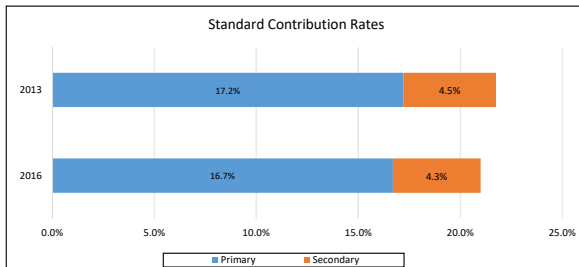
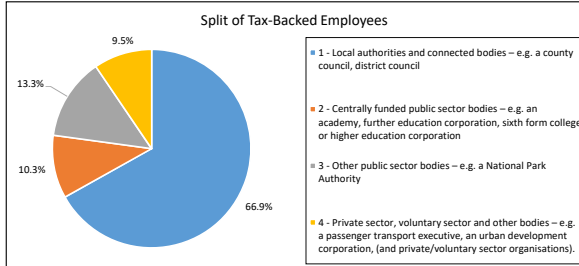
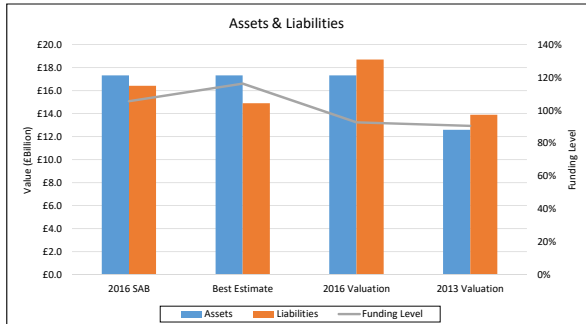
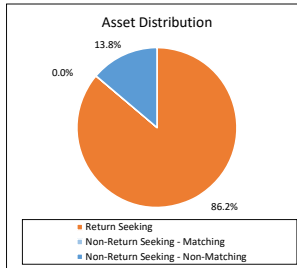
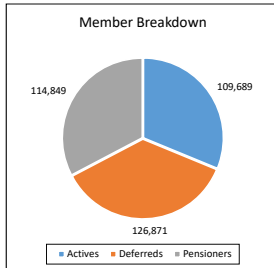




# Government Actuary's Department

## Greater Manchester Pension Fund

This document is intended only for discussions between GAD, the relevant Local Authority and their actuary



Local Authority	Core Spending (£m)	Core Spending (%)
<b>Total</b>	<b>£2,138.8</b>	<b>100.0%</b>
Manchester	£419.1	19.6%
Wigan	£220.3	10.3%
Salford	£207.5	9.7%
Stockport	£206.0	9.6%
Bolton	£202.3	9.5%
Oldham	£181.9	8.5%
Rochdale	£169.7	7.9%
Tameside	£164.1	7.7%
Trafford	£143.3	6.7%
Bury	£126.9	5.9%
Greater Manchester Fire	£97.5	4.6%

<b>Solvency Breakdown</b>	
<b>Asset Shock</b>	
Assets are divided into the following classes:	
Return seeking - Equity, Property, Infrastructure debt & other return seeking assets	
Non-return seeking - All other assets	
Return seeking assets are stressed by reducing them by 15%	
New deficit allocated to tax-raising authorities	
= (Pre-stress asset value - Post-stress asset value) × % Tax backed employees	
This deficit is then spread over 20 years of annual payments, and compared to the fund's core spending	
	£m
Pre-stress asset value	£17,324.6
Return seeking assets	£14,931.8
Non-return seeking assets	£2,392.8
Post-stress asset value	£15,084.9
Return seeking	£12,692.0
Non-return seeking	£2,392.8
Percentage of tax-backed employees (Group 1 + Group 3)	80.2%
New deficit allocated to tax raising authorities	£1,796.4
Annual deficit payment (spread over 20 years)	£105.1
Total core spending	£2,138.8
Deficit percentage of core spending	4.9%
Deficit percentage of core spending (allowing for post-asset shock surplus)	Surplus
<b>Liability Shock</b>	
Non-matched liabilities are stressed by increasing them by 10%	
New deficit allocated to tax-raising authorities	
= (Post-stress liability value - Pre-stress liability value) × % Tax backed employees	
Deficit is spread over 20 years and compared to the fund's core spending	
	£m
Liability value pre-stress (GAD's best estimate calculation)	£14,902.5
Liability value post-stress	£16,392.7
New deficit allocated to tax raising authorities	£1,195.2
Annual deficit Payment (spread over 20 years)	£69.9
Deficit percentage of core spending	3.3%
Deficit percentage of core spending (allowing for post-liability shock surplus)	Surplus
<b>Employer Default Shock</b>	
Determine funding level on GAD's best estimate basis	
If the fund is in deficit, non-tax backed deficits are allocated to tax-backed	
The non-tax backed deficit is spread over 20 years and compared to the fund's core spending	
	£m
Deficit on best estimate basis	£0.0
Proportion of deficit allocated to non-tax raising authorities	£0.0
Annual deficit payment (spread over 20 years)	£0.0
Deficit percentage of core spending	Surplus

<b>Solvency Breakdown (continued)</b>	
Fund Open/Closed	Open
SAB Funding Level	105.5%
Percentage of Non-Statutory Employees (Group 3 + Group 4)	22.8%
<b>Long Term Cost Efficiency</b>	
<b>Deficit Recovery Period</b>	
Implied deficit recovery period calculated on a standardised market consistent basis	
Recovery period (years)	Surplus
<b>Required Return</b>	
Required investment return rates to achieve full funding in 20 years' time on the standardised market consistent basis	
Required return under best estimate basis	3.0%
<b>Repayment Shortfall</b>	
Difference between the actual deficit recovery contribution rate and the annual deficit recovery contributions required as a percentage of payroll to pay off deficit in 20 years, where the deficit is calculated on a standardised market consistent basis	
Annual deficit recovery payment as % of implied 2016/17 payroll	0.0%
Actual contribution rate paid less SCR on best estimate basis	8.9%
Difference	8.9%
<b>Return Scope</b>	
Required investment return rates as calculated in required return, compared with the fund's expected best estimate future returns assuming current asset mix maintained	
Expected return	6.0%
Required return	3.0%
Difference	3.0%
<b>Deficit Recovery Plan</b>	
Consideration of how the deficit recovery plan has changed compared to 2013 valuation	
Valuation	2013
Deficit Recovery End Point	2036
2013 Common Contribution Rate	21.8%
2014/15 Average Employer Contribution Rate	18.0%
2016 Standard Contribution Rate	21.0%
Increase in contributions to 2016	
From 2013 Common Contribution Rate	-0.8%
From 2014/15 Average Employer Contribution Rate	3.0%
Increase in deficit recovery end point (years)	3

Minor inconsistencies in totals may occur due to rounding.

16 July 2018

At GAD, we seek to achieve a high standard in all our work. We are accredited under the Institute and Faculty of Actuaries' Quality Assurance Scheme. Our website describes the standards we apply.