WORCESTERSHIRE COUNTY COUNCIL PENSION FUND

2016 ACTUARIAL VALUATION



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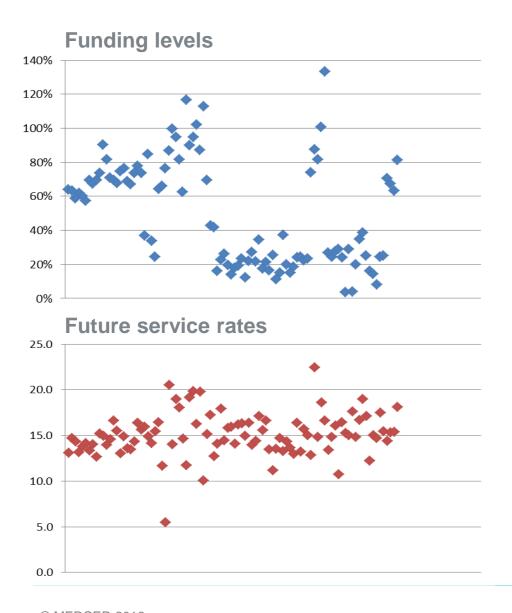
VALUATION BASICS IN SIMPLE TERMS

Has the Fund got enough assets to cover expected benefits built up to date



How much will the Employers have to pay for benefits earned in the future?

2013 VALUATION - INDIVIDUAL EMPLOYERS REMINDER OF OUTCOMES



Key points on 2013 outcomes:

- Majority of funding levels had fallen between 2010 and 2013. Main reason was due to increase in liabilities caused by falling gilt yields.
- Improvement in funding levels post 31 March 2013 were taken into account when setting recovery plans.
- Recovery periods were set at an individual employer level up to a maximum of 21 years.
- Deficit contributions were indexed in line with assumed pay growth (4.1% p.a.).
- In certain cases, some phasing of contribution increases was permitted on affordability grounds.

2016 VALUATION FUNDING STRATEGY KEY POINTS



DISCOUNT RATE - LINKED EXPLICITLY TO REAL RETURNS VERSUS CPI



UPDATE DEMOGRAPHIC ASSUMPTIONS, PRIMARILY LIFE EXPECTANCY. CONSIDER SHORT TERM SALARY GROWTH.



SUBJECT TO REASONABLE AFFORDABILITY, AIM TO CONTINUE WITH RECOVERY PLANS AGREED IN 2013 TO DEMONSTRATE GOOD PROGRESS TOWARDS ELIMINATING FUNDING DEFICITS



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

FUNDING FRAMEWORK ASSET RETURNS COMPARED TO CPI

Broadly speaking, there are two measures where the Fund's returns need to "beat" CPI to reduce long term costs and therefore contribution requirements:

Long term CPI expectations



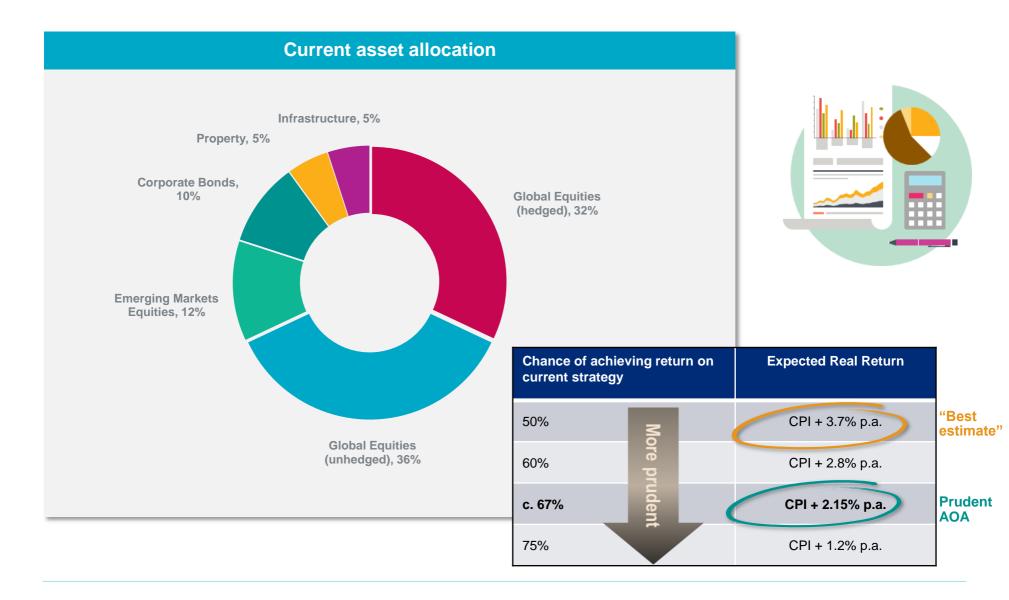
- Impacts the value placed on the Fund's liabilities.
- Drives contribution rates and the amount the Fund needs to hold in reserves as part of the long term funding arrangements.
- The Fund requires long term investment returns in excess of CPI

Short term (year-on-year) CPI changes



- Impacts the increase to members' pensions each year.
- There will inevitably be short term fluctuations between movements in CPI and the Fund's short term asset returns.

DISCOUNT RATE EXPECTED INVESTMENT RETURNS



2016 ACTUARIAL VALUATION INTERVALUATION EXPERIENCE - WHOLE FUND

Actual vs Expected	Impact on deficit /contributions	Comment	
Investment returns		Returns have exceeded 2013 assumption	
Membership Profile		No change to FSR due to change in membership profile	
CPI Pension Increases		Overall liabilities are around 3% lower compared to those expected	
Pensioner Deaths		Analysis shows that the impact on liabilities is slightly positive	
Pay Increases		Impact on total liabilities is an increase of around 1%.	
Early leavers		Impact on total liabilities is a decrease of around 1%	
Other factors e.g. ill health, bulk transfers, transfer-in strains etc.		Probation transfer improved whole Fund position. Other factors had marginal impact compared to those above.	

IMPACT ON INDIVIDUAL EMPLOYERS WILL VARY

2016 ACTUARIAL VALUATION DEMOGRAPHIC ASSUMPTIONS UPDATE - WHOLE FUND

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
III-Health Retirement			No change from 2013 assumption
Withdrawal			No change from 2013 assumption
50/50			No change from 2013 assumption
Commutation			No change from 2013 assumption
Proportions Married / Dependants			Marginal impact only

IMPACT ON INDIVIDUAL EMPLOYERS WILL VARY

2016 ACTUARIAL VALUATION PRELIMINARY RESULTS AS AT 31 MARCH 2016

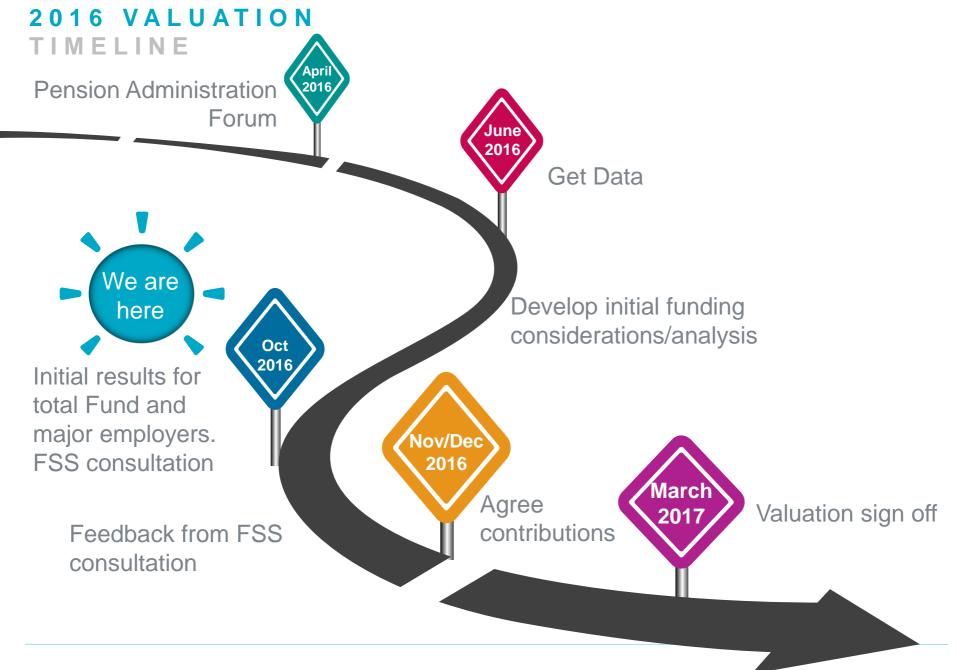
	31 March 2013	31 March 2016	
Discount Rate	Final Results	Real Return of CPI plus 2.15% p.a.	Like for like with 2013 Basis
Assets	£1,721m	£1,952m	£1,952m
Liabilities	£2,488m	£2,582m ¹	£2,892m²
Deficit	£767m	£630m	£940m
Funding Level	69%	76%	68%
Employer Future Service Rate (% of pay per annum)	14.1% ³	15.1%³	14.0% ³
Illustrative deficit contributions payable over c18 years (2017/18) indexed with assumed long term pay growth	£38.7m p.a. ⁴	£36.3m p.a.	£52.0m p.a.
Average Future Service Contributions (2017/18) based on estimated payroll of c£340m for 2017/18	£47.9m p.a.	£51.3m p.a.	£47.6m p.a.
Total contributions payable	£86.6m p.a.	£87.6m p.a.	£99.6m p.a.

¹²⁰¹⁶ figures include allowance for short term pay of 1% p.a. for 4 years up to 2019/20 for all employers for illustration

²Like for like figures include allowance for the residual 2013 short term pay assumption of 2% p.a. for 2 years up to 2017/18 for all employers for illustration

³Allows for different discount rate assumption to past service (CPI plus 3% p.a. at 2013 and CPI plus 2.75% p.a. at 2016)

⁴Certified deficit contributions emerging from 2013 valuation. Theoretical deficit contributions would have been £39.5m p.a. at 2017/18 based on updated funding position as at 31 August 2013.



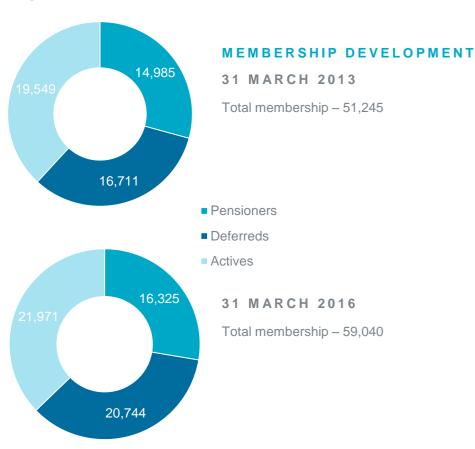
APPENDIX



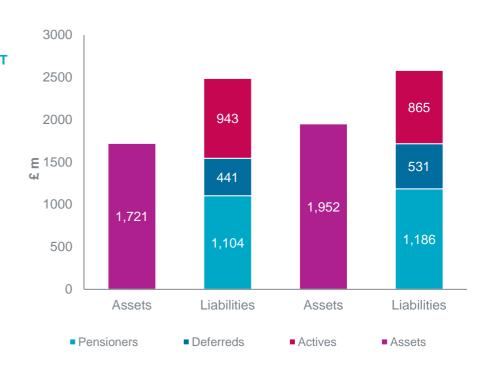
OVERVIEW OF FUND PROFILE

MEMBERSHIP DETAILS

MEMBERSHIP DETAILS PROVIDED BY THE FUND







FUND MEMBERSHIP

MEMBERSHIP ANALYSIS

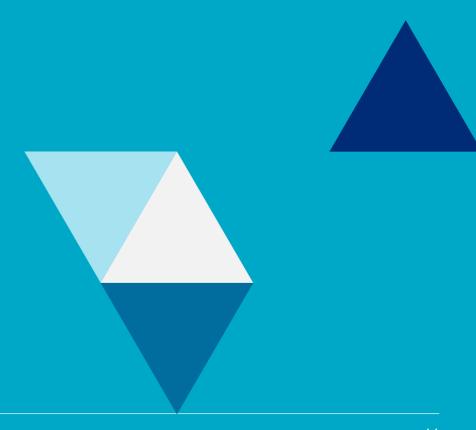
	31 March 2013	31 March 2016
Active members		
Number	19,549	21,971
Total Pensionable Salaries (£000s p.a.) 1	315,646	336,420
Average Pensionable Salary (£ p.a.)	16,146	15,312
Average age ²	49.8	49.9
Average accrued pension	2,740	2,516
Deferred pensioners ³		
Number	16,711	20,744
Total deferred pensions revalued to valuation date (£000s p.a.)	23,423	30,015
Average deferred pension (£ p.a.)	1,402	1,447
Average age ²	48.7	49.2
Current Pensioners and Dependants		
Number	14,985 ⁴	16,325
Total pensions payable (£000s p.a.)	69,075	76,553
Average Pension	4,610	4,689
Average Age ²	70.0	70.6

 ¹ Including actual pay for part time members
 ² Weighted by accrued pension/deferred pension/pension
 ³ Including frozen refunds
 ⁴ Also an additional 127 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 2.1% p.a. (Gilts + 1.5% p.a.)	CPI plus 2.5% p.a. (Gilts +1.5% p.a.)	CPI plus 2.15% p.a.	
Discount rate:	4.7% p.a.	5.1% p.a.	4.35% p.a.	
Inflation: Consumer Prices Index (CPI)	2.6% p.a.	2.6% p.a.	2.2% p.a.	
Long term pay growth assumption	4.1% p.a.	4.1% p.a.	3.7% p.a.	
Pension increases	2.6% p.a.	2.6% p.a.	2.2% p.a.	
Short term pay growth assumption	1.0% p.a. for 3 years 2.0% p.a. for 2 years	1.0% p.a. for 3 years 2.0% p.a. for 2 years	1% p.a. to 31 March 2020	

GLOSSARY



GLOSSARY

Actuarial Valuation: an investigation by an actuary into the ability of a defined benefit scheme to meet its liabilities. For the LGPS the Fund Actuary will assess the funding level of each participating employer and agree contribution rates with the administering authority to fund the cost of new benefits and make good any existing deficits as set out in the separate Funding Strategy Statement.

Benchmark: a measure against which fund performance is to be judged.

Best Estimate Assumption: an assumption where the outcome has a 50/50 chance of being achieved.

Bonds: loans made to an issuer (often a government or a company) which undertakes to repay the loan at an agreed later date. The term refers generically to corporate bonds or government bonds (gilts).

Career Average Revalued Earnings Scheme (CARE): with effect from 1 April 2014, benefits accrued by members in the LGPS take the form of CARE benefits. Every year members will accrue a pension benefit equivalent to 1/49th of their pensionable pay in that year. Each annual pension accrued receives inflationary increases (in line with the annual change in the Consumer Prices Index) over the period to retirement.

CPI: acronym standing for "Consumer Prices Index". CPI is a measure of inflation with a basket of goods that is assessed on an annual basis. The reference goods and services differ from those of RPI. These goods are expected to provide lower, less volatile inflation increases. Pension increases in the LGPS are linked to the annual change in CPI.

Deficit: the extent to which the value of the Fund's past service liabilities exceeds the value of the Fund's assets.

Discount Rate: the rate of interest used to convert a cash amount occurring in the future to a present value.

Employer Covenant: the degree to which an employer participating in an occupational pension scheme is willing and able to meet the funding requirements of the scheme.

Employer's Future Service Contribution Rate: the contribution rate payable by an employer, expressed as a % of pensionable pay, as being sufficient to meet the cost of new benefits being accrued by active members in the future. The cost will be net of employee contributions and will include an allowance for the expected level of administrative expenses

Equities: shares in a company which are bought and sold on a stock exchange.

Funding Level: the difference between the value of the Fund's assets and the value of the Fund's liabilities expressed as a percentage.

Funding Strategy Statement: This is the main document that outlines how the administering authority will manage employer's contributions to the Fund.

Funding Target: an assessment of the present value of benefits to be paid in the future. Under the current Funding Strategy Statement, the desired funding target is equal to the past service liabilities assessed on the ongoing basis.

Government Actuary's Department (GAD): the GAD are responsible for providing actuarial advice to public sector clients. GAD is a non-ministerial department of HM Treasury.

Investment Strategy: the long-term distribution of assets among various asset classes that takes into account the Fund's objectives and attitude to risk.

Past Service Liabilities: this is the present value of the benefits accrued by members up to the valuation date. It is assessed based on a set of assumptions agreed between the Administering Authority and the Actuary.

Percentiles: relative ranking (in hundredths) of a particular range. For example, in terms of expected returns a percentile ranking of 75 indicates that in 25% of cases, the return achieved would be greater, and in 75% cases the return would be lower.

Prepayment: the payment by employers of contributions to the Fund earlier than that certified by the Actuary. The amount paid will be reduced compared to the certified amount to reflect the early payment.

Present Value: the value of projected benefit payments, discounted back to the valuation date.

Prudent Assumption: an assumption where the outcome has a greater than 50/50 chance of being achieved i.e. the outcome is more likely to be overstated than understated. Legislation requires the assumptions adopted for an actuarial valuation to be prudent.

Real Return: a rate of return net of inflation.

Recovery Plan: a strategy by which an employer will make up a funding deficit over a specified period of time ("the recovery period"), as set out in the Funding Strategy Statement.

Section 13 Valuation: in accordance with Section 13 of the Public Service Pensions Act 2014, the Government Actuary's Department (GAD) have been commissioned to advise the Department for Communities and Local Government (DCLG) in connection with reviewing the 2016 LGPS actuarial valuations. All LGPS Funds therefore will be assessed on a standardised set of assumptions as part of this process.

50/50 Scheme: in the LGPS, active members are given the option of accruing a lower benefit in the 50/50 Scheme, in return for paying a lower level of contribution.

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 17 October 2016. It will not be updated unless requested.

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