Investment Cost Effectiveness Analysis 2015

Norwegian Government Pension Fund Global



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5 Total cost and benchmark cost

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Key takeaways

Returns

- All returns have been converted using the GPFG currency basket. However, differences in total returns reflect in large part home-market biases and the relative performance of currencies. So they are not the primary focus of this report.
- Your 10-year net total return was 5.3%. This was close to the Global median of 5.4% and equal to the peer median of 5.3%.
- Your 10-year policy return was 5.3%. This was slightly below the Global median of 5.5% and equal to the peer median of 5.3%.

Value added*

• Your 10-year net value added was 0.0%. This was close to the Global median of 0.1% and below the peer median of 0.3%.

Cost

- Your investment cost of 5.7 bps was below your benchmark cost of 18.2 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was low cost because you had a lower cost implementation style and you paid less than peers for similar services.
- Your fund achieved 10-year net value added of -1 bps and cost savings of 12 bps on the cost effectiveness chart.

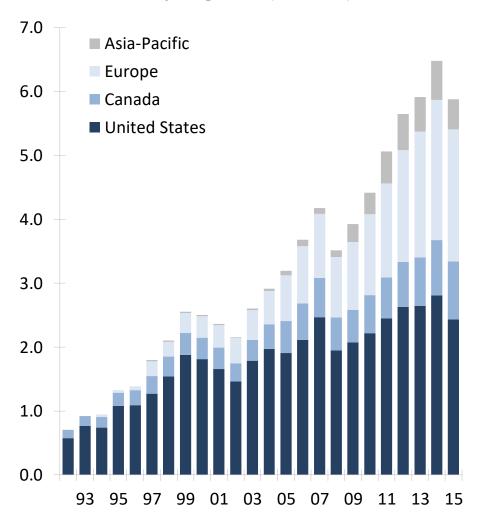
^{*} The median value added is the mid-point of the data series and is not directly derived from the median points for total return and policy return.

This benchmarking report compares your cost and return performance to the 293 funds in CEM's extensive pension database.

- 162 U.S. funds participate with assets totaling €2.4 trillion.
- 72 Canadian funds participate with assets totaling €909 billion.
- 52 European funds participate with aggregate assets of €2.1 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.
- 7 Asia-Pacific funds participate with aggregate assets of €472 billion. Included are funds from Australia, New Zealand, China and South Korea.

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

Participating assets (€ trillions)



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

Peer group for Norwegian Government Pension Fund Global

- 16 global sponsors from €31 billion to €783 billion
- Median size of €139 billion versus your €783 billion
- 3 Canadian funds, 5 European funds, 3 Asia-Pacific funds 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.

Your 10-year net total return of 5.3% compares to the peer median of 5.3%

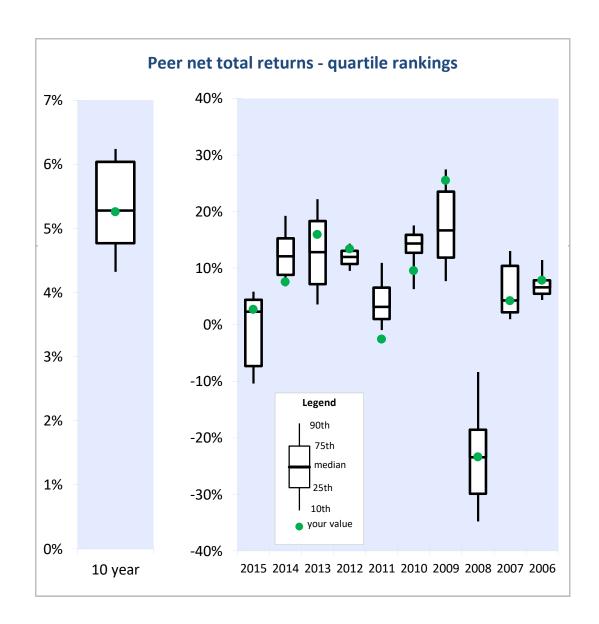
Total returns, by themselves, provide little insight into the reasons behind relative performance. Therefore, we separate total return into its more meaningful components: policy return and value added.

	Your 10-year
Net total fund return	5.3%
- Policy return	5.3%
= Net value added	0.0%

This approach enables you to understand the contribution from both policy mix decisions (which tend to be the board's responsibility) and implementation decisions (which tend to be management's responsibility).

Actual and policy returns have been converted to your currency using unhedged currency returns.

The fund return consists of Equity, Fixed Income and Real Estate. The fund benchmark is the weighted benchmark of Equity and Fixed Income, the benchmark for Real Estate used in the report is the actual portfolio return.



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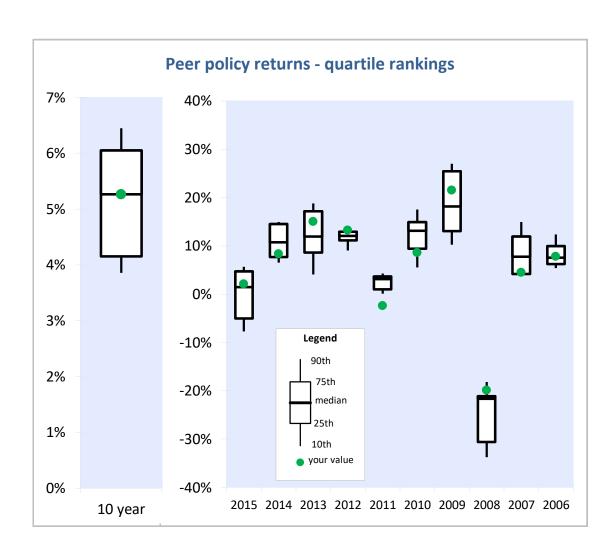
Your 10-year policy return of 5.3% compares to the peer median of 5.3%.

Your policy return is the return you could have earned passively by indexing your investments according to your policy mix.

Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

- Long term capital market expectations
- Liabilities
- Appetite for risk

Each of these three factors is different across funds. Therefore, it is not surprising that policy returns often vary widely between funds.



To enable fairer comparisons, the policy returns of all participants with policy weight in private equity were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the Research section pages 6-7 for details.

Your policy asset mix compares to the peer and Global averages as follows:

Your fund is in the early stages of the allocation to real assets (with a 3% allocation in 2015), and has no hedge funds or private equity whereas the peer funds had allocations of 12%, 2% and 6% respectively. The Global funds' allocations were 7%, 3% and 4%.

 Your policy asset mix is more globally diversified than the average Peer or Global fund.

10-year average policy mix

	Your	Peer	Global	
	Fund	Avg.	Avg.	
Stock	56%	48%	50%	
Fixed Income	43%	32%	37%	
Hedge Funds	0%	2%	3%	
Real Assets ¹	1%	12%	7%	
Private Equity	0%	6%	4%	
Total	100%	100%	100%	

^{1.} Real assets includes commodities, natural resources, infrastructure, REITS and real estate.

Regional allocations can significantly influence the policy return. GPFG's overweight in European securities and the peer group's overweight in North American securities would cause a difference in the policy returns. Variations in the fixed income portfolios, such as duration, credit quality and country allocation within regions would have an impact as well. Not being invested in asset classes like private equity and having a lower allocation to real estate had a minor impact on GPFG's policy return.

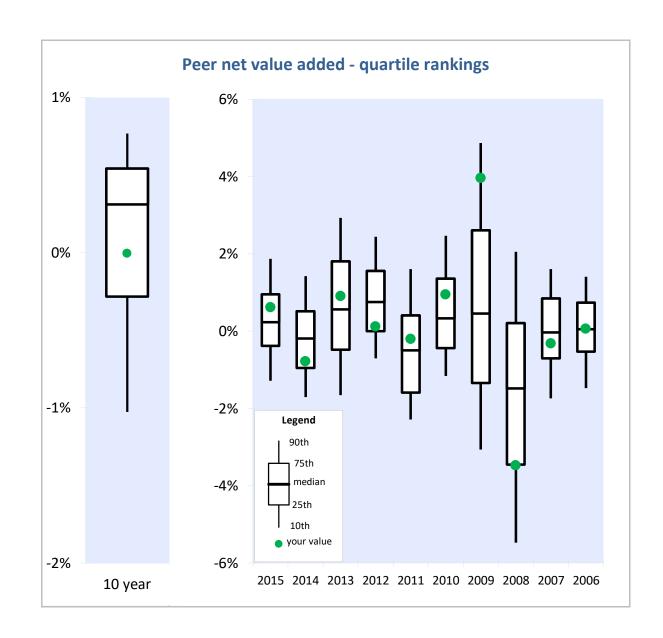
Net value added is the component of total return from active management. Your 10-year net value added was 0.0%.

Net value added equals total net return minus policy return.

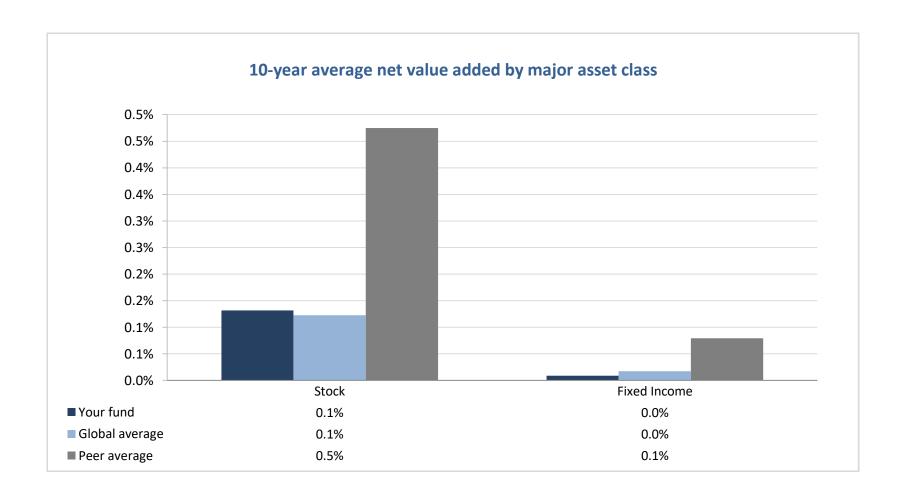
Value added for Norwegian
Government Pension Fund Global

	Net	Policy	Net value
Year	Return	Return	Added
2015	2.7%	2.1%	0.6%
2014	7.5%	8.3%	(0.8%)
2013	15.9%	15.0%	0.9%
2012	13.4%	13.2%	0.1%
2011	(2.6%)	(2.4%)	(0.2%)
2010	9.5%	8.6%	0.9%
2009	25.5%	21.5%	4.0%
2008	(23.4%)	(19.9%)	(3.5%)
2007	4.2%	4.5%	(0.3%)
2006	7.8%	7.8%	0.1%
10-year	5.3%	5.3%	(0.0%)

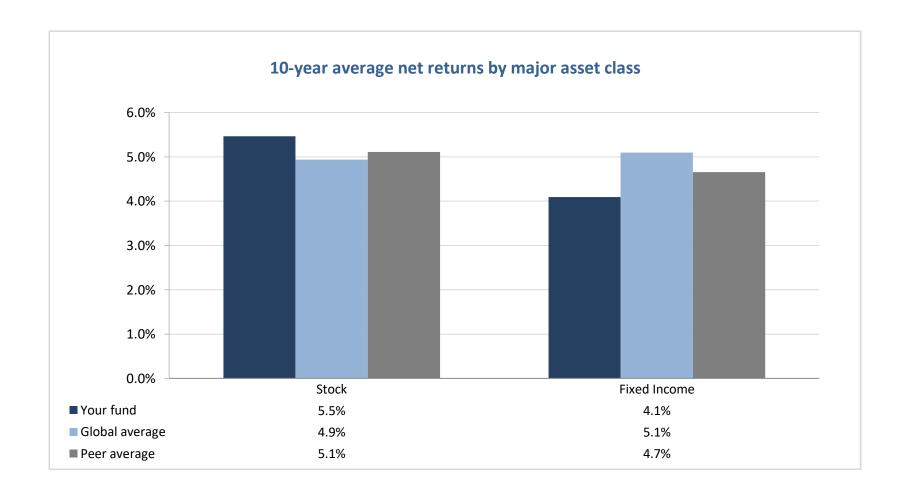
Your 10-year net value added of 0.0% compares to a median of 0.3% for your peers and 0.1% for the Global universe.



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



You had higher 10-year net returns in Stock relative to the Global average.



Your investment costs were €450.1 million or 5.7 basis points in 2015.

Asset management costs by	Internal Mgmt		External Management				
asset class and style (€000s)	Active	Overseeing	Passive	Active	Perform.		
		of external	fees	base fees	fees 1	Tota	al
Stock - Global	114,509	6,696		63,858	64,589	249,652	
Fixed Income - Global	32,020	175		4,815		37,010	
Real Estate Operating Sub.	39,477					39,477	
Total excluding private asset performance fees						326,139	4.2bp
Oversight, custodial and other costs ²							
Oversight of the fund 67							
Trustee & custodial 42,4							
Consulting and performance mea	suremen	t				8,868	
Audit							
Total oversight, custodial & other costs						123,967	1.6bp
Total investment costs (excl. transaction costs & private asset performance fees)						450,106	5.7bp

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

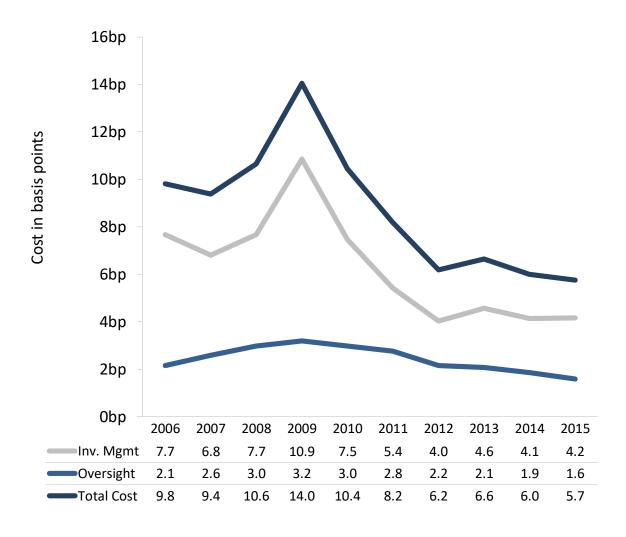
Footnotes

² Excludes non-investment costs, such as benefit insurance premiums and preparing cheques for retirees.

Your costs decreased between 2006 and 2015.

 You increased your use of lower cost internal management from 79% of assets in 2006 to 96% in 2015.

Trend in your investment costs

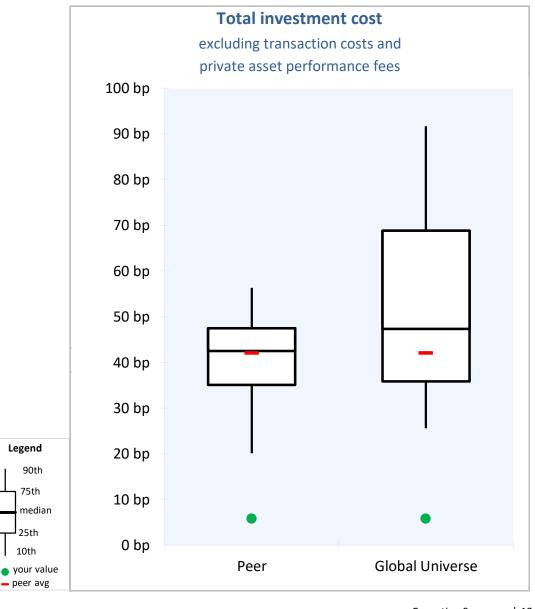


Your 2015 total investment cost of 5.7 bps was the lowest of the peers and was substantially below the peer median of 42.5 bps.

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

- Asset mix, particularly holdings of the highest cost asset classes: real estate (excl REITS), infrastructure, hedge funds and private equity. These high cost assets equaled 3% of your fund's assets at the end of 2015 versus a peer average of 23%.
- Fund size. Bigger funds have advantages of scale.

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



Benchmark cost analysis suggests that, after adjusting for fund size and asset mix, your fund was low cost by 12.4 basis points in 2015.

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 5.7 bp was below your benchmark cost of 18.2 bp. Thus, your cost savings was 12.4 bp.

Your cost versus benchmark

	€000s	basis points
Your total investment cost	450,106	5.7 bp
Your benchmark cost	1,425,139	18.2 bp
Your excess cost	(975,033)	(12.4) bp

Your fund was low cost in 2015 because you had a lower cost implementation style and you paid less than peers for similar services.

Reasons for your low cost status

	Excess C (Saving	·
	€000s	bps
Lower cost implementation style		
 Less external active management (more lower cost internal) 	(718,160)	(9.2)
 Less overlays 	(104,086)	(1.3)
 Other style differences 	132,530	1.7
	(689,717)	(8.8)
2. Paying less than peers for similar services		
External investment management costs	1,761	0.0
 Internal investment management costs 	(268,916)	(3.4)
 Oversight, custodial & other costs 	(18,162)	(0.2)
	(285,316)	(3.6)
Total savings	(975,033)	(12.4)

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

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

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

- External active management because it tends to be much more expensive than internal or passive management. You used less external active management than your peers (your 4% versus 35% for your peers).
- Within external active holdings, fund of funds usage because it is more expensive than direct fund investment.

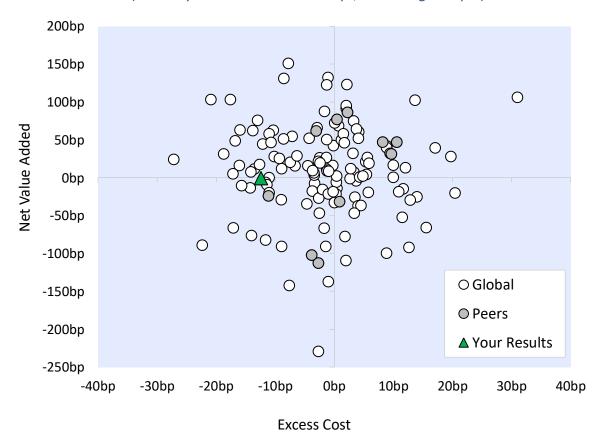
Implementation style¹ 100% 90% 80% 70% 60% 50% 40% 30% 20% 10% 0% **Global Funds** Your Fund Peers ■ Internal passive 0% 18% 4% Internal active 96% 12% 40% External passive 0% 7% 18% ■ External active 4% 67% 35%

1. The graph above does not take into consideration the impact of derivatives.

Your fund achieved 10-year net value added of -1 bps and cost savings of 12 bps on the cost effectiveness chart.

10-year net value added versus excess cost

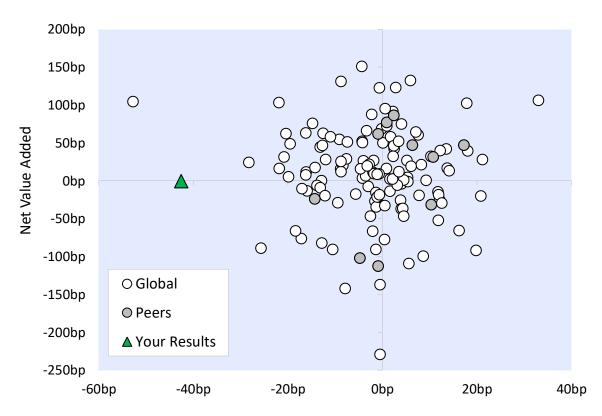
(Your 10-year: net value added -1 bps, cost savings 12 bps 1)



^{1.} Your 10-year cost savings of 12 basis points is the average of your cost savings for the past 10 years.

10-year net value added versus excess cost as a percentage of benchmark cost

10-year net value added versus excess cost as a % of benchmark cost



Excess Cost as a % of benchmark cost

2

Research and Trends

Net value added	
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The region with the highest net value added was Europe.

Value added by region¹ (period ending December 31, 2015)

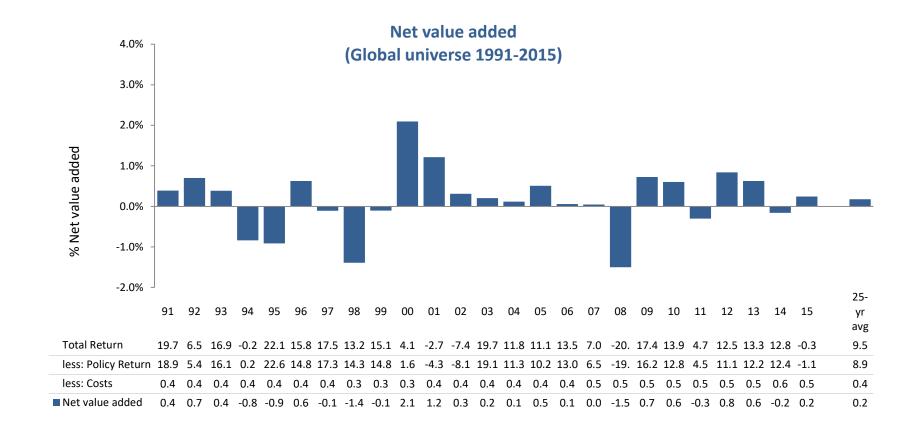
		U.S.	Canadian	European	Asia-Pacific
	All funds	funds	funds	funds	funds
	25-year	25-year	25-year	22-year²	16-year²
	average³	average ³	average³	average³	average ³
Total return	9.51%	10.14%	8.47%	7.67%	7.94%
- Policy return	8.91%	9.48%	7.94%	6.92%	7.61%
- Costs	0.42%	0.47%	<u>0.37%</u>	0.30%	0.48%
= Net value added	0.17%	0.19%	0.16%	0.45%	-0.15%
# of annual observations	7,677	4,255	2,360	927	118
Median fund size (€ billion)	6.7	8.0	2.9	16.6	29.2

^{1.} Only regions with more than four participating funds are separately disclosed. Funds from regions with fewer than four participating funds are included in Global/ All Funds.

^{2.} The shorter time periods for European and Asia-Pacific funds reflect the dates that CEM started collecting data in those regions.

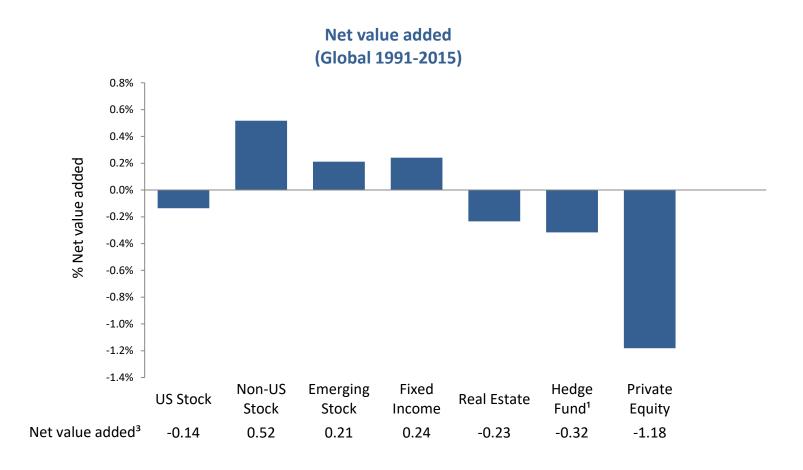
^{3.} Averages are the arithmetic average of annual averages.

In the Global universe, net value added averaged 0.2% over the past 25 years **ending 2015.**



Value added analysis is based on 7,677 annual fund total performance observations from the CEM Global universe for the 25-year period ending 2015. The 25-year average is an arithmetic average of the annual averages.

The asset class that had the highest net value added in the Global universe over the past 25 years was Non-US Stock.



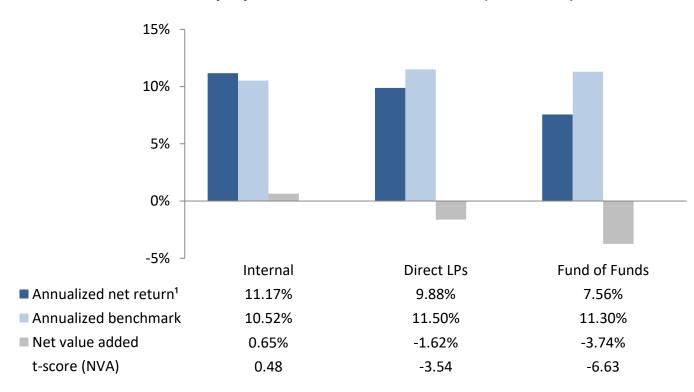
^{1.} Hedge Fund gross value added performance reflect data for the 16 year period from 2000 to 2015.

^{2.} The net value added calculation for private equity uses the average benchmark of all Global participants.

^{3.} Value added analysis is from 7,677 annual fund performance observations from the CEM Global universe for the 25-year period ending 2015. Value added reflects the asset weighted value added of all mandates in each asset category including indexed holdings. Averages shown above are the arithmetic average of the annual averages of all observations of funds with holdings in the asset category for each year.

Costs matter - Lower cost internal investment in private equity outperformed direct LPs. Direct LPs outperformed fund of funds.



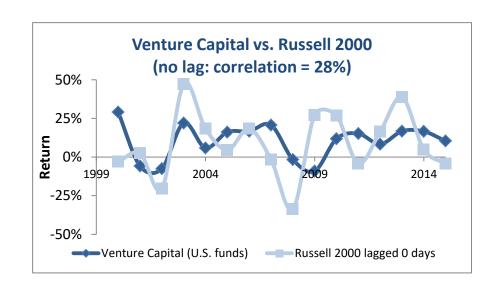


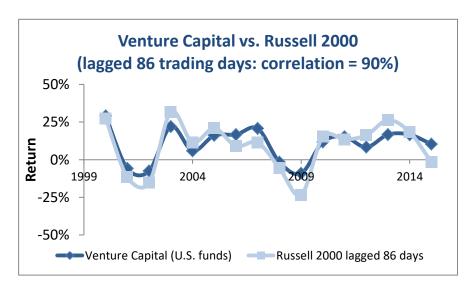
^{1.} Private equity performance by investment style research was updated on July 1 2016. Net value added has dropped by a significant margin since the original reseach which covered 1996-2012 due to the 2013 bull market in small cap equities which is the basis of the benchmark. 2. To compare the performance of private equity implementation styles over long periods, Monte Carlo simulations were used to capture differences in risk between styles. For details, see "How Implementation Style and Costs Affect Private Equity Performance", Alex Beath, Chris Flynn, and Jody MacIntosh, International Journal of Pension Management pp. 50, vol. 7, issue 1, Spring 2014.

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 2009 the Russell 2000 index return was 27.2% versus -23.4% if lagged 86 trading days. Thus if a fund earned the average reported venture capital return for 2008 of -1.6%, they would have mistakenly believed that their value added from venture capital was -28.8% using the un-lagged benchmarks versus 21.8% using the same benchmark lagged to matched the average 86 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.





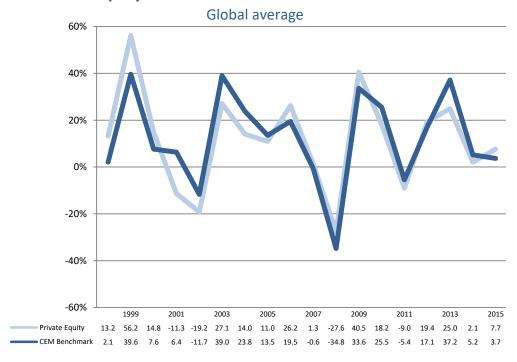
To enable fairer comparisons, CEM uses default private equity benchmarks.

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 101 trading days (i.e., approximately 142 calendar days or 4.7 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 84% for the default benchmarks versus 48% for self-reported benchmarks. Other statistics such as volatility were also much better.

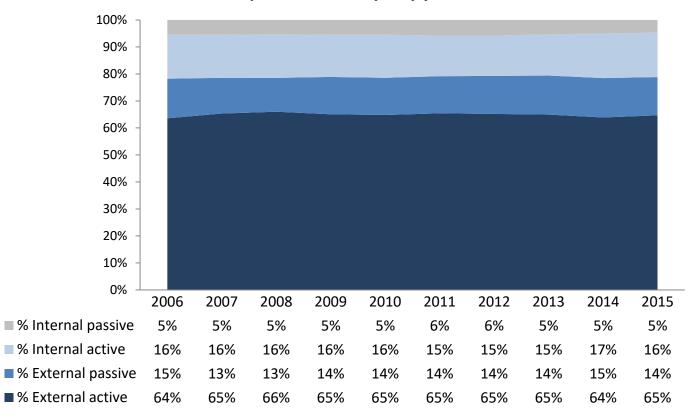
Private equity returns versus default benchmark returns¹



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.

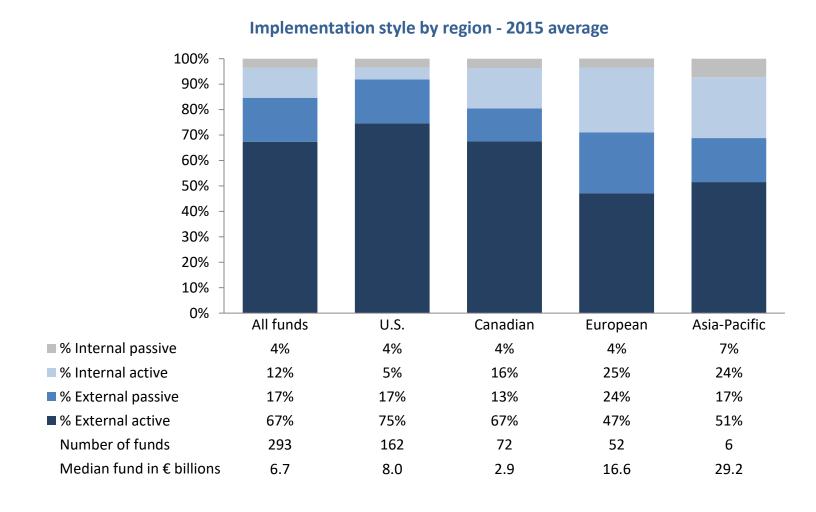
For global plans, external active management increased from 64% to 65% over the past 10 years.



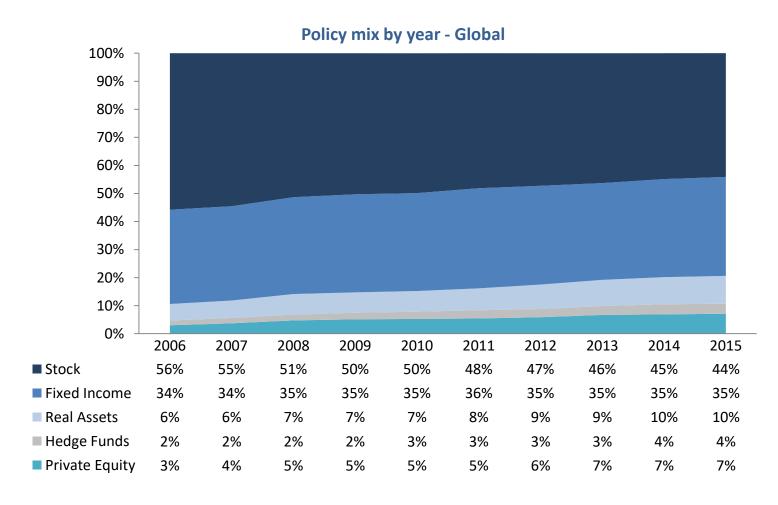


[•] This analysis is based on 124 global funds with 10 consecutive years of data.

European funds have less externally managed active assets than funds in most other regions.

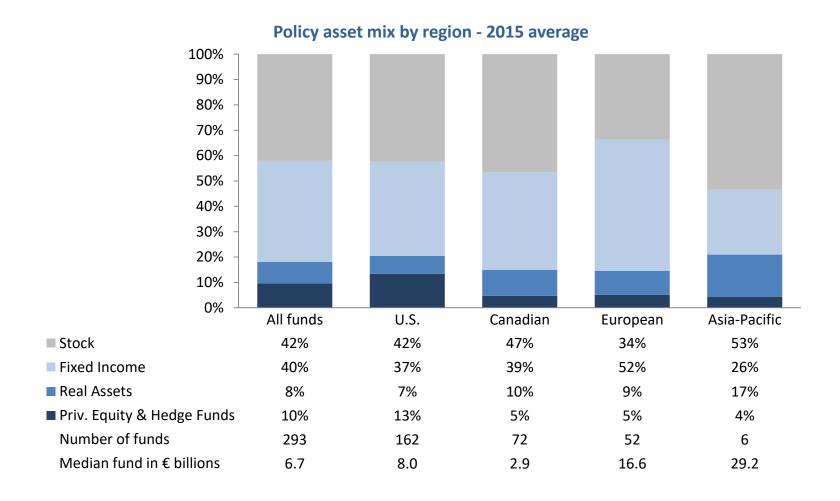


For Global plans, combined policy weights for real assets, private equity and hedge funds increased from 10.6% in 2006 to 20.6% in 2015.



[•] This analysis is based on 124 global funds with 10 consecutive years of data.

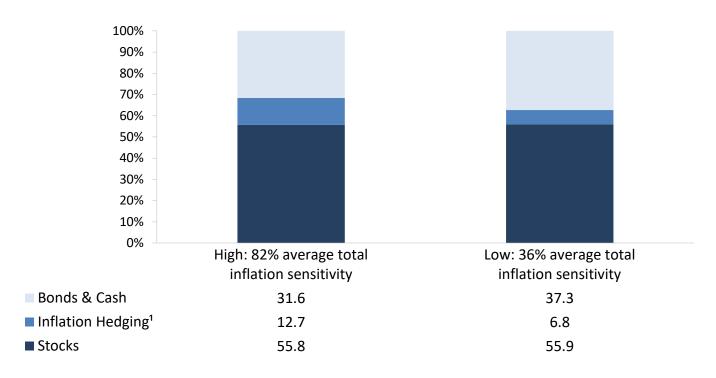
European funds have more fixed income.



Impact of inflation sensitivity on policy asset mix decisions

One would expect plans with more inflation sensitivity to have more inflation hedging assets and fewer nominal bonds than plans with less inflation sensitivity. Although this is true, the difference is small: inflation hedging assets represent 12.7% of assets at plans with high inflation sensitivity versus 6.8% at plans with lower inflation sensitivity.

Average policy asset mix: Plans with above vs. below average inflation sensitivity

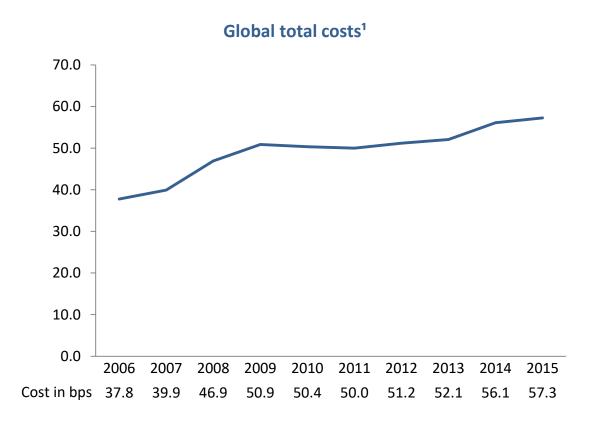


^{1.} Inflation hedge assets include inflation-indexed bonds, commodities, real estate & REITs, infrastructure and natural resources.

Global fund costs have grown by 19 basis points on average over the last 10 years.

Reasons for the increase in costs include:

- Allocation to the more expensive asset classes - hedge funds, real assets and private equity-increased from 5% to 9% on average.
- Use of the most expensive implementation style, external active management, increased from 64% to 65% on average.



^{1.} This analysis is based on 124 global funds with 10 consecutive years of data.

3

Description of peer group and universe

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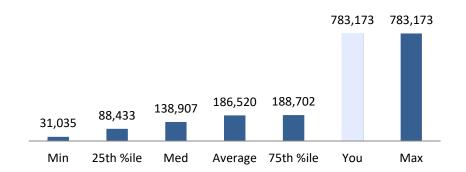
Peer group

Your peer group is comprised of 16 global funds, with assets ranging from €31.0 billion to €783.2 billion versus your €783.2 billion. The median size is €138.9 billion.

Size is the primary criteria for choosing your peer group, because size greatly impacts how much you pay for services. Generally, the larger your fund, the smaller your unit operating costs (i.e., the economies of scale impact).

Peer group for Norwegian Government Pension Fund Global

Total fund assets (€ millions) - you versus peers

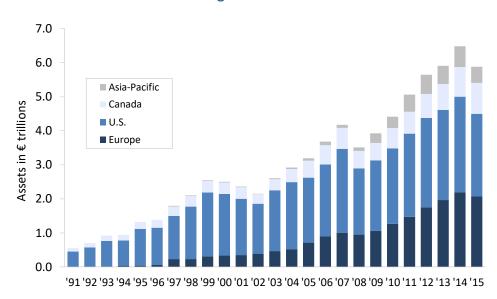


CEM global universe

CEM has been providing investment benchmarking solutions since 1991. The 2015 survey universe is comprised of 293 funds representing €5.9 trillion in assets. The breakdown by region is as follows:

- 162 U.S. pension funds with aggregate assets of €2.4 trillion.
- 72 Canadian pension funds with aggregate assets of €909 billion.
- 52 European pension funds with aggregate assets of €2.1 trillion. Included are funds from The Netherlands, Norway, Sweden, Finland, Denmark, Switzerland and the UK.
- 7 Asia-Pacific pension funds with aggregate assets of €472 billion.

CEM global universe



Universe subsets

CEM's global survey universe is comprised of 293 funds with total assets of €5.9 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 €31.0 €783.2 billion. The peer median of €138.9 billion compares to your €783.2 billion.
- Global The global universe is comprised of 293 funds ranging in size from €0.1 €783.2 billion. The median fund is €4.7 billion.

Universe subsets by number of funds and assets

		Global by type				Glob	al by Cou	ntry		
									Asia-	
Pe	er group ¹	Corp.	Public	Other	Total	U.S.	Canada	Europe	Pacific	Total
# of funds										
2015	16	143	97	50	293	162	72	52	7	293
2014	15	163	198	52	414	174	88	143	9	414
2013	15	183	193	60	438	190	89	152	7	438
2012	15	188	199	57	445	201	88	144	12	445
2011	15	197	113	71	382	205	88	77	12	382
# of funds with	<u>1</u>									
uninterrupted	data for:									
1 yr	16	143	97	50	290	162	72	52	7	293
2 yrs	15	130	91	40	261	148	67	42	5	262
3 yrs	15	121	86	38	245	136	63	41	5	245
4 yrs	15	109	85	32	226	131	59	31	5	226
5 yrs	15	102	79	30	211	127	53	26	5	211
6 yrs	14	94	75	29	198	119	52	23	4	198
Total assets (€	billions)									
2015	2,984	936	4,107	823	5,881	2,431	909	2,070	472	5,881
2014	2,735	1,124	4,590	768	6,482	2,809	867	2,195	612	6,482
2013	2,457	1,052	4,590	670	5,912	2,646	761	1,966	539	5,912
2012	2,230	1,058	3,977	562	5,647	2,629	704	1,749	565	5,647
2011	1,958	1,054	3,447	517	5,062	2,446	644	1,472	501	5,062
2015 asset dist	ribution									
(€ billions)										
Avg	186.5	6.5	42.3	16.5	20.1	15.0	12.6	39.8	67.4	20.1
Max	783.2				783.2					783.2
75th %ile	188.7				14.1					14.1
Median	138.9				4.7					4.7
25th %ile	88.4				1.6					1.6
Min	31.0				0.1					0.1

^{1.} Peer group statistics are for your 2015 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 - 2015 (as a % of year-end assets)

				Global	by type			Glob	oal by Cou	intry	
	Your	Peer								Asia-	
	fund¹	group	Corp.	Public	Other	Total	U.S.	Canada	Europe	Pacific	Total
<u>Implementation</u> s	<u>style</u>										
External active	4.1	32.7	72.4	55.7	57.0	64.4	70.8	66.2	44.0	47.8	64.4
Fund of funds	0.0	2.0	3.3	2.6	2.8	3.0	3.8	1.3	3.0	1.6	3.0
External passive	0.0	7.4	16.8	16.3	22.0	17.3	17.2	12.9	24.0	14.8	17.3
Internal active	95.9	39.6	5.2	19.5	15.2	11.7	4.7	15.9	25.5	28.9	11.7
Internal passive	0.0	<u>18.4</u>	<u>2.3</u>	<u>6.0</u>	<u>3.1</u>	<u>3.6</u>	<u>3.5</u>	<u>3.7</u>	<u>3.5</u>	<u>6.9</u>	<u>3.6</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Actual accet mix											
Actual asset mix Stock	61.9	42.7	38.6	47.4	37.6	41.5	41.6	46.9	33.7	42.9	41.5
Fixed income	35.4	32.3	45.5	47.4 29.7	44.3	40.0	37.6	37.4	52.3	32.3	40.0
Global TAA	0.0	0.1	2.1	1.6	0.9	1.7	2.5	1.0	0.3	1.3	1.7
Real assets	2.7	14.6	5.6	11.2	11.2	8.4	7.1	10.1	8.7	1.3 17.8	8.4
Hedge funds	0.0	2.7	4.6	3.9	2.6	4.0	5.6	1.8	2.1	1.7	4.0
Private equity	0.0	7.6	3.5	6.2	3.4	4.0 4.4	5.5	2.9	2.1 2.8	4.0	4.0 <u>4.4</u>
Total	100.0	7.0 100.0	100.0	100.0	<u>3.4</u> 100.0	100.0	100.0	100.0	2.8 100.0	100.0	100.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Policy asset mix											
Stock	61.6	44.4	39.0	48.0	38.4	42.0	42.3	46.5	33.8	50.4	42.0
Fixed income	35.3	31.6	45.7	29.6	43.4	39.9	37.2	38.5	51.6	30.0	39.9
Global TAA	0.0	0.0	2.0	1.5	1.0	1.6	2.4	1.1	0.3	0.9	1.6
Real assets	3.1	14.6	5.5	11.4	11.8	8.5	7.1	10.2	9.5	15.1	8.5
Hedge funds	0.0	2.2	4.2	2.8	2.0	3.3	4.9	1.0	1.9	0.2	3.3
Private equity	0.0	<u>7.2</u>	<u>3.7</u>	<u>6.6</u>	<u>3.4</u>	<u>4.6</u>	<u>6.1</u>	<u>2.6</u>	<u>2.9</u>	<u>3.5</u>	<u>4.6</u>
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Implementation style, actual mix and policy mix trends

Implementation style, actual mix and policy mix - 2011 to 2015

(as a % of year-end assets)

		Yo	ur fun	d ¹			Pee	r avera	ige²			Glob	al aver	age ²	
2	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011
Implementation st	<u>tyle</u>														
External active	4.1	4.1	3.7	3.8	6.7	37.0	36.5	45.8	45.7	45.4	66.1	65.0	65.9	65.9	65.9
External passive	0.0	0.0	0.0	0.0	0.0	7.9	8.3	7.9	7.3	7.7	16.8	17.2	17.2	17.4	17.2
Internal active	95.9	95.9	96.3	96.2	93.3	37.0	36.3	26.8	27.4	27.5	12.9	13.3	12.1	11.9	12.0
Internal passive	0.0	0.0	0.0	0.0	0.0	<u>18.1</u>	<u>19.0</u>	<u> 19.5</u>	<u> 19.7</u>	<u>19.4</u>	<u>4.2</u>	<u>4.4</u>	<u>4.9</u>	<u>4.8</u>	<u>4.8</u>
Total 1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.0	100.0	100.0
Actual asset mix															
Stock	61.9	61.2	62.7	60.2	59.6	43.9	44.3	44.3	42.8	44.0	40.8	41.9	44.5	43.4	43.9
Fixed income	35.4	37.4	36.4	39.4	40.2	32.3	32.8	32.4	33.6	32.6	38.6	38.9	36.6	38.2	38.2
Global TAA	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.1	0.1	2.2	2.2	2.0	1.8	1.6
Real assets	2.7	1.4	0.9	0.4	0.2	12.9	12.6	12.7	12.6	12.5	8.7	8.0	7.9	7.9	7.3
Hedge funds	0.0	0.0	0.0	0.0	0.0	2.9	2.5	2.7	2.7	2.6	4.7	4.4	4.2	3.8	3.9
Private equity	0.0	0.0	0.0	0.0	0.0	<u>7.9</u>	<u>7.7</u>	<u>7.8</u>	<u>8.3</u>	<u>8.2</u>	<u>5.0</u>	<u>4.7</u>	<u>4.7</u>	<u>4.9</u>	<u>5.0</u>
Total 1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Policy asset mix															
Stock	61.6	61.1	60.9	60.9	58.7	45.8	45.4	45.0	45.3	47.8	41.3	41.8	43.6	44.9	45.8
Fixed income	35.3	36.7	38.1	38.4	41.0	31.5	32.4	33.1	32.9	32.6	38.8	38.7	37.6	37.6	37.5
Global TAA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.0	2.0	1.6	1.5
Real assets	3.1	2.2	1.0	0.7	0.3	12.9	12.7	12.3	12.1	10.9	8.7	8.5	8.2	7.8	7.1
Hedge funds	0.0	0.0	0.0	0.0	0.0	2.4	2.4	2.7	2.8	2.4	4.0	4.0	3.6	3.3	3.4
Private equity	0.0	0.0	0.0	0.0	0.0	<u>7.5</u>	<u>7.1</u>	6.8	6.9	6.4	5.2	5.0	5.0	4.8	4.6
Total 1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

^{2.} Trends are based on the 211 Global and 15 peer funds with 5 consecutive years of data ending 2015.

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 - 2015

(as a % of average assets)

		Yo	ur func	1%			Peer	avera	ge %			Globa	ıl avera	age %	
	E	xterna		Inte	rnal	Е	xterna	l	Inte	rnal	E	xterna		Inte	rnal
	Active	FOFs	Index	Active	Index	Active	FOFs	Index	Active	Index	Active	FOFs	Index	Active	Index
Stock - U.S.						18.5		20.4	6.0	55.1	46.5		40.7	5.5	7.3
Stock - EAFE						36.9		17.2	26.0	19.9	58.8		24.7	13.2	3.4
Stock - ACWIxU.S.						20.5		79.5	0.0	0.0	63.1		36.5	0.5	0.0
Stock - Emerging						58.2		4.9	17.8	19.1	80.7		11.1	3.1	5.2
Stock - Global	6.3		0.0	93.7	0.0	34.3		7.2	48.0	10.5	68.7		16.4	12.9	2.0
Stock - Other						27.1		6.2	30.2	36.5	72.6		8.1	12.5	6.8
Total Stock	6.3		0.0	93.7	0.0	31.6		12.4	27.8	28.1	60.1		26.6	8.6	4.7
Fixed Income - US						34.9		0.8	35.7	28.6	67.6		15.4	13.3	3.6
Fixed Income - EAFE						23.7		0.0	72.9	3.4	27.1		40.1	30.4	2.4
Fixed Income - Emerging						80.1		0.0	16.1	3.8	88.7		0.2	10.3	0.8
Fixed Income - Global	0.6		0.0	99.4	0.0	29.1		0.6	70.3	0.0	59.7		5.9	30.1	4.4
Fixed Income - Inflation Indexed						7.7		36.4	23.2	32.8	21.0		32.6	18.5	27.9
Fixed Income - High Yield						93.5		0.0	6.5	0.1	93.2		1.4	5.5	0.0
Fixed Income - Mortgages						15.7		0.0	80.5	3.8	76.8		4.3	18.3	0.6
Fixed Income - Private Debt						17.8		0.0	82.2	0.0	74.4		0.0	25.6	0.0
Fixed Income - Other						8.6		0.1	60.7	30.6	75.7		12.0	9.3	3.0
Cash						34.2		0.0	65.8	0.0	54.7		0.0	45.3	0.0
Total Fixed Income	0.6		0.0	99.4	0.0	23.1		6.0	53.0	17.9	65.8		14.8	15.6	3.8
Commodities						1.7		0.6	67.8	29.9	65.2		12.6	18.0	4.3
Infrastructure			n/a		n/a	14.9	1.1	n/a	84.0	n/a	64.5	5.0	n/a	30.5	n/a
Natural Resources			n/a		n/a	44.5	0.0	n/a	55.5	n/a	82.6	2.2	n/a	15.1	n/a
REITs						16.3	0.0	0.0	83.7	0.0	66.8	0.0	21.2	9.6	2.4
Real Estate ex-REITs	0.0	0.0	n/a	100.0	n/a	54.7	3.8	n/a	41.5	0.0	79.5	4.6	n/a	15.8	0.0
Other Real Assets			n/a		n/a	100.0	0.0	n/a	0.0	n/a	92.5	0.0	n/a	7.5	n/a
Total Real Assets	0.0	0.0	0.0	100.0	0.0	37.6	0.0	0.0	60.8	1.5	79.9	0.0	2.3	17.5	0.4
Hedge Funds			n/a		n/a	84.9	15.1	n/a	0.0	n/a	60.5	39.5	n/a	0.0	n/a
Global TAA			n/a		n/a	100.0	0.0	n/a	0.0	n/a	88.4	0.0	n/a	11.6	n/a
Diversified Private Equity			n/a		n/a	51.6	19.9	n/a	28.5	n/a	66.1	29.0	n/a	4.9	n/a
Venture Capital			n/a		n/a	43.2	55.4	n/a	1.4	n/a	60.7	38.2	n/a	1.1	n/a
LBO			n/a		n/a	79.6	4.0	n/a	16.4	n/a	89.7	7.4	n/a	2.9	n/a
Other Private Equity			n/a		n/a	99.0	0.0	n/a	1.0	n/a	87.4	0.0	n/a	12.6	n/a
Total Private Equity			n/a		n/a	66.5	13.9	n/a	19.6	n/a	76.2	20.0	n/a	3.8	n/a
Total Fund - Avg. Holdings	4.1	0.0	0.0	95.9	0.0	32.6	2.0	7.4	39.6	18.3	63.9	2.9	17.6	12.0	3.7

Actual mix

Actual asset mix - 2011 to 2015

(as a % of year-end assets)

		Your fund % ¹					Peer	averag	ge %			Globa	al avera	age %	
	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011
Stock - U.S.						11.3	12.4	12.4	11.8	11.7	14.7	12.9	14.4	15.0	17.6
Stock - EAFE						6.3	7.2	7.9	7.8	8.8	6.5	10.0	10.9	11.0	8.0
Stock - ACWIxU.S.						0.4	0.4	0.4	0.4	0.3	3.2	2.4	2.6	2.4	2.4
Stock - Emerging						4.0	4.3	4.4	4.5	3.6	2.9	3.0	2.9	2.9	2.6
Stock - Global	61.9	61.2	62.7	60.2	59.6	14.7	14.9	13.7	12.9	13.8	9.7	13.3	12.2	11.3	6.9
Stock - Other						5.9	5.1	5.5	5.5	5.9	4.6	4.3	4.5	4.7	5.4
Total Stock	61.9	61.2	62.7	60.2	59.6	42.7	44.3	44.3	42.8	44.0	41.5	45.9	47.6	47.3	42.9
Fixed Income - US						4.5	5.0	5.2	5.6	5.7	7.5	5.5	5.9	6.7	8.1
Fixed Income - EAFE						3.0	3.0	2.9	2.8	2.4	4.4	4.8	5.1	4.0	5.5
Fixed Income - Emerging						0.9	0.9	0.8	0.7	0.4	1.3	1.0	1.1	0.8	0.9
Fixed Income - Global	35.4	37.4	36.4	39.4	40.2	5.4	5.4	5.5	5.7	6.0	2.4	3.3	3.3	3.6	3.2
Fixed Income - Inflation Indexed						4.9	5.1	5.2	5.1	4.8	1.6	2.0	2.0	2.3	2.5
Fixed Income - High Yield						0.6	0.7	0.7	0.8	0.7	1.4	1.1	1.3	1.2	1.4
Fixed Income - Mortgages						0.8	0.9	0.8	1.0	1.0	0.5	0.3	0.3	0.3	0.4
Fixed Income - Private Debt						1.0	0.4	0.3	0.3	0.2	0.6	0.4	0.2	0.1	0.0
Fixed Income - Other						8.1	9.4	9.8	10.1	10.1	18.0	14.8	13.2	13.8	16.6
Cash						3.1	2.0	1.2	1.4	1.2	2.3	2.4	2.4	2.6	2.5
Total Fixed Income	35.4	37.4	36.4	39.4	40.2	32.3	32.8	32.4	33.6	32.6	40.0	35.7	34.8	35.6	41.1
Commodities						0.8	1.2	1.3	1.2	1.2	0.4	0.4	0.5	0.5	0.6
Infrastructure						5.2	2.7	2.6	2.6	2.5	1.4	1.0	0.8	0.8	0.8
Natural Resources						0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.3
REITs						0.9	0.9	1.0	1.0	1.1	0.7	0.6	0.5	0.5	0.6
Real Estate ex-REITs	2.7	1.4	0.9	0.4	0.2	7.3	7.4	7.5	7.5	7.4	5.4	5.3	5.0	4.9	4.5
Other Real Assets						0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3
Total Real Assets	2.7	1.4	0.9	0.4	0.2	14.6	12.6	12.7	12.6	12.5	8.4	7.7	7.3	7.2	7.1
Hedge Funds						2.7	2.5	2.7	2.7	2.6	4.0	3.6	3.6	3.3	3.4
Global TAA						0.1	0.1	0.1	0.1	0.1	1.7	3.2	2.9	2.6	1.3
Div. Private Equity						5.3	4.9	5.0	5.4	5.4	3.3	3.0	3.1	3.2	3.4
Venture Capital						0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
LBO						1.7	2.1	2.1	2.2	2.2	0.5	0.4	0.4	0.4	0.4
Other Private Equity						0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
Total Private Equity						7.6	7.7	7.8	8.3	8.2	4.4	3.9	3.8	3.9	4.2
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count	1	1	1	1	1	16	15	15	15	15	293	414	438	445	382
Median Assets (€ billions)	783.2	655.7	568.2	483.6	401.8	173.7	179.0	163.6	148.8	143.9	6.4	3.8	3.3	3.1	4.1

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

Policy mix

Policy asset mix - 2011 to 2015

(as a % of average assets)

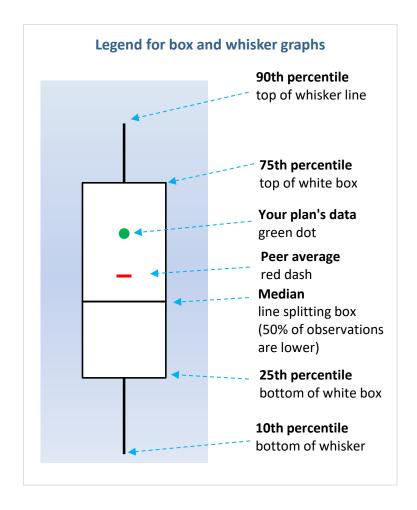
		Yo	ur fund	l %			Peer	averag	ge %			Globa	al avera	age %	
	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011	2015	2014	2013	2012	2011
Stock - U.S.						7.5	8.0	8.4	8.5	10.1	13.6	11.6	12.9	14.6	17.0
Stock - EAFE						4.8	5.1	6.3	5.7	7.0	5.6	9.3	10.0	10.6	7.8
Stock - ACWIxU.S.									1.0	1.0	3.6	2.7	2.5	2.6	3.1
Stock - Emerging						2.7	2.9	3.1	3.2	3.4	2.6	2.6	2.7	2.5	2.4
Stock - Global	61.6	61.1	60.9	60.9	58.7	24.2	24.3	21.9	21.5	20.7	11.8	14.8	13.6	12.6	8.8
Stock - Other						5.2	5.0	5.3	5.4	5.6	4.8	4.2	4.5	4.8	5.6
Total Stock	61.6	61.1	60.9	60.9	58.7	44.4	45.4	45.0	45.3	47.8	42.0	45.2	46.1	47.7	44.6
Fixed Income - US						5.9	6.4	6.5	6.6	6.8	7.9	5.9	6.7	7.2	8.7
Fixed Income - EAFE						3.3	3.3	3.6	3.7	3.4	4.6	4.7	5.2	4.0	5.3
Fixed Income - Emerging						1.0	1.0	1.0	0.9	0.6	1.2	1.0	1.1	0.8	0.8
Fixed Income - Global	35.3	36.7	38.1	38.4	41.0	5.1	6.0	5.4	5.5	5.7	2.5	3.6	3.5	3.9	3.3
Fixed Income - Inflation Indexed						4.8	5.2	5.6	5.1	5.5	1.8	2.1	2.1	2.2	2.5
Fixed Income - High Yield						0.4	0.4	0.3	0.5	0.4	1.5	1.2	1.3	1.1	1.2
Fixed Income - Mortgages						0.4	0.4	0.5	0.5	0.6	0.5	0.2	0.2	0.3	0.3
Fixed Income - Private Debt						0.6	0.0	0.2	0.0		0.6	0.4	0.2	0.1	0.0
Fixed Income - Other						8.8	9.9	10.2	10.6	10.2	18.8	15.8	14.5	14.4	16.8
Cash						1.3	-0.1	-0.1	-0.4	-0.5	0.6	0.7	0.7	0.8	1.2
Total Fixed Income	35.3	36.7	38.1	38.4	41.0	31.6	32.4	33.1	32.9	32.6	39.9	35.5	35.6	34.9	40.1
Commodities						0.7	1.1	1.4	1.4	1.3	0.5	0.5	0.6	0.6	0.7
Infrastructure						5.2	2.7	2.5	2.3	2.2	1.5	1.3	1.0	0.9	0.8
Natural Resources						0.3	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2
REITs						0.9	0.9	0.9	1.0	0.3	0.6	0.5	0.5	0.4	0.4
Real Estate ex-REITs	3.1	2.2	1.0	0.7	0.3	7.1	7.5	7.2	7.1	6.7	5.3	5.8	5.5	5.4	4.8
Other Real Assets						0.3	0.3	0.1	0.1	0.0	0.4	0.3	0.3	0.3	0.2
Total Real Assets	3.1	2.2	1.0	0.7	0.3	14.6	12.7	12.3	12.1	10.9	8.5	8.7	8.2	7.9	7.1
Hedge Funds						2.2	2.4	2.7	2.8	2.4	3.3	3.4	3.3	3.1	3.1
Global TAA											1.6	2.9	2.5	2.3	1.1
Div. Private Equity						6.5	6.4	6.2	6.3	5.8	4.0	3.6	3.5	3.4	3.5
Venture Capital						0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.1
LBO						0.4	0.4	0.4	0.5	0.5	0.3	0.2	0.2	0.2	0.2
Other Private Equity						0.2	0.2	0.1	0.0		0.1	0.2	0.1	0.1	0.1
Total Private Equity						7.2	7.1	6.8	6.9	6.4	4.6	4.2	4.0	3.9	4.0
Total Fund	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Count	1	1	1	1	1	16	15	15	15	15	293	414	438	445	382

Returns, Benchmarks and Value Added

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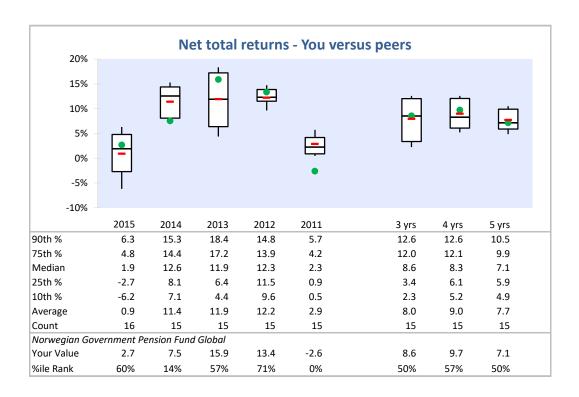
Interpreting box and whisker graphs

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

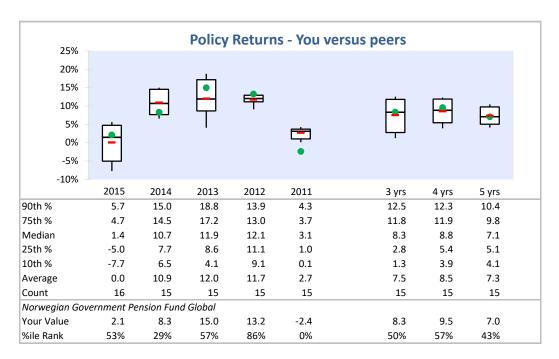
Your 5-year net total return of 7.1% was close to the peer median and below the median of the Global universe. Comparisons of total return do not help you understand the reasons behind relative performance. To understand the relative contributions from policy asset mix decisions and implementation decisions we separate total return into its more meaningful components - policy return and implementation value added.

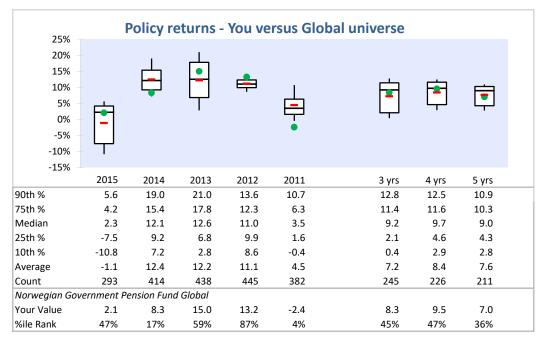




Policy returns

Your 5-year policy return of 7.0% was below the peer median and below the median of the Global universe. Policy return is the return you would have earned had you passively implemented your policy asset mix decision through your benchmark portfolios.

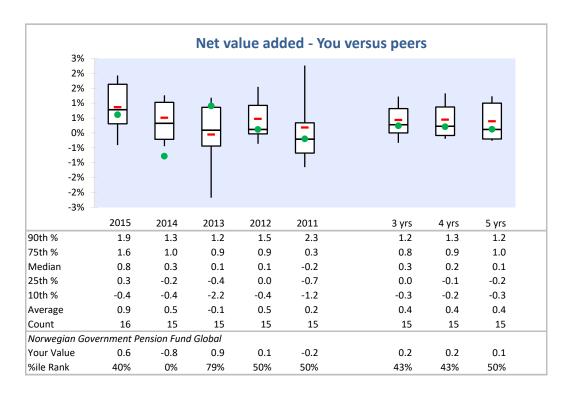


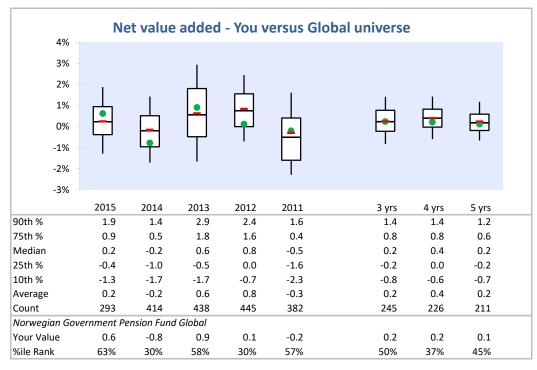


To enable fairer comparisons, the policy returns of all participants with policy weight in private equity were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the Research section pages 6-7 for details.

Net value added

Your 5-year net value added of 0.1% was close to the peer median and close to 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

		Your fund % 15 2014 2013 2012 2011 5-yr 20						Pe	er av	erage	%			Glo	bal av	/erage	e %	
Asset class	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr
Stock - U.S.							4.5	17.0	34.8	16.4	2.2	14.4	2.9	17.9	34.8	15.2	1.4	13.8
Stock - EAFE							4.9	1.7	23.3	18.3	-10.7	6.8	2.9	2.0	25.5	17.0	-11.3	6.5
Stock - Emerging							-11.0	6.0	-0.5	17.5	-17.6	-1.9	-11.2	4.6	-0.3	17.0	-17.8	-2.3
Stock - ACWIxU.S.							0.0	3.3	17.4	16.6	-12.6	4.3	2.1	3.3	19.3	16.5	-11.8	5.3
Stock - Global	3.8	7.9	26.3	18.0	-8.9	8.7	3.2	10.4	24.8	15.2	-5.6	9.1	1.8	10.7	26.3	14.7	-5.9	9.0
Stock - Other							-5.8	8.0	14.1	11.2	-8.7	3.3	-12.8	8.2	14.1	10.8	-8.6	1.8
Stock - Total	3.8	7.9	26.3	18.0	-8.9	8.7	0.6	9.6	23.1	15.5	-6.3	8.0	-0.3	10.0	25.5	15.4	-5.9	8.4
Fixed Income - US							3.4	19.4	-1.1	5.6	11.3	7.5	3.8	13.7	-0.7	6.4	9.6	6.5
Fixed Income - EAFE							-2.7	10.7	3.3	9.0	8.7	5.7	-6.1	13.7	3.9	9.3	7.2	5.4
Fixed Income - Emerging							-5.6	2.5	-4.1	16.3	1.3	1.8	-4.3	4.2	-5.3	15.6	2.9	2.4
Fixed Income - Global	0.3	6.9	0.1	6.7	7.0	4.1	-0.3	11.1	0.0	10.3	7.1	5.5	-2.8	8.4	2.9	8.8	6.2	4.6
Fixed Income - Inflation Indexed							-3.3	11.0	-6.1	7.0	14.9	4.4	-4.0	13.1	-4.1	6.5	10.3	4.1
Fixed Income - High Yield							-3.3	5.4	8.5	14.2	3.8	5.6	-1.5	6.3	8.7	14.1	4.0	6.2
Fixed Income - Mortgages							-1.3	8.9	2.0	5.2	9.1	4.7	-3.1	6.6	2.6	8.4	5.5	3.9
Fixed Income - Private Debt							-1.8	3.8	6.2	8.4	4.3	4.1	-0.1	5.6	7.3	8.9	2.1	4.7
Fixed Income - Other							-1.9	8.6	0.0	9.4	8.1	4.7	-4.2	16.4	-3.9	8.4	13.8	5.7
Cash							-2.6	2.3	0.2	1.6	4.5	1.1	-2.4	1.1	1.1	0.8	1.3	0.4
Fixed Income - Total	0.3	6.9	0.1	6.7	7.0	4.1	-1.9	10.6	-2.8	7.7	11.8	4.9	-2.4	12.9	-1.5	7.7	11.6	5.5
Commodities							-17.8	-23.2	-1.1	1.0	-0.7	-8.9	-21.7	-12.2	-3.9	-0.2	-5.1	-8.9
Infrastructure							3.5	20.2	8.0	8.1	2.4	8.3	3.7	11.2	8.5	7.0	5.9	7.2
REITs							8.7	22.9	9.0	25.4	-1.2	12.5	3.2	24.2	5.5	18.9	2.2	10.4
Natural Resources							-0.2	16.4	8.7	3.5	0.4	5.6	-1.8	14.9	7.0	3.6	3.8	5.4
Real Estate ex-REITs	9.8	10.1	11.3	5.0	-5.2	6.0	9.4	14.5	10.4	9.6	10.9	11.0	8.7	13.8	11.0	7.4	11.4	10.5
Other Real Assets							-0.3	7.9	6.2	4.6	-2.1	3.2	-6.9	9.6	3.4	0.9	-0.4	1.2
Real Assets - Total	10.0	10.4	11.8	5.8	-4.4	6.6	7.1	13.2	9.2	10.4	9.3	9.8	6.0	12.9	9.3	7.6	8.5	8.8
Hedge Funds							-0.6	5.9	7.2	4.8	1.2	3.7	1.5	9.3	9.7	5.4	1.1	5.4
Global TAA							-2.2	12.1	2.4	7.4	-1.3	3.5	-0.3	8.9	7.9	7.3	3.0	5.3
Diversified Private Equity							8.9	18.0	15.2	12.1	9.2	12.6	10.8	18.9	16.7	10.0	12.1	13.7
LBO							4.1	15.9	15.5	12.4	14.9	12.5	7.7	20.2	16.9	11.7	12.9	13.8
Venture Capital							10.8	23.4	15.8	7.5	21.2	15.6	13.1	20.1	15.8	6.3	16.3	14.2
Other Private Equity							10.6	16.6	14.9	-0.2	-8.0	6.4	7.0	15.4	16.4	6.6	6.8	10.3
Private Equity - Total							9.6	17.5	16.9	12.2	11.2	13.4	10.5	18.9	16.4	9.7	12.3	13.5
Total Fund Return	2.7	7.5	15.9	13.4	-2.6	7.1	0.9	11.4	11.9	12.2	2.9	7.7	-0.9	12.3	12.8	12.0	4.2	7.9

Benchmark returns by asset class

		١	our f	und %	,			Pe	er ave	erage	%			Glo	bal av	/erage	e %	
Asset class	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr
Stock - U.S.							4.3	17.1	33.8	14.8	2.0	13.8	3.2	18.7	34.0	15.2	2.2	14.1
Stock - EAFE							3.7	2.1	25.0	15.8	-10.3	6.6	2.3	2.2	24.8	16.1	-11.2	6.1
Stock - Emerging							-11.4	5.3	-1.8	17.0	-17.6	-2.4	-11.4	4.7	-0.8	16.5	-17.0	-2.3
Stock - ACWIxU.S.							0.1	2.9	16.5	15.8	-12.4	4.0	0.2	3.1	17.4	16.1	-12.6	4.2
Stock - Global	3.0	8.7	25.0	17.5	-8.4	8.6	2.3	10.0	22.2	14.7	-5.3	8.4	1.2	10.9	25.4	14.5	-5.5	8.8
Stock - Other							-6.6	7.4	10.5	11.4	-9.0	2.4	-14.1	8.8	14.2	10.9	-7.7	1.8
Stock - Total	3.0	8.7	25.0	17.5	-8.4	8.6	0.6	9.3	22.1	15.2	-6.6	7.6	-0.8	10.2	24.3	14.9	-5.5	8.1
Fixed Income - US							3.4	19.1	-3.0	4.2	11.1	6.7	3.5	13.1	-1.5	4.4	11.2	6.0
Fixed Income - EAFE							-2.9	9.2	1.5	8.5	8.4	4.8	-6.0	14.6	3.5	8.5	7.1	5.3
Fixed Income - Emerging							-5.0	3.5	-3.5	15.9	2.3	2.4	-3.4	5.9	-4.7	15.4	4.5	3.3
Fixed Income - Global	0.6	7.6	-0.2	7.0	6.5	4.2	-0.2	10.0	-0.8	7.3	6.7	4.5	-2.0	8.4	2.5	6.2	6.4	4.2
Fixed Income - Inflation Indexed							-3.6	11.3	-6.5	6.6	14.5	4.1	-3.4	14.4	-4.1	5.8	9.9	4.3
Fixed Income - High Yield							-3.8	4.1	8.6	14.6	5.3	5.6	-2.4	6.3	8.6	14.5	4.8	6.2
Fixed Income - Mortgages							-2.4	7.0	-1.3	4.4	8.0	3.0	-4.3	5.1	0.3	5.7	6.2	2.5
Fixed Income - Private Debt							-3.6	3.9	7.0	11.3	1.7	4.0	-2.0	6.0	5.6	6.7	3.4	3.9
Fixed Income - Other							-4.2	8.8	1.6	8.5	11.6	5.1	-4.3	17.5	-4.3	7.3	14.7	5.8
Cash							-3.2	1.9	0.2	1.3	1.4	0.3	-2.3	2.6	1.2	0.7	1.1	0.7
Fixed Income - Total	0.6	7.6	-0.2	7.0	6.5	4.2	-1.6	11.0	-2.7	6.7	11.6	4.8	-2.4	14.1	-2.0	6.8	12.6	5.6
Commodities							-23.2	-22.2	1.0	1.4	-2.7	-9.9	-22.6	-12.9	-3.0	-0.4	-5.5	-9.2
Infrastructure							0.4	10.4	6.6	8.3	10.1	7.1	-1.9	8.6	7.6	7.6	6.4	5.6
REITs							7.7	23.3	8.3	25.4	-1.6	12.1	3.5	23.8	5.9	19.3	4.4	11.1
Natural Resources							0.7	12.0	9.2	4.8	9.0	7.1	2.9	11.4	9.3	6.2	5.5	7.0
Real Estate ex-REITs	10.0	10.4	11.8	5.8	-4.4	6.6	9.8	13.0	10.0	9.2	12.0	10.8	8.6	13.5	10.7	8.0	11.9	10.5
Other Real Assets							1.4	11.1	14.0	2.9	-0.3	5.7	-4.4	8.6	8.8	7.2	4.1	4.8
Real Assets - Total	10.0	10.4	11.8	5.8	-4.4	6.6	5.6	11.9	8.8	9.6	10.2	9.2	4.8	11.8	8.8	7.8	8.9	8.4
Hedge Funds							-0.5	7.3	5.5	6.0	0.9	3.8	1.8	7.7	7.7	4.6	1.0	4.5
Global TAA							-0.3	10.5	7.6	7.3	-1.0	4.7	2.6	7.8	9.5	7.1	1.0	5.5
Diversified Private Equity ¹							7.3	16.1	27.9	11.6	8.2	14.0	7.5	21.4	28.3	8.0	14.4	15.6
LBO ¹							0.5	14.2	24.9	13.1	11.7	12.6	6.1	18.9	29.1	10.9	13.0	15.3
Venture Capital ¹							0.4	13.9	25.2	13.6	11.6	12.7	7.2	19.9	28.5	10.7	12.3	15.5
Other Private Equity ¹							4.5	13.8	29.6	14.6	8.4	13.9	7.1	18.4	29.2	10.4	13.2	15.4
Private Equity ¹ - Total							7.3	14.7	27.8	12.1	8.9	13.9	7.6	21.2	28.1	8.1	14.4	15.6
Total Policy Return	2.1	8.3	15.0	13.2	-2.4	7.0	0.0	10.9	12.0	11.7	2.7	7.3	-1.1	12.4	12.2	11.1	4.5	7.7

^{1.} To enable fairer comparisons, the policy returns of all participants with policy weight in private equity were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the Research section pages 6-7 for details.

Net value added by asset class

		,	Your f	und %	/ D			Pe	er av	erage	%			Glo	bal av	verage	2 %	
Asset class	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr	2015	2014	2013	2012	2011	5-yr
Stock - U.S.							0.2	-0.1	1.0	1.6	0.2	0.5	-0.2	-0.7	1.0	0.1	-0.8	-0.2
Stock - EAFE							1.2	-0.4	-1.7	2.5	-0.4	0.2	0.5	-0.1	0.9	0.9	-0.1	0.4
Stock - Emerging							0.4	0.6	1.3	0.5	-0.1	0.5	0.2	-0.1	0.4	0.4	-0.8	0.0
Stock - ACWIxU.S.							-0.1	0.4	1.0	0.8	-0.2	0.3	1.9	0.2	2.2	0.5	0.8	1.0
Stock - Global	0.8	-0.9	1.3	0.5	-0.6	0.2	1.0	0.4	2.6	0.6	-0.3	0.8	0.6	-0.2	1.0	0.3	-0.4	0.2
Stock - Other							0.8	0.6	3.6	-0.2	0.3	1.0	1.4	-0.5	0.3	0.0	-0.9	0.0
Stock - Total	0.8	-0.9	1.3	0.5	-0.6	0.2	-0.1	0.3	1.0	0.3	0.4	0.4	0.5	-0.2	1.3	0.6	-0.4	0.3
Fixed Income - US							0.0	0.3	0.2	1.4	0.2	0.8	0.2	0.3	0.8	2.1	-0.8	0.5
Fixed Income - EAFE							0.2	1.5	1.8	0.5	0.3	0.8	0.0	-0.7	0.4	0.9	0.3	0.1
Fixed Income - Emerging							-0.6	-1.0	-0.6	0.4	-0.3	-0.6	-0.9	-1.7	-0.6	0.2	-1.5	-0.9
Fixed Income - Global	-0.3	-0.7	0.2	-0.3	0.5	-0.1	-0.1	0.4	0.3	1.9	0.4	1.0	-0.7	-0.2	0.4	2.6	-0.2	0.4
Fixed Income - Inflation Indexed							0.3	-0.3	0.3	0.4	0.4	0.2	-0.4	-1.3	-0.1	0.6	0.7	-0.1
Fixed Income - High Yield							0.5	1.3	-0.1	-0.4	-1.5	0.0	1.0	-0.1	0.2	-0.4	-0.7	0.0
Fixed Income - Mortgages							1.1	1.9	3.2	0.8	1.1	1.6	1.2	1.9	2.5	2.9	-0.9	1.4
Fixed Income - Private Debt							1.8	-0.1	-0.8	-2.9	2.6	0.2	1.9	-0.3	2.1	2.5	-0.5	0.8
Fixed Income - Other							2.2	-0.2	-1.6	1.0	-2.5	-0.4	0.0	-0.2	0.5	1.1	-1.0	-0.1
Cash							0.6	0.4	0.0	0.2	3.1	0.8	-0.1	-1.5	0.0	0.2	0.2	-0.3
Fixed Income - Total	-0.3	-0.7	0.2	-0.3	0.5	-0.1	-0.3	-0.4	-0.1	0.9	0.2	0.1	-0.1	-1.2	0.4	0.9	-0.9	-0.1
Commodities							5.4	-0.9	-2.1	-0.4	2.0	0.9	1.4	2.0	-1.2	0.2	0.3	0.3
Infrastructure							3.1	9.8	1.4	-0.2	-7.8	1.1	5.6	2.6	1.0	-0.4	-0.5	1.7
REITs							0.9	-0.4	0.7	0.1	0.4	0.4	-0.3	0.7	-0.5	-0.2	-2.1	-0.6
Natural Resources							-0.9	4.4	-0.5	-1.3	-8.6	-1.5	-4.6	3.7	-2.3	-2.5	-1.7	-1.7
Real Estate ex-REITs	-0.2	-0.3	-0.4	-0.8	-0.8	-0.5	-0.4	1.6	0.4	0.4	-1.1	0.2	0.2	0.4	0.4	-0.5	-0.5	-0.1
Other Real Assets							-1.7	-3.2	-7.8	1.8	-1.8	-2.5	-2.9	-0.1	-5.7	-6.5	-3.8	-3.6
Real Assets - Total	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.3	0.4	0.8	-0.9	0.6	1.2	1.2	0.5	-0.2	-0.3	0.4
Hedge Funds							-0.1	-1.4	1.7	-1.3	0.3	-0.2	-0.4	1.6	2.1	0.9	0.1	8.0
Global TAA							-2.0	1.7	-5.3	0.2	-0.3	-1.2	-2.8	1.1	-1.4	0.2	1.4	-0.3
Diversified Private Equity ¹							1.6	1.9	-12.8	0.5	1.1	-1.4	3.3	-2.5	-11.5	2.1	-2.4	-2.0
LBO ¹							3.5	1.7	-9.4	-0.7	3.2	-0.2	1.6	1.3	-11.7	0.8	-0.2	-1.5
Venture Capital ¹							10.4	9.5	-9.4	-6.1	9.6	2.9	5.9	0.5	-12.4	-4.3	4.0	-1.2
Other Private Equity ¹							6.1	2.8	-14.7	-14.8	-16.3	-7.5	-0.2	-2.7	-12.5	-3.4	-6.1	-5.1
Private Equity¹ - Total							2.4	2.7	-11.0	0.1	2.3	-0.5	2.9	-2.3	-11.6	1.7	-2.2	-2.1
Total fund	0.6	-0.8	0.9	0.1	-0.2	0.1	0.9	0.5	-0.1	0.5	0.2	0.4	0.2	-0.2	0.6	0.8	-0.3	0.2

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

^{1.} To enable fairer comparisons, the policy returns of all participants with policy weight in private equity were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Refer to the Research section pages 6-7 for details.

Your policy return and value added calculation - 2015

2015 Policy Return and Value Added

	Policy	Benchmark		Net	Value
Asset class	weight	Description	Return	return	added
Stock - Global	61.6%	Your Stock: Global benchmark	3.0%	3.8%	0.8%
Fixed Income - Global	35.3%	Barclays Global Aggregate + Barclays Global Inflation	0.6%	0.3%	-0.3%
Real Estate ex-REITs	3.1%	Custom (Actual)	10.0%	9.8%	-0.2%
Total	100.0%				
Net Actual Return (reported by you)				2.7%
Calculated Policy Return = sum o	f (policy we	eights X benchmark returns)		2.4%	
Adjustment to reflect rebalancin	g and overl	ay impacts		<u>-0.3%</u>	
Policy Return					2.1%
Net Value Added (Net Return - Poli	y Return)				0.6%

The fund return consists of Equity, Fixed Income and Real Estate. The fund benchmark is the weighted benchmark of Equity and Fixed Income, the benchmark for Real Estate used in the report is the actual portfolio return.

Your policy return and value added calculations - 2011 to 2014

2014 Policy Return and Value Added

	Policy	Benchmark	(Net	Value
Asset class	weight	Description	Return	return	added
Stock - Global	61.1%	Your Stock: Globa	8.7%	7.9%	-0.9%
Fixed Income - U.S.	36.7%	Barclays Global A	7.6%	6.9%	-0.7%
Fixed Income - Global	36.7%	Barclays Global A	7.6%	6.9%	-0.7%
Real Estate ex-REITs	2.2%	Custom (Actual)	10.4%	10.1%	-0.3%
Total	100.0%				
Net Return (reported by you)					7.5%
Calculated policy return (sum	: Policy weigh	nts x benchmarks)		11.1%	
Adjustment to reflect rebalar	ncing and ove	rlay impacts		-2.8%	
Policy Return					8.3%
Net Value Added (Net Return -	Policy Retur	n)			-0.8%

2012 Policy Return and Value Added

	Policy	Benchmarl	<	Net	Value
Asset class	weight	Description	Return	return	added
Stock - Global	60.9%	Your Stock: Globa	17.5%	18.0%	0.5%
Fixed Income - U.S.	38.4%	Barclays Global A	7.0%	6.7%	-0.3%
Fixed Income - Global	38.4%	Barclays Global A	7.0%	6.7%	-0.3%
Real Estate ex-REITs	0.7%	Custom (Actual)	5.8%	5.0%	-0.8%
Total	100.0%				
Net Return (reported by you)					13.4%
Calculated policy return (sum:	Policy weigh	nts x benchmarks)		16.1%	
Adjustment to reflect rebalan	cing and ove	rlay impacts		-2.8%	
Policy Return					13.2%
Net Value Added (Net Return -	Policy Retur	n)			0.1%

2013 Policy Return and Value Added

	Policy	Benchmark	(Net	Value
Asset class	weight	Description	Return	return	added
Stock - Global	60.9%	Your Stock: Globa	25.0%	26.3%	1.3%
Fixed Income - U.S.	38.1%	Barclays Global A	-0.2%	0.1%	0.2%
Fixed Income - Global	38.1%	Barclays Global A	-0.2%	0.1%	0.2%
Real Estate ex-REITs	1.0%	Custom (Actual)	11.8%	11.3%	-0.4%
Total	100.0%				
Net Return (reported by you)					15.9%
Calculated policy return (sum: Po	olicy weigh	nts x benchmarks)		15.2%	
Adjustment to reflect rebalancing	g and ove	rlay impacts		-0.3%	
Policy Return					<u>15.0%</u>
Net Value Added (Net Return - Po	licy Retur	n)			0.9%

2011 Policy Return and Value Added

	Policy	Benchmark	<	Net	Value			
Asset class	weight	Description	Return	return	added			
Stock - Global	58.7%	Your Stock: Globa	-8.4%	-8.9%	-0.6%			
Fixed Income - U.S.	41.0%	Barclays Global A	6.5%	7.0%	0.5%			
Fixed Income - Global	41.0%	Barclays Global A	6.5%	7.0%	0.5%			
Real Estate ex-REITs	0.3%	Custom (Actual)	-4.4%	-5.2%	-0.8%			
Total	100.0%							
Net Return (reported by you)					-2.6%			
Calculated policy return (sum: Po	olicy weigh	nts x benchmarks)		0.4%				
Adjustment to reflect rebalancing	g and ove	rlay impacts		-2.8%				
Policy Return					<u>-2.4%</u>			
Net Value Added (Net Return - Policy Return)								

Profit/Loss on overlay programs

	Your	P	Peer median				Global median			
	2015	2014	20:	15	2014		2015		2014	
Overlay type	bps	bps	bps	#	bps	#	bps	#	bps	#
Int. Discretionary Currency			7	3	5	2	2	10	3	12
Ext. Discretionary Currency			3	2	2	2	1	7	4	9
Internal Global TAA			9	2	10	2	13	6	8	7
External Global TAA							13	2	30	2
Internal PolicyTilt TAA			-28	1	0	1	-2	6	0	5
External PolicyTilt TAA							-5	3	-3	2
Internal Commodities							-6	1	-1	1
External Commodities					0	1	-455	1	0	2
Internal Long/Short			16	2	0	1	-4	9	3	8
External Long/Short							-5	1	0	1
Internal Other			0	3	0	3	1	10	0	11
External Other							0	7	4	8
Total Profit/Loss			2	8	1	7	1	38	4	44

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.

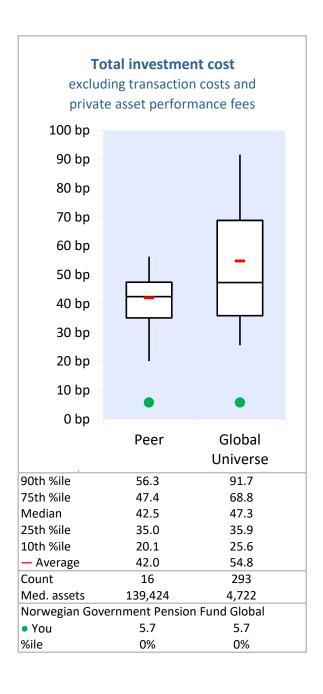
Total cost and benchmark cost

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Comparisons of total investment cost

Your total investment cost, excluding transaction costs and private asset performance fees, of 5.7 bps was below the peer median of 42.5 bps.

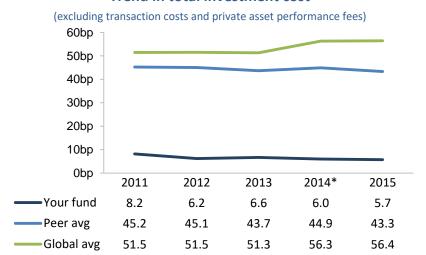
Differences in total investment cost are often caused by two factors that are usually outside of management's control: asset mix and fund size. Therefore, to assess whether your fund's total investment cost is high or low given your unique asset mix and size, CEM calculates a benchmark cost for your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



Trend in total investment cost

Your total investment cost, excluding transaction costs and private asset performance fees, decreased from 8.2 bps in 2011 to 5.7 bps in 2015.

Trend in total investment cost



Trend analysis is based on the 211 Global funds and the 15 peer funds with 5 or more consecutive years of data.

^{*} Starting in 2014 hedge fund performance fees are being included for all participants. This is one reason for the uptick in costs relative to 2013.

Types of costs included in your total investment cost

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

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

^{*}For limited partnerships, external manager base fees represent gross contractual management fees.

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

Detailed breakdown of your total investment cost

Your 2015 total investment cost, excluding transaction costs and private asset performance fees, was 5.7 bp or €450.1 million.

Your investment costs

	Inte	Internal		nal Passive	Е	xternal Ac	tive	Total		
				Monitoring	Base	Perform.	Monitoring			% of
	Passive	Active	Fees	& Other	Fees	Fees ¹	& Other	€000s	bps	Total
Asset management										
Asset management					60.050	64 500	5 505	0.40.650		===/
Stock		114,509			63,858	64,589	6,696	249,652		55%
Fixed Income		32,020			4,815		175	37,010		8%
	<u>In Sub</u>	Oversight								
Real Estate - Operating Sub.	0	39,477						39,477		9%
Total asset management costs	Total asset management costs excluding private asset performance fees									
Oversight, custodial & other as	set related	costs								
Oversight of the Fund								67,859		15%
Trustee & Custodial								42,400		9%
Consulting and Performance M	easureme	nt						8,868		2%
Audit								4,840		1%
Other										
Total oversight, custodial & oth	er costs							123,967	1.6bp	28%
Total investment costs excluding	ng transact	ion costs	and priv	vate asset pe	rformance	e fees		450,106	5.7bp	100%

¹ Starting in 2014, CEM changed its methodology to include performance fees on hedge funds in total cost used for comparison and benchmarking. Performance fees for real estate, infrastructure, natural resources and private equity are excluded.

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 (2015 - 2011)

	Investment costs (€000s)					Change	e (€000s)			Change (%)			
	2015	2014	2013	2012	2011	2015	2014	2013	2012	2015	2014	2013	2012
Asset management													
Stock	249,652	214,185	210,993	146,290	176,572	35,467	3,192	64,703	-30,282	17%	2%	44%	-17%
Fixed Income	37,010	29,004	27,155	33,538	33,080	8,006	1,849	-6,383	458	28%	7%	-19%	1%
Real Estate - Operating Sub.	39,477	28,131	21,479	15,155	8,178	11,346	6,652	6,324	6,977	40%	31%	42%	85%
Total excl. private asset perf. fees	326,139	271,320	259,627	194,983	217,830	54,819	11,693	64,644	-22,847	20%	5%	33%	-10%
Oversight sustadial 9 other asset	rolatod	oosts.											
Oversight, custodial & other asset													
Oversight of the Fund	67,859	59,310	67,148	64,168	65,464	8,549	-7,838	2,980	-1,296	14%	-12%	5%	-2%
Trustee & Custodial	42,400	51,964	43,763	33,318	36,160	-9,564	8,201	10,445	-2,842	-18%	19%	31%	-8%
Consulting and Performance Mea	8,868	6,363	2,292	2,356	5,105	2,505	4,071	-64	-2,749	39%	178%	-3%	-54%
Audit	4,840	4,314	4,667	4,464	4,077	526	-353	203	387	12%	-8%	5%	9%
Other	0	0	0	0	0								
Total oversight, custodial & other	123,967	121,953	117,872	104,308	110,809	2,014	4,081	13,564	-6,501	2%	3%	13%	-6%
Total investment costs ¹	450,106	393,277	377,504	299,295	328,644	56,829	15,773	78,208	-29,349	14%	4%	26%	-9%
Total in basis points	5.7bp	6.0bp	6.6bp	6.2bp	8.2bp								

¹ Starting in 2014, CEM changed its methodology to include performance fees on hedge funds in total cost used for comparison and benchmarking. Performance fees for real estate, infrastructure, natural resources and private equity are excluded.

Total cost versus benchmark cost

Your fund's total investment cost, excluding transaction costs and private asset performance fees, was 12.4 bps below your benchmark cost of 18.2 bps. This implies that your fund was low cost by 12.4 bps compared to the peer median, after adjusting for your fund's asset mix.

Your cost versus benchmark

	€000s	bps
Your fund's total investment cost excluding transaction costs and illiquid asset performance fees	450,106	5.7 bp
- Your fund's benchmark	1,425,139	18.2 bp
= Your fund's cost savings	-975,033	-12.4 bp

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

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

Reasons why your fund was low cost

	Cost/-Sa impa	•
	€000s	bps
<u>Differences in implementation style:</u>		
External active vs. low cost styles	-718,160	-9.2 bp
Fund of funds vs. external direct	0	0.0 bp
Mix of internal and passive styles	132,530	1.7 bp
Style impact of overlays	-104,086	-1.3 bp
Total style impact	-689,717	-8.8 bp
Paying more/-less for similar services:		
External investment management	1,761	0.0 bp
Private asset performance fees	0	0.0 bp
Internal investment management	-268,916	-3.4 bp
Oversight, custodial and other	-18,162	-0.2 bp
Total impact of paying more /-less	-285,316	-3.6 bp
Total savings	-975,033	-12.4 bp

Benchmark cost calculation

Your 2015 benchmark cost was 18.2 basis points or €1.4 billion. It equals your holdings for each asset class multiplied by the peer median cost for the asset class. The peer median cost is the style weighted average for all implementation styles (i.e., internal passive, internal active, external passive, external active).

Calculation of your 2015 benchmark cost

	Your	Weighted	
	average	peer median	Benchmark
Asset class	assets	cost ¹	€000s
	(A)	(B)	(A X B)
Asset management costs			
Stock	484,838	16.4 bp	796,237
Fixed Income	277,526	9.3 bp	258,195
Real Estate ex-REITs (including oper. suk	20,810	59.8 bp	124,491
Overlay Programs ²	783,173	1.3 bp	104,086
Benchmark for asset management	783,173	16.4 bp	1,283,010
Oversight, custody and other costs			
Oversight of the Fund	783,173	0.9 bp	67,897
Trustee & Custodial	783,173	0.5 bp	42,222
Consulting	783,173	0.1 bp	9,543
Audit	783,173	0.0 bp	3,350
Other	783,173	0.2 bp	19,116
Benchmark for oversight, custody & other	r	1.8 bp	142,129
Total handbook cost		10 1 hn	1 425 120
Total benchmark cost		18.2 bp	1,425,139

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

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

Cost impact of differences in implementation style

Differences in implementation style (i.e., external active management versus lower cost indexed and internal management, fund of funds versus lower cost direct LPs, and overlay usage) relative to your peers saved you 8.8 bps.

Calculation of the cost impact of differences in implementation style

	Your avg	70 External active		Premium vs.	Cost	•	
	holdings		Peer	More/	internal and	-Savin	igs³
	(mils)	You	average	-Less	passive ^{1 2}	€000s	bps
	(A)						
	. ,			(B)	(C)	(A X B X C)	
Stock	484,838	6%	32%	-25%	40 bp	-488,289	
Fixed Income	277,526	1%	23%	-23%	27 bp	-167,025	
Real Estate ex-REITs (incl. oper. suk	20,810	0%	60%	-60%	51 bp	-62,846	
partnerships as % of external:	0		55%		46 bp	0	
Total impact of differences in extern	nal active m	anager	nent usage	!		-718,160	-9.2 bp
			Overlay uso	ige			
Impact of lower use of portfolio leve	el overlays ((see pa	ge 10)			-104,086	-1.3 bp
		Mix	of low cost	styles			
Impact of mix of internal indexed, in	iternal activ	ve, exte	ernal indexe	ed (see pa	ige 11)	132,530	1.7 bp
Total						-689,717	-8.8 bp

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

^{2. &#}x27;Insufficient' indicates there is insufficient peer data to determine the cost premium.

Cost impact of overlays

As summarized on the previous page, the style impact of overlays saved you 1.3 bps. If you use more overlays than your peers, or more expensive types of overlays, then it increases your relative cost.

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

	Your avg	Overlay	notional an	nounts as	Median	Your cost	Avorago	Cost/
	O		avg total h				Average	-Savings
	total	a /0 UI	Peer	More/	cost as a	as a % of	cost as a %	
	holdings	V		/	% of	total	of total	Impact
	(mils)	You	Average	-Less	notional	holdings ¹	holdings	(000s)
	(A)			(B)	(C)			(A X B X C)
Internal Overlays								
Currency - Hedge	783,173	0.0%	n/a			N/A	0.1 bp	-5,817
Currency - Discretionary	783,173	0.0%	7.5%	-7.5%	0.5 bp			-3,205
Passive Beta - Hedge	783,173	0.0%	n/a			N/A	0.1 bp	-6,110
Duration - Hedge	783,173	0.0%	n/a			N/A	0.1 bp	-5,576
Global TAA - Discretionary	783,173	0.0%	n/a			N/A	0.1 bp	-5,230
Policy Tilt TAA - Discretionary	783,173	0.0%	12.5%	-12.5%	1.2 bp			-11,631
Commodity Futures - Discretionary	783,173	0.0%	0.0%	0.0%	18.9 bp			-667
Long/Short - Discretionary	783,173	0.0%	n/a			N/A	0.7 bp	-55,836
Other - Discretionary	783,173	0.0%	0.2%	-0.2%	6.6 bp			-1,028
External Overlays								
Currency - Hedge	783,173	0.0%	2.9%	-2.9%	1.9 bp			-4,313
Currency - Discretionary	783,173	0.0%	0.3%	-0.3%	12.8 bp			-3,055
Passive Beta - Hedge	783,173	0.0%	0.0%	0.0%	8.2 bp			-140
Duration - Hedge	783,173	0.0%	0.5%	-0.5%	3.9 bp			-1,478
Dur. Mgmt Swaption - Hedge	783,173	0.0%	0.0%	0.0%	3.7 bp			0
Global TAA - Discretionary	783,173	0.0%	0.0%	0.0%	76.1 bp			0
Policy Tilt TAA - Discretionary	783,173	0.0%	0.0%	0.0%	0.6 bp			0
Commodity Futures - Discretionary	783,173	0.0%	0.0%	0.0%	5.7 bp			0
Long/Short - Discretionary	783,173	0.0%	0.0%	0.0%	2.3 bp			0
Other - Discretionary	783,173	0.0%	0.0%	0.0%	7.3 bp			0
Total impact in 000s								-104,086
Total impact in basis points								-1.3 bp

^{1.} For overlay programs (primarily certain internal, profit seeking programs) where no clear notional value is defined or provided, these types of overlays are compared in terms of cost relative to total holdings.

Cost impact of lower cost styles

As summarized on page 9, your mix of 'lower-cost' internal and passive styles cost you 1.7 bps. Details are shown below.

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

	Your non-		Cost/					
	external active	Internal passive		Internal active		External passive		-Savings ¹
	holdings (mils)	You	Peers	You	Peers	You	Peers	(000s)
Stock	454,193	0%	41%	100%	41%	0%	18%	123,174
Fixed Income	275,996	0%	23%	100%	69%	0%	8%	9,355
Real Estate ex-REITs	20,810	0%	0%	100%	100%	0%	0%	0
Total impact in 000s								132,530
Total impact in basis poin	nts							1.7 bp

^{1.} Cost/-savings for each asset class equals non-external active holdings within each asset class X cumulative impact from the three lower cost styles. By formula: [(peer median cost for the style - peer weighted average cost of lower cost styles) X (your weight for the style - peer weight for the style)]. Peer median costs for each style are shown on page 18.

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 3.6 bps.

Calculation of the cost impact of paying more/-less

		Your avg	<u>.</u>	Cost in bps		Cos	
		holdings	.,	Peer	More/	-Savi	_
	Style	(mils)	Your	median	-less	€000s	bps
		(A)			(B)	(A X B)	
External asset management							
Stock	active	30,645	44.1	43.7	0.4	1,335	
Fixed Income	active	1,530	32.6	29.8	2.8	427	
Total for external management						1,761	0.0 bp
Internal asset management							
Stock	active	454,193	2.5	6.5	-4.0	-182,805	
Fixed Income	active	275,996	1.2	3.5	-2.3	-63,943	
Real Estate ex-REITs	active	20,810	19.0	29.6	-10.7	-22,168	
Total for internal asset manageme	ent					-268,916	-3.4 bp
Oversight, custodial, other							
Oversight of the Fund		783,173	0.9	0.9	0.0	-38	
Consulting and Performance Mea	surement	783,173	0.1	0.1	0.0	-675	
Trustee & Custodial		783,173	0.5	0.5	0.0	178	
Audit		783,173	0.1	0.0	0.0	1,490	
Other		783,173	0.0	0.2	-0.2	-19,116	
Total for oversight, custodial, other	er					-18,162	-0.2 bp
Total						-285,316	-3.6 bp

^{*}Universe median used as peer data was insufficient.

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

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

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

		Benchmark = peer		Your	More/	Due to Impl.	Due to paying
	Your cost ¹	weighted median cost ¹	More/ -less	average assets	-less (€000s)	style (€000s)	more/less (€000s)
	(A)	(B)	(C = A - B)	(D)	(C X D)		
Asset management costs							
Stock	5.1 bp	16.4 bp	-11.3 bp	484,838	-546,585	-365,115	-181,470
Fixed Income	1.3 bp	9.3 bp	-8.0 bp	277,526	-221,185	-157,669	-63,516
Real Estate ex-REITs (including oper. sul	19.0 bp	59.8 bp	-40.9 bp	20,810	-85,014	-62,846	-22,168
Overlay Programs ²	0.0 bp	1.3 bp	-1.3 bp	783,173	-104,086	-104,086	0
Total asset management	4.2 bp	16.4 bp	-12.2 bp	783,173	-956,871	-689,717	-267,154
Oversight, custody and other costs							
Oversight of the Fund	0.9 bp	0.9 bp	0.0 bp	783,173	-38	n/a	-38
Trustee & Custodial	0.5 bp	0.5 bp	0.0 bp	783,173	178	n/a	178
Consulting	0.1 bp	0.1 bp	0.0 bp	783,173	-675	n/a	-675
Audit	0.1 bp	0.0 bp	0.0 bp	783,173	1,490	n/a	1,490
Other	0.0 bp	0.2 bp	-0.2 bp	783,173	-19,116	n/a	-19,116
Total oversight, custody & other	1.6 bp	1.8 bp	-0.2 bp	783,173	-18,162	n/a	-18,162
Total	5.7 bp	18.2 bp	-12.4 bp	783,173	-975,033	-689,717	-285,316

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

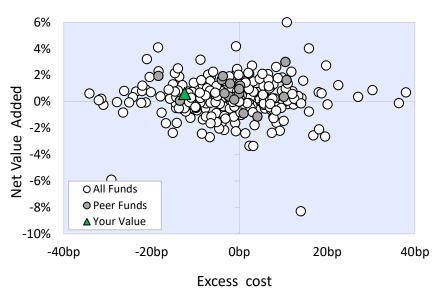
^{2.} Total fund average holdings is used as the base when calculating the relative cost impact of the overlay programs.

Your cost effectiveness ranking

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

For the 2015 year, your fund ranked in the positive value added, low cost quadrant.

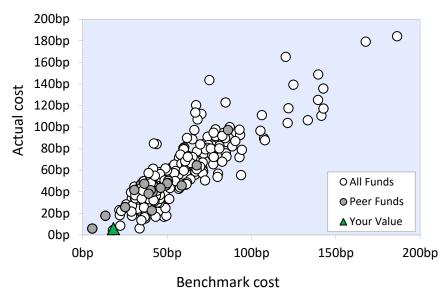




¹ Benchmark cost and excess cost calculations are based on regression analysis (see Appendix B in this section) for all funds except your fund. Your fund's benchmark cost is based on peer-median costs (per page 7 of this section).

Actual cost versus benchmark cost





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

Appendix A: Benchmarking methodology formulas and data

a) Formulas

Example calculations are for Stock unless otherwise indicated.

Asset class peer cost

- = Weighted average by peer average style of peer median costs for asset class
- $= [(0.28 \times 1.4 \text{bp}) + (0.28 \times 6.5 \text{bp}) + (0.12 \times 3.3 \text{bp}) + (0.32 \times 43.7 \text{bp})] / (0.28 + 0.28 + 0.12 + 0.32) = 16.4 \text{bp}$

Peer average low cost (by asset class)

- = Weighted average by peer average style of peer median costs for internal passive, internal active and external passive management for asset class
- $= [(0.28 \times 1.4 \text{bp}) + (0.28 \times 6.5 \text{bp}) + (0.12 \times 3.3 \text{bp})] / (0.28 + 0.28 + 0.12) = 3.8 \text{bp}$

External active cost premium (by asset class)

- = Peer median external active cost peer average low cost
- = 43.7bp 3.8bp = 39.8bp

Fund of funds premium (by asset class)

- = Peer median fund-of-funds cost peer median external active cost
- = (For private equity) 215.3bp 155.6bp = 59.7bp

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

- = [(Your int. pass. % average peer int. pass. %) X (peer median int. pass. cost peer average low cost)
 - + (your int. act. % peer average int. act. %) X (peer median int. act. cost peer average low cost)
- + (your ext. pass. % average peer ext. pass. %) X (median peer ext. pass. cost peer average low cost)] X your average holdings

b) Insufficient peer data

All peer data is adjusted to ensure comparisons are made only when sufficient data is available. When too few peers have the asset class or style in question, peer costs are replaced with your fund's cost, neutralizing the effect of your cost. Major implementation styles (external active, fund of funds and combined "low cost") that you do not hold are ignored if they have insufficient data to draw major style impact conclusions. Throughout this section, 'peer median' and 'average peer style' always refer to these adjusted values. The following page shows the adjusted data used in this section.

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

c) 2015 cost data used to calculate weighted peer median costs and impact of mix differences.

Asset Class		Your costs (basis points)					Peer median costs (basis points)						
	Internal Passive	Internal Active	External Passive	External Active	Limited Parner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	Weighted Median
Stock		2.5		44.1			1.4	6.5	3.3	43.7			16.4
Fixed Income		1.2		32.6			1.7	3.5	4.5	29.8			9.3
Real Estate ex-REITs		19.0						29.6		55.2	92.4	168.0	59.8

d) 2015 Style weights used to calculate the weighted peer median costs and impact of mix differences.

Style Weights		You (%)						Peer average (%)					
	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	Internal Passive	Internal Active	External Passive	External Active	Limited Partner.	Fund of Funds	
Stock	0.0%	93.7%	0.0%	6.3%			28.1%	27.8%	12.4%	31.6%			
Fixed Income	0.0%	99.4%	0.0%	0.6%			17.9%	53.0%	6.0%	23.1%			
Real Estate ex-REITs		100.0%		0.0%	0.0%	0.0%		40.4%		27.1%	28.6%	3.8%	

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

Appendix B: Regression based benchmarks

Regression Benchmark Cost Equations

	2015		201	2014		2013		2	2011	
	Coeff.	"t"								
Constant	76.5	17.4	84.4	19.2	76.8	18.2	73.2	18.9	72.5	18.8
Size in millions (Log 10)	-13.7	-12.8	-15.7	-14.6	-14.2	-13.3	-13.7	-13.8	-13.3	-13.8
Percentage of assets in:										
Stocks	11.1	2.8	14.3	3.3	19.6	4.5	19.0	4.6	14.8	3.6
Real estate	47.1	3.5	56.7	3.7	56.9	3.8	55.1	4.2	50.8	3.9
Private equity & hedge funds	208.1	28.2	205.2	27.4	203.3	26.9	208.1	30.5	210.4	31.5
Country variable (1 if Cdn)	-2.9	-1.7	-6.9	-4.0	-8.1	-4.7	-6.4	-4.1	-4.9	-3.3
	All		All		All		All		All	
Standard error	14.5		14.5		14.6		13.1		0.7	
R-squared	65%		67%		65%		71%		0%	
F statistic	184.1		185.9		175.1		219.0		0.0	
Sample size	486		449		466		454		487	

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

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

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

Most importantly, the R-squareds have been high. In 2015, the R-squared was 65% which means that fund size, asset mix and nationality explain more than 65% of the differences in costs between funds. This is good explanatory power.

Below is a description of the coefficients:

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

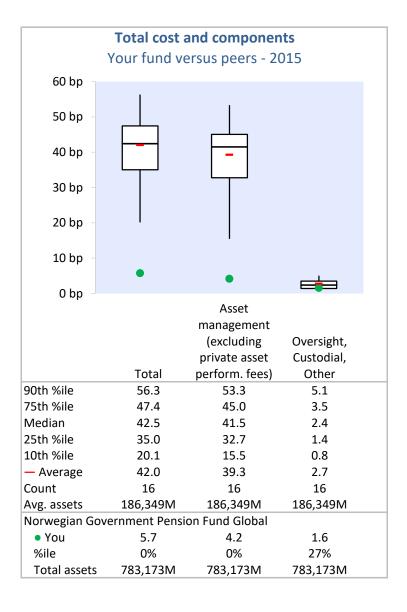
Cost comparisons

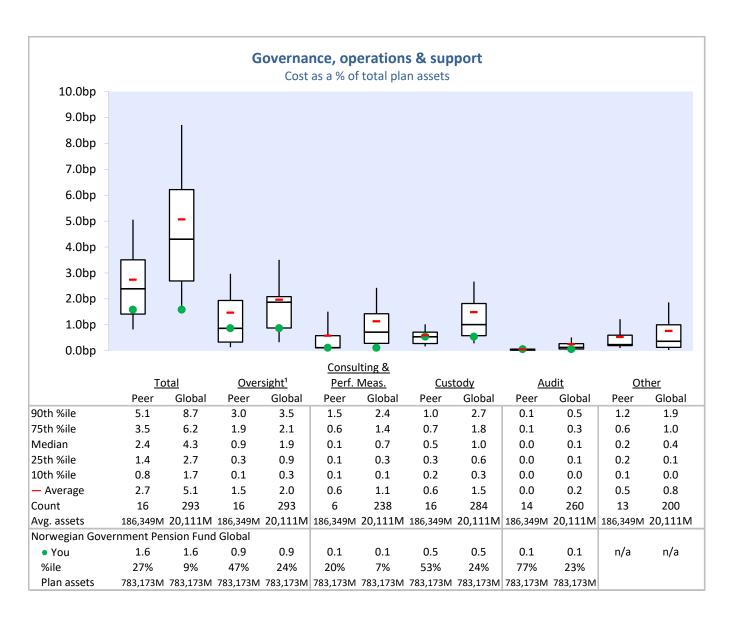
lotal fund cost	2				
Governance, operations & support	3				
Public asset classes					
- Stock	4				
- Fixed Income	10				
- Commodities	19				
- REITs	20				
Real asset classes					
- Real estate ex-REITs	21				
- Infrastructure	22				
- Natural resources	23				
- Other real assets	24				
Private equity					
- Diversified private equity	25				
- LBO	26				
- Venture capital	27				
- Other private equity	28				
Global TAA	29				
Hedge Funds					
Overlays	31				

Total fund cost

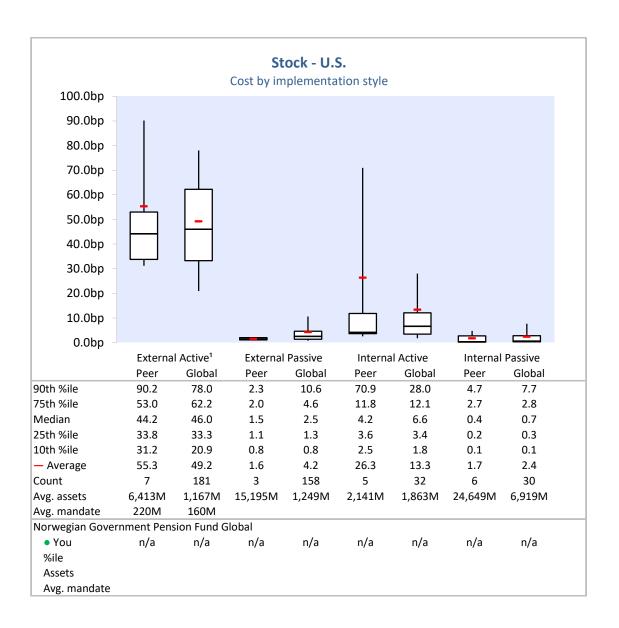
Total costs are benchmarked in the previous section. In this section, your fund's costs are compared on a lineitem basis to your peers. This enables you to understand better why you may be a high or low cost fund and it also identifies and quantifies major cost differences that may warrant further investigation.

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.



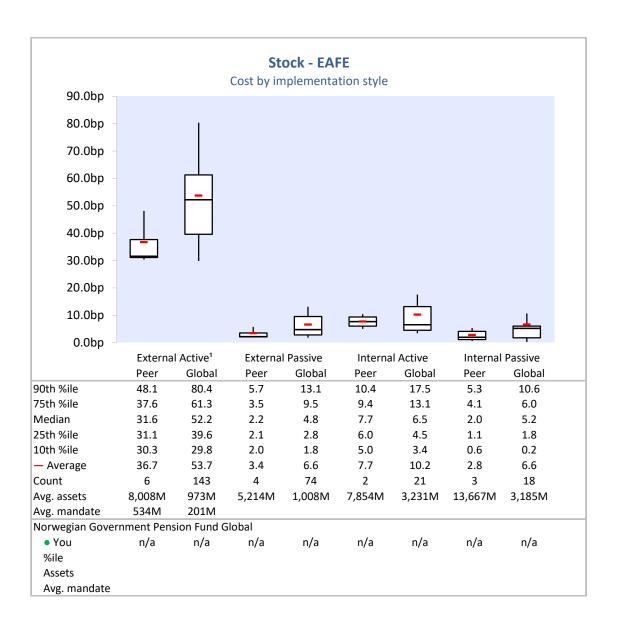


^{1.} Oversight costs include the salaries and benefits of executives and their staff responsible for overseeing the entire fund or multiple asset classes and the fees/salaries of the Board or Investment Committee. All costs associated with the above including fees/salaries, travel, director's insurance 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.



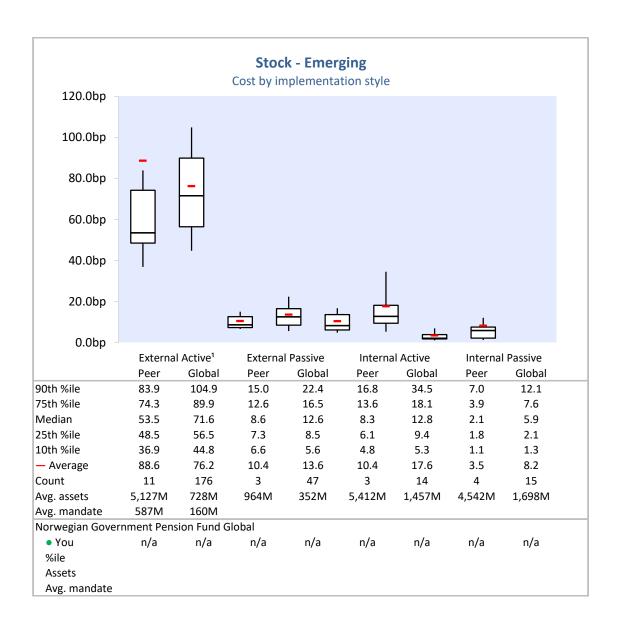
		Peer	Global
	You	Average	Average
Base fees	n/a	46.4	44.6
Performance fees*	n/a	8.1	4.2
Internal and other	<u>n/a</u>	<u>0.7</u>	0.4
Total	n/a	55.3	49.2

^{*} 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 14.2 bps for peers (4 funds) and 15.9 bps for Global participants (48 funds).



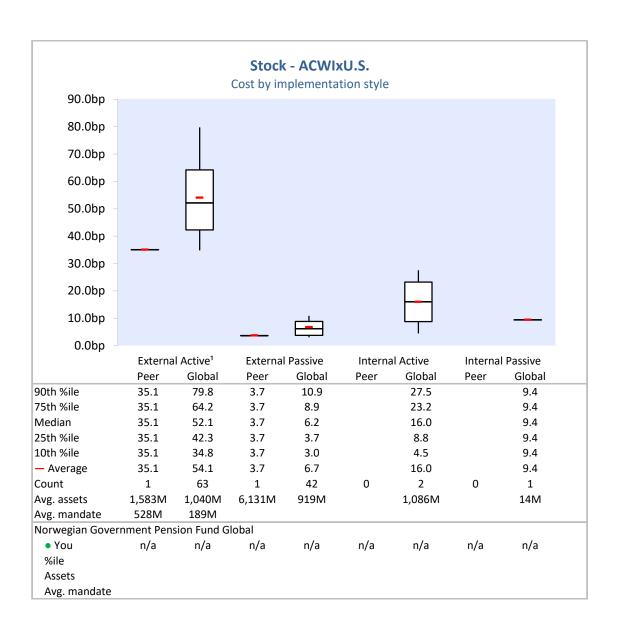
		Peer	Global
	You	Average	Average
Base fees	n/a	29.8	49.2
Performance fees*	n/a	6.3	4.0
Internal and other	<u>n/a</u>	<u>0.5</u>	<u>0.6</u>
Total	n/a	36.7	53.7

^{*} 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 12.7 bps for peers (3 funds) and 16.3 bps for Global participants (35 funds).



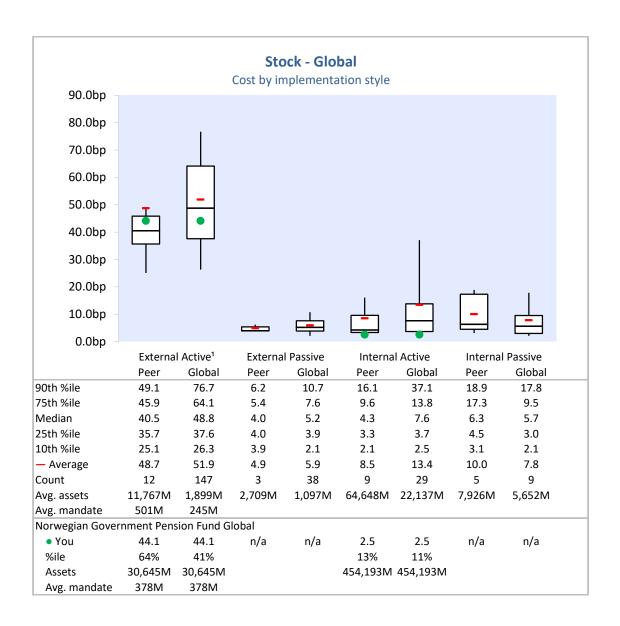
		Peer	Global
	You	Average	Average
Base fees	n/a	56.4	70.6
Performance fees*	n/a	27.3	3.9
Internal and other	<u>n/a</u>	<u>4.9</u>	<u>1.7</u>
Total	n/a	88.6	76.2

^{*} 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 50.0 bps for peers (6 funds) and 20.4 bps for Global participants (34 funds).



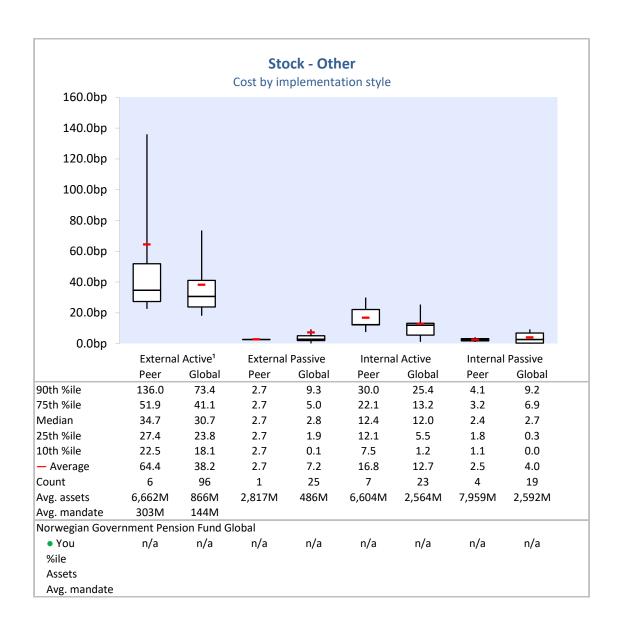
		Peer	Global
	You	Average	Average
Base fees	n/a	33.9	51.3
Performance fees*	n/a	0.0	2.3
Internal and other	<u>n/a</u>	<u>1.1</u>	<u>0.5</u>
Total	n/a	35.1	54.1

^{*} 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 10.3 bps for Global participants (14 funds).



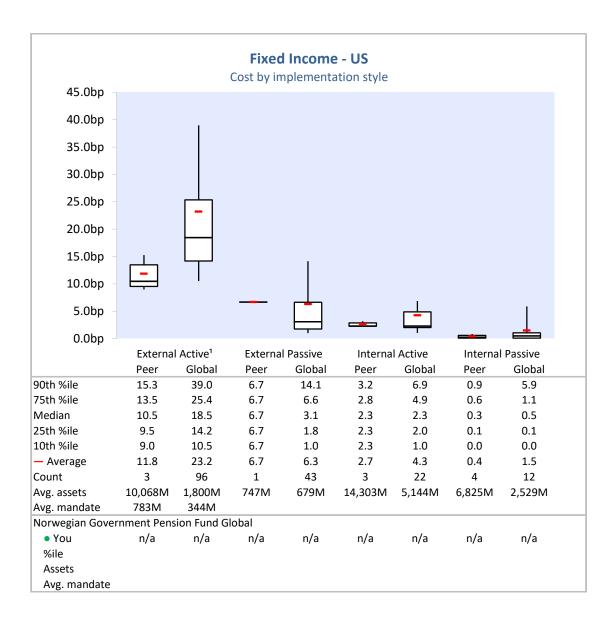
		Peer	Global
	You	Average	Average
Base fees	20.8	37.1	46.6
Performance fees*	21.1	8.0	4.2
Internal and other	<u>2.2</u>	<u>3.6</u>	<u>1.1</u>
Total	44.1	48.7	51.9

^{*} 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 9.7 bps for peers (10 funds) and 12.5 bps for Global participants (49 funds).



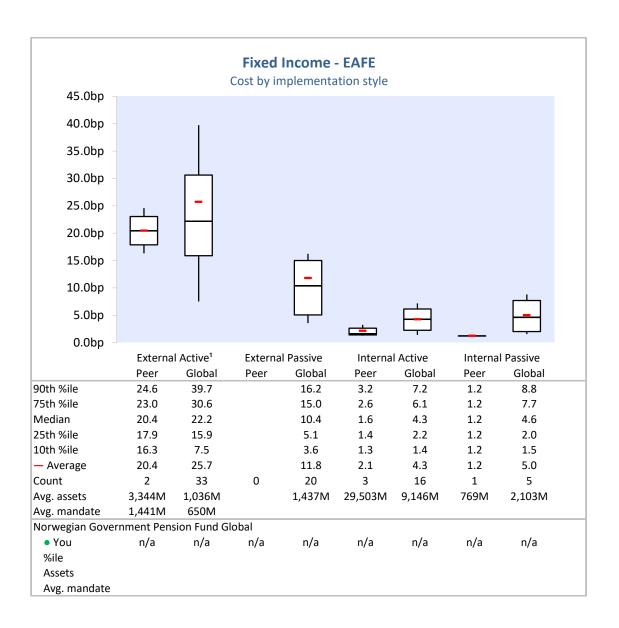
		Peer	Global
	You	Average	Average
Base fees	n/a	42.0	35.0
Performance fees*	n/a	20.4	2.6
Internal and other	<u>n/a</u>	2.0	<u>0.5</u>
Total	n/a	64.4	38.2

^{*} 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 30.6 bps for peers (4 funds) and 11.4 bps for Global participants (22 funds).



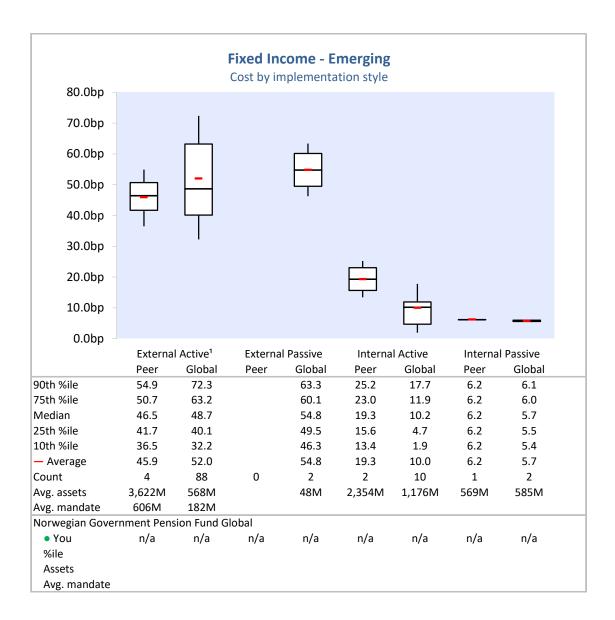
		Peer	Global
	You	Average	Average
Base fees	n/a		
Performance fees*	n/a		
Internal and other	<u>n/a</u>	<u>1.6</u>	<u>0.5</u>
Total	n/a	11.8	23.2

^{*} For funds that did not report a performance fee, a value of 'zero' was used.



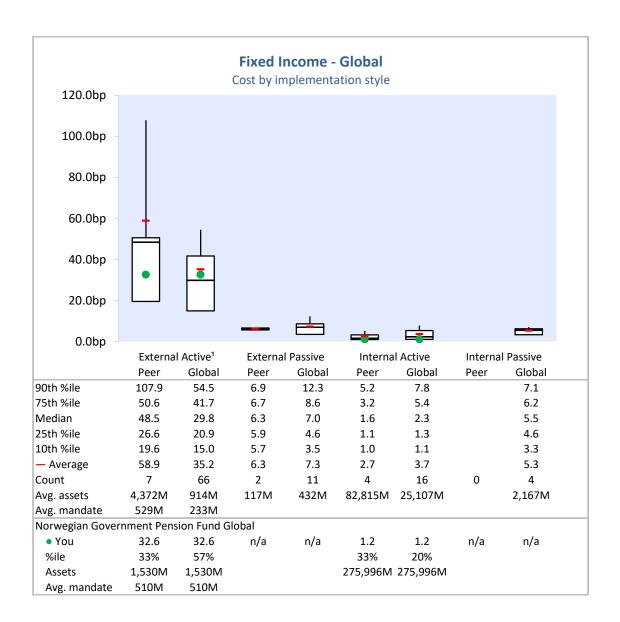
		Peer	Global
	You	Average	Average
Base fees	n/a	11.2	21.4
Performance fees*	n/a	8.7	0.6
Internal and other	<u>n/a</u>	0.6	<u>3.8</u>
Total	n/a	20.4	25.7

^{*} 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 2.4 bps for Global participants (8 funds).



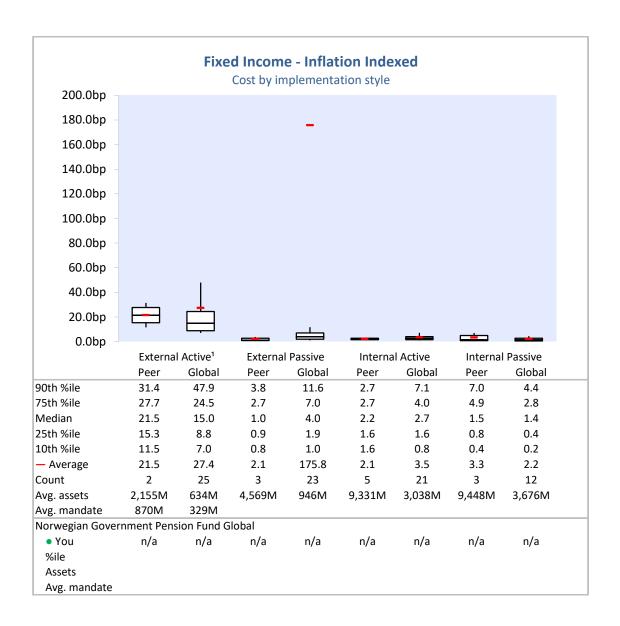
		Peer	Global
	You	Average	Average
Base fees	n/a	38.9	49.5
Performance fees*	n/a	5.6	0.7
Internal and other	<u>n/a</u>	<u>1.4</u>	<u>1.8</u>
Total	n/a	45.9	52.0

^{*} 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 7.4 bps for peers (3 funds) and 3.8 bps for Global participants (17 funds).



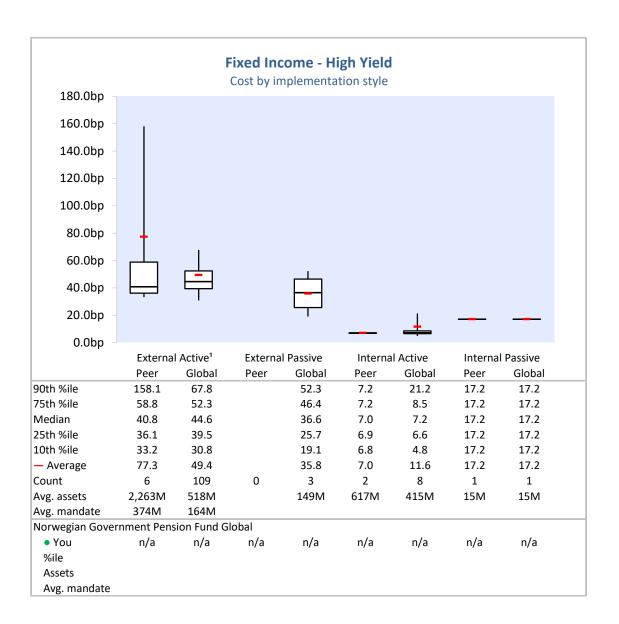
		Peer	Global
	You	Average	Average
Base fees	31.5	34.3	31.9
Performance fees*	0.0	20.4	2.4
Internal and other	<u>1.1</u>	<u>4.2</u>	<u>0.9</u>
Total	32.6	58.9	35.2

^{*} 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 35.8 bps for peers (4 funds) and 9.4 bps for Global participants (17 funds).



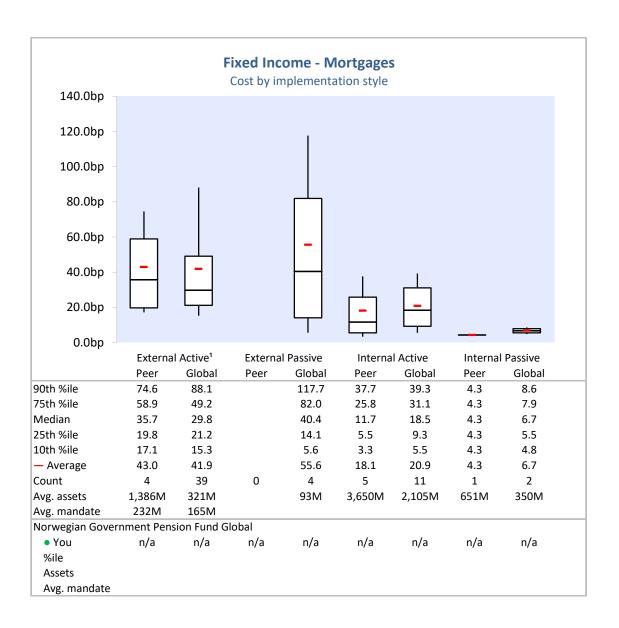
		Peer	Global
	You	Average	Average
Base fees	n/a	21.3	21.3
Performance fees*	n/a	0.0	5.7
Internal and other	<u>n/a</u>	0.2	0.3
Total	n/a	21.5	27.4

^{*} For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 0.0 bps for peers (1 fund) and 71.1 bps for Global participants (2 funds).



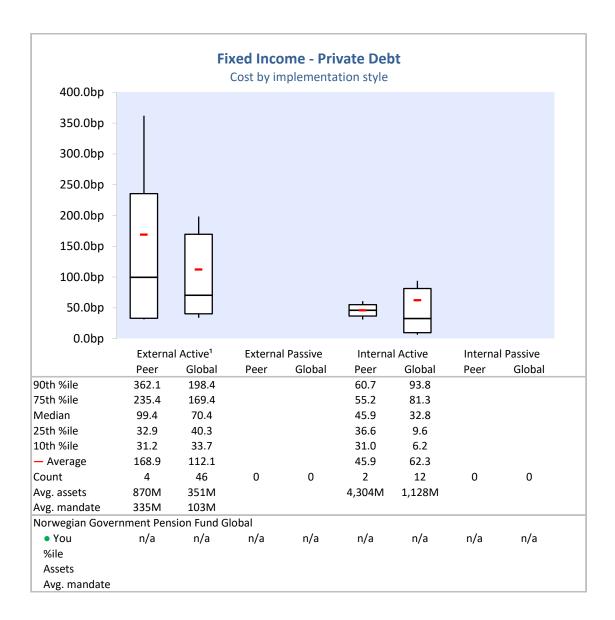
		Peer	Global
	You	Average	Average
Base fees	n/a	53.2	45.5
Performance fees*	n/a	19.9	2.2
Internal and other	<u>n/a</u>	<u>4.2</u>	<u>1.7</u>
Total	n/a	77.3	49.4

^{*} 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 29.8 bps for peers (4 funds) and 14.4 bps for Global participants (17 funds).



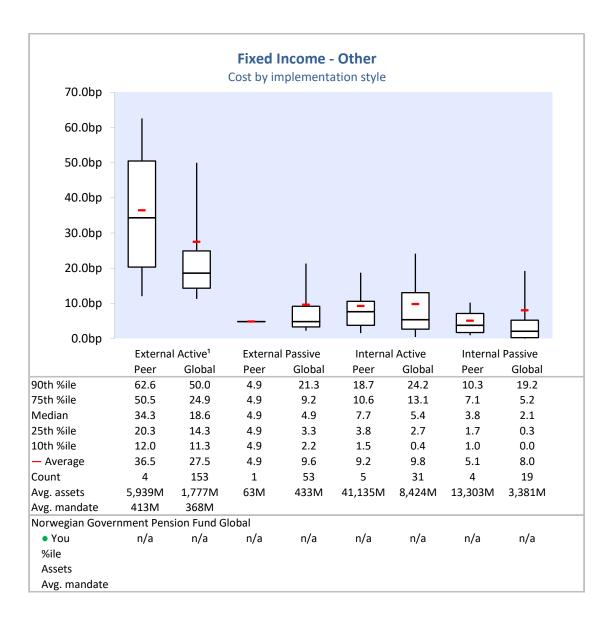
		Peer	Global
	You	Average	Average
Base fees	n/a	31.1	38.5
Performance fees*	n/a	0.0	0.3
Internal and other	<u>n/a</u>	<u>11.8</u>	<u>3.1</u>
Total	n/a	43.0	41.9

^{*} 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 5.4 bps for Global participants (2 funds).



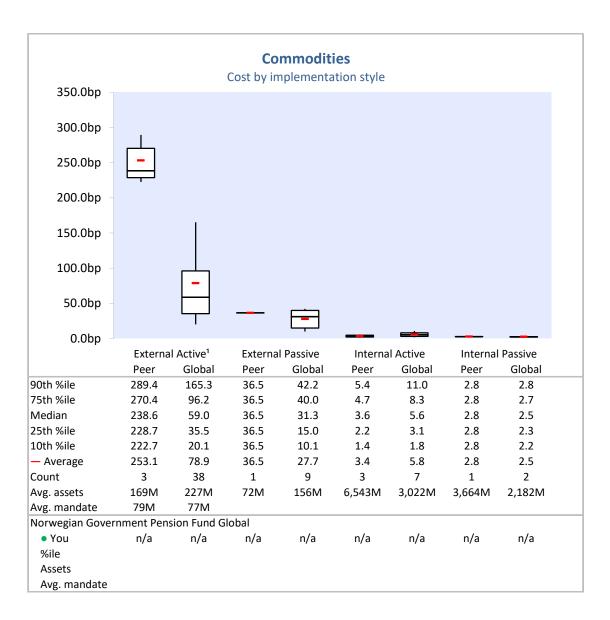
		Peer	Global
	You	Average	Average
Base fees	n/a	145.7	102.0
Performance fees*	n/a	5.3	5.4
Internal and other	<u>n/a</u>	<u>18.0</u>	<u>4.7</u>
Total	n/a	168.9	112.1

^{*} 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 21.1 bps for peers (1 fund) and 24.9 bps for Global participants (10 funds).



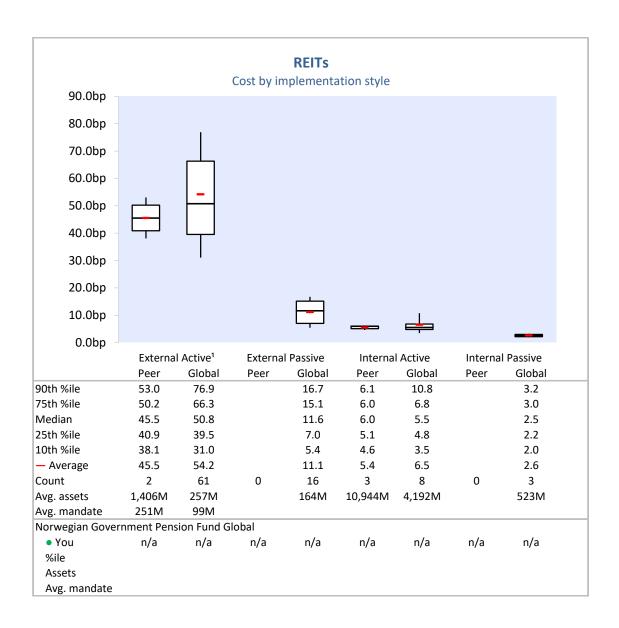
		Peer	Global
	You	Average	Average
Base fees	n/a	30.4	23.1
Performance fees*	n/a	0.0	3.9
Internal and other	<u>n/a</u>	<u>6.1</u>	<u>0.5</u>
Total	n/a	36.5	27.5

^{*} For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is -0.1 bps for peers (1 fund) and 23.9 bps for Global participants (25 funds).



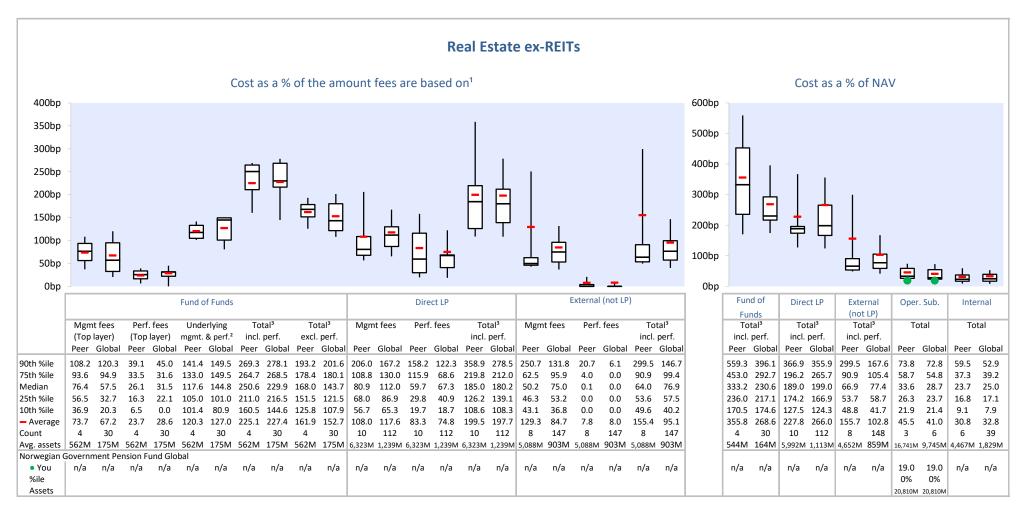
		Peer	Global
	You	Average	Average
Base fees	n/a	220.9	70.4
Performance fees*	n/a	13.7	4.3
Internal and other	<u>n/a</u>	<u>18.5</u>	<u>4.1</u>
Total	n/a	253.1	78.9

^{*} 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 41.1 bps for peers (1 fund) and 12.6 bps for Global participants (13 funds).

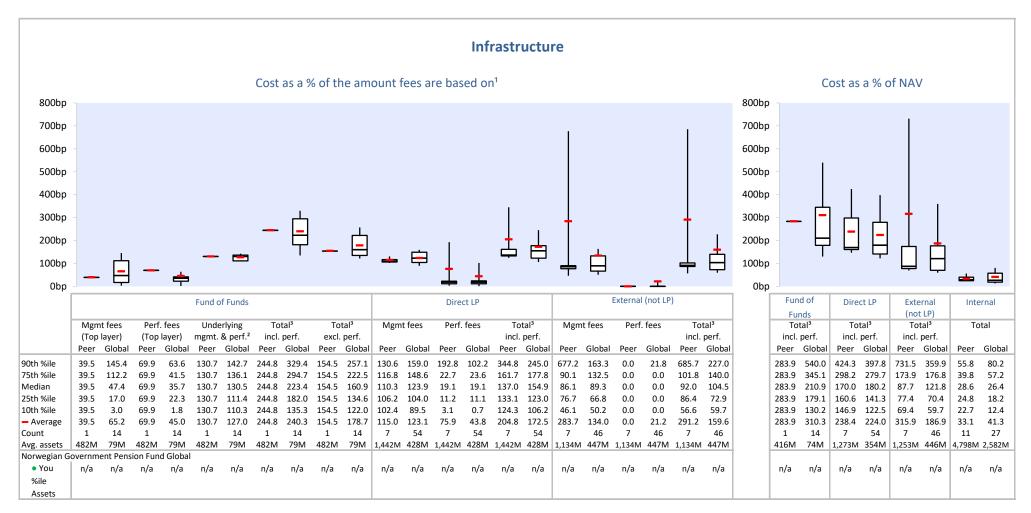


		Peer	Global
	You	Average	Average
Base fees	n/a	43.1	52.3
Performance fees*	n/a	0.0	1.4
Internal and other	<u>n/a</u>	<u>2.4</u>	<u>0.5</u>
Total	n/a	45.5	54.2

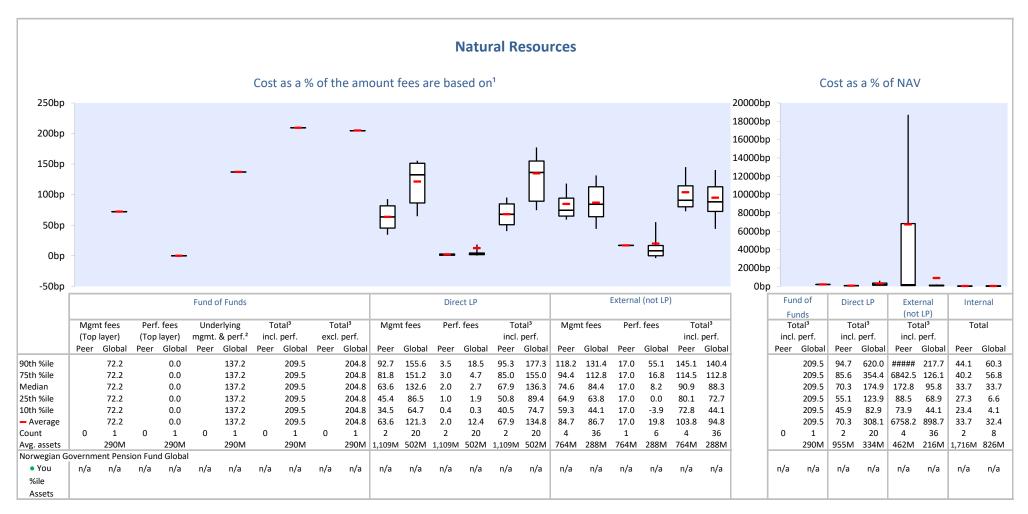
^{*} For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 7.7 bps for Global participants (11 funds).



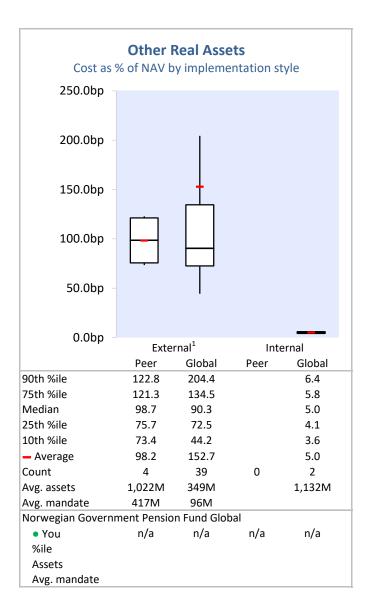
- 1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- 2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 81 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 7.4 bps for fund of funds, 8.2 bps for LPs and 18.3 bps for external (not LPs).



- 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 110 bps (on amount fees are based on) for underlying management fees and 24 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 4.7 bps for fund of funds, 13.9 bps for LPs and 7.5 bps for external (not LPs).



- 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 133 bps (on amount fees are based on) for underlying management fees and 5 bps (on NAV) for underlying performance fees were used.
- 3. The total cost also includes the internal cost of monitoring and selecting natural resources investments. The peer average cost of monitoring and selecting was 2.3 bps for LPs and 14.8 bps for external (not LPs).

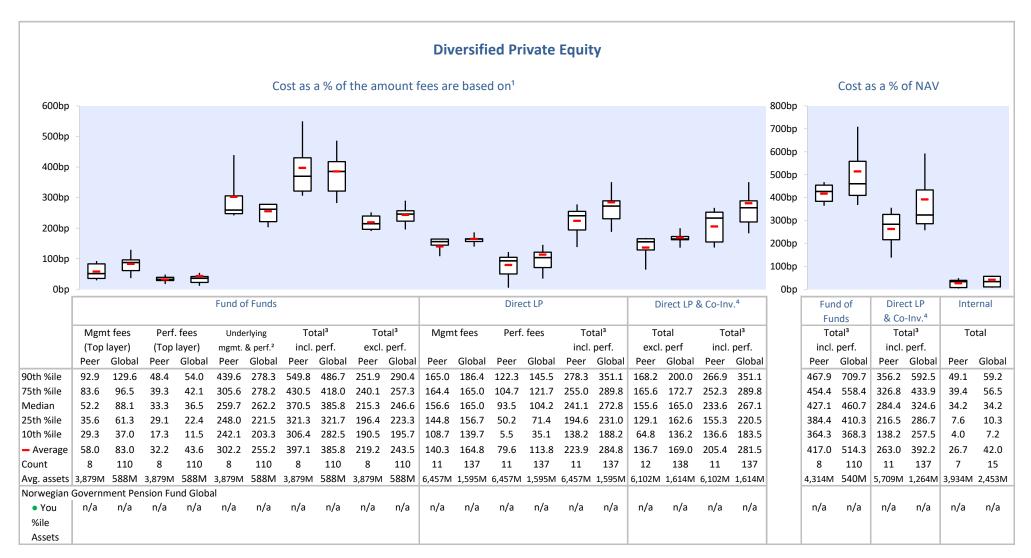


1. Breakdown of external fees

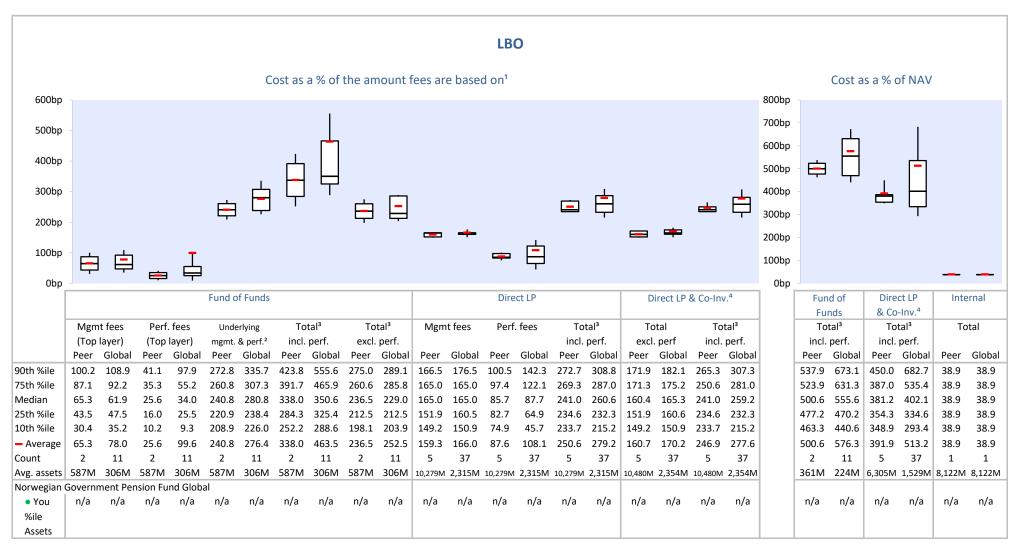
	Your	Peer	Global
	Plan	Average	Average
Base fees	n/a	92.2	143.6
Internal and other	n/a	<u>6.1</u>	<u>9.1</u>
Total†	n/a	98.2	152.7
Performance fees*	n/a	-32.0	-4.2

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

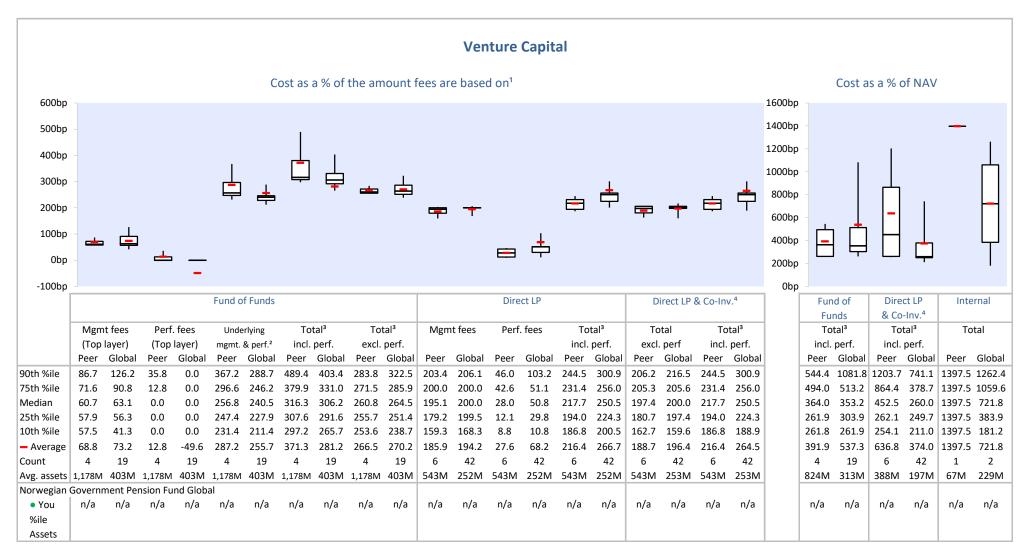
^{*} For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is -32.0 bps for peers (4 funds) and -4.2 bps for Global participants (39 funds).



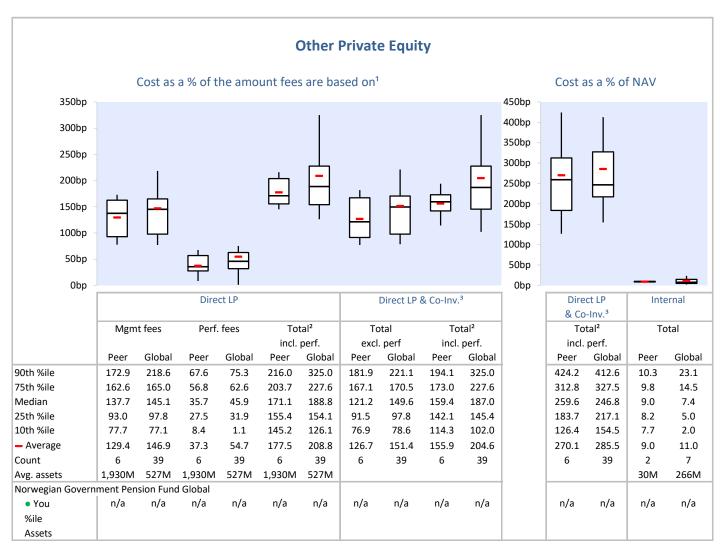
- 1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- 2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 157 bps (on amount fees are based on) for underlying management fees and 122 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 4.6 bps for fund of funds and 4.1 bps for LPs.
- 4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by 3 of your peers and 11 of the Global funds.



- 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 165 bps (on amount fees are based on) for underlying management fees and 142 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 6.2 bps for fund of funds and 3.6 bps for LPs.
- 4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by none of your peers and 1 of the Global funds.



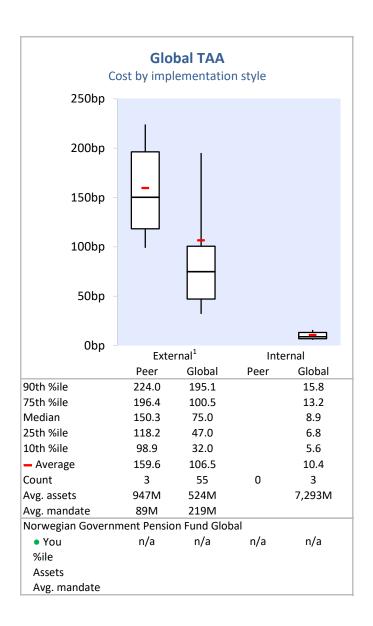
- 1. The base for fees is usually the committed amount during the commitment period, and unreturned invested capital afterwards.
- 2. The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 195 bps (on amount fees are based on) for underlying management fees and 51 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 2.5 bps for fund of funds and 2.8 bps for LPs.
- 4. Co-investment is included with direct LPs because it can only be done alongside direct LPs. CEM uses this combined style in its benchmark cost analysis to ensure funds that reduce their costs by using co-investment receive benchmark credit. Co-investment is done by none of your peers and none of the Global funds.



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

^{2.} The total cost also includes the internal cost of monitoring and selecting private equity investments. The peer average cost of monitoring and selecting was 10.8 bps

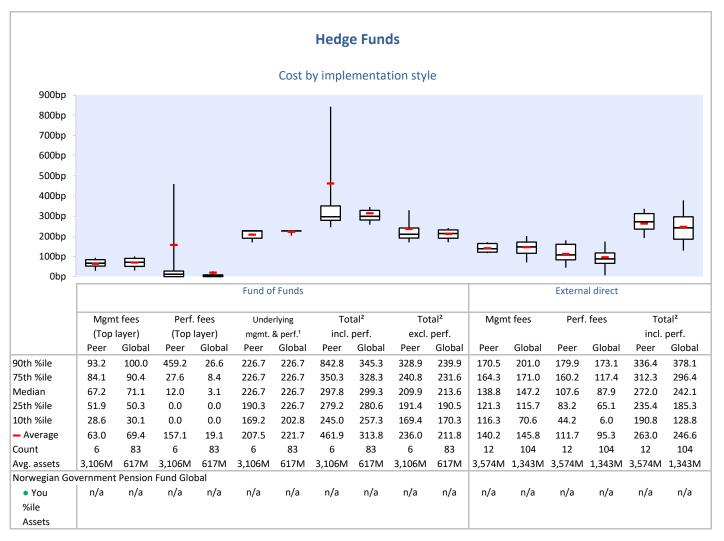
^{3.} Co-investment is included with direct LPs in CEM's benchmark cost analysis because it reduces the cost of investing in direct LPs. Co-investment is done by none of your peers and 1 of the Global funds.



1. Breakdown of External fees

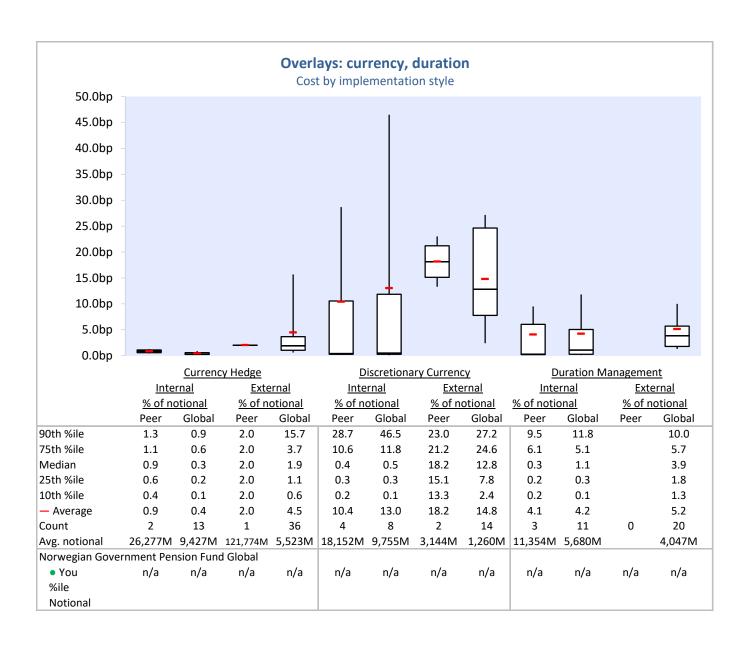
	Your	Peer	Global
	Plan	Average	Average
Base fees	n/a	87.2	77.2
Performance fees*	n/a	65.0	27.8
Internal and other	<u>n/a</u>	<u>7.4</u>	<u>1.6</u>
Total	n/a	159.6	106.5

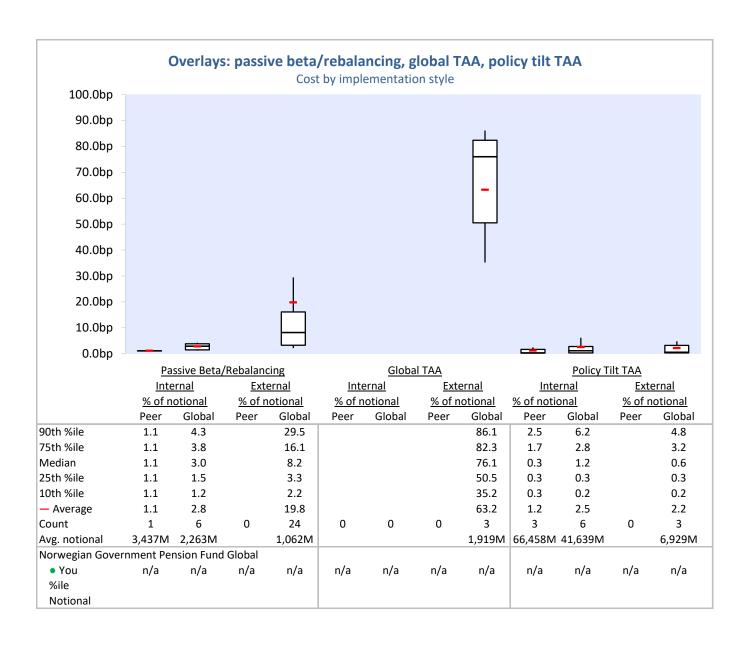
^{*} For funds that did not report a performance fee, a value of 'zero' was used. The average performance fee for only those funds that reported a performance fee is 97.6 bps for peers (2 funds) and 43.6 bps for Global participants (35 funds).

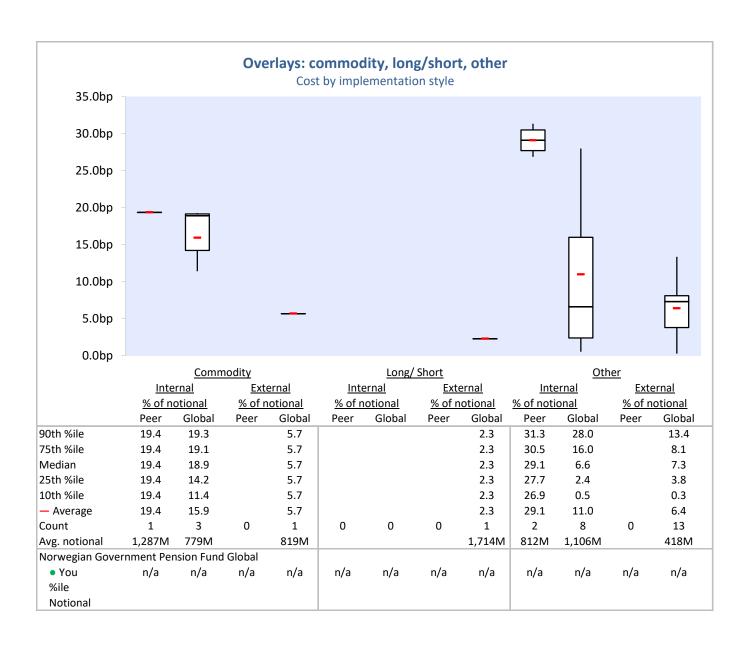


^{1.} The fees of fund of funds include both the top layer fees paid to the fund of funds manager and the underlying fees paid to the 'underlying partnerships' held by the fund of funds. Most funds were unable to provide the underlying fees so defaults of 139 bps (on NAV) for underlying management fees and 88 bps (on NAV) for underlying performance fees were used.

^{2.} The total cost also includes the internal cost of monitoring and selecting hedge fund investments. The peer average cost of monitoring and selecting was 34.3 bps for fund of funds and 11.1 bps for external direct.







8

Appendices

Appendix A - Data Summary

Appendix B - Currency conversion

Appendix C - Data quality

Appendix D - Glossary of terms

Appendix A - Data Summary

Plan Info	2015	2014	2013
Contact	Julie Belck-Olsen	Kyrre Nilsen	Kyrre Nilsen
Type of fund (corporate, public, other)	Public	Public	Public
Total fund size (mils) as at December 31	777,429.0	708,824.0	602,613.0
Asset-class level holdings provided on survey are: year end or average?	Average	Average	Average
Total return for year ended	2.74%	7.58%	15.95%
Is the return net or gross?	Gross	Gross	Gross
Total fund policy or benchmark return	2.07%	8.30%	14.98%

Ancillary Data	2015	2014	2013
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 %			
Ad hoc %			
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

Asset Class		Policy	Benchmark	
		Weight	Description	Return
Stock - Global	2015	61.6	Your Stock: Global benchmark	3.0
	2014	61.1	Your Stock: Global benchmark	8.7
	2013	60.9	Your Stock: Global benchmark	25.0
Fixed Income -	2015	35.3	Barclays Global Aggregate + Barclays Global Inflation Linked	0.6
Global	2014	36.7	Barclays Global Aggregate + Barclays Global Inflation Linked	7.6
	2013	38.1	Barclays Global Aggregate + Barclays Global Inflation Linked	-0.2
Real Estate ex-	2015	3.1	Custom (Actual)	10.0
REITs	2014	2.2	Custom (Actual)	10.4
	2013	1.0	Custom (Actual)	11.8

Appendix A - Data Summary: Assets, Returns and Costs

Asset Class		Assets (millions)				Fees/Costs in 000s							
		Interr	nally	Externally Managed		Intern	Internally Externally Managed			ed			
		Acti	ve		Active		Activ	re			Active		
						# of			Base	Perform	Internal	Total	
		Assets	Return	Assets	Return	mgrs	000s	bps1	Fees ³	Fees	& Other ³	000s	bps ¹
Stock - Global	2015	454,193.0	4.3	30,644.5	-2.7	81	114,509.0	2.5	63,858.0	64,589.0	6,696.0	135,143.0	44.1
	2014	375,631.0	7.7	25,859.0	10.6	77	81,998.0	2.2	50,165.0	77,696.0	4,326.0	132,187.0	51.1
	2013	335,784.0	27.1	20,662.0	13.5	60	80,221.0	2.4	39,697.0	87,535.0	3,540.0	130,772.0	63.3
Fixed Income - Global	2015	275,995.9	0.4	1,530.1	-8.5	3	32,020.0	1.2	4,815.0		175.0	4,990.0	32.6
	2014	243,704.0	6.9	1,278.0	6.3	4	25,671.0	1.1	3,153.0		180.0	3,333.0	26.1
	2013	206,663.0	0.1	168.0	17.2	2	26,670.0	1.3	407.0		78.0	485.0	28.9

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

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

Asset Class Assets (millions) and Annual Returns						ı	nvest	tment F	ees / Cost	s in 000s	1		
		Internal & Co-Inv		xternal	#	Inte	ernal & Co-Inv	,	External				
		meemara co mv	Amt fees	Accinal	Ext	- IIIcc	Total	,	Base	Perform	Internal	Total ¹	bps (% of
		Assets Return	based on	Assets Return	Mgrs		000s	bps	Fees	Fees	& Other	000s	fee basis)
Real Estate ex-REITs		<u>Direct</u>					Direct						
	2015												
	2014												
	2013												
						<u>Or</u>	perating Sub.						
		Operating Sub.				Under	Oversight						
	2015	20,809.6 10.0				0.0	39,477.0	19.0					
	2014	9,227.0 10.4				0.0	28,131.0	30.5					
	2013	4,881.0 11.8				7,807.0	13,672.0	44.0					

^{1.} Cost in basis points = total cost / average holdings. Total cost excludes private asset performance fees because of comparability issues.

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

Oversight, Custodial and Other Costs						
		000s	bps			
Oversight of the fund assets ¹	2015	67,859.0	0.9bp			
	2014	59,310.0	0.9bp			
	2013	67,148.0	1.2bp			
Custodial total	2015	42,400.0	0.5bp			
	2014	51,964.0	0.8bp			
	2013	43,763.0	0.8bp			
Custodial foreign (if available)	2015	42,400.0	0.6bp			
	2014					
	2013					
Custodial domestic (if available)	2015					
	2014					
	2013					
Consulting / performance measurement	2015	8,868.0	0.1bp			
	2014	6,363.0	0.1bp			
	2013	2,292.0	0.0bp			
Audit	2015	4,840.0	0.1bp			
	2014	4,314.0	0.1bp			
	2013	4,667.0	0.1bp			
Other (legal etc)	2015					
	2014					
	2013					
Total	2015	123,967.0	1.6bp			
	2014	121,951.0	1.9bp			
	2013	117,870.0	2.1bp			

Summary of All Asset Management Costs					
		000s	bps		
Investment Management Costs	2015	326,139.0	4.2bp		
	2014	271,320.0	4.1bp		
	2013	259,627.0	4.6bp		
Overlay Costs	2015				
	2014				
	2013				
Oversight, Custodial & Other Costs	2015	123,967.0	1.6bp		
	2014	121,951.0	1.9bp		
	2013	117,870.0	2.1bp		
Total	2015	450,106.0	5.7bp		
	2014	393,271.0	6.0bp		
	2013	377,497.0	6.6bp		

^{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 B - Currency conversion

Norwegian Government Pension Fund Global

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

Currency conversion table							
	2015	2014	2013	2012	2011		
United States Dollars - USD*	0.761	0.777	0.773	0.806	0.801		
Canada Dollars - CAD	0.624	0.619	0.626	0.660	0.650		
Euro - EUR*	1.000	1.000	1.000	1.000	1.000		
Sweden Kronor - SEK	0.084	0.088	0.090	0.091	0.090		
Swiss Franc - CHF	0.589		0.556				
United Kingdom Pounds - GBP	1.086	1.109	1.114	1.185	1.181		
Australia Dollars - AUD	0.527	0.518	0.525	0.552	0.513		
New Zealand Dollars - NZD	0.536	0.528	0.528	0.545	0.523		
South African Rand - ZAR							

^{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 CEMs 25th 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 futher 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.