

**Staffordshire Pension Fund**  
**Investment Benchmarking Results**  
For the 5 year period ending March 31, 2018



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## This report will help you to satisfy your oversight responsibilities by:

- Comparing your investment performance with other funds.
- Highlighting returns that come from:
  - The local Pension Committee's strategic asset allocation decisions, and
  - The implementation of the Committee's strategy (typically the responsibility of management).
- Comparing the level of risk inherent in your portfolio and relative to your liabilities and your funding position.
- Comparing your investment costs and explaining why your costs compare as they do.
- Considering how and why your costs have changed over time.
- Looking at value-for-money – 'did paying more get you more'?

The report is based on standardised data submitted to CEM by your fund, by other LGPS funds and a wider universe of funds from around the world. Care is taken to validate the data contained in the report. This includes automated validations on outlying or unusual data as it is submitted, and an additional manual data 'clean' where our analysts interact with fund personnel to ensure the data is fit for purpose. The information in this report is confidential and should not be disclosed to third parties without the express written consent of CEM. CEM will not disclose any of the information in the report without your express written consent.

## We compare your returns to other LGPS funds and a wider global universe.

### CEM's LGPS Universe

Pool / Group	# of Participant Funds	Total Assets (£bns)	% of CEM's LGPS Universe	Funds
Access Pool	7	£24.2	12%	Cambridgeshire, East Sussex, Essex, Isle of Wight, Kent, Northamptonshire, Suffolk.
BCPP	12	£44.2	21%	Bedford, Cumbria, Durham, East Riding, Lincolnshire, NYPF, Northumberland, SYPF, Surrey, Teesside, Tyne and Wear, Warwickshire.
Brunel Pool	1	£4.8	2%	Avon.
Central Pool	4	£27.9	14%	Cheshire, Staffordshire, West Midlands, Worcestershire.
LPP Pool	2	£13.5	7%	Lancashire, LPFA.
Northern	3	£44.3	22%	GMPF, Merseyside, West Yorkshire.
Scotland	4	£30.2	15%	Falkirk, Lothian, Shetland Islands, Strathclyde.
Welsh Pool	8	£16.5	8%	Swansea, Dyfed, Flintshire, Torfaen, Gwynedd, Powys, Rhondda Cynon TAF, Cardiff.
<b>Total</b>	<b>41</b>	<b>£205.6</b>	<b>100%</b>	

The main performance comparisons are with the LGPS universe comprising 41 funds with total assets of £206 billion (average £5 billion, median £3 billion).

We also compare your returns (and LGPS returns generally) with a wider global universe comprising 346 funds with total assets of £7.3 trillion (average £21bn, median £5bn). The global universe includes half of the world's top 300 funds.

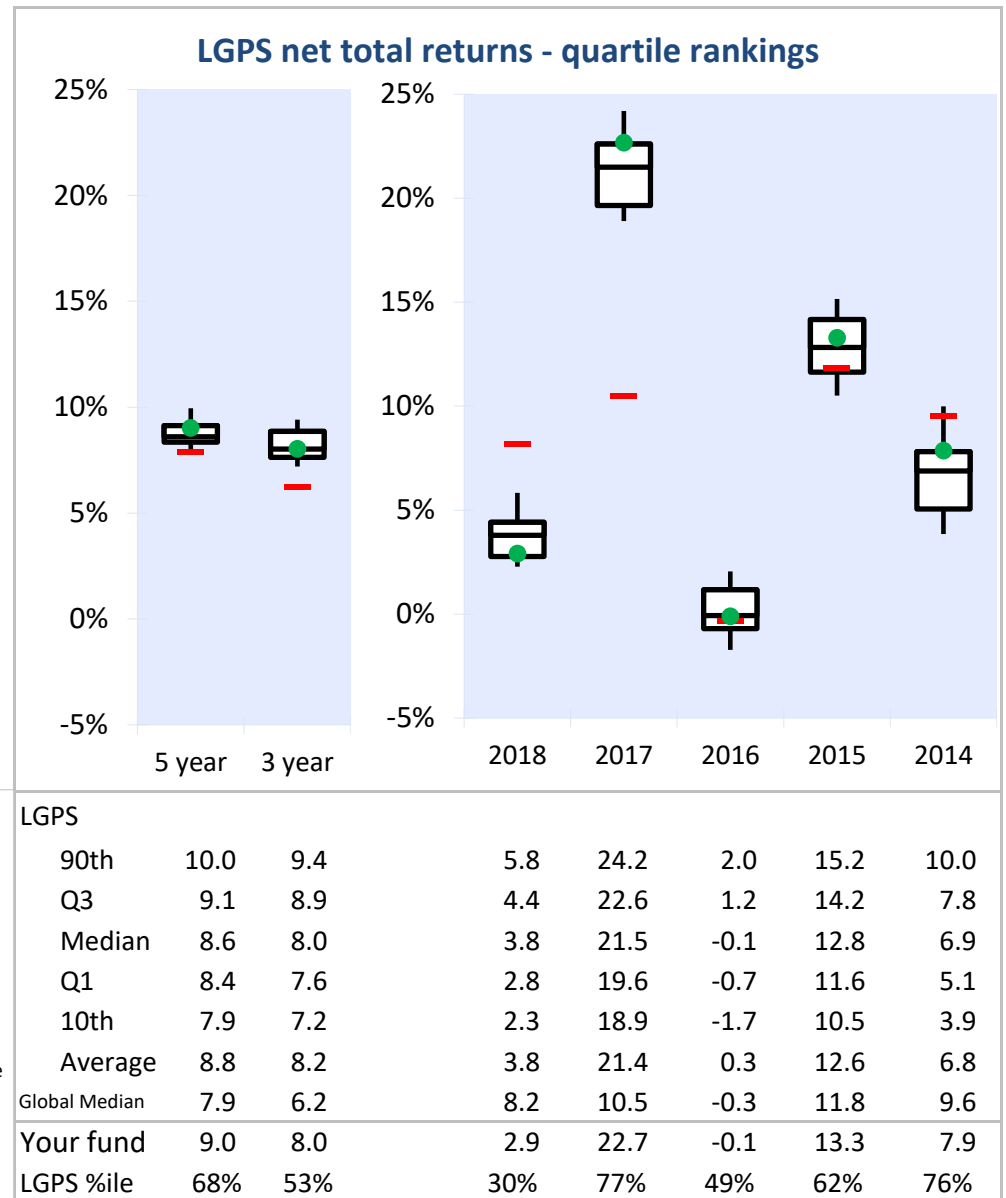
# Your 5-year net total return of 9.0% was above both the LGPS median of 8.6% and the Global median of 7.9%.

Total returns, by themselves, provide little insight into the reasons behind relative performance. Therefore, we separate total return into its more meaningful components:

- Strategic asset mix return: The return from strategic asset allocation decisions. These decisions are typically made by the local Pensions Committee.
- Value added: A function of active management decisions, including tactical asset allocation, manager selection, stock selection, etc. These 'implementation' decisions tend to be made by management (increasingly within pools in England and Wales).

These are discussed on the pages that follow.

Global return comparisons have been particularly influenced by the relative strength of the \$US over the period covered by this report and by the depreciation of the £ in 2016/17, i.e. there is some currency 'noise' in the global comparison.

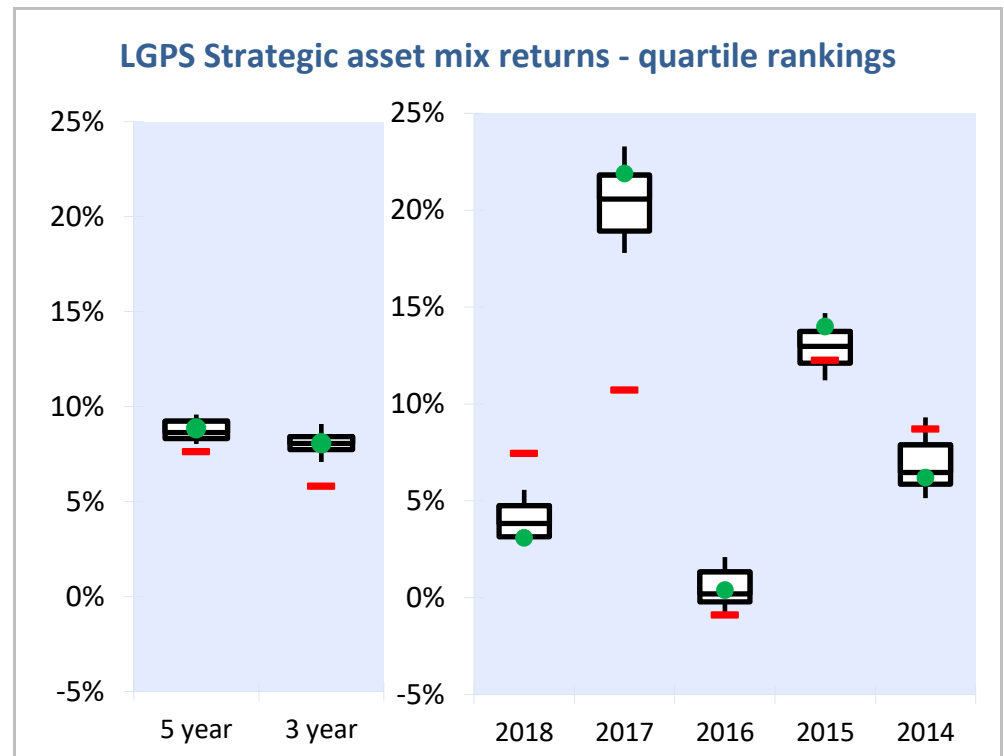


## Your 5-year strategic asset mix return of 8.8% was above both the LGPS median of 8.6% and the Global median of 7.6%.

Your strategic asset mix return is the return you could have earned passively by indexing your investments according to your strategic asset mix. The strategic asset mix return is typically the most significant driver of total returns.

Having a higher or lower relative strategic asset mix return is not necessarily good or bad. Your strategic asset mix return reflects your asset mix which in turn reflects your funding position, long-term capital market expectations, liabilities, employer covenant and appetite for risk.

Each of these factors is different across funds. Therefore, it is not surprising that strategic asset mix returns often vary widely between funds. In the following page we explore how your asset mix impacts your strategic asset mix returns relative to peers.



Legend		LGPS							
90th		90th	9.6	9.1	5.6	23.3	2.1	14.7	9.3
75th		Q3	9.2	8.4	4.7	21.8	1.3	13.7	7.9
median		Median	8.6	8.1	3.8	20.6	0.2	13.0	6.5
25th		Q1	8.3	7.7	3.1	18.9	-0.2	12.1	5.9
10th		10th	8.0	7.1	2.7	17.8	-0.9	11.2	5.1
		Average	8.8	8.1	4.0	20.5	0.5	12.8	6.9
● your value		Global Median	7.6	5.8	7.5	10.7	-0.9	12.3	8.7
— Global med		Your fund	8.8	8.1	3.1	21.9	0.4	14.0	6.2
		LGPS %ile	62%	50%	23%	77%	54%	81%	40%

## Differences in strategic asset mix return are caused by differences in benchmarks and asset mix.

Your 5-year strategic asset mix return was slightly above the LGPS median primarily because of:

- The positive impact of your higher weight in one of the better performing asset classes of the past 5 years: Total Stock (your 68% 5-year average weight versus a LGPS average of 60%).
- The positive impact of your higher weight in one of the better performing asset classes of the past 5 years: Domestic Property (your 10% 5-year average weight versus a LGPS average of 5%).

This was largely offset by the negative impact of:

- Your lack of a benchmark for private equity.
- The negative impact of you 3-month LIBOR benchmark for Global Bonds. Most peers had benchmarks based on longer duration broad index bonds which outperformed cash.

1. Weights are based only on plans with 5 years of continuous data.

2. Other stock includes Asia-Pacific, Europe exUK stock. Other fixed income includes Private Debt and U.S. bonds. Other real assets includes commodities, natural resources, infrastructure and REITs.

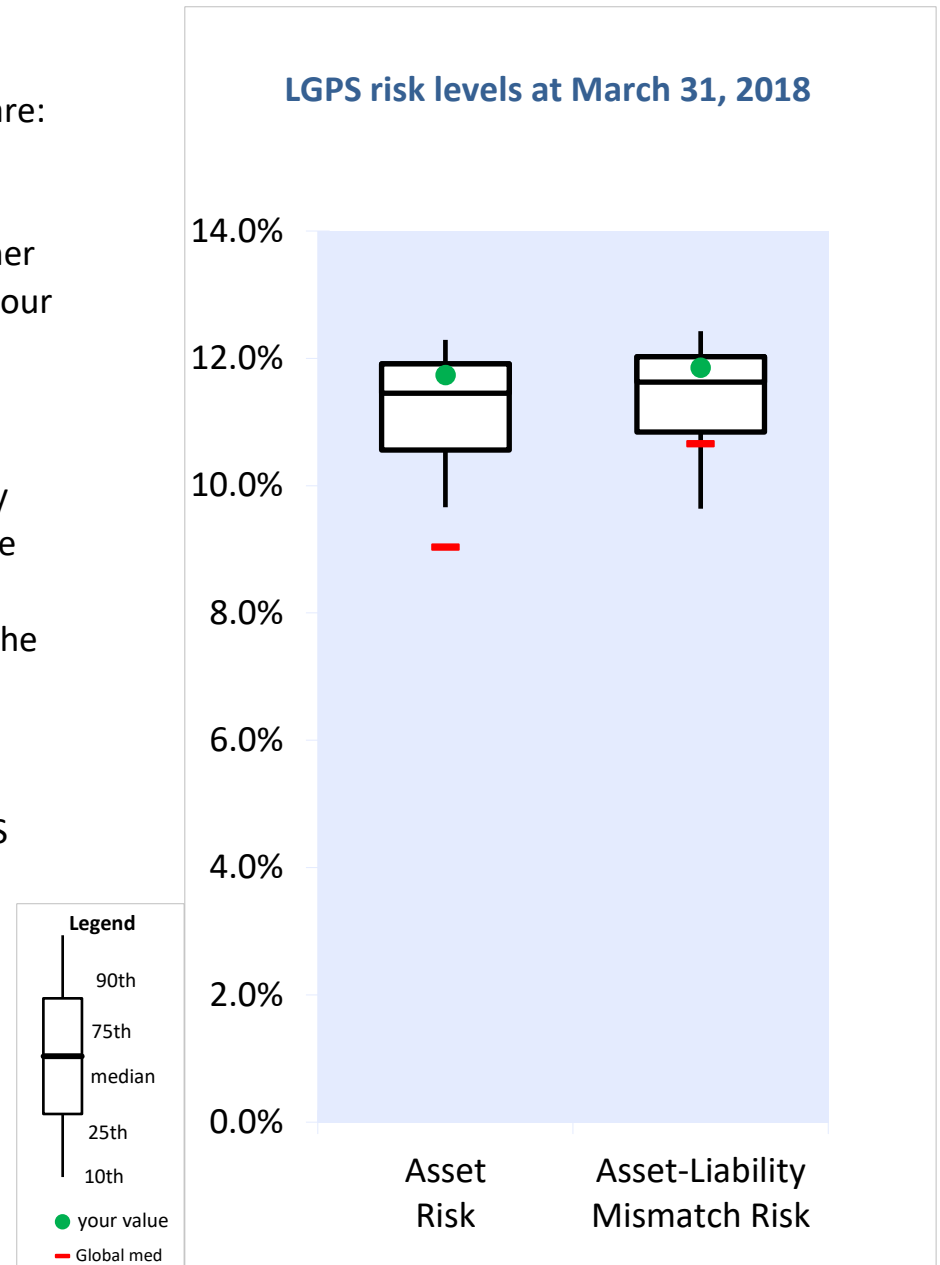
3. A value of 'n/a' is shown if asset class return are not available for the full 5 years or if they are broad and incomparable.

	5-Year average strategic asset mix <sup>1</sup>			5-year bmk. return	
	Your Fund	LGPS Avg.	More/ Less	Your Fund	LGPS Avg.
U.K. Stock	16%	17%	-2%	6.5%	6.8%
U.S. Stock		4%	-4%		14.4%
Emerging Market Stock	2%	3%	-1%	2.5%	6.6%
Global Stock	50%	26%	24%	11.0%	11.1%
Other Stock <sup>2</sup>		9%	-9%		n/a <sup>3</sup>
<b>Total Stock</b>	<b>68%</b>	<b>60%</b>	<b>8%</b>	<b>9.8%</b>	<b>9.6%</b>
Fixed Income - UK		7%	-7%		5.3%
Inflation Indexed Bonds	6%	3%	3%	7.2%	7.9%
Global Bonds	7%	6%	2%	0.5%	3.0%
Cash	1%	1%	0%	0.4%	0.4%
Other Fixed Income <sup>2</sup>		2%	-2%		n/a <sup>3</sup>
<b>Total Fixed Income</b>	<b>15%</b>	<b>19%</b>	<b>-5%</b>	<b>3.5%</b>	<b>4.8%</b>
Hedge Funds	3%	2%	1%	0.4%	2.6%
Balanced Funds		2%	-2%		7.1%
Real Estate ex-REITs		4%	-4%		9.4%
Domestic Property	10%	5%	5%	11.7%	10.2%
Other Real Assets <sup>2</sup>		3%	-3%		n/a <sup>3</sup>
Private Equity	5%	5%	0%	1.0%	16.5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>0%</b>		

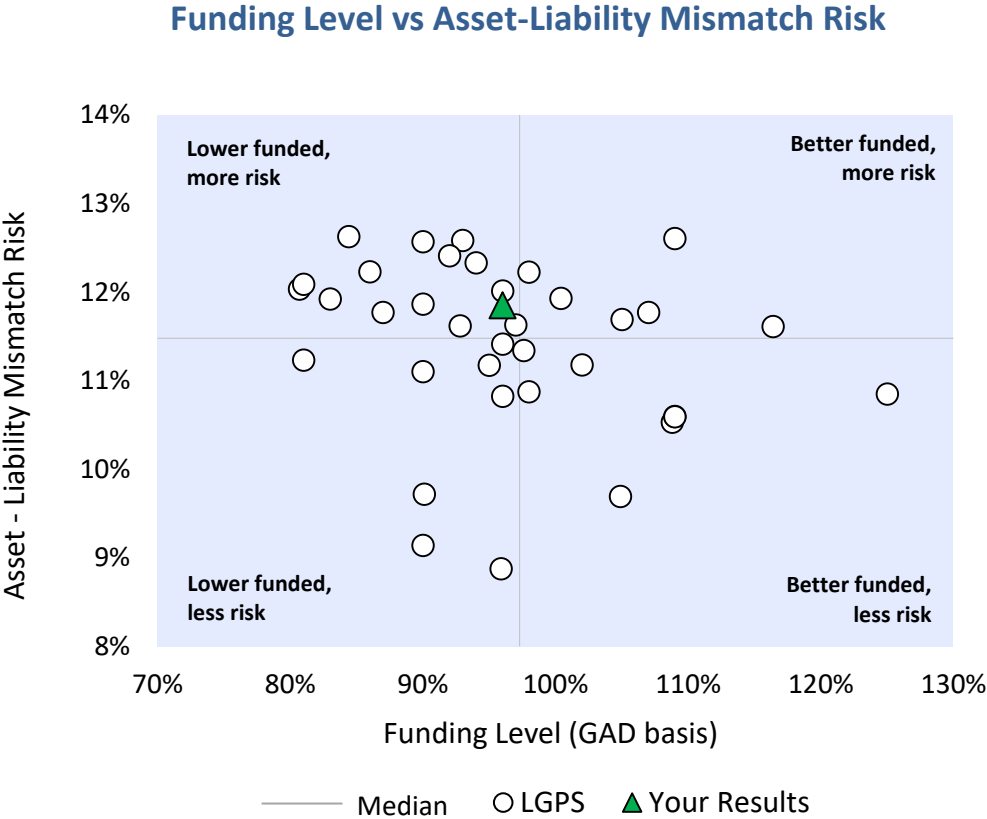
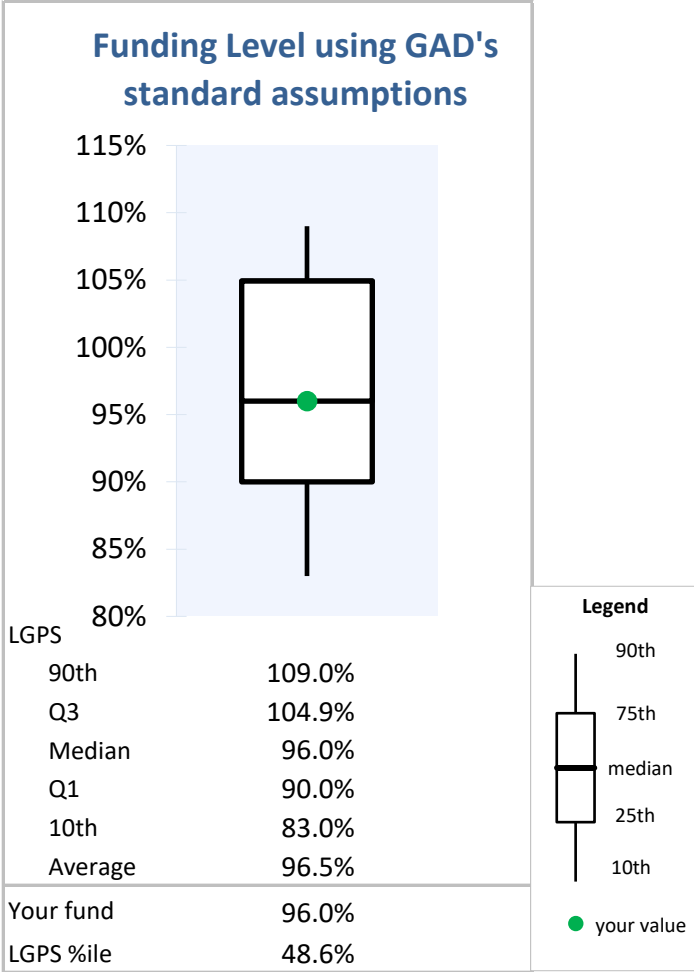
# Your strategic asset allocation is largely a function of your appetite for risk.

The two key risks for the Pension Committee to consider are:

- **Asset Risk** - A higher asset risk is indicative of a higher weighting to more volatile assets (and vice-versa). Your asset risk of 11.7% was above the LGPS median of 11.5%.
- **Asset-liability mismatch risk** - A higher asset-liability mismatch risk is indicative a willingness to take more risk to improve the funding level. Lower asset risk is indicative of either better funding, concerns about the employer covenant or a desire for stability in contributions. A lower asset-liability mismatch risk means you are closer to a 'fully-matched' position. Your asset-liability risk of 11.9% was above the LGPS median of 11.6%.



# Your funding level of 96% was equal to the LGPS median of 96%. You had more asset liability mismatch risk.



Funding level is based on standardised actuarial assumptions developed by the Government Actuaries Department (GAD). Most of the key assumptions are consistent across funds but some assumptions, and in particular mortality assumptions, are fund specific. Your funding level as shown may not reflect the actuarial basis you use to determine your asset allocation or contribution policies, but it serves a useful purpose in providing context for comparisons of asset risk and asset liability mismatch risk.

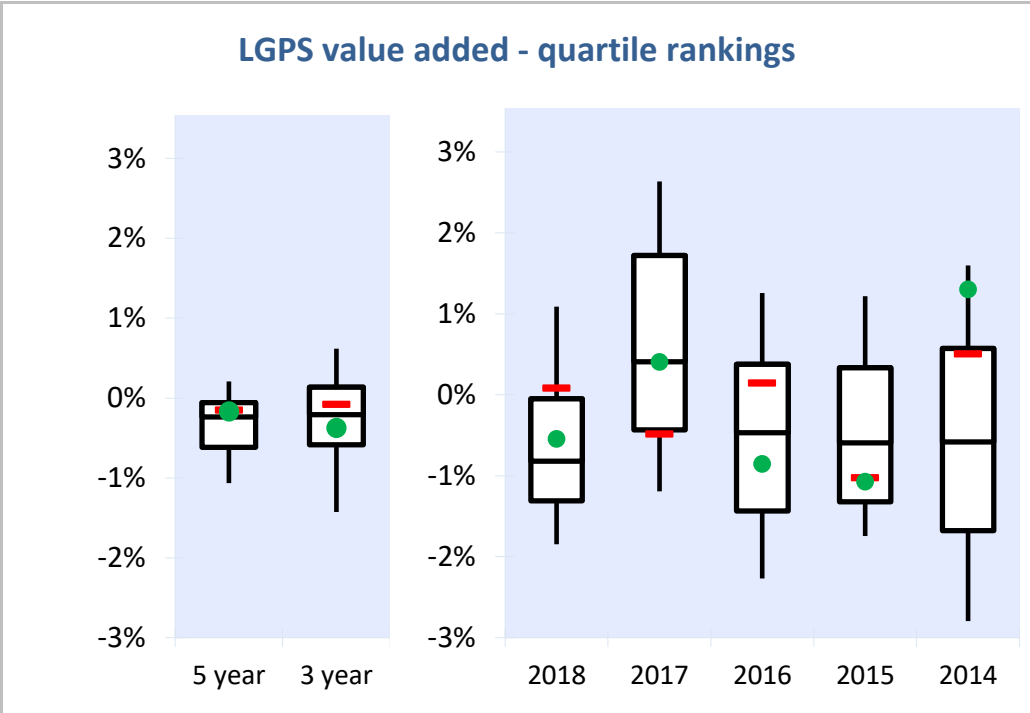


**Net value added is the component of total return from active management. This is typically the responsibility of management (increasingly within pools in England and Wales). Your 5-year net value added was 0.2%.**

Net value added equals total net return minus strategic asset mix return.

It is a function of active management decisions which includes tactical asset allocation, manager selection, stock selection, choice of benchmarks, hedging, overlays, etc.

Your 5-year net value added of 0.2% compares to a median of 0.1% for the LGPS universe and 0.2% globally.

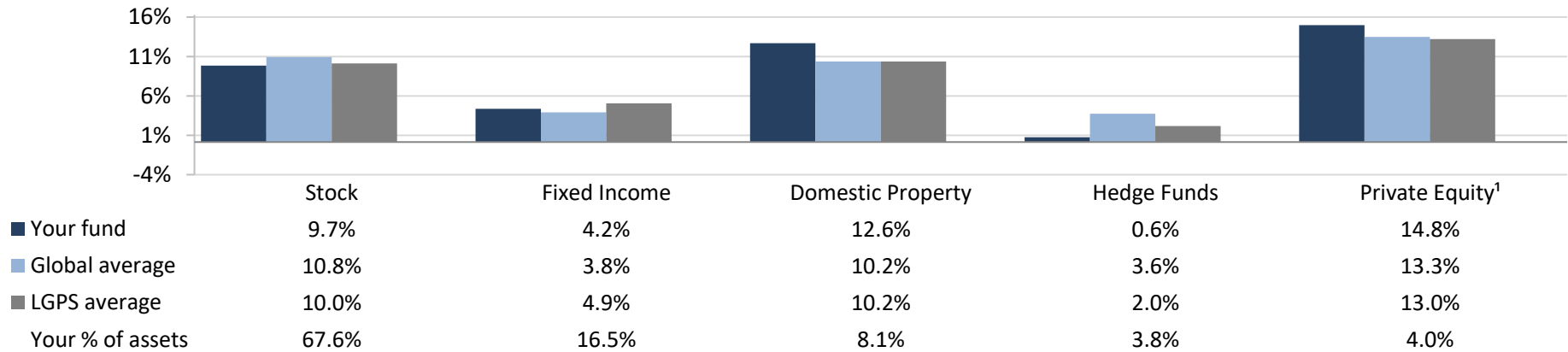


Your value added was impacted by your choice of benchmarks for private equity. CEM suggests using lagged, investable benchmarks for private equity. If your fund used the private equity benchmark suggested by CEM, your 5-year total fund value added would have been 0.6% lower.

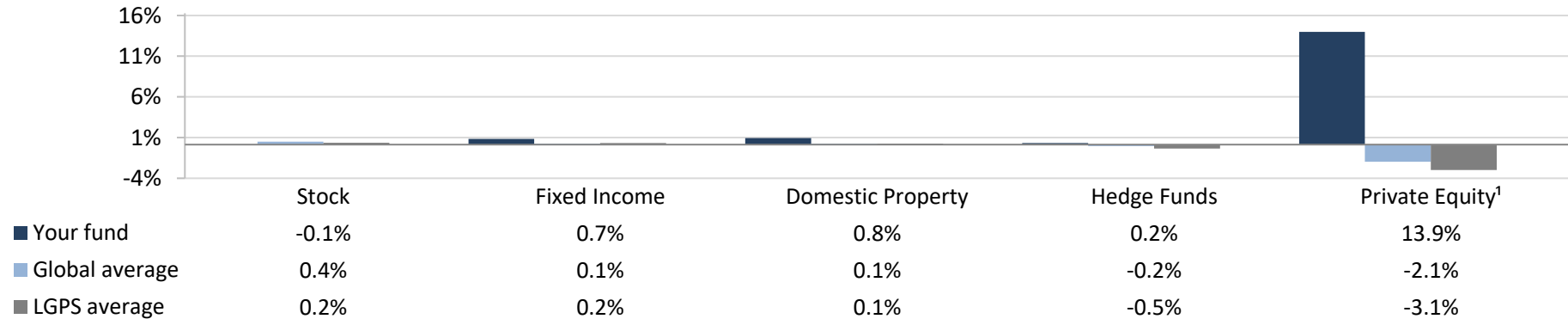
Legend		LGPS							
	90th	90th	0.6	1.0	1.4	3.0	1.6	1.6	1.9
	75th	Q3	0.3	0.5	0.3	2.1	0.7	0.7	0.9
	median	Median	0.1	0.1	-0.5	0.8	-0.1	-0.2	-0.2
	25th	Q1	-0.3	-0.2	-1.0	-0.1	-1.1	-1.0	-1.3
	10th	10th	-0.7	-1.1	-1.5	-0.8	-1.9	-1.4	-2.4
	your value	Average	0.0	0.1	-0.2	0.9	-0.2	-0.2	-0.1
	Global med	Global Median	0.2	0.3	0.4	-0.1	0.5	-0.7	0.9
		Your fund	0.2	0.0	-0.2	0.8	-0.5	-0.7	1.7
		LGPS %ile	59%	38%	63%	49%	41%	31%	86%

# Here is how your net returns and net value added compare.

## 5-year average net return by major asset class



## 5-year average net value added by major asset class



1. To enable fairer comparisons, the private equity benchmarks of all participants, except your fund, were adjusted to reflect lagged, investable, public-market indices. If your fund used the private equity benchmark suggested by CEM, your fund's 5-year private equity net value added would have been -2.3%.

## We compare your costs to the following custom peer group:

- 21 Global sponsors from £3.2 billion to £8.6 billion
- Median size of £5.5 billion versus your £4.8 billion
- Peers are selected based on size (because size impacts costs) and to include both LGPS and non-LGPS funds (to help you understand how your costs compare with a broad cross-section of funds).
- We specifically exclude other LGPS funds from your pool because costs will increasingly be homogenous within the pool.

### LGPS Funds

Bath & North East Somerset Council - Avon Pension Fund  
East Riding Pension Fund  
Essex Pension Fund  
Lothian Pension Fund  
Merseyside Pension Fund  
Rhondda Cynon TAF Pension Fund  
South Yorkshire Pensions Fund  
Staffordshire Pension Fund  
Surrey Pension Fund  
Teesside Pension Fund  
Tyne and Wear Pension Fund

### Non-LGPS Funds

Colleges of Applied Arts and Technology  
District of Columbia Retirement Board  
Houston Police Officers Pension System  
Manitoba Civil Service Superannuation Fund  
Missouri State Employees' Ret. Sys.  
OSOOL Total Pension Fund  
Saskatchewan Public Employees Pension Fund  
Stichting BPF voor de Koopvaardij  
BPF voor de Media PNO  
SPF TNO

The names of the above fund sponsors in your peer group are confidential and may not be disclosed to third parties.

## We are benchmarking investment costs of £25.2 million or 53.9 basis points in 2017/18.

Asset management costs by asset class and style (£000s)	Internal Active	External Management			Total
		Passive fees	Active base fees	Perform. fees <sup>6</sup>	
Stock - UK		38	620		658
Stock - Emerging			1,081		1,081
Stock - Global		382	2,016	370	2,767
Fixed Income - Global Credit			488		488
Fixed Income - Inflation Indexed		32			32
Hedge Fund - FoFs <sup>4 5</sup>			2,256	629	2,885
Domestic Property <sup>1 3</sup>	1,608		127	16	1,751
Diversified Private Equity - FoFs <sup>3 4 5</sup>			7,757	3,216	10,973
Private Credit - LPs <sup>2 3</sup>			1,988	1,172	3,160
<b>Total</b>					<b>23,795 51.0bp</b>
<b>Oversight, custodial and other costs <sup>7</sup></b>					
Oversight of the fund					302
Trustee & custodial					136
Consulting and performance measurement					402
Audit					29
Other					521
<b>Total oversight, custodial &amp; other costs</b>					<b>1,389 3.0bp</b>
<b>Total investment costs (excl. transaction costs )</b>					<b>25,183 53.9bp</b>

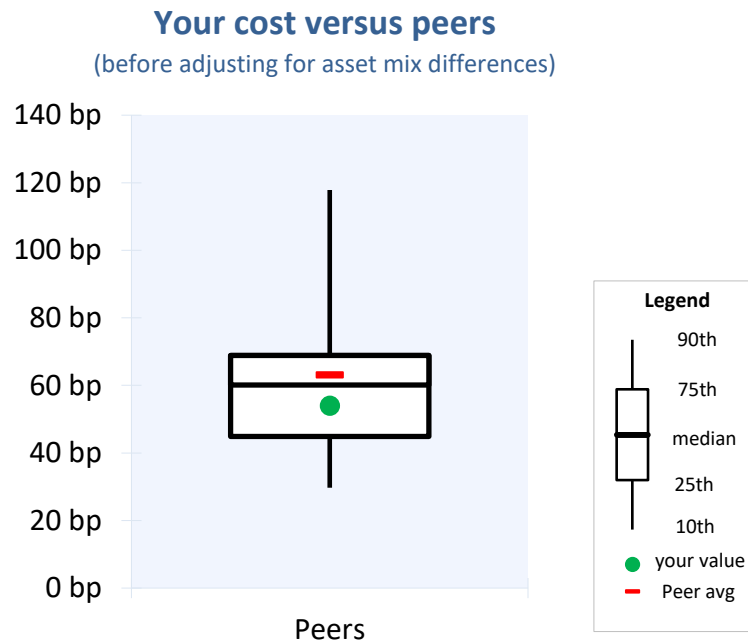
### Footnotes

- Default base fees were added: Domestic Property - External Not Fund of Fund 40 bp.
  - CEM used a default cost because detailed costs by partnership were not provided for private equity. Without the details, we were unable to show your actual costs on the same (gross) basis as peers. The unusually low costs have now been defaulted to: Private Credit - LPs 127 bp.
  - Default performance fees were added: Private Credit - LPs 113 bps, Diversified Private Equity - FoFs 42 bps, Domestic Property - External Not Fund of Fund 5 bp.
  - Default underlying costs were added: Diversified Private Equity - FoFs 157 bps, Hedge Fund - FoFs 141 bp.
  - Default underlying performance fees were added: Hedge Fund - FoFs 72 bp.
- Refer to Appendix A for full details regarding defaults.
- Total cost includes carry/performance fees for all asset classes.
  - Excludes pension administration costs.

# Your cost of 53.9 bps was below your benchmark cost of 57.2 bps.

## Comparison of costs before adjusting for asset mix:

Before adjusting for differences in asset mix, your costs of 53.9 bps were -6.2 bps below the peer median of 60.1 bps.



## Comparison of costs after adjusting for asset mix:

To calculate a benchmark cost we apply peer median costs at an asset class level to your asset mix (i.e., we adjust for differences in asset mix).

### Your cost versus benchmark

(after adjusting for asset mix differences)

	£000s	basis points
Your total investment cost	25,183	53.9 bp
Your benchmark cost	26,690	57.2 bp
Your excess cost	-1,507	(3.2) bp

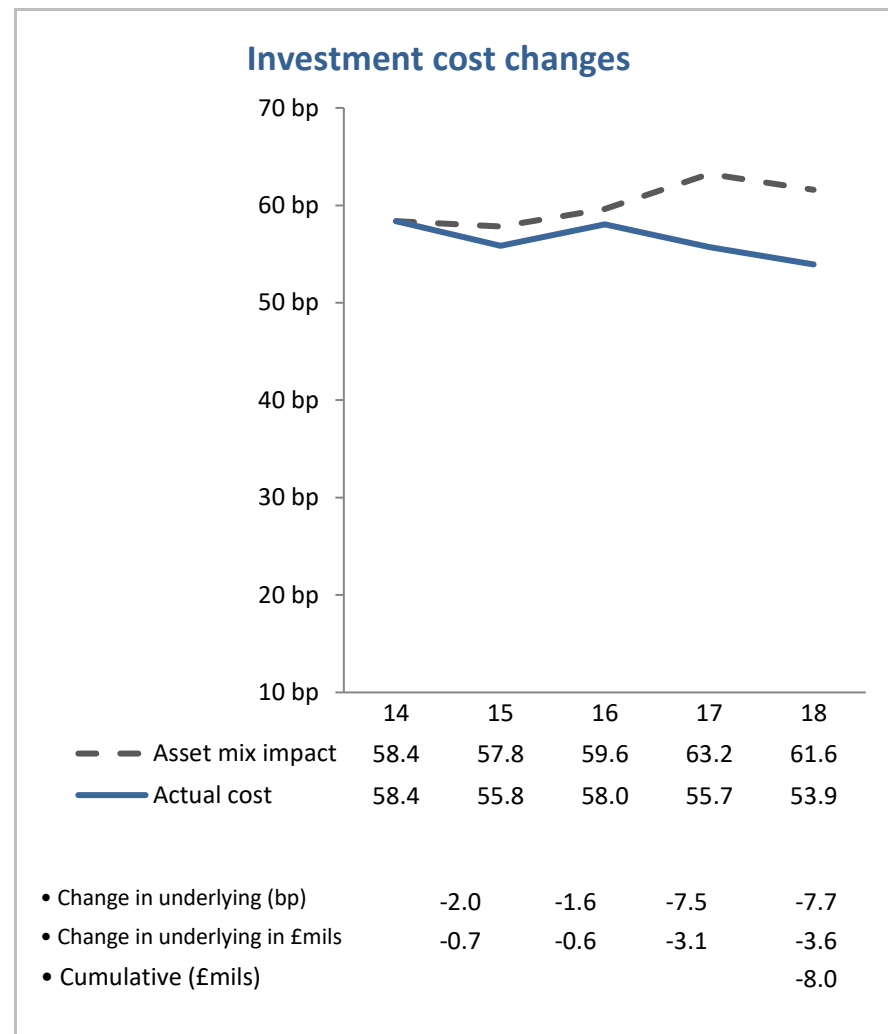
## Your fund was slightly low cost because you had a lower cost implementation style and you paid less than peers for similar services.

### Reasons for your low cost status

		Excess Cost/ (Savings)	
		£000s	bps
1. Lower cost implementation style			
• More passive management (vs. higher cost active )		-3,941	(8.4)
• More internal management (vs. higher cost external)		87	0.2
• More fund of funds		2,810	6.0
• Less overlays		-311	(0.7)
		<u>-1,355</u>	<u>(2.9)</u>
2. Paying less than peers for similar services			
	<u>You</u>	<u>Peer Median</u>	
• External investment management costs			
Fixed Income - Global Credit - Active	13.7 bp	33.0 bp	-687 (1.5)
Diversified Private Equity - Fof	72.2 bp	89.0 bp	-569 (1.2)
Stock - UK - Active	20.6 bp	39.1 bp	-553 (1.2)
Hedge Funds - Fof	117.3 bp	64.7 bp	459 1.0
All other differences			118 0.3
• Internal investment management costs			612 1.3
• Oversight, custodial and other costs			469 1.0
			<u>-152 (0.3)</u>
<b>Total savings</b>			<b>-1,507 (3.2)</b>

## Your cost fell from 58.4 bps in 2013/14 to 53.9 bps in 2017/18.

	Bps	£000s
Investment cost reported in 2013/14	53.4 bp	£16,825
Impact of methodology changes <sup>1</sup>		
• Inclusion of hedge fund performance fees	5.0 bp	£2,312
• Inclusion of private market performance fees	0.0 bp	£0
Restated costs for 2013/14 <sup>1</sup>	58.4 bp	£19,137
Impact of changes in assets and asset mix		
• Increase in assets <sup>2</sup>	n/a	£8,121
• Higher cost asset mix	7.1 bp	£3,328
• Reduced use of overlays	(3.9) bp	£-1,822
	61.6 bp	£28,764
Impact of changes within the same asset classes		
• More passive (less active)	(6.2) bp	
• More external management (vs. internal)	3.0 bp	
Higher/-lower fees for:		
• Stock and fixed Income	(4.1) bp	
• Private markets and hedge funds:		
Lower base fees	(1.0) bp	
Higher performance fees	1.0 bp	
• Lower oversight and other changes	(0.4) bp	
Total changes in underlying costs	(7.7) bp	£-3,581
Investment cost in 2017/18	<u>53.9 bp</u>	<u>£25,183</u>



1. To enable a meaningful comparison, we have adjusted your reported 2013/14 cost to allow for the fact that we started to collect more costs at a later date. The reported cost is increased as if you were paying the same amount in bps in 2013/14 for each asset class. For example, we started to collect hedge fund performance fees in 2014. If your hedge fund performance fees were 50 bps at that time, then we assume you were paying 50 bps in 2013/14 and that your 'implementation style' was unchanged.

2. Assumes all costs increase in line with the value of assets.

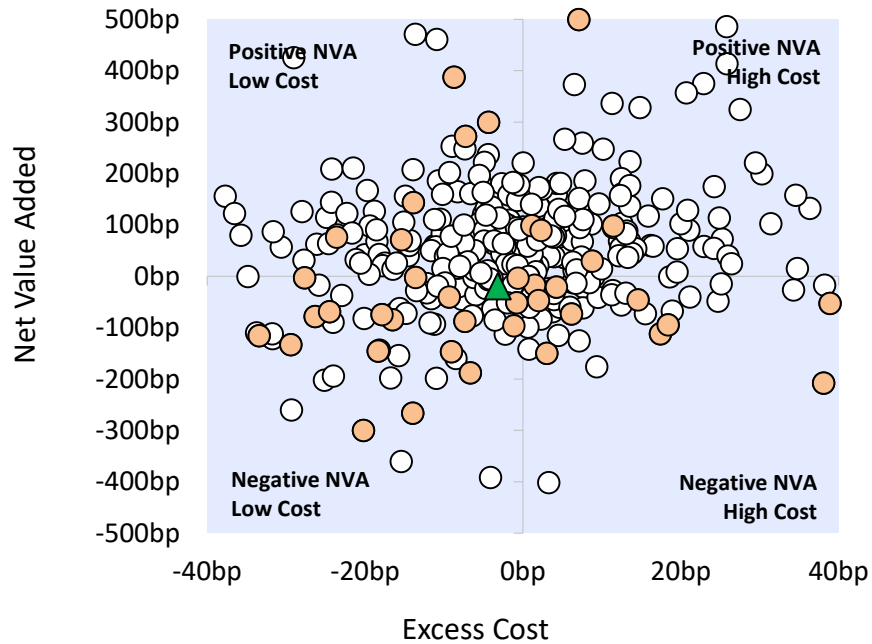
# Cost Effectiveness

Your 2017/18 performance placed in the negative value added, low cost quadrant of the cost effectiveness chart.

Your 5-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.

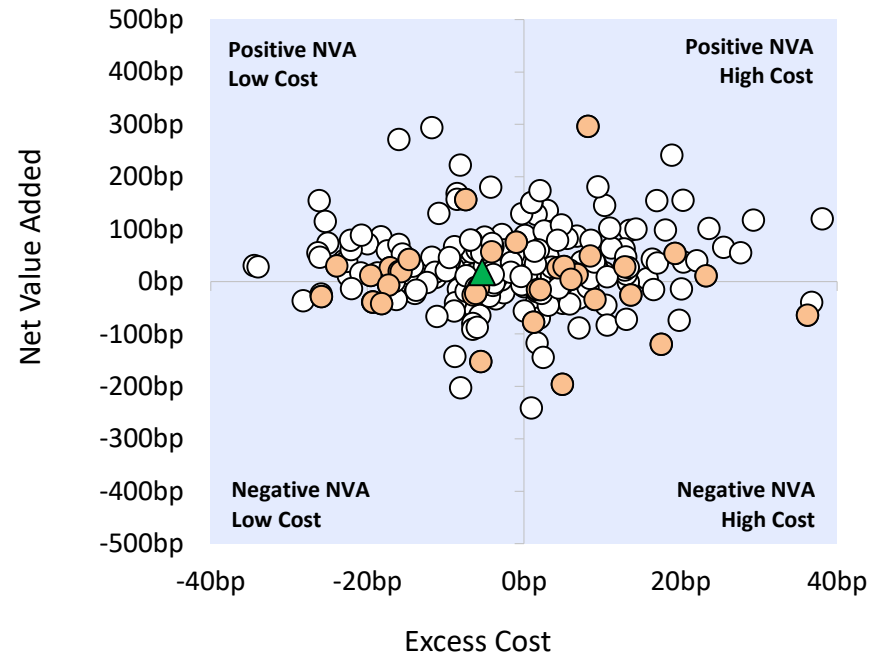
**2017/18 net value added versus excess cost**

(Your 2017/18: net value added -19 bps, cost savings 3 bps <sup>1</sup>)



**5-Year net value added versus excess cost**

(Your 5-year: net value added 18 bps, cost savings 5 bps <sup>1</sup>)



1. Your 5-year cost savings relative to peers of 5 basis points is the average for the past 5 years. Cost savings before 2016/17 are calculated using regression analysis.



# Key takeaways

## Returns

- Your 5-year net total return was 9.0%. This was above the LGPS median of 8.6% and above the global median of 7.9%.
- Your 5-year strategic asset mix return was 8.8%. This was above the LGPS median of 8.6% and above the global median of 7.6%.

## Risk

- Your asset risk of 11.7% was above the LGPS median of 11.5%. Your asset-liability risk of 11.9% was above the LGPS median of 11.6%.
- Your funding level on the standard GAD basis of 96% was equal to the LGPS median of 96%.

## Value added

- Your 5-year net value added was 0.2%. This was above the LGPS median of 0.1% and equal to the global median of 0.2%.

## Cost

- Your investment cost of 53.9 bps was below your benchmark cost of 57.2 bps. This suggests that your fund was slightly low cost compared to your peers.
- Your fund was slightly low cost because you had a lower cost implementation style and you paid less than peers for similar services.
- Your cost fell from 58.4 bps in 2013/14 to 53.9 bps in 2017/18.