

EXHIBIT 17

Pennsylvania Public School Employees' Retirement System

Investment Cost Effectiveness Analysis - Summary of Results

For the 5 year period ending December 31, 2020



Key Takeaways

Returns

- Your 5-year net total return was 9.0%. This was below both the U.S. Public median of 9.5% and the peer median of 9.5%.
- Your 5-year policy return was 8.5%. This was below both the U.S. Public median of 9.1% and the peer median of 8.8%.

Value added

- Your 5-year net value added was 0.4%. This was equal to the U.S. Public median of 0.4% and close to the peer median of 0.5%.

Cost

- Your investment cost of 102.7 bps was above your benchmark cost of 82.1 bps. This suggests that your fund was high cost compared to your peers.
- Your fund was high cost because it paid more than peers for some services and it had a higher cost implementation style.

Risk

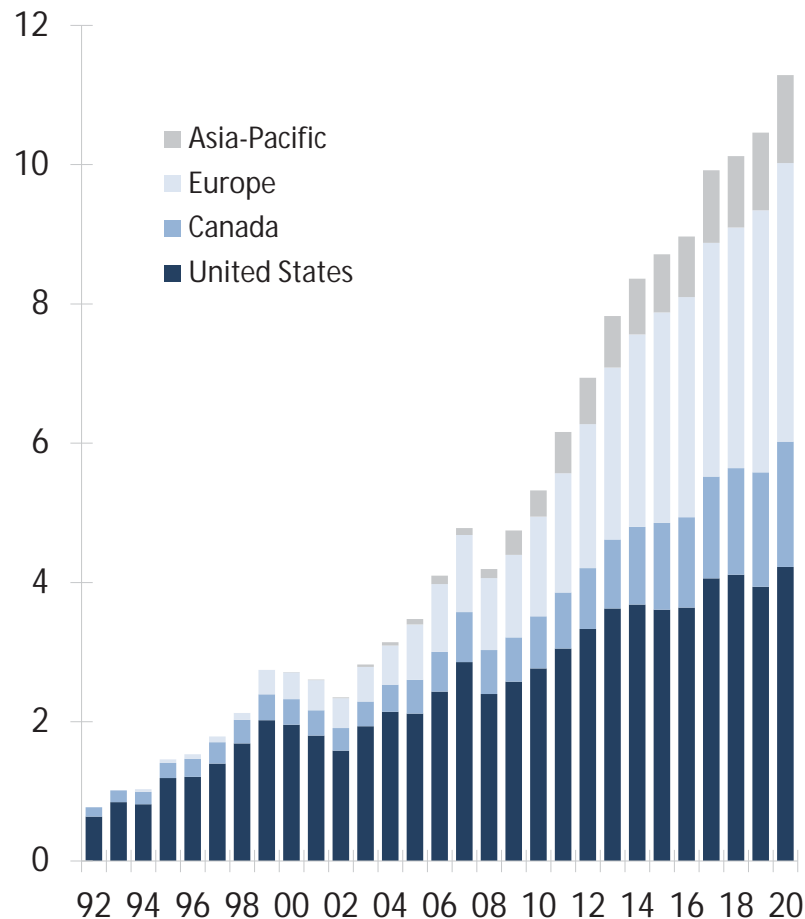
- Your asset risk of 10.7% was equal to the U.S. Public median of 10.7%. Your asset-liability risk of 14.4% was above the U.S. Public median of 13.4%.
Realized volatility of actual returns has been lower than the median U.S. public plan over the past 5-years.

This benchmarking report compares your cost and return performance to the 316 funds in CEM's extensive pension database.

- 158 U.S. pension funds participate. The median U.S. fund had assets of \$10.2 billion and the average U.S. fund had assets of \$26.7 billion. Total participating U.S. assets were \$4.2 trillion.
- 70 Canadian funds participate with assets totaling \$1.8 trillion.
- 78 European funds participate with aggregate assets of \$4.0 trillion. Included are funds from the Netherlands, Norway, Sweden, Finland, Ireland, Denmark and the U.K.
- 6 Asia-Pacific funds participate with aggregate assets of \$1.3 trillion. Included are funds from Australia, New Zealand, China 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 49 funds.

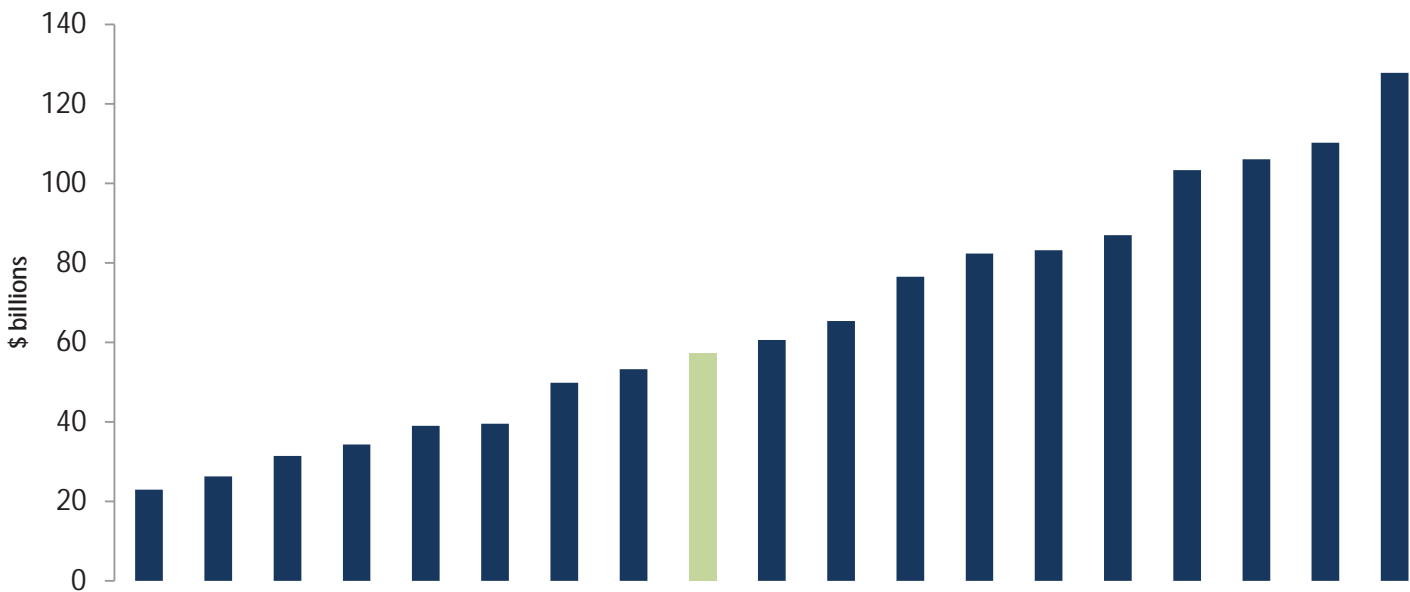
Participating assets (\$ trillions)



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

Peer group for Pennsylvania Public School Employees Retirement System

- 19 U.S. Public sponsors from \$22.9 billion to \$127.8 billion
- Median size of \$60.6 billion versus your \$57.2 billion



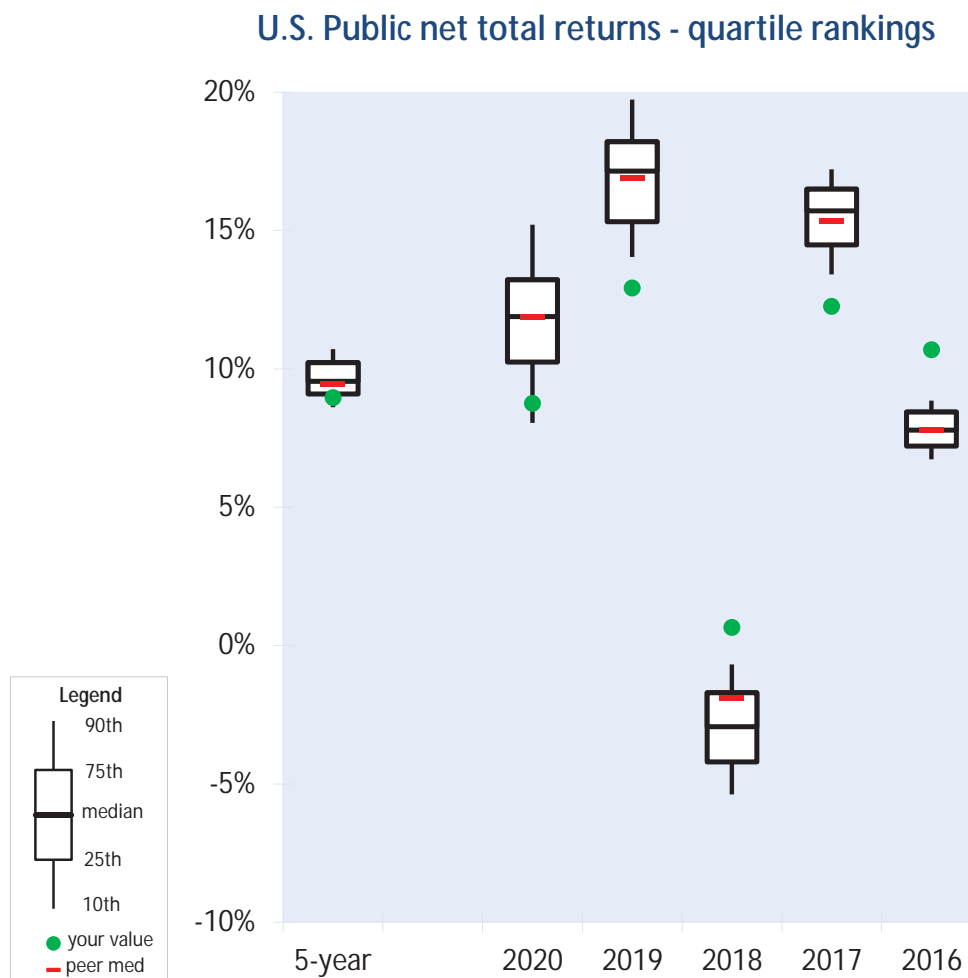
To preserve client confidentiality, given potential access to documents as permitted by the Freedom of Information Act, we do not disclose your peers' names in this document.

Your 5-year net total return of 9.0% was below both the U.S. Public median of 9.5% and the peer median of 9.5%.

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	9.0%
- Policy return	8.5%
= Net value added	0.4%

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).



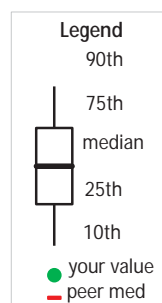
Your 5-year policy return of 8.5% was below the U.S. Public median of 9.1% and slightly below the peer median of 8.8%.

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

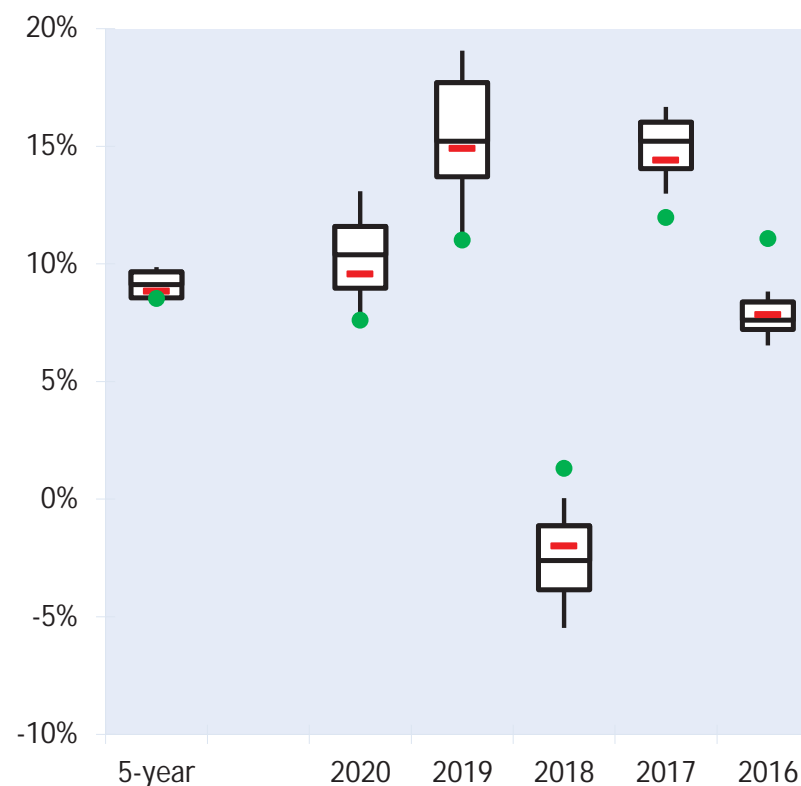
Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

- 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.



U.S. Public policy returns - quartile rankings



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 9.2%, 0.6% higher than your adjusted 5-year policy return of 8.5%. Mirroring this, your 5-year total fund net value added would be 0.6% lower.

Your 5-year policy return of 8.5% was close to the U.S. Public median of 9.1% primarily because of:

- The positive impact of your higher benchmark returns in several asset classes, including bonds, private equity and private debt.
- This was partly offset by the negative impact of your lower relative weight in Stocks, one of the better performing asset classes of the past 5 years (your 18% average weight versus 47% for the U.S. Public universe).

	5-year average policy mix ¹			5-year benchmark return	
	Your Fund	U.S. Publ Avg.	More/ Less	Your Fund	U.S. Publ Avg.
Stock - U.S.	6%	19%	-13%	14.5%	15.2%
Stock - EAFE	0%	5%	-5%	n/a ³	7.9%
Stock - Emerging	1%	2%	-1%	12.6%	12.6%
Stock - ACWI x U.S.	10%	7%	3%	9.0%	9.1%
Stock - Global	0%	11%	-11%	n/a ³	12.2%
Other Stock	0%	2%	-3%	n/a ³	n/a ³
Total Stock	18%	47%	-29%	11.0%	12.4%
Fixed Income - U.S.	4%	16%	-12%	4.4%	4.7%
Fixed Income - Long Bonds	5%	2%	4%	7.8%	7.9%
Fixed Inc. - Inflation Indexed	12%	3%	9%	6.7%	5.5%
Cash	-11%	-1%	-10%	1.2%	1.2%
Other Fixed Income ²	10%	5%	5%	n/a ³	n/a ³
Total Fixed Income	21%	25%	-4%	7.0%	5.4%
Hedge Funds	10%	4%	6%	6.0%	4.6%
Risk Parity	7%	1%	6%	10.0%	9.5%
Commodities	8%	1%	7%	5.0%	1.1%
Infrastructure	3%	1%	2%	7.9%	7.2%
Real Estate incl. REITs	11%	9%	2%	7.0%	5.6%
Other Real Assets ²	3%	1%	2%	n/a ³	n/a ³
Private Equity	14%	9%	5%	7.3%	7.0%
Private Debt	5%	2%	3%	11.2%	6.7%
Total	100%	100%			

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

2. Other fixed income includes: High Yield, Emerging and Global. Other real assets include: 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.

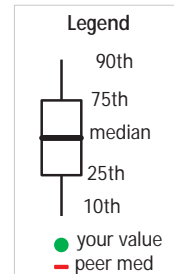
Net value added is the component of total return from active decisions. Your 5-year net value added was 0.4%.

Net value added equals total net return minus policy return.

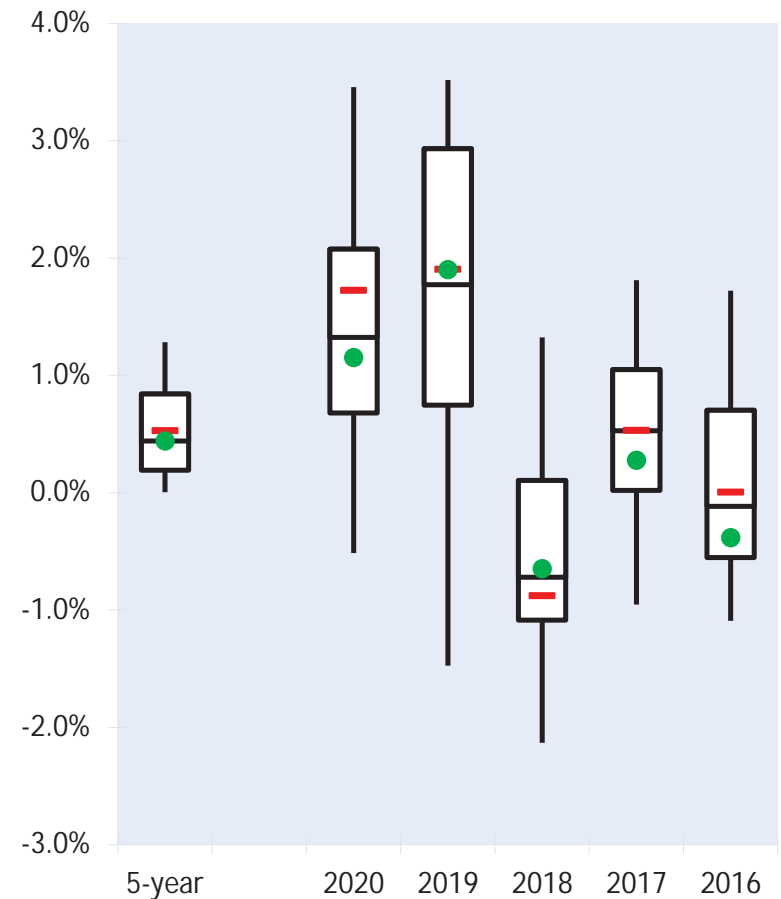
Value added for Pennsylvania Public School Employees Retirement System

Year	Net return	Policy return	Net value added
2020	8.8%	7.6%	1.2%
2019	12.9%	11.0%	1.9%
2018	0.7%	1.3%	-0.6%
2017	12.3%	12.0%	0.3%
2016	10.7%	11.1%	-0.4%
5-Year	9.0%	8.5%	0.4%

Your 5-year net value added of 0.4% compares to a median of 0.5% for your peers and 0.4% for the U.S. Public universe.



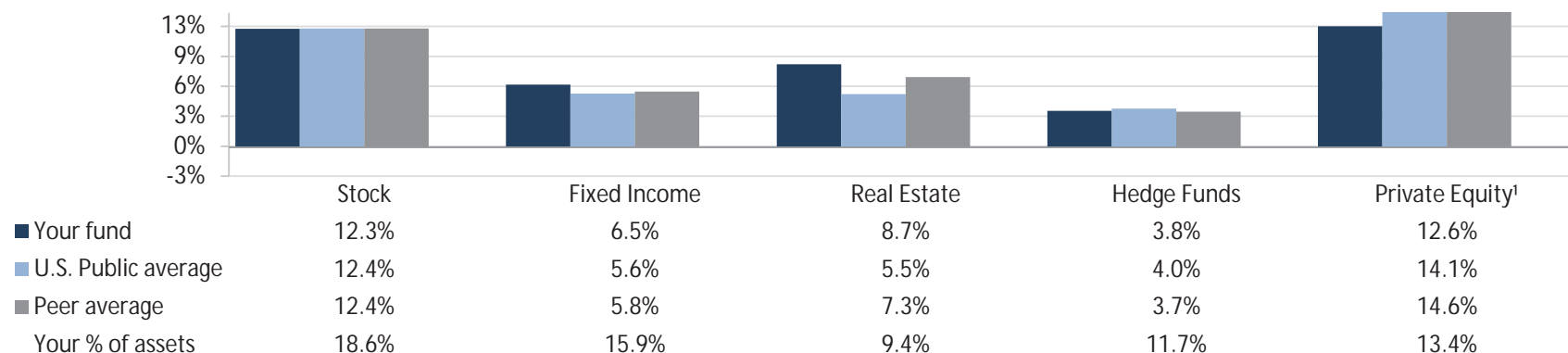
U.S. Public net value added - quartile rankings



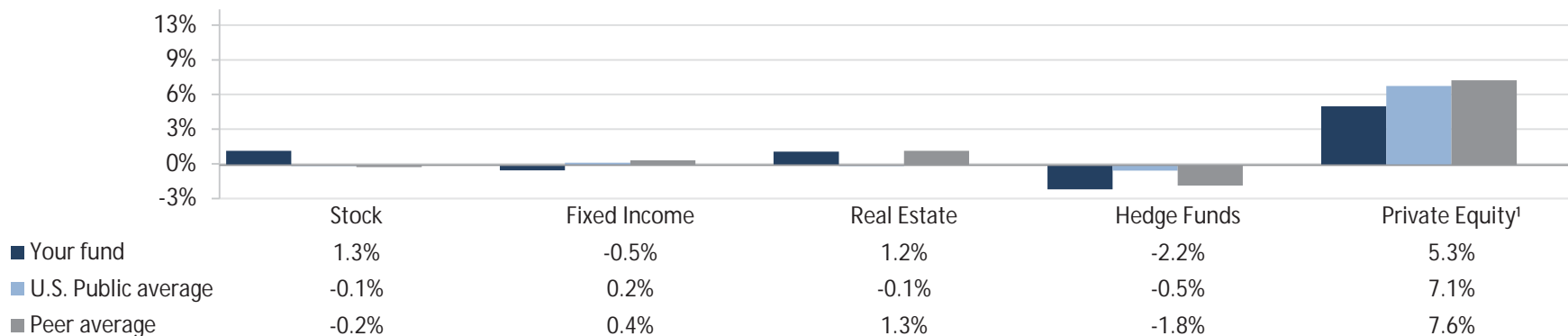
To enable fairer comparisons, the value added for each participant including your fund was adjusted to reflect private equity benchmarks based on lagged, investable public market indices. Prior to this adjustment, your fund's 5-year total fund net value added was -0.2%.

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. 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 0.3%.

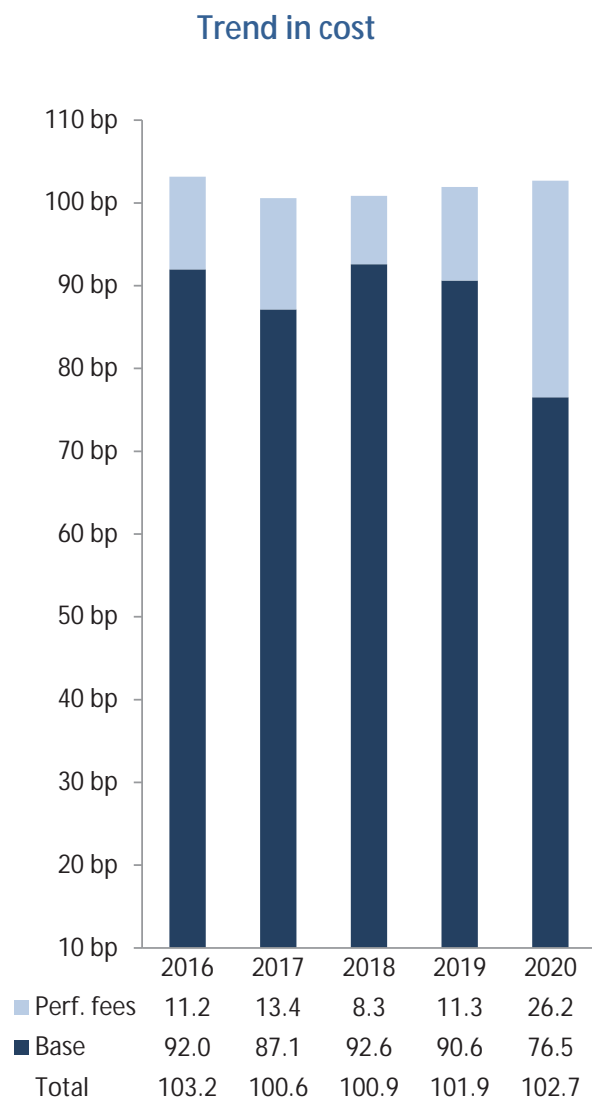
Your investment costs, excluding private asset performance fees, were \$586.9 million or 102.7 basis points in 2020.

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	
Stock - U.S. Large Cap	403						403
Stock - U.S. Mid Cap	83						83
Stock - U.S. Small Cap	83						83
Stock - Emerging			35		1,699	19,131	20,865
Stock - ACWI x U.S.	400		291		19,362	57,459	77,512
Fixed Income - U.S.		359	50		840		1,249
Fixed Income - Emerging			35		1,921		1,956
Fixed Income - Global ¹					6		6
Fixed Income - Inflation Indexed	238						238
Fixed Income - High Yield			111		1,256		1,367
Fixed Income - Long Bonds	278						278
Fixed Income - Other			35		21,728		21,763
Cash		301	65		304	2,166	2,836
Commodities	24		116		4,641	4,550	9,332
REITs	27		20		1,563		1,610
Infrastructure - LP ²			112		5,052	3,341	5,164
Infrastructure - Co-Invest. ²			71				71
Natural Resources - LP ^{1 2}					5,689	725	5,689
Other Real Assets ²		76	65		1,091	1,549	1,232
Real Estate ex-REITs - LP ²			709		51,781	36,631	52,490
Real Estate ex-REITs - Co-Invest. ²			76				76
Risk Parity		551	80		10,786		11,417
Hedge Funds - External Active			343		83,625	66,221	150,189
Diversified Private Equity - LP ²			929		124,200	26,276	125,129
Diversified Private Equity - Co-Invest. ²			175				175
Venture Capital - LP ²			175		8,997	22,554	9,172
Venture Capital - Co-Invest. ²			76				76
Private Credit - LP ²			678		66,622	29,583	67,301
Private Credit - Evergreen ²			81		1,336	2,511	1,418
Private Credit - Co-Invest. ²			76				76
Derivatives/Overlays	260	67	211	861			1,400
Total excluding private asset performance fees							570,658 99.8bp
Oversight, custodial and other costs ³							
Oversight of the fund							9,166
Trustee & custodial							2,191
Consulting and performance measurement							4,524
Audit							384
Other							0
Total oversight, custodial & other costs							16,265 2.8bp
Total investment costs (excl. transaction costs & private asset performance fees)							586,923 102.7bp

Footnotes

1. Default base fees were added: Global - External Active 26 bps, Natural Resources - LP 144 bp. Refer to Appendix A for full details regarding defaults.
2. 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.
3. Excludes non-investment costs, such as benefit insurance premiums and preparing cheques for retirees.

Your costs changed very little between 2016 and 2020. You had a lower cost asset mix and had a lower cost implementation style but it was mostly offset by paying more in 2020 for similar investment styles.



Reasons why your costs decreased by 0.5 bps

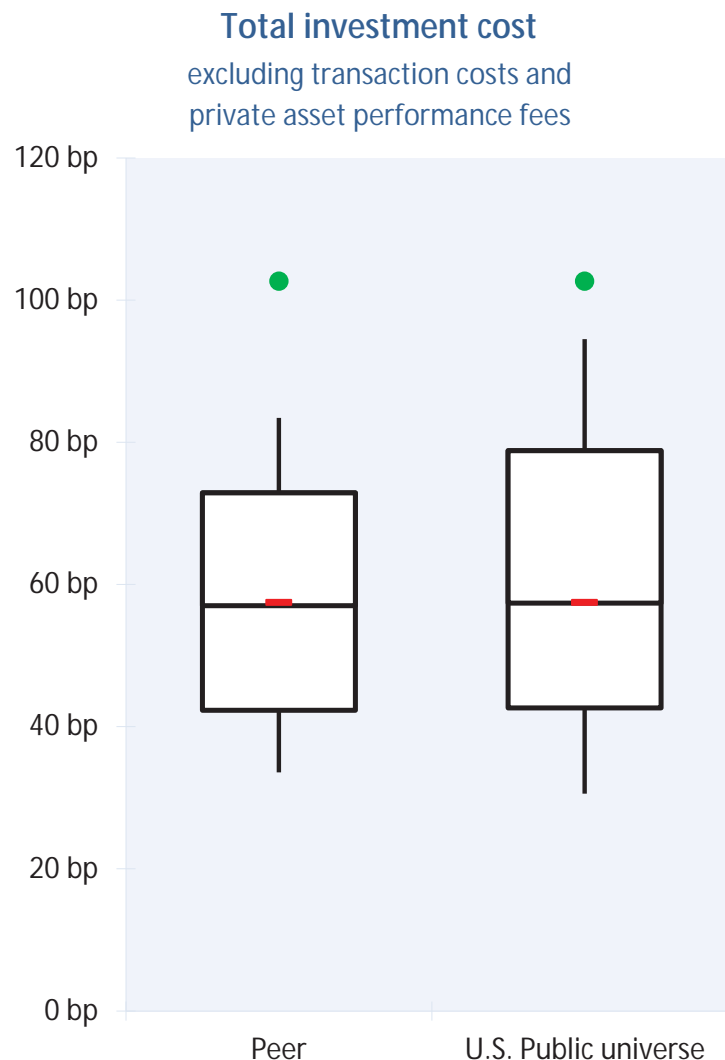
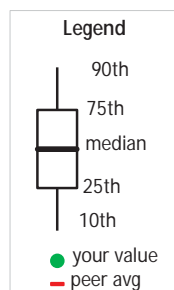
			Impact in bps
1. Lower cost asset mix			
• More Fixed Income: 2016 16% vs 2020 25%			1.1
• Less Real Estate ex-REITs: 2016 12% vs 2020 11%			(1.4)
• Less Hedge Funds & Multi-Asset: 2016 21% vs 2020 16%			(4.6)
• Less Private Equity: 2016 19% vs 2020 15%			(6.3)
• More Private Debt: 2016 9% vs 2020 10%			1.3
• All other mix changes			0.6
			(9.3)
2. Lower cost implementation style			
• More passive, less active			(1.5)
• More internal as a % of active			(0.8)
• More co-investment as a % of LP/Co			(1.3)
• All other implementation style changes			0.1
			(3.5)
3. Paid more, net, for similar investment styles			
	<u>2016 cost</u>	<u>2020 cost</u>	
• Higher external active acwi x u.s. costs	57.2 bp	171.2 bp	9.0
• Higher diversified private equity base fees	145.0 bp	180.9 bp	4.3
• Higher external active emerging costs	74.3 bp	552.7 bp	3.2
• Lower real estate ex-reits base fees	111.1 bp	85.9 bp	(2.7)
• Higher hedge funds performance fees	68.4 bp	104.8 bp	4.0
• Lower internal investment management costs			(0.3)
• Lower oversight, custodial & other costs	3.0 bp	2.8 bp	(0.2)
• All other differences			(5.0)
			12.3
Total decrease			(0.5)

Your total investment cost of 102.7 bps was above the peer median of 57.0 bps.

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

- Asset mix, particularly holdings of the highest cost asset classes: real estate (excl. REITs), infrastructure, hedge funds, private equity and private credit. These high cost assets equaled 43% of your funds assets at the end of 2020 versus a peer average of 28%.
- 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 high cost by 20.6 basis points in 2020.

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

Your total cost of 102.7 bp was above your benchmark cost of 82.1 bp. Thus, your excess cost was 20.6 bp.

Your cost versus benchmark

	\$000s	basis points
Your total investment cost	586,923	102.7 bp
Your benchmark cost	469,398	82.1 bp
Your excess cost	117,525	20.6 bp

Your fund was high cost because it paid more than peers for some services and it had a higher cost implementation style.

Explanation of your cost status

			Excess Cost/ (Savings)	
			\$000s	bps
1. Higher cost implementation style				
• Differences in the use of active management vs. lower cost passive			(8,387)	(1.5)
• Less external management, more lower cost internal			(1,417)	(0.2)
• More LPs as a percentage of external			36,894	6.5
• Less fund of funds			(7,563)	(1.3)
• Less co-investment as a percentage of LP/Co			739	0.1
• Less overlays			(149)	(0.0)
			20,117	3.5
2. Paying more than peers for some services				
• External investment management costs				
	<u>You</u>	<u>Peer Median</u>		
Emerging - External Active - Total*	552.7 bp	48.1 bp	19,047	3.3
ACWI x U.S. - External Active - Total*	171.2 bp	38.2 bp	59,918	10.5
Infrastructure - LP - Base fees	64.8 bp	133.0 bp	(5,436)	(1.0)
Hedge Funds - External Active - Base fees	132.8 bp	109.0 bp	15,092	2.6
Hedge Funds - External Active - Performance Fees	104.8 bp	96.0 bp	5,535	1.0
All other differences			(4,429)	(0.8)
• Internal investment management costs			(1,024)	(0.2)
• Oversight, custodial & other costs			8,704	1.5
			101,837	17.0
Total fund excess cost			117,525	20.6

* The costs for the Emerging stock included 506 bps of performance fees and ACWIxUS included 128 bps of performance fees. Both asset classes substantially outperformed their respective benchmarks.

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

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

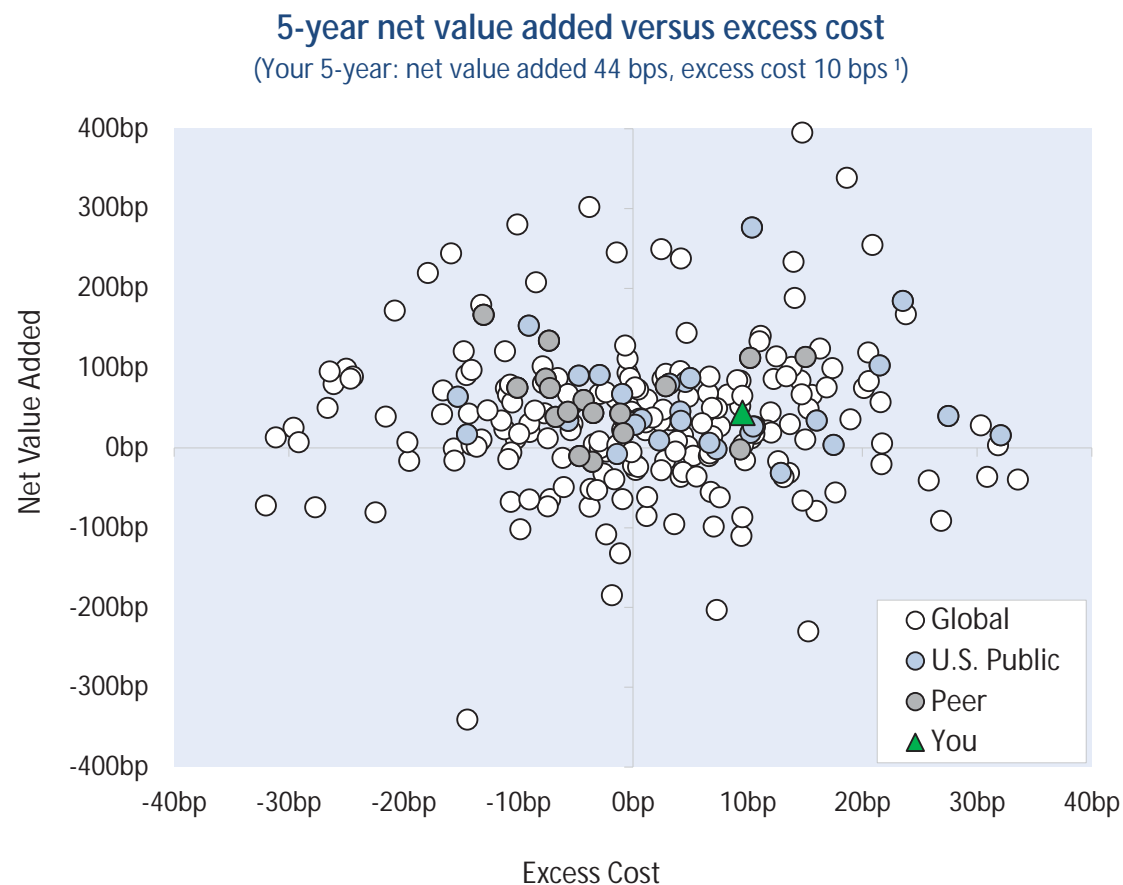
Asset class/category	Style weighted cost			Your average assets (or fee basis) ²	Due to impl. style	Due to paying more/(less) ³	Total more/(less)
	Your cost	Peer median ¹ = Benchmark	More/(less)				
Asset management costs	(A)	(B)	(C = A - B)	(D)			(C x D)
Stock - U.S. Large Cap	1.5 bp	3.0 bp	(1.5) bp	2,622	(552)	162	(390)
Stock - U.S. Mid Cap	1.9 bp	13.6 bp	(11.6) bp	434	(551)	45	(506)
Stock - U.S. Small Cap	1.9 bp	33.7 bp	(31.7) bp	433	(1,379)	6	(1,373)
Stock - Emerging	552.7 bp	33.5 bp	519.2 bp	377	553	19,047	19,600
Stock - ACWI x U.S.	111.8 bp	26.5 bp	85.3 bp	6,933	(646)	59,778	59,132
Fixed Income - U.S.	8.0 bp	6.5 bp	1.5 bp	1,555	(424)	656	232
Fixed Income - Emerging	51.5 bp	27.6 bp	23.8 bp	380	169	736	906
Fixed Income - Global	26.0 bp	5.8 bp	20.2 bp	2	5	0	5
Fixed Income - Inflation Indexed	0.9 bp	3.5 bp	(2.6) bp	2,717	(626)	(73)	(700)
Fixed Income - High Yield	22.8 bp	27.8 bp	(5.0) bp	600	143	(446)	(303)
Fixed Income - Long Bonds	0.7 bp	8.4 bp	(7.6) bp	3,758	(2,723)	(139)	(2,862)
Fixed Income - Other	92.2 bp	92.2 bp	0.0 bp	2,360	0	0	0
Commodities	43.2 bp	23.4 bp	19.8 bp	2,160	(1,708)	5,987	4,279
REITs	34.4 bp	30.5 bp	3.8 bp	469	(534)	713	179
Real Estate ex-REITs	85.0 bp	84.0 bp	1.0 bp	6,187	29,848	(29,249)	599
Infrastructure	62.6 bp	103.5 bp	(40.9) bp	837	2,014	(5,436)	(3,421)
Natural Resources	144.0 bp	121.8 bp	22.2 bp	395	878	0	878
Other Real Assets	10.6 bp	10.6 bp	0.0 bp	1,162	0	0	0
Hedge Funds	132.8 bp	113.3 bp	19.5 bp	6,322	(1,784)	20,627	18,843
Risk Parity	38.7 bp	42.4 bp	(3.7) bp	2,951	(4,318)	3,224	(1,094)
Diversified Private Equity	163.9 bp	153.8 bp	10.1 bp	7,645	(8,436)	16,174	7,738
Venture Capital	104.2 bp	108.8 bp	(4.6) bp	887	(407)	0	(407)
Private Credit	120.7 bp	107.3 bp	13.4 bp	5,702	10,744	(3,110)	7,634
Derivatives/Overlays	0.2 bp	0.3 bp	(0.0) bp	57,157	(149)	0	(149)
Total asset management	99.8 bp	80.8 bp	19.0 bp	57,157	20,117	88,704	108,821
Oversight, custody and other costs							
Total oversight	2.8 bp	1.3 bp	1.5 bp	57,157	n/a	8,704	8,704
Total	102.7 bp	82.1 bp	20.6 bp	57,157	20,117	97,408	117,525

1. The weighted peer median cost for asset management is the style-weighted average of the peer median costs for all implementation styles (e.g., internal passive, external active, fund of fund, etc.). It excludes performance fees on private assets.

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

3. Total more/less differences include the impact of performance fees, which are not shown separately on this page. Refer to section 4 for a comprehensive breakdown of your differences versus benchmark cost.

Your fund achieved a 5-year net value added of 44 bps and excess cost of 10 bps on the cost effectiveness chart.



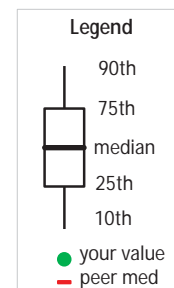
1. 5-year excess cost of 9.6 basis points is the average of your excess cost for the past 5 years.

	2020	2019	2018	2017	2016	5-year
Net value added	115.3bp	190.2bp	(64.7) bp	27.7bp	(38.3) bp	44.0bp
Excess cost	20.6bp	8.6bp	11.9bp	4.7bp	2.0bp	9.6bp

Comparison of risk levels:

Your asset risk of 10.7% was equal to the U.S. Public median of 10.7%. 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 asset-liability risk of 14.4% was above the U.S. Public median of 13.4%. Asset-liability risk is the standard deviation of funded status caused by market factors. It is a function of the standard deviations of your asset risk, your marked-to-market liabilities and the correlation between the two.



U.S. Public risk levels at December 31, 2020

