

# Northern LGPS

## Investment Benchmarking Results

For the 5 year period ending March 31, 2019



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# This report will help you to satisfy your oversight responsibilities.

The CEM Benchmarking report focuses on what is strategically important in investment decision making. We bring the threads of funding, risk, returns and cost together to create a high-level narrative on how your decisions have affected outcomes and how and why you compare as you do across a range of indicators.

The report provides an independent means to validate your strategy or to support arguments for change. It provides accountability and can help you make better decisions. It supports requests for resources and can help in the negotiation of fees with external parties.

- Comparisons on investment performance, highlighting returns that come from:
  - The local Pension Committee's strategic asset allocation decisions, and
  - The implementation of the Committee's strategy.
- Comparisons on 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.
- Information on how and why your costs have changed over time.
- Value-for-money analysis – 'did paying more get you more'?
- Detailed data to support decision making.

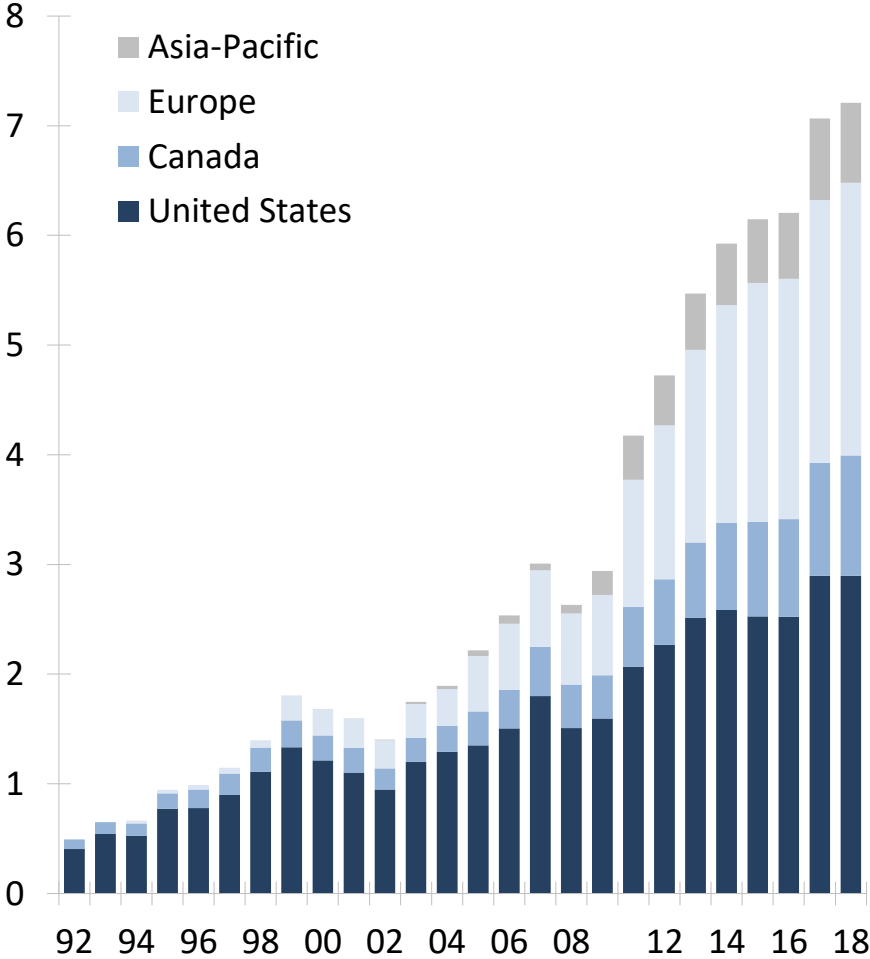
The report is based on standard data submitted to CEM by your fund, by other LGPS funds and a wider universe of funds from around the world. Care is taken to validate the data contained in the report. This includes automated validations on outlying or unusual data as it is submitted, and an additional 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.

# This benchmarking report compares your cost and return performance to the 310 funds in CEM's extensive pension database.

- 167 U.S. pension funds participate. The median U.S. fund had assets of £6.1 billion and the average U.S. fund had assets of £17.3 billion. Total participating U.S. assets were £2.9 trillion.
- 78 Canadian funds participate with assets totaling £1.1 trillion.
- 56 European funds participate with aggregate assets of £2.5 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.
- Of the European funds, there are 46 U.K. funds with aggregate assets of £396.6 billion.
- 7 Asia-Pacific funds participate with aggregate assets of £729.5 billion. Included are funds from Australia, New Zealand, China and South Korea.
- 2 Gulf region funds participate.

The most meaningful comparisons for your returns and value added are to the U.K. universe.

Participating assets (£ trillions)

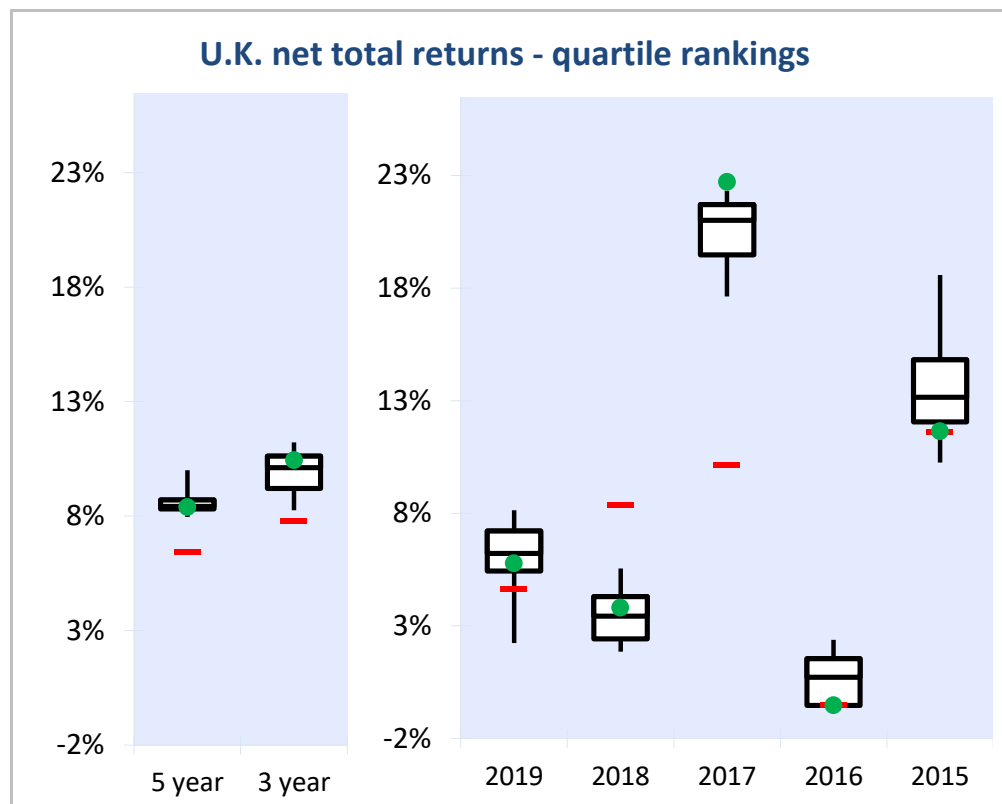


## Your 5-year net total asset-weighted return of 8.5% was equal to the U.K. median of 8.5% and above the Global median of 6.5%.

Total returns, by themselves, provide little insight into the reasons behind relative performance. In the pages that follow, we separate 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 (increasingly within pools in England and Wales).

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 currency 'noise' in the global comparison.



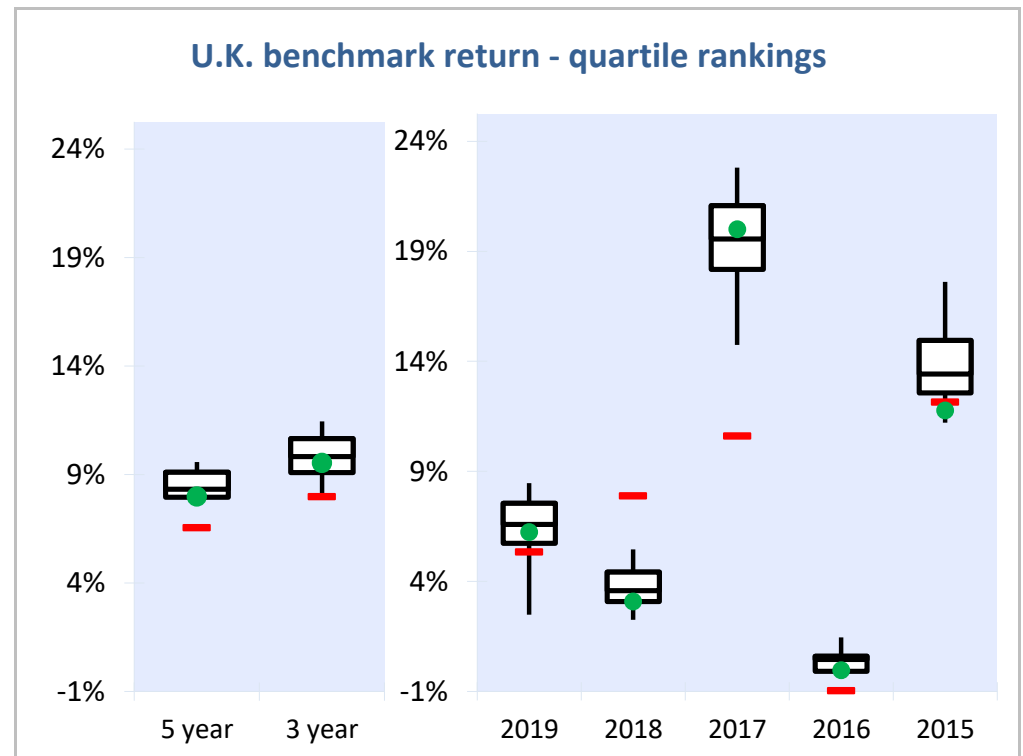
Legend		LGPS								
		90th	Q3	Median	Q1	10th	Average	Global Median	Your fund	LGPS %ile
90th		10.1	11.3	8.2	5.7	22.4	2.5	18.7		
75th		8.8	10.7	7.3	4.4	21.8	1.7	14.9		
median		8.5	10.2	6.3	3.5	21.1	0.8	13.3		
25th		8.4	9.3	5.5	2.5	19.6	-0.4	12.2		
10th		8.1	8.4	2.3	2.0	17.7	-0.7	10.4		
your value	●	8.8	9.9	6.1	3.6	20.4	0.9	13.9		
Global med	—	6.5	7.9	4.8	8.5	10.3	-0.4	11.7		
		8.5	10.6	5.9	3.9	22.8	-0.4	11.7		
		44%	63%	43%	62%	92%	25%	19%		

## Your 5-year asset-weighted benchmark return of 8.0% was below the U.K. median of 8.4% and above the Global median of 6.6%.

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

Having a higher or lower relative benchmark return is not necessarily good or bad. Your benchmark 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 benchmark returns often vary widely between funds. In the following page we explore how your asset mix impacts your benchmark return relative to peers.



Legend		LGPS							
	90th	9.6	11.5	8.5	5.5	22.9	1.5	17.7	
	Q3	9.2	10.7	7.6	4.5	21.1	0.6	15.0	
	Median	8.4	9.9	6.6	3.6	19.6	0.5	13.5	
	Q1	8.0	9.1	5.8	3.1	18.2	0.0	12.6	
	10th	7.6	8.0	2.5	2.3	14.8	-0.4	11.3	
	Average	8.5	9.8	6.3	3.7	19.5	0.5	14.1	
	Global Median	6.6	8.0	5.4	7.9	10.7	-0.9	12.2	
	Your fund	8.0	9.6	6.3	3.1	20.1	0.0	11.8	
	LGPS %ile	31%	37%	30%	28%	60%	29%	14%	

## Differences in benchmark returns are caused by differences in asset mix and benchmarks at an asset class level.

Your relative 5-year aggregate benchmark return was influenced by:

- The negative impact of having a higher policy allocation to U.K. stock.
- The negative impact of lower benchmark returns for all alternative assets compared to the U.K. average.
- These factors were partly offset by the positive impact of a higher allocation to U.S. Stock.

	5-Year average strategic asset mix <sup>1</sup>			5-year bmk. return	
	Your Fund	U.K. Avg.	More/ Less	Your Fund	U.K. Avg.
Asia-Pacific Stock	8%	3%	5%	10.7%	10.1%
U.K. Stock	25%	16%	9%	6.1%	6.2%
Europe exUK Stock	9%	3%	6%	7.0%	6.8%
U.S. Stock	10%	5%	4%	16.1%	14.7%
Emerging Market Stock	5%	3%	2%	10.9%	9.3%
Global Stock	2%	25%	-23%	8.5%	11.2%
Other Stock <sup>2</sup>	0%	3%	-2%		n/a <sup>3</sup>
<b>Total Stock</b>	<b>60%</b>	<b>58%</b>	<b>2%</b>	<b>9.1%</b>	<b>9.9%</b>
Fixed Income - UK	2%	4%	-3%	5.5%	5.3%
Fixed Income - UK Gov't	4%	1%	2%	5.2%	6.8%
Fixed Income - UK Credit	4%	1%	2%	5.0%	5.3%
Inflation Indexed Bonds	5%	6%	-1%	8.9%	9.7%
Global Bonds	3%	6%	-4%	6.4%	3.2%
Cash	3%	1%	2%	0.3%	0.4%
Other Fixed Income <sup>2</sup>	2%	2%	-1%	n/a <sup>3</sup>	n/a <sup>3</sup>
<b>Total Fixed Income</b>	<b>21%</b>	<b>22%</b>	<b>-1%</b>	<b>5.6%</b>	<b>6.0%</b>
Hedge Funds	2%	2%	0%	2.8%	3.2%
Balanced Funds	0%	1%	-1%	n/a <sup>3</sup>	4.7%
Infrastructure	3%	3%	0%	3.2%	4.2%
Real Estate ex-REITs	2%	4%	-2%	9.2%	9.3%
Domestic Property	6%	5%	1%	7.5%	9.4%
Other Real Assets <sup>2</sup>	1%	1%	0%	n/a <sup>3</sup>	n/a <sup>3</sup>
Private Equity	5%	4%	1%	4.1%	12.5%
Private Debt	0%	1%	-1%	n/a <sup>3</sup>	3.7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>0%</b>		

1. 5-year weights are based only on plans with 5 years of continuous data.

2. Other stock includes EAFE. Other fixed income includes Canada, UK, U.S., long bonds and EAFE bonds. Other real assets includes commodities, natural resources and REITS.

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

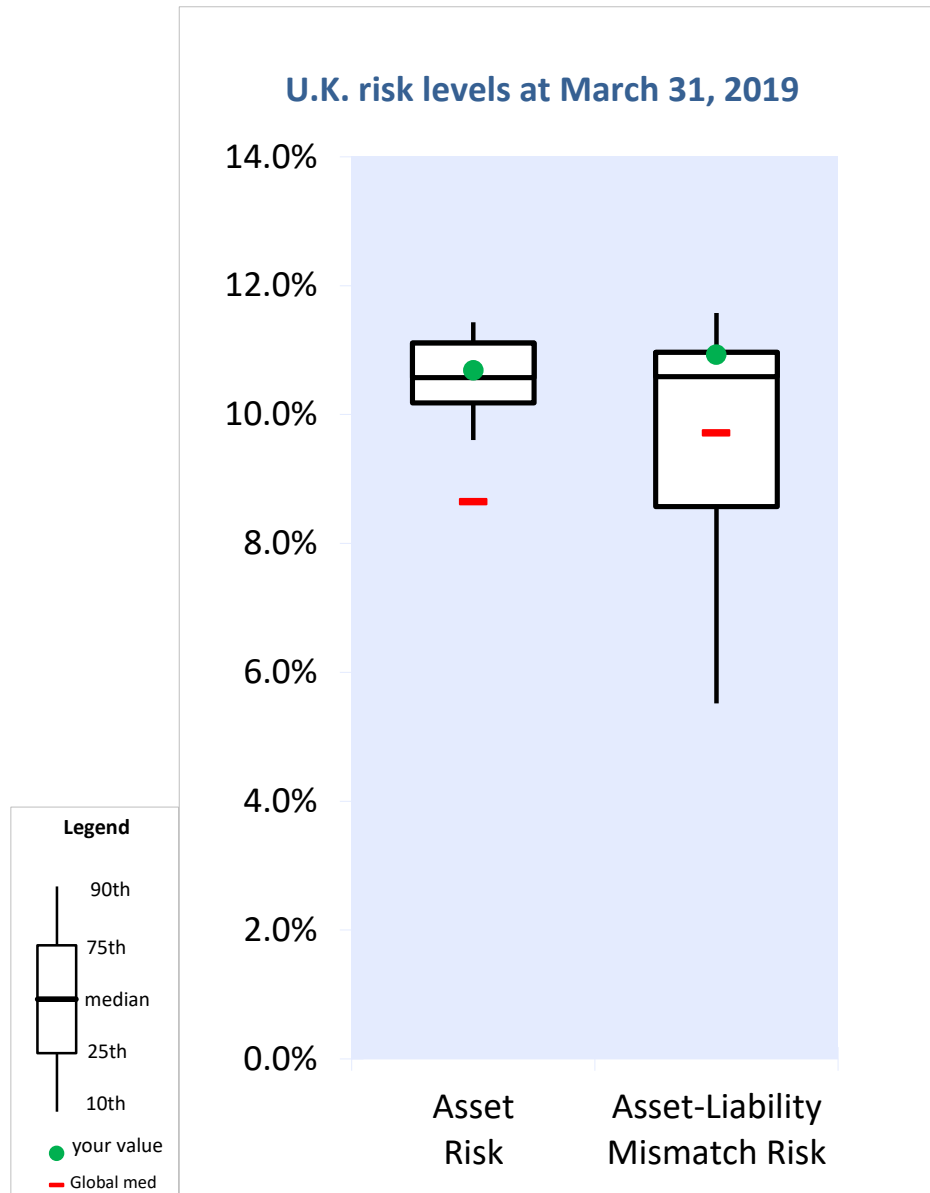
# Your strategic asset allocation is largely a function of your appetite for risk.

Two of the key risks 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 10.69% was above the U.K. median of 10.57%.
- **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 employer covenants 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 10.93% was above the U.K. median of 10.59%.

Trend:

	Asset Risk	Asset-Liability Mismatch Risk
2014/15	10.96%	11.43%
Change	-0.27%	-0.50%
2018/19	10.69%	10.93%

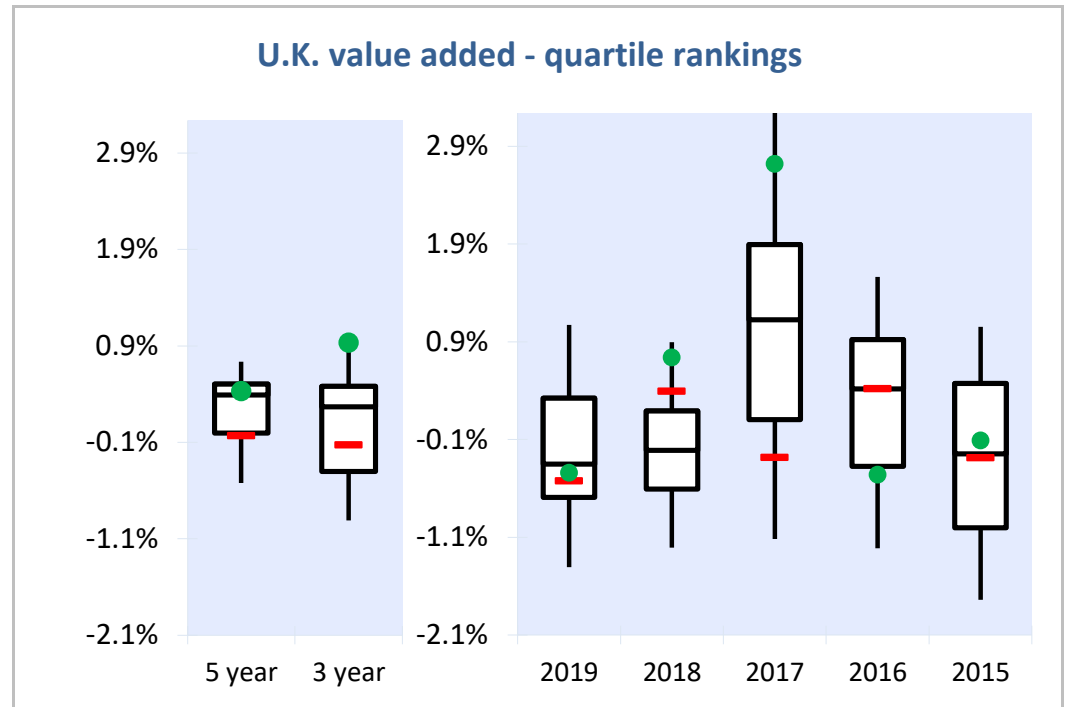


# Net value added is the component of total return from active management. Your 5-year net value added was 0.5%.

Net value added equals total net return minus benchmark return.

It is a function of active management decisions made in the implementation of your strategy which includes tactical asset allocation, manager selection, stock selection, choice of benchmarks, hedging, overlays, etc.

Your 5-year net value added of 0.5% compares to a median of 0.4% for the U.K. universe and 0.0% globally.



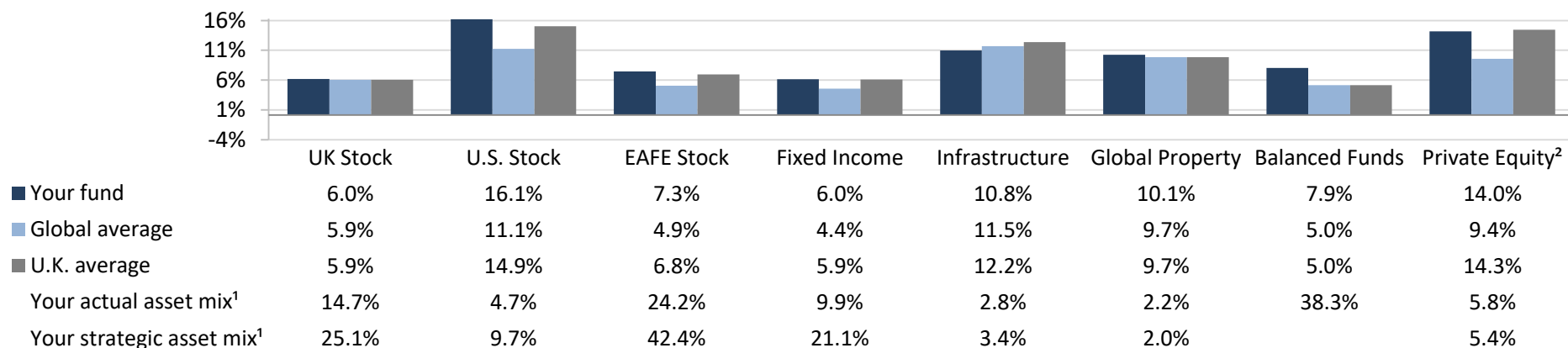
Your value added was impacted by your choice of benchmarks in private markets, in particular. CEM suggests using lagged, investable benchmarks for private equity. If you used the private equity benchmark suggested by CEM, your 5-year total pool value added would have been 0.5% lower.

Legend		LGPS							
	90th	90th	0.8	1.0	1.1	0.9	3.4	1.6	1.1
	75th	Q3	0.5	0.5	0.4	0.2	1.9	1.0	0.5
	median	Median	0.4	0.3	-0.3	-0.2	1.2	0.5	-0.2
	25th	Q1	0.0	-0.4	-0.6	-0.6	0.1	-0.3	-1.0
	10th	10th	-0.5	-0.9	-1.4	-1.2	-1.1	-1.2	-1.7
	your value	Average	0.3	0.1	-0.2	-0.1	0.9	0.4	-0.3
	Global med	Global Median	0.0	-0.1	-0.5	0.4	-0.2	0.5	-0.2
		Your fund	0.5	1.0	-0.4	0.8	2.8	-0.4	-0.1
		LGPS %ile	56%	89%	48%	86%	84%	21%	54%

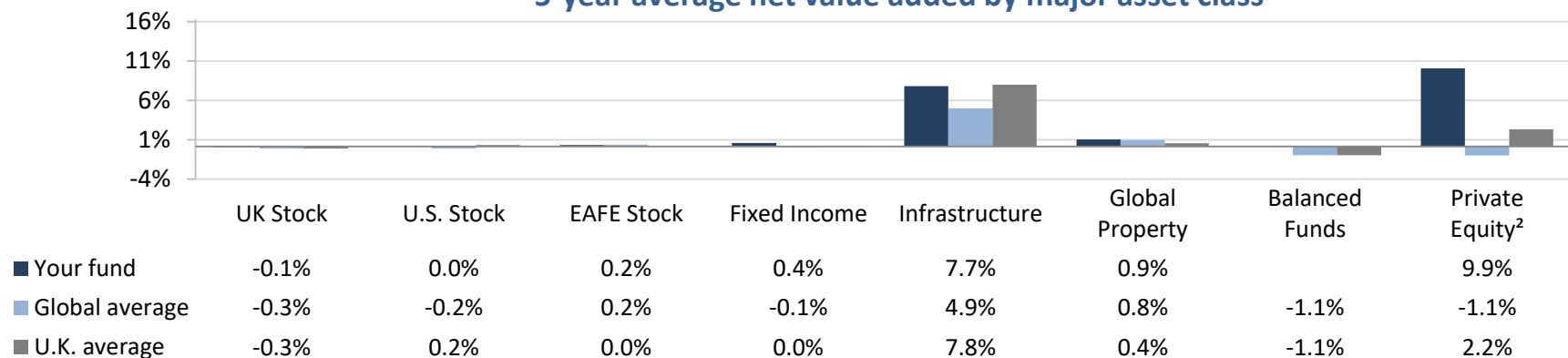


# Here is how your net returns and net value added compare.

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



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

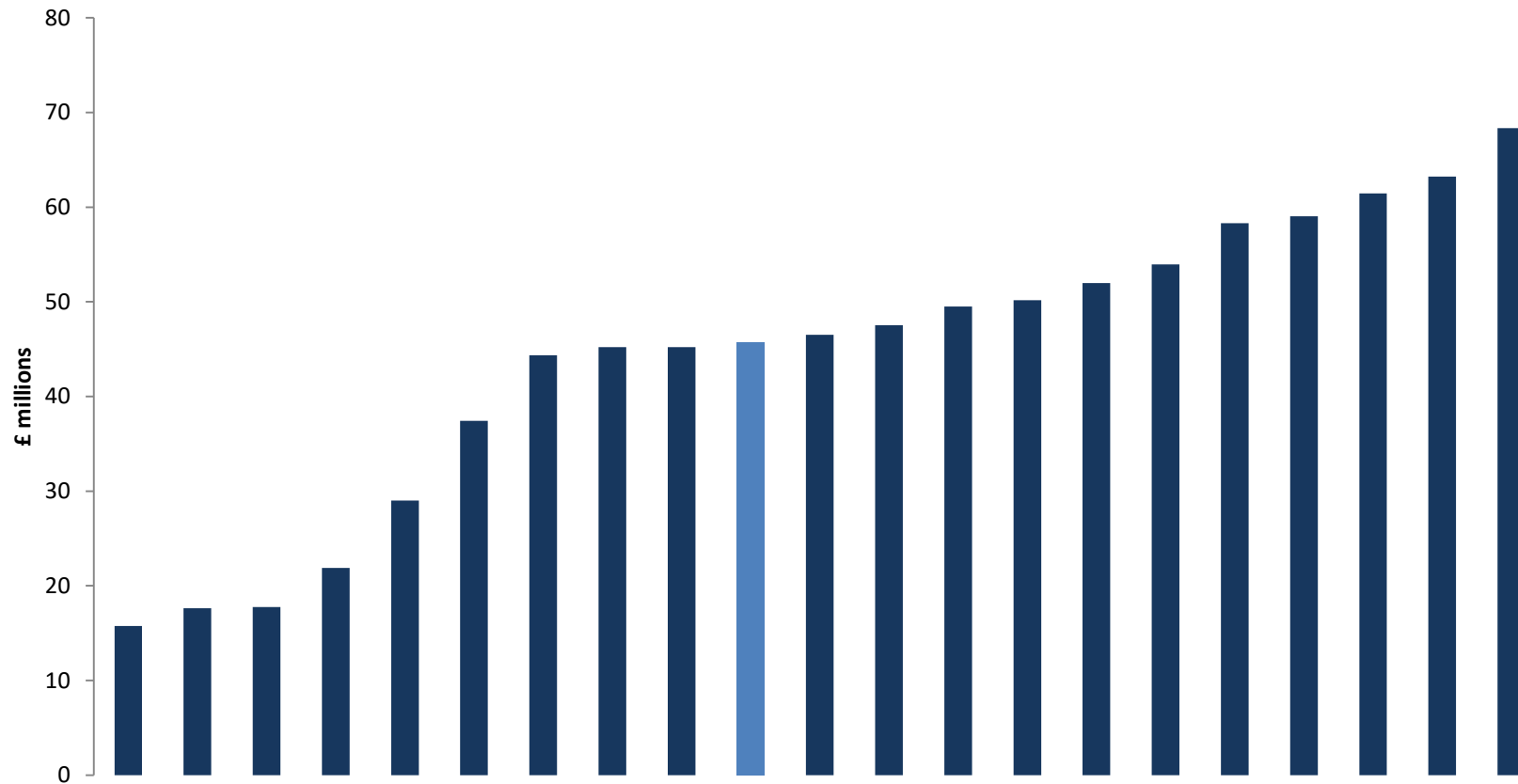


1. 5-year average.

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 your fund used the private equity benchmark suggested by CEM, your fund's 5-year private equity net value added would have been 0.2%.

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

- 21 Global sponsors from £15.8 billion to £68.3 billion
- Median size of £46.5 billion versus your £45.7 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 are benchmarking investment costs of £161.5m or 35.8 basis points in 18/19.

Costs by asset class and style (£000s)	Internal Management			External Management			Total	
	Passive	Active	Oversight of external	Passive fees	Active base fees	Perform. fees		
Equities, Bonds, Cash and Multi-asset strategies	347	3,081	272	2,584	30,755	544	37,583	
Hedge Fund - External Active			38		1,874	3,719	5,631	
Hedge Fund - FoFs								
Top Layer Fees			22		1,380	699	2,101	
Underlying Fees					2,322	1,494	3,816	
Global Property		2	155		4,149	49	4,306	
Global Property - LP			143		8,321	2,717	8,464	
Global Property - Fund of Funds								
Top Layer Fees			6		315	263	321	
Underlying Fees					285	136	285	
Infrastructure		3,567					3,567	
Infrastructure - LP			283		21,090	12,835	21,373	
Domestic Property		436	104		6,157	37	6,697	
Other Real Assets			42		5,294	4,928	5,335	
Diversified Private Equity - LP			371		30,105	37,305	30,476	
Diversified Private Equity - FoFs								
Top Layer Fees			128		7,306	3,572	7,433	
Underlying Fees					10,843	19,636	10,843	
Private Credit - LP			851		2,656	721	3,507	
Other Private Equity - LP			255		4,682	4,851	4,937	
Derivatives/Overlays				150	131		281	
	347	7,086	2,669	2,734	137,664	93,505	156,955	34.8bp
Total oversight, custodial & other costs							4,511	1.0bp
Total benchmarked costs							161,466	35.8bp

### Defaults:

We have highlighted in blue any costs where we have added a default for one or more of the three Northern funds. Defaults are added because the data has not been provided, is inconsistent with our standard approach and therefore incomparable or outside acceptable ranges with no suitable explanation. Where one fund provides valid data then we use that data for that fund.

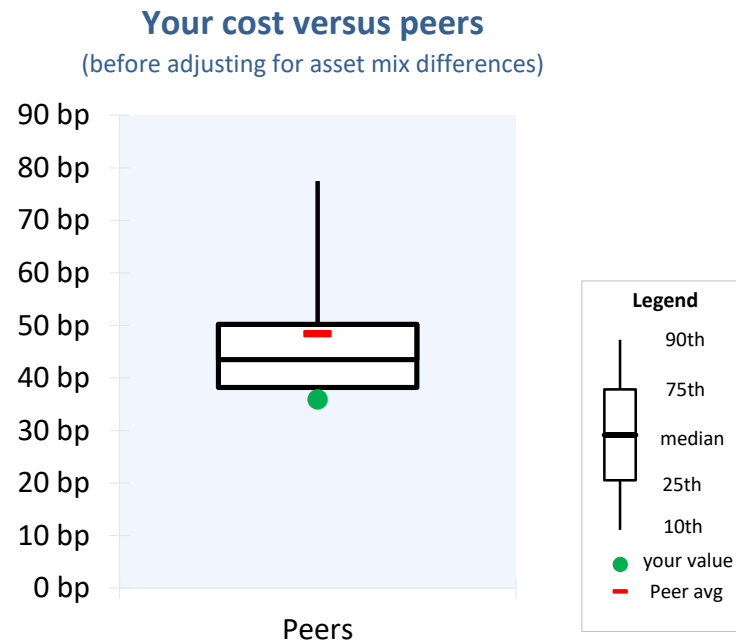
Performance fees for private market assets are material, vary substantially from year to year and therefore cause volatility in benchmarking results over time. They are also very difficult to obtain consistently and therefore to compare. They are shown here in grey for completeness, but are not benchmarked in the report.

Numbers in italics are derived from partnership level data supplied by one of more funds.

# Your cost of 35.8 bps was below your benchmark cost of 39.7 bps.

## Comparison of costs before adjusting for asset mix:

Before adjusting for differences in asset mix, your costs of 35.8 bps were 7.6 bps below the peer median of 43.5 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	161,466	35.8 bp
Your benchmark cost	178,705	39.7 bp
Your excess cost	-17,239	(3.8) bp

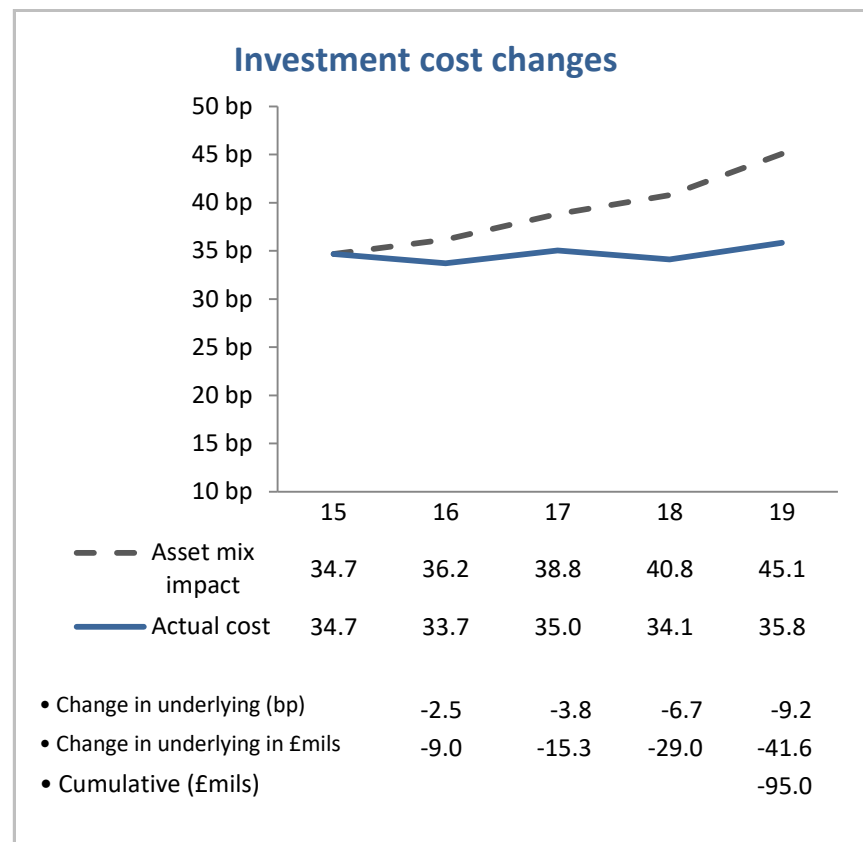
**Your pool was slightly low cost because you paid less than peers for similar services. These savings were partly offset by your higher cost implementation style.**

**Reasons for your low cost status**

	Excess Cost/ (Savings)	
	£000s	bps
<b>1. Higher cost implementation style</b>		
• More active management (vs. lower cost passive )	5,099	1.1
• More external management (vs. lower cost internal)	3,749	0.8
• More partnerships for private assets (vs. funds)	6,960	1.5
• Use of fund of funds	2,088	0.5
• Less co-investment as a percentage of LP/Co	1,824	0.4
• Less overlays	-2,252	(0.5)
	<u>17,468</u>	<u>3.9</u>
<b>2. Paying less than peers for similar services</b>		
• External investment management costs	-27,584	(6.1)
• Internal investment management costs	-3,146	(0.7)
• Oversight, custodial and other costs	-3,976	(0.9)
	<u>-34,707</u>	<u>(7.7)</u>
<b>Total savings</b>	<u>-17,239</u>	<u>(3.8)</u>

## Your benchmarked cost increased from 34.7 bps in 14/15 to 35.8 bps in 18/19.

	Bps	£000s
Investment cost reported in 2014/15	34.7 bp	£111,593
Impact of changes in assets and asset mix		
• Increase in assets <sup>1</sup>	n/a	£44,590
• Higher cost asset mix	10.4 bp	£46,847
• Increased use of overlays	0.0 bp	£71
	<u>45.1 bp</u>	<u>£203,101</u>
Impact of changes within the same asset classes		
• More passive (less active)	(0.3) bp	
• Less external management (vs. internal)	(0.0) bp	
• Less fund-of-funds	(0.5) bp	
Higher/-lower fees for:		
• Stock and fixed Income	0.3 bp	
• Private markets and hedge funds: <sup>2</sup>	(8.4) bp	
• Lower oversight and other changes	(0.4) bp	
Total changes in underlying costs	<u>(9.2) bp</u>	<u>£-41,635</u>
Investment cost in 2018/19	<u><u>35.8 bp</u></u>	<u><u>£161,466</u></u>



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

2. Excludes the impact of changes in private market performance fees. Includes changes to Hedge Fund performance fees.

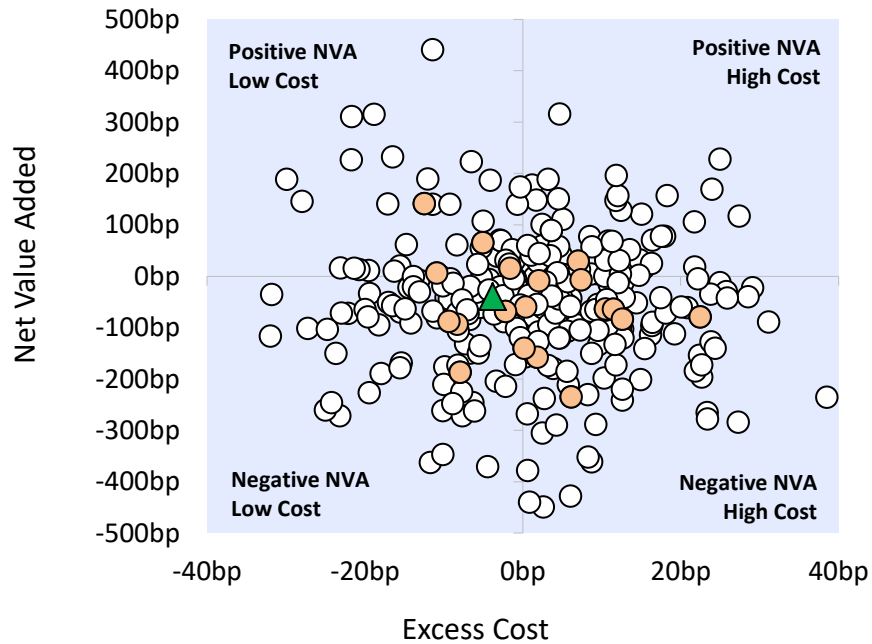
# Cost Effectiveness

Your 2018/19 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.

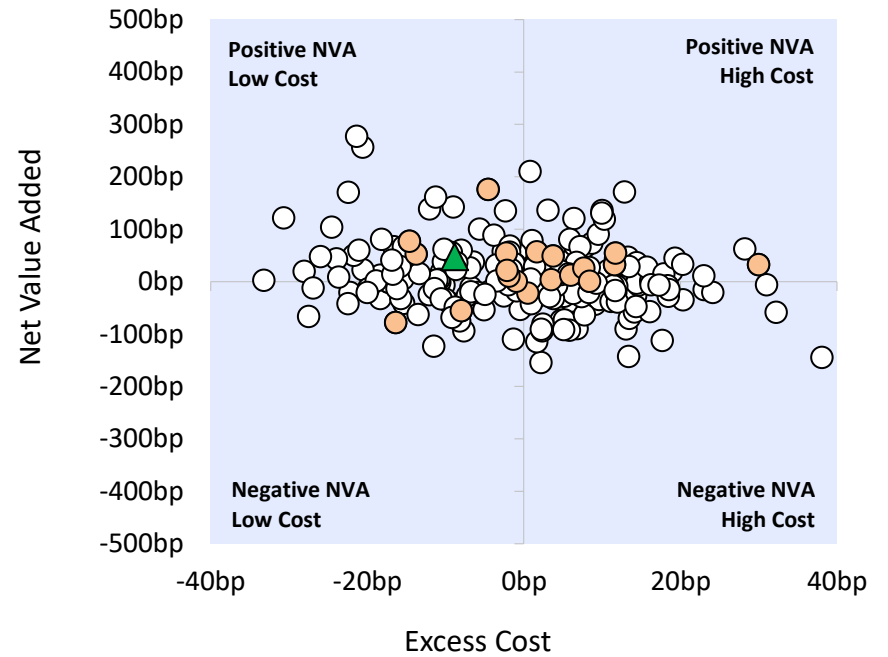
## 2018/19 net value added versus excess cost

(Your 2018/19: net value added -40 bps, cost savings 4 bps<sup>1</sup>)



## 5-Year net value added versus excess cost

(Your 5-year: net value added 47 bps, cost savings 9 bps<sup>1</sup>)



1. Your 5-year cost savings relative to peers of 9 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 8.5%. This was equal to the U.K. median of 8.5% and above the Global median of 6.5%.
- Your 5-year-year benchmark return was 8.0%. This was below the U.K. median of 8.4% and above the Global median of 6.6% .

## Risk

- Your asset risk of 10.69% was above the U.K. median of 10.57%. Your asset-liability risk of 10.9% was above the U.K. median of 10.6%.

## Value added

- Your 5-year net value added was 0.5%. This was above the Global median of 0.0% and above the U.K. median of 0.4%.

## Cost

- Your investment cost of 35.8 bps was below your benchmark cost of 39.7 bps. This suggests that your pool was slightly low cost compared to your peers.
- Your pool was slightly low cost because you paid less than peers for similar services. These savings were partly offset by your higher cost implementation style.
- Your benchmarked cost increased from 34.7 bps in 14/15 to 35.8 bps in 18/19. This was due to asset mix changes. Your underlying costs fell in the period.