Investment Benchmarking Analysis

(for the 5-year period ending December 31, 2023)

South Carolina Retirement System Investment Commission



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Key Takeaways

2023 Calendar Year

- Your 1-year net total return was 11.6%. This was above both the U.S. Public median of 11.3% and the peer median of 10.6%.
- Your investment cost of 101.2 bps was below your benchmark cost of 109.9 bps. This suggests that your fund was slightly low cost compared to your peers.
- Your fund was below benchmark cost because it had a lower cost implementation style.
- You placed in the low cost, positive net value added quadrant for 2023. This contributed to maintaining the same low cost, positive net value added position you achieved over the most recent 5- and 10-year periods.

5-year Returns

- Your 5-year net total return was 9.2%. This was above the U.S. Public median of 8.7% and equal to the peer median of 9.2%.
- Your 5-year policy return was 6.9%. This was below both the U.S. Public median of 7.5% and the peer median of 7.5%.

5-year Value added

- Your 5-year net value added was 2.3%. This was above both the U.S. Public median of 1.3% and the peer median of 1.3%.
- Your 2.3% 5-year value added translates into approximately \$4.0 billion of cumulative value added over 5 years.

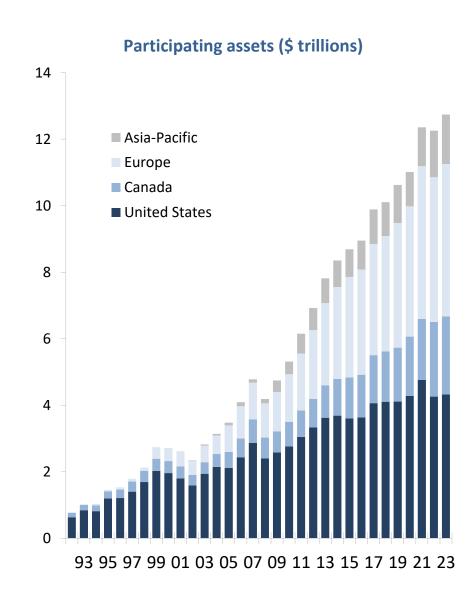
5-Year Cost

- Your 5-year average costs were 117.1 bps. This was below your benchmark over the period, providing an average annual savings of 12 bps.
- Your costs decreased by 2.6 bps, from 103.8 bps in 2019 to 101.2 bps in 2023, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in performance fees for better returning assets.

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

- 149 U.S. pension funds participate. The median U.S. fund had assets of \$10.3 billion and the average U.S. fund had assets of \$29.0 billion. Total participating U.S. assets were \$4.3 trillion.
- 66 Canadian funds participate with assets totaling \$2.3 trillion.
- 64 European funds participate with aggregate assets of \$4.6 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the UK.
- 10 Asia-Pacific funds participate with aggregate assets of \$1.5 trillion. Included are funds from Australia, New Zealand and South Korea.
- 4 funds from other regions participate.

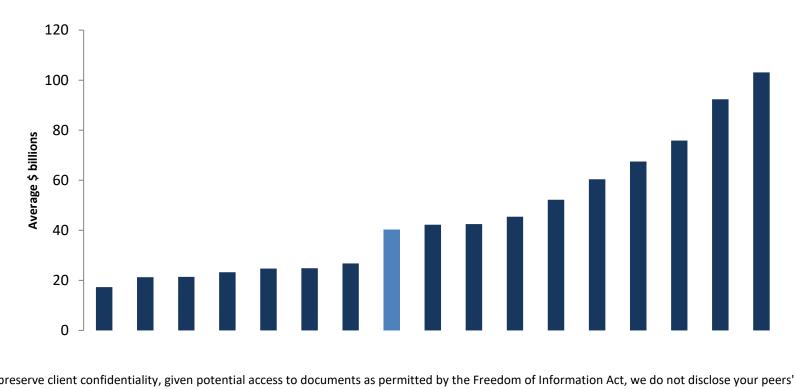
The most meaningful comparisons for your returns and value added are to the U.S. Public universe, which consists of 46 funds. The U.S. Public universe assets totaled \$3.0 trillion and the median fund had assets of \$26.2 billion.



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

Peer group for South Carolina Retirement System Investment Commission

- 17 U.S. sponsors from \$17.3 billion to \$103.1 billion
- Median size of \$42.2 billion versus your \$40.2 billion



To preserve client confidentiality, given potential access to documents as permitted by the Freedom of Information Act, we do not disclose your peers' names in this document.

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 adding value (i.e., mostly the effectiveness of active management, as well as the amount of active management versus passive management)?

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?

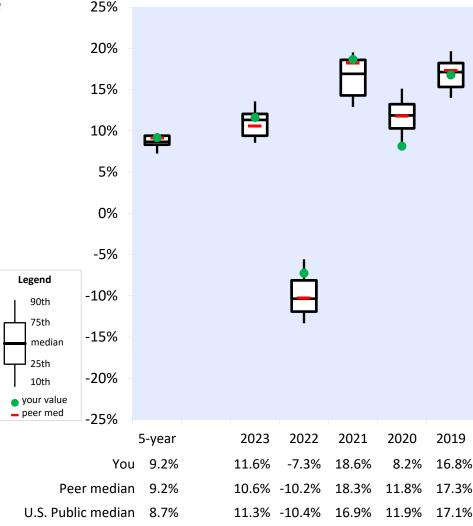
Your 5-year net total return of 9.2% was above the U.S. Public median of 8.7% and equal to the peer median of 9.2%

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	9.2%
- Policy return	6.9%
= Net value added	2.3%

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).

U.S. Public net total returns - quartile rankings 25%



10.6% -10.2% 18.3% 11.8% 17.3% 11.3% -10.4% 16.9% 11.9% 17.1%

Your 5-year policy return of 6.9% was below both the U.S. Public median of 7.5% and the peer median of 7.5%.

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

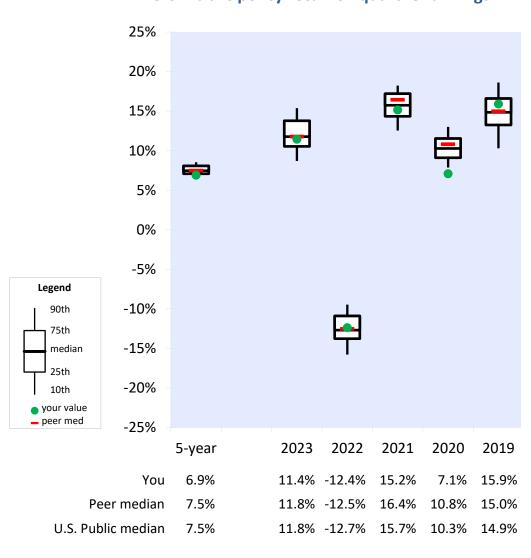
Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

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

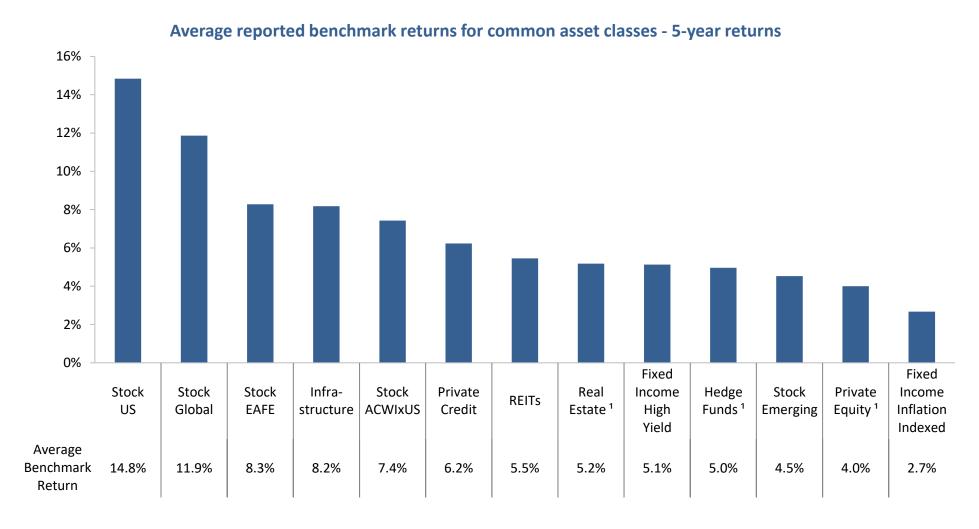
Each of these three factors is different across funds. Therefore, it is not surprising that policy returns often vary widely between funds.

To enable fairer comparisons, the policy returns of all participants, including your fund, were adjusted to reflect private equity benchmarks based on lagged, investable, public-market indices. Prior to this adjustment, your 5-year policy return was 7.5%, 0.6% higher than your adjusted 5-year policy return of 6.9%. Mirroring this, your 5-year total fund net value added would be 0.6% lower.

U.S. Public policy returns - quartile rankings



Differences in policy returns are caused by differences in benchmarks and policy mix. The two best performing asset classes for the 5 years ending 2023 were Stock - U.S. and Stock - Global.



^{1.} The private equity benchmark is the average of the standardized private equity benchmark returns applied to U.S. Public participants based on a blend of listed small cap proxies. The hedge fund and real estate benchmarks are the averages of benchmark returns reported by U.S. Public participants.

Your 5-year policy return of 6.9% was below the U.S. Public median of 7.5% primarily because of:

- The negative impact of lower benchmark returns in Infrastructure and Real estate than the U.S. Public average.
- Offset by the positive impact of a slightly higher benchmark return in Total Stock than the U.S. Public average.

5-year	average	pol	licy	mix ¹

5-year	bench-
mark	return

	Your	U.S. Publ	More/	Your	U.S. Publ
	Fund	Avg.	Less	Fund	Avg.
Stock - U.S.	12%	17%	-5%	12.4%	14.8%
Stock - EAFE	2%	4%	-2%	n/a³	8.3%
Stock - Emerging	4%	2%	2%	8.1%	4.5%
Stock - ACWI x U.S.	1%	6%	-5%	n/a³	7.4%
Stock - Global	27%	14%	13%	12.2%	11.9%
Other Stock	0%	2%	-2%	n/a³	n/a³
Total Stock	46%	45%	1%	12.2%	11.6%
Fixed Income - U.S.	22%	16%	6%	1.1%	1.3%
Fixed Inc Inflation indexed	0%	3%	-3%	n/a³	2.7%
Cash	1%	-1%	2%	2.7%	1.9%
Other Fixed Income ²	3%	6%	-3%	n/a³	n/a³
Total Fixed Income	25%	24%	1%	1.5%	1.6%
Global TAA	1%	1%	1%	6.8%	6.6%
Hedge funds	0%	3%	-3%	6.8%	5.0%
Infrastructure	3%	1%	2%	7.0%	8.2%
REITs	1%	1%	0%	7.4%	5.5%
Real estate ex-REITs	8%	9%	-1%	3.5%	5.2%
Other Real Assets ²	0%	2%	-2%	n/a³	n/a³
Private equity	8%	11%	-3%	4.0%	4.0%
Private debt	7%	2%	4%	6.0%	6.2%
Total	100%	100%			

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

^{2.} Other fixed income includes: Fixed income - Long bonds, Fixed income - High yield and Fixed income - Emerging. Other real assets include: Commodities and Natural resources.

^{3.} A value of 'n/a' is shown if asset class returns are not available for the full 5 years or if they are broad and incomparable.

Net value added is the component of total return from active management. Your 5-year net value added was 2.3%.

Net value added equals total net return minus policy return.

Value added for South Carolina Retirement System Investment Commission

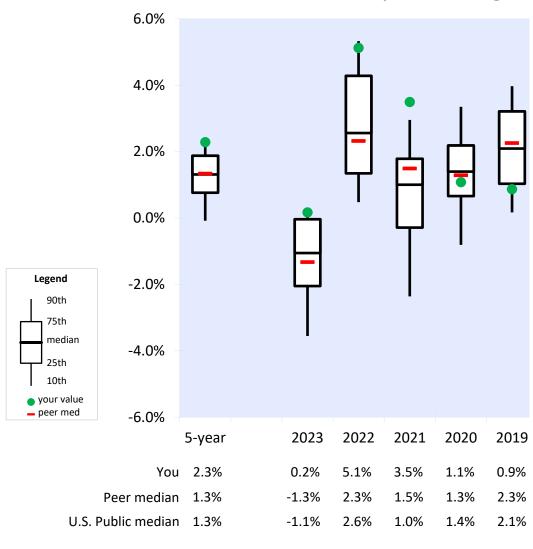
	Net	Policy	Net value
Year	return	return	added
2023	11.6%	11.4%	0.2%
2022	-7.3%	-12.4%	5.1%
2021	18.6%	15.2%	3.5%
2020	8.2%	7.1%	1.1%
2019	16.8%	15.9%	0.9%
5-Year	9.2%	6.9%	2.3%

Your 5-year net value added of 2.3% compares to a median of 1.3% for your peers and 1.3% for the U.S. Public universe.

Your 2.3% 5-year value added translates into approximately \$4.0 billion of cumulative value added over 5 years.

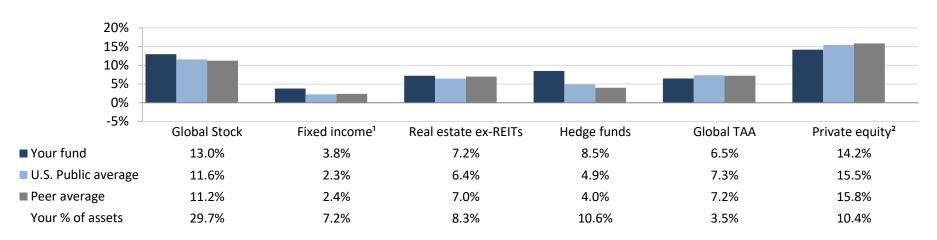
To enable fairer comparisons, the value added for each participant including your fund was adjusted to reflect private equity benchmarks based on lagged, investable public market indices. Prior to this adjustment, your fund's 5-year total fund net value added was 1.7%.

U.S. Public net value added - quartile rankings

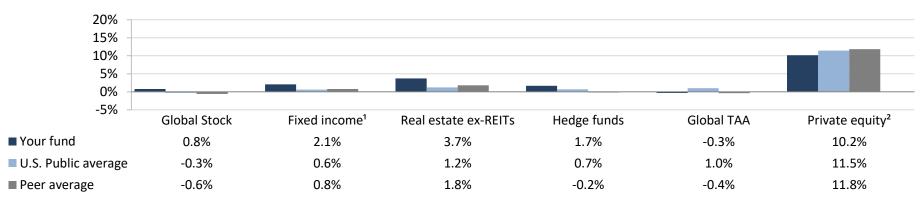


Comparisons of your 5-year net return and net value added by major asset class:

5-year average net return by major asset class



5-year average net value added by major asset class



^{1.} Excludes cash and leverage.

^{2.} To enable fairer comparisons, the private equity benchmarks of all participants, including your fund were adjusted to reflect lagged, investable, public-market indices. Prior to this adjustment, your fund's 5-year private equity net value added was 1.0%.

Your investment costs were \$406.8 million or 101.2 basis points in 2023.

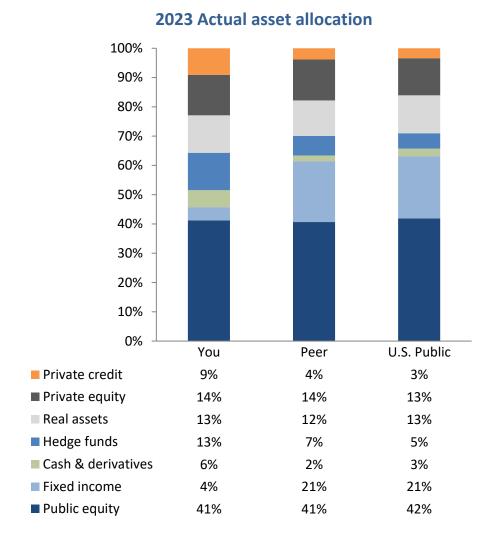
Asset management costs by asset	Internal	Exter	nal Managei	ment			Footnotes
	Overseeing	Passive	Active	Perform.			1. CEM-imputed costs were applied
(4 0 0 0 0)	Ŭ		base fees	fees 5	Total		to the manager base fees for one or
Asset management costs by asset class and style (\$000s) Public Stock and REITs Fixed Income Infrastructure Infrastructure - LP/Value add Infrastructure - Co-invest. Real estate ex-REITs Real estate ex-REITs - LP/Value add Real estate ex-REITs - Co-invest. Global TAA Hedge funds - External active Hedge funds - FoFs 3 4 Private equity - Diversified - LP/Value add Private equity - Diversified - FoFs 3 4 LBO - LP/Value add 1 2 LBO - Co-invest. LBO - FoFs 3 4 Venture capital - LP/Value add Venture capital - LP/Value add Venture capital - FoFs 3 4 Private credit - LP/Value add Private credit - LP/Value add Private credit - LP/Value add Private credit - Co-invest. Venture capital - Co-invest. Venture capital - Co-invest. Private credit - Co-invest. Private credit - Co-invest. Private equity - Other 2 3 Derivatives/Overlays Total Oversight, custodial and other costs Oversight of the fund	Overseeing of external 5,312 652 180 183 65 743 324 35 229 1,387 4 41 666 69 475 621 44 58 15 164 1,083 69 197 257	Passive fees 3,485	_		Total 9,822 7,917 7,283 17,665 435 16,591 -8,112 -339 10,116 159,976 273 2,296 66 6,952 52,994 12,579 5,514 6,643 15 12,361 66,434 -2,016 7,649 1,286 401,332	99.9bp	1. CEM-imputed costs were applied to the manager base fees for one or more mandates were added: LBO - LP/Value add 150 bp. 2. CEM-imputed costs were applied to the following manager performance fees for one or more mandates were added: LBO - LP/Value add 130 bps. 3. CEM-imputed costs were applied to the underlying manager base fees for one or more mandates were added: Hedge funds - FoFs 125 bps, LBO - FoFs 150 bps, Private equity - Other - FoFs 120 bps, Venture capital - FoFs 160 bps, Private equity - Diversified - FoFs 150 bps. 4. CEM-imputed costs were applied to the underlying performance fees for one or more mandates were added: Hedge funds - FoFs 105 bps, LBO - FoFs 130 bps, Private equity - Other - FoFs 60 bps, Venture capital - FoFs 70 bps, Private equity - Diversified - FoFs 105 bps. Refer to Appendix A for full details regarding the different forms of cost completion. 5. Total cost includes
					•		carry/performance fees for all asset
Trustee & custodial					1,151		classes.
Consulting and performance measure	ment				1,809		6. Excludes non-investment costs,
Audit					285		such as benefit insurance premiums
Other	+c				359	1 460	and preparing cheques for retirees.
Total oversight, custodial & other cost	LS				5,445	1.4bp	

406,777 101.2bp

High-cost assets equaled 48% of your assets at the end of 2023 versus a peer average of 37%.

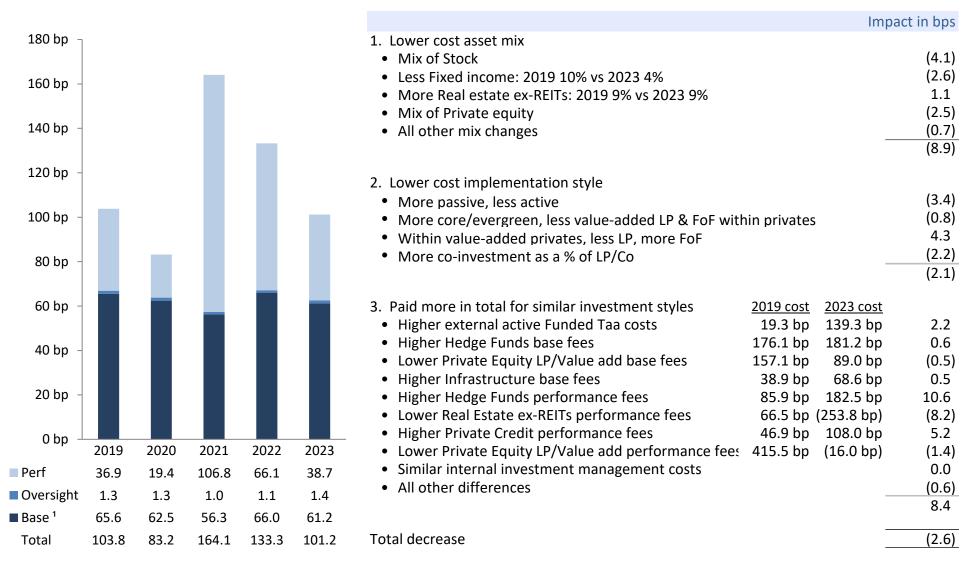
Alternative asset classes, such as, real estate (excl. REITs), infrastructure, hedge funds, private equity and private credit are typically higher cost asset classes than public asset classes such as public equity and fixed income. You had a combined public market allocation of 48% at the end of 2023 versus a peer average of 63%.

Your alternative asset classes represent 48% of your assets, but 94% of your total costs.



Your costs decreased by 2.6 bps, from 103.8 bps in 2019 to 101.2 bps in 2023, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in performance fees for better returning assets.

Trend in cost Reasons why your costs decreased by 2.6 bps



^{1.} Includes fees for managing internal assets and internal costs of monitoring external programs, where allocated.

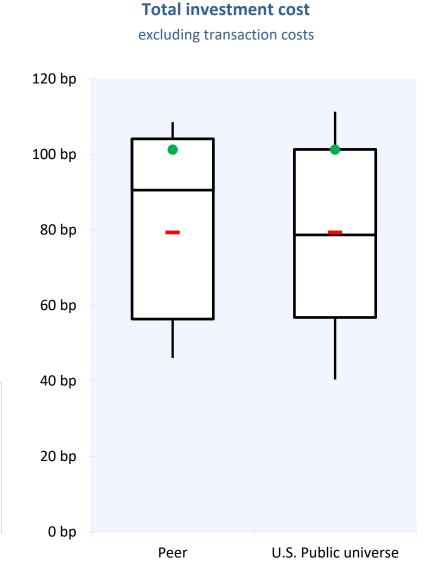
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Before adjusting for asset mix differences, your total investment cost of 101.2 bps was above the peer median of 90.5 bps.

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

- Asset mix private asset classes are generally more expensive than public asset classes.
- 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.



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90th
75th
median

25th 10th your value peer avg

Benchmark cost analysis suggests that, after adjusting for fund size and asset mix, your fund was below benchmark cost by 8.7 basis points in 2023.

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 101.2 bp was slightly below your benchmark cost of 109.9 bp. Thus, your cost savings were 8.7 bp.

Your cost versus benchmark

	\$000s	basis points
Your total investment cost	406,777	101.2 bp
Your benchmark cost	441,867	109.9 bp
Your excess cost	(35,090)	(8.7) bp

Your fund was below benchmark cost because it had a lower cost implementation style.

Reasons for your low cost status

	Excess C (Saving	•
	\$000s	bps
Lower cost implementation style		
 Less active management, more lower cost passive 	(27,825)	(6.9)
 More external management, less lower cost internal 	2,168	0.5
 More LPs as a percentage of external 	16,148	4.0
 Use of fund of funds 	852	0.2
 More co-investment as a percentage of LP/Co 	(51,221)	(12.7)
Less overlays	(496)	(0.1)
	(60,374)	(15.0)
2. Paying more than peers for some services		
 External investment management costs 	26,698	6.6
 Internal investment management costs 	(1)	(0.0)
 Oversight, custodial & other costs 	(1,413)	(0.4)
	25,284	6.3
Total savings	(35,090)	(8.7)
Neutralized differences due to performance fees specific to 2023:		
 Paying more for hedge fund performance fees 	34,098	8.5

Your implementation style was 15.0 bps lower cost than the peer average.

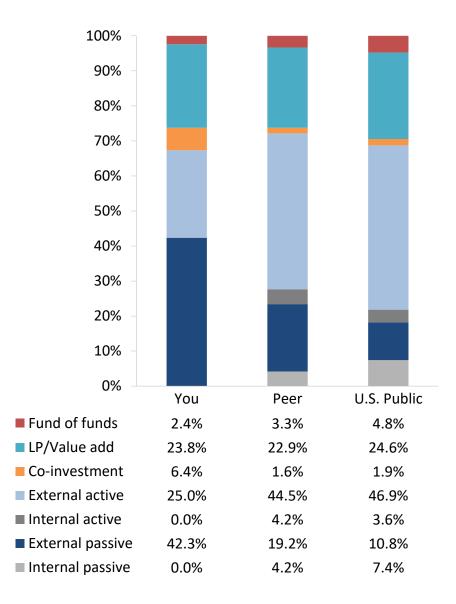
Implementation style is the way in which your fund implements asset allocation. Each implementation choice has a cost. Your first choice is how much to implement passively or actively. The table below summarizes your aggregate choices versus peers and their cost impact.

Implementation choices	Impact
Less active, more passive	(6.9) bp
Less internal as a % of passive	0.0 bp
Less internal as a % of active	0.5 bp
More LPs as a % of external	4.0 bp
Less fund of funds	0.2 bp ²
More co-investment as a percentage of LP/Co	(12.7) bp
Less overlays	(0.1) bp
Total impact	(15.0) bp

The peer and universe style was adjusted to match your asset mix. It equals their average style for each asset class weighted by your fee basis for the asset class. It shows how the average peer would implement your asset mix.

- 1. Implementation style is shown as a % of total fund fee basis because the fee basis is the primary driver of cost for private assets (e.g., new private equity LP commitments increase costs before LP NAV increases). Style weights are based on average holdings. Cash and derivatives are excluded.
- 2. Typically, less fund of funds as a % of LP/Co/FoF is lower cost. But your mix of fund of funds increased your cost.

Implementation style¹

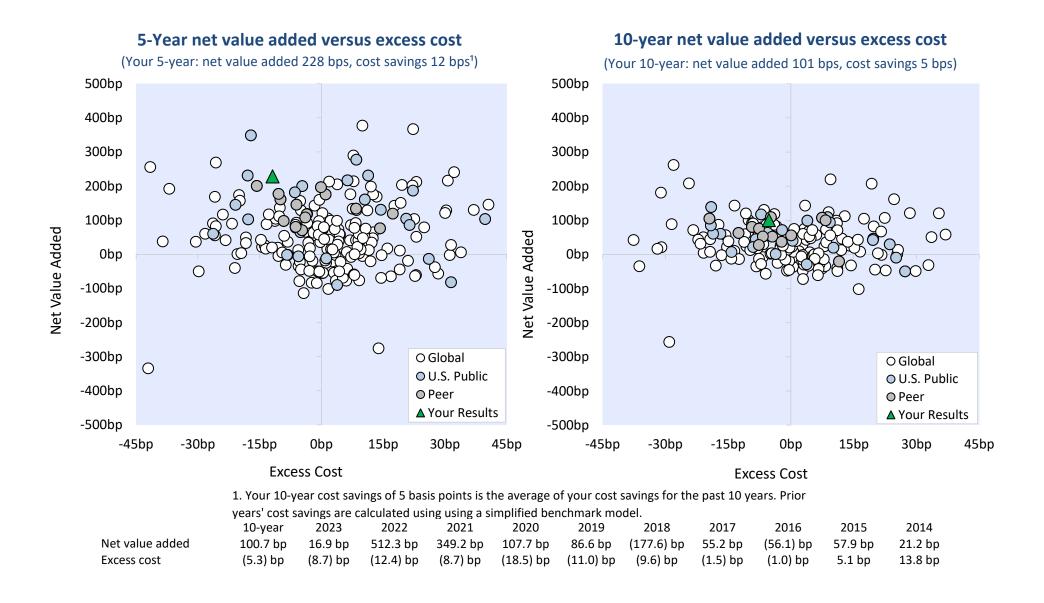


The table below summarizes why your fund is high/low cost relative to the peermedian by asset class.

Why are you high/(low) cost by asset class?

	Impl.	Paying				
	style	more/(less)	Total	Total	Holding	Net value
Asset class/category	\$000s	\$000s	\$000s	bps	%	added
Stock - U.S. small cap	(3,572)	715	(2,857)	(27.3) bp	3%	0.6%
Stock - EAFE	(2,217)	187	(2,030)	(28.7) bp	2%	-2.5%
Stock - Emerging	(894)	53	(841)	(31.9) bp	1%	12.2%
Stock - Global	(21,092)	2,159	(18,933)	(13.0) bp	36%	-1.1%
Fixed income - U.S.	114	1,334	1,448	35.5 bp	1%	-3.7%
Fixed income - Emerging	0	(7)	(7)	(14.5) bp	0%	-96.6%
Fixed income - High yield	111	1,534	1,645	13.6 bp	3%	-1.9%
Fixed income - Other	55	(17)	38	2.1 bp	0%	
REITs	36	1	37	1.3 bp	1%	1.3%
Real estate ex-REITs	2,781	(27,630)	(24,849)	(72.2) bp	9%	5.8%
Infrastructure	(2,608)	4,099	1,491	14.2 bp	3%	7.8%
Hedge funds	(1,870)	24,682	22,812	51.7 bp	11%	-8.3%
Global TAA	39	7,622	7,661	105.5 bp	2%	-6.1%
Private equity - Diversified	(3,213)	(3,921)	(7,135)	(113.6) bp	1%	-1.7%
Venture capital	3,651	(2,003)	1,647	11.4 bp	2%	-15.7%
LBO	(46,688)	17,061	(29,627)	(82.0) bp	9%	1.0%
Private credit	15,489	829	16,318	46.4 bp	9%	-4.0%
Derivatives and overlays	(496)	0	(496)	(0.1) bp	2%	
Oversight, custodial & other	n/a	(1,413)	(1,413)	(0.4) bp		
Total	(60,374)	25,284	(35,090)	(8.7) bp	100%	0.2%

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



Summary of key takeaways

Returns

- Your 5-year net total return was 9.2%. This was above the U.S. Public median of 8.7% and equal to the peer median of 9.2%.
- Your 5-year policy return was 6.9%. This was below both the U.S. Public median of 7.5% and the peer median of 7.5%.

Value added

- Your 5-year net value added was 2.3%. This was above both the U.S. Public median of 1.3% and the peer median of 1.3%.
- Your 2.3% 5-year value added translates into approximately \$4.0 billion of cumulative value added over 5 years.

Cost and cost effectiveness

- Your investment cost of 101.2 bps was below your benchmark cost of 109.9 bps. This suggests that your fund was slightly low cost compared to your peers.
- Your fund was below benchmark cost because it had a lower cost implementation style.
- Your costs decreased by 2.6 bps, from 103.8 bps in 2019 to 101.2 bps in 2023, because you had a lower cost asset mix and had a lower cost implementation style. This was partly offset by paying more in performance fees for better returning assets.