

Investment
Cost Effectiveness Analysis
(for the 10-year period ending December 31, 2017)

Government Pension Fund Norway



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Key takeaways

Value added

- Your 10-year net value added was 0.8%. This was above the Global median of 0.1% and above the peer median of 0.1%.

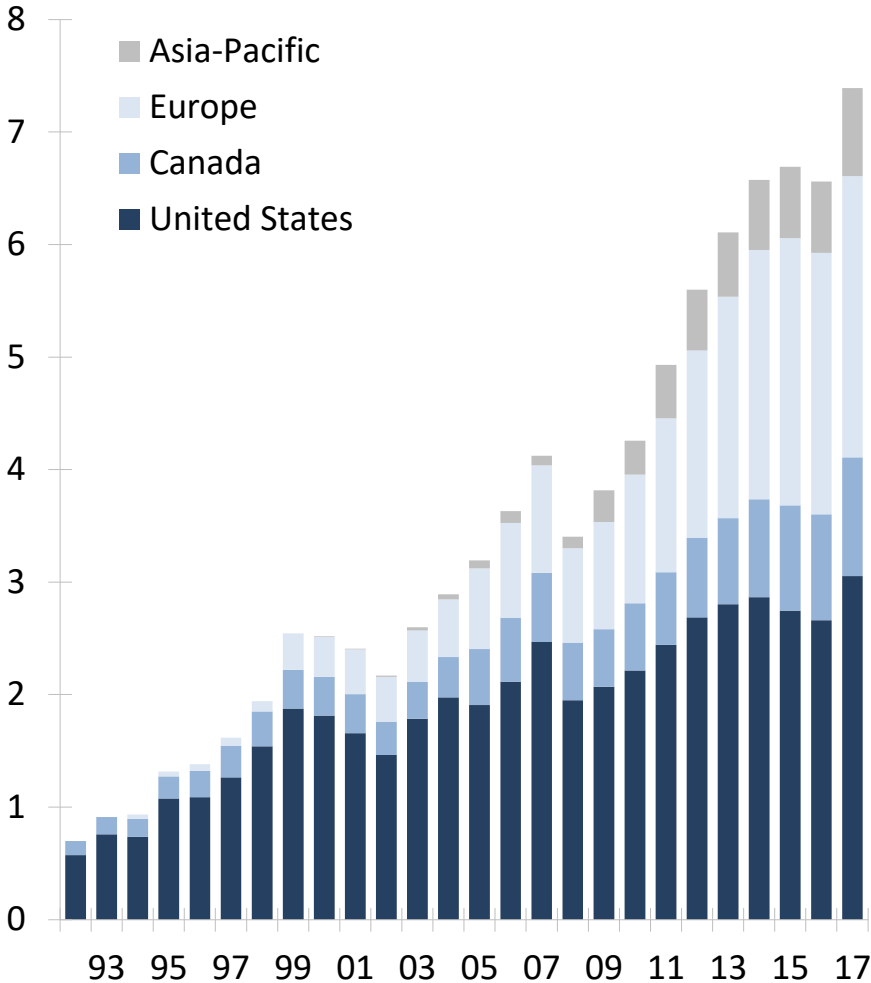
Cost

- Your investment cost of 7.3 bps was below your benchmark cost of 14.9 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was low cost primarily because you had a lower cost implementation style.
- Your 10-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.

This benchmarking report compares your cost and return performance to the 347 funds in CEM's extensive pension database.

- 167 U.S. pension funds participate. The median U.S. fund had assets of €7.0 billion and the average U.S. fund had assets of €18.3 billion. Total participating U.S. assets were €3.1 trillion.
- 79 Canadian funds participate with assets totaling €1,055.7 billion.
- 88 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.
- 11 Asia-Pacific funds participate with aggregate assets of €780.0 billion. Included are funds from Australia, New Zealand, China and South Korea.

Participating assets (€ trillions)



The most valuable comparisons for cost performance are to your custom peer group because size impacts costs.

Peer group for Government Pension Fund Norway

- 16 Global sponsors from €12 billion to €71 billion
- Median size of €45 billion versus your €23 billion
- Median size of internal equity program is €11 billion versus your €15 billion

- 3 Canadian funds, 7 European funds, 6 U.S. funds make up the Global peer group.
- In the report there are also comparisons to CEM's Global database of participants.

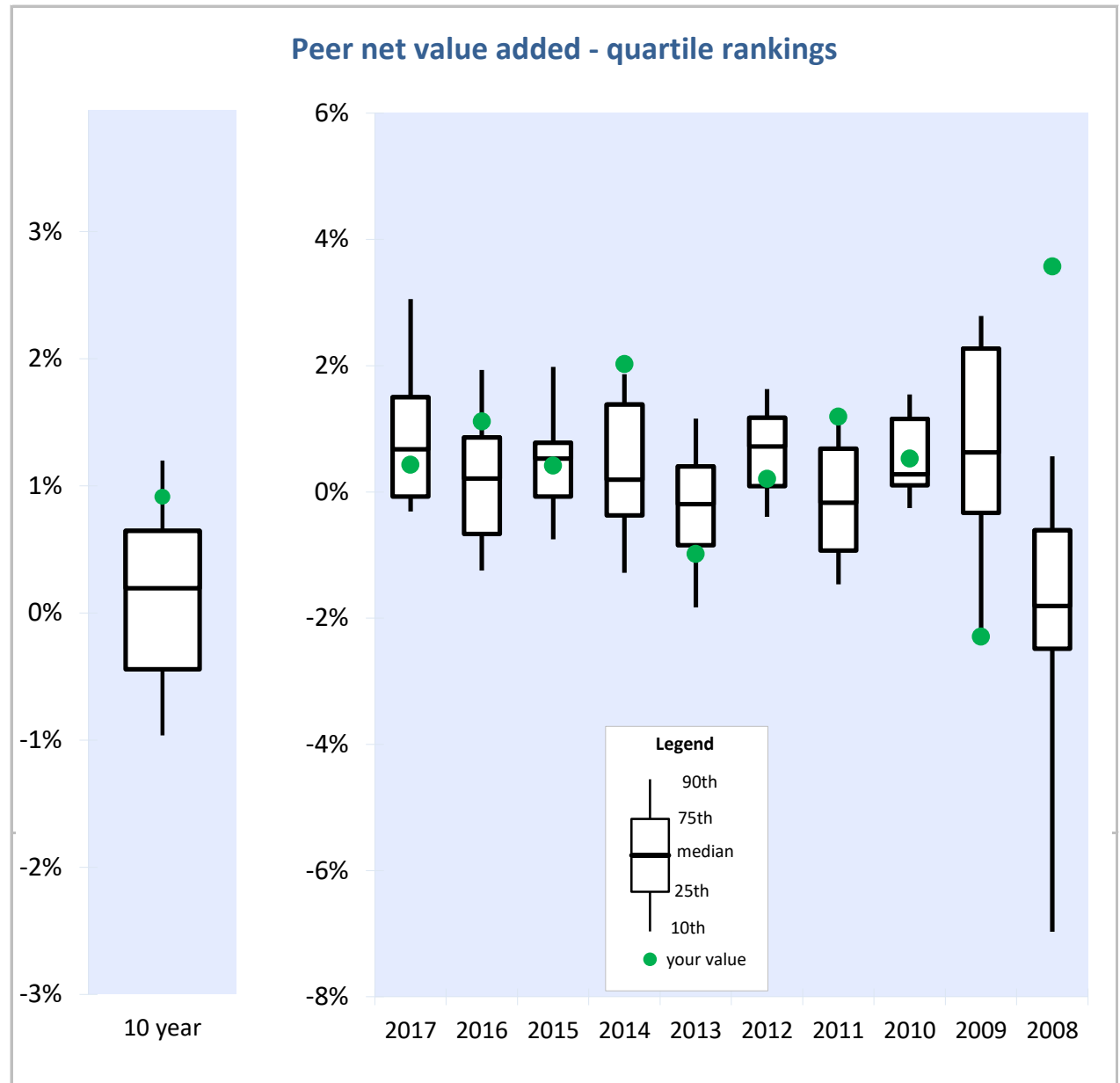
Net value added is the component of total return from active management. Your 10-year net value added was 0.8%.

Net value added equals total net return minus policy return.

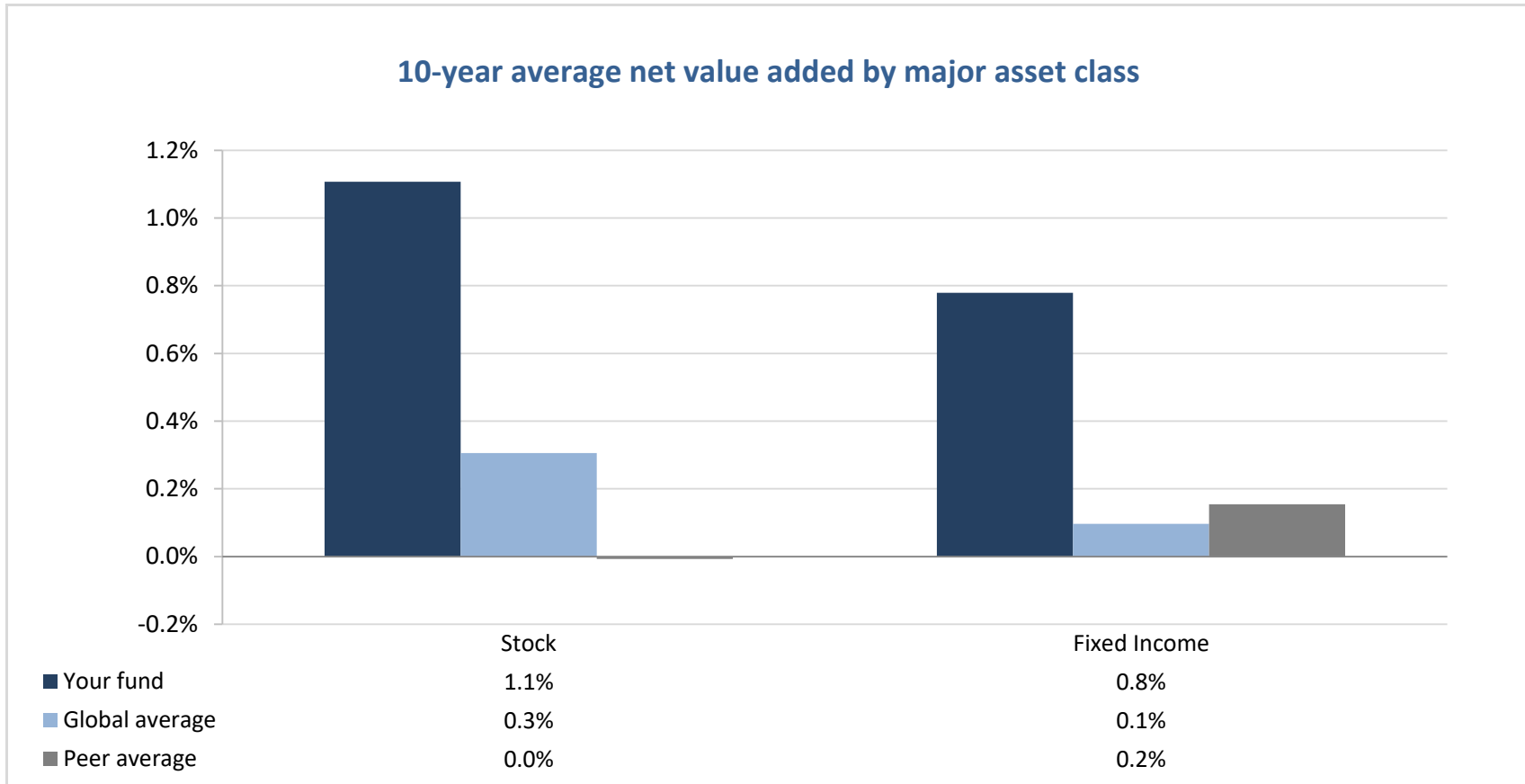
Value added for Government Pension Fund Norway

Year	Net Return	Policy Return	Net value Added
2017	13.1%	12.7%	0.4%
2016	7.0%	5.9%	1.1%
2015	6.9%	6.5%	0.4%
2014	10.6%	8.6%	2.0%
2013	15.6%	16.6%	-1.0%
2012	12.1%	11.9%	0.2%
2011	-4.0%	-5.2%	1.2%
2010	15.2%	14.7%	0.5%
2009	33.4%	35.7%	-2.3%
2008	-25.2%	-28.8%	3.6%
10-Year	7.4%	6.6%	0.8%

Your 10-year net value added of 0.8% compares to a median of 0.1% for your peers and 0.1% for the Global universe.



You had positive 10-year net value added in Stock and Fixed Income.



Your investment costs were €16.8 million or 7.3 basis points in 2017.

Asset management costs by asset class and style (€000s)	Internal Active	Total	
Stock - Europe	7,445	7,445	
Fixed Income - Europe	6,647	6,647	
Total excluding private asset performance fees		14,092	6.1bp
Oversight, custodial and other costs ¹			
Oversight of the fund		1,604	
Trustee & custodial		721	
Consulting and performance measurement		45	
Audit		270	
Other		105	
Total oversight, custodial & other costs		2,745	1.2bp
Total investment costs (excl. transaction costs)		16,837	7.3bp

Footnotes

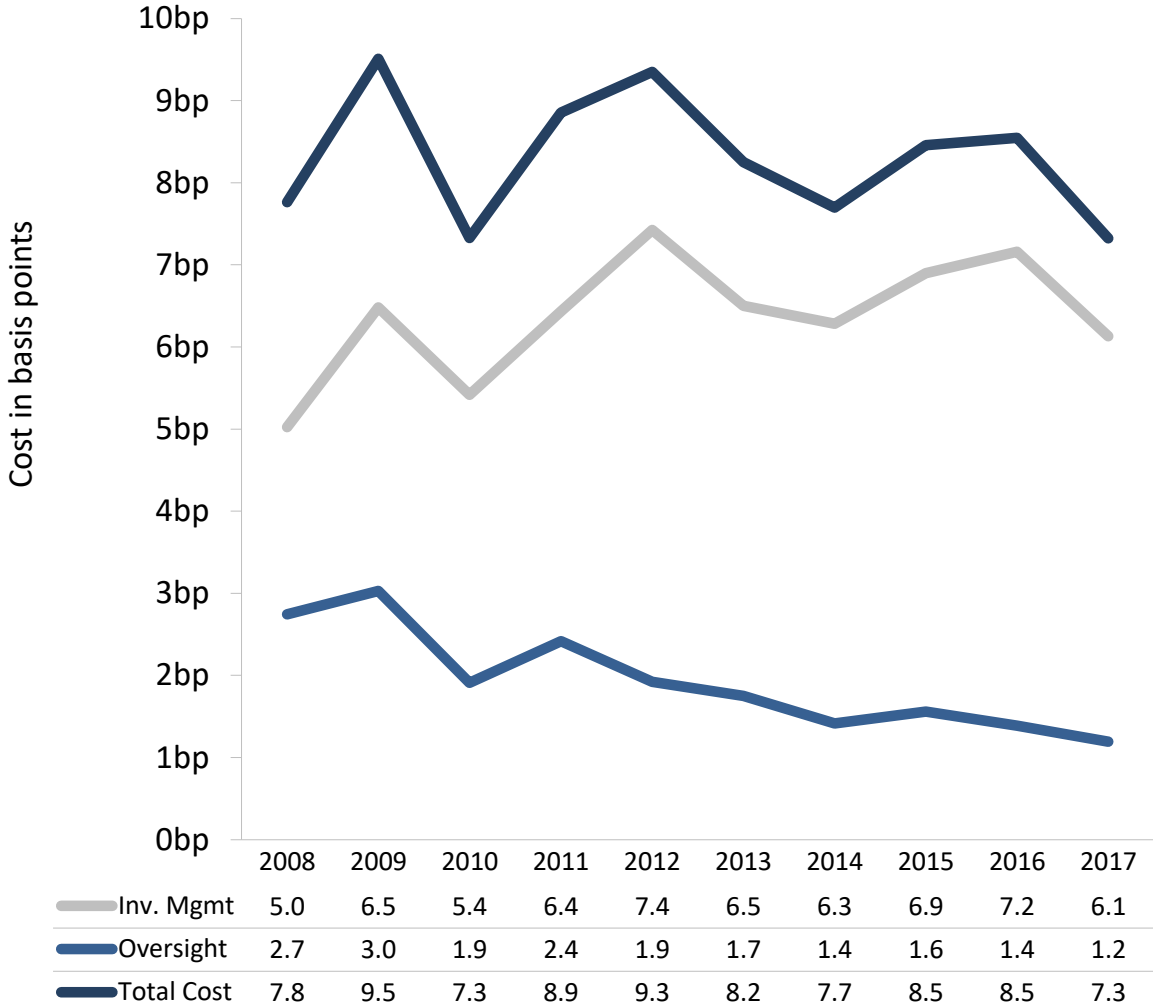
. Total cost excludes carry/performance fees for real estate, infrastructure, natural resources and private equity. Performance fees are included for the public market asset classes and hedge funds.

1. Excludes non-investment costs, such as benefit insurance premiums and preparing cheques for retirees.

Your costs decreased slightly between 2008 and 2017.

However there was a noticeable decrease in costs in 2017. The primary cause was a decline in both the stock and fixed income expenses.

Trend in your investment costs

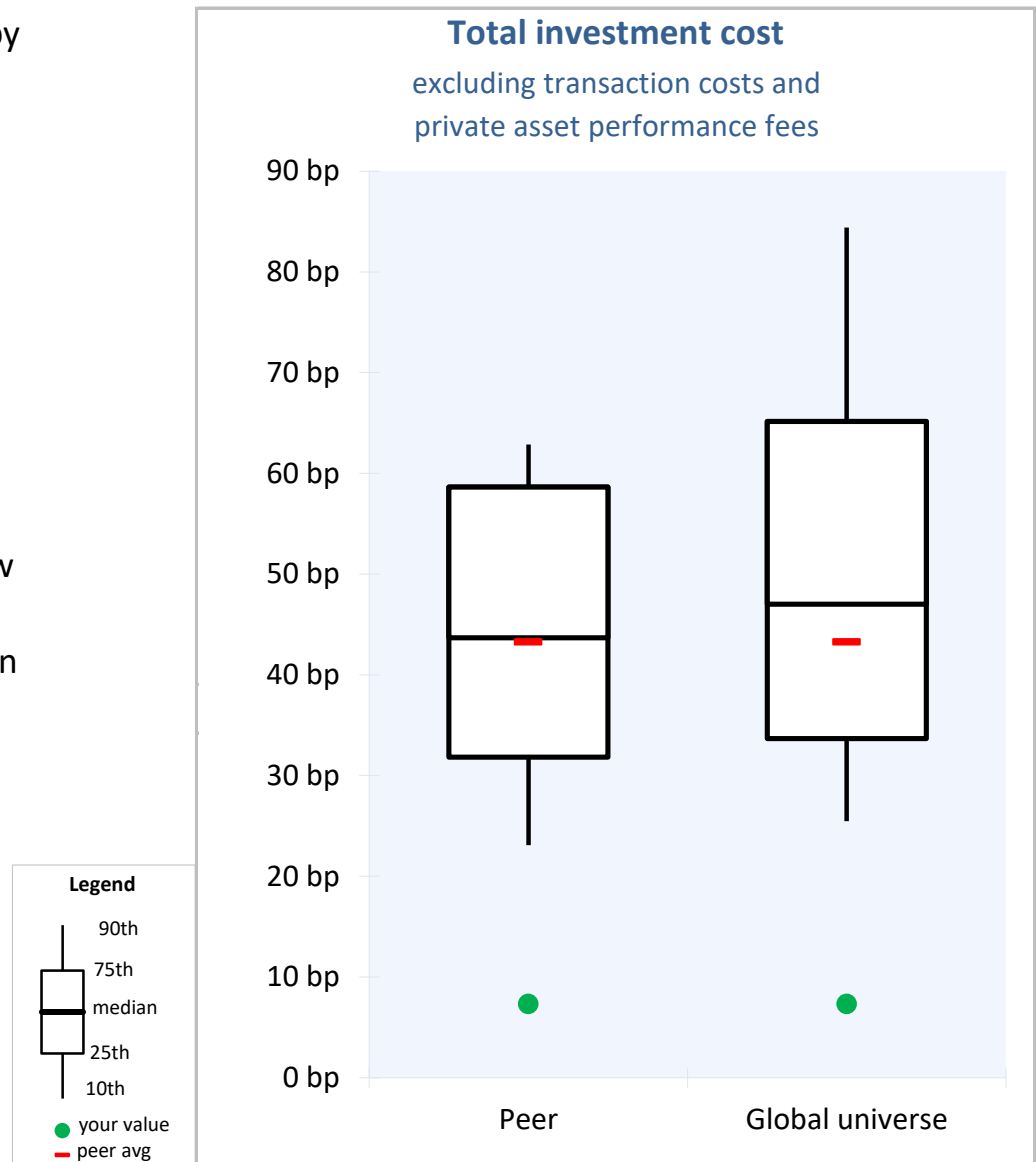


Your total investment cost of 7.3 bps was among the lowest of the peers and was substantially below the peer median of 43.7 bps.

Differences in total investment cost are often caused by two factors that are often outside of management's control:

- Asset mix, particularly holdings of the highest cost asset classes: real estate (excl REITS), infrastructure, hedge funds and private equity. These high cost assets equaled 0% of your funds assets at the end of 2017 versus a peer average of 21%.
- Fund size. Bigger funds have advantages of scale.

Therefore, to assess whether your costs are high or low given your unique asset mix and size, CEM calculates a benchmark cost for your fund. This analysis is shown on the following page.



Benchmark cost analysis suggests that, after adjusting for fund size and asset mix, your fund was low cost by 7.6 basis points in 2017.

Your benchmark cost is an estimate of what your cost would be given your actual asset mix and the median costs that your peers pay for similar services. It represents the cost your peers would incur if they had your actual asset mix.

Your total cost of 7.3 bp was below your benchmark cost of 14.9 bp. Thus, your cost savings was 7.6 bp.

Your cost versus benchmark

	€000s	basis points
Your total investment cost	16,837	7.3 bp
Your benchmark cost	34,265	14.9 bp
Your excess cost	(17,428)	(7.6) bp

Your fund was low cost primarily because you had a lower cost implementation style.

Reasons for your low cost status

	Excess Cost/ (Savings)	
	€000s	bps
1. Lower cost implementation style		
• Less external active management (more lower cost passive and internal)	(16,810)	(7.3)
• Less overlays	(1,471)	(0.6)
• Other style differences	2,032	0.9
	<u>(16,249)</u>	<u>(7.1)</u>
2. Paying less than peers for similar services		
• Internal investment management costs	(693)	(0.3)
• Oversight, custodial & other costs	(486)	(0.2)
	<u>(1,179)</u>	<u>(0.5)</u>
Total savings	(17,428)	(7.6)

Alternative benchmark cost

	Average holdings in €mils	GPFN cost in bps	Cost comparison with median peer across all management styles (bps)			Cost comparison with median peer with similar management style (bps)		
			Benchmark cost	Difference to benchmark cost	Contribution to total cost difference	Benchmark cost	Difference to benchmark cost	Contribution to total cost difference
Stock - Europe - Active	14,312	5.2	15.2	10.0	6.2	7.7	2.5	1.6
Fixed Income - Europe - Active	8,556	7.8	9.2	1.4	0.5	4.4	(3.4)	(1.3)
Total, excl. Overlays and overhead		6.1	12.9		6.7	6.4		0.3
Overlay programs	22,986	0.0	0.6	0.6	0.6	0.6	0.6	0.6
Overhead	22,986	1.2	1.4	0.2	0.2	1.4	0.2	0.2
Total	22,986	7.3	14.9		7.6	8.5		1.2

Notes:

Internal Europe stock uses All stock as the benchmark.

Internal Europe fixed income uses All fixed income as the benchmark.

High-level estimate of management costs incurred if GPFN were managed passively

	Average holdings in €mils	Current cost in bps	Benchmark target cost in bps
Stock	14,312	5.2	4.8
Fixed Income	8,556	7.8	2.2
Total, excl. overhead		6.1	3.8
Overhead	22,986	1.2	1.2
Total	22,986	7.3	5.0

Notes:

Stock uses Europe stock as the benchmark.

Fixed income uses All fixed income as the benchmark.

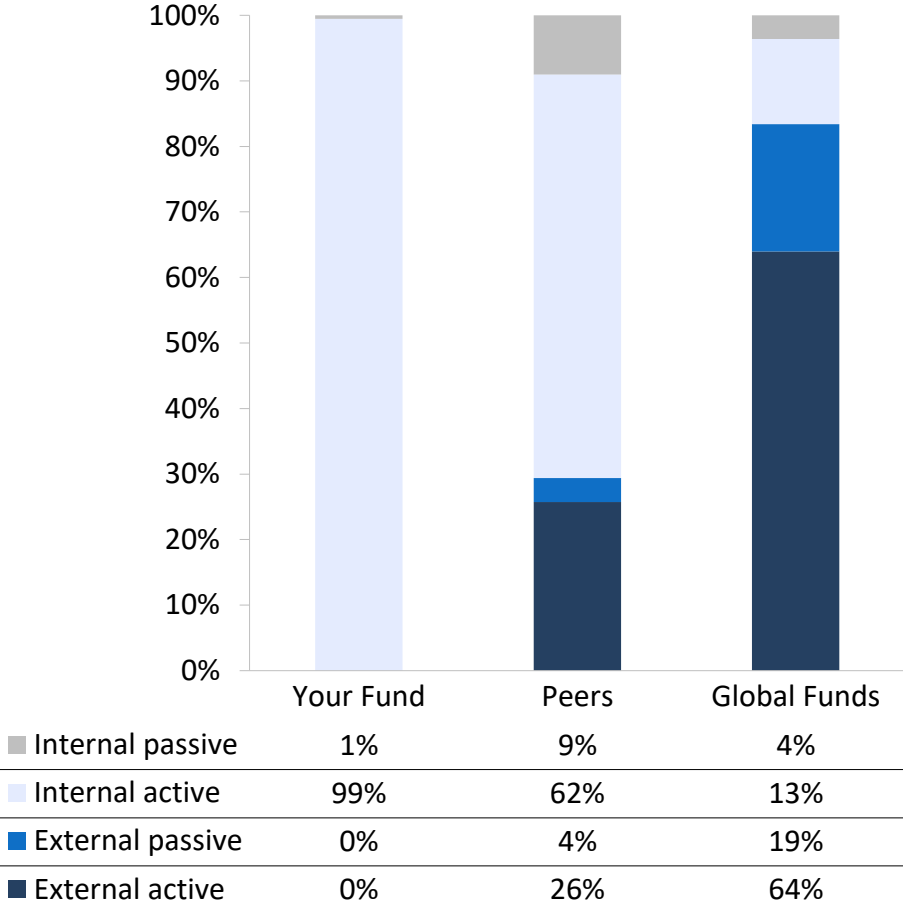
Differences in cost performance are often caused by differences in implementation style.

Implementation style is defined as the way in which your fund implements asset allocation. It includes internal, external, active, passive and fund of funds styles.

The greatest cost impact is usually caused by differences in the use of:

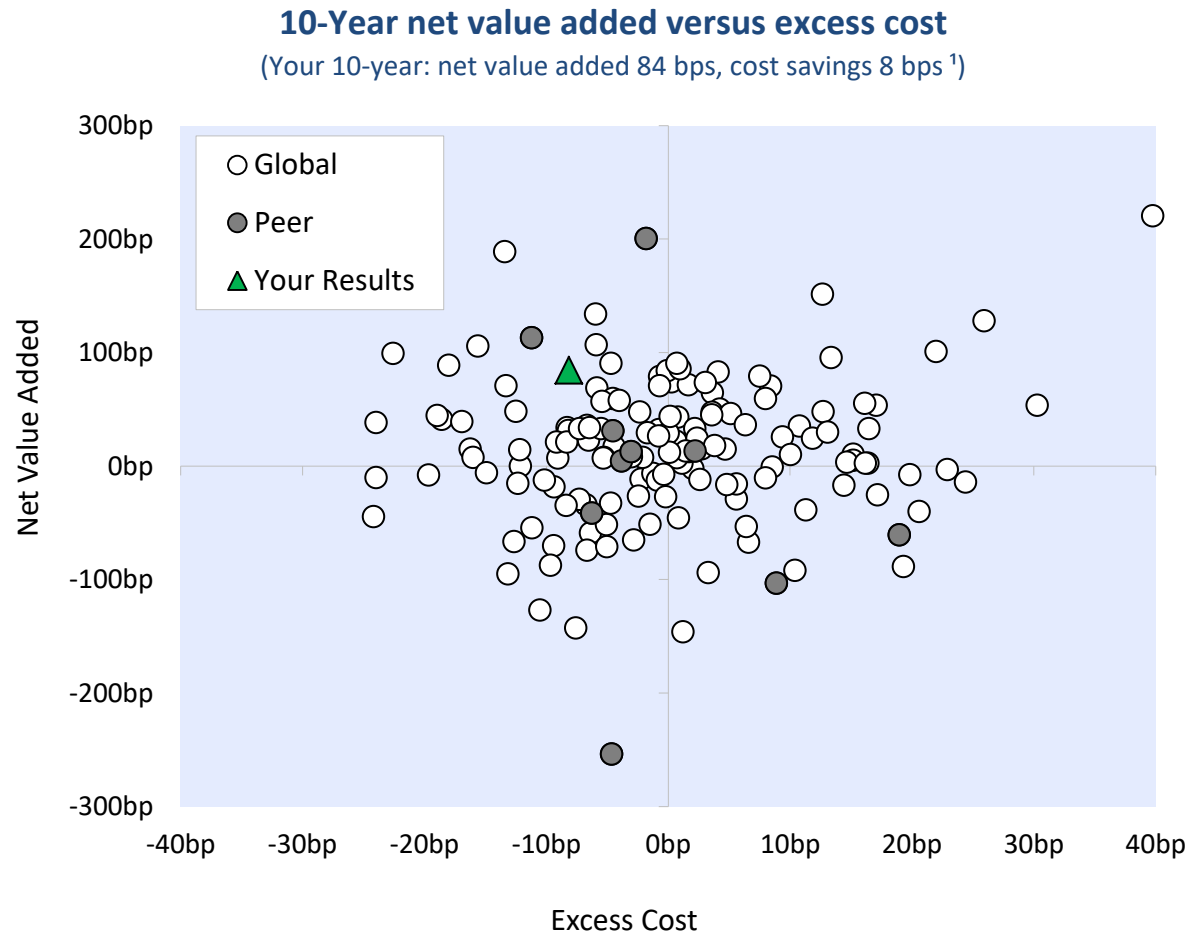
- External active management because it tends to be much more expensive than internal or passive management. You used less external active management than your peers (your 0% versus 26% for your peers).

Implementation style¹



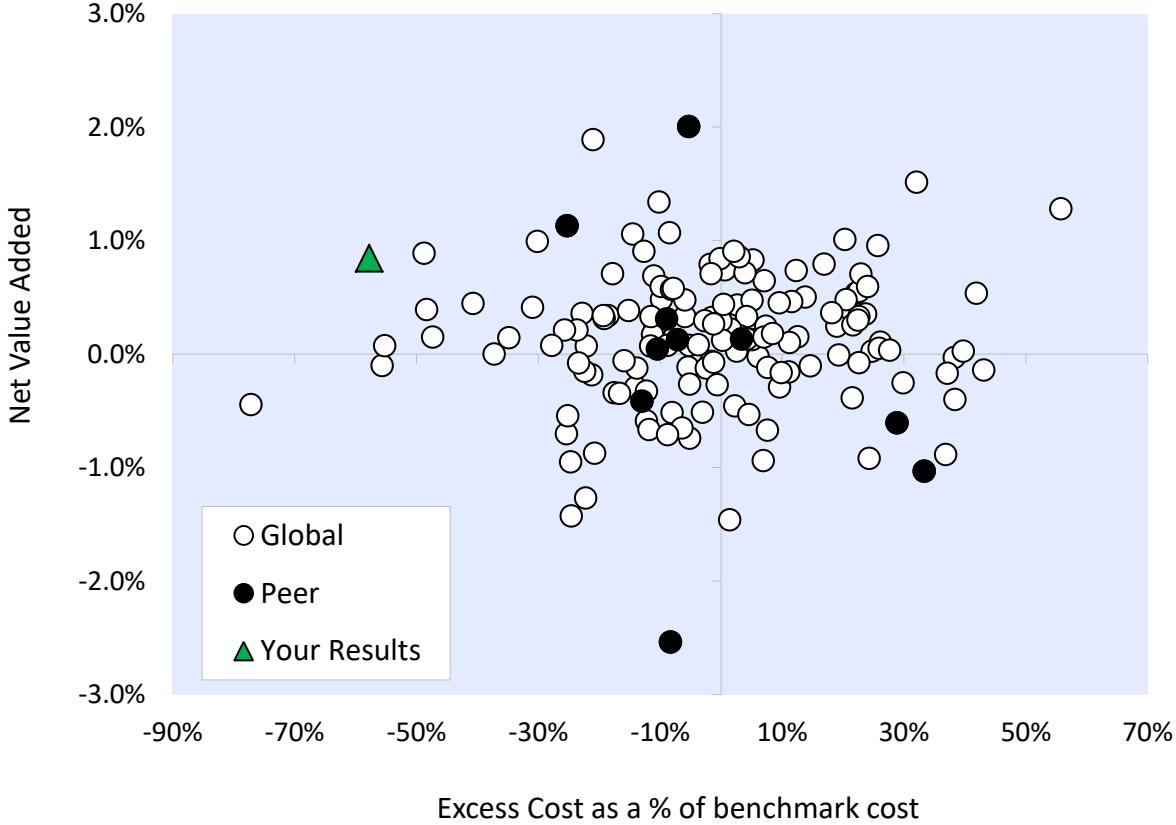
1. The graph above does not take into consideration the impact of derivatives. The values in the graph above are calculated using average holdings.

Your 10-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.



10-year Excess cost as a % of benchmark cost versus Net value added

10-year excess cost as a % of BM cost vs. net value added



2

Description of peer group and universe

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Peer group

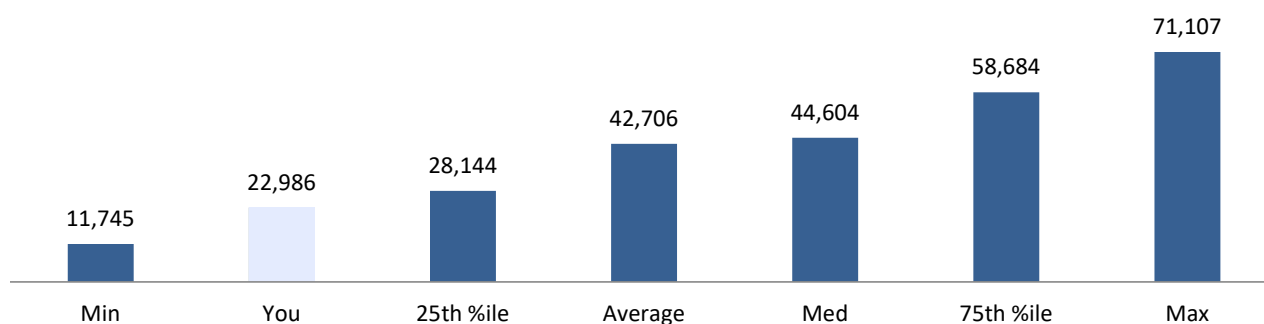
Your peer group is comprised of 16 Global funds, with assets ranging from €11.7 billion to €71.1 billion versus your €23.0 billion. The median size is €44.6 billion.

In order to preserve client confidentiality, we do not disclose your peers' names in this document due to the Freedom of Information Act. Your peer group consist of plans with the following characteristics:

Peer Group Characteristics - 2017

	Your Plan	Peers	Global average
<u>Plan Assets (\$ billions)</u>			
Range	23.0	11.7 - 71.1	0.1 - 844.4
Median		44.6	5.7
<u># of Plans</u>			
Corporate		2	151
Public	1	12	150
Other		2	46
Total	1	16	347
<u>Implementation style</u>			
% External active	0.0	25.7	64.0
% External passive	0.0	3.7	19.4
% Internal active	99.5	61.6	13.0
% Internal passive	0.5	9.0	3.6
<u>Asset mix</u>			
% Stock	62.3	41.4	42.8
% Fixed Income	37.2	33.2	37.7
% Real Assets	0.0	10.6	9.2
% Private Equity	0.0	6.6	4.7
% Hedge Funds & Other	0.5	8.2	5.6

Total fund assets (€ millions) - you versus peers

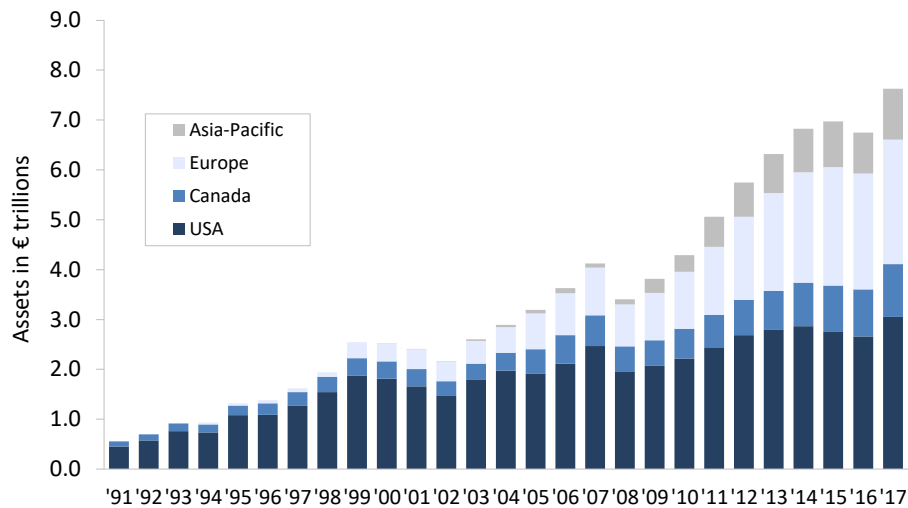


CEM global universe

CEM has been providing investment benchmarking solutions since 1991. The 2017 survey universe is comprised of 347 funds representing €7.6 trillion in assets. The breakdown by region is as follows:

- 167 U.S. pension funds with aggregate assets of €3.1 trillion.
- 79 Canadian pension funds with aggregate assets of €1.1 trillion.
- 88 European pension funds with aggregate assets of €2.5 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Denmark, UK, and Ireland.
- 8 Asia-Pacific pension funds with aggregate assets of €780.0 billion.

CEM global universe



Universe subsets

CEM's global survey universe is comprised of 347 funds with total assets of €7.6 trillion. Your fund's returns and costs are compared to the following two subsets of the global universe:

- Peers - Your peer group is comprised of 16 Global funds ranging in size from €11.7 - €71.1 billion. The peer median of €44.6 billion compares to your €23.0 billion.
- Global - The global universe is comprised of 347 funds ranging in size from €0.1 - €844.4 billion. The median fund is €5.7 billion.

Universe subsets by number of funds and assets

	Peer group ¹	Global by type				Global by Country				
		Corp.	Public	Other	Total	U.S.	Canada	Europe	Asia-Pacific	Total
# of funds										
2017	16	151	150	46	347	167	79	88	13	347
2016	16	154	145	47	346	170	80	84	12	346
2015	16	161	148	55	364	176	80	95	13	364
2014	16	164	208	55	427	178	89	147	13	427
2013	16	185	201	63	449	193	90	155	11	449
2012	15	188	204	58	450	203	89	144	14	450
2011	15	195	115	67	377	204	89	70	14	377
2010	13	180	121	47	348	206	95	38	9	348
2009	13	177	116	44	337	208	93	27	9	337
2008	11	175	116	48	339	214	90	23	12	339
# of funds with uninterrupted data for:										
1 yr	16	151	150	46	347	167	79	88	13	347
2 yrs	16	137	136	41	314	153	71	78	12	314
3 yrs	16	117	126	39	282	138	59	73	12	282
4 yrs	16	107	125	37	269	133	56	69	11	269
5 yrs	16	99	120	35	254	123	54	68	9	254
6 yrs	15	91	116	29	236	118	52	59	7	236
7 yrs	14	87	78	28	193	115	48	23	7	193
8 yrs	13	80	73	22	175	106	48	17	4	175
9 yrs	11	76	67	21	164	99	47	14	4	164
10 yrs	11	68	66	21	155	91	47	14	3	155
Total assets (€ billions)										
2017	683	1,161	4,987	1,477	7,625	3,054	1,056	2,500	1,016	7,625
2016	616	1,078	4,309	1,361	6,748	2,661	940	2,324	823	6,748
2015	618	1,100	4,467	1,404	6,971	2,747	934	2,376	914	6,971
2014	607	1,162	4,377	1,286	6,825	2,867	871	2,215	873	6,825
2013	560	1,104	4,056	1,156	6,316	2,803	765	1,967	780	6,316
2012	501	1,094	3,796	854	5,744	2,687	707	1,665	685	5,744
2011	479	1,074	3,224	763	5,061	2,443	644	1,368	605	5,061
2010	400	939	2,742	609	4,290	2,215	598	1,142	335	4,290
2009	369	858	2,359	598	3,815	2,071	512	952	281	3,815
2008	279	735	2,104	566	3,404	1,950	513	838	104	3,404
2017 asset distribution (€ billions)										
Avg	42.7	7.7	33.2	32.1	22.0	18.3	13.4	28.4	78.2	22.0
Max	71.1	51.5	844.4	409.4	844.4	261.6	177.0	844.4	432.2	844.4
75th %ile	58.7	10.0	27.3	31.9	18.0	19.6	7.6	19.4	60.2	18.0
Median	44.6	3.3	7.2	9.6	5.7	7.0	3.0	5.9	33.1	5.7
25th %ile	28.1	1.4	2.6	2.4	1.8	2.2	1.1	2.4	17.4	1.8
Min	11.7	0.1	0.1	0.2	0.1	0.2	0.1	0.3	2.2	0.1

1. Peer group statistics are for your 2017 peer group only as your peer group may have included different funds in prior years.

Implementation style, actual mix and policy mix by universe subset

Implementation style, actual mix and policy mix - 2017 (as a % of year-end assets)

	Your fund ¹	Peer group	Global by type				Global by Country				
			Corp.	Public	Other	Total	U.S.	Canada	Europe	Asia-Pacific	Total
Implementation style											
External active	0.0	25.0	68.1	55.4	58.4	61.3	69.7	63.4	46.9	38.8	61.3
Fund of funds	0.0	0.8	2.4	3.1	2.3	2.7	2.8	1.6	3.6	1.6	2.7
External passive	0.0	3.7	19.9	19.7	17.1	19.4	19.9	11.1	26.5	16.3	19.4
Internal active	99.5	61.6	7.7	16.8	18.0	13.0	4.7	19.3	20.0	33.5	13.0
Internal passive	<u>0.5</u>	<u>9.0</u>	<u>2.0</u>	<u>5.0</u>	<u>4.3</u>	<u>3.6</u>	<u>3.0</u>	<u>4.6</u>	<u>3.1</u>	<u>9.9</u>	<u>3.6</u>
Total	100	100	100	100	100	100	100	100	100	100	100
Actual asset mix											
Stock	62.3	41.4	36.3	49.2	42.9	42.8	41.2	44.1	43.6	48.5	42.8
Fixed income	37.7	34.2	49.5	26.9	38.1	38.2	39.0	37.7	38.5	29.8	38.2
Global TAA	0.0	2.8	0.9	1.1	0.1	0.9	1.1	0.4	1.0	0.5	0.9
Real assets	0.0	10.6	5.7	11.8	11.9	9.2	7.3	12.2	9.6	13.0	9.2
Hedge funds	0.0	4.0	3.8	3.3	2.3	3.4	4.8	2.0	1.9	3.0	3.4
Balanced Funds	0.0	0.0	0.0	1.1	0.0	0.5	0.0	0.0	1.8	0.0	0.5
Risk Parity	0.0	0.3	0.3	0.5	0.4	0.4	0.6	0.2	0.0	0.6	0.4
Private equity	<u>0.0</u>	<u>6.6</u>	<u>3.5</u>	<u>6.2</u>	<u>4.2</u>	<u>4.7</u>	<u>5.9</u>	<u>3.4</u>	<u>3.6</u>	<u>4.7</u>	<u>4.7</u>
Total	100	100	100	100	100	100	100	100	100	100	100
Policy asset mix											
Stock	64.5	41.5	36.3	49.0	42.2	42.5	40.9	43.4	43.6	51.8	42.5
Fixed income	35.5	34.5	49.3	26.9	38.0	38.1	38.5	38.8	38.3	28.2	38.1
Global TAA	0.0	4.2	0.9	1.3	0.1	0.9	1.1	0.6	1.0	0.6	0.9
Real assets	0.0	10.7	5.8	12.6	12.6	9.6	7.7	12.7	10.3	12.7	9.6
Hedge funds	0.0	2.0	3.8	2.8	2.4	3.2	4.8	1.4	1.9	1.9	3.2
Balanced Funds	0.0	0.0	0.0	0.5	0.0	0.2	0.0	0.0	0.8	0.0	0.2
Risk Parity	0.0	0.3	0.2	0.4	0.5	0.4	0.6	0.2	0.1	0.7	0.4
Private equity	<u>0.0</u>	<u>6.8</u>	<u>3.8</u>	<u>6.5</u>	<u>4.1</u>	<u>5.0</u>	<u>6.5</u>	<u>3.0</u>	<u>4.0</u>	<u>4.2</u>	<u>5.0</u>
Total	100	100	100	100	100	100	100	100	100	100	100

1. Due to the fact that your fund provided average assets, the above tables show your implementation style and asset mix using average assets rather than year-end.

Implementation style, actual mix and policy mix trends

Implementation style, actual mix and policy mix - 2013 to 2017 (as a % of year-end assets)

	Your fund ¹					Peer average ²					Global average ²				
	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
Implementation style															
External active	0.0	0.0	0.0	0.0	0.0	21.6	22.5	23.5	24.7	24.0	64.4	64.2	64.2	63.9	65.2
External passive	0.0	0.0	0.0	0.0	0.0	3.9	4.2	4.4	4.6	4.3	16.4	16.7	17.1	17.3	16.5
Internal active	99.5	99.5	99.5	99.3	99.5	63.1	62.2	60.2	59.4	60.3	14.7	14.5	13.9	13.8	13.1
Internal passive	<u>0.5</u>	<u>0.5</u>	<u>0.5</u>	<u>0.7</u>	<u>0.5</u>	<u>11.4</u>	<u>11.1</u>	<u>12.0</u>	<u>11.3</u>	<u>11.4</u>	<u>4.5</u>	<u>4.7</u>	<u>4.7</u>	<u>5.0</u>	<u>5.3</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Actual asset mix															
Stock	62.3	60.8	59.2	57.7	62.6	40.1	39.4	39.1	39.9	41.1	40.9	41.0	42.2	43.5	45.6
Fixed income	37.7	39.2	40.8	42.3	37.4	35.9	35.0	34.6	34.8	34.9	37.6	37.3	36.6	37.1	35.3
Global TAA	0.0	0.0	0.0	0.0	0.0	4.1	4.6	5.5	5.3	3.9	1.0	1.3	1.6	1.6	1.4
Real assets	0.0	0.0	0.0	0.0	0.0	10.2	10.8	10.7	10.2	11.2	10.2	10.1	9.4	8.5	8.5
Hedge funds	0.0	0.0	0.0	0.0	0.0	2.5	2.7	2.8	2.6	2.1	3.8	4.1	4.2	3.9	3.9
Balanced Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risk Parity	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.4	0.4	0.2	0.5	0.2	0.2	0.2	0.1
Private equity	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>6.8</u>	<u>7.0</u>	<u>6.9</u>	<u>6.7</u>	<u>6.6</u>	<u>6.0</u>	<u>5.9</u>	<u>5.7</u>	<u>5.2</u>	<u>5.2</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Policy asset mix															
Stock	64.5	61.1	59.5	58.1	62.8	39.4	40.4	40.1	40.6	41.6	41.2	41.8	42.9	43.3	44.8
Fixed income	35.5	38.9	40.5	41.9	37.2	36.1	35.0	35.3	35.6	35.5	37.6	37.3	36.7	36.8	36.4
Global TAA	0.0	0.0	0.0	0.0	0.0	6.1	6.4	6.2	6.3	5.7	1.2	1.3	1.4	1.4	1.4
Real assets	0.0	0.0	0.0	0.0	0.0	9.9	9.5	9.5	8.8	9.1	10.4	10.0	9.4	9.1	8.7
Hedge funds	0.0	0.0	0.0	0.0	0.0	1.5	1.6	1.9	1.6	1.4	3.3	3.5	3.6	3.5	3.1
Balanced Funds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Risk Parity	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.2	0.4	0.2	0.2	0.2	0.1
Private equity	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>6.5</u>	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>	<u>6.6</u>	<u>6.0</u>	<u>5.9</u>	<u>5.8</u>	<u>5.6</u>	<u>5.5</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

1. Due to the fact that your fund provided average assets, the above tables show your trend in implementation style and asset mix using average assets rather than year-end.

2. Trends are based on the 155 Global and 11 peer funds with 10 or more consecutive years of data ending 2017.

Implementation style by asset class

Implementation style impacts your costs, because external active management tends to be more expensive than internal or passive (or indexed) management and fund-of-funds usage is more expensive than direct fund investment.

Implementation style by asset class - 2017 (as a % of average assets)

	Your fund %				Peer average %				Global average %			
	External		Internal		External		Internal		External		Internal	
	Active	FOFs	Index	Active	Index	Active	FOFs	Index	Active	FOFs	Index	Active
Stock - U.S.					9.2	12.1	49.4	29.4	41.7	42.1	8.9	7.3
Stock - Europe	0.0		0.0	100.0	0.0		100.0	0.0	13.1	5.0	73.1	8.8
Stock - Global					22.2	0.0	77.8	0.0	62.0	27.0	9.2	1.8
Stock - Other					1.4	0.0	54.7	43.9	68.1	8.5	16.1	7.2
Stock - Emerging					44.1	12.3	31.8	11.8	75.7	16.5	5.6	2.2
Stock - ACWI x U.S.					66.1	0.0	33.7	0.2	70.7	28.7	0.6	0.0
Total Stock	0.0		0.0	100.0	0.0		100.0	0.0	17.4	6.8	61.3	14.5
Fixed Income - U.S.					4.6	6.3	89.0	0.0	58.6	23.8	15.1	2.4
Fixed Income - Europe	0.0		0.0	100.0	0.0		100.0	0.0	1.4	0.3	81.7	16.6
Fixed Income - Global					3.6	0.0	85.9	10.5	63.2	9.2	23.8	3.9
Fixed Income - Other					8.4	6.3	82.9	2.4	61.6	11.0	22.0	5.4
Fixed Income - Long Bonds					1.0	0.0	99.0	0.0	78.7	12.2	5.2	3.8
Fixed Income - Emerging					45.4	0.0	54.2	0.4	82.7	4.4	12.4	0.5
Fixed Income - Inflation Indexed					0.0	0.0	76.2	23.8	11.1	41.8	26.0	21.1
Fixed Income - High Yield					74.9	0.0	23.8	1.3	92.7	1.0	6.2	0.1
Fixed Income - Mortgages					46.2	0.0	53.8	0.0	67.5	8.2	17.3	7.0
Fixed Income - Private Debt					58.4	0.0	41.6	0.0	75.0	0.0	19.6	5.4
Fixed Income - Bundled LDI					0.0	0.0	0.0	0.0	27.0	49.6	23.4	0.0
Fixed Income - Convertibles					100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0
Cash					18.8		81.2		51.0		49.0	
Total Fixed Income	0.0		0.0	100.0	0.0		100.0	0.0	13.2	2.0	77.9	6.8
Commodities					0.0	0.0	21.1	78.9	60.2	12.9	19.4	7.5
Infrastructure					24.1	1.0	74.9		73.5	4.9	21.5	
Natural Resources					51.4	0.0	48.6		80.6	1.3	18.1	
REITs					15.5	0.0	32.0	52.6	73.2	17.0	6.5	3.4
Real Estate					40.7	0.6	58.7		76.1	7.7	16.2	
Other Real Assets					100.0		0.0		97.1		2.9	
Total Real Assets					37.8	0.6	0.0	59.6	2.0	75.6	5.8	1.8
Hedge Funds					96.0	4.0			68.5	31.5		
Global TAA					6.8		93.2		86.6		13.4	
Balanced Funds					0.0	0.0			66.6	33.4		
Risk Parity					100.0		0.0		93.3		6.7	
Diversified Private Equity					68.1	9.5	22.4		65.0	30.2	4.8	
Venture Capital					68.1	25.8	6.1		60.0	37.9	2.0	
LBO					94.8	5.2	0.0		93.4	4.2	2.4	
Private Credit					100.0	0.0	0.0		98.3	0.4	1.3	
Other Private Equity					54.9		45.1		89.5		10.5	
Total Private Equity					75.2	8.7	16.1		72.1	23.4	4.5	
Total Fund - Avg. Holdings	0.0	0.0	0.0	99.5	0.5				24.8	0.8	3.7	61.7
									9.0	61.2	2.7	19.5
												13.0
												3.6

Actual mix

Actual asset mix - 2013 to 2017 (as a % of total average assets)

	Your fund ¹					Peer average %					Global average %				
	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
Stock - U.S.						12.1	12.3	12.3	12.4	12.2	12.2	13.4	13.5	13.0	14.5
Stock - Europe	62.3	60.8	59.2	57.7	10.0	16.4	16.8	16.8	16.9	14.3	7.9	8.3	8.2	10.0	10.9
Stock - Global						6.6	5.2	5.0	5.1	5.2	12.7	11.7	11.7	13.1	12.0
Stock - Other					52.7	1.2	1.8	1.7	1.9	5.2	3.9	4.2	4.1	4.4	4.6
Stock - Emerging						4.2	4.2	4.0	4.3	4.4	3.5	3.0	2.9	3.0	3.0
Stock - ACWI x U.S.						0.9	0.9	0.9	1.0	1.0	2.6	2.6	2.7	2.3	2.5
Stock - Aggregate	62.3	60.8	59.2	57.7	62.6	41.4	41.0	40.7	41.5	42.3	42.8	43.3	43.2	45.8	47.6
Fixed Income - U.S.						7.5	7.6	7.7	8.0	7.5	5.8	6.1	6.7	5.5	5.8
Fixed Income - Europe	37.2	38.7	40.2	41.6	6.0	7.5	7.5	8.0	8.1	5.9	3.9	3.7	4.4	4.7	5.0
Fixed Income - Global						3.9	3.9	3.4	3.1	3.1	2.8	2.7	2.9	3.2	3.2
Fixed Income - Other					30.8	2.9	3.4	3.6	3.7	5.5	5.4	6.0	6.0	5.8	5.4
Fixed Income - Long Bonds						2.0	1.5	1.5	1.3	1.5	11.2	10.2	9.8	8.7	7.4
Fixed Income - Emerging						2.5	2.4	2.4	2.5	2.2	1.1	1.0	1.1	1.1	1.1
Fixed Income - Inflation Indexed						2.2	2.4	2.4	2.4	2.6	2.1	2.4	2.0	2.0	2.1
Fixed Income - High Yield						1.4	1.6	1.8	1.6	1.4	1.2	1.3	1.3	1.1	1.3
Fixed Income - Mortgages						0.6	0.6	0.5	0.5	0.6	0.5	0.4	0.4	0.3	0.3
Fixed Income - Private Debt						1.0	0.9	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3
Fixed Income - Bundled LDI											1.1	0.2	0.1	0.1	0.1
Fixed Income - Convertibles						0.2	0.0	0.0	0.0		0.1	0.0	0.0	0.0	0.0
Cash						1.6	0.9	0.9	1.2	2.1	2.1	2.0	1.8	2.1	2.0
Fixed Income - Aggregate	37.2	38.7	40.2	41.6	36.9	33.2	32.8	32.8	33.2	33.0	37.7	36.6	37.0	34.9	34.0
Commodities						0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.4	0.5
Infrastructure						2.0	1.9	1.8	1.5	1.5	1.9	1.8	1.4	1.1	0.9
Natural Resources						0.6	0.6	0.5	0.4	0.4	0.5	0.4	0.3	0.3	0.2
REITs						0.3	0.3	0.2	0.2	0.2	0.7	0.6	0.6	0.5	0.5
Real Estate						7.6	8.1	8.1	7.6	7.6	5.6	5.8	5.5	5.3	5.0
Other Real Assets						0.1	0.1	0.2	0.4	1.0	0.2	0.3	0.3	0.3	0.3
Real Assets						10.6	11.1	10.9	10.3	10.9	9.2	9.1	8.5	7.8	7.4
Hedge Funds						4.0	4.2	4.2	4.0	3.3	3.4	3.8	3.8	3.6	3.6
Global TAA						2.8	3.2	3.8	3.6	2.7	0.9	1.2	1.6	2.7	2.5
Balanced Funds											0.5	0.5	0.5	0.4	0.4
Risk Parity						0.3	0.3	0.3	0.3	0.1	0.4	0.2	0.2	0.2	0.1
Diversified Private Equity						4.0	4.0	3.9	4.1	4.1	3.3	3.5	3.4	3.1	3.1
Venture Capital						0.4	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.2
LBO						1.8	1.8	1.8	1.4	1.4	0.5	0.5	0.5	0.5	0.4
Private Credit						0.1	0.1	0.1	0.1	0.1	0.4	0.2	0.2	0.1	0.0
Other Private Equity						0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2
Private Equity						6.6	6.7	6.5	6.3	6.2	4.7	4.8	4.6	4.1	3.9
Derivatives/Overlays Mkt Value	0.5	0.5	0.5	0.7	0.5	1.1	0.7	0.8	0.8	1.4	0.5	0.5	0.6	0.5	0.6
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count	1	1	1	1	1	16	16	16	16	16	347	346	364	427	449
Median Assets (€ billions)	23.0	23.5	20.8	20.6	20.1	44.6	41.2	40.2	37.0	32.2	5.7	4.8	4.5	3.4	3.0

1. Your asset mix is based on average assets rather than year-end.

Policy mix

Policy asset mix - 2013 to 2017 (as a % of total assets)

	Your fund %					Peer average %					Global average %				
	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013	2017	2016	2015	2014	2013
Stock - U.S.						9.4	11.5	11.6	11.4	12.6	11.4	12.3	12.6	11.7	13.0
Stock - Europe	64.5	61.1	59.5	58.1	10.0	14.0	15.5	15.1	15.7	13.7	7.3	7.7	7.6	9.4	10.1
Stock - Global						12.2	8.6	8.5	8.1	5.8	14.5	13.9	13.4	14.6	13.3
Stock - Other					52.8	1.9	2.6	2.6	2.6	5.9	3.7	4.0	4.3	4.3	4.5
Stock - Emerging						3.4	3.6	3.7	3.8	4.2	2.9	2.7	2.8	2.7	2.7
Stock - ACWI x U.S.						0.5	0.5	0.5	0.6	0.7	2.7	2.8	3.0	2.6	2.4
Stock - Aggregate	64.5	61.1	59.5	58.1	62.8	41.5	42.3	42.0	42.2	43.1	42.5	43.3	43.6	45.2	46.2
Fixed Income - U.S.						7.4	7.6	7.4	7.7	7.9	6.0	6.2	6.8	5.9	6.6
Fixed Income - Europe	35.5	38.9	40.5	41.9	6.0	7.5	7.8	8.3	7.8	5.5	3.9	3.8	4.5	4.8	5.2
Fixed Income - Global						5.9	6.0	5.7	5.6	5.6	3.0	3.1	3.1	3.4	3.3
Fixed Income - Other					31.2	2.6	3.1	3.4	3.4	5.4	6.0	6.4	6.3	6.2	6.0
Fixed Income - Long Bonds						2.7	1.8	1.8	1.6	1.6	11.7	10.7	10.4	9.2	8.3
Fixed Income - Emerging						2.4	2.3	2.3	2.3	2.0	1.0	1.0	1.1	1.0	1.2
Fixed Income - Inflation Indexed						2.6	2.7	2.6	2.7	3.1	2.3	2.6	2.2	2.1	2.2
Fixed Income - High Yield						1.2	1.4	1.6	1.5	1.7	1.2	1.4	1.4	1.2	1.3
Fixed Income - Mortgages						0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.2	0.2
Fixed Income - Private Debt						1.0	0.7	0.8	0.8	0.6	0.5	0.5	0.5	0.3	0.3
Fixed Income - Bundled LDI											1.2	0.1	0.1	0.1	0.1
Fixed Income - Convertibles						0.2	0.0		0.1	0.0	0.1	0.0	0.0	0.0	0.0
Cash						0.2	0.1	0.2	1.0	1.4	0.6	0.9	0.7	0.8	0.8
Fixed Income - Aggregate	35.5	38.9	40.5	41.9	37.2	34.5	33.9	34.5	35.0	35.1	38.1	37.2	37.5	35.2	35.4
Commodities						0.1	0.2	0.2	0.1	0.3	0.3	0.4	0.5	0.5	0.6
Infrastructure						2.1	1.9	1.9	1.4	1.4	2.0	1.9	1.6	1.4	1.1
Natural Resources						0.4	0.4	0.3	0.2	0.2	0.4	0.3	0.3	0.2	0.2
REITs						0.3	0.3	0.2	0.2	0.2	0.6	0.5	0.5	0.5	0.5
Real Estate						7.6	7.2	7.1	7.4	7.2	6.1	5.9	5.6	5.8	5.6
Other Real Assets						0.2	0.1	0.2	0.1	0.1	0.3	0.4	0.4	0.3	0.3
Real Assets						10.7	10.2	9.9	9.5	9.4	9.6	9.4	8.9	8.8	8.3
Hedge Funds						2.0	2.2	2.6	2.5	2.1	3.2	3.3	3.3	3.4	3.3
Global TAA						4.2	4.4	4.2	4.3	3.9	0.9	1.3	1.6	2.6	2.3
Balanced Funds											0.2	0.2	0.2	0.2	0.2
Risk Parity						0.3	0.3	0.3	0.3	0.1	0.4	0.2	0.2	0.2	0.1
Diversified Private Equity						4.8	4.6	4.5	5.2	5.3	4.0	4.1	3.9	3.7	3.6
Venture Capital						0.1	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2
LBO						1.8	1.8	1.8	0.8	0.8	0.3	0.3	0.4	0.3	0.3
Private Credit						0.1					0.4	0.2	0.2	0.1	0.0
Other Private Equity						0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1
Private Equity						6.8	6.7	6.5	6.3	6.3	5.0	5.1	4.8	4.4	4.2
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count	1	1	1	1	1	16	16	16	16	16	347	346	364	427	449

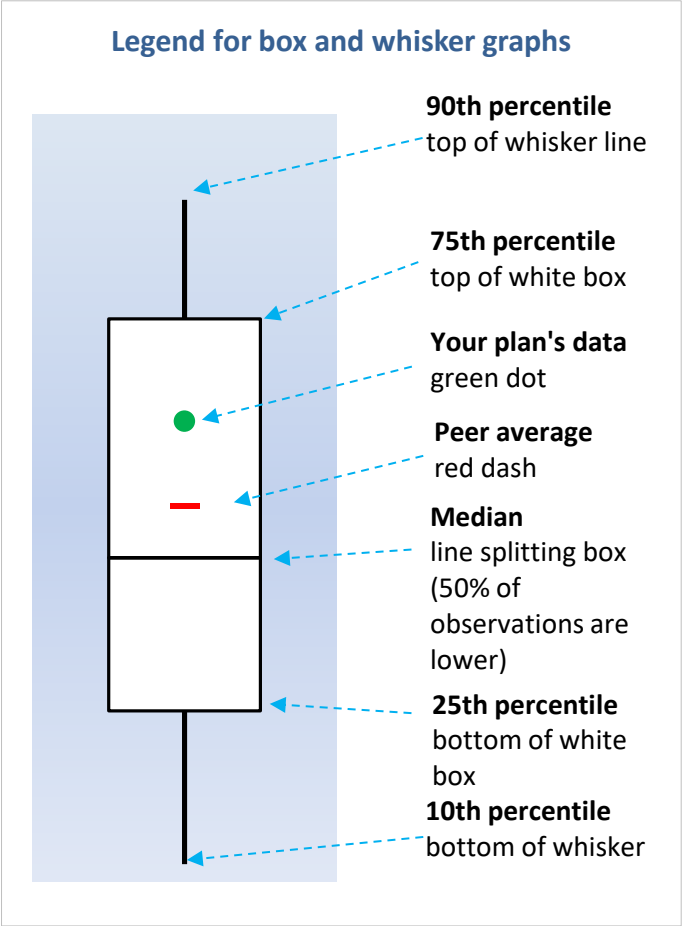
3

Returns, Benchmarks and Value Added

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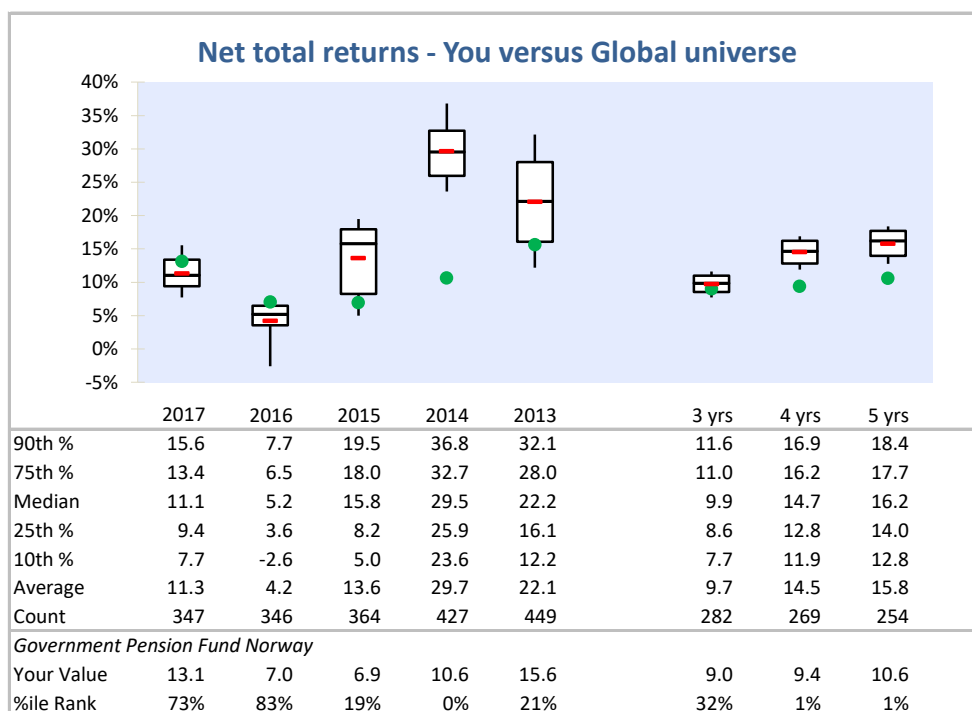
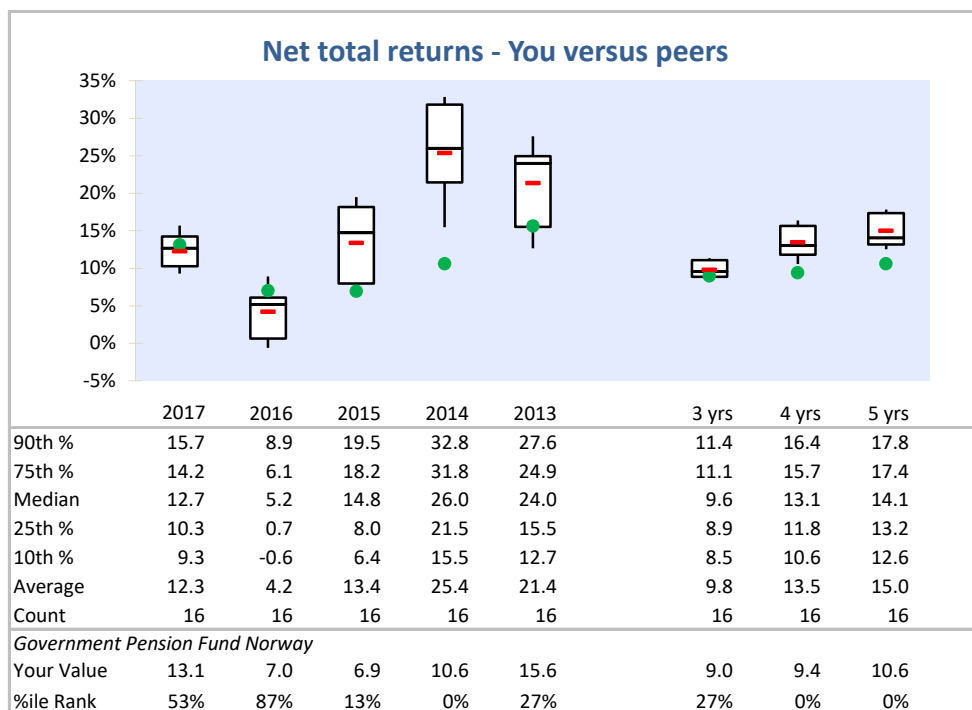
Interpreting box and whisker graphs

Box and whisker graphs are used extensively in this report because they show visually where you rank relative to all observations. At a glance you can see which quartile your data falls in.



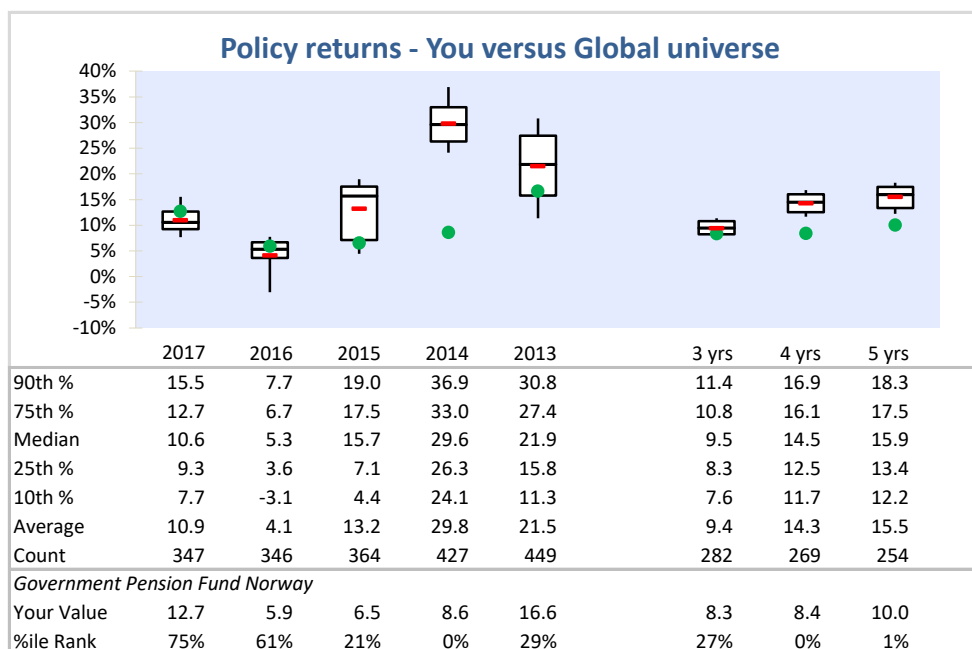
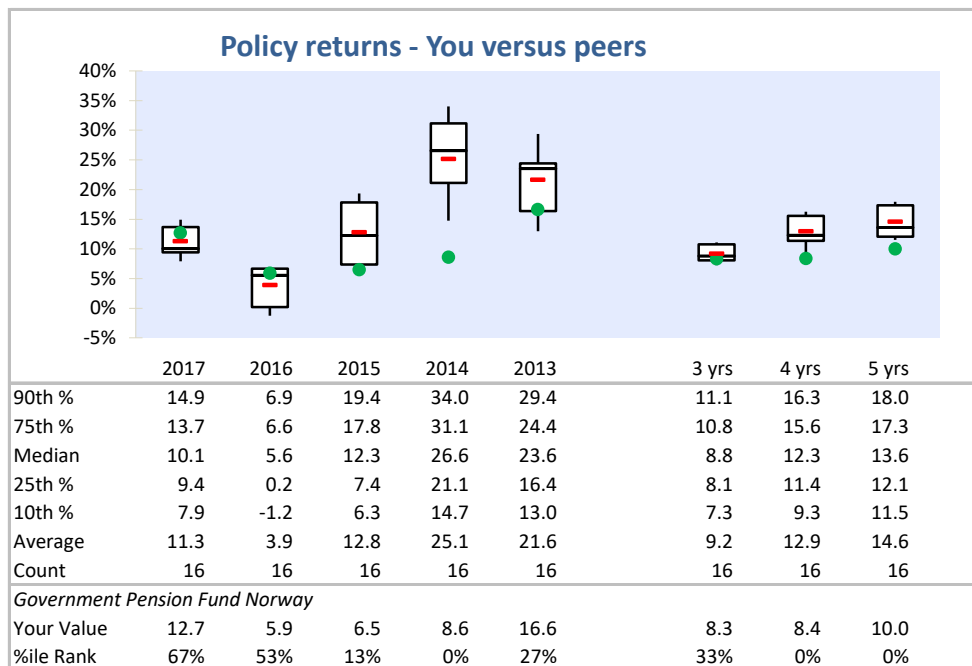
Net total returns

Your 5-year net total return of 10.6% was below the peer median and below the median of the Global universe. Comparisons of total return do not help you understand the reasons behind relative performance. To understand the relative contributions from policy asset mix decisions and implementation decisions we separate total return into its more meaningful components - policy return and implementation value added.



Policy returns

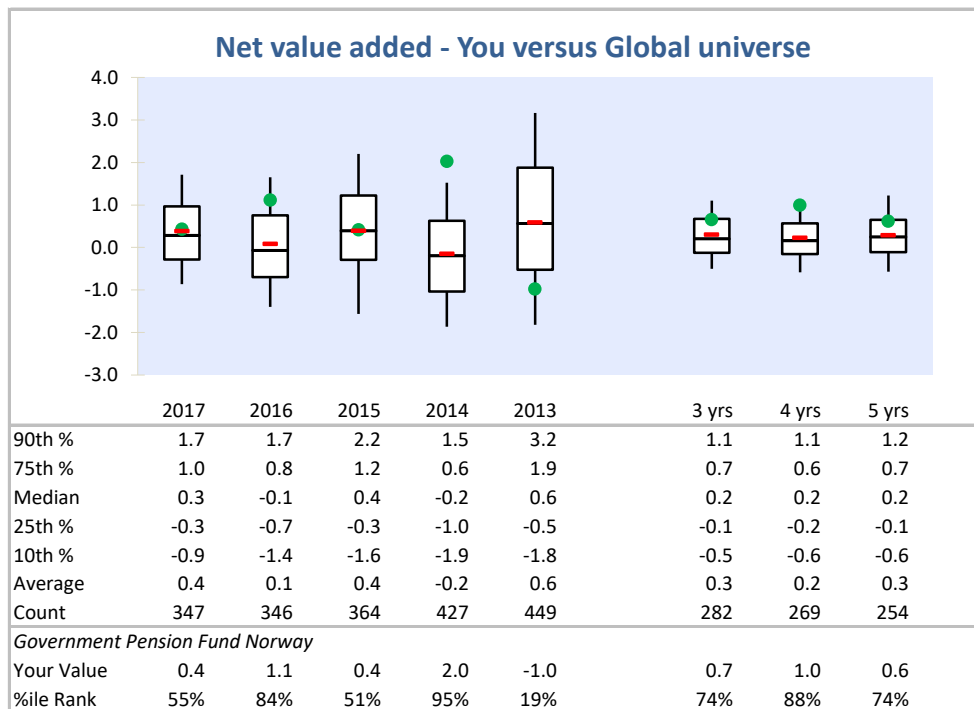
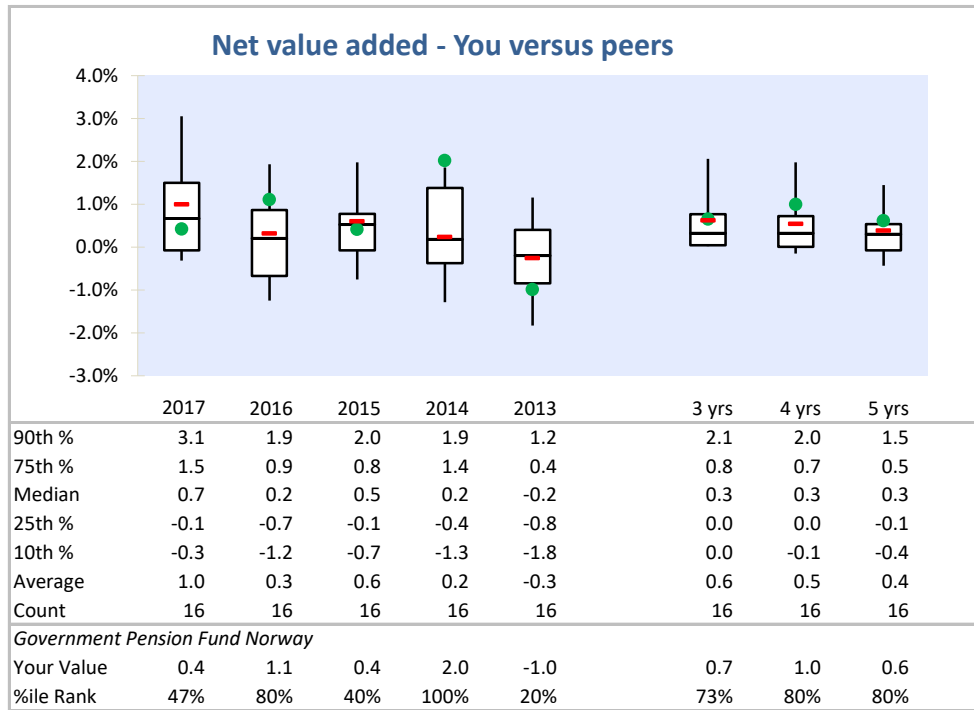
Your 5-year policy return of 10.0% was below the peer median and below the median of the Global universe. Policy return is the return you would have earned had you passively implemented your policy asset mix decision through your benchmark portfolios.



To enable fairer comparisons, the policy returns of all participants except your fund were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the appendix of this section for details.

Net value added

Your 5-year net value added of 0.6% was among the highest in your peer group and above the median of the Global universe. Net value added is the difference between your net total return and your policy return.



Net returns by asset class

Asset class	Your fund %						Peer average %						Global average %					
	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹
Stock - U.S.							16.9	9.1	14.6	33.9	45.2	23.2	15.2	9.7	17.6	36.3	46.0	24.2
Stock - Europe	19.2	10.4	9.8	10.6	39.6	17.4	19.1	1.5	18.9	18.4	37.6	18.5	20.0	-0.9	17.2	18.1	36.0	17.6
Stock - Global							17.7	6.9	15.6	28.0	39.5	21.0	19.3	3.8	16.9	28.2	37.0	20.6
Stock - Other					21.5		10.1	15.2	-4.1	31.8	26.0	21.3	10.3	16.6	0.2	25.8	27.0	14.8
Stock - Emerging							28.1	8.0	1.9	20.6	9.6	13.0	28.7	7.4	1.8	21.1	8.1	13.1
Stock - ACWI x U.S.							24.6	3.2	16.2	22.1	30.1	17.6	22.7	0.9	15.3	19.0	29.3	16.8
Stock - Aggregate	19.2	10.4	9.8	10.6	24.3	14.8	19.0	6.7	13.3	25.1	34.2	19.2	18.4	6.2	14.0	27.2	35.9	19.8
Fixed Income - U.S.							2.2	1.2	15.1	28.2	9.2	11.0	0.3	1.4	17.5	30.7	7.3	10.8
Fixed Income - Europe	3.5	2.1	2.8	9.7	12.2	6.0	7.6	-3.4	6.7	16.9	11.9	7.6	7.2	-3.8	8.5	31.3	12.4	10.1
Fixed Income - Global							14.9	1.4	9.2	21.2	11.9	11.5	5.7	0.0	11.3	25.6	11.4	9.7
Fixed Income - Other					1.4		3.8	0.9	9.5	18.1	14.0	8.0	6.4	2.4	8.9	25.9	7.8	9.6
Fixed Income - Long Bonds							10.1	4.7	9.4	46.8	-8.7	10.8	6.4	4.7	11.2	43.0	-0.9	12.2
Fixed Income - Emerging							9.9	7.2	9.0	19.0	3.8	10.5	8.4	7.2	9.4	20.9	2.3	9.7
Fixed Income - Inflation Indexed							1.7	2.4	10.1	27.1	-0.2	7.7	2.3	2.9	10.7	31.1	3.8	8.6
Fixed Income - High Yield							5.8	9.1	12.6	21.2	18.9	13.2	4.1	8.0	12.3	23.3	18.1	12.8
Fixed Income - Mortgages							6.6	-2.0	12.1	23.5	15.0	11.1	5.8	1.3	12.6	24.4	11.6	10.5
Fixed Income - Private Debt							3.4	4.5	13.5	24.3	13.4	11.3	5.3	1.2	15.3	23.9	16.3	12.2
Fixed Income - Bundled LDI							7.2	-6.1	9.3	2.2			8.4	8.2	2.7	91.6	-6.0	17.9
Fixed Income - Convertibles							1.2	-4.1	14.1	17.3	9.8	6.9	7.6	-0.4	10.8	17.0	26.3	16.3
Cash							4.3	1.7	11.1	24.9	7.4	9.4	4.4	2.1	11.5	30.9	6.8	10.4
Fixed Income - Aggregate	3.5	2.1	2.8	9.7	3.1	4.2	4.3	1.7	11.1	24.9	7.4	9.4	4.4	2.1	11.5	30.9	6.8	10.4
Commodities							4.8	9.3	-20.1	-16.4	10.6	-4.4	-0.1	10.1	-13.3	1.9	2.6	-2.0
Infrastructure							12.6	3.1	25.4	25.6	16.9	16.1	13.6	1.2	23.3	29.7	17.8	16.6
Natural Resources							-0.6	1.8	11.8	20.5	14.0	8.7	2.5	3.2	11.2	33.3	16.4	12.0
REITs							1.0	3.6	21.6	56.8	9.8	17.7	6.7	1.0	18.5	44.2	14.2	15.7
Real Estate							12.3	4.7	23.4	27.2	21.7	17.3	7.1	2.4	25.7	31.7	20.4	16.6
Other Real Assets							6.4	7.4	-1.3	12.5	11.0	6.6	-0.2	3.4	7.9	26.4	12.4	9.6
Real Assets							11.4	4.2	22.2	26.9	19.1	16.5	6.9	2.3	22.2	30.7	18.4	15.5
Hedge Funds							7.7	-5.0	9.2	17.8	21.4	11.0	2.1	-3.0	15.2	26.0	18.9	11.6
Global TAA							7.6	0.6	15.5	26.9	16.0	12.8	4.8	1.7	13.1	25.7	16.3	10.9
Balanced Funds													15.6	-11.1	15.5	24.3	23.7	12.8
Risk Parity							12.6	12.5	5.6	34.8	6.4	13.9	8.3	9.2	7.1	32.0	5.7	12.2
Diversified Private Equity							13.3	4.9	24.9	33.9	23.2	19.4	13.3	4.5	27.3	37.8	24.4	21.0
Venture Capital							7.6	-6.0	16.0	37.5	17.9	14.0	9.2	-1.2	31.0	39.5	23.9	19.3
LBO							12.6	5.3	21.9	32.6	29.8	19.9	13.3	8.2	26.4	40.1	25.7	20.8
Private Credit							2.5	2.4	31.4	40.9	29.1	20.6	7.2	4.4	18.5	30.3	24.0	19.5
Other Private Equity							11.2	8.2	26.3	34.5	36.1	22.6	9.5	3.2	23.1	34.2	23.8	17.9
Private Equity							12.6	5.5	24.3	34.8	24.8	19.8	12.6	4.6	26.9	37.6	24.3	20.9
Total Fund Return	13.1	7.0	6.9	10.6	15.6	10.6	12.3	4.2	13.4	25.4	21.4	15.0	11.3	4.2	13.6	29.7	22.1	15.8

1. The 5-year return number only includes funds with continuous data over the last 5 years.

Benchmark returns by asset class

Asset class	Your fund %						Peer average %						Global average %					
	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹
Stock - U.S.							16.3	9.4	14.8	34.2	44.8	23.1	15.1	10.2	17.7	36.9	44.8	24.3
Stock - Europe	19.1	8.7	9.2	7.4	42.3	16.7	18.0	1.4	16.2	18.4	37.2	17.7	19.1	-1.1	16.2	17.9	34.8	16.9
Stock - Global							17.6	5.6	16.5	26.9	37.6	20.3	17.3	5.0	16.2	28.1	35.7	19.9
Stock - Other					23.6		5.3	11.9	-1.9	28.3	31.3	18.8	11.1	15.4	-0.7	25.7	23.4	13.8
Stock - Emerging							28.5	7.8	0.2	20.5	6.7	12.3	29.6	8.1	1.2	21.1	7.5	12.9
Stock - ACWI x U.S.							21.7	2.9	15.8	21.2	25.8	16.5	21.5	2.0	13.2	18.7	26.7	16.1
Stock - Aggregate	19.1	8.7	9.2	7.4	26.6	14.0	18.2	6.2	13.0	24.3	34.2	18.7	17.7	6.8	13.4	27.3	34.4	19.4
Fixed Income - U.S.							1.8	0.8	15.0	28.0	8.7	10.3	0.0	0.5	17.1	29.9	6.5	10.2
Fixed Income - Europe	2.8	1.8	2.7	9.2	11.7	5.6	6.5	-2.7	7.6	17.7	10.6	7.7	6.7	-4.1	9.2	32.2	11.7	9.9
Fixed Income - Global							4.3	0.8	11.6	19.8	8.8	9.0	4.4	-1.5	12.0	25.0	10.8	9.0
Fixed Income - Other					0.7		2.6	1.8	10.0	21.6	10.6	9.4	3.7	1.9	9.3	27.6	7.6	8.7
Fixed Income - Long Bonds							9.2	2.3	9.5	47.0	-10.9	9.9	6.2	4.1	11.2	42.6	-1.5	11.9
Fixed Income - Emerging							7.5	5.4	11.3	23.9	3.0	10.4	7.4	6.3	10.5	22.7	3.0	10.0
Fixed Income - Inflation Indexed							2.2	1.6	9.9	26.1	4.0	7.9	2.5	2.8	10.9	32.4	4.0	9.0
Fixed Income - High Yield							5.7	10.5	10.5	19.1	17.7	12.9	4.4	10.3	11.0	23.0	17.4	13.1
Fixed Income - Mortgages							6.3	-0.5	9.1	18.4	8.8	8.4	4.6	0.5	10.2	21.1	8.7	8.1
Fixed Income - Private Debt							1.0	4.4	10.2	21.5	10.8	9.8	4.4	0.9	12.8	22.3	13.9	10.9
Fixed Income - Bundled LDI													8.1	6.6	2.9	76.3	3.4	17.4
Fixed Income - Convertibles							16.9	-0.2	12.0	12.5	23.7	14.3	12.4	4.4	12.2	17.9	28.2	15.5
Cash							1.1	-4.1	10.5	16.3	11.4	6.4	-0.1	-3.7	11.9	18.5	9.3	6.7
Fixed Income - Aggregate	2.8	1.8	2.7	9.2	2.5	3.8	3.6	1.1	11.0	24.0	6.8	9.0	4.3	1.7	11.6	31.6	6.1	10.3
Commodities							8.0	4.5	-8.7	-3.2	7.9	-1.9	0.0	7.4	-12.1	0.9	5.1	-1.3
Infrastructure							11.5	0.9	19.2	25.8	22.7	15.2	9.8	-1.1	16.6	25.6	16.2	12.4
Natural Resources							5.9	2.2	17.6	24.1	16.5	12.8	2.2	2.6	15.2	28.2	18.0	12.5
REITs							1.1	3.9	21.4	55.1	10.0	17.4	6.7	2.1	18.5	43.2	14.5	15.8
Real Estate							9.2	4.2	24.5	26.4	20.1	16.3	5.7	2.1	24.9	31.1	19.7	16.0
Other Real Assets							15.7	-1.8	11.0	17.9	24.3	13.9	1.5	2.9	9.9	25.0	17.9	11.8
Real Assets							9.2	3.7	22.6	26.5	19.4	15.7	5.9	1.8	20.7	29.1	17.7	14.4
Hedge Funds							8.1	-5.2	9.3	19.5	21.6	12.1	3.2	-1.6	16.0	24.2	16.6	11.4
Global TAA							8.6	0.7	16.9	24.1	22.3	13.8	6.8	0.2	16.6	24.1	18.0	12.4
Balanced Funds													21.5	-10.6	18.6	23.9	25.8	15.1
Risk Parity							5.9	4.5	22.2	32.6	20.2	16.6	7.8	7.8	13.1	31.3	16.4	15.2
Diversified Private Equity							16.0	6.0	19.4	36.4	40.6	22.8	15.7	5.6	19.3	38.6	41.4	23.1
Venture Capital							17.0	3.3	22.0	34.9	41.3	22.9	14.8	4.8	20.4	39.3	41.0	23.1
LBO							17.4	1.4	24.1	30.9	41.6	22.4	14.6	5.1	20.8	39.6	39.6	22.9
Private Credit							9.1	9.1	19.8	45.7	41.2	23.9	15.8	6.0	19.6	35.3	43.6	22.8
Other Private Equity							16.1	4.7	20.0	32.7	41.6	22.2	16.7	4.0	19.3	37.2	41.2	22.8
Private Equity							16.8	5.1	19.9	36.4	40.5	22.8	15.7	5.5	19.3	38.5	41.3	23.1
Total Policy Return	12.7	5.9	6.5	8.6	16.6	10.0	11.3	3.9	12.8	25.1	21.6	14.6	10.9	4.1	13.2	29.8	21.5	15.5

1. The 5-year return number only includes funds with continuous data over the last 5 years.

2. To enable fairer comparisons, the policy returns of all participants except your fund were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the appendix of this section for details.

Net value added by asset class

Asset class	Your fund %						Peer average %						Global average %					
	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹	2017	2016	2015	2014	2013	5-yr ¹
Stock - U.S.							0.6	-0.3	-0.2	-0.3	0.4	0.0	0.0	-0.5	-0.1	-0.7	1.1	0.0
Stock - Europe	0.1	1.7	0.6	3.2	-2.7	0.8	1.0	0.1	2.6	0.0	0.4	0.8	0.9	0.1	0.9	0.2	1.1	0.7
Stock - Global							0.2	1.4	-1.0	-0.7	2.2	0.4	1.8	-1.1	0.5	-0.1	1.1	0.5
Stock - Other					-2.1		6.4	0.6	0.7	3.7	-4.3	3.6	-0.8	0.5	1.4	0.3	3.7	1.4
Stock - Emerging							-0.5	0.2	1.6	0.1	2.9	0.7	-1.0	-0.8	0.5	0.0	0.6	0.3
Stock - ACWI x U.S.							2.9	0.3	0.4	0.9	6.8	2.1	1.2	-1.1	2.1	0.3	2.6	0.8
Stock - Aggregate	0.1	1.7	0.6	3.2	-2.2	0.8	0.8	0.5	0.3	0.8	-0.1	0.5	0.6	-0.6	0.7	-0.1	1.5	0.4
Fixed Income - U.S.							0.4	0.4	0.1	0.2	0.9	0.4	0.3	0.9	0.4	0.5	0.9	0.5
Fixed Income - Europe	0.7	0.3	0.1	0.5	0.5	0.4	1.1	-0.7	-0.9	-0.8	1.2	-0.1	0.4	0.2	-0.2	-0.9	0.6	0.1
Fixed Income - Global							10.6	0.6	-2.0	-0.8	3.4	2.0	1.4	1.5	-0.9	0.2	0.5	0.6
Fixed Income - Other					0.7		1.2	-0.9	-0.5	-2.1	4.7	0.1	2.6	0.6	-0.1	-0.2	0.6	1.2
Fixed Income - Long Bonds							1.0	2.4	-0.2	-0.2	2.2	0.8	0.3	0.3	-0.2	0.4	0.6	0.3
Fixed Income - Emerging							2.4	1.8	-2.3	-5.0	0.8	0.1	1.1	0.9	-1.1	-2.0	-0.7	-0.3
Fixed Income - Inflation Indexed							-0.5	0.9	0.2	1.1	-2.8	-0.3	-0.1	0.1	0.0	-1.5	-0.2	-0.2
Fixed Income - High Yield							0.0	-1.3	2.0	-0.3	1.2	0.3	-0.3	-2.0	1.3	0.1	0.4	-0.2
Fixed Income - Mortgages							0.3	-1.5	3.1	5.0	6.2	2.7	1.1	0.6	1.8	2.4	3.2	2.2
Fixed Income - Private Debt							1.2	0.1	3.3	2.8	2.5	1.5	1.1	0.4	2.6	1.1	2.9	1.6
Fixed Income - Bundled LDI													0.0	1.6	-0.2	15.3	-0.2	-0.3
Fixed Income - Convertibles							-9.6	-6.0	-2.6	-10.2			-4.7	-4.8	-1.4	-0.9	-6.3	-0.4
Cash							0.2	0.1	4.0	0.1	-0.2	1.0	-0.1	0.4	0.1	0.3	0.1	0.3
Fixed Income - Aggregate	0.7	0.3	0.1	0.5	0.7	0.5	0.7	0.6	0.1	0.9	0.5	0.4	0.1	0.4	-0.1	-0.8	0.7	0.1
Commodities							-3.2	0.5	0.5	1.1	2.7	0.7	0.0	2.0	-0.9	2.7	-1.9	0.1
Infrastructure							1.2	2.3	6.2	-0.2	-5.8	0.9	3.8	2.1	7.0	3.9	1.6	4.0
Natural Resources							-6.5	-0.4	-5.9	-3.6	-2.5	-4.2	0.4	0.5	-3.9	4.9	-2.3	-0.7
REITs							-0.1	-0.3	0.2	1.6	-0.2	0.3	0.3	-1.2	-0.4	1.0	-0.3	0.0
Real Estate							2.9	0.7	-0.3	1.7	1.9	1.4	1.3	0.3	0.5	0.5	0.6	0.6
Other Real Assets							-9.3	9.2	-12.3	-3.5	-20.7	-7.3	-1.7	-0.1	-2.8	0.3	-6.3	-2.0
Real Assets							2.0	0.8	-0.1	1.0	-0.2	1.0	1.0	0.6	1.5	1.5	0.6	1.1
Hedge Funds							-1.6	0.0	-0.1	-1.7	-0.7	-1.3	-1.2	-1.2	-1.0	1.4	2.4	-0.1
Global TAA							-1.0	-0.1	-1.4	2.8	-5.1	-1.0	-1.8	1.2	-3.6	1.5	-1.4	-1.4
Balanced Funds													-6.6	1.0	-3.1	0.6	-1.3	-2.1
Risk Parity							6.7	7.9	-16.6	2.2	-13.8	-2.7	0.5	1.5	-6.6	0.0	-10.6	-3.0
Diversified Private Equity							-2.5	-1.6	5.8	-3.5	-17.4	-3.5	-2.4	-1.1	7.8	-0.8	-17.0	-2.1
Venture Capital							-9.3	-9.6	-5.9	1.1	-23.4	-9.3	-5.3	-6.3	10.1	-0.2	-16.8	-3.8
LBO							-4.9	3.7	-2.4	0.0	-11.7	-3.0	-1.4	3.6	4.7	0.8	-13.9	-2.1
Private Credit							-6.6	-6.7	11.5	-4.9	-12.1	-3.3	-8.2	-5.5	-0.2	-5.5	-21.4	-4.5
Other Private Equity							-4.2	1.3	7.9	-2.5	-5.5	-0.5	-7.1	-0.8	3.4	-3.6	-17.1	-5.1
Private Equity							-4.2	0.1	4.5	-2.5	-15.6	-3.2	-3.2	-0.9	7.3	-1.0	-17.0	-2.2
Total Fund Return	0.4	1.1	0.4	2.0	-1.0	0.6	1.0	0.3	0.6	0.2	-0.3	0.4	0.4	0.1	0.4	-0.2	0.6	0.3

Total net value add is determined by both actual and policy allocation. It is the outcome of total net return (page 6) minus total benchmark return (page 7). Aggregate net returns are an asset weighted average of all categories that the fund has an actual allocation to. Aggregate benchmark returns are a policy weighted average and includes only those categories that are part of your policy fund's mix.

1. The 5-year return number only includes funds with continuous data over the last 5 years.

2. To enable fairer comparisons, the policy returns of all participants except your fund were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the appendix of this section for details.

Your policy return and value added calculation - 2017

2017 Policy Return and Value Added

Asset class	Policy weight	Benchmark Description	Return	Net return	Value added
Stock - Europe	64.5%	CMVINXBINN - Custom Index - OSEBX	19.1%	19.2%	0.1%
Fixed Income - Europe	35.5%	Barclays Capital Global Aggregate Nordic ex Norv	2.8%	3.5%	0.7%
Total	100.0%				
Net Actual Return (reported by you)					13.1%
Calculated Policy Return = sum of (policy weights X benchmark returns)				13.3%	
Adjustment to reflect rebalancing and overlay impacts				<u>-0.6%</u>	
Policy Return (reported by you)					<u>12.7%</u>
Net Value Added (Net Return - Policy Return)					0.4%

Your policy return and value added calculations - 2013 to 2016

2016 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - Europe	61.1%	CMVINXBXINN -	8.7%	10.4%	1.7%
Fixed Income - Europe	38.9%	Barclays Capital	1.8%	2.1%	0.3%
Total	100.0%				
Net Return (reported by you)					7.0%
Calculated policy return (sum: Policy weights x benchmarks)				6.0%	
Adjustment to reflect rebalancing and overlay impacts				<u>-0.1%</u>	
Policy return (reported by you)					<u>5.9%</u>
Net Value Added (Net Return - Policy Return)					1.1%

2014 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - Europe	58.1%	CMVINXBXINN -	7.4%	10.6%	3.2%
Stock - Other					
Fixed Income - Europe	41.9%	Barclays Capital	9.2%	9.7%	0.5%
Fixed Income - Other					
Total	100.0%				
Net Return (reported by you)					10.6%
Calculated policy return (sum: Policy weights x benchmarks)				8.2%	
Adjustment to reflect rebalancing and overlay impacts				<u>0.4%</u>	
Policy return (reported by you)					<u>8.6%</u>
Net Value Added (Net Return - Policy Return)					2.0%

2015 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - Europe	59.5%	CMVINXBXINN -	9.2%	9.8%	0.6%
Fixed Income - Europe	40.5%	Barclays Capital	2.7%	2.8%	0.1%
Total	100.0%				
Net Return (reported by you)					6.9%
Calculated policy return (sum: Policy weights x benchmarks)				6.6%	
Adjustment to reflect rebalancing and overlay impacts				<u>-0.1%</u>	
Policy return (reported by you)					<u>6.5%</u>
Net Value Added (Net Return - Policy Return)					0.4%

2013 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - Europe	10.0%	CMVINXBXINN -	42.3%	39.6%	-2.7%
Stock - Other	52.8%		23.6%	21.5%	-2.1%
Fixed Income - Europe	6.0%	Barclays Capital	11.7%	12.2%	0.5%
Fixed Income - Other	31.2%		0.7%	1.4%	0.7%
Total	100.0%				
Net Return (reported by you)					15.6%
Calculated policy return (sum: Policy weights x benchmarks)				17.6%	
Adjustment to reflect rebalancing and overlay impacts				<u>-1.0%</u>	
Policy return (reported by you)					<u>16.6%</u>
Net Value Added (Net Return - Policy Return)					-1.0%

Profit/Loss on overlay programs

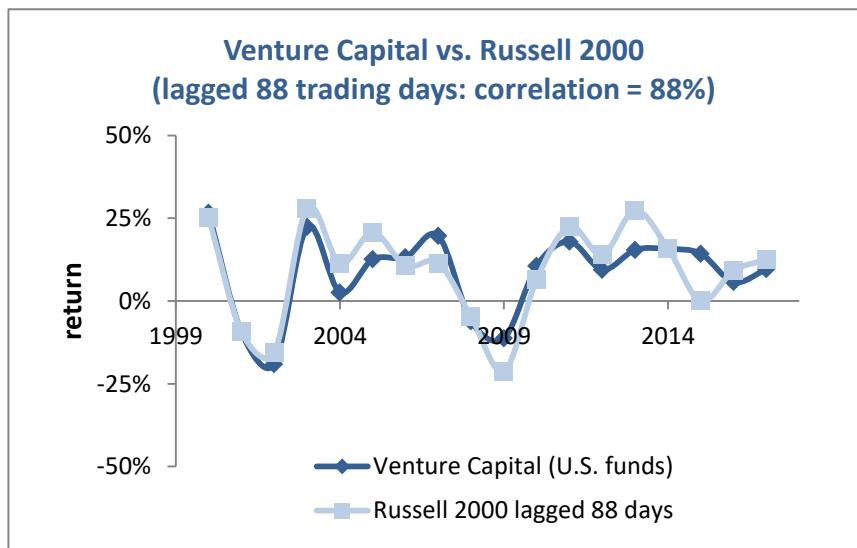
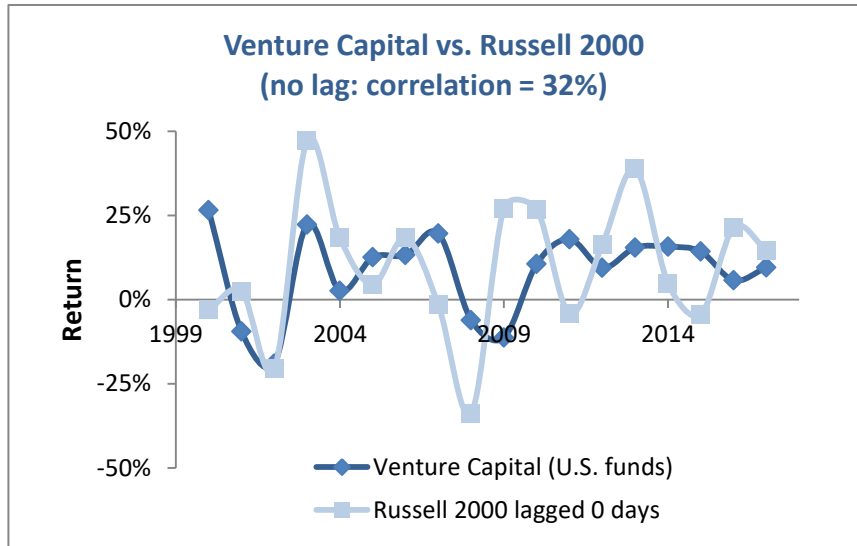
Overlay type	Your fund		Peer median				Global median			
	2017	2016	2017		2016		2017		2016	
	bps	bps	bps	#	bps	#	bps	#	bps	#
Int. Discretionary Currency			0.1	4	0.0	5	0.1	13	0.0	15
Ext. Discretionary Currency							-0.1	12	5.4	9
Internal Global TAA			27.5	3	0.0	3	15.0	8	0.0	9
External Global TAA							6.4	3	22.0	2
Internal PolicyTilt TAA			-0.6	4	0.0	3	-0.2	10	0.0	10
External PolicyTilt TAA							18.2	2	318.6	1
Internal Commodities			0.4	1	-4.3	1	15.9	2	5.5	2
External Commodities							1.9	3	107.0	2
Internal Long/Short			8.8	4	-11.7	4	9.0	7	2.4	8
External Long/Short							38.6	1		
Internal Other			11.6	3	0.7	3	0.6	12	0.8	12
External Other			-2.1	1	1.6	1	0.0	11	1.6	11

Profit/loss in basis points was calculated using total fund average holdings. This was done to measure the impact of the program at the total fund level.

Appendix - Private equity benchmarks used by most funds are flawed.

A high proportion of the benchmarks used for illiquid assets by participants in the CEM universe are flawed. Flaws include:

- Timing mismatches due to lagged reporting. For example, as the graphs on the right demonstrate, reported venture capital returns clearly lag the returns of stock indices. Yet most funds that use stock indices to benchmark their private equity do not use lagged benchmarks. The result is substantial noise when interpreting performance. For example, for 2008 the Russell 2000 index return was -33.8% versus -4.8% if lagged 88 trading days. Thus if a fund earned the average reported venture capital return for 2008 of -6.1%, they would have mistakenly believed that their value added from venture capital was 27.7% using the un-lagged benchmarks versus -1.3% using the same benchmark lagged to match the average 88 day reporting lag of venture capital funds.



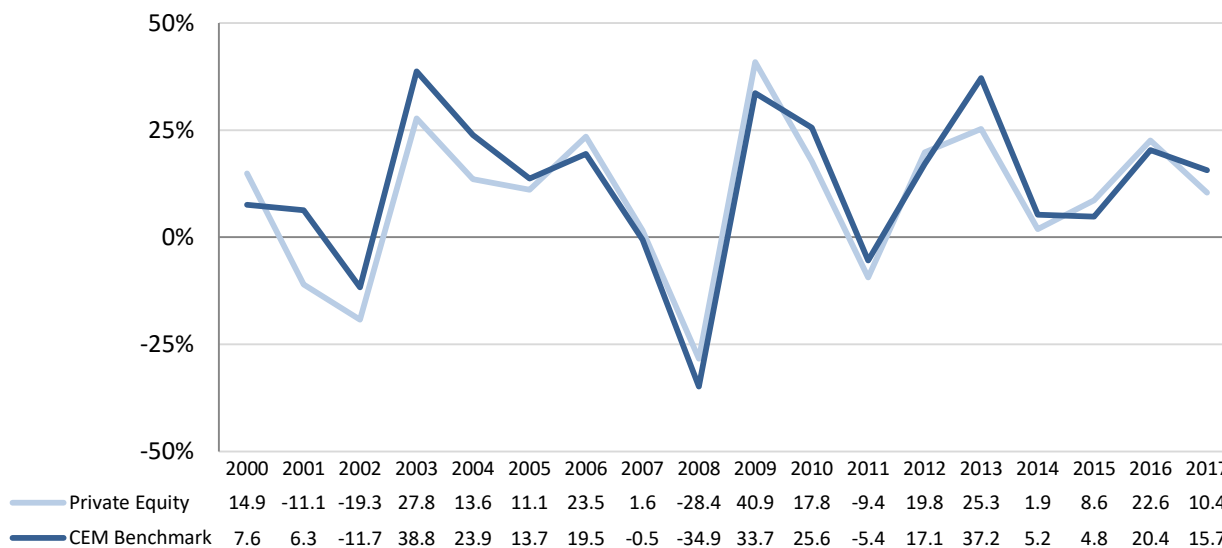
- Un-investable peer-based benchmarks. Peer based benchmarks reflect the reporting lags in peer portfolios so they have much better correlations than un-lagged investable benchmarks. But their relationship statistics are not as good as for lagged investable benchmarks.
- Aspirational premiums (i.e., benchmark + 2%). Premiums cannot be achieved passively, and evidence suggests that a fund has to be substantially better than average to attain them. More importantly, when comparing performance to other funds, they need to be excluded to ensure a level playing field.

To enable fairer comparisons, CEM uses default private equity benchmarks.

Benchmarks used for private equity by most participants in the CEM universe are flawed (see previous page). So to enable fairer comparisons, CEM replaced the reported private equity benchmarks of all funds except yours with defaults. The defaults are:

- Investable. They are comprised of lagged small cap benchmarks.
- Custom lagged for each participant. Different portfolios had different lags. CEM estimated the lag on private equity portfolios by comparing annual private equity returns to public market proxies with 1 day of lag, 2 days of lag, 3 days of lag, etc. At some number of days lag, correlation between the two series is maximized. The median lag was 85 trading days (i.e., approximately 119 calendar days or 3.9 calendar months)
- Regional mix adjusted based on the average estimated mix of regions in private equity portfolios for a given country.
- The result is the default benchmarks are superior to most self-reported benchmarks. Correlations improve to a median of 82% for the default benchmarks versus 44% for self-reported benchmarks. Other statistics such as volatility were also much better.

Private equity returns versus reported and default benchmark returns - Global median



1. To enable better comparison between lagged returns and lagged benchmarks, lags have been removed from both. See "Asset allocation and fund performance of defined benefit pension funds in the United States, 1998-2014" by Alexander D. Beath and Chris Flynn for details.

4

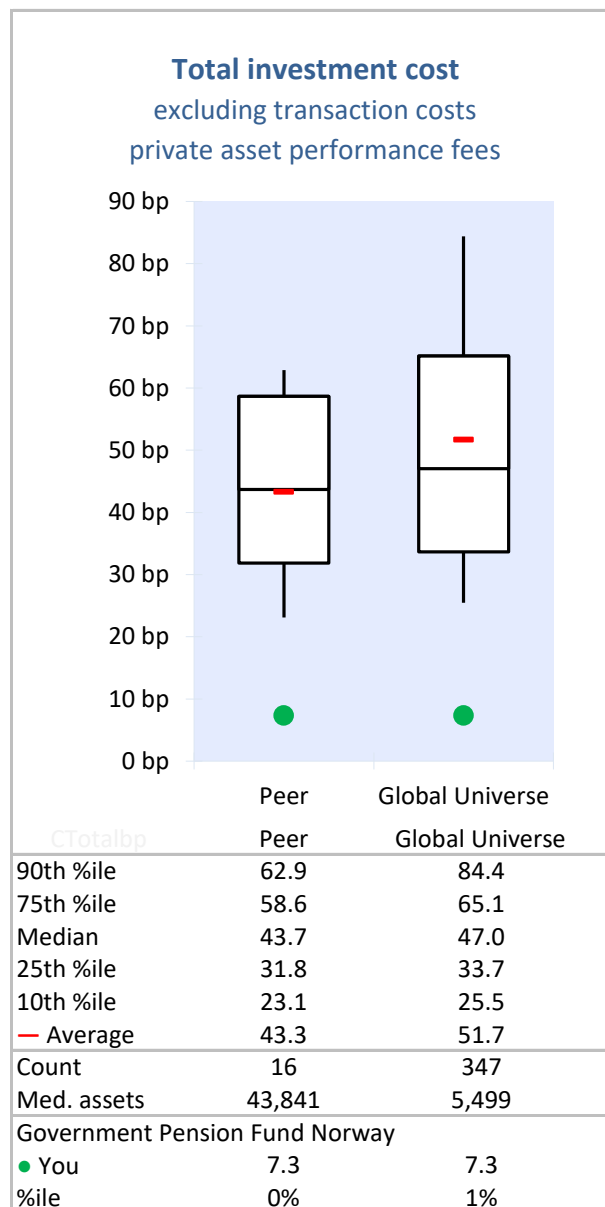
Total cost and benchmark cost

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Comparisons of total investment cost

Your total investment cost, excluding transaction costs and private asset performance fees, of 7.3 bps was below the peer median of 43.7 bps.

Differences in total investment cost are often caused by two factors that are usually outside of management's control: asset mix and fund size. Therefore, to assess whether your fund's total investment cost is high or low given your unique asset mix and size, CEM calculates a benchmark cost for your fund. Benchmark cost analysis begins on page 7 of this section.

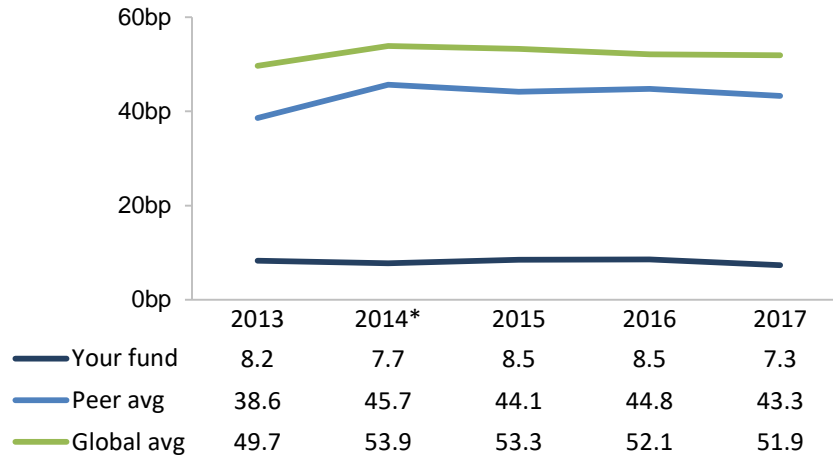


Trend in total investment cost

Your total investment cost, excluding transaction costs and private asset performance fees, decreased from 8.2 bps in 2013 to 7.3 bps in 2017.

Trend in total investment cost

(excluding transaction costs and private asset performance fees)



Trend analysis is based on 254 Global funds and 16 peer funds with 5 or more consecutive years of data.

* Since 2014, hedge fund performance fees have been included for all participants.

Types of costs included in your total investment cost

The table below outlines the types of costs included in your total investment cost.

Asset class	Internal		External			
	In-house total cost	Transaction costs	Manager base fees	Monitoring & other costs	Perform. fees (active only)	Transaction costs
<u>Public</u> (Stock, Fixed income, commodities, REITs)	✓	✗	✓	✓	✓	✗
Derivatives/Overlays	✓	✗	✓	✓	✓	✗
<u>Hedge funds & Global TAA</u>						
Hedge Funds	n/a	n/a	✓	✓	✓	✗
Global TAA	✓	✗	✓	✓	✓	✗
<u>Private real assets</u> (Infrastructure, natural resources, real estate ex-REITs, other real assets)	✓	✗	✓	✓	✗	✗
<u>Private equity</u> (Diversified private equity, venture capital, LBO, other private equity)	✓	✗	✓*	✓	✗	✗

*External manager base fees represent gross contractual management fees.

- ✓ indicates cost is included.
- ✗ indicates cost is excluded.
- Green shading indicates that the cost type has been newly added for the 2014 data year.
- CEM currently excludes external private asset performance fees and all transaction costs from your total cost because only a limited number of participants are currently able to provide complete data.

Detailed breakdown of your total investment cost

Your 2017 total investment cost, excluding transaction costs and private asset performance fees, was 7.3 bp or €16.8 million.

Your investment costs

	Internal		External Passive	External Active			Total ¹		
	Passive	Active	Monitoring Fees & Other	Base Fees	Perform. Fees	Monitor. & Other	€000s	bps	% of Total
Asset management									
Stock - Europe		7,445					7,445		44%
Fixed Income - Europe		6,647					6,647		39%
Fixed Income - Other									
Total asset management costs excluding private asset performance fees							14,092	6.1bp	84%
Oversight, custodial & other asset related costs									
Oversight of the Fund							1,604		10%
Trustee & Custodial							721		4%
Consulting and Performance Measurement							45		0%
Audit							270		2%
Other							105		1%
Total oversight, custodial & other costs							2,745	1.2bp	16%
Total investment costs excluding transaction costs and private asset performance fees							16,837	7.3bp	100%

1. Total cost excludes carry/performance fees for real estate, infrastructure, natural resources and private equity. Performance fees are included for the public market asset classes and hedge funds.

Changes in your investment costs

The table below shows how your investment costs have changed from year to year by asset class.

Change in your investment costs (2017 - 2013)

	Investment costs (€000s)					Change (€000s)				Change (%)			
	2017	2016	2015	2014	2013	2017	2016	2015	2014	2017	2016	2015	2014
Asset management													
Stock - Europe	7,445	8,622	7,910	7,120	1,589	-1,177	712	790	5,531	-14%	9%	11%	348%
Fixed Income - Europe	6,647	7,217	6,353	5,657	1,617	-570	864	696	4,040	-8%	14%	12%	250%
Fixed Income - Other					4,331								
Total excl. private asset perf. fees	14,092	15,839	14,263	12,777	12,949	-1,747	1,576	1,486	-172	-11%	11%	12%	-1%
Oversight, custodial & other asset related costs													
Oversight of the Fund	1,604	1,519	1,721	1,480	1,868	85	-202	241	-388	6%	-12%	16%	-21%
Trustee & Custodial	721	895	763	721	731	-174	132	42	-10	-19%	17%	6%	-1%
Consulting and Performance Measurement	45	52	71	59	86	-7	-19	12	-27	-13%	-27%	20%	-31%
Audit	270	306	267	283	311	-36	39	-16	-28	-12%	15%	-6%	-9%
Other	105	293	400	336	489	-188	-107	64	-153	-64%	-27%	19%	-31%
Total oversight, custodial & other	2,745	3,065	3,222	2,879	3,485	-320	-157	343	-606	-10%	-5%	12%	-17%
Total investment costs ¹	16,837	18,904	17,485	15,656	16,434	-2,067	1,419	1,829	-778	-11%	8%	12%	-5%
Total in basis points	7.3bp	8.5bp	8.5bp	7.7bp	8.2bp								

1. Total cost excludes carry/performance fees for real estate, infrastructure, natural resources and private equity. Performance fees are included for the public market asset classes and hedge funds.

Total cost versus benchmark cost

Your fund's total investment cost, excluding transaction costs and private asset performance fees, was 7.6 bps below your benchmark cost of 14.9 bps. This implies that your fund was low cost by 7.6 bps compared to the peer median, after adjusting for your fund's asset mix.

Your cost versus benchmark

	€000s	bps
Your fund's total investment cost excluding transaction costs and illiquid asset performance fees	16,837	7.3 bp
- Your fund's benchmark	34,265	14.9 bp
= Your fund's cost savings	-17,428	-7.6 bp

Your benchmark cost is an estimate of your total costs assuming that you paid the peer median cost for each of your investment mandates and fund oversight. The calculation of your benchmark cost is shown on the following page.

The reasons why your fund's total cost was below your benchmark are summarized in the table below. Details of each of the impacts below are provided on pages 9 to 12.

Reasons why your fund was low cost

	Cost/-Savings impact	
	€000s	bps
<u>Differences in implementation style:</u>		
External active vs. low cost styles	-16,810	-7.3 bp
Partnerships vs. external active	0	n/a
Fund of funds vs. external direct	0	n/a
Mix of internal and passive styles	2,032	0.9 bp
Style impact of overlays	-1,471	-0.6 bp
Total style impact	-16,249	-7.1 bp
<u>Paying more/-less for similar services:</u>		
External investment management	0	
Internal investment management	-693	-0.3 bp
Oversight, custodial and other	-486	-0.2 bp
Total impact of paying more /-less	-1,179	-0.5 bp
Total savings	-17,428	-7.6 bp

Benchmark cost calculation

Your 2017 benchmark cost was 14.9 basis points or 34.3 million. It equals your holdings for each asset class multiplied by the peer median cost for the asset class. The peer median cost is the style weighted average for all implementation styles (i.e., internal passive, internal active, external passive, external active).

Calculation of your 2017 benchmark cost

Asset class	Your average assets (A)	Weighted peer median cost ¹ (B)	Benchmark €000s (A X B)
Asset management costs			
Stock - Europe	14,312	15.2 bp	21,715
Fixed Income - Europe	8,556	9.2 bp	7,848
Overlay Programs ²	22,986	0.6 bp	1,471
Benchmark for asset management	22,986	13.5 bp	31,034
Oversight, custody and other costs			
Oversight of the Fund	22,986	0.9 bp	2,067
Trustee & Custodial	22,986	0.4 bp	936
Consulting and Performance Measuremer	22,986	0.0 bp	39
Audit	22,986	0.0 bp	64
Other	22,986	0.1 bp	126
Benchmark for oversight, custody & other		1.4 bp	3,231
Total benchmark cost		14.9 bp	34,265

1. The weighted peer median cost for asset management is the style-weighted average of the peer median costs for all implementation styles (i.e., internal passive, internal active, external passive, external active, fund of fund). The style weights by asset class for your fund and the peers are shown on page 17 of this section.

2. Total fund average holdings is used as the base when calculating the relative cost impact of the overlay programs.

Cost impact of differences in implementation style

Differences in implementation style (i.e., external active management versus lower cost indexed and internal management, fund of funds versus lower cost direct LPs, and overlay usage) relative to your peers saved you 7.1 bps.

Calculation of the cost impact of differences in implementation style

	Your avg holdings (mils)	% External active			Premium vs. internal and passive ¹	Cost/ -Savings
	(A)	You	Peer average	More/ -Less	(C)	€000s bps
		(B)				(A X B X C)
Stock - Europe	14,312	0%	17%	-17%	51 bp	-12,552
Fixed Income - Europe	8,556	0%	13%	-13%	37 bp	-4,258
Total impact of differences in external active management usage						-16,810 -7.3 bp
<i>Overlay usage</i>						
Impact of lower use of portfolio level overlays (see page 10)						-1,471 -0.6 bp
<i>Mix of low cost styles</i>						
Impact of mix of internal indexed, internal active, external indexed (see page 11)						2,032 0.9 bp
Total						-16,249 -7.1 bp

1. The external active cost 'premium vs internal and passive' is the additional cost of external active management and fund of funds relative to the average of the other lower cost implementation styles: internal passive, internal active and external passive. These calculations are specific to your peer group.

Cost impact of overlays

As summarized on the previous page, the style impact of overlays saved you 0.6 bps. If you use more overlays than your peers, or more expensive types of overlays, then it increases your relative cost.

Calculation of the cost impact of differences in the use of portfolio level overlays

	Your average total holdings (mils)	Cost as % of total holdings		Cost/-Savings Impact (000s)
		You	Peer avg.	
	(A)	(B)	(C)	A X (B - C)
Currency - Hedge	22,986	NA	0.06 bp	-143
Currency - Discretionary	22,986	NA	0.07 bp	-164
Rebalancing / Passive Beta - Hedge	22,986	NA	0.04 bp	-96
Duration Management - Hedge	22,986	NA	0.00 bp	-10
Global TAA - Discretionary	22,986	NA	0.06 bp	-129
Policy tilt TAA - Discretionary	22,986	NA	0.04 bp	-87
Commodity Futures - Discretionary	22,986	NA	0.01 bp	-13
Long/Short - Discretionary	22,986	NA	0.26 bp	-587
Other Overlay - Discretionary	22,986	NA	0.05 bp	-111
External Overlays				
Currency - Hedge	22,986	NA	0.00 bp	-3
Currency - Discretionary	22,986	NA	0.03 bp	-72
Rebalancing / Passive Beta - Hedge	22,986	NA	0.01 bp	-22
Other Overlay - Discretionary	22,986	NA	0.01 bp	-33
Total impact in 000s				-1,471
Total impact in basis points				-0.6 bp

Cost impact of lower cost styles

As summarized on page 9, your mix of 'lower-cost' internal and passive styles cost you 0.9 bps. Details are shown below.

Cost impact of differences in your mix of 'lower-cost' implementation styles

	Your non-external active holdings (mils)	Percent holdings (of non-external-active)						Cost/-Savings ¹ (000s)
		Internal passive		Internal active		External passive		
		You	Peers	You	Peers	You	Peers	
Stock - Europe	14,312	0%	18%	100%	74%	0%	8%	1,874
Fixed Income - Europe	8,556	0%	8%	100%	90%	0%	2%	158
Total impact in 000s								2,032
Total impact in basis points								0.9 bp

1. Cost/-savings for each asset class equals non-external active holdings within each asset class X cumulative impact from the three lower cost styles. By formula: [(peer median cost for the style - peer weighted average cost of lower cost styles) X (your weight for the style - peer weight for the style)]. Peer median costs for each style are shown on page 15.

Cost impact of paying more/-less for similar services

Differences in what you paid relative to your peers for similar asset management and related oversight and support services saved you 0.5 bps.

Calculation of the cost impact of paying more/-less

	Style	Your avg holdings (mils)	Cost in bps			Cost/-Savings	
			Your	Peer median	More/-less	€000s	bps
Internal asset management		(A)			(B)	(A X B)	
Stock - Europe - Internal Active	active	14,312	5.2	7.7	-2.5	-3,593	
Fixed Income - Europe - Internal Active	active	8,556	7.8	4.4	3.4	2,900	
Total for internal management						-693	-0.3 bp
Oversight, custodial, other							
Oversight of the Fund		22,986	0.7	0.9	-0.2	-463	
Trustee & Custodial		22,986	0.3	0.4	-0.1	-215	
Consulting		22,986	0.0	0.0	0.0	6	
Audit		22,986	0.1	0.0	0.1	206	
Other		22,986	0.0	0.1	0.0	-21	
Total for oversight, custodial, other						-486	-0.2 bp
Total						-1,179	-0.5 bp

Summary of why you are high or low cost by asset class

The table below summarizes where you are high and low cost by asset class. It also quantifies how much is due to differences in implementation style (i.e., differences in the mix of external active, external passive, internal active, internal passive and fund of fund usage) and how much is due to paying more or less for similar services (i.e., same asset class and style).

Summary of why you are high or low cost by asset class

	Your cost ¹	Benchmark = peer weighted median cost ¹	More/-less	Your average assets (or fee basis)	'More/-less in \$000s		
	(A)	(B)	(C = A - B)	(D)	Total More/-less	Due to Impl. style	Due to paying more/less
Asset management costs							
Stock - Europe	5.2 bp	15.2 bp	-10.0 bp	14,312	-14,270	-10,677	-3,593
Fixed Income - Europe	7.8 bp	9.2 bp	-1.4 bp	8,556	-1,201	-4,101	2,900
Overlay Programs ²	0.0 bp	0.6 bp	-0.6 bp	22,986	-1,471	-1,471	0
Total asset management	6.1 bp	13.5 bp	-7.4 bp	22,986	-16,942	-16,249	-693
Oversight, custody and other costs							
Oversight of the Fund	0.7 bp	0.9 bp	-0.2 bp	22,986	-463	n/a	-463
Trustee & Custodial	0.3 bp	0.4 bp	-0.1 bp	22,986	-215	n/a	-215
Consulting	0.0 bp	0.0 bp	0.0 bp	22,986	6	n/a	6
Audit	0.1 bp	0.0 bp	0.1 bp	22,986	206	n/a	206
Other	0.0 bp	0.1 bp	0.0 bp	22,986	-21	n/a	-21
Total oversight, custody & other	1.2 bp	1.4 bp	-0.2 bp	22,986	-486	n/a	-486
Total	7.3 bp	14.9 bp	-7.6 bp	22,986	-17,428	-16,249	-1,179

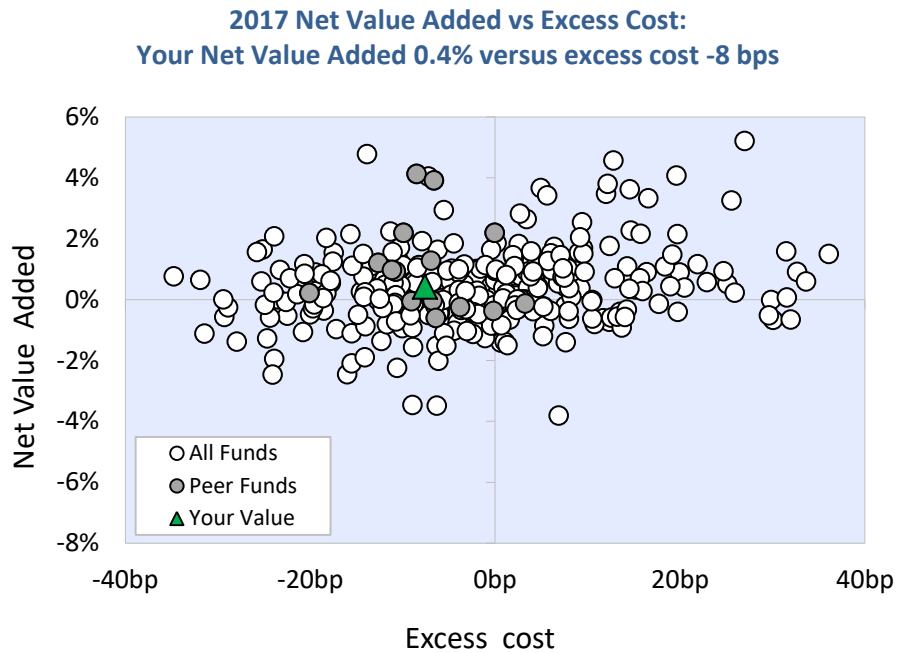
1. The weighted peer median cost for asset management is the style-weighted average of the peer median costs for all implementation styles (i.e., internal passive, internal active, external passive, external active, fund of fund). It excludes performance fees on private assets. The style weights by asset class for your fund and the peers are shown on page 17 of this section.

2. Total fund average holdings is used as the base when calculating the relative cost impact of the overlay programs.

Your cost effectiveness ranking

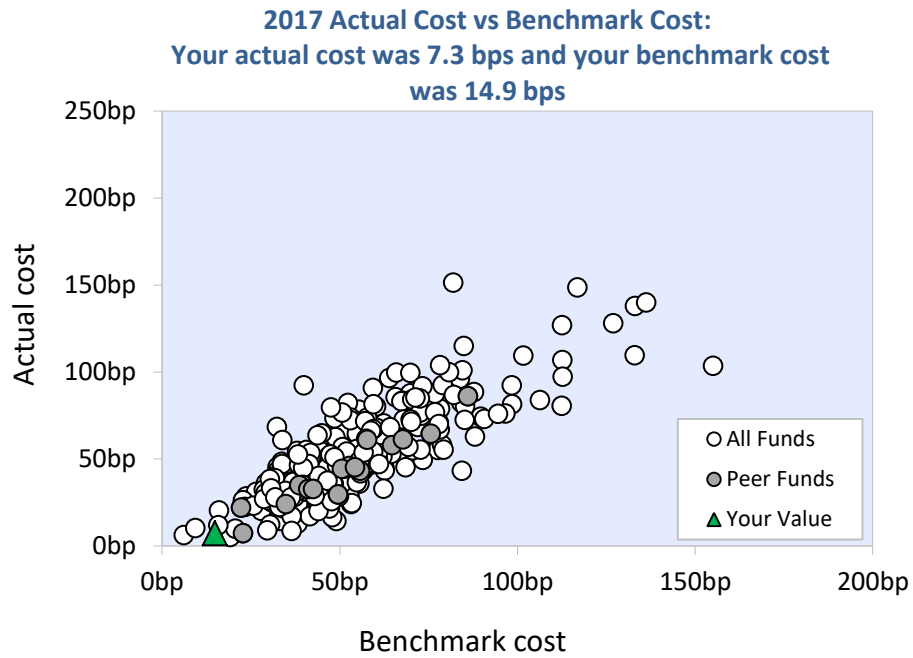
Being high or low cost is neither good nor bad. The more important question is, are you receiving sufficient value for your excess cost? At the total fund level, we provide insight into this question by combining your value added and your excess cost to create a snapshot your cost effectiveness performance relative to that of the survey universe.

For the 2017 year, your fund ranked in the positive value added, low cost quadrant.



1 Benchmark cost and excess cost calculations are based on regression analysis (see Appendix B in this section) for all funds except your fund. Your fund's benchmark cost is based on peer-median costs (per page 7 of this section).

Actual cost versus benchmark cost



1 Benchmark cost calculations are based on regression analysis (see Appendix B in this section) for all funds except your fund. Your fund's benchmark cost is based on peer-median costs (per page 7 of this section).

Appendix A: Benchmarking methodology formulas and data

a) Formulas

Example calculations are for 'Stock - Europe' unless otherwise indicated.

Asset class peer cost

$$\begin{aligned} &= \text{Weighted average by peer average style of peer median costs for asset class} \\ &= [(0.15 \times 1.5 \text{ bp}) + (0.61 \times 7.7 \text{ bp}) + (0.07 \times 5.0 \text{ bp}) + (0.17 \times 57.2 \text{ bp})] = 15.2 \text{ bp} \end{aligned}$$

Peer average low cost (by asset class)

$$\begin{aligned} &= \text{Weighted average by peer average style of peer median costs for internal passive, internal active and} \\ &\text{external passive management for asset class} \\ &= [(0.15 \times 1.5 \text{ bp}) + (0.61 \times 7.7 \text{ bp}) + (0.07 \times 5.0 \text{ bp})] / (0.15 + 0.61 + 0.07) = 6.4 \text{ bp} \end{aligned}$$

External active cost premium (by asset class)

$$\begin{aligned} &= \text{Peer median external active cost - peer average low cost} \\ &= 57.2 \text{ bp} - 6.4 \text{ bp} = 50.8 \text{ bp} \end{aligned}$$

Impact from other differences in implementation style (by Asset Class)=

$$\begin{aligned} &= [(\text{Your int. pass. \%} - \text{average peer int. pass. \%}) \times (\text{peer median int. pass. cost} - \text{peer average low cost}) \\ &\quad + (\text{your int. act. \%} - \text{peer average int. act. \%}) \times (\text{peer median int. act. cost} - \text{peer average low cost}) \\ &\quad + (\text{your ext. pass. \%} - \text{average peer ext. pass. \%}) \times (\text{median peer ext. pass. cost} - \text{peer average low cost})] \\ &\quad \times \text{your average holdings} \end{aligned}$$

Appendix A: Benchmarking methodology formulas and data (page 2 of 2)

b) 2017 cost data used to calculate weighted peer median costs and impact of mix differences.

Asset Class	Your costs (basis points)						Peer median costs (basis points)						
	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	Weighted Median
Stock - Europe		5.2					1.5	7.7	5.0	57.2			15.2
Fixed Income - Europe		7.8					2.2	4.4	3.9	41.3			9.2

c) 2017 Style weights used to calculate the weighted peer median costs and impact of mix differences.

Style Weights	You (%)						Peer average (%)					
	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds
Stock - Europe	0.0%	100.0%	0.0%	0.0%			14.6%	61.4%	6.8%	17.3%		
Fixed Income - Europe	0.0%	100.0%	0.0%	0.0%			6.9%	77.7%	2.0%	13.4%		

The above data was adjusted as noted when there were insufficient peers, or for other reasons where direct comparisons were inappropriate.

Appendix B: Regression based benchmarks

Regression Benchmark Cost Equations

	2017		2016		2015		2014		2013	
	Coeff.	"t"	Coeff.	"t"	Coeff.	"t"	Coeff.	"t"	Coeff.	"t"
Constant	69.5	14.6	78.5	17.4	77.6	16.9	77.7	16.9	70.8	17.1
Size in millions (Log 10)	-13.2	-11.1	-14.1	-13.0	-14.0	-12.8	-13.7	-12.5	-12.7	-12.5
<u>Percentage of assets in:</u>										
Stocks	20.1	4.4	7.7	1.9	10.4	2.5	7.9	1.9	15.8	4.0
Real estate	75.0	5.2	73.3	5.6	60.2	4.3	56.1	3.8	62.6	4.5
Private equity & hedge funds	273.8	30.8	259.6	30.1	272.5	30.9	292.1	31.8	224.3	25.7
Country variable (1 if Cdn)	-4.1	-2.1	-2.9	-1.6	-1.5	-0.8	-3.0	-1.7	-3.3	-1.9
	All		All		All		All		All	
R-squared	74%		69%		69%		69%		59%	
Sample size	378		490		509		526		551	

In order to compare your fund's cost effectiveness to the survey universe, a benchmark cost for all participants is required.

The benchmark operating cost for all other funds is determined using regression analysis. The regression equation coefficients and "t statistics" are shown in the table above. An absolute "t" of greater than 2 indicates that the coefficient is statistically significant in predicting the dependent variable, in this case, the benchmark cost.

The benchmark equations have been remarkably robust. Although the coefficients change every year, primarily because of changes in the composition of the survey universe, they remain similar in relative magnitude and direction.

Most importantly, the R-squareds have been high. In 2017, the R-squared was 74% which means that fund size, asset mix and nationality explain more than 74% of the differences in costs between funds. This is good explanatory power.

Below is a description of the coefficients:

- Size = Log10 (fund size in millions)
- % Stocks = proportion in stocks (coefficient changed in 2011)
- % Real estate = proportion directly invested in real estate and infrastructure.
- % Private equity = proportion in direct and fund-of-funds venture capital, other private equity and hedge funds.
- Country variable = 1 if your country of origin is Canada, otherwise 0.

5

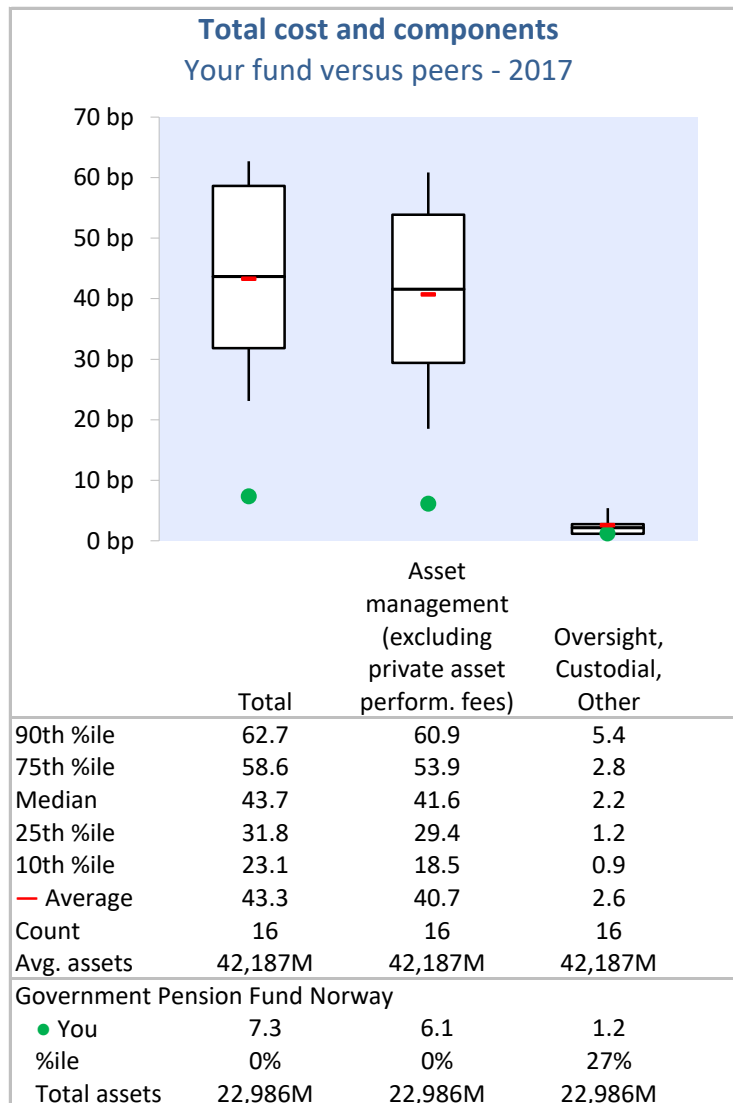
Cost comparisons

Total fund cost	2
Governance, operations & support	3
Public asset classes	
- Stock	4
- Fixed Income	10
- Commodities	23
- REITs	24
Real asset classes	
- Real estate ex-REITs	25
- Infrastructure	26
- Natural resources	27
- Other real assets	28
Private equity	
- Diversified private equity	29
- LBO	30
- Venture capital	31
- Private credit	32
- Other private equity	33
Global TAA	34
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Total fund cost

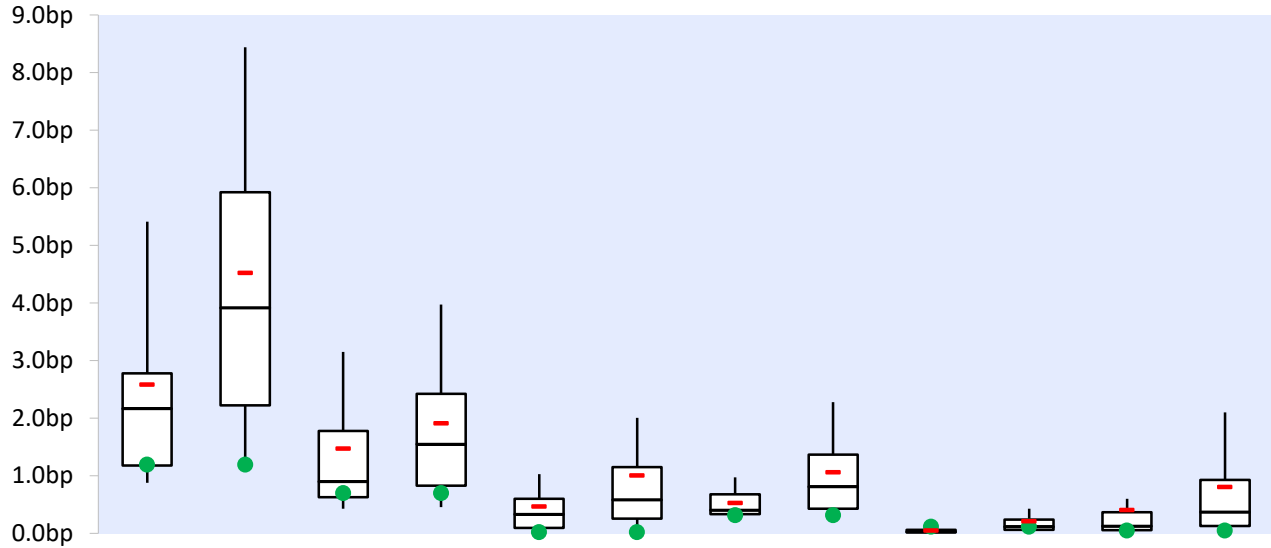
Total costs are benchmarked in the previous section. In this section, your fund's costs are compared on a line-item basis to your peers. This enables you to understand better why you may be a high or low cost fund and it also identifies and quantifies major cost differences that may warrant further investigation.

The 25th to 75th percentile range is the most relevant since higher and lower values may include outliers caused by unusual circumstances, such as performance-based fees. Count refers to the number of funds in your peer group that have costs in this category. It enables you to gauge the statistical significance.



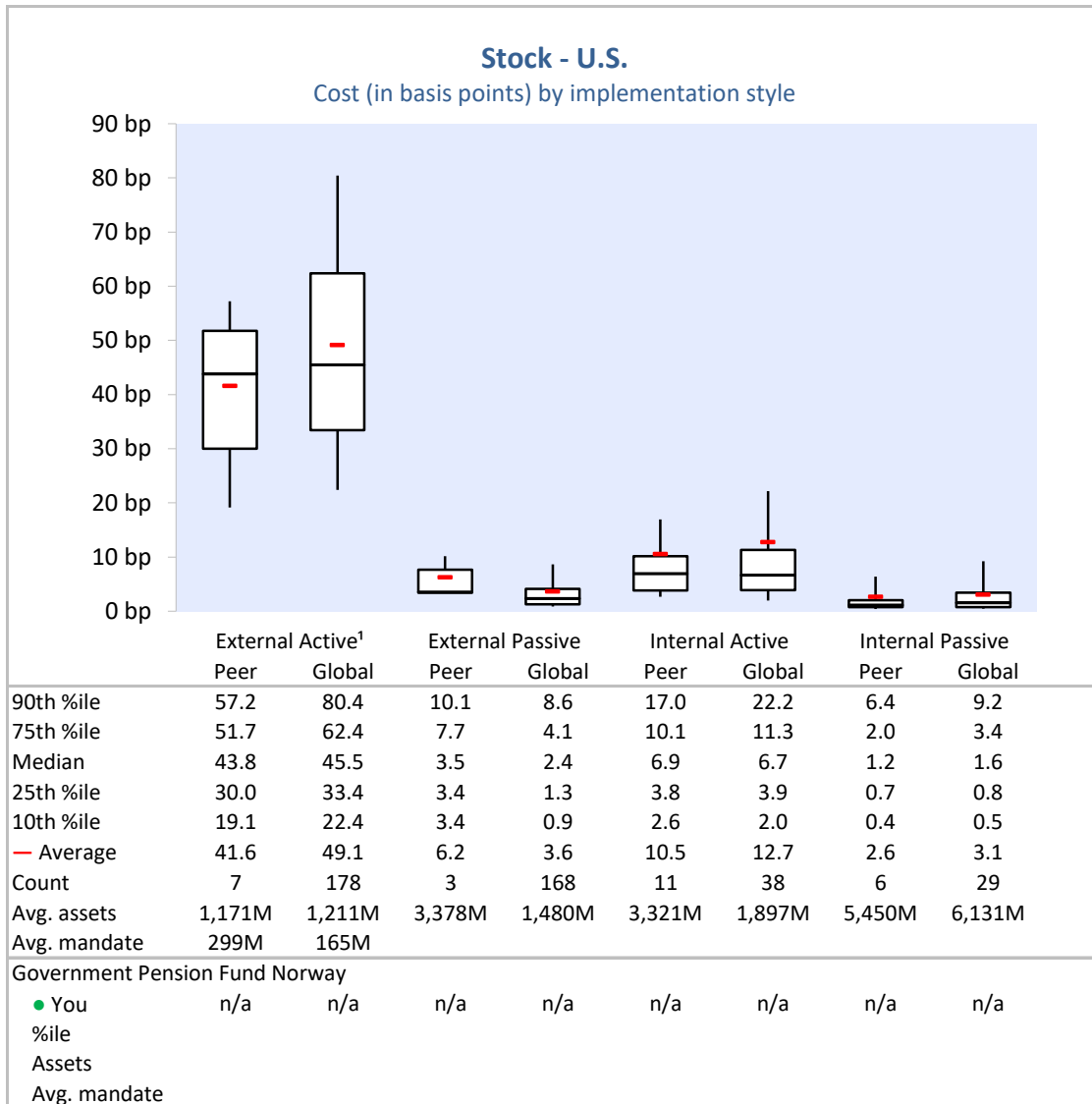
Governance, operations & support

Cost as a % of total plan assets



	Total		Oversight ¹		Consulting & Perf. Meas.		Custody		Audit		Other	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	5.4	8.4	3.2	4.0	1.0	2.0	1.0	2.3	0.1	0.4	0.6	2.1
75th %ile	2.8	5.9	1.8	2.4	0.6	1.2	0.7	1.4	0.1	0.2	0.4	0.9
Median	2.2	3.9	0.9	1.6	0.3	0.6	0.4	0.8	0.0	0.1	0.1	0.4
25th %ile	1.2	2.2	0.6	0.8	0.1	0.3	0.3	0.4	0.0	0.1	0.1	0.1
10th %ile	0.9	1.2	0.4	0.5	0.0	0.1	0.3	0.2	0.0	0.0	0.0	0.0
— Average	2.6	4.5	1.5	1.9	0.5	1.0	0.5	1.1	0.1	0.2	0.4	0.8
Count	16	332	16	332	9	273	16	326	14	296	11	228
Avg. assets	42,187M	21,246M	42,187M	21,246M	42,187M	21,246M	42,187M	21,246M	42,187M	21,246M	42,187M	21,246M
Government Pension Fund Norway												
● You	1.2	1.2	0.7	0.7	0.0	0.0	0.3	0.3	0.1	0.1	0.0	0.0
%ile	27%	9%	33%	20%	13%	2%	13%	16%	92%	50%	20%	13%
Plan assets	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M	22,986M

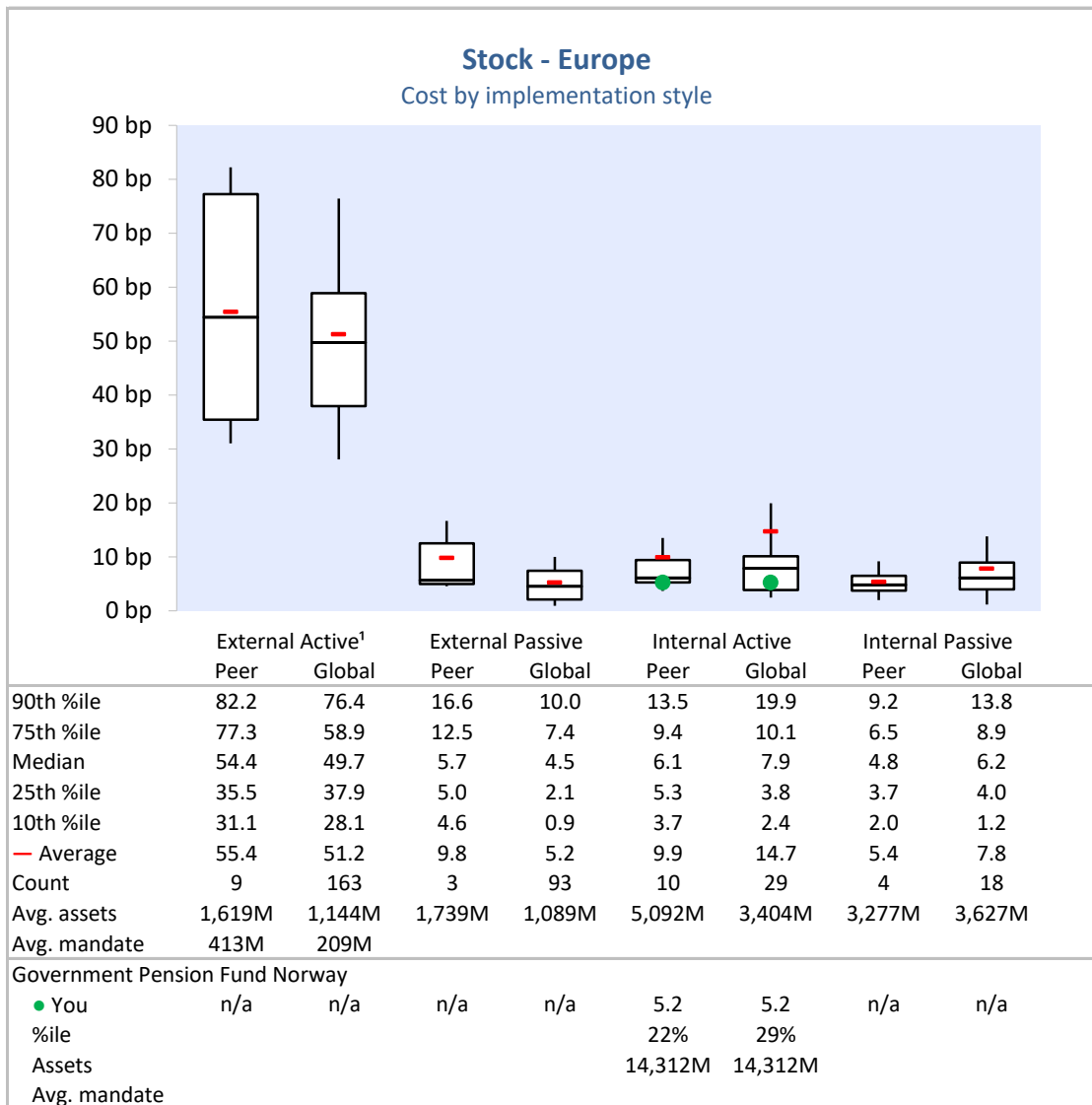
1. Oversight costs include the salaries and benefits of executives and their staff responsible for overseeing the entire fund or multiple asset classes and the fees/salaries of the Board or Investment Committee. All costs associated with the above including fees/salaries, travel, director's insurance and attributed overhead are included. Given fiduciary obligations, having the lowest oversight costs is not necessarily optimal. Some sponsors with lower-than-average executive and administration costs compensate by having-higher-than average consulting costs.



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	35.5	45.1
Performance fees*	n/a	3.5	3.2
Internal and other	<u>n/a</u>	<u>2.6</u>	<u>0.8</u>
Total	n/a	41.6	49.1

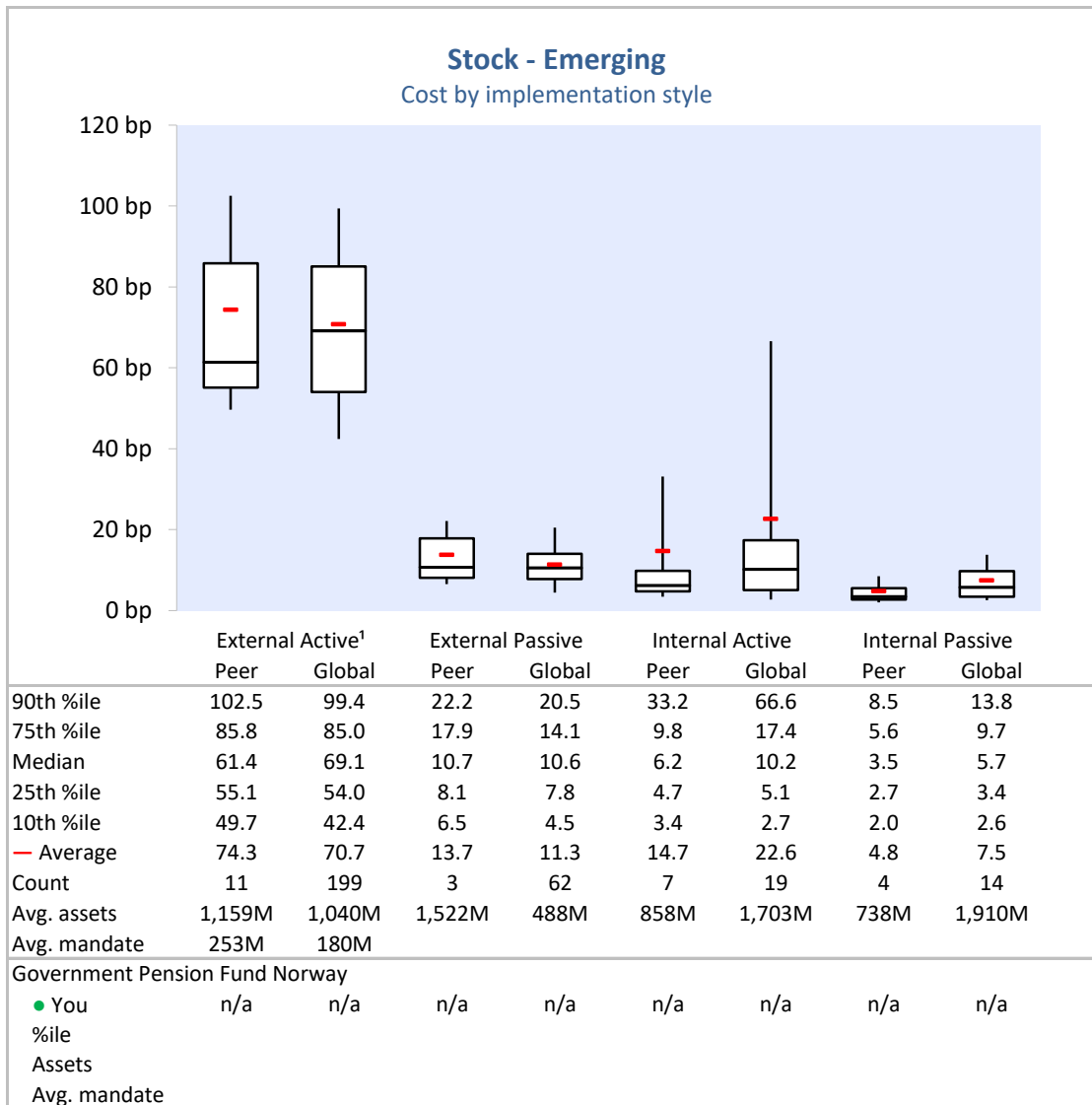
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 3.0 bps for peers (24 funds) and 12.6 bps for Global participants (45 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	47.3	46.2
Performance fees*	n/a	5.9	4.2
Internal and other	<u>n/a</u>	<u>2.2</u>	<u>0.8</u>
Total	n/a	55.4	51.2

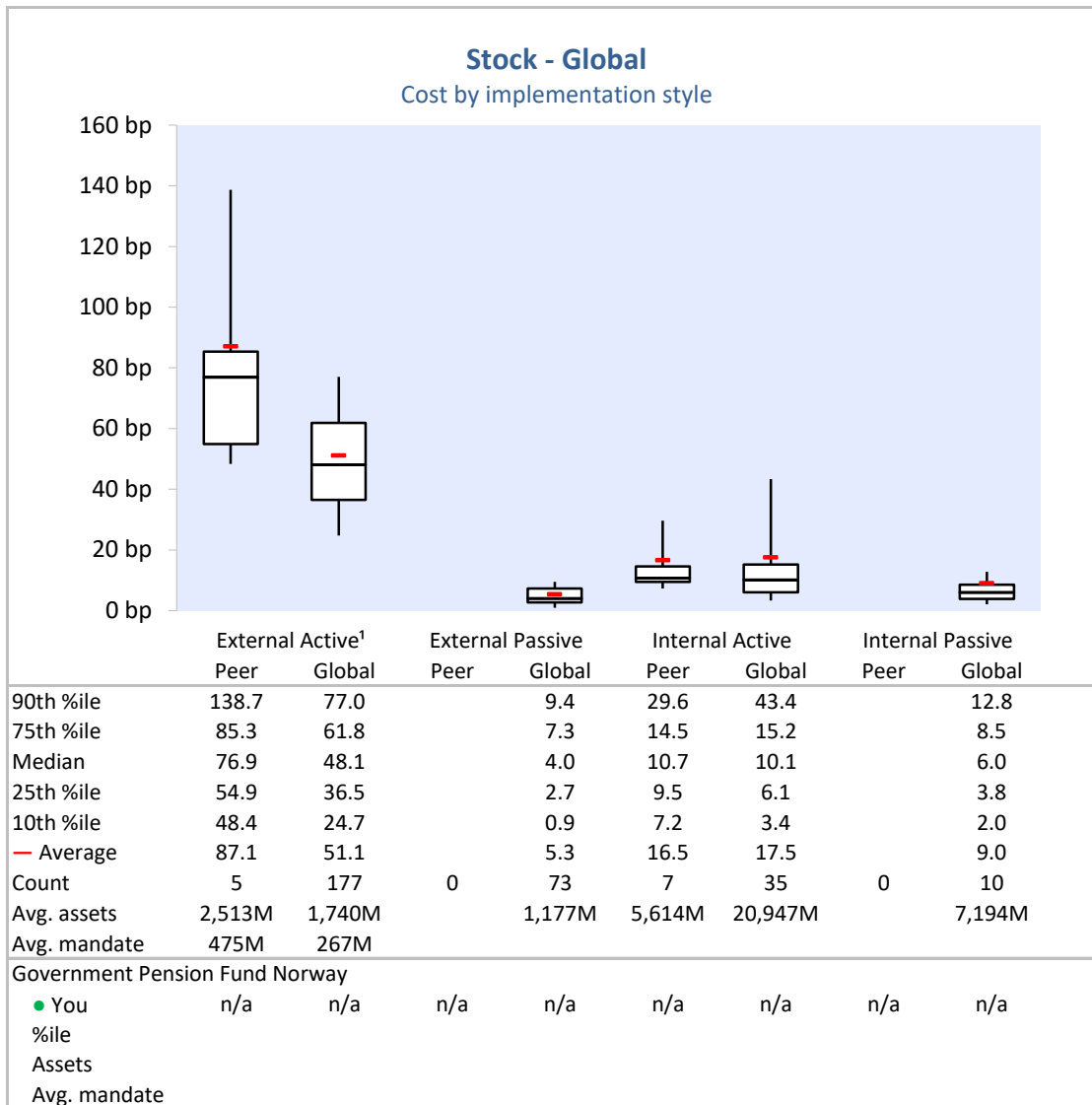
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 17.6 bps for peers (3 funds) and 15.7 bps for Global participants (44 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	59.1	65.6
Performance fees*	n/a	10.7	4.0
Internal and other	<u>n/a</u>	<u>4.6</u>	<u>1.1</u>
Total	n/a	74.3	70.7

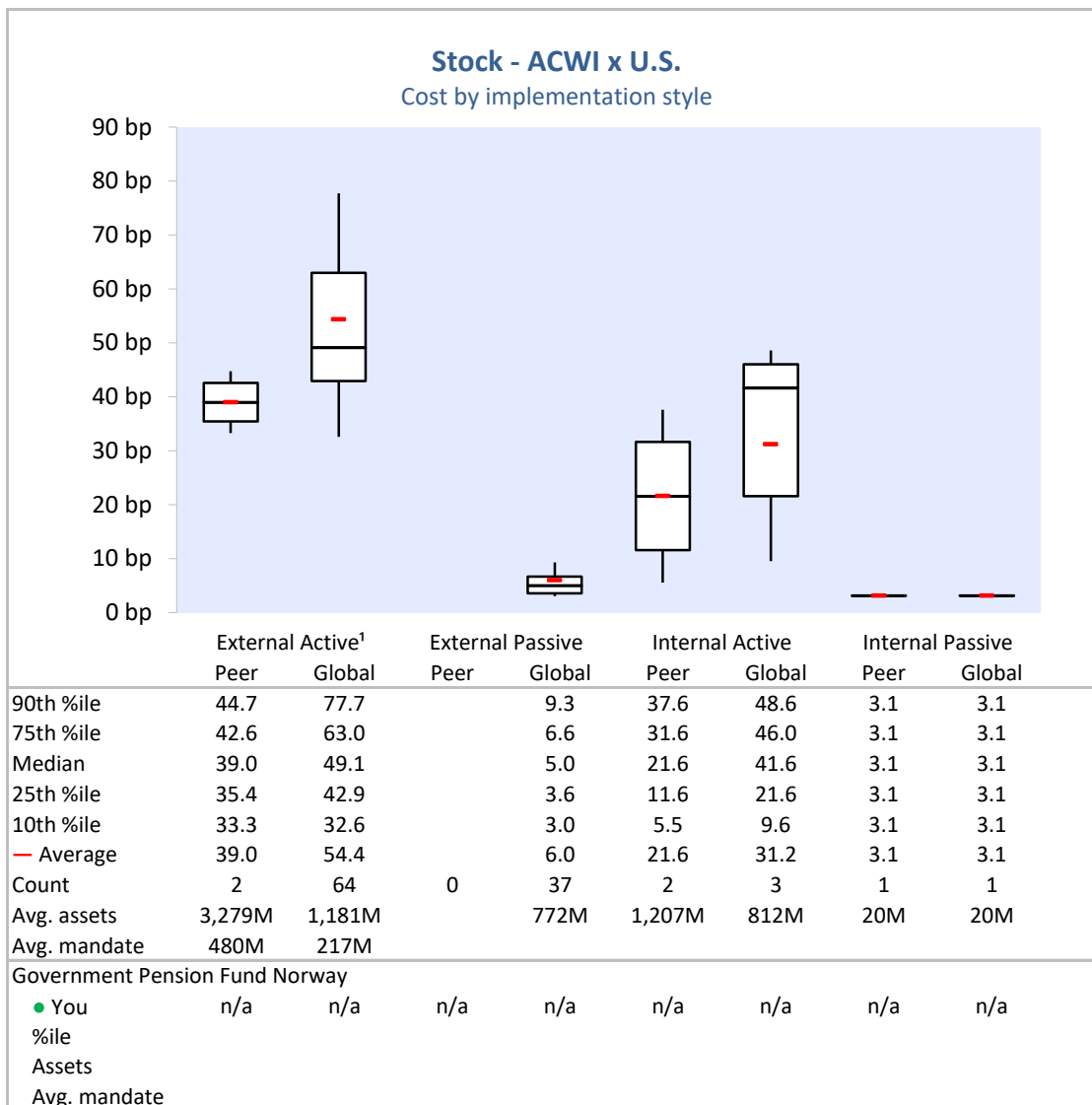
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 23.5 bps for peers (5 funds) and 18.1 bps for Global participants (44 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	43.9	45.4
Performance fees*	n/a	37.7	4.6
Internal and other	<u>n/a</u>	<u>5.6</u>	<u>1.1</u>
Total	n/a	87.1	51.1

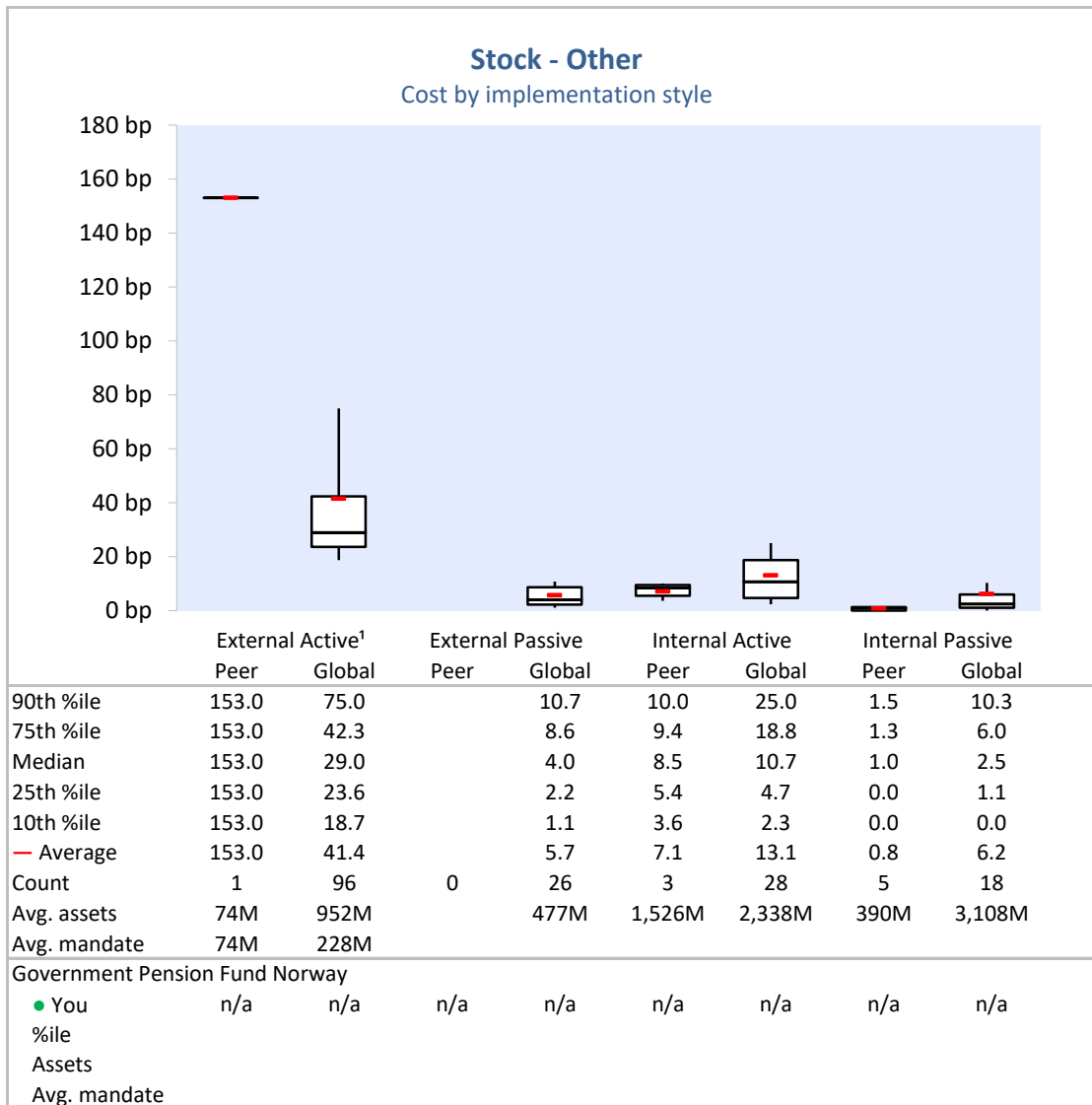
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 47.1 bps for peers (4 funds) and 15.8 bps for Global participants (51 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	38.4	51.4
Performance fees*	n/a	n/a	2.6
Internal and other	<u>n/a</u>	<u>0.6</u>	<u>0.4</u>
Total	n/a	39.0	54.4

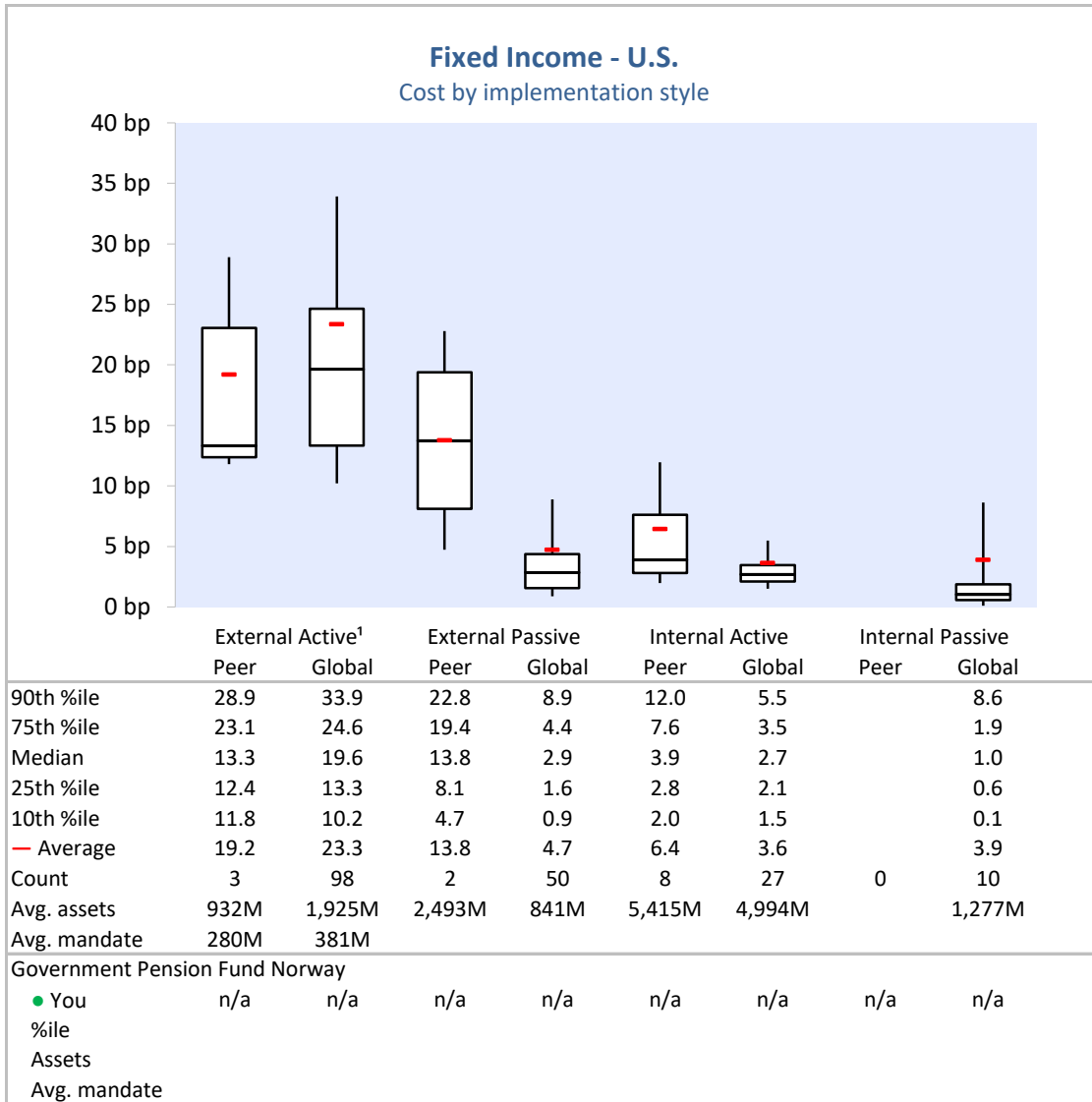
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 10.4 bps for Global participants (16 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	152.5	37.2
Performance fees*	n/a	n/a	3.7
Internal and other	<u>n/a</u>	<u>0.5</u>	<u>0.6</u>
Total	n/a	153.0	41.4

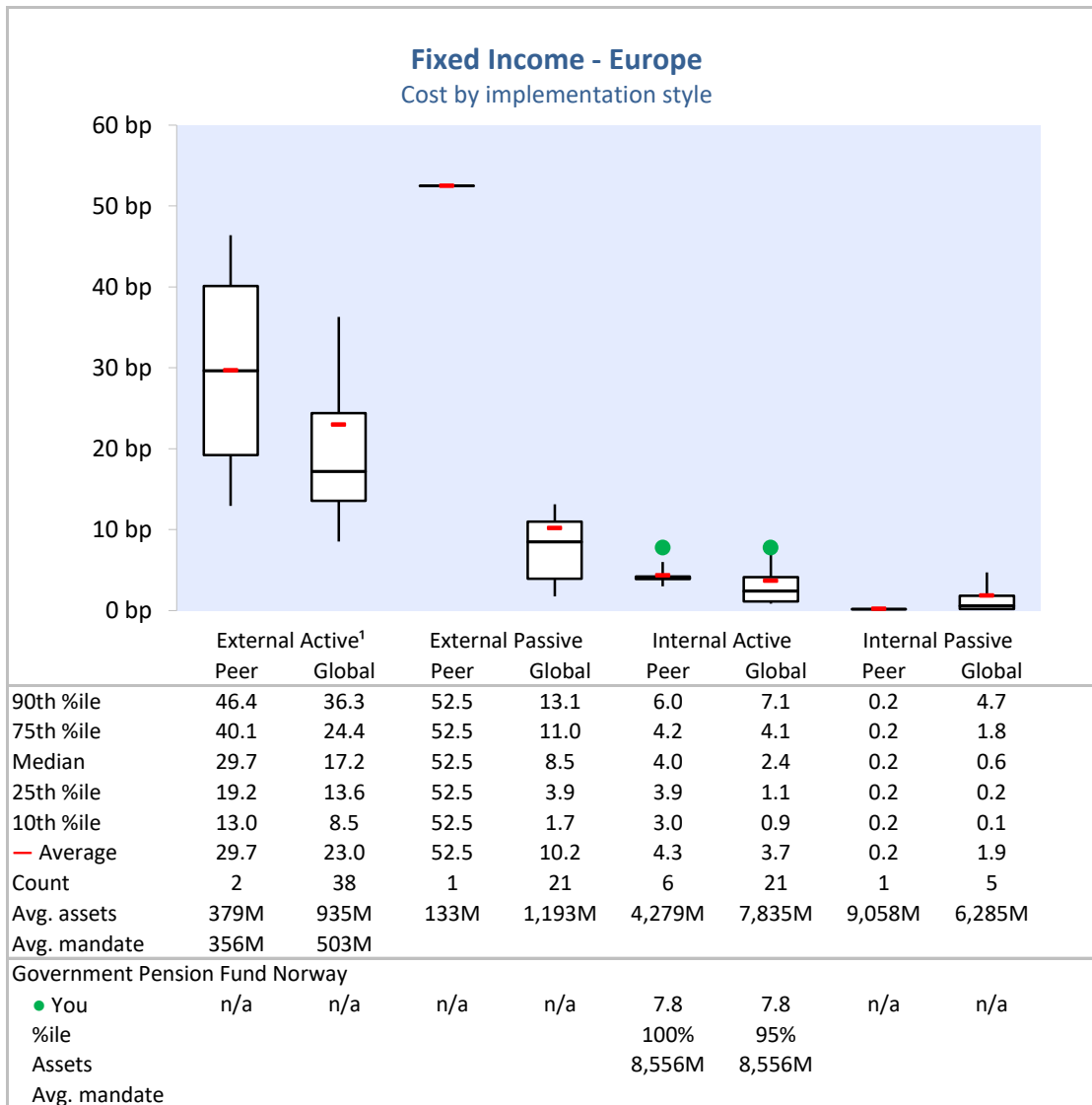
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 20.8 bps for Global participants (17 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	16.3	21.5
Performance fees*	n/a	n/a	1.2
Internal and other	<u>n/a</u>	<u>2.9</u>	<u>0.6</u>
Total	n/a	19.2	23.3

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 5.5 bps for Global participants (21 funds).

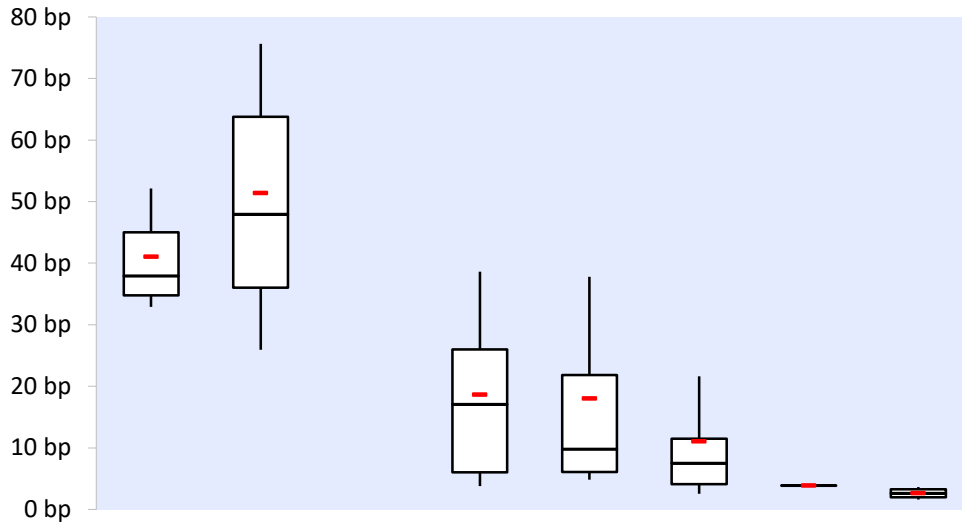


1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	28.3	18.3
Performance fees*	n/a	0.0	3.6
Internal and other	<u>n/a</u>	<u>1.4</u>	<u>1.2</u>
Total	n/a	29.7	23.0

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 13.5 bps for Global participants (10 funds).

Fixed Income - Emerging Cost by implementation style

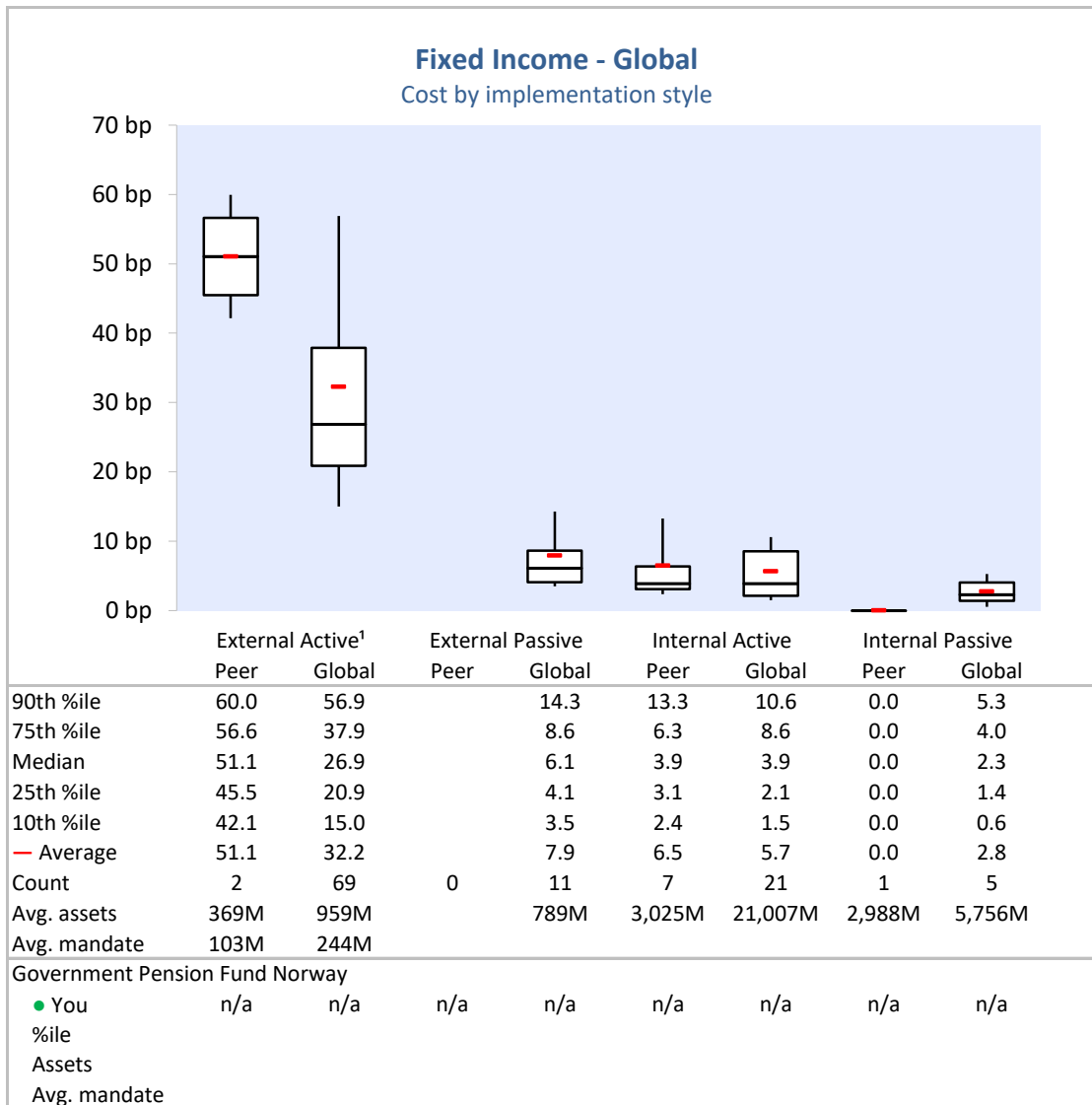


	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	52.1	75.6		38.6	37.8	21.6	3.9	3.6
75th %ile	45.0	63.8		26.0	21.8	11.5	3.9	3.3
Median	38.0	48.0		17.1	9.8	7.5	3.9	2.6
25th %ile	34.8	36.0		6.0	6.1	4.1	3.9	2.0
10th %ile	32.9	25.9		3.8	4.8	2.6	3.9	1.6
— Average	41.0	51.4		18.6	18.0	11.0	3.9	2.6
Count	6	94	0	7	4	16	1	2
Avg. assets	1,835M	709M		352M	1,380M	1,227M	48M	1,023M
Avg. mandate	420M	191M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	33.0	48.1
Performance fees*	n/a	6.5	2.1
Internal and other	<u>n/a</u>	<u>1.5</u>	<u>1.1</u>
Total	n/a	41.0	51.4

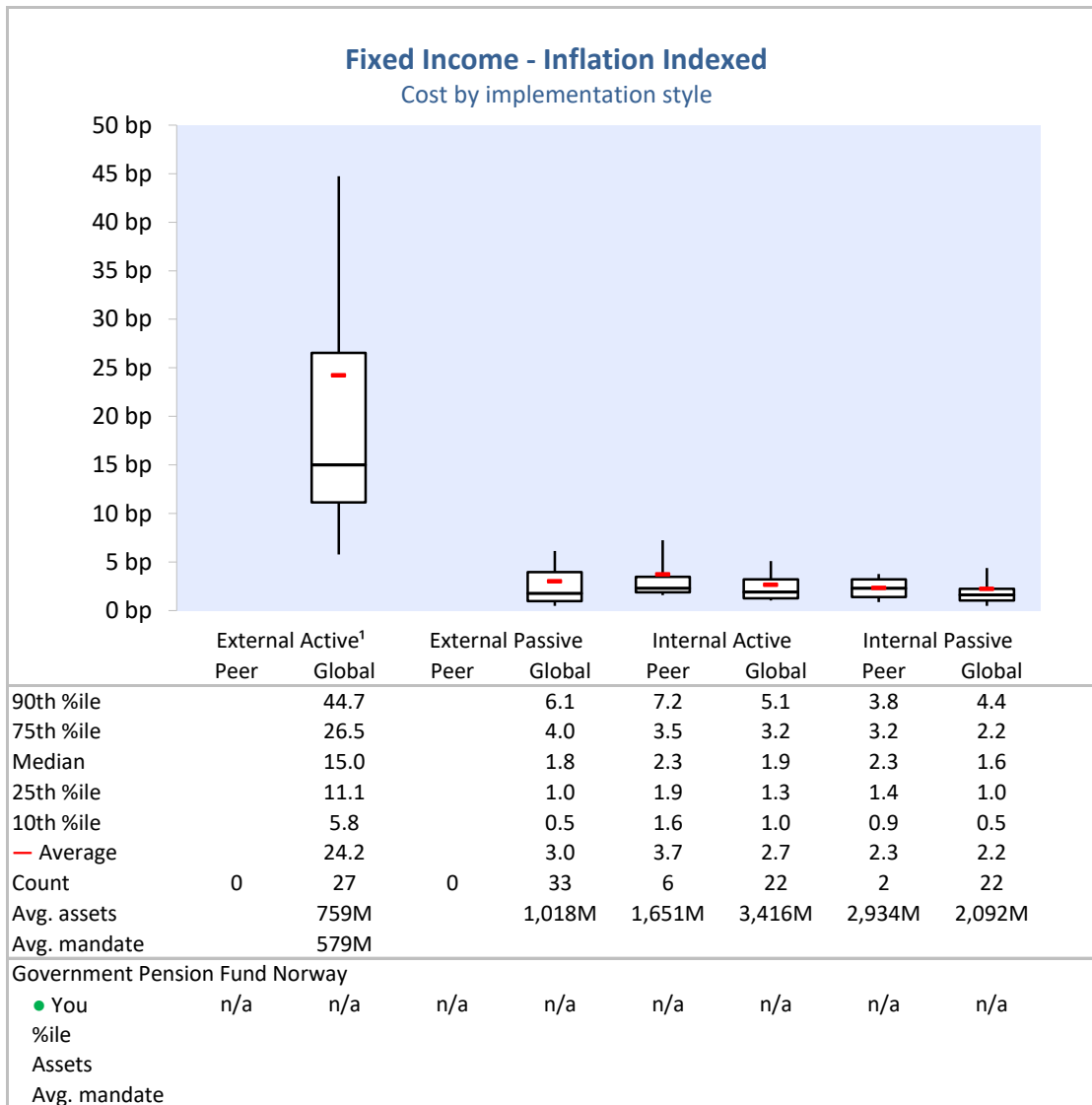
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 13.0 bps for peers (3 funds) and 10.6 bps for Global participants (19 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	47.3	30.9
Performance fees*	n/a	2.4	0.7
Internal and other	<u>n/a</u>	<u>1.3</u>	<u>0.6</u>
Total	n/a	51.1	32.2

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 4.8 bps for peers (1 fund) and 3.4 bps for Global participants (15 funds).

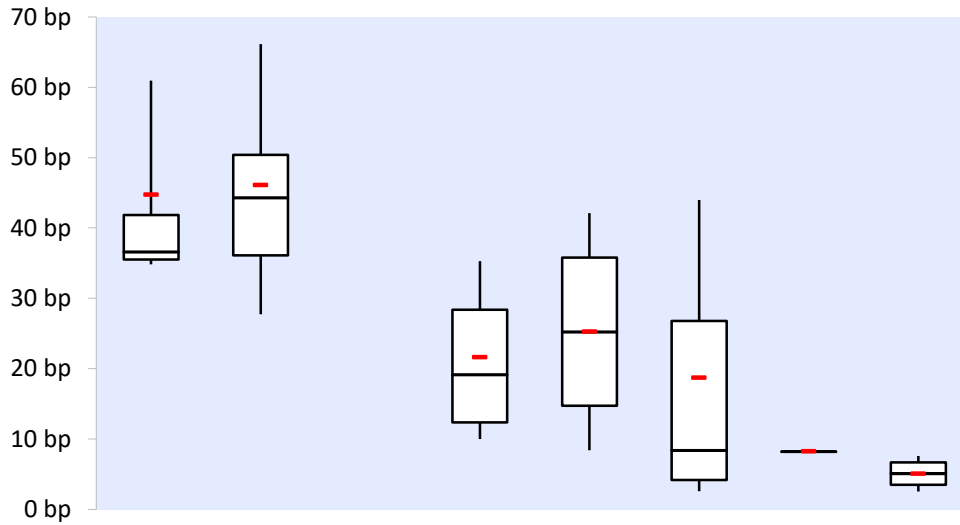


1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	n/a	22.1
Performance fees*	n/a	n/a	1.9
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>0.2</u>
Total	n/a	n/a	24.2

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 7.3 bps for Global participants (7 funds).

Fixed Income - High Yield Cost by implementation style



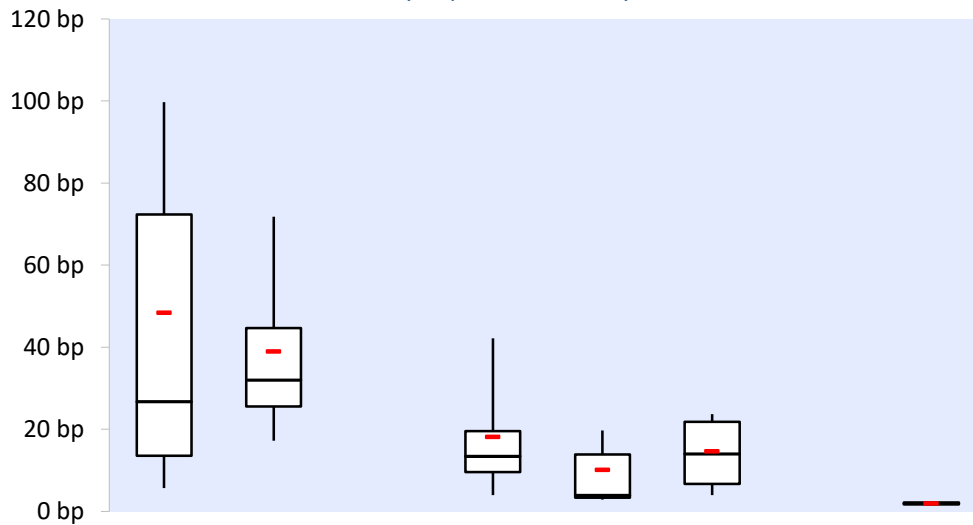
	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	60.9	66.1		35.3	42.1	44.0	8.2	7.6
75th %ile	41.8	50.4		28.4	35.8	26.8	8.2	6.7
Median	36.6	44.3		19.1	25.3	8.4	8.2	5.1
25th %ile	35.5	36.1		12.4	14.7	4.2	8.2	3.5
10th %ile	34.8	27.7		10.0	8.4	2.6	8.2	2.5
— Average	44.7	46.1		21.6	25.3	18.7	8.2	5.1
Count	7	111	0	4	2	13	1	2
Avg. assets	1,243M	589M		103M	593M	438M	205M	135M
Avg. mandate	407M	171M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	37.7	43.0
Performance fees*	n/a	4.5	1.5
Internal and other	<u>n/a</u>	<u>2.5</u>	<u>1.6</u>
Total	n/a	44.7	46.1

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 15.7 bps for peers (2 funds) and 9.0 bps for Global participants (19 funds).

Fixed Income - Mortgages Cost by implementation style



	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	99.7	71.8		42.2	19.7	23.7		2.3
75th %ile	72.4	44.7		19.5	13.8	21.9		2.2
Median	26.7	32.0		13.4	4.0	14.0		1.9
25th %ile	13.6	25.6		9.6	3.3	6.7		1.7
10th %ile	5.7	17.3		4.0	2.9	4.0		1.5
— Average	48.4	39.0		18.1	10.1	14.6		1.9
Count	3	39	0	9	3	11	0	2
Avg. assets	676M	457M		71M	933M	1,571M		267M
Avg. mandate	240M	272M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

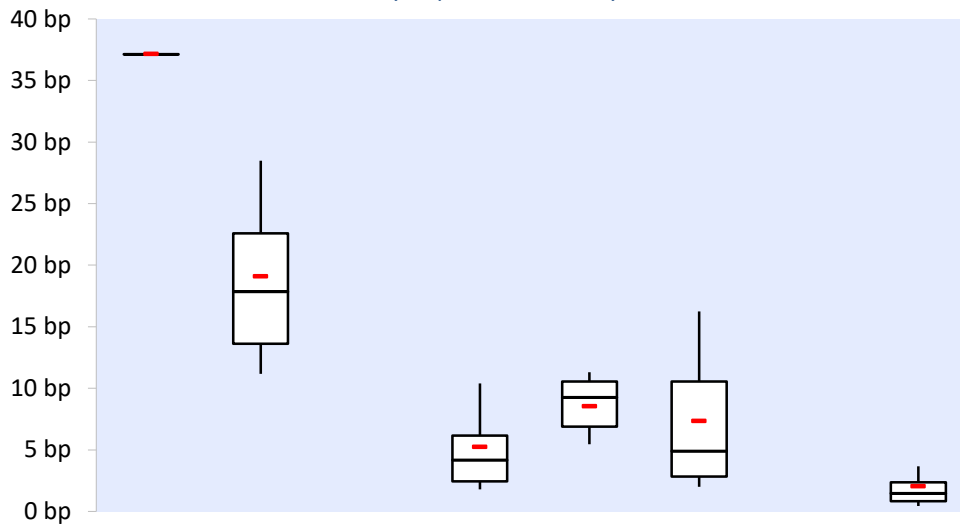
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	40.5	34.3
Performance fees*	n/a	n/a	0.3
Internal and other	<u>n/a</u>	<u>7.8</u>	<u>4.3</u>
Total	n/a	48.4	39.0

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 4.0 bps for Global participants (3 funds).

Fixed Income - Long Bonds

Cost by implementation style



	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	37.1	28.5		10.4	11.3	16.2		3.7
75th %ile	37.1	22.6		6.2	10.6	10.6		2.4
Median	37.1	17.9		4.2	9.3	4.9		1.5
25th %ile	37.1	13.6		2.4	6.9	2.8		0.8
10th %ile	37.1	11.2		1.8	5.4	2.0		0.4
— Average	37.1	19.1		5.2	8.5	7.3		2.0
Count	1	96	0	38	3	15	0	13
Avg. assets	186M	2,522M		350M	3,656M	1,484M		3,209M
Avg. mandate	186M	422M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

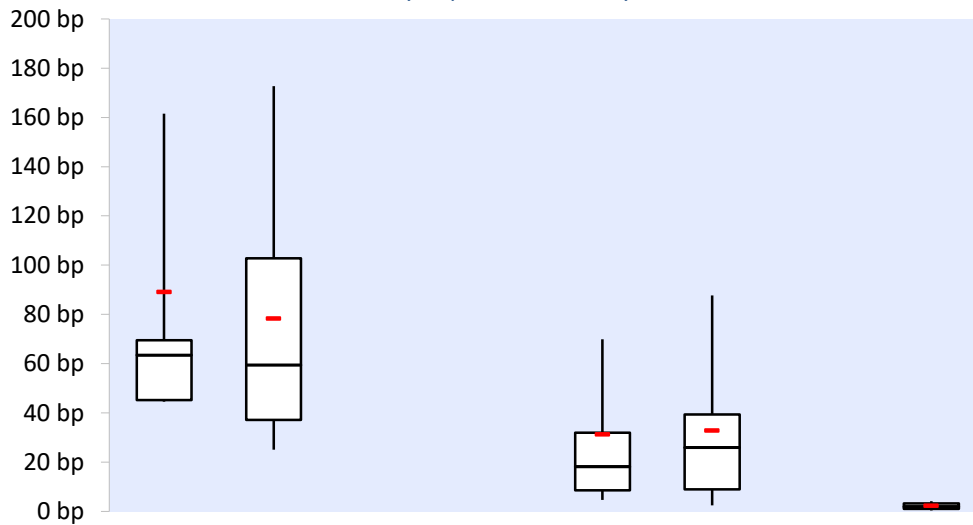
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	26.7	17.8
Performance fees*	n/a	n/a	1.0
Internal and other	<u>n/a</u>	<u>10.5</u>	<u>0.3</u>
Total	n/a	37.1	19.1

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 7.3 bps for Global participants (13 funds).

Fixed Income - Private Debt

Cost by implementation style



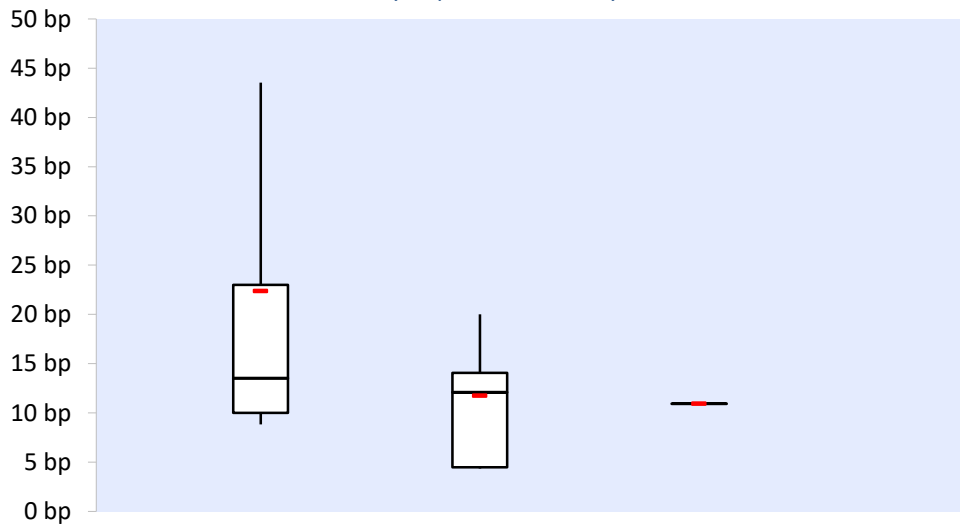
	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	161.6	172.7			69.9	87.7		4.1
75th %ile	69.5	102.8			32.0	39.4		3.3
Median	63.6	59.5			18.1	26.0		2.0
25th %ile	45.2	37.1			8.6	9.0		1.0
10th %ile	44.5	25.0			4.7	2.4		0.4
— Average	89.1	78.3			31.2	32.7		2.2
Count	5	59	0	0	5	14	0	3
Avg. assets	834M	427M			651M	1,276M		362M
Avg. mandate	101M	111M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	69.3	66.8
Performance fees*	n/a	0.0	7.9
Internal and other	<u>n/a</u>	<u>19.8</u>	<u>3.7</u>
Total	n/a	89.1	78.3

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 31.0 bps for Global participants (15 funds).

Fixed Income - Bundled LDI Cost by implementation style



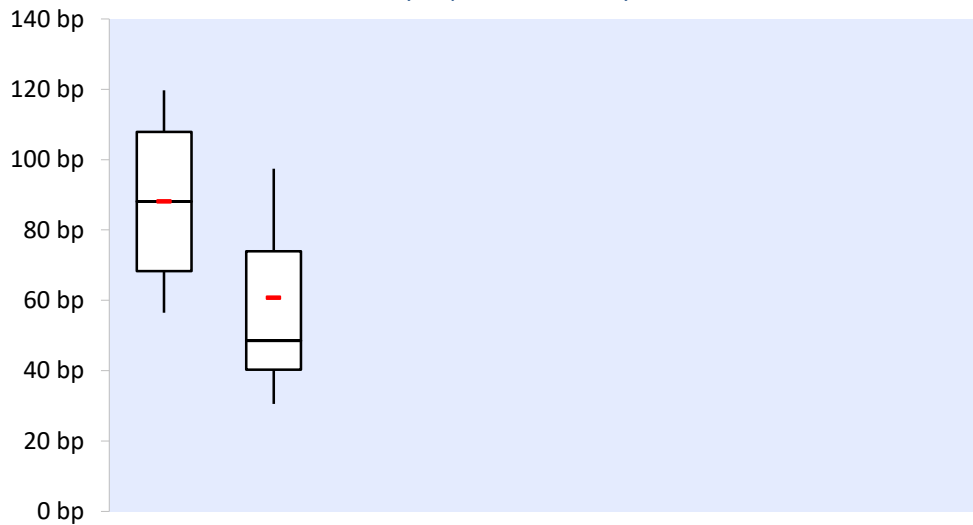
	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile		43.5		20.0		10.9		
75th %ile		23.0		14.1		10.9		
Median		13.6		12.1		10.9		
25th %ile		10.0		4.5		10.9		
10th %ile		8.8		4.4		10.9		
— Average		22.4		11.7		10.9		
Count	0	5	0	7	0	1	0	0
Avg. assets		332M		2,702M		846M		
Avg. mandate		313M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	n/a	22.3
Performance fees*	n/a	n/a	n/a
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>0.0</u>
Total	n/a	n/a	22.4

No funds reported a performance fee.

Fixed Income - Convertibles Cost by implementation style

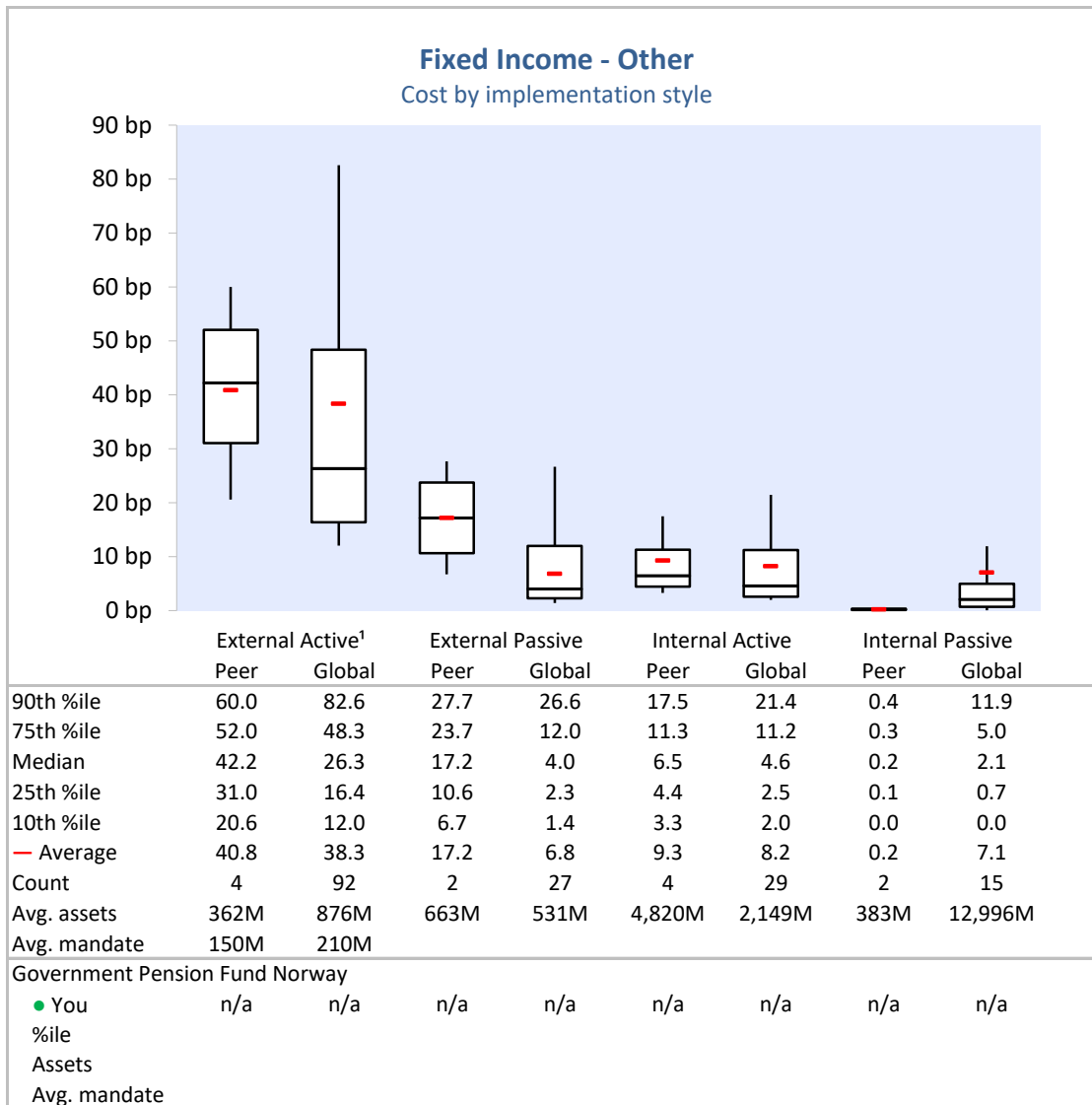


	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	119.7	97.4						
75th %ile	107.9	73.9						
Median	88.1	48.5						
25th %ile	68.3	40.2						
10th %ile	56.4	30.6						
— Average	88.1	60.7						
Count	2	7	0	0	0	0	0	0
Avg. assets	984M	634M						
Avg. mandate	269M	240M						
Government Pension Fund Norway								
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile								
Assets								
Avg. mandate								

1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	42.6	47.2
Performance fees*	n/a	44.0	12.6
Internal and other	<u>n/a</u>	<u>1.4</u>	<u>0.9</u>
Total	n/a	88.1	60.7

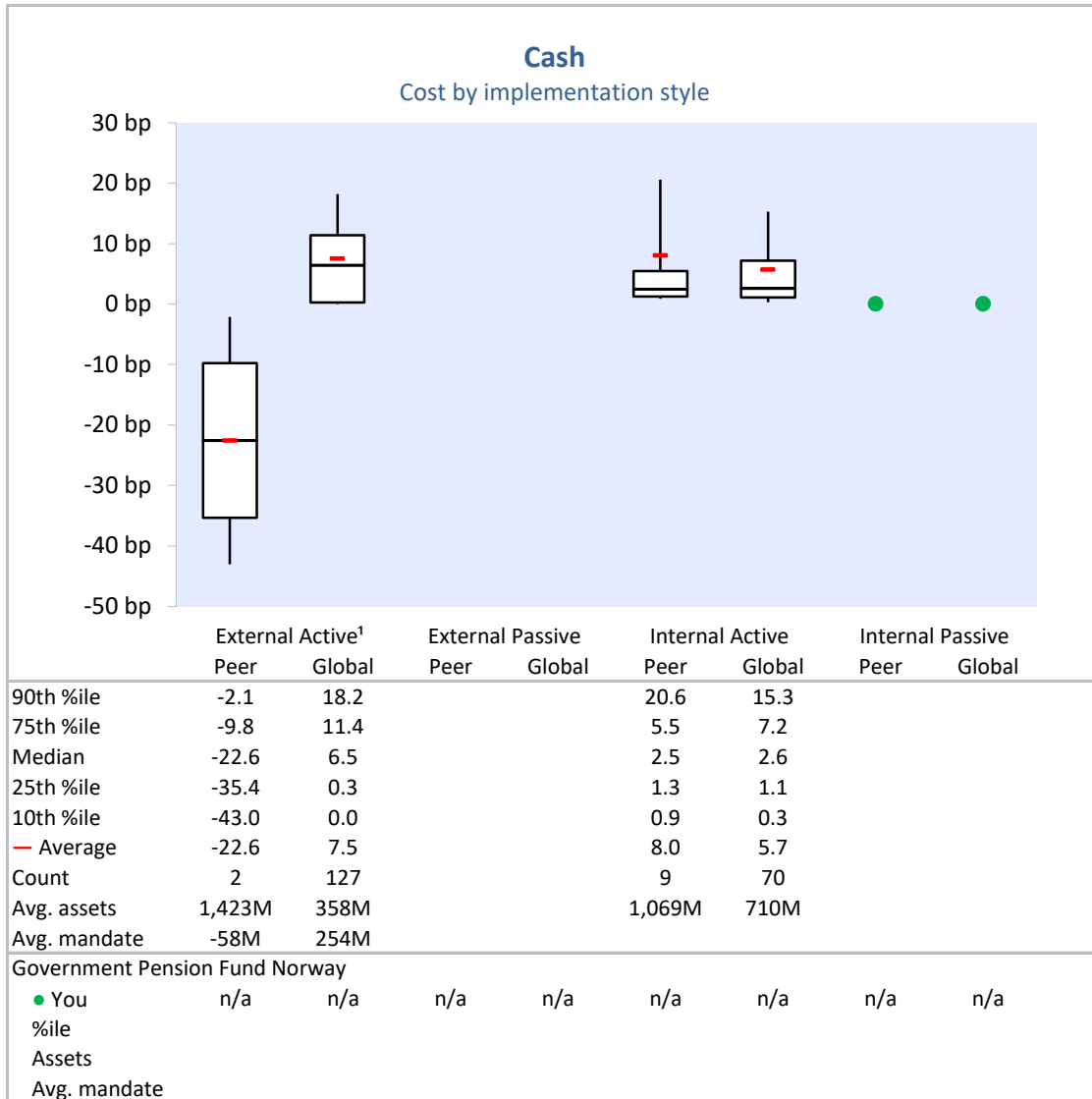
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 44.0 bps for peers (2 funds) and 29.4 bps for Global participants (3 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	37.5	33.9
Performance fees*	n/a	0.0	3.6
Internal and other	<u>n/a</u>	<u>3.4</u>	<u>0.9</u>
Total	n/a	40.8	38.3

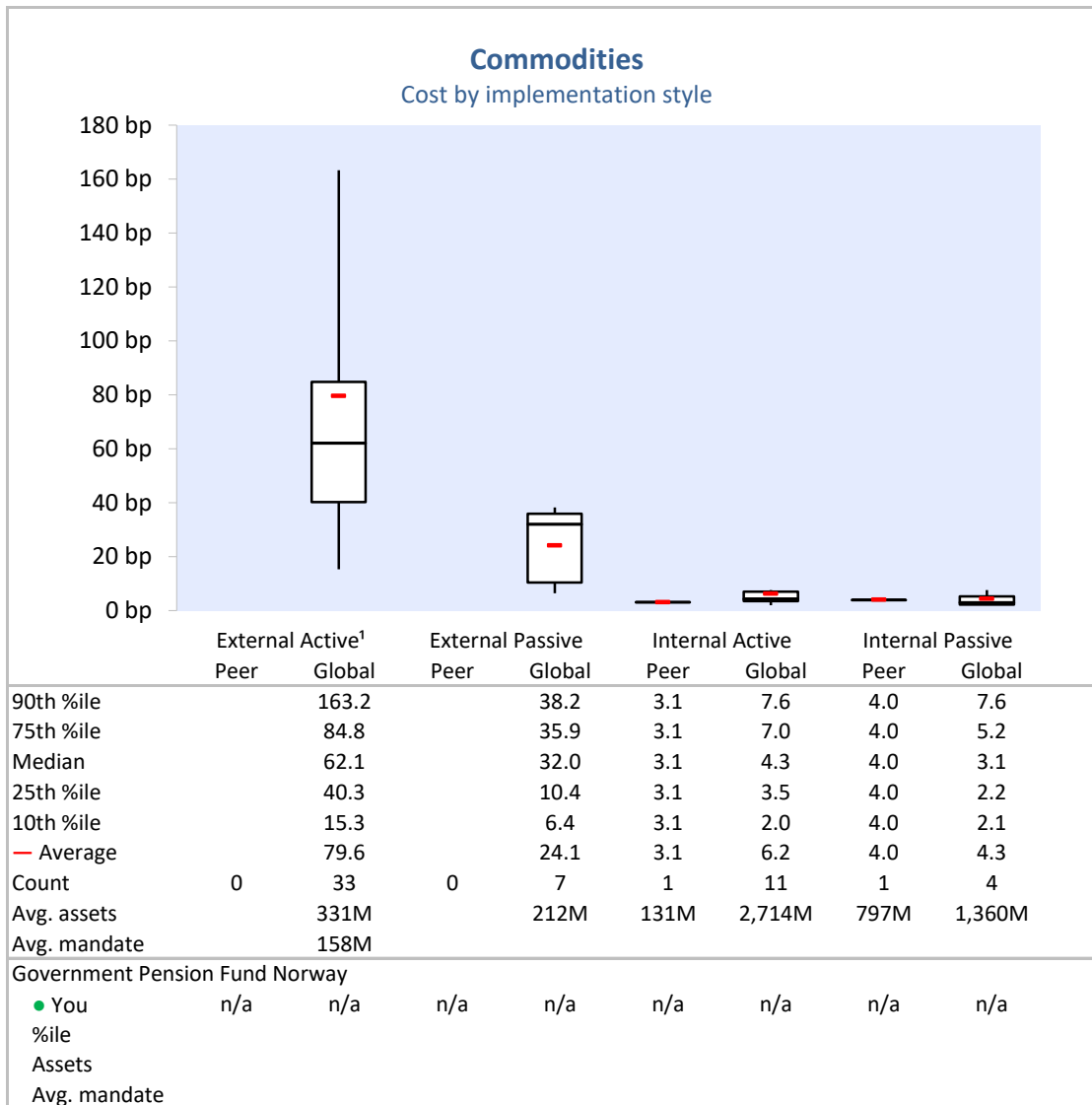
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 16.5 bps for Global participants (20 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	-22.6	6.8
Performance fees*	n/a	0.0	0.3
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>0.3</u>
Total	n/a	-22.6	7.5

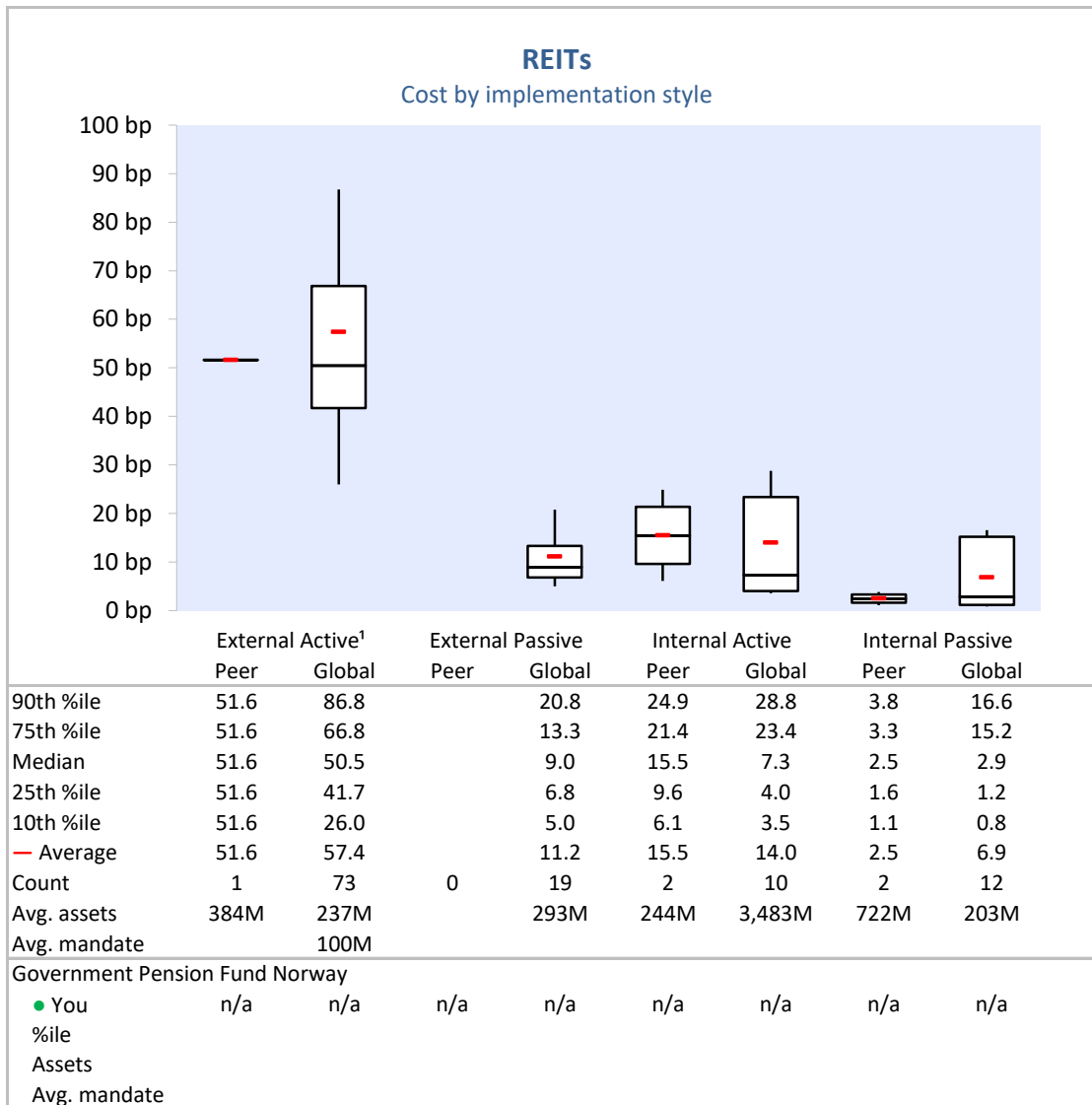
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 3.1 bps for Global participants (14 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	n/a	62.6
Performance fees*	n/a	n/a	15.3
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>1.7</u>
Total	n/a	n/a	79.6

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 33.7 bps for Global participants (15 funds).



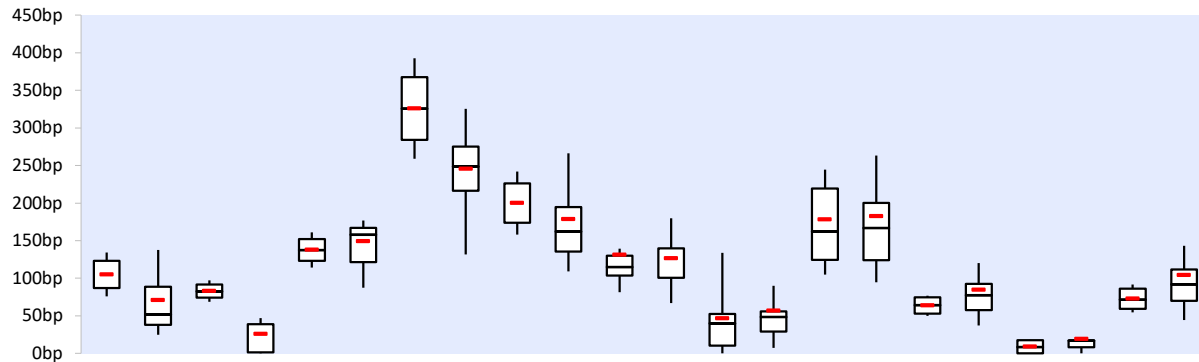
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	50.5	53.6
Performance fees*	n/a	0.0	3.0
Internal and other	<u>n/a</u>	<u>1.2</u>	<u>0.9</u>
Total	n/a	51.6	57.4

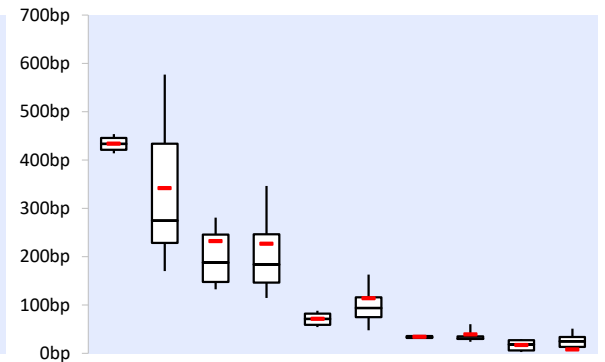
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 12.7 bps for Global participants (17 funds).

Real Estate ex-REITs

Cost as a % of the amount fees are based on¹



Cost as a % of NAV

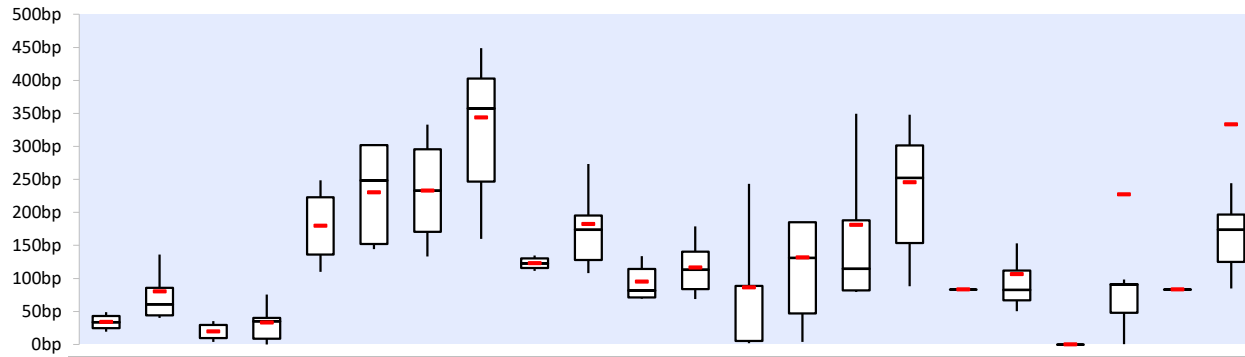


	Fund of Funds										Direct LP & Co-Inv.						External (not LP)						Fund of Funds		Direct LP & Co-Inv.		External (not LP)		Oper. Sub.		Internal	
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total		Total			
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global		
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global		
90th %ile	134.3	137.8	97.0	47.2	161.1	177.0	392.5	325.4	242.1	266.1	139.5	180.0	133.8	90.2	244.6	263.4	76.9	120.3	18.2	20.1	91.7	143.2	453.6	577.2	281.2	346.4	88.2	162.8	36.8	60.3	29.5	51.6
75th %ile	123.4	88.8	91.7	39.0	152.4	167.0	367.5	275.0	226.3	194.6	130.0	139.7	52.4	56.0	219.3	200.2	74.8	92.7	17.7	17.0	86.2	111.7	446.2	434.0	246.2	246.8	82.6	116.2	35.8	35.2	27.2	33.8
Median	105.1	51.9	82.9	38.3	137.7	157.9	325.7	248.7	200.0	162.4	115.0	114.9	40.1	48.8	162.5	167.0	64.2	77.6	8.7	17.0	71.6	92.3	433.9	275.0	188.0	184.3	71.6	94.1	34.0	30.6	18.5	25.3
25th %ile	86.8	38.1	74.1	1.6	123.1	121.4	284.0	216.5	173.7	135.7	103.6	100.4	10.2	29.1	124.6	124.2	53.0	57.8	0.1	8.1	59.4	70.1	421.5	228.5	148.2	146.6	59.5	74.9	32.3	29.7	6.1	13.3
10th %ile	75.9	24.9	68.8	0.0	114.3	87.3	258.9	131.9	157.9	109.0	81.7	67.0	0.0	7.6	104.9	94.6	49.8	37.3	0.0	0.0	54.5	44.4	414.1	170.3	132.8	115.0	54.5	47.9	31.3	24.1	3.1	5.9
— Average	105.1	70.8	82.9	25.8	137.7	149.0	325.7	245.7	200.0	178.7	131.3	126.5	46.7	56.7	178.0	182.3	63.6	84.7	9.0	19.2	72.6	103.9	433.9	342.0	231.8	226.6	71.4	113.7	34.0	38.7	17.1	8.1
Count	2	33	2	33	2	33	2	33	2	33	11	134	11	132	11	134	6	164	6	164	6	164	2	33	11	134	6	164	2	7	6	46
Avg. assets	394M	369M	394M	369M	394M	369M	394M	369M	394M	369M	1,041M	1,326M	1,041M	1,346M	1,041M	1,326M	2,318M	981M	2,318M	981M	2,318M	981M	214M	322M	881M	1,112M	2,357M	902M	5,597M	7,134M	3,644M	2,377M
Government Pension Fund Norway																																
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile																																
Assets																																

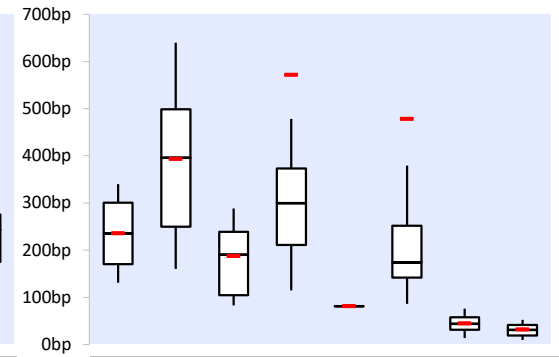
- The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 95 bps (on amount fees are based on) for underlying management fees and 43 bps (on NAV) for underlying performance fees were used.
- The total cost also includes the internal cost of monitoring and selecting real estate investments. The peer average cost of monitoring and selecting was 4.8 bps for fund of funds, 14.0 bps for LPs and 3.8 bps for external (not LPs).
- Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 2 of your peers and 11 of the Global funds.

Infrastructure

Cost as a % of the amount fees are based on¹



Cost as a % of NAV

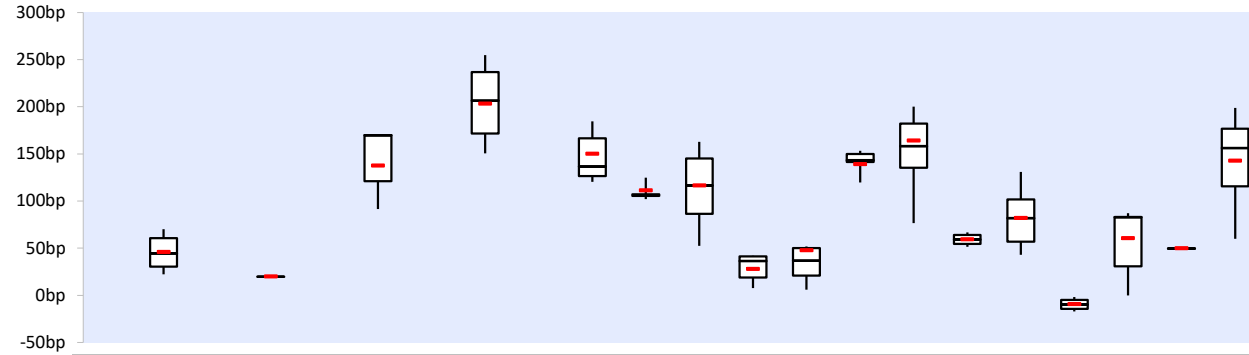


	Fund of Funds										Direct LP & Co-Inv.						External (not LP)						Fund of Funds		Direct LP & Co-Inv.		External (not LP)		Internal		
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total				
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global			
	90th %ile	48.8	136.1	35.2	75.6	248.8	302.0	332.8	448.8	134.9	273.1	133.9	178.7	243.4	185.0	349.5	347.9	83.2	153.0	0.0	98.4	83.2	244.0	339.9	640.1	288.6	478.5	81.3	379.2	75.9	52.1
75th %ile	43.3	85.7	29.3	40.0	222.8	302.0	295.4	402.8	130.4	195.4	114.5	140.5	88.5	185.0	187.8	301.3	83.2	111.7	0.0	91.0	83.2	196.5	300.7	499.0	238.6	372.8	81.3	251.5	57.4	41.0	
Median	34.0	60.8	19.6	35.3	179.5	248.6	233.0	357.8	123.0	174.0	81.8	113.3	13.2	131.2	114.6	252.5	83.2	83.0	0.0	91.0	83.2	173.9	235.5	396.0	190.4	299.6	81.3	174.0	44.1	30.9	
25th %ile	24.7	44.3	9.8	8.6	136.2	152.3	170.6	246.4	115.6	127.9	71.0	83.8	5.3	47.0	81.8	153.8	83.2	66.7	0.0	47.7	83.2	125.0	170.3	249.3	104.1	210.7	81.3	141.4	31.2	19.2	
10th %ile	19.1	40.0	3.9	0.0	110.2	144.5	133.2	159.8	111.2	108.2	69.4	68.6	1.7	3.7	79.3	88.2	83.2	50.4	0.0	0.4	83.2	84.7	131.1	159.8	82.7	114.4	81.3	86.0	13.7	9.5	
— Average	34.0	80.3	19.6	33.1	179.5	230.2	233.0	343.6	123.0	182.1	95.0	116.6	86.1	131.6	181.1	245.7	83.2	106.3	0.0	227.1	83.2	333.4	235.5	393.2	187.2	571.4	81.3	477.9	44.6	31.9	
Count	2	21	2	21	2	21	2	21	2	21	6	103	6	101	6	103	1	61	1	61	1	61	2	21	6	103	1	61	4	28	
Avg. assets	95M	108M	95M	108M	95M	108M	95M	108M	95M	108M	570M	12,009M	517M	13,293M	1,087M	25,302M	389M	494M	389M	494M	389M	494M	96M	103M	381M	373M	398M	468M	3,132M	3,573M	
Government Pension Fund Norway																															
● You %ile	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Assets																															

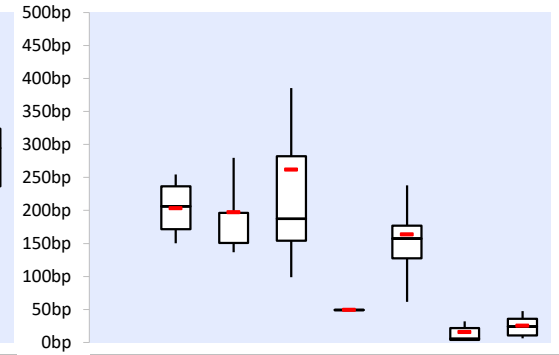
- The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 89 bps (on amount fees are based on) for underlying management fees and 90 bps (on NAV) for underlying performance fees were used.
- The total cost also includes the internal cost of monitoring and selecting infrastructure investments. The peer average cost of monitoring and selecting was 2.4 bps for fund of funds, 11.2 bps for LPs and 3.8 bps for external (not LPs).
- Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 1 of your peers and 14 of the Global funds.

Natural Resources

Cost as a % of the amount fees are based on¹



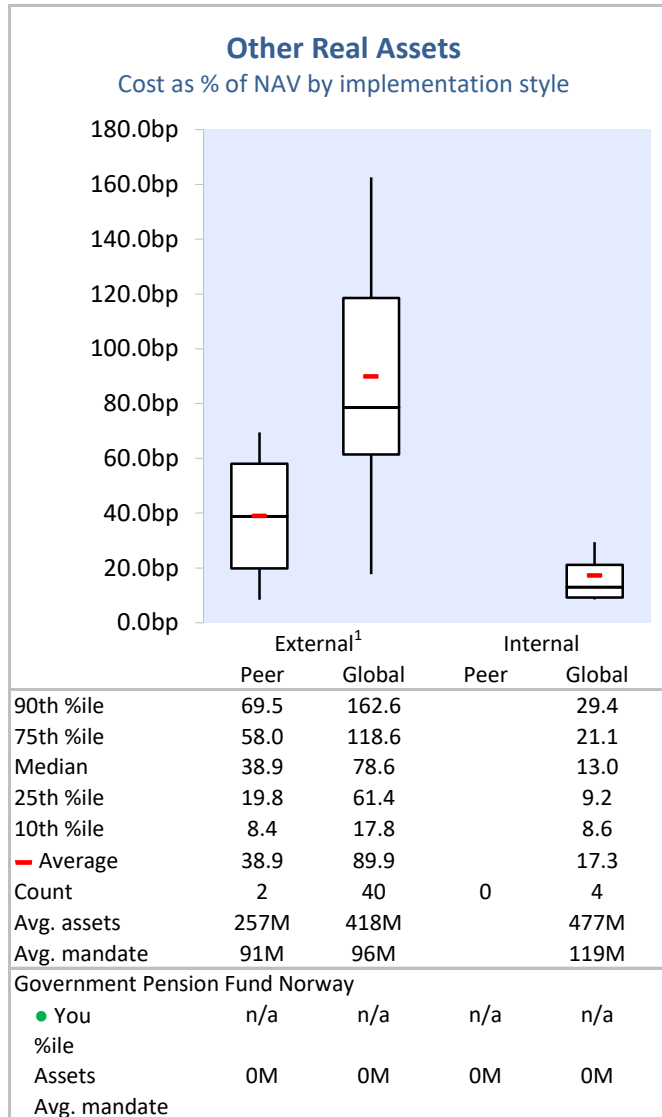
Cost as a % of NAV



	Fund of Funds						Direct LP & Co-Inv.						External (not LP)											
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.			
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile		70.2		20.0		170.0		254.6		184.6	124.9	162.8	42.1	51.7	153.3	200.1	66.8	130.9	-1.9	87.1	49.7	198.8		
75th %ile		60.6		20.0		170.0		236.6		166.6	107.3	145.0	41.5	50.0	149.8	182.1	63.9	101.8	-4.7	83.0	49.7	176.7		
Median		44.5		20.0		170.0		206.6		136.6	106.9	116.6	36.6	36.8	143.5	158.3	59.2	82.0	-9.5	83.0	49.7	156.2		
25th %ile		30.6		20.0		120.9		171.5		126.5	105.3	86.5	19.0	21.0	141.2	135.2	54.4	56.9	-14.2	30.7	49.7	115.7		
10th %ile		22.2		20.0		91.5		150.5		120.5	102.0	52.4	7.6	6.1	119.7	76.4	51.5	43.1	-17.1	0.0	49.6	60.1		
— Average		45.9		20.0		137.3		203.2		149.9	111.2	116.3	27.9	47.6	139.1	163.9	59.2	81.9	-9.5	60.6	49.7	142.5		
Count	0	3	0	3	0	3	0	3	0	3	5	36	5	36	5	36	2	35	2	35	2	35		
Avg. assets		40M		40M		40M		40M		40M	556M	4,188M	140M	1,712M	695M	5,901M	419M	383M	419M	383M	419M	383M		
Government Pension Fund Norway																								
● You %ile Assets	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		

	Fund of Funds		Direct LP & Co-Inv.		External (not LP)		Internal	
	Total ³ incl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	254.6	279.7	385.2	49.6	238.0	31.9	47.5	
	236.6	196.1	282.3	49.5	176.9	22.1	35.8	
	206.6	176.2	187.8	49.3	157.4	5.7	24.4	
	171.5	150.8	154.4	49.1	127.6	4.1	10.6	
	150.5	136.9	98.9	49.0	61.5	3.1	6.6	
	203.2	197.2	261.7	49.3	163.5	15.5	25.4	
0	3	5	36	2	35	3	13	
	40M	275M	459M	423M	339M	520M	1,130M	
	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	0M	0M	0M	0M	0M	0M	0M	

- The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of n/a bps (on amount fees are based on) for underlying management fees and n/a bps (on NAV) for underlying performance fees were used.
- The total cost also includes the internal cost of monitoring and selecting natural resource investments. The peer average cost of monitoring and selecting was 10.4 bps for LPs and 3.5 bps for external (not LPs).
- Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 1 of your peers and 14 of the Global funds.



1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	37.8	88.9
Internal and other	<u>n/a</u>	<u>2.2</u>	<u>2.5</u>
Total*	n/a	38.9	89.9
Performance fees**	n/a	0.0	30.1

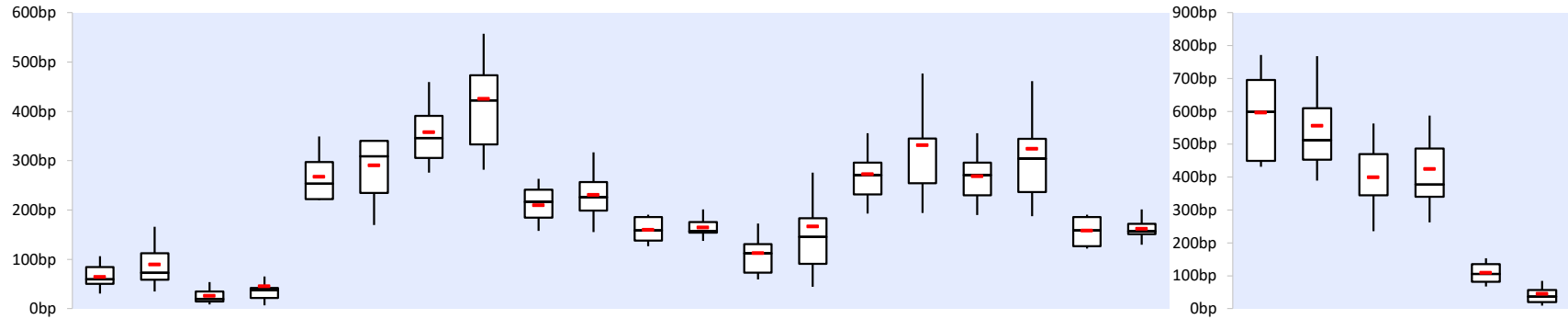
* Total cost excludes performance fees because most participants did not provide performance fees for other real assets.

** For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 0.0 bps for peers (2 funds) and 30.1 bps for Global participants (40 funds).

Diversified Private Equity

Cost as a % of the amount fees are based on¹

Cost as a % of NAV



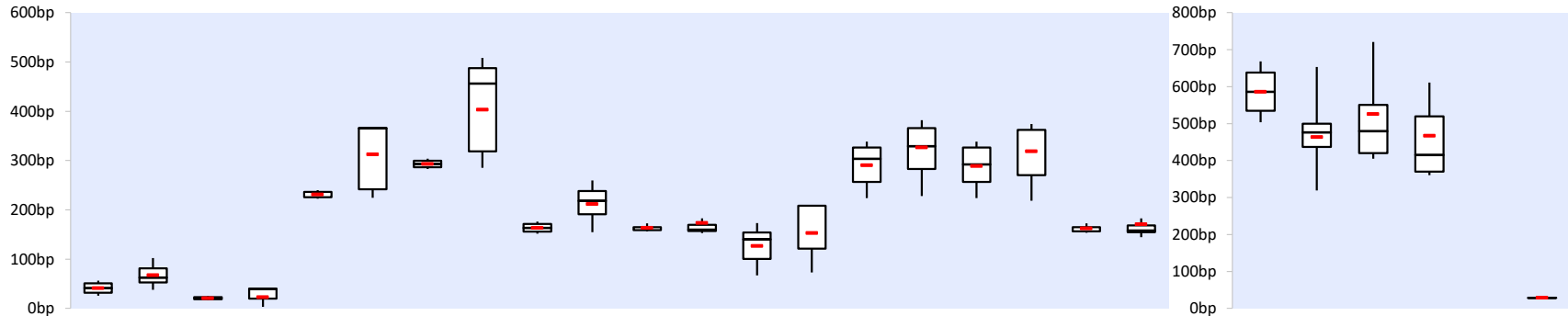
	Fund of Funds										Direct LP						Direct LP & Co-Inv. ⁴				Fund of Funds		Direct LP & Co-Inv. ⁴		Internal	
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total ³ excl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	106.1	166.2	53.6	65.4	348.8	340.0	459.7	556.9	263.1	316.7	190.7	201.3	172.6	275.8	355.7	476.6	355.7	461.4	190.7	201.2	771.3	767.4	563.1	587.3	152.9	84.2
75th %ile	84.3	112.3	34.7	42.0	297.1	340.0	391.0	472.9	241.3	256.4	185.6	175.5	130.9	183.0	296.0	345.1	296.0	344.6	185.6	172.1	695.0	609.7	470.2	486.6	135.2	56.7
Median	60.0	73.0	19.8	37.9	253.5	308.9	346.2	422.5	216.4	226.2	158.6	157.0	112.3	145.4	270.8	308.2	270.8	304.5	158.6	157.0	598.9	512.9	400.5	378.0	105.8	36.6
25th %ile	50.6	58.4	14.5	21.6	222.1	234.3	305.4	333.2	184.6	199.0	137.9	154.2	72.7	91.0	231.3	254.1	229.5	236.4	126.3	150.8	449.0	453.2	345.1	340.0	81.6	19.8
10th %ile	30.5	34.6	8.5	6.5	220.5	169.6	275.4	281.5	157.5	155.1	126.6	137.4	59.0	44.3	192.7	194.1	189.6	187.4	122.0	129.6	431.7	389.8	235.3	262.3	67.0	9.1
Average	64.2	89.3	26.0	45.6	267.6	290.7	357.7	425.7	209.9	230.9	160.1	164.8	112.6	166.8	272.7	331.6	268.6	324.3	158.3	162.2	596.4	556.7	399.4	424.8	109.3	45.0
Count	7	133	7	133	7	133	7	133	7	133	13	154	13	154	13	154	13	156	13	156	7	133	13	155	3	19
Avg. assets	623M	601M	623M	601M	623M	601M	623M	601M	623M	601M	1,832M	1,675M	1,832M	1,675M	1,832M	1,675M	1,943M	1,760M	1,943M	1,760M	430M	521M	1,411M	1,358M	2,487M	2,484M
Government Pension Fund Norway																										
● You %ile	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Assets	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M

1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 157 bps (on amount fees are based on) for underlying management fees and 183 bps (on NAV) for underlying performance fees were used.
3. The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 13.6 bps for fund of funds.
4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 2 of your peers and 19 of the Global funds.

LBO

Cost as a % of the amount fees are based on¹

Cost as a % of NAV



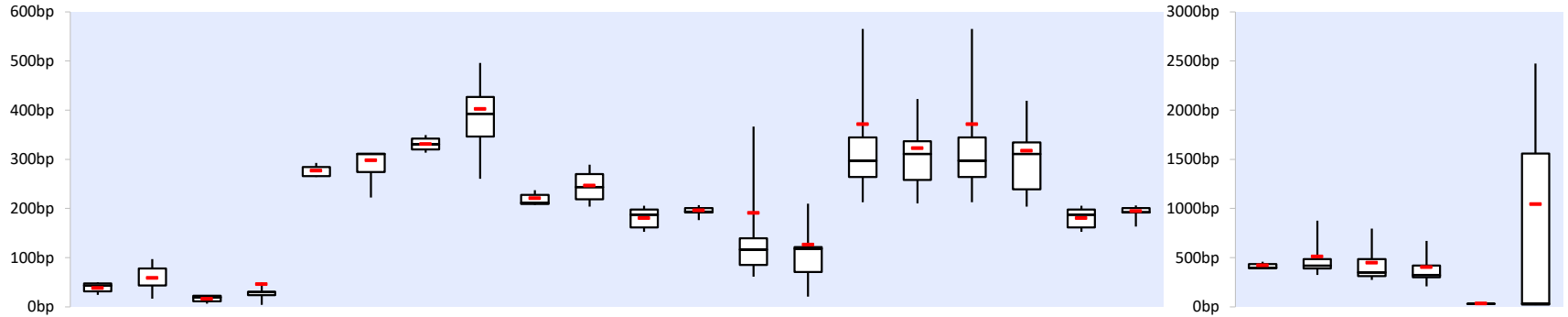
	Fund of Funds										Direct LP						Direct LP & Co-Inv. ⁴				Fund of Funds & Co-Inv. ⁴		Internal			
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total ³ excl. perf.		Total ³ incl. perf.		Total ³ excl. perf.		Total	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	56.5	102.4	24.4	40.0	239.9	366.0	303.7	508.4	176.0	259.4	172.5	182.6	173.4	209.0	338.2	382.1	338.2	374.2	172.5	182.6	668.6	653.5			29.2	
75th %ile	50.8	81.4	23.1	40.0	236.6	366.0	299.8	487.4	171.4	238.4	164.6	169.4	154.4	208.1	326.3	365.8	326.3	362.5	164.6	168.3	637.7	499.5			29.2	
Median	41.2	62.8	20.8	39.5	231.3	366.0	293.3	456.5	163.7	218.7	161.5	160.2	140.6	159.7	303.8	329.5	292.6	320.2	161.5	158.0	586.2	476.4			29.2	
25th %ile	31.6	53.0	18.5	19.9	225.9	242.0	286.8	318.8	156.1	191.3	158.8	157.0	100.3	121.5	256.6	282.9	256.6	270.1	156.3	154.5	534.7	437.1			29.2	
10th %ile	25.9	37.6	17.2	3.3	222.7	224.2	282.9	285.5	151.5	154.6	156.8	152.8	67.3	72.9	224.2	228.3	224.2	218.7	153.6	144.8	503.8	319.3			29.2	
Average	41.2	67.7	20.8	22.9	231.3	312.8	293.3	403.4	163.7	211.6	163.5	173.7	127.0	152.9	290.5	326.6	288.9	318.8	162.7	170.9	586.2	463.8			29.2	
Count	2	13	2	13	2	13	2	13	2	13	7	46	7	46	7	46	7	46	7	46	0	1				
Avg. assets	590M	243M	590M	243M	590M	243M	590M	243M	590M	243M	2,591M	2,159M	2,591M	2,159M	2,591M	2,159M	2,626M	2,220M	2,626M	2,220M	345M	183M	1,738M	1,499M		7,472M
Government Pension Fund Norway																										
● You %ile	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Assets	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M

1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 123 bps (on amount fees are based on) for underlying management fees and 209 bps (on NAV) for underlying performance fees were used.
3. The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 9.5 bps for fund of funds.
4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 1 of your peers and 5 of the Global funds.

Venture Capital

Cost as a % of the amount fees are based on¹

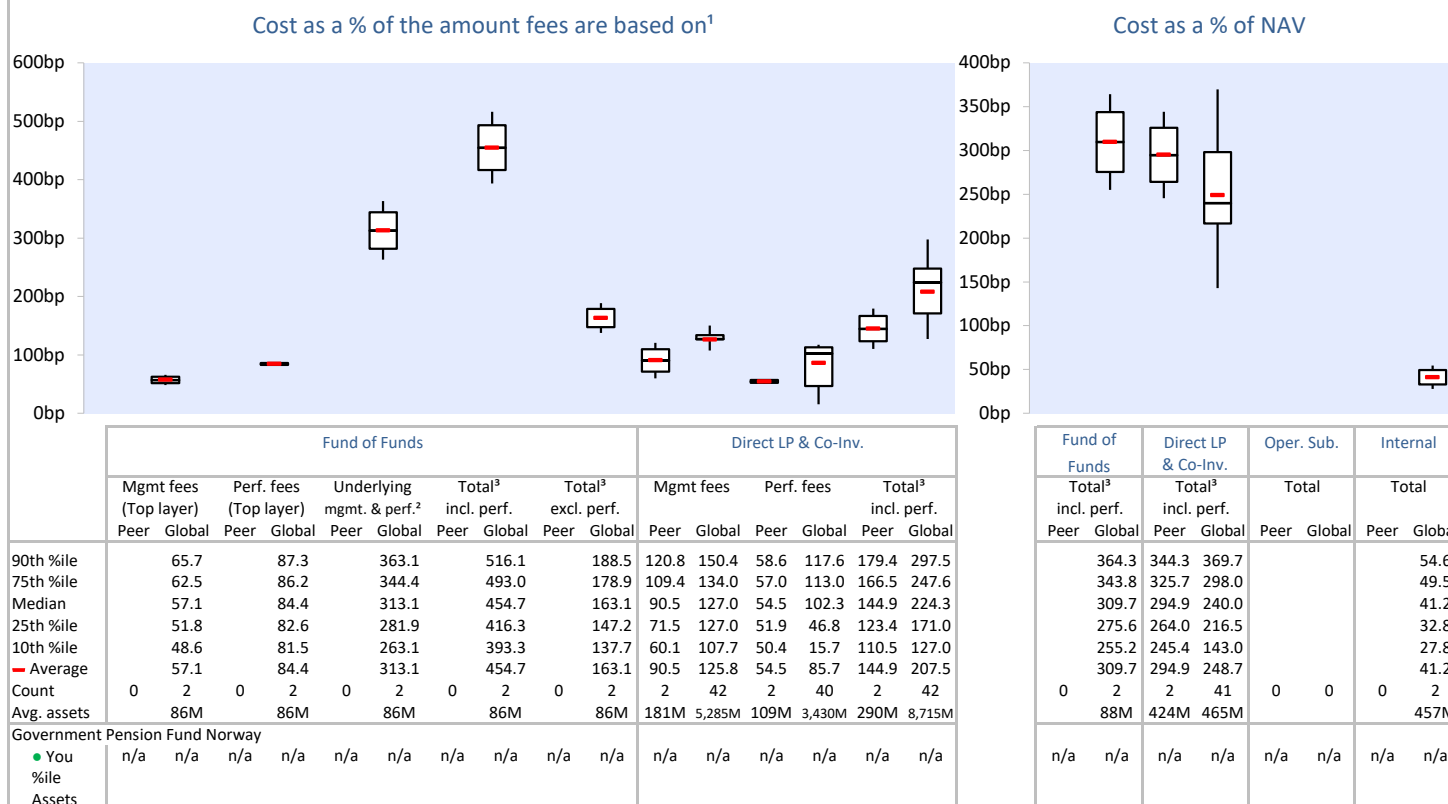
Cost as a % of NAV



	Fund of Funds										Direct LP						Direct LP & Co-Inv. ⁴				Fund of Funds & Co-Inv. ⁴		Internal					
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total ³ excl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total			
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	50.0	97.1	24.0	50.1	292.9	312.8	349.1	496.2	237.2	289.1	205.5	206.9	366.5	209.7	565.5	422.8	565.5	419.4	205.5	206.1	457.7	875.1	795.6	670.0	32.6	2475.4		
75th %ile	47.5	77.9	22.4	30.2	284.2	311.0	342.3	426.6	227.6	269.9	197.9	200.8	139.7	121.4	344.5	336.5	344.5	334.6	197.9	200.7	434.3	485.1	485.4	418.8	32.6	1559.3		
Median	43.5	52.0	19.6	30.0	269.7	311.0	331.0	393.0	211.7	244.0	187.9	193.5	116.9	118.5	297.5	311.0	297.5	311.0	187.9	192.3	395.4	420.1	351.6	325.2	32.6	32.6		
25th %ile	31.6	43.3	11.4	23.5	266.0	274.2	320.0	346.6	209.0	218.7	161.7	192.0	85.2	71.0	264.1	258.0	264.1	239.0	161.7	192.0	394.8	388.5	311.9	300.5	32.6	22.5		
10th %ile	24.5	16.5	6.6	3.8	263.8	222.4	313.4	260.4	207.4	203.8	152.6	176.7	61.4	20.7	212.5	210.2	212.5	203.7	152.6	163.1	394.4	325.2	273.8	207.7	32.6	16.5		
Average	38.3	58.6	16.0	45.7	276.9	297.8	331.2	402.1	220.5	246.7	180.6	195.9	190.6	126.5	371.3	322.4	371.3	317.3	180.6	194.3	421.0	509.7	448.0	402.7	32.6	1043.7		
Count	3	23	3	23	3	23	3	23	3	23	8	47	8	47	8	47	8	48	8	48	3	23	8	48	1	3		
Avg. assets	358M	198M	358M	198M	358M	198M	358M	198M	358M	198M	368M	288M	368M	288M	368M	288M	368M	285M	368M	285M	358M	198M	368M	285M	227M	222M		
Government Pension Fund Norway																												
● You %ile	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Assets	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	

1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 192 bps (on amount fees are based on) for underlying management fees and 119 bps (on NAV) for underlying performance fees were used.
3. The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 5.2 bps for fund of funds.
4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by none of your peers and 3 of the Global funds.

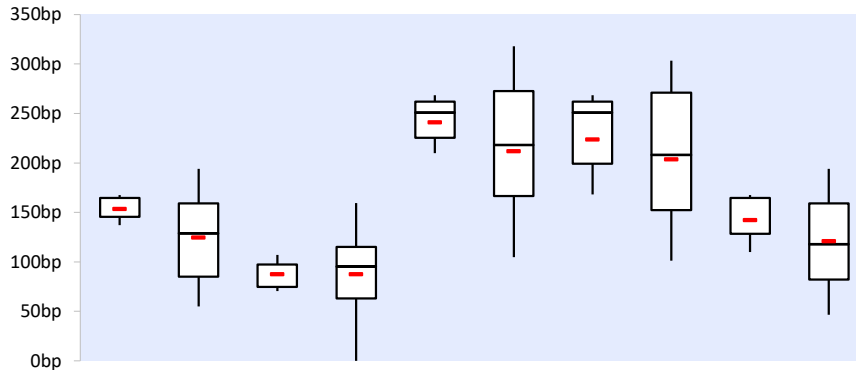
Private Credit



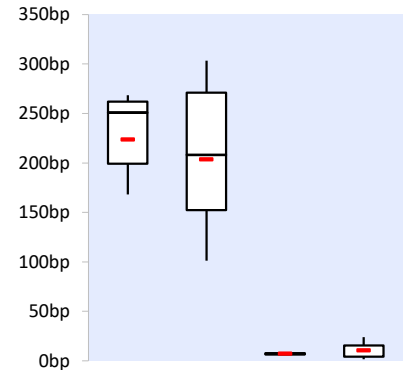
1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of n/a bps (on amount fees are based on) for underlying management fees and n/a bps (on NAV) for underlying performance fees were used.
3. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by none of your peers and 6 of the Global funds.

Other Private Equity

Cost as a % of the amount fees are based on¹

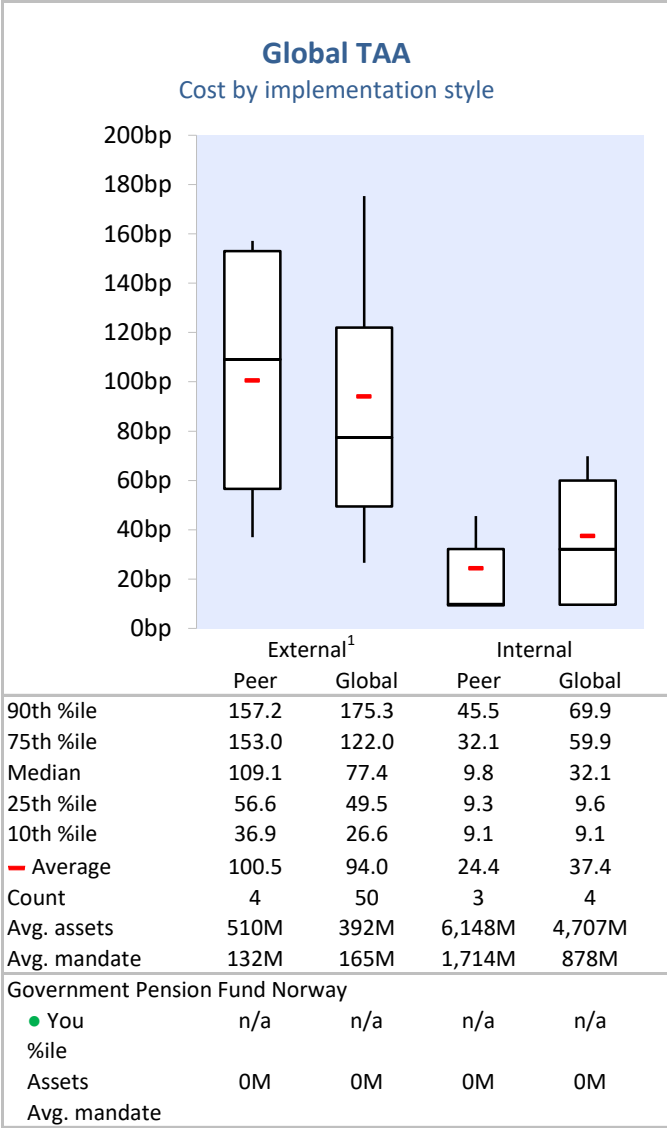


Cost as a % of NAV



	Direct LP						Direct LP & Co-Inv. ³				Direct LP & Co-Inv. ³		Internal	
	Mgmt fees		Perf. fees		Total ² incl. perf.		Total ² incl. perf.		Total ² excl. perf.		Total ² incl. perf.		Total	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	167.6	194.1	106.9	159.6	268.3	317.9	268.3	303.4	167.6	194.1	268.3	303.4	8.0	24.1
75th %ile	164.5	159.3	97.3	115.0	261.8	272.6	261.8	271.0	164.5	159.3	261.8	271.0	7.7	15.6
Median	159.3	128.9	81.3	95.5	251.0	218.3	251.0	208.1	159.3	118.0	251.0	208.1	7.1	8.3
25th %ile	145.4	85.0	74.6	63.0	225.3	166.5	199.2	152.4	128.4	82.2	199.2	152.4	6.5	4.1
10th %ile	137.1	55.0	70.6	0.0	209.9	104.9	168.1	101.1	109.8	46.5	168.1	101.1	6.2	1.8
— Average	153.5	124.5	87.5	87.4	241.1	211.9	223.7	203.5	142.1	120.8	223.7	203.5	7.1	10.7
Count	3	37	3	37	3	37	3	37	3	37	3	37	2	7
Avg. assets	867M	560M	867M	560M	867M	560M	1,030M	583M	1,030M	583M	1,030M	583M	517M	357M
Government Pension Fund Norway														
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile														
Assets	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M

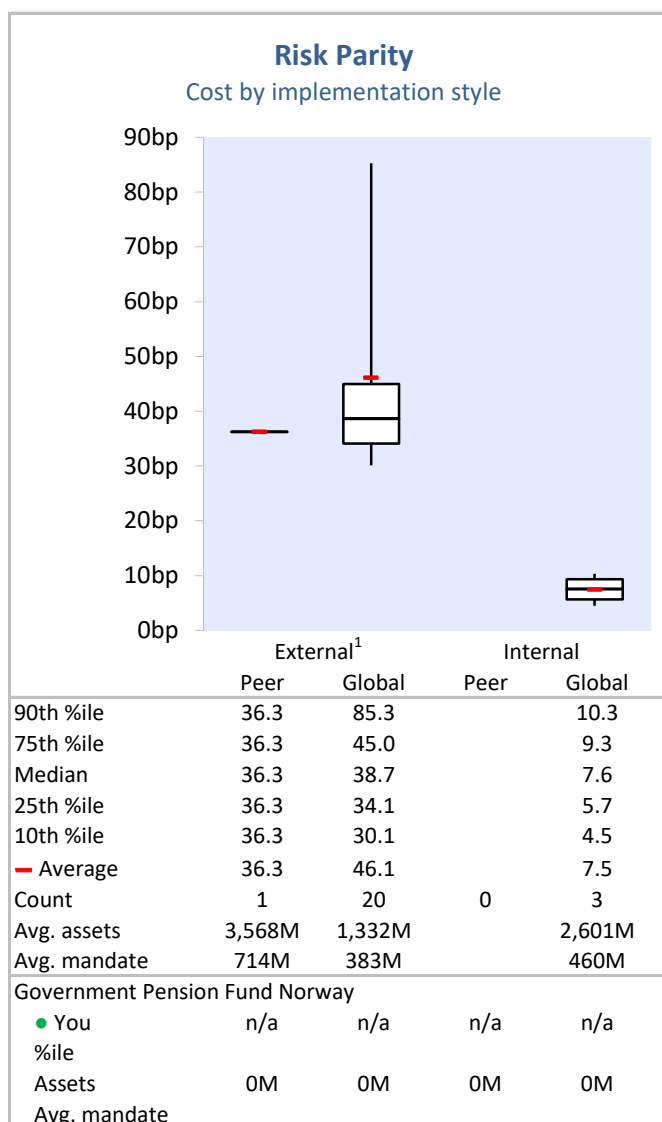
1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The total cost also includes the internal cost of monitoring and selecting private equity investments.
3. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 1 of your peers and 3 of the Global funds.



1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	75.9	74.9
Internal and other	<u>n/a</u>	<u>24.3</u>	<u>16.6</u>
Performance fees	n/a	0.8	20.9
Total*	n/a	100.5	94.0

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.8 bps for peers (2 funds) and 20.9 bps for Global participants (32 funds).



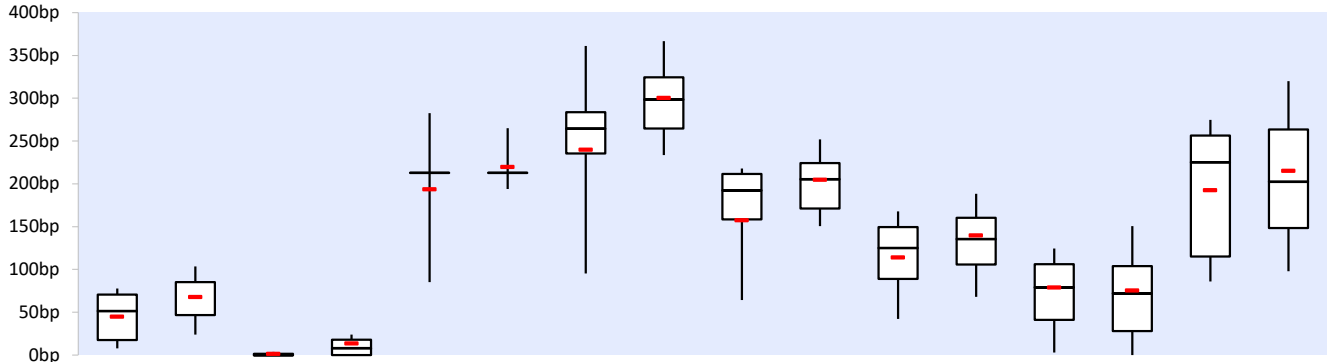
1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	35.5	40.3
Internal and other	<u>n/a</u>	<u>0.7</u>	<u>1.7</u>
Performance fees	n/a	n/a	7.8
Total*	n/a	36.3	46.1

* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 7.8 bps for Global participants (13 funds).

Hedge Funds

Cost by implementation style

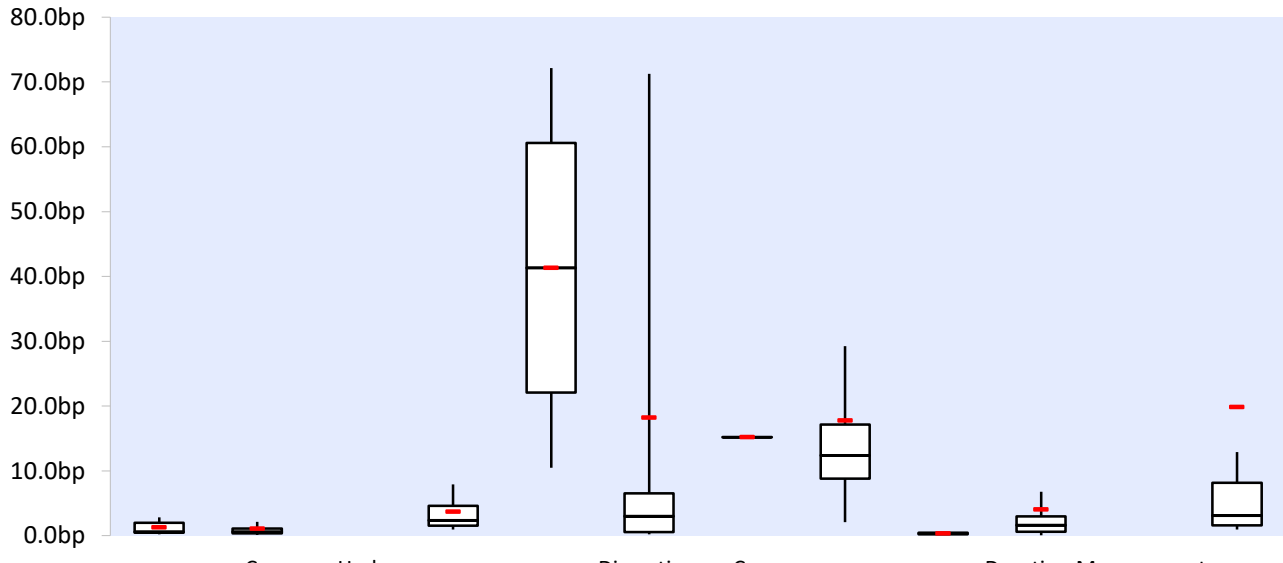


	Fund of Funds										External Direct					
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. and perf. ¹		Total ² incl. perf.		Total ² excl. perf.		Mgmt fees		Perf. fees		Total ² incl. perf.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	77.7	103.5	3.5	24.0	282.6	265.1	361.1	366.7	217.8	252.1	167.9	188.2	124.6	150.5	274.7	320.0
75th %ile	70.6	85.3	1.4	18.0	213.0	213.0	283.6	324.4	211.6	224.3	149.3	160.4	106.2	103.8	256.4	263.5
Median	51.6	70.0	0.0	8.1	213.0	213.0	264.6	298.8	192.6	205.7	125.1	135.5	79.2	72.0	225.5	202.7
25th %ile	17.4	46.6	0.0	0.0	213.0	213.0	235.3	264.8	158.4	171.2	89.1	105.9	40.9	27.8	115.0	148.3
10th %ile	7.9	23.7	0.0	0.0	85.2	194.1	95.1	233.6	64.3	150.5	42.2	67.9	2.8	0.0	85.8	98.0
— Average	44.7	67.6	1.3	13.2	193.6	219.4	239.6	300.2	157.2	204.4	113.7	139.6	78.7	75.3	192.4	215.0
Count	5	87	5	87	5	87	5	87	5	87	12	128	12	128	12	128
Avg. assets	178M	583M	178M	583M	178M	583M	178M	583M	178M	583M	2,635M	1,430M	2,635M	1,430M	2,635M	1,430M
Government Pension Fund Norway																
● You %ile	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Assets	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M	0M

1. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 141 bps (on NAV) for underlying management fees and 72 bps (on NAV) for underlying performance fees were used.

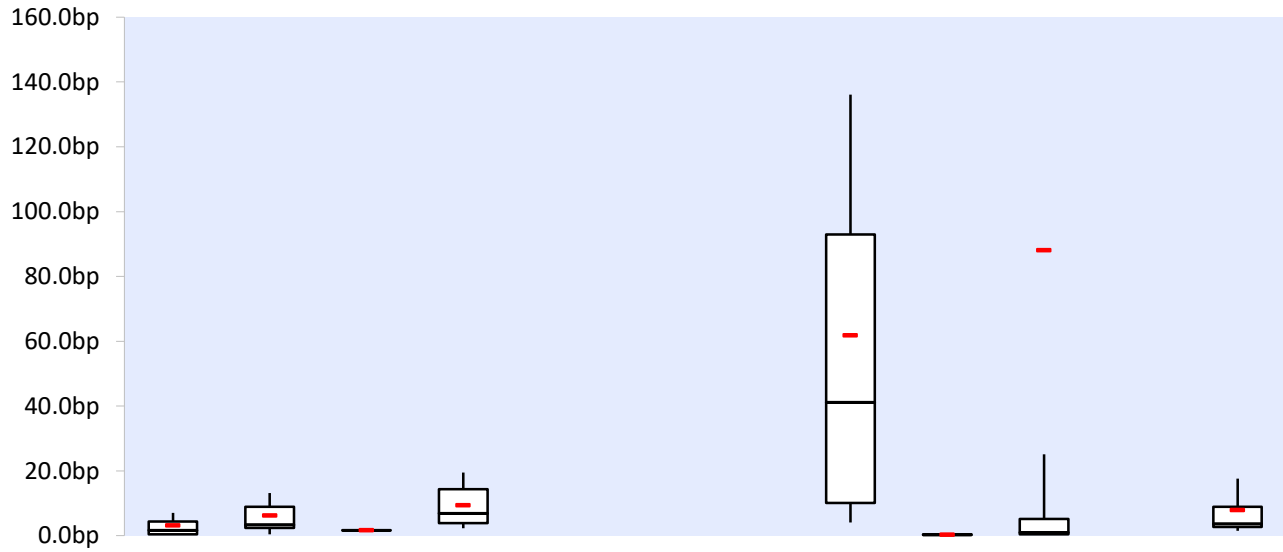
2. The total cost also includes the internal cost of monitoring and selecting real estate investments. The peer average cost of monitoring and selecting was 2.3 bps for fund of

Overlays: currency, duration
Cost by implementation style



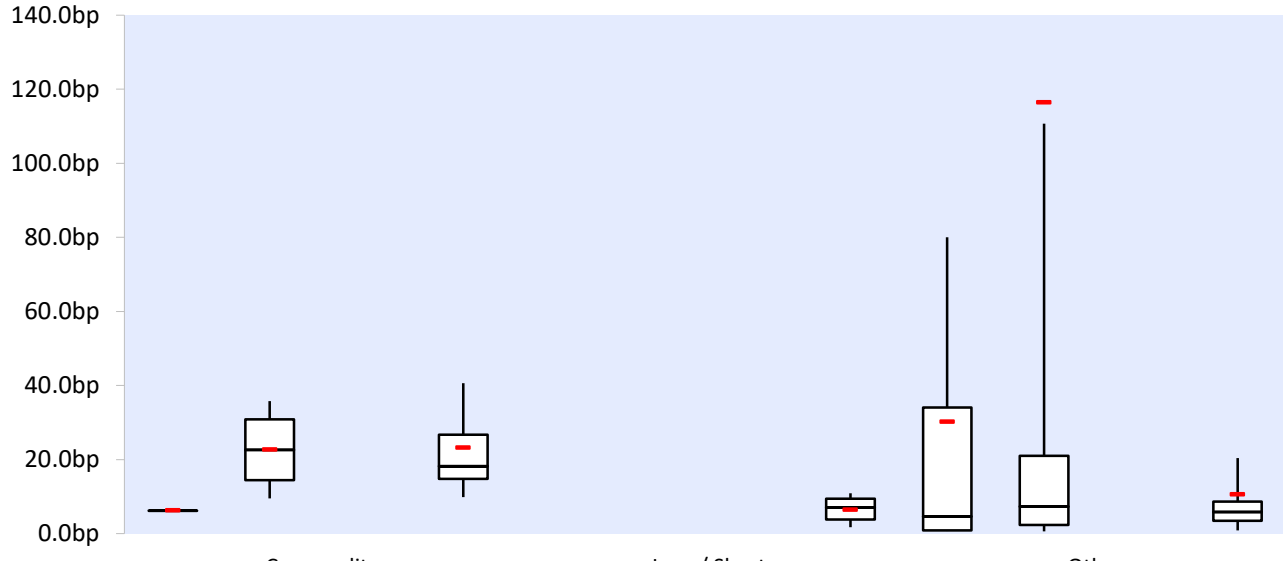
	Currency Hedge				Discretionary Currency				Duration Management			
	Internal		External		Internal		External		Internal		External	
	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	2.8	2.1	7.9		72.2	71.3	15.2	29.2	0.6	6.8		12.9
75th %ile	2.0	1.1	4.6		60.6	6.5	15.2	17.2	0.5	3.0		8.2
Median	0.6	0.6	2.4		41.3	3.0	15.2	12.4	0.3	1.6		3.1
25th %ile	0.4	0.4	1.5		22.1	0.5	15.2	8.8	0.2	0.6		1.6
10th %ile	0.2	0.1	1.0		10.5	0.2	15.2	2.1	0.1	0.1		1.0
— Average	1.3	1.1	3.7		41.3	18.2	15.2	17.7	0.3	4.0		19.8
Count	5	20	0	47	2	13	1	18	2	13	0	15
Avg. notional	7,506M	7,022M		2,022M	600M	7,493M	1,943M	1,350M	3,141M	3,423M		6,357M
Government Pension Fund Norway												
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile												
Avg. notional	875M	875M							10,889M	10,889M		

Overlays: passive beta/rebalancing, global TAA, policy tilt TAA Cost by implementation style



	Passive Beta/Rebalancing				Global TAA				Policy Tilt TAA			
	Internal		External		Internal		External		Internal		External	
	% of notional		% of notional		% of notional		% of notional		% of notional		% of notional	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	7.0	13.2	1.7	19.5				136.1	0.4	25.1		17.6
75th %ile	4.3	8.9	1.7	14.3				92.9	0.4	5.2		8.9
Median	1.7	3.4	1.7	6.9				41.2	0.3	1.0		3.7
25th %ile	0.4	2.4	1.7	3.8				10.1	0.2	0.4		2.7
10th %ile	0.3	0.4	1.7	2.3				4.0	0.1	0.2		1.5
— Average	3.1	6.1	1.7	9.4				61.8	0.3	88.0		7.9
Count	4	9	1	32	0	0	0	4	2	11	0	4
Avg. notional	13,418M	7,020M	5,988M	924M				1,906M	22,848M	27,054M		1,920M
Government Pension Fund Norway												
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile												
Avg. notional												

Overlays: commodity, long/short, other
Cost by implementation style



	Commodity				Long/ Short				Other			
	Internal		External		Internal		External		Internal		External	
	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	% of notional	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	6.3	35.8		40.6				10.9	80.1	110.7		20.4
75th %ile	6.3	30.9		26.7				9.5	34.1	21.0		8.6
Median	6.3	22.7		18.3				7.1	4.7	7.4		5.9
25th %ile	6.3	14.5		14.8				3.8	0.9	2.4		3.4
10th %ile	6.3	9.6		9.9				1.8	0.7	0.6		0.9
— Average	6.3	22.7		23.2				6.5	30.2	116.4		10.6
Count	1	2	0	4	0	0	0	3	4	11	0	17
Avg. notional	620M	462M		611M				628M	1,316M	1,063M		436M
Government Pension Fund Norway												
● You	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%ile												
Avg. notional												

7

Appendices

Appendix A - Data Summary

Appendix B - Currency conversion

Appendix C - Data quality

Appendix D - Glossary of terms

Appendix A - Data Summary

Government Pension Fund Norway

Plan Info	2017	2016	2015
Contact	Jørn Nilsen	Jørn Nilsen	Jørn Nilsen
Type of fund (corporate, public, other)	Public	Public	Public
Total fund size (mils) as at December 31	23,918.0	23,380.0	20,638.0
Asset-class level holdings provided on survey are: year end or average?	Average	Year End	Year End
Total return for year ended	13.20%	7.10%	7.00%
Is the return net or gross?	Gross	Gross	Gross
Total fund policy or benchmark return	12.70%	5.90%	6.50%

Ancillary Data	2017	2016	2015
What is your hedging policy for: Foreign non-U.S. Holdings?			
What were your actuarial fees in 000s?	10	23	88
How many plan members/beneficiaries do you have: Active? Active (no-accrual)? Retired? Other?			
What type of plan(s) do you have?			
To what extent are your retired members' benefits indexed to inflation? Contractual % If the indexation is subject to a cap, describe the cap	0%	0%	0%
What % of the plan's liabilities pertain to retired members?			
Actuarial valuation assumptions for funding purposes: Liability discount rate Salary progression rate		2.4%	2.7% 2.5%
What was your actuarial assumption for expected rate of return?			2.7%

Appendix A - Data Summary: Policy Weights and Benchmarks

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Asset Class		Policy Weight	Benchmark	
			Description	Return
Stock - Europe	2017	64.5	CMVINXBXINN - Custom Index - OSEBX	19.1
	2016	61.1	CMVINXBXINN - Custom Index - OSEBX	8.7
	2015	59.5	CMVINXBXINN - Custom Index - OSEBX	9.2
Fixed Income - Europe	2017	35.5	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Global Aggregated Norway ex. treasuries Barclays Capital Treasuries Norway	2.8
	2016	38.9	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Global Aggregated Norway ex. treasuries Barclays Capital Treasuries Norway	1.8
	2015	40.5	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Global Aggregated Norway ex. treasuries Barclays Capital Treasuries Norway	2.7

Appendix A - Data Summary: Assets, Returns and Costs

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Asset Class		Assets (millions)			Fees/Costs in 000s													
		Internally		Externally Managed	Internally				Externally Managed									
		Active		Active	Indexed		Active		Indexed			Active						
		Assets	Return	# of mgrs	000s	bps ¹	000s	bps ¹	Fees	Over-sight	Total	000s	bps ¹	Base Fees	Perform Fees	Internal & Other	Total	000s
Stock - Europe	2017	14,312.0	19.3			7,445.3	5.2											
	2016	14,290.0	10.5			8,622.0	6.5											
	2015	12,288.0	9.9			7,910.0	6.5											
Fixed Income - Europe	2017	8,556.0	3.6			6,646.7	7.8											
	2016	9,090.0	2.2			7,217.0	8.3											
	2015	8,350.0	2.9			6,353.0	7.5											

1. Cost in basis points = total cost / average holdings.

Appendix A: Assets, Returns and Costs (cont.)

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Asset Class	Assets (millions) and Annual Returns		# Ext Mgrs	Investment Fees / Costs in 000s ¹												
				Internal & Co-Inv						Fund of Funds						
	Amt fees based on	Assets Return		Total 000s	bps ¹	Base Fees	Perform Fees	Internal & Other	Total ¹ 000s	bps (% of fee basis)	Underlying Fees	Base Fees	Perform Fees	Internal & Other	Total ¹ 000s	bps (% of fee basis)
Domestic Property																

Your fund does not have private equity assets.

Appendix A - Data Summary: Oversight, Custodial and Other Costs

Government Pension Fund Norway

Oversight, Custodial and Other Costs			
		000s	bps
Oversight of the fund assets ¹	2017	1,604.0	0.7bp
	2016	1,519.0	0.7bp
	2015	1,721.0	0.8bp
Custodial total	2017	721.0	0.3bp
	2016	895.0	0.4bp
	2015	763.0	0.4bp
Consulting / performance measurement	2017	45.0	0.0bp
	2016	52.0	0.0bp
	2015	71.0	0.0bp
Audit	2017	270.0	0.1bp
	2016	306.0	0.1bp
	2015	267.0	0.1bp
Other (legal etc)	2017	105.0	0.0bp
	2016	293.0	0.1bp
	2015	400.0	0.2bp
Total	2017	2,745.0	1.2bp
	2016	3,065.0	1.4bp
	2015	3,222.0	1.6bp

Summary of All Asset Management Costs			
		000s	bps
Investment Management Costs	2017	14,092.0	6.1bp
	2016	15,839.0	7.2bp
	2015	14,263.0	6.9bp
Oversight, Custodial & Other Costs	2017	2,745.0	1.2bp
	2016	3,065.0	1.4bp
	2015	3,222.0	1.6bp
Total	2017	16,837.0	7.3bp
	2016	18,904.0	8.5bp
	2015	17,485.0	8.5bp

1. Oversight includes the salaries and benefits of executives and their staff responsible for overseeing the entire fund or multiple asset classes and the fees / salaries of the board or investment committee. All costs associated with the above including fees / salaries, travel, director's insurance and attributed overhead should be included.

Appendix A - Data Summary: Overlays

Government Pension Fund Norway

Overlays		Internal					External									
		Notional amount (mils)	Market value (mils)	Profit/Loss (000s)	Cost (000s)	% of Notion. (bps)	Duration (years)	Notional amount (mils)	Market value (mils)	Profit/Loss (000s)	Base fees (000s)	Perf. fees (000s)	Over-sight (000s)	Total (000s)	% of Notion. (bps)	Duration (years)
Currency Hedge	2017	874.8	1.7													
	2016	1,103.0	-16.0													
	2015	1,287.0	-26.0													
Duration Management	2017	10,889.4	116.6													
	2016	12,803.0	126.0													
	2015	8,547.0	140.0													

Appendix B - Currency conversion

Government Pension Fund Norway

#N/A

Currency conversion table					
	2017	2016	2015	2014	2013
United States Dollars - USD*	0.747	0.732	0.761	0.777	0.773
Canada Dollars - CAD	0.597	0.576	0.624	0.619	0.626
Euro - EUR*	1.000	1.000	1.000	1.000	1.000
Sweden Kronor - SEK	0.084	0.081	0.084	0.089	0.090
United Kingdom Pounds - GBP	1.048	1.055	1.087	1.109	1.114
Australia Dollars - AUD	0.500	0.499	0.527	0.518	0.525
New Zealand Dollars - NZD	0.507	0.505	0.536	0.528	0.528

1. Source OECD website.

* USD - Some participating Asia-Pacific funds report holdings and performance in USD.

EUR - Participating funds from Denmark and Norway report holdings and performance in Euros.

Appendix C - Data quality

The value of the information contained in these reports is only as good as the quality of the data received. CEM's procedures for checking and improving the data include the following.

Improved survey clarity

Twenty years of feedback from survey participants has led to improved definitions and survey clarity. In addition to immediate feedback from participants, CEM has hosted user workshops to solicit additional feedback and to resolve issues, such as trade-offs between more information and effort on the part of participants.

Computer and desktop verification

Survey responses are compared to norms for the survey universe and to each sponsor's prior year data when available. This typically results in questions generated by our online survey engine as well as additional follow-up to clarify responses or with additional questions.

In addition to these procedures, data quality continues to improve for the following reasons:

Learning curve

This is CEM's 27th year of gathering this data and experience is teaching the firm and the participants how to do a better job.

Growing universe

As our universe of respondents continues to increase in size, so does our confidence in the results as unbiased errors tend to average themselves out.

Any suggestions on how to further improve data quality are welcome.

Currency Conversions

For reports where either the peer group or report universe includes funds from multiple countries, we have converted the returns back to the base currency of the fund we prepared the report for. For example, for a Euro zone fund with peers from the U.S. we converted U.S. returns to Euro based on the currency return for the year using December 31 spot rates.

Appendix D - Glossary of terms

Average cost

- Calculated by dividing actual annual costs by the average of beginning and end-of-year holdings. If beginning-of-year holdings are not available, they are estimated using end-of-year holdings before the effect of this year's return on investment.

Benchmark return

- Rate of return on a portfolio of investable assets (such as the S&P500) designated as the benchmark portfolio against which the fund measures its own performance for that asset class.

F statistics

- Measure of the statistical significance of the regression coefficients taken as a group. Generally, regression equations with 5 coefficients and sample sizes greater than 20 are statistically significant if its F statistic is greater than 3.

Global TAA

- Fully funded segregated asset pool dedicated to active asset allocation.

Impact coefficient

- Estimate of the impact on the dependent variable in a regression of a change in the value of a given explanatory variable

Level of significance

- Degree to which sample data explains the universe from which they are extracted.

N-year peers

- Subset of peer group that have participated in our study for at least the consecutive n years.

Oversight of the fund

- Resources devoted to the oversight of the fund.

Overlay

- Derivative based program (unfunded other than margin requirements), designed to enhance total portfolio return (such as a tactical asset allocation program) or to achieve some specific mandate such as currency hedging.

Passive proportion

- Proportion of assets managed passively, i.e., indexed to broad capital market benchmarks or dedicated to replicate market benchmarks.

Policy mix

- Reflects long-term policy or target asset weights. Policy asset mix is often established by a fund's investment committee or board and is determined by such long term considerations as liability structure, risk tolerance and long term capital markets prospects.

Policy return

- The return you would have earned if you had passively implemented your policy mix decision through your benchmark portfolios. Your policy return equals the sum of your policy weights multiplied by your asset class benchmarks for each asset class.

R squared (coefficient of determination)

- The percentage of the differences in the dependent variable explained by the regression equation. For example, an R squared of 1 means 100% of the differences are explained and an R squared of 0 means that none of the differences are explained.

Value added

- the difference between your total actual return and your policy return. It is a measure of actual value produced over what could have been earned passively.