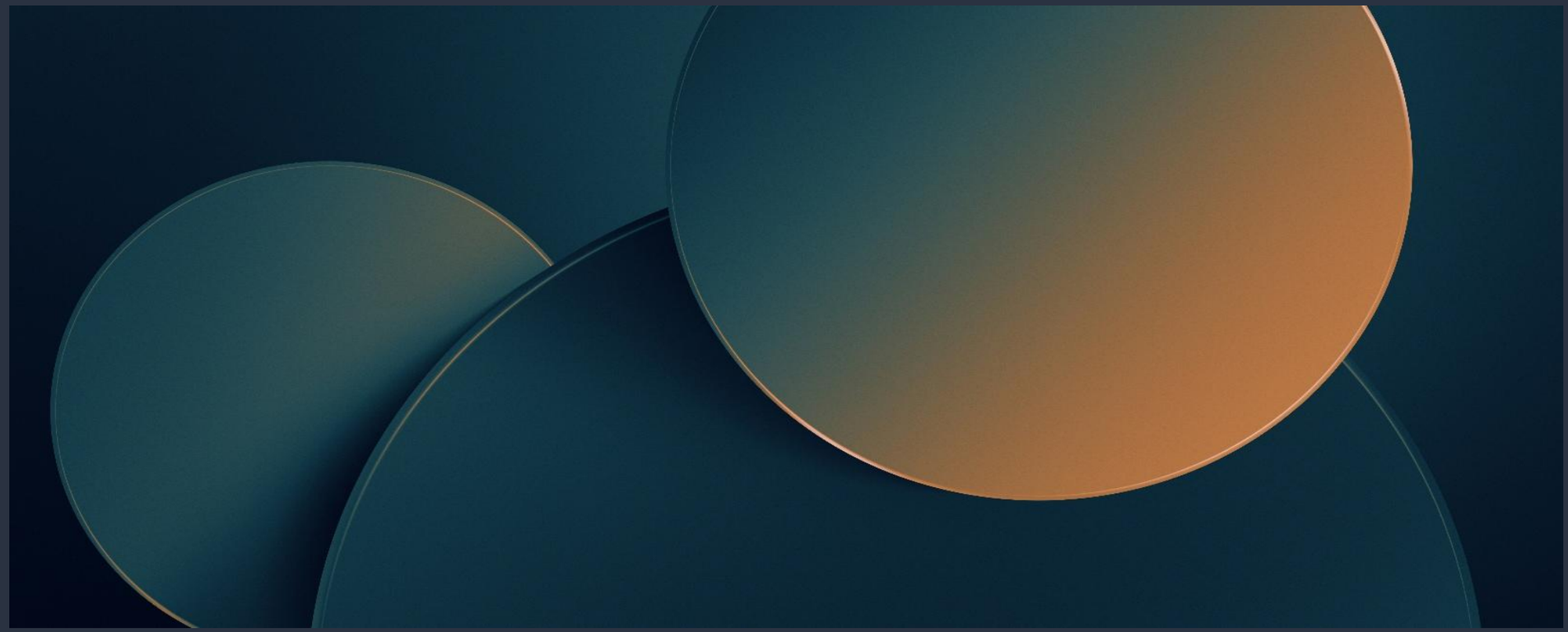
Management Insight Report

DB INVESTMENT BENCHMARKING SUBSCRIPTION



For the 5-year period ending December 31, 2025

This Management Insight Report provides an overview of your DB investment results.

As funds consolidate into larger asset pools, demonstrating value for money is becoming increasingly important.

2025 Highlights:

- Enhanced Data Quality, by emphasizing CEM's Global Reporting Principles and implementing Data Scorecards
- Collected richer data sets: 12,000+ individual mandates collected
- Assessed the impact of maturity on Private Equity Limited Partnership fees

2026 Goals:

- Expedite access to our Talent report by delivering December 2026 Report in February 2027
- Establish the CEM DB Investment Client Advisory Board
- Release CEM Query, our AI-powered tool that allows quick and easy access to information - twenty beta testers will have access this year (2026)



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A. EXECUTIVE SUMMARY 4

B. UNIVERSE & PEERS 5

C. COSTS

- Your costs 7
- Cost trend 8
- Benchmark cost 9

D. PERFORMANCE

- 5-year fund performance 11
- Policy mix contribution 12
- Asset class contribution 13

E. RISK 14

F. RESEARCH INSIGHTS

- Benchmarks 16
- Database insights 19

Also Included In Your Subscription

Exhibits
Methodology & underlying data

Monitor
CEM's online dashboard for more granular insights

Data Scorecards
Assessment of the completeness & timeliness of data

Talent Report
A supplemental report that helps you assess your staffing levels

Limited Partnerships Report
A supplemental report that helps you compare your LP deal terms

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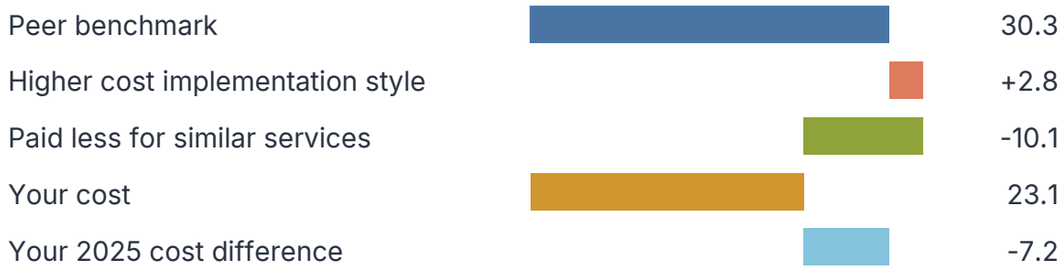
Your 2025 investment costs, excluding private asset performance fees, were 7.2 basis points below the peer benchmark, while your 5-year net value added was -0.3%.

Total investment costs, exc. private asset perf. fees and transaction costs | 2025

Your 2025 total investment costs were 7.2 bps below the peer benchmark.



Key performance metrics | U.S. Public Universe | 2021 - 2025

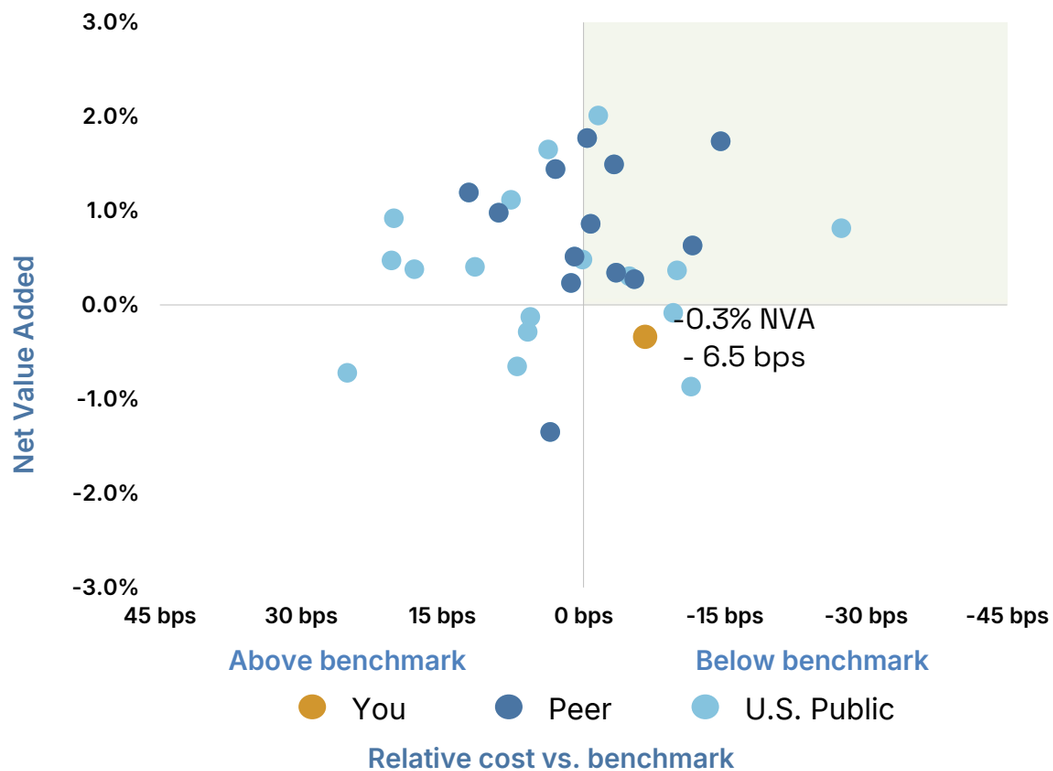
Your 5-year net value added fell short of the U.S. Public universe median by 0.8%.

	Rank vs universe*	You	Median
5-year net value added		-0.3%	0.5%
5-year net return		5.6%	7.7%
2025 asset risk		9.5%	11.3%
10-year Sharpe ratio		0.68	0.76

*Chart shows your percentile rank vs. the U.S. Public universe, going 0% to 100%, left to right.

Net value added versus relative cost | 2021 - 2025

Your 5-year net value added (%) versus your 5-year relative cost (bps)



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Your performance is benchmarked against the U.S. Public Universe: 37 sponsors, representing $3.1 T in CEM's Investment Benchmarking Database.

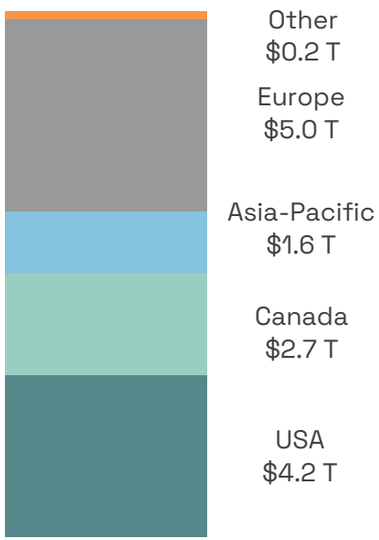
Total Investment Database*

256

INSTITUTIONAL INVESTORS

$13.8 T

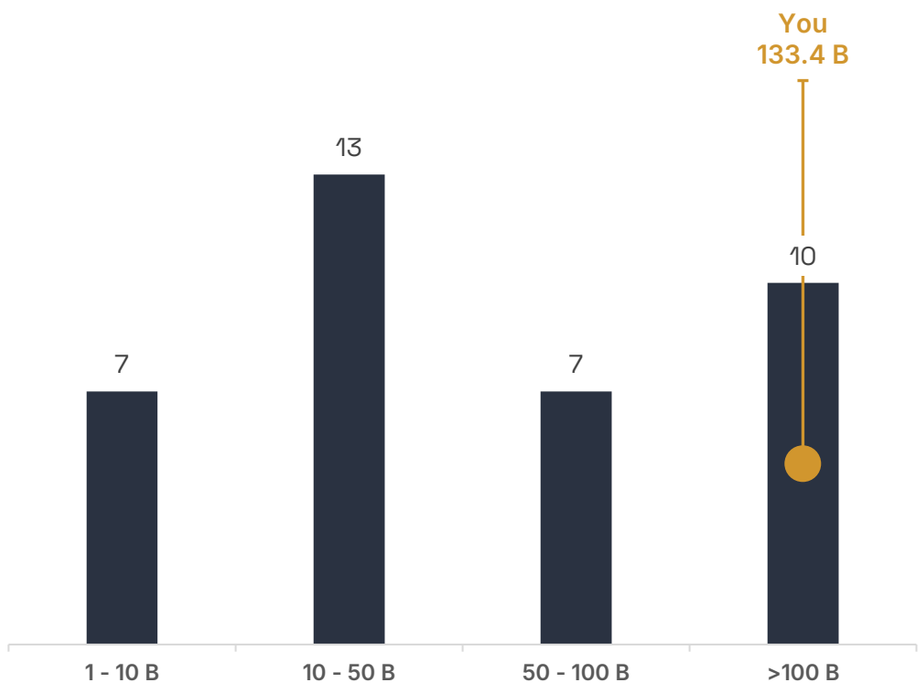
IN TOTAL ASSETS



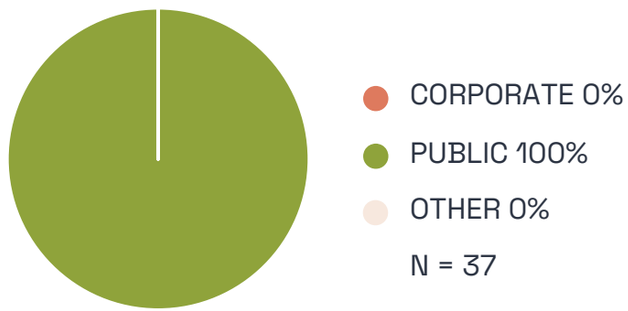
*By the end of the 2025 survey cycle, we expect data from 280+ funds totaling $13T+ in AUM.

U.S. Public Universe by assets under management | $ billion, 2025

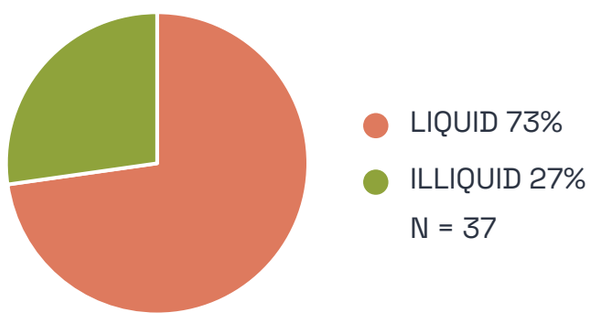
37 U.S. Public sponsors from $1.1 billion to $525.0 billion



Plan type | U.S. Public 2025



Asset mix | U.S. Public 2025



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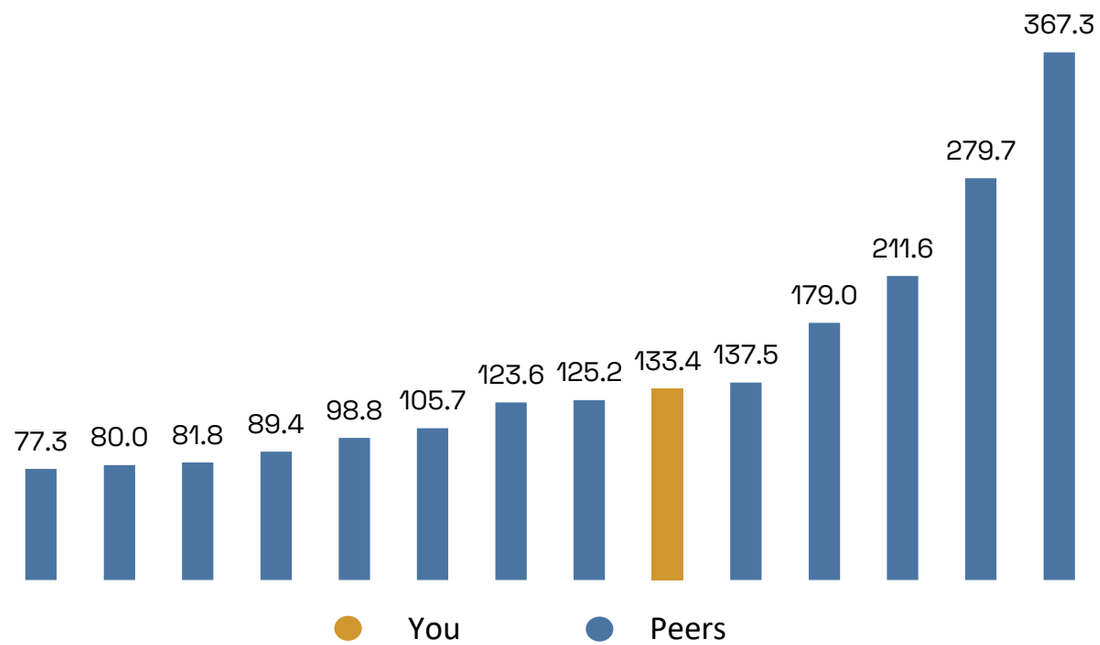
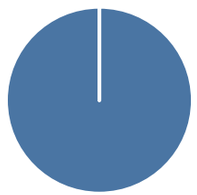
Your costs are benchmarked against a custom peer group with similar total assets under management.

Peer group by assets under management | $ billion, 2025

14 U.S. public sponsors from $77.3 billion to $367.3 billion



Plan type | 2025



- CORPORATE 0%
- PUBLIC 100%
- OTHER 0%

N = 14

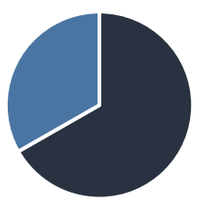
Region | 2025



- USA 100%
- CANADA 0%
- EUROPE 0%

N = 14

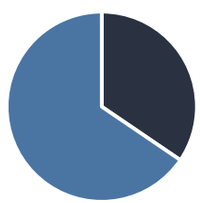
Asset mix | 2025



- LIQUID 67%
- ILLIQUID 33%

N = 14

Implementation | 2025



- INTERNAL 35%
- EXTERNAL 65%

N = 14

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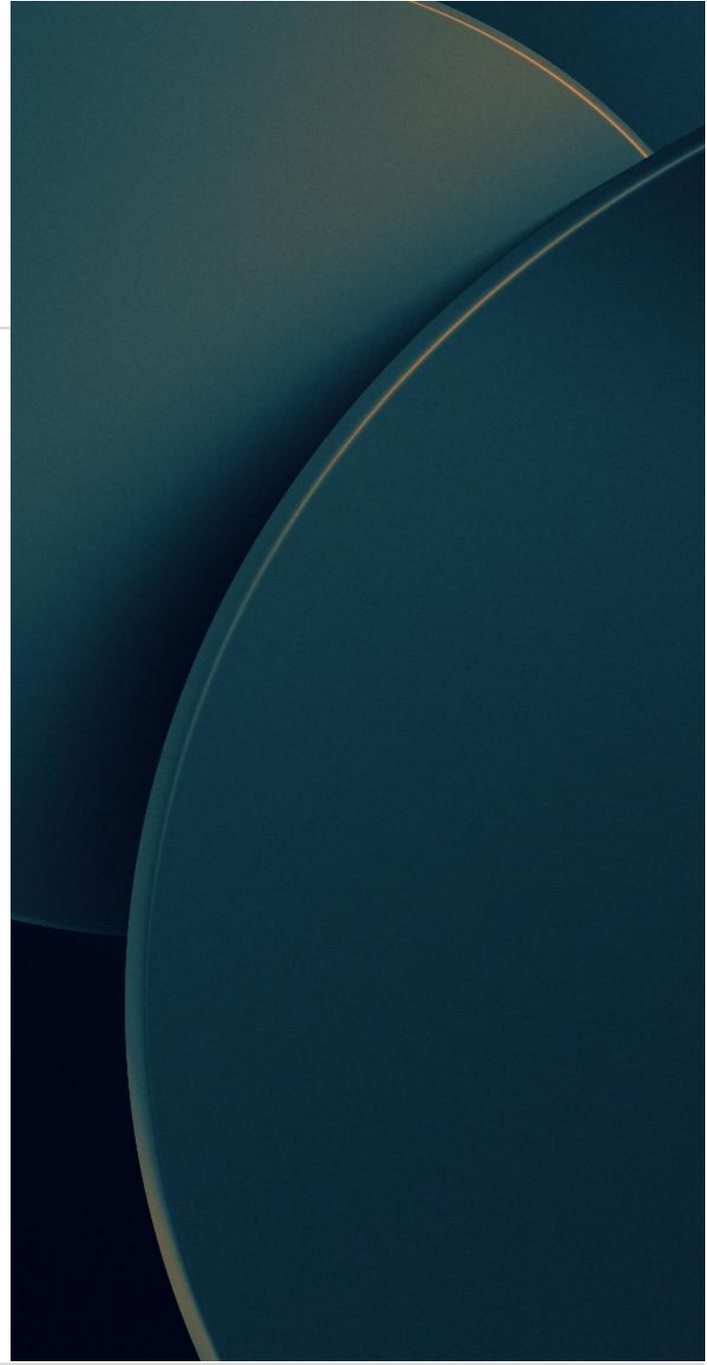
Your investment costs, excluding private asset performance fees, were $308.2 million or 23.1 basis points in 2025.



Total fund costs by asset class, excluding private asset perf. fees and transaction costs | 2025

Asset Class	Base fees ($000)	Performance fees ($000)	Internal & other ($000)	Total ($000)	Total (bps)
Stock	65,781	-	2,377	68,158	12.0
Fixed income ex. cash	6,557	-	2,481	9,038	2.4
Cash	-	-	3,442	3,442	3.9
Hedge funds	43,351	14,825	1,038	59,213	98
Real estate	53,863	2,410	1,376	55,239	64.0
Infrastructure	7,838	8	238	8,075	78.1
Other real assets	15,119	12,243	652	15,770	44.3
Private debt	30,396	8,079	974	31,370	70.6
Private equity	51,746	55,159	1,662	53,407	98.1
Fund level oversight	-	-	4,500	4,500	0.3
Total	**274,649**	**14,825**	**18,739**	**308,213**	**23.1**

Numbers shaded are excluded from the analysis.
Base and performance fees also include the underlying fees associated with your fund-of-funds strategies.
CEM uses imputed data to address missing or incomparable costs, ensuring comparability across all participants. Refer to the Appendix of the Exhibits for CEM's data principles and imputations applied to your fund's data. Fund level costs consist of expenses not attributed to specific asset classes, including total fund oversight, trustee and custodial services, audit, consulting, and performance measurement.

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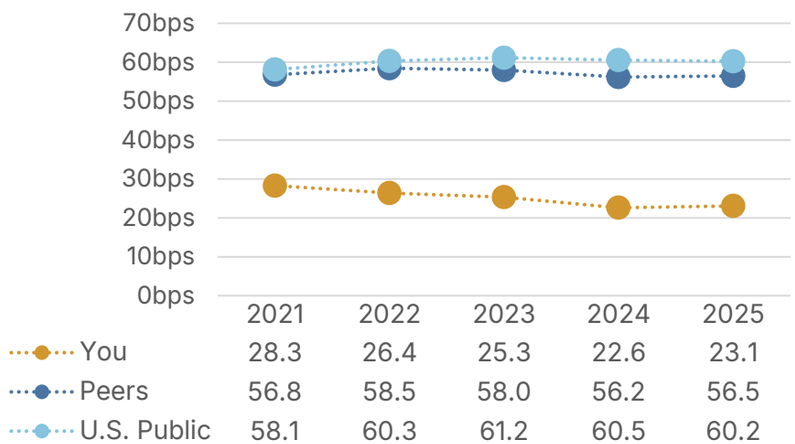
Your costs decreased over the last 5 years because of paying less for similar investment styles and moving to a lower cost asset mix.

Total investment costs (bps) | 2021 - 2025

Your total investment costs, excluding private asset performance fees and transaction costs, dropped from 28.3 bps in 2021 to 23.1 bps in 2025.



	2021	2022	2023	2024	2025
You	28.3	26.4	25.3	22.6	23.1
Peers	56.8	58.5	58.0	56.2	56.5
U.S. Public	58.1	60.3	61.2	60.5	60.2

Average costs for the 31 U.S. Public funds and 14 peers with 5 years of consecutive data. Before adjusting for asset mix differences, the median 2025 cost for the 14 peers was 55.5 bps.

Cost impact of your changes (bps) | 2021 - 2025

Your costs decreased over the last 5 years because of paying less for similar investment styles and moving to a lower cost asset mix.

Lower cost asset mix	**-1.2**
All other mix changes	-1.2
Higher cost implementation style	**0.6**
Paid less in total for similar investment styles	**-4.6**
Lower core real estate ex-REITs base fees	-0.7
Lower non-core/value add natural resources base fees	-0.5
Lower non-core/value add real estate ex-REITs base fees	-0.5
Lower external active ACWI x u.s. stock costs	-0.3
Lower external active hedge funds performance fees	-1.9
All other differences	-0.7
Total decrease	**-5.2**

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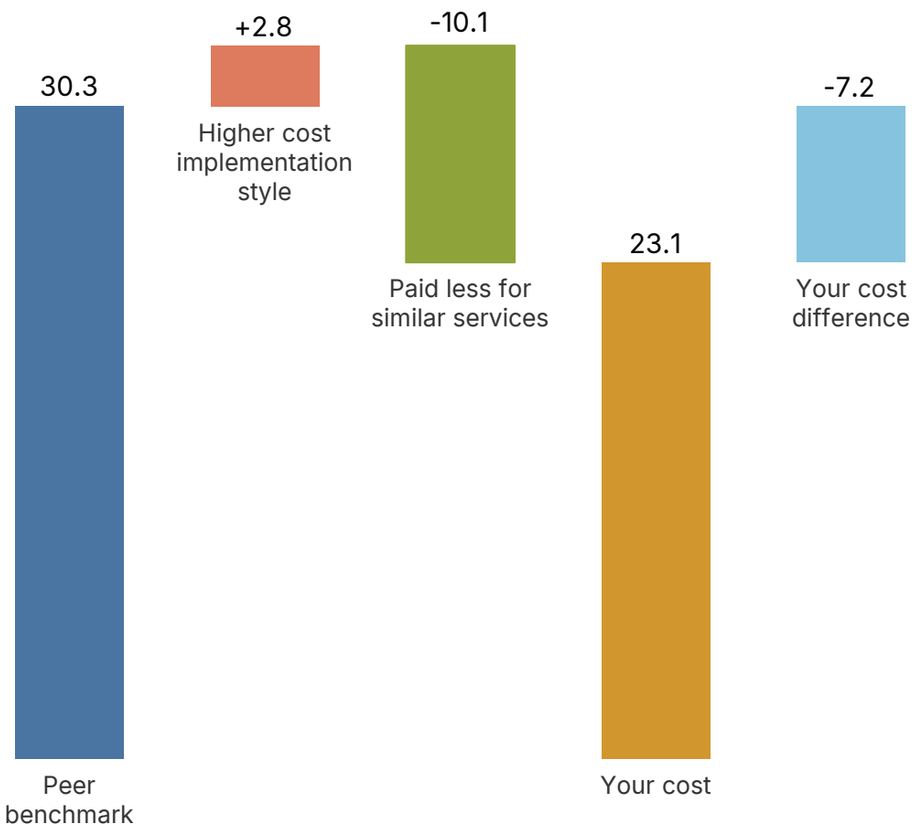
After adjusting for asset mix, benchmark cost analysis suggests that your fund was below benchmark cost by 7.2 basis points in 2025.

Cost breakdown vs. peer benchmark (bps) | 2025



Explanation of implementation style differences (bps) | 2025

Total impact of implementation style differences	**2.8**
Your mix of active/passive	-0.1
Use of external management vs. lower cost internal	1.3
Your mix of core/value-add funds	1.5
More fund of funds	0.2
Less co-investment as a percentage of value add/co	0.1
Differences in use of overlays	-0.1

Explanation of cost differences for similar services (bps) | 2025

Total impact of paying more/less for similar services	**-10.1**
External investment management costs	-8.6
Internal investment management costs	-0.8
Oversight, custodial & other costs	-0.6

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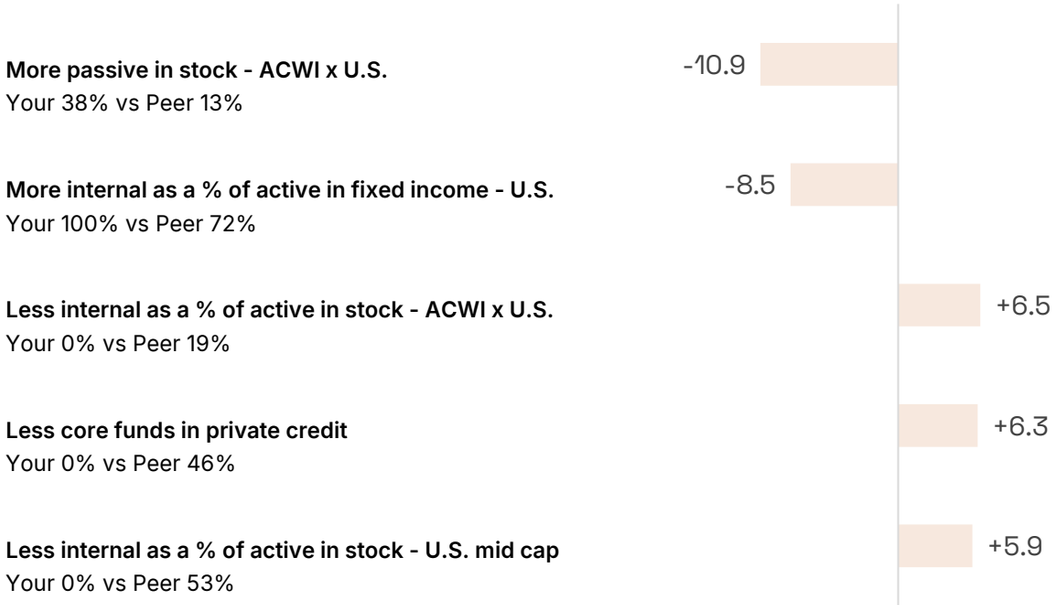
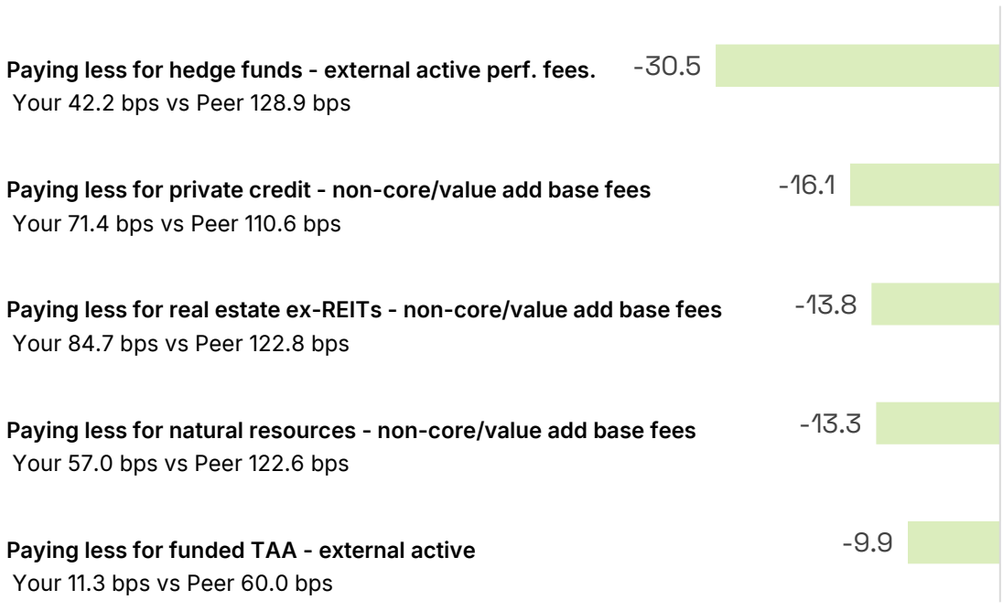
The most significant drivers of cost difference vs benchmark were implementation style differences in stock - ACWI x U.S., and paying less for hedge funds - external active.

Top 5 implementation style impacts ($M) | 2025



Top 5 impacts from paying more or less than your peers for similar services ($M) | 2025



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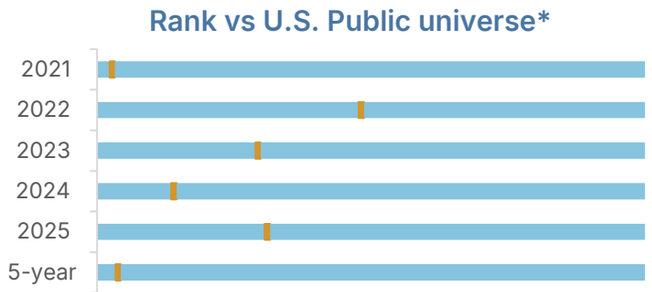
Your 5-year net value added of -0.3% compares to a median of 0.5% for the U.S. Public universe.

Return, net of all investment costs

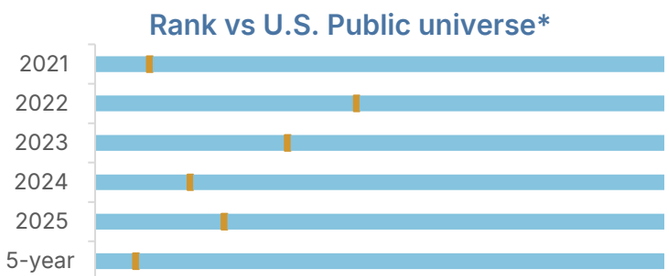
Your 5-year net total return of 5.6% was below both the U.S. Public median of 7.7% and the peer median of 7.8%.



	You	Median
2021	9.7%	16.9%
2022	-10.4%	-10.4%
2023	10.2%	11.4%
2024	7.4%	8.8%
2025	13.0%	14.0%
5-year	5.6%	7.7%

Policy return

Your 5-year policy return of 6.0% was below both the U.S. Public median of 7.0% and the peer median of 6.9%.



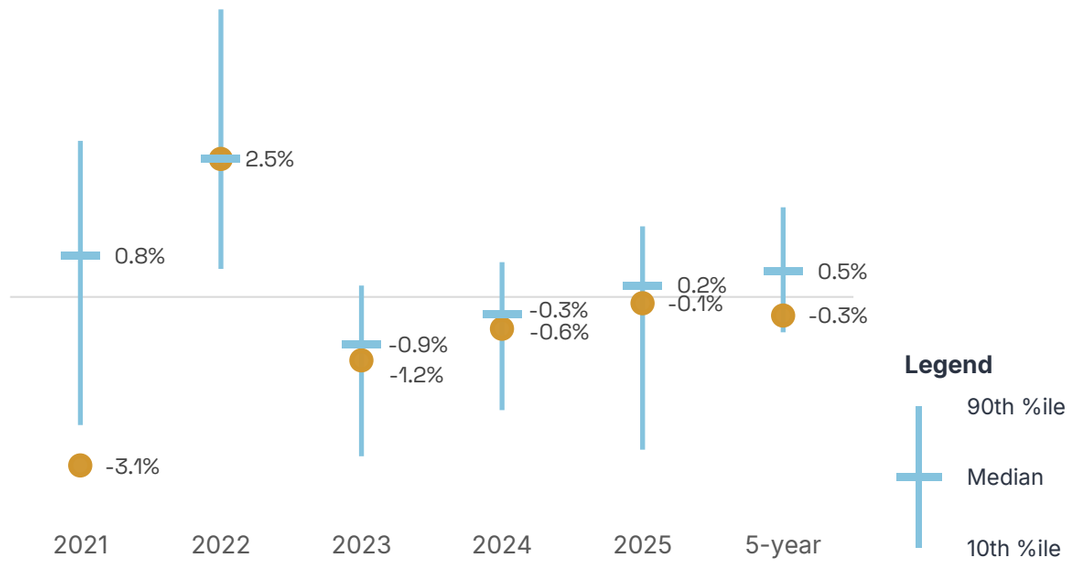
	You	Median
2021	12.8%	15.7%
2022	-12.9%	-12.7%
2023	11.4%	11.8%
2024	8.0%	9.4%
2025	13.1%	14.1%
5-year	6.0%	7.0%

*Chart shows your percentile rank vs. the U.S. Public universe, going 0% to 100%, left to right.

Net value added | Net return minus policy return, U.S. Public 2021 - 2025

Your 5-year net value added of -0.3% was below the U.S. Public median of 0.5%.

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%.



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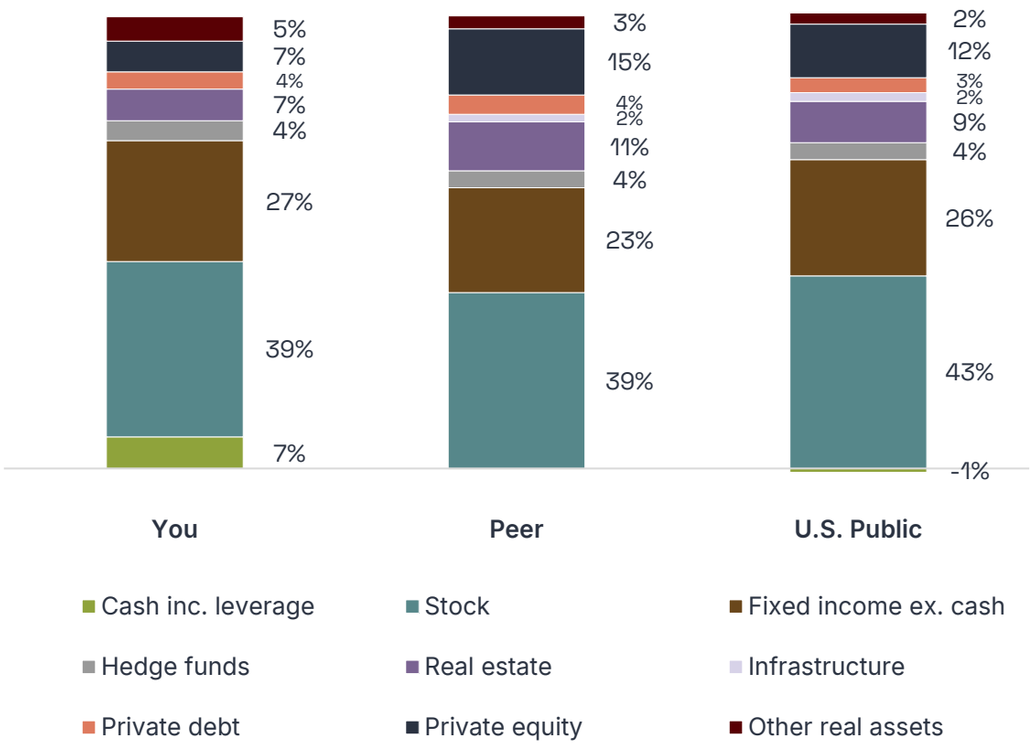
Policy mix differences are a major driver of variance in total fund policy returns.

Policy asset mix | 2021 - 2025

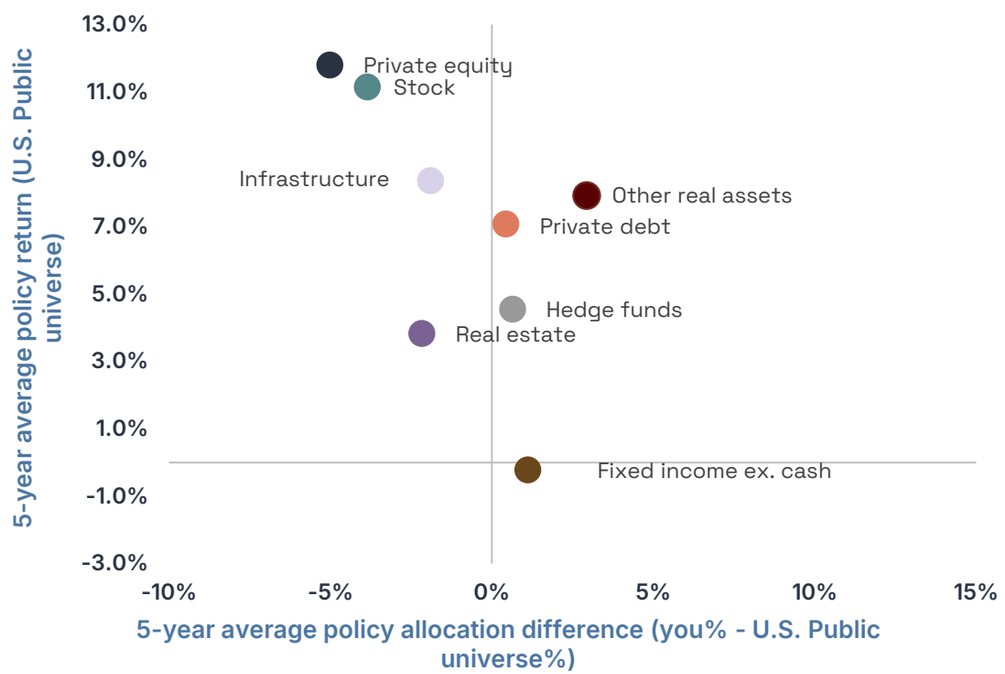
Your policy asset mix allocates 5% less to private equity and 4% less to stock than the average U.S. Public fund.



Contribution of asset classes to your fund's policy return position | 2021 - 2025

Your lower allocation to Private equity decreased your policy return relative to the universe, due to its stronger performance than the average asset class.

To enable fairer comparisons, the private equity benchmarks of all participants, including your fund, were adjusted to reflect lagged, investable, public-market indices.



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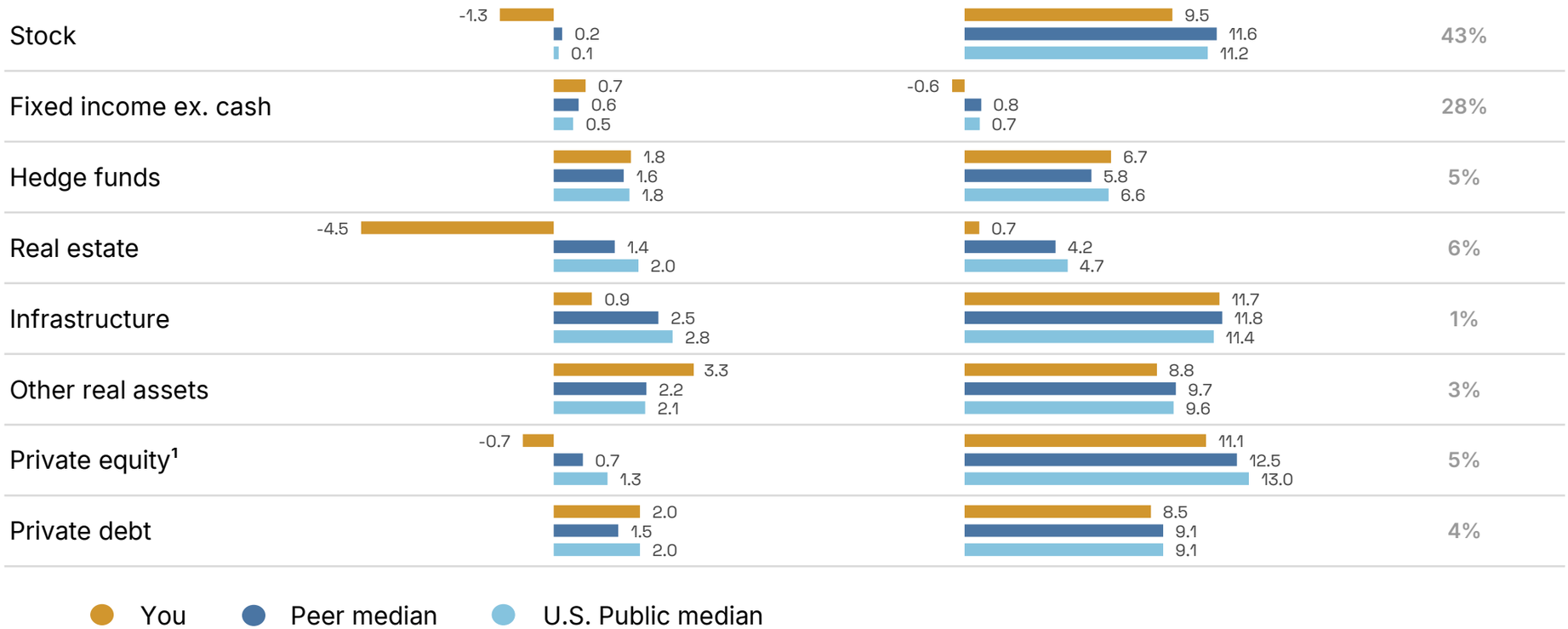
Hedge funds and infrastructure contributed positively to your 5-year total fund net value added relative to the universe.



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 1.2%.

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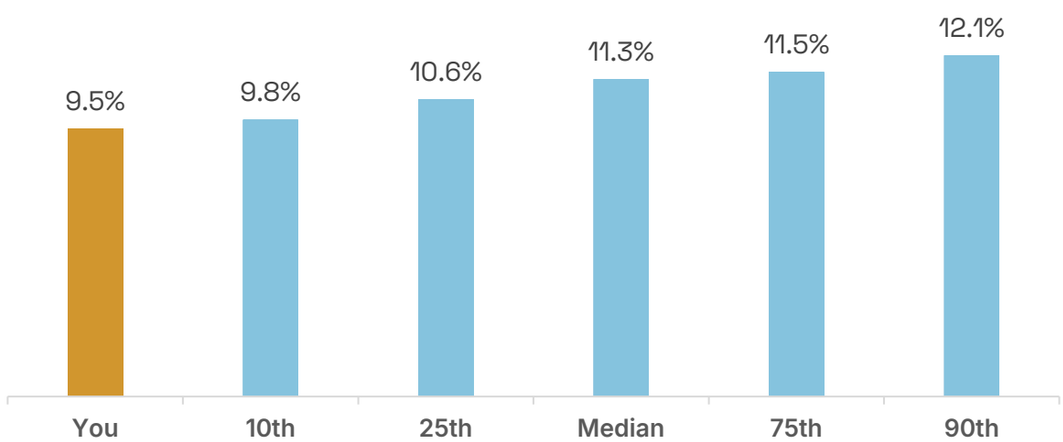
Your asset risk of 9.5% was below the U.S. Public Universe median of 11.3%.

Asset risk (%) | 2025

Your asset risk of 9.5% was below the U.S. Public Universe median of 11.3%.

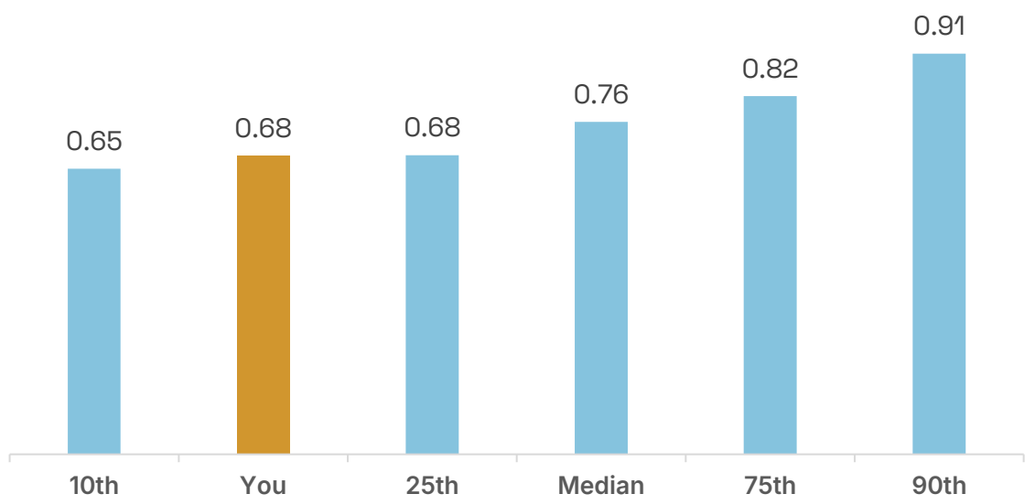
Asset risk is the standard deviation of your policy return. It is based on the historical variance of, and covariance between, the asset classes in your policy mix; standardized for all participants in the CEM database.



Realized Sharpe ratio | 10-year ending 2025

Your realized Sharpe ratio of 0.68 was below the U.S. Public Universe median of 0.76.

Realized Sharpe ratio is the historical excess return of your portfolio per unit of total risk. It is a function of the actual annual returns generated above the risk-free rate and the realized standard deviation of those annual returns over the 10-year observation period.



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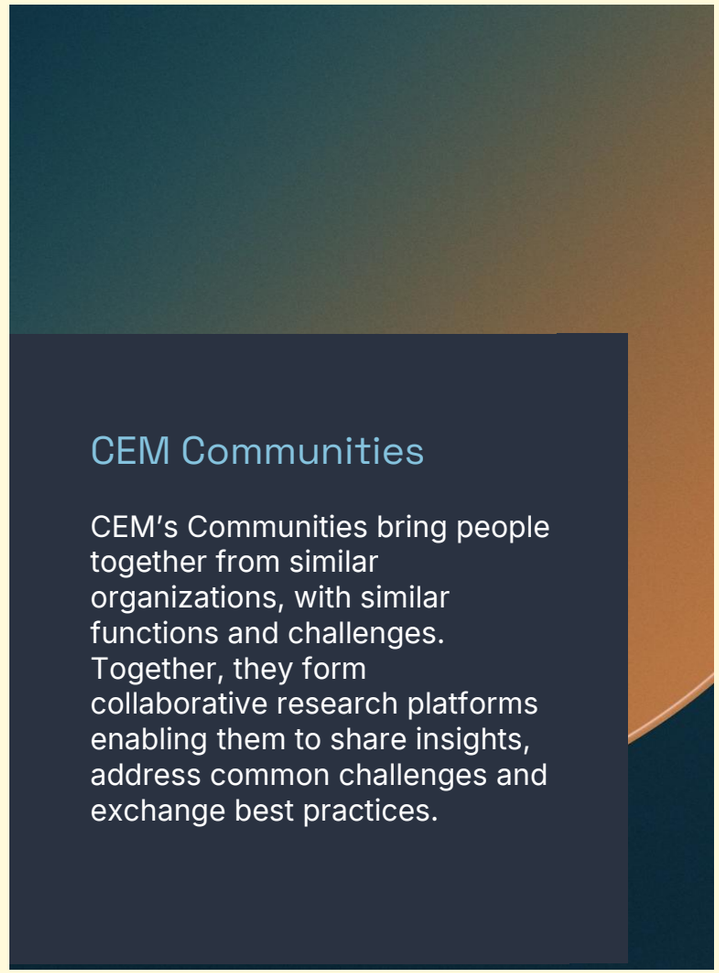
Community & Database research insights

Performance Benchmarks

This year, we share insights on Performance Benchmarks, courtesy of the Canadian DB Investment & Operations Community. The insights matter because:

- Performance benchmarks often reflect legacy decisions, not strategy.
- Performance benchmarks shape outcomes, compensation, and risk, but processes lack transparency.



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Which benchmarks matter at the total fund level?

Funds can be categorized into three groups based on how they prioritize their Strategic Asset Allocation (SAA) benchmark.

01.

SAA Dominant

These funds treat their SAA as the primary benchmark for evaluating total fund performance. They may track long-term return objectives as a secondary reference point.

Direct link to incentives: Funds often use SAA performance to determine staff compensation across relevant roles.

Codified and reported: The SAA benchmark often appears in the investment policy statement and public reporting.

02.

SAA Coequal

These funds use the SAA alongside other benchmarks, assigning each comparable weight in performance assessments. Common reference points include CPI+ targets, long-term return assumptions, and liability-based benchmarks.

Mixed approach to incentives: Funds may link compensation to multiple benchmarks (e.g., long-term return targets, the SAA, or a combination of both).Tied incentives may capture staff focus even if other benchmarks drive evaluation.

03.

SAA Subordinate

These funds rely more heavily on other benchmarks (e.g., return objectives and liability-driven metrics) while treating SAA as a secondary reference point.

Mixed approach to incentives: Staff may be compensated based on non-SAA benchmarks even if SAA appears in planning documents.

SAA still in use: While not primary, SAA is often retained to support internal alignment, discipline, and long-term strategy tracking.

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How do funds tailor benchmarks across asset classes?

The amount of customization of a given benchmark is less predicted by the asset class and more by the asset owner's approach to benchmarking.

01.

Engineers

These funds systematically adjust SAA benchmarks across multiple criteria. Adjustments reflect a structured approach. High use of strategy, region, and currency alignment.

Private equity example: 40% S&P 500 Index (USD/EUR hedged) 90 days lagged + 2% p.a.; 25% Stoxx Europe 600 Index (currency hedged) 90 days lagged + 2% p.a.; 10% MSCI AC Asia ex Japan Index (currency hedged) 90 days lagged + 2% p.a.; 25% fixed 7% p.a.

02.

Tailors

These funds tailor SAA benchmarks for select criteria, often tied to specific exposures, views, or operational preferences. Moderate use of criteria, typically focused on region and strategy.

Private equity example: Russell 3000 + 3%

03.

Minimalists

Apply few or no benchmark adjustments, relying on standard, broad market weight indices. Performance attribution may be sophisticated, with a high-level benchmark representing the total investable universe.

Private equity example: MSCI World Small Cap Index

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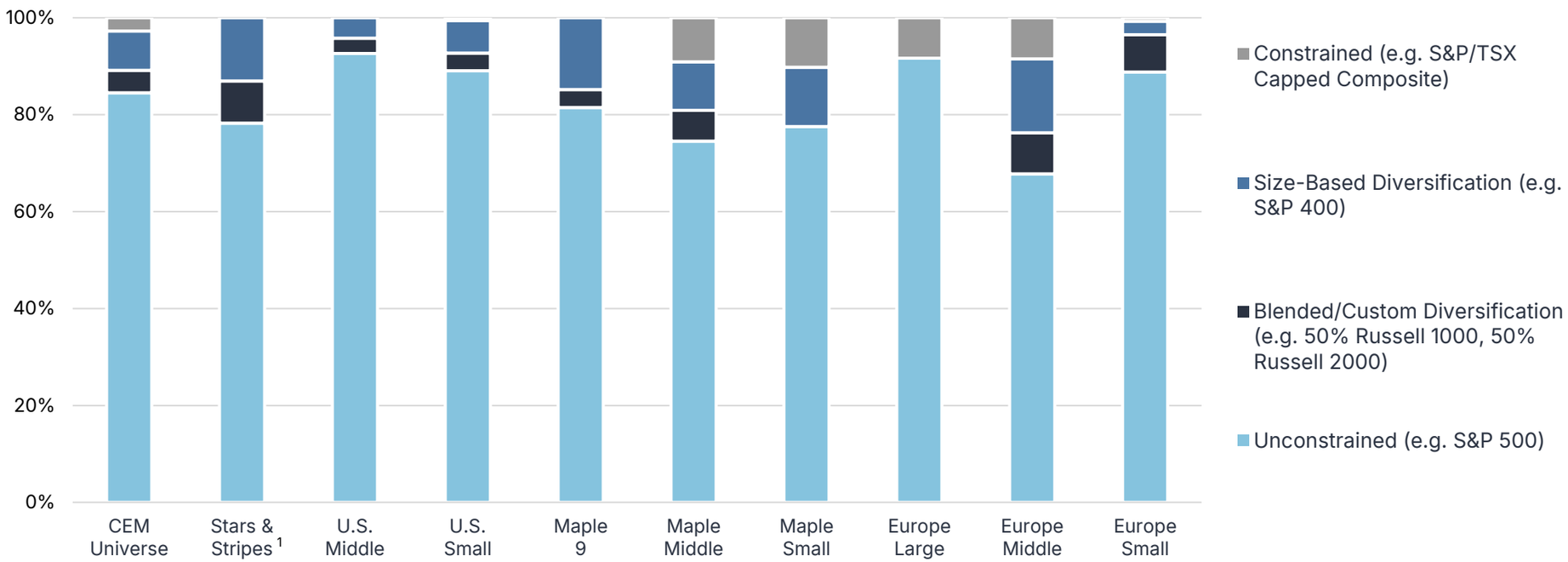
How do funds manage concentration risk with benchmarks?

Concentration Controls in Public Equity Market Benchmarks, 2024



Source: Stars and Stripes 2026: Performance Benchmark Application by Large Public Pension Plans in the United States

1. Stars & Stripes is a CEM community of large U.S. public pension plans.

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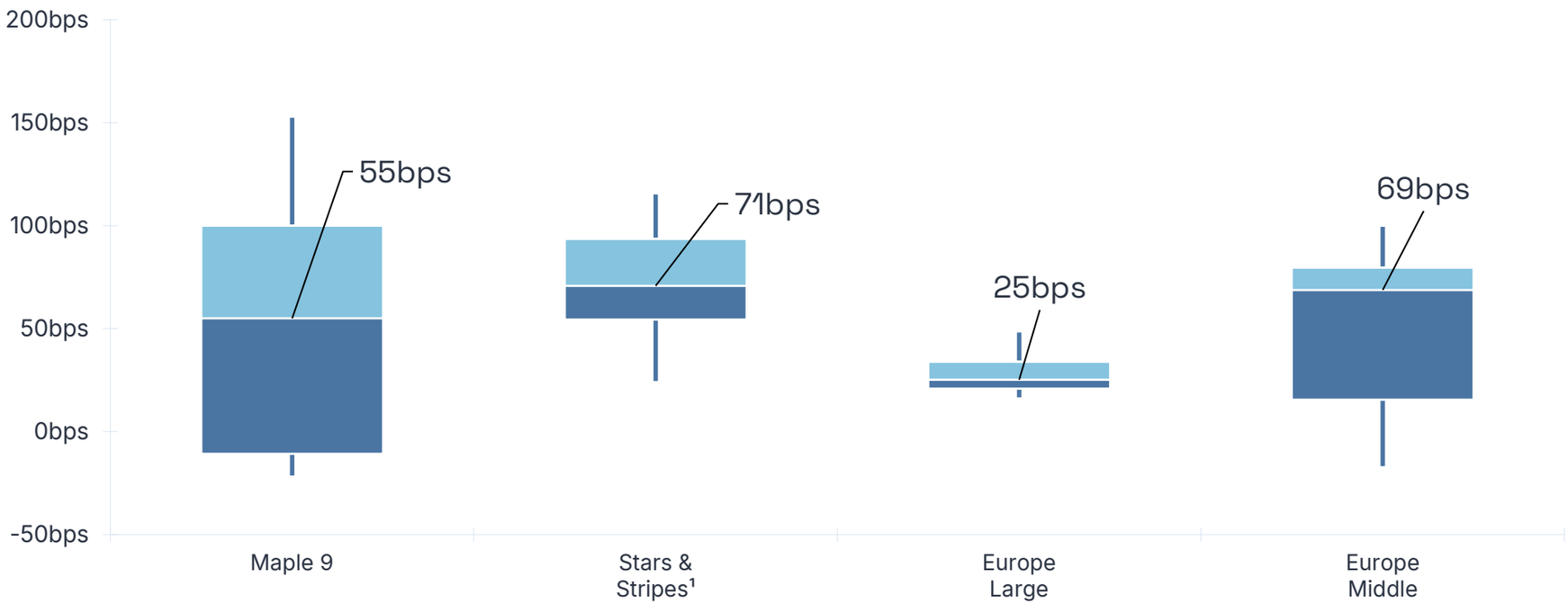
Long-term performance: Global average 10-year value added was 21 bps from 2015-2024

10-year net value added (2015 - 2024)



Source: CEM Investment Benchmarking Database (As at Nov 30, 2025)

1. Stars & Stripes is a CEM community of large U.S. public pension plans.

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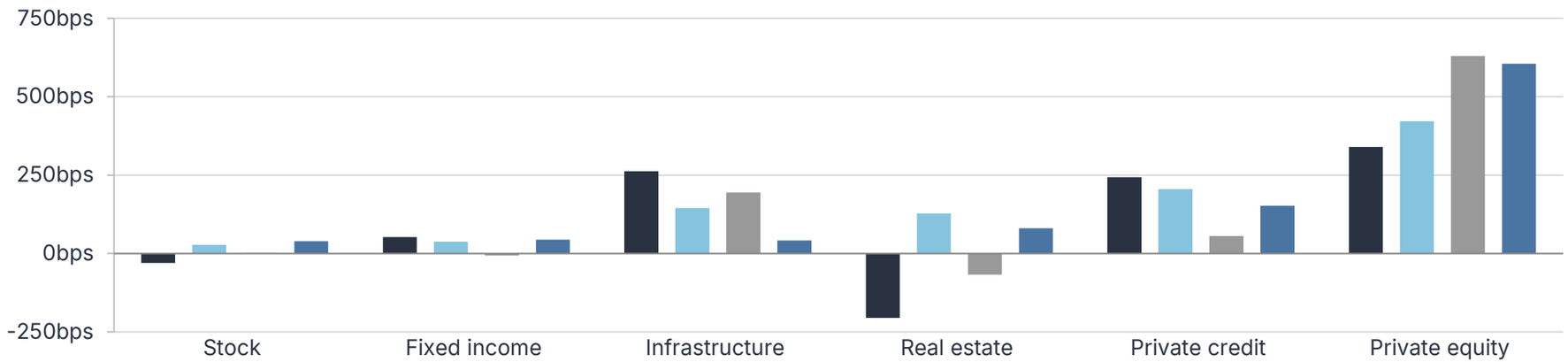
Sources of 10-year NVA by asset class.

10-year net value added (2015 - 2024)



	Stock	Fixed income	Infrastructure	Real estate	Private credit	Private equity
Maple 9	-31bps	52bps	262bps	-205bps	243bps	340bps
Stars & Stripes[1]	28bps	38bps	145bps	128bps	205bps	422bps
Europe Large	2bps	-6bps	195bps	-68bps	56bps	630bps
Europe Middle	40bps	44bps	42bps	80bps	153bps	605bps

Source: CEM Investment Benchmarking Database (As at Nov 30, 2025)

1. Stars & Stripes is a CEM community of large U.S. public pension plans.

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North Carolina Retirement Systems

DB Investment Benchmarking Subscription

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November 2026