

**Staffordshire Pension Fund**  
**Investment Benchmarking Results**  
For the 8-year period ending the 31<sup>st</sup> March 2022

Version 1

05-12-2022



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# This benchmarking report provides an independent assessment of value-for-money.

We compare your costs with other pension funds, inside and outside LGPS. To provide context, we also compare your investment performance, asset mix, risk, funding etc. What emerges is a narrative about your fund, how it compares with others and why your investment outcomes compare as they do.

## Cost

- How do our costs compare and why?
- Where are we paying more / less than others?
- What is the trend in our costs?

## Performance

- Costs need to be seen in the context of performance.
- How do our returns compare with others and why?
- Are our active management decisions being rewarded?

## Risk

- How does the risk in our portfolio compare with others?
- How does risk relate to relative funding levels?

## Value-for-Money

- If we are paying more then are we getting more?
- How does our net value add compare with others?

The report is accompanied by an on-line dashboard. The dashboard allows your management team to drill-down on key metrics and access detailed comparisons of cost, performance and value at an asset class and mandate level.

This report reflects a 8-year time period since 2015 to align with the Department of Leveling Up Housing and Communities (DLUHC) baseline for measuring the success of pooling within LGPS.

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. Detailed notes and definitions are included as an appendix to the report.

## We compare your costs with 18 global peer funds ranging from £4.0 bn to £12.4 bn.

The peer group is selected to answer a key question:

*Are your costs reasonable for a fund of your size and with your assets?*

Peers are therefore selected:

- Based on size - because size impacts costs.
- To include both LGPS and non-LGPS funds globally.
- Because they hold similar assets to you.
- For stability and validity:
  - Regular participants mean consistent year-on-year results.
  - To deliver a stable statistical sample.

The median size in the peer group is £7.1 bn (versus your average assets of £6.5 bn).

We specifically exclude other LGPS funds from your pool because costs will increasingly be homogenous within the pool.

The names of peers are confidential and should not be disclosed to third parties.

### **Peer Group**

#### LGPS Funds

Cambridgeshire County Council\*

Essex Pension Fund

Kent County Council\*

Lothian Pension Fund

Merseyside 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

Dominion Energy, Inc.

Houston Police Officers Pension System

Manitoba Civil Service Superannuation Fund

Missouri State Employees' Ret. Sys.

Stichting BPF voor de Koopvaardij

BPF voor de Media PNO

SPF TNO

New peers versus 2020/21 have a star next to their name. Peers not included from 2020/21: Rhondda Cynon TAF Pension Fund.

## We are benchmarking investment costs of £37.2m or 56.9 bps in 2022.

Asset class	External management costs			Total	
	Passive fees £000s	Active base fees £000s	Active perf. fees £000s	£000s	bps
Equities - UK	44	9		53	1.1
Equities - Global	755	4,920		5,675	14.9
Bonds - Inflation indexed	49			49	1.2
Bonds - other	463			463	8.6
Infrastructure - LP		122	172	294	218.8
Infrastructure - FoFs					
Top Layer Fees		3	6	9	287.0
Underlying Fees		4	4	8	257.0
Domestic property - Evergreen		1,297	254	1,550	30.6
Hedge funds - FoFs					
Top Layer Fees		80	53	133	103.6
Underlying Fees		162	180	342	266.0
Private equity - Diversified - FoFs					
Top Layer Fees		3,163	3,363	6,525	207.2
Underlying Fees		4,849	7,872	12,721	404.0
Private credit - LP		4,576	2,043	6,619	233.3
Private credit - FoFs					
Top Layer Fees		135	63	198	189.4
Underlying Fees		129	75	204	195.0
	1,311	19,448	14,083	34,842	53.3
Oversight, custody and other costs <sup>3</sup>				2,345	3.6
Total benchmarked costs <sup>4</sup>				37,187	56.9

Numbers shaded in grey are excluded from the analysis that follows. Numbers shaded in blue include defaults for one or more mandates, please see appendix 2 to check the defaults used. Please see appendix 4 for any further notes.

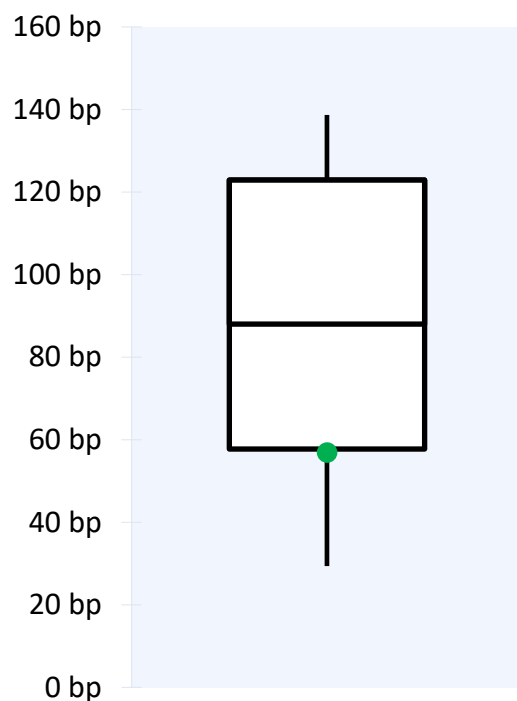
# Your cost of 56.9 bps was above your benchmark cost of 52.3 bps.

## Comparison of costs *before adjusting for asset mix* :

Before adjusting for differences in asset mix, your costs of 56.9 bps were 31.1 bps below the peer median of 88.0 bps.

### Your cost versus peers

(before adjusting for asset mix differences)



## 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	bps
Your investment cost	37,187	56.9
Your benchmark cost	34,185	52.3
Difference	3,002	4.6

The difference is explained by two factors:

	£000s	bps
1. Implementation style	4,013	6.1
2. Paying less for similar assets	(1,011)	(1.5)
Total	3,002	4.6

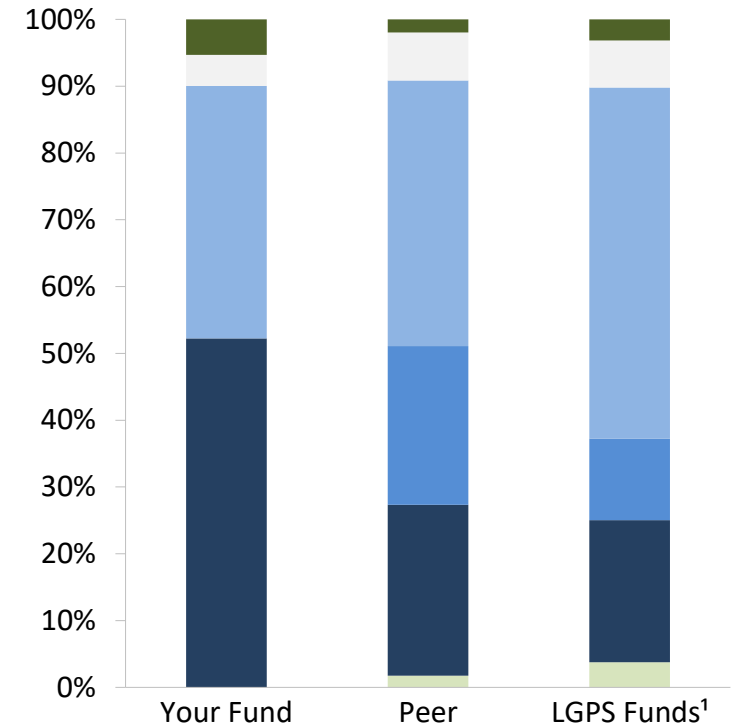
These factors are quantified in the pages overleaf.

# Your implementation decisions cost you 6.1 bps relative to peers.

Implementation choice is about structural differences in how funds implement strategy, e.g. more or less active or passive.

Your implementation choices versus peers	Impact bps	Impact £000s
More fund of funds	6.4	4,178
Less LPs (more evergreen)	0.8 <sup>2</sup>	492
More LPs (less co-investment)	0.1	53
More external (less internal)	3.0	1,955
Less active (more passive)	(3.7)	(2,393)
Less overlays	(0.4)	(272)
<b>Total impact</b>	<b>6.1</b>	<b>4,013</b>

## Implementation style



■ Fund of funds	5.3%	2.0%	3.2%
■ LP	4.7%	7.1%	7.1%
■ External active	37.8%	39.7%	52.5%
■ Internal active	0.0%	23.7%	12.2%
■ External passive	52.2%	25.5%	21.3%
■ Internal passive	0.0%	1.8%	3.8%

## Paying less for similar assets saved you 1.5 bps relative to peers.

Asset class and style	Mandate	You bps	Peer bmk. cost bps <sup>1</sup>	Total fund impact £000s	Total fund impact bps <sup>2</sup>
<b>Mandates managed by the pool</b>					
Equities - Global - External active	Global Equity Active Multi Manager Fund	28.2	34.1	(349.0)	(0.5)
Bonds - Other - External passive	Corporate Bonds	8.6	14.0	(290.9)	(0.4)
Equities - Global - External passive	Factor Based Equities	15.5	5.1	194.4	0.3
Private equity - Private equity - Diversified - FoFs	Private Equity 1	0.0	106.8	(53.1)	(0.1)
Private equity - Private equity - Diversified - FoFs - top layer base fees	Private Equity 1	34.4	80.6	(23.0)	(0.0)
Private equity - Private equity - Diversified - FoFs - underlying perf. fees (on NAV)	Private Equity 1	250.0	250.0	(0.0)	(0.0)
Private equity - Private equity - Diversified - FoFs - underlying base fees	Private Equity 1	154.0	154.0	(0.0)	(0.0)
				(522)	(0.8)
<b>Public Mandates</b>					
Equities - Global - External active	Global Equity	22.5	34.1	(720.0)	(1.1)
Equities - Global - External passive	Passive Global Equity	2.6	5.1	(444.1)	(0.7)
Equities - Global - External active	Global Equity	25.8	34.1	(279.2)	(0.4)
Equities - UK - External active	UK Equity	1.1	28.3	(226.1)	(0.3)
Equities - UK - External passive	Passive UK Equity	1.1	3.4	(90.1)	(0.1)
All other public mandates				66	0.1
				(1,694)	(2.6)
<b>Private asset classes and styles</b>					
Private credit - LP - base fees		161.3	108.4	1,501	2.3
Domestic property - Evergreen - base fees		25.6	47.4	(1,105)	(1.7)
Private equity - Diversified - FoFs - top layer base fees		101.5	80.6	648	1.0
Private credit - FoFs - top layer base fees		129.4	46.0	87	0.1
All other private asset classes				87	0.1
				1,131	1.7
Oversight, custody and other costs		3.6	3.6	20	0.0
			Total	(1,064)	(1.5)

## Changes in your asset mix increased your cost by 2.6 bps since 2015.

All other things being equal, changes in your asset mix influence your total cost. If you invest more in higher cost assets, particularly private assets, your costs increase (and vice versa).

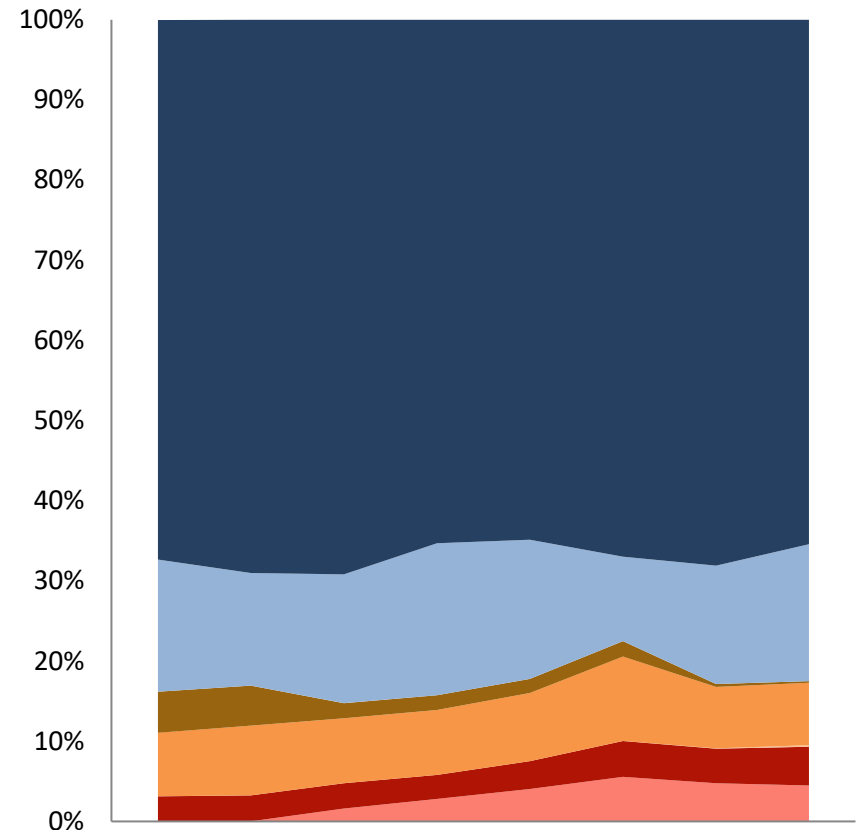
Asset classes that tend to have lower costs are denoted in blue and asset classes that tend to have higher cost assets are denoted in red colours.

The asset mix impact is the predicted change of your costs based on asset mix alone. It assumes that what you paid for each mandate and how you implemented your strategy was unchanged from the baseline year.

	Since last year	8-year
<b>Start cost (bps)</b>	<b>51.2</b>	<b>55.8</b>
Impact of:		
Asset mix	2.4	2.6
Implementation	0.3	(1.8)
Pay more/less	2.9	0.3
<b>End cost (bps)</b>	<b>56.9</b>	<b>56.9</b>

■ Equities	67%	69%	69%	65%	65%	67%	68%	65%
■ Bonds	16%	14%	16%	19%	17%	11%	15%	17%
■ Hedge funds & multi-asset	5%	5%	2%	2%	2%	2%	0%	0%
■ Property	8%	9%	8%	8%	9%	11%	8%	8%
■ Infrastructure	0%	0%	0%	0%	0%	0%	0%	0%
■ Private equity	3%	3%	3%	3%	4%	4%	4%	5%
■ Private debt	0%	0%	2%	3%	4%	6%	5%	5%
■ Derivatives/Overlays	0%	0%	0%	0%	0%	0%	0%	0%

8-year trend in your actual asset mix





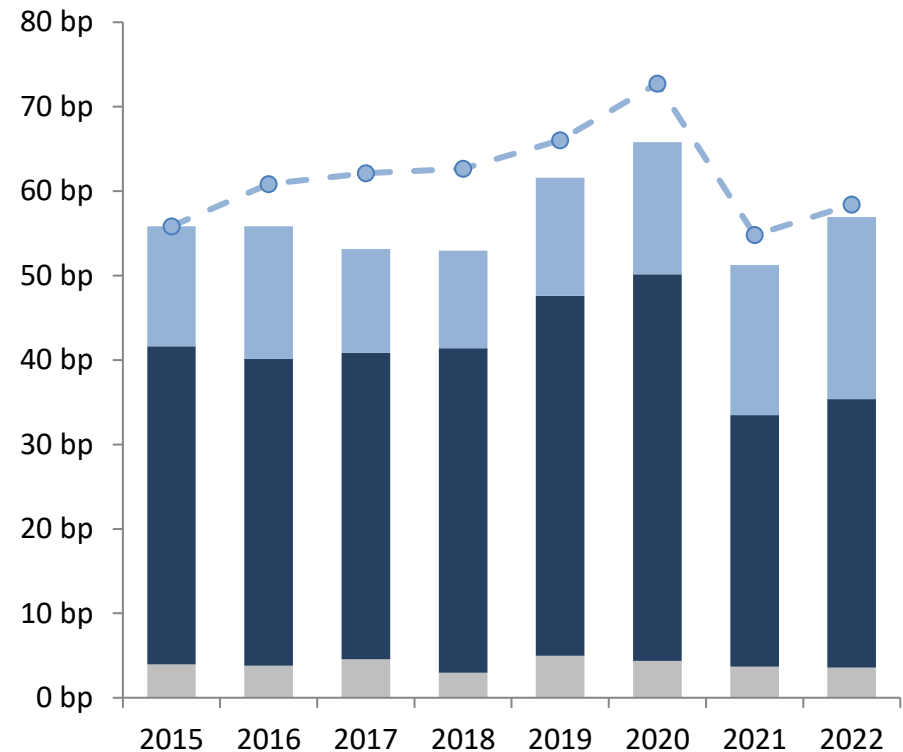
# Your benchmarked costs increased from 55.8 bps in 2015 to 56.9 bps in 2022.

Your costs change over time because:

1. Your asset mix changes.
2. Your implementation approach changes, e.g., moving from active to passive or external to internal (or vice versa).
3. What you pay for mandates changes over time because:
  - Performance fees (if applicable) are variable.
  - Your line-up of managers and mandates changes.
  - Some mandates have cost bands that vary with assets.

The asset mix impact line on the graph shows the predicted change of your costs based on asset mix alone. It assumes that what you paid for each mandate and how you implemented your strategy was unchanged from the baseline year.

Investment cost changes (bps)



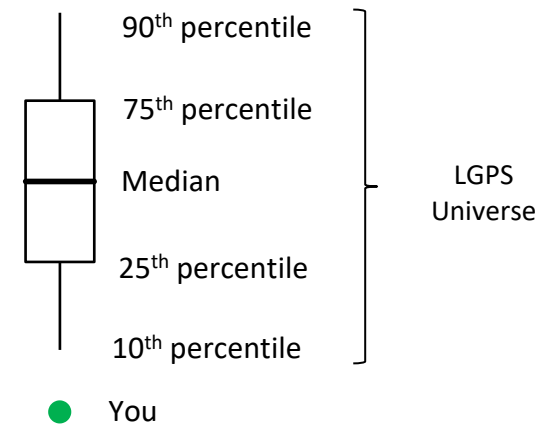
Performance	14.2	15.7	12.3	11.6	14.0	15.6	17.8	21.6
Base and internal	37.6	36.3	36.3	38.4	42.7	45.8	29.8	31.8
Oversight	4.0	3.8	4.5	3.0	5.0	4.4	3.7	3.6
Total	55.8	55.8	53.1	53.0	61.6	65.8	51.2	56.9
Asset mix impact	55.8	60.8	62.1	62.7	66.0	72.7	54.8	58.4

## We compare your investment returns to CEM's LGPS universe.

Costs need to be seen in context so we consider relative performance to help better understand cost. The investment performance comparisons are with CEM's LGPS universe, which currently comprises 29 funds with total assets of £225 billion (average £8 billion, median £5 billion).

Pool / Group	Participating funds
Access	Cambridgeshire, Essex, Isle of Wight, Kent, Northamptonshire.
BCPP	Cumbria, Durham, Lincolnshire, NYPF, SYPF, Surrey, Teesside, Tyne and Wear, Warwickshire.
Central	Staffordshire, West Midlands, Worcestershire.
LPP	Lancashire, LPFA.
Northern	GMPP, Merseyside, West Yorkshire.
Scotland	Falkirk, Fife, Lothian, Strathclyde.
Wales	Swansea, Flintshire, Gwynedd.

'Bar and whisker' graphs are used to show how you compare with other LGPS funds:

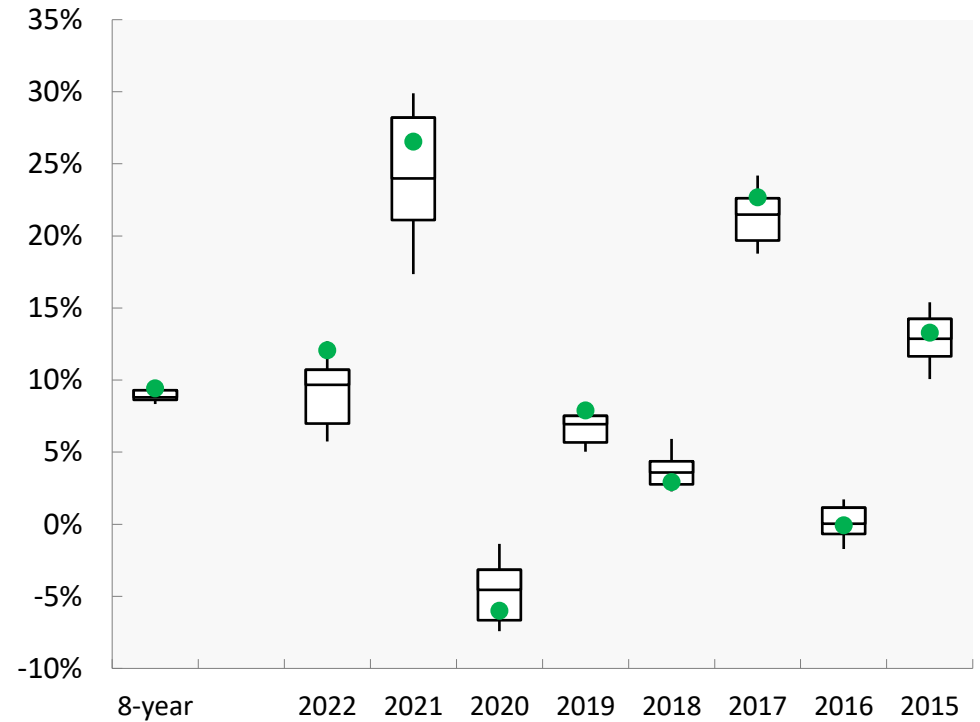


## Your 8-year net total return of 9.4% was above the LGPS median of 8.8%.

In the pages that follow, we help you to understand why your returns compare as they do by separating total return into its more meaningful components:

- *Benchmark 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.

LGPS net total returns - quartile rankings



Q3	9.3	10.7	28.2	-3.2	7.5	4.4	22.6	1.1	14.2
<b>Median</b>	<b>8.8</b>	<b>9.7</b>	<b>24.0</b>	<b>-4.6</b>	<b>7.0</b>	<b>3.6</b>	<b>21.5</b>	<b>0.0</b>	<b>12.9</b>
Q1	8.6	7.0	21.1	-6.7	5.7	2.8	19.7	-0.7	11.6
<b>Your fund</b>	<b>9.4</b>	<b>12.1</b>	<b>26.5</b>	<b>-6.0</b>	<b>7.9</b>	<b>2.9</b>	<b>22.7</b>	<b>-0.1</b>	<b>13.3</b>
LGPS %ile	86%	82%	67%	31%	78%	32%	77%	46%	63%

## Your 8-year benchmark return of 9.4% was above the LGPS median of 8.7%.

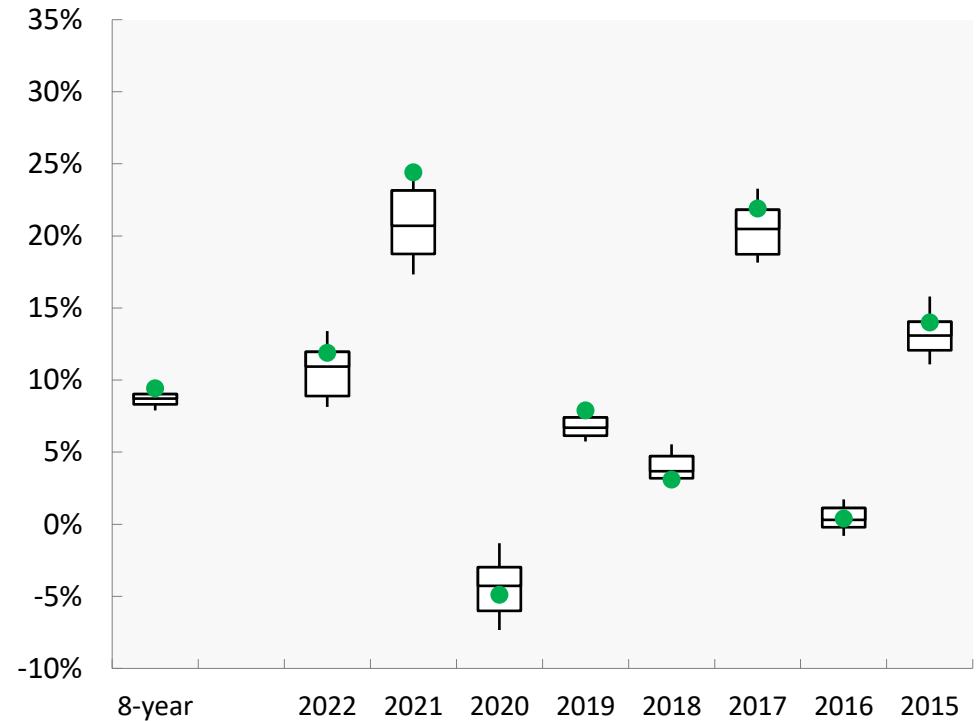
The benchmark return is the return you could have earned by implementing your strategy passively, i.e., by indexing your portfolio in line with your strategic asset allocation.

You have selected a strategic asset allocation based on your funding position, long-term market expectations, liabilities, employer covenant and appetite for risk.

These factors are different in each fund and it is unsurprising that benchmark returns (and total returns) often vary widely.

The following page looks at how your strategic asset allocation and choice of benchmarks compare with other LGPS funds.

LGPS benchmark returns - quartile rankings



Q3	9.0	12.0	23.2	-3.0	7.4	4.7	21.8	1.1	14.0
<b>Median</b>	<b>8.7</b>	<b>10.9</b>	<b>20.7</b>	<b>-4.3</b>	<b>6.7</b>	<b>3.7</b>	<b>20.5</b>	<b>0.3</b>	<b>13.1</b>
Q1	8.3	8.9	18.8	-6.0	6.2	3.2	18.7	-0.2	12.1
<b>Your fund</b>	<b>9.4</b>	<b>11.9</b>	<b>24.4</b>	<b>-4.9</b>	<b>7.9</b>	<b>3.1</b>	<b>21.9</b>	<b>0.4</b>	<b>14.0</b>
LGPS %ile	86%	71%	92%	43%	86%	22%	77%	51%	74%

## Benchmark returns are driven by strategic asset mix and choice of benchmarks.

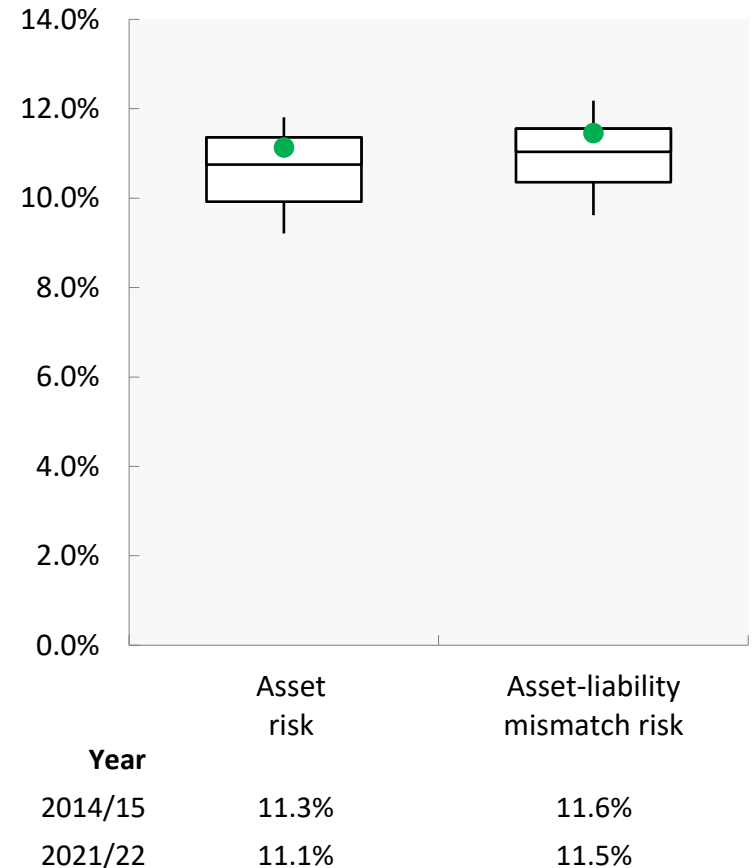
Strategic asset mix				Actual asset mix		8-year benchmark return	
	You 2015	You 2022	LGPS Avg. 2022	You 2022	You	LGPS Avg.	
Equities - UK	15%	7%	10%	7%	5.8%	6.0%	
Equities - U.S.	0%	0%	2%	0%	n/a <sup>1</sup>	16.7%	
Equities - Emerging	2%	0%	3%	0%	n/a <sup>1</sup>	7.6%	
Equities - Global	51%	58%	33%	58%	11.7%	12.1%	
Equities - Other	0%	0%	5%	0%	n/a <sup>1</sup>	n/a <sup>1</sup>	
<b>Total equities</b>	<b>68%</b>	<b>65%</b>	<b>52%</b>	<b>65%</b>	<b>n/a<sup>1</sup></b>	<b>10.3%</b>	
Bonds - Inflation indexed	7%	7%	3%	6%	7.1%	7.2%	
Bonds - Global	10%	0%	3%	0%	n/a <sup>1</sup>	3.5%	
Bonds - Other	1%	8%	12%	11%	n/a <sup>1</sup>	n/a <sup>1</sup>	
<b>Total bonds</b>	<b>17%</b>	<b>14%</b>	<b>19%</b>	<b>17%</b>	<b>3.8%</b>	<b>4.6%</b>	
Global TAA	0%	0%	2%	0%	n/a <sup>1</sup>	1.1%	
Hedge funds	1%	1%	1%	0%	1.2%	3.2%	
Infrastructure	0%	2%	7%	0%	n/a <sup>1</sup>	4.1%	
Real estate incl. REITs	10%	10%	9%	8%	9.4%	8.9%	
Other Real Assets	0%	0%	0%	0%	n/a <sup>1</sup>	n/a <sup>1</sup>	
Private equity	4%	4%	6%	5%	2.9%	18.3% <sup>2</sup>	
Private debt	0%	5%	4%	5%	n/a <sup>1</sup>	3.3%	
<b>Total alternatives</b>	<b>15%</b>	<b>22%</b>	<b>29%</b>	<b>17%</b>			

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

It is interesting and helpful to compare the overall expected level of volatility in your portfolio. Each fund has its own risk model, but we calculate risk on a standard basis in order to compare funds. It is your position relative to others that is helpful.

- Asset risk - A higher asset risk is indicative of a higher weighting to more volatile assets and/or more concentration in the portfolio (and vice-versa). Your asset risk of 11.1% was above the LGPS median of 10.8%.
- Asset-liability mismatch risk - A lower asset-liability mismatch risk means you are closer to a 'fully-matched' position. A higher asset-liability mismatch risk is indicative of a willingness to take more risk relative to liabilities. Your asset-liability risk of 11.5% was above the LGPS median of 11.0%.

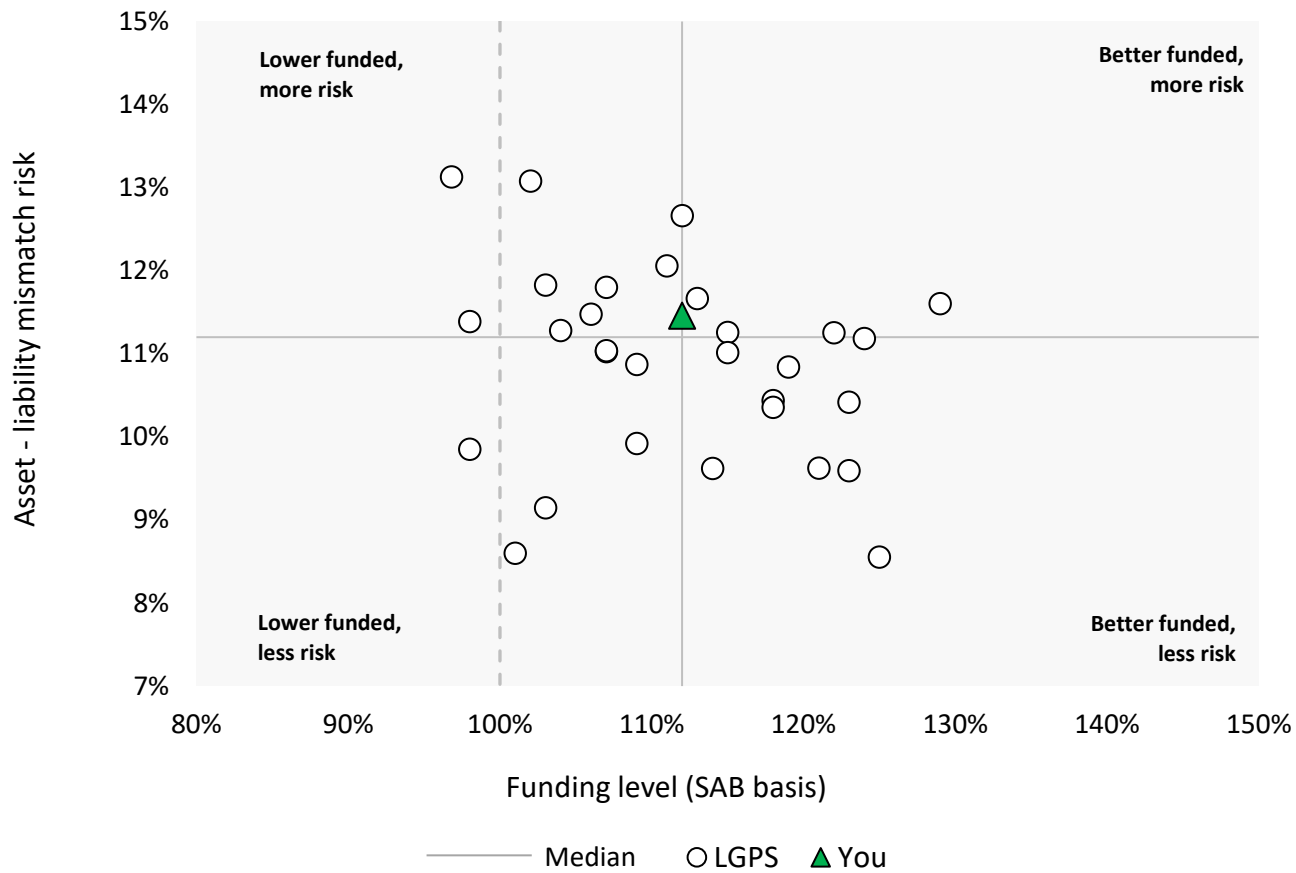
LGPS risk levels at 31<sup>st</sup> March 2022



# Your funding level on the standard SAB basis<sup>1</sup> in 2019 was 112%.

Your funding level on the standard SAB basis in 2019 was equal to the LGPS median of 112%. You had more asset liability mismatch risk than other LGPS funds. We use the standard SAB basis because it helps us to compare relative funding levels, eliminating most of the noise of different actuarial assumptions.

### LGPS funding levels (SAB basis) vs asset-liability mismatch risk



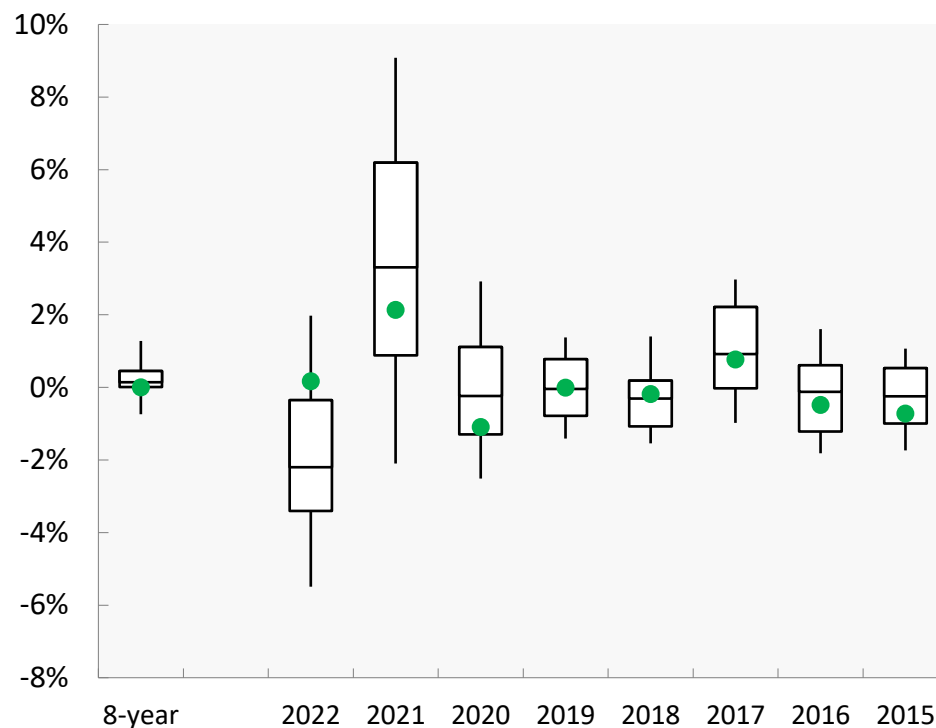
## Your 8-year net value added of 0.0% was slightly below the LGPS median of 0.1%.

Net value added is outperformance from active implementation decisions. It equals total net return minus benchmark return. It is a function of active management decisions made in the implementation of your strategy including tactical asset allocation, manager selection, stock selection, choice of benchmarks, hedging, overlays, etc.

Your average 8-year net value added of 0.0% compares to a median of 0.1% for the LGPS universe.

Year	Assets (£m)	Net value add (%)	Approx. net value add (£m)
2015	3,519	-0.7%	-25
2016	3,749	-0.5%	-18
2017	4,154	0.8%	32
2018	4,669	-0.2%	-9
2019	4,946	0.0%	0
2020	4,739	-1.1%	-52
2021	6,125	2.1%	131
2022	6,533	0.2%	11

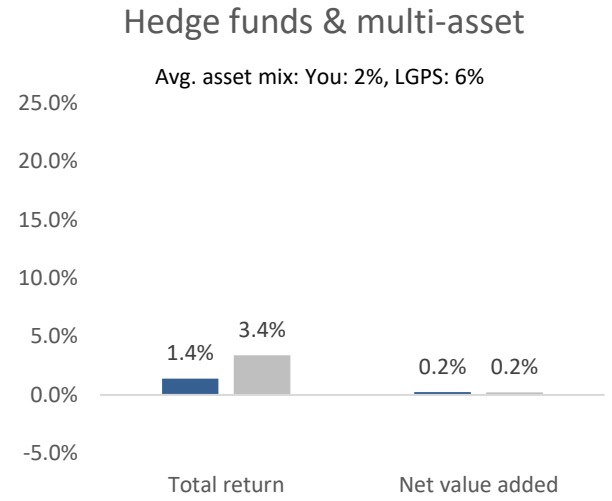
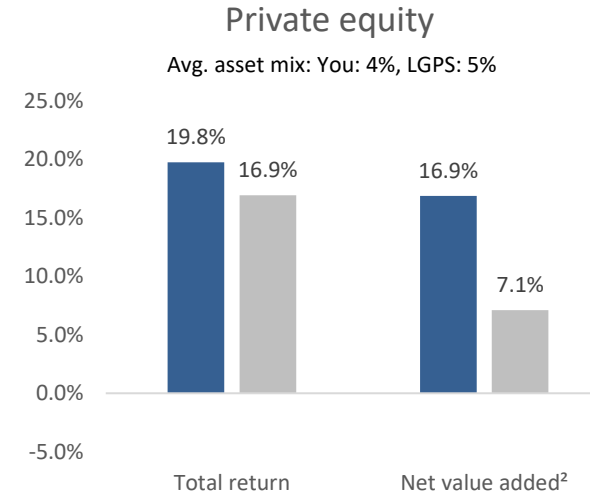
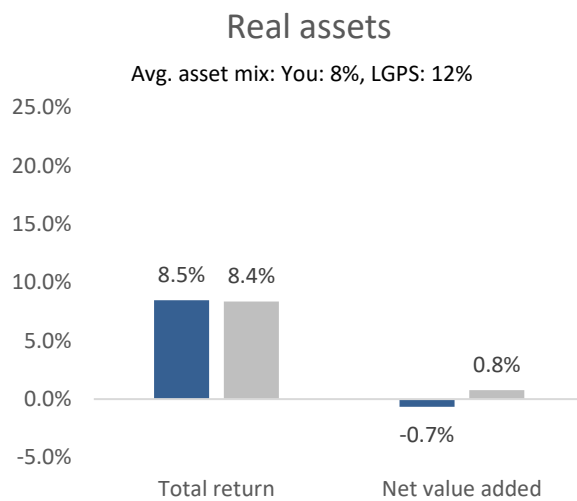
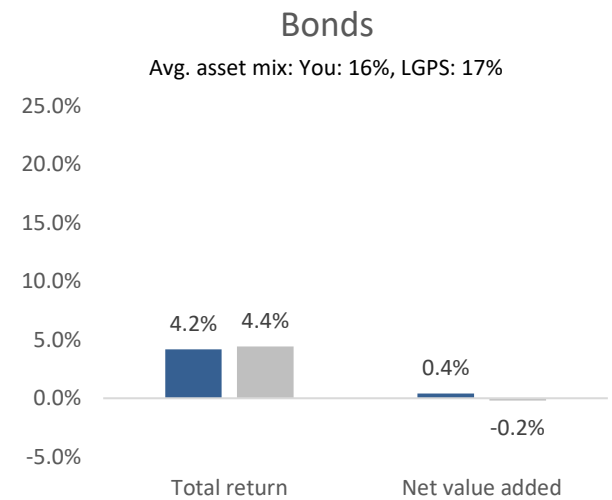
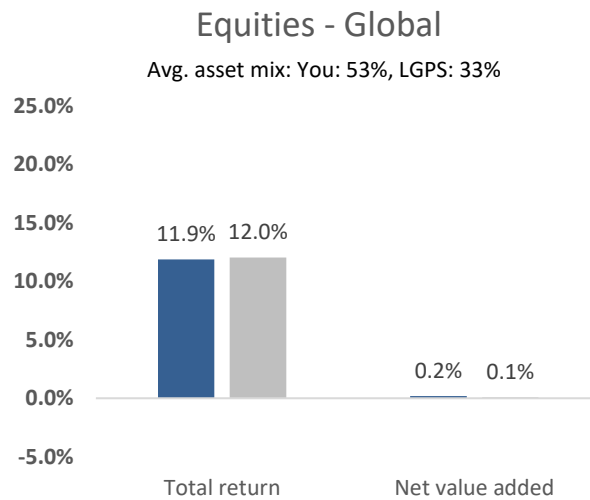
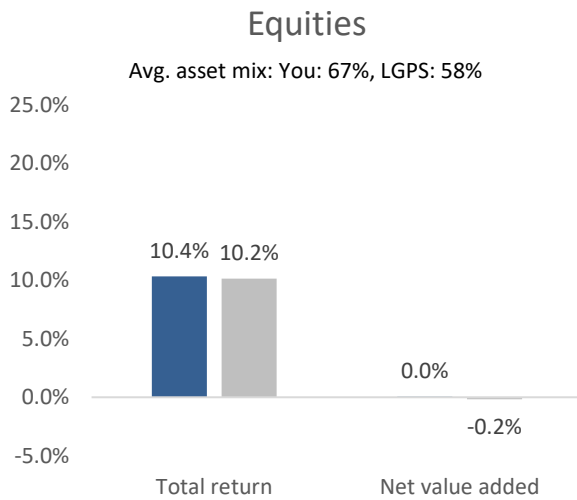
LGPS net value added<sup>1</sup> - quartile rankings



Q3	0.4	-0.4	6.2	1.1	0.8	0.2	2.2	0.6	0.5
<b>Median</b>	<b>0.1</b>	<b>-2.2</b>	<b>3.3</b>	<b>-0.2</b>	<b>0.0</b>	<b>-0.3</b>	<b>0.9</b>	<b>-0.1</b>	<b>-0.2</b>
Q1	0.0	-3.4	0.9	-1.3	-0.8	-1.1	0.0	-1.2	-1.0
<b>Your fund</b>	<b>0.0</b>	<b>0.2</b>	<b>2.1</b>	<b>-1.1</b>	<b>0.0</b>	<b>-0.2</b>	<b>0.8</b>	<b>-0.5</b>	<b>-0.7</b>
LGPS %ile	23%	79%	39%	29%	54%	51%	46%	41%	33%



# 8-year average net returns and net value added by major asset class

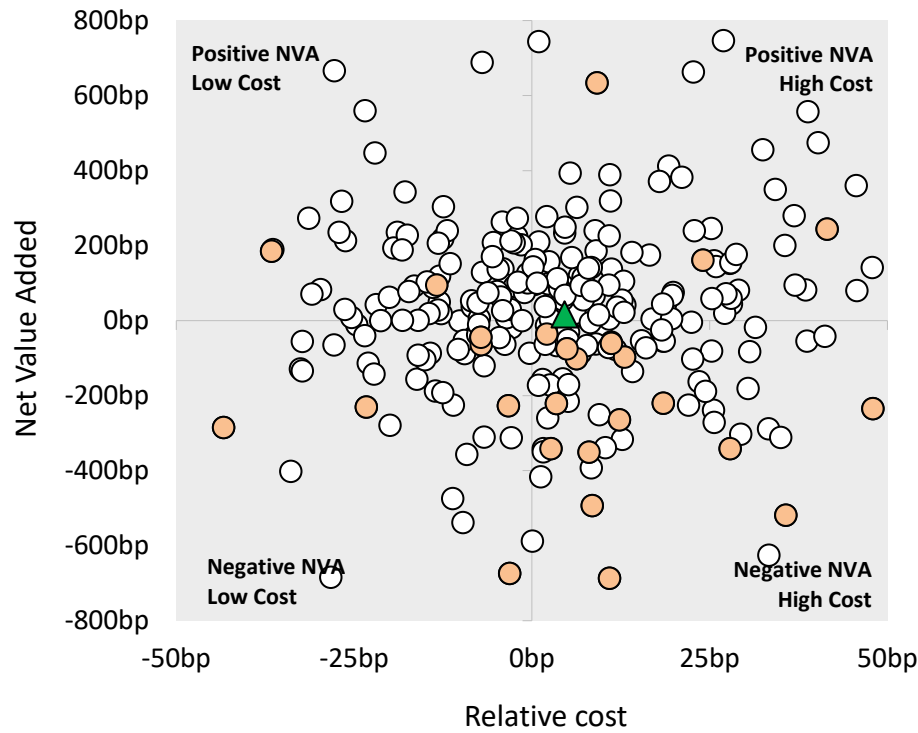


■ You    ■ LGPS

# Value-for-Money (VfM)

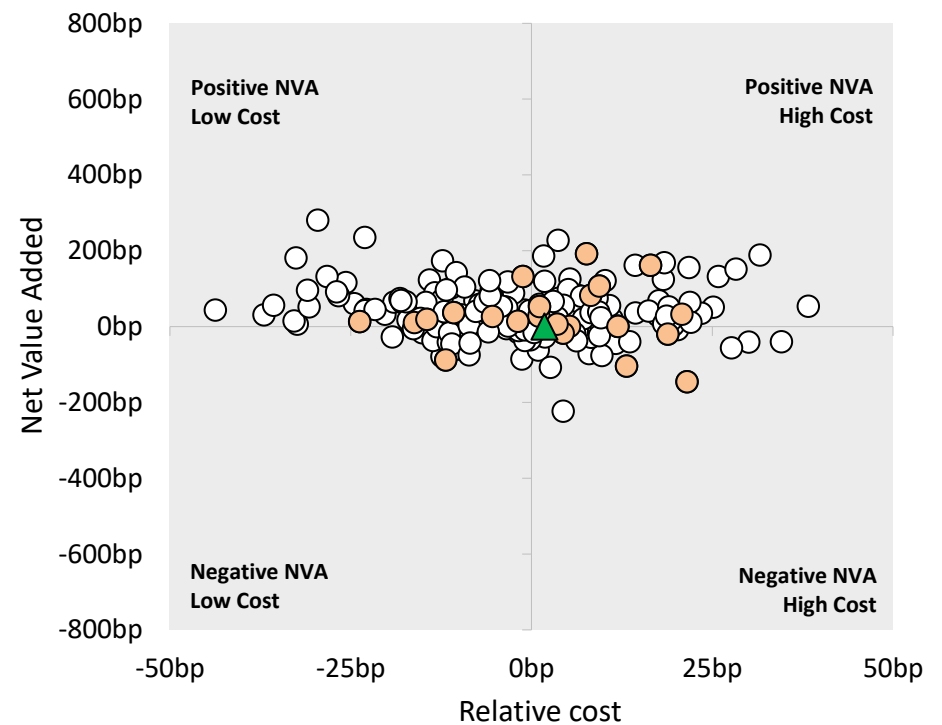
Your 2022 performance placed in the positive value added, high cost quadrant of the VfM chart.

(Your 2021/22: net value added 16.7 bps, cost 4.6 bps)



Your 8-year performance placed in the positive value added, high cost quadrant of the VfM chart.

(Your 8-year: net value added 0.3 bps, cost 1.8 bps)



	2022	2021	2020	2019	2018	2017	2016	2015	8-year
Net value added (bps)	16.7	213.6	(109.2)	(0.7)	(18.4)	77.0	(48.2)	(72.1)	0.3
Your relative cost (bps)	4.6	5.8	6.7	6.9	(3.2)	(2.8)	(5.4) <sup>1</sup>	1.7 <sup>1</sup>	1.8

# Key takeaways

## Cost

- Your investment cost of 56.9 bps was above your benchmark cost of 52.3 bps.
- In aggregate, you had a higher cost implementation style.
- In aggregate, you paid less than peers for similar assets.

## Cost trend

- Your costs increased from 55.8 bps in 2014/15.

## Returns

- Your 8-year net total return was 9.4%. This was above the LGPS median of 8.8%.
- Your 8-year benchmark return was 9.4%. This was above the LGPS median of 8.7%.

## Funding and Risk

- Your funding level of 112% on the standard SAB basis in 2019 was same the LGPS median of 112%.
- Your strategic asset allocation suggests that you take more risk relative to your liabilities than LGPS peers.

## Value added

- Your 8-year net value added was 0.0%. The LGPS median was 0.1%.
- Your cumulative 8-year net value added has added £70 million to the funding of your plan.

## Cost effectiveness / value-for-money

- Your 8-year performance placed in the positive value added, high cost quadrant of the VfM chart.

## Appendix 1: Your complete cost data

Asset Class	Style <sup>1</sup>	Manager	Mandate	Avg. NAV £m	Fee Basis £m	Internal Costs £000s	Base Fees £000s	Perf Fees £000s	Underlying Base Fees £000s	Underlying Perf Fees £000s	Total B'mkd £000s	Total B'mkd bps	Transact costs £000s	Other expenses £000s	
Equities - UK	EP	LGIM	Passive UK Equity	390.6	390.6	n/a	44	-	n/a	n/a	44	1.1	-	-	
Equities - UK	EA	Aberdeen Sta	UK Equity	83.1	83.1	n/a	9	-	n/a	n/a	9	1.1	-	-	
Equities - Global	EP	LGIM	Passive Global Equity	1,795.4	1,795.4	n/a	466	-	n/a	n/a	466	2.6	-	-	
Equities - Global	EP	LGPS Central	Factor Based Equities	186.9	186.9	n/a	289	-	n/a	n/a	289	15.5	-	-	
Equities - Global	EA	LGPS Central	Global Equity Active M	593.2	593.2	n/a	1,674	-	n/a	n/a	1,674	28.2	-	-	
Equities - Global	EA	Longview Part	Global Equity	334.4	334.4	n/a	861	-	n/a	n/a	861	25.8	-	-	
Equities - Global	EA	JP Morgan	Global Equity	620.8	620.8	n/a	1,397	-	n/a	n/a	1,397	22.5	-	-	
Equities - Global	EA	Impax	Fund 1	269.5	269.5	n/a	988	-	n/a	n/a	988	36.7	-	-	
Bonds - Inflation indexed	EP	LGIM	Passive UK Index Linke	417.6	417.6	n/a	49	-	n/a	n/a	49	1.2	-	-	
Bonds - Other	EP	LGPS Central	Corporate Bonds	538.3	538.3	n/a	463	-	n/a	n/a	463	8.6	-	-	
Cash	IA	Cash		160.9	160.9	-	n/a	n/a	n/a	n/a	-	-	-	-	
Domestic property	EA	Colliers		1	445.6	445.6	n/a	1,120	223	n/a	n/a	1,343	30.1	-	-
Domestic property	EA	Property man	Multiple mandates		61.4	61.4	n/a	176	31	n/a	n/a	207	33.7	-	-
Infrastructure	LP	Blackrock	Infrastructure LP - 1		3.6	3.6	n/a	46	46	n/a	n/a	92	257.0	-	-
Infrastructure	LP	Equitix	Fund 1		9.9	9.9	n/a	76	126	n/a	n/a	202	205.0	-	-
Infrastructure	FF	Pantheon	Fund of Funds 1		0.3	0.3	n/a	3	6	4	4	17	544.0	-	-
Hedge funds	FF	Goldman Sact		1	12.8	12.8	n/a	80	53	162	180	475	369.6	-	-
Private equity - Diversified	FF	Harbourvest		1	209.6	209.6	n/a	1,777	2,054	3,228	5,241	12,300	586.8	-	-
Private equity - Diversified	FF	Knightsbridge		1	33.9	33.9	n/a	969	332	522	847	2,670	788.1	-	-
Private equity - Diversified	FF	Partners Grou		1	38.3	38.3	n/a	386	701	590	958	2,634	687.7	-	-
Private equity - Diversified	FF	Lazard		1	0.8	0.8	n/a	6	8	12	20	46	574.0	-	-
Private equity - Diversified	FF	Capital Dynar		1	27.3	27.3	n/a	8	267	420	682	1,377	504.7	-	-
Private equity - Diversified	FF	LGPS Central	Private Equity 1		5.0	5.0	n/a	17	-	77	124	218	438.4	-	-
Private credit	LP	Alcentra		1	88.4	88.4	n/a	732	637	n/a	n/a	1,369	154.8	-	-
Private credit	LP	Highbridge		1	85.0	85.0	n/a	1,391	612	n/a	n/a	2,003	235.6	-	-
Private credit	LP	Hayfin		1	110.3	110.3	n/a	2,453	794	n/a	n/a	3,247	294.4	-	-
Private credit	FF	Barings	European Private Loan		7.1	7.1	n/a	129	43	87	51	309	436.4	-	-
Private credit	FF	LGPS Central	Credit Partnership I LF		3.4	3.4	n/a	7	20	41	24	93	274.9	-	-
<b>Total</b>					<b>6,533</b>	<b>6,533</b>	-	<b>15,616</b>	<b>5,952</b>	<b>5,143</b>	<b>8,131</b>	<b>34,842</b>	<b>53.3</b>	-	-
<b>Oversight, custody and other costs</b>												<b>2345</b>	<b>3.6</b>		
<b>Total amount benchmarked</b>												<b>37,187</b>	<b>56.9</b>		

Numbers highlighted in blue are defaults. Refer Appendix 2 for more details.

1. These are the styles in which you are invested in: EP - external passive, EA - external active, IA - internal active, LP - limited partnership, and FF - fund of funds.

## Appendix 2: Defaults

Defaults are used where the fund is unable to provide data. Defaults are universe median costs by asset class and style.

Asset Class	Implementation style	Default used	Default bps	Based on
Domestic property	Evergreen	Performance fees	5	NAV
Infrastructure	Limited partnership	Base fees	129	Fee basis <sup>1</sup>
Infrastructure	Limited partnership	Performance fees	128	NAV
Infrastructure	Fund of funds	Top layer base fees	92	Fee basis <sup>1</sup>
Infrastructure	Fund of funds	Top performance fees	195	NAV
Infrastructure	Fund of funds	Underlying base fees	129	Fee basis <sup>1</sup>
Infrastructure	Fund of funds	Underlying performance fees	128	NAV
Hedge funds	Fund of funds	Top performance fees	41	NAV
Hedge funds	Fund of funds	Underlying base fees	126	NAV
Hedge funds	Fund of funds	Underlying performance fees	140	NAV
Private equity - Diversified	Fund of funds	Top performance fees	98	NAV
Private equity - Diversified	Fund of funds	Underlying base fees	154	Fee basis <sup>1</sup>
Private equity - Diversified	Fund of funds	Underlying performance fees	250	NAV
Private equity - Diversified	Fund of funds	Top layer base fees	72	Fee basis <sup>1</sup>
Private credit	Limited partnership	Performance fees	72	NAV
Private credit	Fund of funds	Top performance fees	60	NAV
Private credit	Fund of funds	Underlying base fees	123	Fee basis <sup>1</sup>
Private credit	Fund of funds	Underlying performance fees	72	NAV

1. For external property, infrastructure, natural resources and private equity/credit investments the fee basis is usually the committed amount during the commitment period and unreturned invested capital (i.e., book cost) afterward. Unreturned invested capital equals contributed capital less contributed capital attributable to realized investments plus the aggregate amount of write-downs, if any, with respect to unrealized investments. If this has not been provided the default will be based on NAV.

## Appendix 3: SAA, Benchmarks and NVA (1 year)

Asset class	Strategic asset allocation (SAA)	Benchmark	Benchmark return	Actual net return	Net value added (NVA)
Equities - UK	6.5%	Your Stock: UK benchmark	13.0%	11.2%	-1.8%
Equities - Global	58.0%	Your Stock: Global benchmark	12.6%	12.6%	0.0%
Bonds - other	6.5%	50% ICE BofAMI. Sterling Non-Gilt Index (ex-emerging markets)	-4.9%	-5.2%	-0.3%
Bonds - Inflation indexed	6.5%	Your Bonds: Inflation indexed benchmark	4.8%	4.9%	0.1%
Cash	1.0%	Cash	0.1%	0.1%	0.0%
Infrastructure	2.0%	UK CPI +3.5%	10.0%	-14.0%	-24.0%
Domestic property	10.0%	IPD UK Monthly Property (GBP)	23.7%	13.7%	-10.0%
Hedge funds	1.0%	Sterling 3 Month Libor (of 8.5%)	0.2%	11.9%	11.7%
Private credit	5.0%	Sonia +5%	5.1%	13.7%	8.6%
Private equity - Diversified	3.5%	MSCI World Index +2.0% (lagged by 1 quarter)	25.5%	38.4%	12.9%
<b>Total</b>	<b>100.0%</b>				
Net Actual Return (reported by you) at a whole-of-fund level				12.1%	
Benchmark Return (reported by you) at a whole-of-fund level			11.9%		
<b>Net Value Added (Net Return - Benchmark Return)</b>					<b>0.2%</b>

## Appendix 4: Notes

Page	Note
4	<ol style="list-style-type: none"><li>1. Transaction costs should not be regarded as complete. They are shown only where provided. We specifically exclude transaction costs from the benchmarking analysis because of concerns over the consistency and validity of data. We hope to include transaction costs in future years.</li><li>2. Other expenses include fund administration, governance, compliance, distribution and communication costs captured from CTI templates.</li><li>3. Benchmarked investment costs exclude pension administration costs and non-investment related governance and oversight costs.</li><li>4. Your 2021/22 financial statements report investment costs of £20.89 million . The costs benchmarked here are different. This is likely because of differences in standard definitions, and/or estimations of costs in financial statements.</li></ol>
6	<ol style="list-style-type: none"><li>1. The LGPS universe currently comprises of 29 funds.</li><li>2. Typically, more evergreen is lower cost. But your mix of evergreen by asset class increased your cost.</li></ol>
7	<ol style="list-style-type: none"><li>1. The cost that the Peer group is expected to pay for this asset class and style, based on their median cost (in bps).</li><li>2. Bps impact at the total fund level, i.e., what the mandate contributes to the overall total cost vs. benchmark.</li></ol>
13	<ol style="list-style-type: none"><li>1. A value of 'n/a' is shown if asset class returns are not available for the full 8 years or if they are broad and incomparable.</li><li>2. To enable fairer comparisons, the private equity benchmarks of all participants, except your fund, were adjusted to reflect lagged, investable, public-market indices. If CEM used this same adjustment for your fund, your fund's 8-year private equity net value added would have been 8.3%. The 8-year average, self-reported benchmark from private equity was 6.55%</li></ol>
14	<ol style="list-style-type: none"><li>1. Asset risk is the standard deviation of your benchmark return. It is based on the historical variance of, and covariance between, the asset classes in your strategic asset allocation.</li><li>2. Asset-liability mismatch risk is the standard deviation of funded status caused by market factors. It is a function of the standard deviations of your asset risk, your marked-to-market liabilities and the correlation between the two.</li></ol>
15	<ol style="list-style-type: none"><li>1. The funding level is based on standardised actuarial assumptions developed for the Scheme Advisory Board (SAB). Most of the key assumptions are consistent across funds but some assumptions, and in particular mortality assumptions, are fund specific. The standard basis serves a useful purpose in providing context for comparisons of asset risk and asset-liability mismatch risk.</li><li>2. Your funding level, on the regular basis prescribed by your own actuary in 2019 was 99%, i.e., the SAB basis is less prudent than your regular basis. The median funding level for participating LGPS funds on their regular basis was 98%.</li></ol>

## Appendix 4: Notes

Page	Note
16	1. To enable fairer comparisons, the value added for each participant, except your fund, was adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. If CEM used this same adjustment for your fund, your 8-year total fund value added would have been 0.3% lower.
17	1. We do not have sufficiently detailed historic data to compare returns for 8 years. 2. To enable fairer comparisons, the private equity benchmarks of all participants, except your fund, were adjusted to reflect lagged, investable, public-market indices. If CEM used this same adjustment for your fund, your fund's 8-year private equity net value added would have been 8.3%.
18	1. Calculated using a simplified benchmark model.