

# Iowa Public Employees' Retirement System

## Investment Cost Effectiveness Analysis - Summary of Results

For the 5 year period ending December 31, 2019



Michael Reid  
Vice President

# Key takeaways

## Returns

- Your 5-year net total return was 7.8%. This was above the U.S. Public median of 7.5% and above the peer median of 7.0%.
- Your 5-year policy return was 7.0%. This was equal to the U.S. Public median of 7.0% and above the peer median of 6.7%.

## Value added

- Your 5-year net value added was 0.8%. This was above the U.S. Public median of 0.4% and above the peer median of 0.4%.

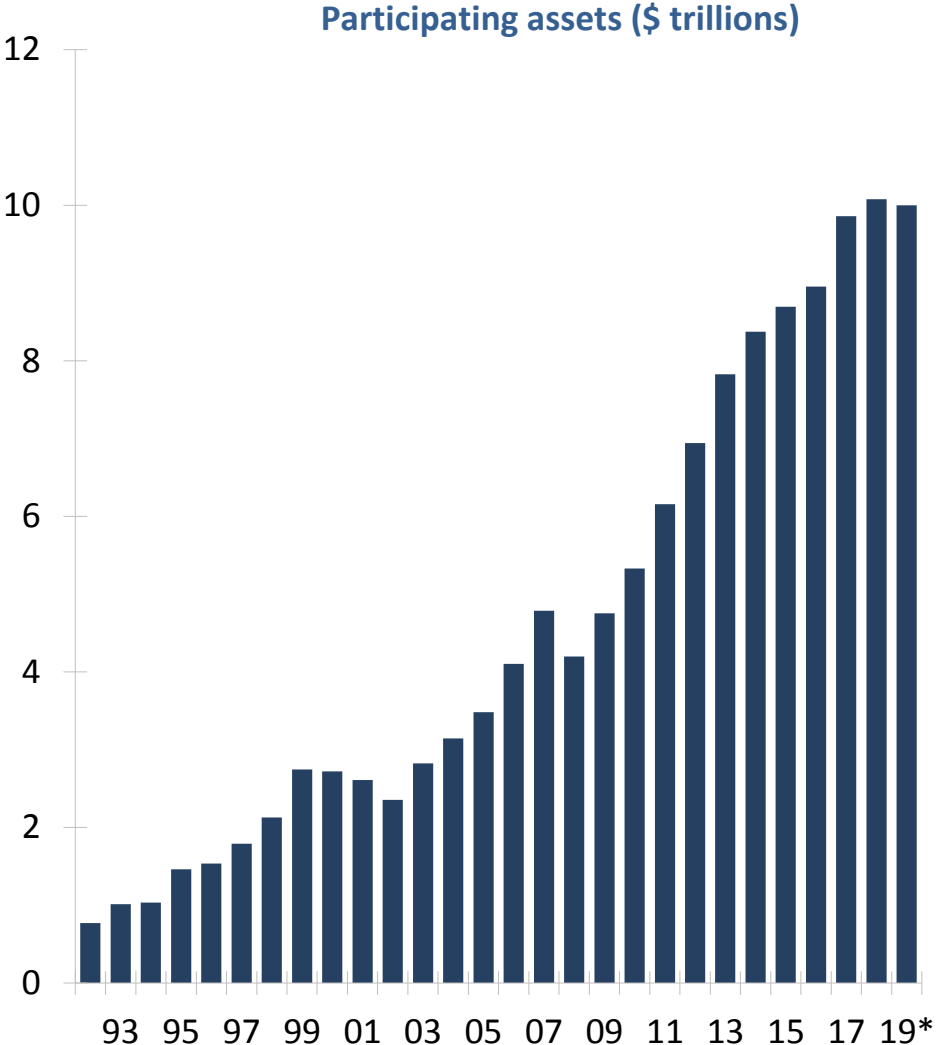
## Cost

- Your investment cost of 37.7 bps was below your benchmark cost of 48.0 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was low cost because you paid less than peers for similar services and you had a lower cost implementation style.

# This benchmarking report compares your cost and return performance to the 235 funds in CEM's extensive pension database.

- 131 U.S. pension funds participate. The median U.S. fund had assets of \$12.0 billion and the average U.S. fund had assets of \$26.7 billion. Total participating U.S. assets were \$3.5 trillion.
- 63 Canadian funds participate with assets totaling \$1.5 trillion.
- 37 European funds participate with aggregate assets of \$3.1 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 \$211.9 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 U.S. Public universe.

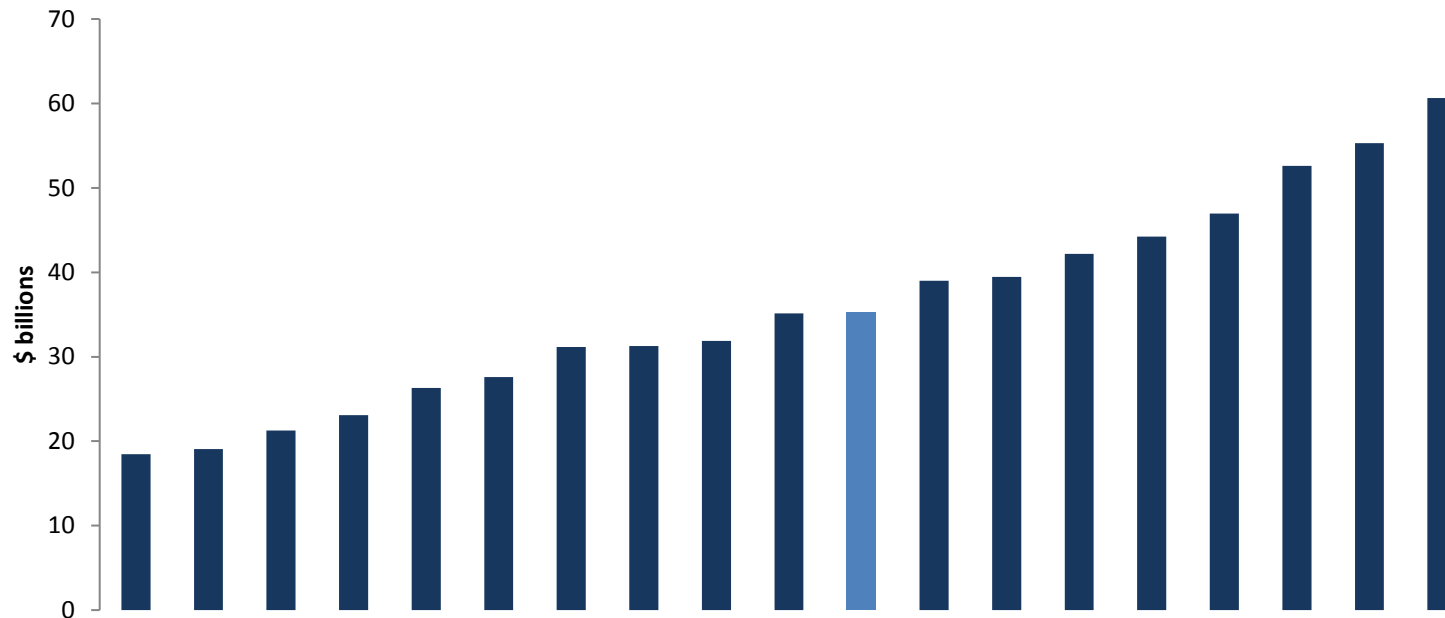


\*2019 assets includes both received and expected data.

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

## Peer group for Iowa Public Employees' Retirement System

- 19 U.S. Public sponsors from \$18.4 billion to \$60.6 billion
- Median size of \$35.1 billion versus your \$35.3 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. For some of the peers 2018 cost data was used as a proxy for 2019.

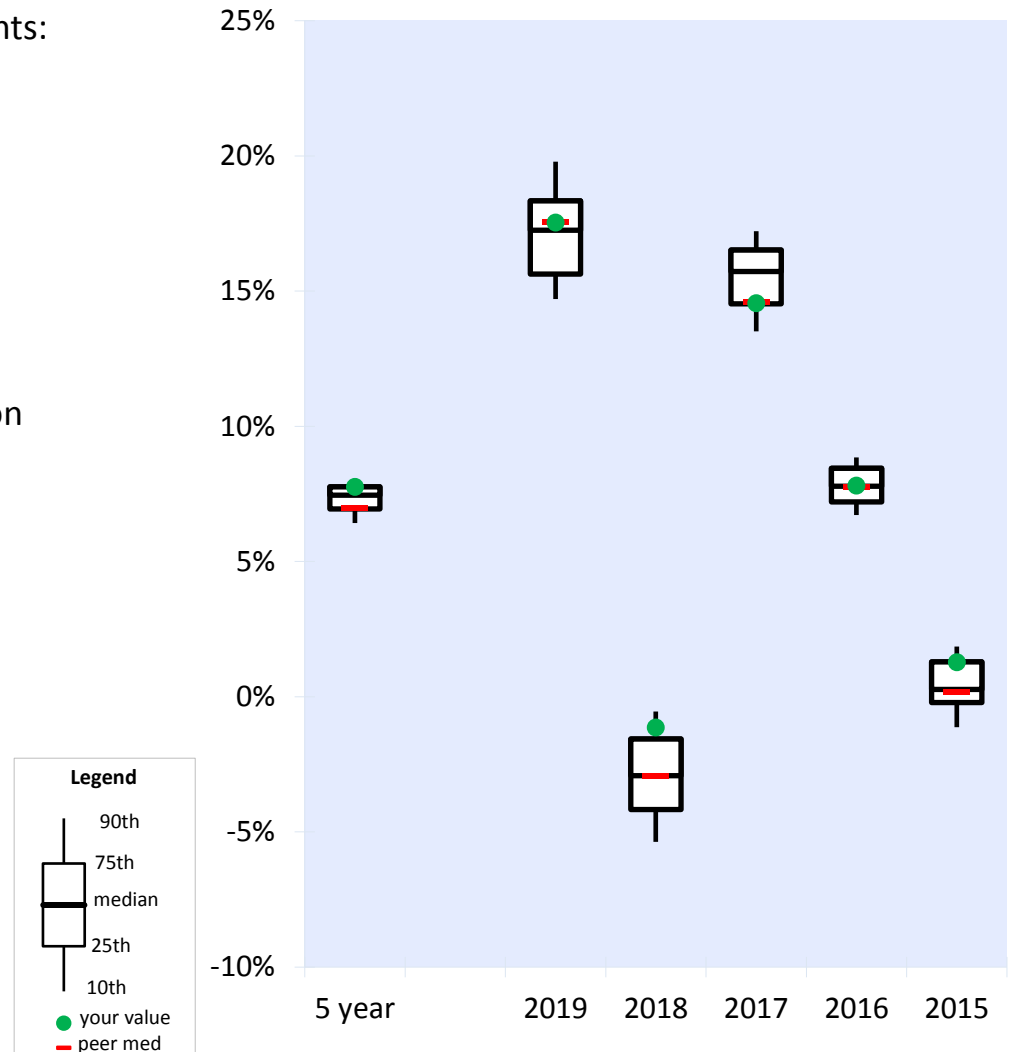
## Your 5-year net total return of 7.8% was above both the U.S. Public median of 7.5% and the peer median of 7.0%.

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	7.8%
- Policy return	7.0%
= Net value added	0.8%

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



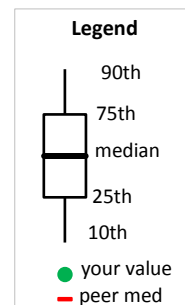
## Your 5-year policy return of 7.0% was equal to the U.S. Public median of 7.0% and above the peer median of 6.7%.

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

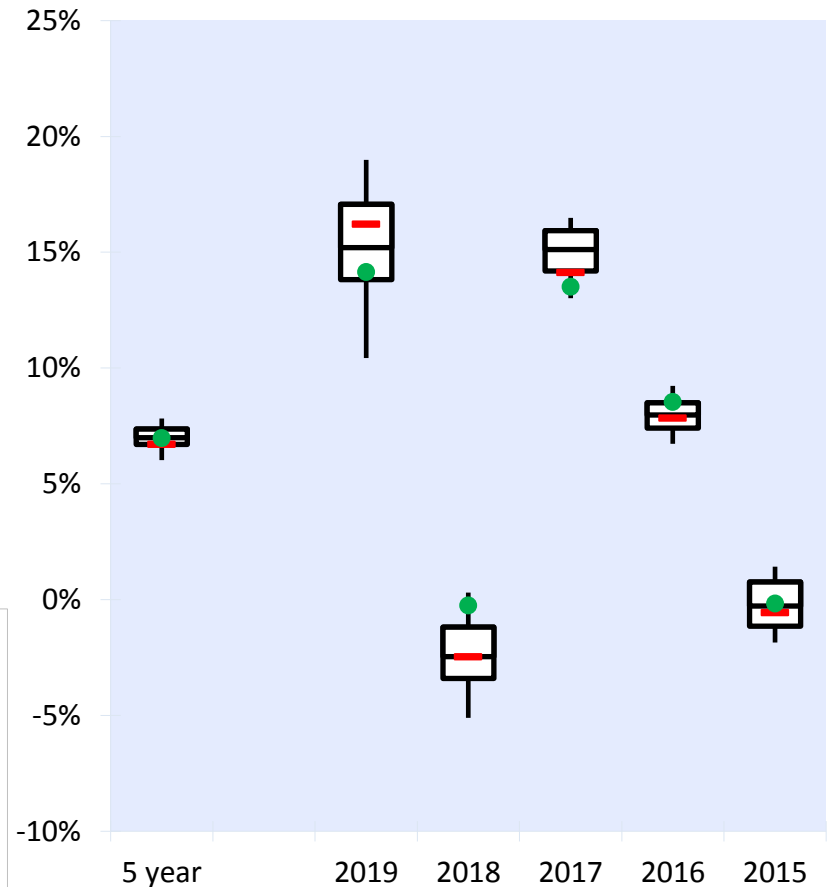
Having a higher or lower relative policy return is not necessarily good or bad. Your policy return reflects your investment policy, which should reflect your:

- 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.



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 7.7%, 0.8% higher than your adjusted 5-year policy return of 7.0%. Mirroring this, your 5-year total fund net value added would be 0.8% lower.

## Your 5-year policy return of 7.0% was equal to the U.S. Public median of 7.0% primarily because of:

The offsetting impacts of:

- Your higher weight to U.S. stock, which had a positive effect. You had a 5-year average allocation of 24% to U.S. stock compared to the 20% allocation for the U.S. universe. U.S. stock had strong performance over the past 5 years.
- Your higher weight to fixed income, which had a negative effect. You had a 5-year average allocation of 37% to total fixed income compared to the 25% allocation for the U.S. universe. Fixed income underperformed stock over the past 5 years.

	5-year average policy mix <sup>1</sup>			5-year bmk. return	
	Your Fund	U.S. Publ Avg.	More/ Less	Your Fund	U.S. Publ Avg.
U.S. Stock	24%	20%	4%	11.4%	11.1%
EAFE Stock	0%	4%	-4%	n/a <sup>3</sup>	5.9%
ACWIXUS Stock	16%	8%	8%	5.8%	5.9%
Global Stock	0%	11%	-11%	n/a <sup>3</sup>	8.5%
Other Stock	0%	6%	-6%	n/a <sup>3</sup>	n/a <sup>3</sup>
<b>Total Stock</b>	<b>41%</b>	<b>49%</b>	<b>-9%</b>	<b>9.2%</b>	<b>8.8%</b>
U.S. Bonds	28%	17%	11%	3.4%	3.1%
Long Bonds	0%	1%	-1%	n/a <sup>3</sup>	4.2%
Inflation Indexed Bonds	5%	3%	2%	2.6%	2.8%
Fixed Income - Emerging	1%	1%	0%	5.9%	4.8%
Cash	1%	-1%	3%	1.1%	1.1%
Other Fixed Income	3%	4%	-1%	n/a <sup>3</sup>	n/a <sup>3</sup>
<b>Total Fixed Income</b>	<b>37%</b>	<b>25%</b>	<b>13%</b>	<b>3.5%</b>	<b>3.6%</b>
Hedge Funds	0%	4%	-4%	n/a <sup>3</sup>	3.2%
Real Estate ex-REITs	6%	8%	-2%	8.0%	8.4%
Other Real Assets <sup>2</sup>	3%	4%	0%	n/a <sup>3</sup>	n/a <sup>3</sup>
Private Equity	11%	9%	3%	7.4%	7.6%
Private Debt	1%	2%	0%	n/a <sup>3</sup>	5.3%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>0%</b>		

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

2. Other real assets includes commodities, natural resources, infrastructure and REITs.

3. A value of 'n/a' is shown if asset class return 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 0.8%.

Net value added equals total net return minus policy return.

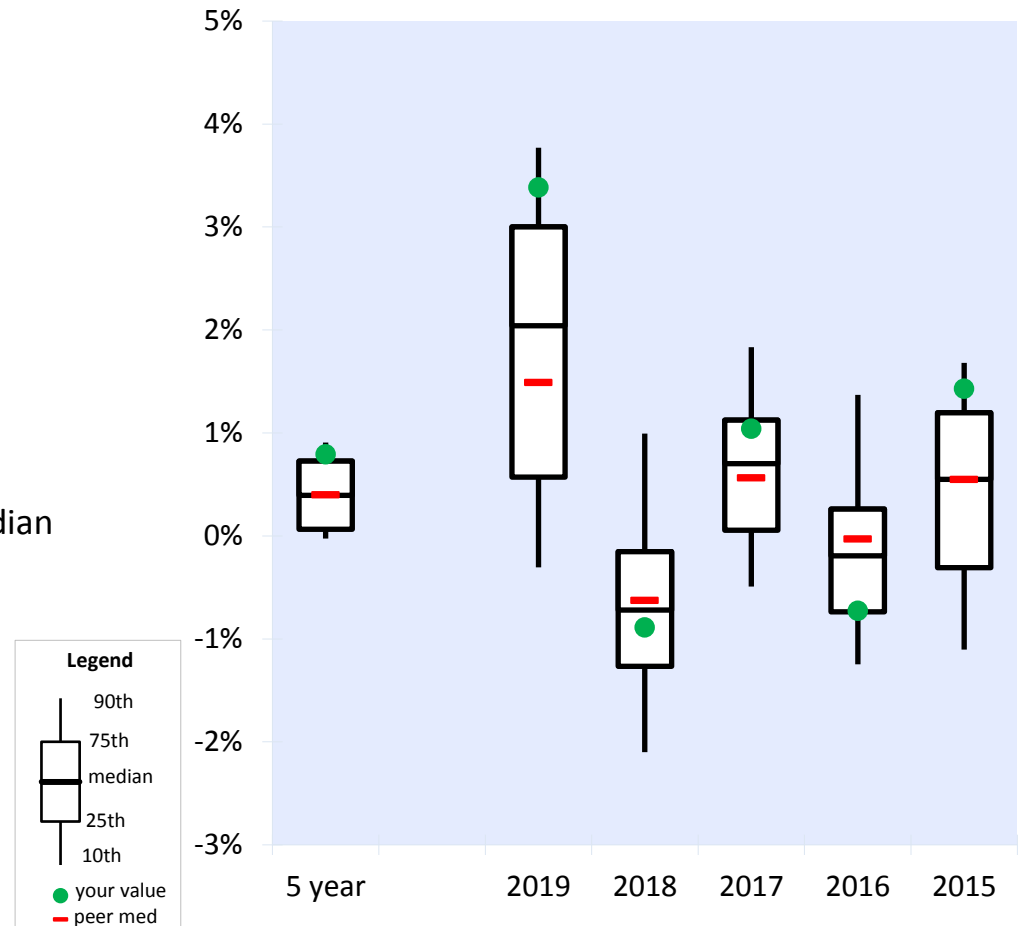
## Value added for Iowa Public Employees' Retirement System

Year	Net Return	Policy Return	Net Value Added
2019	17.5%	14.1%	3.4%
2018	-1.1%	-0.2%	-0.9%
2017	14.6%	13.5%	1.0%
2016	7.8%	8.5%	-0.7%
2015	1.3%	-0.2%	1.4%
5-Year	7.8%	7.0%	0.8%

Your 5-year net value added of 0.8% compares to a median of 0.4% for your peers and 0.4% for the U.S. Public universe.

Your 0.8% 5-year value added translates into approximately \$1.3 billion of cumulative value added over 5 years, or \$0.7 billion more than if you had earned the U.S. Public median of 0.4%.

## U.S. Public net value added - quartile rankings

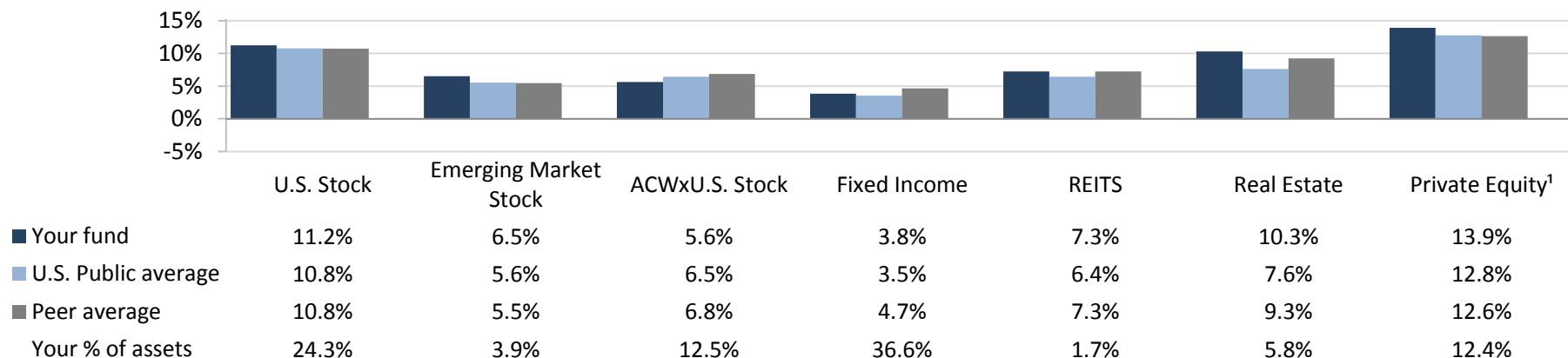


To enable fairer comparisons, the value added for each participant including your fund was adjusted to reflect private equity benchmarks based on investable public market indices. Prior to this adjustment, your fund's 5-year total fund net value added was 0.0%.

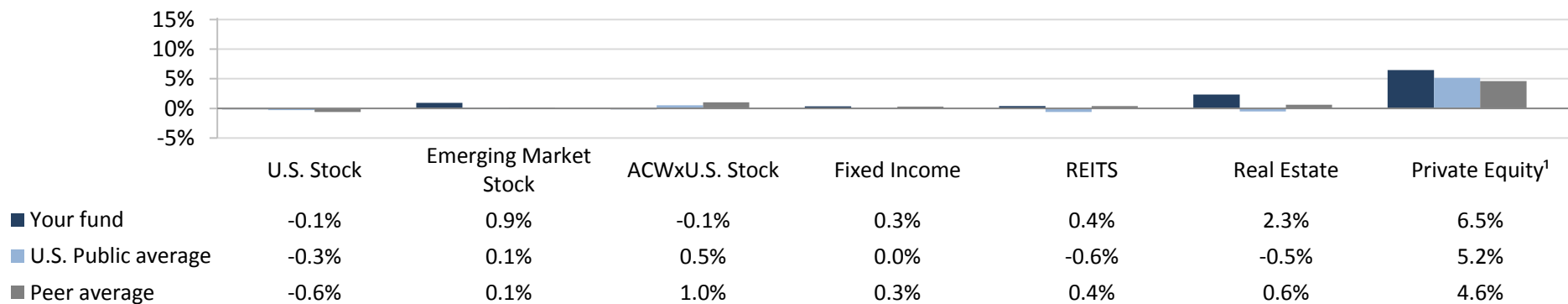


# Comparisons of your 5-year net return and net value added by major asset class:

## 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 -1.6%.

## Your investment costs were \$123.8 million or 37.7 basis points in 2019.

Asset management costs by asset class and style (\$000s)	Internal Overseeing of external	External Management			Total	
		Passive fees	Active base fees	Perform. fees <sup>1</sup>		
Stock - U.S. Broad/All		227	1,591	7,153	8,972	
Stock - Emerging		47	1,540		1,587	
Stock - ACWI x U.S.		439	943		1,382	
Fixed Income - U.S.		7	5,493	2,714	8,213	
Fixed Income - Emerging			662	498	1,160	
Fixed Income - Inflation Indexed		23	41		64	
Fixed Income - High Yield			1,065		1,065	
Cash			269		269	
REITs		115	535	455	1,105	
Real Estate ex-REITs <sup>1</sup>			9,922		9,922	
Natural Resources <sup>1</sup>			1,571		1,571	
Other Real Assets <sup>1</sup>			564		564	
Diversified Private Equity - LP <sup>1 2</sup>	6,477		62,851		69,327	
Diversified Private Equity - Co-Invest. <sup>1</sup>	1,827				1,827	
Private Credit - External <sup>1</sup>			7,831		7,831	
Derivatives/Overlays	328	184	1,648	3,780	5,939	
Total excluding private asset performance fees					120,796	36.7bp
<b>Oversight, custodial and other costs <sup>3</sup></b>						
Oversight of the fund					1,373	
Trustee & custodial					902	
Consulting and performance measurement					368	
Audit					151	
Other					259	
Total oversight, custodial & other costs					3,052	0.9bp
Total investment costs (excl. transaction costs & private asset performance fees)					123,848	37.7bp

### Footnotes

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.

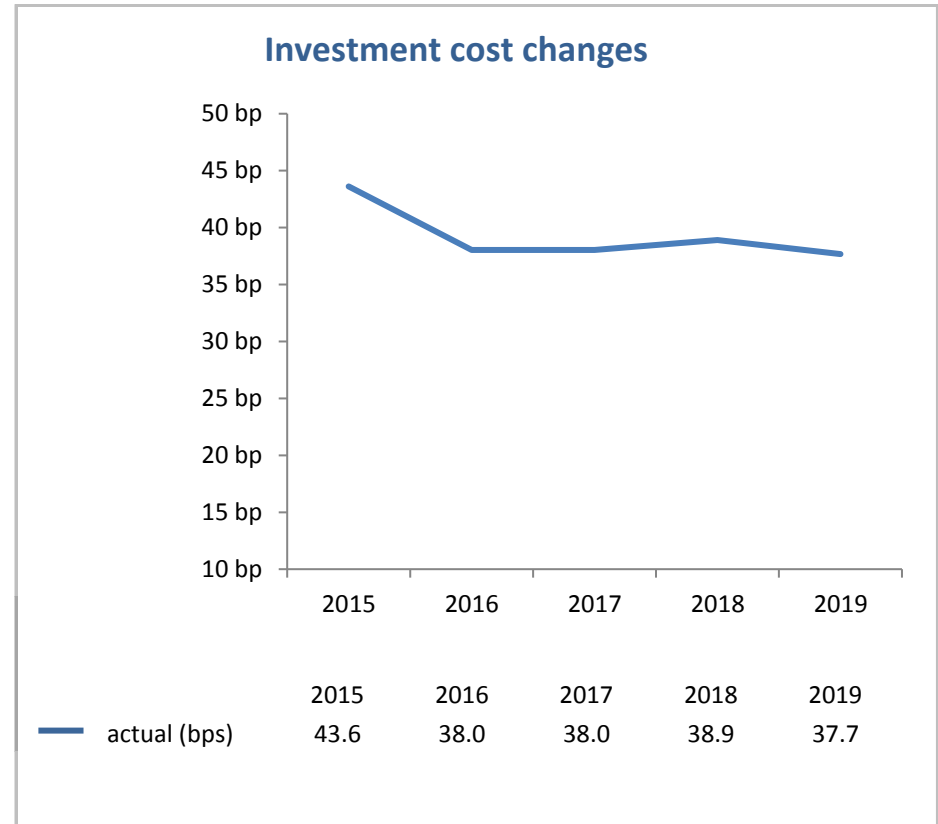
2. Fees are the weighted average management cost calculated using the detailed limited partnership survey provided.

Refer to Appendix A for full details regarding defaults.

3. Excludes non-investment costs, such as PBGC premiums and preparing checks for retirees.

## Your cost decreased from 43.6 bps in 2015 to 37.7 bps in 2019.

	Bps
Investment cost reported in 2015	43.6 bp
Impact of changes in assets and asset mix	
• Increase in assets	n/a
• Higher cost asset mix	3.0 bp
• Increased use of overlays	1.8 bp
Cost after asset mix impact	48.4 bp
Impact of changes within the same asset classes	
• Less active, more passive	(4.3) bp
• Mix of external vs. internal	0.0 bp
• More co-investment as a % of funds	(2.5) bp
Total impact of style changes	(6.8) bp
Higher/-lower fees for:	
• Stock and fixed Income	(5.4) bp
• Private markets and hedge funds:	
Higher base fees	1.3 bp
Performance fees (excluded)	
• Higher oversight and other changes	0.1 bp
• Overlays and other unfunded strategies	0.0 bp
Total impact of higher/lower fees	(4.0) bp
Investment cost in 2019	<u>37.7 bp</u>

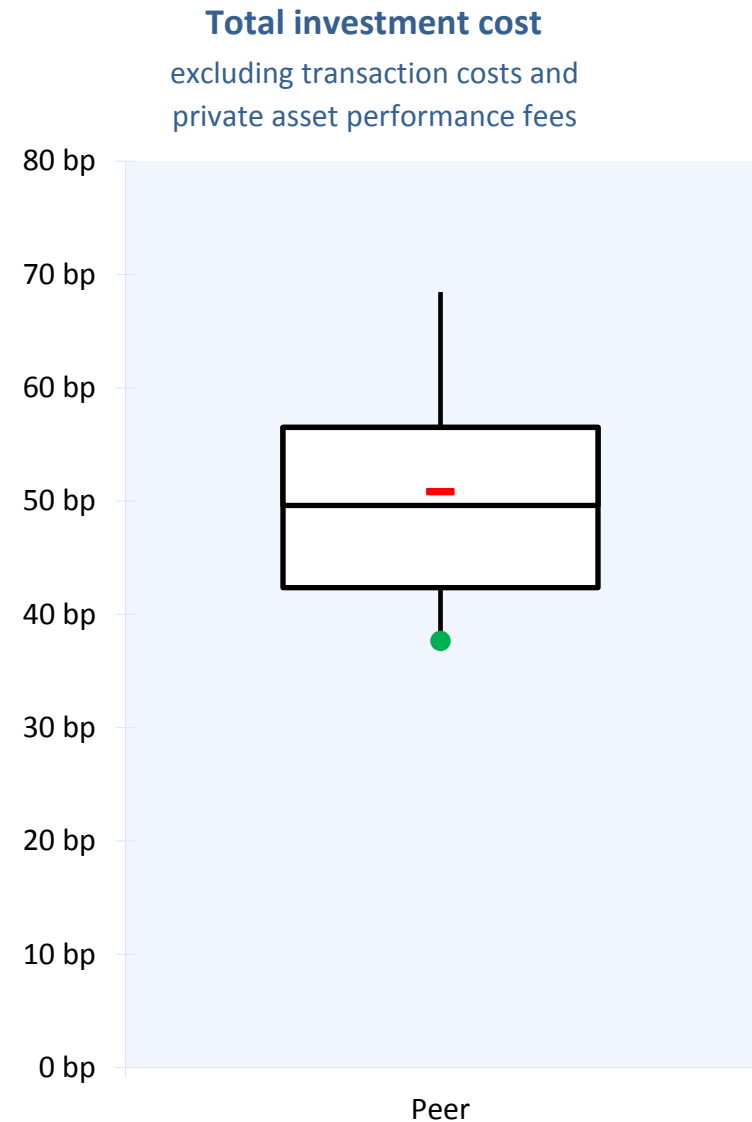
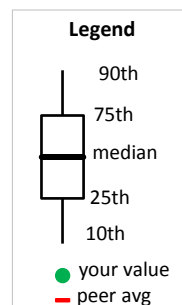


## Your total investment cost of 37.7 bps was among the lowest of the peers and compares to the peer median of 49.6 bps.

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 20% of your funds assets at the end of 2019 versus a peer average of 18%.
- 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 10.3 basis points in 2019.

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 37.7 bp was below your benchmark cost of 48.0 bp. Thus, your cost savings were 10.3 bp.

### Your cost versus benchmark

	\$000s	basis points
Your total investment cost	123,848	37.7 bp
Your benchmark cost	157,826	48.0 bp
Your excess cost	(33,978)	(10.3) bp

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

### Reasons for your low cost status

	Excess Cost/ (Savings)	
	\$000s	bps
1. Lower cost implementation style		
• Use of active management vs. lower cost passive	193	0.1
• More external management vs. lower cost internal	4,023	1.2
• Less LPs as a percentage of external	(7,466)	(2.3)
• Less fund of funds	(7,026)	(2.1)
• More co-investment as a percentage of LP/Co	(3,660)	(1.1)
• More overlays	4,998	1.5
	<u>(8,938)</u>	<u>(2.7)</u>
2. Paying less than peers for similar services		
• External investment management costs	(19,844)	(6.0)
• Oversight, custodial & other costs	(5,195)	(1.6)
	<u>(25,040)</u>	<u>(7.6)</u>
<b>Total savings</b>	<b>(33,978)</b>	<b>(10.3)</b>

## The table below provides a summary of why you are high/low cost relative to the peer-median by asset class.

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

Asset class/category	Your cost	Benchmark = peer weighted median cost <sup>1</sup>	More/-less	Your average assets (or fee basis)	Total More/-less	Due to Impl. style	Due to paying more/less
	(A)	(B)	(C = A - B)	(D)	(C x D)		
<b>Asset management costs</b>							
Stock - U.S. Broad/All	12.0 bp	12.7 bp	(0.7) bp	7,463	(507)	(172)	(335)
Stock - Emerging	10.6 bp	46.2 bp	(35.6) bp	1,499	(5,330)	(168)	(5,163)
Stock - ACWI x U.S.	3.3 bp	26.9 bp	(23.6) bp	4,144	(9,786)	169	(9,956)
Fixed Income - U.S.	9.4 bp	14.5 bp	(5.1) bp	8,736	(4,466)	4,317	(8,784)
Fixed Income - Emerging	28.7 bp	41.6 bp	(12.9) bp	404	(521)	0	(521)
Fixed Income - Inflation Indexed	0.6 bp	4.9 bp	(4.3) bp	1,072	(464)	(300)	(163)
Fixed Income - High Yield	13.5 bp	34.4 bp	(20.8) bp	786	(1,638)	0	(1,638)
Cash	9.9 bp	9.9 bp	0.0 bp	272	0	0	0
REITs	22.1 bp	24.1 bp	(2.1) bp	500	(104)	162	(266)
Real Estate ex-REITs	53.9 bp	87.1 bp	(33.2) bp	1,840	(6,358)	(3,394)	(2,964)
Natural Resources	71.5 bp	94.7 bp	(23.2) bp	220	(510)	(510)	0
Other Real Assets	27.4 bp	77.6 bp	(50.3) bp	206	(1,035)	0	(1,035)
Diversified Private Equity	160.2 bp	139.5 bp	20.7 bp	4,442	(3,018)	(10,687)	7,668
Private Credit	108.8 bp	109.4 bp	(0.6) bp	720	(43)	(3,354)	3,311
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Derivatives and overlays <sup>2</sup>	1.8 bp	0.3 bp	1.5 bp	32,874	4,998	4,998	0
<b>Total asset management</b>	<b>36.7 bp</b>	<b>45.5 bp</b>	<b>(8.8) bp</b>	<b>32,874</b>	<b>(28,782)</b>	<b>(8,938)</b>	<b>(19,844)</b>
<b>Oversight, custody and other costs<sup>3</sup></b>							
Oversight of the Fund	0.4 bp	1.1 bp	(0.7) bp				
Trustee & Custodial	0.3 bp	0.5 bp	(0.2) bp				
Consulting	0.1 bp	0.2 bp	(0.1) bp				
Audit	0.0 bp	0.0 bp	(0.0) bp				
Other	0.1 bp	0.2 bp	(0.1) bp				
<b>Total oversight, custody &amp; other</b>	<b>0.9 bp</b>	<b>2.5 bp</b>	<b>(1.6) bp</b>	<b>32,874</b>	<b>(5,195)</b>	<b>n/a</b>	<b>(5,195)</b>
<b>Total</b>	<b>37.7 bp</b>	<b>48.0 bp</b>	<b>(10.3) bp</b>	<b>32,874</b>	<b>(33,978)</b>	<b>(8,938)</b>	<b>(25,040)</b>

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.
2. Total fund average holdings is used as the base when calculating the relative cost impact of the overlay programs.
3. Benchmarks for oversight total and individual lines are based on peer medians. Sum of the lines may be different from the total.

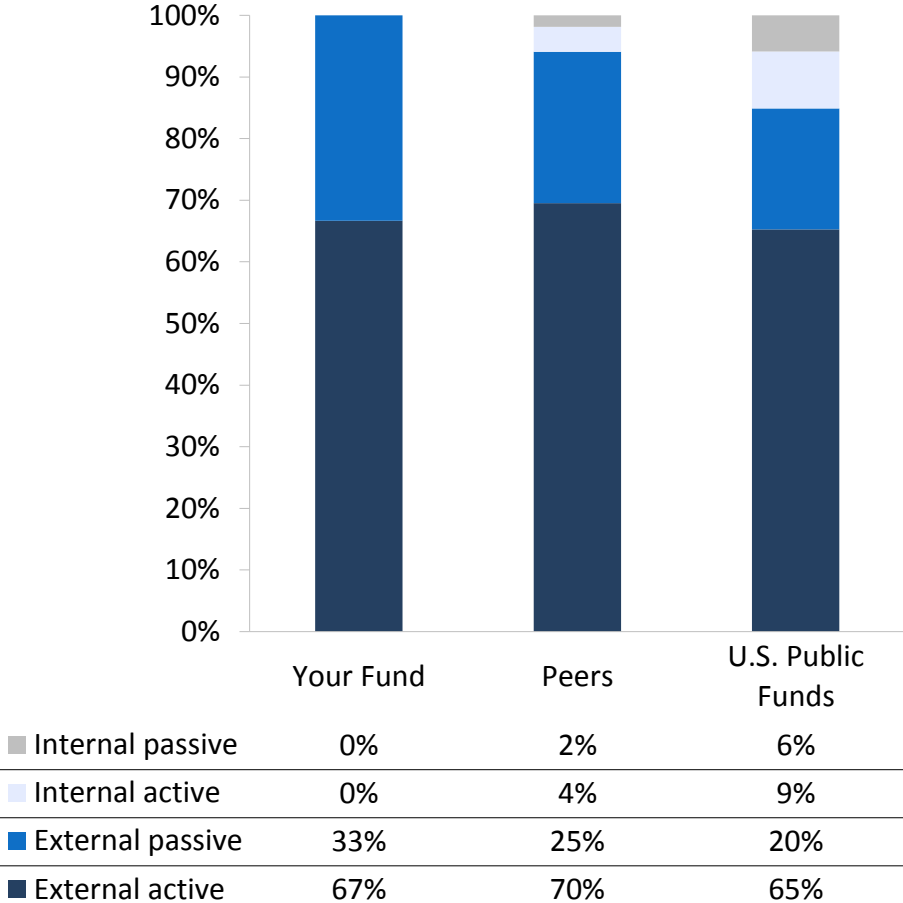
# Differences in cost performance are often caused by differences in implementation style.

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 67% versus 70% 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 0% of hedge funds, real estate and private equity in fund of funds compared to 13% for your peers.

Implementation style<sup>1</sup>



1. The graph above does not take into consideration the impact of derivatives. The values in the graph above are calculated using average holdings.



# The net impact of paying more/less for external asset management costs saved 6.0 bps.

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

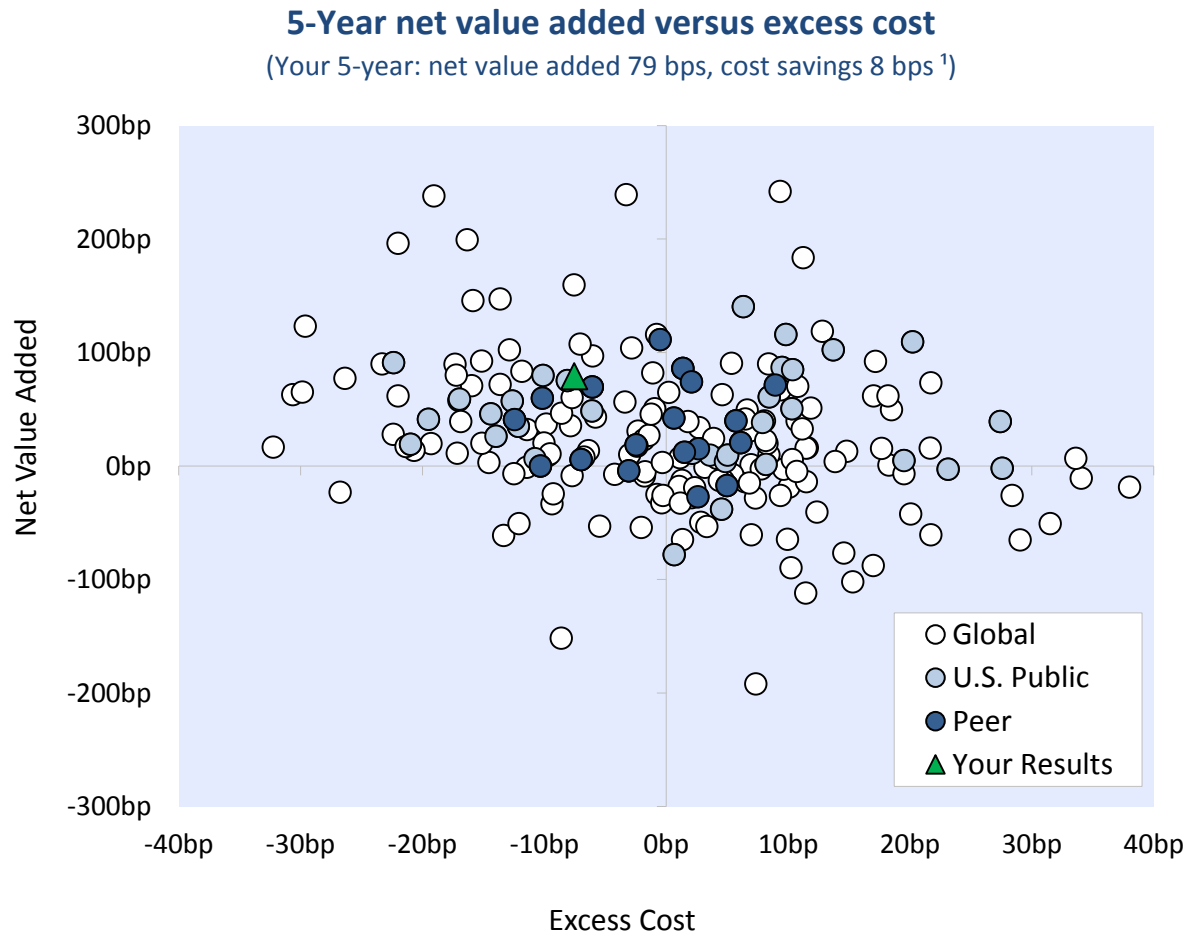
	Style	Your avg holdings in \$mils	Cost in bps			Cost/ (savings) \$000s
			Your Fund	Peer median	More/ (less)	
<b>External asset management</b>		(A)			(B)	(A X B)
Stock - U.S. Broad/All	passive	5,277	0.4	0.9	(0.5)	(252)
Stock - U.S. Broad/All	active	2,187	40.0 <sup>1</sup>	40.4	(0.4)	(83)
Stock - Emerging	passive	509	0.9	9.2	(8.2)	(420)
Stock - Emerging	active	990	15.6 <sup>1</sup>	63.5	(47.9)	(4,743)
Stock - ACWI x U.S.	passive	1,789	2.5	4.9	(2.5)	(441)
Stock - ACWI x U.S.	active	2,355	4.0 <sup>1</sup>	44.4	(40.4)	(9,515)
Fixed Income - U.S.	passive	780	0.1	0.8	(0.7)	(52)
Fixed Income - U.S.	active	7,956	10.3 <sup>1</sup>	21.3	(11.0)	(8,731)
Fixed Income - Emerging	active	404	28.7 <sup>1</sup>	41.6	(12.9)	(521)
Fixed Income - Inflation Indexed	passive	956	0.2	0.9	(0.7)	(63)
Fixed Income - Inflation Indexed	active	116	3.5 <sup>1</sup>	12.2	(8.7)	(100)
Fixed Income - High Yield	active	786	13.5 <sup>1</sup>	34.4	(20.8)	(1,638)
REITs	passive	175	6.6	6.6	0.0	0
REITs	active	325	30.4 <sup>1</sup>	38.6	(8.2)	(266)
Real Estate ex-REITs	active	1,840	53.9	70.1	(16.1)	(2,964)
Natural Resources	active	220	71.5	71.5	0.0	0
Other Real Assets	active	206	27.4 <sup>1</sup>	77.6	(50.3)	(1,035)
Diversified Private Equity	CO	610	29.9	51.6	(21.6)	(1,321)
Diversified Private Equity	LP	3,832	180.9	157.5	23.5	8,989
Private Credit	active	720	108.8	62.8	46.0	3,311
Total impact of paying more/less for external management						(19,844)
Total in bps						(6.0) bp

1. You paid performance fees in these asset classes.

'Excluded' indicates that the asset class was excluded from this analysis due to comparability concerns with peers.

2. 'Amount fees are based on' is the basis for calculating costs for private assets.

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



1. Your 5-year cost savings of 8 basis points is the average of your cost savings for the past 5 years.

	2019	2018	2017	2016	2015	5-year
Net value added	338.5bp	-89.1bp	104.0bp	-72.8bp	143.0bp	79.2bp
Excess Cost	-10.3bp	-8.3bp	-7.7bp	-8.4bp	-3.1bp	-7.6bp

# Summary of key takeaways

## Returns

- Your 5-year net total return was 7.8%. This was above the U.S. Public median of 7.5% and above the peer median of 7.0%.
- Your 5-year policy return was 7.0%. This was equal to the U.S. Public median of 7.0% and above the peer median of 6.7%.

## Value added

- Your 5-year net value added was 0.8%. This was above the U.S. Public median of 0.4% and above the peer median of 0.4%.

## Cost and cost effectiveness

- Your investment cost of 37.7 bps was below your benchmark cost of 48.0 bps. This suggests that your fund was low cost compared to your peers.
- Your fund was low cost because you paid less than peers for similar services and you had a lower cost implementation style.