

Investment
Cost Effectiveness Analysis
(for the 5 years ending December 31, 2013)

New Zealand Superannuation Fund



Key takeaways

Returns

- Your 5-year net total net return was 15.7%. This was above the Global median of 10.9% and above the peer median of 10.6%.
- Your 5-year policy return was 13.5%. This was above the Global median of 10.7% and above the peer median of 9.9%.

Value added

- Your 5-year net value added was 2.2%. This was above the Global median of 0.3% and above the peer median of 0.7%.

Cost and cost effectiveness

- Your investment cost of 46.7 bps was above your benchmark cost of 44.0 bps. This suggests that your fund was slightly high cost compared to your peers.
Your fund was slightly high cost because you paid more than peers for similar services. This added costs was mostly offset by you had a lower cost implementation style.
- Your 5-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.

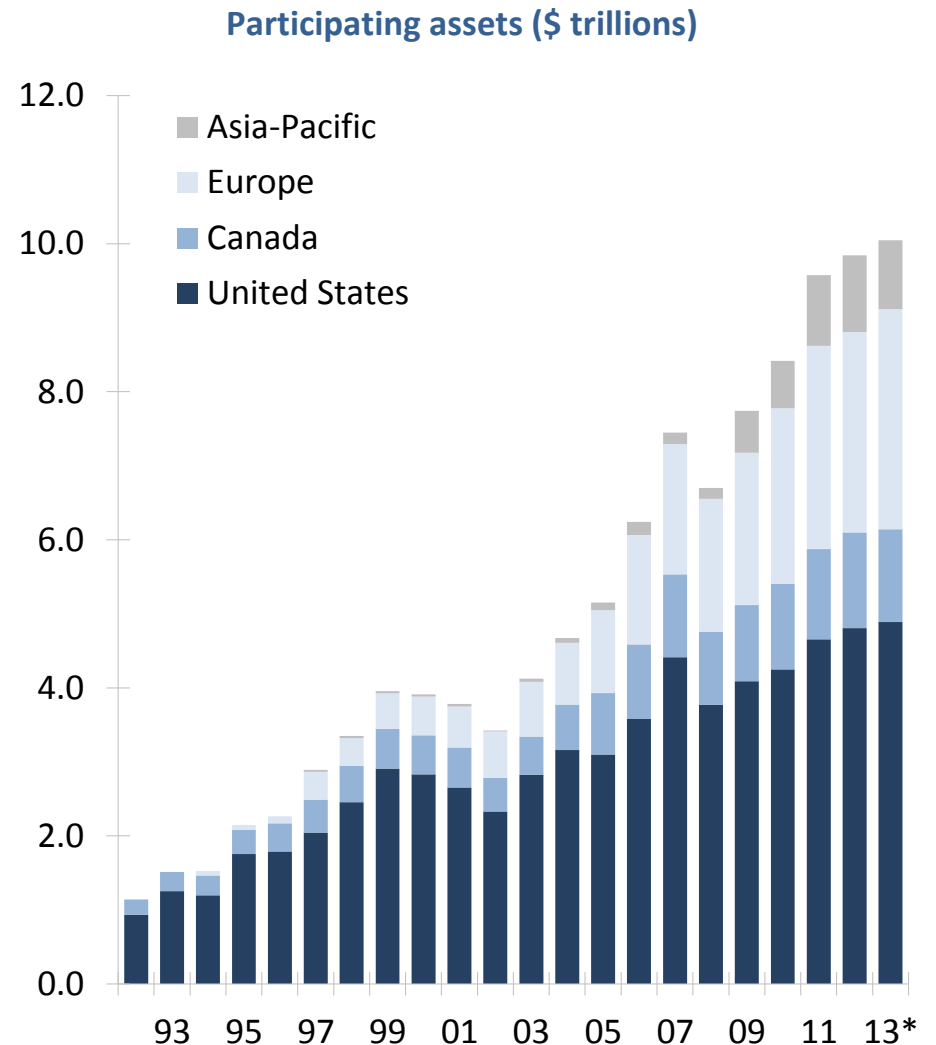
Risk

- Your asset risk of 11.8% was above the Global median of 9.0%. Your tracking error of 3.1% was above the Global median of 1.7%.

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

- 168 U.S. pension funds participate. The median U.S. fund had assets of \$9.5 billion and the average U.S. fund had assets of \$27.0 billion. Total participating U.S. assets were \$4.5 trillion.
- 79 Canadian funds participate with assets totaling \$802 billion.
- 55 European funds participate with aggregate assets of \$3.0 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.
- 4 Asia-Pacific funds participate with aggregate assets of \$932 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.

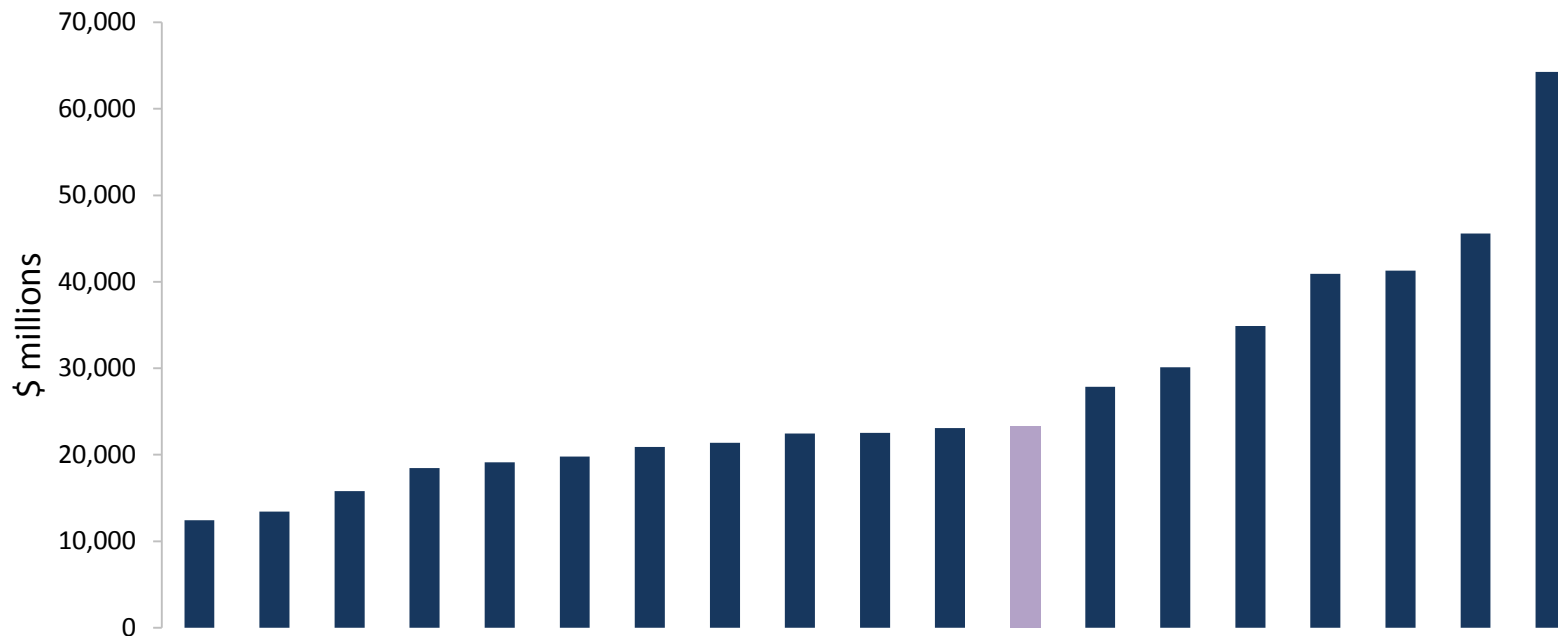


* The graph for 2013 reflects both received and expected data.

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

Peer group for New Zealand Superannuation Fund

- 19 global sponsors from \$12 billion to \$64 billion
- Median size of \$23 billion versus your \$23 billion



The names of the above fund sponsors in your peer group are confidential and may not be disclosed to third parties. All other information in this report is confidential and may not be disclosed to third parties without the express written mutual consent of CEM Benchmarking Inc and New Zealand Superannuation Fund.

What gets measured gets managed, so it is critical that you measure and compare the right things:

1. Returns

Why do total returns differ from other funds? What was the impact of your policy mix decisions versus implementation decisions?

2. Net value added

Are your implementation decisions (i.e., the amount of active versus passive management) adding value?

3. Costs

Are your costs reasonable? Costs matter and can be managed.

4. Cost effectiveness

Net implementation value added versus excess cost. Does paying more get you more?

5. Risk

How much risk was taken to obtain your value added?
What is the risk of your policy mix?

Your 5-year total net return of 15.7% was above the Global median of 10.9%.

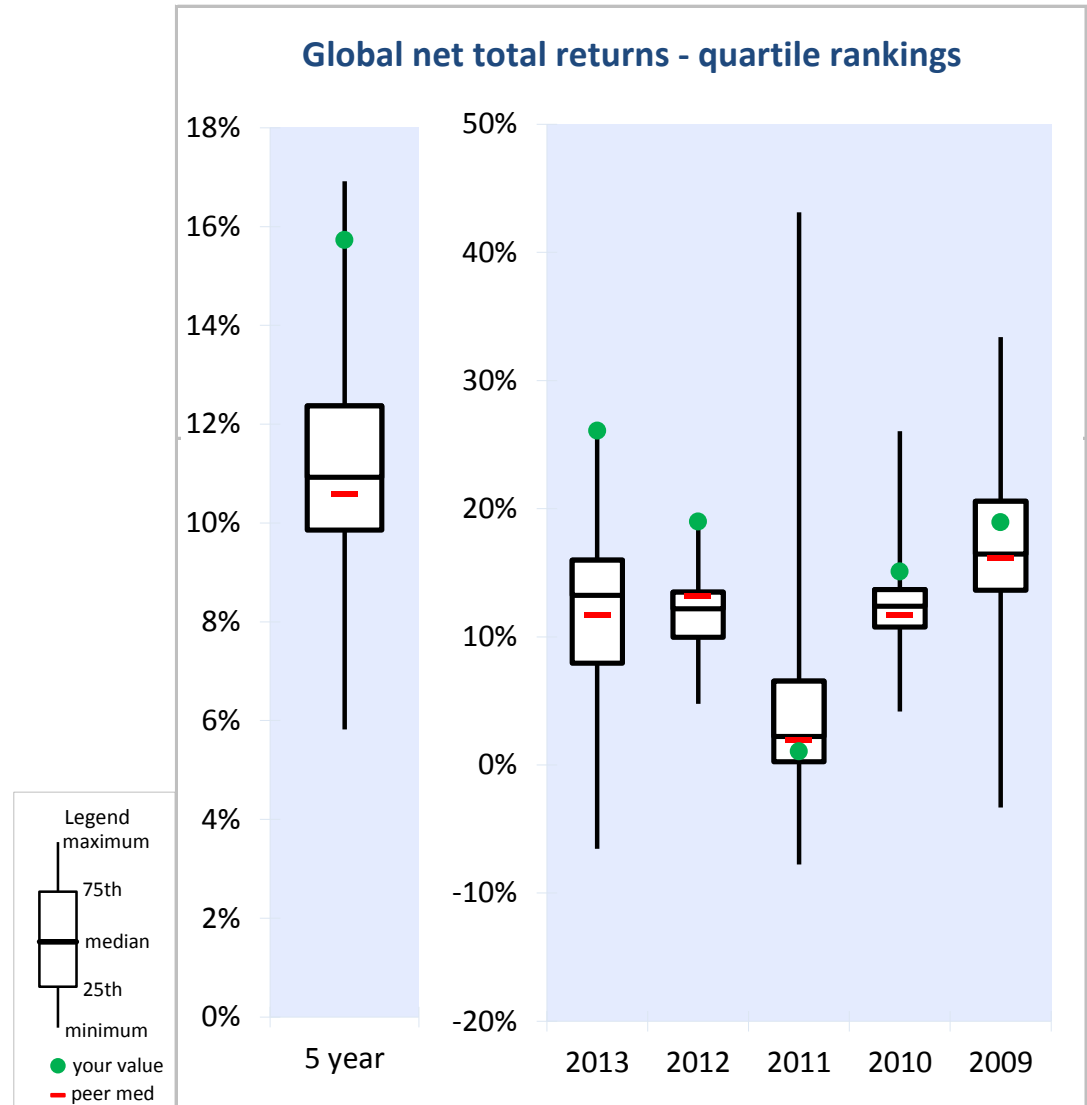
Total returns, by themselves, provide little insight into the reasons behind relative performance. Therefore, we separate total return into its more meaningful components: policy return and value added.

	Your 5-year
Net total fund return	15.7%
- Policy return	13.5%
= Net value added	2.2%

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).

The median 5-year net total return of your peers was 10.6%.

Returns are reported in local currency.



Your 5-year policy return of 13.5% was above the Global median of 10.7%

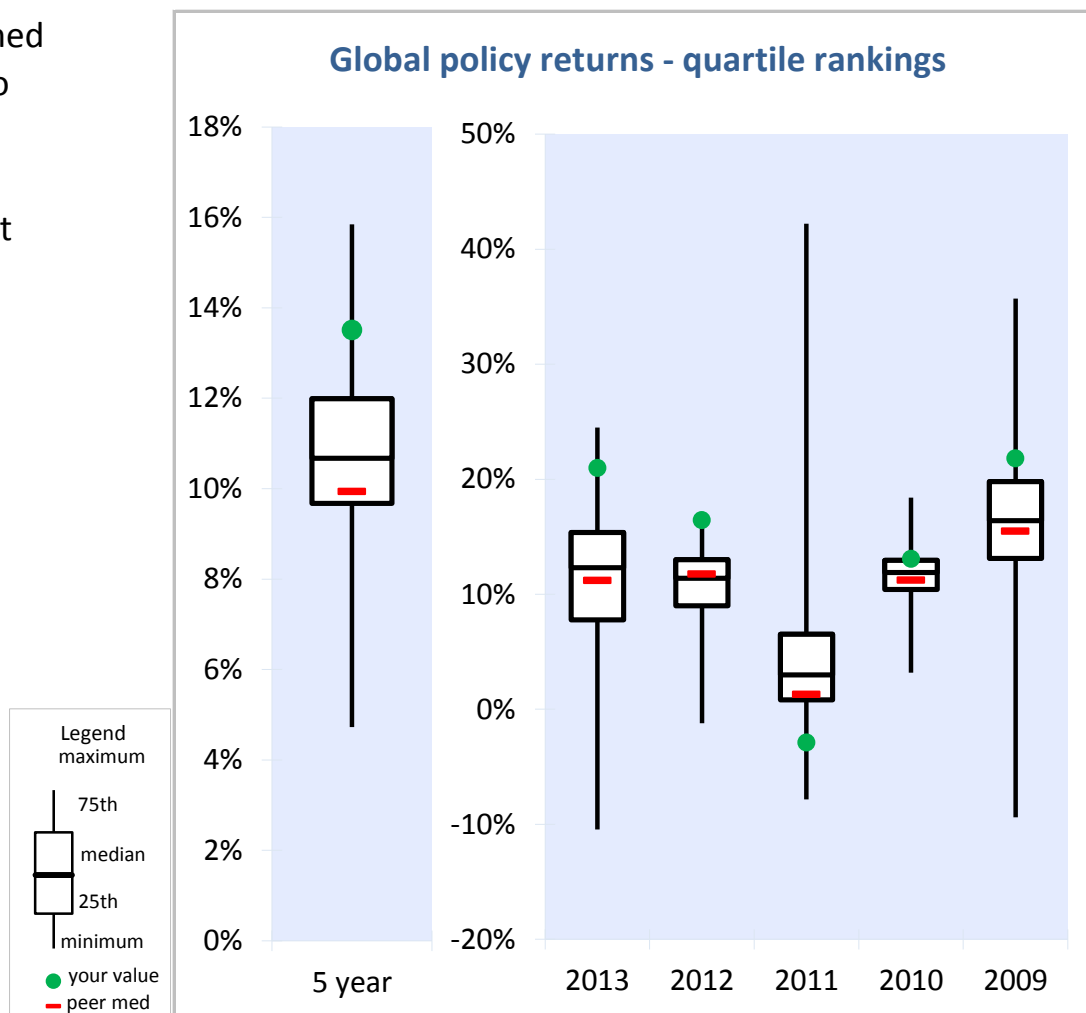
Your policy return is the return you could have earned passively by indexing your investments according to your policy mix.

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.

The median 5-year policy return of your peers was 9.9%.



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.

At the end of 2013 your policy mix compared to your peers and the Global universe as follows:

- Your fund had more stock than the peer and Global averages (your 75% versus a peer average of 43% and a Global average of 47%).

Policy asset mix

Asset class	2013		
	Your fund	Peer avg.	Global avg.
U.S. Stock	0%	8%	16%
Europe & Far East Stock	5%	7%	8%
Emerging Market Stock	0%	4%	2%
Global Stock	70%	13%	11%
Other Stock ¹	0%	11%	10%
Total Stock	75%	43%	47%
U.S. Bonds	0%	5%	8%
Long Bonds	0%	10%	11%
Global Bonds	20%	6%	3%
Other Fixed Income ¹	0%	17%	16%
Total Fixed Income	20%	37%	37%
Hedge Funds	0%	5%	3%
Commodities	0%	1%	1%
Real Estate incl. REITS	5%	6%	6%
Other Real Assets ¹	0%	2%	1%
Private Equity	0%	4%	4%
Total	100%	100%	100%

1. Other stock includes Canadian and ACWIxUS stock. Other fixed income includes Canada, Euro, Capital Indexed, Europe & Far East bonds. Other real assets includes natural resources and infrastructure.

Your fund uses derivatives, to gain exposure to some asset classes.

Policy asset mix

For the purposes of comparing your costs and value added to other participants, CEM looks at investments before the impact of derivatives. This allows us to compare, for example, the cost of the global stock assets in your plan to similar assets in your peers' plans. Our report will reflect your assets as they appear in the middle column - before derivatives.

Asset class	Policy mix	Actual weights	
		excluding derivatives	including derivatives
Europe & Far East Stock	5%	5%	5%
Emerging Market Stock	0%	5%	7%
Global Stock	<u>70%</u>	<u>18%</u>	<u>54%</u>
Total Stock	75%	27%	66%
Capital Indexed Bonds	0%	0%	0%
Global Bonds	20%	7%	10%
Cash	0%	37%	-7%
Other Fixed Income	<u>0%</u>	<u>0%</u>	<u>1%</u>
Total Fixed Income	20%	44%	4%
Global TAA	0%	0%	2%
Hedge Funds	0%	7%	7%
Natural Resources	0%	6%	6%
Infrastructure	0%	5%	5%
REITs	5%	4%	4%
Real Estate ex-REITs	0%	2%	2%
Private Equity	0%	3%	3%
Total	100%	100%	100%

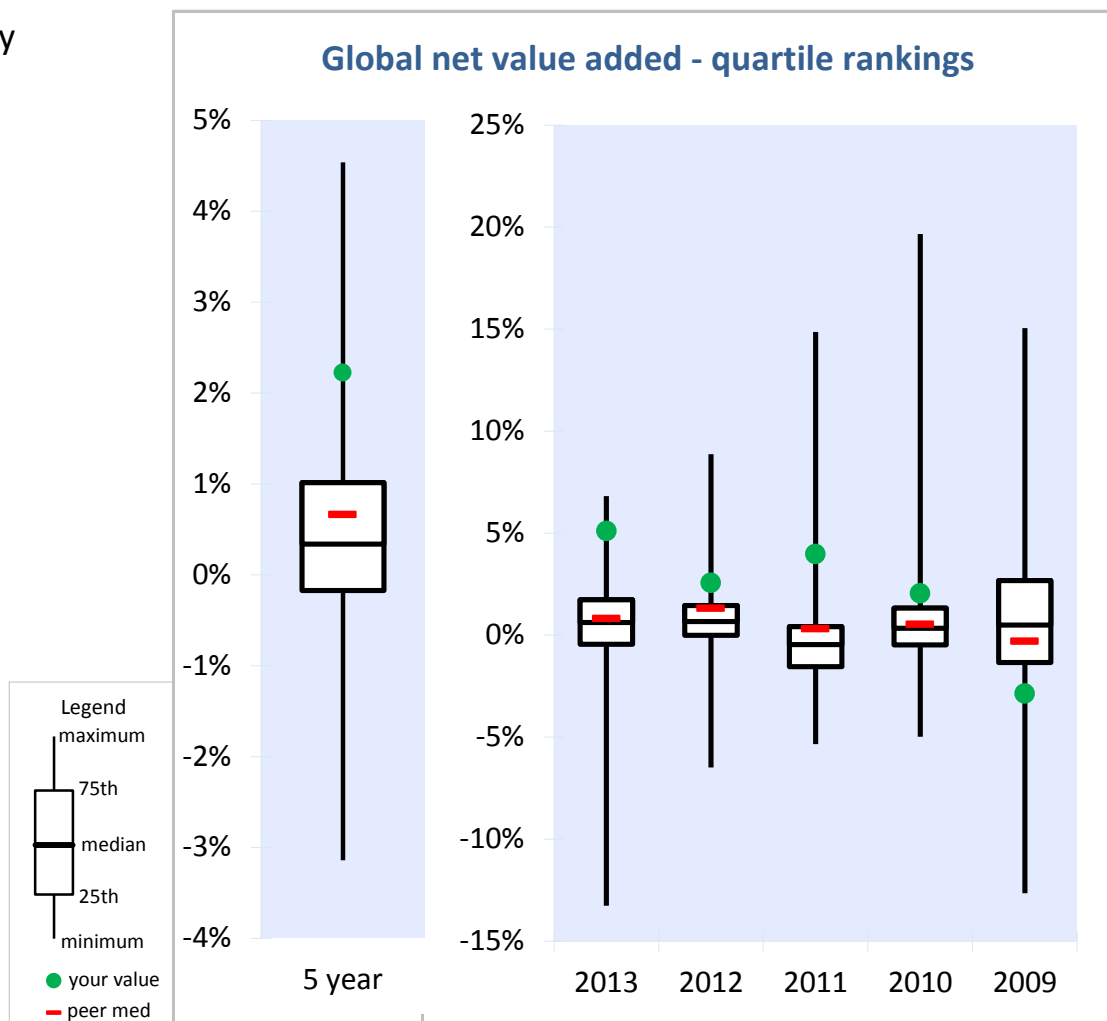
Net value added is the component of total return from active management. Your 5-year net value added was 2.2%.

Net value added equals total net return minus policy return.

Value added for New Zealand Superannuation Fund

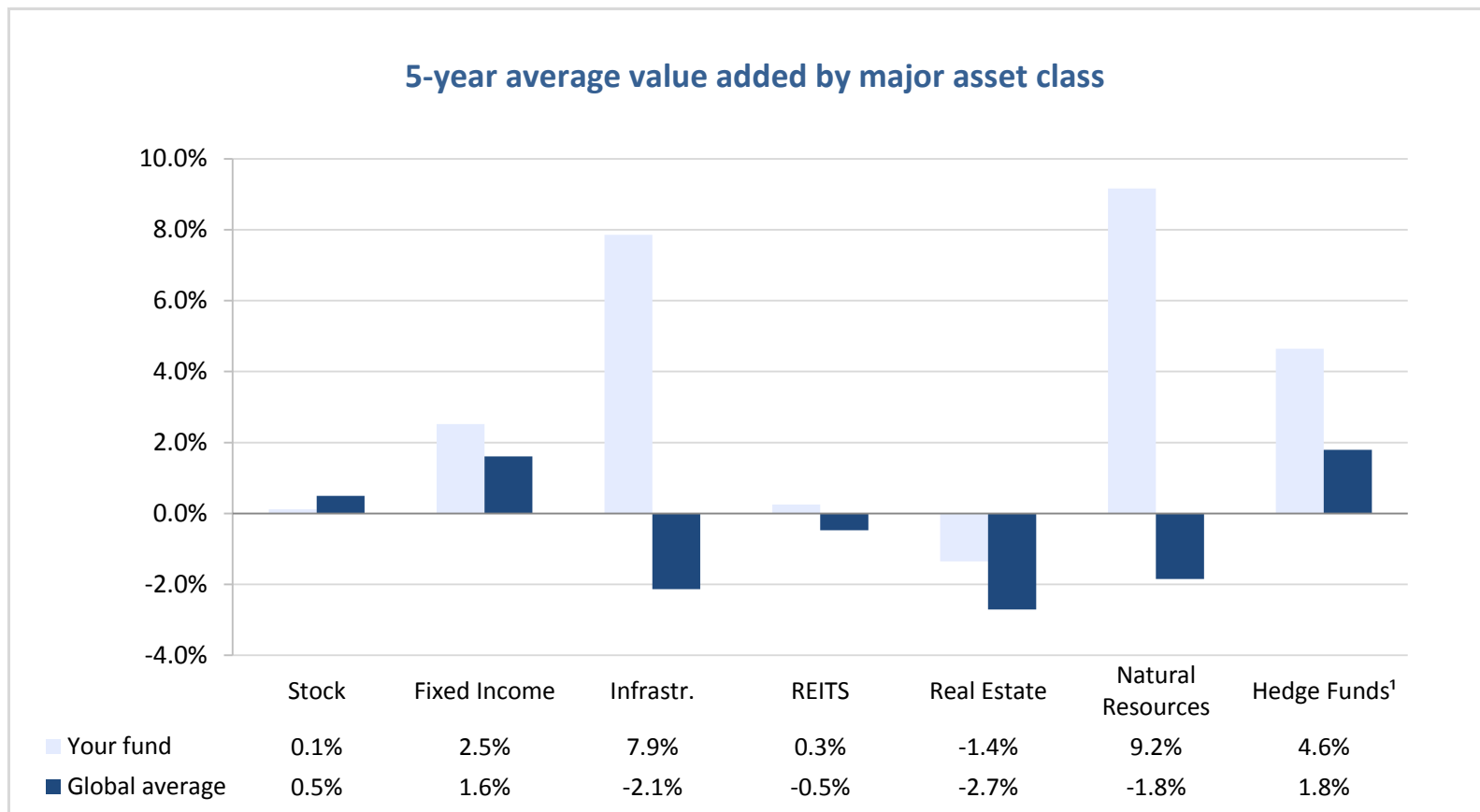
Year	Net Return	Policy Return	Net value Added
2013	26.1%	21.0%	5.1%
2012	19.0%	16.5%	2.5%
2011	1.1%	(2.9%)	4.0%
2010	15.1%	13.1%	2.0%
2009	18.9%	21.8%	(2.9%)
5-year	15.7%	13.5%	2.2%

Your 5-year net value added of 2.2% compares to a median of 0.7% for your peers and 0.3% for the Global universe.



To enable fairer comparisons, the value added for each participant was adjusted to reflect private equity benchmarks based on investable public market indices. Refer to the Research section, pages 6-7 for details as to why this adjustment makes for better comparisons.

You had positive 5-year value added in Stock, Fixed Income, Infrastr., REITS, Natural Resources and Hedge Funds.



1. It is also useful to compare total returns for hedge funds. Your 5-year return of 0.1% for hedge funds was below the Global average of 7.0%.

Your investment costs were \$109.0 million or 46.7 basis points in 2013.

Asset management costs by asset class and style (\$000s)

	Internal Management			External Management			Total
	Passive	Active	Overseeing of external	Passive fees	Active base fees	Perform. fees ²	
Europe & Far East Stock	111		938		3,685		4,734
Stock - Emerging			724	681	3,175		4,580
Stock - Global			1,437	897	2,140		4,474
Stock - Other	21						21
Fixed Income - Global			416	757			1,173
Fixed Income - Other	300						300
Cash		2,103					2,103
Hedge Funds - Direct			2,816		26,893	616 ²	29,709
REITs			72	284			356
Real Estate					1,022	excluded ²	1,022
Real Estate - LPs			1,118		4,755	excluded ²	5,873
Infrastructure		173	1,046		8,219	24,578 ²	9,438
Infrastructure - LPs			51		2,820	excluded ²	2,871
Natural Resources			1,598		4,709	1,528 ²	6,307
Diversified Private Equity			1,271		9,260	excluded ²	10,531
Diversified Priv. Eq.- Fund of Funds					2,620 ¹	excluded ²	2,620
Other Private Equity		1,526	201		432	excluded ²	2,159
Overlay Programs		5,211					5,211
Total asset management costs							93,482 40.0bp
Oversight, custodial and other costs ³							
Oversight of the fund							9,920
Trustee & custodial							4,496
Audit							365
Other							733
Total oversight, custodial & other costs							15,514 6.6bp
Total investment costs							108,996 46.7bp

¹ Default underlying costs added to provided top-layer costs.

Refer to Appendix A for full details.

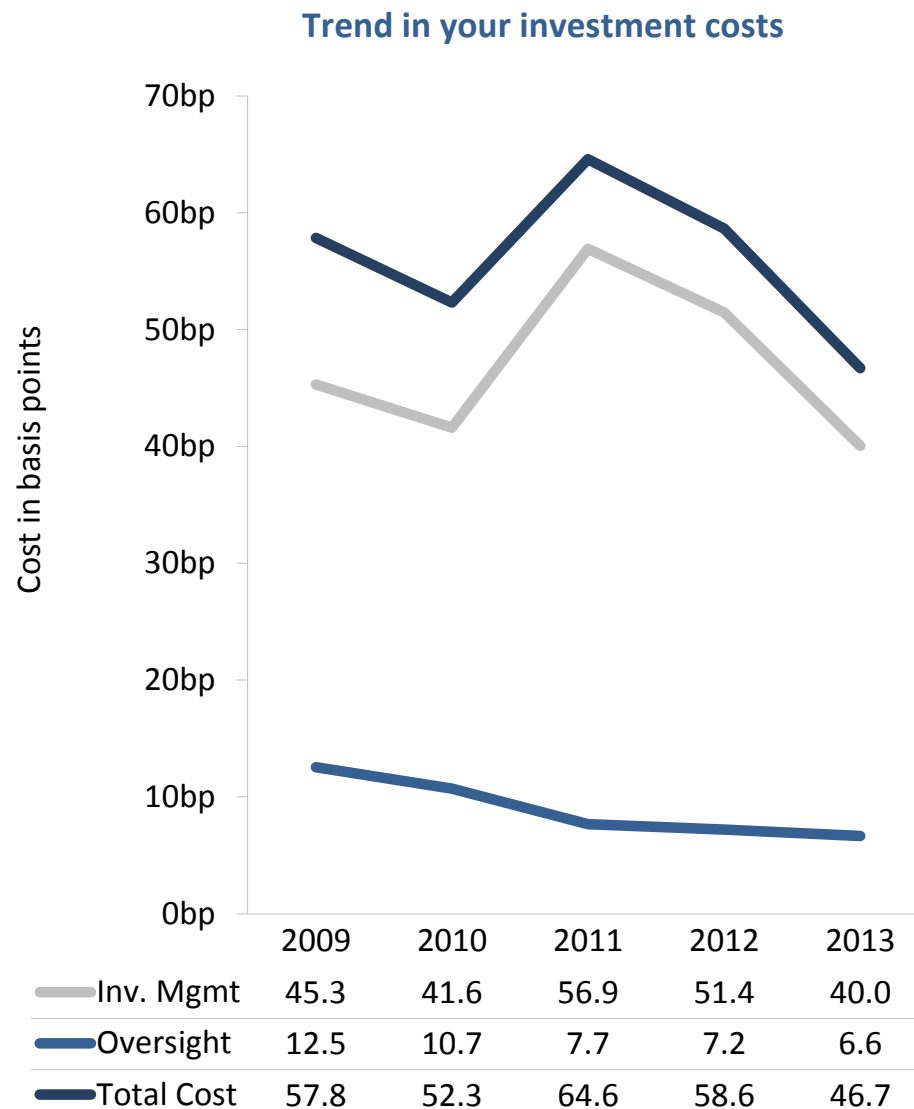
² Total cost excludes carry/performance fees for real estate, infrastructure, hedge funds and private equity. Performance fees are included for the public market asset classes.

³ Excludes non-investment costs, such as benefit insurance premiums and preparing cheques for retirees.

Your costs decreased between 2009 and 2013.

Your costs decreased primarily because you decreased your investment in the highest cost asset classes. Your holdings of hedge funds, real estate and private equity decreased from 45% of assets in 2009 to 28% in 2013.

You increased your use of lower cost passive and internal management from 42% of assets in 2009 to 70% in 2013.

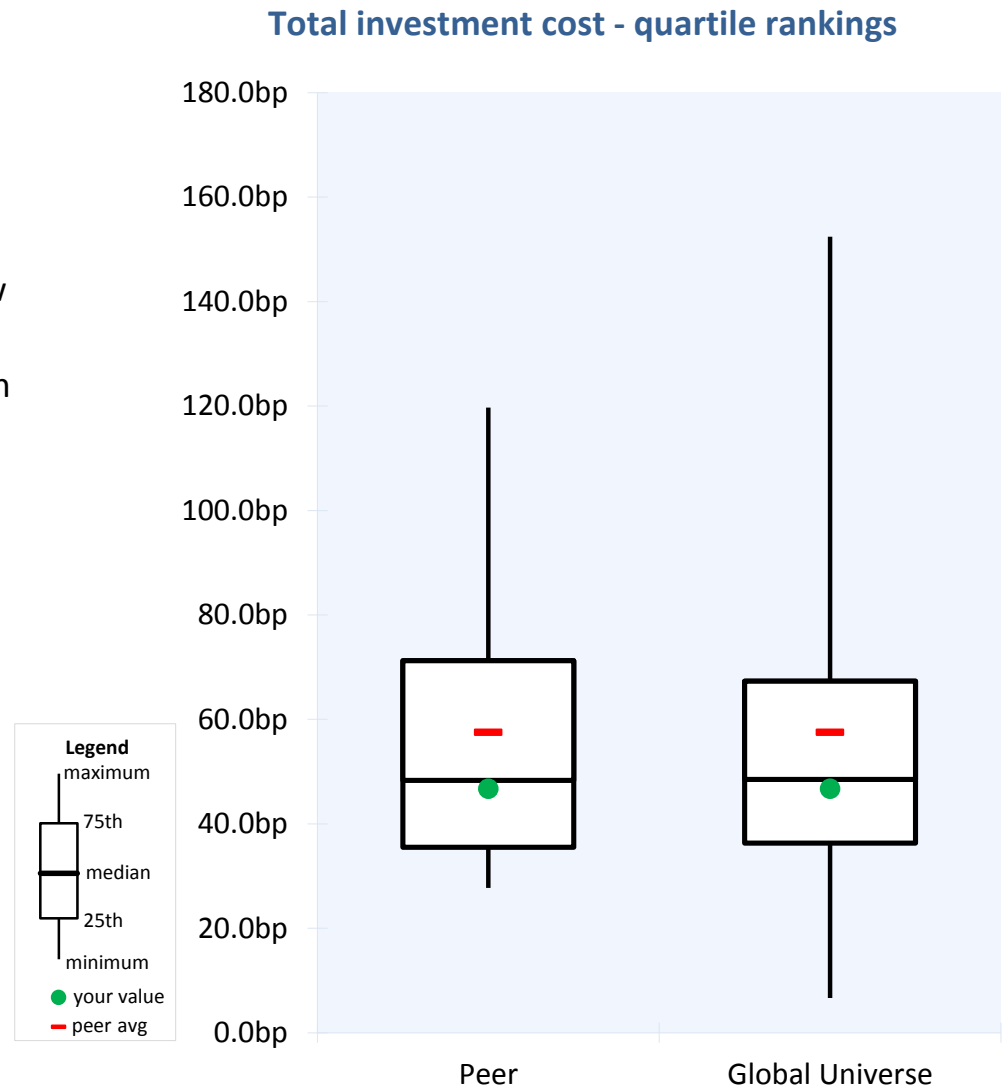


Your total investment cost of 46.7 bps was below the peer average of 57.6 bps.

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

- asset mix and
- fund size.

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 slightly high cost by 2.7 basis points in 2013.

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 46.7 bp was slightly above your benchmark cost of 44.0 bp. Thus, your excess cost was 2.7 bp.

Your cost versus benchmark

	\$000s	basis points
Your total investment cost	108,996	46.7 bp
Your benchmark cost	<u>102,623</u>	<u>44.0 bp</u>
Your excess cost	6,373	2.7 bp

Your fund was slightly high cost because you paid more than peers for similar services. This added costs was mostly offset by you had a lower cost implementation style.

Explanation of your cost status

	Excess Cost/ (Savings)	
	\$000s	bps
1. Lower cost implementation style		
• Less fund of funds	(3,326)	(1.4)
• Less external active management (vs. lower cost passive and internal)	(13,113)	(5.6)
• More overlays	1,003	0.4
• Other style differences	(55)	(0.0)
	<u>(15,491)</u>	<u>(6.6)</u>
2. Paying more than peers for similar services		
• External investment management costs	11,142	4.8
• Internal investment management costs	2,957	1.3
• Oversight, custodial & other costs	7,765	3.3
	<u>21,864</u>	<u>9.4</u>
Total excess cost	6,373	2.7

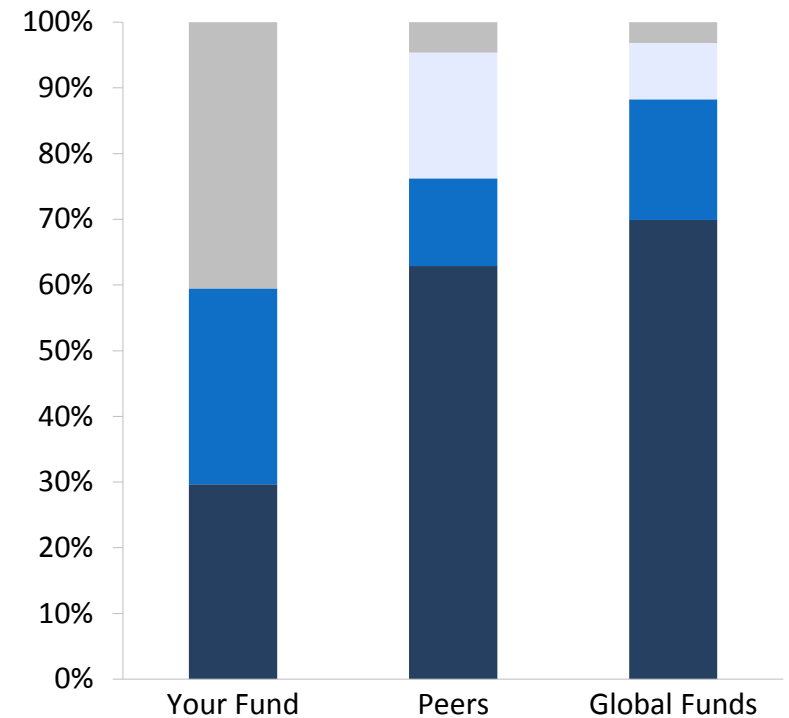
Differences in cost performance are often caused by differences in implementation style.

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 30% versus 63% for your peers).
- Within external active holdings, fund of funds usage because it is more expensive than direct fund investment. You had less in fund of funds. Your 2% of hedge funds, real estate and private equity in fund of funds compared to 12% for your peers.

Implementation style¹



	Your Fund	Peers	Global Funds
Internal passive	41%	5%	3%
Internal active	0%	19%	9%
External passive	30%	13%	18%
External active	30%	63%	70%

1. The graph above has included an estimate of the impact of derivatives on your implementation style.

Differences in implementation style saved you 6.6 bp relative to your peers.

Calculation of the cost impact of differences in implementation style

Asset class	Your avg holdings in \$mils (A)	% External active			Premium vs passive & internal ¹ (C)	Cost/ (savings)	
		You	Peer average	More/ (less) (B)		\$000s (A X B X C)	bps
Europe & Far East Stock	1,198	70.9%	59.1%	11.8%	41.8 bp	592	
Stock - Emerging	1,059	29.6%	68.4%	(38.8%)	61.1 bp	(2,510)	
Stock - Global	4,140	16.1%	55.4%	(39.3%)	41.8 bp	(6,809)	
Stock - Other	2	0.0%	44.3%	(44.3%)	23.1 bp	(2)	
Fixed Income - Global	1,716	0.0%	34.7%	(34.7%)	20.3 bp	(1,209)	
Fixed Income - Other	37	0.0%	56.4%	(56.4%)	27.1 bp	(57)	
REITs	1,025	0.0%	47.5%	(47.5%)	35.3 bp	(1,720)	
Infrastructure	1,393	87.4%	92.5%	(5.1%)	86.0 bp	(613)	
of which Ltd Partnerships represent:		18.2%	36.6%	(18.4%)	40.6 bp	(910)	
Real Estate ex-REITs	526	100.0%	74.3%	25.7%	45.6 bp	616	
of which Ltd Partnerships represent:		55.9%	45.4%	10.4%	51.5 bp	283	
Natural Resources	1,515	100.0%	58.7%	41.3%	27.4 bp	1,719	
of which Ltd Partnerships represent:		0.0%	9.1%	(9.1%)	Insufficient ²	0	
Diversified Private Equity	571	100.0%	99.3%	0.7%	Insufficient ²	0	
Other private equity	412	19.3%	70.0%	(50.8%)	119.2 bp	(2,494)	
Impact of less/more external active vs. lower cost styles						(13,113)	(5.6) bp
						<u>Fund of funds % of LPs vs. direct LP¹</u>	
Hedge Funds - LPs	1,649	0.0%	24.8%	(24.8%)	89.6 bp	(3,664)	
Infrastructure - LPs	221	0.0%	0.0%	0.0%		0	
Real Estate ex-REITs - LPs	294	0.0%	2.5%	(2.5%)	Insufficient ²	0	
Diversified Private Equity - LPs	571	17.2%	9.9%	7.3%	81.2 bp	338	
Impact of less/more fund of funds vs. direct LPs						(3,326)	(1.4) bp
						<u>Overlays and other</u>	
Impact of higher use of portfolio level overlays						1,003	0.4 bp
Impact of mix of internal passive, internal active, and external passive ³						(55)	(0.0) bp
Total impact of differences in implementation style						(15,491)	(6.6) bp

Footnotes

1. The cost premium is the additional cost of external active management relative to the average of other lower cost implementation styles - internal passive, internal active and external passive.

2. A cost premium listed as 'Insufficient' indicates that there was not enough peer data to calculate the premium.

3. The 'Impact of mix of internal passive, internal active and external passive' quantifies the net cost impact of differences in cost between, and your relative use of, these 'low-cost' styles.

The net impact of paying more/less for external asset management costs added 4.8 bps.

Cost impact of paying more/(less) for external asset management

	Your avg holdings in \$mils (A)	Cost in bps			Cost/ (savings) in \$000s (A X B)
		Your Fund	Peer median	More/ (less) (B)	
Europe & Far East Stock - Active	849	54.4	46.6	7.8	665
Stock - Emerging - Passive	746	11.8	12.5	(0.7)	(49)
Stock - Emerging - Active	313	118.2	73.6	44.7	1,398
Stock - Global - Passive	3,474	3.7	5.9	(2.1)	(740)
Stock - Global - Active	666	47.7	47.7	0.0	0
Fixed Income - Global - Passive	1,716	6.8	9.2	(2.4)	(407)
Hedge Funds - Active	1,649	180.2	154.8	25.4	4,186
Infrastructure - Active	996	93.0	88.7	4.3	424
Infrastructure - Limited Partnership	221	129.7	129.4	0.3	8
REITs - Passive	1,025	3.5	10.2*	(6.7)	(685)
Real Estate ex-REITs - Active	232	44.0	54.4	(10.4)	(241)
Real Estate ex-REITs - Limited Partnership	294	199.7	105.9	93.8	2,759
Natural Resources - Active	1,515	41.6	32.7	8.9	1,355
Diversified Private Equity - Active	473	222.6	166.6	56.1	2,651
Diversified Private Equity - Fund of Fund	98	267.3	247.8	19.5	191
Other Private Equity - Active	79	79.7	126.5	(46.8)	(372)
Total impact of paying more/less for external management					11,142
Total in bps					4.8 bp

*Universe median used as peer data was insufficient.

The net impact of paying more/less for internal asset management costs added 1.3 bps.

Cost impact of paying more/(less) for internal asset management

	Your avg holdings in \$mils (A)	Cost in bps			Cost/ (savings) in \$000s (A X B)
		Your Fund	Peer median	More/ (less) (B)	
Europe & Far East Stock - Passive	349	3.2	3.2	0.0	0
Stock - Other - Passive	2	102.7	8.9	93.8	19
Fixed Income - Other - Passive	37	80.8	5.7	75.2	279
Infrastructure - Active	176	9.9	17.6	(7.7)	(136)
Other Private Equity - Active	333	45.9	7.3	38.5	1,282
<i>Notional</i>					
Derivatives/Overlays - Currency - Hedge	13,402	0.2	0.4	(0.1)	(199)
Derivatives/Overlays - Passive Beta	9,650	1.5	1.5	0.0	0
Derivatives/Overlays - Policy Tilt TAA	511	39.7	6.1	33.5	1,711
Total impact of paying more/less for internal management					2,957
Total in bps					1.3 bp

The net impact of differences in oversight, custodial & other costs added 3.3 bps.

Cost impact of differences in oversight, custodial & other costs

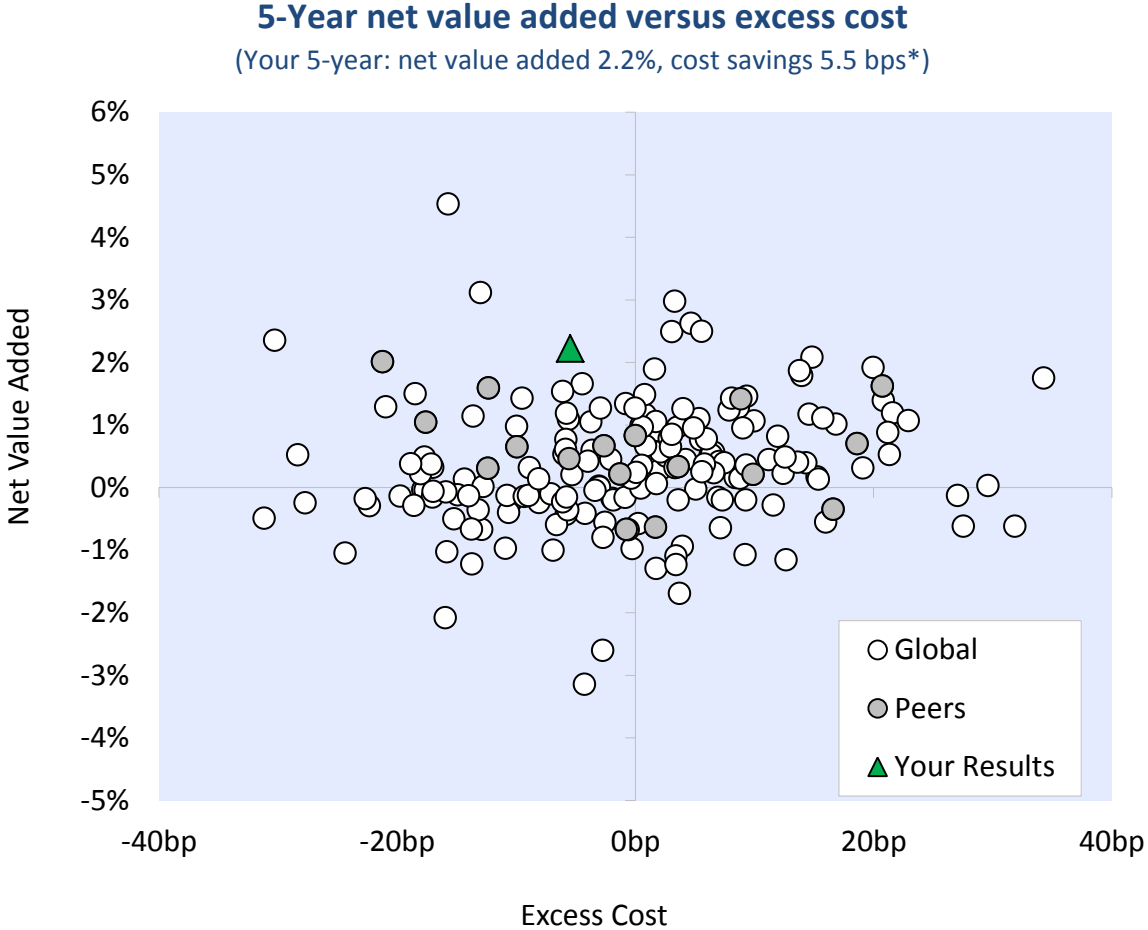
	Your avg holdings in \$mils (A)	Cost in bps			Cost/ (savings) in \$000s (A X B)
		Your fund	Peer median	More/ (less) (B)	
Oversight	23,345	4.2	1.6	2.6	6,182
Custodial	23,345	1.9	1.0	1.0	2,228
Consulting	23,345	0.0	0.4	(0.4)	(898)
Audit	23,345	0.2	0.1	0.1	176
Other	23,345	0.3	0.3	0.0	78
Total					7,765
Total in bps					3.3 bp

In summary, your fund was slightly high cost because you paid more than peers for similar services. This added costs was mostly offset by you had a lower cost implementation style.

Explanation of your cost status

	Excess Cost/ (Savings)	
	\$000s	bps
1. Lower cost implementation style		
• Less fund of funds	(3,326)	(1.4)
• Less external active management (vs. lower cost passive and internal)	(13,113)	(5.6)
• More overlays	1,003	0.4
• Other style differences	(55)	(0.0)
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2. Paying more than peers for similar services		
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• Oversight, custodial & other costs	7,765	3.3
	<u>21,864</u>	<u>9.4</u>
Total excess cost	6,373	2.7

Your 5-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.

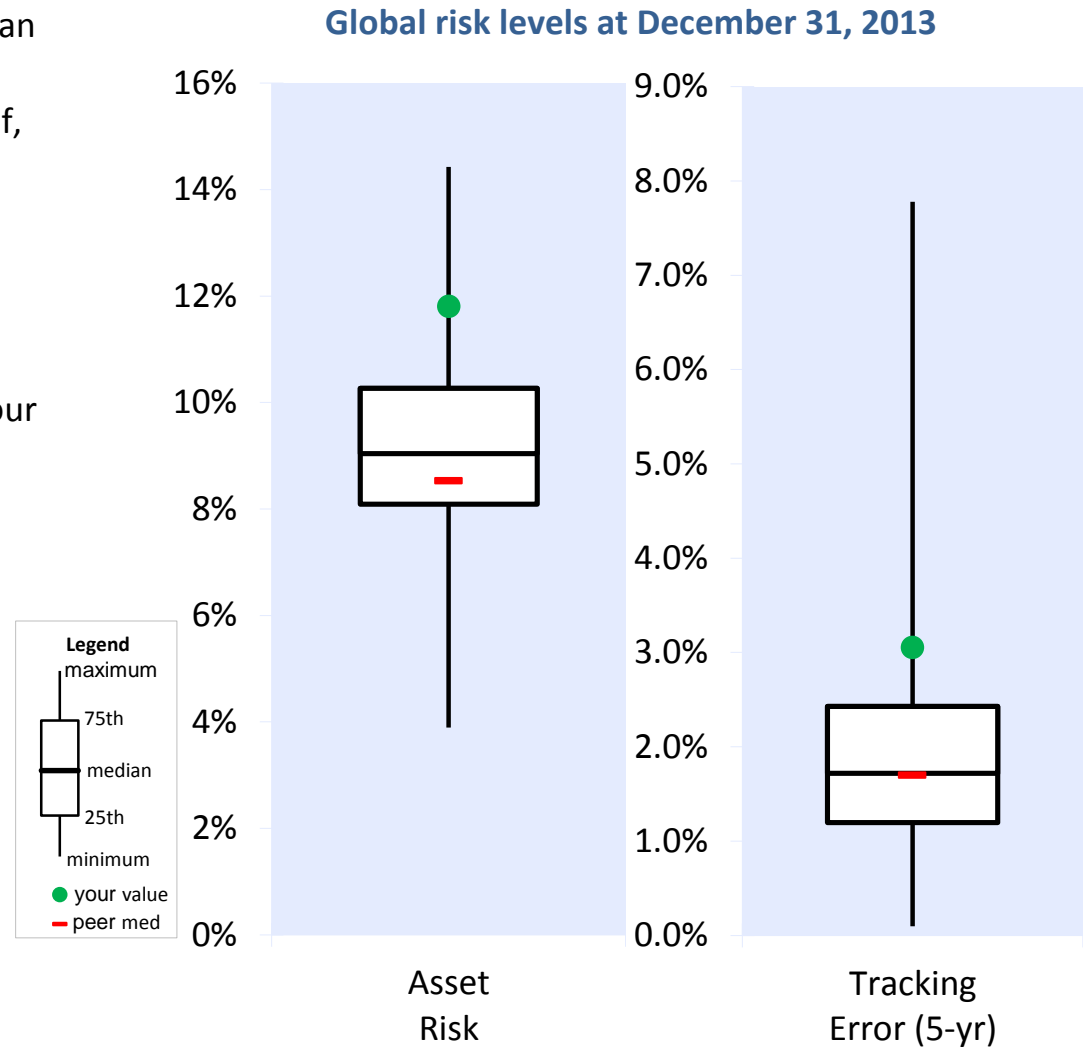


Your 5-year cost savings of 5.5 basis points is the average of your cost savings for the past 5 years.

Comparison of risk levels

Your asset risk of 11.8% was above the Global median of 9.0%. Asset risk is the standard deviation of your policy return. It is based on the historical variance of, and covariance between, the asset classes in your policy mix.

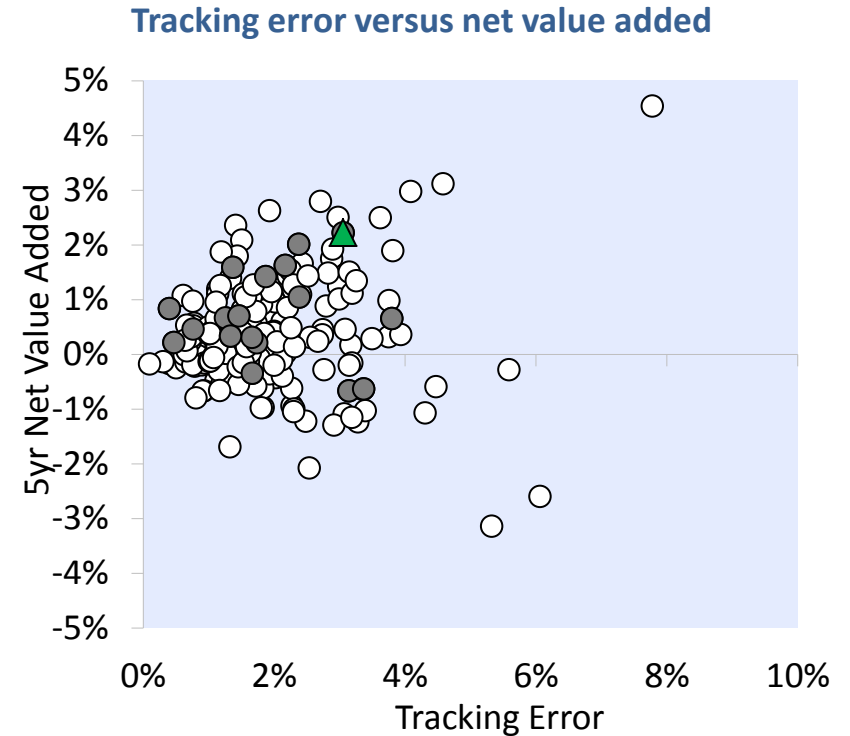
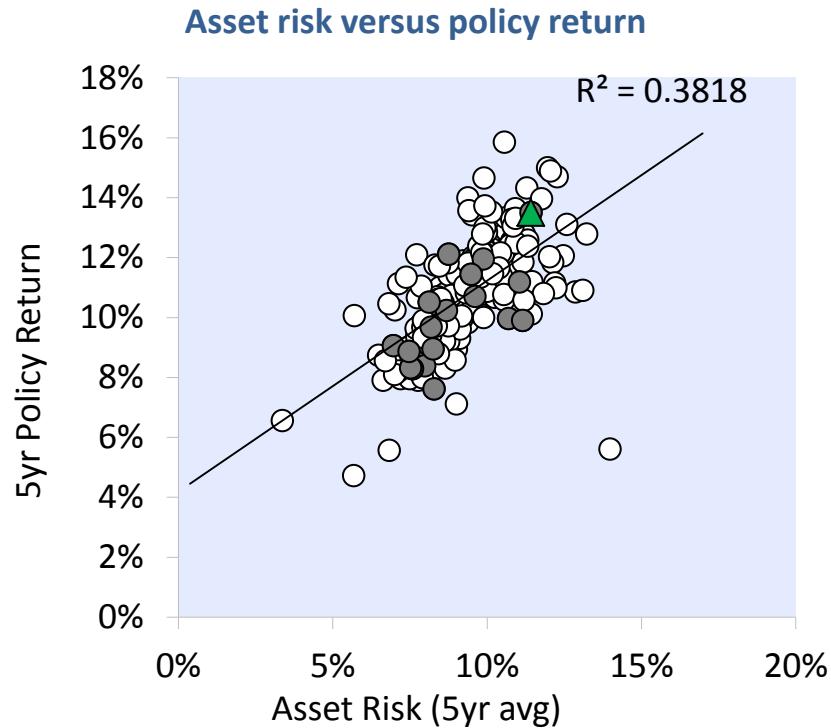
Your tracking error of 3.1% was above the Global median of 1.7%. Tracking error is the risk of active management. It equals the standard deviation of your annual net value added.



During the 5-year period ending 2013, Global funds were rewarded for taking asset risk. More risk resulted in worse performance.

Higher asset risk was associated with higher policy returns.

There was no meaningful relationship between tracking error and net value added.



Summary of key takeaways

Returns

- Your 5-year net total net return was 15.7%. This was above the Global median of 10.9% and above the peer median of 10.6%.
- Your 5-year policy return was 13.5%. This was above the Global median of 10.7% and above the peer median of 9.9%.

Value added

- Your 5-year net value added was 2.2%. This was above the Global median of 0.3% and above the peer median of 0.7%.

Cost and cost effectiveness

- Your investment cost of 46.7 bps was above your benchmark cost of 44.0 bps. This suggests that your fund was slightly high cost compared to your peers.
Your fund was slightly high cost because you paid more than peers for similar services. This added costs was mostly offset by you had a lower cost implementation style.
- Your 5-year performance placed in the positive value added, low cost quadrant of the cost effectiveness chart.

Risk

- Your asset risk of 11.8% was above the Global median of 9.0%. Your tracking error of 3.1% was above the Global median of 1.7%.