

Investment
Cost Effectiveness Analysis
(for the 10-year period ending December 31, 2020)

Government Pension Fund Norway



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Key Takeaways

Value added

- Your 10-year net value added was 0.6%. This was above the Global median of 0.3% and above the peer median of 0.4%.

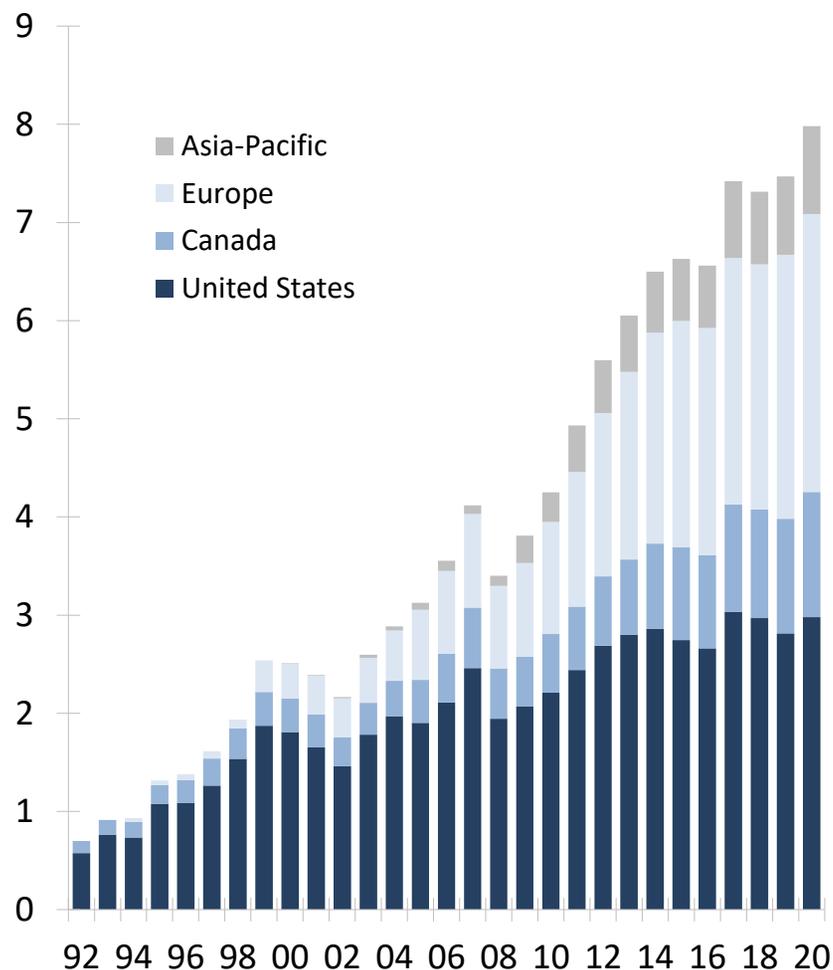
Cost

- Your 2020 investment cost of 6.0 bps was below your benchmark cost of 13.7 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was low cost because it had a lower cost implementation style and it paid less than peers for similar services.
- 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 308 funds in CEM's extensive pension database.

- 158 U.S. pension funds participate. The median U.S. fund had assets of €7.3 billion and the average U.S. fund had assets of €18.9 billion. Total participating U.S. assets were €3.0 trillion.
- 68 Canadian funds participate with assets totaling €1.3 trillion.
- 73 European funds participate with aggregate assets of €2.8 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.
- 6 Asia-Pacific funds participate with aggregate assets of €896.3 billion. Included are funds from Australia, New Zealand, China and South Korea.
- 3 funds from other regions participate.

Participating assets (€ trillions)



The most valuable comparisons for cost performance are to your custom peer group because plan size and the size of the internal equity program impacts costs.

Peer group for Government Pension Fund Norway

- 16 Global sponsors from €16.1 billion to €100.3 billion
- Median size of €60.4 billion versus your €27.9 billion
- Median size of internal equity program of €16 billion versus your €18 billion

- 3 Canadian funds, 7 European funds, 1 Asia-Pacific fund and 5 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 0.6%.

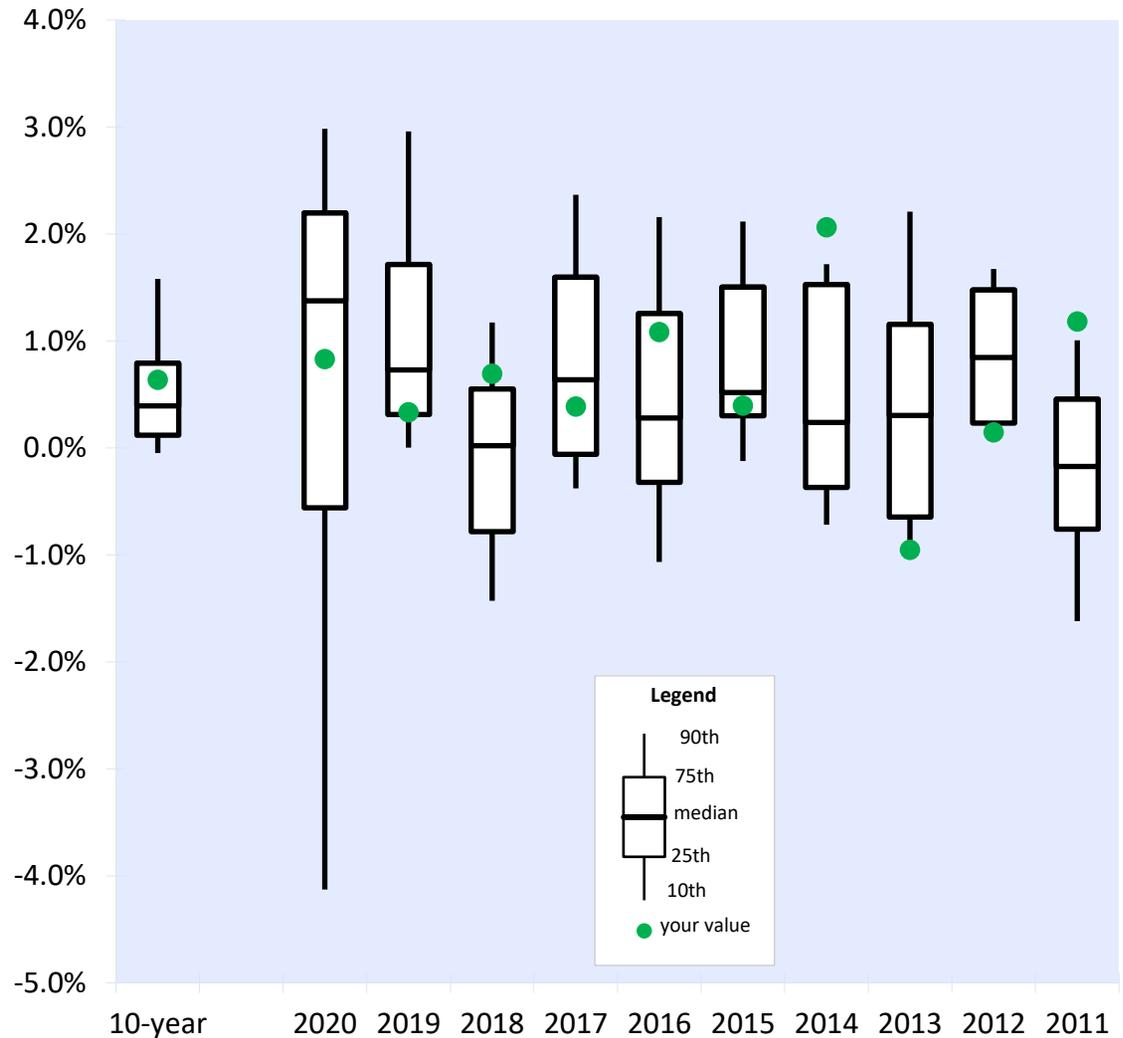
Net value added equals total net return minus policy return.

Value added for Government Pension Fund Norway

Year	Net return	Policy return	Net value added
2020	8.7%	7.9%	0.8%
2019	12.4%	12.0%	0.3%
2018	-0.4%	-1.1%	0.7%
2017	13.2%	12.8%	0.4%
2016	7.0%	5.9%	1.1%
2015	6.9%	6.5%	0.4%
2014	10.6%	8.5%	2.1%
2013	15.6%	16.6%	-1.0%
2012	12.1%	11.9%	0.1%
2011	-4.0%	-5.2%	1.2%
10-Year	8.0%	7.4%	0.6%

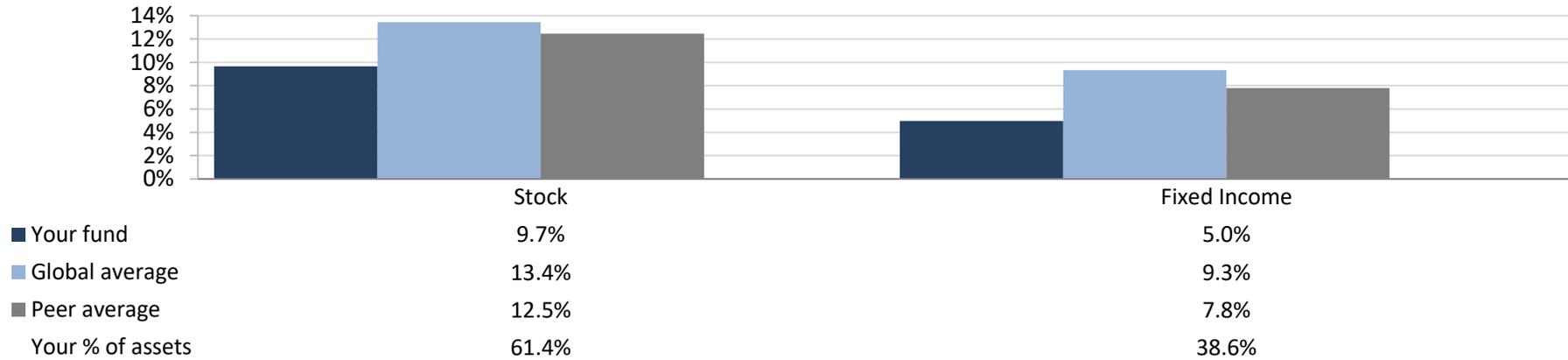
Your 10-year net value added of 0.6% compares to a median of 0.4% for your peers and 0.3% for the Global universe.

Peer net value added - quartile rankings

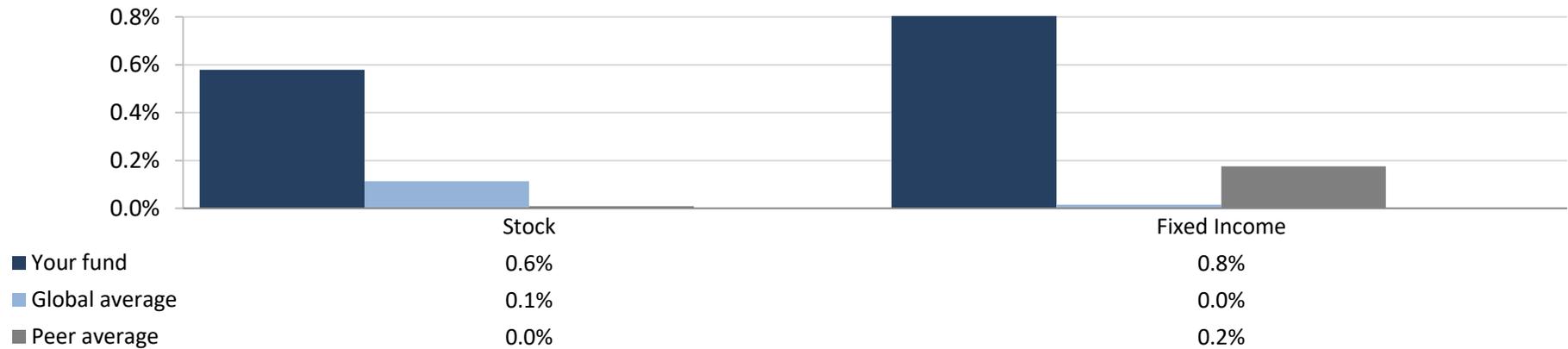


Comparisons of your 10-year net return and net value added by major asset class:

10-year average net return by major asset class



10-year average net value added by major asset class

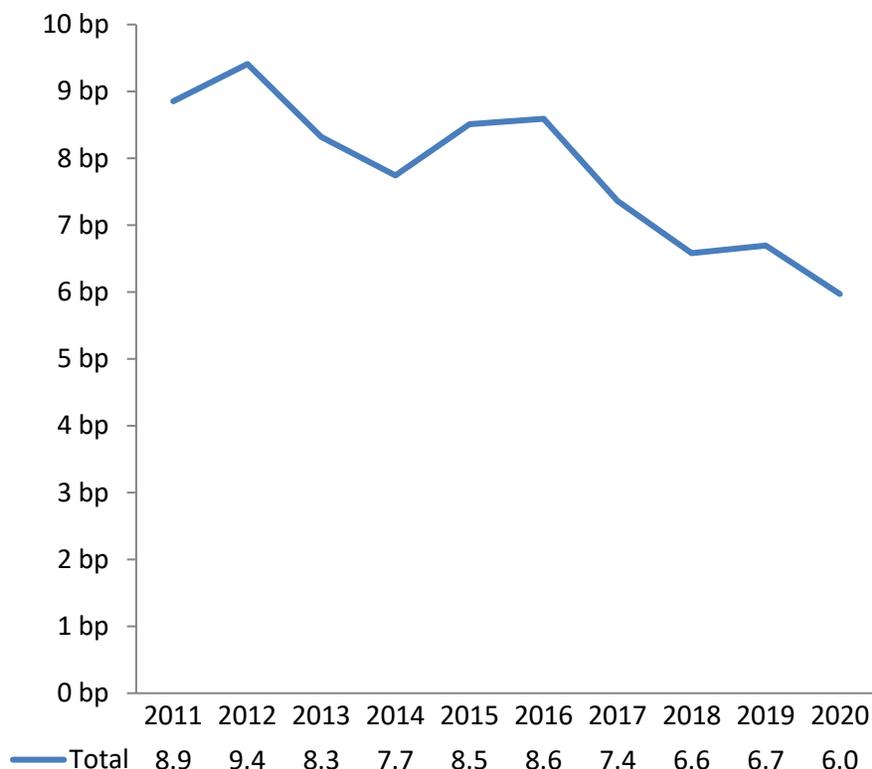


Your investment costs, excluding private asset performance fees, were €16.5 million or 6.0 basis points in 2020.

Asset management costs by asset class and style (€000s)	Internal Active	Total	
Stock - EAFE	6,792	6,792	
Fixed Income - EAFE	7,483	7,483	
Total excluding private asset performance fees		14,275	5.2bp
Oversight, custodial and other costs			
Oversight of the fund		1,202	
Trustee & custodial		575	
Consulting and performance measurement		61	
Audit		222	
Other		142	
Total oversight, custodial & other costs		2,202	0.8bp
Total investment costs (excl. transaction costs)		16,477	6.0bp

Your costs decreased by 2.9 bps, from 8.9 bps in 2011 to 6.0 bps in 2020, primarily because you paid less in 2020 for similar investment styles.

Trend in cost



Reasons why your costs decreased by 2.9 bps

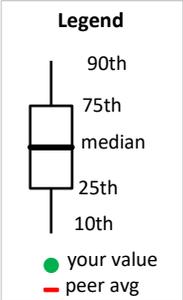
	Impact in bps
1. Asset mix movements	(0.0)
2. Paid less, net, for similar investment styles	
Lower internal investment management costs	
• Lower internal active Stock - EAFE costs	(1.0)
• All other internal investment mgmt. differences	(0.2)
• All other differences	(1.7)
	<u>(2.9)</u>
Total decrease	<u><u>(2.9)</u></u>

Your total investment cost of 6.0 bps was among the lowest of the peers and was substantially below the peer median of 41.9 bps.

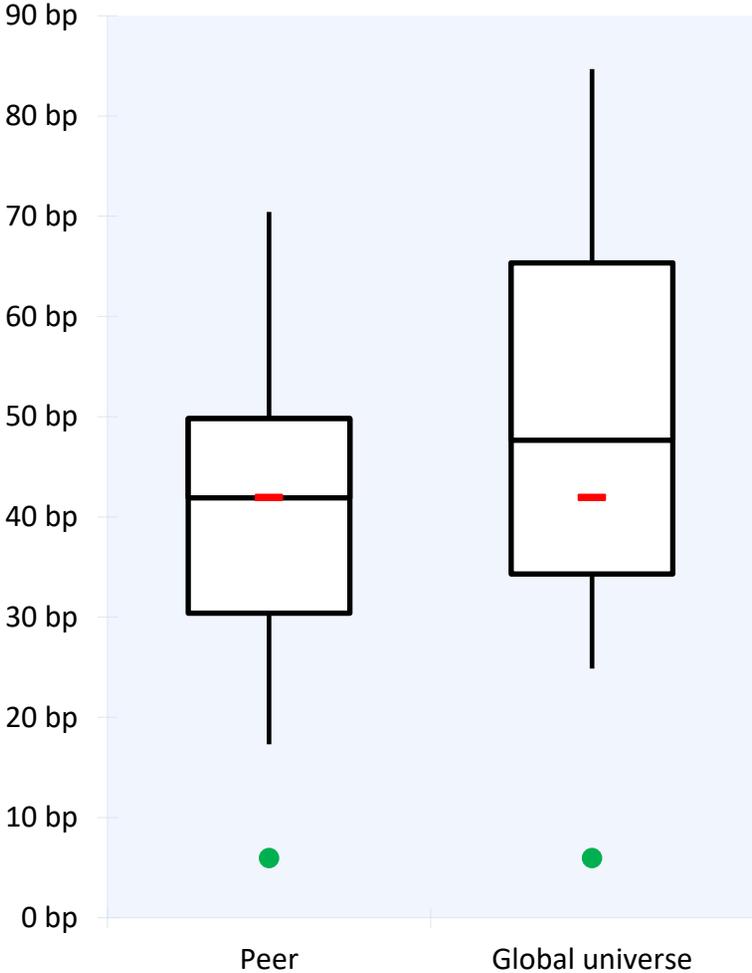
Differences in total investment cost are often caused by two factors that are often outside of management's control:

- Asset mix, particularly holdings of the highest cost asset classes: real estate (excl. REITs), infrastructure, hedge funds, private equity and private credit. These high cost assets equaled 0% of your funds assets at the end of 2020 versus a peer average of 26%.
- 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.



Total investment cost
excluding transaction costs and private asset performance fees



Benchmark cost analysis suggests that, after adjusting for fund size and asset mix, your fund was low cost by 7.8 basis points in 2020.

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 6.0 bp was below your benchmark cost of 13.7 bp. Thus, your cost savings were 7.8 bp.

Your cost versus benchmark

	€000s	basis points
Your total investment cost	16,477	6.0 bp
Your benchmark cost	37,912	13.7 bp
Your excess cost	(21,435)	(7.8) bp

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

Reasons for your low cost status

	Excess Cost/ (Savings)	
	€000s	bps
1. Implementation style differences	(15,482)	(5.6)
2. Paying less than peers for similar services		
• Internal investment management costs	(2,407)	(0.9)
• Oversight, custodial & other costs	(3,546)	(1.3)
	(5,953)	(2.2)
<hr/> Total savings	(21,435)	(7.8)

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
<i>Internal asset management</i>								
Stock - Europe	17,528	3.9	12.5	8.7	5.5	6.9	3.0	1.9
Fixed income - Europe	10,040	7.5	8.4	1.0	0.4	4.6	(2.9)	(1.0)
Total, excl. Overlays and overhead		5.2	11.0		5.9	6.0		0.9
Overlay Programs	27,601	0.0	0.6	0.6	0.6	0.6	0.6	0.6
Overhead	27,601	0.8	2.1	1.3	1.3	2.1	1.3	1.3
Total	27,601	6.0	13.7		7.8	8.7		2.8

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
<i>Internal asset management</i>			
Stock - Europe	17,528	3.9	2.5
Fixed income - Europe	10,040	7.5	1.7
Overhead	27,601	0.8	0.8
Total	27,601	6.0	3.0

Notes:

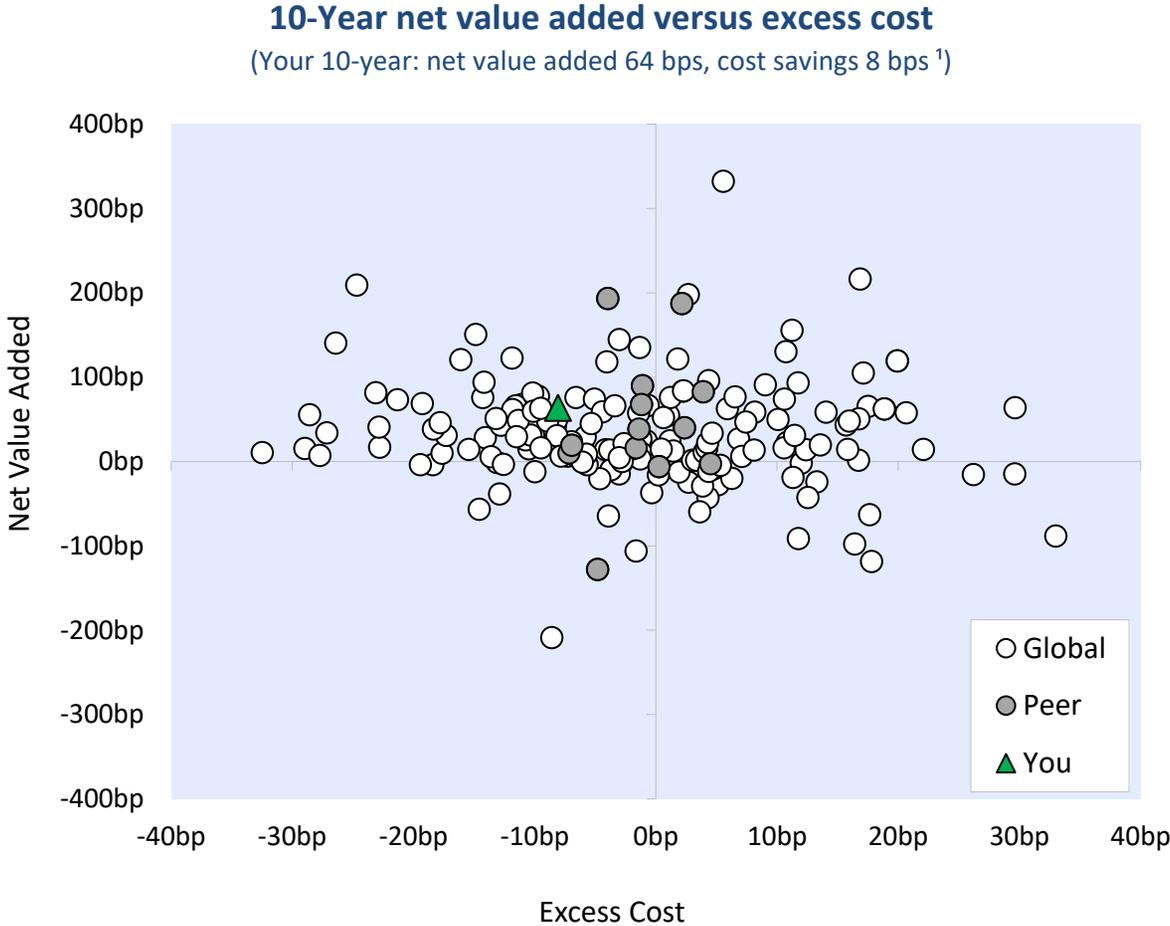
Internal stock uses All stock as the benchmark.

Internal fixed income uses All fixed income as the benchmark.

The benchmark result needs to be interpreted with caution since the value is very low and based on a limited number of observations.

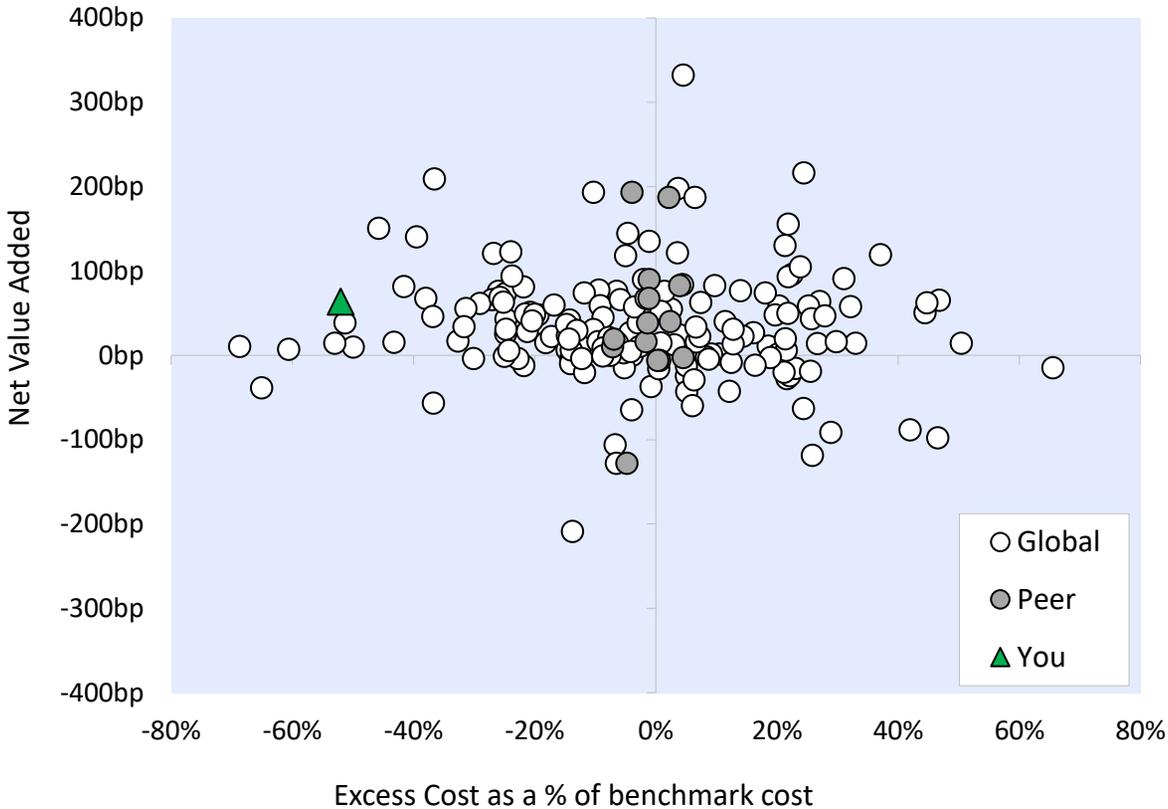
This also does not take into consideration possible issues with owning a relatively large proportion of a given benchmark index or any constraints around ESG factors.

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

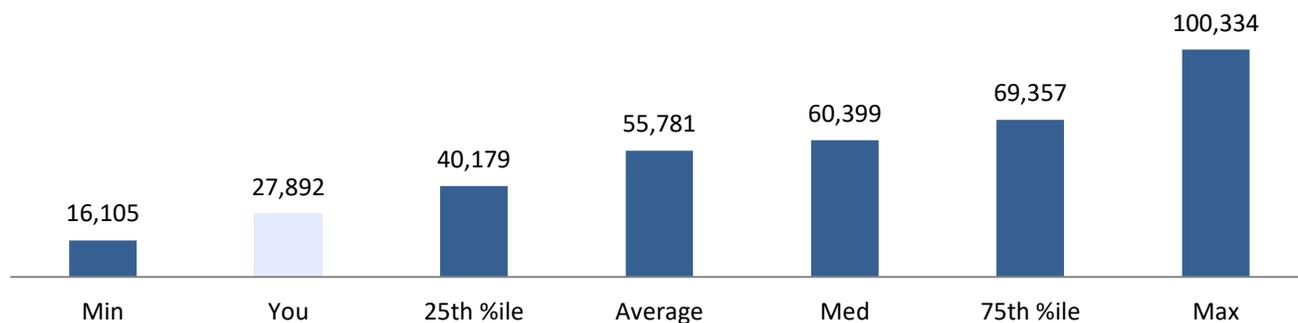
Your peer group is comprised of 16 Global funds, with assets ranging from €16.1 billion to €100.3 billion versus your €27.9 billion. The median size is €60.4 billion. The median size of their internal equity programs is €16 billion versus your €18 billion.

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

Peer Group Characteristics - 2020

	You	Peers	Global average
<u>Plan Assets (\$ billions)</u>			
Range	27.9	16.1 - 100.3	0.0 - 966.7
Median		60.4	6.2
<u># of Plans</u>			
Corporate		0	142
Public	1	12	129
Other		4	37
Total		16	308
<u>Implementation style</u>			
% External active	0.0	29.0	66.4
% External passive	0.0	4.5	18.4
% Internal active	100.0	58.9	11.4
% Internal passive	0.0	7.6	3.9
<u>Asset mix</u>			
% Stock	65.1	41.7	38.8
% Fixed Income	34.9	28.3	38.7
% Real Assets	0.0	12.5	9.7
% Private Equity	0.0	7.9	5.3
% Hedge Funds & Other	0.0	6.2	5.3

Total fund assets (€ millions) - you versus peers

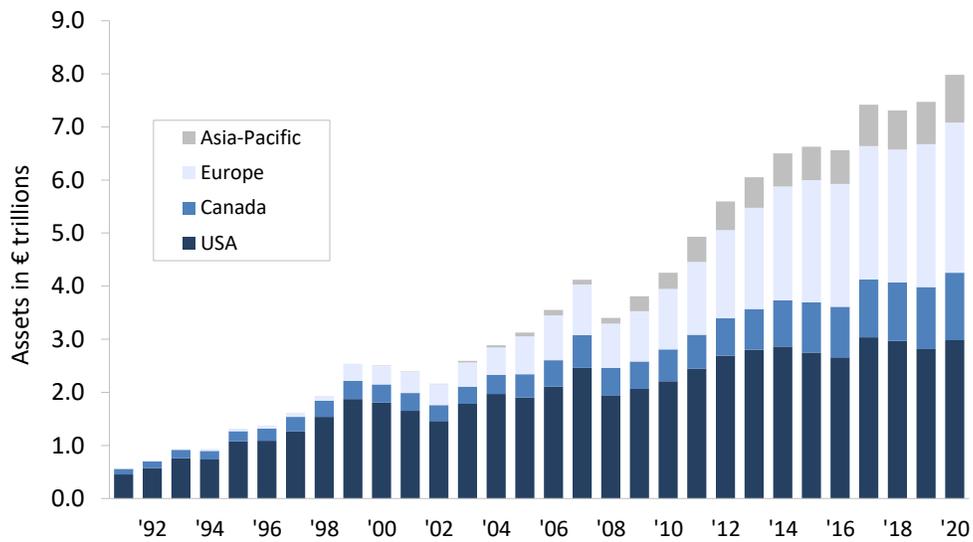


CEM global universe

CEM has been providing investment benchmarking solutions since 1991. The 2020 survey universe is comprised of 308 funds representing €8.0 trillion in assets. The breakdown by region is as follows:

- 158 U.S. pension funds with aggregate assets of €3.0 trillion.
- 68 Canadian pension funds with aggregate assets of €1.3 trillion.
- 73 European pension funds with aggregate assets of €2.8 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Denmark, UK, and Ireland.
- 6 Asia-Pacific pension funds with aggregate assets of €0.9 trillion.

CEM global universe



Universe subsets

CEM's global survey universe is comprised of 308 funds with total assets of €8.0 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 €16.1 - €100.3 billion. The peer median of €60.4 billion compares to your €27.9 billion.
- Global - The global universe is comprised of 308 funds ranging in size from €0.0 - €966.7 billion. The median fund is €6.2 billion.

Universe subsets by number of funds and assets

	Peer group ¹	Corp.	Public	Other	Total	U.S.	Canada	Europe	Asia-Pacific	Total
# of funds										
2020	16	142	129	37	308	158	68	73	9	308
2019	16	135	135	41	311	151	71	75	14	311
2018	16	147	147	44	338	170	78	76	14	338
2017	16	151	156	47	354	167	80	91	16	354
2016	16	155	147	47	349	170	81	83	15	349
2015	16	162	150	53	365	176	81	92	16	365
2014	16	165	205	54	424	177	88	144	15	424
2013	16	186	200	62	448	193	90	152	13	448
2012	15	189	203	58	450	203	89	144	14	450
2011	15	197	114	67	378	204	89	71	14	378
# of funds with uninterrupted data for:										
1 yr	16	142	129	37	308	158	68	73	9	308
2 yrs	16	129	120	35	284	142	65	68	9	284
3 yrs	16	121	118	34	273	137	63	64	9	273
4 yrs	16	114	113	32	259	130	57	63	9	259
5 yrs	16	109	109	32	250	127	54	60	9	250
6 yrs	16	102	103	30	235	120	48	58	9	235
7 yrs	16	95	102	30	227	117	46	55	9	227
8 yrs	16	91	99	28	218	111	45	54	8	218
9 yrs	15	84	94	25	203	106	44	46	7	203
10 yrs	14	83	68	24	175	104	42	22	7	175
Total assets (€ billions)										
2020	892	1,310	5,209	1,492	8,010	2,980	1,273	2,831	926	8,010
2019	854	1,169	4,926	1,474	7,570	2,814	1,168	2,690	898	7,570
2018	776	1,119	4,918	1,361	7,399	2,969	1,107	2,498	825	7,399
2017	772	1,139	5,022	1,498	7,659	3,035	1,093	2,512	1,019	7,659
2016	690	1,080	4,294	1,377	6,751	2,661	951	2,313	826	6,751
2015	681	1,102	4,470	1,340	6,912	2,746	948	2,302	916	6,912
2014	662	1,164	4,384	1,243	6,792	2,860	869	2,149	914	6,792
2013	604	1,106	4,078	1,120	6,304	2,802	765	1,909	827	6,304
2012	536	1,096	3,783	864	5,743	2,687	707	1,665	685	5,743
2011	507	1,078	3,211	773	5,062	2,442	644	1,371	605	5,062
2020 asset distribution (€ billions)										
Avg	55.8	9.2	40.4	40.3	26.0	18.9	18.7	38.8	102.9	26.0
Max	100.3	58.6	966.7	459.0	966.7	292.9	268.0	966.7	542.8	966.7
75th %ile	69.4	12.2	28.1	43.6	18.3	16.7	11.4	27.5	100.3	18.3
Median	60.4	4.5	8.1	13.8	6.2	7.3	4.1	8.5	22.5	6.2
25th %ile	40.2	1.8	2.9	3.0	2.3	2.3	1.5	3.1	7.0	2.3
Min	16.1	0.2	0.0	0.1	0.0	0.2	0.0	0.5	0.6	0.0

1. Peer group statistics are for your 2020 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 - 2020 (as a % of year-end assets)

	Your fund	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	28.1	69.8	58.8	59.6	64.0	71.5	62.4	51.1	47.6	64.0
Fund of funds	0.0	0.8	2.1	2.8	2.3	2.4	2.3	1.7	3.3	2.8	2.4
External passive	0.0	4.5	19.3	17.0	19.7	18.4	18.9	12.6	23.0	16.4	18.4
Internal Active	100.0	58.9	6.5	15.9	14.2	11.4	4.4	18.4	18.7	20.8	11.4
Internal Passive	<u>0.0</u>	<u>7.6</u>	<u>2.2</u>	<u>5.6</u>	<u>4.3</u>	<u>3.9</u>	<u>3.0</u>	<u>4.9</u>	<u>3.8</u>	<u>12.4</u>	<u>3.9</u>
Total	100	100	100	100	100	100	100	100	100	100	100
Actual asset mix											
Stock	65.1	41.7	31.4	46.6	40.0	38.8	37.3	37.4	42.5	45.7	38.8
Fixed Income ¹	34.9	29.6	52.1	26.4	36.7	39.5	42.9	36.5	35.9	30.5	39.5
Global TAA	0.0	1.4	0.7	1.3	0.2	0.9	0.9	0.5	1.2	0.2	0.9
Real Assets	0.0	12.5	6.0	13.0	12.0	9.7	6.3	16.2	10.9	10.5	9.7
Hedge Funds	0.0	3.2	3.5	2.7	2.7	3.1	4.2	1.8	1.7	4.0	3.1
Balanced Funds	0.0	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.5	0.0	0.1
Risk Parity	0.0	0.3	0.5	0.4	0.3	0.4	0.7	0.2	0.0	1.0	0.4
Private Debt	0.0	3.4	1.7	2.6	3.3	2.3	1.4	2.8	3.7	1.1	2.3
Private Equity	<u>0.0</u>	<u>7.9</u>	<u>4.1</u>	<u>6.7</u>	<u>4.9</u>	<u>5.3</u>	<u>6.3</u>	<u>4.6</u>	<u>3.5</u>	<u>7.1</u>	<u>5.3</u>
Total	100	100	100	100	100	100	100	100	100	100	100
Policy asset mix											
Stock	65.1	43.3	31.8	45.7	41.9	38.8	37.6	37.5	41.1	51.5	38.8
Fixed Income	34.9	29.3	51.2	26.1	35.5	38.8	42.4	35.8	35.3	27.2	38.8
Global TAA	0.0	2.8	0.6	1.3	0.1	0.9	0.9	0.7	1.2	0.2	0.9
Real Assets	0.0	12.4	6.6	14.5	12.9	10.7	7.3	16.8	12.2	10.2	10.7
Hedge funds	0.0	1.8	3.3	2.3	2.1	2.8	3.8	1.3	1.9	2.9	2.8
Balanced Funds	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.3	0.0	0.1
Risk Parity	0.0	0.3	0.5	0.3	0.2	0.4	0.6	0.1	0.0	0.6	0.4
Private Debt	0.0	2.7	1.8	3.0	3.0	2.4	1.2	3.5	4.2	1.3	2.4
Private Equity	<u>0.0</u>	<u>7.4</u>	<u>4.2</u>	<u>6.7</u>	<u>4.4</u>	<u>5.3</u>	<u>6.3</u>	<u>4.3</u>	<u>3.9</u>	<u>6.1</u>	<u>5.3</u>
Total	100	100	100	100	100	100	100	100	100	100	100

1. Includes derivatives and overlays.

Implementation style, actual mix and policy mix trends

Implementation style, actual mix and policy mix - 2016 to 2020 (as a % of year-end assets)

	Your fund					Peer average ¹					Global average ¹				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
Implementation style															
External active	0.0	0.0	0.0	0.0	0.0	28.9	28.5	28.7	28.1	28.7	62.4	62.1	62.2	61.2	60.6
Fund of funds	0.0	0.0	0.0	0.0	0.0	0.6	1.1	0.6	0.7	0.6	2.2	2.4	2.6	2.6	2.7
External passive	0.0	0.0	0.0	0.0	0.0	3.9	3.7	3.3	4.1	4.5	16.6	16.7	16.6	17.6	18.1
Internal active	100.0	100.0	100.0	100.0	100.0	57.9	56.5	57.1	57.1	56.3	13.4	13.3	13.3	13.6	13.5
Internal passive	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>8.6</u>	<u>10.3</u>	<u>10.4</u>	<u>10.0</u>	<u>9.9</u>	<u>5.4</u>	<u>5.5</u>	<u>5.3</u>	<u>4.9</u>	<u>5.1</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Actual asset mix															
Stock	65.1	61.8	59.0	62.6	61.1	40.2	39.5	40.0	42.0	40.8	37.0	37.3	37.2	40.8	40.7
Fixed income ²	34.9	38.2	41.0	37.4	38.9	31.2	31.1	31.6	31.9	31.8	40.4	39.8	39.6	37.7	37.6
Global TAA	0.0	0.0	0.0	0.0	0.0	1.7	1.8	2.2	2.3	2.9	0.8	0.9	1.0	0.9	1.2
Real assets	0.0	0.0	0.0	0.0	0.0	13.0	13.6	13.3	12.5	13.1	9.7	10.0	10.2	9.6	9.5
Hedge funds	0.0	0.0	0.0	0.0	0.0	2.4	2.8	2.9	3.0	3.2	3.4	3.6	3.9	3.8	4.1
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	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.3
Private credit	0.0	0.0	0.0	0.0	0.0	3.5	2.6	2.4	1.8	1.5	2.1	1.9	1.8	1.5	1.2
Private equity	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>7.8</u>	<u>8.2</u>	<u>7.2</u>	<u>6.2</u>	<u>6.4</u>	<u>6.3</u>	<u>6.0</u>	<u>5.8</u>	<u>5.3</u>	<u>5.3</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Policy asset mix															
Stock	65.1	62.0	59.0	64.5	61.1	42.6	42.9	42.9	44.5	44.7	37.6	38.1	38.5	41.0	41.4
Fixed income	34.9	38.0	41.0	35.5	38.9	30.7	31.7	31.9	31.5	32.3	39.9	40.0	39.5	37.9	37.5
Global TAA	0.0	0.0	0.0	0.0	0.0	3.1	3.6	3.6	3.5	4.0	1.0	1.0	1.1	1.0	1.3
Real assets	0.0	0.0	0.0	0.0	0.0	12.8	12.5	12.3	12.3	11.8	10.3	10.0	10.0	9.7	9.4
Hedge funds	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.8	0.6	0.6	2.9	3.1	3.3	3.4	3.5
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	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.3
Private credit	0.0	0.0	0.0	0.0	0.0	2.6	1.9	2.1	1.6	1.1	2.0	1.6	1.5	1.1	1.0
Private equity	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>7.2</u>	<u>6.3</u>	<u>6.0</u>	<u>5.6</u>	<u>5.2</u>	<u>6.0</u>	<u>5.8</u>	<u>5.6</u>	<u>5.4</u>	<u>5.6</u>
Total	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

1. Trends are based on the 175 Global and 14 peer funds with 10 or more consecutive years of data ending 2020.

2. Includes derivatives and overlays.

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 - 2020 (as a % of year-end assets)

	Your fund %				Peer average %				Global average %					
	External		Internal		External		Internal		External		Internal			
	Active	FOFs	Index	Active Index	Active	FOFs	Index	Active Index	Active	FOFs	Index	Active Index		
Stock - U.S.					9.8	11.3	45.9	33.0	35.1	50.7	6.8	7.3		
Stock - EAFE	0.0		0.0	100.0	12.3	9.1	74.2	4.4	53.0	25.3	19.5	2.2		
Stock - Global					33.6	2.2	64.2	0.0	62.9	25.7	8.7	2.7		
Stock - Other					0.8	15.5	77.5	6.2	68.9	9.4	13.4	8.3		
Stock - Emerging					30.8	14.9	46.9	7.4	74.4	15.8	6.4	3.5		
Stock - ACWI x U.S.					65.2	0.0	34.5	0.3	69.1	29.2	0.9	0.8		
Stock - Aggregate	0.0		0.0	100.0	18.5	9.0	61.0	11.4	55.6	30.6	9.6	4.2		
Fixed Income - U.S.					4.9	5.4	88.2	1.4	65.7	16.3	14.1	3.9		
Fixed Income - EAFE	0.0		0.0	100.0	4.4	0.4	69.7	25.6	36.0	33.8	17.0	13.2		
Fixed Income - Global					13.8	0.3	84.6	1.3	64.2	7.2	24.6	4.0		
Fixed Income - Other					7.3	5.4	87.3	0.0	59.4	15.7	21.8	3.1		
Fixed Income - Long Bonds					1.3	0.0	98.7	0.0	80.8	10.3	5.4	3.5		
Fixed Income - Emerging					60.4	0.0	34.2	5.4	76.3	5.5	17.1	1.2		
Fixed Income - Inflation Indexed					0.0	0.0	82.9	17.1	18.1	40.0	15.9	26.0		
Fixed Income - High Yield					83.9	0.0	16.1	0.0	87.0	2.3	8.9	1.7		
Fixed Income - Bundled LDI					4.4	0.0	95.6	0.0	51.5	27.6	14.5	6.4		
Fixed Income - Convertibles					100.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0		
Cash					40.3		59.7		49.1		50.9			
Fixed Income - Aggregate	0.0		0.0	100.0	15.4	1.8	75.6	7.2	65.4	15.2	14.3	5.1		
Commodities					25.7	0.0	12.8	61.5	45.8	10.6	14.3	29.4		
Infrastructure					24.8	0.6	74.6		77.6	6.4	16.0			
Natural Resources					48.9	0.0	51.1		75.9	0.4	23.7			
REITs					5.3	0.0	51.1	43.6	66.3	18.6	13.1	2.1		
Real Estate					38.1	2.0	59.9		78.0	6.4	15.5			
Other Real Assets					97.0	0.0	3.0		93.1	0.0	6.9			
Real Assets - Aggregate					34.3	1.4	0.0	62.7	76.7	5.6	1.3	0.7		
Hedge Funds					94.9	5.1			76.5	23.5				
Global TAA					8.9		91.1		78.4		21.6			
Balanced Funds					0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0		
Risk Parity					98.3		1.7		92.2		7.8			
Private Credit					64.9	0.0	35.1		89.5	2.4	8.2			
Mortgages					56.2		43.8		90.5		9.5			
Diversified Private Equity					71.9	5.3	22.9		72.7	22.5	4.7			
Venture Capital					79.0	19.9	1.1		54.3	44.9	0.8			
LBO					93.7	5.7	0.6		94.6	5.3	0.1			
Other Private Equity					83.1	0.0	16.9		75.6	0.0	24.4			
Private Equity - Aggregate					78.3	6.3	15.4		74.5	20.8	4.7			
Total Fund - Yr.-End Holdings	0.0	0.0	0.0	100.0	28.1	0.8	4.5	58.9	7.6	64.0	2.4	18.4	11.4	3.9

Actual mix

Actual asset mix - 2016 to 2020 (as a % of total year-end assets)

	Your fund					Peer average %					Global average %				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
Stock - U.S.						11.0	11.1	11.4	11.4	11.1	10.4	10.5	11.1	12.2	13.4
Stock - EAFE	65.1	61.8	59.0	62.6	61.1	15.2	15.2	15.3	16.5	16.8	6.2	6.1	6.8	8.1	8.4
Stock - Global						8.1	7.6	7.5	7.5	6.1	13.8	13.4	12.8	13.0	11.8
Stock - Other						1.9	1.7	2.0	2.5	3.0	2.8	3.2	3.4	3.8	4.3
Stock - Emerging						4.5	4.1	4.3	4.5	4.4	3.1	3.0	3.1	3.5	3.0
Stock - ACWI x U.S.						1.0	0.8	0.8	0.9	0.8	2.4	2.4	2.3	2.5	2.6
Stock - Aggregate	65.1	61.8	59.0	62.6	61.1	41.7	40.6	41.3	43.3	42.3	38.8	38.5	39.6	43.2	43.5
Fixed Income - U.S.						6.3	6.6	6.5	6.2	6.0	6.4	6.5	6.9	5.7	6.2
Fixed Income - EAFE	34.9	37.9	41.0	37.4	38.9	5.8	5.7	6.7	6.3	6.9	2.9	3.1	3.1	3.8	3.7
Fixed Income - Global						3.3	4.2	4.1	4.0	4.2	2.4	2.6	2.4	2.8	2.7
Fixed Income - Other						2.3	2.3	2.5	3.2	3.8	4.7	4.8	5.0	5.4	5.9
Fixed Income - Long Bonds						1.6	2.1	1.5	1.2	1.3	13.1	12.8	12.8	10.6	10.0
Fixed Income - Emerging						1.9	2.1	1.9	1.9	1.8	1.3	1.4	1.2	1.1	1.0
Fixed Income - Inflation Indexed						1.8	2.0	3.0	3.3	3.0	1.4	1.9	1.7	2.0	2.4
Fixed Income - High Yield						1.2	0.7	0.7	1.0	1.2	1.3	1.2	1.2	1.2	1.3
Fixed Income - Bundled LDI						1.8	1.0				3.4	2.3	2.2	1.2	0.2
Fixed Income - Convertibles						0.1	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Cash		0.2				2.1	2.0	1.9	2.3	1.4	1.5	1.4	1.6	2.1	2.0
Fixed Income - Aggregate	34.9	38.2	41.0	37.4	38.9	28.3	28.8	29.0	29.5	29.6	38.7	38.2	38.3	36.0	35.6
Commodities						0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3
Infrastructure						3.7	3.5	3.1	3.1	2.9	2.4	2.4	2.1	1.9	1.7
Natural Resources						0.6	0.7	0.6	0.6	0.6	0.3	0.3	0.4	0.5	0.4
REITs						0.3	0.2	0.2	0.2	0.2	0.5	0.5	0.6	0.6	0.5
Real Estate						7.7	8.6	8.6	8.0	8.5	6.1	6.3	6.3	5.6	5.8
Other Real Assets						0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2
Real Assets - Aggregate						12.5	13.2	12.8	12.1	12.6	9.7	10.0	9.9	9.1	9.0
Hedge Funds						3.2	3.7	3.7	3.7	3.9	3.1	3.2	3.4	3.4	3.8
Global TAA						1.4	1.6	1.9	2.0	2.5	0.9	1.0	0.9	1.0	1.2
Balanced Funds											0.1	0.4	0.4	0.5	0.5
Risk Parity						0.3	0.3	0.3	0.3	0.3	0.4	0.6	0.5	0.5	0.3
Mortgages						0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.6	0.4	0.4
Private Credit						2.7	1.9	1.7	1.2	1.0	1.7	1.6	1.3	1.1	0.8
Diversified Private Equity						5.1	5.3	4.8	4.1	4.2	4.2	4.3	3.9	3.4	3.5
Venture Capital						0.5	0.5	0.5	0.4	0.4	0.2	0.3	0.3	0.2	0.2
LBO						2.0	1.8	1.7	1.3	1.3	0.6	0.6	0.5	0.5	0.5
Other Private Equity						0.2	0.6	0.3	0.4	0.5	0.2	0.2	0.2	0.2	0.2
Private Equity - Aggregate						7.9	8.2	7.2	6.2	6.4	5.3	5.3	4.8	4.3	4.5
Derivatives/Overlays Mkt Value						1.3	1.1	1.4	1.1	0.9	0.8	0.5	0.3	0.6	0.4
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count	1	1				16	16	16	16	16	308	311	338	354	349
Median Assets (€ billions)	27.9	27.3	24.2	22.9	23.4	60.4	56.2	49.9	51.4	46.6	6.2	6.2	5.4	5.1	4.8

Policy mix

Policy asset mix - 2016 to 2020 (as a % of total assets)

	Your fund %					Peer average %					Global average %				
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016	2020	2019	2018	2017	2016
Stock - U.S.						9.7	9.9	10.0	9.8	11.3	9.6	9.9	10.6	11.3	12.3
Stock - EAFE	65.1	62.0	59.0	64.5	61.1	13.8	14.2	13.9	14.6	15.9	5.5	5.6	6.4	7.5	7.8
Stock - Global						12.8	13.0	13.0	13.3	9.6	15.9	15.4	14.7	14.9	13.7
Stock - Other						2.6	2.6	2.8	3.2	3.8	2.9	3.3	3.3	3.7	4.0
Stock - Emerging						3.6	3.6	3.9	3.7	4.0	2.7	2.7	2.8	2.9	2.7
Stock - ACWI x U.S.						0.6	0.5	0.5	0.5	0.5	2.3	2.4	2.6	2.6	2.8
Stock - Aggregate	65.1	62.0	59.0	64.5	61.1	43.3	43.8	44.1	45.0	45.0	38.8	39.3	40.3	42.9	43.3
Fixed Income - U.S.						6.3	6.4	6.2	6.0	6.0	6.7	6.7	7.1	6.0	6.2
Fixed Income - EAFE	34.9	38.0	41.0	35.5	38.9	6.4	6.3	7.0	6.3	6.5	3.1	3.3	3.2	3.7	3.7
Fixed Income - Global						4.6	5.8	5.8	6.2	6.5	2.8	2.8	2.7	3.1	3.1
Fixed Income - Other						2.8	2.8	2.7	2.9	3.5	4.6	5.1	5.0	6.0	6.3
Fixed Income - Long Bonds						1.6	1.5	1.5	1.6	1.7	13.5	13.2	13.2	11.3	10.7
Fixed Income - Emerging						1.5	1.8	1.8	1.7	1.5	1.2	1.3	1.1	1.0	1.0
Fixed Income - Inflation Indexed						2.9	4.5	4.4	3.8	3.9	1.6	2.1	1.9	2.3	2.6
Fixed Income - High Yield						0.9	0.6	0.5	0.7	0.8	1.2	1.2	1.1	1.2	1.4
Fixed Income - Bundled LDI						2.3					3.5	2.4	2.3	1.2	0.1
Fixed Income - Convertibles						0.0	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0
Cash						0.2	0.5	0.5	1.2	0.9	0.3	0.4	0.5	0.6	0.9
Fixed Income - Aggregate	34.9	38.0	41.0	35.5	38.9	29.3	30.4	30.5	30.6	31.3	38.8	38.7	38.3	36.6	36.3
Commodities						0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.3	0.3	0.4
Infrastructure						3.1	2.9	2.7	2.7	2.6	2.7	2.5	2.2	2.0	1.9
Natural Resources						0.5	0.4	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3
REITs						0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.6	0.6	0.5
Real Estate						8.4	8.4	8.3	8.2	7.8	6.7	6.6	6.4	6.1	5.9
Other Real Assets						0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.3
Real Assets - Aggregate						12.4	12.0	11.8	11.9	11.3	10.7	10.3	10.1	9.6	9.3
Hedge Funds						1.8	1.9	1.9	1.5	1.6	2.8	2.9	3.2	3.2	3.3
Global TAA						2.8	3.1	3.2	3.1	3.5	0.9	0.9	0.9	1.0	1.2
Balanced Funds											0.1	0.0	0.2	0.2	0.3
Risk Parity						0.3	0.3	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.3
Mortgages						0.6	0.7	0.8	0.5	0.5	0.7	0.6	0.6	0.5	0.4
Private Credit						2.1	1.2	1.3	1.1	0.7	1.8	1.5	1.3	1.0	0.8
Diversified Private Equity						5.7	4.7	4.5	4.4	4.1	4.5	4.5	4.1	4.0	4.2
Venture Capital						0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2
LBO						1.6	1.6	1.5	1.3	1.3	0.5	0.4	0.5	0.3	0.3
Other Private Equity						0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2
Private Equity - Aggregate						7.4	6.5	6.1	6.0	5.7	5.3	5.1	4.8	4.6	4.9
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count		1				16	16	16	16	16	308	311	338	354	349

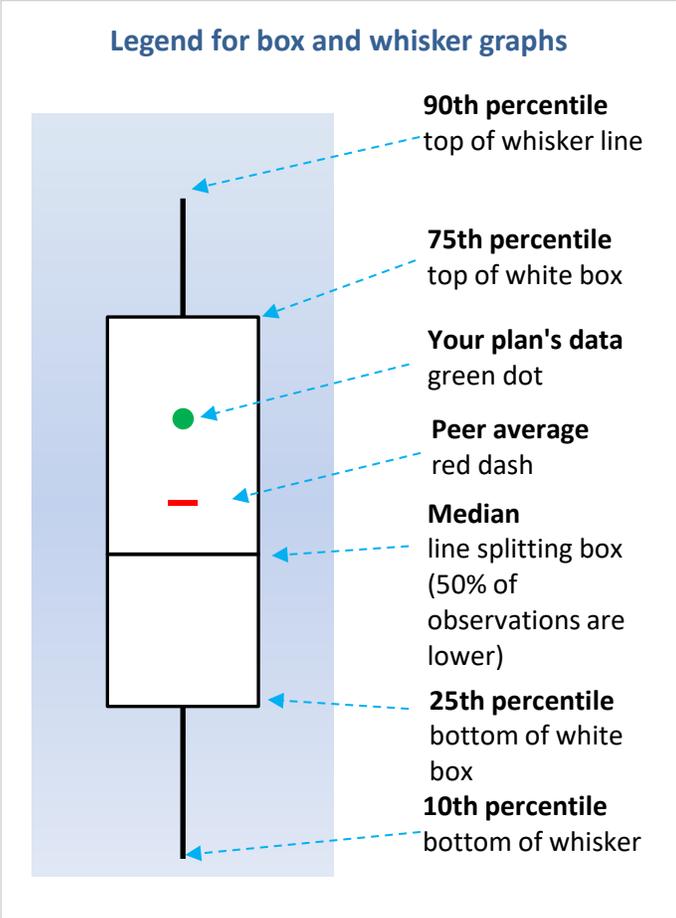
3

Returns, Benchmarks and Value Added

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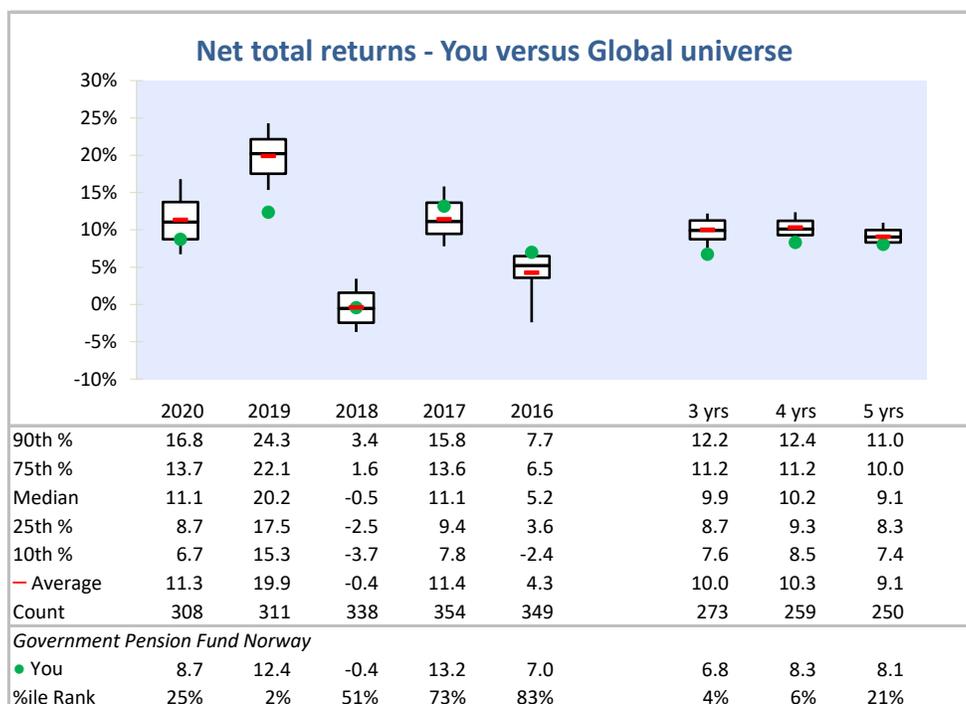
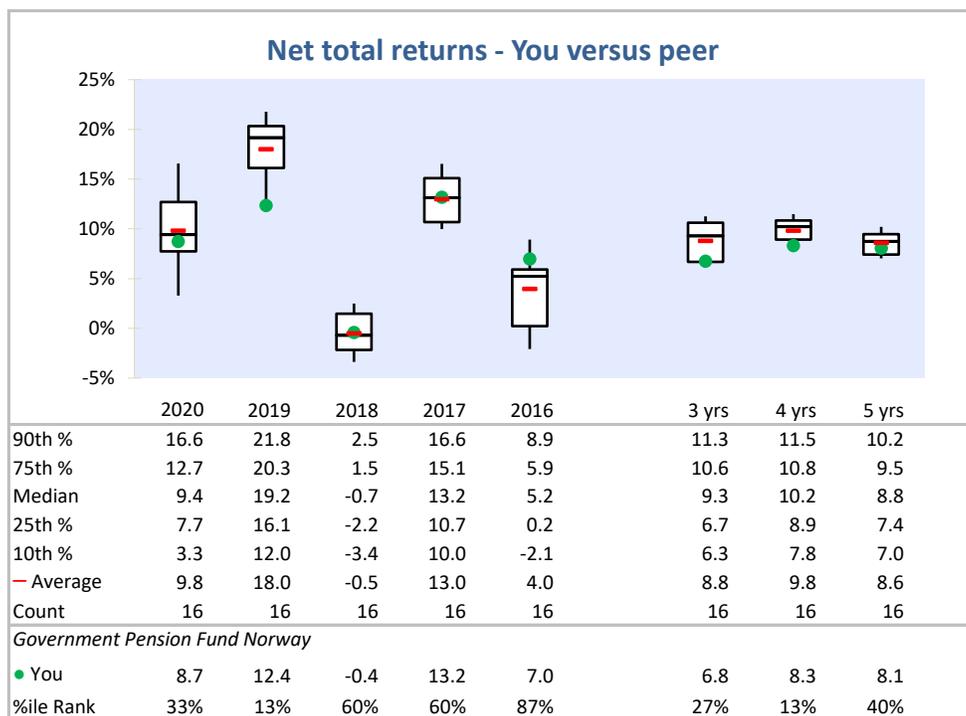
Interpreting box and whisker graphs

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.



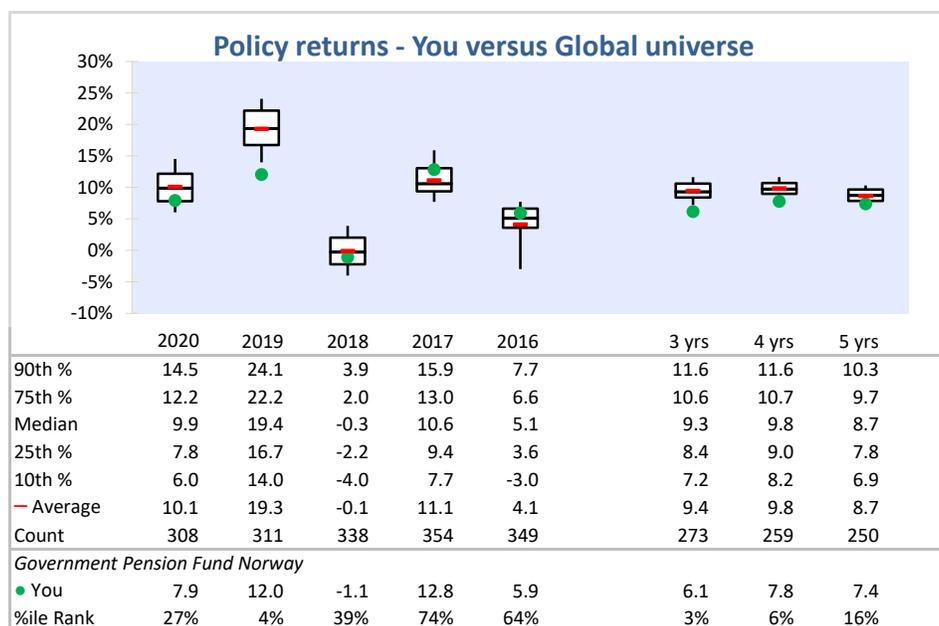
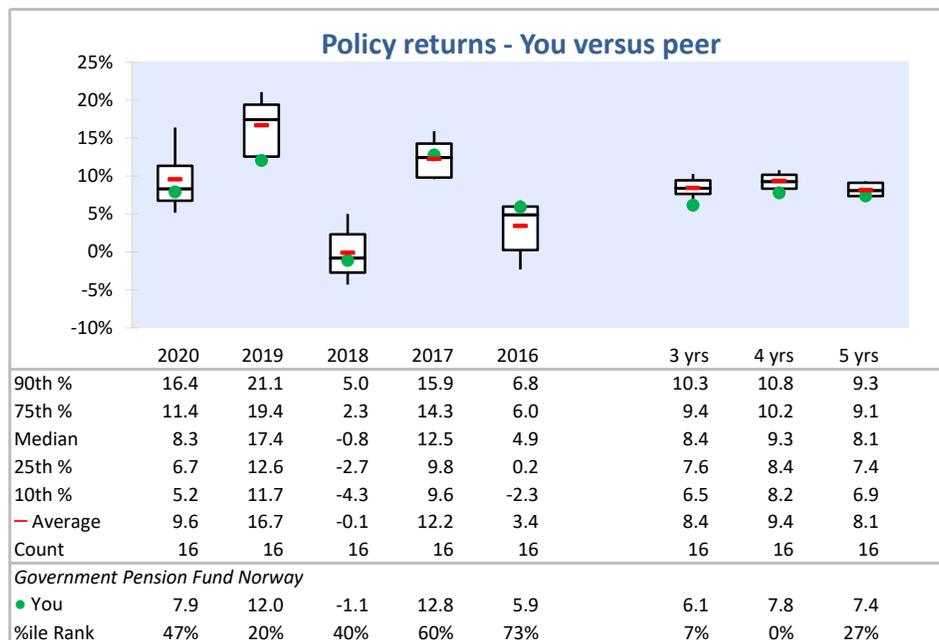
Net total returns

Your 5-year net total return of 8.1% 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

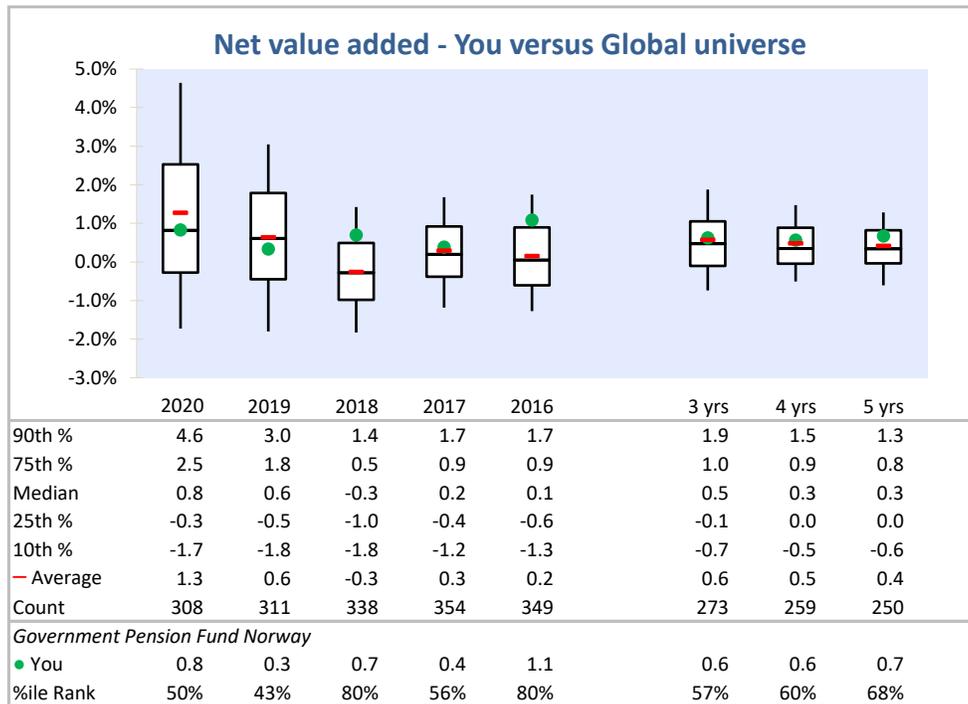
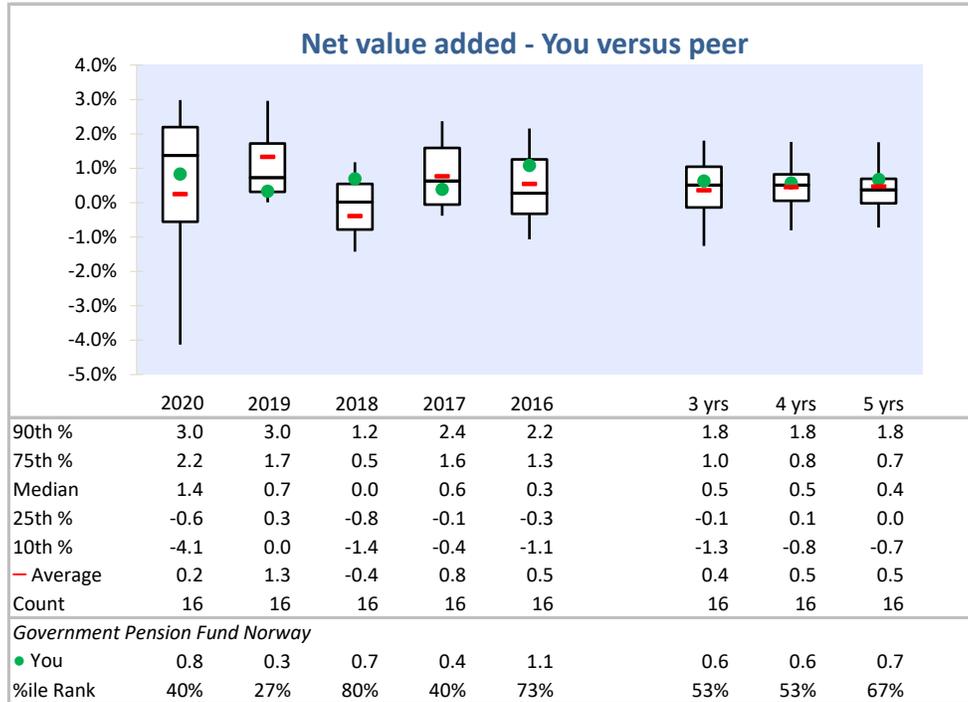
Your 5-year policy return of 7.4% was below the peer median and below the median of the Global universe. Policy return is the return you would have earned had you passively implemented your policy asset mix decision through your benchmark portfolios.



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 0.7% was above the peer median 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 %					
	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹
Stock - U.S.							18.3	33.2	-1.4	17.3	8.5	14.6	16.8	32.1	-1.5	15.2	9.8	13.9
Stock - EAFE	8.0	18.1	-1.9	19.3	10.4	10.5	8.9	24.4	-9.4	18.9	1.3	8.1	9.0	24.2	-9.9	19.9	-0.9	7.7
Stock - Global							6.8	28.7	-5.3	17.0	6.6	10.0	13.6	27.8	-4.0	19.3	3.8	11.3
Stock - Other							129.7	18.6	-3.0	9.4	14.7	18.8	9.7	22.8	-8.9	10.3	16.1	9.7
Stock - Emerging							15.2	20.3	-11.3	28.0	8.0	11.4	16.8	22.4	-10.7	28.6	7.3	12.0
Stock - ACWI x U.S.							9.4	25.7	-8.4	20.9	3.4	9.5	11.4	24.9	-10.5	22.6	0.9	9.0
Stock - Aggregate	8.0	18.1	-1.9	19.3	10.4	10.5	11.2	27.4	-6.5	19.0	6.4	10.8	13.0	27.8	-5.7	18.4	6.2	11.3
Fixed Income - U.S.							8.1	11.0	2.8	2.3	0.7	4.8	8.4	12.1	4.3	0.3	1.4	5.0
Fixed Income - EAFE	7.3	4.1	1.6	3.6	2.1	3.7	11.1	5.8	0.0	7.8	-3.5	4.1	11.8	8.8	0.3	7.4	-3.9	5.1
Fixed Income - Global							7.1	8.3	-0.7	13.1	2.4	5.0	8.8	7.6	0.4	5.5	-0.1	4.6
Fixed Income - Other							5.6	7.8	2.8	4.3	0.9	4.3	7.6	11.2	1.2	6.2	2.5	5.4
Fixed Income - Long Bonds							18.0	22.9	-1.9	12.9	4.7	10.9	13.6	21.5	-0.9	6.4	4.7	9.0
Fixed Income - Emerging							1.9	14.2	-1.4	9.2	7.5	6.0	3.5	14.6	-1.7	8.2	7.2	6.4
Fixed Income - Inflation Indexed							8.8	10.9	-0.2	2.5	2.1	4.7	9.6	12.7	0.2	2.3	2.9	5.3
Fixed Income - High Yield							6.6	13.5	1.4	4.9	9.6	7.1	5.0	13.1	1.7	4.1	8.1	6.8
Fixed Income - Bundled LDI							17.1	10.4					20.3	21.5	0.6	8.6	8.2	20.5
Fixed Income - Convertibles							37.4	12.2	0.2	7.2	-6.1	3.7	25.1	15.8	1.4	6.8	2.1	9.0
Cash							4.2	3.9	1.7	1.8	-3.8	1.6	0.0	4.2	3.5	-0.3	-3.3	0.5
Fixed Income - Aggregate	7.3	4.1	1.6	3.6	2.1	3.7	8.2	10.7	0.9	4.5	1.5	5.0	10.9	15.1	0.8	4.4	2.1	6.5
Commodities							-16.7	12.5	-1.1	9.7	12.2	2.7	-3.6	9.8	-7.5	0.1	10.1	0.8
Infrastructure							8.1	8.1	9.3	13.8	5.3	9.1	5.9	12.9	9.7	14.1	1.5	8.9
Natural Resources							-4.6	6.6	9.3	-0.6	1.8	1.7	-4.7	5.6	8.0	2.1	3.2	2.0
REITs							-18.2	26.0	0.4	1.7	4.1	3.4	-6.9	25.3	-0.2	6.2	1.9	4.4
Real Estate							2.3	9.9	10.7	11.9	3.5	7.6	0.5	9.1	12.3	7.6	2.1	6.4
Other Real Assets							-10.5	-44.4	-18.8	6.4	7.4	-24.8	0.6	5.4	-1.0	-0.6	3.4	-2.9
Real Assets - Aggregate							2.2	10.5	9.8	11.4	4.4	7.6	0.6	10.6	8.9	7.2	2.3	5.9
Hedge Funds							2.7	10.9	2.6	6.4	-5.0	3.8	2.6	8.0	1.6	2.6	-2.3	2.8
Global TAA							7.2	19.8	-4.6	8.9	0.1	5.9	2.4	13.9	-0.9	5.1	2.2	3.7
Balanced Funds													-12.4	32.0	-11.9	17.2	-11.2	0.1
Risk Parity							3.5	32.4	-5.2	12.6	12.9	10.6	7.4	20.2	-2.7	8.4	8.1	8.3
Mortgages							4.8	10.0	5.6	5.7	-0.4	5.4	7.1	9.0	2.7	6.5	1.4	5.8
Private Credit							3.9	8.0	6.9	4.9	4.2	5.1	4.3	12.0	8.1	6.8	2.4	5.9
Diversified Private Equity							12.2	12.8	18.3	15.6	5.6	12.6	12.8	11.7	18.9	13.1	4.6	12.1
Venture Capital							30.0	10.6	17.8	7.2	-7.0	10.5	22.7	10.7	23.2	10.0	-0.9	11.6
LBO							14.3	15.4	14.5	10.4	5.2	12.6	13.0	13.9	18.7	13.3	7.6	12.6
Other Private Equity							14.5	18.3	2.6	11.8	7.9	17.7	12.3	10.5	15.2	8.9	3.8	10.7
Private Equity - Aggregate							13.3	13.2	16.7	13.5	6.2	12.4	13.5	11.3	18.9	12.8	4.7	12.2
Total Fund Return	8.7	12.4	-0.4	13.2	7.0	8.1	9.8	18.0	-0.5	13.0	4.0	8.6	11.3	19.9	-0.4	11.4	4.3	9.1

You were not able to provide full year returns for all of the components of returns of asset classes with values shown in italics. The composite calculation only uses those components with a full year return.

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 %					
	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹
Stock - U.S.							17.4	32.3	-2.6	16.4	8.4	13.8	17.5	32.4	-1.2	15.1	10.2	14.3
Stock - EAFE	8.2	17.7	-2.6	19.1	8.7	9.9	8.2	24.8	-8.6	18.2	0.8	8.0	5.5	24.2	-9.2	19.2	-1.1	7.2
Stock - Global							14.3	27.8	-5.1	17.6	5.5	11.4	12.8	28.3	-4.6	17.6	5.0	11.2
Stock - Other							12.1	28.7	-10.4	4.6	13.1	7.7	6.1	26.5	-8.4	11.2	15.7	9.7
Stock - Emerging							16.6	21.0	-11.1	28.7	7.9	12.0	15.8	20.4	-9.6	29.4	8.1	12.0
Stock - ACWI x U.S.							7.4	23.8	-8.9	20.0	3.5	8.5	8.5	23.9	-9.8	21.4	2.0	8.5
Stock - Aggregate	8.2	17.7	-2.6	19.1	8.7	9.9	13.4	26.8	-6.1	18.2	5.8	11.0	12.6	27.9	-5.5	17.8	6.7	11.3
Fixed Income - U.S.							7.1	11.3	3.1	2.4	0.6	4.4	7.5	11.4	4.3	0.0	0.5	4.4
Fixed Income - EAFE	4.9	3.8	1.0	2.9	1.8	2.9	11.1	5.9	-0.5	6.9	-3.5	3.8	11.8	8.4	0.4	7.0	-3.6	4.7
Fixed Income - Global							8.1	8.4	1.3	4.3	-0.5	4.2	7.3	9.6	1.3	4.5	-1.0	4.5
Fixed Income - Other							6.0	9.9	3.0	3.3	1.6	4.3	6.6	11.5	1.2	3.7	2.0	5.1
Fixed Income - Long Bonds							13.6	22.1	-2.3	12.0	3.9	9.5	12.2	21.4	-0.8	6.2	4.1	8.6
Fixed Income - Emerging							4.1	14.3	-0.3	7.9	4.7	6.0	3.1	15.0	-0.6	7.1	6.2	6.1
Fixed Income - Inflation Indexed							11.2	9.3	0.5	2.7	1.6	4.8	9.9	11.8	0.3	2.5	3.2	5.2
Fixed Income - High Yield							6.1	13.9	1.5	4.9	10.9	7.3	5.0	14.5	1.6	4.3	10.3	7.4
Fixed Income - Bundled LDI							14.3						21.6	21.7	-0.4	8.3	4.9	21.2
Fixed Income - Convertibles							11.1	24.1	-1.9	16.9	-0.2	10.4	19.7	17.6	1.5	11.9	5.6	13.7
Cash							2.2	4.6	2.3	1.1	-5.1	0.7	0.5	4.5	3.4	-0.2	-3.7	0.9
Fixed Income - Aggregate	4.9	3.8	1.0	2.9	1.8	2.9	8.9	10.1	1.1	3.7	0.6	4.8	10.3	15.0	0.8	4.3	1.8	6.4
Commodities							-4.8	19.5	-7.3	8.0	4.5	-2.4	-5.3	12.7	-7.2	-0.1	7.8	0.5
Infrastructure							9.6	9.9	7.7	12.0	2.0	7.8	6.3	13.2	4.7	10.1	-1.0	6.5
Natural Resources							0.6	8.1	6.5	7.0	2.0	4.2	-1.8	10.5	5.2	2.1	2.7	2.8
REITs							-17.9	26.1	0.5	1.5	4.3	3.5	-8.4	23.9	-0.2	6.6	2.5	4.0
Real Estate							4.1	8.6	9.4	9.9	3.1	6.9	1.4	10.0	9.2	6.2	2.1	5.9
Other Real Assets							16.2	12.1	-3.0	15.7	-1.8	6.3	5.1	13.4	2.5	1.4	3.0	5.5
Real Assets - Aggregate							3.8	9.4	8.6	9.9	2.8	6.7	1.1	11.5	7.0	6.3	1.8	5.5
Hedge Funds							5.5	13.5	3.4	9.2	-6.2	5.7	4.0	10.8	2.6	3.6	-1.2	3.3
Global TAA							6.6	18.3	5.3	10.1	0.5	8.2	7.1	16.2	1.1	7.5	0.9	6.5
Balanced Funds													-24.6	42.7	-12.2	20.4	-13.0	1.5
Risk Parity							2.9	32.0	-5.4	5.9	4.5	7.3	6.7	18.0	1.5	7.0	7.2	8.6
Mortgages							4.3	11.0	3.7	4.8	1.2	5.0	7.9	8.6	1.6	4.8	0.7	4.9
Private Credit							2.5	11.2	2.8	3.6	4.5	3.9	3.1	15.2	3.9	5.7	0.6	5.1
Diversified Private Equity							-5.3	-4.7	20.5	20.3	-0.8	5.1	-2.7	-5.6	22.2	18.1	3.1	6.2
Venture Capital							-0.3	-6.6	21.8	19.0	0.5	6.0	-2.3	-5.2	22.8	16.8	2.5	6.1
LBO							1.7	-7.2	22.5	19.7	0.3	6.6	-1.6	-5.8	23.6	16.0	4.4	6.5
Other Private Equity							-3.2	-4.0	16.9	22.8	-5.9	3.8	-2.6	-5.2	20.6	18.1	2.7	6.0
Private Equity - Aggregate							-4.8	-5.1	21.2	19.6	-0.1	5.3	-2.5	-5.7	22.3	18.1	3.1	6.3
Total Policy Return	7.9	12.0	-1.1	12.8	5.9	7.4	9.6	16.7	-0.1	12.2	3.4	8.1	10.1	19.3	-0.1	11.1	4.1	8.7

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 %					
	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹	2020	2019	2018	2017	2016	5-yr ¹
Stock - U.S.							1.0	0.9	1.2	0.9	0.0	0.8	-0.6	-0.3	-0.3	0.0	-0.4	-0.3
Stock - EAFE	-0.2	0.4	0.7	0.2	1.7	0.6	0.7	-0.4	-0.8	0.7	0.4	0.1	3.4	-0.1	-0.8	0.7	0.2	0.5
Stock - Global							-6.2	-0.2	-0.1	-0.4	1.2	-1.3	0.8	-0.5	0.6	1.8	-1.1	0.2
Stock - Other							143.7	-10.0	7.1	6.6	0.3	11.4	6.6	-4.2	-0.6	-0.7	0.3	-0.1
Stock - Emerging							-1.4	-0.7	-0.2	-0.7	0.1	-0.6	1.0	2.0	-1.0	-0.9	-0.8	0.1
Stock - ACWI x U.S.							2.1	1.9	0.5	0.9	-0.1	1.0	2.9	1.0	-0.7	1.2	-1.1	0.5
Stock - Aggregate	-0.2	0.4	0.7	0.2	1.7	0.6	-2.2	0.6	-0.4	0.8	0.6	-0.2	0.5	-0.1	-0.2	0.6	-0.5	0.0
Fixed Income - U.S.							0.9	-0.3	-0.2	-0.2	0.1	0.4	0.7	0.7	0.0	0.3	0.9	0.6
Fixed Income - EAFE	2.4	0.3	0.6	0.7	0.3	0.9	0.0	0.0	0.4	1.0	0.0	0.3	-0.2	1.1	-0.1	0.4	-0.2	0.4
Fixed Income - Global							-2.5	0.6	-2.0	8.8	2.8	0.7	0.9	-1.9	-0.8	1.3	0.9	0.1
Fixed Income - Other							-0.3	-2.1	1.1	0.3	-0.6	0.0	0.5	-0.2	0.3	2.6	0.6	0.4
Fixed Income - Long Bonds							4.5	0.8	0.3	0.8	0.9	1.4	1.3	0.2	-0.1	0.3	0.3	0.4
Fixed Income - Emerging							-2.3	-0.1	-1.2	1.3	2.8	0.0	0.4	-0.4	-1.1	1.1	1.0	0.3
Fixed Income - Inflation Indexed							-0.8	1.7	-0.7	-0.2	0.5	0.1	-0.1	0.8	-0.1	-0.1	-0.3	0.2
Fixed Income - High Yield							0.5	-0.4	-0.1	0.0	-1.3	-0.2	0.1	-1.5	0.2	-0.3	-1.9	-0.6
Fixed Income - Bundled LDI							2.8						0.5	0.3	-0.1	0.0	1.6	-0.7
Fixed Income - Convertibles							26.3	-12.0	2.0	-9.6	-6.0	-6.7	5.4	-4.9	-0.5	-4.5	-4.3	-4.8
Cash							2.0	-0.6	-0.3	0.2	0.1	0.6	-0.2	-0.3	0.0	-0.1	0.4	-0.4
Fixed Income - Aggregate	2.4	0.3	0.6	0.7	0.3	0.9	-0.7	0.6	-0.1	0.7	0.9	0.3	0.4	0.1	0.0	0.1	0.3	0.1
Commodities							-11.9	-0.1	1.7	-3.2	0.5	0.7	2.0	-3.4	-0.9	-0.1	1.4	-0.1
Infrastructure							-1.5	-1.8	1.7	1.8	3.3	1.3	0.4	-0.2	4.9	4.0	2.2	2.5
Natural Resources							-5.2	-0.7	1.1	-6.5	-0.4	-2.5	-3.5	-4.7	2.6	0.2	0.2	-0.9
REITs							-0.4	-0.1	-0.1	0.2	-0.2	-0.2	1.3	1.3	-0.3	0.0	-1.1	0.5
Real Estate							-1.8	1.3	1.3	2.0	0.7	0.7	-0.9	-0.8	3.0	1.0	0.2	0.0
Other Real Assets							-26.7	-56.5	-15.8	-9.3	9.2	-31.1	-5.3	-8.1	-3.0	-2.0	0.1	-8.8
Real Assets - Aggregate							-1.7	1.1	1.2	1.5	2.0	0.9	-0.4	-0.8	1.9	0.9	0.6	0.4
Hedge Funds							-1.7	-3.1	-0.8	-2.8	1.0	-1.7	-2.0	-2.9	-1.0	-1.0	-1.1	-1.1
Global TAA							0.6	-1.2	-9.9	-1.2	-0.3	-2.3	-5.2	-3.0	-2.3	-2.2	1.2	-2.5
Balanced Funds													15.0	-10.2	1.1	-3.8	2.2	2.2
Risk Parity							0.7	0.4	0.2	6.7	8.3	3.2	-1.4	2.0	-4.1	1.4	1.3	0.1
Mortgages							0.5	-1.0	1.9	0.9	-1.6	0.5	-0.9	0.5	1.2	1.4	0.7	0.9
Private Credit							1.3	-1.6	4.1	0.2	0.5	1.3	0.8	-2.9	4.1	1.2	0.9	0.6
Diversified Private Equity							17.9	17.0	-2.3	-4.9	6.5	7.5	15.4	17.0	-3.2	-5.0	1.4	5.7
Venture Capital							30.4	16.7	-4.5	-12.0	-7.6	4.3	24.6	15.7	0.3	-6.2	-3.9	5.4
LBO							12.5	22.2	-8.5	-9.7	4.9	5.7	14.8	19.7	-4.8	-2.8	3.2	6.1
Other Private Equity							13.8	24.3	-13.7	-12.8	15.9	11.0	14.1	15.1	-6.0	-8.6	0.4	4.2
Private Equity - Aggregate							18.5	17.9	-4.7	-6.3	6.3	7.1	15.8	16.8	-3.3	-5.2	1.6	5.7
Total Fund Return	0.8	0.3	0.7	0.4	1.1	0.7	0.2	1.3	-0.4	0.8	0.5	0.5	1.3	0.6	-0.3	0.3	0.2	0.4

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.

You were not able to provide full year returns for all of the components of returns of asset classes with values shown in italics. The composite calculation only uses those components with a full year return.

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 - 2020

2020 Policy Return and Value Added

Asset class	Policy weight	Benchmark Description	Return	Net return	Value added
Stock - EAFE	65.1%	CMVINXBINN - Custom Index 15 % - OSEBX 85 %	8.2%	8.0%	-0.2%
Fixed Income - EAFE	34.9%	Barclays Capital Global Aggregate Nordic ex Norv	4.9%	7.3%	2.4%
Total	100.0%				
Net Actual Return (reported by you)					8.7%
Calculated Policy Return = sum of (policy weights X benchmark returns)				7.1%	
Adjustment to reflect rebalancing and overlay impacts				<u>0.8%</u>	
Policy Return (reported by you)					<u>7.9%</u>
Net Value Added (Net Return - Policy Return)					0.8%

Your policy return and value added calculations - 2016 to 2019

2019 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - EAFE	62.0%	CMVINXBXINN -	17.7%	18.1%	0.4%
Fixed Income - EAFE	38.0%	Barclays Capital	3.8%	4.1%	0.3%
Cash					
Total	100.0%				
Net Return (reported by you)					
Calculated policy return (sum: Policy weights x benchmarks)				12.4%	12.4%
Adjustment to reflect rebalancing and overlay impacts				<u>-0.4%</u>	
Policy return (reported by you)					<u>12.0%</u>
Net Value Added (Net Return - Policy Return)					0.3%

2017 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - EAFE	64.5%	CMVINXBXINN -	19.1%	19.3%	0.2%
Fixed Income - EAFE	35.5%	Barclays Capital	2.9%	3.6%	0.7%
Cash					
Total	100.0%				
Net Return (reported by you)					
Calculated policy return (sum: Policy weights x benchmarks)				13.4%	13.2%
Adjustment to reflect rebalancing and overlay impacts				<u>-0.6%</u>	
Policy return (reported by you)					<u>12.8%</u>
Net Value Added (Net Return - Policy Return)					0.4%

2018 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - EAFE	59.0%	CMVINXBXINN -	-2.6%	-1.9%	0.7%
Fixed Income - EAFE	41.0%	Barclays Capital	1.0%	1.6%	0.6%
Cash					
Total	100.0%				
Net Return (reported by you)					
Calculated policy return (sum: Policy weights x benchmarks)				-1.1%	-0.4%
Adjustment to reflect rebalancing and overlay impacts				<u>0.0%</u>	
Policy return (reported by you)					<u>-1.1%</u>
Net Value Added (Net Return - Policy Return)					0.7%

2016 Policy Return and Value Added

Asset class	Policy	Benchmark		Net return	Value added
	weight	Description	Return		
Stock - EAFE	61.1%	CMVINXBXINN -	8.7%	10.4%	1.7%
Fixed Income - EAFE	38.9%	Barclays Capital	1.8%	2.1%	0.3%
Cash					
Total	100.0%				
Net Return (reported by you)					
Calculated policy return (sum: Policy weights x benchmarks)				6.0%	7.0%
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%

Profit/Loss on overlay programs

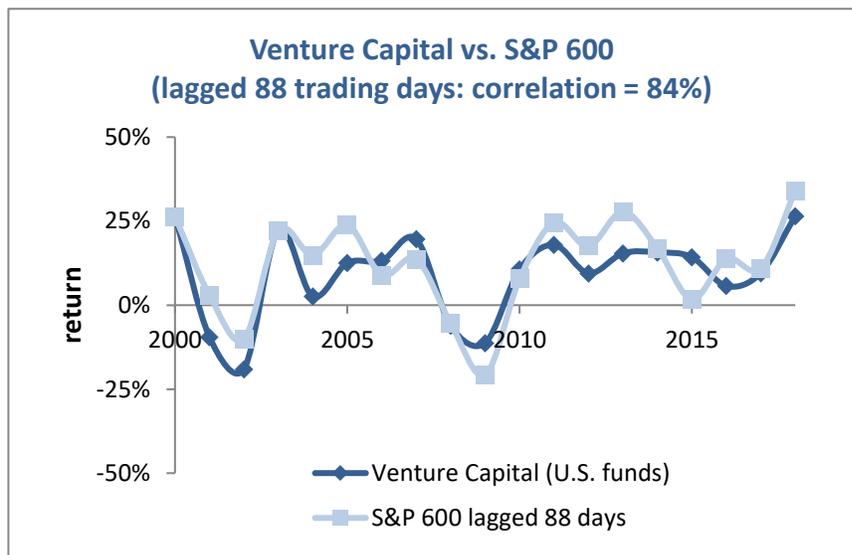
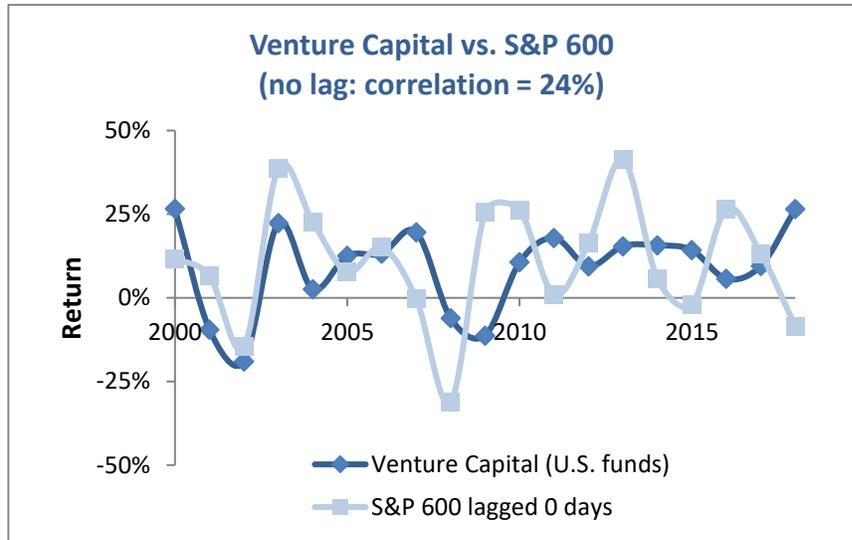
Overlay type	Your fund		Peer median				Global median			
	2020	2019	2020		2019		2020		2019	
	bps	bps	bps	#	bps	#	bps	#	bps	#
Int. Discretionary Currency			0.0	3	3.2	3	-0.5	8	1.6	10
Ext. Discretionary Currency							5.0	8	0.0	9
Internal Global TAA			20.0	3	27.8	3	18.9	7	20.4	7
External Global TAA										
Internal PolicyTilt TAA			10.7	3	17.9	2	12.8	8	2.0	10
External PolicyTilt TAA							14.6	1	-26.3	1
Internal Commodities			0.0	1	-1.4	1	14.0	2	22.2	2
External Commodities							-1.7	2	10.5	3
Internal Long/Short			-15.6	4	9.3	3	1.1	8	1.7	5
External Long/Short							3.0	1		
Internal Other			19.1	2	0.7	3	19.6	8	-0.1	13
External Other			-6.5	1	-0.8	1	0.2	11	7.2	15

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 S&P 600 index return was -31.1% versus -5.4% 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 25.0% using the un-lagged benchmarks versus -0.7% using the same benchmark lagged to match the average 88 day reporting lag of venture capital funds.



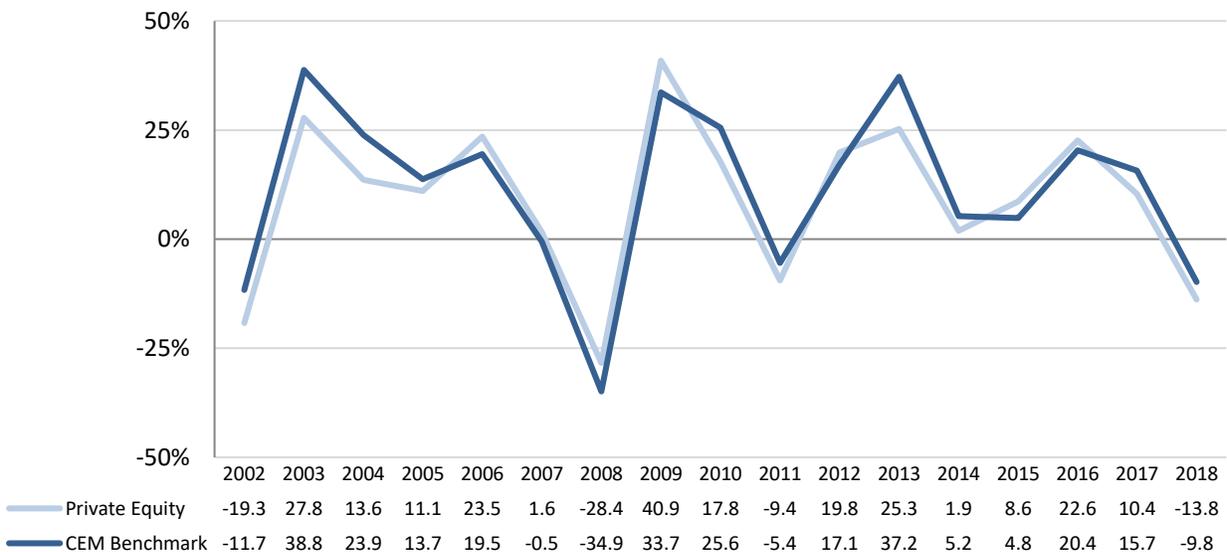
- Un-investable peer-based benchmarks. Peer based benchmarks reflect the reporting lags in peer portfolios so they have much better correlations than un-lagged investable benchmarks. But their relationship statistics are not as good as for lagged investable benchmarks.
- Aspirational premiums (i.e., 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.

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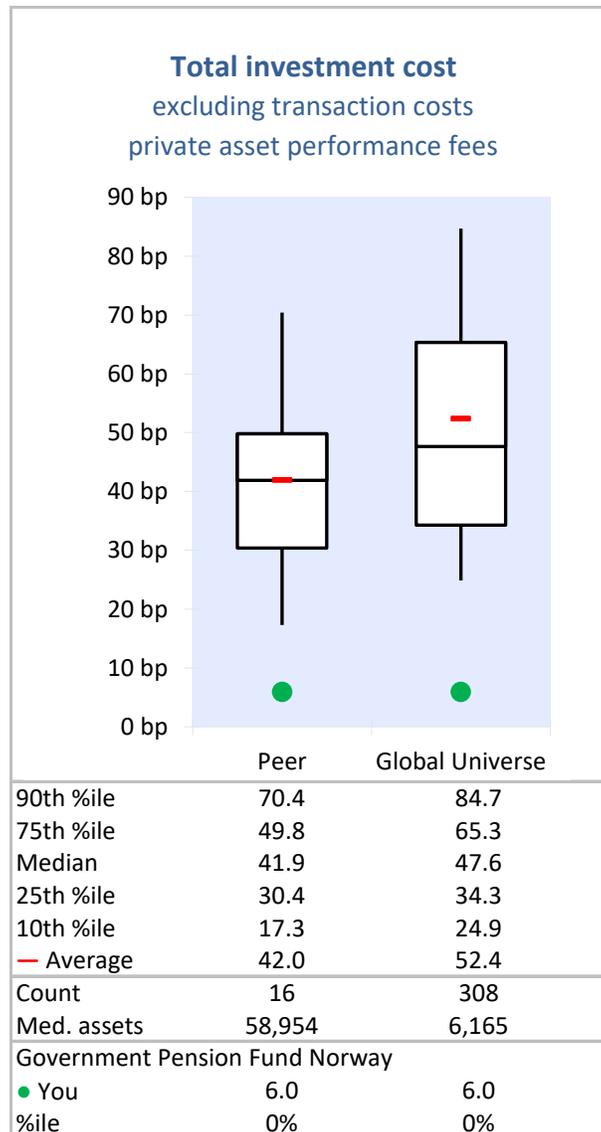
Cost: total, benchmark, trend

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Comparisons of total investment cost

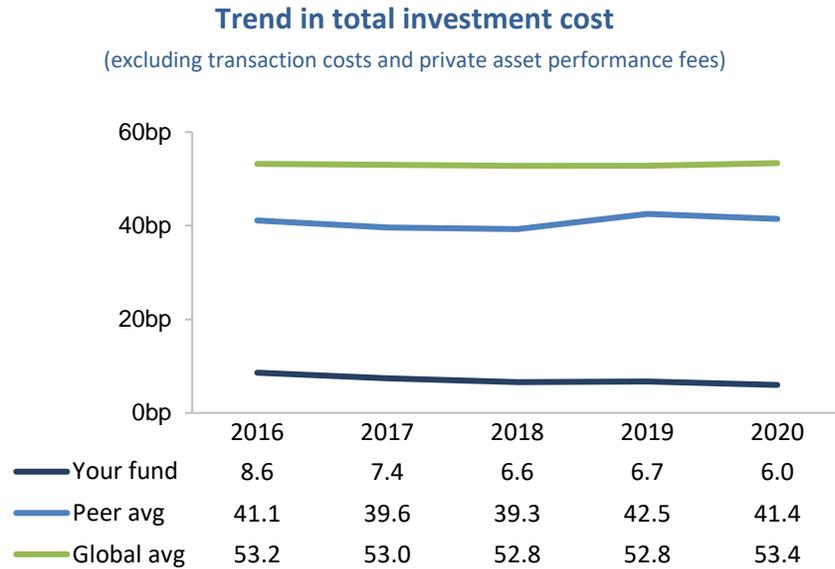
Your total investment cost, excluding transaction costs and private asset performance fees, of 6.0 bps was below the peer median of 41.9 bps.

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, you versus peers and universe

Your total investment cost, excluding transaction costs and private asset performance fees, decreased from 8.6 bps in 2011 to 6.0 bps in 2020.



Trend analysis is based on 175 Global funds and 14 peer funds with 10 or more consecutive years of data.

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.
- CEM currently excludes performance fees for certain external assets 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 2020 total investment cost, excluding transaction costs and private asset performance fees, was 6.0 bp or €16.5 million.

	Internal		External Passive		External Active			Total ¹		
	Passive	Active	Fees	Monitoring & Other	Base Fees	Perform. Fees	Monitor. & Other	€000s	bps	% of Total
Asset management										
Stock - EAFE		6,792						6,792		41%
Fixed Income - EAFE		7,483						7,483		45%
Total asset management costs excluding private asset performance fees								14,275	5.2bp	87%
Oversight, custodial & other asset related costs										
Oversight of the Fund								1,202		7%
Trustee & Custodial								575		3%
Consulting and Performance Measurement								61		0%
Audit								222		1%
Other								142		1%
Total oversight, custodial & other costs								2,202	0.8bp	13%
Total investment costs excluding transaction costs and private asset performance fees								16,477	6.0bp	100%

1. Total cost excludes carry/performance fees for real estate, infrastructure, natural resources, private equity, and private debt. 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 (2020 - 2016)

	Investment costs (€000s)					Change (€000s)				Change (%)			
	2020	2019	2018	2017	2016	2020	2019	2018	2017	2020	2019	2018	2017
Asset management													
Stock - EAFE	6,792	7,017	7,472	7,445	8,622	-225	-456	27	-1,177	-3%	-6%	0%	-14%
Fixed Income - EAFE	7,483	7,921	6,426	6,647	7,217	-438	1,495	-221	-570	-6%	23%	-3%	-8%
Total excl. private asset perf. fees	14,275	14,937	13,899	14,092	15,839	-662	1,039	-194	-1,747	-4%	7%	-1%	-11%
Oversight, custodial & other asset related costs													
Oversight of the Fund	1,202	1,270	937	1,604	1,519	-68	333	-667	85	-5%	36%	-42%	6%
Trustee & Custodial	575	582	624	721	895	-7	-42	-97	-174	-1%	-7%	-13%	-19%
Consulting and Performance Measurement	61	56	66	45	52	5	-10	21	-7	9%	-15%	47%	-13%
Audit	222	252	227	270	306	-30	25	-43	-36	-12%	11%	-16%	-12%
Other	142	131	155	105	293	11	-24	50	-188	8%	-15%	48%	-64%
Total oversight, custodial & other	2,202	2,291	2,009	2,745	3,065	-89	282	-736	-320	-4%	14%	-27%	-10%
Total investment costs ¹	16,477	17,228	15,908	16,837	18,904	-751	1,321	-930	-2,067	-4%	8%	-6%	-11%
Total in basis points	6.0bp	6.7bp	6.6bp	7.4bp	8.6bp								

1. Total cost excludes carry/performance fees for real estate, infrastructure, natural resources, private equity, and private debt. 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 7.8 bps below your benchmark cost of 13.7 bps. This implies that your fund was low cost by 7.8 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 costs excluding transaction costs and private asset performance fees	16,477	6.0 bp
- Your fund's benchmark	37,912	13.7 bp
= Your fund's cost savings	-21,435	-7.8 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 11.

Reasons why your fund was low cost

	Cost/-Savings impact	
	€000s	bps
<u>Differences in implementation style:</u>		
Less passive	5,205	1.9 bp
More int. active % of total active	-18,967	-6.9 bp
Less overlays and unfunded strategies	-1,720	-0.6 bp
Total style impact	-15,482	-5.6 bp
<u>Paying more/-less for similar services:</u>		
External investment management	0	0.0 bp
Internal investment management	-2,407	-0.9 bp
Oversight, custodial and other	-3,546	-1.3 bp
Total impact of paying more /-less	-5,953	-2.2 bp
Total savings	-21,435	-7.8 bp

Benchmark cost calculation

Your 2020 benchmark cost was 13.7 basis points or 37.9 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).

Asset class	Your average assets (A)	Weighted peer median cost ¹ (B)	Benchmark €000s (A X B)
Asset management costs			
Stock - EAFE ⁴	17,528	12.5 bp	21,971
Fixed Income - EAFE ⁴	10,040	8.4 bp	8,473
Overlay Programs ²	27,601	0.6 bp	1,720
Benchmark for asset management	27,601	11.7 bp	32,164
Oversight, custody and other costs³			
Oversight	27,601	1.3 bp	
Trustee & Custodial	27,601	0.3 bp	
Consulting	27,601	0.0 bp	
Audit	27,601	0.0 bp	
Other	27,601	0.1 bp	
Benchmark for oversight, custody & other	27,601	2.1 bp	5,748
Total benchmark cost		13.7 bp	37,912

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 15 of this section.

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

3. Benchmarks for oversight total and individual lines are based on peer medians. Sum of the lines may be different from the total.

4. A different asset was used as a proxy to determine the benchmarks and style percentages: 'Stock - Aggregate' for 'Stock - EAFE', 'Fixed Income - Aggregate' for 'Fixed Income - EAFE'.

Cost impact of differences in implementation style

Differences in implementation style (passive vs. active, internal vs. external, etc.) relative to your peers saved you 5.6 bps.

Implementation choices	Assets by style	Peer benchmark cost			Style 1 %			Cost/ -Savings €000s	bps
		Style 1	Style 2	Style 1 -Savings	Your	Peer average	More/ -Less		
	a	b	c	d = b - c			e	a x d x e	
<u>Passive vs active</u>	Total assets	Passive	Active		Passive % of total assets				
Stock - EAFE	17,528	3 bp	15 bp	-13 bp	0%	21%	-21%	4,635	
Fixed Income - EAFE	10,040	3 bp	9 bp	-6 bp	0%	9%	-9%	569	
Less passive								5,205	1.9 bp
<u>Internal active vs external active</u>	Active assets	Internal active	External active		Internal active % of active				
Stock - EAFE	17,528	7 bp	42 bp	-35 bp	100%	76%	24%	-14,537	
Fixed Income - EAFE	10,040	5 bp	30 bp	-25 bp	100%	83%	17%	-4,430	
More int. active % of total active								-18,967	-6.9 bp
Less overlays and unfunded strategies								-1,720	-0.6 bp
Total impact of differences in implementation style								-15,482	-5.6 bp

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.

	Your average total holdings (mils) (A)	Cost as % of total holdings		Cost/-Savings Impact (000s) A X (B - C)
		You (B)	Peer avg. (C)	
Internal Overlays				
Currency - Hedge	27,601	NA	0.07 bp	-199
Currency - Discretionary	27,601	NA	0.05 bp	-142
Rebalancing / Passive Beta - Hedge	27,601	NA	0.05 bp	-129
Duration Management - Hedge	27,601	NA	0.00 bp	-11
Global TAA - Discretionary	27,601	NA	0.14 bp	-383
Policy tilt TAA - Discretionary	27,601	NA	0.03 bp	-89
Commodity Futures - Discretionary	27,601	NA	0.00 bp	-2
Long/Short - Discretionary	27,601	NA	0.20 bp	-563
Other Overlay - Discretionary	27,601	NA	0.02 bp	-61
External Overlays				
Currency - Hedge	27,601	NA	0.00 bp	-3
Currency - Discretionary	27,601	NA	0.02 bp	-57
Rebalancing / Passive Beta - Hedge	27,601	NA	0.03 bp	-74
Other Overlay - Discretionary	27,601	NA	0.00 bp	-7
Total impact in 000s				-1,720
Total impact in basis points				-0.6 bp

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 2.2 bps.

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 - EAFE	active	17,528	3.9	6.9	-3.0	-5,278
Fixed Income - EAFE	active	10,040	7.5	4.6	2.9	2,871
Total for internal management						-2,407 -0.9 bp
Oversight, custodial, other¹						
Oversight			0.4	1.3	-0.9	
Trustee & Custodial			0.2	0.3	-0.1	
Consulting			0.0	0.0	0.0	
Audit			0.1	0.0	0.1	
Other			0.1	0.1	-0.1	
Total for oversight, custodial, other		27,601	0.8	2.1	-1.3	-3,546 -1.3 bp
Total						-5,953 -2.2 bp

1. The benchmark for 'oversight, custodial and other costs' is based on the total costs for these activities.

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).

	Your cost	Benchmark = peer weighted median cost ¹	More/-less	Your average assets (or fee basis)	More/-less in €000s		
					Total More/-less	Due to Impl. style	Due to paying more/less
Asset management costs	(A)	(B)	(C = A - B)	(D)	(C X D)		
Stock - EAFE ⁴	3.9 bp	12.5 bp	-8.7 bp	17,528	-15,179	-9,901	-5,278
Fixed Income - EAFE ⁴	7.5 bp	8.4 bp	-1.0 bp	10,040	-990	-3,861	2,871
Overlay Programs ²	0.0 bp	0.6 bp	-0.6 bp	27,601	-1,720	-1,720	0
Total asset management	5.2 bp	11.7 bp	-6.5 bp	27,601	-17,889	-15,482	-2,407
Oversight, custody and other costs³							
Oversight of the Fund	0.4 bp	1.3 bp	-0.9 bp				
Trustee & Custodial	0.2 bp	0.3 bp	-0.1 bp				
Consulting	0.0 bp	0.0 bp	0.0 bp				
Audit	0.1 bp	0.0 bp	0.1 bp				
Other	0.1 bp	0.1 bp	-0.1 bp				
Total oversight, custody & other	0.8 bp	2.1 bp	-1.3 bp	27,601	-3,546	n/a	-3,546
Total	6.0 bp	13.7 bp	-7.8 bp	27,601	-21,435	-15,482	-5,953

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 15 of this section.

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

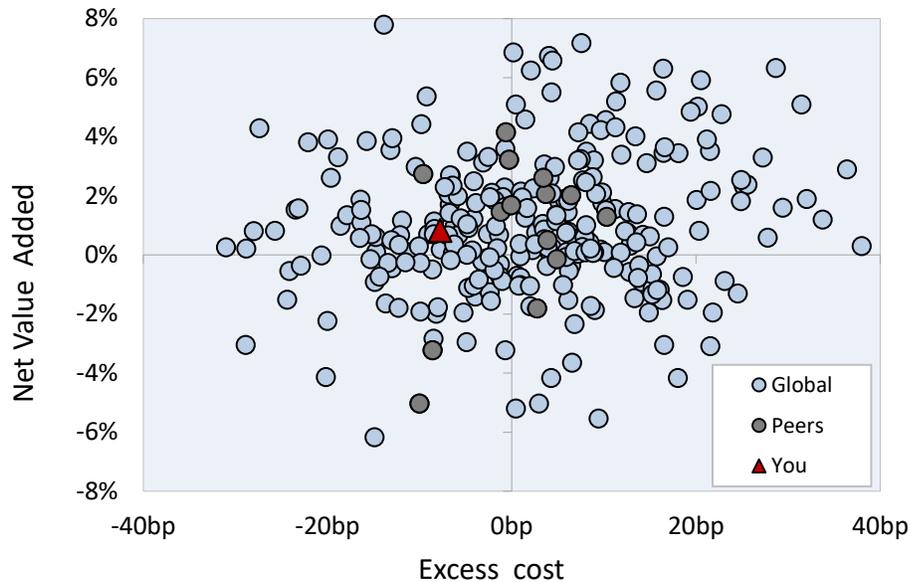
3. Benchmarks for oversight total and individual lines are based on peer medians. Sum of the lines may be different from the total.

4. A different asset was used as a proxy to determine the benchmarks and style percentages: 'Stock - Aggregate' for 'Stock - EAFE', 'Fixed Income - Aggregate' for 'Fixed Income - EAFE'.

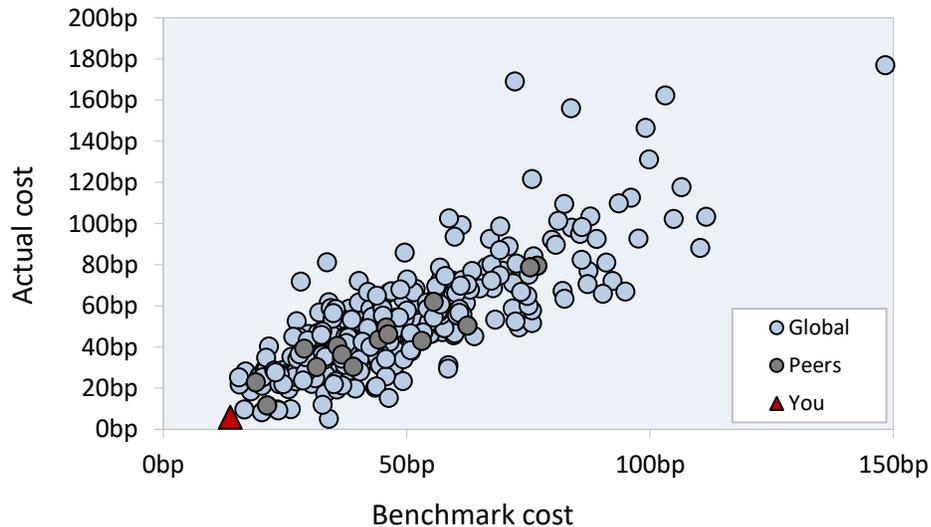
Your cost effectiveness ranking

Being high or low cost is neither good nor bad. More important is whether you are receiving sufficient value for your excess cost. At the total fund level, we provide insight into this question by combining your value added and excess cost to create a snapshot of your cost effectiveness performance relative to that of the global universe. In 2020, your fund ranked in the positive value added, low cost quadrant.

Your 2020 Net value added 0.8%, Excess cost -8 bps



Your 2020 Actual cost 6.0 bps, Benchmark cost 13.7 bps



For all funds except your fund, benchmark cost equals the sum of group median costs x fund's average holdings by asset class plus group median cost of derivatives/overlays plus group median cost of oversight/support. Group peer if the fund is in the peer group, universe - if the fund is part of the universe, and global/database otherwise. Your fund's benchmark cost is calculated using peer-based methodology per page 7 of this section.

Benchmarking methodology formulas and data

a) Formulas

Example calculations for 'Stock - EAFE'

Asset class peer cost = weighted average by peer average style of peer median costs

$$= (12\% \times 1.7 \text{ bp}) + (60\% \times 6.9 \text{ bp}) + (9\% \times 3.5 \text{ bp}) + (19\% \times 42.0 \text{ bp}) = 12.5 \text{ bp}$$

Your cost versus benchmark (-savings/+excess) = asset class your cost - asset class peer cost

$$= 3.9 \text{ bp} - 12.5 \text{ bp} = -8.7 \text{ bp}$$

Attribution of 'your cost versus benchmark' to impact of style mix and impact of cost/paying more

Cost impact of differences in implementation style (-savings/+excess)

= cost impacts of passive vs active (A), internal passive vs external passive (B), internal active vs external active (C)

$$= 2.6 \text{ bp} + 0.0 \text{ bp} + -8.3 \text{ bp} = -5.6 \text{ bp}$$

A) Impact of Passive vs Active management (-savings/+excess)

$$= (\text{peer average passive cost} - \text{peer average active cost}) \times (\text{passive \% of asset, you} - \text{passive \% of asset, peer average}) \\ = (2.5 \text{ bp} - 15.2 \text{ bp}) \times (0\% - 21\%) = 2.6 \text{ bp}$$

Peer average passive cost = weighted average by peer average style of peer median costs for internal passive and external passive management

$$= [(12\% \times 1.7 \text{ bp}) + (9\% \times 3.5 \text{ bp})] / (12\% + 9\%) = 2.5 \text{ bp}$$

Peer average active cost = weighted average by peer average style of peer median costs for internal active and external active management

$$= [(60\% \times 6.9 \text{ bp}) + (19\% \times 42.0 \text{ bp})] / (60\% + 19\%) = 15.2 \text{ bp}$$

B) Impact of Internal Passive vs External Passive management (-savings/+excess)

$$= (\text{peer average internal passive cost} - \text{peer average external passive cost}) \times (\text{internal passive \% of passive, you} - \text{internal passive \% of passive, peer average}) \times \text{passive \% of asset, you} \\ = (1.7 \text{ bp} - 3.5 \text{ bp}) \times (0\% - 0\%) \times 0\% = 0.0 \text{ bp}$$

C) Impact of Internal Active vs External Active management (-savings/+excess)

$$= (\text{peer average internal active cost} - \text{peer average external active cost}) \times (\text{internal active \% of active, you} - \text{internal active \% of active, peer avg}) \times \text{active \% of asset, you} \\ = (6.9 \text{ bp} - 42.0 \text{ bp}) \times (100\% - 76\%) \times 100\% = -8.3 \text{ bp}$$

Cost impact of paying more/-less

$$= (\text{cost internal passive, you} - \text{cost internal passive, peer}) \times \text{internal passive \% of asset, you} + (\text{cost internal active, you} - \text{cost internal active, peer}) \times \text{internal active \% of asset, you} + (\text{cost external passive, you} - \text{cost external passive, peer}) \times \text{external passive \% of asset, you} + (\text{cost external active, you} - \text{cost external active, peer}) \times \text{external active \% of asset, you} \\ = (0.0 \text{ bp} - 1.7 \text{ bp}) \times 0\% + (3.9 \text{ bp} - 6.9 \text{ bp}) \times 100\% + (0.0 \text{ bp} - 3.5 \text{ bp}) \times 0\% + (0.0 \text{ bp} - 42.0 \text{ bp}) \times 0\% = -3.0 \text{ bp}$$

Your cost versus benchmark (-savings/+excess)

$$= \text{cost impact of differences in implementation style} + \text{cost impact of paying more/-less} \\ = -5.6 \text{ bp} + -3.0 \text{ bp} = -8.7 \text{ bp}$$

Benchmarking methodology formulas and data

b) 2020 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	Co-invest	Limited Partner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Co-invest	Limited Partner.	Fund of Funds	Weighted Median
Stock - EAFE		3.9						1.7	6.9	3.5	42.0				12.5
Fixed Income - EAFE		7.5						1.7	4.6	6.4	29.9				8.4

Benchmarking methodology formulas and data

c) 2020 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	Co-invest	Limited Partner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Co-invest	Limited Partner.	Fund of Funds
Stock - EAFE	0.0%	100.0%	0.0%	0.0%				11.9%	60.4%	9.0%	18.7%			
Fixed Income - EAFE	0.0%	100.0%	0.0%	0.0%				7.1%	75.2%	1.8%	15.9%			

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

Methodology of the cost trend model

CEM cost trend model relies on four factors or reasons to explain the cost differences over time: asset value, asset mix, implementation style, and paying more/less for similar services.

Factors affecting the cost differences

Asset value. If we keep the last three factors constant, costs will normally follow changes in the asset holdings. For external implementations, among the reasons is the common practice of charging management fees based on the value of assets under management. For internal, more assets requires additional internal staff (front and back office) and other operating expenditures. In the current model, for simplicity, we assume that costs change proportionately to the plan average assets.

Change in asset value only affects the cost amounts and does not affect costs in basis points. These are determined by the changes in the last three factors.

Asset mix. These are the cost differences associated with increasing / decreasing allocations to one or more of the asset classes, while keeping other factors constant. Higher allocations to more expensive assets will increase the cost both in amounts and in basis points.

Implementation style. These are changes in costs associated with increasing / decreasing allocations to one or more of the management styles within the same asset class.

Paying more/less for similar services. These cost differences reflect changes in the fees / internal costs in basis points for the same implementation style within the same asset class or same oversight service.

Attribution of the cost differences and other assumptions

Change in the cost amount for one asset =

Sum of impacts of asset value, asset mix, implementation style, and paying more/less for similar services.

Change in the basis point costs for one asset =

Sum of basis point impacts of asset mix, implementation style, and paying more/less for similar services.

For overlays, we do not differentiate between implementation styles and use entire asset category.

Oversight costs are only affected by changes in asset value and paying more/less for similar services.

The base model attributes cost differences between any two years. Trends and cumulative results are built upon combinations of multiple two-year attributions. When an entire asset class is missing in one of the two years, the cost difference for that asset is attributed to the asset value and mix impacts only. Impacts of other factors is 0. When an implementation style within the same asset class is missing in one of the two years, the cost difference for that style is attributed to the effects of the implementation style, while impact of paying more/less for similar services is 0. Impacts of changes in the asset value and asset mix are still accounted for.

General simplified formula for attributing basis point cost differences for one asset class

Cost difference in bps = impact of asset mix + impacts of style & paying =

$$[CostBpsL \times (HavgHpct - HavgLpct)] + [HavgHpct \times (CostBpsH - CostBpsL)]$$

where L/H are lower and higher years; HavgPct is % of asset's average holdings in total nav holdings;

CostBps is the asset total cost in basis points for a particular year.

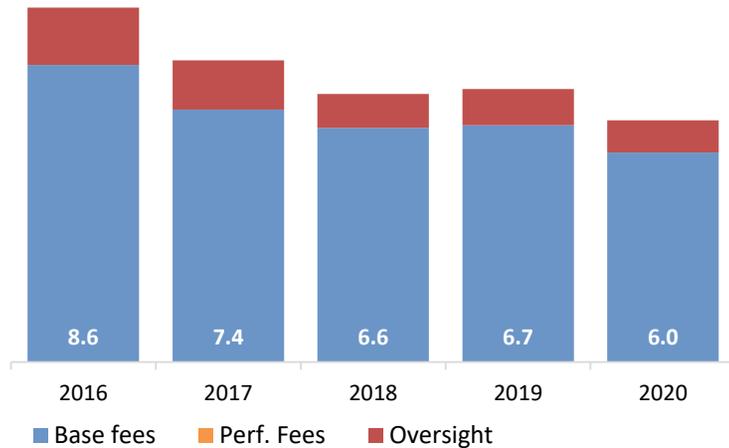
Further, cost difference for style & paying impacts (CostBpsH - CostBpsL) for one style =

$$style\ impact [CostStyleBpsL \times (WgH - WgL)] + paying\ impact [WgH \times (CostStyleBpsH - CostStyleBpsL)]$$

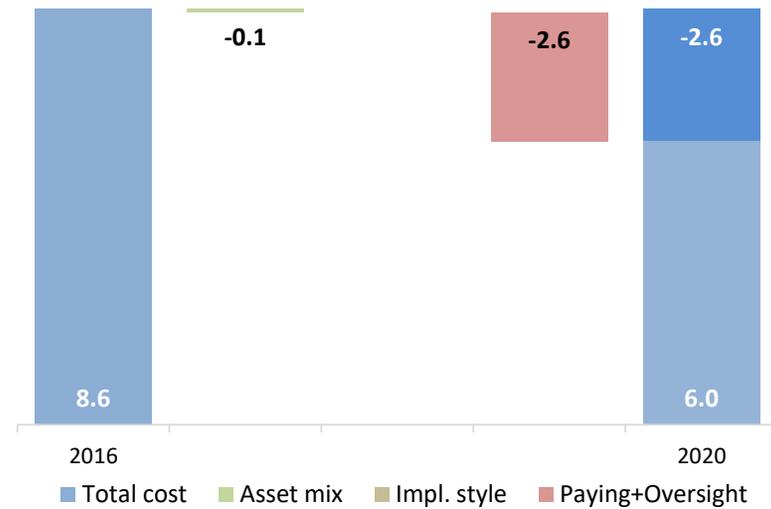
where CostStyleBps is the style cost in basis points; Wg is the weight for that style within the asset class.

Total plan cost and cost changes

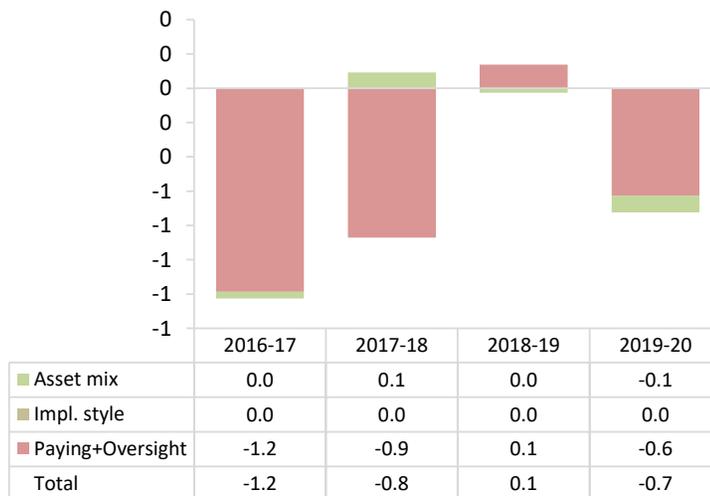
Total plan cost over time, bps



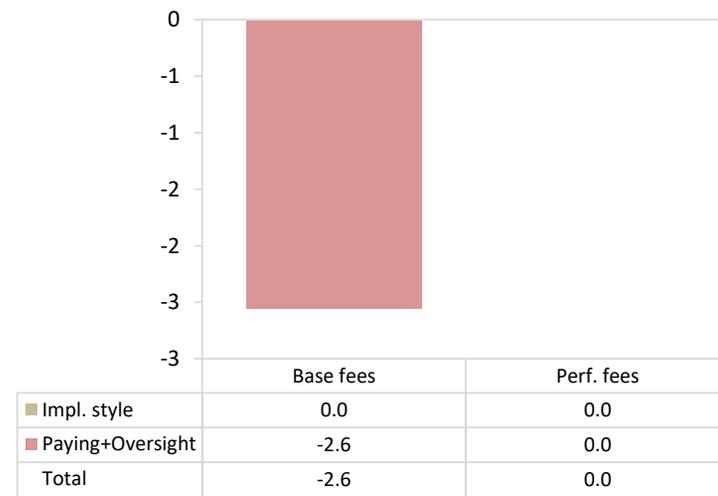
Cost differences, 2020 versus 2016, bps



Reasons for cost differences over time, bps



Impact of base and performance fees, 2020 vs. 2016, bps



Summary of cost differences, 2020 versus 2016

Your total cost decreased by 2.6 bps between 2016 and 2020 because of changes in: asset mix (-0.1 bps), implementation style (0.0 bps), and paying more/less for similar services (-2.6 bps).

	bps	€000s
Starting total cost, 2016	8.6	18,904
Growth in asset value		4,803
Asset mix	<u>-0.1</u>	<u>-181</u>
Stock	0.2	560
Fixed Income	-0.3	-741
Implementation style (less expensive vs. more)	<u>0.0</u>	<u>0</u>
Paying more/-less for	<u>-2.0</u>	<u>-5,407</u>
Stock	-1.7	-4,580
Fixed Income	-0.3	-827
Oversight, custodial, other (pay more/-less)	<u>-0.6</u>	<u>-1,642</u>
Total difference	-2.6	-2,427
Ending total cost, 2020	6.0	16,477

Summary of cost differences, year over year

	bps	€000s								
	2016		2017		2018		2019		2016	
Starting total cost	8.6	18,904	7.4	16,837	6.6	15,908	6.7	17,228	8.6	18,904
Growth in asset value		738		955		1,035		1,247		4,803
Asset mix	0.0	-90	0.1	223	0.0	-69	-0.1	-273	-0.1	-181
Stock	0.1	327	-0.2	-452	0.1	204	0.1	373	0.2	560
Fixed Income	-0.2	-417	0.3	674	-0.1	-273	-0.2	-646	-0.3	-741
Implementation style (less expensive vs. more)	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Paying more/-less for	-1.0	-2,275	-0.5	-1,215	0.1	204	-0.5	-1,471	-2.0	-5,407
Stock	-0.8	-1,840	0.0	56	-0.4	-1,146	-0.4	-1,106	-1.7	-4,580
Fixed Income	-0.2	-435	-0.5	-1,272	0.5	1,349	-0.1	-365	-0.3	-827
Oversight, custodial, other (pay more/-less)	-0.2	-440	-0.4	-892	0.1	151	-0.1	-255	-0.6	-1,642
Total difference	-1.2	-2,067	-0.8	-930	0.1	1,321	-0.7	-751	-2.6	-2,427
Ending total cost	7.4	16,837	6.6	15,908	6.7	17,228	6.0	16,477	6.0	16,477
	2017		2018		2019		2020		2020	

Sum of all changes (except for the total) between adjacent years will differ from the changes between starting and ending years in the last two columns.

Reasons by asset class and cost type, €000

Your total cost has decreased by €2.4 million in 2020 compared to 2016. An increase of €4.8 million was due to the €5.6 billion rise in plan total average nav holdings. The remaining decrease of €7.2 million is explained by the changes in the asset mix (-€181 thousand), implementation style (€0.0 thousand), and paying more/less for similar services (-€7.0 million).

Asset class ¹	2016 cost €000s	Asset mix €000s	Implement. style €000s	Paying more/-less €000s	Total ex asset gr. €000s	Total difference €000s	Growth in asset value €000s	2020 cost €000s
	A	B	C	D	E=B+C+D	F=G-A	F-E	G
Stock - EAFE	8,622	560	0	-4,580	-4,021	-1,830	2,191	6,792
Fixed Income - EAFE	7,217	-741	0	-827	-1,568	266	1,834	7,483
Total for asset management	15,839	-181	0	-5,407	-5,588	-1,564	4,024	14,275
Overlays and unfunded strategies ²	0	0		0	0	0	0	0
Oversight	1,519			-703	-703	-317	386	1,202
Trustee & Custodial	52			-4	-4	9	13	61
Consulting	895			-547	-547	-320	227	575
Audit	306			-162	-162	-84	78	222
Other	293			-225	-225	-151	74	142
Total for fund oversight ³	3,065			-1,642	-1,642	-863	779	2,202
Total	18,904	-181	0	-7,049	-7,230	-2,427	4,803	16,477

1. Cost differences for asset classes are attributed to the effects of:

- Asset growth, asset mix, implementation style, and paying for similar services, when the asset class exists in both years.
- Asset growth and asset mix, when the asset class exists only in one of the years.

2. Cost differences for overlays are attributed to the effects of:

- Asset growth and paying more/less for similar services, when the fund has overlays in both years.
- Asset growth and asset mix, when the fund has overlays only in one of the years.

3. Cost differences for oversight are attributed to the effects of asset growth and paying more/less for similar services.

Reasons by asset class and cost type, basis points

Your total cost has decreased by 2.6 bps in 2020 vs. 2016. It was driven by the changes in the asset mix (-0.1 bps), implementation style (0.0 bps), and paying more/less for similar services (-2.6 bps).

Asset class	Asset mix bps	Implement. style bps	Paying more/-less bps	Total difference bps	Total ¹ ex asset gr. €000s
	B	C	D	B+C+D	
Stock - EAFE	0.2	0.0	-1.7	-1.5	-4,021
Fixed Income - EAFE	-0.3	0.0	-0.3	-0.6	-1,568
Total for asset management	-0.1	0.0	-2.0	-2.0	-5,588
Overlays and unfunded strategies	0.00		0.00	0.00	0
Oversight			-0.3	-0.3	-703
Trustee & Custodial			0.0	0.0	-4
Consulting			-0.2	-0.2	-547
Audit			-0.1	-0.1	-162
Other			-0.1	-0.1	-225
Total for fund oversight			-0.6	-0.6	-1,642
Total	-0.1	0.0	-2.6	-2.6	-7,230
Total basis point costs in years 2020 and 2016		6.0	8.6	-2.6	

1. Calculated by multiplying total difference in bps by plan total nav average holdings for year 2020, €28 billion. Similarly, basis point costs on this page are converted from the amounts on the previous page using the same total nav holdings as the fee basis.

Impact of changes in asset mix

Changes in the asset mix decreased your total cost by €181 thousand or -0.1 bps.

Asset class	2016 Cost bps	2020 Cost bps	2016 asset ¹ weight %	2020 asset ¹ weight %	Change in asset weight	Asset mix changes ² bps	Asset mix changes ³ €000s
	A	B	C	D	E=D-C	A (or B) x E	
Stock - EAFE	6.5	3.9	60%	64%	3%	0.2	560
Fixed Income - EAFE	8.3	7.5	40%	36%	-3%	-0.3	-741
Total for asset management						-0.1	-181

1. Weight % = asset's average (NAV for performance lines) holdings / plan total nav average holdings.
2. If asset is not available in one of the years, the entire weighted cost difference in bps is attributed to the asset mix.
3. Calculated by multiplying asset mix changes in bps by plan total nav average holdings for year 2020, €28 billion.

Impact of changes in implementation style

Changes in implementation style (passive vs. active, internal vs. external, etc.) in 2020 vs. 2016 saved you €0.0 thousand.

Implementation choices	2020 avg. assets €mils	Cost, 2016			Style 1 %			Cost/ €000s
	A	Style 1 B	Style 2 C	Style 1 -Savings D = B - C	2020	2016	More/ -Less E	
Total								0

Cost differences are attributed exclusively to the effects of implementation style when the style existed in one of the years only.

Impact of paying more/-less for similar services

In 2020, you paid €7.0 million less for similar asset management and oversight / support services vs. 2016.

Asset class styles where you had assets in both 2020 and 2016 ¹	Style	2020 avg. assets €mils	Cost in bps		More/ -less	Cost/ -Savings €000s
			2020	2016		
<u>Internal asset management</u>		A			B	A x B
Stock - EAFE	active	17,528	3.9	6.5	-2.6	-4,580
Fixed Income - EAFE	active	10,040	7.5	8.3	-0.8	-827
Total for internal management						-5,407
Oversight		27,601	0.4	0.7	-0.3	-702.9
Trustee & Custodial		27,601	0.0	0.0	0.0	-4
Consulting		27,601	0.2	0.4	-0.2	-547
Audit		27,601	0.1	0.1	-0.1	-162
Other		27,601	0.1	0.1	-0.1	-225
Total for fund oversight						-1,642
Total						-7,049

1. Cost differences are attributed to paying more/less for similar services only if the asset-class style existed in both years.

5

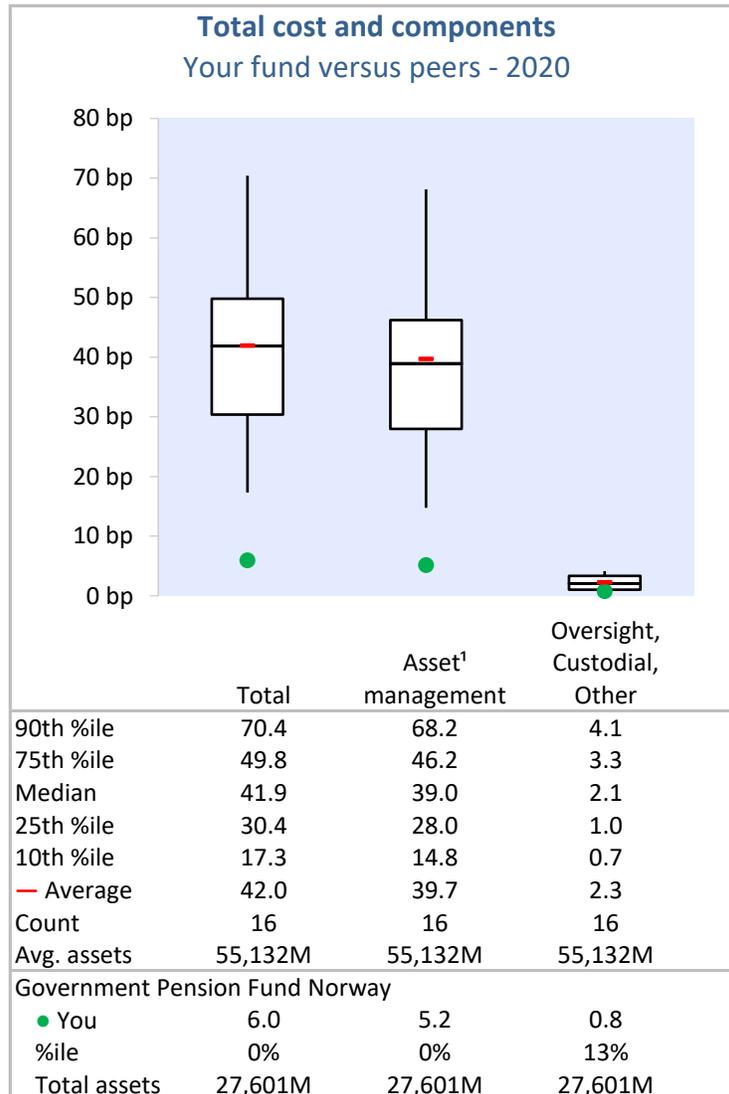
Cost comparisons

Total fund cost	2
Governance, operations & support	3
Public asset classes	
- Stock	4
- Fixed Income	10
- Commodities	20
- REITs	21
Real asset classes	
- Real estate ex-REITs	22
- Infrastructure	23
- Natural resources	24
- Other real assets	25
Private equity	
- Diversified private equity	26
- LBO	27
- Venture capital	28
- Private credit	29
- Other private equity	31
Global TAA	32
RiskParity	33
Balanced Funds	34
Hedge Funds	35
Overlays	36

Total fund cost

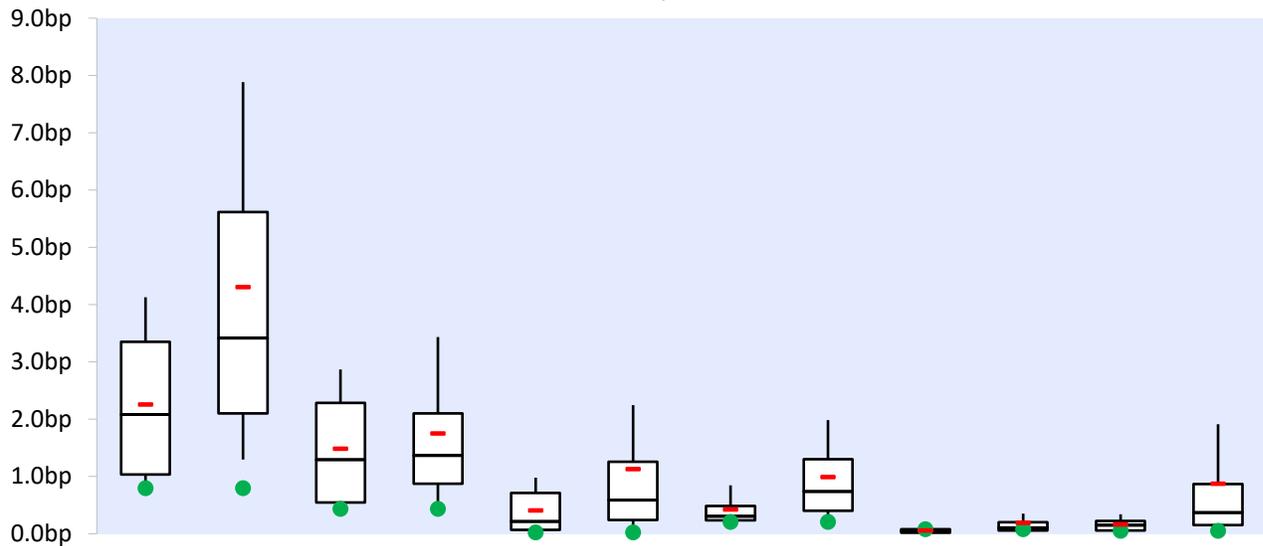
Total costs are benchmarked in the previous section. In this section, your fund's costs are compared on a line-item basis to your peers. This enables you to understand better why you may be a high or low cost fund and it also identifies and quantifies major cost differences that may warrant further investigation.

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.



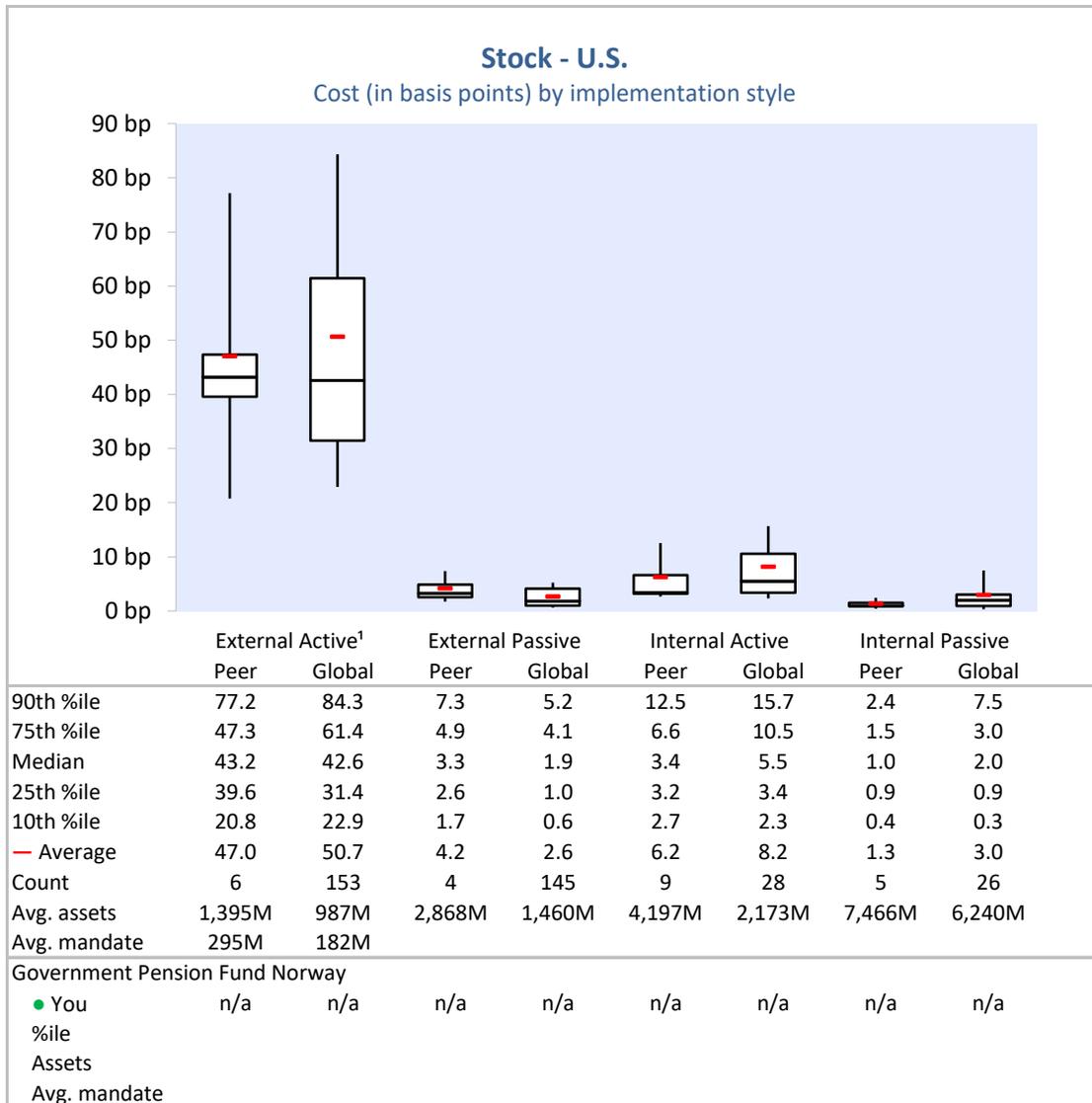
Governance, operations & support

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	4.1	7.9	2.9	3.4	1.0	2.2	0.8	2.0	0.1	0.4	0.3	1.9
75th %ile	3.3	5.6	2.3	2.1	0.7	1.3	0.5	1.3	0.1	0.2	0.2	0.9
Median	2.1	3.4	1.3	1.4	0.2	0.6	0.3	0.7	0.0	0.1	0.2	0.4
25th %ile	1.0	2.1	0.5	0.9	0.1	0.2	0.2	0.4	0.0	0.1	0.1	0.2
10th %ile	0.7	1.3	0.3	0.4	0.0	0.1	0.2	0.2	0.0	0.0	0.0	0.0
— Average	2.3	4.3	1.5	1.7	0.4	1.1	0.4	1.0	0.1	0.2	0.2	0.9
Count	16	308	16	308	6	238	16	293	13	261	15	205
Avg. assets	55,132M	25,655M	55,132M	25,655M	55,132M	25,655M	55,132M	25,655M	55,132M	25,655M	55,132M	25,655M
Government Pension Fund Norway												
● You	0.8	0.8	0.4	0.4	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1
%ile	13%	6%	13%	11%	0%	1%	13%	11%	75%	40%	14%	12%
Plan assets	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M	27,601M

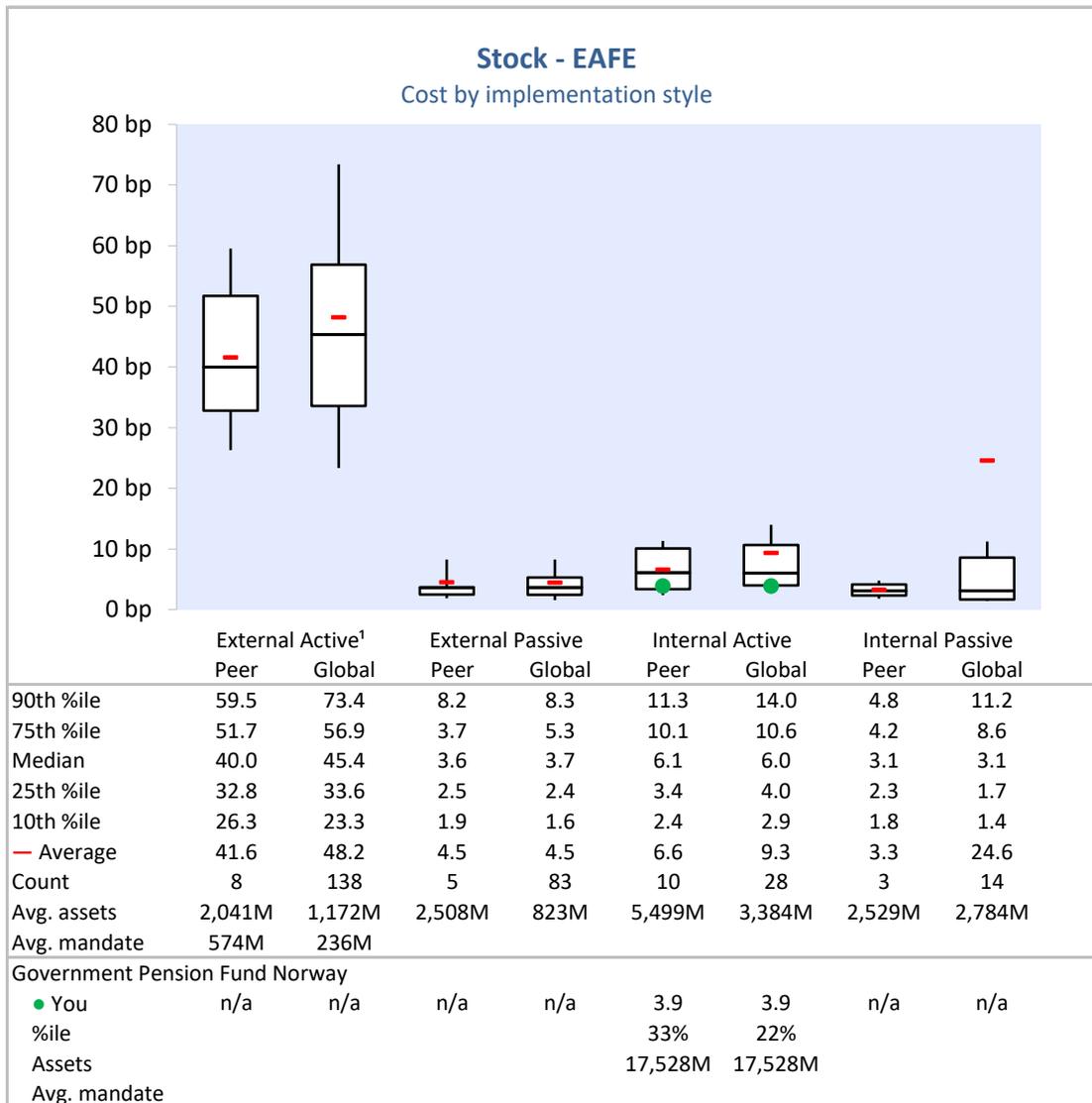
1. Oversight costs include the salaries and benefits of executives and their staff responsible for overseeing the entire fund or multiple asset classes and the fees/salaries of the Board or Investment Committee. All costs associated with the above including fees/salaries, travel, director's insurance 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	30.4	41.1
Performance fees*	n/a	15.7	8.9
Internal and other	<u>n/a</u>	<u>1.0</u>	<u>0.7</u>
Total	n/a	47.0	50.7

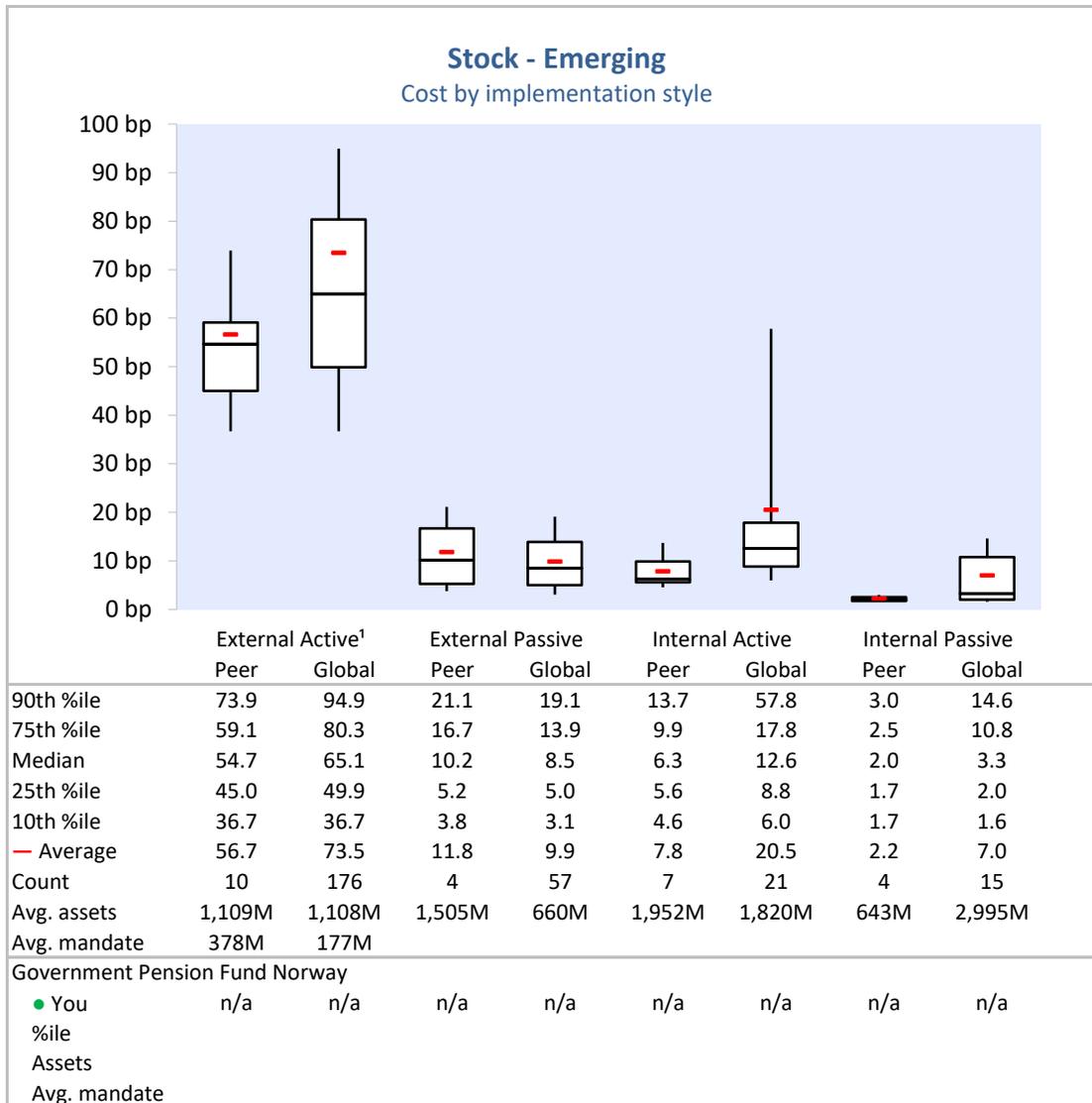
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 94.1 bps for peers (1 fund) and 34.0 bps for Global participants (40 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	34.6	42.0
Performance fees*	n/a	6.1	5.4
Internal and other	<u>n/a</u>	<u>0.8</u>	<u>0.8</u>
Total	n/a	41.6	48.2

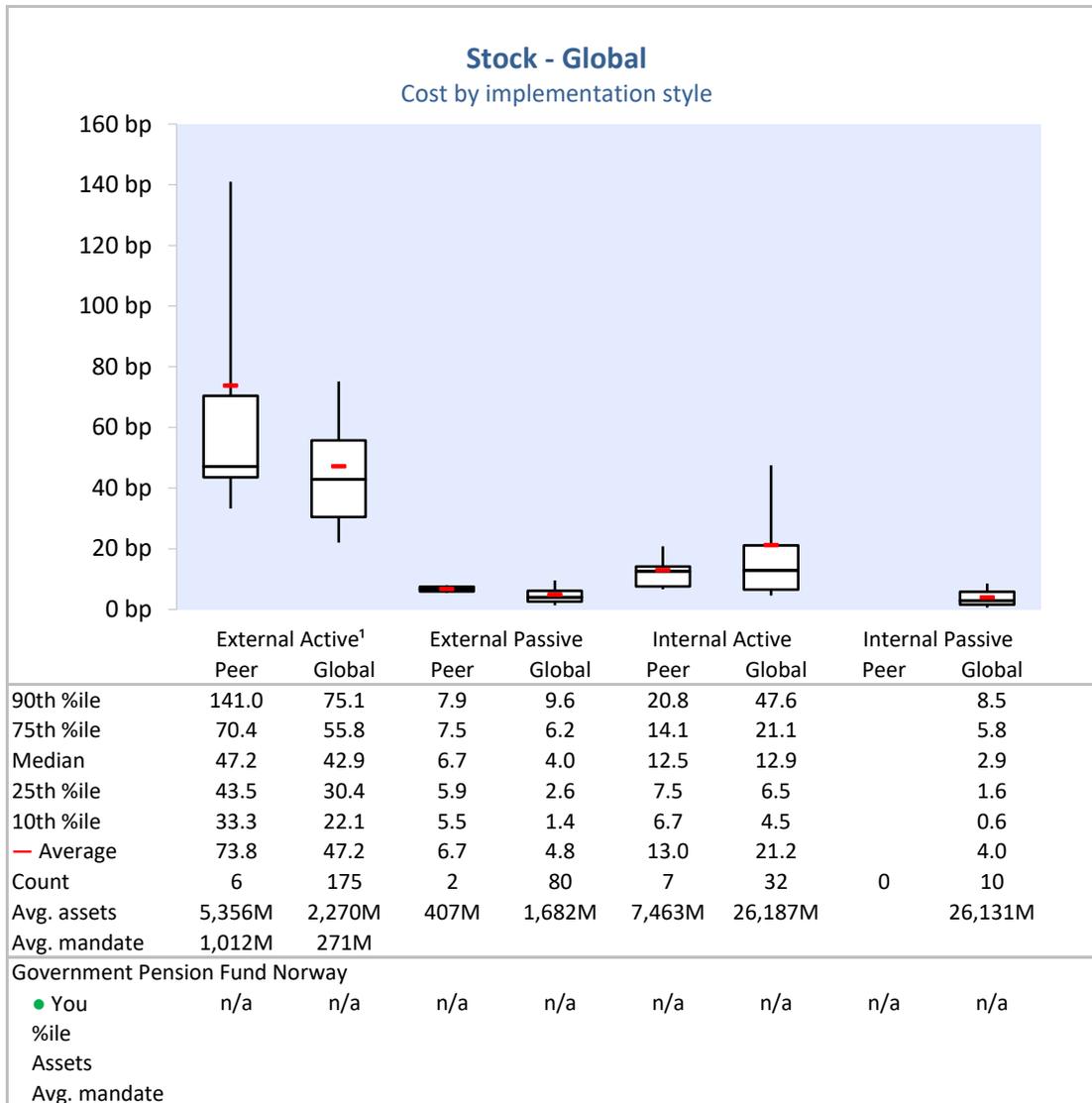
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 24.6 bps for peers (2 funds) and 17.7 bps for Global participants (42 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	45.9	57.0
Performance fees*	n/a	8.4	14.8
Internal and other	<u>n/a</u>	<u>2.4</u>	<u>1.7</u>
Total	n/a	56.7	73.5

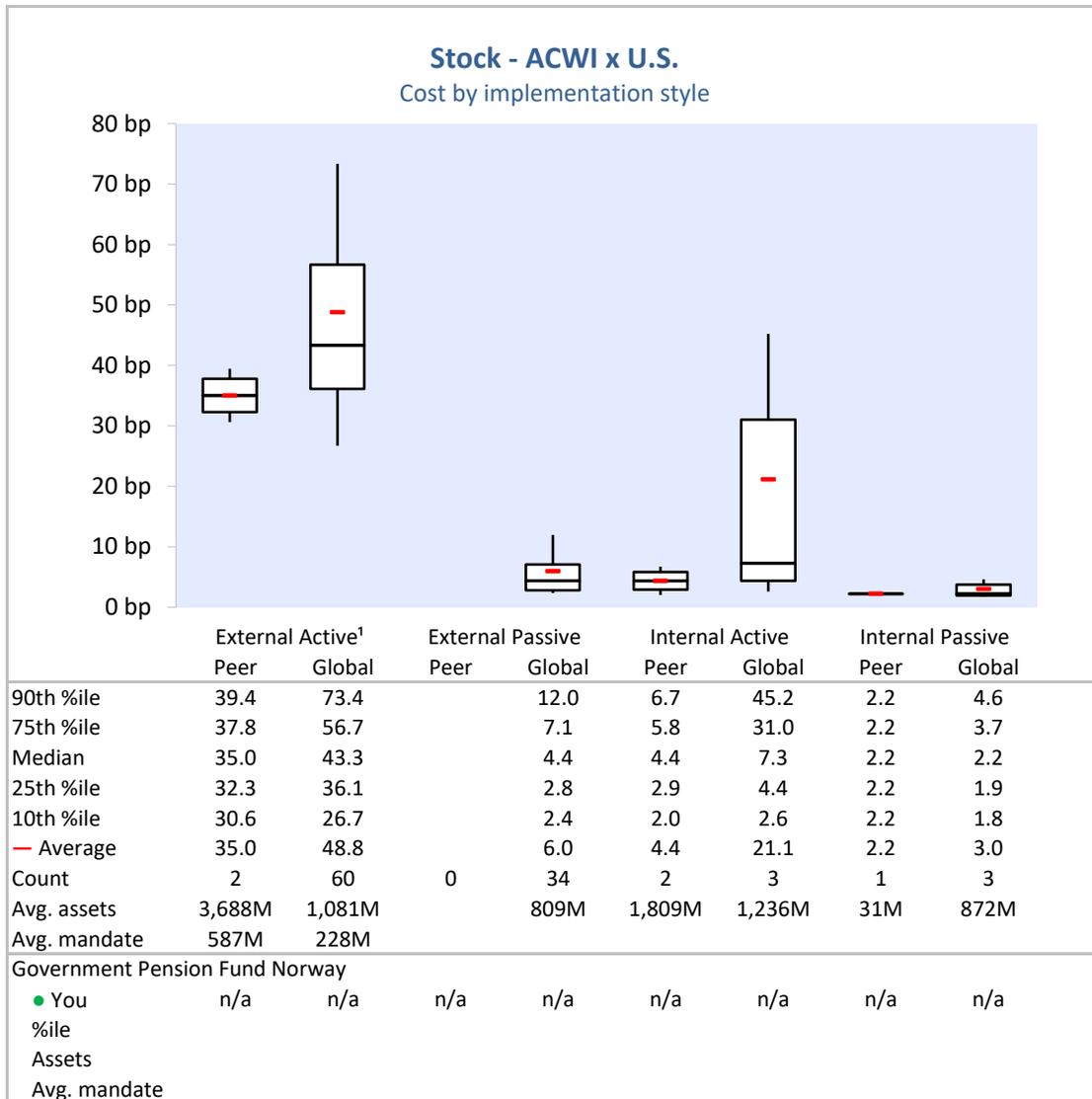
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 42.0 bps for peers (2 funds) and 55.3 bps for Global participants (47 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	42.0	41.3
Performance fees*	n/a	30.2	4.7
Internal and other	<u>n/a</u>	<u>1.6</u>	<u>1.2</u>
Total	n/a	73.8	47.2

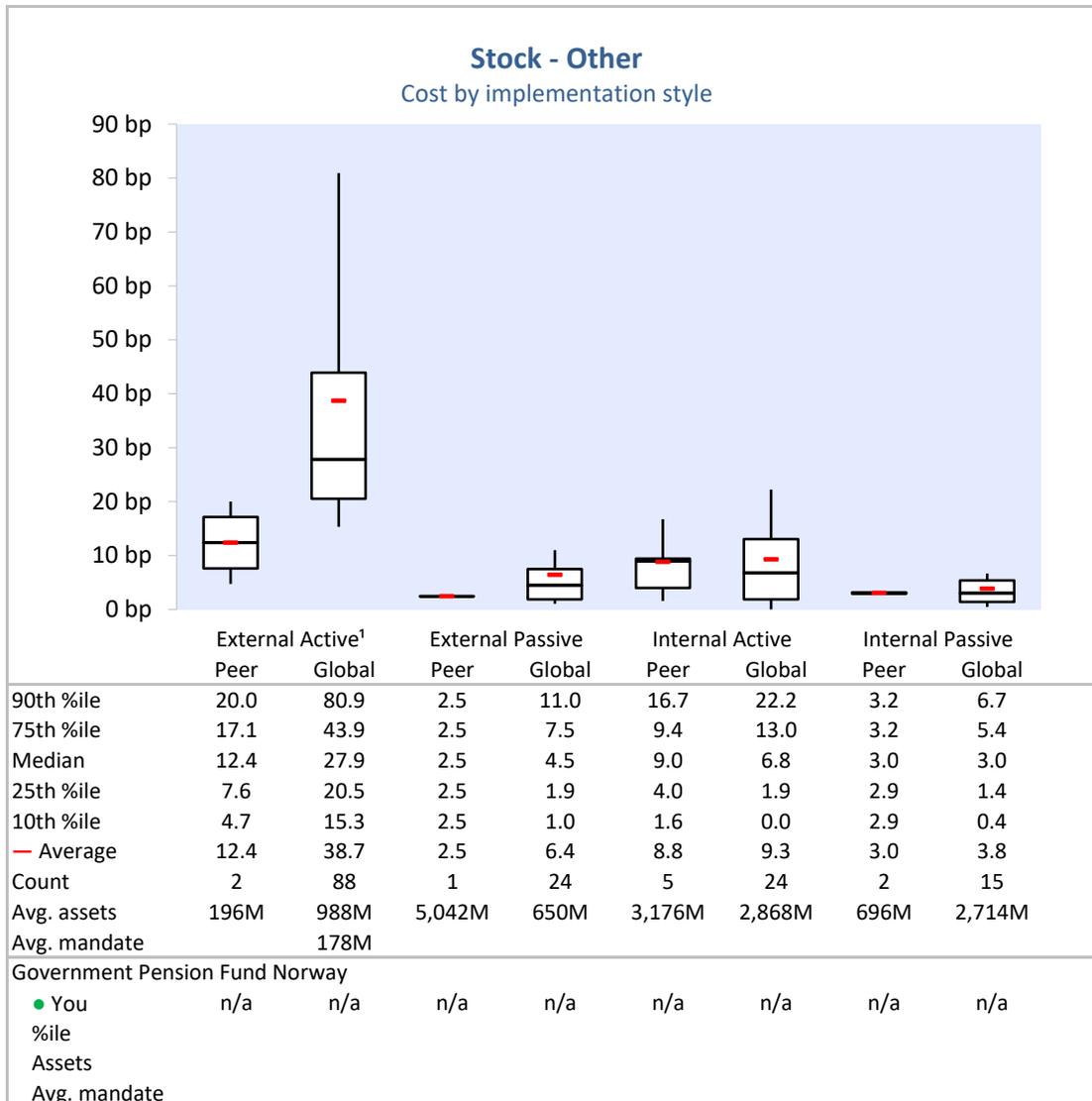
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 36.2 bps for peers (5 funds) and 13.3 bps for Global participants (62 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	34.5	45.2
Performance fees*	n/a	n/a	3.2
Internal and other	<u>n/a</u>	<u>0.5</u>	<u>0.3</u>
Total	n/a	35.0	48.8

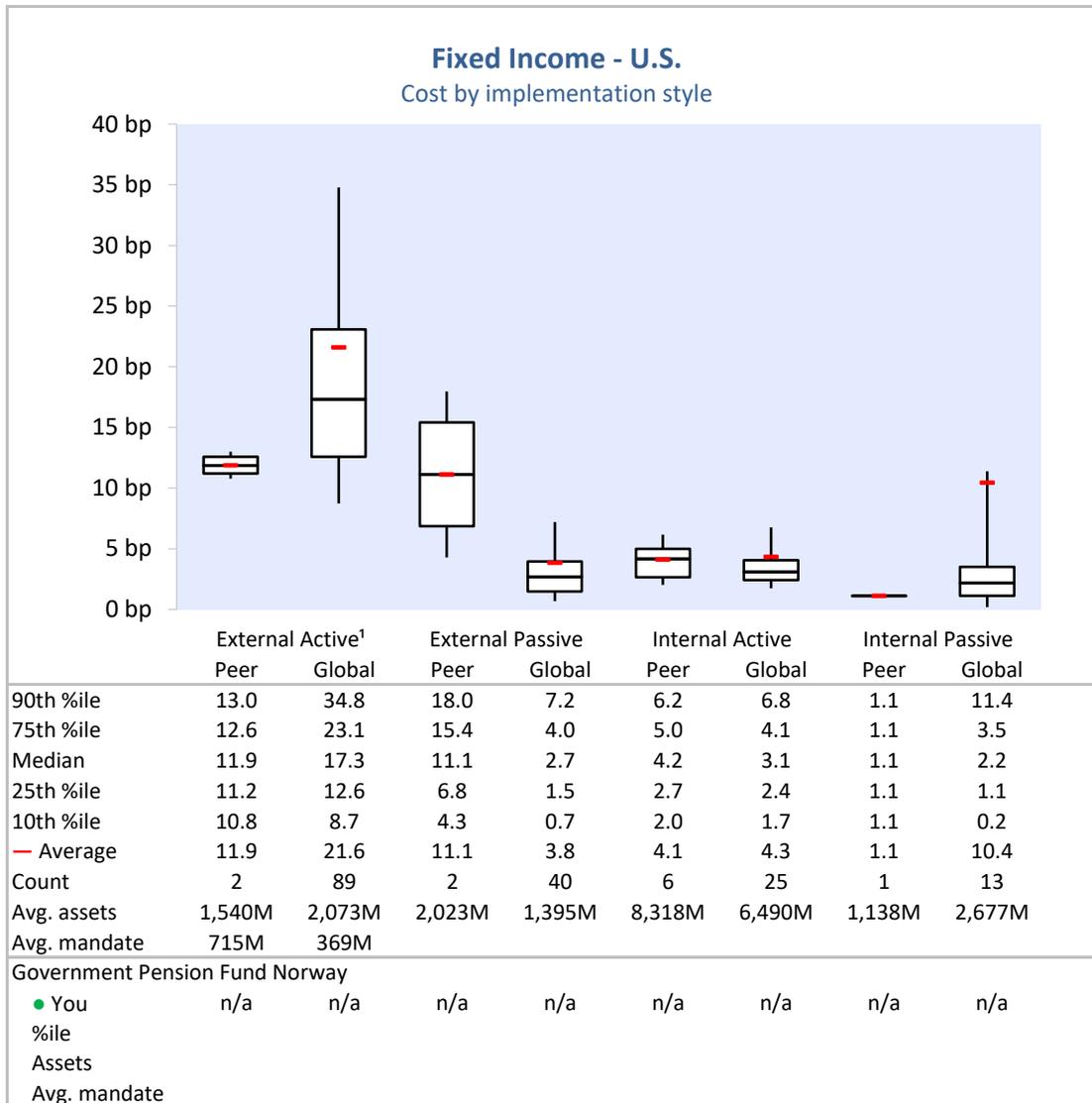
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 24.2 bps for Global participants (8 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	11.4	33.9
Performance fees*	n/a	n/a	3.7
Internal and other	<u>n/a</u>	<u>0.9</u>	<u>1.1</u>
Total	n/a	12.4	38.7

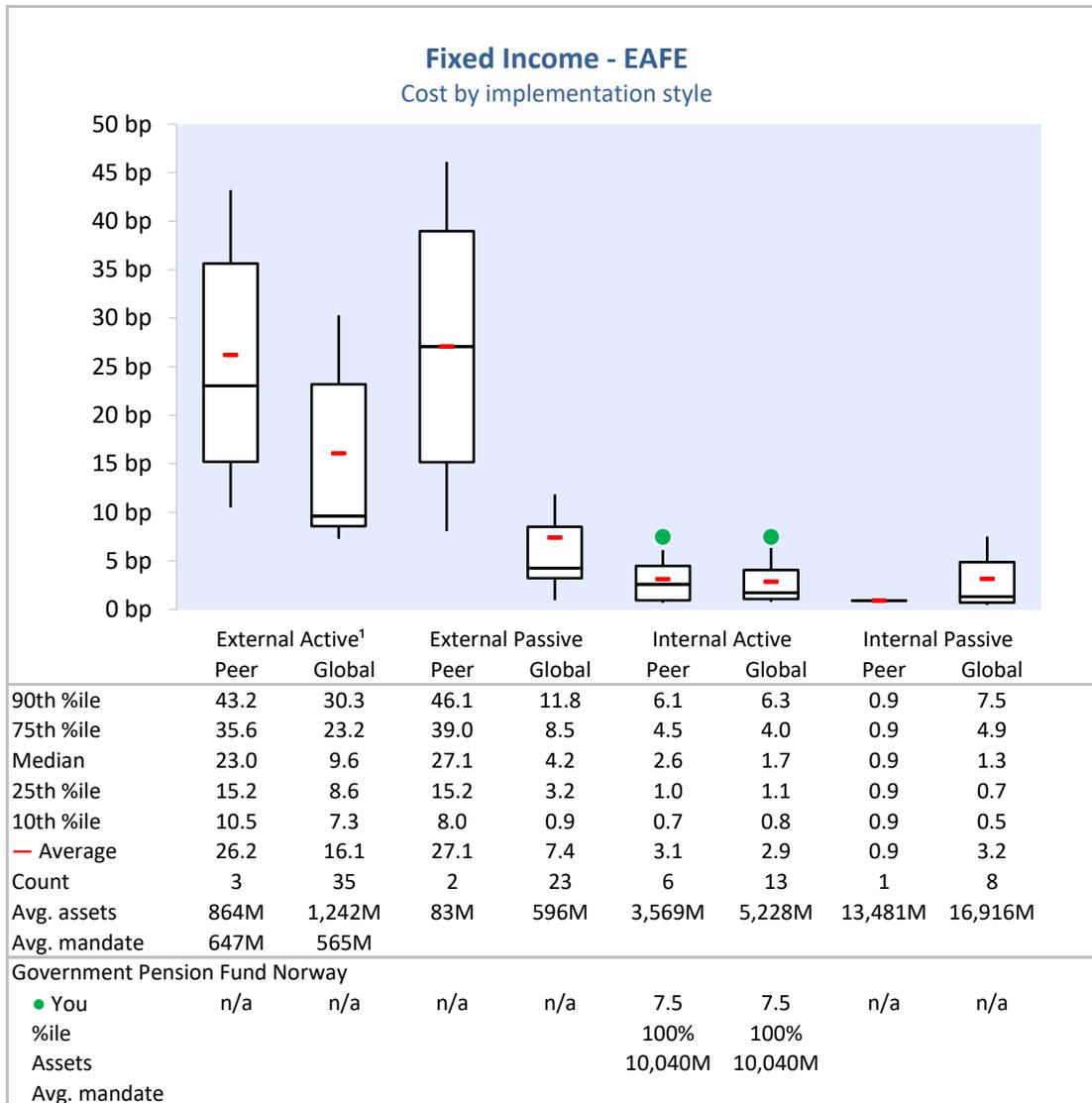
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 17.3 bps for Global participants (19 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	10.9	20.3
Performance fees*	n/a	n/a	0.8
Internal and other	<u>n/a</u>	<u>1.0</u>	<u>0.5</u>
Total	n/a	11.9	21.6

* 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 4.1 bps for Global participants (17 funds).

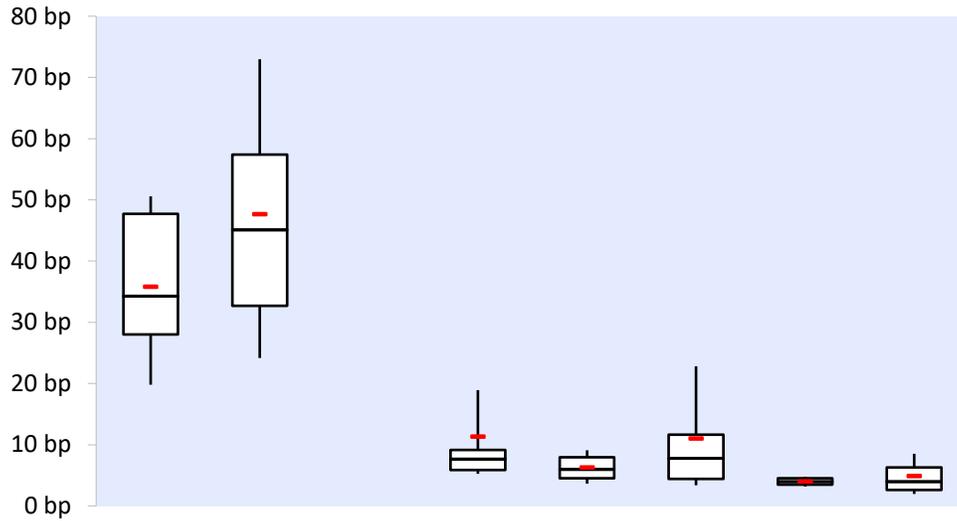


1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	21.6	14.1
Performance fees*	n/a	3.9	1.3
Internal and other	<u>n/a</u>	<u>0.7</u>	<u>0.6</u>
Total	n/a	26.2	16.1

* 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 11.6 bps for peers (1 fund) and 3.6 bps for Global participants (13 funds).

Fixed Income - Emerging Cost by implementation style

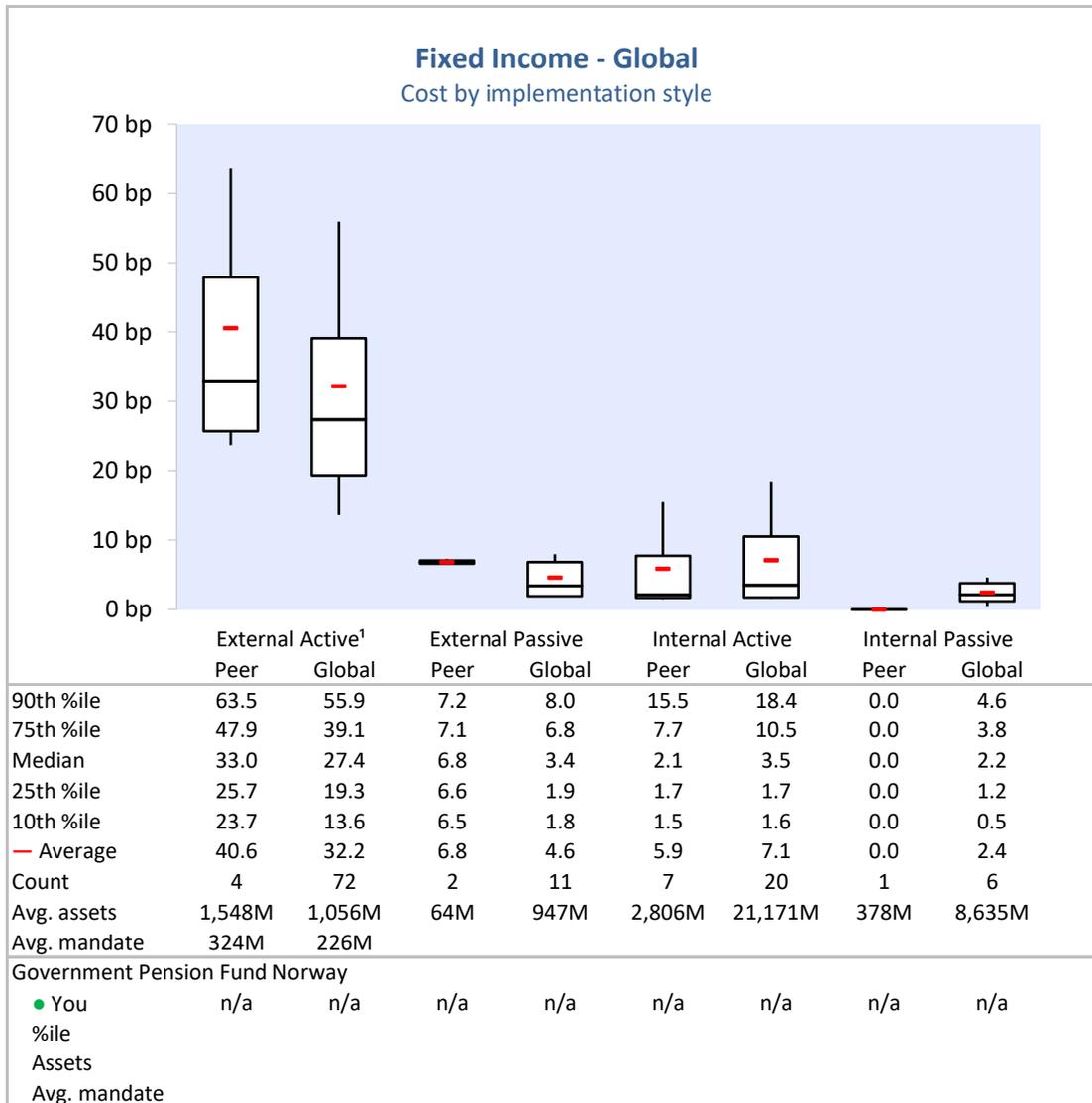


	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	50.5	73.0	0	18.9	9.1	22.8	4.8	8.5
75th %ile	47.7	57.4		9.1	7.9	11.6	4.5	6.3
Median	34.3	45.1		7.7	6.0	7.8	4.0	4.0
25th %ile	28.0	32.7		5.9	4.5	4.4	3.5	2.6
10th %ile	19.8	24.2		5.3	3.6	3.4	3.2	2.0
— Average	35.8	47.7		11.3	6.3	11.0	4.0	4.9
Count	8	84	0	8	3	19	2	4
Avg. assets	1,551M	863M		1,464M	1,327M	1,699M	320M	1,906M
Avg. mandate	327M	184M						
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	31.4	40.6
Performance fees*	n/a	2.5	3.5
Internal and other	<u>n/a</u>	<u>1.9</u>	<u>3.5</u>
Total	n/a	35.8	47.7

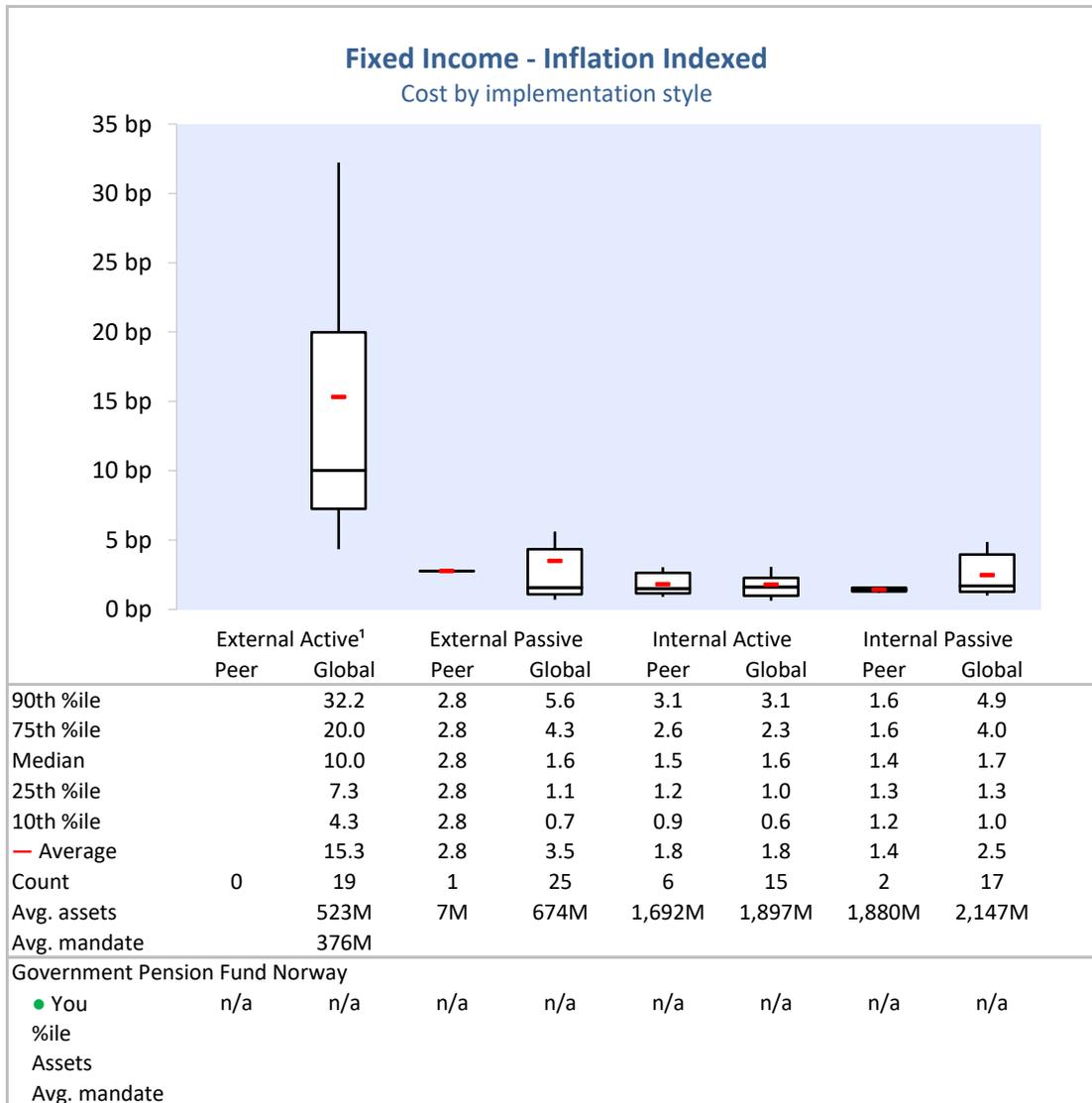
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 6.7 bps for peers (3 funds) and 12.9 bps for Global participants (23 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	38.8	28.3
Performance fees*	n/a	0.6	1.2
Internal and other	<u>n/a</u>	<u>1.2</u>	<u>2.7</u>
Total	n/a	40.6	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 2.3 bps for peers (1 fund) and 4.9 bps for Global participants (18 funds).



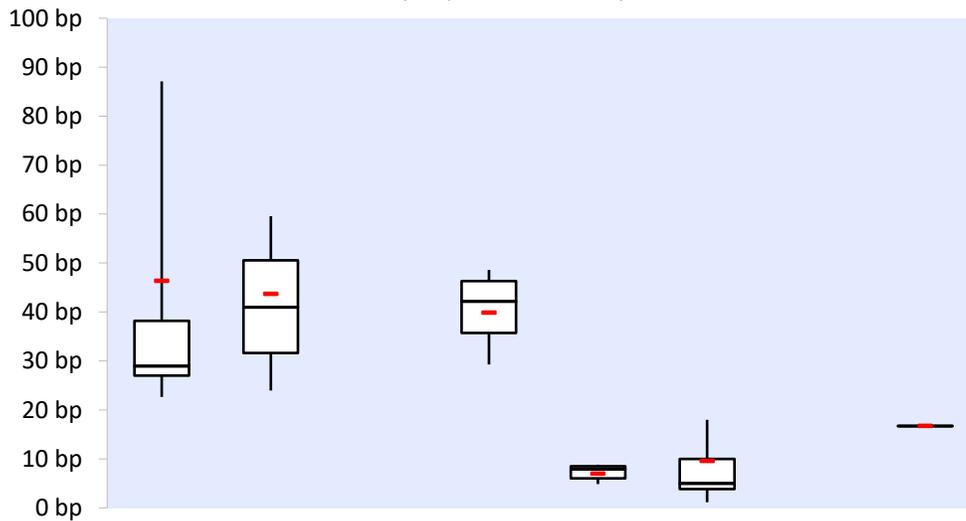
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	n/a	14.7
Performance fees*	n/a	n/a	0.5
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>0.1</u>
Total	n/a	n/a	15.3

* 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 4.5 bps for Global participants (2 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	87.1	59.5		48.6	8.8	18.0		16.7
75th %ile	38.2	50.6		46.3	8.5	10.0		16.7
Median	29.0	41.0		42.2	8.0	5.0		16.7
25th %ile	27.0	31.6		35.7	6.0	3.9		16.7
10th %ile	22.6	24.0		29.3	4.9	1.2		16.7
— Average	46.4	43.7		39.9	7.0	9.6		16.7
Count	7	98	0	4	3	18	0	1
Avg. assets	1,345M	669M		680M	753M	1,156M		870M
Avg. mandate	354M	162M						
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								

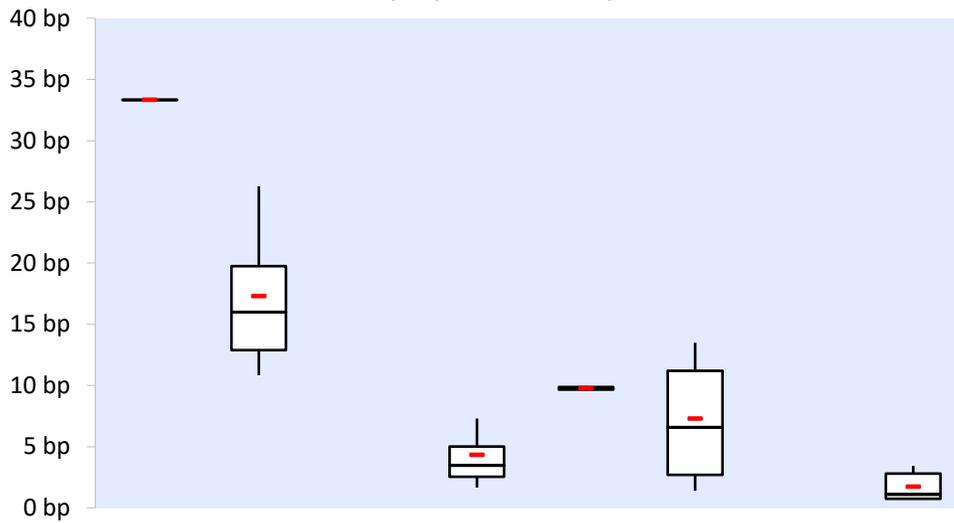
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	35.1	38.6
Performance fees*	n/a	9.9	3.2
Internal and other	<u>n/a</u>	<u>1.3</u>	<u>2.0</u>
Total	n/a	46.4	43.7

* 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 69.1 bps for peers (1 fund) and 19.4 bps for Global participants (16 funds).

Fixed Income - Long Bonds

Cost by implementation style



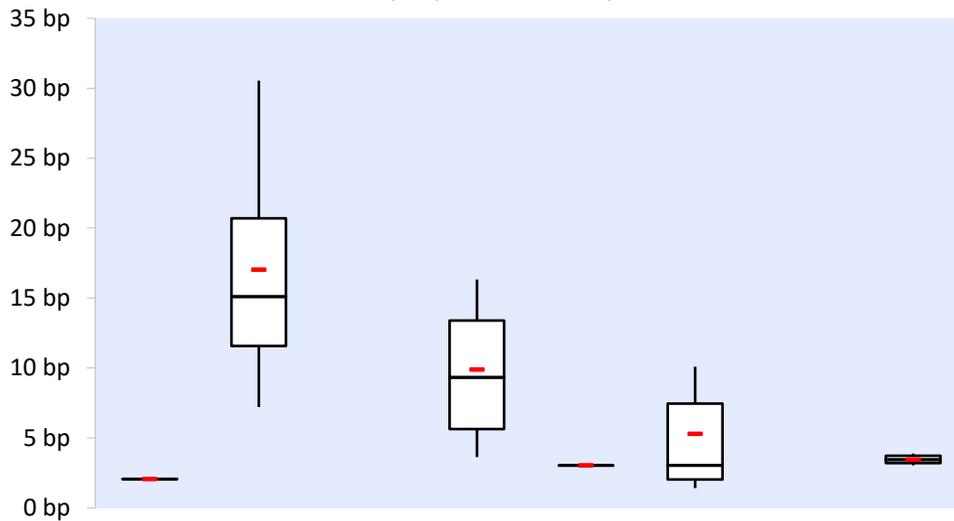
	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	33.3	26.3		7.3	9.9	13.5		3.4
75th %ile	33.3	19.8		5.0	9.9	11.2		2.8
Median	33.3	16.0		3.5	9.8	6.6		1.1
25th %ile	33.3	12.9		2.5	9.7	2.7		0.7
10th %ile	33.3	10.8		1.7	9.6	1.4		0.7
— Average	33.3	17.3		4.3	9.8	7.3		1.7
Count	1	101	0	39	2	14	0	9
Avg. assets	228M	3,017M		331M	8,770M	3,529M		5,160M
Avg. mandate		487M						
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	31.8	16.6
Performance fees*	n/a	n/a	0.5
Internal and other	<u>n/a</u>	<u>1.5</u>	<u>0.1</u>
Total	n/a	33.3	17.3

* 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 5.4 bps for Global participants (10 funds).

Fixed Income - Bundled LDI Cost by implementation style



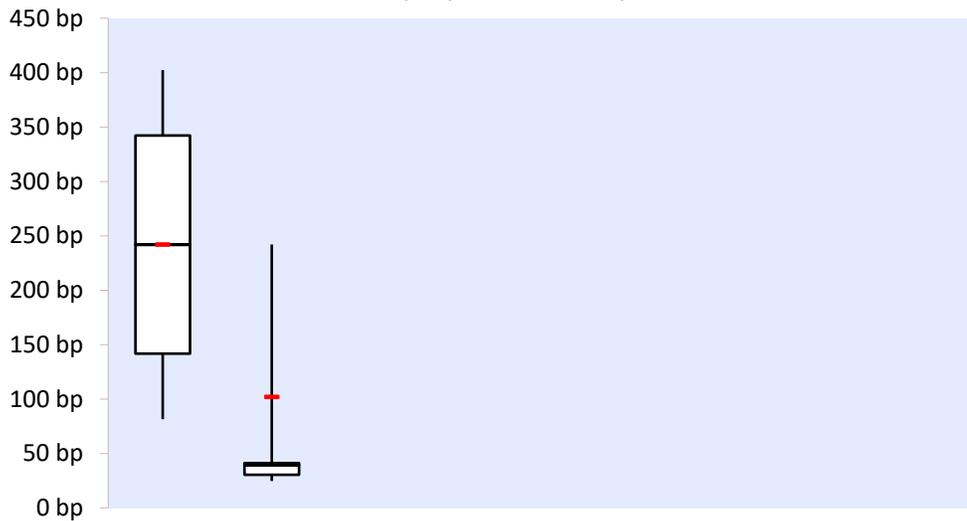
	External Active ¹		External Passive		Internal Active		Internal Passive	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	2.1	30.5		16.3	3.1	10.1		3.9
75th %ile	2.1	20.7		13.4	3.1	7.5		3.7
Median	2.1	15.1		9.3	3.1	3.1		3.5
25th %ile	2.1	11.6		5.6	3.1	2.0		3.2
10th %ile	2.1	7.2		3.6	3.1	1.4		3.0
— Average	2.1	17.0		9.9	3.1	5.3		3.5
Count	1	20	0	8	1	3	0	2
Avg. assets	958M	1,825M		5,864M	20,693M	33,235M		7,238M
Avg. mandate		452M						
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	1.8	16.2
Performance fees*	n/a	n/a	0.1
Internal and other	<u>n/a</u>	<u>0.3</u>	<u>0.7</u>
Total	n/a	2.1	17.0

* 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 2.6 bps for Global participants (1 fund).

Fixed Income - Convertibles Cost by implementation style

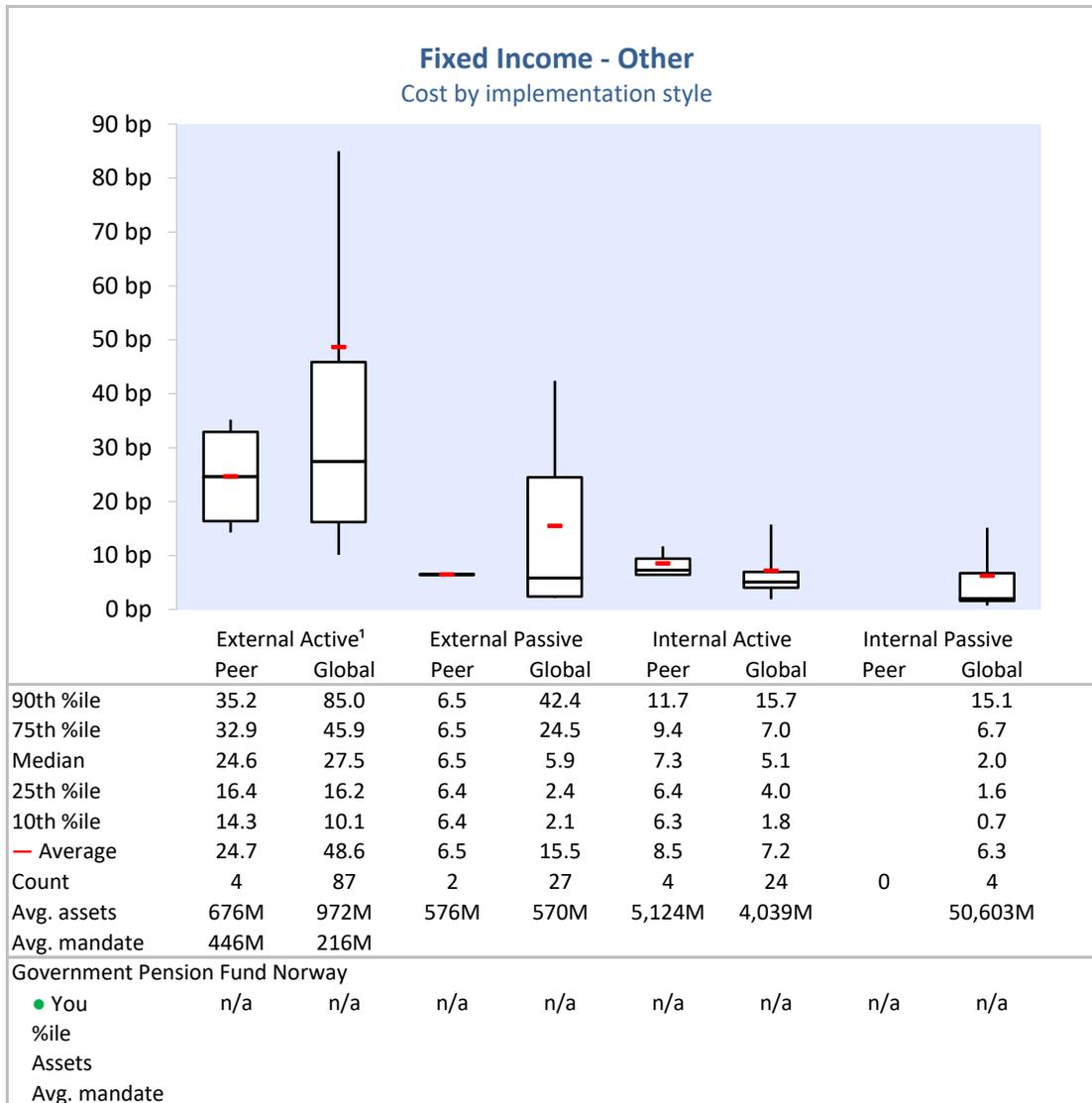


	External Active ¹ Peer	Global	External Passive Peer	Global	Internal Active Peer	Global	Internal Passive Peer	Global
90th %ile	402.3	242.0						
75th %ile	342.2	41.1						
Median	242.0	39.6						
25th %ile	141.7	30.5						
10th %ile	81.6	24.8						
— Average	242.0	102.1						
Count	2	6	0	0	0	0	0	0
Avg. assets	252M	481M						
Avg. mandate	252M	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	44.2	36.2
Performance fees*	n/a	196.8	65.6
Internal and other	<u>n/a</u>	<u>1.0</u>	<u>0.3</u>
Total	n/a	242.0	102.1

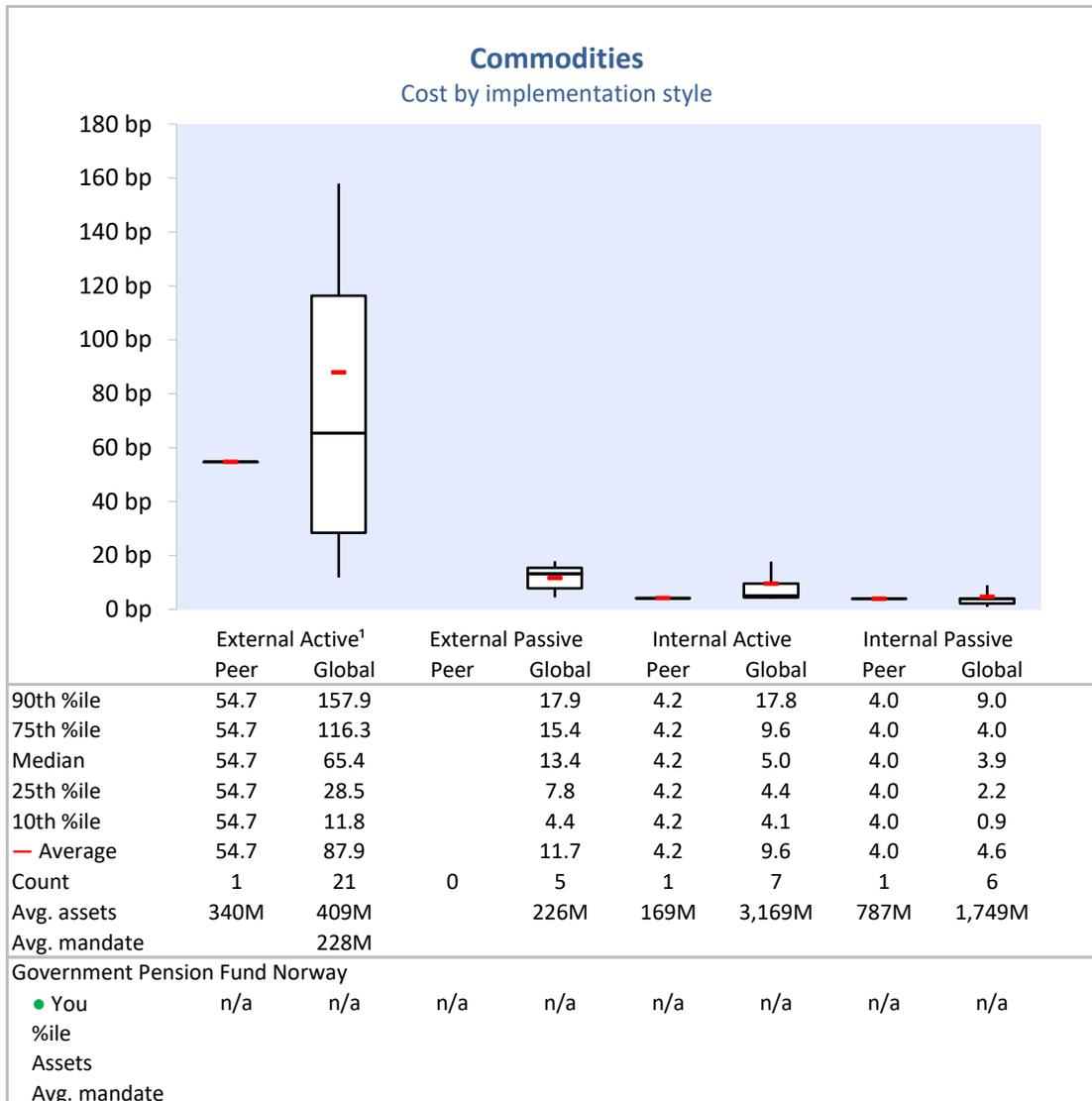
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 393.7 bps for peers (1 fund) and 393.7 bps for Global participants (1 fund).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	22.1	37.9
Performance fees*	n/a	n/a	9.9
Internal and other	<u>n/a</u>	<u>2.6</u>	<u>0.8</u>
Total	n/a	24.7	48.6

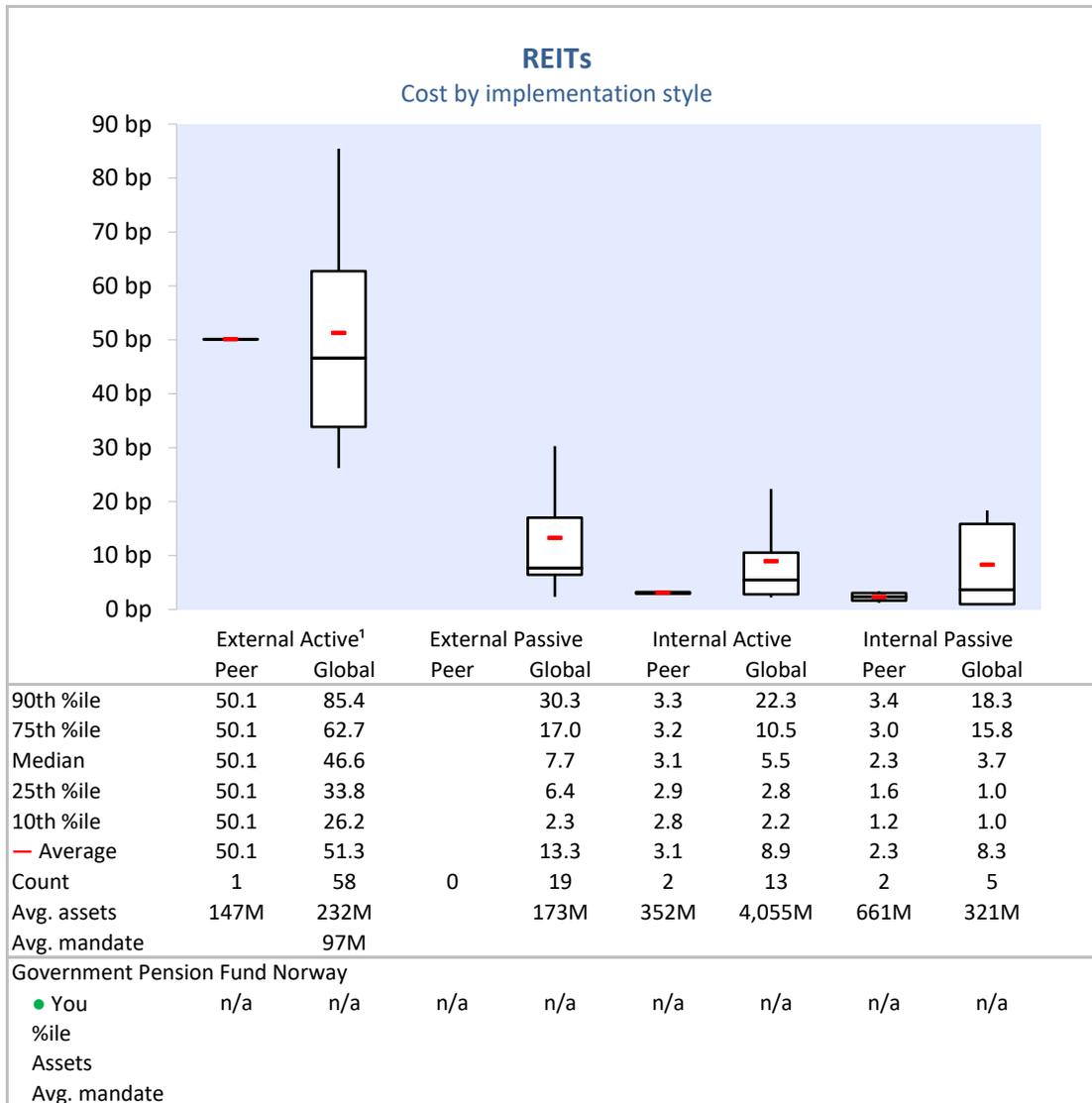
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 57.6 bps for Global participants (15 funds).



1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	53.0	76.7
Performance fees*	n/a	0.0	9.8
Internal and other	<u>n/a</u>	<u>1.7</u>	<u>1.4</u>
Total	n/a	54.7	87.9

* 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 22.9 bps for Global participants (9 funds).



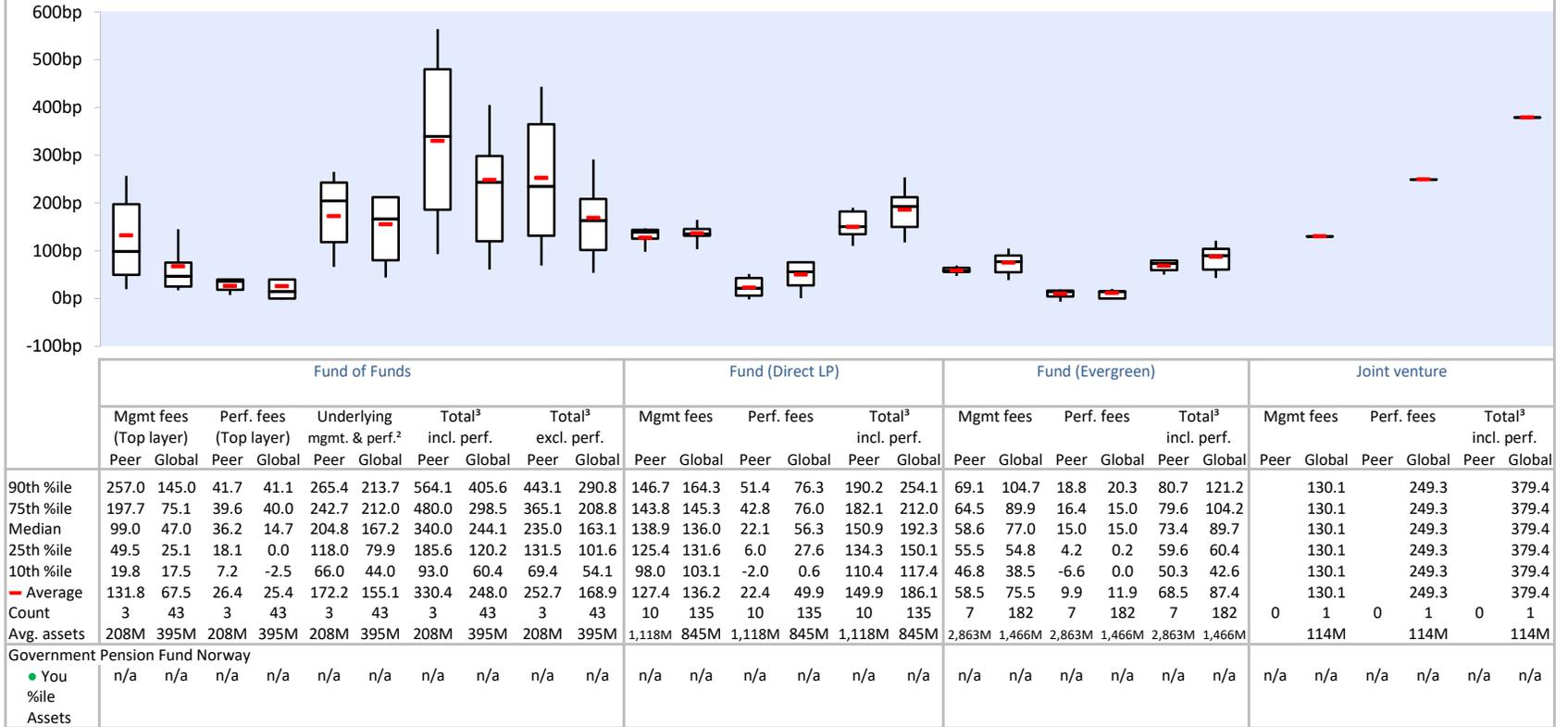
1. Breakdown of external active fees

	You	Peer Average	Global Average
Base fees	n/a	49.1	42.5
Performance fees*	n/a	n/a	6.1
Internal and other	<u>n/a</u>	<u>1.0</u>	<u>2.7</u>
Total	n/a	50.1	51.3

* 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 18.6 bps for Global participants (19 funds).

Real Estate

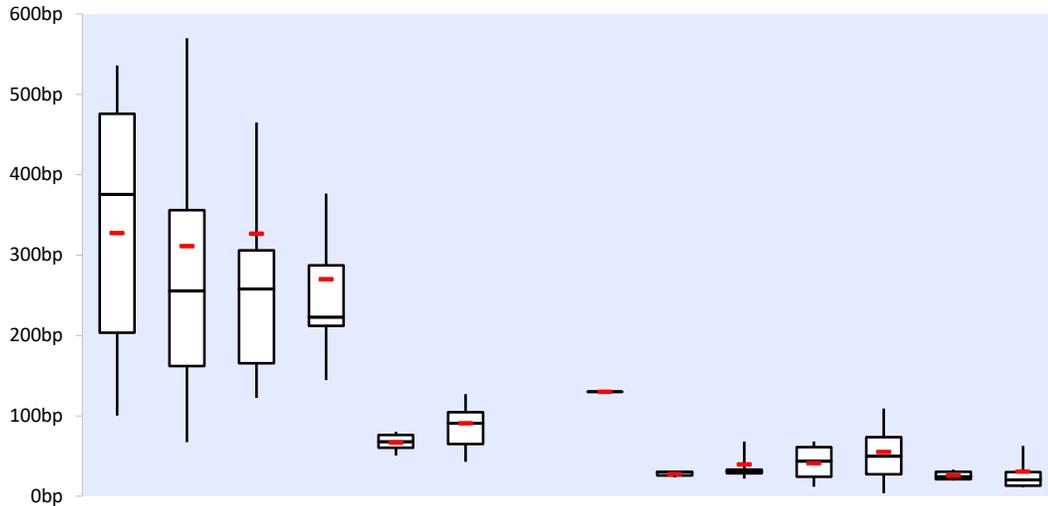
Cost as a % of the amount fees are based on¹



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 136 bps (on amount fees are based on) for underlying management fees and 69 bps (on NAV) for underlying performance fees were used.
 3. The total cost also includes the internal cost of monitoring and selecting real estate investments. The peer average cost of monitoring and selecting was 2.0 bps for fund of funds, 6.8 bps for LPs and 4.2

Real Estate - contd.

Cost as a % of NAV



	Fund of Funds		Fund (Direct LP)		Fund (Evergreen)		Joint venture		Oper. Sub.		Co-Inv.		Internal	
	Total ¹ incl. perf.		Total ¹ incl. perf.		Total ¹ incl. perf.		Total ¹ incl. perf.		Total ¹ incl. perf.		Total ¹ incl. perf.		Total	
	Peer	Global	Peer	Global										
90th %ile	535.8	569.9	464.8	376.4	79.9	126.9		130.1	30.6	68.0	68.2	109.3	33.2	62.7
75th %ile	475.8	356.1	305.7	287.0	76.2	104.5		130.1	30.4	33.1	60.8	73.4	30.3	30.1
Median	375.8	255.7	258.0	222.8	67.9	91.0		130.1	30.0	30.8	43.7	49.7	24.7	20.4
25th %ile	203.5	161.9	165.3	212.0	60.1	64.9		130.1	25.8	28.3	24.0	27.2	21.0	13.0
10th %ile	100.2	67.0	122.5	144.5	50.4	42.7		130.1	23.3	21.8	11.8	3.7	19.6	10.9
— Average	327.6	311.3	326.9	270.0	66.9	90.7		130.1	27.5	39.6	41.1	55.0	25.8	30.8
Count	3	43	10	135	7	182	0	1	3	12	4	28	6	39
Avg. assets	200M	336M	735M	638M	2,970M	1,397M		114M	5,621M	6,163M	336M	599M	4,519M	2,670M
Government Pension Fund Norway														
● You	n/a	n/a	n/a	n/a										
%ile														
Assets														

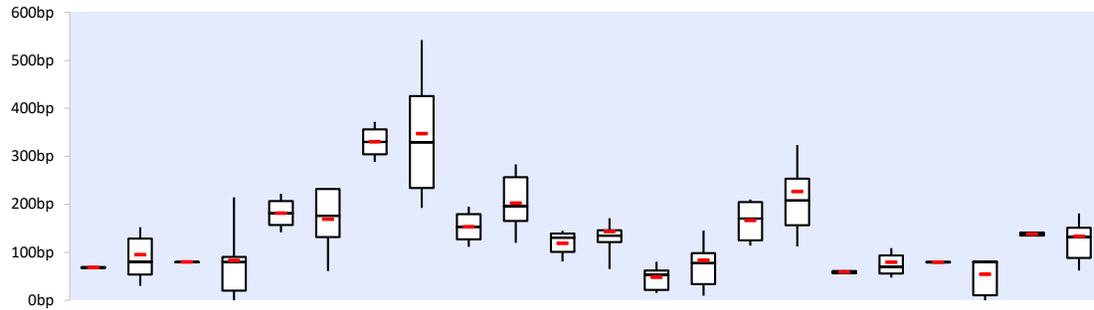
1. The total cost also includes the internal cost of monitoring and selecting real estate investments.

2. Co-investment is included with direct LPs because it can only be done alongside direct LPs. Co-investment is done by 4 of your peers and 23 of the Global funds.

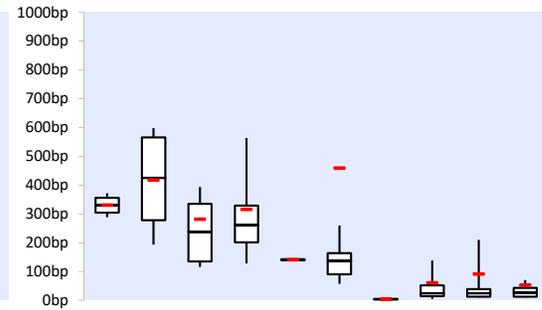
3. The total cost also includes the internal cost of monitoring and selecting real estate investments. Internal and other - FoFs The peer

Infrastructure

Cost as a % of the amount fees are based on¹



Cost as a % of NAV

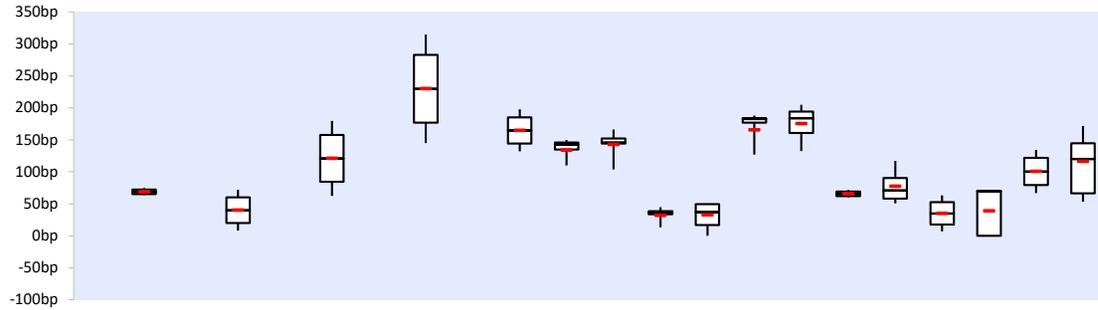


	Fund of Funds										Fund (Direct LP)						Fund (Evergreen)						Fund of Funds		Fund (Direct LP)		Fund (Evergreen)		Co-Inv.		Internal		
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.		Total ³ incl. perf.		Total		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	70.1	152.1	80.0	214.8	222.0	232.0	372.1	542.4	195.1	283.5	144.9	171.3	80.5	145.6	209.8	323.5	62.7	108.6	80.7	82.3	143.4	180.9	372.1	597.9	393.6	563.6	143.9	260.1	5.2	138.8	210.1	70.1	
75th %ile	69.5	128.4	80.0	90.3	206.9	232.0	356.4	425.6	179.4	256.7	138.9	146.0	62.1	98.1	204.9	253.4	61.2	93.5	80.2	81.0	141.5	151.0	356.4	565.7	335.2	328.8	142.8	163.6	4.7	52.1	38.5	42.8	
Median	68.5	80.6	80.0	80.0	181.8	176.2	330.3	329.2	153.3	196.1	130.9	135.0	53.5	78.0	170.6	208.6	58.9	70.0	79.5	80.1	138.3	132.3	330.3	425.6	237.6	261.2	140.9	137.2	4.0	24.8	24.5	26.4	
25th %ile	67.4	53.7	80.0	20.0	156.7	131.6	304.1	233.8	127.1	165.4	100.9	121.3	21.8	34.0	124.7	156.4	56.5	55.7	78.7	10.5	135.2	88.4	304.1	278.0	135.2	201.5	139.0	90.5	3.3	14.0	12.3	12.7	
10th %ile	66.8	30.3	80.0	0.0	141.7	60.9	288.4	192.4	111.4	119.5	81.0	65.4	15.6	9.6	114.1	112.4	55.0	47.4	78.3	0.0	133.3	61.9	288.4	193.5	115.8	127.8	137.9	57.3	2.9	4.6	9.7	9.9	
Average	68.5	95.2	80.0	83.3	181.8	168.9	330.3	347.4	153.3	202.4	118.6	143.3	47.8	83.5	166.4	226.8	58.9	79.4	79.5	54.1	138.3	133.5	330.3	418.3	281.5	316.0	140.9	459.1	4.0	60.9	90.9	52.5	
Count	2	29	2	29	2	29	2	29	2	29	10	114	10	114	10	114	2	55	2	55	2	55	2	29	2	29	2	55	2	28	8	29	
Avg. assets	104M	105M	104M	105M	104M	105M	104M	105M	104M	105M	513M	492M	513M	492M	513M	492M	2,530M	629M	2,530M	629M	2,530M	629M	104M	99M	374M	379M	2,444M	593M	204M	521M	3,527M	4,321M	
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	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	0M	0M																															

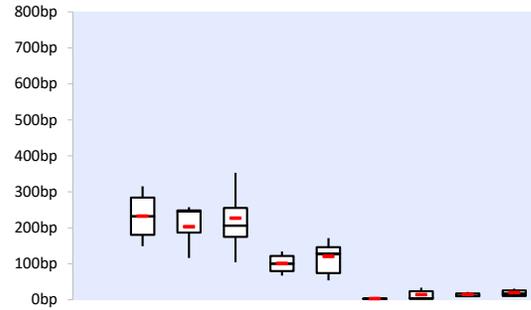
1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 85 bps (on amount fees are based on) for underlying management fees and 97 bps (on NAV) for underlying performance fees were used.
3. The total cost also includes the internal cost of monitoring and selecting infrastructure investments. The peer average cost of monitoring and selecting was 1.2 bps for fund of funds, 5.1 bps for LPs and 3.2 bps for external (not LPs). Some averages on the right chart may be off the chart where there is outlier data resulting from large base or performance fees divided by small NAV.

Natural Resources

Cost as a % of the amount fees are based on¹

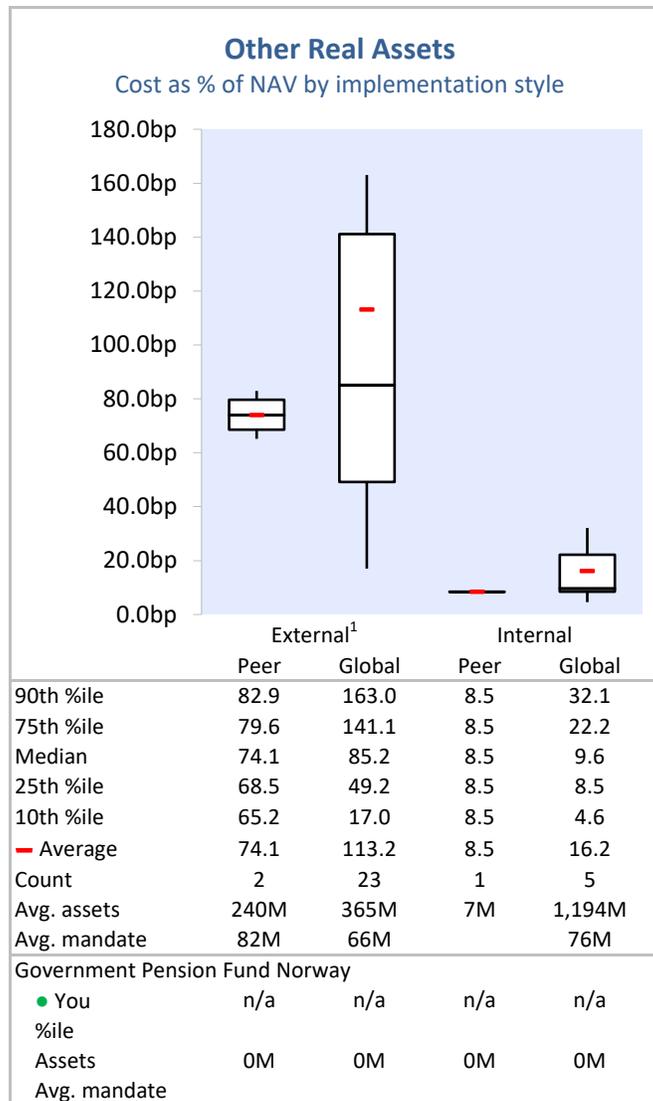


Cost as a % of NAV



	Fund of Funds										Fund (Direct LP)						Fund (Evergreen)						Fund of Funds		Fund (Direct LP)		Fund (Evergreen)		Co-Inv.		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.													
	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	74.5	72.0	179.4	314.5	197.5	149.5	166.4	44.9	50.0	187.7	204.6	71.3	117.2	63.0	70.0	134.3	171.6	315.0	257.1	352.9	134.3	171.3	3.7	33.9	21.5	30.6								
75th %ile	72.4	60.0	157.5	282.7	185.2	145.7	152.1	38.4	49.6	183.7	194.0	69.1	90.5	52.5	70.0	121.6	144.7	283.9	248.0	255.1	121.6	146.4	3.4	23.9	17.4	25.6								
Median	68.8	40.0	121.0	229.8	164.8	143.1	145.7	37.2	37.2	182.9	184.0	65.6	71.0	35.0	70.0	100.6	120.2	232.0	246.1	205.9	100.6	127.8	2.9	4.5	10.4	16.5								
25th %ile	65.3	20.0	84.5	176.8	144.3	134.6	144.0	33.6	16.6	176.7	160.6	62.0	58.1	17.5	0.0	79.5	66.2	180.2	186.9	174.5	79.5	74.2	2.3	2.9	10.3	10.4								
10th %ile	63.1	8.0	62.6	145.1	132.1	110.1	103.5	13.4	0.0	126.9	132.4	59.9	50.7	7.0	0.0	66.9	53.5	149.1	115.9	104.3	66.9	53.9	2.0	1.1	10.3	8.5								
Average	68.8	40.0	121.0	229.8	164.8	133.8	142.6	31.7	32.5	165.5	175.2	65.6	77.2	35.0	38.9	100.6	116.1	232.0	202.6	226.4	100.6	120.1	2.9	13.7	15.0	19.8								
Count	0	2	0	2	0	2	0	2	0	2	0	2	5	47	5	47	5	47	2	23	2	23	2	23	2	23	2	7	3	12				
Avg. assets	17M	17M	17M	17M	17M	346M	513M	346M	513M	346M	513M	483M	170M	483M	170M	483M	170M	483M	17M	288M	384M	483M	162M	56M	597M	644M	1,775M							
Government Pension Fund Norway	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			
You %ile 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	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 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. The total cost also includes the internal cost of monitoring and selecting natural resource investments. The peer average cost of monitoring and selecting was 5.5 bps for LPs and 6.9 bps for external (not LPs).



1. Breakdown of external fees

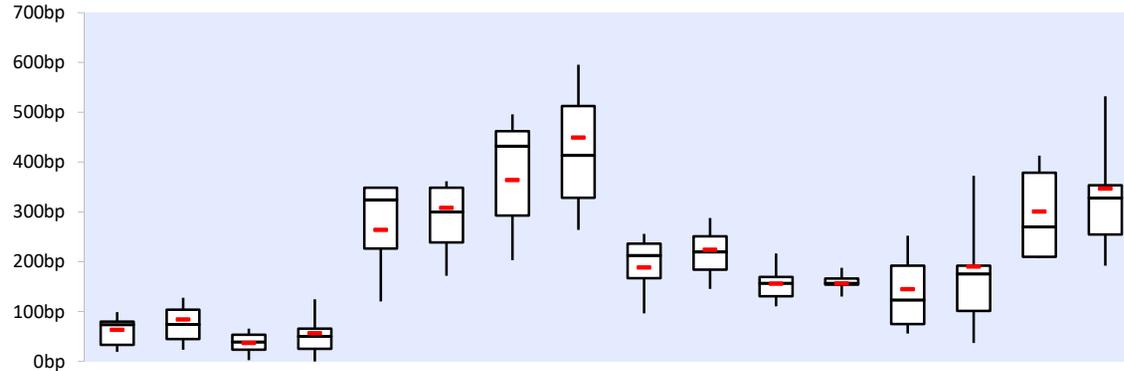
	Your Plan	Peer Average	Global Average
Base fees	n/a	40.7	107.5
Internal and other	n/a	33.4	13.1
Total*	n/a	74.1	113.2
Performance fees**	n/a	8.7	26.2

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

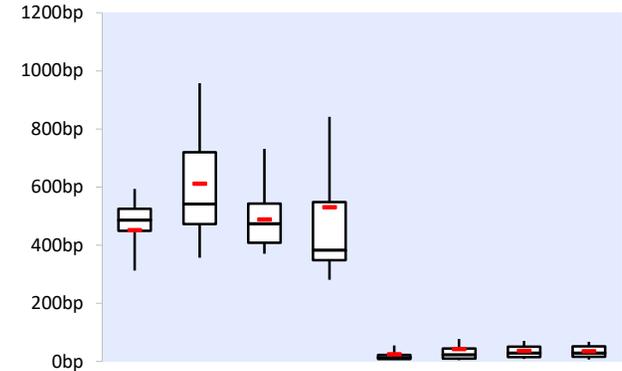
** For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 8.7 bps for peers (2 funds) and 26.2 bps for Global participants (23 funds).

Diversified Private Equity

Cost as a % of the amount fees are based on¹



Cost as a % of NAV



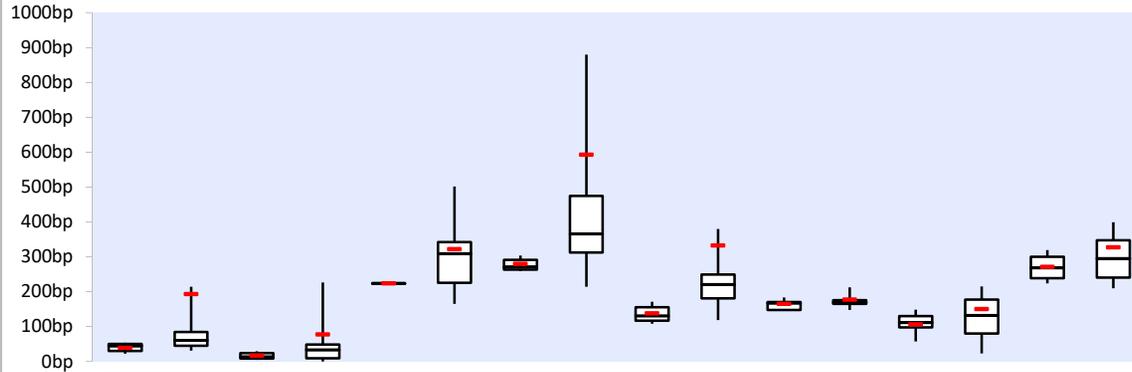
	Fund of Funds										Direct LP					
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	99.0	127.9	66.0	124.5	349.0	361.6	496.2	595.5	256.0	287.7	216.9	188.2	252.5	372.5	413.3	532.2
75th %ile	79.7	103.7	53.6	66.0	349.0	349.0	462.0	512.7	236.7	251.0	169.8	166.2	192.0	192.0	379.1	353.9
Median	73.7	74.5	39.4	50.7	324.8	300.2	432.5	413.7	213.3	220.1	157.2	157.0	123.4	175.7	270.5	328.4
25th %ile	33.6	45.2	23.6	25.5	226.6	239.0	293.0	328.4	166.8	184.6	130.9	154.1	75.3	101.3	210.0	254.6
10th %ile	19.0	23.8	2.7	0.0	120.4	171.7	203.2	264.2	96.4	145.4	110.7	130.3	56.0	36.8	207.5	192.0
Average	63.4	84.5	36.8	56.9	264.2	308.0	364.3	449.4	188.6	224.3	155.9	156.8	145.1	190.1	301.0	346.9
Count	8	126	8	126	8	126	8	126	8	126	12	163	12	163	12	163
Avg. assets	379M	527M	379M	527M	379M	527M	379M	527M	379M	527M	3,698M	2,138M	3,698M	2,138M	3,698M	2,138M
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

	Fund of Funds		Direct LP		Co-Investment		Internal	
	Total ³ incl. perf.		Total ³ incl. perf.		Total incl. perf.		Total	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	593.1	957.4	731.2	841.6	54.7	77.6	70.4	67.2
75th %ile	525.3	719.8	543.0	548.0	22.8	44.3	50.8	51.3
Median	486.7	542.4	474.7	382.7	13.5	23.1	29.3	29.6
25th %ile	449.2	472.6	408.5	349.0	8.4	9.6	14.6	16.1
10th %ile	312.2	357.4	370.7	281.5	5.3	4.5	8.8	6.5
Average	451.3	611.1	487.9	530.4	24.8	42.6	36.2	34.8
Count	8	126	12	163	5	35	6	19
Avg. assets	275M	447M	2,401M	1,629M	1,025M	1,227M	1,891M	3,851M
● You %ile	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

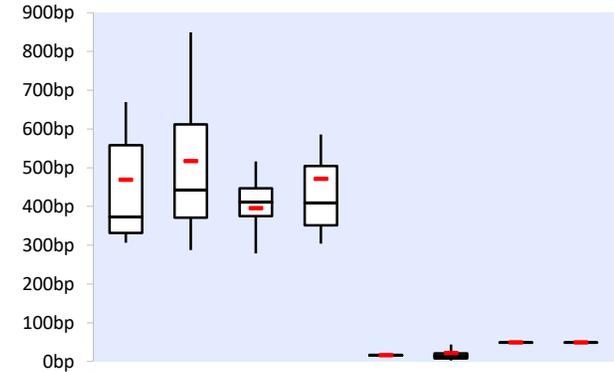
- The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 157 bps (on amount fees are based on) for underlying management fees and 192 bps (on NAV) for underlying performance fees were used.
- The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 3.6 bps for fund of funds.

LBO

Cost as a % of the amount fees are based on¹



Cost as a % of NAV



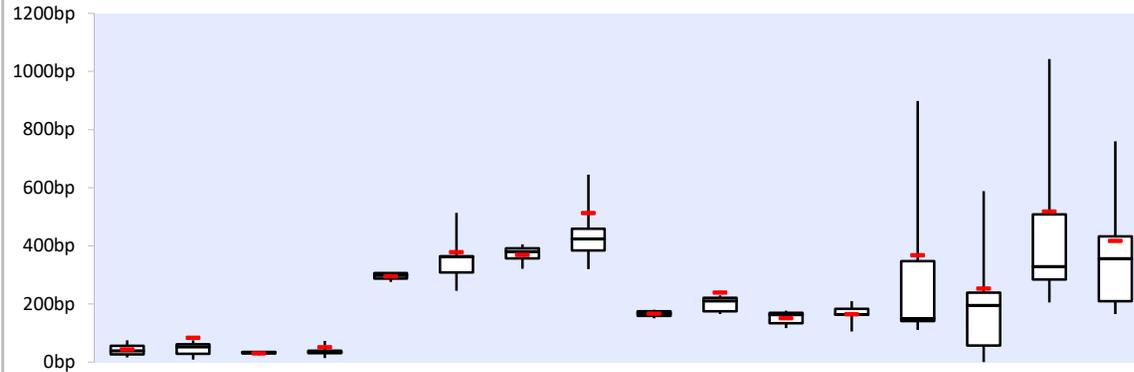
	Fund of Funds										Direct LP					
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. & perf. ²		Total ³ incl. perf.		Total ³ excl. perf.		Mgmt fees		Perf. fees		Total ³ incl. perf.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	53.8	214.6	29.5	226.4	225.5	501.3	303.9	879.9	171.0	379.6	183.7	212.1	148.7	215.5	319.6	398.7
75th %ile	50.4	84.1	23.6	48.6	224.9	342.0	291.7	474.7	155.8	249.1	170.0	175.8	129.8	177.0	299.8	347.0
Median	44.9	61.0	13.8	33.4	223.9	310.0	271.6	365.9	130.6	220.9	167.7	169.2	111.6	132.5	268.8	295.7
25th %ile	30.5	44.9	8.3	9.5	223.2	225.9	263.7	311.9	116.8	181.1	147.9	165.0	97.2	79.7	238.7	240.9
10th %ile	21.8	31.2	5.0	0.0	222.8	165.0	258.9	214.6	108.5	118.3	145.1	147.9	57.4	23.3	224.1	209.9
Average	39.0	193.4	16.7	77.4	224.1	321.9	279.7	592.8	138.2	332.5	165.4	177.4	106.1	150.1	271.5	327.6
Count	3	17	3	17	3	17	3	17	3	17	8	40	8	40	8	40
Avg. assets	468M	339M	468M	339M	468M	339M	468M	339M	468M	339M	3,106M	2,888M	3,106M	2,888M	3,106M	2,888M
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

Fund of Funds		Direct LP		Co-Investment		Internal	
Total ³ incl. perf.		Total ³ incl. perf.		Total incl. perf.		Total	
Peer	Global	Peer	Global	Peer	Global	Peer	Global
669.1	849.3	516.0	585.5	16.7	43.7	49.6	49.6
558.2	611.7	446.5	504.7	16.5	21.1	49.6	49.6
373.3	443.0	411.0	409.4	16.2	14.1	49.6	49.6
331.6	370.8	375.1	351.0	15.9	7.8	49.6	49.6
306.5	287.3	278.6	303.9	15.7	2.5	49.6	49.6
468.7	517.3	395.5	471.6	16.2	21.9	49.6	49.6
3	17	8	40	2	10	1	1
346M	235M	1,883M	1,970M	945M	727M	126M	126M
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
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 75 bps (on amount fees are based on) for underlying management fees and 177 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 3.2 bps for fund of funds.

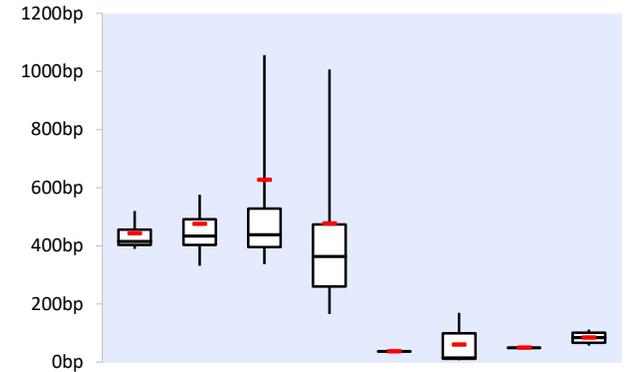
Venture Capital

Cost as a % of the amount fees are based on¹



	Fund of Funds										Direct 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.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	74.4	75.1	34.6	72.6	308.4	513.7	405.4	644.6	179.6	229.9	177.4	209.6	898.3	588.1	1042.7	759.1
75th %ile	56.3	61.3	34.5	39.2	306.3	363.9	391.8	459.1	175.0	221.0	170.0	183.6	347.3	238.7	508.2	432.9
Median	39.2	52.7	33.7	35.0	299.4	363.0	380.4	423.8	168.3	210.7	163.6	164.7	150.8	196.1	328.9	357.2
25th %ile	26.5	28.9	29.2	30.7	287.3	308.7	356.5	384.4	159.1	174.7	133.8	162.7	140.8	57.4	284.5	209.5
10th %ile	16.3	8.7	22.8	13.3	276.1	245.2	320.5	320.1	150.2	165.0	116.8	105.0	110.2	0.0	205.0	165.0
Average	43.6	83.1	30.1	50.9	294.3	378.1	368.0	512.1	165.9	239.3	150.9	164.5	367.3	252.4	518.2	416.9
Count	4	24	4	24	4	24	4	24	4	24	8	43	8	43	8	43
Avg. assets	311M	220M	311M	220M	311M	220M	311M	220M	311M	220M	533M	505M	533M	505M	533M	505M
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

Cost as a % of NAV



Fund of Funds		Direct LP		Co-Investment		Internal	
Total ³ incl. perf.		Total ³ incl. perf.		Total incl. perf.		Total	
Peer	Global	Peer	Global	Peer	Global	Peer	Global
519.3	576.0	1056.2	1006.5	36.7	169.2	49.6	111.4
455.6	491.7	528.1	473.5	36.7	99.1	49.6	101.1
415.1	433.4	439.1	363.6	36.7	15.0	49.6	83.9
402.8	403.3	395.3	260.2	36.7	11.3	49.6	66.7
389.6	331.2	337.1	165.0	36.7	6.9	49.6	56.4
443.2	475.6	627.1	476.6	36.7	59.7	49.6	83.9
4	24	8	43	1	7	1	2
311M	220M	434M	425M	123M	96M	65M	369M
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0M	0M	0M	0M	0M	0M	0M	0M

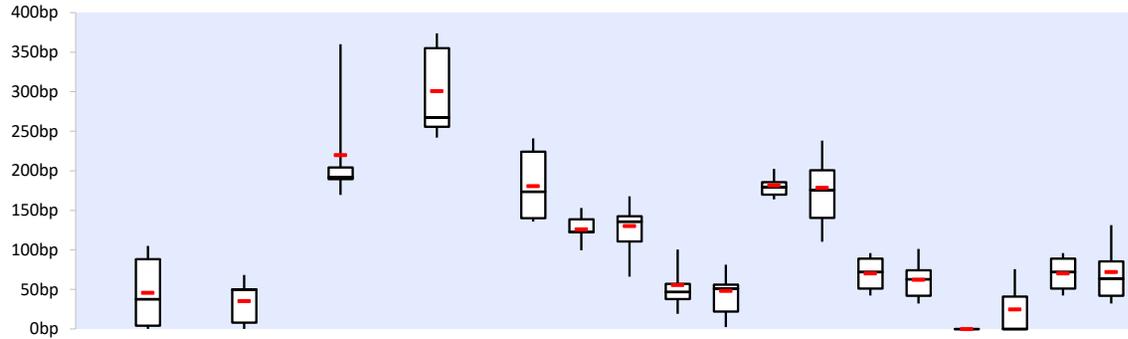
1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.

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 115 bps (on amount fees are based on) for underlying management fees and 200 bps (on NAV) for underlying performance fees were used.

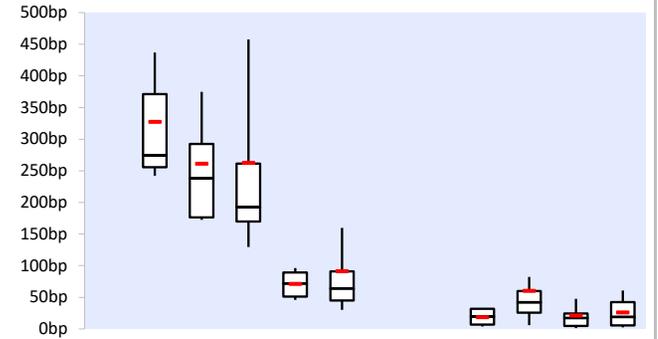
3. The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 3.1 bps for fund of funds.

Private Credit

Cost as a % of the amount fees are based on¹



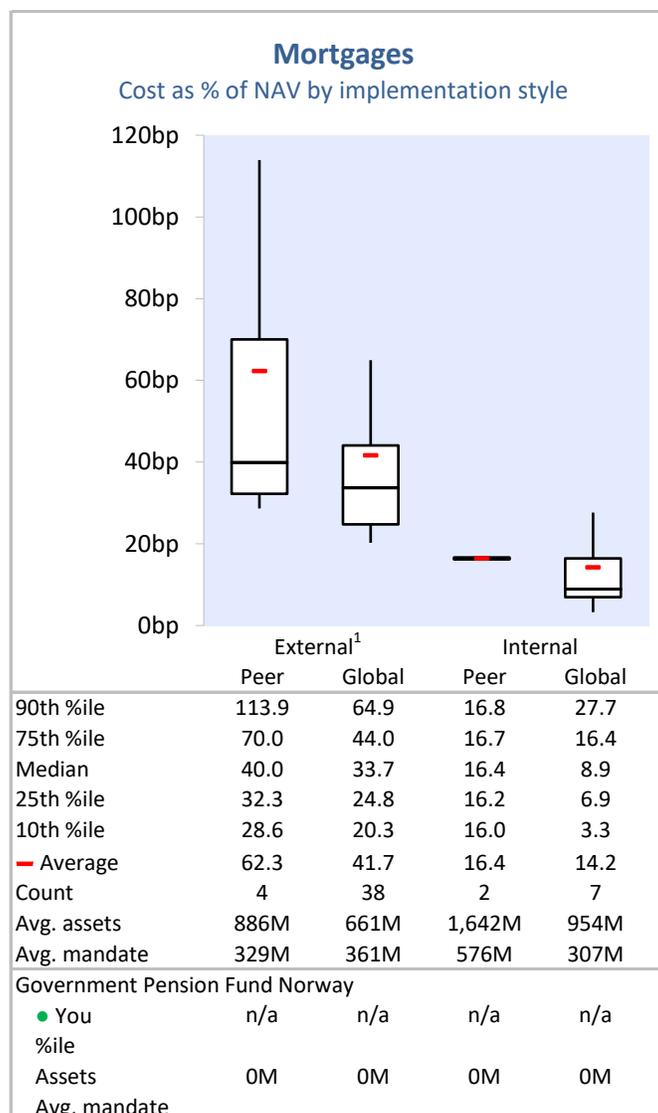
Cost as a % of NAV



	Fund of Funds										Direct LP						Evergreen							
	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		
90th %ile	105.0	68.3	360.0	373.8	241.0	153.1	167.8	100.4	81.3	202.2	238.2	96.1	101.3	0.0	75.5	96.1	131.2							
75th %ile	88.3	50.0	204.1	355.1	224.3	138.7	142.6	57.0	56.0	185.5	200.5	89.0	74.3	0.0	41.0	89.0	85.5							
Median	37.8	50.0	192.0	267.6	173.8	122.7	136.0	46.8	51.0	179.7	175.9	72.1	63.0	0.0	0.0	72.1	63.8							
25th %ile	4.1	7.9	189.3	255.7	140.1	122.6	110.8	37.7	21.9	169.7	140.4	51.1	41.9	0.0	0.0	51.1	41.9							
10th %ile	0.0	0.0	169.6	242.0	136.0	99.5	66.2	19.2	2.5	164.0	110.1	42.4	32.3	0.0	0.0	42.4	32.3							
Average	45.7	35.2	220.0	300.9	180.7	126.2	130.2	55.5	48.4	181.7	178.6	70.2	62.4	0.0	24.7	70.2	72.2							
Count	0	11	0	11	0	11	0	11	0	11	0	11	5	104	5	104	5	104	6	66	2	26	6	66
Avg. assets	62M	62M	62M	62M	62M	2,093M	606M	2,093M	606M	2,093M	606M	1,090M	435M	3,270M	1,104M	1,090M	435M							
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	n/a	

	Fund of Funds		Direct LP		Evergreen		Oper. Sub.		Co-Inv.		Internal		
	Total ³ incl. perf.		Total ³ incl. perf.		Total ³ incl. perf.		Total		Total 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	
90th %ile	436.8	374.9	457.6	96.1	159.5					32.1	82.4	47.5	60.8
75th %ile	371.2	292.4	261.5	89.0	91.2					31.9	59.9	24.5	42.4
Median	274.4	238.1	193.1	72.1	64.1					20.0	42.3	17.5	19.1
25th %ile	255.7	176.5	169.7	51.2	44.8					6.8	25.9	4.8	5.6
10th %ile	242.0	172.4	129.6	45.8	30.0					4.0	5.8	1.3	2.6
Average	327.4	261.3	262.7	71.3	91.3					18.6	60.4	21.2	26.4
Count	0	11	5	104	6	66	0	0	4	12	9	22	
Avg. assets	59M	1,636M	490M	1,086M	431M					218M	256M	969M	1,328M
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

- 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 real estate investments. The peer average cost of monitoring and selecting was 7.5 bps for LPs and 12.0 bps for external (not LPs).



1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	60.4	38.5
Internal and other	<u>n/a</u>	<u>1.9</u>	<u>2.9</u>
Total*	n/a	62.3	41.7
Performance fees**	n/a	0.0	3.8

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

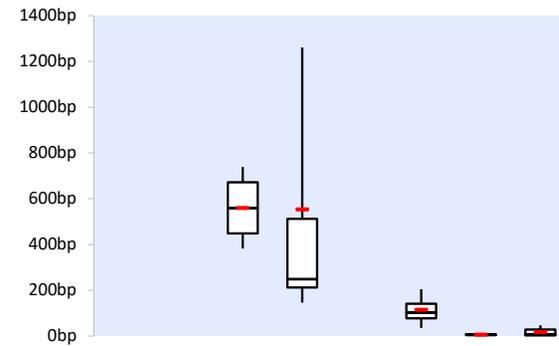
** For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 8.7 bps for peers (2 funds) and 26.2 bps for Global participants (23 funds).

Other Private Equity

Cost as a % of the amount fees are based on¹



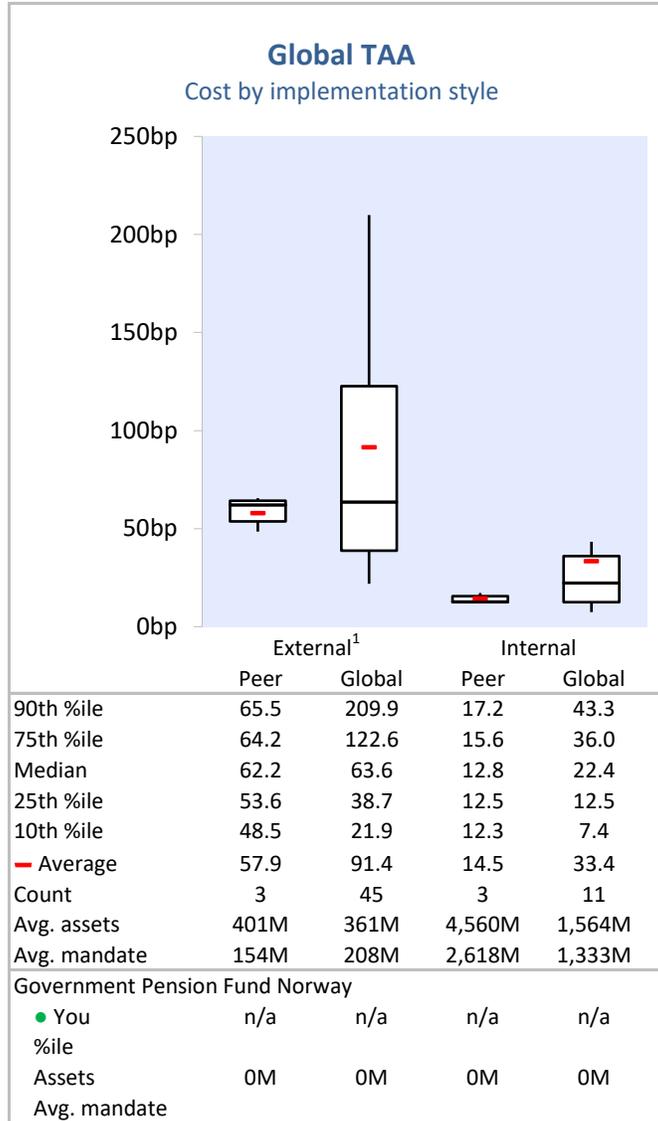
Cost as a % of NAV



	Fund of Funds										Direct 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.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
	Total ³ incl. perf.		Total ³ incl. perf.		Total incl. perf.		Total		Total		Total ³ incl. perf.		Total incl. perf.		Total	
90th %ile																
75th %ile																
Median																
25th %ile																
10th %ile																
— Average																
Count	0	0	0	0	0	0	0	0	0	0	2	24	2	24	2	24
Avg. assets											676M	942M	676M	942M	676M	942M
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

	Fund of Funds		Direct LP		Co-Investment		Internal		
	Total ³ incl. perf.		Total ³ incl. perf.		Total incl. perf.		Total		
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	
	Total		Total		Total		Total		
			738.9	1260.9			205.2	9.4	47.2
			672.1	512.5			141.1	8.2	28.1
			560.7	249.4			103.3	6.3	7.6
			449.2	212.1			77.7	4.3	2.9
			382.4	146.2			35.7	3.1	1.6
			560.7	554.5			115.6	6.3	18.2
0	0		2.0	24	0	4	2	10	
			563M	615M		242M	203M	887M	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
0M	0M	0M	0M	0M	0M	0M	0M	0M	0M

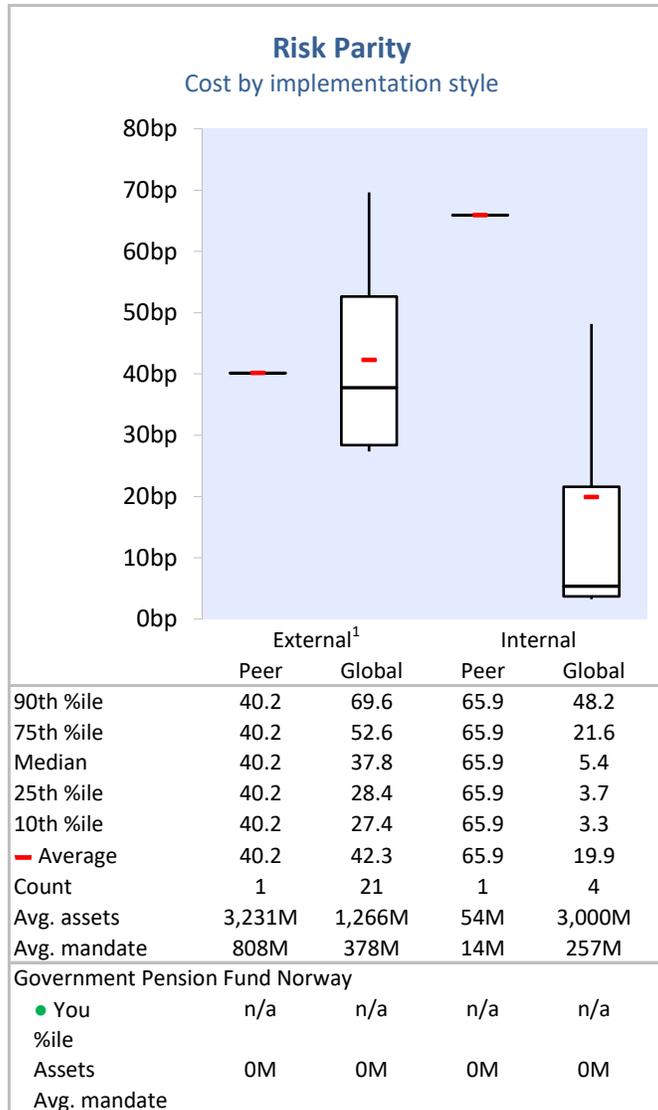
1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
 2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 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.



1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	55.8	77.1
Internal and other	<u>n/a</u>	<u>2.1</u>	<u>4.9</u>
Performance fees	n/a	0.0	16.8
Total*	n/a	57.9	91.4

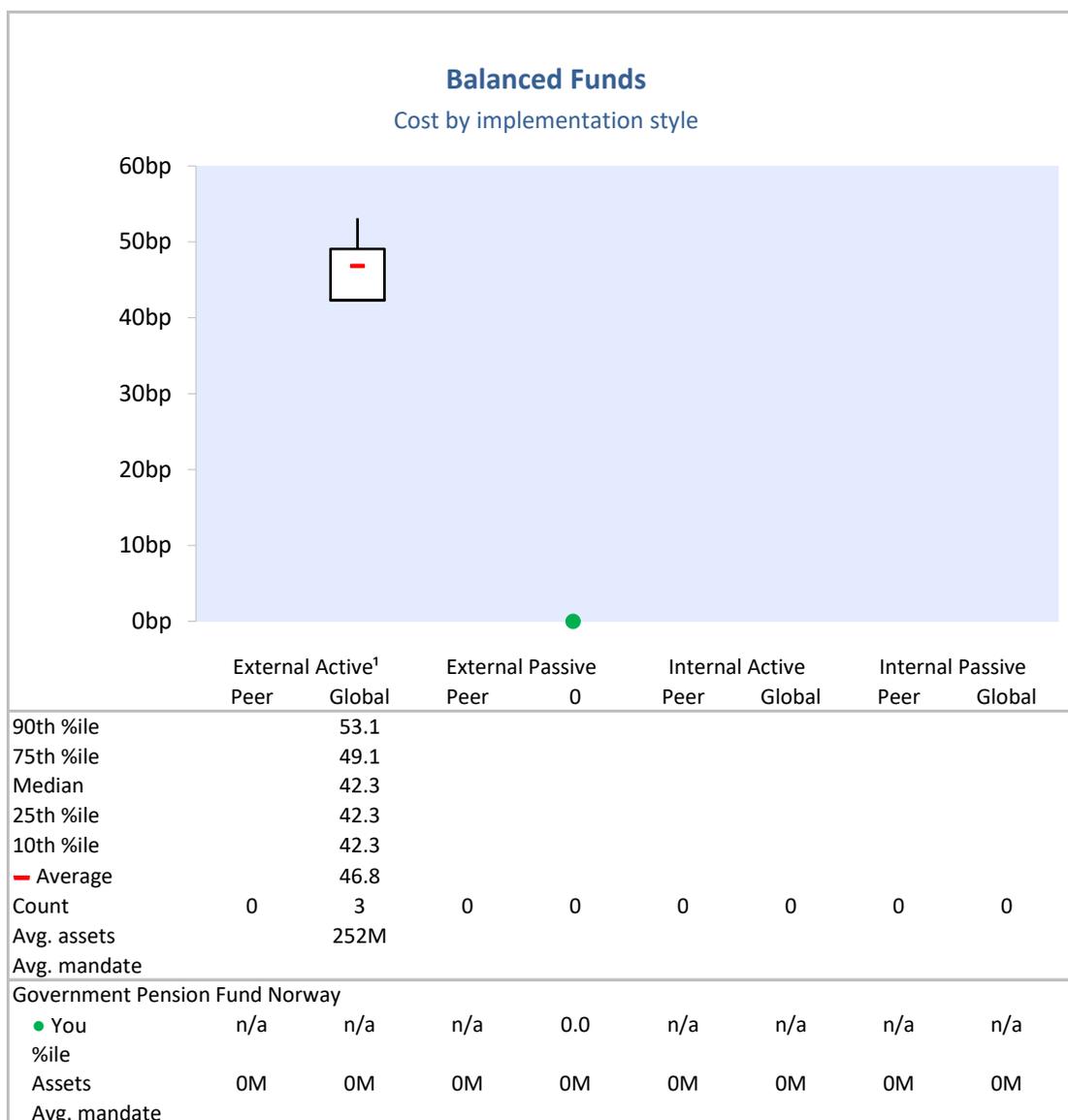
* For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for those funds that reported a performance fee is 0.0 bps for peers (2 funds) and 16.8 bps for Global participants (33 funds).



1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	39.5	39.3
Internal and other	<u>n/a</u>	<u>0.7</u>	<u>2.0</u>
Performance fees	n/a	0.0	3.1
Total*	n/a	40.2	42.3

* 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 3.1 bps for Global participants (14 funds).



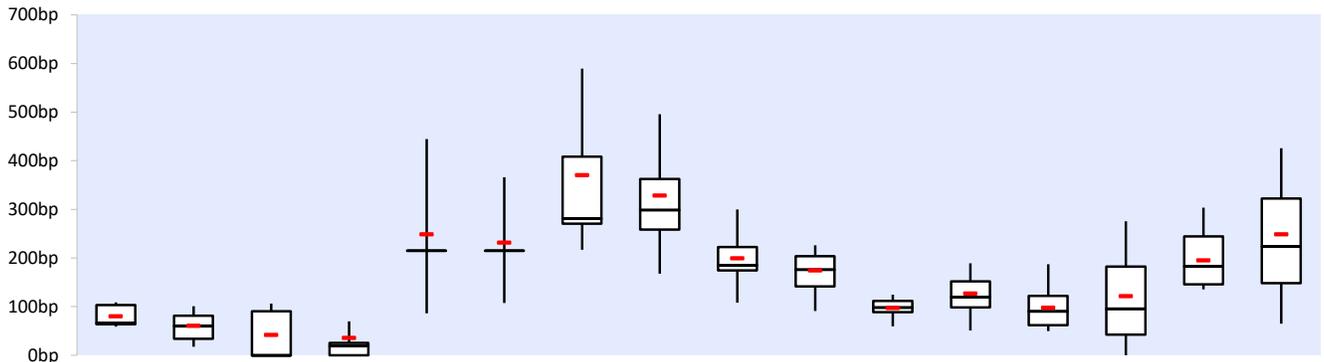
1. Breakdown of external fees

	Your Plan	Peer Average	Global Average
Base fees	n/a	n/a	46.8
Internal and other	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>
Performance fees	n/a	n/a	0.0
Total*	n/a	n/a	46.8

* 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 Global participants (3 funds).

Hedge Funds

Cost by implementation style

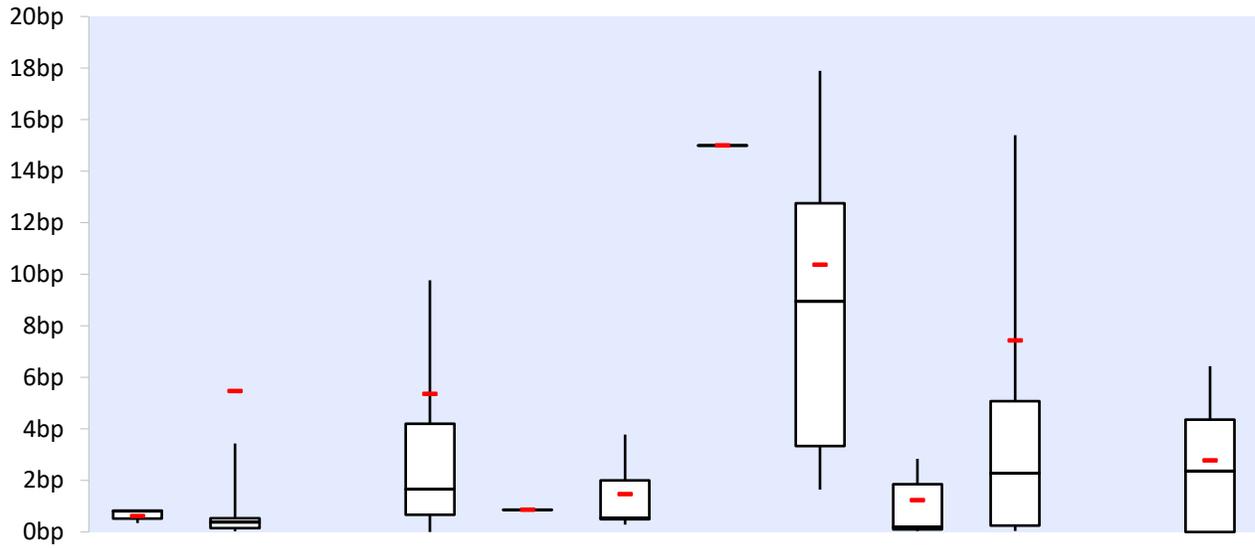


	Fund of Funds										External Direct					
	Mgmt fees (Top layer)		Perf. fees (Top layer)		Underlying mgmt. and perf. ¹		Total ² incl. perf.		Total ² excl. perf.		Mgmt fees		Perf. fees		Total ² incl. perf.	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	108.5	101.1	106.5	70.0	444.9	366.5	589.5	495.6	300.1	226.3	124.6	189.2	187.5	275.4	303.4	425.6
75th %ile	103.3	81.5	90.2	25.3	215.0	215.0	408.5	362.7	222.3	203.5	112.1	151.9	121.9	182.1	244.3	322.6
Median	66.3	59.9	0.0	19.1	215.0	215.0	281.3	298.9	185.3	176.1	98.2	119.6	90.3	96.0	183.3	224.1
25th %ile	63.6	34.1	0.0	0.0	215.0	215.0	270.7	258.3	174.7	141.9	88.7	98.5	62.1	42.5	146.1	148.2
10th %ile	58.8	17.7	0.0	0.0	86.0	107.5	216.9	167.9	108.0	90.9	59.3	51.1	49.9	0.0	135.5	64.9
— Average	80.2	60.9	41.5	35.8	248.6	231.9	370.3	328.7	199.6	174.5	97.5	127.2	97.9	121.5	195.4	248.7
Count	5	66	5	66	5	66	5	66	5	66	10	119	10	119	10	119
Avg. assets	222M	645M	222M	645M	222M	645M	222M	645M	222M	645M	2,965M	1,655M	2,965M	1,655M	2,965M	1,655M
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 119 bps (on NAV) for underlying management fees and 96 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 2.8 bps for fund of

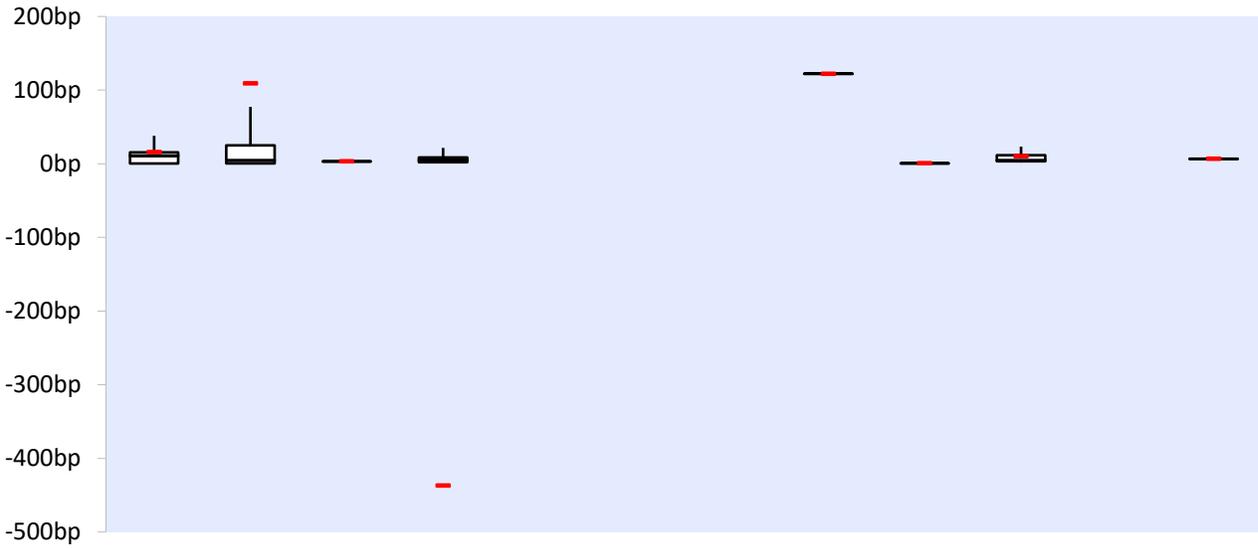
Overlays: currency, duration Cost by implementation style



	Currency Hedge		Discretionary Currency		Duration Management							
	Internal		External		Internal		External		Internal		External	
	% of notional		% of notional		% of notional		% of notional		% of notional		% of notional	
	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global	Peer	Global
90th %ile	0.8	3.4		9.8	0.9	3.8	15.0	17.9	2.8	15.4		6.4
75th %ile	0.8	0.5		4.2	0.9	2.0	15.0	12.8	1.9	5.1		4.4
Median	0.8	0.4		1.7	0.9	0.5	15.0	8.9	0.2	2.3		2.4
25th %ile	0.5	0.1		0.7	0.9	0.5	15.0	3.3	0.1	0.2		0.0
10th %ile	0.3	0.0		0.0	0.9	0.3	15.0	1.6	0.0	0.0		0.0
— Average	0.6	5.5		5.4	0.9	1.5	15.0	10.4	1.2	7.4		2.8
Count	3	20	0	38	1	7	1	16	3	10	0	24
Avg. notional	12,457M	11,741M		1,418M	1,108M	259,834M	1,280M	1,276M	3,909M	8,569M		4,922M
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	2,007M	2,007M							9,211M	9,211M		

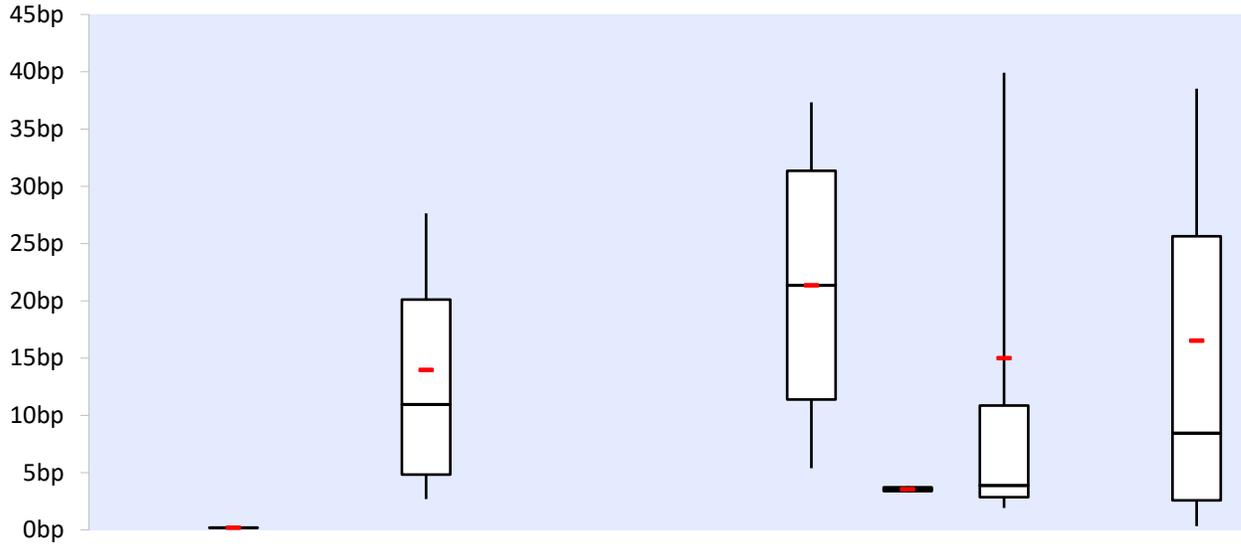
Overlays: passive beta/rebalancing, global TAA, policy tilt TAA

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	37.8	77.3	3.2	21.6				122.4	0.8	23.2		7.0
75th %ile	15.6	24.9	3.2	8.7				122.4	0.8	11.8		7.0
Median	11.2	4.8	3.2	5.0				122.4	0.8	4.8		7.0
25th %ile	0.5	0.5	3.2	2.3				122.4	0.8	3.3		7.0
10th %ile	0.4	0.1	3.2	0.9				122.4	0.8	1.8		7.0
— Average	16.1	109.1	3.2	-437.0				122.4	0.8	10.3		7.0
Count	5	12	1	33	0	0	0	1	1	4	0	1
Avg. notional	6,934M	5,749M	9,932M	1,345M				1,938M	27,123M	6,899M		77M
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 Peer	% of notional Global										
90th %ile		0.2		27.6				37.3	3.8	39.9		38.5
75th %ile		0.2		20.1				31.4	3.7	10.9		25.6
Median		0.2		11.0				21.4	3.5	3.9		8.5
25th %ile		0.2		4.8				11.4	3.4	2.9		2.6
10th %ile		0.2		2.7				5.4	3.3	1.9		0.3
— Average		0.2		14.0				21.4	3.5	15.0		16.5
Count	0	1	0	4	0	0	0	2	2	9	0	15
Avg. notional		2,259M		821M				2,598M	4,431M	1,565M		793M
Government Pension Fund Norway												
● You	n/a	n/a										
%ile												
Avg. notional												

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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	2020	2019	2018	2017	2016
Survey Preparer	Jørn Terje Krekling	Jørn Terje Krekling	Jørn Terje Krekling	Rune Møien	Rune Møien
Additional Contact	Jørn Nilsen	Jørn Nilsen	Jørn Nilsen	Jørn Nilsen	Jørn Nilsen
Type of fund (corporate, public, other)	Public	Public	Public	Public	Public
Total fund size (€mils) as at December 31	27,892.0	27,245.0	24,165.0	23,918.0	23,380.0
Asset-class level holdings provided on survey are: year end or average?	Year End	Year End	Average	Average	Year End
Total return for year ended	8.80%	12.42%	-0.36%	13.25%	7.06%
Is the return net or gross?	Gross	Gross	Gross	Gross	Gross
Total fund policy or benchmark return	7.91%	12.02%	-1.12%	12.79%	5.89%

Ancillary Data	2020	2019	2018	2017	2016
What is your hedging policy for: Foreign non-U.S. Holdings?					
What were your actuarial fees in 000s?					
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					
What % of the plan's liabilities pertain to retired members?					
Actuarial valuation assumptions for funding purposes: Liability discount rate Salary progression rate					
What was your actuarial assumption for expected rate of return?					

Appendix A - Data Summary: Policy Weights and Benchmarks

Government Pension Fund Norway

Asset Class	Year	Policy Weight	Benchmark	
			Description	Return
Stock - Europe	2020	65.1	CMVINXBXINN - Custom Index 15 % - OSEBX 85 %	8.2
	2019	62.0	CMVINXBXINN - Custom Index 15 % - OSEBX 85 %	17.7
	2018	59.0	CMVINXBXINN - Custom Index - OSEBX	-2.6
	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
	2014	58.1	CMVINXBXINN - Custom Index - OSEBX	7.4
	2013	62.8	CMVINXBXINN - Custom Index, OSEBX	26.3
	2012	62.4	CMVINXBXINN - Custom Index, OSEBX	15.3
	2011	60.7	CMVINXBXINN - Custom Index, OSEBX	-13.0
Fixed Income - Europe	2020	34.9	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Clobal Agreegated Norway ex. treasuries Barclays Capital Treasuries Norway	4.9
	2019	38.0	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Clobal Agreegated Norway ex. treasuries Barclays Capital Treasuries Norway	3.8
	2018	41.0	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Clobal Agreegated Norway ex. treasuries Barclays Capital Treasuries Norway	1.0
	2017	35.5	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Clobal Agreegated Norway ex. treasuries Barclays Capital Treasuries Norway	2.9
	2016	38.9	Barclays Capital Global Aggregate Nordic ex Norway Custom Index 30% 70% Barclays Capital Clobal Agreegated 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 Clobal Agreegated Norway ex. treasuries Barclays Capital Treasuries Norway	2.7
	2014	41.9	Barclays Capital Global Aggregate Nordic ex Norway Custom Index - 70% Barclays Capital Clobal Agreegated Norway ex. treasuries - 30% Barclays Capital Treasuries Norway	9.2
	2013	37.2	Barclays Capital Global Aggregate Nordic ex Norway Custom Index, 70% Barclays Capital Clobal Agreegated Norway ex. treasuries 30% Barclays Capital Treasuries Norway	2.5
	2012	37.6	Barclays Capital Global Aggregate Nordic ex Norway Custom Index, 70% Barclays Capital Clobal Agreegated Norway ex. treasuries 30% Barclays Capital Treasuries Norway	6.7
	2011	39.3	Barclays Capital Global Aggregate Nordic ex Norway Custom Index, 70% Barclays Capital Clobal Agreegated Norway ex. treasuries 30% Barclays Capital Treasuries Norway	6.5
Cash	2020			
	2019			

Appendix A Data Summary - Assets, Returns and Costs: Public Market

Government Pension Fund Norway

Asset Class/Style	Year	Asset (€millions)	Return %	Cost (€000)				Cost (bps)			
				Internal & Other	Base Fees	Perf Fees	Total	Internal & Other	Base Fees	Perf Fees	Total
Stock - Europe Internal Active	2020	18,168.2	8.05	6,792.0			6,792.0	3.9			3.9
	2019	16,888.3	18.15	7,016.5			7,016.5	4.5			4.5
	2018	14,255.5	-1.83	7,472.3			7,472.3	5.2			5.2
	2017	14,312.0	19.34	7,445.3			7,445.3	5.2			5.2
	2016	14,290.0	10.46	8,622.0			8,622.0	6.5			6.5
Fixed Income - Europe Internal Active	2020	9,723.7	7.37	7,483.0			7,483.0	7.5			7.5
	2019	10,356.9	4.19	7,920.8			7,920.8	7.8			7.8
	2018	9,909.2	1.69	6,426.2			6,426.2	6.5			6.5
	2017	8,556.0	3.64	6,646.7			6,646.7	7.8			7.8
	2016	9,090.0	2.17	7,217.0			7,217.0	8.3			8.3
Cash Internal Active	2020										
	2019	64.7									

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	2020	1,202.0	0.4bp
	2019	1,270.0	0.5bp
	2018	937.0	0.4bp
	2017	1,604.0	0.7bp
	2016	1,519.0	0.7bp
Custodial total	2020	575.0	0.2bp
	2019	582.0	0.2bp
	2018	624.0	0.3bp
	2017	721.0	0.3bp
	2016	895.0	0.4bp
Consulting / performance measurement	2020	61.0	0.0bp
	2019	56.0	0.0bp
	2018	66.0	0.0bp
	2017	45.0	0.0bp
	2016	52.0	0.0bp
Audit	2020	222.0	0.1bp
	2019	252.0	0.1bp
	2018	227.0	0.1bp
	2017	270.0	0.1bp
	2016	306.0	0.1bp
Other (legal etc)	2020	142.0	0.1bp
	2019	131.0	0.1bp
	2018	155.0	0.1bp
	2017	105.0	0.0bp
	2016	293.0	0.1bp
Total	2020	2,202.0	0.8bp
	2019	2,291.0	0.9bp
	2018	2,009.0	0.8bp
	2017	2,745.0	1.2bp
	2016	3,065.0	1.4bp

Summary of All Asset Management Costs			
		000s	bps
Investment Management Costs	2020	14,275.0	5.2bp
	2019	14,937.3	5.8bp
	2018	13,898.5	5.8bp
	2017	14,092.0	6.2bp
	2016	15,839.0	7.2bp
Oversight, Custodial & Other Costs	2020	2,202.0	0.8bp
	2019	2,291.0	0.9bp
	2018	2,009.0	0.8bp
	2017	2,745.0	1.2bp
	2016	3,065.0	1.4bp
Total	2020	16,477.0	6.0bp
	2019	17,228.3	6.7bp
	2018	15,907.5	6.6bp
	2017	16,837.0	7.4bp
	2016	18,904.0	8.6bp

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	2020	3,040.0														
	2019	973.5														
	2018	882.6														
Duration Management	2020	8,808.1														
	2019	9,613.2														
	2018	12,396.1														

Appendix B - Currency conversion

Government Pension Fund Norway

All currency amounts have been converted to Euros using Purchasing Power Parity figures per the OECD¹. The table below shows the foreign exchange rates for the past 5 years.

Currency conversion table					
	2020	2019	2018	2017	2016
United States Dollars - USD*	0.711	0.714	0.723	0.747	0.732
Canada Dollars - CAD	0.594	0.572	0.580	0.597	0.576
Euro - EUR*	1.000	1.000	1.000	1.000	1.000
Sweden Kronor - SEK	0.080	0.079	0.080	0.084	0.081
United Kingdom Pounds - GBP	0.993	1.015	1.013	1.048	1.055
Australia Dollars - AUD	0.486	0.493	0.496	0.500	0.499
New Zealand Dollars - NZD	0.487	0.480	0.498	0.507	0.505

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 30th 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.