



Investment Committee Meeting Agenda

Tuesday, December 17, 2024

10:30 A.M

(or immediately following the Defined Contribution Committee)

- I. [Market Update and Performance Review – Callan](#)
(Information Only)
- II. [Watchlist](#)
(Intended Outcome- Approval of Staff Recommendation)
- III. [Search Criteria for Global Equity Manager](#)
(Intended Outcome – Approval of Staff Recommendation)
- IV. [Iran Divestment Act of 2015 Exposure Review](#)
(Information Only)
- V. [Israel Support Act of 2019](#)
(Information Only)
- VI. [Securities Lending Update](#)
(Information Only)
- VII. [Miscellaneous Updates](#)
(Information Only)

Investment**Committee Members:**

Dr. Randy McCoy, *Committee Chair*
Mr. Bill Benson
Ms. Kim Hanna
Mr. Chris Graham
State Treasurer David McRae

Mr. Kelly Breland, *Board Chair*

December 17, 2024



Public Employees' Retirement System of Mississippi

Executive Summary
October 2024 Performance Review

John Jackson, CFA
Senior Vice President

Alexander Ford
Senior Vice President

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Mississippi PERS Executive Summary – 3Q 2024 and October Update

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- ▶ **Third Quarter 2024 Performance Review**
 - PERS Highlights and Capital Markets Overview
 - PERS Portfolio Review – as of September 30, 2024

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 - TD Epoch Global Choice

- ▶ **Appendix**
 - Net of Fee Performance
 - Benchmark Definitions
 - Callan Updates

Callan

October 2024 Performance Review

PERS of Mississippi Performance Highlights

As of October 31, 2024

- ▶ **PERS Total Fund assets stood at \$34.6 billion at the end of October, a decrease of approximately \$715.8 million from the end of 3Q.**
 - A negative investment return decreased the market value of assets by approximately \$658.6 million, while net outflows reduced assets by \$57.2 million.
- ▶ **Overall, the asset allocation was in line with its current target allocation at the end of October.**
 - Underweight allocations to Real Estate (-1.6%) and Domestic Equity (-1.0%) were offset by overweight allocations to the System's other asset classes.
- ▶ **Fiscal year-to-date, the PERS Total Fund return 3.1% (gross of fees) versus the 3.4% return for the Policy Benchmark.**
- ▶ **The PERS Total Fund returned -1.9% (gross of fees) during the month of October matching the return of the Policy Benchmark.**
- ▶ **Investments in the underlying asset classes performed as follows:**
 - The domestic equity composite returned -1.0% for the month (-0.2% vs. benchmark) and 4.8% fiscal YTD (-0.6% vs. benchmark).
 - The international equity composite returned -4.8% for the month (+0.1% vs. benchmark) and 2.9% fiscal YTD (+0.1% vs. benchmark).
 - The global equity composite returned -2.0% for the month (+0.4% vs. benchmark) and 3.1% fiscal YTD (-1.3% vs. benchmark).
 - The fixed income composite returned -1.7% for the month (+0.8% vs. benchmark) and 2.7% fiscal YTD (+0.1% vs. benchmark).
 - The real estate composite returned -0.2% for the month (-0.4% vs. benchmark) and 2.4% fiscal YTD (+1.3% vs. benchmark).
 - The private equity composite returned -0.2% for the month and 1.2% fiscal YTD.
 - The private credit composite returned 0.6% for the month and 2.0% fiscal YTD.
- ▶ **The PERS Total Fund has outperformed its benchmark over the trailing five- and ten-year periods. Over the trailing time periods the PERS Total Fund returned 8.5% and 8.1, respectively.**

Note: The numbers in parenthesis above indicate benchmark relative performance for each asset class over the specified time period. Net of fees returns are included in the appendix.

Economic Backdrop

As of October 31, 2024

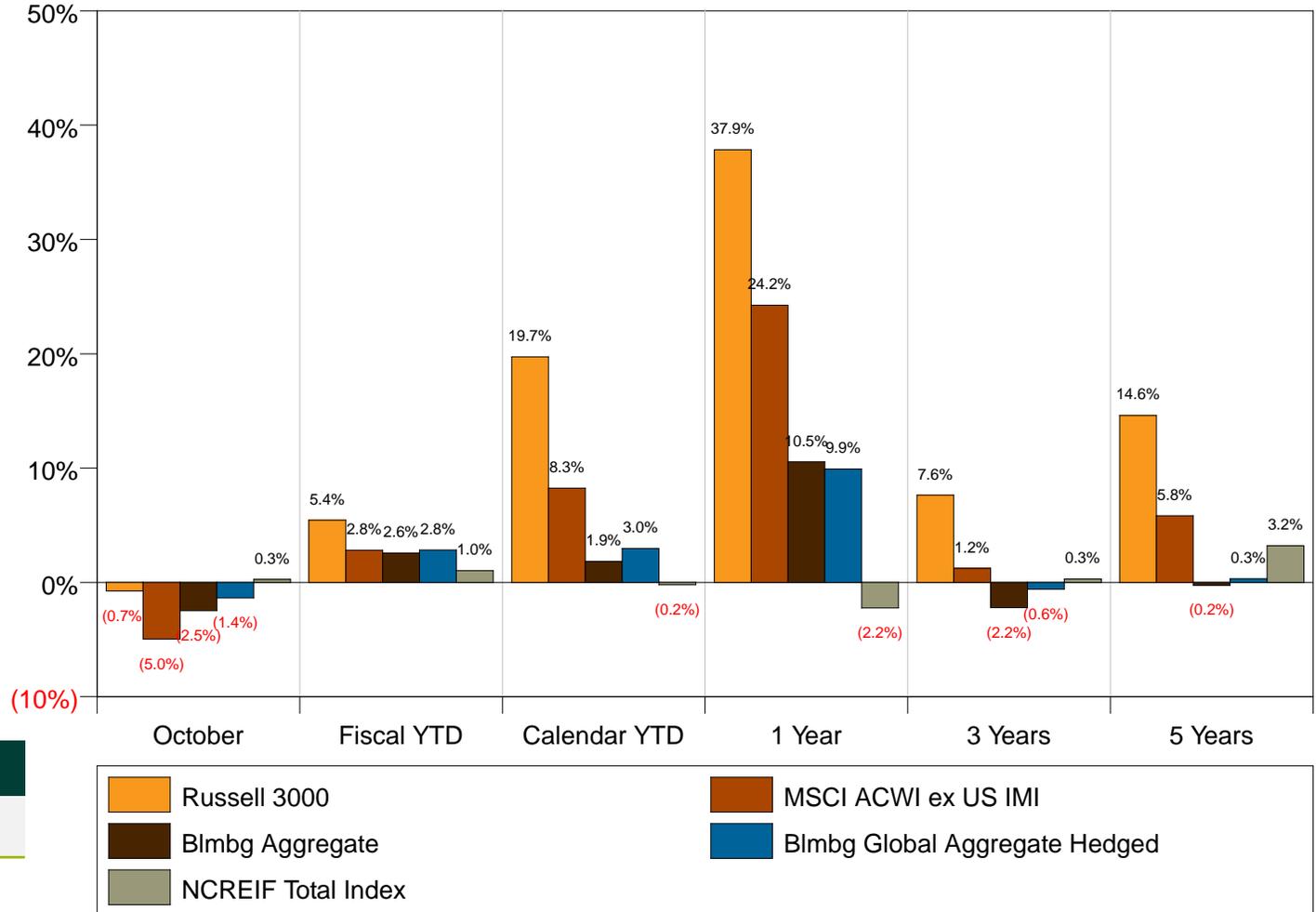
Key Points

- ▶ Public markets declined in October, despite macroeconomic data released during the month was solid, with GDP and the jobs market remaining strong. CPI data declined but fell short of expectations.
- ▶ Real annualized U.S. GDP grew by 2.8% in 3Q24, down from 3.0% in 2Q24, per the advance estimate. The deceleration reflects slower private inventory and residential fixed investments, partially offset by growth in consumer spending, exports, and federal government spending. Increased imports, which subtract from GDP, also impacted the figure.
- ▶ The labor market in the U.S. was relatively unchanged in October. Non-farm payrolls increased by only 12,000 jobs, down sharply from September. In September, 223,000 jobs were added. Sectors experiencing employment growth included health care and government, while temporary help services and manufacturing employment declined. The seasonally adjusted unemployment rate for October was 4.1%, unchanged from September. The labor force participation rate slightly decreased from 62.7% to 62.6%.
- ▶ The headline Consumer Price Index (CPI) rose 2.6% year-over-year in October, an increase from the September reading of 2.4%. A gain in the shelter index accounted for over half of the increase in the all-items index. Core CPI, which excludes food and energy prices, gained 3.3%, unchanged from September.

Asset Class Performance

Returns for Periods Ended October 31, 2024

- ▶ Both equities and fixed income posted negative returns in October, driven by anticipation of the presidential election results, interest rate trajectories, and mixed third-quarter earnings.
- ▶ U.S. equities declined 0.7% (Russell 3000 Index) in October, bringing the Fiscal YTD return to 5.4%.
- ▶ Global ex-U.S. equities, as measured by the MSCI ACWI ex-U.S. IMI, returned -5.0% in October and 2.8% Fiscal YTD.
- ▶ U.S. investment grade fixed income gave back much of its third quarter return in October, with the Bloomberg U.S. Aggregate Bond Index declining 2.5%. The Bloomberg Global Aggregate (Hedged) Index outperformed domestic fixed income, returning -1.4% in October.



(as of 12/16/2024)

QTD

Russell 3000

MSCI ACWI ex-U.S. IMI

Bloomberg U.S. Aggregate

Bloomberg Global Aggregate
(Hedged)

Russell 3000

Blmbg Aggregate

NCREIF Total Index

MSCI ACWI ex US IMI

Blmbg Global Aggregate Hedged

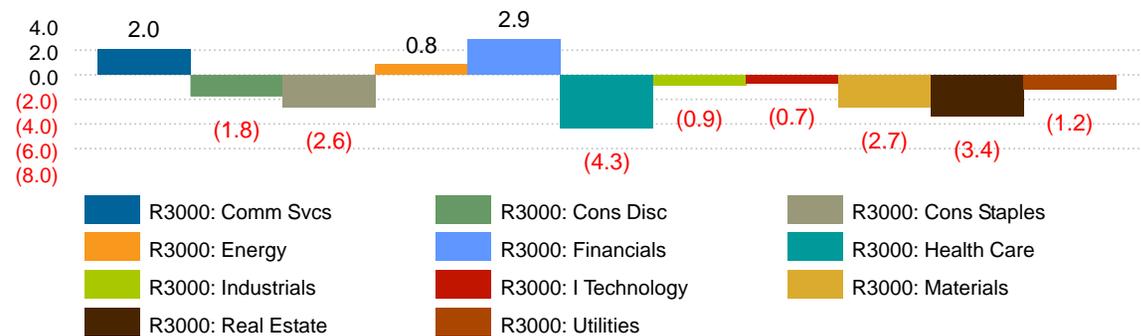
U.S. Equity Markets

As of October 31, 2024

- ▶ U.S. equities fell 0.7% in October (Russell 3000 Index). Disappointing quarterly earnings from major corporations further weighed on market performance.
- ▶ Large cap stocks outperformed small caps (Russell 1000 Index: -0.7% vs. Russell 2000 Index: -1.4%).
- ▶ In both the large and small cap spaces, growth stocks outperformed value (Russell 1000 Growth Index: -0.3% vs. Russell 1000 Value Index: -1.1%; Russell 2000 Growth Index: -1.3% vs. Russell 2000 Value Index: -1.6%).
- ▶ Sector performance was negative overall in October, with 8 of the 11 sectors that comprise the Russell 3000 posting losses. Sectors that posted positive returns were Financials (+2.9%), Communication Services (+2.0%), and Energy (+0.8%). The sectors with the lowest performance were Health Care (-4.3%), Real Estate (-3.4%), Materials (-2.7%), Consumer Staples (-2.6%), and Consumer Discretionary (-1.8%).

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell:3000 Index	(0.73)	19.75	37.86	7.64	14.60	12.44
Russell:1000 Index	(0.70)	20.33	38.07	8.12	15.00	12.75
Russell:1000 Growth	(0.33)	24.14	43.77	8.84	19.00	16.18
Russell:1000 Value	(1.10)	15.40	30.98	6.85	10.14	8.87
Russell:Midcap Index	(0.54)	14.02	35.39	3.55	10.94	9.80
Russell:2000 Index	(1.44)	9.56	34.07	(0.05)	8.50	7.94
Russell:2000 Growth	(1.33)	11.72	36.49	(2.30)	7.92	8.15
Russell:2000 Value	(1.56)	7.51	31.77	1.95	8.42	7.33

Russell 3000 Index 1 Month Sector Returns



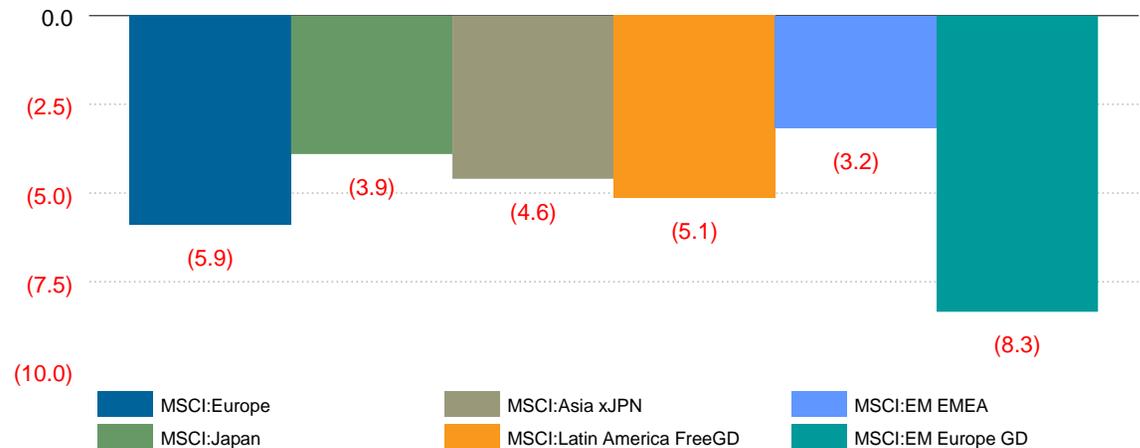
Non-U.S. Equity Markets

As of October 31, 2024

- ▶ Global ex-U.S. equities posted losses in October. The MSCI ACWI ex-US IMI Index fell 4.95%, with growth stocks underperforming value (MSCI ACWI ex-USA Growth Index: -5.1% vs. MSCI ACWI ex-USA Value Index: -4.7%) and large cap stocks outperforming small cap (MSCI ACWI ex-USA Large Cap Index: -1.8% vs. MSCI ACWI ex-USA Small Cap Index: -5.2%).
- ▶ Emerging markets marginally outperformed developed markets in October, falling 4.5% (MSCI Emerging Markets Index). The MSCI Asia ex-Japan Index dropped by 4.6%, as Indian equities faced pressure as concerns grew surrounding conflicts in the Middle East, and China's performance struggled due to persistent issues in its real estate sector and high youth unemployment. Emerging Europe, the Middle East, and Africa saw negative returns (MSCI EM EMEA: -3.2%), as well as Latin American markets (MSCI Emerging Markets Latin America Index: -5.1%).
- ▶ The U.S. dollar strengthened over the month against a basket of developed market currencies (MSCI EAFE Index: -5.4% vs. MSCI EAFE Hedged Index: -1.3%).

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI:ACWI xUS IMI	(4.95)	8.26	24.25	1.24	5.83	4.92
MSCI:EAFE	(5.44)	6.85	22.97	2.70	6.24	5.27
MSCI:EAFE Hedged	(1.26)	12.61	23.17	9.51	10.37	9.04
MSCI:EM	(4.45)	11.66	25.32	(1.43)	3.93	3.43
MSCI:ACWI xUS Small	(5.23)	6.08	23.73	(0.92)	6.21	5.76

MSCI Regional 1 Month Returns



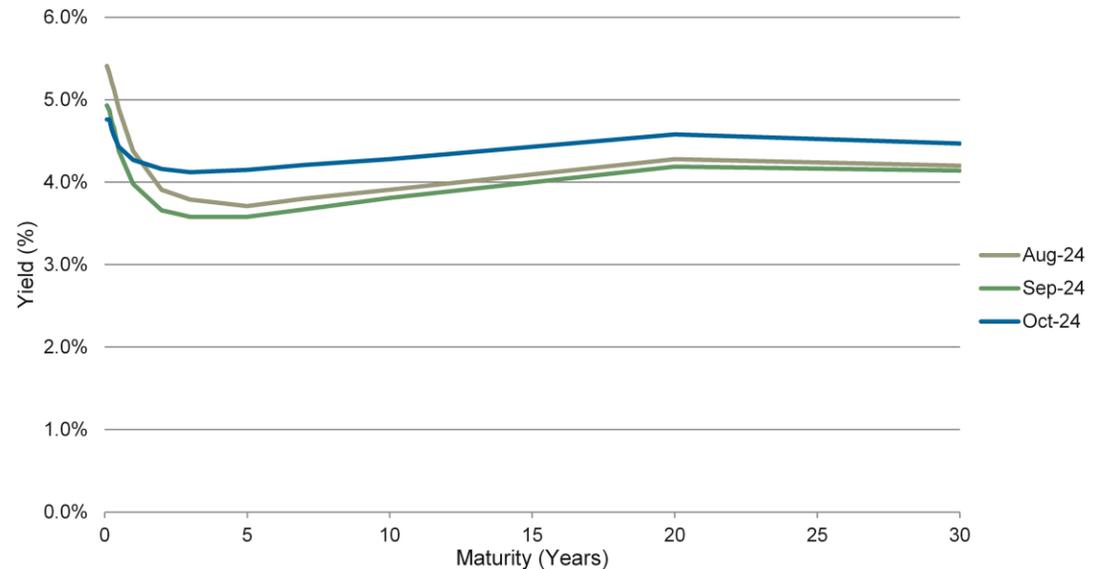
Fixed Income Markets

As of October 31, 2024

- ▶ Bond returns were negative in October (Bloomberg U.S. Aggregate Bond Index). Treasury yields rose across the curve as generally positive economic data shifted investor expectations for rate cuts. The Bloomberg U.S. Aggregate Bond Index fell 2.5%. The Bloomberg Credit Index and the Bloomberg High Yield Corporate Index fell 2.4% and 0.5%, respectively. Long bonds (Bloomberg Long Gov/Credit Index) declined 4.7% this month. TIPS (Bloomberg US TIPS Index: -1.8%) outperformed nominal Treasuries (Bloomberg Treasury Index: -2.4%). The 10-year breakeven inflation rate increased from 2.18% to 2.33%.
- ▶ Markets are now pricing in fewer cuts – 0.25% less for 2024 and 0.50% less for 2025. Additionally, a large sell-off in Treasuries occurred over the month, as election expectations raised concerns about inflationary policies, further reducing the likelihood of future rate cuts.
- ▶ Investment grade issuance was \$95 billion in October, in line with expectations. High yield issuers priced \$24 billion, and spreads ended the month at 2.82%, 0.13% tighter than September. The 90-day T-bill yield decreased from 4.73% to 4.64%, the 2-year rose 0.50% to 4.16%, the 10-year increased 0.47% to 4.28%, and the 30-year increased 0.33% to 4.47%. The 2-10 Year Treasury Yield spread tightened from 0.15% bps to 0.12%.

Index	Last Month	Year to Date	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Blmbg:Aggregate	(2.48)	1.86	10.55	(2.20)	(0.23)	1.49
Blmbg:Long Gov/Credit	(4.69)	(1.32)	17.01	(8.16)	(2.90)	1.61
Blmbg:Treasury	(2.38)	1.36	8.41	(2.55)	(0.70)	1.00
Blmbg:Credit	(2.41)	2.69	13.07	(1.99)	0.46	2.43
Blmbg:MBS	(2.83)	1.54	11.44	(2.08)	(0.60)	1.02
Blmbg:TIPS	(1.79)	2.97	8.61	(1.54)	2.20	2.26
ICE:HY Corp Cash Pay	(0.57)	7.29	16.33	2.95	4.36	4.76
CS:Lev Loan	0.85	7.52	10.55	6.51	5.89	4.91
3 Month T-Bill	0.38	4.43	5.39	3.63	2.36	1.69

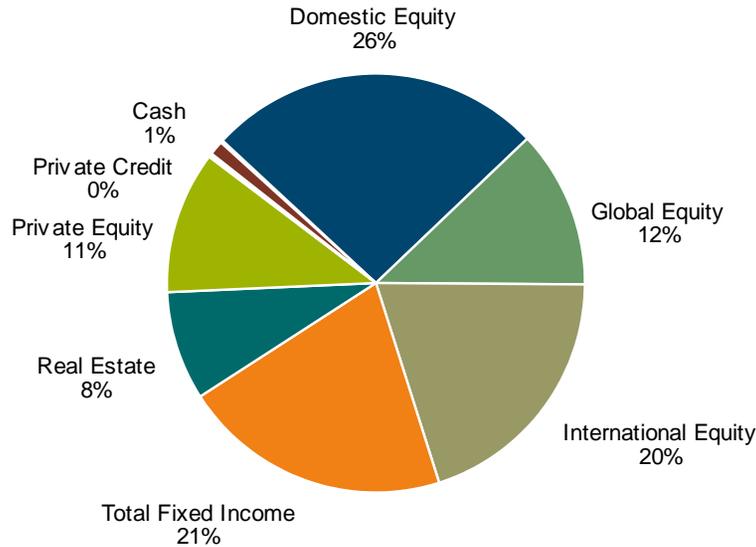
Treasury Yield Curve



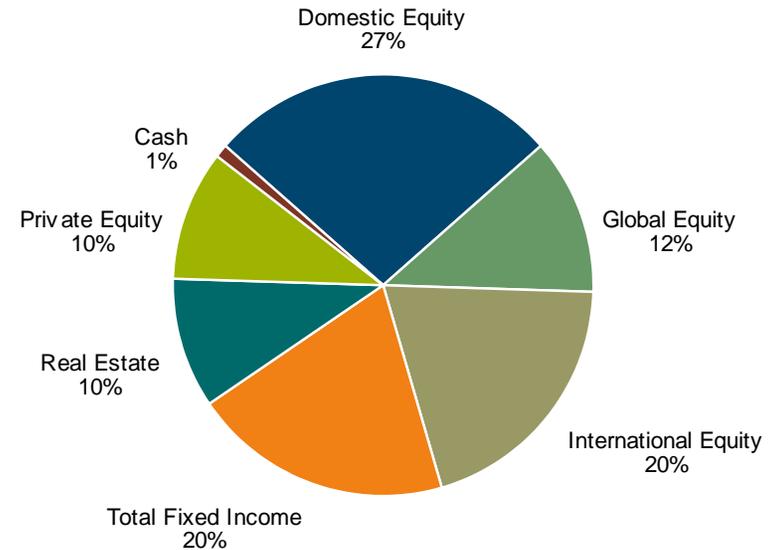
PERS Asset Allocation Versus Policy Target

As of October 31, 2024

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	9,012,377	26.0%	27.0%	(1.0%)	(329,667)
Global Equity	4,230,233	12.2%	12.0%	0.2%	78,214
International Equity	6,930,945	20.0%	20.0%	0.0%	10,913
Total Fixed Income	7,211,645	20.8%	20.0%	0.8%	291,613
Real Estate	2,922,825	8.4%	10.0%	(1.6%)	(537,191)
Private Equity	3,819,011	11.0%	10.0%	1.0%	358,995
Private Credit	89,663	0.3%	0.0%	0.3%	89,663
Cash	383,462	1.1%	1.0%	0.1%	37,460
Total	34,600,160	100.0%	100.0%		

► Overall, the PERS asset allocation was in line with its strategic target allocation.

- Underweight allocations to Real Estate (-1.6%) and Domestic Equity (-1.0%) were offset by overweight allocations to the System’s other asset classes.

Note: The Target Asset Allocation represents the legacy policy target weights. The legacy allocation target and Total Fund Benchmark will be maintained until the new asset classes have been more fully funded.

PERS Asset Class Cash Flows

As of October 31, 2024

	October 31, 2024		Net New Inv.	Inv. Return	September 30, 2024	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$9,012,376,831	26.05%	\$0	\$(88,231,762)	\$9,100,608,594	25.77%
Global Equity	\$4,230,233,022	12.23%	\$0	\$(84,719,265)	\$4,314,952,287	12.22%
International Equity	\$6,930,945,086	20.03%	\$(5)	\$(351,390,585)	\$7,282,335,676	20.62%
Total Fixed Income	\$7,211,644,956	20.84%	\$0	\$(124,425,148)	\$7,336,070,104	20.77%
Real Estate	\$2,922,825,052	8.45%	\$(2,552,447)	\$(5,378,905)	\$2,930,756,403	8.30%
Private Equity	\$3,819,010,777	11.04%	\$(205,075)	\$(7,374,361)	\$3,826,590,213	10.84%
Private Credit	\$89,662,815	0.26%	\$6,993,007	\$465,072	\$82,204,736	0.23%
Cash	\$383,461,828	1.11%	\$(60,535,613)	\$1,521,415	\$442,476,027	1.25%
Total Fund	\$34,600,160,367	100.0%	\$(57,242,192)	\$(658,591,481)	\$35,315,994,040	100.0%

► PERS Total Fund assets stood at \$34.6 billion at the end of October, a decrease approximately \$715.8 million from the end of 3Q.

- A negative investment return decreased the market value of assets by approximately \$658.6 million.
- Net outflows reduced assets by approximately \$57.2 million.

PERS Asst Class Performance – Gross of Fees

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Fiscal YTD	Last 12 Months	Last 36 Months	Last 60 Months
Domestic Equity	\$9,012,377	26.05%	(0.97%)	4.84%	34.74%	6.83%	14.27%
Domestic Equity Benchmark	-	-	(0.73%)	5.45%	37.86%	7.64%	14.60%
Global Equity	\$4,230,233	12.23%	(1.96%)	3.08%	31.52%	4.16%	10.54%
Global Equity Benchmark	-	-	(2.32%)	4.37%	32.33%	4.93%	10.74%
International Equity	\$6,930,945	20.03%	(4.83%)	2.89%	25.38%	1.53%	6.67%
International Equity Benchmark	-	-	(4.95%)	2.82%	24.25%	1.24%	5.83%
Total Fixed Income	\$7,211,645	20.84%	(1.70%)	2.65%	12.33%	(1.14%)	0.78%
Total Fixed Income Benchmark	-	-	(2.48%)	2.59%	10.55%	(2.20%)	(0.23%)
Real Estate	\$2,922,825	8.45%	(0.18%)	2.37%	(3.14%)	(1.20%)	2.90%
Real Estate Benchmark	-	-	0.26%	1.05%	(2.23%)	0.29%	3.21%
Private Equity	\$3,819,011	11.04%	(0.19%)	1.16%	4.03%	4.23%	15.02%
Private Equity Benchmark	-	-	0.33%	1.33%	4.91%	(0.87%)	10.16%
Private Credit	\$89,663	0.26%	0.55%	2.00%	-	-	-
Private Credit Benchmark	-	-	1.43%	3.27%	-	-	-
Cash Composite	\$383,462	1.11%	0.41%	1.81%	5.43%	3.95%	2.49%
Cash Benchmark	-	-	0.41%	1.78%	5.51%	3.71%	2.37%
Total Fund	\$34,600,160	100.00%	(1.87%)	3.10%	19.58%	2.63%	8.47%
Total Fund Benchmark	-	-	(1.90%)	3.35%	21.16%	2.75%	7.89%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are **gross of fees**.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Domestic Equity	\$9,012,377	26.05%	(0.97%)	2.75%	4.84%	34.74%	6.83%
Russell 3000 Index	-	-	(0.73%)	3.52%	5.45%	37.86%	7.64%
Large Cap Equity	\$6,863,050	19.84%	(0.74%)	3.58%	4.64%	37.47%	8.94%
Russell 1000 Index	-	-	(0.70%)	3.83%	5.34%	38.07%	8.12%
Managed Large Cap Equity	\$881,901	2.55%	0.40%	3.08%	2.83%	34.56%	7.99%
Eagle Capital	881,901	2.55%	0.40%	3.08%	2.83%	34.56%	7.99%
S&P 500 Index	-	-	(0.91%)	3.66%	4.93%	38.02%	9.08%
Northern Trust S&P 500	\$5,981,149	17.29%	(0.91%)	3.65%	4.91%	37.92%	9.09%
S&P 500 Index	-	-	(0.91%)	3.66%	4.93%	38.02%	9.08%
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Mid Cap Equity	\$1,108,241	3.20%	(1.21%)	2.53%	4.93%	27.09%	0.84%
Russell MidCap Index	-	-	(0.54%)	3.74%	8.62%	35.39%	3.55%
Artisan Partners Russell MidCap Growth Idx	517,395 -	1.50% -	0.11% 1.75%	4.05% 7.75%	2.92% 8.40%	26.58% 38.67%	(6.77%) 0.61%
Victory Mid Cap Value Russell MidCap Value Idx	590,832 -	1.71% -	(2.34%) (1.26%)	1.23% 2.50%	6.76% 8.69%	28.33% 34.03%	- 5.10%
Small Cap Equity	\$1,041,085	3.01%	(2.21%)	(2.15%)	6.10%	25.98%	1.12%
Russell 2000 Index	-	-	(1.44%)	(2.24%)	7.69%	34.07%	(0.05%)
Dimensional Fund Advisors Russell 2000 Value Index	352,716 -	1.02% -	(1.55%) (1.56%)	(3.79%) (3.35%)	6.15% 8.43%	28.17% 31.77%	8.60% 1.95%
Wellington Small Cap Russell 2000 Index	364,139 -	1.05% -	(2.01%) (1.44%)	(0.42%) (2.24%)	8.35% 7.69%	33.76% 34.07%	4.31% (0.05%)
Riverbridge Partners Russell 2000 Growth Index	324,231 -	0.94% -	(3.14%) (1.33%)	(2.26%) (1.12%)	3.64% 6.97%	16.32% 36.49%	(9.58%) (2.30%)
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Global Equity	\$4,230,233	12.23%	(1.96%)	1.72%	3.08%	31.52%	4.16%
Global Equity Benchmark (2)	-	-	(2.32%)	2.27%	4.37%	32.33%	4.93%
Acadian Global Equity	1,064,742	3.08%	(1.04%)	2.27%	1.78%	36.91%	8.10%
Epoch Investments	1,059,463	3.06%	(1.72%)	1.74%	3.35%	28.92%	3.60%
Harding-Loevner	1,059,191	3.06%	(2.57%)	1.91%	2.61%	30.46%	(0.68%)
LSV Global Value	1,042,410	3.01%	(2.52%)	0.95%	4.68%	29.87%	-
MSCI ACWI Index	-	-	(2.24%)	2.57%	4.22%	32.79%	5.51%
International Equity	\$6,930,945	20.03%	(4.83%)	0.50%	2.89%	25.38%	1.53%
International Equity Bnmk (3)	-	-	(4.95%)	0.29%	2.82%	24.25%	1.24%
International Eq Custom Bnmk (4)	-	-	(5.07%)	0.22%	2.66%	24.07%	1.00%
All Country ex US	\$4,713,982	13.62%	(5.00%)	(0.49%)	2.25%	24.86%	1.18%
Arrowstreet Capital	695,551	2.01%	(3.33%)	0.18%	0.67%	27.17%	7.68%
Baillie Gifford	764,875	2.21%	(5.86%)	1.64%	3.49%	25.37%	(7.39%)
Marathon Asset Mgmt	867,291	2.51%	(5.41%)	(2.06%)	2.18%	22.80%	2.08%
MSCI ACWI xUS IMI Index	-	-	(4.95%)	0.29%	2.82%	24.25%	1.24%
NT MSCI World ex US	2,386,264	6.90%	(5.06%)	(0.77%)	2.35%	24.23%	-
MSCI World xUS	-	-	(5.10%)	(0.85%)	2.26%	23.84%	2.81%
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Small Cap	\$687,134	1.99%	(5.77%)	(1.88%)	2.97%	21.87%	(3.83%)
Principal Sm Cap Intl	352,672	1.02%	(5.80%)	(2.60%)	1.97%	21.92%	(2.07%)
Northern Trust Intl Small Cap	332,170	0.96%	(5.75%)	(1.16%)	4.01%	-	-
MSCI World xUS Small	-	-	(5.72%)	(1.36%)	4.13%	23.60%	(2.55%)
Emerging Markets	\$1,511,973	4.37%	(3.85%)	4.90%	4.89%	28.82%	3.14%
Lazard Emerging Markets	768,354	2.22%	(5.61%)	2.93%	3.64%	27.12%	6.50%
Fisher Investments	743,620	2.15%	(1.97%)	7.01%	6.23%	30.62%	(0.36%)
MSCI Emerging Mkts Idx	-	-	(4.45%)	3.58%	3.89%	25.32%	(1.43%)
Total Equity	\$20,173,555	58.30%	(2.53%)	1.75%	3.79%	30.75%	4.42%
MSCI ACWI IMI Index	-	-	(2.32%)	2.27%	4.37%	32.33%	4.93%
Total Equity Custom Bnmk (5)	-	-	(2.57%)	2.12%	4.30%	31.78%	4.84%
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Domestic Fixed-Income	\$4,909,029	14.19%	(1.77%)	0.86%	2.49%	12.07%	(1.59%)
Blmbg Aggregate Index	-	-	(2.48%)	0.25%	2.59%	10.55%	(2.20%)
Short Duration	\$1,198,652	3.46%	0.20%	1.49%	2.20%	6.58%	-
SIT Short Duration FI	1,198,652	3.46%	0.20%	1.49%	2.20%	6.58%	-
Blmbg Gov/Cred 1-3 Yr	-	-	(0.57%)	1.17%	2.37%	6.25%	1.42%
Core Fixed Income	\$1,361,666	3.94%	(2.57%)	0.57%	2.58%	11.72%	(1.83%)
Blmbg Aggregate Index	-	-	(2.48%)	0.25%	2.59%	10.55%	(2.20%)
PIMCO	683,115	1.97%	(2.52%)	0.65%	2.62%	12.03%	(1.77%)
Manulife Asset Management	678,550	1.96%	(2.61%)	0.48%	2.53%	11.46%	(2.00%)
Blmbg Aggregate Index	-	-	(2.48%)	0.25%	2.59%	10.55%	(2.20%)
Core Plus	\$2,348,712	6.79%	(2.29%)	0.70%	2.59%	12.54%	(1.40%)
Loomis Sayles	1,155,830	3.34%	(2.45%)	0.43%	2.31%	12.07%	(1.47%)
Prudential Core Plus	1,192,881	3.45%	(2.14%)	0.97%	2.86%	13.00%	(1.34%)
Blmbg Aggregate Index	-	-	(2.48%)	0.25%	2.59%	10.55%	(2.20%)
Emerging Markets Debt	\$741,220	2.14%	(1.46%)	2.97%	4.68%	19.07%	(0.12%)
Wellington EMD	741,220	2.14%	(1.46%)	2.97%	4.68%	19.07%	(0.12%)
EMBI Global Dvsfd Index	-	-	(1.72%)	2.42%	4.33%	18.16%	(0.99%)
Global Fixed Income	\$1,561,397	4.51%	(1.56%)	0.54%	2.21%	10.05%	(0.54%)
PIMCO Global	777,987	2.25%	(1.50%)	0.46%	2.09%	9.96%	(0.41%)
AllianceBernstein Global	783,410	2.26%	(1.62%)	0.61%	2.32%	10.13%	(0.69%)
Blmbg Global Agg (Hedged)	-	-	(1.35%)	0.88%	2.83%	9.92%	(0.59%)
Total Fixed Income	\$7,211,645	20.84%	(1.70%)	1.00%	2.65%	12.33%	(1.14%)
Blmbg Aggregate Index	-	-	(2.48%)	0.25%	2.59%	10.55%	(2.20%)
Total Fixed Inc Custom Bnmk (6)	-	-	(2.12%)	0.62%	2.82%	11.14%	(1.66%)
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
REIT Composite	\$354,055	1.02%	(3.18%)	6.29%	13.03%	36.71%	1.18%
REIT Comp Custom Bnmk (7)	-	-	(4.08%)	4.96%	11.22%	32.75%	(0.83%)
Centersquare FTSE NAREIT Equity Index	239,577 -	0.69% -	(2.44%) (2.90%)	7.34% 6.11%	14.52% 12.72%	40.19% 36.80%	2.93% 1.53%
Cohen & Steers EPRA/NAREIT Dev REIT Idx	114,478 -	0.33% -	(4.71%) (5.02%)	4.17% 4.16%	10.04% 10.49%	30.65% 29.84%	(1.29%) (2.28%)
Core Real Estate	\$1,570,904	4.54%	0.28%	0.30%	0.74%	(6.45%)	(1.06%)
Principal Capital	826,308	2.39%	0.48%	0.16%	0.53%	(4.73%)	0.18%
UBS Trumbull Property	359,769	1.04%	0.00%	0.01%	1.03%	(6.20%)	(2.25%)
JPMCB Strategic Property	384,827	1.11%	0.10%	0.86%	0.92%	(10.03%)	(2.40%)
NFI-ODCE Equal Weight Net	-	-	(0.02%)	(0.07%)	(0.09%)	(6.76%)	(1.85%)
NFI-ODCE Value Weight Net	-	-	0.01%	0.02%	0.03%	(6.44%)	(1.85%)
Core Plus Real Estate	\$222,551	0.64%	1.19%	1.19%	1.99%	(10.65%)	(4.44%)
UBS Trumbull Property G&I	222,551	0.64%	1.19%	1.19%	1.99%	(10.65%)	(4.44%)
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Non-Core Real Estate	\$736,831	2.13%	(0.10%)	(0.25%)	1.38%	(4.46%)	1.13%
AEW Partners VII	3,875	0.01%	0.27%	1.50%	2.36%	7.63%	(1.69%)
AEW Partners VIII	11,681	0.03%	(1.00%)	(1.58%)	(1.35%)	9.14%	12.08%
AEW Partners IX	62,939	0.18%	(0.35%)	(0.25%)	0.73%	6.50%	7.79%
Heitman VP IV	30,521	0.09%	(0.75%)	(0.29%)	(0.24%)	(0.13%)	7.59%
Heitman VP V	62,195	0.18%	(0.58%)	0.25%	0.25%	(1.78%)	-
AG Core Plus IV	16,700	0.05%	0.06%	(2.39%)	(2.21%)	(11.35%)	(13.76%)
AG Realty Fund X	49,834	0.14%	(0.00%)	(2.99%)	(3.09%)	(7.08%)	6.50%
AG Realty Value Fd XI	22,767	0.07%	(0.57%)	2.14%	1.43%	0.21%	-
Invesco US Income Fund	164,607	0.48%	0.94%	0.72%	1.68%	(6.40%)	-
Invesco VA Fund IV	1,866	0.01%	0.43%	1.24%	0.38%	(15.93%)	(37.91%)
Invesco VA Fund V	57,000	0.16%	(0.45%)	(0.44%)	(1.67%)	(25.55%)	(10.54%)
Invesco Real Estate US Fund VI	39,567	0.11%	0.00%	(2.22%)	(2.22%)	(12.81%)	-
TA Associates Realty Fund XII	84,259	0.24%	(0.84%)	(0.77%)	(0.93%)	(1.31%)	11.92%
TA Associates Realty Fund XIII	48,969	0.14%	(0.62%)	(0.60%)	28.91%	-	-
Westbrook RE Fund X	13,219	0.04%	0.03%	(4.83%)	(4.80%)	(33.52%)	(12.44%)
Westbrook RE Fund XI	64,234	0.19%	0.03%	2.34%	2.36%	7.70%	14.86%
NCREIF Total Index	-	-	0.26%	0.78%	1.05%	(2.23%)	0.29%
Timber Composite	\$38,483	0.11%	0.07%	4.82%	4.83%	(4.22%)	0.59%
Hancock Timber Portfolio	38,483	0.11%	0.07%	4.82%	4.83%	(4.22%)	0.59%
NCREIF Timberland Index	-	-	0.51%	1.53%	2.05%	9.03%	10.50%
Total Real Estate	\$2,922,825	8.45%	(0.18%)	0.97%	2.37%	(3.14%)	(1.20%)
Real Estate Benchmark (8)	-	-	0.26%	0.78%	1.05%	(2.23%)	0.29%
Mississippi-Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

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Periodic Rates of Return – Gross of Fees (Continued)

As of October 31, 2024

	Market Value \$(000)	Ending Weight	Last Month	Last 3 Months	Fiscal YTD	Last 12 Months	Last 36 Months
Private Equity	\$3,819,011	11.04%	(0.19%)	1.10%	1.16%	4.03%	4.23%
Pathway PEF XXIII Series 2008	210,713	0.61%	(0.19%)	0.18%	0.20%	0.73%	(4.75%)
Pathway PEF XXIII Series 2013	643,933	1.86%	(0.14%)	(0.72%)	(0.56%)	1.34%	0.00%
Pathway PEF XXIII Series 2016	1,283,200	3.71%	(0.40%)	1.73%	1.58%	6.58%	6.33%
Pathway PEF XXIII Series 2021	383,562	1.11%	(0.28%)	1.72%	2.03%	9.84%	4.43%
Grosvenor Diversified Partners	126,716	0.37%	(0.41%)	(4.33%)	(3.17%)	(15.98%)	(6.97%)
Grosvenor Div Partners 2014 Series	622,140	1.80%	0.11%	1.56%	1.59%	1.66%	8.71%
Grosvenor Div Partners 2018 Series	537,897	1.55%	0.01%	2.72%	2.73%	10.19%	12.70%
Grosvenor Div Partners 2024 Series	10,850	0.03%	0.14%	-	-	-	-
Private Equity Benchmark (9)	-	-	0.33%	1.00%	1.33%	4.91%	(0.87%)
Private Credit	\$89,663	0.26%	0.55%	1.25%	2.00%	-	-
Blue Owl Lending Fd Series 20	58,795	0.17%	0.00%	0.85%	0.85%	-	-
Grosvenor Private Credit Series 2023	30,868	0.09%	1.53%	1.94%	3.28%	-	-
Private Credit Benchmark (10)	-	-	1.43%	3.37%	3.27%	-	-
Cash	\$383,462	1.11%	0.41%	1.30%	1.81%	5.43%	3.95%
1mo T-Bill	-	-	0.41%	1.32%	1.78%	5.51%	3.71%
Total Fund	\$34,600,160	100.00%	(1.87%)	1.44%	3.10%	19.58%	2.63%
Policy Benchmark*	-	-	(1.90%)	1.54%	3.35%	21.16%	2.75%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Callan

Third Quarter 2024 Performance Review

PERS of Mississippi Performance Highlights

As of September 30, 2024

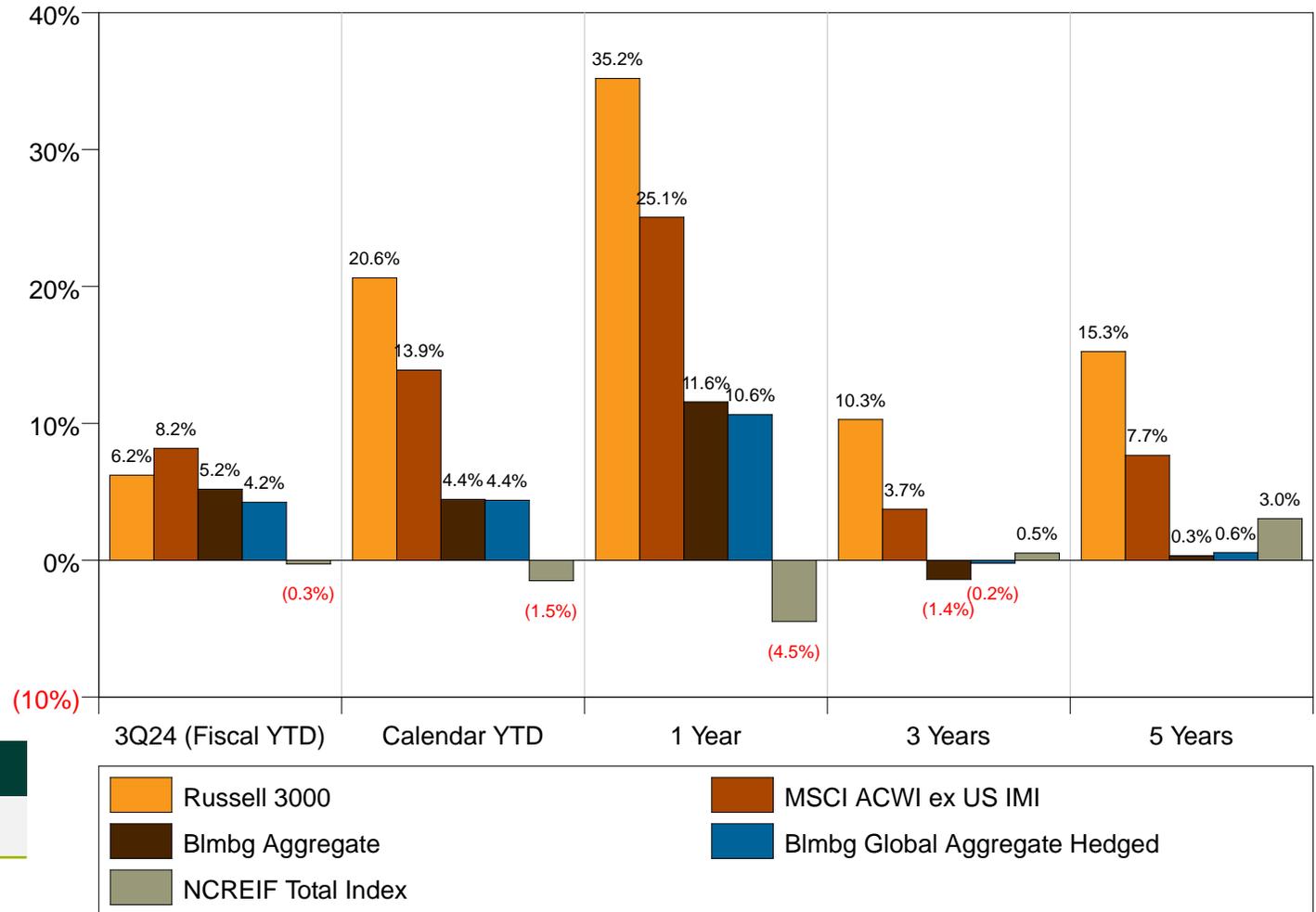
- ▶ **PERS Total Fund assets stood at \$35.3 billion at the end of September, an increase of approximately \$1.6 billion for the quarter.**
 - A positive investment return increased the market value of assets by approximately \$1.7 billion, while net outflows reduced assets by \$117.4 million.
- ▶ **Overall, the asset allocation was in line with its current target allocation at the end of September.**
 - Underweight allocations to Real Estate (-1.7%) and Domestic Equity (-1.2%) were offset by overweight allocations to the System's other asset classes.
- ▶ **The PERS Total Fund returned 5.1% (gross of fees) during the third quarter versus the 5.4% return for the Policy Benchmark.**
- ▶ **During the last year, the PERS Total Fund returned 19.1% (gross of fees) versus the 20.4% return for the Policy Benchmark.**
- ▶ **Investments in the underlying asset classes performed as follows:**
 - The domestic equity composite returned 5.9% during 3Q (-0.4% vs. benchmark).
 - The international equity composite returned 8.1% during 3Q (-0.1% vs. benchmark).
 - The global equity composite returned 5.2% during 3Q (-1.7% vs. benchmark).
 - The fixed income composite returned 4.4% during 3Q (-0.8% vs. benchmark).
 - The real estate composite returned 2.6% during 3Q (+1.8% vs. benchmark).
 - The private equity composite returned 1.4% during 3Q.
 - The private credit composite returned 1.4% during 3Q.
- ▶ **The PERS Total Fund has outperformed its benchmark over the trailing five-, ten-, and fifteen-year periods. Over the trailing time periods, the PERS Total Fund returned 9.3%, 8.4%, and 9.2%, respectively.**

Note: The numbers in parenthesis above indicate benchmark relative performance for each asset class over the specified time period. Net of fees returns are included in the appendix.

Asset Class Performance

- ▶ U.S. equities continued to perform well in 3Q, with the Russell 3000 gaining 6.2%. Year-to-date (YTD), the index is up 20.6%.
- ▶ Global ex-U.S. equities, as measured by the MSCI ACWI ex-U.S. IMI, rose 8.2% for the quarter, bringing its YTD return to 13.9%.
- ▶ After producing flat returns in the previous quarter, U.S. investment grade fixed income rallied, with the Bloomberg U.S. Aggregate Bond Index gaining 5.2% in 3Q and 4.4% YTD. The Bloomberg Global Aggregate (Hedged) Index gained 4.2% for the quarter.
- ▶ Private real estate, represented by the NCREIF Total Index, declined 0.3% for the quarter, bringing the YTD return to -1.5%.

Returns for Periods Ended September 30, 2024



(as of 10/21/2024)

QTD

Russell 3000

MSCI ACWI ex-U.S. IMI

Bloomberg U.S. Aggregate

Bloomberg Global Aggregate
(Hedged)

Russell 3000

Blmbg Aggregate

NCREIF Total Index

MSCI ACWI ex US IMI

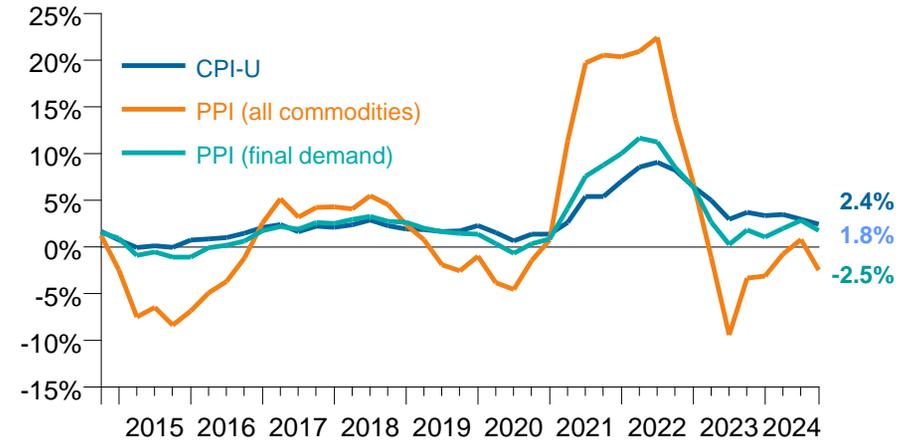
Blmbg Global Aggregate Hedged

U.S. Economy—Summary

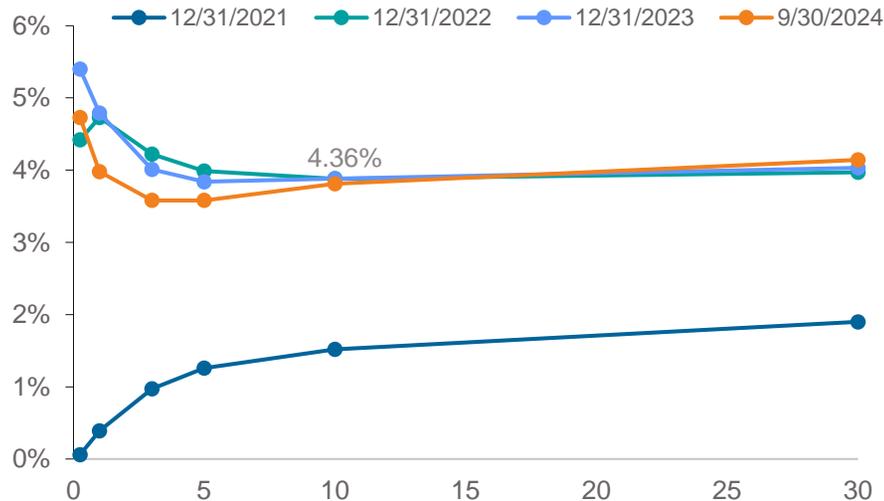
For periods ended 9/30/24

- GDP rose 2.8% in the 3Q according to the “advance” estimate. A decrease from the 2Q reading of 3.0%.
- Headline CPI increased 2.4% year-over-year in September, while core CPI (ex food and energy) increased 1.8% over the same period.
- The Fed cut short-term rates 50 bps at the September FOMC meeting, with a current target range of 4.75%-5.00%. The Fed cut an additional 25 bps at the November meeting.
- The unemployment rate was 4.1% in September, a slight decrease from the August reading of 4.2% and the July reading of 4.3%.

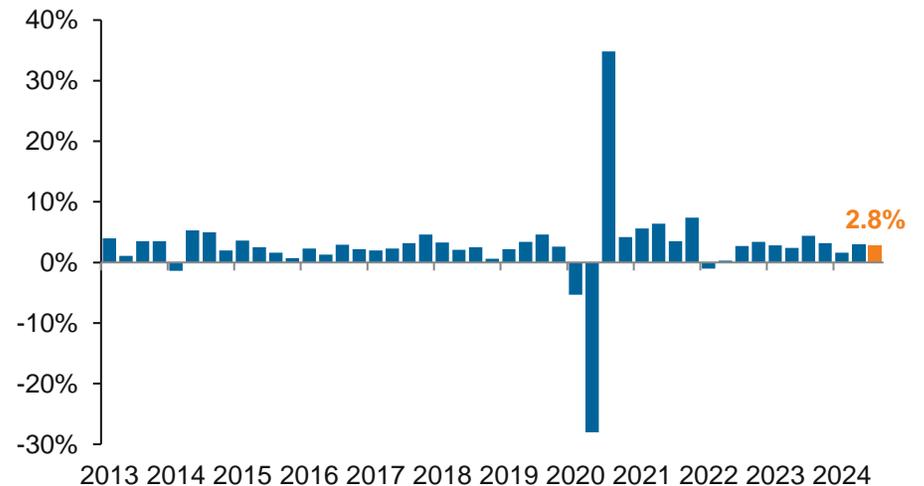
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Quarterly Real GDP Growth



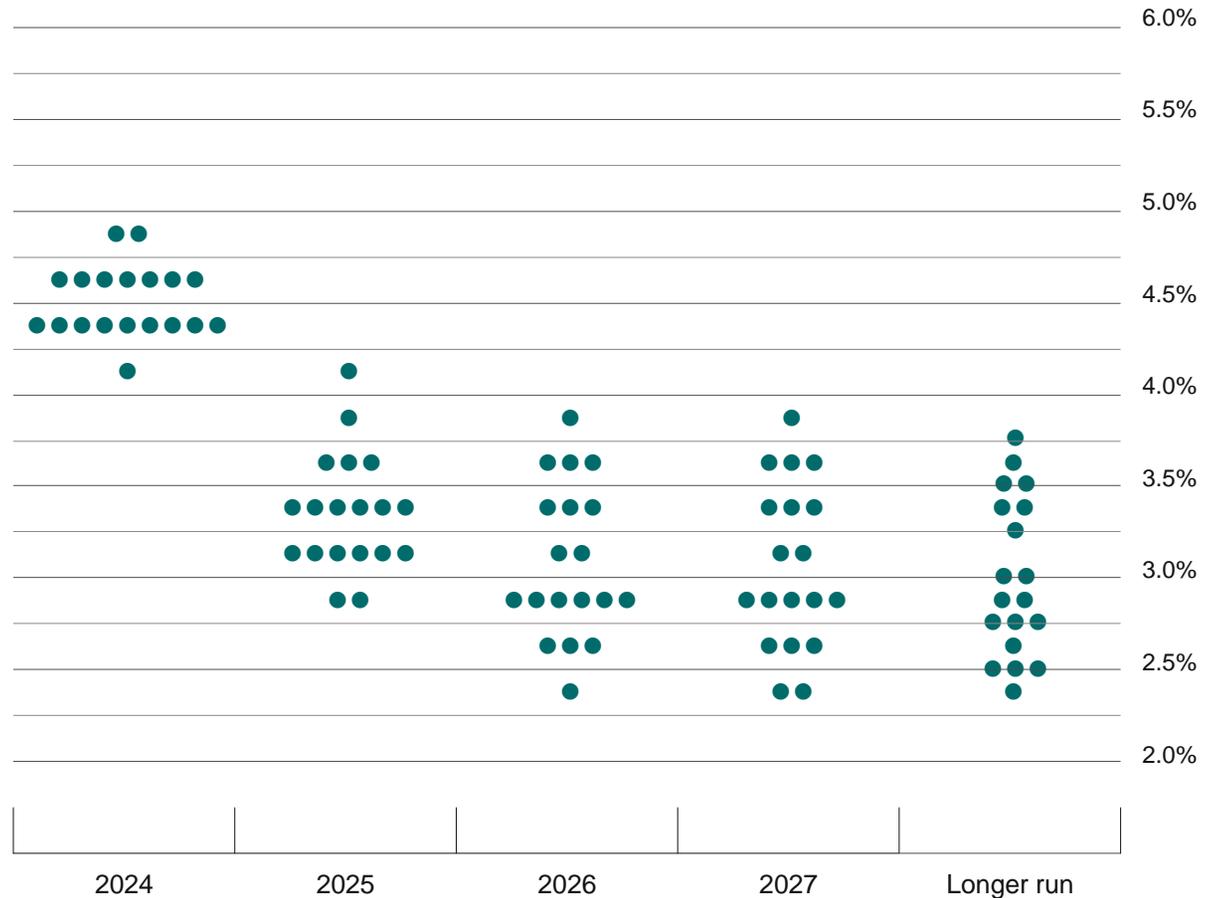
Sources: Bureau of Labor Statistics, Callan, Federal Reserve

The Fed's 'Dot Plot'

September 18, 2024

Federal Open Market Committee (FOMC) participants' assessments of appropriate monetary policy

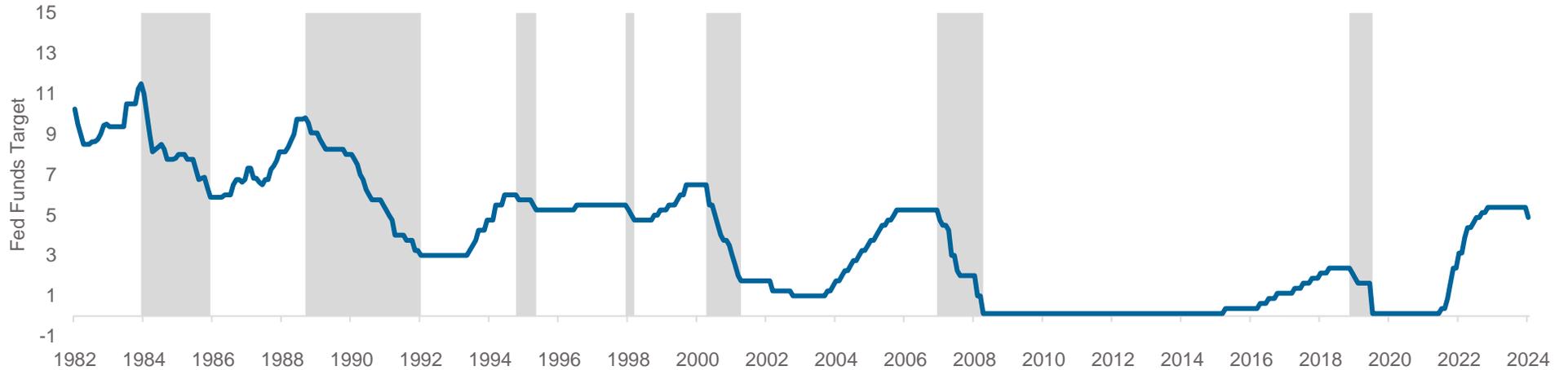
- Median year-end in 2024 = 4.4% (down from 5.1% projection at June meeting)
- “Longer run” up 10 basis points to 2.9%
- Dispersion of views widens in 2025 and 2026 but narrows over longer run.
- Bias is toward higher rates in the longer run; lower bound is 2.4% but higher bound is 3.8%, around the median of 2.9%
- Market expects more cuts next year based on CME FedWatch as of September. Fed Funds expectations for end of 2024:
 - 80% probability of 4.25% to 4.5%, another 50 bps in rate cuts
 - Mid point of expectations for the end of 2025 is 3.25%-3.5%, implying another 100 bps in rate cuts after this year.
 - The range of expectations for the end of 2025 is very wide, ranging from 2.5% to 4.25%



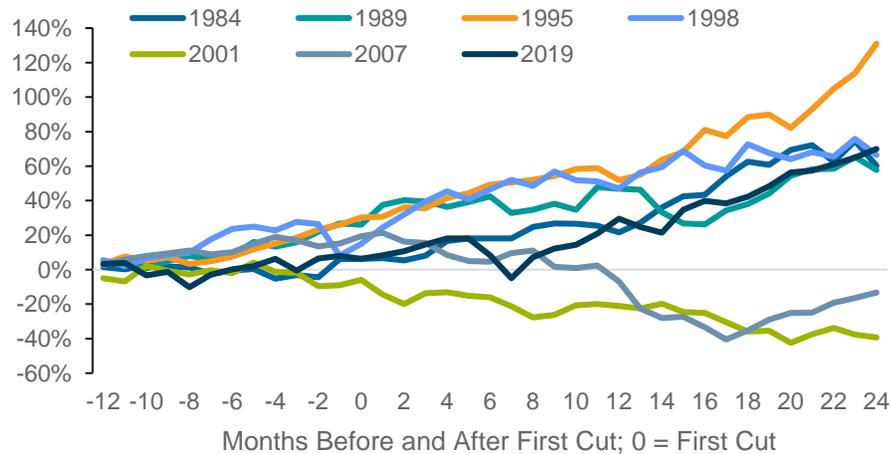
Source: Federal Reserve. FOMC participants do not always submit projections for all time periods.

Market Performance Around Fed Cutting Cycles

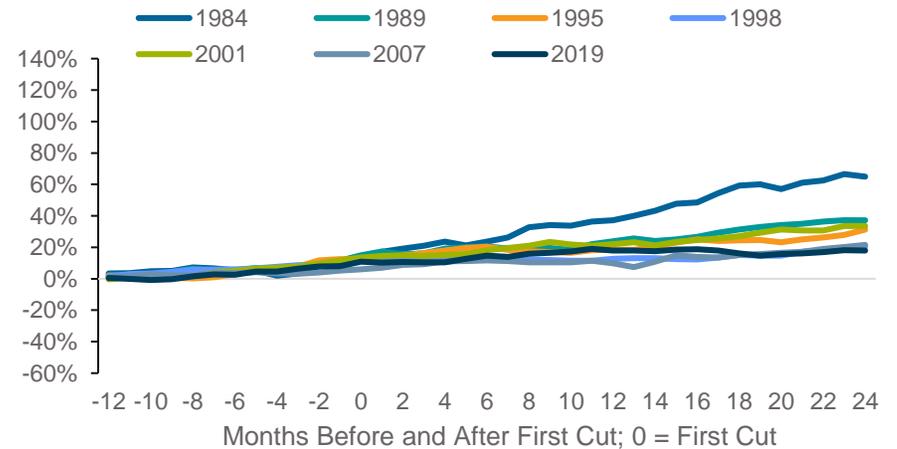
Federal Reserve Cutting Cycles



S&P 500 Cumulative Returns When Fed Cuts Rates



Bloomberg Agg Cumulative Returns When Fed Cuts Rates



Sources: Bloomberg, Federal Reserve, S&P Dow Jones Indices

Equity and Bond Markets Up Sharply in 3Q

Equities have recovered losses of 2022; fixed income and real estate still lag

S&P 500 climbed 5.9% in 3Q24

- U.S. small cap equities outperformed U.S. large cap, as did developed ex-U.S. markets and emerging markets.

Strong quarter for core fixed income

- The Bloomberg U.S. Aggregate Bond Index rose 5.2% as rates fell over the quarter.
- Long duration fixed income and non-U.S. bonds saw even stronger returns than the Aggregate.
- Interest rates remain volatile as markets assess how the Fed will continue with easing.
- CPI-U came in at 2.4% (year-over-year) in 3Q, down slightly from last quarter's 2.5%, and supporting the prospects for further rate cuts later this year.

Economy reignites in 2Q with continued strength into 3Q

- 3Q24 GDP came in at a surprisingly strong 2.8%, after another surprise in 2Q. Consumer spending continues to drive GDP growth, fueled by rising incomes and lower inflation.

Returns for Periods ended 9/30/24

	Quarter	1 Year	3 Years	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	6.23	35.19	10.29	15.26	12.83	8.38
S&P 500	5.89	36.35	11.91	15.98	13.38	8.20
Russell 2000	9.27	26.76	1.84	9.39	8.78	8.27
Global ex-U.S. Equity						
MSCI World ex USA	7.76	24.98	5.65	8.36	5.68	4.77
MSCI Emerging Markets	8.72	26.05	0.40	5.75	4.03	--
MSCI ACWI ex USA Small Cap	8.90	23.25	1.39	8.21	6.08	6.79
Fixed Income						
Bloomberg Aggregate	5.20	11.57	-1.39	0.33	1.84	4.06
90-day T-Bill	1.37	5.46	3.49	2.32	1.65	1.92
Bloomberg Long Gov/Credit	7.96	17.24	-6.17	-1.97	2.32	5.62
Bloomberg Global Agg ex-US	8.52	12.28	-4.42	-1.86	-0.50	2.62
Real Estate						
NCREIF Property	0.78	-3.47	0.87	3.26	5.88	7.67
FTSE Nareit Equity	16.09	34.74	5.07	5.46	7.83	10.08
Alternatives						
Cambridge Private Equity*	1.00	4.62	3.71	13.84	13.10	12.73
Cambridge Senior Debt*	1.19	7.51	6.40	6.92	6.76	4.33
HFRI Fund Weighted	2.92	12.73	4.05	7.43	5.12	6.10
Bloomberg Commodity	0.68	0.96	3.66	7.79	0.03	2.21
CPI-U	0.36	2.44	4.75	4.19	2.85	2.55

*Cambridge Private Equity and Cambridge Senior Debt data as of 6/30/24.

Returns greater than one year are annualized. Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

Callan Periodic Table of Investment Returns

As of October 30, 2024

Calendar Year Returns				Quarterly Returns			Monthly Returns	
2020	2021	2022	2023	1Q24	2Q24	3Q24	Oct	YTD 2024
Small Cap Equity 19.96%	Large Cap Equity 28.71%	Dev Non-U.S. Equity 17.34%	Large Cap Equity 26.29%	Large Cap Equity 10.56%	EM Equity 5.00%	Real Estate 16.07%	NCREIF ODCE Eq Wt Net -0.02%	Large Cap Equity 20.97%
Large Cap Equity 18.40%	Real Estate 26.09%	EM Equity 9.70%	Dev Non-U.S. Equity 18.24%	Dev Non-U.S. Equity 5.78%	Large Cap Equity 4.28%	Small Cap Equity 9.27%	High Yield -0.54%	EM Equity 11.66%
EM Equity 18.31%	NCREIF ODCE Eq Wt Net 21.88%	Large Cap Equity 7.56%	Small Cap Equity 16.93%	Small Cap Equity 5.18%	High Yield 1.09%	EM Equity 8.72%	Large Cap Equity -0.91%	Small Cap Equity 9.56%
Dev Non-U.S. Equity 7.82%	Small Cap Equity 14.82%	Real Estate 6.85%	High Yield 13.44%	EM Equity 2.37%	Interm. Fixed Income 0.64%	Dev Non-U.S. Equity 7.26%	Small Cap Equity -1.44%	High Yield 7.42%
U.S. Fixed Income 7.51%	Dev Non-U.S. Equity 11.26%	Small Cap Equity 6.23%	EM Equity 9.83%	High Yield 1.47%	U.S. Fixed Income 0.07%	Large Cap Equity 5.89%	Interm. Fixed Income -1.60%	Dev Non-U.S. Equity 6.85%
High Yield 7.11%	High Yield 5.28%	High Yield 4.17%	Real Estate 9.67%	Interm. Fixed Income -0.15%	Dev Non-U.S. Equity -0.42%	High Yield 5.28%	U.S. Fixed Income -2.48%	Real Estate 6.09%
Interm. Fixed Income 6.43%	Interm. Fixed Income -1.44%	U.S. Fixed Income 1.87%	U.S. Fixed Income 5.53%	U.S. Fixed Income -0.78%	NCREIF ODCE Eq Wt Net -0.82%	U.S. Fixed Income 5.20%	EM Equity -4.45%	Interm. Fixed Income 3.00%
NCREIF ODCE Eq Wt Net 0.75%	U.S. Fixed Income -1.54%	Interm. Fixed Income 1.54%	Interm. Fixed Income 5.24%	Real Estate -1.30%	Real Estate -2.43%	Interm. Fixed Income 4.17%	Real Estate -5.08%	U.S. Fixed Income 1.86%
Real Estate -9.04%	EM Equity -2.54%	NCREIF ODCE Eq Wt Net -5.08%	NCREIF ODCE Eq Wt Net -13.33%	NCREIF ODCE Eq Wt Net -2.38%	Small Cap Equity -3.28%	NCREIF ODCE Eq Wt Net -0.07%	Dev Non-U.S. Equity -5.44%	NCREIF ODCE Eq Wt Net -3.27%

Sources: ● S&P 500 ● Russell 2000 ● MSCI EAFE ● MSCI Emerging Markets ● Bloomberg U.S. Aggregate ● Bloomberg Corp High Yield
● Bloomberg Multiverse ● NCREIF ODCE Equal Weight Net ● FTSE EPRA/NAREIT Developed

U.S. Equity Market: Key Metrics

S&P 500 valuation measures

S&P 500 Index: Forward P/E Ratio

Valuation Measure	Latest	30-year Average	Std Dev Over-/Under-valued
Forward P/E	22.20x	16.80x	1.66
Shiller's P/E	35.08x	28.06x	1.15
Dividend yield	1.29%	1.98%	1.94
Price to book	4.61x	3.19x	1.71
Price to cash flow	16.99x	11.30x	2.40
EY minus Baa yield	-1.01%	0.05%	0.57



Forward P/E (22.20) is more than one standard deviation above its long-term average (16.80).

Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, S&P Dow Jones Indices, Thomson Reuters, J.P. Morgan Asset Management.

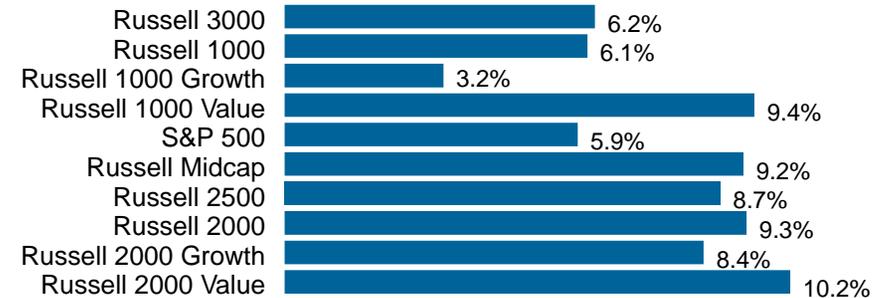
Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1997 and by FactSet since January 2022. Current next 12 months consensus earnings estimates are \$231. Average P/E and standard deviations are calculated using 25 years of history. Shiller's P/E uses trailing 10 years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12 months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF are since November 1995 due to data availability. Guide to the Markets – U.S. Data are as of September 30, 2024

U.S. Equity Performance: 3Q24

U.S. market reaches record high after spike in volatility

- The U.S. equity market initially had a disappointing start to the third quarter as the S&P 500 Index dropped during the month of July.
- But the market rallied in the last months of 3Q to end the quarter at a record high.
- All sectors within the S&P 500 posted positive returns over the quarter except for the Energy sector. As a result of the Fed's rate cut decision, the "bond proxy" sectors (i.e., Real Estate and Utilities) performed the best.
- During 3Q, value outperformed growth across the market cap spectrum. Small cap stocks outperformed large cap stocks.
- Narrow leadership continues to be an issue for U.S. stocks. Year-to-date, the "Magnificent Seven" stock returns accounted for 45% of the returns of the S&P 500 Index.

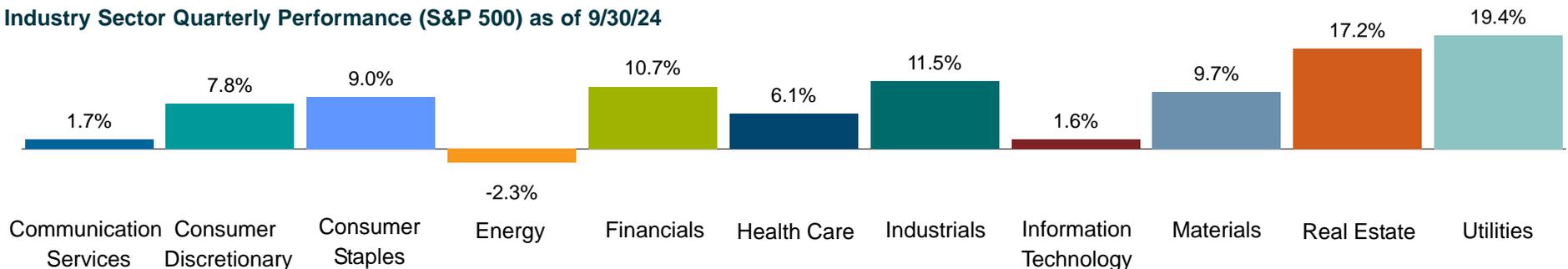
U.S. Equity: Quarter Ended 9/30/24



U.S. Equity: One Year Ended 9/30/24



Industry Sector Quarterly Performance (S&P 500) as of 9/30/24



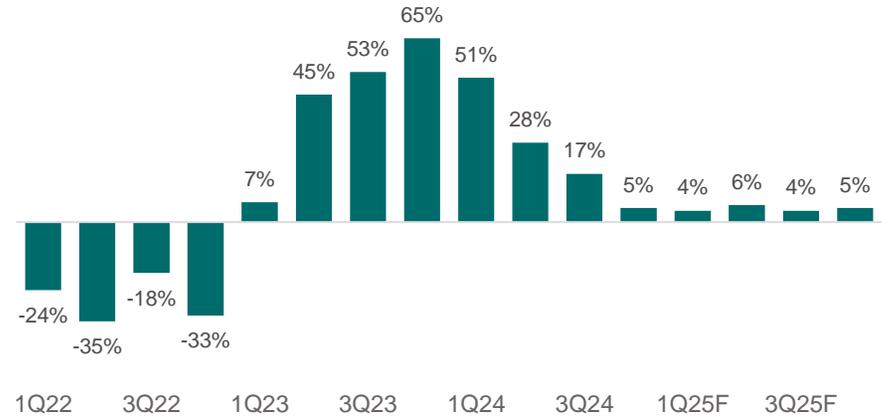
Sources: FTSE Russell, S&P Dow Jones Indices

U.S. Equity Key Theme

Top performers have broadened out from the mega cap growth stocks

- The “Magnificent Seven” stocks experienced increased volatility and mixed results in 3Q. Four of these stocks underperformed the S&P 500 Index.
- Better earnings growth expectations for the market relative to the “Magnificent Seven” could result in broader market leadership.
- Although the long-term trend may have reversed in the last quarter, a large percentage of S&P 500 Index returns since 2021 are attributable to the “Magnificent Seven.”

Earnings Growth Gap Between the Magnificent Seven and the Rest of the S&P 500 (y/y quarterly earnings growth)



Magnificent Seven Return Contribution (S&P 500): 2021-3Q24

Returns	2021	2022	2023	YTD 2024
Magnificent Seven	40%	-40%	76%	35%
—Share of returns	33%	56%	63%	45%
S&P 500 ex-Mag Seven	17%	-8%	8%	11%
—Share of returns	67%	44%	37%	55%

Magnificent Seven Absolute Returns: 3Q24

Stock	3Q Total Return
Tesla	32.22%
Meta Platforms	13.53%
Apple	10.58%
NVIDIA	-1.70%
Amazon.com	-3.58%
Microsoft	-3.77%
Alphabet	-8.96%
S&P 500	5.89%

Sources: FactSet, J.P. Morgan, Westfield Capital

Global/Global ex-U.S. Equity Performance: 3Q24

Non-U.S. markets outpace U.S. as technology sector lags

Broad market

- Global equity markets rose while central banks began easing monetary policy and cutting interest rates.
- Market gains broadened to include more value stocks and underperforming sectors.
- Non-U.S. markets outpaced U.S. markets as the technology sector, comprising a large portion of the U.S. market, faced pressure from AI spending scrutiny.
- Emerging markets outperformed developed markets with Asia being the strongest region within emerging markets.

Emerging markets

- China led a sharp rally higher in emerging markets after the Chinese government announced extensive stimulus measures aimed at tackling weakening economic activity, deflation, and its deteriorating property market.

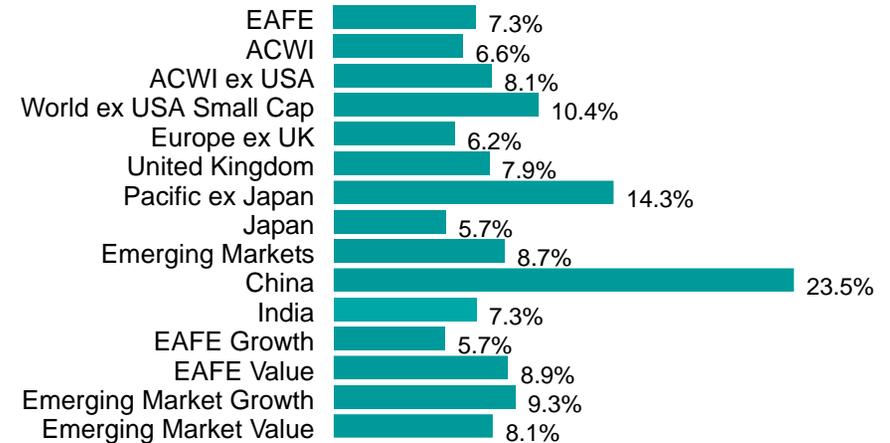
Growth vs. value

- Generally, value-oriented sectors led markets higher as the Technology sector lagged on growth concerns. One exception was China as stimulus announcements boosted beaten-down Chinese tech companies.

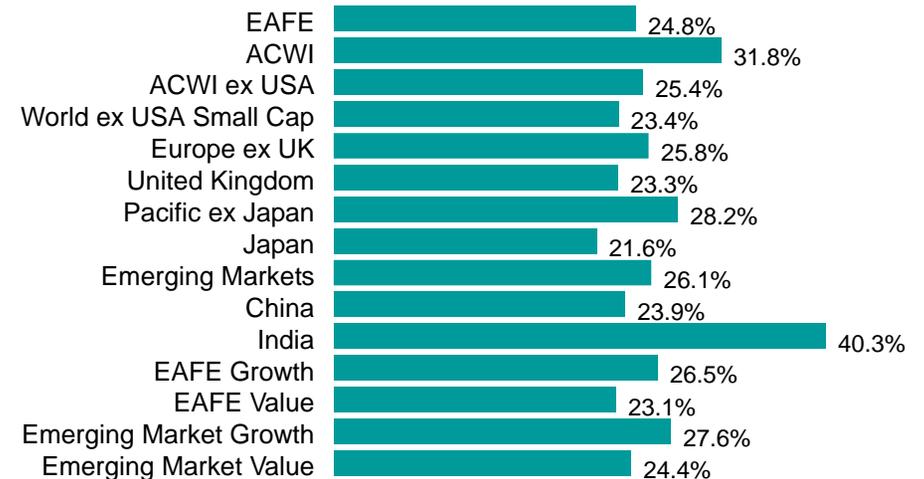
U.S. dollar strength

- The U.S. Dollar Index (DXY), declined over the third quarter amid a much-anticipated rate cut by the U.S. Federal Reserve.

Global Equity Returns: Quarter Ended 9/30/24



Global Equity Returns: One Year Ended 9/30/24



Source: MSCI

International Equity Valuations and Dividend Yields

Dividend yields of non-U.S. companies continue to rise compared to the U.S.

International: Price-to-earnings discount vs. U.S.

MSCI All Country World ex-U.S. vs. S&P 500, next 12 months



International: Difference in dividend yields vs. U.S.

MSCI All Country World ex-U.S. minus S&P 500, next 12 months



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. J.P. Morgan Guide to the Markets – U.S. Data are as of September 30, 2024.

U.S. Fixed Income Performance: 3Q24

U.S. taxable bond markets rallied in 3Q

Macro environment

- The Fed lowered rates for the first time since 2020, reducing its overnight target by 50 bps; Fed “dot plot” currently indicates two more cuts by year-end.
- U.S. Treasuries fell across the curve; 10-year Treasury yield declined to 3.81% from 4.36% at the beginning of the quarter.
- The yield curve took a step toward normalization with the 2s/10s ending positive, though rates at the front-end remain elevated vs. intermediate- and long-term.

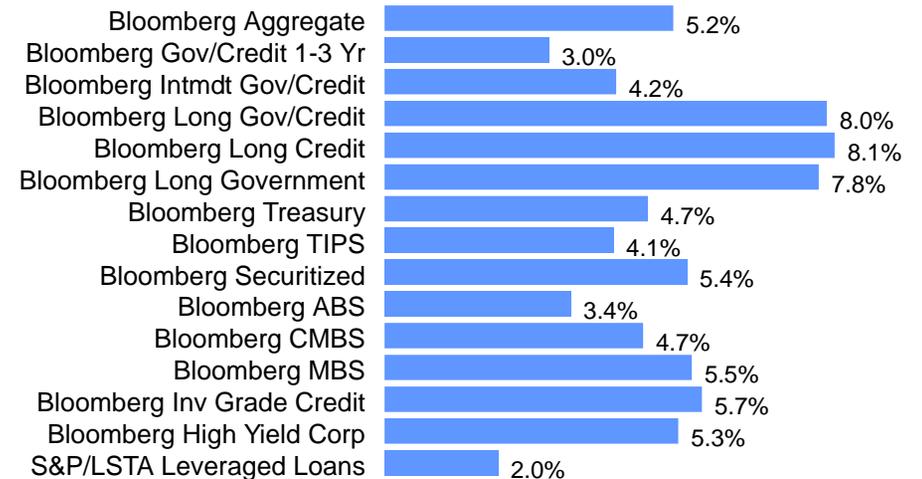
Performance and drivers

- Bloomberg U.S. Aggregate Bond Index gained 5.2%, the second-best quarter in nearly 30 years, led by the rally in rates.
- Investment grade corporates and all securitized sectors outperformed U.S. Treasuries on a duration-adjusted basis.
- High yield corporate excess returns (+1.7%) outpaced investment grade corporates excess returns (+0.8%).

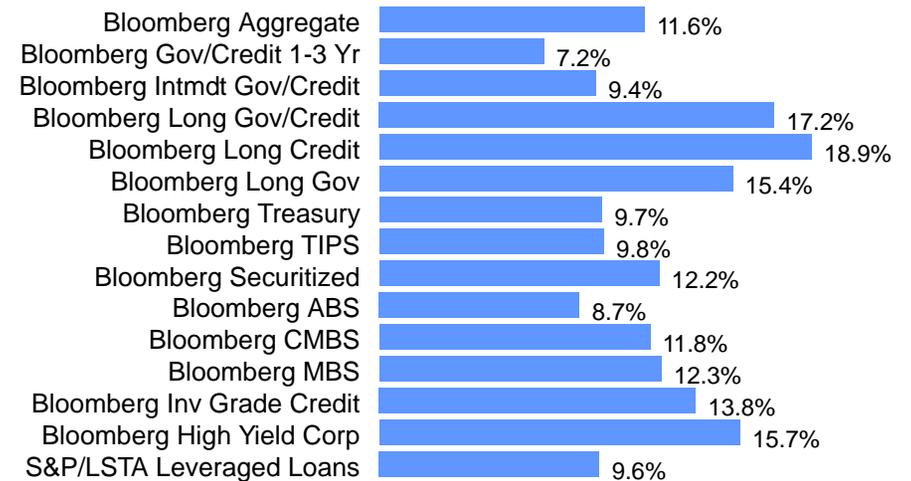
Valuations

- Despite significant widening in late July, both IG and HY spreads ended tighter over the quarter.
- HY defaults declined to 1.8%, while bank loans increased to 3.1%, widening the gap between them to the highest since 2014.
- New issuance continued to be strong, adding \$424 billion in IG and \$78 billion in HY debt.

U.S. Fixed Income Returns: Quarter Ended 9/30/24



U.S. Fixed Income Returns: One Year Ended 9/30/24



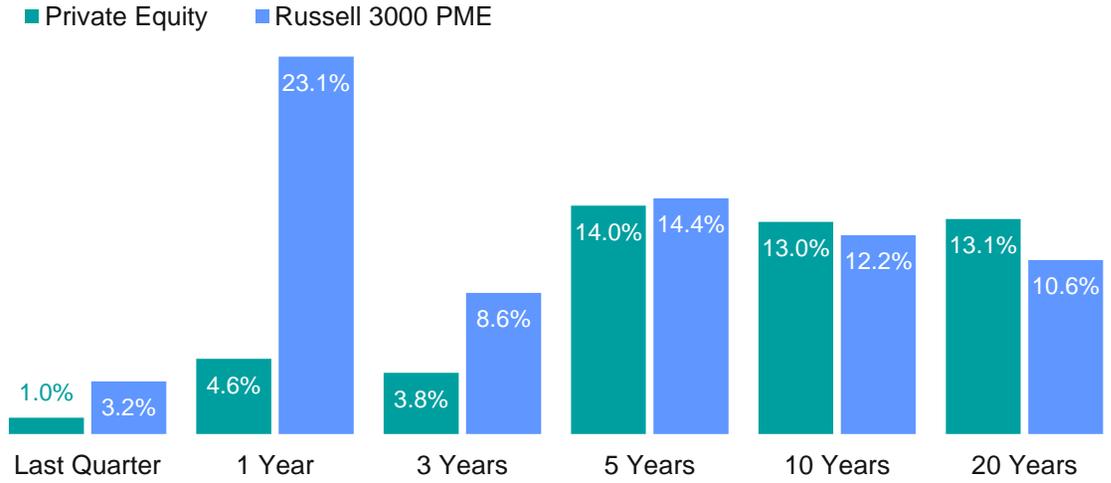
Sources: Bloomberg, Callan, S&P Dow Jones Indices, J.P. Morgan, SIFMA

Private Equity Trends

Performance

- Public equity’s exceptional performance in the first half of the year (led by the “Magnificent Seven” technology stocks) has left private equity in its wake.
- Private equity returns are not as volatile as the public markets, and private equity doesn’t typically outperform when public equity is at record highs (it likewise doesn’t drop as sharply when public equity drops).
- Over the long term, private equity has outperformed public equity by 1%-3%.
- By strategy, buyouts continue to see solid short-term performance, while venture capital and growth equity have experienced a bumpier recovery from the tech downturn of 2022-23.

Net IRRs as of 6/30/24



Net IRRs by Strategy as of 6/30/2024

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	-0.8%	-1.3%	-3.2%	14.7%	15.0%	12.4%
Growth Equity	1.4%	4.1%	0.2%	13.4%	13.0%	13.4%
Buyouts	1.4%	6.6%	6.8%	14.8%	13.3%	14.0%
Mezzanine	2.3%	9.4%	9.3%	11.2%	10.9%	11.3%
Credit Opportunities	1.8%	8.5%	7.6%	8.5%	7.2%	9.2%
Control-Oriented Distressed	0.6%	2.8%	9.0%	13.4%	10.7%	11.3%
Private Equity	1.0%	4.6%	3.8%	14.0%	13.0%	13.1%

Source: LSEG/Cambridge. PME: Public Market Equivalent

U.S. Private Real Estate Performance: 3Q24

Sector appreciation turns positive, outside of office

Valuations reflect higher interest rates

- After eight consecutive quarters of negative returns, valuations have adjusted to reflect higher borrowing costs.
- Income returns were positive across sectors and regions.
- All property sectors experienced flat or positive appreciation, except for Office.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	0.0%	-8.0%	-1.0%	2.1%	5.2%
Income	0.8%	3.2%	2.8%	2.9%	3.2%
Appreciation	-0.8%	-10.9%	-3.8%	-0.9%	1.9%
NCREIF Property Index	0.8%	-3.5%	0.9%	3.3%	5.9%
Income	1.2%	4.7%	4.3%	4.3%	4.5%
Appreciation	-0.4%	-7.9%	-3.3%	-1.0%	1.3%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type

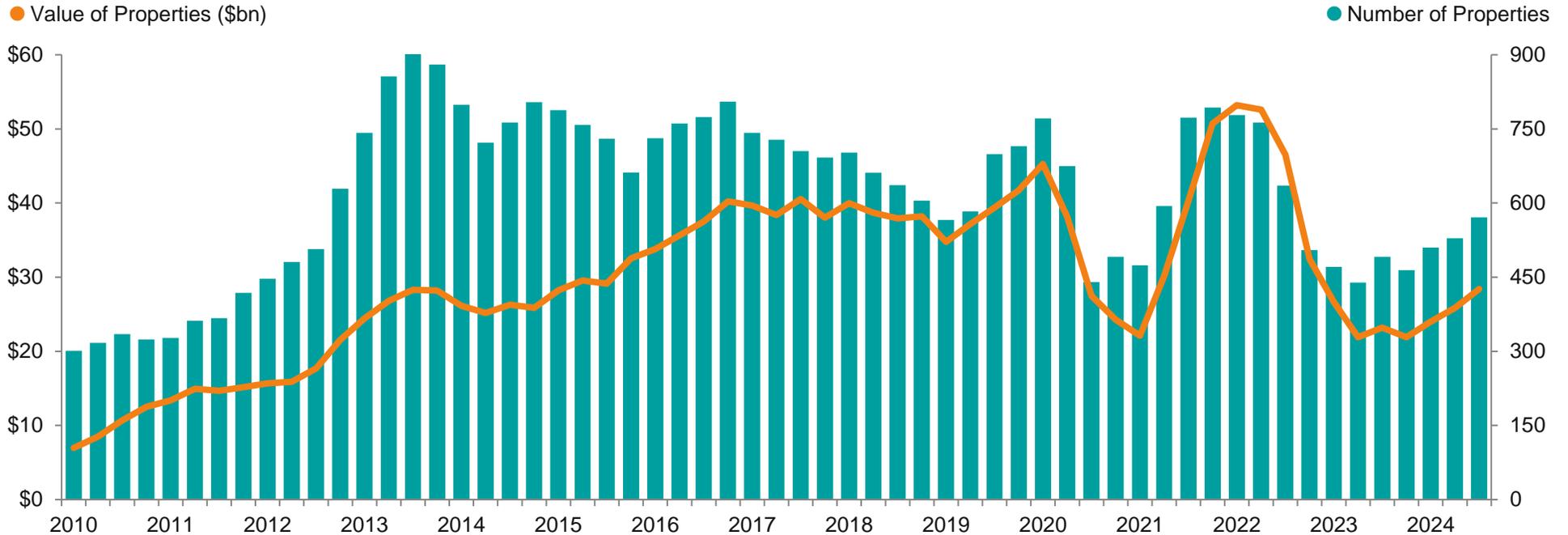


Source: NCREIF; ODCE return is net

U.S. Private Real Estate Market Trends

Pricing and transaction volumes are increasing after bottoming

NCREIF Property Index Rolling 4-Quarter Transaction Totals



- ▶ Transaction volume is increasing on a rolling four-quarter basis yet remains below five-year averages.
- ▶ In 3Q24, transaction volume increased slightly on a quarter-over-quarter basis. Transaction volume remains significantly lower compared to 2022.
- ▶ The volatile rise in interest rates is the driving force behind the slowdown in transactions. Increasing transactions are driven by increasing confidence in multi-family and industrial values. Valuations have largely adjusted to increased borrowing costs.

Source: NCREIF

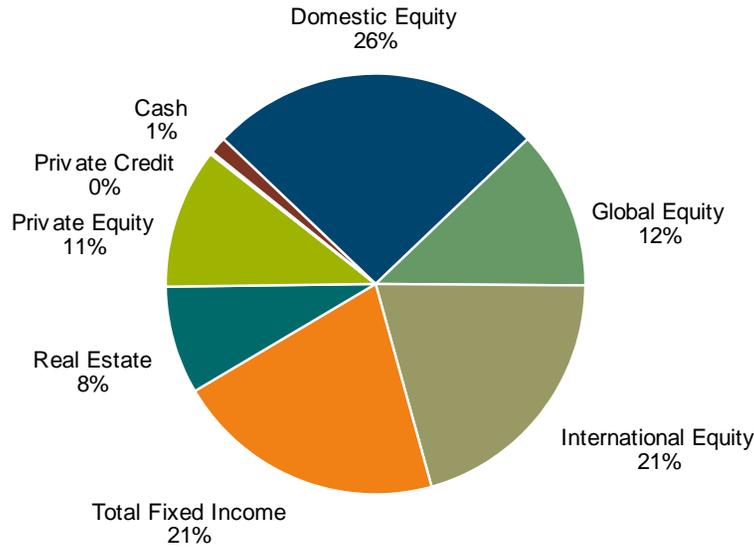
PERS Portfolio Review

3Q 2024

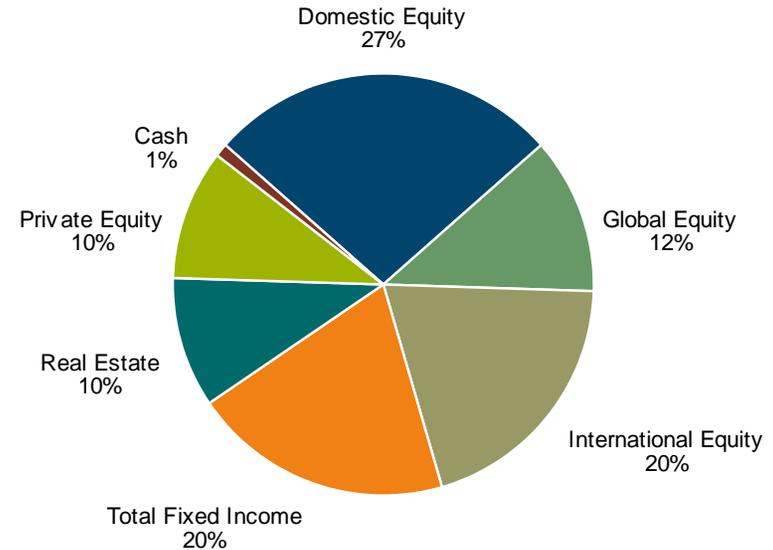
PERS Asset Allocation Versus Policy Target

As of September 30, 2024

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	9,100,609	25.8%	27.0%	(1.2%)	(434,710)
Global Equity	4,314,952	12.2%	12.0%	0.2%	77,033
International Equity	7,282,336	20.6%	20.0%	0.6%	219,137
Total Fixed Income	7,336,070	20.8%	20.0%	0.8%	272,871
Real Estate	2,930,756	8.3%	10.0%	(1.7%)	(600,843)
Private Equity	3,826,590	10.8%	10.0%	0.8%	294,991
Private Credit	82,205	0.2%	0.0%	0.2%	82,205
Cash	442,476	1.3%	1.0%	0.3%	89,316
Total	35,315,994	100.0%	100.0%		

► Overall, the PERS asset allocation was in line with its strategic target allocation.

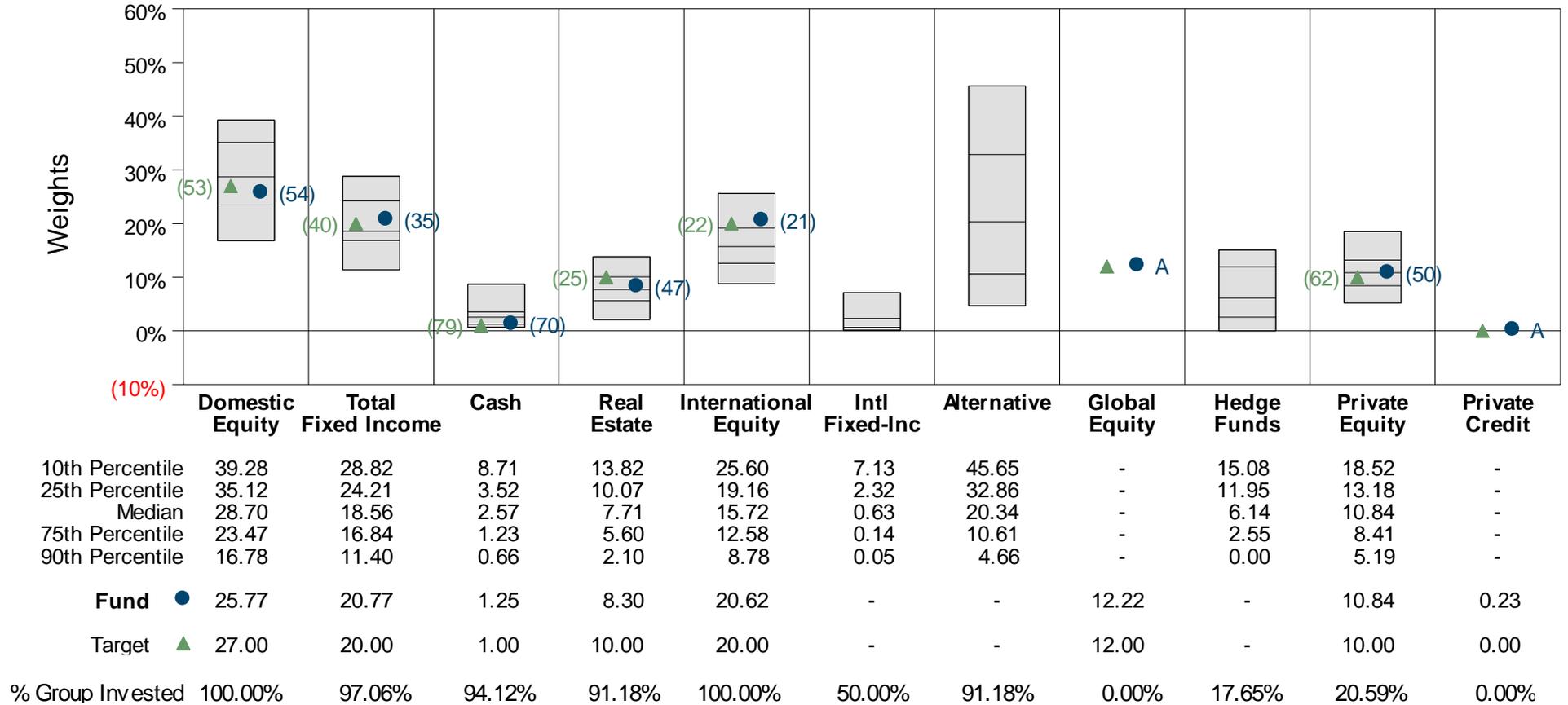
- Underweight allocations to Real Estate (-1.7%) and Domestic Equity (-1.2%) were offset by overweight allocations to the System's other asset classes.

Note: The Target Asset Allocation represents the legacy policy target weights. The legacy allocation target and Total Fund Benchmark will be maintained until the new asset classes have been more fully funded.

PERS Asset Allocation Versus Peers

As of September 30, 2024

Asset Class Weights vs Callan Public Fund Spons- V Lg DB (>10B)



Note: The global equity and private credit asset classes do not have enough members in the Callan Public Fund Sponsor – Very Large (>\$10B) Database to populate peer rankings.

PERS Asset Class Cash Flows

As of September 30, 2024

	September 30, 2024		Net New Inv.	Inv. Return	June 30, 2024	
	Market Value	Weight			Market Value	Weight
Domestic Equity	\$9,100,608,594	25.77%	\$(4,111,679)	\$504,696,710	\$8,600,023,563	25.50%
Global Equity	\$4,314,952,287	12.22%	\$(3,949,941)	\$211,348,403	\$4,107,553,825	12.18%
International Equity	\$7,282,335,676	20.62%	\$(5,180,199)	\$545,988,707	\$6,741,527,167	19.99%
Total Fixed Income	\$7,336,070,104	20.77%	\$(3,473,382)	\$310,712,451	\$7,028,831,035	20.84%
Real Estate	\$2,930,756,403	8.30%	\$(87,153,647)	\$74,483,764	\$2,943,426,286	8.73%
Private Equity	\$3,826,590,213	10.84%	\$(155,382,450)	\$52,051,452	\$3,929,921,211	11.65%
Private Credit	\$82,204,736	0.23%	\$38,100,734	\$873,366	\$43,230,637	0.13%
Cash	\$442,476,027	1.25%	\$104,161,775	\$4,108,293	\$334,205,958	0.99%
Total Fund	\$35,315,994,040	100.00%	\$(117,439,034)	\$1,704,713,392	\$33,728,719,682	100.00%

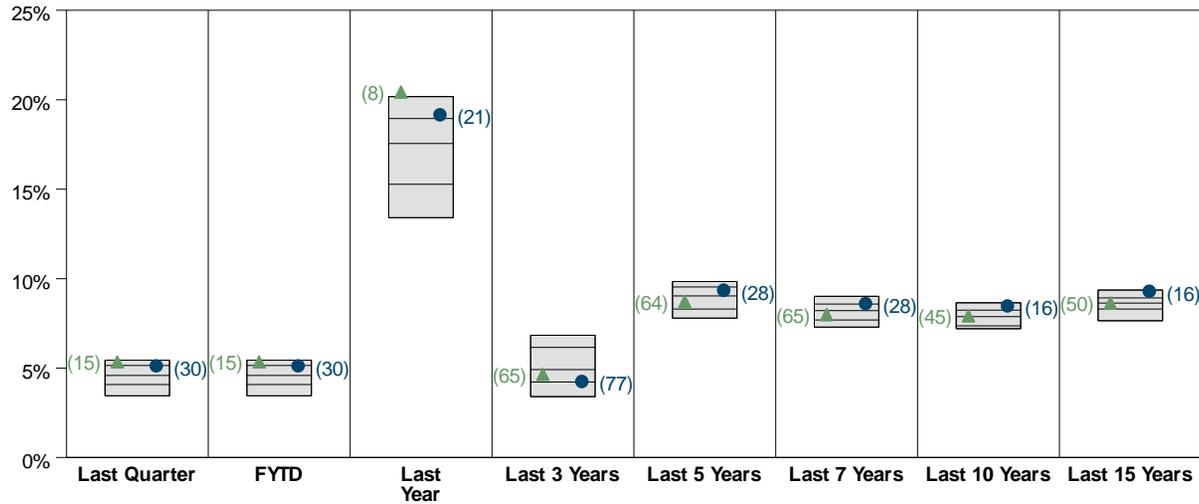
► PERS Total Fund assets stood at \$35.3 billion at the end of September, an increase of approximately \$1.6 billion from the end of 2Q.

- A positive investment return increased the market value of assets by approximately \$1.7 billion.
- Net outflows reduced assets by approximately \$117.4 million.

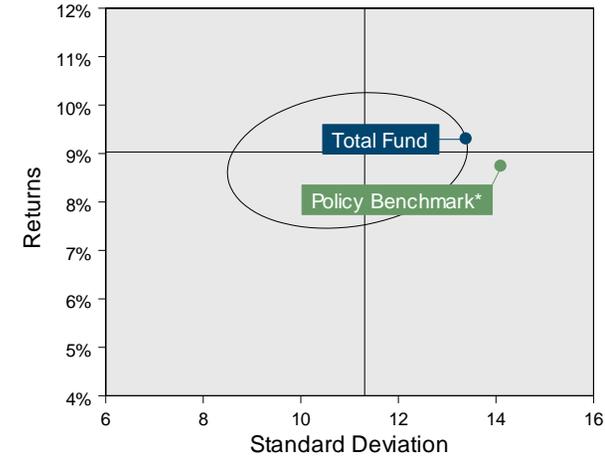
PERS Total Fund Summary Dashboard

As of September 30, 2024

Performance vs Callan Public Fd V Lg DB (Gross)



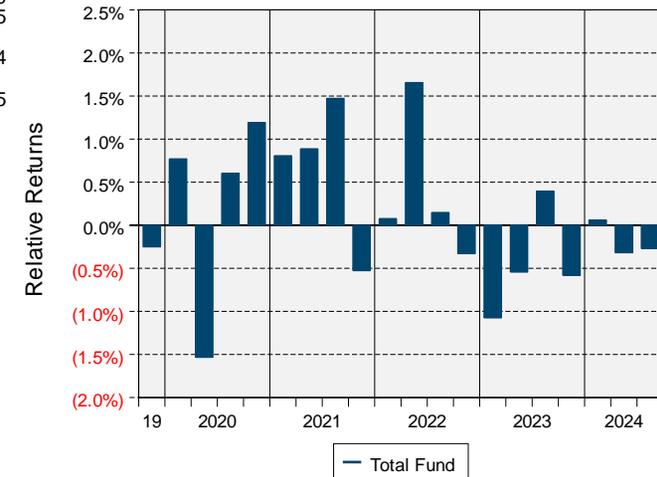
Callan Public Fd V Lg DB (Gross) Annualized Five Year Risk vs Return



10th Percentile	5.44	5.44	20.18	6.83	9.84	9.01	8.65	9.36
25th Percentile	5.14	5.14	18.95	6.16	9.54	8.58	8.24	8.92
Median	4.59	4.59	17.55	4.92	9.03	8.21	7.88	8.64
75th Percentile	4.08	4.08	15.28	4.22	8.31	7.69	7.36	8.30
90th Percentile	3.45	3.45	13.41	3.40	7.80	7.29	7.21	7.65
Total Fund ●	5.06	5.06	19.10	4.19	9.29	8.55	8.42	9.24
Policy Benchmark* ▲	5.35	5.35	20.43	4.66	8.73	7.99	7.93	8.65

- ▶ During the third quarter, the PERS Total Fund returned 5.1% (gross of fees) compared with 5.4% for its Policy Benchmark and ranked in the 30th percentile relative to peers.*
- ▶ For the last year, the PERS Total Fund returned 19.1% (gross of fees) versus 20.4% for the Policy Benchmark and ranked in the 21st percentile.
- ▶ The PERS Total Fund outperformed its Policy Benchmark over the trailing five-, seven-, ten-, and fifteen-year periods and ranked above the peer group median over periods beyond three years.

Relative Return vs Policy Benchmark*



*Percentile rankings are based on PERS' gross of fees performance relative to a universe of gross of fees peer returns (public defined benefit plans with assets greater than \$10 billion).

PERS Asset Class Performance – Gross of Fees

As of September 30, 2024

	Market Value \$(000)	Ending Weight	Last Quarter/ Fiscal YTD	Last Year	Last 3 Years
Domestic Equity	\$9,100,609	25.77%	5.87%	32.39%	9.36%
Domestic Equity Benchmark	-	-	6.23%	35.19%	10.29%
Global Equity	\$4,314,952	12.22%	5.15%	30.16%	6.54%
Global Equity Benchmark	-	-	6.84%	30.96%	7.44%
International Equity	\$7,282,336	20.62%	8.10%	26.07%	3.69%
International Equity Benchmark	-	-	8.18%	25.06%	3.74%
Total Fixed Income	\$7,336,070	20.77%	4.42%	12.63%	(0.63%)
Total Fixed Income Benchmark	-	-	5.20%	11.57%	(1.39%)
Real Estate	\$2,930,756	8.30%	2.56%	(3.52%)	(0.35%)
Real Estate Benchmark	-	-	0.78%	(3.47%)	0.87%
Private Equity	\$3,826,590	10.84%	1.36%	4.05%	4.49%
Private Equity Benchmark	-	-	1.00%	4.43%	1.32%
Private Credit	\$82,205	0.23%	1.44%	-	-
Private Credit Benchmark	-	-	1.82%	-	-
Cash Composite	\$442,476	1.25%	1.39%	5.44%	3.81%
Cash Benchmark	-	-	1.36%	5.56%	3.57%
Total Fund	\$35,315,994	100.00%	5.06%	19.10%	4.19%
Total Fund Benchmark	-	-	5.35%	20.43%	4.66%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are **gross of fees**.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

PERS Asset Class Performance – Gross of Fees (Continued)

As of September 30, 2024

	Last 5 Years	Last 10 Years	Last 15 Years
Domestic Equity	14.99%	12.40%	13.66%
Domestic Equity Benchmark	15.26%	12.83%	13.80%
Global Equity	11.67%	9.77%	10.26%
Global Equity Benchmark	11.87%	9.15%	-
International Equity	8.59%	6.12%	6.36%
International Equity Benchmark	7.66%	5.33%	5.58%
Total Fixed Income	1.18%	2.82%	3.82%
Total Fixed Income Benchmark	0.33%	1.84%	2.82%
Real Estate	3.11%	6.35%	7.96%
Real Estate Benchmark	3.26%	5.88%	7.74%
Private Equity	15.07%	15.18%	13.38%
Private Equity Benchmark	10.60%	12.35%	15.04%
Cash Composite	2.44%	1.73%	1.19%
Cash Benchmark	2.31%	1.61%	-
Total Fund	9.29%	8.42%	9.24%
Total Fund Benchmark	8.73%	7.93%	8.65%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity	\$9,100,608,594	25.77%	5.87%	32.39%	9.36%	14.99%	12.40%
Russell 3000 Index	-	-	6.23%	35.19%	10.29%	15.26%	12.83%
Pub Pln- Dom Equity	-	-	6.59%	33.63%	9.74%	14.46%	12.36%
Large Cap Equity	\$6,914,161,238	19.58%	5.42%	36.00%	11.64%	15.96%	13.04%
Russell 1000 Index	-	-	6.08%	35.68%	10.83%	15.64%	13.10%
Callan Large Cap	-	-	5.17%	34.31%	10.37%	14.98%	13.06%
Managed Large Cap Equity	\$878,384,594	2.49%	2.42%	33.92%	9.86%	16.10%	12.46%
Callan Large Cap Core	-	-	5.09%	36.59%	12.16%	16.01%	13.20%
Eagle Capital	878,384,594	2.49%	2.42%	33.92%	9.86%	16.10%	13.60%
S&P 500 Index	-	-	5.89%	36.35%	11.91%	15.98%	13.38%
Callan Large Cap Core	-	-	5.09%	36.59%	12.16%	16.01%	13.20%
Northern Trust S&P 500	\$6,035,776,643	17.09%	5.87%	36.26%	11.93%	15.96%	13.35%
S&P 500 Index	-	-	5.89%	36.35%	11.91%	15.98%	13.38%
Callan Large Cap Core	-	-	5.09%	36.59%	12.16%	16.01%	13.20%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
Mid Cap Equity	\$1,121,816,393	3.18%	6.22%	87	22.25%	83	3.06%	84	11.52%	52	9.77%	63
Russell MidCap Index	-	-	9.21%	22	29.33%	36	5.75%	77	11.30%	60	10.19%	60
Callan Mid Cap Core	-	-	8.17%		26.21%		7.64%		12.03%		10.90%	
Artisan Partners	516,829,813	1.46%	2.81%	88	17.43%	86	(4.88%)	86	10.46%	57	10.86%	56
Russell MidCap Growth Idx	-	-	6.54%	31	29.33%	16	2.32%	18	11.48%	38	11.30%	38
Callan Mid Cap Growth	-	-	5.62%		24.35%		0.06%		10.60%		10.91%	
Victory Mid Cap Value	604,972,618	1.71%	9.32%	45	27.01%	53	-		-		-	
Russell MidCap Value Idx	-	-	10.08%	29	29.01%	26	7.39%	73	10.33%	81	8.93%	68
Callan Mid Cap Value	-	-	9.08%		27.36%		9.37%		12.07%		9.79%	
Small Cap Equity	\$1,064,630,963	3.01%	8.50%	55	20.71%	87	3.28%	72	11.58%	46	11.23%	24
Russell 2000 Index	-	-	9.27%	38	26.76%	46	1.84%	85	9.39%	83	8.78%	87
Callan Small Cap Core	-	-	8.90%		26.47%		5.03%		11.26%		10.33%	
Dimensional Fund Advisors	358,277,052	1.01%	7.82%	71	23.95%	63	10.64%	15	15.60%	7	10.12%	30
Russell 2000 Value Index	-	-	10.15%	24	25.88%	41	3.77%	89	9.29%	79	8.22%	94
Callan Small Cap Value	-	-	8.37%		24.70%		7.04%		11.07%		9.53%	
Wellington Small Cap	371,599,920	1.05%	10.57%	15	27.34%	35	6.56%	27	10.86%	58	11.72%	13
Russell 2000 Index	-	-	9.27%	38	26.76%	46	1.84%	85	9.39%	83	8.78%	87
Callan Small Cap Core	-	-	8.90%		26.47%		5.03%		11.26%		10.33%	
Riverbridge Partners	334,753,991	0.95%	7.01%	53	11.08%	98	(7.42%)	95	7.78%	93	11.12%	57
Russell 2000 Growth Index	-	-	8.41%	28	27.66%	50	(0.35%)	53	8.82%	81	8.95%	98
Callan Small Cap Growth	-	-	7.04%		27.85%		0.20%		11.16%		11.32%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
Global Equity	\$4,314,952,287	12.22%	5.15%	65	30.16%	54	6.54%	61	11.67%	60	9.77%	62
Global Equity Benchmark (2)	-	-	6.84%	32	30.96%	51	7.44%	53	11.87%	56	9.15%	75
Acadian Global Equity	1,075,884,519	3.05%	2.84%	95	33.57%	28	9.89%	24	15.35%	10	10.46%	45
Epoch Investments	1,078,026,593	3.05%	5.16%	65	28.08%	63	6.04%	66	10.00%	86	8.89%	76
Harding-Loevner	1,087,167,538	3.08%	5.32%	61	31.25%	49	1.94%	91	11.66%	60	10.67%	40
LSV Global Value	1,069,376,568	3.03%	7.39%	23	27.62%	67	-	-	-	-	-	-
MSCI ACWI Index	-	-	6.61%	34	31.76%	43	8.09%	48	12.19%	53	9.39%	71
Callan Global Equity	-	-	5.74%	-	31.23%	-	7.75%	-	12.40%	-	10.30%	-
International Equity	\$7,282,335,676	20.62%	8.10%	21	26.07%	26	3.69%	63	8.59%	39	6.12%	58
International Equity Bnmk (3)	-	-	8.18%	18	25.06%	54	3.74%	61	7.66%	69	5.33%	83
International Eq Custom Bnmk (4)	-	-	8.15%	19	25.10%	50	3.46%	66	7.56%	69	5.36%	83
Pub Pln- Intl Equity	-	-	7.62%	-	25.11%	-	4.14%	-	8.42%	-	6.23%	-
All Country ex US	\$4,962,212,289	14.05%	7.63%	53	25.52%	47	3.50%	66	10.31%	27	7.70%	28
Arrowstreet Capital	719,492,910	2.04%	4.13%	93	25.95%	42	9.01%	12	14.41%	3	9.35%	12
Baillie Gifford	812,503,131	2.30%	9.94%	18	25.93%	43	(4.46%)	94	6.28%	90	6.20%	64
Marathon Asset Mgmt	916,875,558	2.60%	8.02%	45	23.60%	70	4.47%	55	8.75%	52	-	-
MSCI ACWI xUS IMI	-	-	8.18%	42	25.06%	55	3.74%	65	7.66%	76	5.33%	89
NT MSCI World ex US	2,513,340,690	7.12%	7.80%	49	25.35%	50	-	-	-	-	-	-
MSCI World xUS	-	-	7.76%	51	24.98%	57	5.65%	42	8.36%	62	5.68%	81
Non-U.S. Equity Database	-	-	7.79%	-	25.36%	-	4.90%	-	8.83%	-	6.65%	-

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

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The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index.

The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
Small Cap	\$729,231,341	2.06%	9.28%	44	21.52%	71	(1.55%) 60	4.60%	84	5.12%	90	
Principal Sm Cap Intl	374,394,233	1.06%	8.25%	66	22.34%	69	0.45% 48	5.60%	77	-	-	
Northern Trust Intl Small Cap	352,453,349	1.00%	10.36%	21	-	-	-	-	-	-	-	
MSCI World Small Cap x US	-	-	10.45%	21	23.36%	63	0.05% 52	6.85%	63	5.99%	81	
Callan Intl Small Cap	-	-	9.02%	-	24.75%	-	0.19%	8.12%	-	7.21%	-	
Emerging Markets	\$1,572,546,051	4.45%	9.10%	20	30.30%	13	4.32%	20	7.91%	28	4.67%	75
Lazard Emerging Markets	814,016,958	2.30%	9.79%	12	31.38%	9	8.41% 3	8.97%	15	5.09%	57	
Fisher Investments	758,529,093	2.15%	8.35%	30	29.17%	20	0.10% 50	6.58%	49	-	-	
MSCI Emerging Mkts Idx	-	-	8.72%	25	26.05%	43	0.40% 47	5.75%	63	4.03%	85	
Callan Emerging Broad	-	-	6.98%	-	24.82%	-	0.14%	6.50%	-	5.31%	-	
EAFE Composite (Terminated)	\$18,345,995	0.05%	-	-	-	-	-	-	-	-	-	
Total Equity	\$20,697,896,556	58.61%	6.49%	36	29.70%	56	6.78%	59	12.05%	55	9.70%	64
MSCI ACWI IMI Index	-	-	6.84%	32	30.96%	51	7.44% 53	11.87%	56	9.20%	75	
Total Equity Custom Bnmk (5)	-	-	7.05%	29	30.67%	52	7.41% 53	11.87%	56	9.45%	69	
Callan Global Equity	-	-	5.74%	-	31.23%	-	7.75%	12.40%	-	10.30%	-	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed-Income	\$4,997,705,496	14.15%	4.34%	12.11%	(1.01%)	1.08%	2.58%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Pub Pln- Dom Fixed	-	-	4.84%	12.04%	(0.32%)	1.49%	2.57%
Short Duration	\$1,196,292,956	3.39%	2.00%	6.71%	-	-	-
SIT Short Duration FI	1,196,292,956	3.39%	2.00%	6.71%	-	-	-
Blmbg Gov/Cred 1-3 Yr	-	-	2.96%	7.19%	1.50%	1.70%	1.64%
Callan Short Fixed Inc	-	-	3.02%	7.97%	2.05%	2.22%	2.11%
Core Fixed Income	\$1,397,562,589	3.96%	5.28%	12.69%	(0.99%)	0.68%	2.21%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Callan Core Bond FI	-	-	5.29%	12.34%	(0.97%)	0.91%	2.33%
PIMCO	700,792,035	1.98%	5.28%	12.81%	(0.93%)	0.79%	2.32%
Manulife Asset Management	696,770,696	1.97%	5.28%	12.51%	(1.17%)	0.72%	-
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Callan Core Bond FI	-	-	5.29%	12.34%	(0.97%)	0.91%	2.33%
Core Plus	\$2,403,849,950	6.81%	5.00%	13.05%	(0.64%)	1.65%	3.02%
Loomis Sayles	1,184,858,328	3.36%	4.88%	12.45%	(0.72%)	1.69%	2.78%
Prudential Core Plus	1,218,991,622	3.45%	5.11%	13.64%	(0.56%)	1.61%	3.26%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Callan Core Plus FI	-	-	5.38%	13.17%	(0.68%)	1.50%	2.78%
Emerging Markets Debt	\$752,167,950	2.13%	6.23%	19.33%	0.31%	1.94%	4.18%
Wellington EMD	752,167,950	2.13%	6.23%	19.33%	0.31%	1.94%	4.18%
EMBI Global Diversified Index	-	-	6.15%	18.60%	(0.40%)	0.87%	3.28%
Emerging Debt Database	-	-	6.54%	17.18%	1.60%	2.51%	3.45%
Global Fixed Income	\$1,586,196,659	4.49%	3.83%	10.99%	(0.15%)	0.95%	2.78%
PIMCO Global	789,848,512	2.24%	3.65%	10.78%	0.00%	1.16%	2.95%
AllianceBernstein Global	796,348,147	2.25%	4.01%	11.20%	(0.32%)	0.74%	2.60%
Blmbg Global Agg (Hedged)	-	-	4.24%	10.63%	(0.22%)	0.57%	2.33%
Callan Global FI (Hedged)	-	-	4.58%	11.67%	0.04%	1.25%	2.73%
Total Fixed Income	\$7,336,070,104	20.77%	4.42%	12.63%	(0.63%)	1.18%	2.82%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Total Fixed Inc Custom Bnmk (6)	-	-	5.05%	12.03%	(0.98%)	0.48%	2.09%
Pub Pln- Dom Fixed	-	-	4.84%	12.04%	(0.32%)	1.49%	2.57%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
REIT Composite	\$365,691,556	1.04%	16.75%	21	34.64%	7	4.42%	9	5.93%	12	8.07%	7
REIT Comp Custom Bnmk (7)	-	-	15.95%	50	31.97%	28	2.88%	18	3.41%	67	6.06%	62
Callan Global REITs	-	-	15.92%		31.12%		1.98%		3.96%		6.41%	
Centersquare	245,559,160	0.70%	17.38%	19	37.09%	22	6.21%	6	7.10%	31	-	
FTSE NAREIT Equity Index	-	-	16.09%	41	34.74%	36	5.07%	33	5.46%	70	7.83%	70
Callan Real Estate REIT	-	-	15.87%		33.71%		4.34%		6.37%		8.38%	
Cohen & Steers	120,132,396	0.34%	15.48%	62	30.65%	53	2.16%	35	4.46%	33	7.12%	24
EPRA/NAREIT Dev REIT Idx	-	-	16.33%	30	30.20%	59	1.37%	59	2.36%	82	5.04%	79
Callan Global REITs	-	-	15.92%		31.12%		1.98%		3.96%		6.41%	
Core Real Estate	\$1,567,501,818	4.44%	0.29%	52	(6.80%)	56	(1.45%)	69	1.35%	79	4.65%	74
Principal Capital (Net)	822,861,805	2.33%	(0.13%)	82	(5.06%)	37	(0.23%)	57	2.52%	57	6.07%	33
UBS Trumbull Property (Net)	360,204,414	1.02%	0.90%	15	(5.79%)	43	(2.56%)	81	(0.63%)	91	2.60%	91
JPMCB Strategic Property (Net)	384,435,599	1.09%	0.62%	26	(11.02%)	86	(2.83%)	85	0.91%	86	4.31%	81
NFI-ODCE Equal Weight Net	-	-	(0.07%)	81	(8.44%)	69	(1.06%)	67	2.33%	60	5.46%	61
NFI-ODCE Value Weight Net	-	-	0.02%	71	(8.04%)	67	(1.04%)	67	2.05%	67	5.16%	63
Callan OE Core Cmngld RE	-	-	0.34%		(6.32%)		0.20%		2.96%		5.75%	
Core Plus Real Estate	\$220,419,777	0.62%	0.57%	33	(11.89%)	90	(5.50%)	95	(0.48%)	91	5.52%	60
UBS Trumbull Property G&I (Net)	220,419,777	0.62%	0.57%	33	(11.89%)	90	(5.50%)	95	(0.48%)	91	5.52%	60
Callan OE Core Cmngld RE	-	-	0.34%		(6.32%)		0.20%		2.96%		5.75%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are **gross of fees**.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
Non-Core Real Estate	\$738,685,372	2.09%	1.48%	15	(6.86%)	61	2.70%	41	6.97%	39	11.10%	4
AEW Partners VII	3,879,989	0.01%	2.08%	6	2.33%	2	(2.27%)	74	(4.16%)	89	5.33%	62
AEW Partners VIII	11,799,006	0.03%	(0.35%)	76	9.64%	1	18.17%	1	18.52%	1	-	-
AEW Partners IX	63,196,253	0.18%	1.08%	20	7.35%	1	7.84%	12	-	-	-	-
Heitman VP IV	31,290,611	0.09%	0.52%	46	0.31%	14	7.57%	13	12.37%	12	-	-
Heitman VP V	62,571,517	0.18%	0.83%	34	(0.63%)	20	-	-	-	-	-	-
AG Core Plus IV	16,717,987	0.05%	(2.27%)	89	(14.19%)	85	(13.62%)	92	(4.22%)	89	-	-
AG Realty Fund X	49,718,048	0.14%	(3.09%)	91	(9.01%)	70	6.69%	20	13.55%	6	-	-
AG Realty Value Fd XI	22,982,660	0.07%	2.00%	7	1.60%	3	-	-	-	-	-	-
Invesco US Income Fund	163,067,081	0.46%	0.73%	36	(8.26%)	67	-	-	-	-	-	-
Invesco VA Fund IV	1,857,576	0.01%	(0.05%)	65	(36.52%)	97	(37.60%)	98	(21.95%)	96	-	-
Invesco VA Fund V	57,255,478	0.16%	(1.23%)	82	(27.90%)	94	(7.18%)	87	1.02%	70	-	-
Invesco Real Estate US Fund VI	37,631,058	0.11%	(2.22%)	89	(12.81%)	84	-	-	-	-	-	-
TA Associates Realty Fund XII	94,769,882	0.27%	(0.09%)	67	(3.74%)	38	15.62%	1	-	-	-	-
TA Associates Realty Fund XIII	41,951,491	0.12%	29.72%	1	-	-	-	-	-	-	-	-
Westbrook RE Fund X	13,215,247	0.04%	(4.83%)	96	(33.37%)	97	(12.45%)	91	(4.34%)	89	-	-
Westbrook RE Fund XI	64,217,052	0.18%	2.33%	4	7.36%	1	14.84%	1	-	-	-	-
NCREIF Total Index	-	-	0.78%	35	(3.47%)	35	0.87%	57	3.26%	51	5.88%	52
Callan Real Est Val Add	-	-	0.49%	-	(4.59%)	-	1.56%	-	3.33%	-	5.99%	-
Timber Composite	\$38,457,881	0.11%	4.76%	5	(4.32%)	43	0.57%	62	6.20%	47	6.35%	28
Hancock Timber Portfolio	38,457,881	0.11%	4.76%	5	(4.32%)	43	0.57%	62	6.20%	47	6.35%	28
NCREIF Timberland Index	-	-	1.53%	-	10.02%	-	10.86%	-	7.47%	-	5.90%	-
Total Real Estate	\$2,930,756,403	8.30%	2.56%	5	(3.52%)	43	(0.35%)	62	3.11%	47	6.35%	28
Real Estate Benchmark (8)	-	-	0.78%	24	(3.47%)	42	0.87%	54	3.26%	47	5.88%	42
Callan Tot Real Est DB	-	-	0.30%	-	(4.45%)	-	1.29%	-	2.84%	-	5.70%	-

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Gross of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
Private Equity	\$3,826,590,213	10.84%	1.36%	56	4.05%	67	4.49%	66	15.07%	8	15.18%	1
Pathway PEF XXIII Series 2008	211,121,219	0.60%	0.40%	77	0.44%	86	(4.45%)	96	10.27%	30	13.03%	2
Pathway PEF XXIII Series 2013	656,151,138	1.86%	(0.42%)	83	1.48%	82	0.23%	90	14.09%	10	13.98%	1
Pathway PEF XXIII Series 2016	1,288,379,787	3.65%	1.99%	51	7.05%	57	6.61%	47	18.81%	4	-	
Pathway PEF XXIII Series 2021	373,316,285	1.06%	2.32%	42	9.94%	42	5.51%	58	-		-	
Grosvenor Diversified Partners	127,023,279	0.36%	(2.77%)	88	(19.10%)	99	(6.35%)	97	2.43%	90	8.02%	18
Grosvenor Div Partners 2014 Ser	632,388,352	1.79%	1.48%	55	1.61%	80	8.79%	36	16.23%	6	11.75%	5
Grosvenor Div Partners 2018 Ser	527,376,140	1.49%	2.73%	31	10.49%	40	12.71%	19	14.19%	10	-	
Grosvenor Div Partners 2024 Ser	10,834,014	0.03%	-		-		-		-		-	
Private Equity Benchmark (9)	-	-	1.00%	59	4.43%	64	1.32%	87	10.60%	29	12.35%	4
Callan Alternative Inv DB	-	-	2.05%		8.67%		6.08%		8.35%		4.36%	
Private Credit	\$82,204,736	0.23%	1.44%	99	-	-	-	-	-	-	-	-
Blue Owl Lending Fd Series 20	51,801,723	0.15%	0.85%	100	-	-	-	-	-	-	-	-
Grosvenor Private Credit Series 2023	30,403,013	0.09%	1.72%	99	-	-	-	-	-	-	-	-
Private Credit Benchmark (10)	-	-	1.82%	99	-	-	-	-	-	-	-	-
Callan Multi-Sector Cr	-	-	3.82%		13.95%		4.10%		5.01%		5.33%	
Cash	\$442,476,027	1.25%	1.39%	70	5.44%	94	3.81%	22	2.44%	62	1.73%	81
1mo T-Bill	-	-	1.36%	83	5.56%	81	3.57%	54	2.31%	80	1.61%	92
Callan Cash Database	-	-	1.64%		5.94%		3.59%		2.51%		1.94%	
Total Fund	\$35,315,994,040	100.00%	5.06%	30	19.10%	21	4.19%	77	9.29%	28	8.42%	16
Policy Benchmark*	-	-	5.35%	15	20.43%	8	4.66%	65	8.73%	64	7.93%	45
Callan Public Fd V Lq DB	-	-	4.59%		17.55%		4.92%		9.03%		7.88%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Callan

Manager in Focus

TD Epoch Global Choice

Epoch Investment Partners (“TD Epoch”)

TD Epoch Global Choice

Background

- ▶ Epoch Investment Partners, Inc. (“TD Epoch”) is a global asset management firm headquartered in New York City that provides U.S., non-U.S., and global investment strategies for institutional and intermediary clients
- ▶ TD Epoch was formed in 2004 and has over 100 employees, including approximately 60 investment professionals
- ▶ In 2013, Epoch Investment Partners became a wholly-owned subsidiary of TD Bank
- ▶ TD Epoch has \$33.6 billion in total assets under management, including \$2.0 billion in the Global Choice strategy*
- ▶ The firm-wide investment approach is based on fundamental research seeking to identify companies that can grow free cash flow and allocate it effectively for the benefit of shareholders or have superior earnings growth
- ▶ The Global Choice strategy provides a concentrated global equity portfolio of 25 to 35 companies representing high conviction holdings, selected primary from other TD Epoch portfolios
- ▶ The strategy has the flexibility to invest across geographies as well as up and down the market capitalization spectrum

- ▶ PERS strategy AUM: \$1,078M as of September 30th (3.1% of Total Fund)
- ▶ PERS inception date: February 2012
- ▶ Benchmark: MSCI All-Country World Index (ACWI)
- ▶ Peer Group: Callan Global Equity

*Asset values as of June 30, 2024.

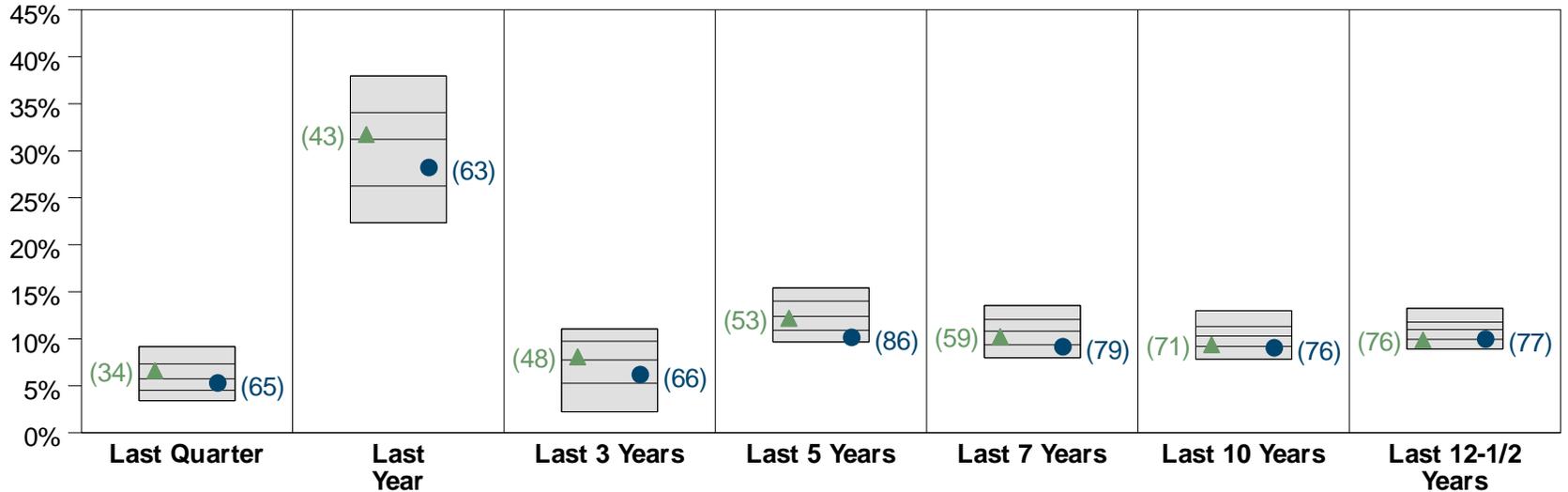
Inception date: February 2012.

Source: Callan LLC.

TD Epoch Global Choice

Historical performance and peer group rankings as of September 30, 2024

Performance vs Callan Global Equity (Gross)



10th Percentile	9.16	37.96	11.05	15.41	13.55	12.99	13.23
25th Percentile	7.33	34.06	9.73	14.01	12.06	11.30	11.78
Median	5.74	31.23	7.75	12.40	10.81	10.30	10.99
75th Percentile	4.52	26.26	5.26	10.91	9.36	9.18	9.94
90th Percentile	3.41	22.34	2.22	9.67	7.97	7.81	8.91
Epoch Investments ●	5.16	28.08	6.04	10.00	9.01	8.89	9.81
MSCI ACWI Index ▲	6.61	31.76	8.09	12.19	10.23	9.39	9.87

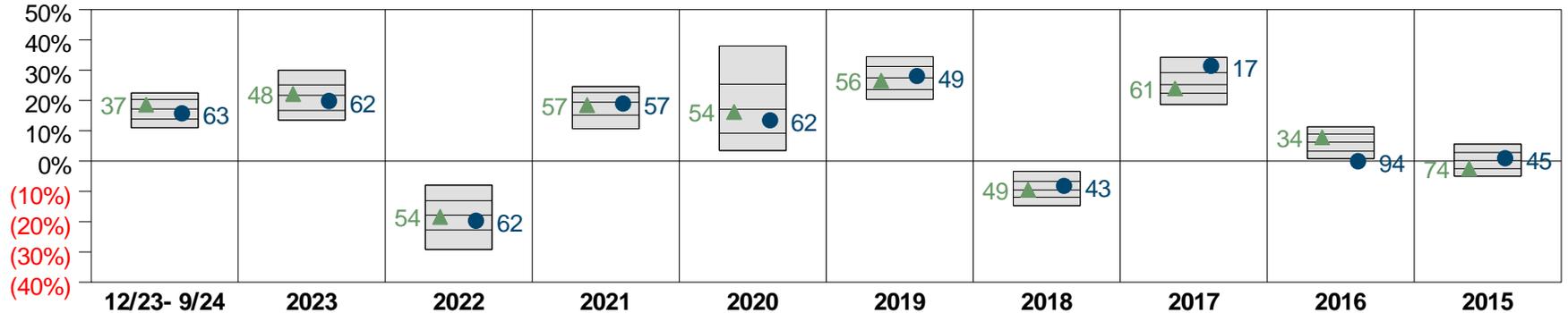
► As of September 30th, performance has lagged the benchmark and ranked below peer group median over both near- and long-term periods

Inception date: February 2012.
Source: Callan LLC.

TD Epoch Global Choice

Calendar year performance and peer group rankings as of September 30, 2024

Performance vs Callan Global Equity (Gross)



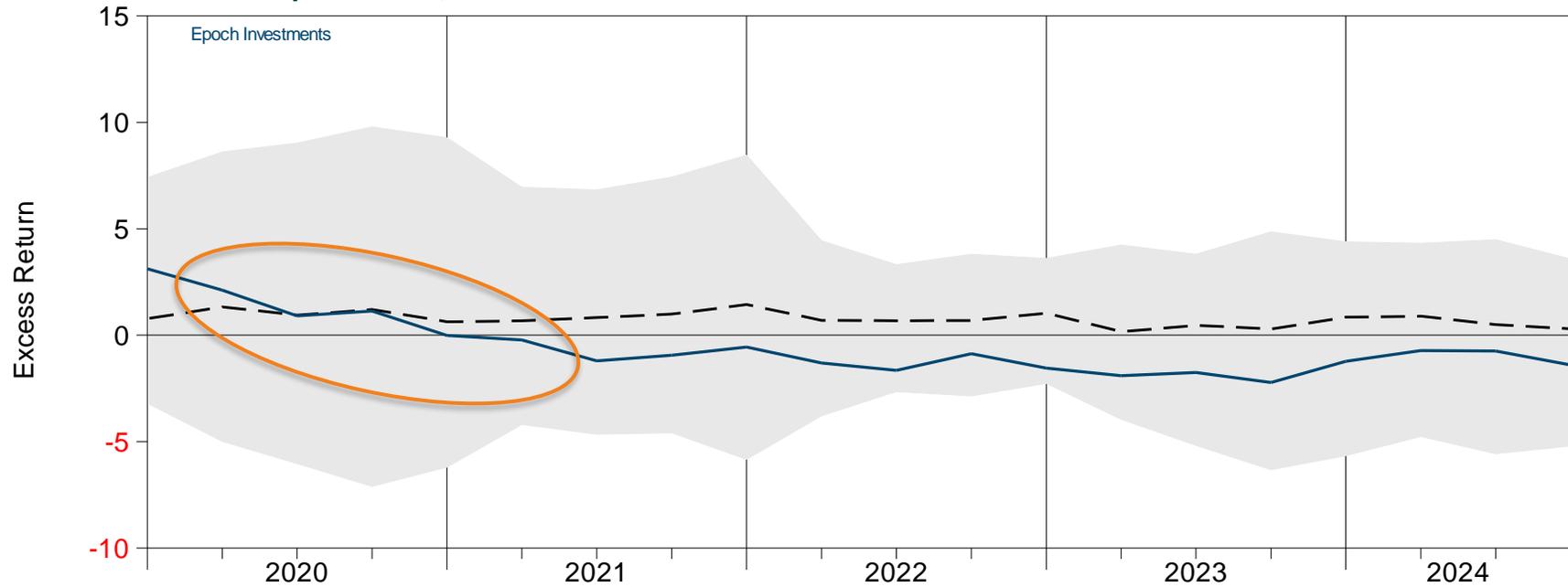
	12/23- 9/24	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	22.51	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile	20.34	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median	17.25	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.24	0.16
75th Percentile	13.85	16.73	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile	11.01	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Epoch Investments	● 15.35	19.47	(20.08)	18.59	13.11	27.66	(8.56)	31.01	(0.46)	0.51
MSCI ACWI	▲ 18.66	22.20	(18.36)	18.54	16.25	26.60	(9.41)	23.97	7.86	(2.36)

Inception date: February 2012.
Source: Callan LLC.

TD Epoch Global Choice

Three-year rolling excess returns

**Rolling Three Year Excess Return Relative to Global Equity Benchmark
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Excess Return	0.77%	(0.55)
% Positive Periods	100%	20%
Average Ranking	50	64

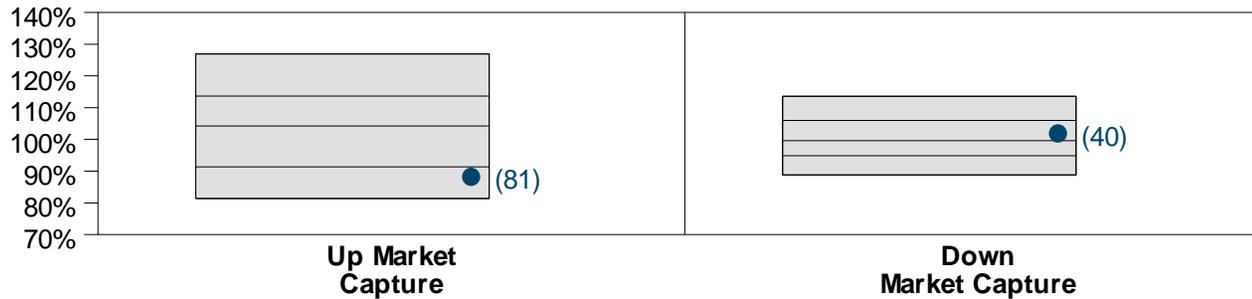
- ▶ Rolling three-year returns first dipped into negative territory in early 2021, and have remained negative and ranking below the peer group median since then

Inception date: February 2012.
Source: Callan LLC.

TD Epoch Global Choice

Up- and down-market performance as of September 30, 2024

Market Capture vs MSCI ACWI (Net) Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024



	Up Market Capture	Down Market Capture
10th Percentile	126.95	113.59
25th Percentile	113.67	105.98
Median	104.22	99.58
75th Percentile	91.35	94.85
90th Percentile	81.39	88.79

Epoch Investments ●

87.77

101.41

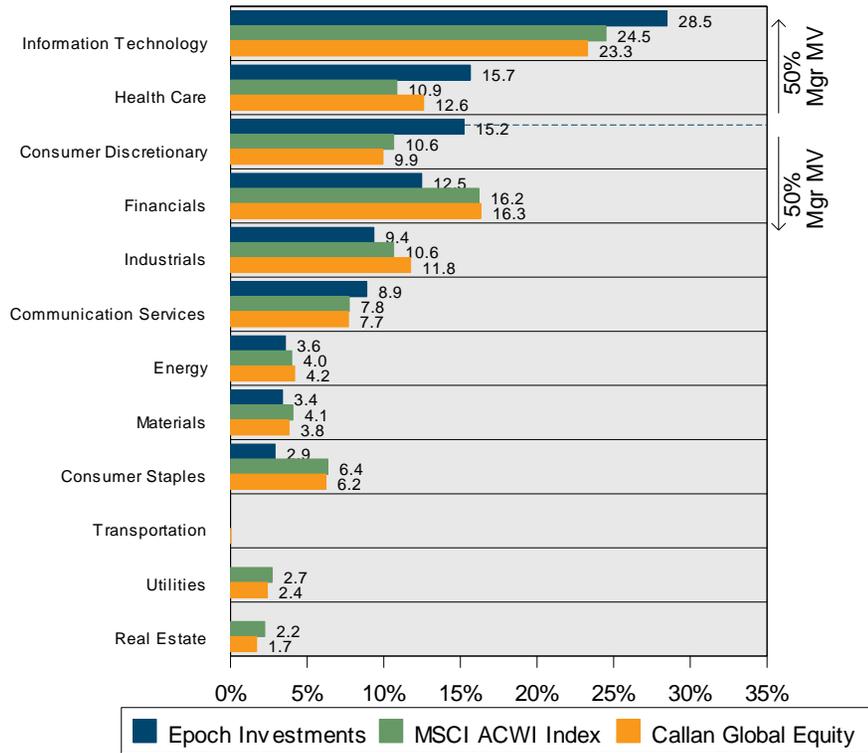
- ▶ A manager with an **up-market capture** > 100 has outperformed the index during “up” (rising) markets environments
- ▶ A manager with a **down-market capture** < 100 has outperformed the index during “down” (falling) market environments
- ▶ The Global Choice strategy has underperformed against its benchmark during rising and falling market environments over the last five years

Note: The down-market capture ratios are inverted.
Inception date: February 2012.
Source: Callan LLC.

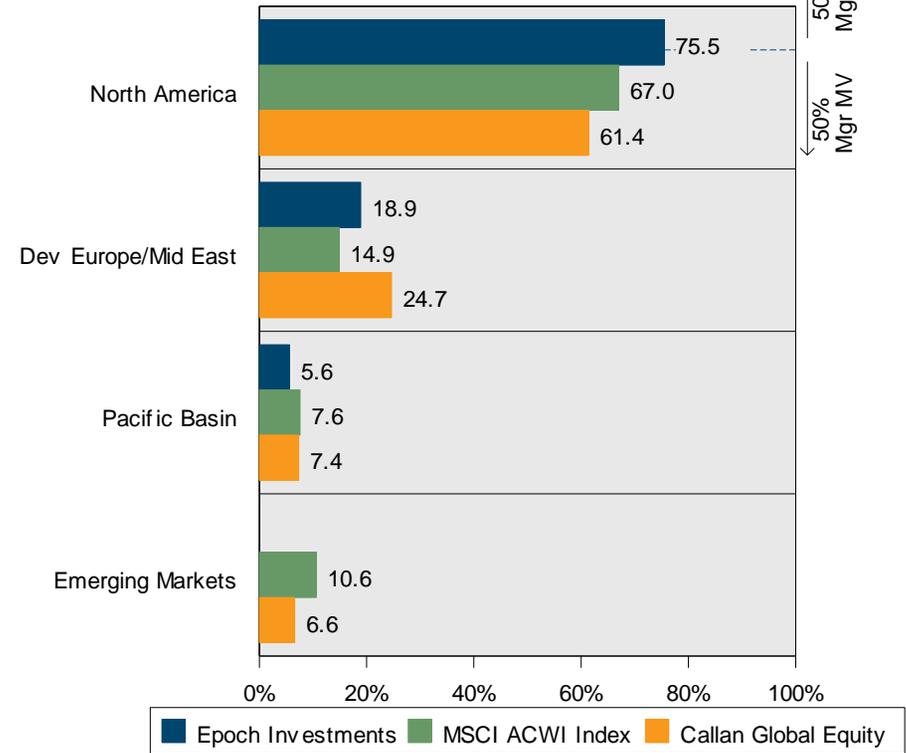
TD Epoch Global Choice

Portfolio positioning as of September 30, 2024

**Sector Allocation
September 30, 2024**



**Regional Allocation
September 30, 2024**



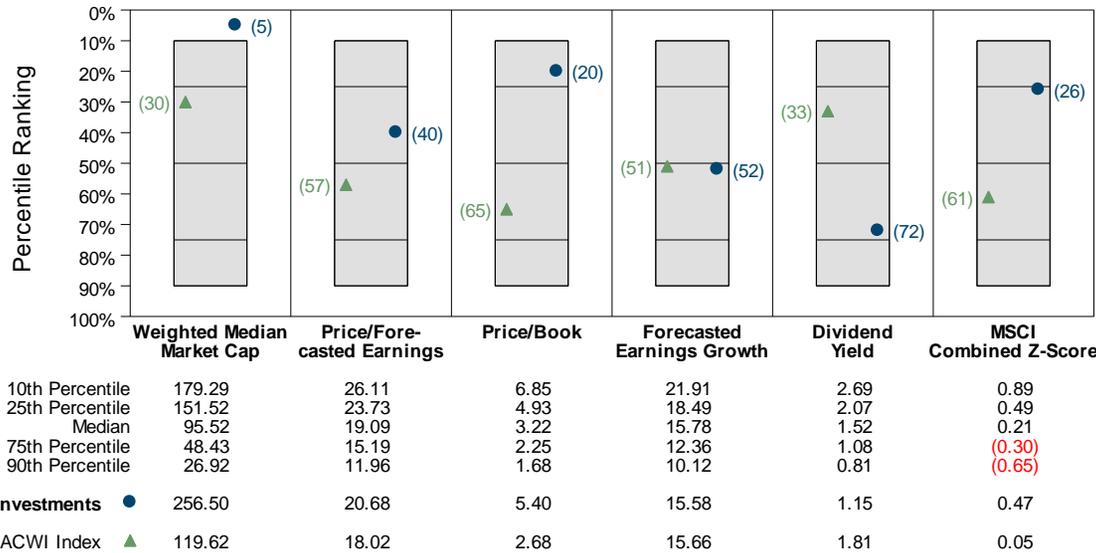
- ▶ Deviations in country and sector allocation relative to the benchmark index can lead to periods of increased tracking error
- ▶ The Global Choice strategy has an overweight to information technology and healthcare stocks
- ▶ Approximately 75% of the strategy's holdings are domiciled in the U.S.

Inception date: February 2012.
Source: Callan LLC.

TD Epoch Global Choice

Portfolio characteristics and style analysis as of September 30, 2024

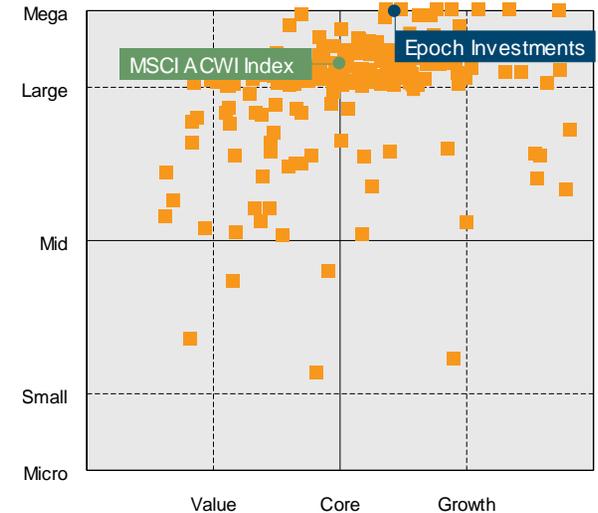
Portfolio Characteristics Percentile Rankings Rankings Against Callan Global Equity as of September 30, 2024



- ▶ The Global Choice strategy provides a concentrated portfolio, currently with 32 names
- ▶ The strategy has an overall weight-median market cap that skews towards the largest companies (i.e., mega-cap), with a slight growth bias
- ▶ The strategy currently exhibits higher valuation multiples (P/E, P/B) with forecasted earnings growth that is equal to the broader benchmark as well as the median of the peer group

Inception date: February 2012.
Source: Callan LLC.

Average Style Map vs Callan Global Equity Holdings for Three Years Ended September 30, 2024



Average Style Exposure Matrix Holdings for Three Years Ended September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	2.3% (1) 4.3% (150)	4.4% (1) 4.8% (133)	9.5% (3) 6.6% (156)	16.2% (5) 15.7% (439)
N. America	11.6% (4) 20.1% (293)	20.6% (7) 15.5% (205)	40.8% (12) 29.2% (196)	73.0% (23) 64.9% (694)
Pacific	0.0% (0) 2.7% (129)	0.0% (0) 2.7% (106)	7.4% (3) 3.1% (116)	7.4% (3) 8.5% (351)
Emerging/ FM	0.3% (0) 2.7% (403)	2.3% (1) 3.7% (418)	0.9% (0) 4.4% (496)	3.5% (1) 10.9% (1317)
Total	14.2% (5) 29.9% (975)	27.3% (9) 26.7% (862)	58.6% (18) 43.3% (964)	100.0% (32) 100.0% (2801)

Callan

Appendix: Net of Fees Performance

Asset Class Performance – Net of Fees

As of September 30, 2024

	Market Value \$(000)	Ending Weight	Last Quarter/ Fiscal YTD	Last Year	Last 3 Years
Domestic Equity	\$9,100,609	25.77%	5.82%	32.14%	9.17%
Domestic Equity Benchmark	-	-	6.23%	35.19%	10.29%
Global Equity	\$4,314,952	12.22%	5.05%	29.66%	6.15%
Global Equity Benchmark	-	-	6.84%	30.96%	7.44%
International Equity	\$7,282,336	20.62%	8.03%	25.69%	3.36%
International Equity Benchmark	-	-	8.18%	25.06%	3.74%
Total Fixed Income	\$7,336,070	20.77%	4.37%	12.40%	(0.83%)
Total Fixed Income Benchmark	-	-	5.20%	11.57%	(1.39%)
Real Estate	\$2,930,756	8.30%	2.39%	(4.30%)	(1.13%)
Real Estate Benchmark	-	-	0.78%	(3.47%)	0.87%
Private Equity	\$3,826,590	10.84%	1.26%	3.66%	4.10%
Private Equity Benchmark	-	-	1.00%	4.43%	1.32%
Private Credit	\$82,205	0.23%	1.35%	-	-
Private Credit Benchmark	-	-	1.82%	-	-
Cash Composite	\$442,476	1.25%	1.39%	5.44%	3.81%
Cash Benchmark	-	-	1.36%	5.56%	3.57%
Total Fund	\$35,315,994	100.00%	4.99%	18.73%	3.86%
Total Fund Benchmark	-	-	5.35%	20.43%	4.66%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Asset Class Performance – Net of Fees (Continued)

As of September 30, 2024

	Last 5 Years	Last 10 Years	Last 15 Years
Domestic Equity	14.77%	12.14%	13.39%
Domestic Equity Benchmark	15.26%	12.83%	13.80%
Global Equity	11.27%	9.32%	9.79%
Global Equity Benchmark	11.87%	9.15%	9.52%
International Equity	8.26%	5.79%	6.04%
International Equity Benchmark	7.66%	5.33%	5.58%
Total Fixed Income	0.99%	2.62%	3.64%
Total Fixed Income Benchmark	0.33%	1.84%	2.82%
Real Estate	2.28%	5.53%	7.35%
Real Estate Benchmark	3.26%	5.88%	7.74%
Private Equity	14.59%	14.54%	12.94%
Private Equity Benchmark	10.60%	12.35%	15.04%
Cash Composite	2.44%	1.73%	1.19%
Cash Benchmark	2.31%	1.61%	1.10%
Total Fund	8.95%	8.05%	8.91%
Total Fund Benchmark	8.73%	7.93%	8.65%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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Periodic Rates of Return – Net of Fees

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Equity	\$9,100,608,594	25.77%	5.82%	32.14%	9.17%	14.77%	12.14%
Russell 3000 Index	-	-	6.23%	35.19%	10.29%	15.26%	12.83%
Large Cap Equity	\$6,914,161,238	19.58%	5.40%	35.87%	11.54%	15.84%	12.89%
Russell 1000 Index	-	-	6.08%	35.68%	10.83%	15.64%	13.10%
Managed Large Cap Equity	\$878,384,594	2.49%	2.25%	33.03%	9.14%	15.36%	11.89%
Eagle Capital	878,384,594	2.49%	2.25%	33.03%	9.14%	15.36%	12.88%
S&P 500 Index	-	-	5.89%	36.35%	11.91%	15.98%	13.38%
Northern Trust S&P 500	\$6,035,776,643	17.09%	5.87%	36.26%	11.92%	15.96%	13.35%
S&P 500 Index	-	-	5.89%	36.35%	11.91%	15.98%	13.38%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are **net of fees**.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Mid Cap Equity	\$1,121,816,393	3.18%	6.10%	21.69%	2.66%	11.12%	9.31%
Russell MidCap Index	-	-	9.21%	29.33%	5.75%	11.30%	10.19%
Artisan Partners	516,829,813	1.46%	2.68%	16.89%	(5.33%)	9.95%	10.34%
Russell MidCap Growth Idx	-	-	6.54%	29.33%	2.32%	11.48%	11.30%
Victory Mid Cap Value	604,972,618	1.71%	9.20%	26.44%	-	-	-
Russell MidCap Value Idx	-	-	10.08%	29.01%	7.39%	10.33%	8.93%
Small Cap Equity	\$1,064,630,963	3.01%	8.36%	20.05%	2.71%	10.94%	10.53%
Russell 2000 Index	-	-	9.27%	26.76%	1.84%	9.39%	8.78%
Dimensional Fund Advisors	358,277,052	1.01%	7.75%	23.60%	10.32%	15.20%	9.65%
Russell 2000 Value Index	-	-	10.15%	25.88%	3.77%	9.29%	8.22%
Wellington Small Cap	371,599,920	1.05%	10.40%	26.54%	5.89%	10.17%	11.02%
Russell 2000 Index	-	-	9.27%	26.76%	1.84%	9.39%	8.78%
Riverbridge Partners	334,753,991	0.95%	6.81%	10.26%	(8.11%)	6.98%	10.20%
Russell 2000 Growth Index	-	-	8.41%	27.66%	(0.35%)	8.82%	8.95%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Global Equity	\$4,314,952,287	12.22%	5.05%	29.66%	6.15%	11.27%	9.32%
Global Equity Benchmark (2)	-	-	6.84%	30.96%	7.44%	11.87%	9.15%
Acadian Global Equity	1,075,884,519	3.05%	2.75%	33.08%	9.49%	14.93%	10.04%
Epoch Investments	1,078,026,593	3.05%	5.05%	27.55%	5.60%	9.51%	8.37%
Harding-Loevner	1,087,167,538	3.08%	5.22%	30.75%	1.54%	11.22%	10.23%
LSV Global Value	1,069,376,568	3.03%	7.29%	27.15%	-	-	-
MSCI ACWI Index	-	-	6.61%	31.76%	8.09%	12.19%	9.39%
International Equity	\$7,282,335,676	20.62%	8.03%	25.69%	3.36%	8.26%	5.79%
International Equity Bnmk (3)	-	-	8.18%	25.06%	3.74%	7.66%	5.33%
International Eq Custom Bnmk (4)	-	-	8.15%	25.10%	3.46%	7.56%	5.36%
All Country ex US	\$4,962,212,289	14.05%	7.57%	25.21%	3.21%	9.95%	7.29%
Arrowstreet Capital	719,492,910	2.04%	4.00%	25.38%	8.53%	13.91%	8.87%
Baillie Gifford	812,503,131	2.30%	9.84%	25.47%	(4.81%)	5.90%	5.81%
Marathon Asset Mgmt	916,875,558	2.60%	7.87%	22.88%	3.86%	8.12%	-
MSCI ACWI xUS IMI	-	-	8.18%	25.06%	3.74%	7.66%	5.33%
NT MSCI World ex US	2,513,340,690	7.12%	7.80%	25.33%	-	-	-
MSCI World xUS	-	-	7.76%	24.98%	5.65%	8.36%	5.68%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Small Cap	\$729,231,341	2.06%	9.20%	20.96%	(2.05%)	4.07%	4.49%
Principal Sm Cap Intl	374,394,233	1.06%	8.16%	21.89%	0.06%	5.15%	-
Northern Trust Intl Small Cap	352,453,349	1.00%	10.36%	-	-	-	-
MSCI World Small Cap x US	-	-	10.45%	23.36%	0.05%	6.85%	5.99%
Emerging Markets	\$1,572,546,051	4.45%	8.98%	29.72%	3.85%	7.45%	4.23%
Lazard Emerging Markets	814,016,958	2.30%	9.71%	30.95%	8.06%	8.62%	4.76%
Fisher Investments	758,529,093	2.15%	8.20%	28.42%	(0.47%)	5.97%	-
MSCI Emerging Mkts Idx	-	-	8.72%	26.05%	0.40%	5.75%	4.03%
EAFE Composite (Terminated)	\$18,345,995	0.05%	-	-	-	-	-
Total Equity	\$20,697,896,556	58.61%	6.42%	29.34%	6.50%	11.76%	9.38%
MSCI ACWI IMI Index	-	-	6.84%	30.96%	7.44%	11.87%	9.20%
Total Equity Custom Bnmk (5)	-	-	7.05%	30.67%	7.41%	11.87%	9.45%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

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The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Domestic Fixed-Income	\$4,997,705,496	14.15%	4.31%	11.95%	(1.15%)	0.94%	2.44%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Short Duration	\$1,196,292,956	3.39%	1.97%	6.62%	-	-	-
SIT Short Duration FI	1,196,292,956	3.39%	1.97%	6.62%	-	-	-
Blmbg Gov/Cred 1-3 Yr	-	-	2.96%	7.19%	1.50%	1.70%	1.64%
Core Fixed Income	\$1,397,562,589	3.96%	5.24%	12.53%	(1.12%)	0.57%	2.10%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
PIMCO	700,792,035	1.98%	5.24%	12.64%	(1.08%)	0.64%	2.17%
Manulife Asset Management	696,770,696	1.97%	5.25%	12.34%	(1.32%)	0.57%	-
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Core Plus	\$2,403,849,950	6.81%	4.96%	12.88%	(0.79%)	1.50%	2.86%
Loomis Sayles	1,184,858,328	3.36%	4.84%	12.25%	(0.90%)	1.51%	2.59%
Prudential Core Plus	1,218,991,622	3.45%	5.08%	13.49%	(0.70%)	1.47%	3.12%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Emerging Markets Debt	\$752,167,950	2.13%	6.11%	18.79%	(0.14%)	1.48%	3.71%
Wellington EMD	752,167,950	2.13%	6.11%	18.79%	(0.14%)	1.48%	3.71%
EMBI Global Dv sfd Index	-	-	6.15%	18.60%	(0.40%)	0.87%	3.28%
Global Fixed Income	\$1,586,196,659	4.49%	3.77%	10.73%	(0.39%)	0.73%	2.54%
PIMCO Global	789,848,512	2.24%	3.59%	10.51%	(0.24%)	0.92%	2.70%
AllianceBernstein Global	796,348,147	2.25%	3.96%	10.94%	(0.55%)	0.50%	2.36%
Blmbg Global Agg (Hedged)	-	-	4.24%	10.63%	(0.22%)	0.57%	2.33%
Total Fixed Income	\$7,336,070,104	20.77%	4.37%	12.40%	(0.83%)	0.99%	2.62%
Blmbg Aggregate Index	-	-	5.20%	11.57%	(1.39%)	0.33%	1.84%
Total Fixed Inc Custom Bnmk (6)	-	-	5.05%	12.03%	(0.98%)	0.48%	2.09%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are net of fees.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index.

The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
REIT Composite	\$365,691,556	1.04%	16.64%	34.09%	3.92%	5.44%	7.55%
REIT Comp Custom Bnmk (7)	-	-	15.95%	31.97%	2.88%	3.41%	6.06%
Centersquare	245,559,160	0.70%	17.28%	36.56%	5.75%	6.67%	-
FTSE NAREIT Equity Index	-	-	16.09%	34.74%	5.07%	5.46%	7.83%
Cohen & Steers	120,132,396	0.34%	15.36%	30.07%	1.61%	3.89%	6.51%
EPRA/NAREIT Dev REIT Idx	-	-	16.33%	30.20%	1.37%	2.36%	5.04%
Core Real Estate	\$1,567,501,818	4.44%	0.29%	(6.80%)	(1.45%)	1.35%	4.65%
Principal Capital (Net)	822,861,805	2.33%	(0.13%)	(5.06%)	(0.23%)	2.52%	6.07%
UBS Trumbull Property (Net)	360,204,414	1.02%	0.90%	(5.79%)	(2.56%)	(0.63%)	2.60%
JPMCB Strategic Property (Net)	384,435,599	1.09%	0.62%	(11.02%)	(2.83%)	0.91%	4.31%
NFI-ODCE Equal Weight Net	-	-	(0.07%)	(8.44%)	(1.06%)	2.33%	5.46%
NFI-ODCE Value Weight Net	-	-	0.02%	(8.04%)	(1.04%)	2.05%	5.16%
Core Plus Real Estate	\$220,419,777	0.62%	0.57%	(11.89%)	(5.50%)	(0.48%)	5.52%
UBS Trumbull Property G&I (Net)	220,419,777	0.62%	0.57%	(11.89%)	(5.50%)	(0.48%)	5.52%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

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The Private Equity Benchmark is currently represented by the Cambridge Private Equity,

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Non-Core Real Estate	\$738,685,372	2.09%	1.29%	(7.98%)	1.47%	5.48%	9.50%
AEW Partners VII	3,879,989	0.01%	2.06%	5.72%	(1.36%)	(3.99%)	4.77%
AEW Partners VIII	11,799,006	0.03%	(0.51%)	9.09%	17.44%	17.69%	-
AEW Partners IX	63,196,253	0.18%	0.91%	6.72%	6.66%	-	-
Heitman VP IV	31,290,611	0.09%	0.34%	(0.32%)	6.92%	11.56%	-
Heitman VP V	62,571,517	0.18%	0.64%	(1.44%)	-	-	-
AG Core Plus IV	16,717,987	0.05%	(2.77%)	(15.94%)	(14.92%)	(5.42%)	-
AG Realty Fund X	49,718,048	0.14%	(1.57%)	(8.58%)	5.95%	11.58%	-
AG Realty Value Fd XI	22,982,660	0.07%	0.75%	(4.93%)	-	-	-
Invesco US Income Fund	163,067,081	0.46%	0.52%	(9.22%)	-	-	-
Invesco VA Fund IV	1,857,576	0.01%	(0.05%)	(36.67%)	(38.05%)	(22.68%)	-
Invesco VA Fund V	57,255,478	0.16%	(1.56%)	(28.80%)	(8.20%)	(0.23%)	-
Invesco Real Estate US Fund VI	37,631,058	0.11%	(2.41%)	(13.47%)	-	-	-
TA Associates Realty Fund XII	94,769,882	0.27%	(0.49%)	(4.84%)	14.02%	-	-
TA Associates Realty Fund XIII	41,951,491	0.12%	29.13%	-	-	-	-
Westbrook RE Fund X	13,215,247	0.04%	(5.21%)	(34.51%)	(13.63%)	(5.59%)	-
Westbrook RE Fund XI	64,217,052	0.18%	1.96%	5.24%	9.56%	-	-
NCREIF Total Index	-	-	0.78%	(3.47%)	0.87%	3.26%	5.88%
Timber Composite	\$38,457,881	0.11%	4.38%	(5.68%)	(0.64%)	4.91%	5.53%
Hancock Timber Portfolio	38,457,881	0.11%	4.38%	(5.68%)	(0.64%)	4.91%	5.53%
NCREIF Timberland Index	-	-	1.53%	10.02%	10.86%	7.47%	5.90%
Total Real Estate	\$2,930,756,403	8.30%	2.39%	(4.30%)	(1.13%)	2.28%	5.53%
Real Estate Benchmark (8)	-	-	0.78%	(3.47%)	0.87%	3.26%	5.88%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%

Periodic Rates of Return – Net of Fees (Continued)

As of September 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Private Equity	\$3,826,590,213	10.84%	1.26%	3.66%	4.10%	14.59%	14.54%
Pathway PEF XXIII Series 2008	211,121,219	0.60%	0.29%	0.03%	(4.88%)	9.74%	12.40%
Pathway PEF XXIII Series 2013	656,151,138	1.86%	(0.50%)	1.15%	(0.09%)	13.70%	13.09%
Pathway PEF XXIII Series 2016	1,288,379,787	3.65%	1.92%	6.75%	6.31%	18.34%	-
Pathway PEF XXIII Series 2021	373,316,285	1.06%	2.14%	9.19%	4.66%	-	-
Grosvenor Diversified Partners	127,023,279	0.36%	(2.96%)	(19.65%)	(6.91%)	1.87%	7.50%
Grosvenor Div Partners 2014 Ser	632,388,352	1.79%	1.40%	1.32%	8.47%	15.82%	10.42%
Grosvenor Div Partners 2018 Ser	527,376,140	1.49%	2.63%	10.00%	12.07%	12.99%	-
Grosvenor Div Partners 2024 Ser	10,834,014	0.03%	-	-	-	-	-
Private Equity Benchmark (9)	-	-	1.00%	4.43%	1.32%	10.60%	12.35%
Private Credit	\$82,204,736	0.23%	1.35%	-	-	-	-
Blue Owl Lending Fd Series 20	51,801,723	0.15%	0.82%	-	-	-	-
Grosvenor Private Credit Series 2023	30,403,013	0.09%	1.53%	-	-	-	-
Private Credit Benchmark (10)	-	-	1.82%	-	-	-	-
Cash	\$442,476,027	1.25%	1.39%	5.44%	3.81%	2.44%	1.73%
1mo T-Bill	-	-	1.36%	5.56%	3.57%	2.31%	1.61%
Total Fund	\$35,315,994,040	100.00%	4.99%	18.73%	3.86%	8.95%	8.05%
Policy Benchmark*	-	-	5.35%	20.43%	4.66%	8.73%	7.93%

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

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50% Bloomberg U.S. High Yield Index, Plus 1%

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Appendix: Benchmark Definitions

Benchmark Definitions

Total Fund Benchmark (Target): Blend of asset class benchmarks at policy weights. The 3Q 2024 Target represents the legacy policy target weights. A new long-term strategic asset allocation was approved in 2022; however, the legacy allocation targets and Total Fund Benchmark will be maintained until the new complementary strategies have been implemented.

<u>Asset Class</u>	<u>Benchmark</u>	<u>4Q 2024 Target</u>	<u>Long-Term Target</u>
U.S. Equity	Russell 3000 Index	27.0%	25.0%
International Equity	MSCI ACWI ex U.S. IMI Index	20.0	20.0
Global Equity	MSCI ACWI IMI Index	12.0	12.0
Private Equity	Cambridge Private Equity	10.0	10.0
Fixed Income	Bloomberg U.S. Aggregate Bond Index	20.0	18.0
Private Credit	<i>See definition below</i>	0.0	2.0
Real Estate	NCREIF Total Index	10.0	10.0
Infrastructure	Infrastructure Benchmark (TBD)	0.0	2.0
Cash	FTSE 1 Month T-Bill	1.0	1.0
Total PERS Target Benchmark		100%	100%

Asset Class Benchmarks:

- 1) **U.S. Equity Benchmark:** 65% S&P 500 Index and 35% Russell 2500 Index through 9/30/2015; then Russell 3000 thereafter.
- 2) **International Equity Benchmark:** MSCI ACWI ex-U.S. through 6/30/2013; then MSCI ACWI ex-U.S. IMI thereafter.
- 3) **International Equity Custom Benchmark:** MSCI ACWI ex-U.S. through 6/30/13; MSCI ACWI ex-U.S. IMI Index through 9/30/2015; then 35% MSCI EAFE Hedged; 35% MSCI ACWI ex-U.S. IMI; 20% MSCI Emerging Markets; 5% MSCI ACWI ex-U.S. Small Cap; and 5% MSCI World ex-U.S. Small Cap thereafter.
- 4) **Global Equity Benchmark:** MSCI World Index through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.
- 5) **Total Equity Benchmark:** 49% Russell 3000 Index, 36% MSCI ACWI ex-U.S. IMI Index, and 15% MSCI AC World Index through 9/30/2015; then 44% Russell 3000 Index, 36% MSCI ACWI ex U.S. IMI Index, and 20% MSCI ACWI IMI thereafter
- 6) **Private Equity Benchmark:** S&P 500 Index + 5% per annum through 3/31/13; S&P 500 Index + 3% per annum through 6/30/22; S&P 500 Index + 3% per annum (1 Quarter Lag) with 3Q22 equal to actual Private Equity composite through 6/30/23; then Cambridge Private Equity thereafter.
- 7) **Total Fixed Income Benchmark:** 55% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, 10% Barclays US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then 65% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.
- 8) **Private Credit Benchmark:** 50% Morningstar LSTA 100 / 50% Bloomberg High Yield, plus 1% per annum.
- 9) **REIT Composite Benchmark:** 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.
- 10) **Total Real Estate Benchmark:** NFI-ODCE Equal Weight Net to 5/31/99; No Benchmark to 9/30/03; 50% NFI-ODCE Equal Weight Net and 50% US Select REIT Index to 6/30/06; 80% NFI-ODCE Equal Weight Net and 20% US Select REIT Index to 6/30/10; 20% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, 55% NFI-ODCE Equal Weight Net to 6/30/12; 15% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, and 60% NFI-ODCE Equal Weight Net to 6/30/13; then NCREIF Property Index thereafter.

Callan

Appendix: Callan Updates

Published Research Highlights: 3Q24

STAR Report (clients-only)



Private Equity Fees and Terms Study



2Q24 Market Intelligence Report (clients-only)



Coming Soon: ESG Survey



Recent Blog Posts

Navigating U.S. Equity Concentration: A Look at Global Stocks

Fanglue Zhou

Nonprofits: Same Mission, but New Approach to Allocations

Tony Lissuzzo

The Supermicro Conundrum: When Success Hurts Managers

Nicole Wubbena

Additional Reading

Active vs. Passive quarterly charts
Capital Markets Review quarterly newsletter
Monthly Updates to the Periodic Table
Market Pulse Flipbook quarterly markets update
Market Intelligence (clients-only)
Real Estate Indicators market outlook

Callan Institute Events

Upcoming conferences, workshops, and webinars

2025 National Conference

Mark your calendars for this event in Scottsdale on April 27-29, 2025

Our annual conference will feature mainstage speakers and Callan-led workshops on a variety of topics.

This year we welcome Zanny Minton Beddoes to the stage.

Registration for this event will open in January 2025!

Please visit our website at callan.com/events-education as we add dates to our 2025 calendar!



Mark Your Calendar

2025 Regional Workshops

June 3, 2025 – Denver

June 5, 2025 – New York

October 28, 2025 – Chicago

October 30, 2025 – San Francisco

Watch your email for further details and an invitation.

Upcoming Webinars

November 21, 2024

Research Café featuring Callan's 2024 Private Equity Fees and Terms Study

January 2025

Callan's 2025 Capital Markets Assumptions Webinar

Introducing Callan On-Demand Education (CODE)

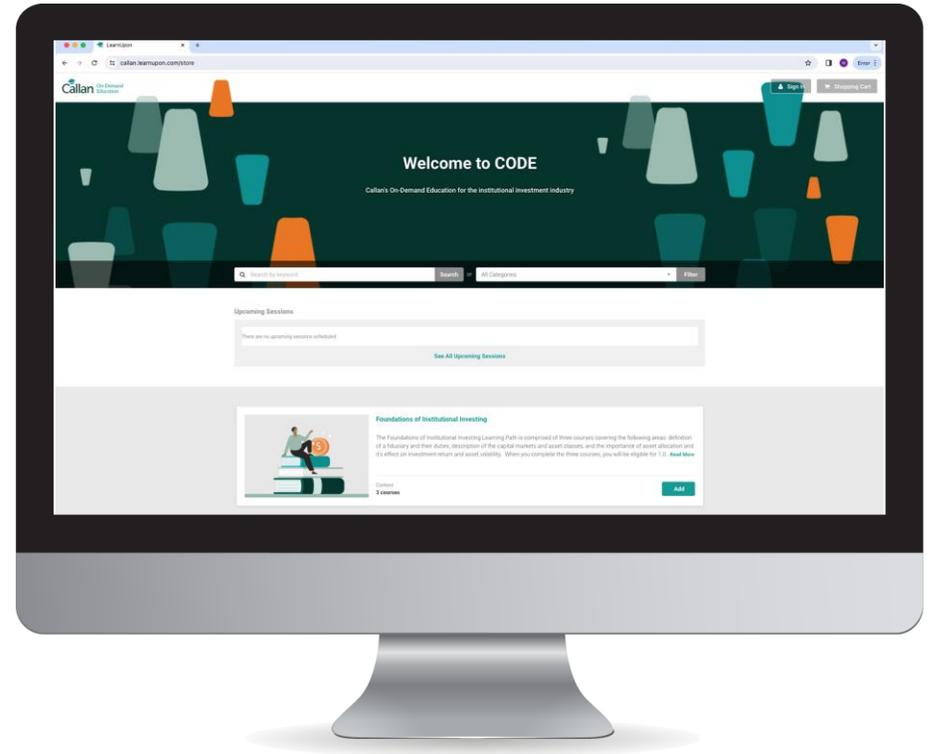


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- ▶ Interactive and engaging
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CODE courses are designed for investment professionals of all levels—and they're self-guided. Access them anytime, from anywhere, and get continuing education credits for each completed course.

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callan.com/code



3 Reasons to Take CODE Courses

- 1 Become a better fiduciary
- 2 Showcase your skills and knowledge
- 3 Learn from Callan's investment experts

Callan Updates

Firm updates by the numbers, as of September 30, 2024

Total Associates: ~200

Company Ownership:

- ▶ 100% employees
- ▶ ~70% of employees are equity owners
- ▶ ~55% of shareholders identify as women or minority

Total General and Investment Consultants: 50+

Total Specialty and Research Consultants: 65+

Total CFA/CAIA/FRMs: 60+

Total Institutional Investor Clients: 475+

Provides advisory services to institutional investor clients with assets over \$4+ trillion

NEW ON CODE: The Framework of Alternative Investments

Our newest online learning course series, the Framework of Alternative Investments, is live on **CODE**, the Callan On-Demand Education portal. Topics covered include private equity, private credit, hedge funds, and real assets. Callan clients have full access to all CODE courses for free.

“CODE is aimed at educating client and non-client, investment and non-investment professional board members alike in how institutional investment portfolios are constructed and maintained across asset classes, including alternatives.”

— Greg Allen, CEO, Chief Research Officer in a June 2024 *FundFire* story about CODE



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Past performance is no guarantee of future results.

September 30, 2024



**Public Employees Retirement
System of Mississippi
Defined Benefit Plan
Board Report**

**Investment Measurement Service
Quarterly Review**

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Strong U.S. Economy Refuses to Cooperate

ECONOMY

2 GDP rose 2.8% in 3Q24 after an equally robust 2Q figure. Job creation has clearly slowed, but the unemployment rate is still low. Overall, economic growth is solid, yet a downbeat mood is pervasive, in seeming defiance of these sunny economic reports.

Strong Year for Gains; Still Lag Benchmark

INSTITUTIONAL INVESTORS

4 All institutional investor types saw strong gains over the trailing one year ended 3Q24 but still lag a 60% stocks/40% bonds benchmark. Gains over longer time periods also lagged the benchmark. For institutional investors, their main focus now is on the Fed, after its first rate cut.

Record High in U.S. And Big Global Gains

EQUITY

6 The U.S. equity markets hit a record high after a disappointing start to 3Q24. But narrow leadership (the Magnificent Seven) continues to be an issue. Global markets outpaced U.S. markets, and global ex-U.S. markets did well as tech stocks in the U.S. faced pressure.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000



6.2%

Global ex-U.S. Equity
MSCI ACWI ex USA



8.1%

U.S. Fixed Income
Bloomberg Agg



5.2%

Global ex-U.S. Fixed Income
Bloomberg Global Agg ex US



8.5%

Sources: Bloomberg, FTSE Russell, MSCI

Rate Cut Spurs Rally With More Expected

FIXED INCOME

8 After the Fed cut rates 50 bps, fixed income rallied. The Fed “dot plot” expects two more cuts by year-end. The Aggregate had its second-best quarter in nearly 30 years. Global bonds also did well, and the U.S. dollar weakened against major currencies.

Funds See Gains and REITs Top Equities

REAL ESTATE/REAL ASSETS

10 After eight consecutive quarters of negative returns, valuations have adjusted to reflect higher borrowing costs. Income returns were positive across sectors and regions in 3Q24, with Hotels the top performer. All property sectors saw flat or positive appreciation, except for Office.

Fewer Funds but More Fundraising

PRIVATE EQUITY

11 The number of funds raised is significantly down, but the amount raised is higher than comparable periods in 2022 and 2023. Other activity has been similar to trends in 2023. Public equity outperformed private equity in the quarter, but not over longer time periods.

Managers Outperform Leveraged Loans

PRIVATE CREDIT

12 Private credit gained 1.8% in 2Q24. Fundraising, by number of funds, is off historical levels but capital raised is in line with the last few years. Interest in the asset class by institutional investors has stayed strong, especially by public DB plans.

High Beta Managers Have Strong Quarter

HEDGE FUNDS/MACs

13 In 3Q, hedge funds had another strong performance, as strategies with higher beta to equity markets saw gains. Equity hedge strategies led returns, driven by generalist managers and those with a focus on health care. Multi-asset class (MAC) strategies also saw gains.

Index Gains Slow in 2Q24; Balances Up

DEFINED CONTRIBUTION

15 The Callan DC Index rose 1.7% in 2Q24. Balances also rose, with investment gains the driver of the growth. U.S. large cap equity saw the largest percentage increases in allocation, while stable value had the largest decrease in allocation due to net outflows.

Strong U.S. Economy Refuses to Cooperate

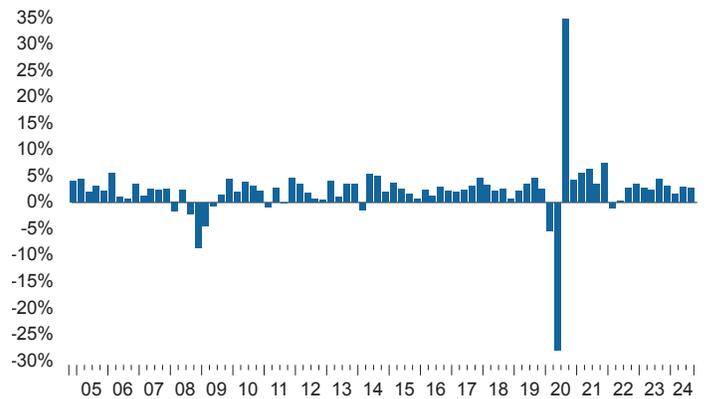
ECONOMY | Jay Kloepfer

Growth in the U.S. economy continues to defy a steady drumbeat of negative perception. Real GDP clocked a 2.8% rate of growth in 3Q24, after an equally robust 3.0% rate in 2Q. The rate of job creation has clearly slowed from that of 2022 and 2023, but September saw a monthly gain of 254,000, and the U.S. economy has averaged 200,000 new jobs per month so far this year. The rule of thumb in economics is that a rate of monthly job creation at or above 200,000 means the economy is expanding. The unemployment rate is still low at 4.1%, and weekly claims for unemployment benefits have dropped over the five months ending in September. So overall economic growth is solid, far stronger than expected at the start of the year, the job market is robust, and incomes and wages have risen substantially. Yet a downbeat mood is pervasive, in seeming defiance of these sunny economic reports.

Inflation has eased, but it doesn't feel like it to households and businesses alike. The cumulative impact on the cost of living from a generational spike in inflation looms large and is likely the chief culprit in the overall "bummer mood," to use the technical term, in the economy. The annual rate of inflation may have come back to 2.4% in September, but it is still positive, which means prices are still rising, just less quickly. Even if inflation goes to zero, prices will remain elevated; we'd need deflation to bring prices down. Deflation is kryptonite to economic policy. For businesses and government, the cost of goods and labor are now at substantially higher levels than four years ago. For households, higher wages help offset the higher costs of goods, services, and shelter, which is good. Average hourly earnings rose 20% between September 2020 and September 2024. However, the cost of new homes, rent, utilities, and groceries rose faster than wages over this period. Auto and home insurance are the new thorns in the consumer's side; the price index for auto insurance rose 16.3% year-over-year in September. The 2.4% rise in CPI in September was held down by a 15.3% drop in gasoline prices and similar declines in other energy-related sectors. Note that utility prices did not benefit from this drop in fuel prices over the past year, as they rose 3.4%.

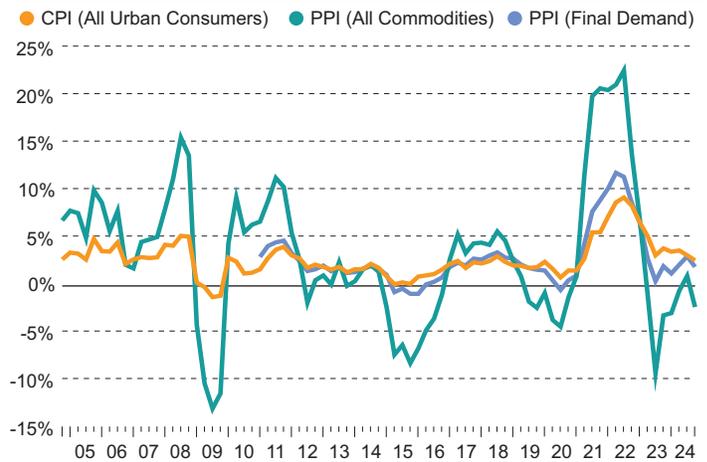
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

Digging through some of the details in the economic reports, the main driver of the strong 3Q GDP was consumer spending, spurred in large part by the strong job market. The leading categories of spending on services were health care (think outpatient services), hospitality, and accommodation; these are highly discretionary expenditures. Within goods, prescription drugs led non-durable goods, while motor vehicles and parts led durable goods spending. Business spending on equipment and intellectual property continued a long run of positive growth, likely driven in

part by the frenzy around AI. However, one of the main detractors to growth in 3Q24 was a reduction in inventory investment, the fifth negative quarter for inventory since the start of 2023. The steady drumbeat of a coming recession and Fed rate cuts may be to blame for spooking inventory investment. Finally, the housing market contracted for the second consecutive quarter, with “contraction” defined as a decline in residential housing investment. Housing prices remain elevated due to an unusual combination of high interest rates and limited supply. High rates would normally soften demand and push down prices, but the supply of homes for sale is limited, as existing homeowners choose to stay in their homes rather than face the higher cost of a new mortgage.

The Fed stepped up and cut interest rates 50 bps in September, only to now face the reality of a stronger economy than expected. The concern for some market participants is that the Fed move will spur exuberance in spending, and goose the stock market further, and this exuberance will potentially trigger a return of inflationary pressures, or at the least, slow the progress on bringing inflation down and keeping it there. The market sentiment on rate changes has been so far ahead of itself these past two years; it has become an unreliable narrator. If rates remain high for a while longer, that scenario suggests continuing economic growth—a good thing, right? If rates start to tail down, that scenario is often an indicator of growing economic problems. The challenge for Fed policy is that no elected official wants higher interest rates, at least not on their watch, and this is an election year.

The Long-Term View

Index	3Q24	Periods Ended 9/30/24			
		1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	6.2	35.2	15.3	12.8	8.4
S&P 500	5.9	36.4	16.0	13.4	8.2
Russell 2000	9.3	26.8	9.4	8.8	8.3
Global ex-U.S. Equity					
MSCI EAFE	7.3	24.8	8.2	5.7	4.6
MSCI ACWI ex USA	8.1	25.4	7.6	5.2	--
MSCI Emerging Markets	8.7	26.1	5.7	4.0	--
MSCI ACWI ex USA Small Cap	8.9	23.3	8.2	6.1	6.8
Fixed Income					
Bloomberg Agg	5.2	11.6	0.3	1.8	4.1
90-Day T-Bill	1.4	5.5	2.3	1.6	1.9
Bloomberg Long G/C	8.0	17.2	-2.0	2.3	5.6
Bloomberg GI Agg ex US	8.5	12.3	-1.9	-0.5	2.6
Real Estate					
NCREIF Property	0.8	-3.5	3.3	5.9	7.7
FTSE Nareit Equity	16.1	34.7	5.5	7.8	10.1
Alternatives					
Cambridge PE*	1.0	4.6	13.8	13.1	12.7
Cambridge Senior Debt*	1.2	7.5	6.9	6.8	4.3
HFRI Fund Weighted	2.9	12.7	7.4	5.1	6.1
Bloomberg Commodity	0.7	1.0	7.8	0.0	2.2
Inflation – CPI-U	0.4	2.4	4.2	2.9	2.6

*Data for most recent period lags. Data as of 2Q24.

Sources: Bloomberg, Bureau of Economic Analysis, FTSE Russell, Hedge Fund Research, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

Recent Quarterly Economic Indicators

	3Q24	2Q24	1Q24	4Q23	3Q23	2Q23
Employment Cost: Total Compensation Growth	3.9%	4.1%	4.2%	4.2%	4.3%	4.5%
Nonfarm Business: Productivity Growth	2.2%	2.1%	0.7%	3.1%	3.8%	3.7%
GDP Growth	2.8%	3.0%	1.6%	3.2%	4.4%	2.4%
Manufacturing Capacity Utilization	76.8%	77.2%	77.1%	77.6%	78.1%	78.4%
Consumer Sentiment Index (1966=100)	68.1	71.1	78.4	64.9	69.6	62.3

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

Strong Year for Gains but Still Lag Benchmark

INSTITUTIONAL INVESTORS

- All institutional investor types saw extremely strong gains over the trailing one year ending 3Q24, counterbalanced by much weaker gains over the last three years.
- Despite that, they still continued to significantly lag stocks and a 60% stocks/40% bonds benchmark over shorter time frames.
- Nonprofits did best over the trailing one year, followed closely by corporate and public defined benefit (DB) plans, with Taft-Hartley plans lagging behind.
- Gains over the last 10 and 20 years significantly lagged the 60% stocks/40% bonds benchmark.
- For institutional investors, their primary focus now is on the Fed.
- After its first rate cut in over four years, are more cuts on the table?
- It is “much closer” to its 2% target, Fed Chair Jerome Powell said.

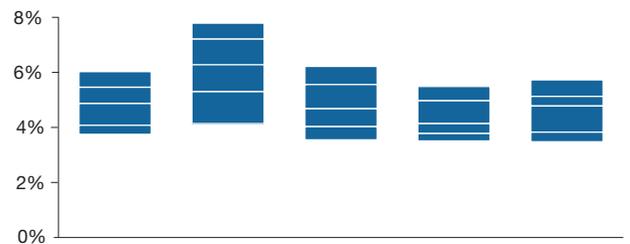
Public defined benefit (DB) plans

- Return enhancement and risk mitigation are the most significant concerns.
- Interest in private real estate has taken some twists and turns. It was low four years ago, then took two consecutive

big jumps in our exclusive survey of Callan clients, dropped back down, and then spiked again.

- In a sharp reversal, there was a jump in the share of clients planning to increase global ex-U.S. equity allocations after a big share said they planned to cut allocations in 1Q24, according to our survey.
- There was almost no interest in changing allocations to other public markets asset classes, either increasing allocations or decreasing them.

Quarterly Returns, Callan Database Groups (9/30/24)



	Public	Corporate	Nonprofit	Taft-Hartley	Insurance Assets
10th Percentile	6.0	7.8	6.2	5.5	5.7
25th Percentile	5.5	7.2	5.6	5.0	5.1
Median	4.9	6.3	4.7	4.1	4.8
75th Percentile	4.1	5.3	4.0	3.8	3.8
90th Percentile	3.8	4.1	3.6	3.5	3.5

Source: Callan

Callan Database Median and Index Returns* for Periods Ended 9/30/24

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	4.9	19.4	4.7	8.5	7.5	7.4
Corporate Database	6.3	19.6	1.1	5.4	6.0	6.7
Nonprofit Database	4.7	19.9	4.6	8.5	7.1	7.2
Taft-Hartley Database	4.1	17.6	4.3	8.0	7.3	7.0
Insurance Assets Database	4.8	14.0	2.6	4.4	4.3	4.6
All Institutional Investors	5.0	19.4	4.1	7.9	7.1	7.1
Large (>\$1 billion)	4.6	17.5	4.1	8.3	7.4	7.3
Medium (\$100mm - \$1bn)	4.9	19.5	4.2	8.0	7.1	7.2
Small (<\$100 million)	5.2	20.6	4.1	7.8	6.8	6.8
60% S&P 500/40% Bloomberg Agg	5.6	26.1	6.6	9.9	8.9	8.0

*Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, insurance assets, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Corporate DB plans

- Pension risk transfer (PRT) is now the top issue, according to our survey.
- In 3Q21, we started asking consultants about corporate DB plans with a focus on three key areas: funded status, funded basis, and plan goals.
- For the first time, PRT was the top goal of corporate DB plans.
- Closing the funding gap, which had typically been the top goal, was No. 2 in 3Q24.
- The share of plans with a funded status above 100% has held fairly steady, with more than 4 of 10 plans at that level. And the vast majority of plans have a funded status above 91%.
- Funded basis has also held fairly steady, with every client this quarter citing projected benefit obligation (PBO).

Defined contribution (DC) plans

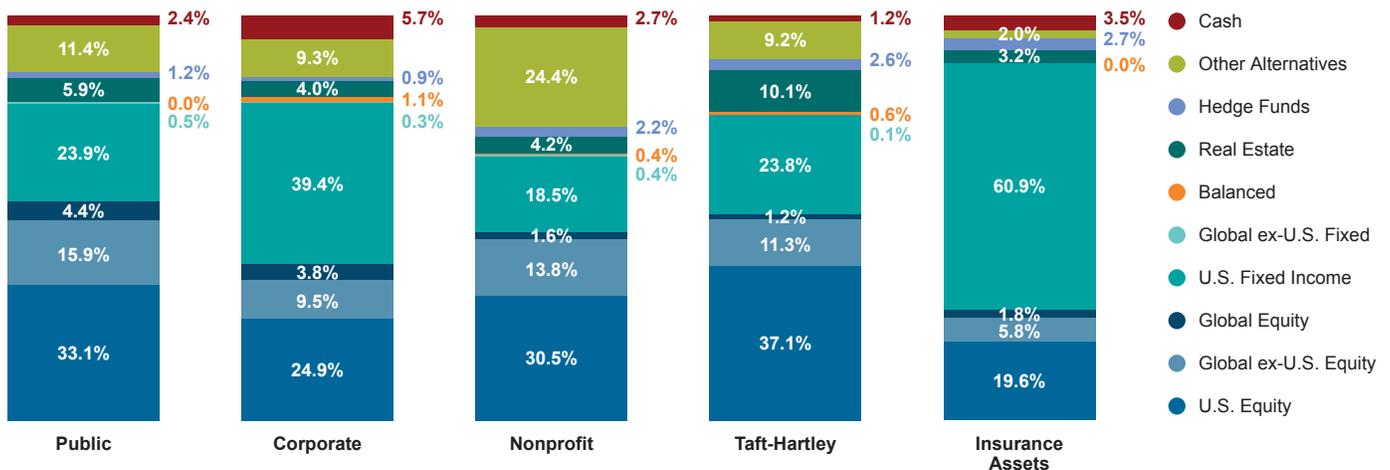
- Roughly 10% have a private real estate or real assets product in the target date fund, according to our survey.
- Fees remain the top issue for DC plans, as they have been for years.

- The percentage of clients with a private real estate or real assets product has held steady since 3Q21.
- Before that, nearly a fifth of plans on a consistent basis had such a product.
- Another issue coming to the forefront for many DC plan sponsors is retirement income.

Nonprofits

- They have little interest in changes to alternative asset allocations, our survey found.
- Nonprofit clients indicated they planned no or only small adjustments for every alternative asset class in 3Q24.
- The percentage of clients that planned to increase private equity fell to 0% from 11% in 1Q24.
- At the same time, the share planning to cut hedge fund allocations also fell, to 3% from 15%.
- Interest in adding to private real estate allocations also dropped after holding relatively steady since 1Q22 and hit the lowest level since 3Q21.

Average Asset Allocation, Callan Database Groups



Note: Charts may not sum to 100% due to rounding. Other alternatives include but is not limited to: diversified multi-asset, private credit, private equity, and real assets. Source: Callan

Equity

U.S. Equities

U.S. market reaches record high after spike in volatility

- The U.S. equity market had a disappointing start to 3Q24 as the S&P 500 Index dropped in July.
- But the market rallied in the last months of 3Q to end the quarter at a record high.
- All sectors within the S&P 500 posted positive returns over the quarter except for the Energy sector. As a result of the Fed's rate cut decision, the bond proxy sectors (Real Estate and Utilities) performed the best.
- During 3Q, value outperformed growth across the market cap spectrum. Small cap stocks outperformed large cap stocks.
- Narrow leadership continues to be an issue for U.S. stocks. YTD, the "Magnificent Seven" stock returns accounted for 45% of the returns of the S&P 500 Index.

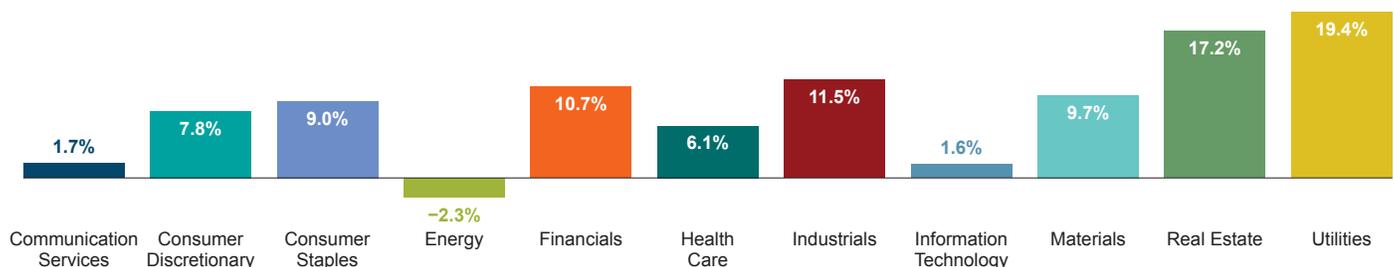
Top performers have broadened out

- The "Magnificent Seven" stocks experienced increased volatility and mixed results in 3Q. Four of these stocks underperformed the S&P 500 Index.
- Better earnings growth expectations for the market relative to the "Magnificent Seven" could result in broader market leadership.
- Although the long-term trend may have reversed in the last quarter, a large percentage of S&P 500 Index returns since 2021 are attributable to the "Magnificent Seven."

Small cap valuations

- Small cap relative valuations are historically low across numerous forward and trailing valuation multiples.

Quarterly Performance of Industry Sectors (9/30/24)



Source: S&P Dow Jones Indices

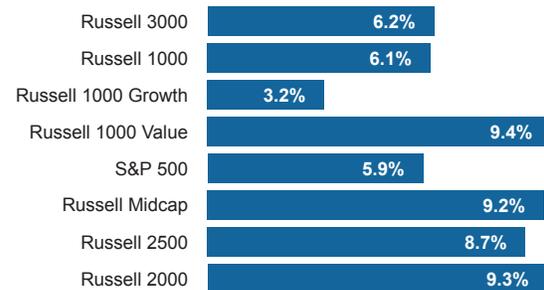
- Small cap continues to trade at large discounts relative to large cap.
- This may be indicative of an attractive entry point for increased allocation.

Global Equities

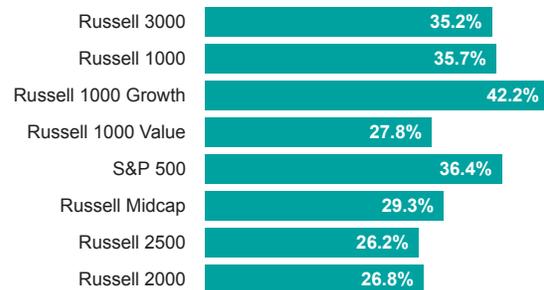
Global ex-U.S. markets outpace U.S. as technology lags

- Global equity markets rose while central banks began easing monetary policy and cutting interest rates.

U.S. Equity: Quarterly Returns (9/30/24)



U.S. Equity: One-Year Returns (9/30/24)



Sources: FTSE Russell and S&P Dow Jones Indices

- Market gains broadened to include more value stocks and previously underperforming sectors.
- Global ex-U.S. markets outpaced U.S. markets as the technology sector, a large portion of the U.S. market, faced pressure from AI spending scrutiny.
- Emerging markets outperformed developed markets with Asia being the strongest region within emerging markets.

Emerging markets

- China led a sharp rally higher in emerging markets after the Chinese government announced extensive stimulus measures aimed at tackling weakening economic activity, deflation, and its deteriorating property market.

Growth vs. value

- Generally, value-oriented sectors led markets higher as the technology sector hindered growth concerns. One exception was China, as stimulus announcements boosted beaten-down Chinese tech companies.

U.S. dollar strength

- The U.S. Dollar Index (DXY) declined over 3Q amid a much-anticipated rate cut by the U.S. Federal Reserve.

Quality growth managers struggle

- While outperforming in 2022, global quality growth managers have struggled since 2023, as high-growth names, often viewed as low-quality, have driven much of the market.

High growth rewarded last 18 months

- While high-growth managers were punished in 2022, they performed exceptionally well in 2023 and 2024.
- Still, on a three-year basis, quality growth managers have tended to outperform high-growth managers but still struggle against the ACWI index.

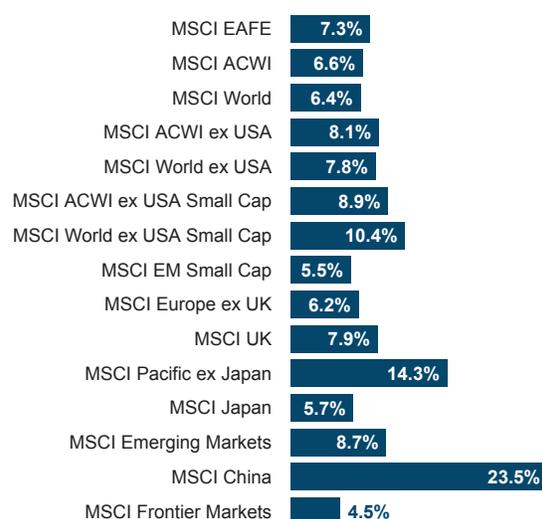
China's stimulus: what and why

- On Sept. 24, 2024, China announced a broad economic stimulus package. This is likely due to declining consumer sentiment and investor pressure.

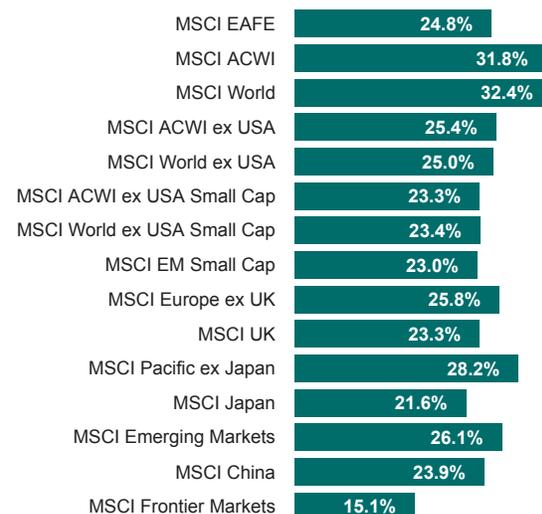
Results

- Stock markets initially rallied between 10%-30%, moving into YTD gain territory. Valuations are still at 10-year lows.
- China has the worst pass-through from GDP growth to earnings and investor returns since 2010. While the stimulus may assist with GDP growth, it may not correlate to better stock performance.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 9/30/24)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 9/30/24)



Source: MSCI

Fixed Income

U.S. Fixed Income

Rate cut spurs market rally

- The Fed lowered rates for the first time since 2020, reducing its overnight target by 50 bps; Fed “dot plot” indicates two more cuts by year-end.
- U.S. Treasuries fell across the curve; 10-year Treasury yield declined to 3.81% from 4.36% at the beginning of the quarter.
- The yield curve took a step toward normalization with the 2s/10s ending positive, though rates at the front-end remain elevated vs. intermediate- and long-term.

Performance and drivers

- The Bloomberg US Aggregate Index gained 5.2%, the second-best quarter in nearly 30 years, led by the rally in rates.
- Investment grade corporates and all securitized sectors outperformed U.S. Treasuries on a duration-adjusted basis.
- High yield corporate excess returns (+1.7%) outpaced investment grade corporate excess returns (+0.8%).

Valuations

- Despite significant widening in late July, both IG and HY spreads ended tighter over the quarter.
- HY defaults declined to 1.8%, while bank loans rose to 3.1%, widening the gap between them to the highest since 2014.
- New issuance continued to be strong, adding \$424 billion in IG and \$78 billion in HY debt.

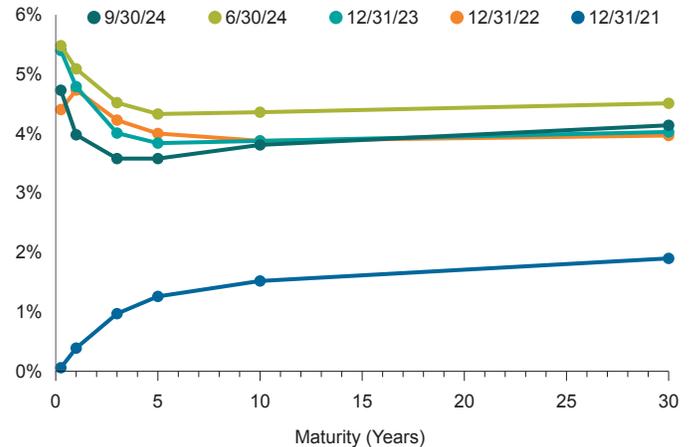
Munis posted gains but underperformed U.S. Treasuries

- Bloomberg Municipal Bond Index (+2.7%) vs. Bloomberg US Treasury Index (+4.7%)

AAA-rated muni yield curve normalized

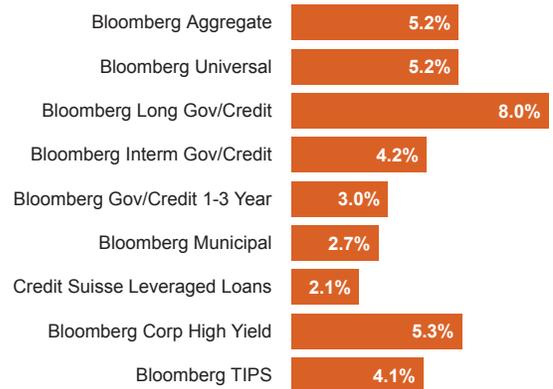
- 2-year and 10-year AAA rates fell by 77 bps and 23 bps, respectively; spread now +24 bps
- Maximum inversion of -50 bps was April 2024.
- Followed path of U.S. Treasury yield curve, which also normalized during the quarter (2-year vs 10-year)

U.S. Treasury Yield Curves

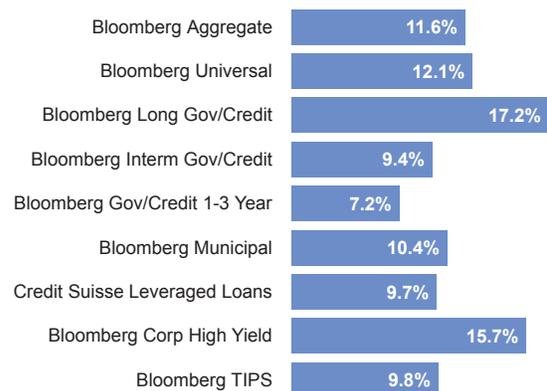


Source: Bloomberg

U.S. Fixed Income: Quarterly Returns (9/30/24)



U.S. Fixed Income: One-Year Returns (9/30/24)



Sources: Bloomberg and Credit Suisse

Muni valuations vs. U.S. Treasuries remain rich

- 10-year AAA Muni/10-year U.S. Treasury yield ratio rich relative to 10-year median (69% now vs. 85% historical)
- Need for increased infrastructure spending could benefit municipal bond issuance in years to come

Corporate new debt issuance remains robust

- Investment-grade corporate issuers continued the surge of new debt, issuing \$424 billion in 3Q, bringing the total YTD to more than \$1.3 trillion, already more than 7 of the last 10 years. At the current pace, new issuance will surpass \$1.7 trillion by year-end, the second-highest total on record.
- High yield new issuance was also robust, with approximately \$78 billion issued over the quarter. This brings the total issuance YTD to nearly \$250 billion, more than each of the last two calendar years.

Global Fixed Income

Macro environment

- Developed market rates declined as growth and inflation expectations moved lower.
- Several central banks cut rates over the quarter while the Bank of Japan unexpectedly raised its target to 0.25%, its highest rate since 2008.

U.S. dollar weakens

- The U.S. dollar weakened relative to major currencies, reversing the trend from the first half of the year and enhancing returns for unhedged investors.
- Within the U.S. Dollar Index (DXY), Japanese yen saw the largest relative gain, rising 12% vs. the U.S. dollar.

Emerging market debt posts strong quarter

- EM central banks broadly continued their easing policies, though Brazil raised its rate and signaled future hikes.
- The rally in EM currencies enhanced returns for EM debt, with the JPM GBI-EM Global Diversified Index gaining 9.0%.

Change in 10-Year Global Government Bond Yields

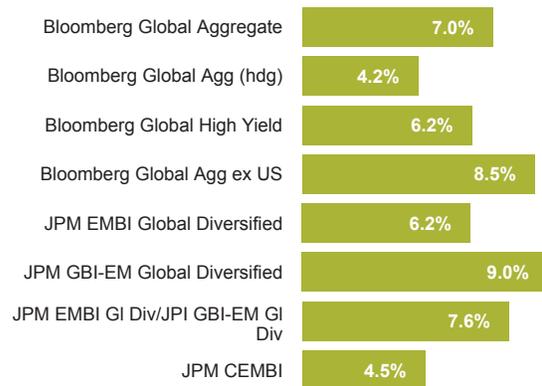
2Q24 to 3Q24



Source: Bloomberg

Global Fixed Income: Quarterly Returns

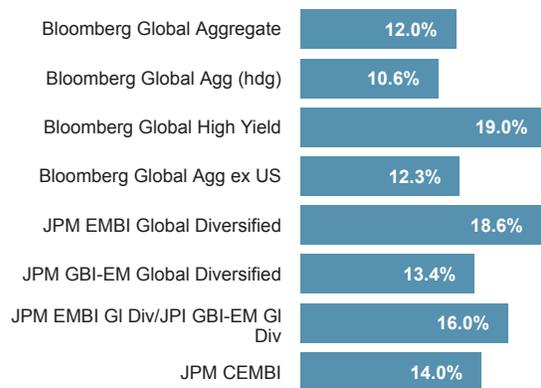
(9/30/24)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns

(9/30/24)



Sources: Bloomberg and JPMorgan Chase

Funds See Gains and REITs Top Equities

REAL ESTATE/REAL ASSETS | Munir Iman

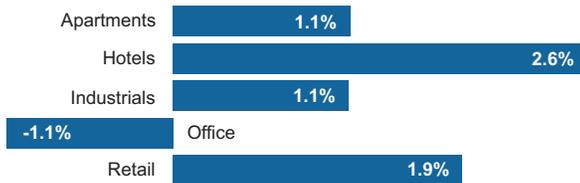
Valuations reflect higher interest rates

- After eight consecutive quarters of negative returns, valuations have adjusted to reflect higher borrowing costs.
- Income returns were positive across sectors and regions in 3Q24, with Hotels the top performer.
- All property sectors experienced flat or positive appreciation, except for Office, which dropped 2.5%.

REITs top equities

- Global REITs outperformed in 3Q24, up 16.1% compared to a 6.4% increase for global equities (MSCI World).
- U.S. REITs gained 16.0% in 3Q24, in contrast with the S&P 500 Index, which rose 5.9%.
- REITs are trading at a premium to NAV (+2.0%) for the first time since January 2022.
- Historically, global REITS have traded at a -3.8% discount to NAV.

Sector Quarterly Returns by Property Type (9/30/24)



Source: NCREIF

Callan Database Median and Index Returns* for Periods Ended 9/30/24

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	20 Years
Real Estate ODCE Style	0.1	-2.8	-8.0	-0.6	2.4	5.6	5.6
NFI-ODCE (value-weighted, net)	0.0	-3.2	-8.0	-1.0	2.1	5.2	5.7
NCREIF Property	0.8	-0.5	-3.5	0.9	3.3	5.9	7.2
NCREIF Farmland	-0.2	0.3	2.6	6.2	5.6	6.7	12.0
NCREIF Timberland	1.5	5.4	10.0	10.9	7.5	5.9	7.1
Public Real Estate							
Global Real Estate Style	15.9	13.2	31.1	2.0	4.0	6.4	7.5
FTSE EPRA Nareit Developed	13.9	15.2	28.2	6.1	4.8	6.3	--
Global ex-U.S. Real Estate Style	16.1	10.8	29.7	-2.1	2.1	5.0	--
FTSE EPRA Nareit Dev ex US	16.8	8.0	24.1	-4.0	-1.6	1.6	--
U.S. REIT Style	15.9	15.3	33.7	4.3	6.4	8.4	8.9
FTSE EPRA Nareit Equity REITs	16.1	15.9	34.7	5.1	5.5	7.8	8.1

*Returns less than one year are not annualized. Sources: Callan, FTSE Russell, NCREIF

Over \$250 billion in dry powder

- ODCE redemption queues are approximately 18.9% of net asset value, with a median queue of 15.0%. This compares to the GFC when queues peaked at approximately 15% of net asset value (NAV).
- Outstanding redemption requests for most large ODCE funds are approximately 6% to 33% of NAV (with one outlier at 56%).
- For a large proportion of funds, these redemptions are partial redemptions, due to portfolio rebalancing and liquidity needs. For a smaller underperforming subset, redemption requests are full redemptions indicative of manager termination.

Pricing, transaction volumes on the rise

- Transaction volume is increasing on a rolling four-quarter basis yet remains below five-year averages.
- In 3Q24, transaction volume increased slightly on a quarter-over-quarter basis. Transaction volume remains significantly lower compared to 2022.
- The rise in interest rates is the driving force behind the slowdown in transactions. Increasing transactions are driven by rising confidence in multi-family and industrial values. Valuations have largely adjusted to higher borrowing costs.

Fewer Funds but More Fundraising

PRIVATE EQUITY | Ashley Kahn

Fundraising ► The first half of 2024 showed mixed signals in terms of fundraising. The number of funds raised is significantly down from years prior, but the amount raised actually exceeds the first halves of both 2022 and 2023. As was the case in 2023, capital continues to concentrate with larger funds. Small venture capital funds, which historically make up a large portion of the number of funds raised, have experienced the greatest challenges fundraising today.

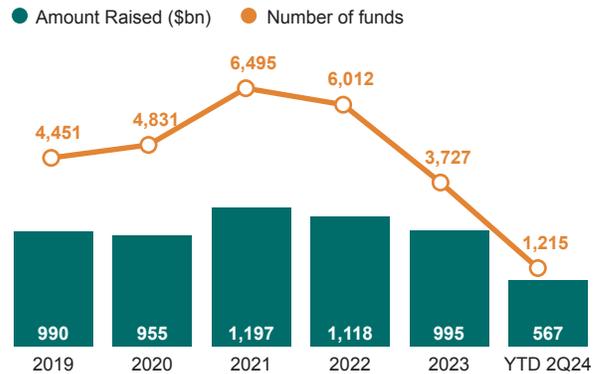
Buyouts ► Buyout activity levels in 2024 are similar to 2023, which represents a return to the pre-pandemic activity levels of 2019. In hindsight, 2021-22 appear to be the exceptional years, characterized by exuberance in deal activity, while 2023-24 are much closer to historical levels.

Venture Capital and Growth Equity ► The first half of 2024 represents a continuation of the slower pace of activity in 2023, although managers are generally more optimistic about making new investments. This year has seen a notable recovery in late-stage valuations. Companies able to raise follow-on financing typically do so at an up round. Similarly, early-stage valuations in 2024 rose by 25% from the prior year.

Exits ► The first half of 2024 represents a continuation of the slower pace of exits in 2023, although managers are generally more optimistic about seeking an exit this year. Both

Annual Fundraising

(6/30/24)



Source: Pitchbook

IPOs and M&A exits are down in 1H24 compared to 1H23 by roughly 10%. Persistent buyer-seller valuation gaps continue to dampen exit activity, and the interest rate cut is not yet reflected in the 2Q24 data.

Returns ► Public equity’s exceptional performance in the first half of the year (led by the “Magnificent Seven” technology stocks) has left private equity in its wake. Private equity returns are not as volatile as the public markets, and private equity doesn’t typically outperform when public equity is at record highs (it likewise doesn’t drop as sharply when public equity drops). Over the long term, private equity consistently outperforms public equity by 1%-3%.

Private Equity Performance (%) (Pooled Horizon IRRs through 6/30/24*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
All Venture	-0.8%	-1.3%	-3.2%	14.7%	15.0%	12.4%
Growth Equity	1.4%	4.1%	0.2%	13.4%	13.0%	13.4%
All Buyouts	1.4%	6.6%	6.8%	14.8%	13.3%	14.0%
Mezzanine	2.3%	9.4%	9.3%	11.2%	10.9%	11.3%
Credit Opportunities	1.8%	8.5%	7.6%	8.5%	7.2%	9.2%
Control Distressed	0.6%	2.8%	9.0%	13.4%	10.7%	11.3%
All Private Equity	1.0%	4.6%	3.8%	14.0%	13.0%	13.1%

Note: Private equity returns are net of fees. Sources: LSEG/Cambridge and S&P Dow Jones Indices

*Most recent data available at time of publication

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of the *Capital Markets Review* and other Callan publications.

Outperformed Leveraged Loans over 5, 10, and 20 Years

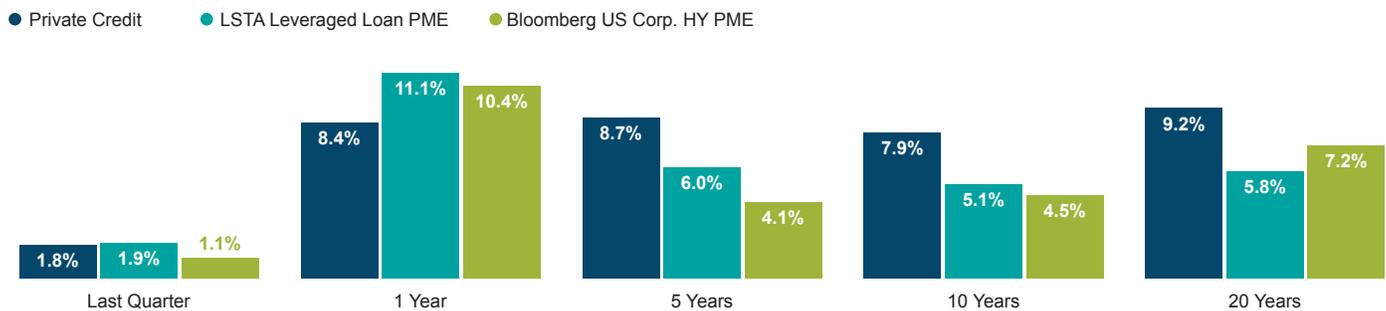
PRIVATE CREDIT | Cos Braswell and Daniel Brown

Private credit gained 1.8% in 2Q24, the most recent quarter available, roughly even with a leveraged loan index and above a high yield index. Over longer time periods it has handily outperformed both indices. Fundraising, by number of funds, is off historical levels but capital raised is in line with the last few years. Interest in the asset class by institutional investors has stayed strong.

- Private credit performance varies across sub-asset class and underlying return drivers. Over the past 10 years the asset class has generated a net IRR of 7.9% as of 2Q24, outperforming leveraged loans. Higher-risk strategies have performed better than lower-risk strategies.
- The number of funds closed in 2Q24 was the lowest we’ve seen in years; however, aggregate capital raised is in line with the last few years and outpaced historical quarters.
- While direct lending continues to dominate fundraises, we are noticing increased interest in specialty finance strategies for more mature PC portfolios.

- Private credit stayed in high demand among Callan clients, and a number of large DB plans are looking to increase their allocations from 2%–3% to 5%–10%.
- Private credit AUM stood at over \$1.5 trillion at the end of 2023, with Preqin forecasting the asset class could grow to over \$2.5 trillion by 2028. Private credit AUM growth is expected to remain steady across geographies. While CAGR grew at about 17.5% from 2016 to 2022, CAGR is forecasted at 11.1% from 2024 to 2028.
- About 90% of investors expect either to maintain or increase their allocation in the next year.
- Direct lending is expected to grow steadily through 2028 as investors increase their private credit allocations. Distressed exposure should grow a bit more slowly with other strategies such as specialty finance and other niche diversifiers growing more quickly.

Private Credit Performance (%) (Pooled Horizon IRRs through 6/30/24*)



Private Credit Performance (%) (Pooled Horizon IRRs by Strategy through 6/30/24*)

Strategy	Quarter	1 Year	5 Years	10 Years	20 Years
Senior Debt	1.2	7.5	7.1	7.1	7.3
Subordinated	2.3	9.4	11.2	10.9	11.2
Credit Opportunities	1.8	8.5	8.5	7.2	9.0
Total Private Credit	1.8	8.4	8.7	7.9	9.2

Source: LSEG/Cambridge

*Most recent data available at time of publication

Higher Beta Hedge Fund Strategies Have a Strong Quarter

HEDGE FUNDS/MACs | Joe McGuane

The market backdrop served as a strong tailwind for most hedge fund strategies in 3Q24. U.S. equity markets ended a volatile quarter higher, driven by strong corporate earnings and the Federal Reserve's larger-than-expected interest rate cut in September. Credit indices saw gains across the board, with investment grade and high yield bond indices outperforming levered loans. Emerging, European, and Asian markets were mixed. Within emerging markets, China outperformed its peers due to improved investor sentiment following the government's announcement of a monetary stimulus package.

In 3Q, hedge funds had another strong performance, as strategies with higher beta to equity markets saw gains. Equity hedge strategies led returns, driven by generalist managers and those with a focus on health care. Relative value strategies were positive, as performance was driven by fundamental and systematic equity relative value. Event-driven strategies also had a strong quarter, as a focus on deep value companies and mergers drove performance. Macro strategies ended slightly lower, as gains from long positions in U.S., European, and U.K.

Hedge Fund Style Group Returns

(9/30/24)



Sources: Callan, Credit Suisse, Federal Reserve

rates, fixed income relative value trading in the U.S., and long gold were offset by losses from shorting Japanese rates, long positions in the U.S. dollar, and going long Japanese equities.

Callan Peer Group Median and Index Returns* for Periods Ended 9/30/24

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	2.1	9.4	5.9	7.5	6.7	7.3
Callan Fund-of-Funds Peer Group	1.9	10.3	4.3	6.2	4.6	5.0
Callan Absolute Return FOF Style	2.4	9.6	5.4	6.1	4.5	4.9
Callan Core Diversified FOF Style	1.7	10.3	4.4	6.3	4.1	4.9
Callan Long/Short Equity FOF Style	2.9	13.6	1.9	6.5	5.7	5.7
HFRI Fund Weighted Index	2.9	12.7	4.0	7.4	5.1	5.1
HFRI Fixed Convertible Arbitrage	3.6	10.9	4.9	7.1	5.5	5.7
HFRI Distressed/Restructuring	3.6	13.1	4.1	7.7	4.7	5.9
HFRI Emerging Markets	4.7	14.9	1.0	5.6	4.0	3.8
HFRI Equity Market Neutral	1.5	9.8	5.2	4.4	3.6	3.2
HFRI Event-Driven	4.6	13.4	4.5	7.4	5.1	5.8
HFRI Relative Value	2.6	9.4	4.3	5.1	4.2	5.3
HFRI Macro	-0.6	3.9	4.3	5.2	3.2	2.6
HFRI Equity Hedge	4.0	17.4	3.6	9.0	6.1	5.9
HFRI Multi-Strategy	4.7	13.5	2.2	6.5	3.6	4.1
HFRI Merger Arbitrage	3.5	7.5	4.4	6.0	4.9	4.4
90-Day T-Bill + 5%	2.6	10.5	8.5	7.3	6.6	6.1

*Net of fees. Sources: Callan, Credit Suisse, Hedge Fund Research

Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group member rose 2.1%. Within this style group of 50 peers, the average hedge credit manager gained 2.9%, driven by interest rate volatility. Meanwhile, the average hedge equity manager added 0.3%, as those focused on health care, utilities, and real estate drove performance. The median Callan Institutional hedge rates manager rose 2.9%, largely driven by relative value fixed income trades.

Within the HFRI indices, the best-performing strategy in 3Q24 was event-driven, which was up 4.6%, as managers were able to profit off their positioning to out-of-favor equities. Equity hedge strategies gained 4.0%, as managers benefited from dispersion in utilities, health care, and real estate. Relative value strategies were up 2.6% due to the Fed lowering interest rates. Macro strategies were down 0.6%, as a weakening dollar offset gains from rates positioning during the quarter.

Across the Callan Hedge FOF database, the median Callan Long-Short Equity FOF ended 2.9% higher, as managers with a more generalist approach were able to profit off dispersion across sectors. Meanwhile, the median Callan Core Diversified FOF gained 1.7%, as equity and event-driven strategies drove performance. The median Callan Absolute Return FOF gained 2.4%, as a higher allocation to relative value strategies drove performance.

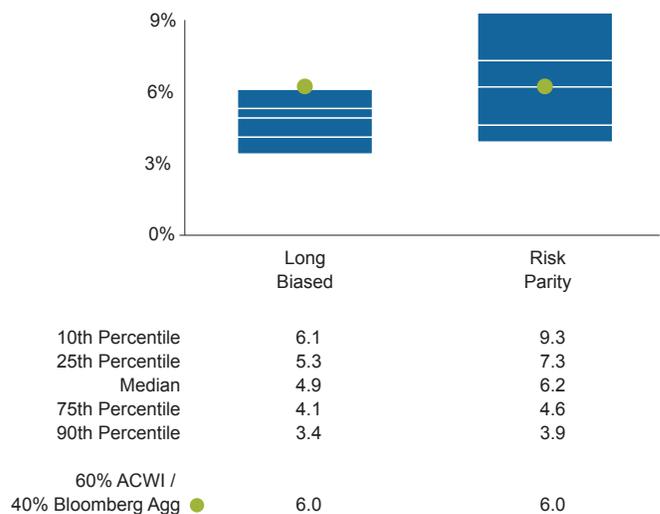
Since the Global Financial Crisis, liquid alternatives to hedge funds have become popular among investors for their attractive risk-adjusted returns that are similarly uncorrelated with traditional stock and bond investments but offered at a lower cost.

Within Callan’s database of liquid alternative solutions, the median Callan MAC Long Biased manager rose 4.9%, as the strong equity rally pushed performance higher. The Callan MAC Risk Parity peer group rose 6.2%, as equities and fixed income positioning drove performance.

If consensus expectations are met for a sustained stable growth and low inflation environment, markets can continue to

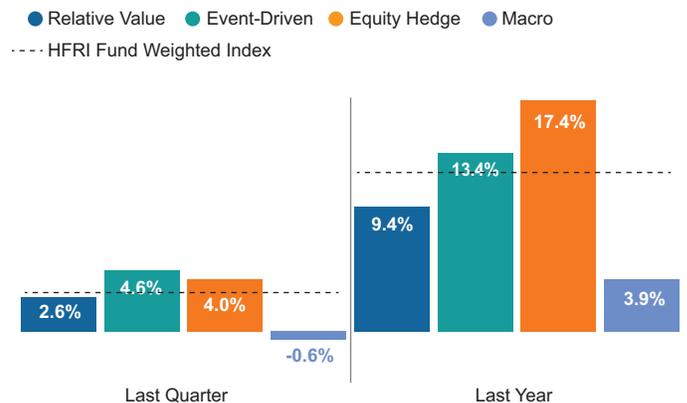
grind higher, and corporate profit margins and balance sheets for the largest companies can remain healthy. With markets priced close to perfection, one bad data point can cause markets to sell off. Against this current backdrop, Callan is focused on managers with the skill to generate alpha both on the long and short side across equities, fixed income, rates, currencies, and commodities.

MAC Style Group Returns (9/30/24)



Sources: Bloomberg, Callan, Eurekahedge, S&P Dow Jones Indices

HFRI Hedge Fund-Weighted Strategy Returns (9/30/24)



Source: HFRI

Index Gains Slow in 2Q24

DEFINED CONTRIBUTION | [Scotty Lee](#)

Performance: Index gains slow in 2Q24

- The Callan DC Index™ gained 1.68% in 2Q24, which brought the Index’s trailing one-year gain to 15.3%. The Age 45 Target Date Fund (analogous to the 2045 vintage) had a higher quarterly return (1.74%).

Growth Sources: Balances rise due to investment gains

- Balances within the DC Index rose by 1.1% after a 6.6% increase in the previous quarter. Investment gains (1.7%) were the driver of the gain, while net flows (-0.6%) had a contrary effect.

Turnover: Net transfers fall

- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index decreased to 0.17% from the previous quarter’s measure of 0.44%. The Index’s historical average (0.54%) remained steady.

Net Cash Flow Analysis: TDFs remain in top spot

- Target date funds (TDFs) garnered 75.8% of quarterly net flows. Within equities, investors withdrew assets from U.S. large cap equity (-32.6%) and U.S. small/mid-cap equity (-18.7%). Notably, stable value (-29.6%) saw relatively large outflows for the seventh consecutive quarter.

Equity Allocation: Exposure rises

- The Index’s overall allocation to equity (73.7%) rose slightly from the previous quarter’s level (73.5%).

Asset Allocation: Fixed income exposure falls

- U.S. large cap equity (28.5%) and target date funds (35.6%) were among the asset classes with the largest percentage increases in allocation, while stable value (6.4%) had the largest decrease in allocation from the previous quarter due to net outflows.

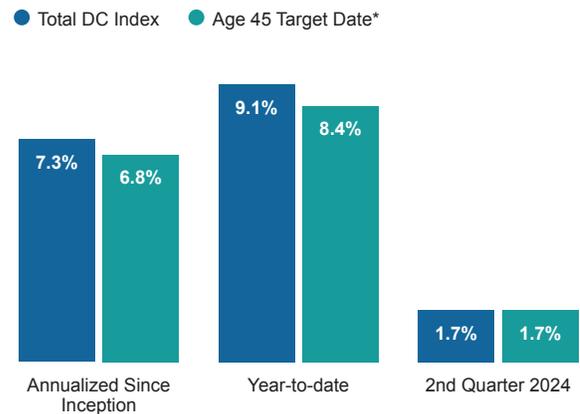
Prevalence of Asset Class: Global equity funds fall

- The prevalence of global equity funds (17.9%) fell by 2.1 percentage points along with a decrease in the prevalence of emerging markets (17.9%) by 1.4 percentage points.

Underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets are tracked in the Callan DC Index.

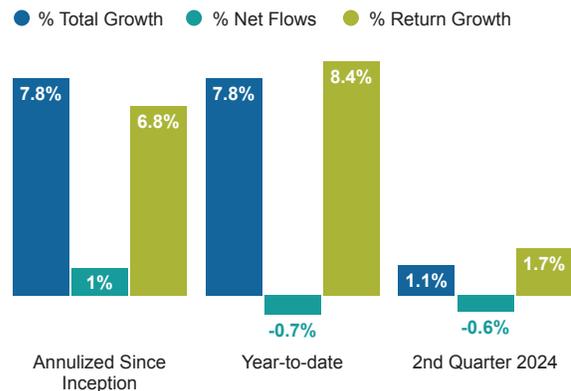
Investment Performance

(6/30/24)



Growth Sources

(6/30/24)



Net Cash Flow Analysis 2Q24

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	75.9%
Brokerage Window	12.4%
Stable Value	-29.6%
U.S. Large Cap	-32.6%
Total Turnover**	0.2%

Data provided here is the most recent available at time of publication.

Source: Callan DC Index

Note: DC Index inception date is January 2006.

* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

Contributors



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The *Capital Markets Review* is a quarterly macroeconomic indicator newsletter that provides thoughtful insights on the economy and recent performance in the equity, fixed income, alternatives, real estate, and other capital markets.

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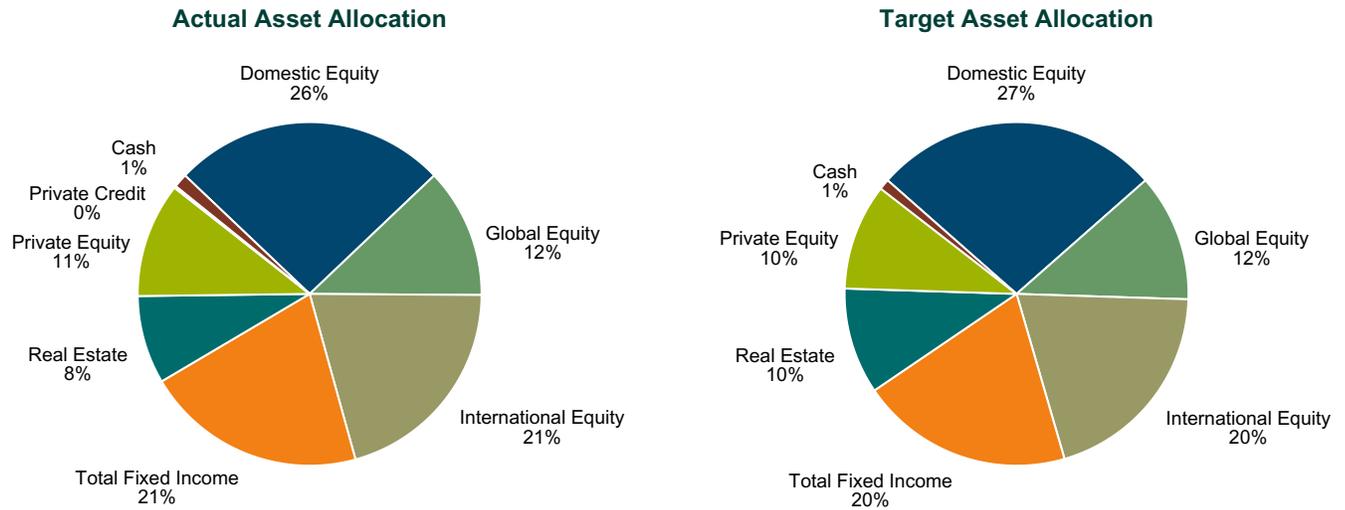
ASSET ALLOCATION AND PERFORMANCE

Asset Allocation and Performance

This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance is then examined relative to funds with similar objectives. Performance of each asset class is then shown relative to the asset class performance of other funds. Finally, a summary is presented of the holdings of the fund's investment managers, and the returns of those managers over various recent periods.

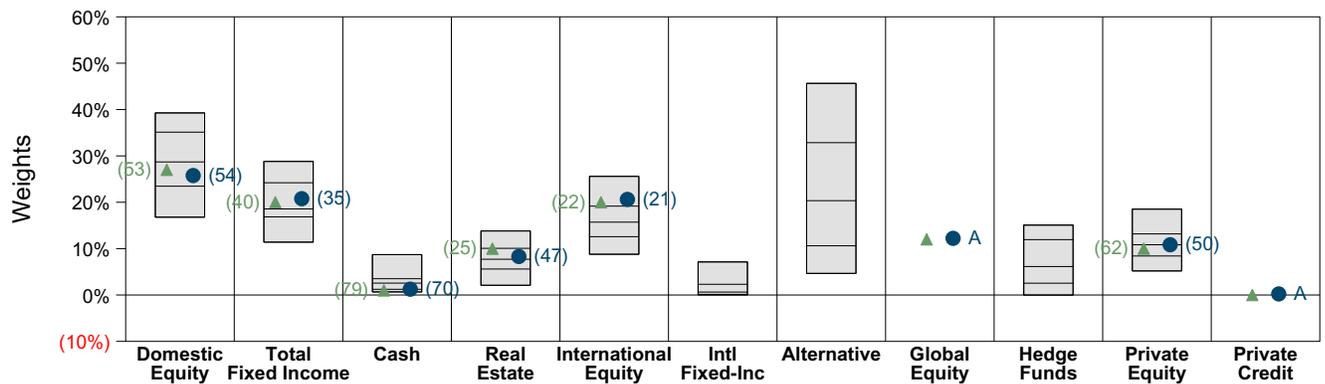
Actual vs Target Asset Allocation As of September 30, 2024

The top left chart shows the Fund's asset allocation as of September 30, 2024. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Spons- V Lg DB (>10B).



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	9,100,609	25.8%	27.0%	(1.2%)	(434,710)
Global Equity	4,314,952	12.2%	12.0%	0.2%	77,033
International Equity	7,282,336	20.6%	20.0%	0.6%	219,137
Total Fixed Income	7,336,070	20.8%	20.0%	0.8%	272,871
Real Estate	2,930,756	8.3%	10.0%	(1.7%)	(600,843)
Private Equity	3,826,590	10.8%	10.0%	0.8%	294,991
Private Credit	82,205	0.2%	0.0%	0.2%	82,205
Cash	442,476	1.3%	1.0%	0.3%	89,316
Total	35,315,994	100.0%	100.0%		

Asset Class Weights vs Callan Public Fund Spons- V Lg DB (>10B)



	Domestic Equity	Total Fixed Income	Cash	Real Estate	International Equity	Intl Fixed-Inc	Alternative	Global Equity	Hedge Funds	Private Equity	Private Credit
10th Percentile	39.28	28.82	8.71	13.82	25.60	7.13	45.65	-	15.08	18.52	-
25th Percentile	35.12	24.21	3.52	10.07	19.16	2.32	32.86	-	11.95	13.18	-
Median	28.70	18.56	2.57	7.71	15.72	0.63	20.34	-	6.14	10.84	-
75th Percentile	23.47	16.84	1.23	5.60	12.58	0.14	10.61	-	2.55	8.41	-
90th Percentile	16.78	11.40	0.66	2.10	8.78	0.05	4.66	-	0.00	5.19	-
Fund	● 25.77	20.77	1.25	8.30	20.62	-	-	12.22	-	10.84	0.23
Target	▲ 27.00	20.00	1.00	10.00	20.00	-	-	12.00	-	10.00	0.00
% Group Invested	100.00%	97.06%	94.12%	91.18%	100.00%	50.00%	91.18%	0.00%	17.65%	20.59%	0.00%

NOTE: Global Equity and Private Credit do not have enough members in their respective peer groups to populate the peer rankings.

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2024, with the distribution as of June 30, 2024. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	September 30, 2024				June 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	\$9,100,608,594	25.77%	\$(4,111,679)	\$504,696,710	\$8,600,023,563	25.50%
Large Cap Equity	\$6,914,161,238	19.58%	\$(1,543,608)	\$355,519,937	\$6,560,184,909	19.45%
Managed Large Cap Equity	\$878,384,594	2.49%	\$(1,471,421)	\$20,793,232	\$859,062,783	2.55%
Eagle Capital	878,384,594	2.49%	(1,471,421)	20,793,232	859,062,783	2.55%
Northern Trust S&P 500	\$6,035,776,643	17.09%	\$(72,188)	\$334,726,705	\$5,701,122,126	16.90%
Mid Cap Equity	\$1,121,816,393	3.18%	\$(1,226,157)	\$65,703,048	\$1,057,339,502	3.13%
Northern Trust Russell Mid-Cap	13,962	0.00%	0	1,182	12,781	0.00%
Artisan Partners	516,829,813	1.46%	(591,405)	14,097,868	503,323,350	1.49%
Victory Mid Cap Value	604,972,618	1.71%	(634,752)	51,603,998	554,003,371	1.64%
Small Cap Equity	\$1,064,630,963	3.01%	\$(1,341,914)	\$83,473,725	\$982,499,152	2.91%
Dimensional Fund Advisors	358,277,052	1.01%	(232,758)	25,998,323	332,511,488	0.99%
Wellington Small Cap	371,599,920	1.05%	(529,885)	35,540,033	336,589,772	1.00%
Riverbridge Partners SCG	334,753,991	0.95%	(579,272)	21,935,370	313,397,893	0.93%
Global Equity	\$4,314,952,287	12.22%	\$(3,949,941)	\$211,348,403	\$4,107,553,825	12.18%
Acadian Global Equity	1,075,884,519	3.05%	(982,884)	29,757,119	1,047,110,285	3.10%
Epoch Investments	1,078,026,593	3.05%	(1,052,419)	52,889,294	1,026,189,719	3.04%
Harding-Loevner	1,087,167,538	3.08%	(1,019,591)	54,962,625	1,033,224,504	3.06%
Longview	1,021,455	0.00%	0	40,559	980,896	0.00%
LSV Global Value	1,069,376,568	3.03%	(895,047)	73,589,918	996,681,696	2.95%
NT Global Equity Index	1,379,739	0.00%	17,662	20,830	1,341,247	0.00%
Northern Trust Transition	2,095,874	0.01%	(17,662)	88,058	2,025,478	0.01%
International Equity	\$7,282,335,676	20.62%	\$(5,180,199)	\$545,988,707	\$6,741,527,167	19.99%
All Country ex US	\$4,962,212,289	14.05%	\$(2,866,335)	\$352,068,636	\$4,613,009,989	13.68%
Arrowstreet Capital	719,492,910	2.04%	(878,279)	28,567,460	691,803,730	2.05%
Baillie Gifford	812,503,131	2.30%	(686,047)	73,459,397	739,729,782	2.19%
Marathon Asset Mgmt	916,875,558	2.60%	(1,243,721)	68,140,098	849,979,181	2.52%
NT MSCI World ex US	2,513,340,690	7.12%	(58,288)	181,901,681	2,331,497,296	6.91%
Small Cap	\$729,231,341	2.06%	\$(490,354)	\$61,944,479	\$667,777,216	1.98%
Mondrian	2,239,169	0.01%	(182,763)	289,322	2,132,611	0.01%
Fidelity	144,589	0.00%	0	3,518	141,072	0.00%
Principal Sm Cap Intl	374,394,233	1.06%	(307,591)	28,554,937	346,146,887	1.03%
Northern Trust Intl Small Cap	352,453,349	1.00%	0	33,096,702	319,356,647	0.95%
Emerging Markets	\$1,572,546,051	4.45%	\$(1,592,402)	\$131,141,216	\$1,442,997,237	4.28%
Lazard	814,016,958	2.30%	(583,482)	72,635,923	741,964,517	2.20%
Fisher Investments	758,529,093	2.15%	(1,008,920)	58,505,293	701,032,720	2.08%
EAFE Composite	\$18,345,995	0.05%	\$(231,107)	\$834,377	\$17,742,725	0.05%
BlackRock EAFE Index	1,529,475	0.00%	(231,107)	161,597	1,598,984	0.00%
Northern Trust EAFE	12,700,840	0.04%	0	632,007	12,068,833	0.04%
Dimensional Fund Advisors	170,610	0.00%	0	6,707	163,903	0.00%
Jarislowsky Fraser	334,488	0.00%	(104,065)	17,461	421,092	0.00%
NS Partners	105,970	0.00%	0	4,206	101,764	0.00%
Lazard Asset-Intl Transition	3,504,611	0.01%	104,065	12,398	3,388,148	0.01%
Total Equity	\$20,697,896,556	58.61%	\$(13,241,819)	\$1,262,033,820	\$19,449,104,555	57.66%

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2024, with the distribution as of June 30, 2024. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	September 30, 2024			Inv. Return	June 30, 2024	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Domestic Fixed-Income	\$4,997,705,496	14.15%	\$(1,759,381)	\$208,048,728	\$4,791,416,148	14.21%
Short Duration	\$1,196,292,956	3.39%	\$(376,612)	\$23,474,602	\$1,173,194,966	3.48%
SIT Short Duration FI	1,196,292,956	3.39%	(376,612)	23,474,602	1,173,194,966	3.48%
Core Fixed Income	\$1,397,562,589	3.96%	\$(493,925)	\$70,121,548	\$1,327,934,966	3.94%
PIMCO	700,792,035	1.98%	(249,713)	35,140,655	665,901,093	1.97%
Northern Trust BB Agg	-142	(0.00%)	0	(3)	-139	(0.00%)
Manulife Asset Management	696,770,696	1.97%	(244,212)	34,980,896	662,034,012	1.96%
Core Plus	\$2,403,849,950	6.81%	\$(888,844)	\$114,452,577	\$2,290,286,216	6.79%
Loomis Sayles	1,184,858,328	3.36%	(498,817)	55,178,530	1,130,178,614	3.35%
Prudential Core Plus	1,218,991,622	3.45%	(390,027)	59,274,047	1,160,107,602	3.44%
Emerging Markets Debt	\$752,167,950	2.13%	\$(809,974)	\$44,112,565	\$708,865,358	2.10%
Wellington EMD	752,167,950	2.13%	(809,974)	44,112,565	708,865,358	2.10%
Global Fixed Income	\$1,586,196,659	4.49%	\$(904,028)	\$58,551,158	\$1,528,549,529	4.53%
PIMCO Global	789,848,512	2.24%	(456,250)	27,805,583	762,499,179	2.26%
AllianceBernstein Global	796,348,147	2.25%	(447,778)	30,745,575	766,050,350	2.27%
Total Fixed Income	\$7,336,070,104	20.77%	\$(3,473,382)	\$310,712,451	\$7,028,831,035	20.84%

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2024, with the distribution as of June 30, 2024. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	September 30, 2024				June 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
REIT Composite	\$365,691,556	1.04%	\$(324,196)	\$52,490,697	\$313,525,055	0.93%
Centersquare	245,559,160	0.70%	(207,040)	36,379,497	209,386,702	0.62%
Cohen & Steers	120,132,396	0.34%	(117,156)	16,111,200	104,138,352	0.31%
Core Real Estate	\$1,567,501,818	4.44%	\$(65,525,945)	\$7,467,204	\$1,625,560,560	4.82%
Principal Capital	822,861,805	2.33%	(33,332,649)	526,964	855,667,490	2.54%
UBS Trumbull Property	360,204,414	1.02%	(12,458,653)	3,783,232	368,879,835	1.09%
JPMCB Strategic Property	384,435,599	1.09%	(19,734,643)	3,157,008	401,013,234	1.19%
Core Plus Real Estate	\$220,419,777	0.62%	\$(3,482,224)	\$1,755,213	\$222,146,788	0.66%
UBS Trumbull Property G&I	220,419,777	0.62%	(3,482,224)	1,755,213	222,146,788	0.66%
Non-Core Real Estate	\$738,685,372	2.09%	\$(16,280,713)	\$11,017,111	\$743,948,974	2.21%
AEW Partners VI	751,994	0.00%	0	1,601	750,393	0.00%
AEW Partners VII	3,879,989	0.01%	(26,129)	79,467	3,826,651	0.01%
AEW Partners VIII	11,799,006	0.03%	(3,975,555)	(61,612)	15,836,173	0.05%
AEW Partners IX	63,196,253	0.18%	(4,113,917)	719,763	66,590,408	0.20%
Heitman VP III	404,923	0.00%	0	5,409	399,514	0.00%
Heitman VP IV	31,290,611	0.09%	(3,380,241)	136,077	34,534,775	0.10%
Heitman VP V	62,571,517	0.18%	2,229,755	516,424	59,825,338	0.18%
AG Core Plus II	822	0.00%	0	5	818	0.00%
AG Core Plus III	137,217	0.00%	(1,000,872)	(8,464)	1,146,553	0.00%
AG Core Plus IV	16,717,987	0.05%	(87,300)	(388,578)	17,193,866	0.05%
AG Realty Fund X	49,718,048	0.14%	954,958	(1,556,488)	50,319,578	0.15%
AG Realty Value Fd XI	22,982,660	0.07%	2,368,589	474,781	20,139,289	0.06%
Invesco US Income Fund	163,067,081	0.46%	(3,349,831)	1,214,800	165,202,112	0.49%
Invesco VA Fund IV	1,857,576	0.01%	11,731	(885)	1,846,730	0.01%
Invesco VA Fund V	57,255,478	0.16%	(193,783)	(714,106)	58,163,367	0.17%
Invesco Real Estate US Fund VI	37,631,058	0.11%	1,736,227	(856,565)	36,751,396	0.11%
TA Associates Realty Fund X	794,787	0.00%	0	4,314	790,473	0.00%
TA Associates Realty Fund XI	474,693	0.00%	(8,973,953)	42,259	9,406,387	0.03%
TA Associates Realty Fund XII	94,769,882	0.27%	(381,101)	(84,961)	95,235,944	0.28%
TA Associates Realty Fund XIII	41,951,491	0.12%	(5,215,625)	10,805,865	36,361,251	0.11%
Westbrook RE Fund X	13,215,247	0.04%	(52,894)	(673,459)	13,941,600	0.04%
Westbrook RE Fund XI	64,217,052	0.18%	7,169,228	1,361,465	55,686,359	0.17%
Timber Composite	\$38,457,881	0.11%	\$(1,540,568)	\$1,753,540	\$38,244,909	0.11%
Hancock Timber Portfolio	38,457,881	0.11%	(1,540,568)	1,753,540	38,244,909	0.11%
Total Real Estate	\$2,930,756,403	8.30%	\$(87,153,647)	\$74,483,764	\$2,943,426,286	8.73%
Private Equity	\$3,826,590,213	10.84%	\$(155,382,450)	\$52,051,452	\$3,929,921,211	11.65%
Pathway PEF XXIII	211,121,219	0.60%	(29,227,259)	868,768	239,479,710	0.71%
Pathway PEF SRS 2013	656,151,138	1.86%	(15,295,250)	(2,879,757)	674,326,144	2.00%
Pathway PEF 2016	1,288,379,787	3.65%	(90,926,250)	25,794,691	1,353,511,345	4.01%
Pathway PEF 2021	373,316,285	1.06%	11,497,250	8,257,409	353,561,625	1.05%
GCM Grosvenor Private Markets	127,023,279	0.36%	(21,420,551)	(3,692,399)	152,136,229	0.45%
GCM Grosvenor 2014	632,388,352	1.79%	(48,199,496)	9,472,860	671,114,989	1.99%
GCM Grosvenor 2018 Series	527,376,140	1.49%	27,659,106	13,925,865	485,791,168	1.44%
Private Credit	\$82,204,736	0.23%	\$38,100,734	\$873,366	\$43,230,637	0.13%
Blue Owl Lending Fd Series 20	51,801,723	0.15%	32,601,659	437,912	18,762,153	0.06%
Grosvenor Private Credit Series 2023	30,403,013	0.09%	5,499,075	435,454	24,468,484	0.07%
Cash	\$442,476,027	1.25%	\$104,161,775	\$4,108,293	\$334,205,958	0.99%
Total Fund	\$35,315,994,040	100.00%	\$(117,439,034)	\$1,704,713,392	\$33,728,719,682	100.00%

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 2024. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended September 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Domestic Equity	5.87%	84	32.39%	69	9.36%	63	14.99%	31	12.40%	48
Russell 3000 Index	6.23%	74	35.19%	17	10.29%	31	15.26%	24	12.83%	23
Pub Pln- Dom Equity	6.59%		33.63%		9.74%		14.46%		12.36%	
Large Cap Equity	5.42%	47	36.00%	45	11.64%	33	15.96%	42	13.04%	50
Russell 1000 Index	6.08%	39	35.68%	47	10.83%	43	15.64%	44	13.10%	49
Callan Large Cap	5.17%		34.31%		10.37%		14.98%		13.06%	
Managed Large Cap Equity	2.42%	96	33.92%	76	9.86%	81	16.10%	48	12.46%	69
Callan Large Cap Core	5.09%		36.59%		12.16%		16.01%		13.20%	
Eagle Capital**	2.42%	96	33.92%	76	9.86%	81	16.10%	48	13.60%	38
S&P 500 Index	5.89%	28	36.35%	54	11.91%	55	15.98%	51	13.38%	47
Callan Large Cap Core	5.09%		36.59%		12.16%		16.01%		13.20%	
Northern Trust S&P 500	5.87%	28	36.26%	55	11.93%	55	15.96%	51	13.35%	48
S&P 500 Index	5.89%	28	36.35%	54	11.91%	55	15.98%	51	13.38%	47
Callan Large Cap Core	5.09%		36.59%		12.16%		16.01%		13.20%	
Mid Cap Equity	6.22%	87	22.25%	83	3.06%	84	11.52%	52	9.77%	63
Russell MidCap Index	9.21%	22	29.33%	36	5.75%	77	11.30%	60	10.19%	60
Callan Mid Cap Core	8.17%		26.21%		7.64%		12.03%		10.90%	
Artisan Partners	2.81%	88	17.43%	86	(4.88%)	86	10.46%	57	10.86%	56
Russell MidCap Growth Idx	6.54%	31	29.33%	16	2.32%	18	11.48%	38	11.30%	38
Callan Mid Cap Growth	5.62%		24.35%		0.06%		10.60%		10.91%	
Victory Mid Cap Value	9.32%	45	27.01%	53	-	-	-	-	-	-
Russell MidCap Value Idx	10.08%	29	29.01%	26	7.39%	73	10.33%	81	8.93%	68
Callan Mid Cap Value	9.08%		27.36%		9.37%		12.07%		9.79%	
Small Cap Equity	8.50%	55	20.71%	87	3.28%	72	11.58%	46	11.23%	24
Russell 2000 Index	9.27%	38	26.76%	46	1.84%	85	9.39%	83	8.78%	87
Callan Small Cap Core	8.90%		26.47%		5.03%		11.26%		10.33%	
Dimensional Fund Advisors	7.82%	71	23.95%	63	10.64%	15	15.60%	7	10.12%	30
Russell 2000 Value Index	10.15%	24	25.88%	41	3.77%	89	9.29%	79	8.22%	94
Callan Small Cap Value	8.37%		24.70%		7.04%		11.07%		9.53%	
Wellington Small Cap	10.57%	15	27.34%	35	6.56%	27	10.86%	58	11.72%	13
Russell 2000 Index	9.27%	38	26.76%	46	1.84%	85	9.39%	83	8.78%	87
Callan Small Cap Core	8.90%		26.47%		5.03%		11.26%		10.33%	
Riverbridge Partners	7.01%	53	11.08%	98	(7.42%)	95	7.78%	93	11.12%	57
Russell 2000 Growth Index	8.41%	28	27.66%	50	(0.35%)	53	8.82%	81	8.95%	98
Callan Small Cap Growth	7.04%		27.85%		0.20%		11.16%		11.32%	

**Benchmark changed to S&P 500 as of 1Q 2014.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 2024. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended September 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Global Equity	5.15%	65	30.16%	54	6.54%	61	11.67%	60	9.77%	62
Global Equity Benchmark (2)	6.84%	32	30.96%	51	7.44%	53	11.87%	56	9.15%	75
Acadian Global Equity	2.84%	95	33.57%	28	9.89%	24	15.35%	10	10.46%	45
Epoch Investments	5.16%	65	28.08%	63	6.04%	66	10.00%	86	8.89%	76
Harding-Loevner	5.32%	61	31.25%	49	1.94%	91	11.66%	60	10.67%	40
LSV Global Value	7.39%	23	27.62%	67	-	-	-	-	-	-
MSCI ACWI Index	6.61%	34	31.76%	43	8.09%	48	12.19%	53	9.39%	71
Callan Global Equity	5.74%		31.23%		7.75%		12.40%		10.30%	
International Equity	8.10%	21	26.07%	26	3.69%	63	8.59%	39	6.12%	58
International Equity Benchmark (3)	8.18%	18	25.06%	54	3.74%	61	7.66%	69	5.33%	83
International Eq Custom BM (4)	8.15%	19	25.10%	50	3.46%	66	7.56%	69	5.36%	83
Pub Pln- Intl Equity	7.62%		25.11%		4.14%		8.42%		6.23%	
All Country ex US	7.63%	53	25.52%	47	3.50%	66	10.31%	27	7.70%	28
Arrowstreet Capital	4.13%	93	25.95%	42	9.01%	12	14.41%	3	9.35%	12
Baillie Gifford	9.94%	18	25.93%	43	(4.46%)	94	6.28%	90	6.20%	64
Marathon Asset Mgmt	8.02%	45	23.60%	70	4.47%	55	8.75%	52	-	-
MSCI ACWI xUS IMI	8.18%	42	25.06%	55	3.74%	65	7.66%	76	5.33%	89
NT MSCI World ex US	7.80%	49	25.35%	50	-	-	-	-	-	-
MSCI World xUS	7.76%	51	24.98%	57	5.65%	42	8.36%	62	5.68%	81
Non-U.S. Equity Database	7.79%		25.36%		4.90%		8.83%		6.65%	
Small Cap	9.28%	44	21.52%	71	(1.55%)	60	4.60%	84	5.12%	90
Principal Sm Cap Intl	8.25%	66	22.34%	69	0.45%	48	5.60%	77	-	-
Northern Trust Intl Small Cap	10.36%	21	-	-	-	-	-	-	-	-
MSCI World Small Cap x US	10.45%	21	23.36%	63	0.05%	52	6.85%	63	5.99%	81
Callan Intl Small Cap	9.02%		24.75%		0.19%		8.12%		7.21%	
Emerging Markets	9.10%	20	30.30%	13	4.32%	20	7.91%	28	4.67%	75
Lazard Emerging Markets	9.79%	12	31.38%	9	8.41%	3	8.97%	15	5.09%	57
Fisher Investments	8.35%	30	29.17%	20	0.10%	50	6.58%	49	-	-
MSCI Emerging Mkts Idx	8.72%	25	26.05%	43	0.40%	47	5.75%	63	4.03%	85
Callan Emerging Broad	6.98%		24.82%		0.14%		6.50%		5.31%	
Total Equity	6.49%	36	29.70%	56	6.78%	59	12.05%	55	9.70%	64
MSCI ACWI IMI Index	6.84%	32	30.96%	51	7.44%	53	11.87%	56	9.20%	75
Total Equity Custom Benchmark (5)	7.05%	29	30.67%	52	7.40%	53	11.86%	56	9.44%	69
Callan Global Equity	5.74%		31.23%		7.75%		12.40%		10.30%	

(2) Global Eqty Benchmark: MSCI World Idx through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.

(3) International Equity Benchmark: MSCI ACWI exUS through 6/30/2013; then MSCI ACWI exUS IMI thereafter.

(4) International Eq Custom BM: MSCI ACWI ex US through 6/30/13; MSCI ACWI ex US IMI Index through 9/30/2015;

35% MSCI EAFE Hedged, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets, 5% MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap through 12/31/17; then 35% MSCI EAFE, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets,

5% MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap thereafter.

(5) Total Equity Custom Benchmark: 49% Russell 3000 Idx, 36% MSCI ACWI ex US IMI Idx, and 15% MSCI AC World Idx through 9/30/2015; then 44% Russell 3000 Idx, 36% MSCI ACWI xUS IMI Idx, and 20% MSCI ACWI IMI thereafter.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 2024. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended September 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Domestic Fixed-Income	4.34%	88	12.11%	46	(1.01%)	76	1.08%	69	2.58%	49
Blmbg Aggregate Index	5.20%	24	11.57%	65	(1.39%)	88	0.33%	95	1.84%	95
Pub Pln- Dom Fixed	4.84%		12.04%		(0.32%)		1.49%		2.57%	
Short Duration	2.00%	95	6.71%	93	-	-	-	-	-	-
Blmbg Gov/Cred 1-3 Yr	2.96%	70	7.19%	88	1.50%	87	1.70%	92	1.64%	95
Callan Short Fixed Inc	3.02%		7.97%		2.05%		2.22%		2.11%	
SIT Short Duration FI	2.00%	95	6.71%	93	-	-	-	-	-	-
Blmbg Gov/Cred 1-3 Yr	2.96%	70	7.19%	88	1.50%	87	1.70%	92	1.64%	95
Callan Short Fixed Inc	3.02%		7.97%		2.05%		2.22%		2.11%	
Core Fixed Income	5.28%	52	12.69%	26	(0.99%)	57	0.68%	83	2.21%	71
Blmbg Aggregate Index	5.20%	75	11.57%	93	(1.39%)	90	0.33%	95	1.84%	97
Callan Core Bond FI	5.29%		12.34%		(0.97%)		0.91%		2.33%	
PIMCO	5.28%	53	12.81%	21	(0.93%)	43	0.79%	74	2.32%	50
Manulife Asset Management	5.28%	51	12.51%	38	(1.17%)	77	0.72%	80	-	-
Blmbg Aggregate Index	5.20%	75	11.57%	93	(1.39%)	90	0.33%	95	1.84%	97
Callan Core Bond FI	5.29%		12.34%		(0.97%)		0.91%		2.33%	
Core Plus	5.00%	89	13.05%	58	(0.64%)	49	1.65%	39	3.02%	25
Loomis Sayles	4.88%	90	12.45%	86	(0.72%)	55	1.69%	34	2.78%	50
Prudential Core Plus	5.11%	86	13.64%	25	(0.56%)	45	1.61%	40	3.26%	16
Blmbg Aggregate Index	5.20%	76	11.57%	95	(1.39%)	90	0.33%	98	1.84%	100
Callan Core Plus FI	5.38%		13.17%		(0.68%)		1.50%		2.78%	
Emerging Markets Debt	6.23%	59	19.33%	35	0.31%	80	1.94%	71	4.18%	24
Wellington EMD	6.23%	59	19.33%	35	0.31%	80	1.94%	71	4.18%	24
EMBI Global Dvsfd Index	6.15%	61	18.60%	39	(0.40%)	88	0.87%	94	3.28%	55
Emerging Debt Database	6.54%		17.18%		1.60%		2.51%		3.45%	
Global Fixed Income	3.83%	75	10.99%	81	(0.15%)	62	0.95%	74	2.78%	45
PIMCO Global	3.65%	79	10.78%	82	0.00%	55	1.16%	58	2.95%	42
AllianceBernstein Global	4.01%	67	11.20%	78	(0.32%)	67	0.74%	88	2.60%	84
Blmbg Global Agg (Hedged)	4.24%	59	10.63%	82	(0.22%)	64	0.57%	91	2.33%	91
Callan Global FI (Hedged)	4.58%		11.67%		0.04%		1.25%		2.73%	
Total Fixed Income	4.42%	82	12.63%	25	(0.63%)	62	1.18%	63	2.82%	37
Blmbg Aggregate Index	5.20%	24	11.57%	65	(1.39%)	88	0.33%	95	1.84%	95
Total Fixed Inc Custom Benchmark (6)	5.05%	38	12.03%	51	(0.98%)	74	0.50%	90	2.10%	86
Pub Pln- Dom Fixed	4.84%		12.04%		(0.32%)		1.49%		2.57%	

(6) Total Fixed Inc Custom Benchmark: 55% Bloomberg Aggregate Index, 25% Bloomberg Global Aggregate Index Hedged, 10% Bloomberg US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then 65% Bloomberg Aggregate Index, 25% Bloomberg Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 2024. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years					
REIT Composite	16.75%	21	34.64%	7	4.42%	9	5.93%	12	8.07%	7
REIT Comp Custom Benchmark (7)	15.95%	50	31.97%	28	2.88%	18	3.41%	67	6.06%	62
Callan Global REITs	15.92%		31.12%		1.98%		3.96%		6.41%	
Centersquare	17.38%	19	37.09%	22	6.21%	6	7.10%	31	-	
FTSE NAREIT Equity Index	16.09%	41	34.74%	36	5.07%	33	5.46%	70	7.83%	70
Callan Real Estate REIT	15.87%		33.71%		4.34%		6.37%		8.38%	
Cohen & Steers	15.48%	62	30.65%	53	2.16%	35	4.46%	33	7.12%	24
EPRA/NAREIT Dev REIT Idx	16.33%	30	30.20%	59	1.37%	59	2.36%	82	5.04%	79
Callan Global REITs	15.92%		31.12%		1.98%		3.96%		6.41%	
Core Real Estate (Net)	0.29%	52	(6.80%)	56	(1.45%)	69	1.35%	79	4.65%	74
Principal Capital (Net)	(0.13%)	82	(5.06%)	37	(0.23%)	57	2.52%	57	6.07%	33
UBS Trumbull Property (Net)	0.90%	15	(5.79%)	43	(2.56%)	81	(0.63%)	91	2.60%	91
JPMCB Strategic Property (Net)	0.62%	26	(11.02%)	86	(2.83%)	85	0.91%	86	4.31%	81
NFI-ODCE Equal Weight Net	(0.07%)	81	(8.44%)	69	(1.06%)	67	2.33%	60	5.46%	61
NFI-ODCE Value Weight Net	0.02%	71	(8.04%)	67	(1.04%)	67	2.05%	67	5.16%	63
Callan OE Core Cmngld RE	0.34%		(6.32%)		0.20%		2.96%		5.75%	
Core Plus Real Estate (Net)	0.57%	33	(11.89%)	90	(5.50%)	95	(0.48%)	91	5.52%	60
UBS Trumbull Property G&I (Net)	0.57%	33	(11.89%)	90	(5.50%)	95	(0.48%)	91	5.52%	60
Callan OE Core Cmngld RE	0.34%		(6.32%)		0.20%		2.96%		5.75%	
Non-Core Real Estate	1.48%	15	(6.86%)	61	2.70%	41	6.97%	39	11.10%	4
AEW Partners VII	2.08%	6	2.33%	2	(2.27%)	74	(4.16%)	89	5.33%	62
AEW Partners VIII	(0.35%)	76	9.64%	1	18.17%	1	18.52%	1	-	
AEW Partners IX	1.08%	20	7.35%	1	7.84%	12	-	-	-	
Heitman VP IV	0.52%	46	0.31%	14	7.57%	13	12.37%	12	-	
Heitman VP V	0.83%	34	(0.63%)	20	-	-	-	-	-	
AG Core Plus IV	(2.27%)	89	(14.19%)	85	(13.62%)	92	(4.22%)	89	-	
AG Realty Fund X	(3.09%)	91	(9.01%)	70	6.69%	20	13.55%	6	-	
AG Realty Value Fd XI	2.00%	7	1.60%	3	-	-	-	-	-	
Invesco US Income Fund	0.73%	36	(8.26%)	67	-	-	-	-	-	
Invesco VA Fund IV	(0.05%)	65	(36.52%)	97	(37.60%)	98	(21.95%)	96	-	
Invesco VA Fund V	(1.23%)	82	(27.90%)	94	(7.18%)	87	1.02%	70	-	
Invesco Real Estate US Fund VI	(2.22%)	89	(12.81%)	84	-	-	-	-	-	
TA Associates Realty Fund XII	(0.09%)	67	(3.74%)	38	15.62%	1	-	-	-	
TA Associates Realty Fund XIII	29.72%	1	-	-	-	-	-	-	-	
Westbrook RE Fund X	(4.83%)	96	(33.37%)	97	(12.45%)	91	(4.34%)	89	-	
Westbrook RE Fund XI	2.33%	4	7.36%	1	14.84%	1	-	-	-	
NCREIF Total Index	0.78%	35	(3.47%)	35	0.87%	57	3.26%	51	5.88%	52
Callan Real Est Val Add	0.49%		(4.59%)		1.56%		3.33%		5.99%	
Timber Composite	4.76%		(4.32%)		0.57%		6.20%		6.78%	
Hancock Timber Portfolio	4.76%		(4.32%)		0.57%		6.20%		6.78%	
NCREIF Timberland Index	1.53%		10.02%		10.86%		7.47%		5.90%	
Total Real Estate	2.56%	5	(3.52%)	43	(0.35%)	62	3.11%	47	6.35%	28
Real Estate Benchmark (8)	0.78%	24	(3.47%)	42	0.87%	54	3.26%	47	5.88%	42
Callan Tot Real Est DB	0.30%		(4.45%)		1.29%		2.84%		5.70%	

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

(7) REIT Comp Custom Benchmarks: 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.

(8) RE Bnmk: NFI-ODCE Eq Wgt Net to 5/31/99; No Bench to 9/30/03; 50% NFI-ODCE Eq Wght Net and 50% US Select REIT Idx to 6/30/06; 80% NFI-ODCE Eq Wght Net and 20% US Select REIT Idx to 6/30/10; 20% NAREIT RE 50 Idx, 15% NCREIF Property Idx, 10% NCREIF Timberland Idx, 55% NFI-ODCE Eq Wgt Net to 6/30/12; 15% NAREIT RE 50 Idx, 15% NCREIF Property Idx, 10% NCREIF Timberland Idx, 60% NFI-ODCE Eq Wgt Net to 6/30/13; then NCREIF Property Idx thereafter.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 2024. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended September 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Private Equity	1.36%	56	4.05%	67	4.49%	66	15.07%	8	15.18%	1
Pathway PEF XXIII	0.40%	77	0.44%	86	(4.45%)	96	10.27%	30	13.03%	2
Pathway PEF SRS 2013	(0.42%)	83	1.48%	82	0.23%	90	14.09%	10	13.98%	1
Pathway PEF 2016	1.99%	51	7.05%	57	6.61%	47	18.81%	4	-	-
Pathway PEF 2021	2.32%	42	9.94%	42	5.51%	58	-	-	-	-
GCM Grosvenor Private Markets	(2.77%)	88	(19.10%)	99	(6.35%)	97	2.43%	90	8.02%	18
GCM Grosvenor 2014	1.48%	55	1.61%	80	8.79%	36	16.23%	6	11.75%	5
GCM Grosvenor 2018 Series	2.73%	31	10.49%	40	12.71%	19	14.19%	10	-	-
Private Equity Benchmark (9)	1.00%	59	4.43%	64	1.32%	87	10.60%	29	12.35%	4
Callan Alternative Inv DB	2.05%		8.67%		6.08%		8.35%		4.36%	
Private Credit	1.44%	99	-	-	-	-	-	-	-	-
Blue Owl Lending Fd Series 20	0.85%	100	-	-	-	-	-	-	-	-
Grosvenor Private Credit Series 2023	1.72%	99	-	-	-	-	-	-	-	-
Private Credit Benchmark (10)	1.82%	99	-	-	-	-	-	-	-	-
Callan Multi-Sector Cr	3.82%		13.95%		4.10%		5.01%		5.33%	
Cash	1.39%	70	5.44%	94	3.81%	22	2.44%	62	1.73%	81
FTSE 1 Mo T-Bill	1.36%	83	5.56%	81	3.57%	54	2.31%	80	1.61%	92
Callan Cash Database	1.64%		5.94%		3.59%		2.51%		1.94%	
Total Fund	5.06%	30	19.10%	21	4.19%	77	9.29%	28	8.42%	16
Policy Benchmark*	5.35%	15	20.43%	8	4.66%	65	8.73%	64	7.93%	45
Callan Public Fd V Lg DB	4.59%		17.55%		4.92%		9.03%		7.88%	

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

(9) Private Equity Benchmark: S&P 500 Index + 5% through 3/31/13; then S&P 500 Index + 3% through 6/30/2022; then S&P 500 + 3% (1 Qtr Lag) through 6/30/2023; thereafter Cambridge Global Private Equity.

(10) Private Credit Benchmark: 50% Morningstar Leverage Loans, 50% Bloomberg High Yield Corp + 1% (1 Qtr. lag).

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FYTD		FY 2024		FY 2023		FY 2022		FY 2021	
Domestic Equity	5.87%	84	21.63%	39	19.45%	11	(14.29%)	66	46.83%	23
Russell 3000 Index	6.23%	74	23.13%	17	18.95%	25	(13.87%)	58	44.16%	58
Pub Pln- Dom Equity	6.59%		21.21%		18.13%		(13.28%)		44.67%	
Large Cap Equity	5.42%	47	25.72%	48	20.69%	41	(12.28%)	51	43.28%	47
Russell 1000 Index	6.08%	39	23.88%	54	19.36%	47	(13.04%)	54	43.07%	47
Callan Large Cap	5.17%		25.33%		18.63%		(12.13%)		42.72%	
Managed Large Cap Equity	2.42%	96	33.28%	5	28.20%	3	(22.51%)	98	56.73%	2
Callan Large Cap Core	5.09%		26.57%		18.09%		(11.09%)		42.50%	
Eagle Capital	2.42%	96	33.28%	5	28.20%	3	(22.51%)	98	56.73%	2
S&P 500 Index	5.89%	28	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72
Callan Large Cap Core	5.09%		26.57%		18.09%		(11.09%)		42.50%	
Northern Trust S&P 500	5.87%	28	24.52%	75	19.57%	30	(10.54%)	44	40.70%	72
S&P 500 Index	5.89%	28	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72
Callan Large Cap Core	5.09%		26.57%		18.09%		(11.09%)		42.50%	
Mid Cap Equity	6.22%	87	11.33%	54	14.69%	43	(18.26%)	90	48.23%	64
Russell MidCap Index	9.21%	22	12.88%	44	14.92%	40	(17.30%)	88	49.80%	55
Callan Mid Cap Core	8.17%		11.46%		12.79%		(11.43%)		50.84%	
Artisan Partners	2.81%	88	11.28%	47	14.29%	88	(32.06%)	65	42.79%	55
Russell MidCap Growth Idx	6.54%	31	15.05%	16	23.13%	15	(29.57%)	62	43.77%	52
Callan Mid Cap Growth	5.62%		11.05%		18.51%		(27.91%)		44.22%	
Small Cap Equity	8.50%	55	7.34%	77	16.93%	18	(19.24%)	66	60.83%	52
Russell 2000 Index	9.27%	38	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44
Callan Small Cap Core	8.90%		11.48%		14.11%		(17.02%)		61.06%	
Dimensional Fund Advisors	7.82%	71	14.85%	30	16.81%	18	(7.13%)	19	84.61%	13
Russell 2000 Value Index	10.15%	24	10.90%	71	6.01%	85	(16.28%)	88	73.28%	40
Callan Small Cap Value	8.37%		13.22%		10.96%		(10.84%)		70.76%	
Wellington Small Cap	10.57%	15	9.84%	61	15.36%	36	(15.50%)	36	56.77%	70
Russell 2000 Index	9.27%	38	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44
Callan Small Cap Core	8.90%		11.48%		14.11%		(17.02%)		61.06%	
Riverbridge Partners	7.01%	53	(2.24%)	99	18.57%	40	(34.47%)	71	47.41%	72
Russell 2000 Growth Index	8.41%	28	9.14%	57	18.53%	40	(33.43%)	68	51.36%	64
Callan Small Cap Growth	7.04%		10.16%		17.21%		(30.39%)		53.86%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FYTD		FY 2024		FY 2023		FY 2022		FY 2021	
Global Equity	5.15%	65	20.73%	40	16.71%	59	(18.73%)	65	39.03%	60
Global Equity Benchmark (2)	6.84%	32	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43
Acadian Global Equity	2.84%	95	28.93%	6	18.61%	39	(14.72%)	43	44.25%	26
Epoch Investments	5.16%	65	18.32%	49	12.30%	89	(15.44%)	46	37.17%	68
Harding-Loevner	5.32%	61	18.15%	50	17.04%	56	(27.96%)	90	40.41%	47
LSV Global Value	7.39%	23	17.44%	52	-	-	-	-	-	-
MSCI ACWI Index	6.61%	34	19.38%	45	16.53%	60	(15.75%)	49	39.26%	58
Callan Global Equity	5.74%		18.13%		17.88%		(16.05%)		40.20%	
International Equity	8.10%	21	12.57%	36	14.77%	45	(22.24%)	74	40.42%	31
International Equity Benchmark (3)	8.18%	18	11.57%	51	12.47%	73	(19.86%)	40	37.18%	62
International Eq Custom BM (4)	8.15%	19	11.64%	49	12.31%	75	(20.49%)	44	37.07%	63
Pub Pln- Intl Equity	7.62%		11.62%		14.51%		(20.78%)		38.73%	
All Country ex US	7.63%	53	12.06%	43	17.02%	46	(22.85%)	71	45.49%	19
Arrowstreet Capital	4.13%	93	23.13%	5	17.10%	45	(13.51%)	17	49.25%	11
Baillie Gifford	9.94%	18	3.17%	94	14.51%	62	(35.34%)	97	41.81%	31
Marathon Asset Mgmt	8.02%	45	9.92%	65	16.77%	48	(19.34%)	53	45.22%	19
MSCI ACWI xUS IMI	8.18%	42	11.57%	49	12.47%	77	(19.86%)	57	37.18%	51
NT MSCI World ex US	7.80%	49	11.61%	49	17.89%	39	-	-	-	-
MSCI World xUS	7.76%	51	11.22%	55	17.41%	42	(16.76%)	32	33.60%	71
Non-U.S. Equity Database	7.79%		11.53%		16.53%		(19.09%)		37.39%	
Small Cap	9.28%	44	6.28%	70	9.75%	76	(25.18%)	56	39.42%	78
Principal Sm Cap Intl	8.25%	66	9.34%	48	12.51%	46	(23.83%)	43	38.43%	80
Northern Trust Intl Small Cap	10.36%	21	-		-		-		-	
MSCI World Small Cap x US	10.45%	21	7.80%	64	10.05%	75	(23.02%)	41	42.28%	56
Callan Intl Small Cap	9.02%		9.16%		12.32%		(24.35%)		43.28%	
Emerging Markets	9.10%	20	17.54%	20	10.02%	22	(26.68%)	48	44.11%	50
Lazard Emerging Markets	9.79%	12	19.15%	14	13.69%	4	(17.37%)	9	42.41%	64
Fisher Investments	8.35%	30	15.70%	29	6.07%	43	(34.76%)	92	45.48%	38
MSCI Emerging Mkts Idx	8.72%	25	12.55%	51	1.75%	79	(25.28%)	41	40.90%	75
Callan Emerging Broad	6.98%		12.71%		4.66%		(27.16%)		44.27%	
Total Equity	6.49%	36	18.21%	49	17.29%	55	(18.07%)	62	43.04%	32
MSCI ACWI IMI	6.84%	32	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43
Total Equity Custom Benchmark (5)	7.05%	29	17.95%	51	16.14%	62	(16.54%)	55	41.00%	42
Callan Global Equity	5.74%		18.13%		17.88%		(16.05%)		40.20%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FYTD		FY 2024		FY 2023		FY 2022		FY 2021	
Domestic Fixed-Income	4.34%	88	3.95%	53	0.26%	53	(10.70%)	72	2.09%	51
Blmbg Aggregate Index	5.20%	24	2.63%	85	(0.94%)	86	(10.29%)	65	(0.33%)	96
Pub Pln- Dom Fixed	4.84%		4.05%		0.45%		(9.51%)		2.22%	
Short Duration	2.00%	95	-		-		-		-	
SIT Short Duration FI	2.00%	95	-		-		-		-	
Callan Short Fixed Inc	3.02%		5.63%		1.49%		(3.57%)		1.19%	
Core Fixed Income	5.28%	52	3.58%	36	(0.80%)	77	(10.28%)	51	0.25%	81
Blmbg Aggregate Index	5.20%	75	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94
Callan Core Bond FI	5.29%		3.34%		(0.34%)		(10.27%)		1.14%	
PIMCO	5.28%	53	3.68%	31	(0.56%)	64	(10.42%)	61	0.22%	81
Manulife Asset Management	5.28%	51	3.38%	46	(1.15%)	91	(10.22%)	44	0.83%	62
Blmbg Aggregate Index	5.20%	75	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94
Callan Core Bond FI	5.29%		3.34%		(0.34%)		(10.27%)		1.14%	
Core Plus	5.00%	89	4.09%	61	1.11%	33	(11.06%)	59	3.70%	36
Loomis Sayles	4.88%	90	2.75%	95	1.40%	21	(10.37%)	32	3.41%	44
Prudential Core Plus	5.11%	86	5.43%	15	0.83%	44	(11.77%)	81	3.98%	31
Blmbg Aggregate Index	5.20%	76	2.63%	95	(0.94%)	88	(10.29%)	30	(0.33%)	99
Callan Core Plus FI	5.38%		4.31%		0.42%		(10.87%)		3.33%	
Emerging Markets Debt	6.23%	59	10.06%	39	8.80%	57	(21.10%)	72	8.86%	65
Wellington EMD	6.23%	59	10.06%	39	8.80%	57	(21.10%)	72	8.86%	65
EMBI Global Dvsfd Index	6.15%	61	9.23%	49	7.39%	71	(21.22%)	74	7.53%	82
Emerging Debt Database	6.54%		8.86%		9.42%		(18.60%)		9.90%	
Global Fixed Income	3.83%	75	5.18%	52	0.66%	62	(9.45%)	44	2.51%	69
PIMCO Global	3.65%	79	5.29%	49	0.43%	67	(8.86%)	35	2.65%	62
AllianceBernstein Global	4.01%	67	5.06%	56	0.87%	54	(10.04%)	63	2.36%	70
Blmbg Global Agg (Hedged)	4.24%	59	4.20%	77	0.52%	65	(8.94%)	36	0.08%	91
Callan Global FI (Hedged)	4.58%		5.25%		0.95%		(9.66%)		3.28%	
Total Fixed Income	4.42%	82	4.93%	25	1.19%	32	(11.49%)	92	2.87%	43
Blmbg Aggregate Index	5.20%	24	2.63%	85	(0.94%)	86	(10.29%)	65	(0.33%)	96
Total Fixed Inc Custom Benchmark (6)	5.05%	38	3.67%	61	0.25%	53	(11.09%)	82	0.55%	74
Pub Pln- Dom Fixed	4.84%		4.05%		0.45%		(9.51%)		2.22%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FYTD		FY 2024		FY 2023		FY 2022		FY 2021	
REIT Composite	16.75%	21	7.63%	26	(0.78%)	13	(8.31%)	4	38.88%	10
REIT Comp Custom Benchmark (7)	15.95%	50	6.43%	53	(2.12%)	26	(9.60%)	13	37.41%	27
Callan Global REITs	15.92%		6.61%		(3.04%)		(11.97%)		34.78%	
Centersquare	17.38%	19	8.40%	26	0.22%	37	(4.62%)	28	38.56%	34
FTSE NAREIT Equity Index	16.09%	41	7.79%	37	(0.13%)	42	(6.27%)	50	38.02%	38
Callan Real Estate REIT	15.87%		7.13%		(0.71%)		(6.27%)		36.65%	
Cohen & Steers	15.48%	62	6.31%	54	(1.99%)	24	(12.02%)	50	39.21%	6
EPRA/NAREIT Dev REIT Idx	16.33%	30	5.66%	70	(3.59%)	64	(12.75%)	64	34.83%	50
Callan Global REITs	15.92%		6.61%		(3.04%)		(11.97%)		34.78%	
Core Real Estate (Net)	0.29%	52	(10.00%)	62	(11.61%)	75	26.63%	59	6.04%	82
Principal Capital (Net)	(0.13%)	82	(8.60%)	51	(10.41%)	62	27.55%	57	8.22%	52
UBS Trumbull Property (Net)	0.90%	15	(8.02%)	45	(15.01%)	88	24.01%	68	1.53%	97
JPMCB Strategic Property (Net)	0.62%	26	(14.43%)	84	(10.92%)	67	27.40%	58	6.00%	82
NFI-ODCE Equal Weight Net	(0.07%)	81	(10.32%)	65	(10.51%)	65	28.90%	47	7.97%	55
NFI-ODCE Value Weight Net	0.02%	71	(9.99%)	62	(10.73%)	66	28.31%	49	7.09%	72
Callan OE Core Cmngld RE	0.34%		(8.54%)		(9.20%)		28.14%		8.44%	
Core Plus Real Estate (Net)	0.57%	33	(16.11%)	89	(17.11%)	95	30.22%	41	11.00%	23
UBS Trumbull Property G&I (Net)	0.57%	33	(16.11%)	89	(17.11%)	95	30.22%	41	11.00%	23
Callan OE Core Cmngld RE	0.34%		(8.54%)		(9.20%)		28.14%		8.44%	
Non-Core Real Estate	1.48%	15	(8.44%)	51	(5.91%)	50	32.05%	44	16.03%	44
AEW Partners VI	-		-		-		-		29.35%	30
AEW Partners VII	2.08%	6	(4.09%)	39	(5.56%)	49	1.94%	91	(11.07%)	94
AEW Partners VIII	(0.35%)	76	12.84%	10	6.18%	16	45.41%	27	25.48%	34
AEW Partners IX	1.08%	20	7.11%	11	9.76%	15	13.38%	80	-	
Heitman VP III	-		-		-		2.65%	90	21.98%	36
Heitman VP IV	0.52%	46	1.41%	18	(1.39%)	36	41.38%	28	24.73%	35
Heitman VP V	0.83%	34	(0.85%)	24	(1.10%)	33	-		-	
AG Core Plus III	-		24.31%	10	(32.44%)	90	(3.11%)	92	(11.34%)	94
AG Core Plus IV	(2.27%)	89	(19.90%)	79	(19.93%)	71	8.52%	83	13.15%	47
AG Realty Fund X	(3.09%)	91	(7.37%)	46	(1.07%)	33	47.73%	26	32.03%	28
AG Realty Value Fd XI	2.00%	7	7.15%	11	-		-		-	
Invesco US Income Fund	0.73%	36	(8.03%)	49	-		-		-	
Invesco VA Fund IV	(0.05%)	65	(36.72%)	95	(63.21%)	100	10.98%	81	0.51%	82
Invesco VA Fund V	(1.23%)	82	(28.54%)	92	(7.70%)	52	30.32%	49	14.83%	45
Invesco Real Estate US Fund VI	(2.22%)	89	(11.26%)	60	-		-		-	
TA Associates Realty Fund XI	-		(26.18%)	88	(28.66%)	83	57.37%	16	21.69%	36
TA Associates Realty Fund XII	(0.09%)	67	(4.71%)	41	(4.37%)	46	69.76%	9	28.12%	31
TA Associates Realty Fund XIII	29.72%	1	-		-		-		-	
Westbrook RE Fund X	(4.83%)	96	(30.60%)	93	(5.98%)	50	11.51%	81	11.95%	48
Westbrook RE Fund XI	2.33%	4	4.94%	13	14.37%	14	31.40%	47	-	
NCREIF Total Index	0.78%	35	(5.53%)	43	(6.60%)	51	21.45%	72	7.37%	70
Callan Real Est Val Add	0.49%		(8.21%)		(6.00%)		29.99%		10.97%	
Timber Composite	4.76%		(10.88%)		(10.82%)		22.11%		20.32%	
Hancock Timber Portfolio	4.76%		(10.88%)		(10.82%)		22.11%		20.32%	
NCREIF Timberland Index	1.53%		9.84%		11.13%		12.01%		3.10%	
Total Real Estate	2.56%	5	(8.43%)	67	(9.90%)	74	22.82%	48	13.62%	39
Real Estate Benchmark (8)	0.78%	24	(5.53%)	56	(6.60%)	64	21.45%	52	7.37%	70
Callan Tot Real Est DB	0.30%		(3.95%)		(1.08%)		22.52%		9.93%	
Private Equity	1.36%	56	4.64%	77	(3.76%)	56	26.03%	17	58.87%	4
Pathway PEF XXIII	0.40%	77	3.05%	81	(16.04%)	97	13.47%	48	81.56%	3
Pathway PEF SRS 2013	(0.42%)	83	2.49%	81	(7.12%)	72	18.67%	36	66.84%	3
Pathway PEF 2016	1.99%	51	7.95%	55	(3.46%)	56	30.48%	10	63.16%	4
Pathway PEF 2021	2.32%	42	11.75%	36	(2.45%)	55	3.16%	67	-	
GCM Grosvenor Private Markets	(2.77%)	88	(19.67%)	98	(1.27%)	53	14.26%	47	41.43%	32
GCM Grosvenor 2014	1.48%	55	1.99%	82	1.02%	46	41.96%	6	43.88%	30
GCM Grosvenor 2018 Series	2.73%	31	10.15%	44	5.89%	31	29.03%	10	16.63%	55
Private Equity Benchmark (9)	1.00%	59	5.05%	74	6.93%	29	(7.04%)	88	44.13%	30
Callan Alternative Inv DB	2.05%		9.14%		(0.79%)		9.29%		19.97%	
Cash	1.39%	70	5.70%	43	4.10%	20	0.31%	18	0.07%	98
FTSE 1 Mo T-Bill	1.36%	83	5.56%	68	3.70%	55	0.15%	31	0.06%	98
Callan Cash Database	1.64%		5.66%		3.85%		(0.36%)		0.48%	
Total Fund	5.06%	30	10.78%	28	7.76%	46	(8.54%)	80	32.71%	7
Policy Benchmark*	5.35%	15	11.27%	22	9.72%	14	(10.94%)	97	28.17%	45
Callan Public Fd V Lg DB	4.59%		10.37%		7.51%		(5.13%)		27.92%	

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023	
Domestic Equity	5.87%	84	2.01%	56	9.86%	36	11.59%	75
Russell 3000 Index	6.23%	74	3.22%	16	10.02%	28	12.07%	38
Pub Pln- Dom Equity	6.59%		2.11%		9.55%		11.88%	
Large Cap Equity	5.42%	47	4.37%	38	10.83%	58	11.53%	59
Russell 1000 Index	6.08%	39	3.57%	45	10.30%	64	11.96%	53
Callan Large Cap	5.17%		2.77%		11.41%		12.11%	
Managed Large Cap Equity	2.42%	96	4.81%	30	12.88%	27	10.51%	85
Callan Large Cap Core	5.09%		4.08%		11.82%		11.88%	
Eagle Capital	2.42%	96	4.81%	30	12.88%	27	10.51%	85
S&P 500 Index	5.89%	28	4.28%	47	10.56%	71	11.69%	58
Callan Large Cap Core	5.09%		4.08%		11.82%		11.88%	
Northern Trust S&P 500	5.87%	28	4.28%	47	10.52%	72	11.68%	59
S&P 500 Index	5.89%	28	4.28%	47	10.56%	71	11.69%	58
Callan Large Cap Core	5.09%		4.08%		11.82%		11.88%	
Mid Cap Equity	6.22%	87	(4.65%)	77	9.75%	45	9.99%	82
Russell MidCap Index	9.21%	22	(3.35%)	38	8.60%	57	12.82%	25
Callan Mid Cap Core	8.17%		(3.84%)		9.56%		11.87%	
Artisan Partners	2.81%	88	(5.46%)	81	10.63%	34	9.21%	90
Russell MidCap Growth Idx	6.54%	31	(3.21%)	27	9.50%	48	14.55%	18
Callan Mid Cap Growth	5.62%		(3.76%)		9.35%		11.93%	
Victory Mid Cap Value	9.32%	45	(3.96%)	34	9.32%	40	10.67%	60
Russell MidCap Value Idx	10.08%	29	(3.40%)	23	8.23%	66	12.11%	35
Callan Mid Cap Value	9.08%		(4.35%)		8.70%		11.47%	
Small Cap Equity	8.50%	55	(5.36%)	90	3.84%	85	13.20%	42
Russell 2000 Index	9.27%	38	(3.28%)	55	5.18%	65	14.03%	19
Callan Small Cap Core	8.90%		(3.11%)		5.77%		12.78%	
Dimensional Fund Advisors	7.82%	71	(3.56%)	54	3.18%	86	15.52%	17
Russell 2000 Value Index	10.15%	24	(3.64%)	55	2.90%	91	15.26%	20
Callan Small Cap Value	8.37%		(3.48%)		5.00%		13.54%	
Wellington Small Cap	10.57%	15	(3.00%)	49	4.49%	77	13.64%	30
Russell 2000 Index	9.27%	38	(3.28%)	55	5.18%	65	14.03%	19
Callan Small Cap Core	8.90%		(3.11%)		5.77%		12.78%	
Riverbridge Partners	7.01%	53	(9.51%)	97	4.11%	89	10.18%	66
Russell 2000 Growth Index	8.41%	28	(2.92%)	59	7.58%	50	12.75%	26
Callan Small Cap Growth	7.04%		(2.34%)		7.48%		11.13%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023	
Global Equity	5.15%	65	2.32%	43	8.98%	45	11.01%	55
Global Equity Benchmark (2)	6.84%	32	2.38%	43	7.72%	57	11.14%	52
Acadian Global Equity	2.84%	95	4.21%	12	13.05%	8	10.24%	73
Epoch Investments	5.16%	65	2.59%	38	6.92%	67	11.04%	54
Harding-Loevner	5.32%	61	3.00%	31	6.93%	67	13.15%	19
LSV Global Value	7.39%	23	(0.52%)	77	8.97%	45	9.63%	81
MSCI ACWI Index	6.61%	34	2.87%	32	8.20%	54	11.03%	54
Callan Global Equity	5.74%		1.89%		8.48%		11.29%	
International Equity	8.10%	21	0.84%	50	4.98%	43	10.17%	43
International Equity Benchmark (3)	8.18%	18	0.92%	48	4.33%	64	9.81%	56
International Eq Custom BM (4)	8.15%	19	1.14%	42	4.27%	67	9.69%	59
Pub Pln- Intl Equity	7.62%		0.84%		4.76%		9.98%	
All Country ex US	7.63%	53	(0.02%)	56	6.06%	35	9.98%	55
Arrowstreet Capital	4.13%	93	1.74%	23	10.37%	6	7.72%	85
Baillie Gifford	9.94%	18	(0.67%)	70	3.46%	75	11.47%	27
Marathon Asset Mgmt	8.02%	45	(0.66%)	70	5.31%	49	9.37%	68
MSCI ACWI xUS IMI	8.18%	42	0.92%	38	4.33%	64	9.81%	58
NT MSCI World ex US	7.80%	49	(0.44%)	65	5.68%	43	10.52%	44
MSCI World xUS	7.76%	51	(0.60%)	69	5.59%	45	10.51%	44
Non-U.S. Equity Database	7.79%		0.28%		5.26%		10.21%	
Small Cap	9.28%	44	(1.35%)	54	2.18%	69	10.32%	61
Principal Sm Cap Intl	8.25%	66	(2.37%)	78	5.37%	39	9.86%	77
Northern Trust Intl Small Cap	10.36%	21	-		-		-	
MSCI World Small Cap x US	10.45%	21	(1.56%)	67	2.58%	67	10.60%	56
Callan Intl Small Cap	9.02%		(1.20%)		4.59%		10.88%	
Emerging Markets	9.10%	20	4.85%	48	2.72%	60	10.89%	8
Lazard Emerging Markets	9.79%	12	6.29%	21	2.65%	61	9.67%	17
Fisher Investments	8.35%	30	3.37%	68	2.80%	60	12.18%	5
MSCI Emerging Mkts Idx	8.72%	25	5.00%	44	2.37%	68	7.86%	58
Callan Emerging Broad	6.98%		4.66%		3.41%		8.11%	
Total Equity	6.49%	36	1.67%	54	7.95%	56	10.96%	57
MSCI ACWI IMI	6.84%	32	2.38%	43	7.72%	57	11.14%	52
Total Equity Custom Benchmark (5)	7.05%	29	2.22%	46	7.51%	59	11.07%	53
Callan Global Equity	5.74%		1.89%		8.48%		11.29%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023	
Domestic Fixed-Income	4.34%	88	0.50%	38	(0.24%)	51	7.17%	25
Blmbg Aggregate Index	5.20%	24	0.07%	88	(0.78%)	89	6.82%	39
Pub Pln- Dom Fixed	4.84%		0.37%		(0.21%)		6.52%	
Short Duration	2.00%	95	1.35%	12	0.76%	45	2.45%	86
Blmbg Gov/Cred 1-3 Yr	2.96%	70	0.95%	86	0.42%	87	2.69%	79
Callan Short Fixed Inc	3.02%		1.09%		0.73%		2.93%	
SIT Short Duration FI	2.00%	95	1.35%	12	0.76%	45	2.45%	86
Blmbg Gov/Cred 1-3 Yr	2.96%	70	0.95%	86	0.42%	87	2.69%	79
Callan Short Fixed Inc	3.02%		1.09%		0.73%		2.93%	
Core Fixed Income	5.28%	52	0.40%	9	(0.42%)	42	7.06%	31
Blmbg Aggregate Index	5.20%	75	0.07%	93	(0.78%)	93	6.82%	66
Callan Core Bond FI	5.29%		0.26%		(0.45%)		6.95%	
PIMCO	5.28%	53	0.40%	8	(0.32%)	33	7.06%	31
Manulife Asset Management	5.28%	51	0.39%	11	(0.53%)	55	7.00%	40
Blmbg Aggregate Index	5.20%	75	0.07%	93	(0.78%)	93	6.82%	66
Callan Core Bond FI	5.29%		0.26%		(0.45%)		6.95%	
Core Plus	5.00%	89	0.25%	78	(0.05%)	43	7.46%	20
Loomis Sayles	4.88%	90	(0.03%)	96	(0.26%)	67	7.53%	16
Prudential Core Plus	5.11%	86	0.53%	23	0.14%	20	7.39%	27
Blmbg Aggregate Index	5.20%	76	0.07%	96	(0.78%)	94	6.82%	81
Callan Core Plus FI	5.38%		0.42%		(0.11%)		7.16%	
Emerging Markets Debt	6.23%	59	0.22%	52	2.18%	45	9.70%	37
Wellington EMD	6.23%	59	0.22%	52	2.18%	45	9.70%	37
EMBI Global Dvsfd Index	6.15%	61	0.30%	48	2.04%	49	9.16%	52
Emerging Debt Database	6.54%		0.26%		2.00%		9.27%	
Global Fixed Income	3.83%	75	0.13%	56	0.25%	43	6.49%	70
PIMCO Global	3.65%	79	0.33%	33	0.29%	41	6.22%	75
AllianceBernstein Global	4.01%	67	(0.07%)	70	0.21%	49	6.76%	41
Blmbg Global Agg (Hedged)	4.24%	59	0.12%	57	0.01%	71	5.99%	81
Callan Global FI (Hedged)	4.58%		0.18%		0.19%		6.74%	
Total Fixed Income	4.42%	82	0.39%	46	0.15%	27	7.28%	19
Blmbg Aggregate Index	5.20%	24	0.07%	88	(0.78%)	89	6.82%	39
Total Fixed Inc Custom Benchmark (6)	5.05%	38	0.10%	84	(0.30%)	55	6.84%	38
Pub Pln- Dom Fixed	4.84%		0.37%		(0.21%)		6.52%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023	
REIT Composite	16.75%	21	0.00%	3	(0.27%)	32	15.63%	45
REIT Comp Custom Benchmark (7)	15.95%	50	(1.15%)	31	(0.71%)	50	15.97%	36
Callan Global REITs	15.92%		(1.69%)		(0.75%)		15.42%	
Centersquare	17.38%	19	0.71%	31	(0.34%)	31	16.36%	55
FTSE NAREIT Equity Index	16.09%	41	0.06%	51	(0.20%)	23	16.22%	60
Callan Real Estate REIT	15.87%		0.10%		(0.90%)		16.48%	
Cohen & Steers	15.48%	62	(1.39%)	36	(0.01%)	25	14.74%	62
EPRA/NAREIT Dev REIT Idx	16.33%	30	(2.15%)	66	(1.05%)	69	15.59%	46
Callan Global REITs	15.92%		(1.69%)		(0.75%)		15.42%	
Core Real Estate (Net)	0.29%	52	(0.41%)	55	(2.81%)	72	(3.99%)	43
Principal Capital (Net)	(0.13%)	82	(0.85%)	65	(1.93%)	61	(2.24%)	28
UBS Trumbull Property (Net)	0.90%	15	(1.02%)	74	(1.79%)	54	(3.95%)	43
JPMCB Strategic Property (Net)	0.62%	26	1.12%	11	(5.55%)	90	(7.40%)	80
NFI-ODCE Equal Weight Net	(0.07%)	81	(0.82%)	65	(2.38%)	66	(5.37%)	64
NFI-ODCE Value Weight Net	0.02%	71	(0.66%)	61	(2.58%)	70	(5.00%)	57
Callan OE Core Cmngld RE	0.34%		(0.26%)		(1.59%)		(4.49%)	
Core Plus Real Estate (Net)	0.57%	33	(2.40%)	93	(2.77%)	71	(7.68%)	83
UBS Trumbull Property G&I (Net)	0.57%	33	(2.40%)	93	(2.77%)	71	(7.68%)	83
Callan OE Core Cmngld RE	0.34%		(0.26%)		(1.59%)		(4.49%)	
Non-Core Real Estate	1.48%	15	0.12%	32	(4.20%)	80	(4.31%)	66
AEW Partners VII	2.08%	6	6.83%	12	(0.17%)	39	(6.01%)	77
AEW Partners VIII	(0.35%)	76	2.80%	13	6.93%	9	0.09%	27
AEW Partners IX	1.08%	20	(0.24%)	44	4.15%	11	2.21%	18
Heitman VP IV	0.52%	46	(0.07%)	37	0.04%	32	(0.18%)	27
Heitman VP V	0.83%	34	1.87%	14	(1.76%)	57	(1.52%)	41
AG Core Plus III	-		0.42%	26	5.56%	10	2.57%	17
AG Core Plus IV	(2.27%)	89	(5.86%)	85	(1.52%)	55	(5.30%)	72
AG Realty Fund X	(3.09%)	91	(2.55%)	71	(1.13%)	52	(2.55%)	54
AG Realty Value Fd XI	2.00%	7	(0.47%)	48	(2.65%)	71	2.80%	16
Invesco US Income Fund	0.73%	36	(0.24%)	44	(1.78%)	57	(7.05%)	78
Invesco VA Fund IV	(0.05%)	65	(4.38%)	83	(12.93%)	97	(23.71%)	100
Invesco VA Fund V	(1.23%)	82	(0.73%)	56	(23.73%)	99	(3.60%)	63
Invesco Real Estate US Fund VI	(2.22%)	89	3.00%	13	(13.44%)	97	0.03%	27
TA Associates Realty Fund XI	-		3.06%	13	0.56%	25	(27.87%)	100
TA Associates Realty Fund XII	(0.09%)	67	0.94%	19	(1.44%)	55	(3.17%)	59
TA Associates Realty Fund XIII	29.72%	1	(1.58%)	67	(6.79%)	86	-	
Westbrook RE Fund X	(4.83%)	96	(7.49%)	87	(17.03%)	98	(8.79%)	85
Westbrook RE Fund XI	2.33%	4	3.14%	13	(1.16%)	52	2.91%	16
NCREIF Total Index	0.78%	35	(0.26%)	44	(0.98%)	51	(3.02%)	57
Callan Real Est Val Add	0.49%		(0.55%)		(0.93%)		(1.86%)	
Timber Composite	4.76%		(9.38%)		(3.74%)		4.71%	
Hancock Timber Portfolio	4.76%		(9.38%)		(3.74%)		4.71%	
NCREIF Timberland Index	1.53%		1.71%		2.12%		4.34%	
Total Real Estate	2.56%	5	(0.41%)	61	(2.76%)	80	(2.86%)	65
Real Estate Benchmark (8)	0.78%	24	(0.26%)	58	(0.98%)	60	(3.02%)	67
Callan Tot Real Est DB	0.30%		0.13%		(0.11%)		(1.18%)	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

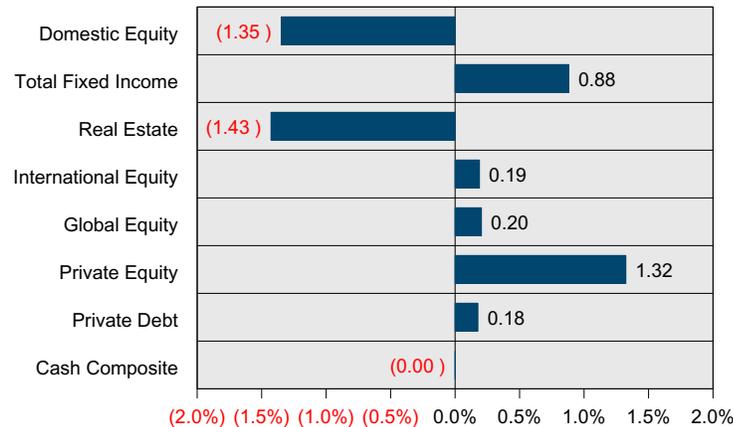
	1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023	
Private Equity	1.36%	56	1.12%	63	1.47%	82	0.04%	51
Pathway PEF XXIII	0.40%	77	0.60%	74	0.01%	94	(0.57%)	55
Pathway PEF SRS 2013	(0.42%)	83	(0.32%)	88	1.71%	81	0.52%	49
Pathway PEF 2016	1.99%	51	2.86%	29	0.86%	91	1.17%	45
Pathway PEF 2021	2.32%	42	3.63%	18	2.16%	72	1.50%	41
GCM Grosvenor Private Markets	(2.77%)	88	(2.51%)	92	(4.22%)	98	(10.89%)	93
GCM Grosvenor 2014	1.48%	55	(1.39%)	89	3.00%	60	(1.42%)	57
GCM Grosvenor 2018 Series	2.73%	31	1.96%	51	2.92%	61	2.49%	35
Private Equity Benchmark (9)	1.00%	59	1.17%	63	2.61%	64	(0.39%)	55
Callan Alternative Inv DB	2.05%		1.99%		3.97%		0.39%	
Private Credit	1.44%	99	1.79%	35	-		-	
Blue Owl Lending Fd Series 20	0.85%	100	1.12%	61	-		-	
Grosvenor Private Credit Series 2023	1.72%	99	2.14%	24	-		-	
Private Credit Benchmark (10)	1.82%	99	1.97%	29	5.42%	4	-	
Callan Multi-Sector Cr	3.82%		1.41%		2.67%		4.94%	
Cash	1.39%	70	1.24%	76	1.36%	41	1.35%	94
FTSE 1 Mo T-Bill	1.36%	83	1.35%	41	1.36%	41	1.38%	81
Callan Cash Database	1.64%		1.35%		1.35%		1.62%	
Total Fund	5.06%	30	1.16%	68	4.57%	26	7.16%	36
Policy Benchmark*	5.35%	15	1.48%	41	4.51%	29	7.78%	14
Callan Public Fd V Lg DB	4.59%		1.37%		3.83%		6.89%	

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

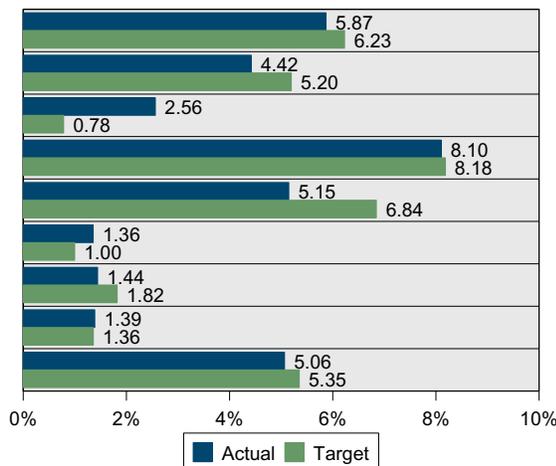
Quarterly Total Fund Relative Attribution - September 30, 2024

The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.

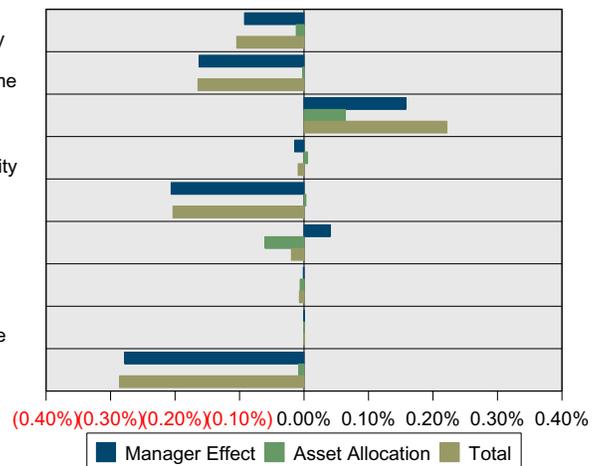
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2024

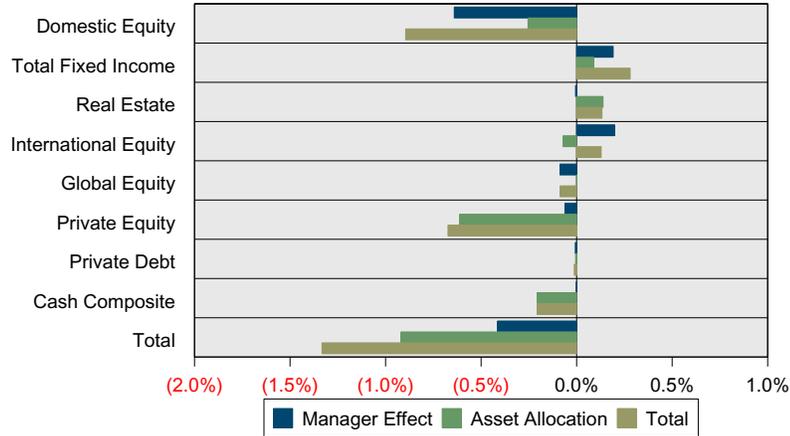
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	5.87%	6.23%	(0.09%)	(0.01%)	(0.10%)
Total Fixed Income	21%	20%	4.42%	5.20%	(0.16%)	(0.00%)	(0.16%)
Real Estate	9%	10%	2.56%	0.78%	0.16%	0.06%	0.22%
International Equity	20%	20%	8.10%	8.18%	(0.01%)	0.01%	(0.01%)
Global Equity	12%	12%	5.15%	6.84%	(0.21%)	0.00%	(0.20%)
Private Equity	11%	10%	1.36%	1.00%	0.04%	(0.06%)	(0.02%)
Private Debt	0%	0%	1.44%	1.82%	(0.00%)	(0.01%)	(0.01%)
Cash Composite	1%	1%	1.39%	1.36%	0.00%	(0.00%)	0.00%
Total			5.06%	5.35%	(0.28%)	(0.01%)	(0.29%)

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

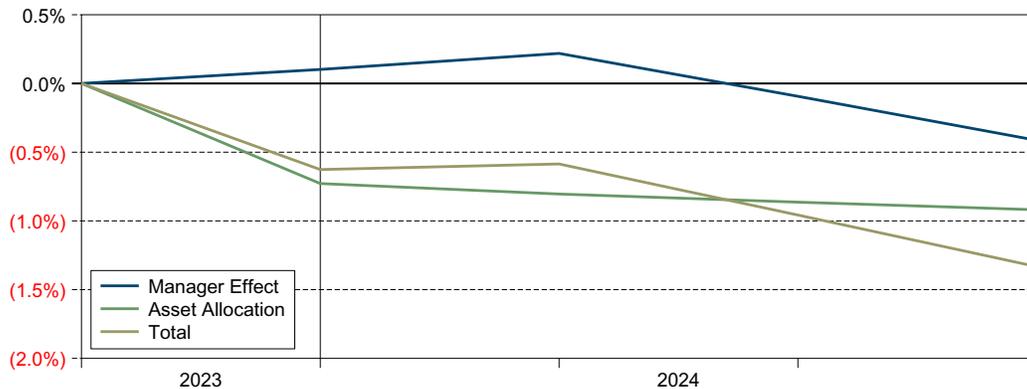
Cumulative Total Fund Relative Attribution - September 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

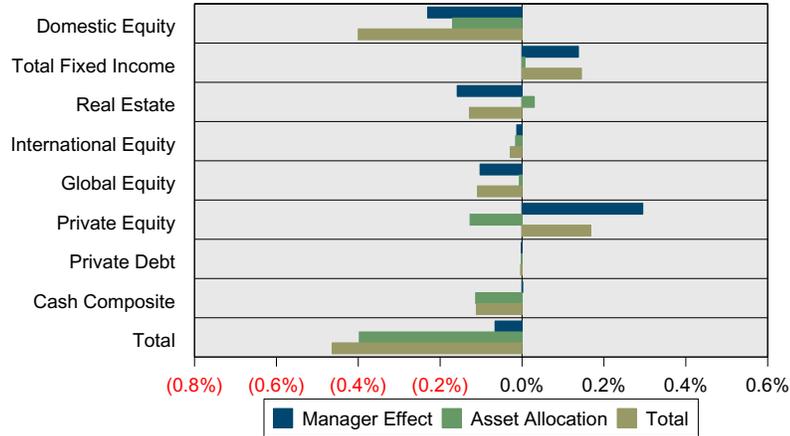
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	32.39%	35.19%	(0.64%)	(0.25%)	(0.89%)
Total Fixed Income	19%	20%	12.63%	11.57%	0.19%	0.09%	0.28%
Real Estate	9%	10%	(3.52%)	(3.47%)	(0.01%)	0.14%	0.13%
International Equity	20%	21%	26.07%	25.06%	0.20%	(0.07%)	0.13%
Global Equity	12%	12%	30.16%	30.96%	(0.09%)	0.00%	(0.09%)
Private Equity	12%	9%	4.05%	4.43%	(0.06%)	(0.61%)	(0.67%)
Private Debt	0%	0%	-	-	(0.01%)	(0.01%)	(0.01%)
Cash Composite	1%	1%	5.44%	5.56%	(0.00%)	(0.21%)	(0.21%)
Total			19.10%	20.43%	+ (0.41%)	+ (0.92%)	(1.33%)

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

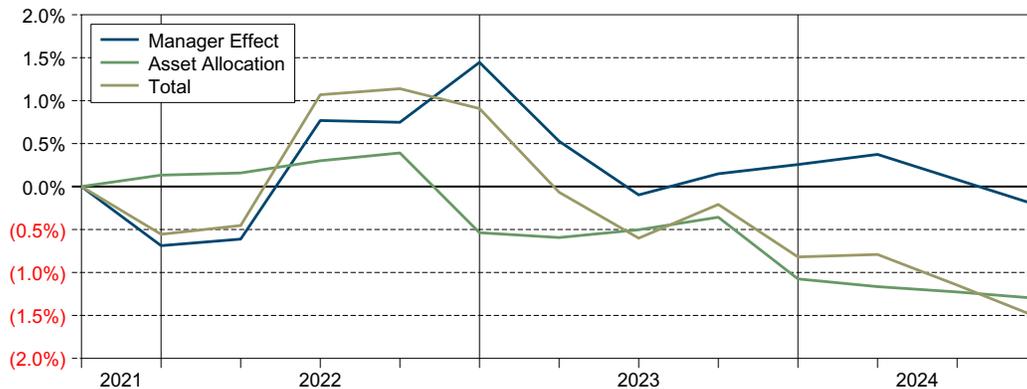
Cumulative Total Fund Relative Attribution - September 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

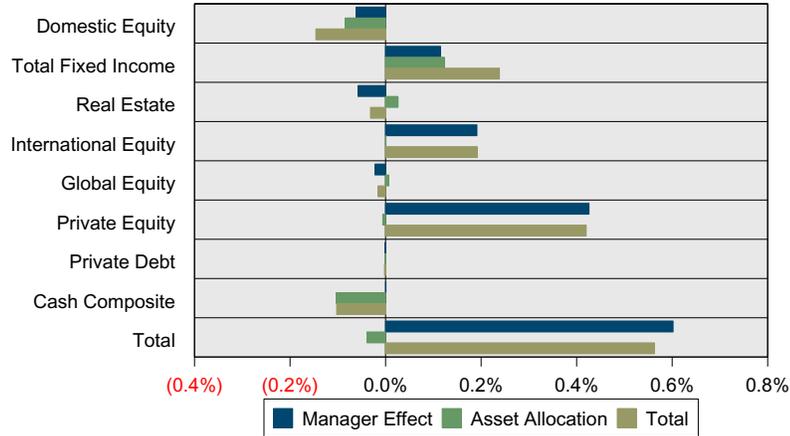
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	25%	27%	9.36%	10.29%	(0.23%)	(0.17%)	(0.40%)
Total Fixed Income	19%	20%	(0.63%)	(1.39%)	0.14%	0.01%	0.15%
Real Estate	10%	10%	(0.35%)	0.87%	(0.16%)	0.03%	(0.13%)
International Equity	20%	22%	3.69%	3.74%	(0.01%)	(0.02%)	(0.03%)
Global Equity	12%	12%	6.54%	7.44%	(0.10%)	(0.01%)	(0.11%)
Private Equity	12%	8%	4.49%	1.32%	0.29%	(0.13%)	0.17%
Private Debt	0%	0%	-	-	(0.00%)	(0.00%)	(0.00%)
Cash Composite	1%	1%	3.81%	3.57%	0.00%	(0.11%)	(0.11%)
Total			4.19%	4.66%	(0.07%)	(0.40%)	(0.46%)

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

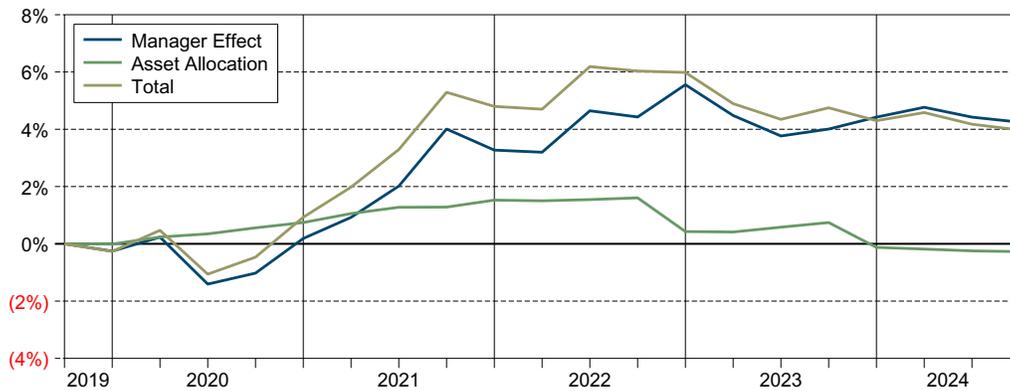
Cumulative Total Fund Relative Attribution - September 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

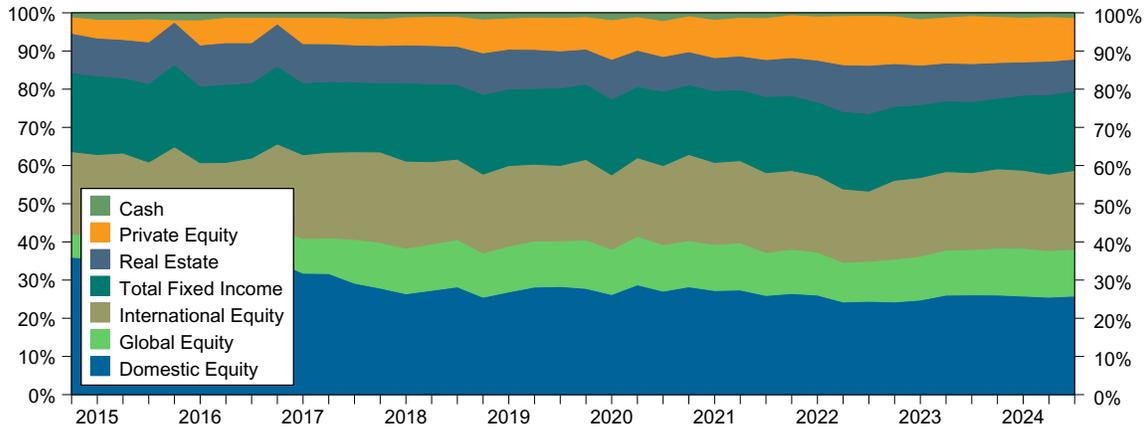
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	14.99%	15.26%	(0.06%)	(0.08%)	(0.15%)
Total Fixed Income	19%	20%	1.18%	0.33%	0.12%	0.12%	0.24%
Real Estate	10%	10%	3.11%	3.26%	(0.06%)	0.03%	(0.03%)
International Equity	20%	22%	8.59%	7.66%	0.19%	0.00%	0.19%
Global Equity	12%	12%	11.67%	11.87%	(0.02%)	0.01%	(0.02%)
Private Equity	11%	8%	15.07%	10.60%	0.43%	(0.01%)	0.42%
Private Debt	0%	0%	-	-	(0.00%)	(0.00%)	(0.00%)
Cash Composite	1%	1%	2.44%	2.31%	0.00%	(0.10%)	(0.10%)
Total			9.29%	8.73%	+ 0.60%	+ (0.04%)	0.56%

* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmgb:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

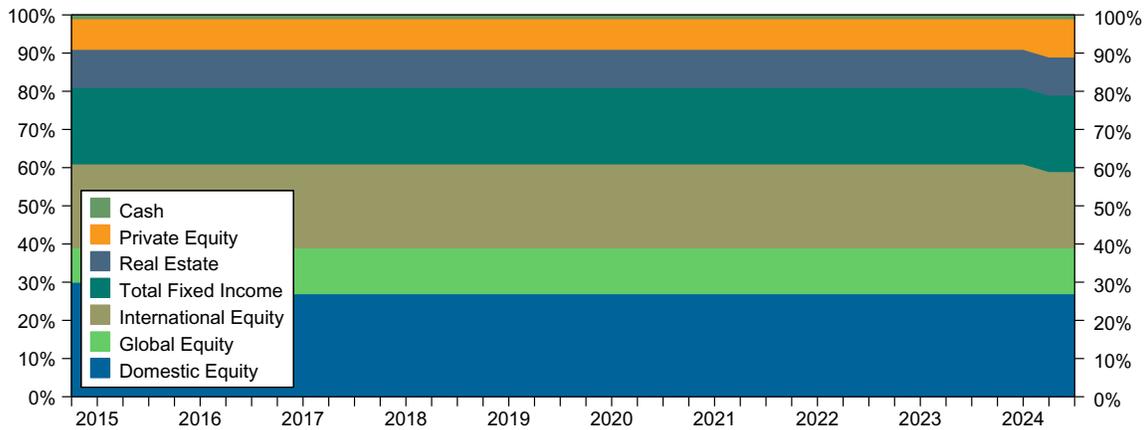
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Spons- V Lg DB (>10B).

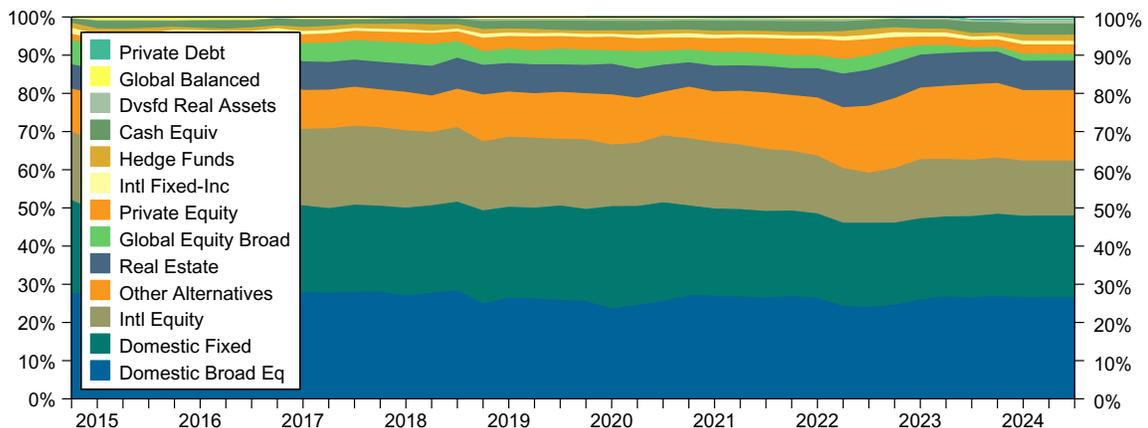
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Callan Public Fund Spons- V Lg DB (>10B) Historical Asset Allocation

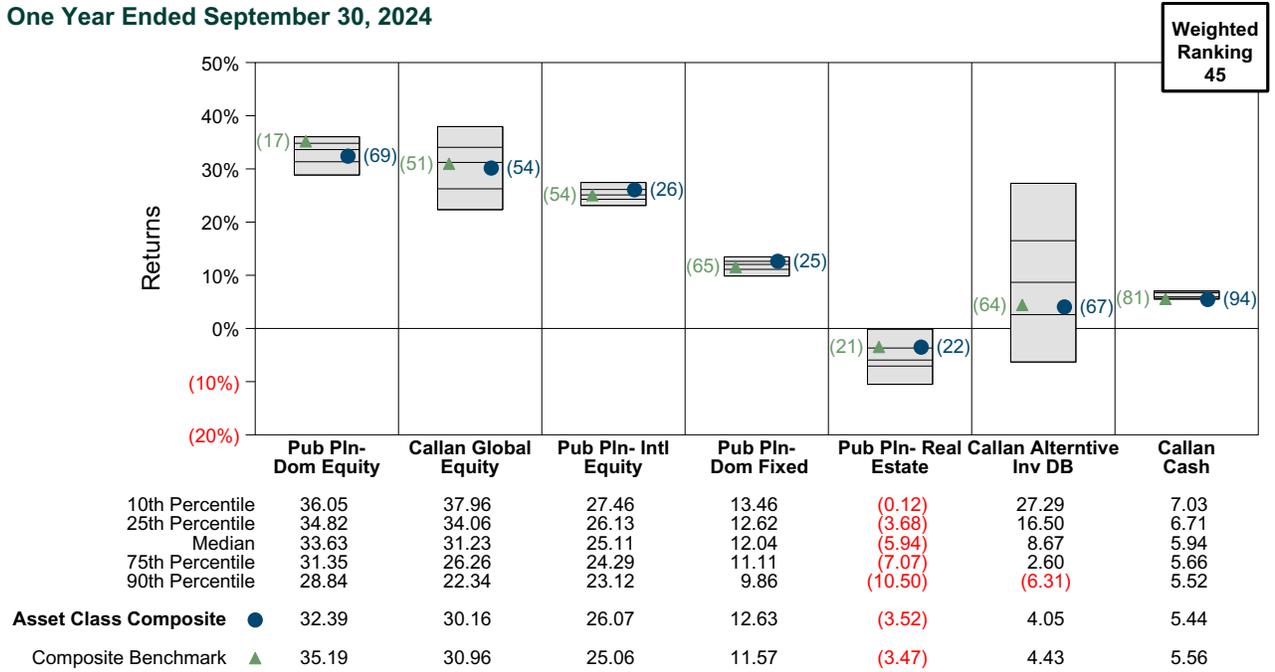


* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

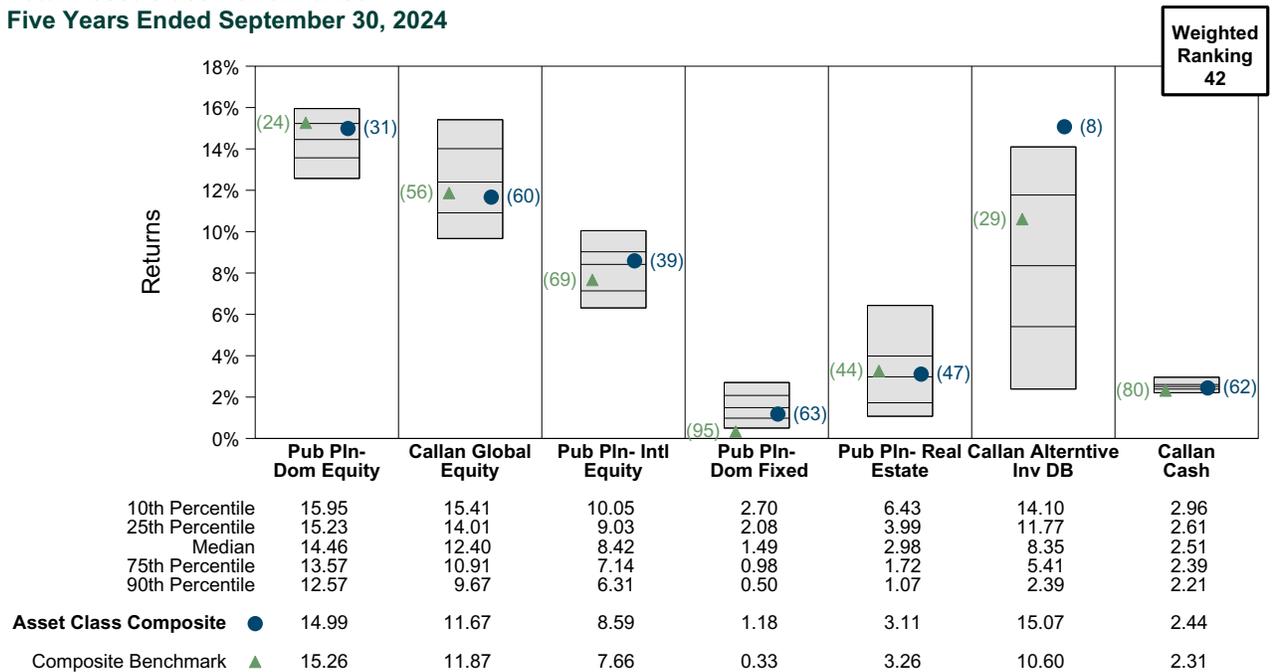
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.

Total Asset Class Performance One Year Ended September 30, 2024



Total Asset Class Performance Five Years Ended September 30, 2024



* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

Total Fund

Period Ended September 30, 2024

Investment Philosophy

*Current Total Fund Target is 27.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 20.0% Blmbg Aggregate Index, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% Cambridge Global PE, 1.0% FTSE 1 Mo T-Bill, and 0.0% Private Credit Benchmark.

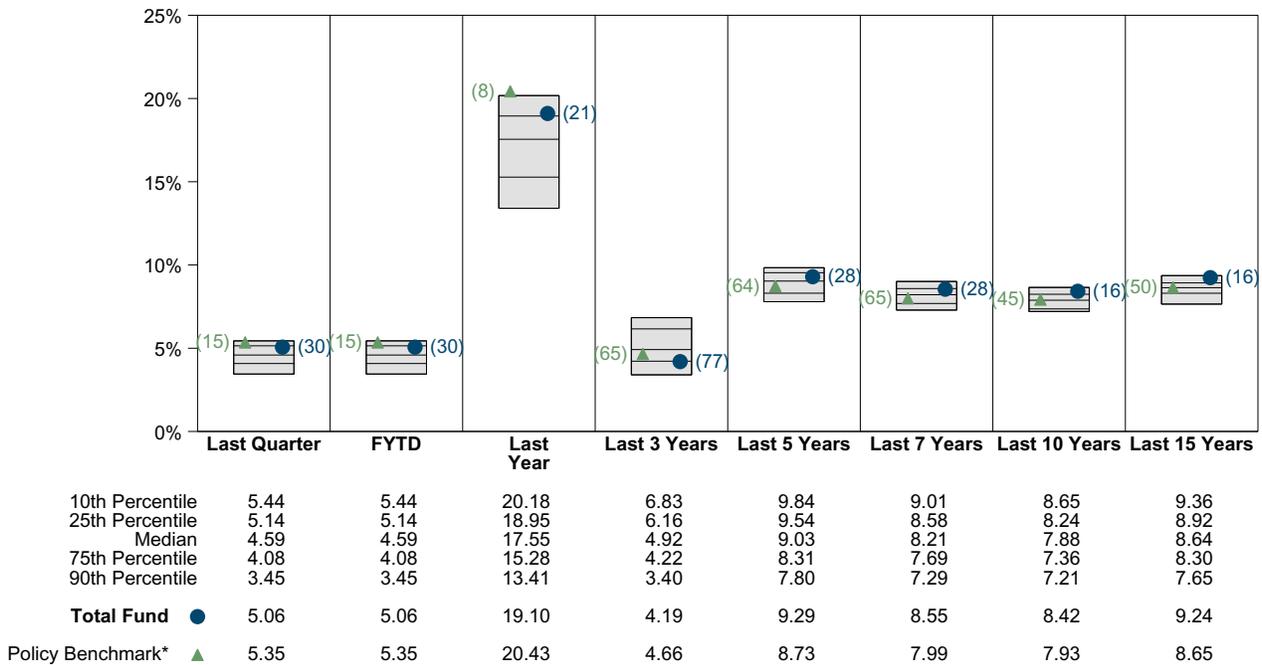
Quarterly Summary and Highlights

- Total Fund's portfolio posted a 5.06% return for the quarter placing it in the 30 percentile of the Callan Public Fd V Lg DB group for the quarter and in the 21 percentile for the last year.
- Total Fund's portfolio underperformed the Policy Benchmark* by 0.29% for the quarter and underperformed the Policy Benchmark* for the year by 1.33%.

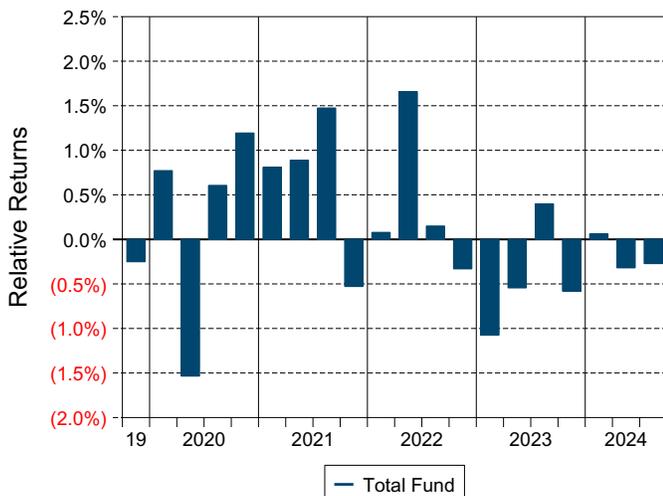
Quarterly Asset Growth

Beginning Market Value	\$33,728,719,682
Net New Investment	\$-117,439,034
Investment Gains/(Losses)	\$1,704,713,392
Ending Market Value	\$35,315,994,040

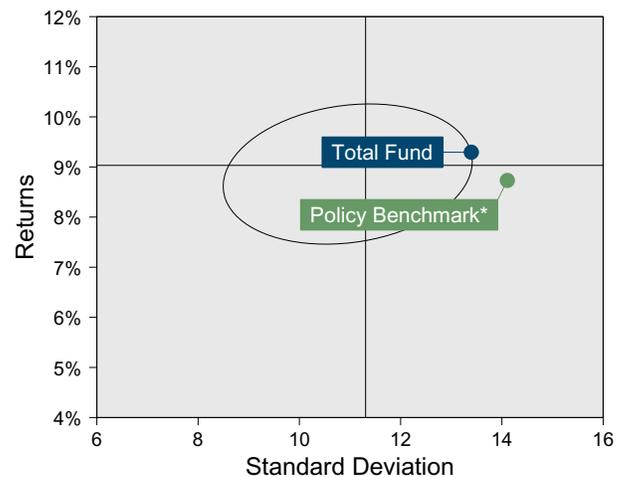
Performance vs Callan Public Fd V Lg DB (Gross)



Relative Return vs Policy Benchmark*



Callan Public Fd V Lg DB (Gross) Annualized Five Year Risk vs Return

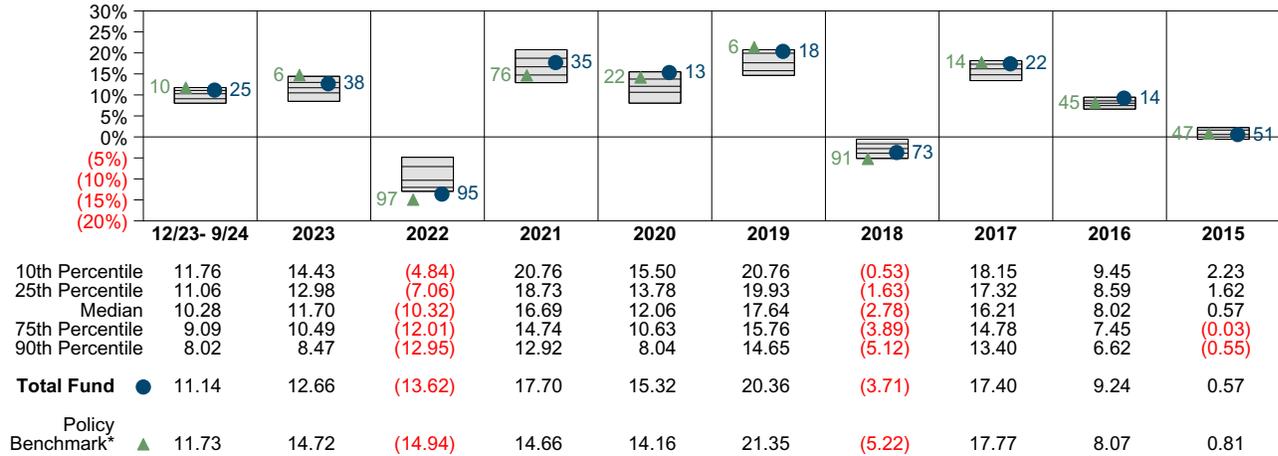


Total Fund Return Analysis Summary

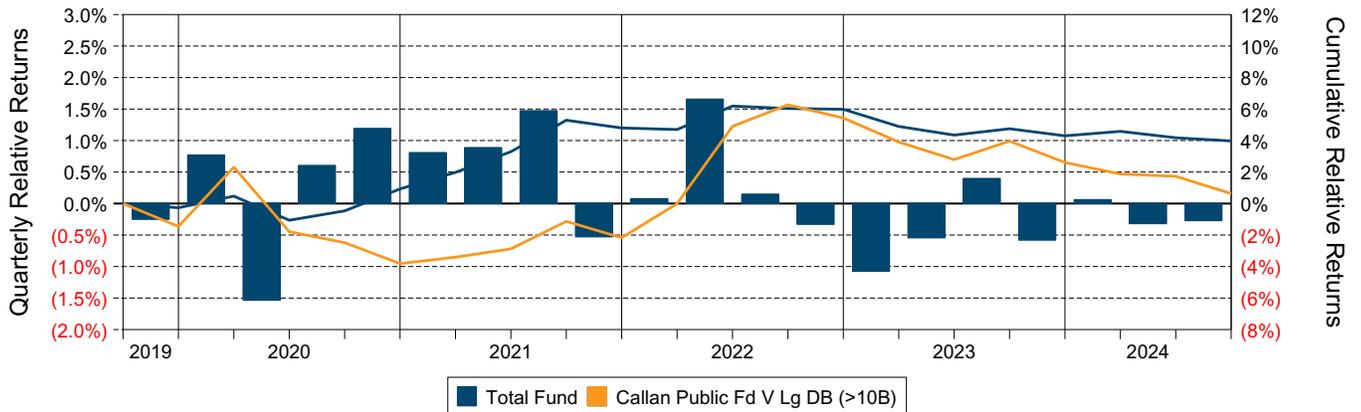
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

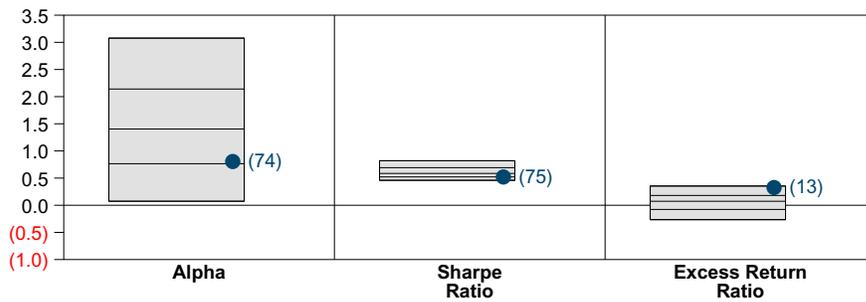
Performance vs Callan Public Fd V Lg DB (>10B) (Gross)



Cumulative and Quarterly Relative Returns vs Policy Benchmark*



Risk Adjusted Return Measures vs Policy Benchmark* Rankings Against Callan Public Fd V Lg DB (>10B) (Gross) Five Years Ended September 30, 2024



Total Equity

Period Ended September 30, 2024

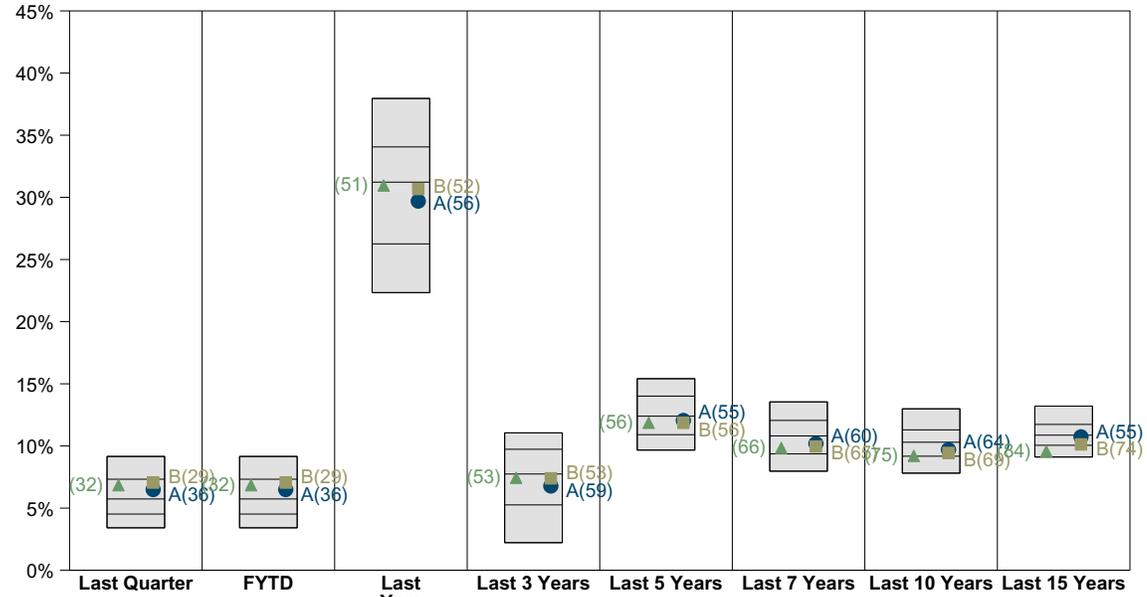
Quarterly Summary and Highlights

- Total Equity's portfolio posted a 6.49% return for the quarter placing it in the 36 percentile of the Callan Global Equity group for the quarter and in the 56 percentile for the last year.
- Total Equity's portfolio underperformed the MSCI ACWI IMI by 0.35% for the quarter and underperformed the MSCI ACWI IMI for the year by 1.26%.

Quarterly Asset Growth

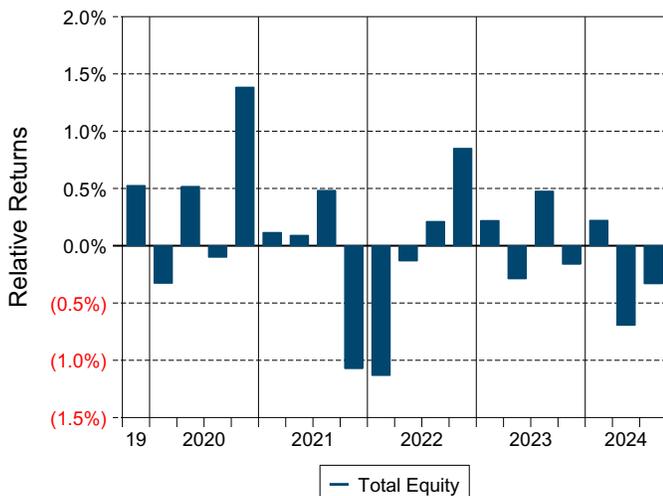
Beginning Market Value	\$19,449,104,555
Net New Investment	\$-13,241,819
Investment Gains/(Losses)	\$1,262,033,820
Ending Market Value	\$20,697,896,556

Performance vs Callan Global Equity (Gross)



	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	9.16	9.16	37.96	11.05	15.41	13.55	12.99	13.21
25th Percentile	7.33	7.33	34.06	9.73	14.01	12.06	11.30	11.73
Median	5.74	5.74	31.23	7.75	12.40	10.81	10.30	10.87
75th Percentile	4.52	4.52	26.26	5.26	10.91	9.36	9.18	10.05
90th Percentile	3.41	3.41	22.34	2.22	9.67	7.97	7.81	9.11
Total Equity	● A 6.49	6.49	29.70	6.78	12.05	10.19	9.70	10.73
Total Equity Custom Benchmark (5)	■ B 7.05	7.05	30.67	7.40	11.86	9.95	9.44	10.13
MSCI ACWI IMI	▲ 6.84	6.84	30.96	7.44	11.87	9.85	9.20	9.58

Relative Return vs MSCI ACWI IMI



Callan Global Equity (Gross) Annualized Five Year Risk vs Return

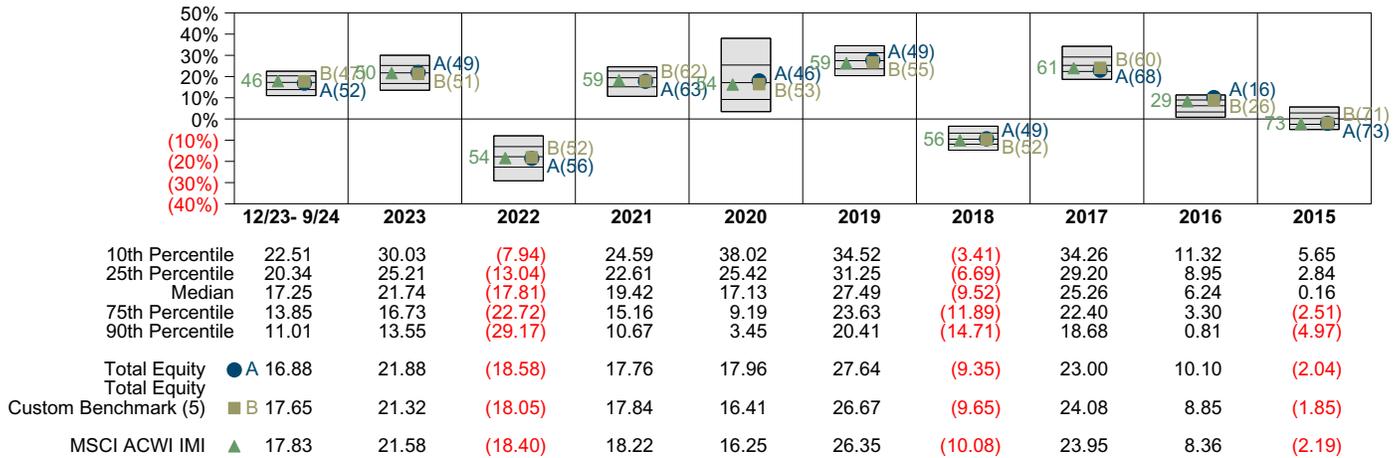


Total Equity Return Analysis Summary

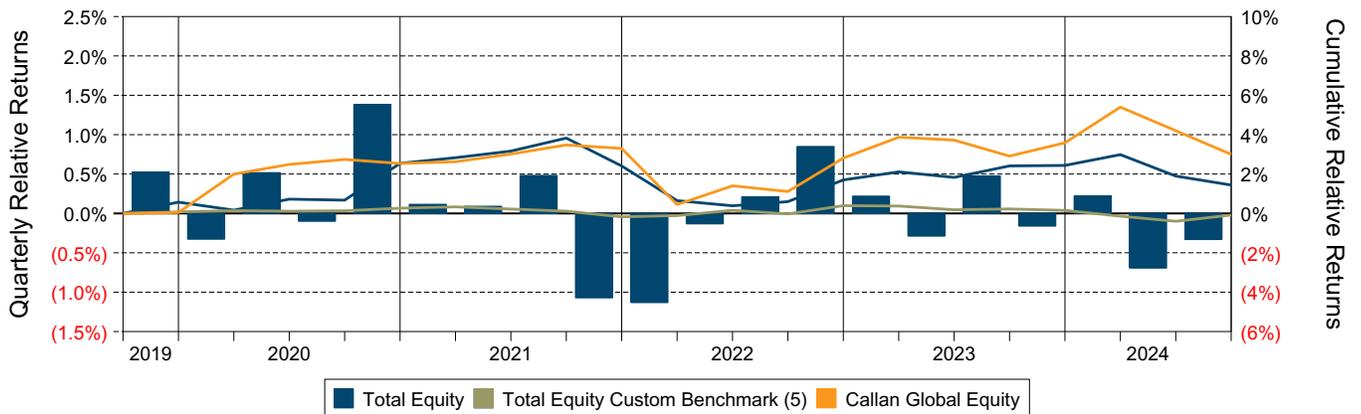
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

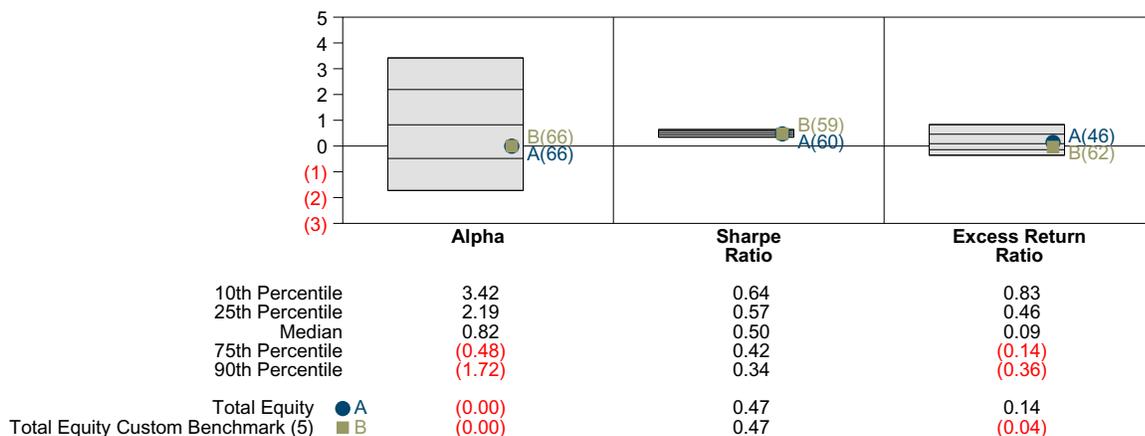
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI IMI



Risk Adjusted Return Measures vs MSCI ACWI IMI Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024



Domestic Equity

Period Ended September 30, 2024

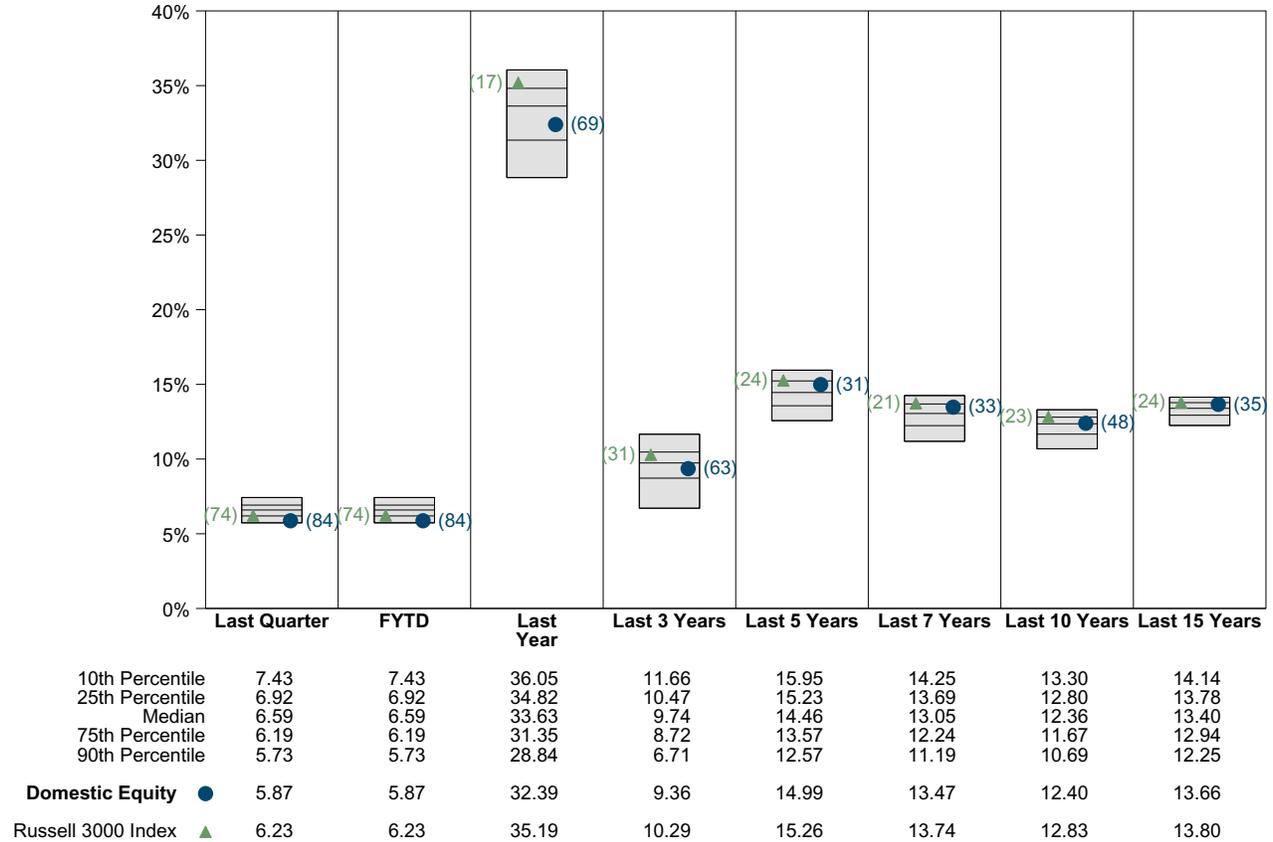
Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a 5.87% return for the quarter placing it in the 84 percentile of the Public Fund - Domestic Equity group for the quarter and in the 69 percentile for the last year.
- Domestic Equity's portfolio underperformed the Russell 3000 Index by 0.36% for the quarter and underperformed the Russell 3000 Index for the year by 2.80%.

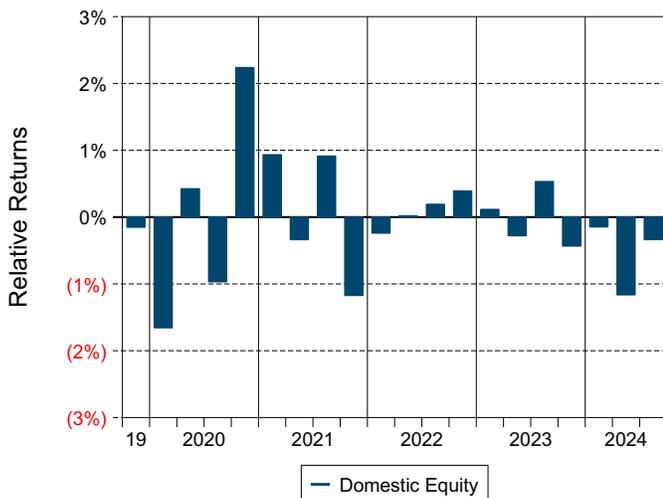
Quarterly Asset Growth

Beginning Market Value	\$8,600,023,563
Net New Investment	\$-4,111,679
Investment Gains/(Losses)	\$504,696,710
Ending Market Value	\$9,100,608,594

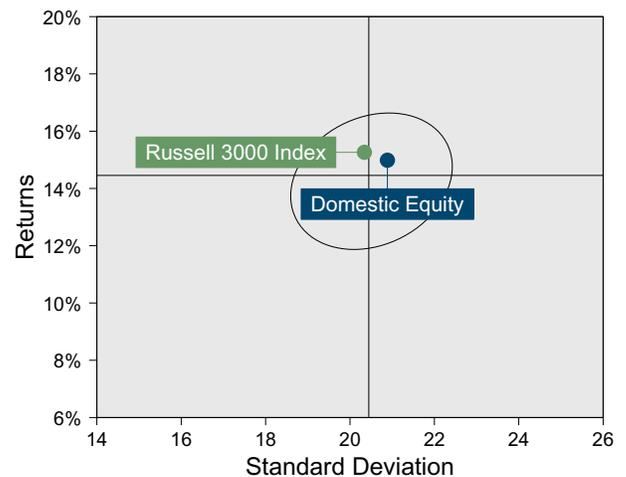
Performance vs Public Fund - Domestic Equity (Gross)



Relative Return vs Russell 3000 Index



Public Fund - Domestic Equity (Gross) Annualized Five Year Risk vs Return

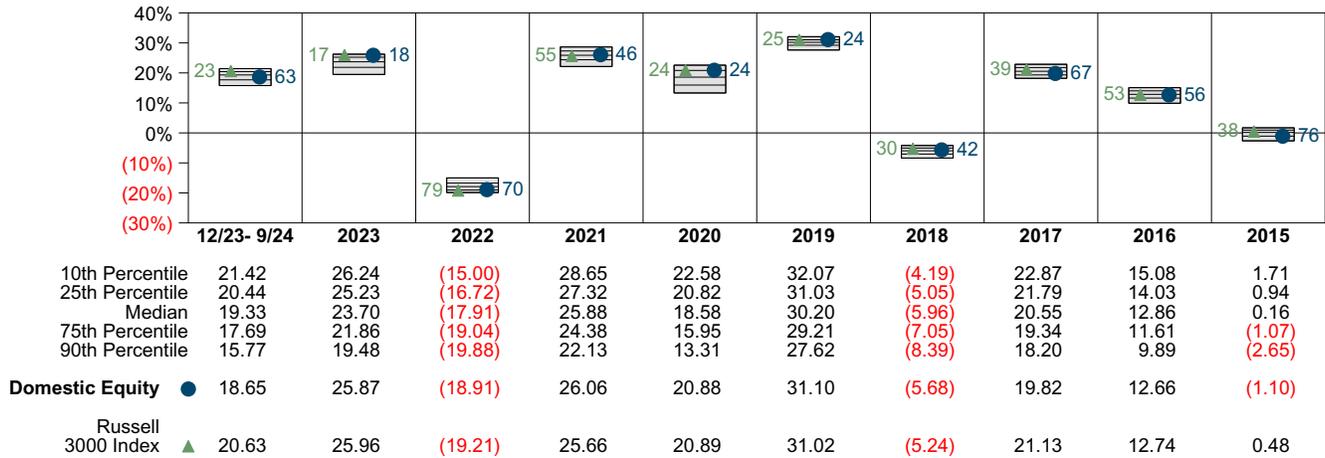


Domestic Equity Return Analysis Summary

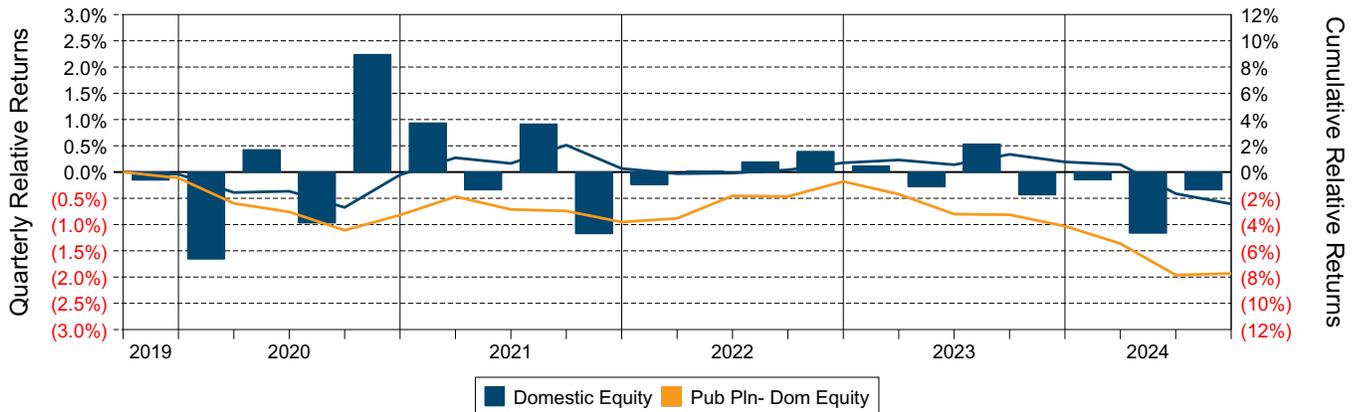
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

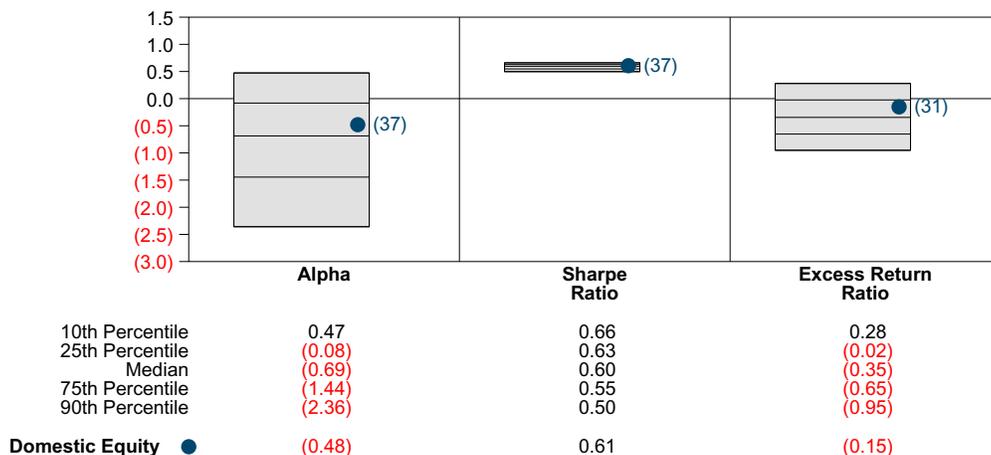
Performance vs Public Fund - Domestic Equity (Gross)



Cumulative and Quarterly Relative Returns vs Russell 3000 Index



Risk Adjusted Return Measures vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended September 30, 2024



Eagle Capital

Period Ended September 30, 2024

Investment Philosophy

Eagle believes that a team driven process adds value via stock selection. The team emphasizes undervalued growth stocks, focusing on companies that are expected to grow for at least five years at rates well above those implicit in the current stock price. The Fund's inception date is January 2005. *Benchmark was changed to S&P 500 in 1Q 2014.

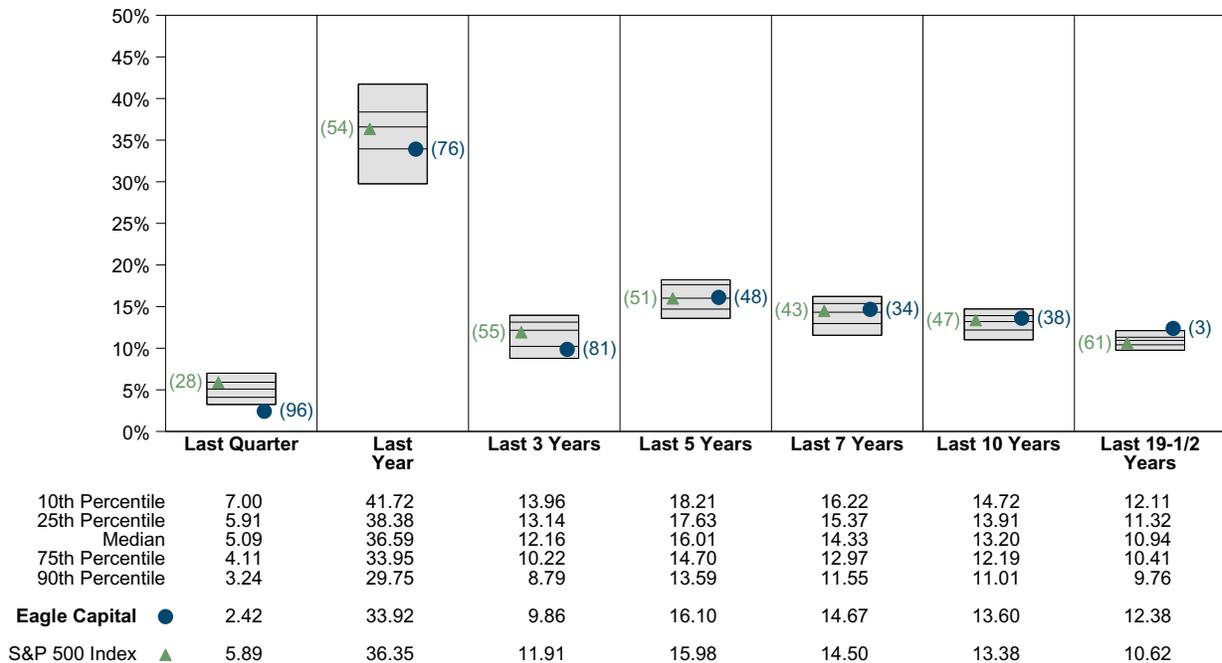
Quarterly Summary and Highlights

- Eagle Capital's portfolio posted a 2.42% return for the quarter placing it in the 96 percentile of the Callan Large Cap Core group for the quarter and in the 76 percentile for the last year.
- Eagle Capital's portfolio underperformed the S&P 500 Index by 3.47% for the quarter and underperformed the S&P 500 Index for the year by 2.43%.

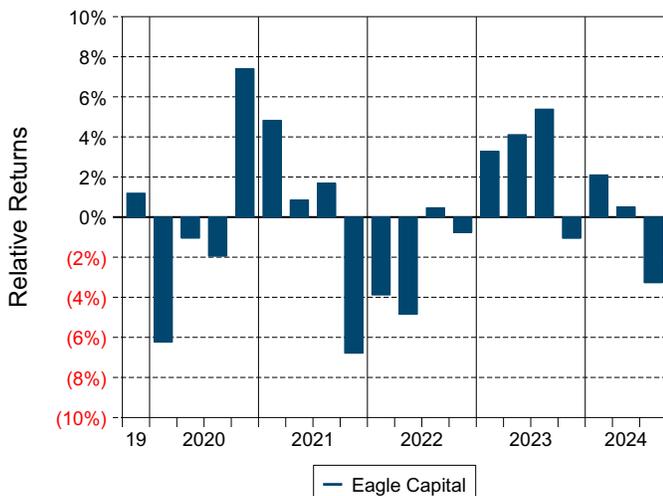
Quarterly Asset Growth

Beginning Market Value	\$859,062,783
Net New Investment	\$-1,471,421
Investment Gains/(Losses)	\$20,793,232
Ending Market Value	\$878,384,594

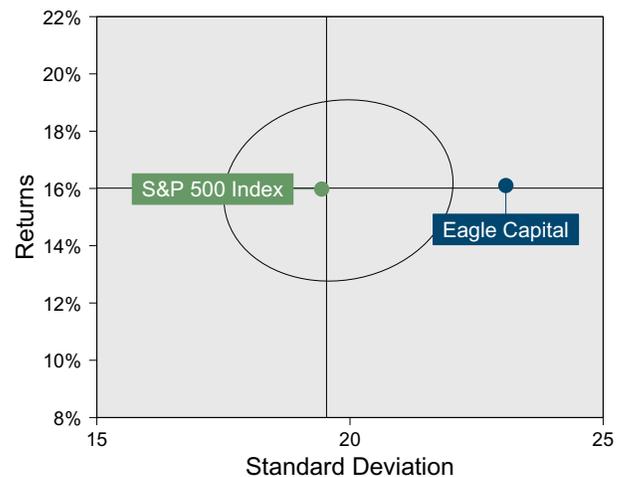
Performance vs Callan Large Cap Core (Gross)



Relative Return vs S&P 500 Index



Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return

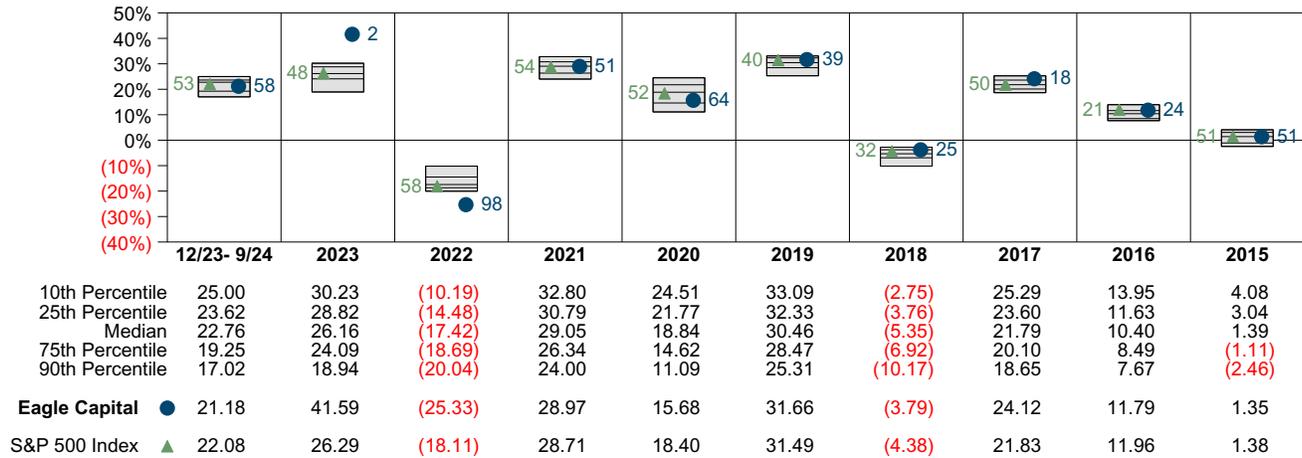


Eagle Capital Return Analysis Summary

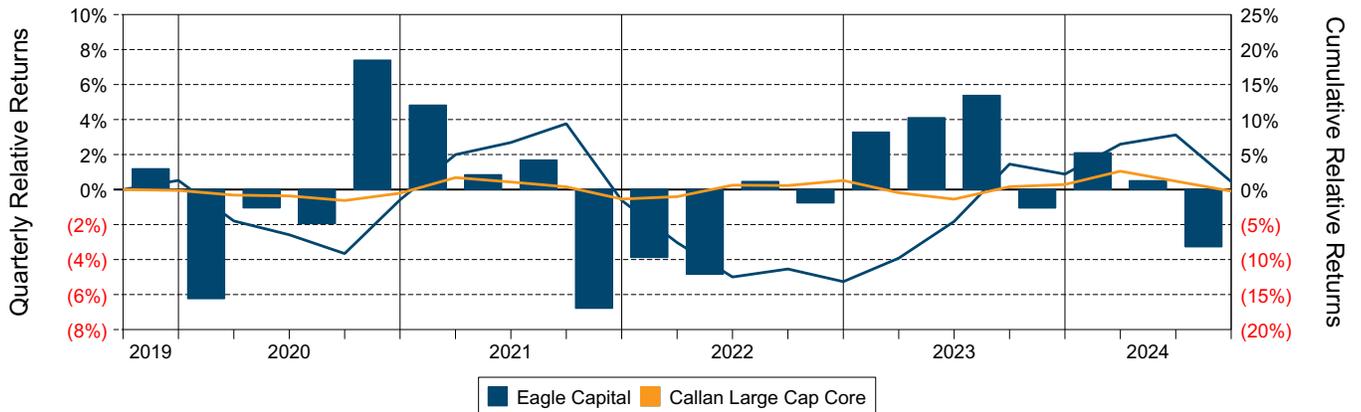
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

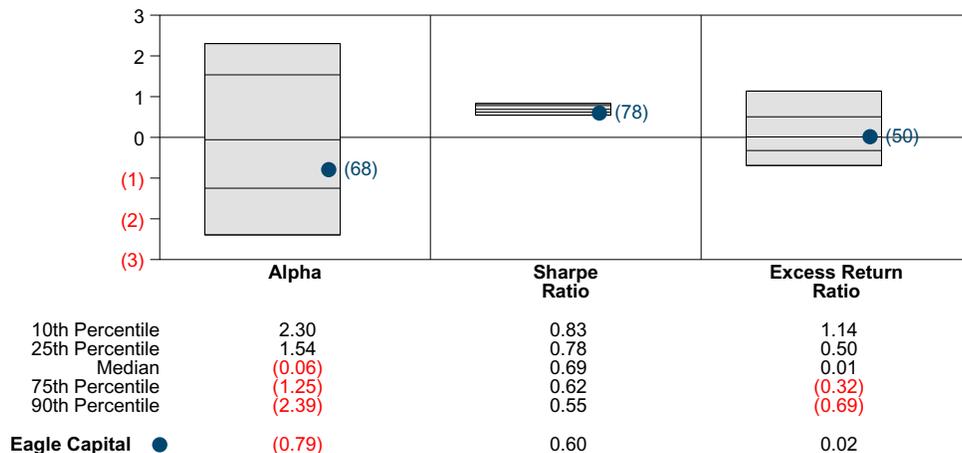
Performance vs Callan Large Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core (Gross) Five Years Ended September 30, 2024

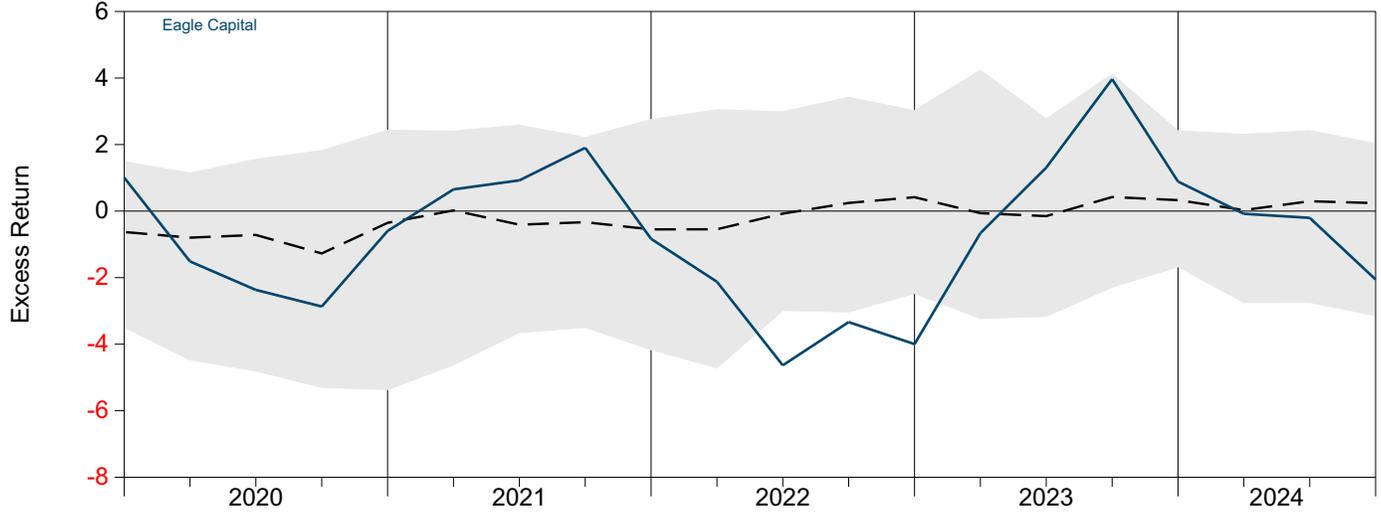


Eagle Capital Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

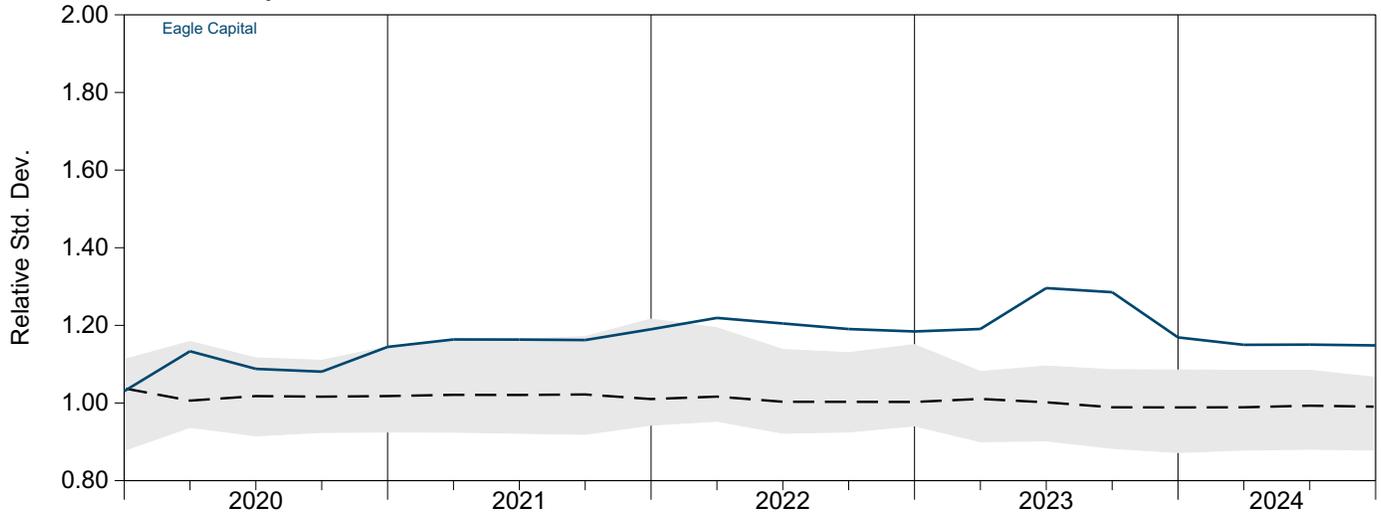
The first chart below illustrates the consistency of excess return over rolling three year periods versus the S&P 500 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Large Cap Core. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

**Rolling Three Year Excess Return Relative to S&P 500 Index
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Excess Return	(0.20)	(0.73)
% Positive Periods	40%	35%
Average Ranking	50	55

**Rolling Three Year Relative Std. Dev. Relative to S&P 500 Index
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Relative Std. Dev.	1.01%	1.17%
% Positive Periods	100%	100%
Average Ranking	50	10

Northern Trust S&P 500 Period Ended September 30, 2024

Investment Philosophy

Northern Trust seeks to replicate the risk and returns of the S&P 500 equity index and believes that a passive approach to portfolio management will provide index-like returns with minimal transaction costs. The Fund's inception date is June 1985.

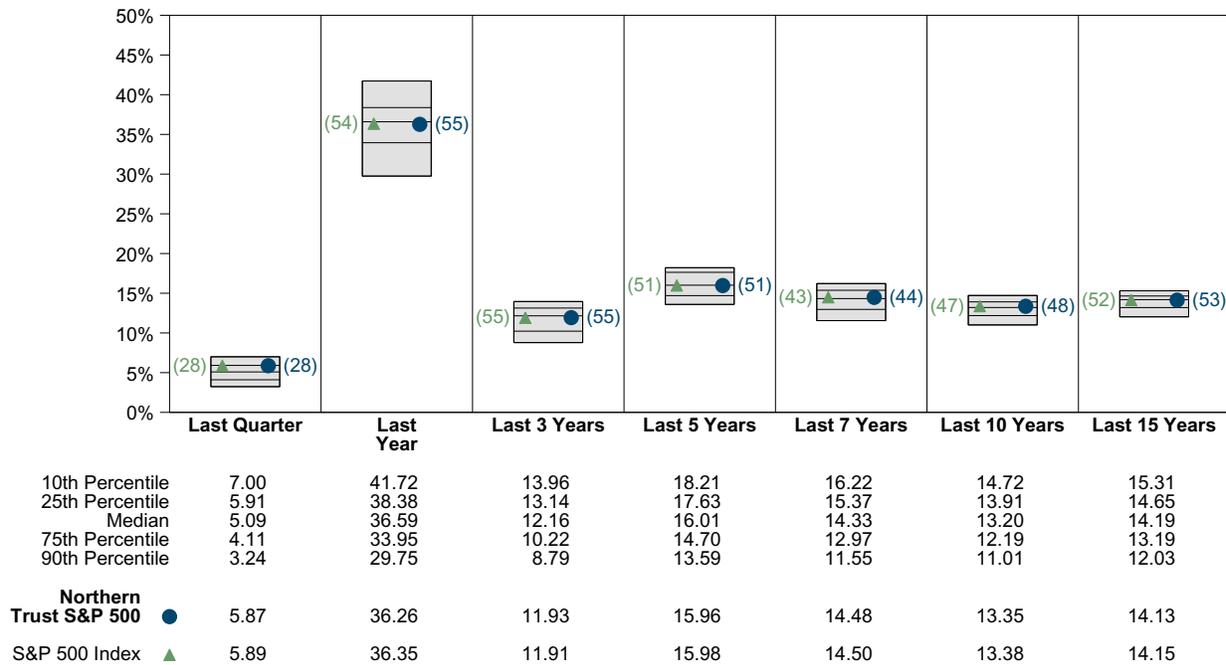
Quarterly Summary and Highlights

- Northern Trust S&P 500's portfolio posted a 5.87% return for the quarter placing it in the 28 percentile of the Callan Large Cap Core group for the quarter and in the 55 percentile for the last year.
- Northern Trust S&P 500's portfolio underperformed the S&P 500 Index by 0.02% for the quarter and underperformed the S&P 500 Index for the year by 0.09%.

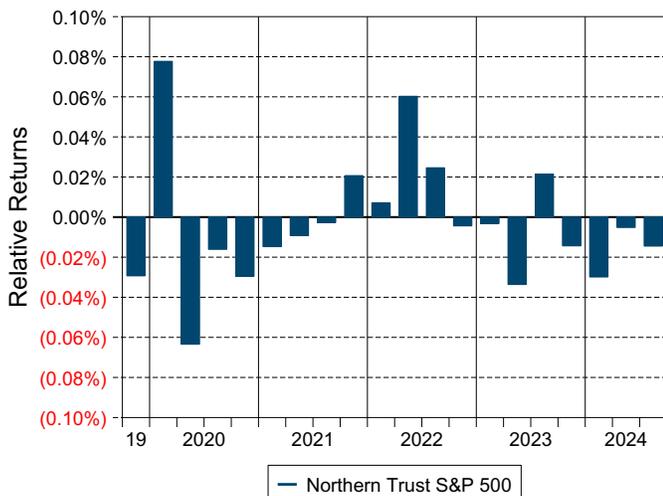
Quarterly Asset Growth

Beginning Market Value	\$5,701,122,126
Net New Investment	\$-72,188
Investment Gains/(Losses)	\$334,726,705
Ending Market Value	\$6,035,776,643

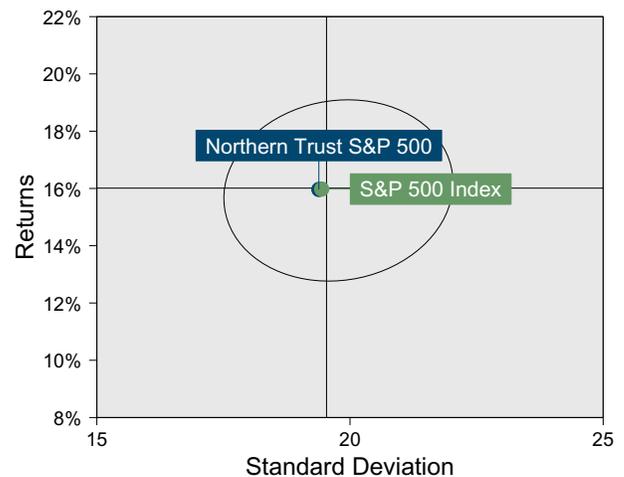
Performance vs Callan Large Cap Core (Gross)



Relative Return vs S&P 500 Index



Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return

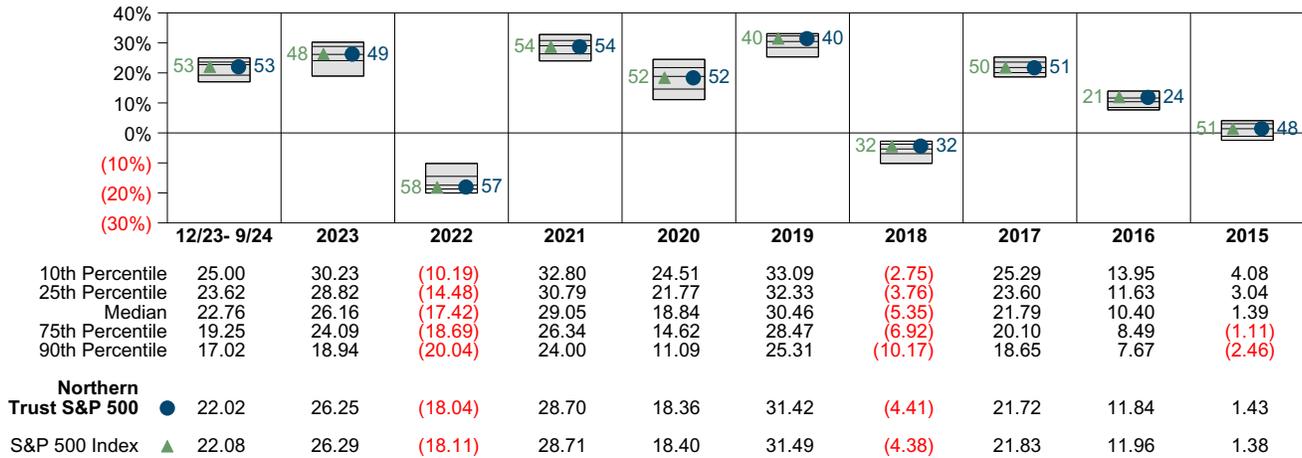


Northern Trust S&P 500 Return Analysis Summary

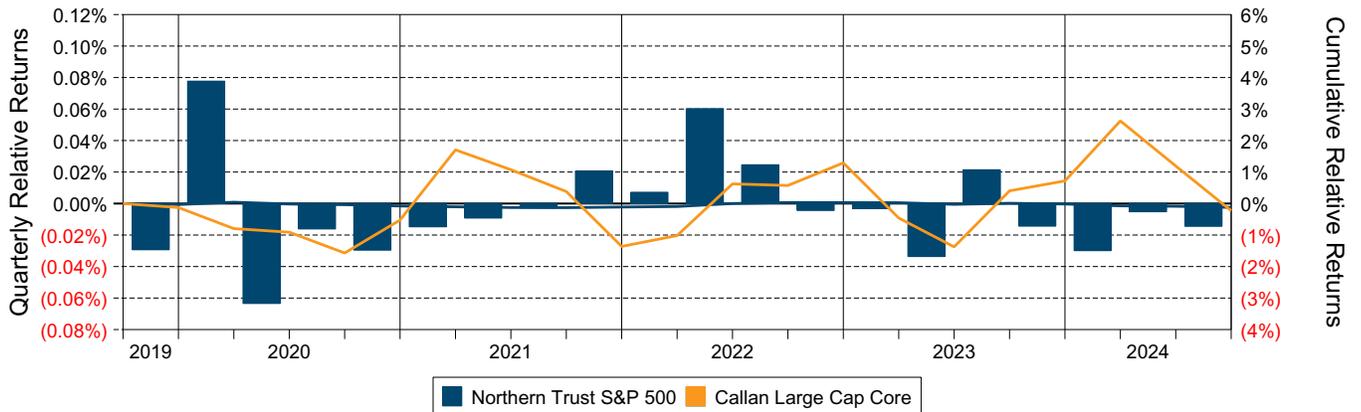
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

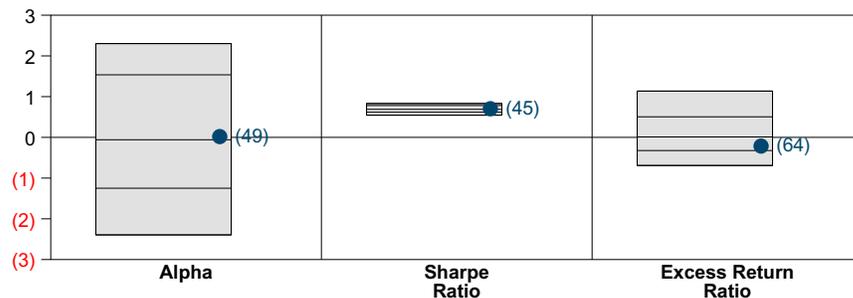
Performance vs Callan Large Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core (Gross) Five Years Ended September 30, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.30	0.83	1.14
25th Percentile	1.54	0.78	0.50
Median	(0.06)	0.69	0.01
75th Percentile	(1.25)	0.62	(0.32)
90th Percentile	(2.39)	0.55	(0.69)
Northern Trust S&P 500	● 0.02	0.70	(0.21)

Artisan Partners

Period Ended September 30, 2024

Investment Philosophy

The Artisan U.S. Mid Cap Growth strategy employs a fundamental investment process to construct a diversified portfolio of U.S. mid cap growth companies. The Fund aims to buy companies at attractive valuations, entering an accelerating profit cycle, and exhibit at least one of the following characteristics: a dominant market share, a low cost producer, possession of a proprietary technology or process, or a strong brand name. The overall portfolio contains between 60-75 positions and has consistently invested in higher cap stocks relative to its peer group. The Fund's inception date is September 2002.

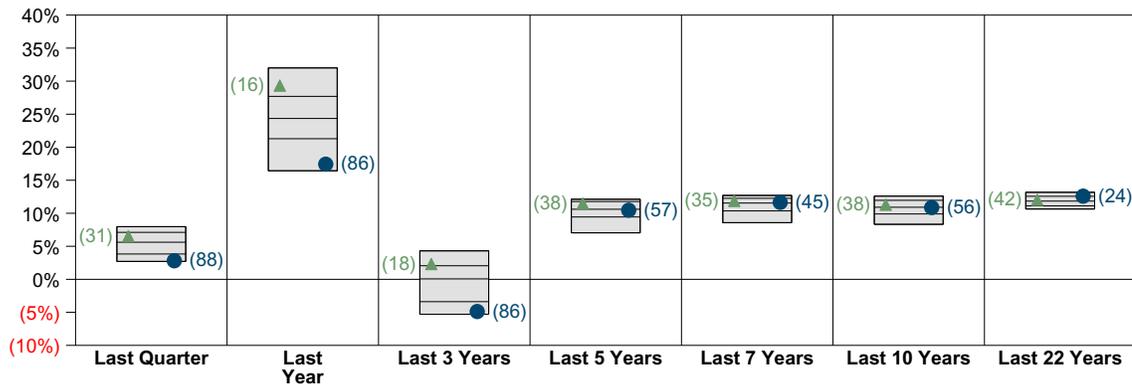
Quarterly Summary and Highlights

- Artisan Partners's portfolio posted a 2.81% return for the quarter placing it in the 88 percentile of the Callan Mid Cap Growth group for the quarter and in the 86 percentile for the last year.
- Artisan Partners's portfolio underperformed the Russell MidCap Growth Idx by 3.74% for the quarter and underperformed the Russell MidCap Growth Idx for the year by 11.90%.

Quarterly Asset Growth

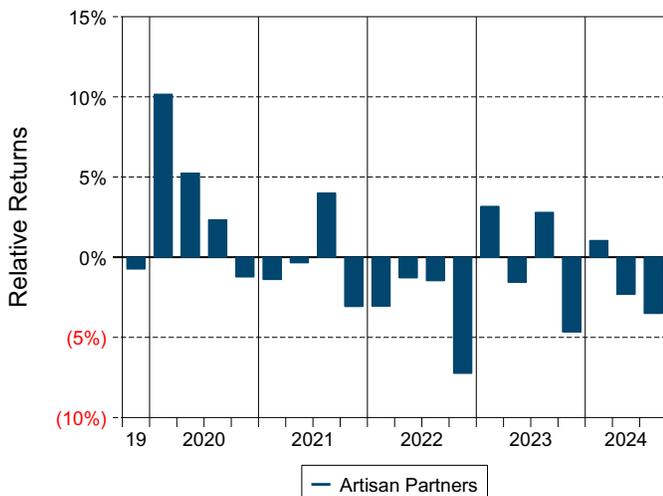
Beginning Market Value	\$503,323,350
Net New Investment	\$-591,405
Investment Gains/(Losses)	\$14,097,868
Ending Market Value	\$516,829,813

Performance vs Callan Mid Cap Growth (Gross)

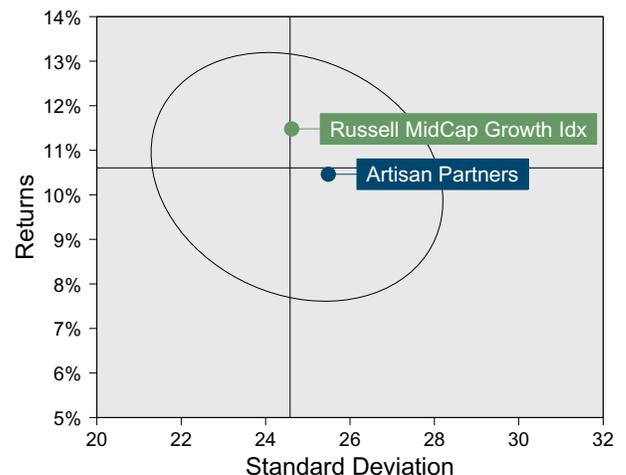


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 22 Years
10th Percentile	7.97	32.00	4.31	12.12	12.70	12.60	13.17
25th Percentile	7.11	27.70	2.06	11.77	12.26	11.96	12.57
Median	5.62	24.35	0.06	10.60	11.54	10.91	11.84
75th Percentile	3.83	21.29	(3.39)	9.44	10.35	9.90	11.13
90th Percentile	2.71	16.43	(5.29)	7.03	8.57	8.32	10.64
Artisan Partners ●	2.81	17.43	(4.88)	10.46	11.65	10.86	12.59
Russell MidCap Growth Idx ▲	6.54	29.33	2.32	11.48	11.88	11.30	12.04

Relative Return vs Russell MidCap Growth Idx



Callan Mid Cap Growth (Gross) Annualized Five Year Risk vs Return

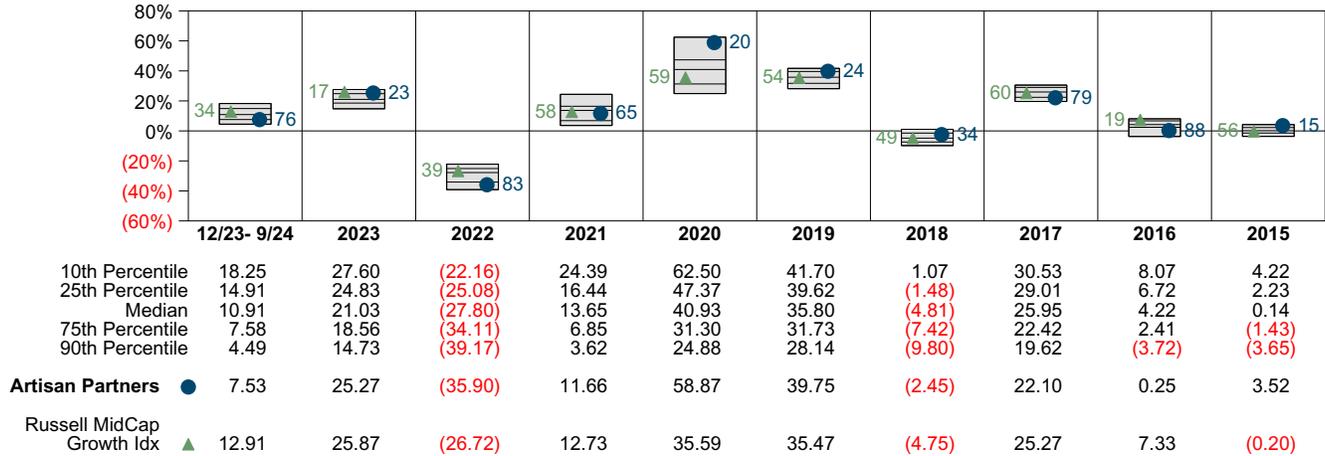


Artisan Partners Return Analysis Summary

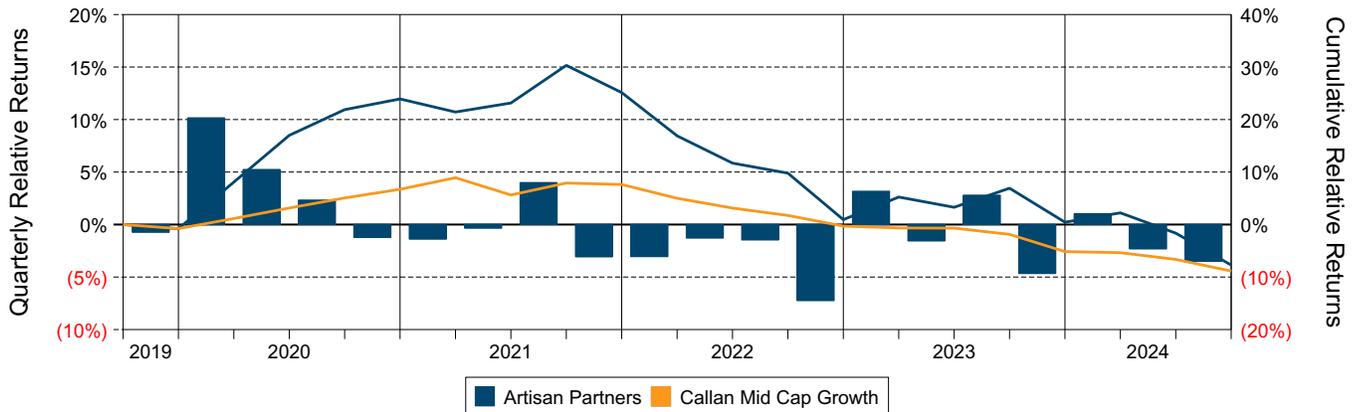
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

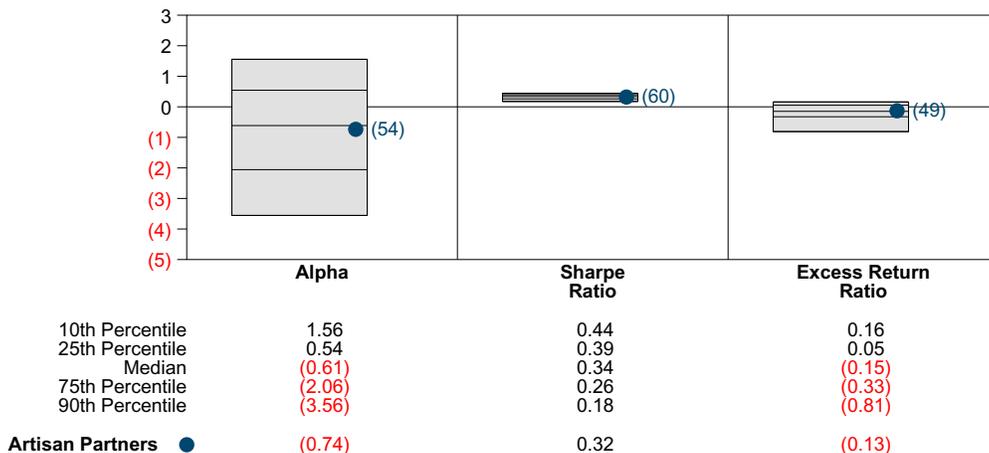
Performance vs Callan Mid Cap Growth (Gross)



Cumulative and Quarterly Relative Returns vs Russell MidCap Growth Idx



Risk Adjusted Return Measures vs Russell MidCap Growth Idx Rankings Against Callan Mid Cap Growth (Gross) Five Years Ended September 30, 2024

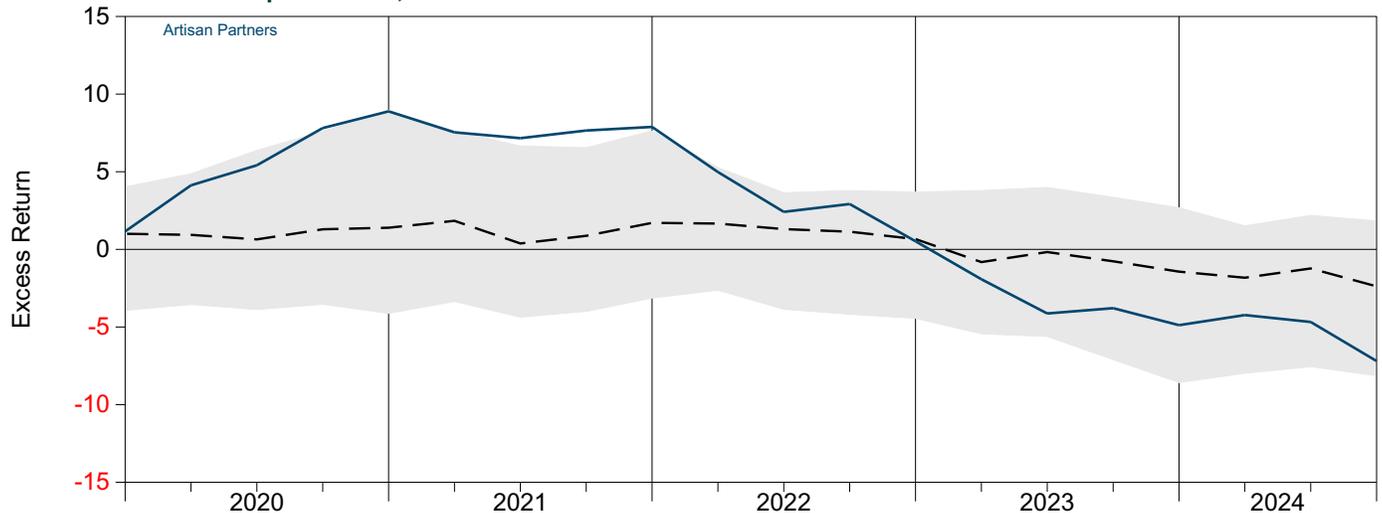


Artisan Partners Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

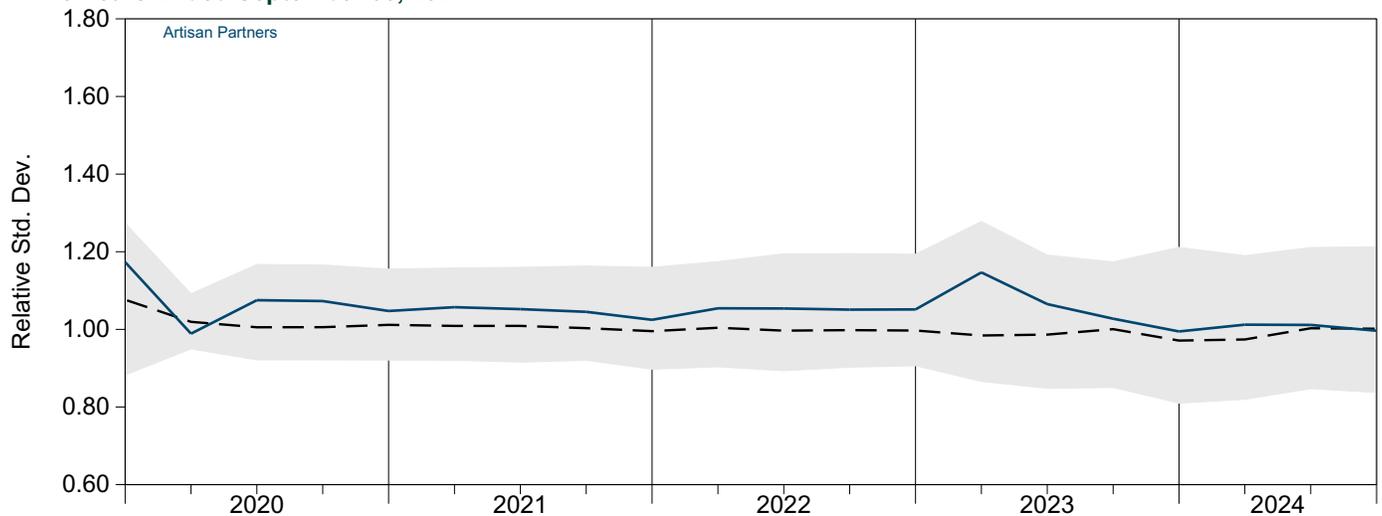
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell MidCap Growth Idx. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Mid Cap Growth. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Russell MidCap Growth Idx Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.31%	1.88%
% Positive Periods	65%	65%
Average Ranking	50	38

Rolling Three Year Relative Std. Dev. Relative to Russell MidCap Growth Idx Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.00%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	37

Victory Mid Cap Value

Period Ended September 30, 2024

Investment Philosophy

The Sycamore Mid Cap Value Equity investment approach focuses on companies with market capitalizations between \$2.5 and \$15 billion that are believed offer above-average total return potential with limited risk. The Mid Cap Value Equity investment process seeks to identify high quality, low expectation mid cap companies that appear poised for continued or improved earnings. Portfolios typically hold 60 - 80 stocks with average annual portfolio turnover of 40%. The team will begin to sell when a company's market capitalization exceed their estimate of intrinsic value or reaches the higher end of the index range. The Fund's inception date is September 2022.

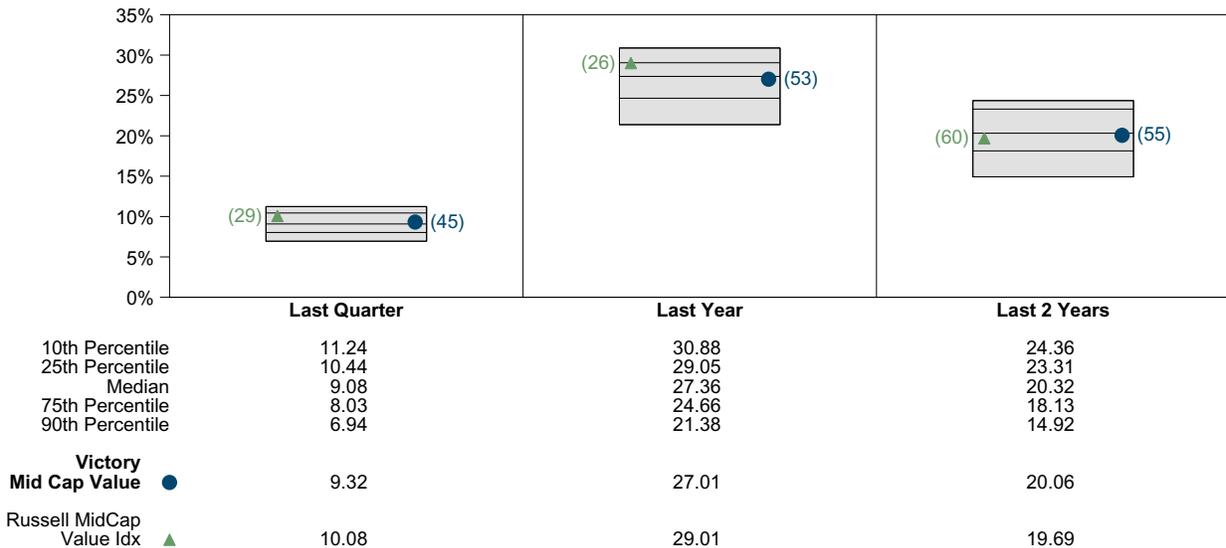
Quarterly Summary and Highlights

- Victory Mid Cap Value's portfolio posted a 9.32% return for the quarter placing it in the 45 percentile of the Callan Mid Cap Value group for the quarter and in the 53 percentile for the last year.
- Victory Mid Cap Value's portfolio underperformed the Russell MidCap Value Idx by 0.76% for the quarter and underperformed the Russell MidCap Value Idx for the year by 2.00%.

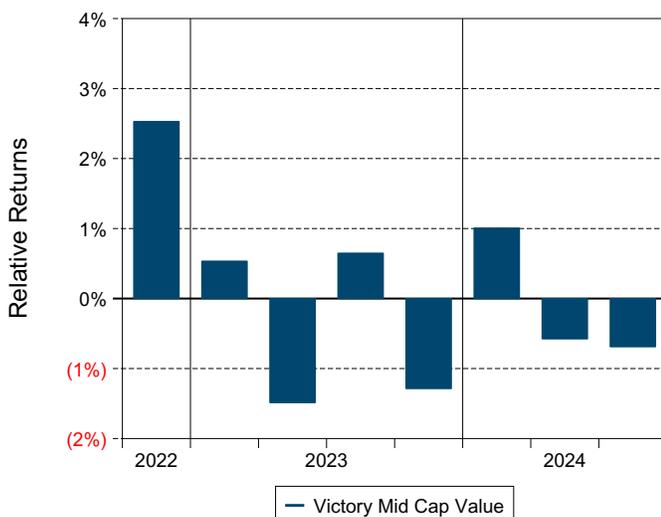
Quarterly Asset Growth

Beginning Market Value	\$554,003,371
Net New Investment	\$-634,752
Investment Gains/(Losses)	\$51,603,998
Ending Market Value	\$604,972,618

Performance vs Callan Mid Cap Value (Gross)



Relative Return vs Russell MidCap Value Idx



Callan Mid Cap Value (Gross) Annualized Two Year Risk vs Return

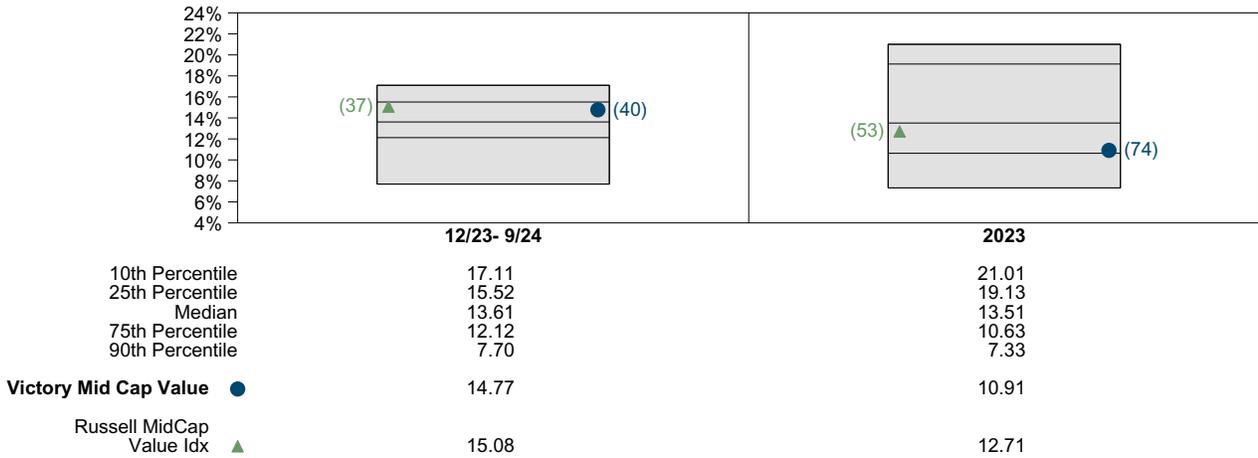


Victory Mid Cap Value Return Analysis Summary

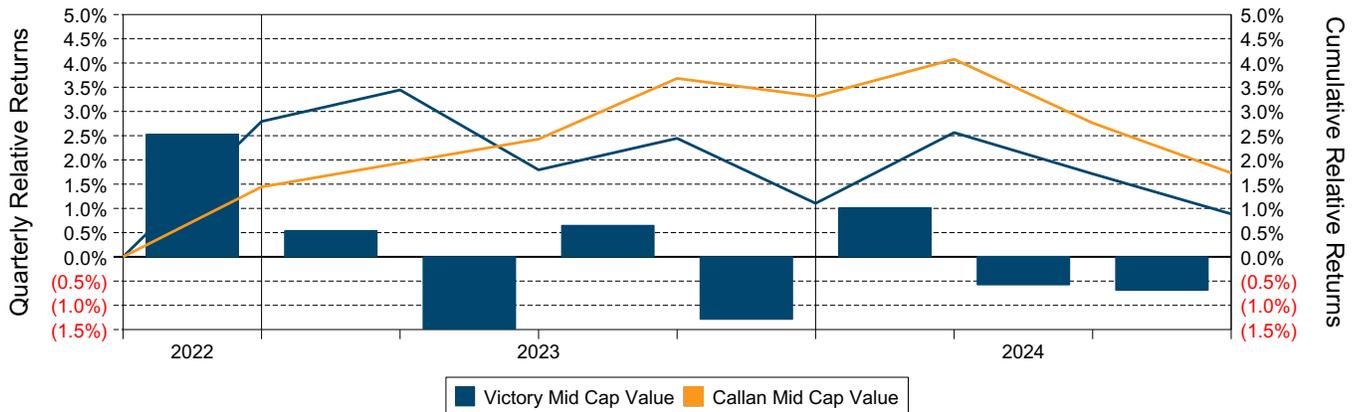
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

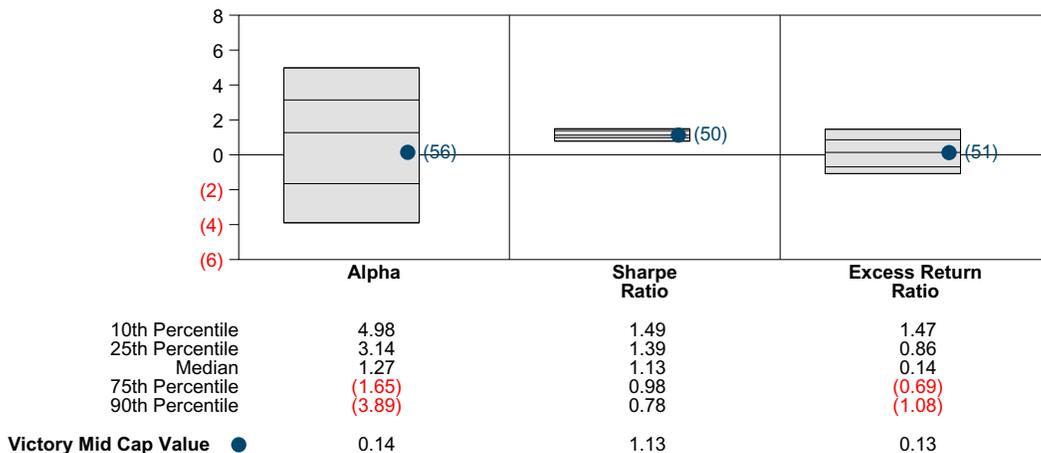
Performance vs Callan Mid Cap Value (Gross)



Cumulative and Quarterly Relative Returns vs Russell MidCap Value Idx



Risk Adjusted Return Measures vs Russell MidCap Value Idx Rankings Against Callan Mid Cap Value (Gross) Two Years Ended September 30, 2024



Dimensional Fund Advisors Period Ended September 30, 2024

Investment Philosophy

DFA's investment philosophy stems from academic research conducted by Professors Eugene Fama and Kenneth French that finds that high book/market value stocks have higher expected returns than growth stocks. DFA's quantitative investment strategy in highly diversified portfolios of small companies with "deep" value characteristics is designed to capture the returns of small value stocks. The Fund's inception date is July 2002.

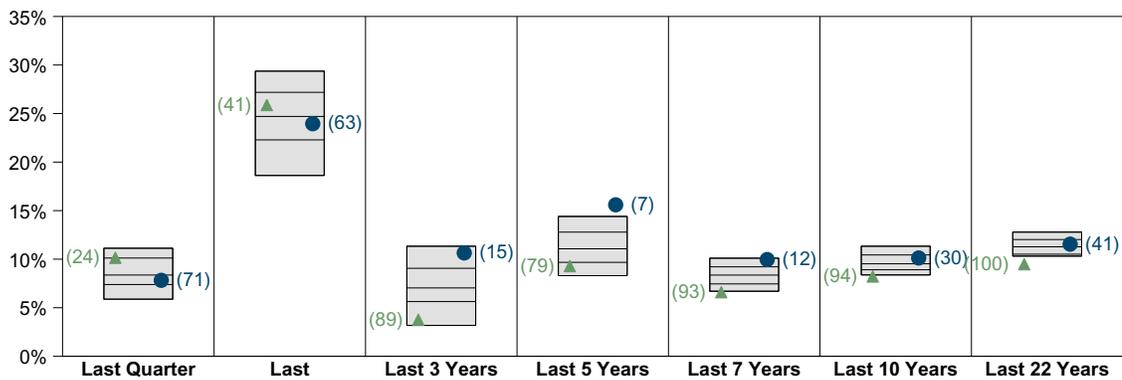
Quarterly Summary and Highlights

- Dimensional Fund Advisors's portfolio posted a 7.82% return for the quarter placing it in the 71 percentile of the Callan Small Cap Value group for the quarter and in the 63 percentile for the last year.
- Dimensional Fund Advisors's portfolio underperformed the Russell 2000 Value Index by 2.33% for the quarter and underperformed the Russell 2000 Value Index for the year by 1.93%.

Quarterly Asset Growth

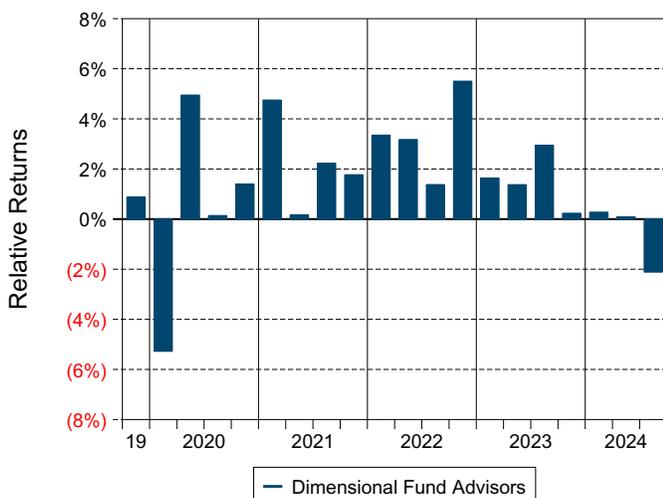
Beginning Market Value	\$332,511,488
Net New Investment	\$-232,758
Investment Gains/(Losses)	\$25,998,323
Ending Market Value	\$358,277,052

Performance vs Callan Small Cap Value (Gross)

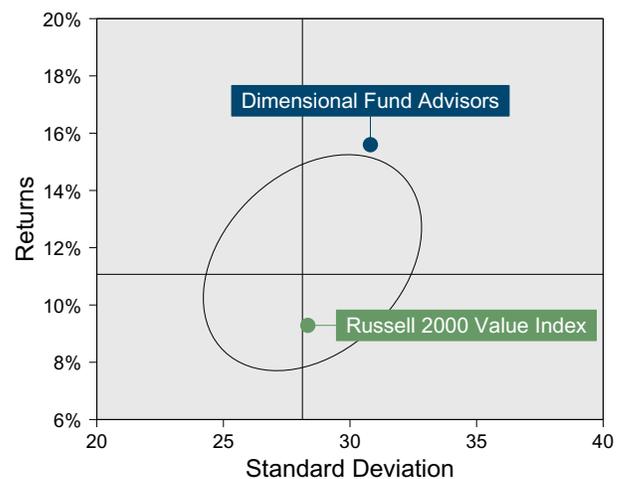


10th Percentile	11.13	29.37	11.34	14.40	10.11	11.34	12.79
25th Percentile	10.12	27.18	9.06	12.79	9.21	10.44	12.02
Median	8.37	24.70	7.04	11.07	8.36	9.53	11.27
75th Percentile	7.39	22.29	5.64	9.68	7.46	8.91	10.52
90th Percentile	5.88	18.62	3.18	8.30	6.70	8.38	10.32
Dimensional Fund Advisors	● 7.82	23.95	10.64	15.60	9.96	10.12	11.55
Russell 2000 Value Index	▲ 10.15	25.88	3.77	9.29	6.60	8.22	9.49

Relative Return vs Russell 2000 Value Index



Callan Small Cap Value (Gross) Annualized Five Year Risk vs Return

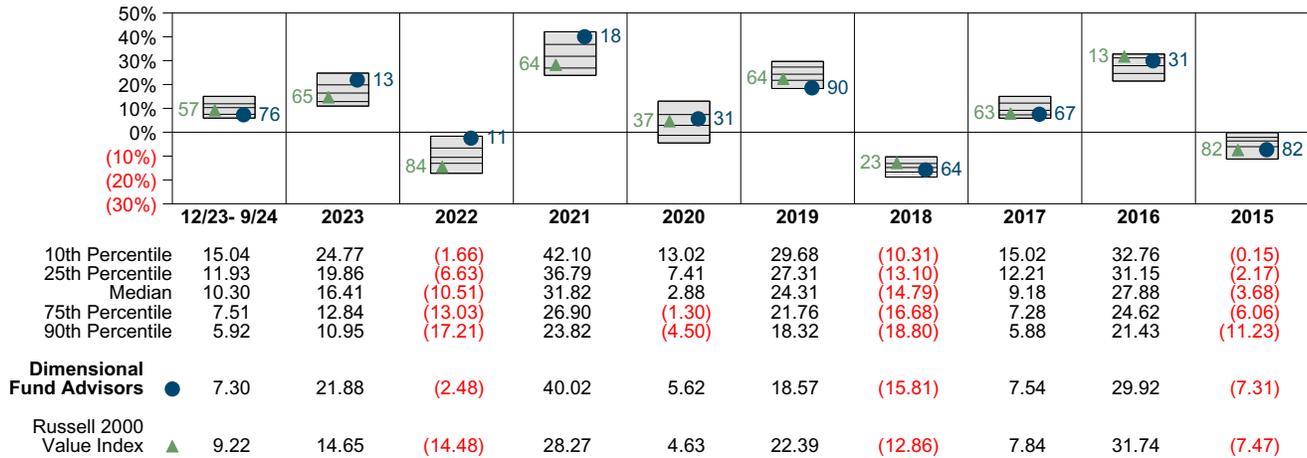


Dimensional Fund Advisors Return Analysis Summary

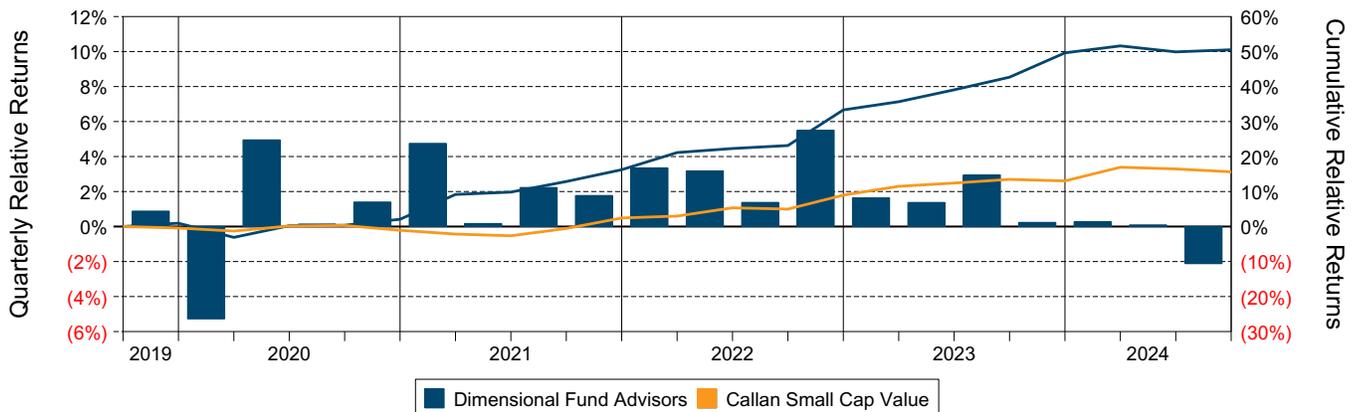
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

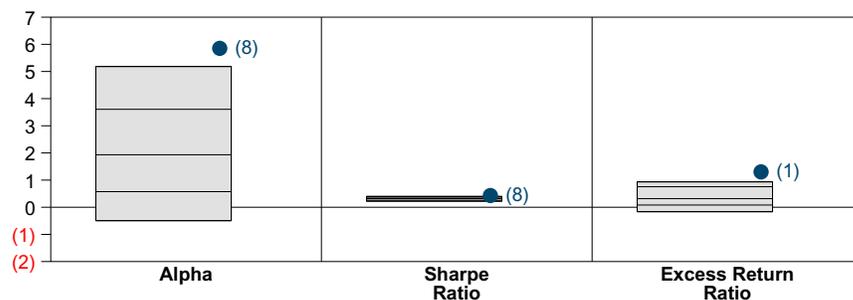
Performance vs Callan Small Cap Value (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Value Index



Risk Adjusted Return Measures vs Russell 2000 Value Index Rankings Against Callan Small Cap Value (Gross) Five Years Ended September 30, 2024

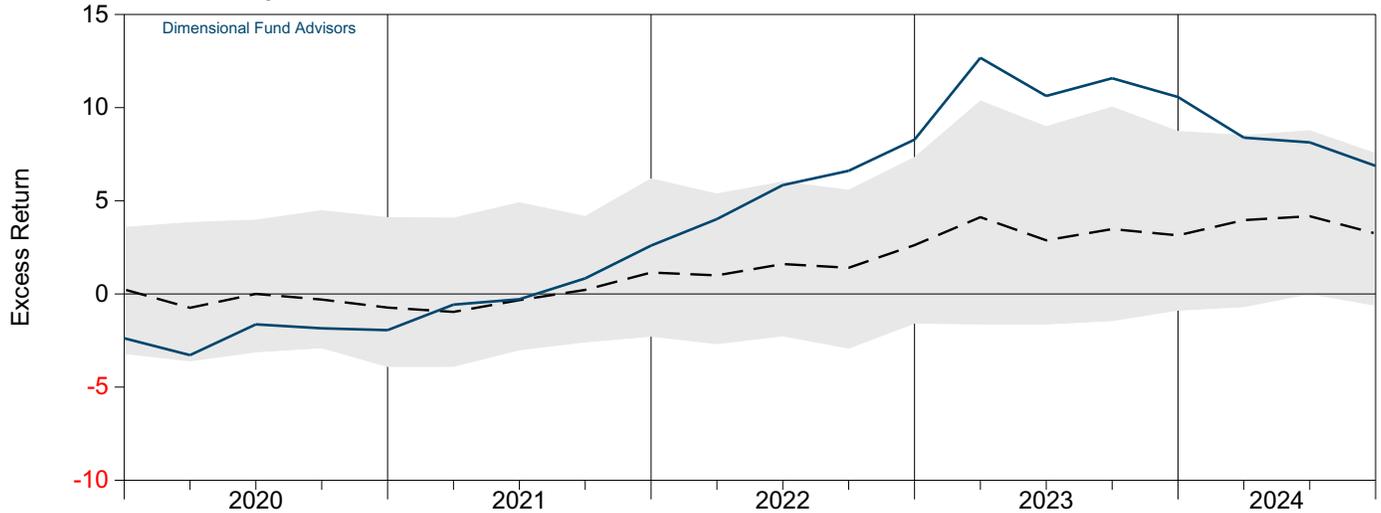


Dimensional Fund Advisors Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

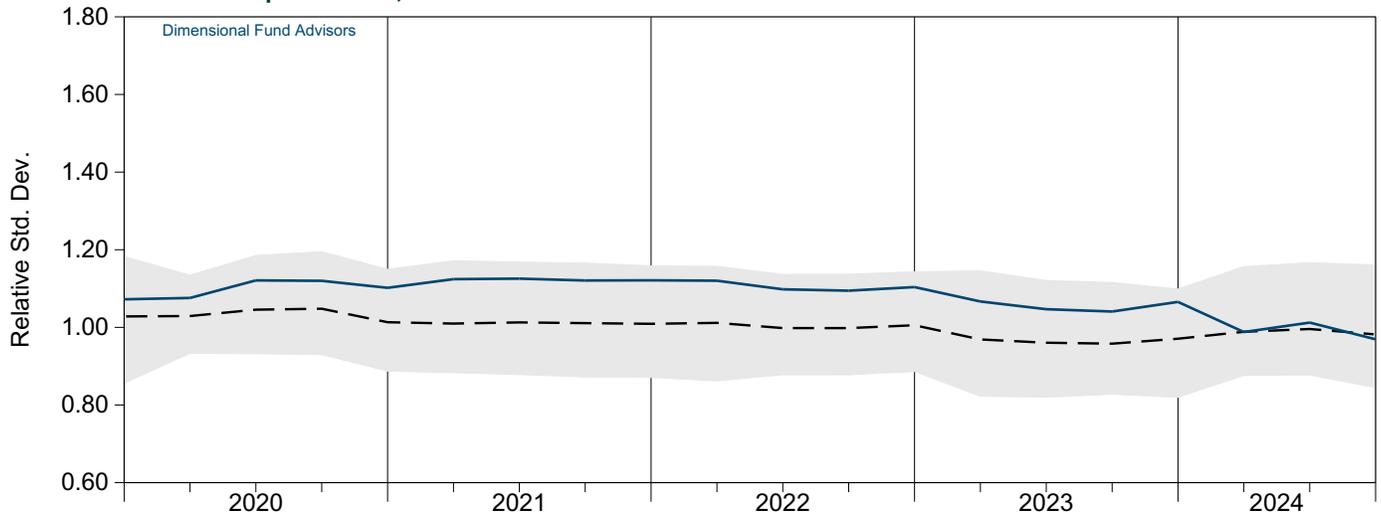
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Value Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Value. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Russell 2000 Value Index Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.51%	4.25%
% Positive Periods	75%	65%
Average Ranking	50	34

Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Value Index Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.00%	1.08%
% Positive Periods	100%	100%
Average Ranking	50	25

Wellington Small Cap Period Ended September 30, 2024

Investment Philosophy

Wellington Management Company is a 100% employee-owned company headquartered in Boston, Massachusetts. The Small Cap 2000 strategy employs a bottom-up fundamental process that relies heavily on Wellington's pool of centralized Global Industry Analysts. The portfolio managers, Mary Pryshlak and Jonathan White, provide strategy oversight from an implementation and risk perspective. The portfolio is diversified from both a stock and sector perspective and aims to neutralize industry and factor exposures. The portfolio has a range between 200-250 holdings with a max position size of 5%. Wellington Small Cap 2000 is appropriate for both standalone, as well as multi-manager structures. The Fund's inception date is July 2002.

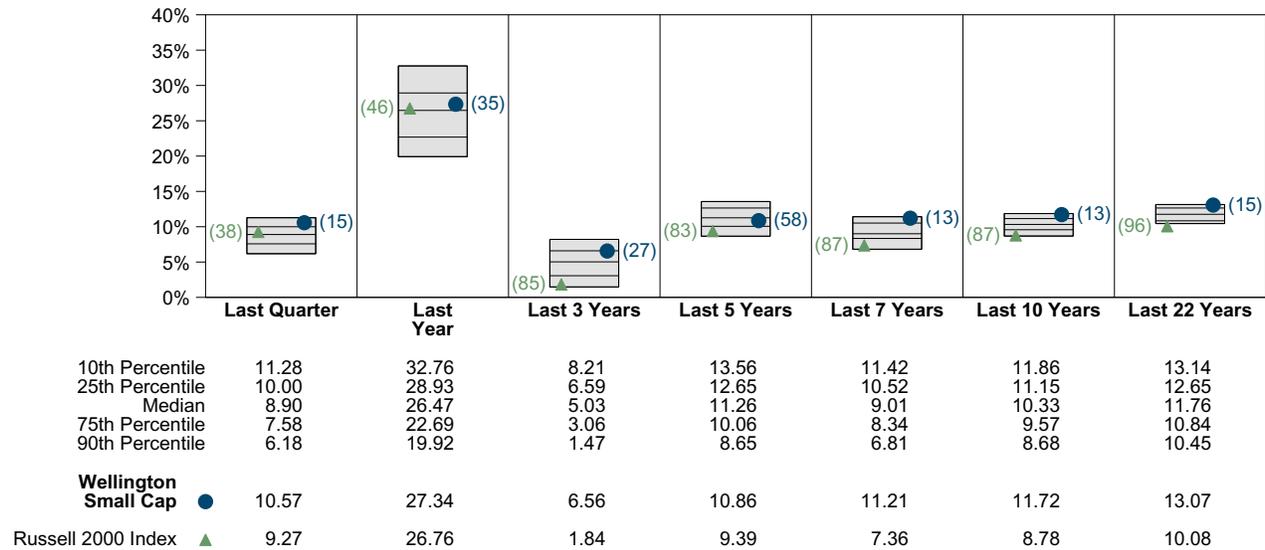
Quarterly Summary and Highlights

- Wellington Small Cap's portfolio posted a 10.57% return for the quarter placing it in the 15 percentile of the Callan Small Cap Core group for the quarter and in the 35 percentile for the last year.
- Wellington Small Cap's portfolio outperformed the Russell 2000 Index by 1.29% for the quarter and outperformed the Russell 2000 Index for the year by 0.58%.

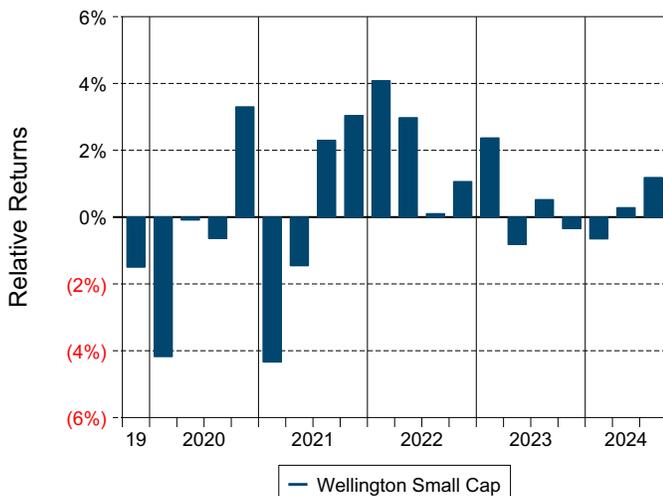
Quarterly Asset Growth

Beginning Market Value	\$336,589,772
Net New Investment	\$-529,885
Investment Gains/(Losses)	\$35,540,033
Ending Market Value	\$371,599,920

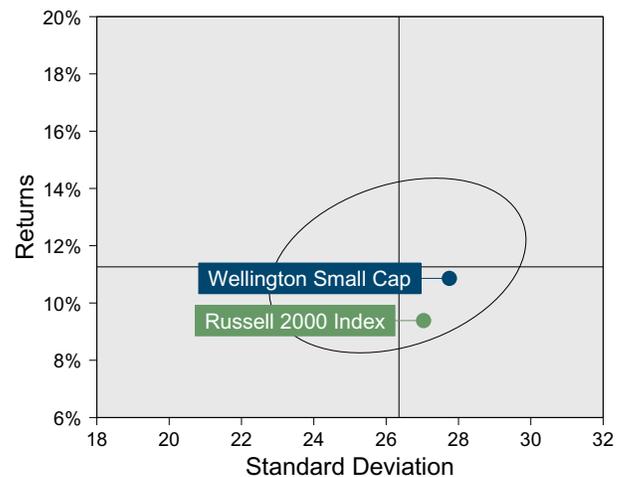
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



Callan Small Cap Core (Gross) Annualized Five Year Risk vs Return

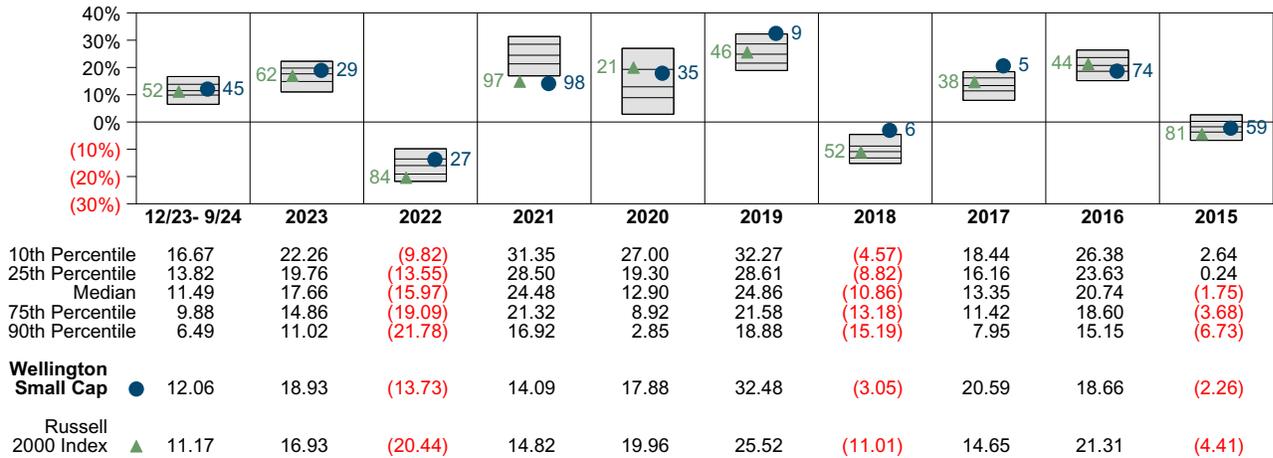


Wellington Small Cap Return Analysis Summary

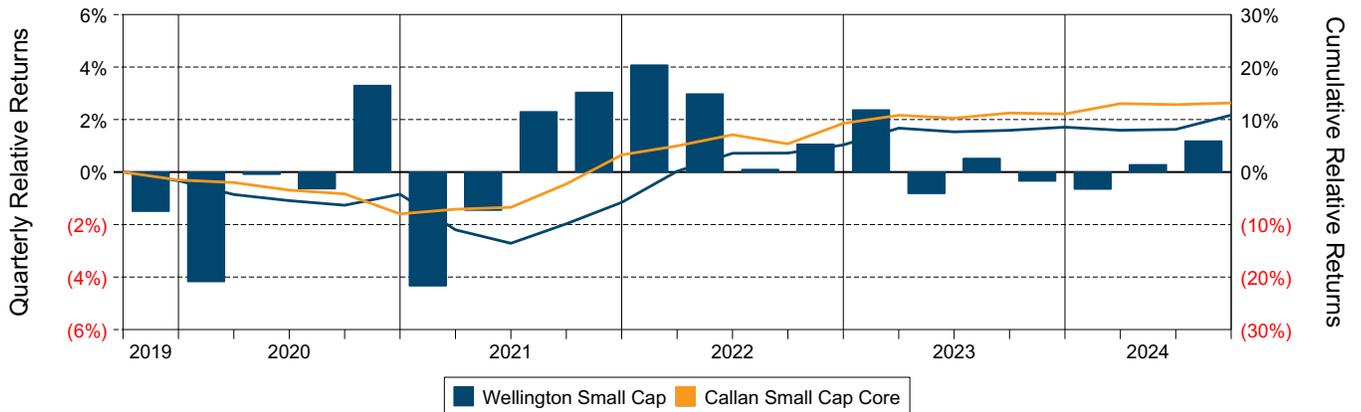
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

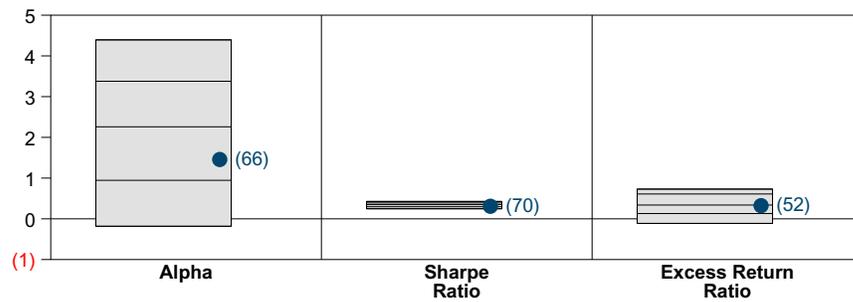
Performance vs Callan Small Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



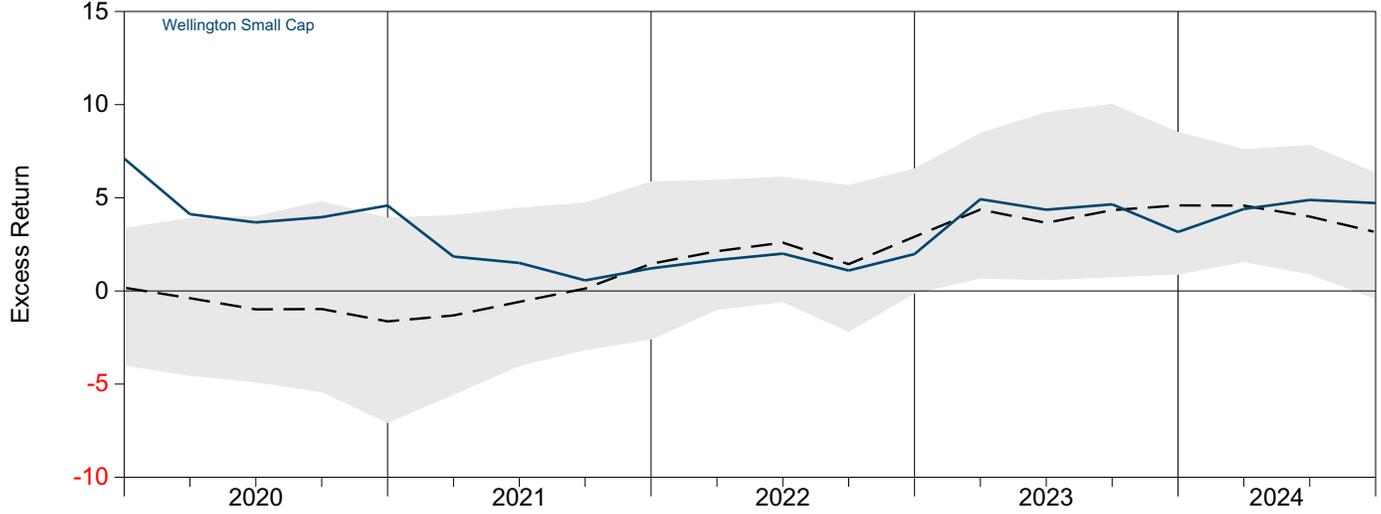
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.39	0.43	0.73
25th Percentile	3.38	0.39	0.61
Median	2.26	0.35	0.34
75th Percentile	0.95	0.30	0.13
90th Percentile	(0.18)	0.25	(0.11)
Wellington Small Cap	● 1.46	0.31	0.32

Wellington Small Cap Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

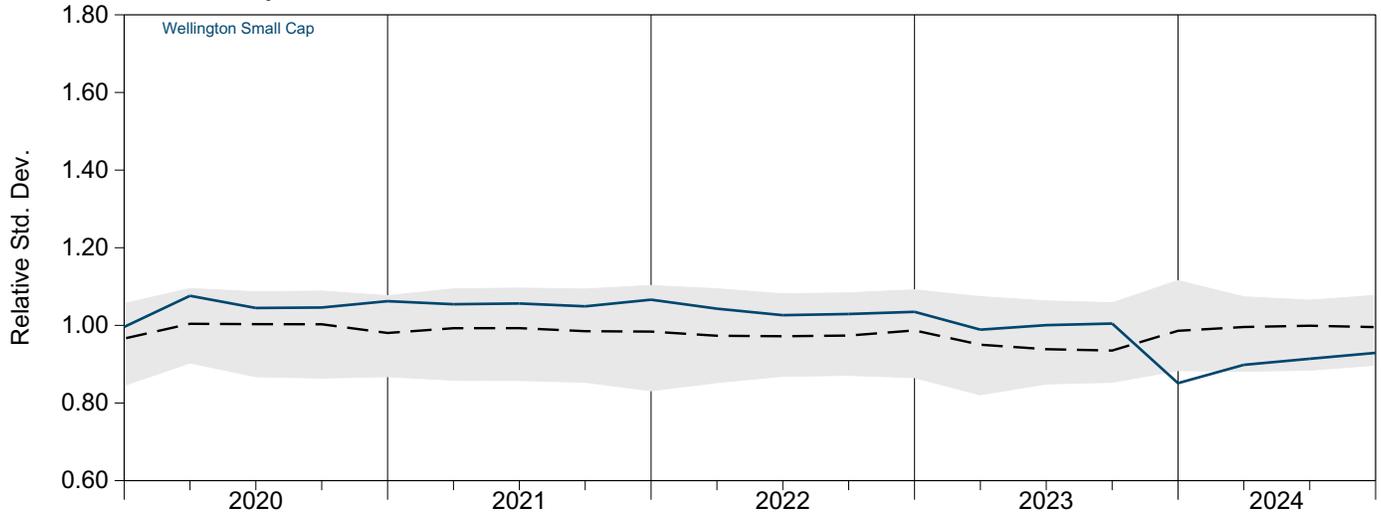
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Core. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

**Rolling Three Year Excess Return Relative to Russell 2000 Index
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Excess Return	1.68%	3.32%
% Positive Periods	70%	100%
Average Ranking	50	37

**Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Index
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Relative Std. Dev.	0.98%	1.01%
% Positive Periods	100%	100%
Average Ranking	50	37

Riverbridge Partners

Period Ended September 30, 2024

Investment Philosophy

Riverbridge believes earnings power determines the value of a franchise. They focus on companies that are building earnings power and intrinsic value of the company over long periods of time. They also look for high-quality growth companies that demonstrate the ability to sustain strong secular earnings growth, regardless of overall economic conditions. The Fund's inception date is December 2013.

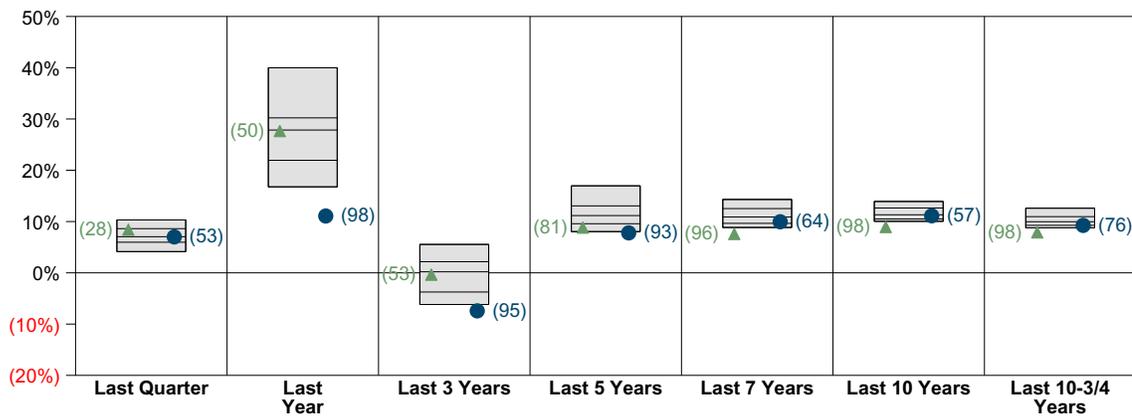
Quarterly Summary and Highlights

- Riverbridge Partners's portfolio posted a 7.01% return for the quarter placing it in the 53 percentile of the Callan Small Cap Growth group for the quarter and in the 98 percentile for the last year.
- Riverbridge Partners's portfolio underperformed the Russell 2000 Growth Index by 1.40% for the quarter and underperformed the Russell 2000 Growth Index for the year by 16.58%.

Quarterly Asset Growth

Beginning Market Value	\$313,397,893
Net New Investment	\$-579,272
Investment Gains/(Losses)	\$21,935,370
Ending Market Value	\$334,753,991

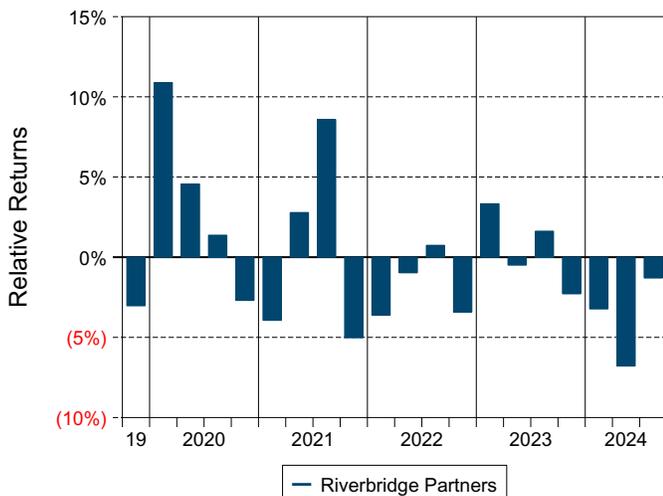
Performance vs Callan Small Cap Growth (Gross)



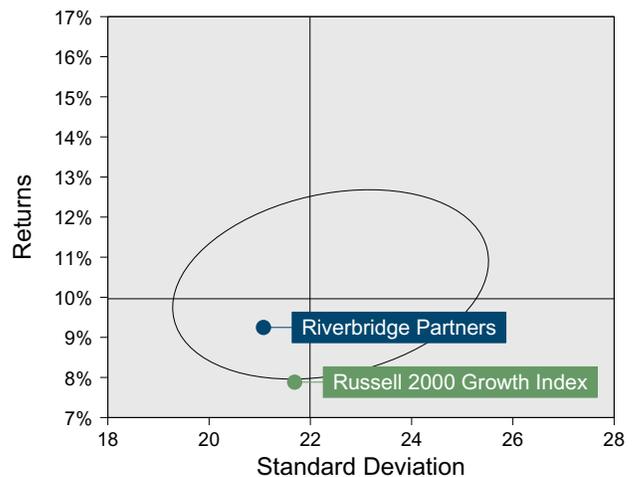
10th Percentile	10.31	39.99	5.54	16.97	14.30	13.92	12.61
25th Percentile	8.61	30.22	2.17	13.05	12.53	12.64	10.96
Median	7.04	27.85	0.20	11.16	10.88	11.32	9.96
75th Percentile	5.96	21.95	(3.74)	9.57	9.65	10.49	9.26
90th Percentile	4.13	16.76	(6.18)	8.03	8.84	10.04	8.78

Riverbridge Partners	●	7.01	11.08	(7.42)	7.78	9.95	11.12	9.25
Russell 2000 Growth Index	▲	8.41	27.66	(0.35)	8.82	7.60	8.95	7.88

Relative Return vs Russell 2000 Growth Index



Callan Small Cap Growth (Gross) Annualized Ten and Three-Quarter Year Risk vs Return

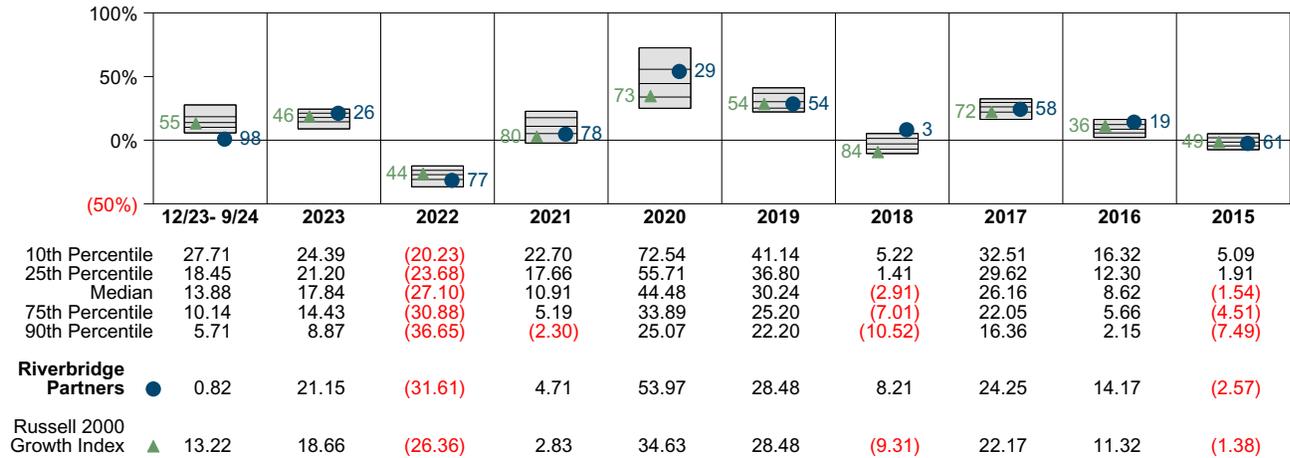


Riverbridge Partners Return Analysis Summary

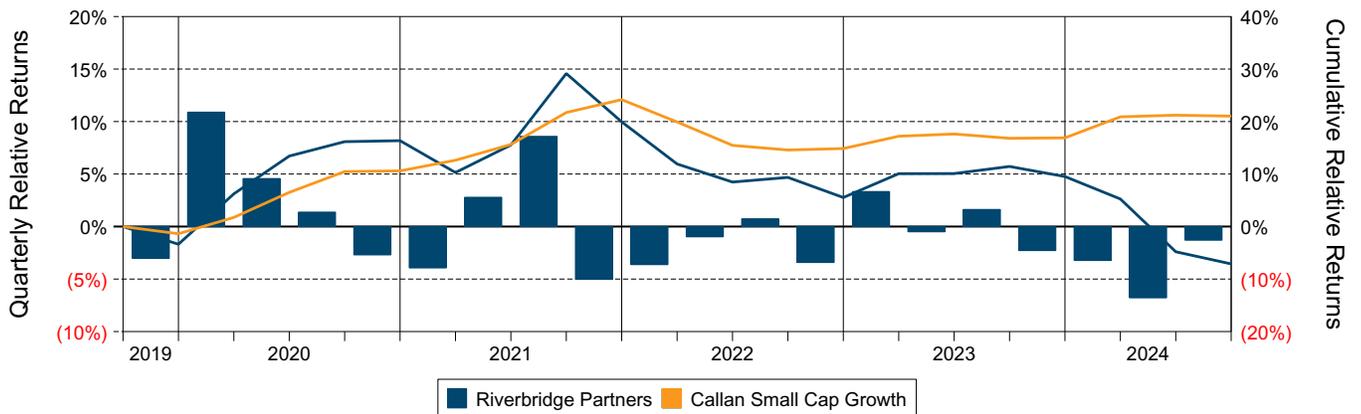
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

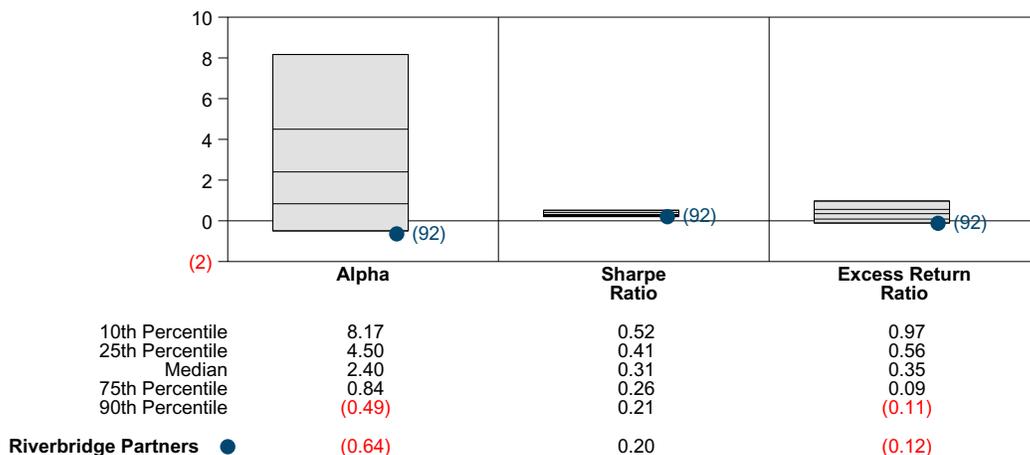
Performance vs Callan Small Cap Growth (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Growth Index



Risk Adjusted Return Measures vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Five Years Ended September 30, 2024

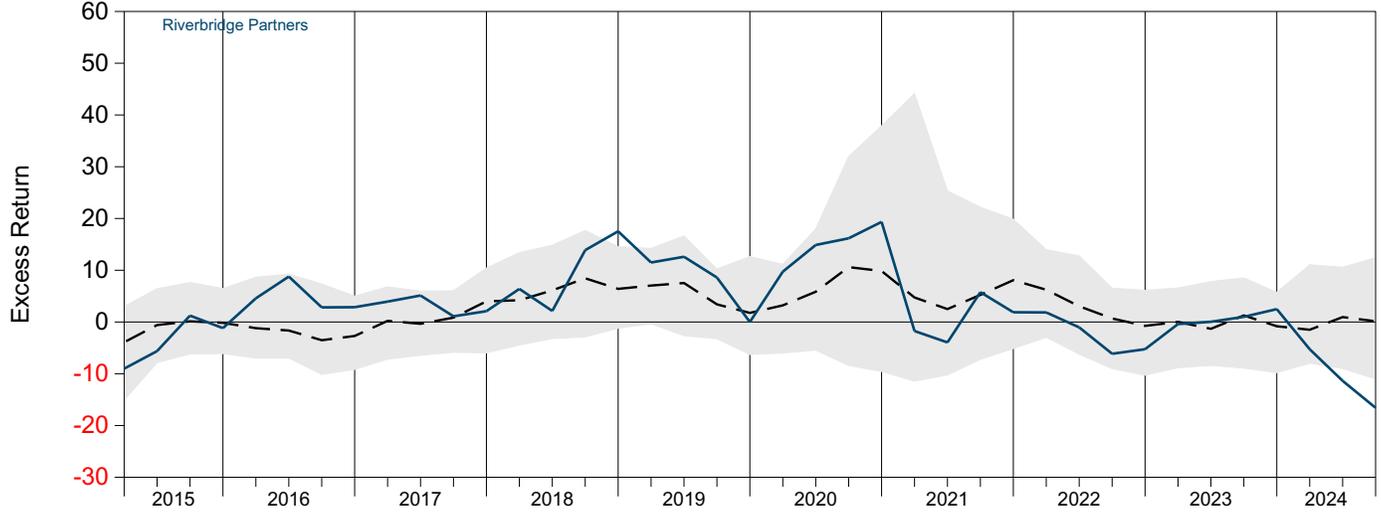


Riverbridge Partners Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

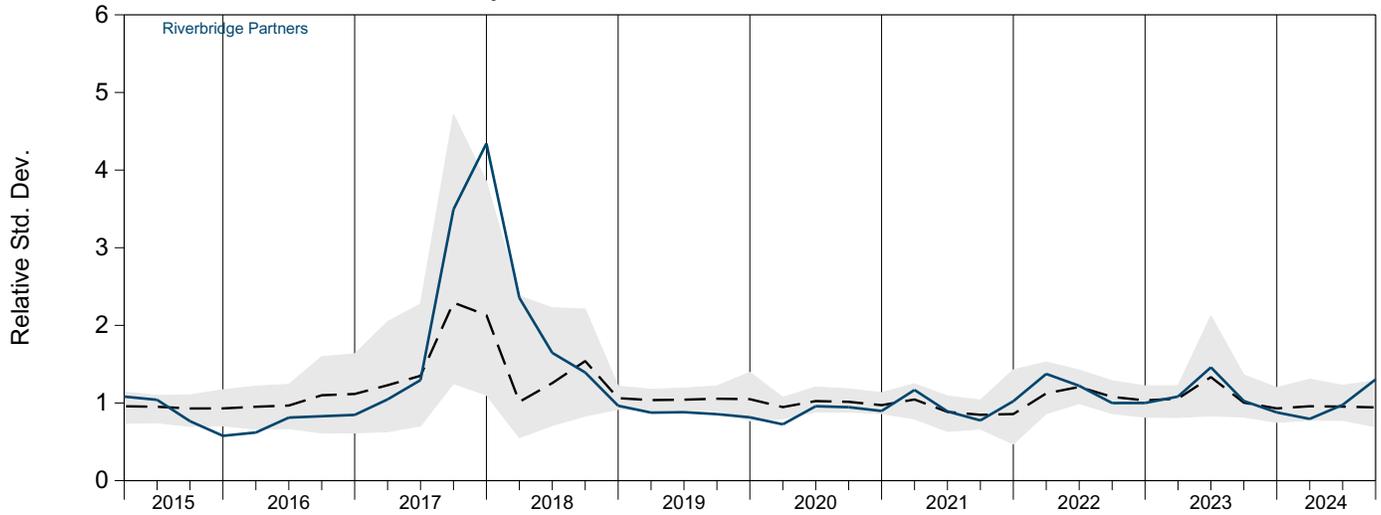
The first chart below illustrates the consistency of excess return over rolling one year periods versus the Russell 2000 Growth Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Growth. The second chart below illustrates the consistency of relative std. dev. over rolling one year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

**Rolling One Year Excess Return Relative to Russell 2000 Growth Index
Nine and Three-Quarter Years Ended September 30, 2024**



<u>Rolling One Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Excess Return	2.42%	2.84%
% Positive Periods	69%	67%
Average Ranking	50	47

**Rolling One Year Relative Std. Dev. Relative to Russell 2000 Growth Index
Nine and Three-Quarter Years Ended September 30, 2024**



<u>Rolling One Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Relative Std. Dev.	1.11%	1.18%
% Positive Periods	100%	100%
Average Ranking	50	58

Global Equity Period Ended September 30, 2024

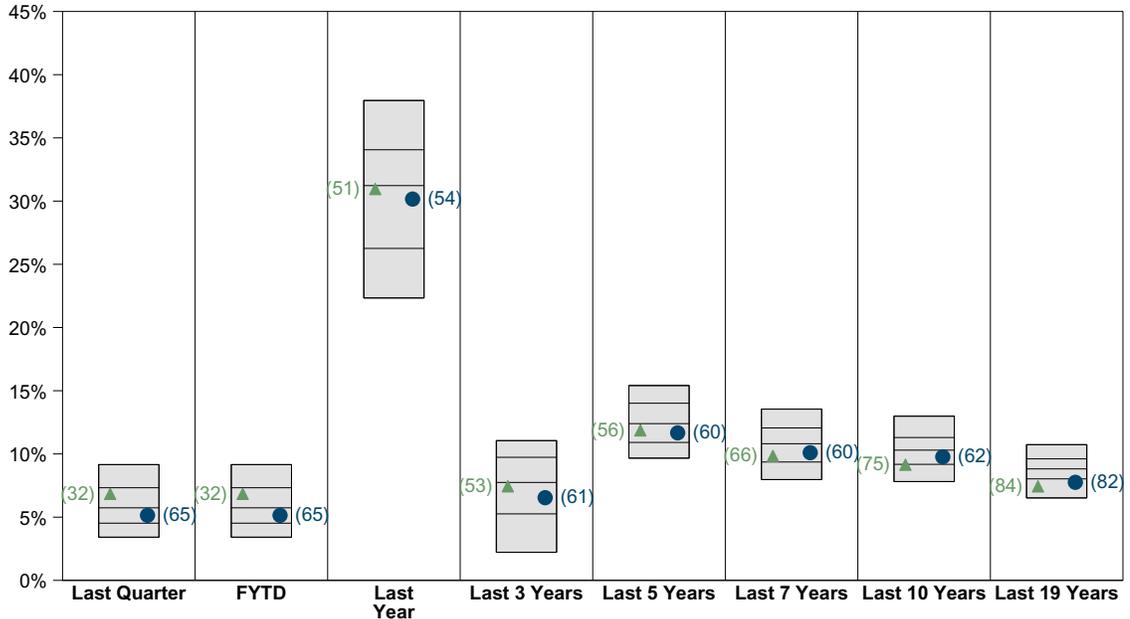
Quarterly Summary and Highlights

- Global Equity's portfolio posted a 5.15% return for the quarter placing it in the 65 percentile of the Callan Global Equity group for the quarter and in the 54 percentile for the last year.
- Global Equity's portfolio underperformed the Global Equity Benchmark (2) by 1.70% for the quarter and underperformed the Global Equity Benchmark (2) for the year by 0.80%.

Quarterly Asset Growth

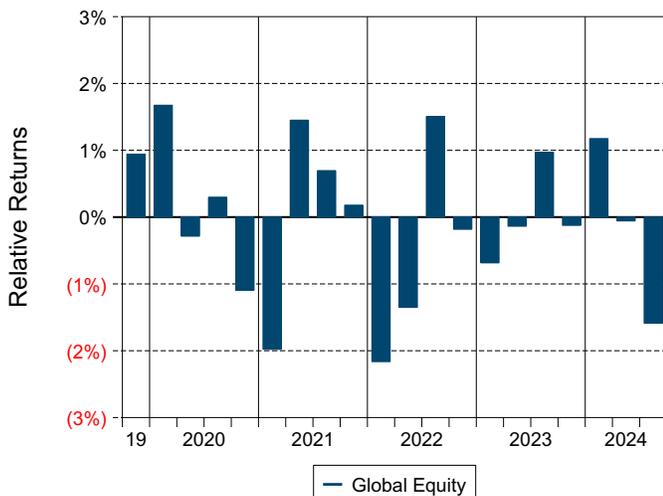
Beginning Market Value	\$4,107,553,825
Net New Investment	\$-3,949,941
Investment Gains/(Losses)	\$211,348,403
Ending Market Value	\$4,314,952,287

Performance vs Callan Global Equity (Gross)

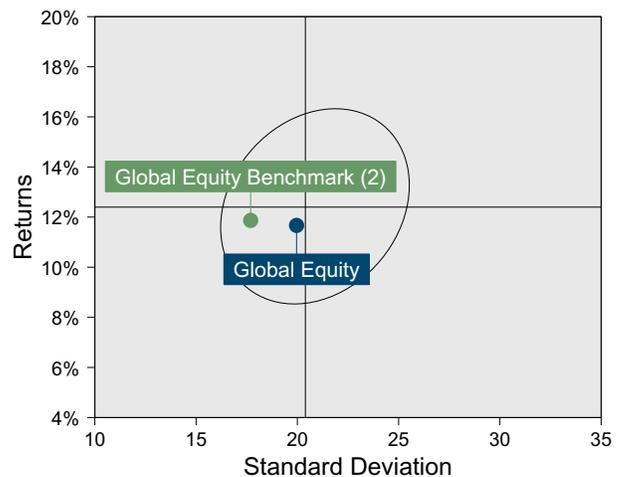


10th Percentile	9.16	9.16	37.96	11.05	15.41	13.55	12.99	10.74
25th Percentile	7.33	7.33	34.06	9.73	14.01	12.06	11.30	9.61
Median	5.74	5.74	31.23	7.75	12.40	10.81	10.30	8.82
75th Percentile	4.52	4.52	26.26	5.26	10.91	9.36	9.18	8.03
90th Percentile	3.41	3.41	22.34	2.22	9.67	7.97	7.81	6.52
Global Equity ●	5.15	5.15	30.16	6.54	11.67	10.10	9.77	7.76
Global Equity Benchmark (2) ▲	6.84	6.84	30.96	7.44	11.87	9.85	9.15	7.44

Relative Returns vs Global Equity Benchmark (2)



Callan Global Equity (Gross) Annualized Five Year Risk vs Return

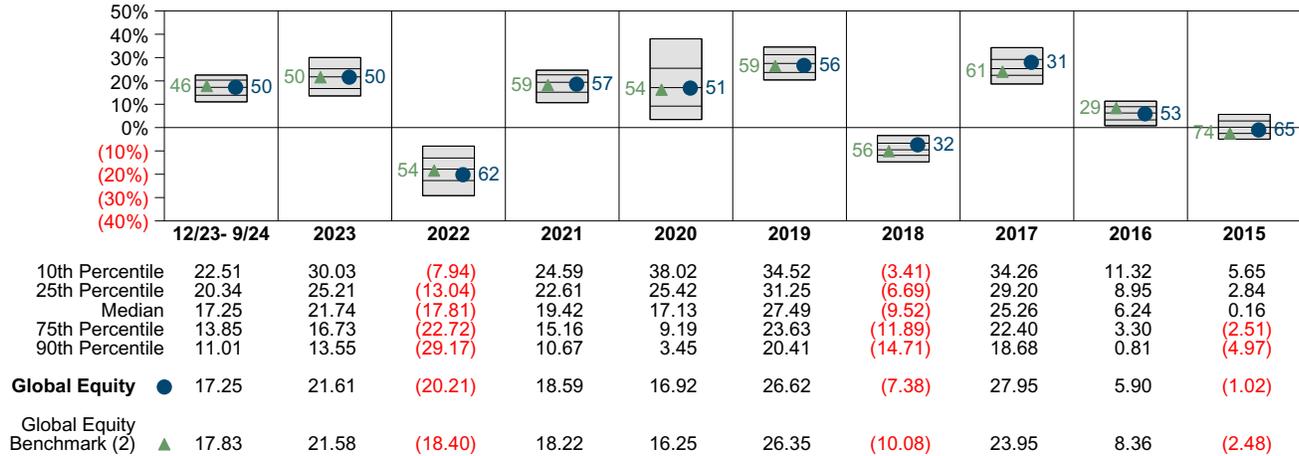


Global Equity Return Analysis Summary

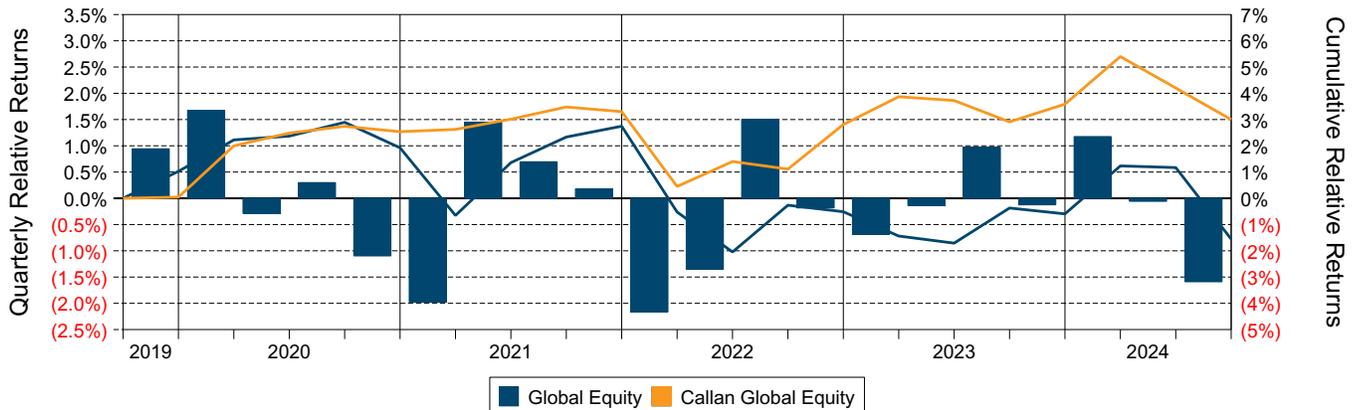
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

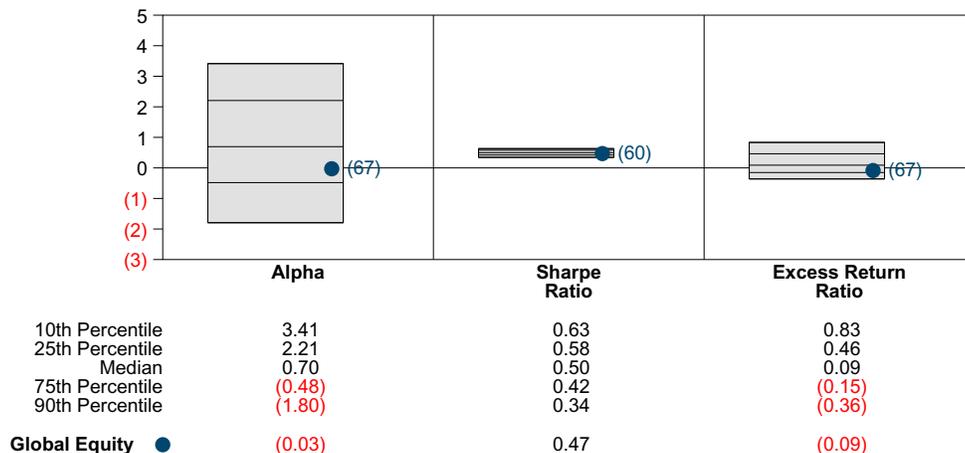
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs Global Equity Benchmark (2)



Risk Adjusted Return Measures vs Global Equity Benchmark (2) Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024



Acadian Global Equity Period Ended September 30, 2024

Investment Philosophy

Acadian's Global Equity Strategy uses a disciplined, multi-factor approach to uncover attractively valued stocks with strong earnings prospects in both the US and non-US markets.

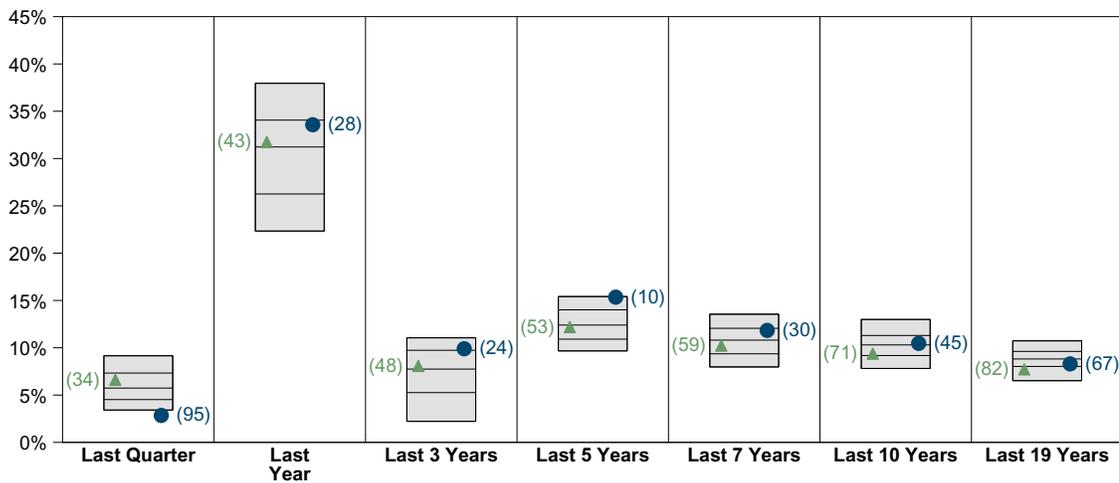
Quarterly Summary and Highlights

- Acadian Global Equity's portfolio posted a 2.84% return for the quarter placing it in the 95 percentile of the Callan Global Equity group for the quarter and in the 28 percentile for the last year.
- Acadian Global Equity's portfolio underperformed the MSCI ACWI Index by 3.77% for the quarter and outperformed the MSCI ACWI Index for the year by 1.82%.

Quarterly Asset Growth

Beginning Market Value	\$1,047,110,285
Net New Investment	\$-982,884
Investment Gains/(Losses)	\$29,757,119
Ending Market Value	\$1,075,884,519

Performance vs Callan Global Equity (Gross)

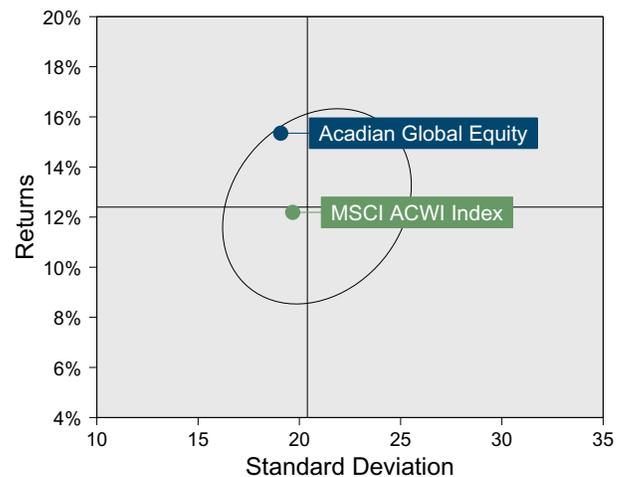


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 19 Years
10th Percentile	9.16	37.96	11.05	15.41	13.55	12.99	10.74
25th Percentile	7.33	34.06	9.73	14.01	12.06	11.30	9.61
Median	5.74	31.23	7.75	12.40	10.81	10.30	8.82
75th Percentile	4.52	26.26	5.26	10.91	9.36	9.18	8.03
90th Percentile	3.41	22.34	2.22	9.67	7.97	7.81	6.52
Acadian Global Equity ●	2.84	33.57	9.89	15.35	11.83	10.46	8.30
MSCI ACWI Index ▲	6.61	31.76	8.09	12.19	10.23	9.39	7.73

Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return

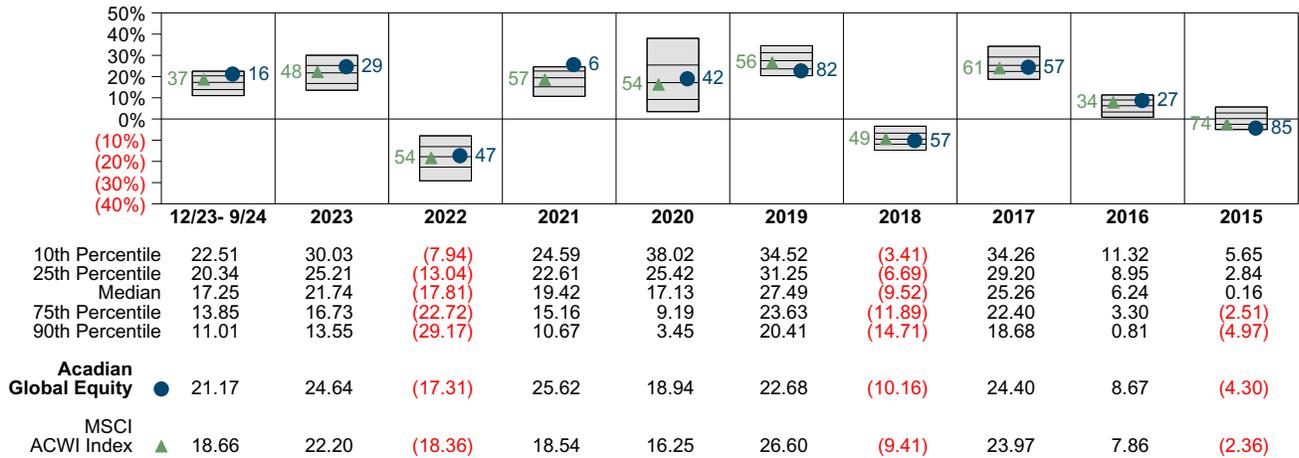


Acadian Global Equity Return Analysis Summary

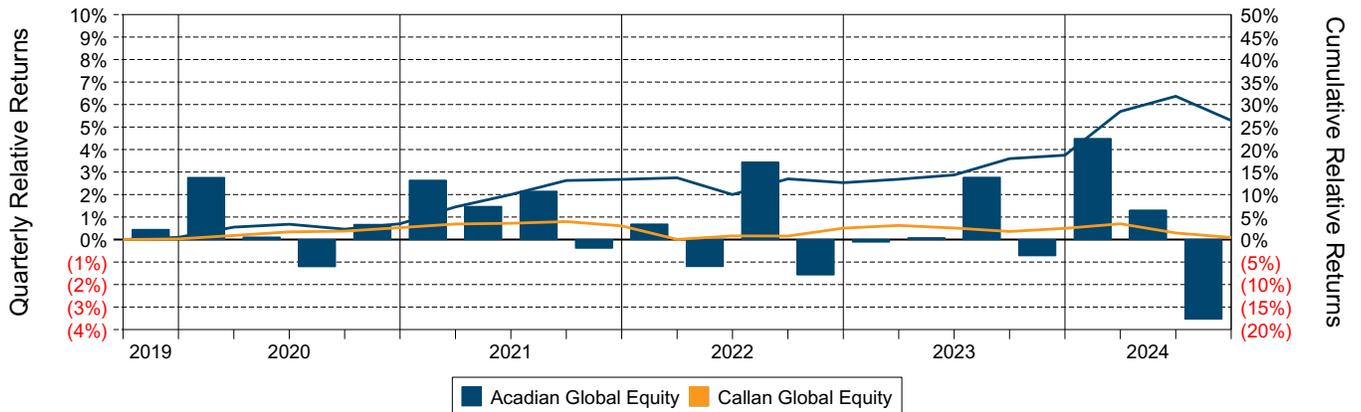
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

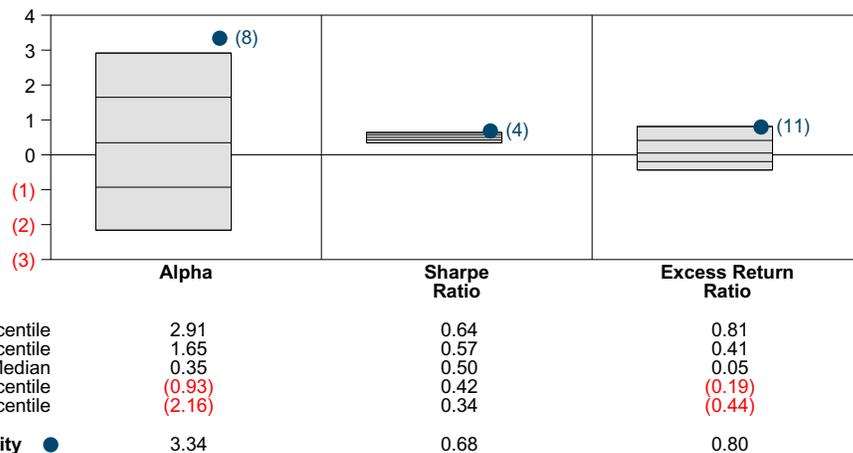
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024

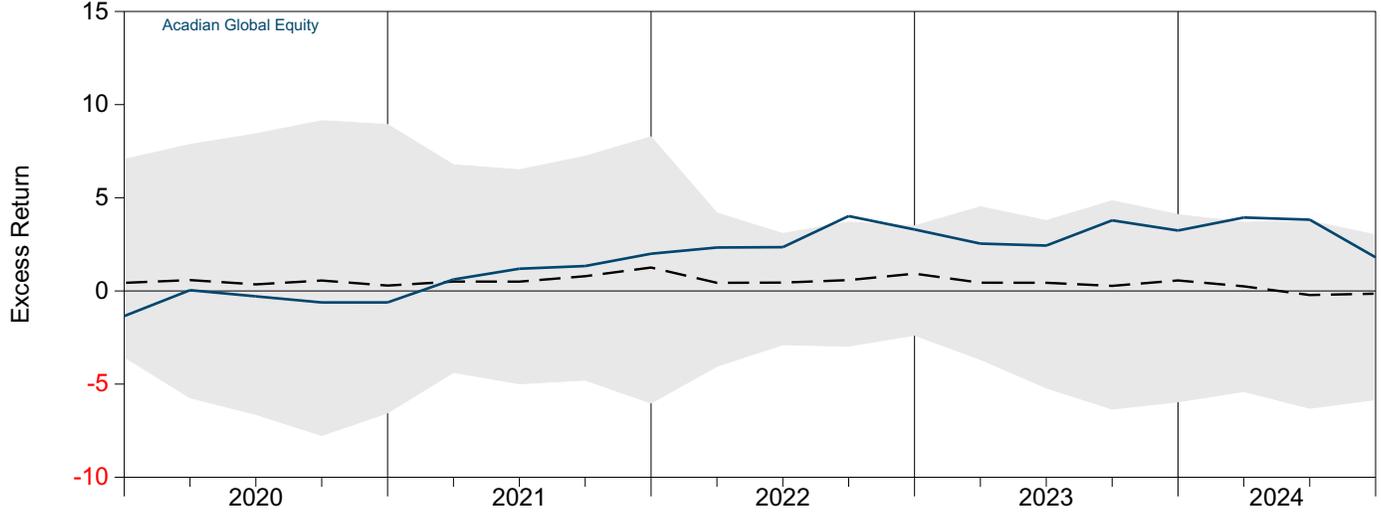


Acadian Global Equity Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

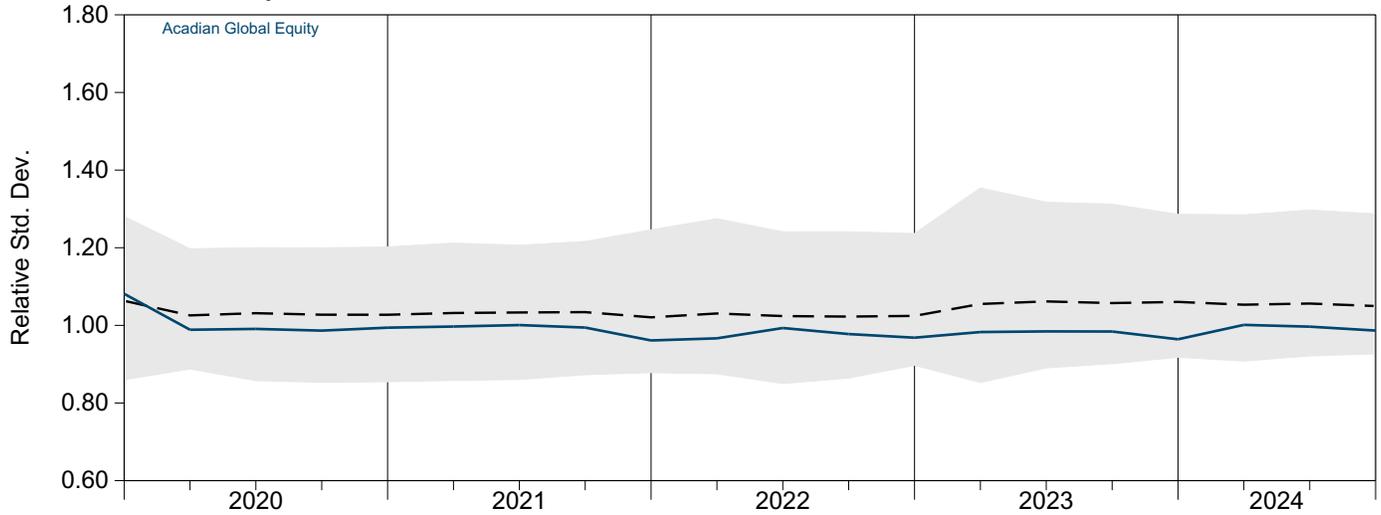
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI ACWI. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Global Equity. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

**Rolling Three Year Excess Return Relative to MSCI ACWI
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Excess Return	0.46%	1.79%
% Positive Periods	90%	80%
Average Ranking	50	33

**Rolling Three Year Relative Std. Dev. Relative to MSCI ACWI
Five Years Ended September 30, 2024**



<u>Rolling Three Year Period Analysis</u>	<u>Median</u>	<u>Portfolio</u>
Average Annual Relative Std. Dev.	1.04%	0.99%
% Positive Periods	100%	100%
Average Ranking	50	68

Epoch Investments

Period Ended September 30, 2024

Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm.

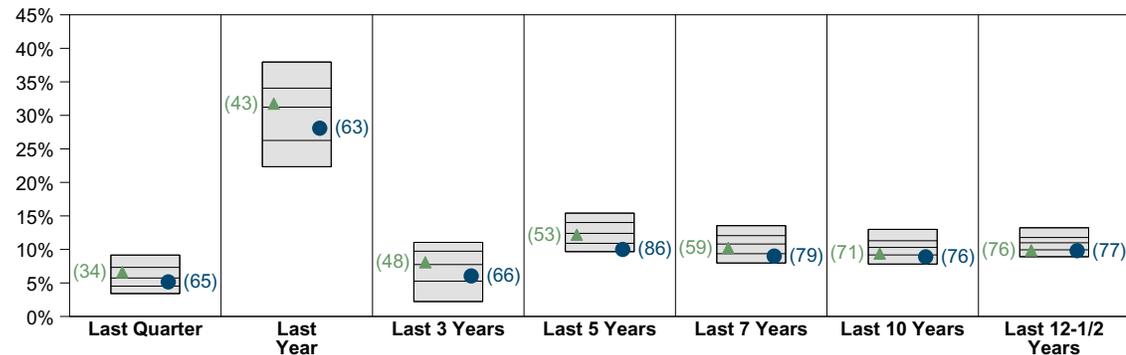
Quarterly Summary and Highlights

- Epoch Investments's portfolio posted a 5.16% return for the quarter placing it in the 65 percentile of the Callan Global Equity group for the quarter and in the 63 percentile for the last year.
- Epoch Investments's portfolio underperformed the MSCI ACWI Index by 1.46% for the quarter and underperformed the MSCI ACWI Index for the year by 3.68%.

Quarterly Asset Growth

Beginning Market Value	\$1,026,189,719
Net New Investment	\$-1,052,419
Investment Gains/(Losses)	\$52,889,294
Ending Market Value	\$1,078,026,593

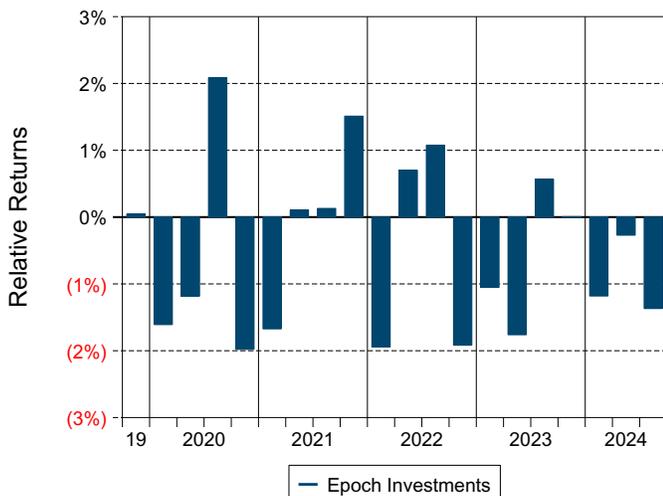
Performance vs Callan Global Equity (Gross)



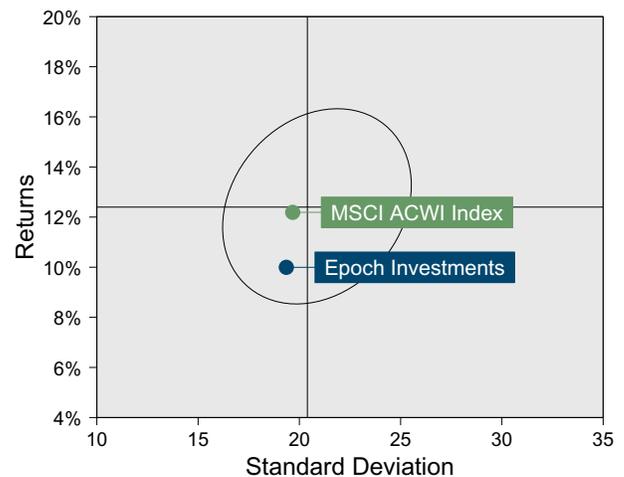
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-1/2 Years
10th Percentile	9.16	37.96	11.05	15.41	13.55	12.99	13.23
25th Percentile	7.33	34.06	9.73	14.01	12.06	11.30	11.78
Median	5.74	31.23	7.75	12.40	10.81	10.30	10.99
75th Percentile	4.52	26.26	5.26	10.91	9.36	9.18	9.94
90th Percentile	3.41	22.34	2.22	9.67	7.97	7.81	8.91

Epoch Investments ●	5.16	28.08	6.04	10.00	9.01	8.89	9.81
MSCI ACWI Index ▲	6.61	31.76	8.09	12.19	10.23	9.39	9.87

Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return

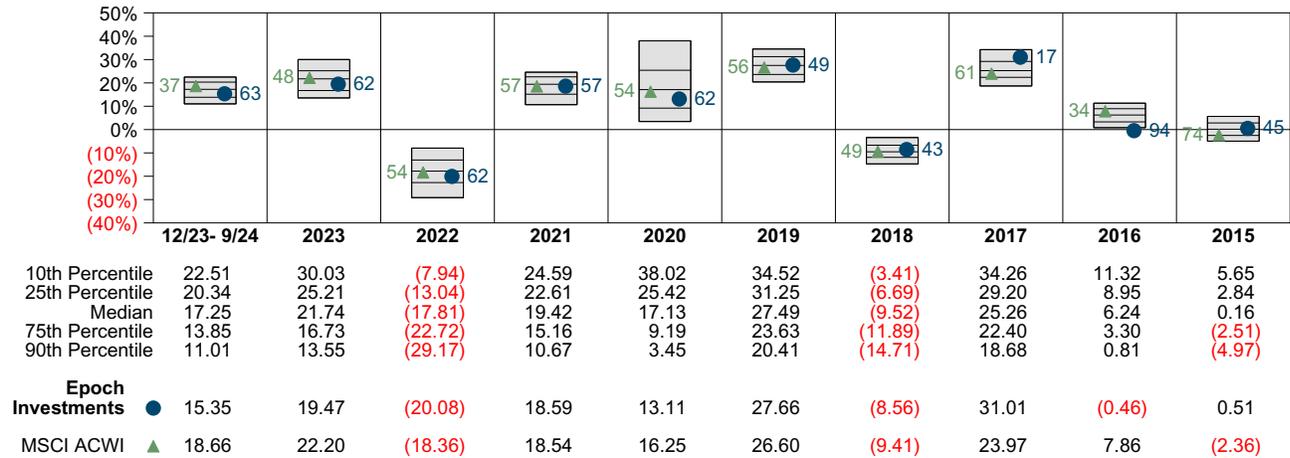


Epoch Investments Return Analysis Summary

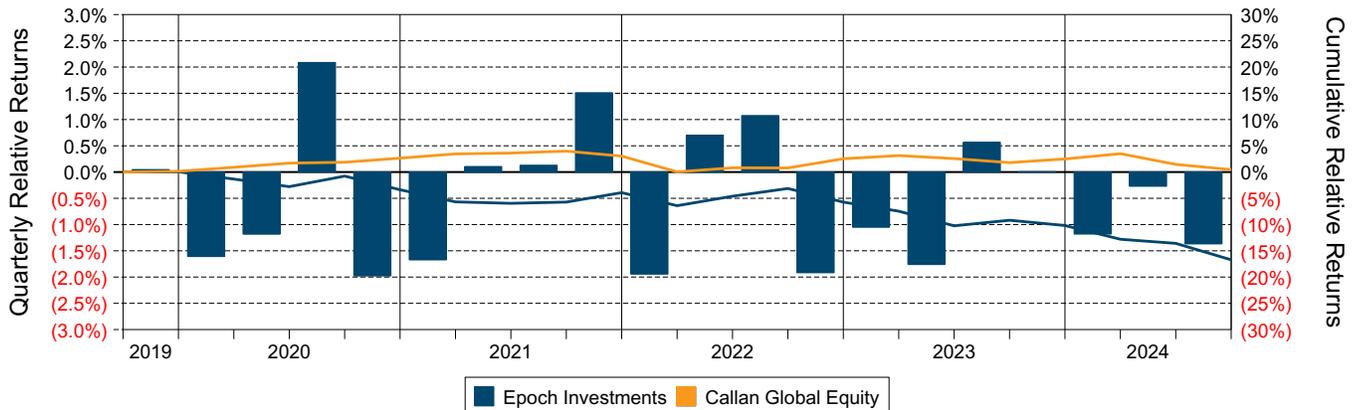
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

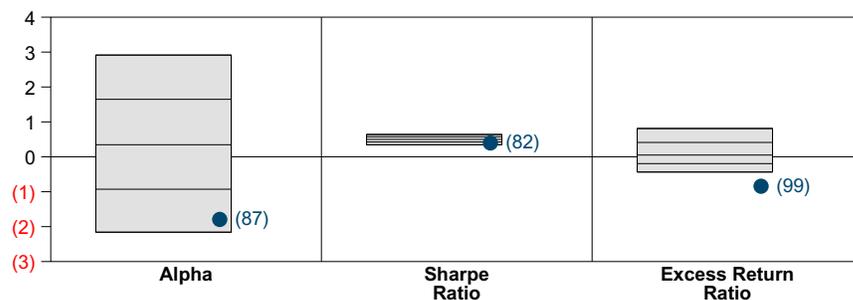
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI



Risk Adjusted Return Measures vs MSCI ACWI Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.91	0.64	0.81
25th Percentile	1.65	0.57	0.41
Median	0.35	0.50	0.05
75th Percentile	(0.93)	0.42	(0.19)
90th Percentile	(2.16)	0.34	(0.44)
Epoch Investments	● (1.79)	0.40	(0.84)

Harding-Loevner

Period Ended September 30, 2024

Investment Philosophy

Harding Loevner is a global equity manager based in Bridgewater, New Jersey. A consistent high quality, growth-oriented investment philosophy and process is employed across all strategies managed by the firm, and analysts and portfolio managers are given considerable latitude to recommend and select securities as they see fit in portfolios. Historically, this approach has led to a favorable upside/downside capture ratio for the Global Equity strategy, as well as a portfolio that tends to be more diversified by sector than growth-oriented peers. The Fund's inception date is February 2012.

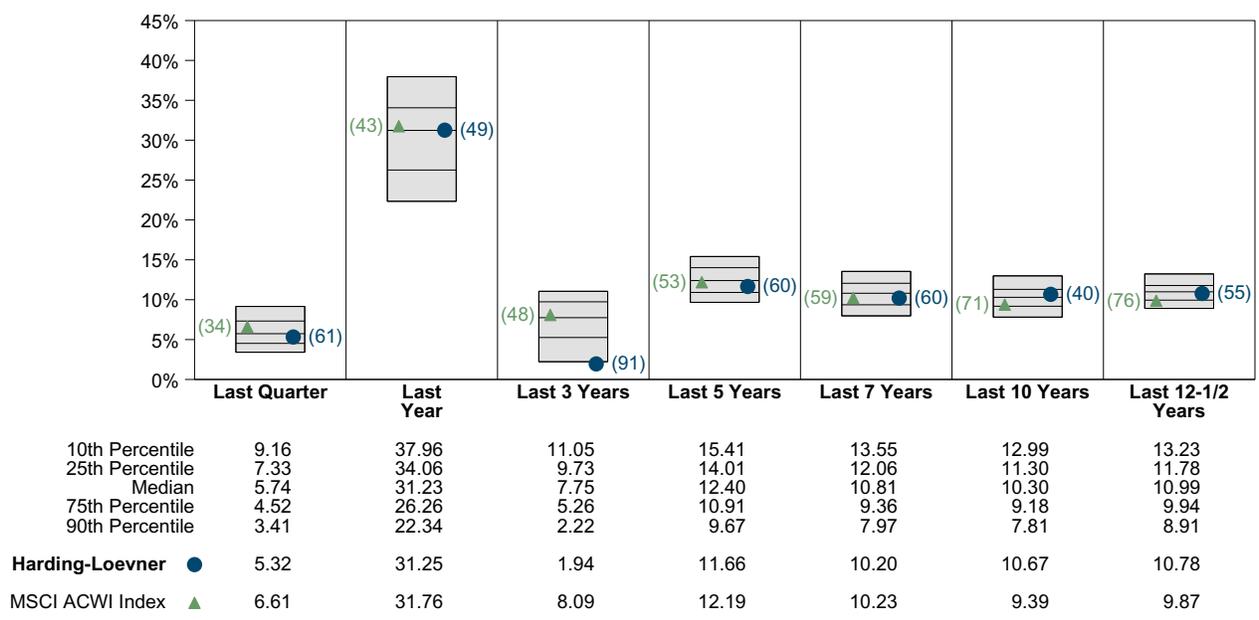
Quarterly Summary and Highlights

- Harding-Loevner's portfolio posted a 5.32% return for the quarter placing it in the 61 percentile of the Callan Global Equity group for the quarter and in the 49 percentile for the last year.
- Harding-Loevner's portfolio underperformed the MSCI ACWI Index by 1.29% for the quarter and underperformed the MSCI ACWI Index for the year by 0.50%.

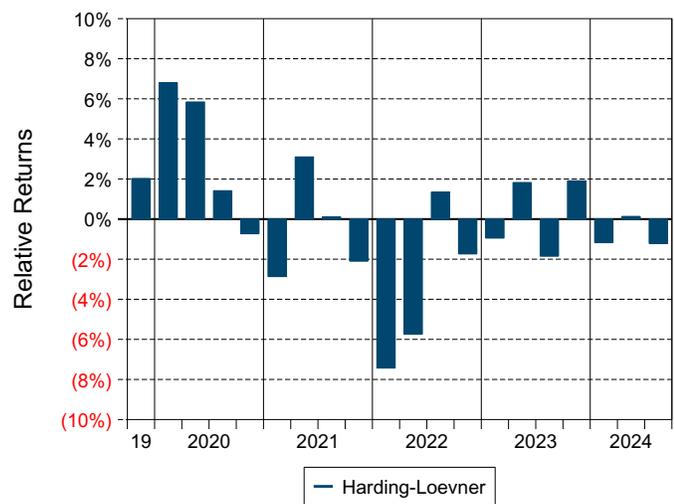
Quarterly Asset Growth

Beginning Market Value	\$1,033,224,504
Net New Investment	\$-1,019,591
Investment Gains/(Losses)	\$54,962,625
Ending Market Value	\$1,087,167,538

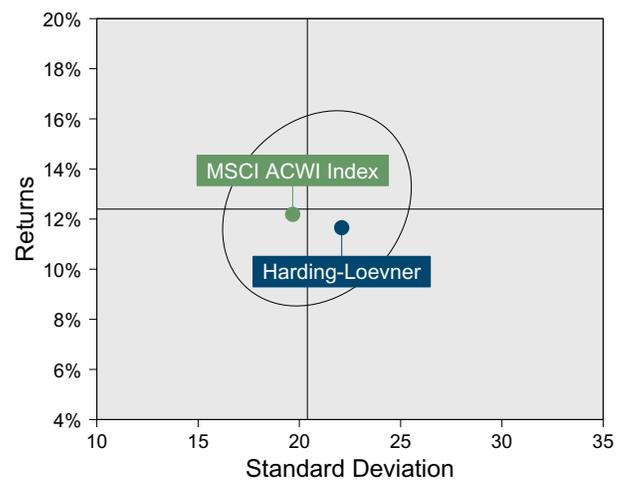
Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return

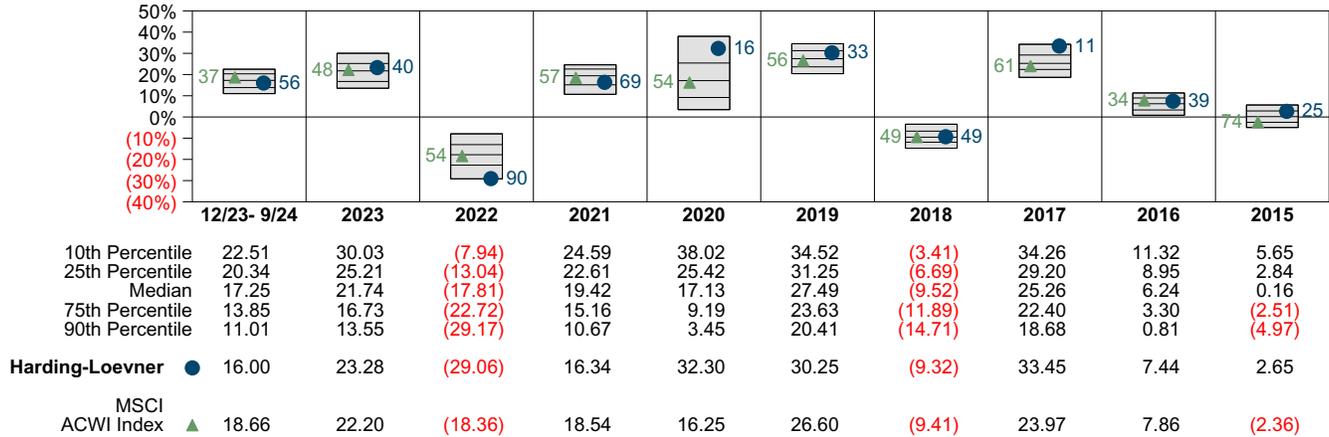


Harding-Loevner Return Analysis Summary

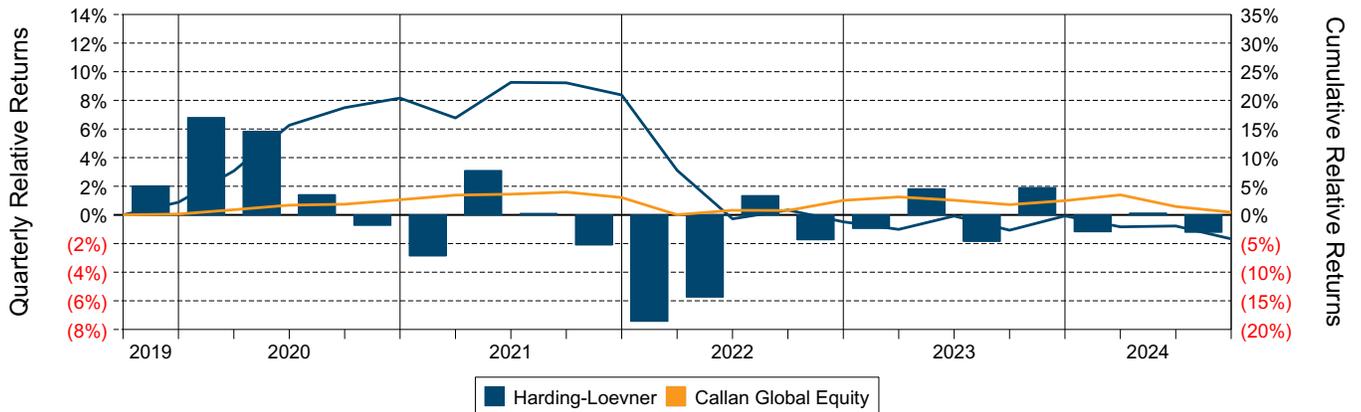
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

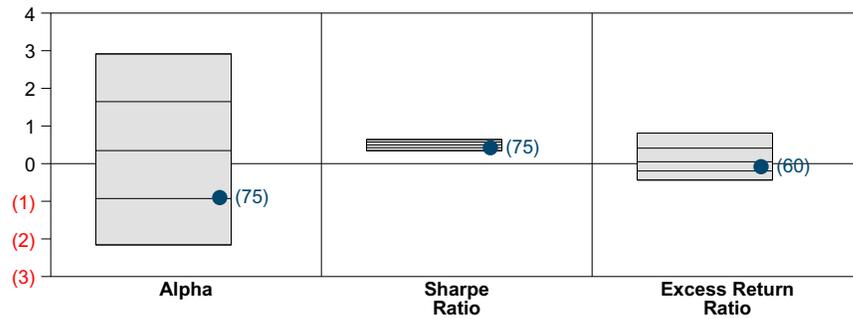
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) Five Years Ended September 30, 2024



LSV Global Value Period Ended September 30, 2024

Investment Philosophy

The Global Value Equity (ACWI) strategy is managed by LSV Asset Management, a quantitative global equity firm based in Chicago. The strategy is managed using quantitative techniques to select individual securities in a risk-controlled and bottom-up approach. The team believes that value factors and security selection drive returns more than sector and country allocations, resulting in a consistent deep value exposure with alpha expected to be generated by stock selection. Sector and country deviations from the index will generally be modest, but the strategy can have a zero weight in smaller benchmark countries. The portfolio typically holds 200-275 securities with annual turnover of ~25%. The Fund's inception date is August 2022.

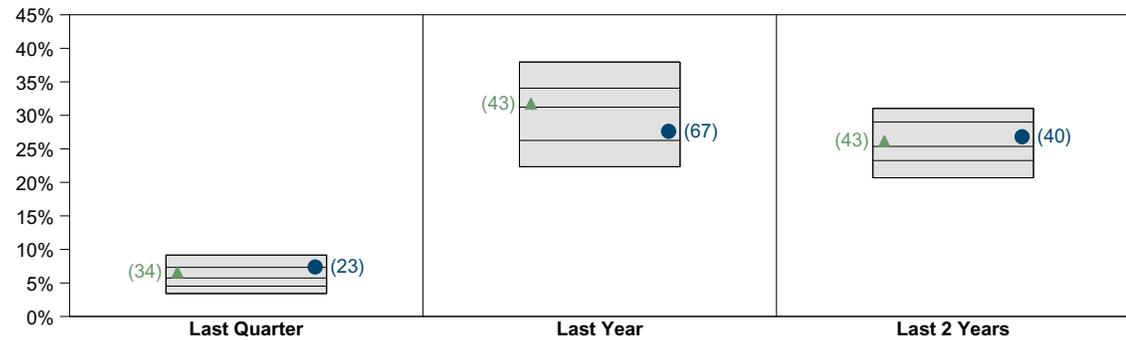
Quarterly Summary and Highlights

- LSV Global Value's portfolio posted a 7.39% return for the quarter placing it in the 23 percentile of the Callan Global Equity group for the quarter and in the 67 percentile for the last year.
- LSV Global Value's portfolio outperformed the MSCI ACWI Index by 0.77% for the quarter and underperformed the MSCI ACWI Index for the year by 4.14%.

Quarterly Asset Growth

Beginning Market Value	\$996,681,696
Net New Investment	\$-895,047
Investment Gains/(Losses)	\$73,589,918
Ending Market Value	\$1,069,376,568

Performance vs Callan Global Equity (Gross)

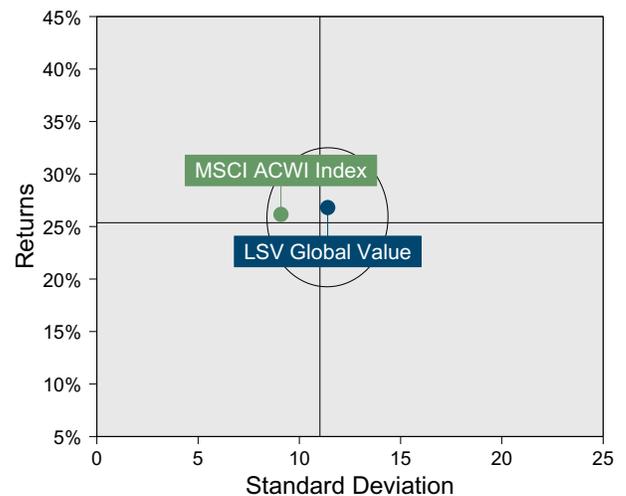


	Last Quarter	Last Year	Last 2 Years
10th Percentile	9.16	37.96	31.04
25th Percentile	7.33	34.06	29.02
Median	5.74	31.23	25.36
75th Percentile	4.52	26.26	23.26
90th Percentile	3.41	22.34	20.69
LSV Global Value	7.39	27.62	26.81
MSCI ACWI Index	6.61	31.76	26.16

Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Two Year Risk vs Return

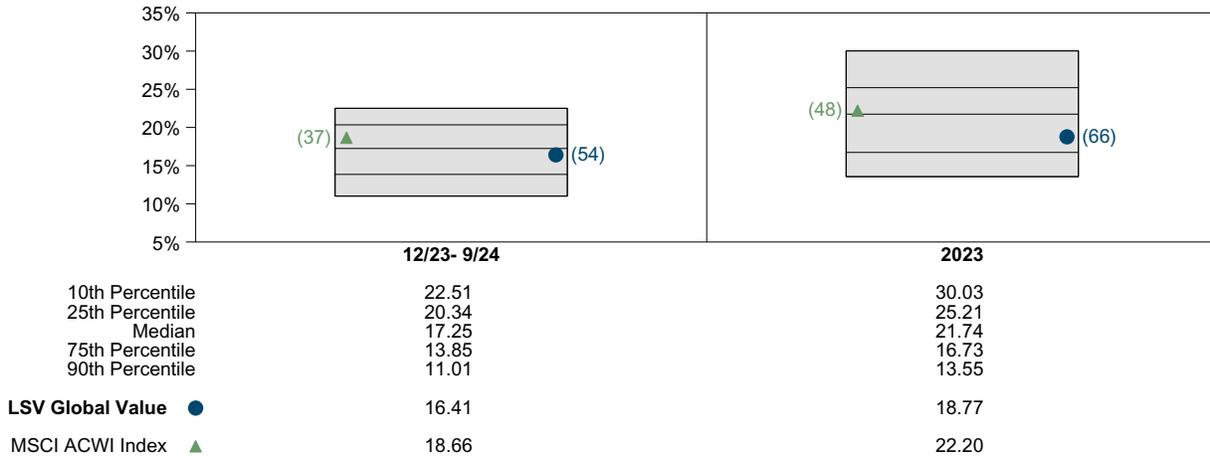


LSV Global Value Return Analysis Summary

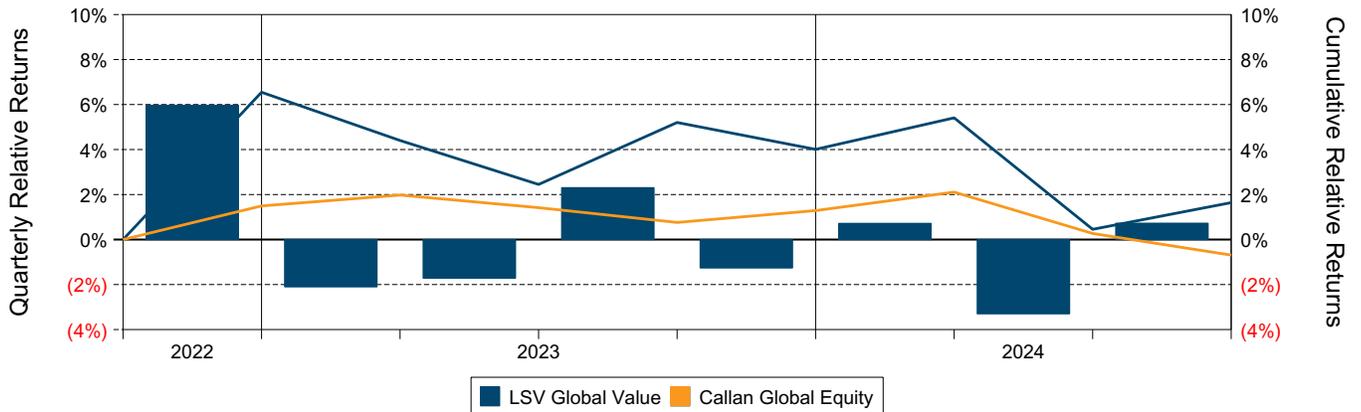
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

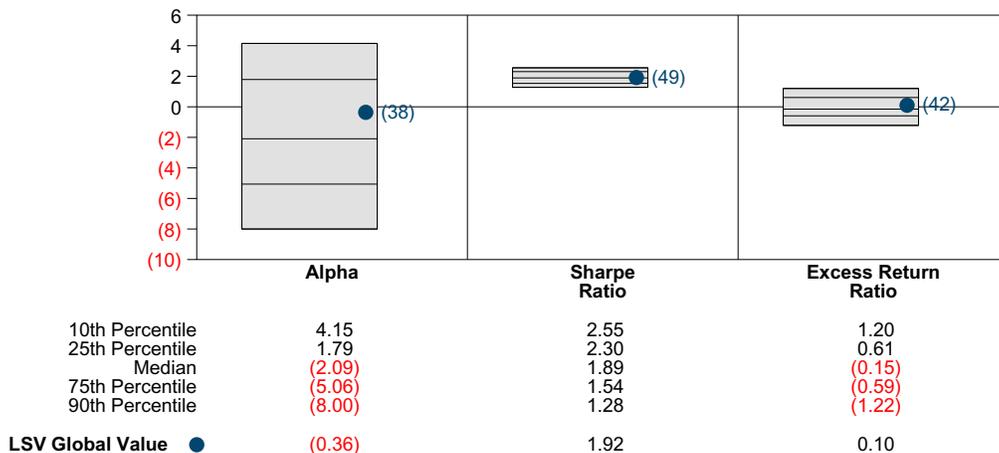
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) Two Years Ended September 30, 2024



International Equity Period Ended September 30, 2024

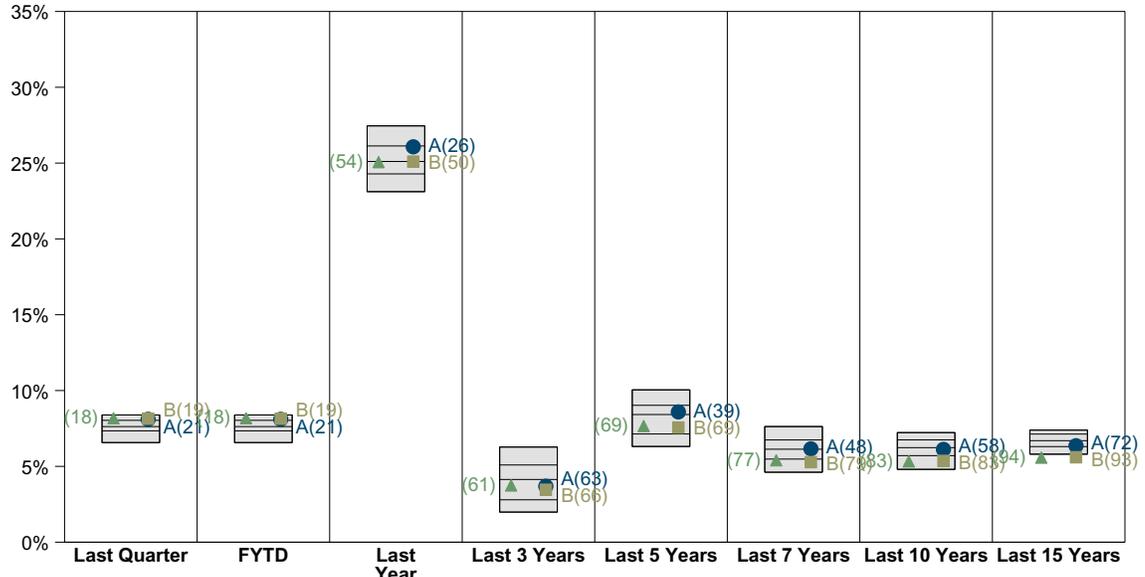
Quarterly Summary and Highlights

- International Equity's portfolio posted a 8.10% return for the quarter placing it in the 21 percentile of the Public Fund - International Equity group for the quarter and in the 26 percentile for the last year.
- International Equity's portfolio underperformed the International Equity Benchmark (3) by 0.08% for the quarter and outperformed the International Equity Benchmark (3) for the year by 1.01%.

Quarterly Asset Growth

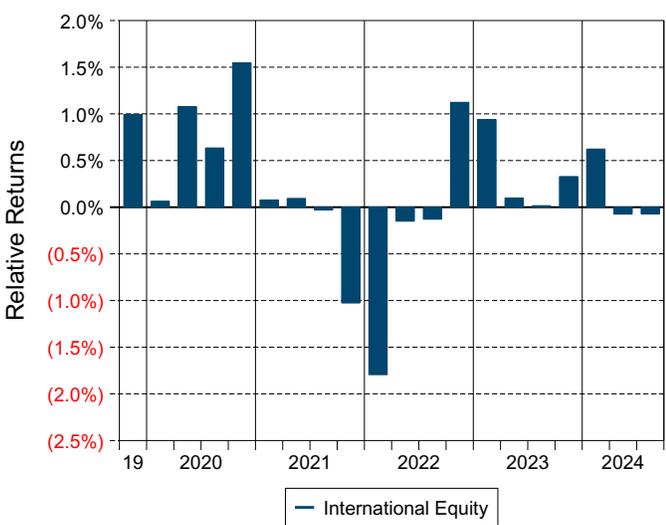
Beginning Market Value	\$6,741,527,167
Net New Investment	\$-5,180,199
Investment Gains/(Losses)	\$545,988,707
Ending Market Value	\$7,282,335,676

Performance vs Public Fund - International Equity (Gross)

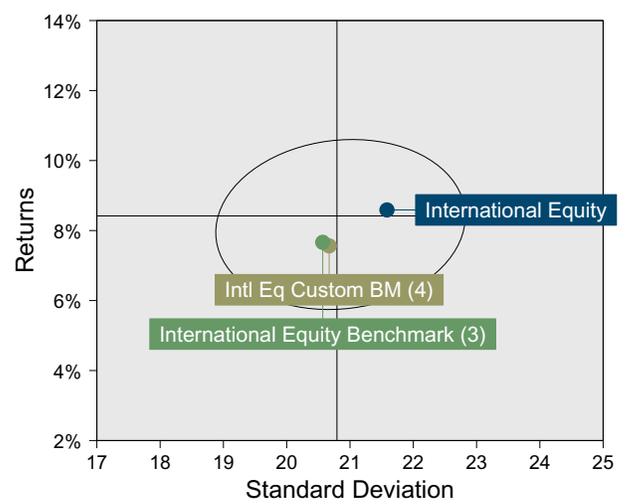


		Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile		8.39	8.39	27.46	6.27	10.05	7.63	7.23	7.39
25th Percentile		8.04	8.04	26.13	5.09	9.03	6.74	6.75	7.13
Median		7.62	7.62	25.11	4.14	8.42	6.13	6.23	6.69
75th Percentile		7.34	7.34	24.29	2.80	7.14	5.48	5.71	6.30
90th Percentile		6.57	6.57	23.12	1.98	6.31	4.61	4.80	5.80
International Equity	● A	8.10	8.10	26.07	3.69	8.59	6.16	6.12	6.36
Intl Eq Custom BM (4)	■ B	8.15	8.15	25.10	3.46	7.56	5.28	5.36	5.60
International Equity Benchmark (3)	▲	8.18	8.18	25.06	3.74	7.66	5.40	5.33	5.58

Relative Returns vs International Equity Benchmark (3)



Public Fund - International Equity (Gross) Annualized Five Year Risk vs Return

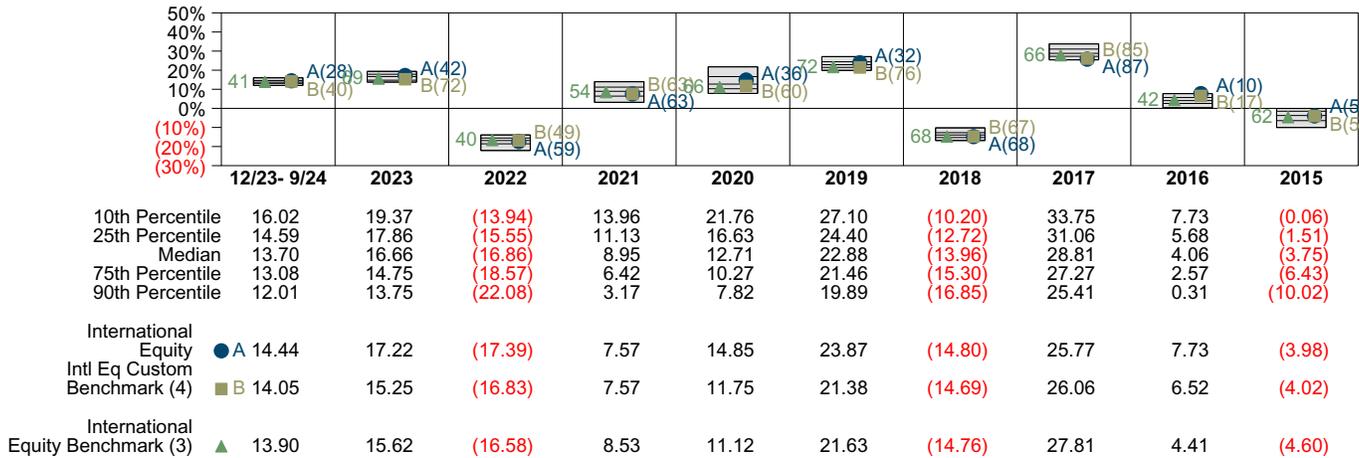


International Equity Return Analysis Summary

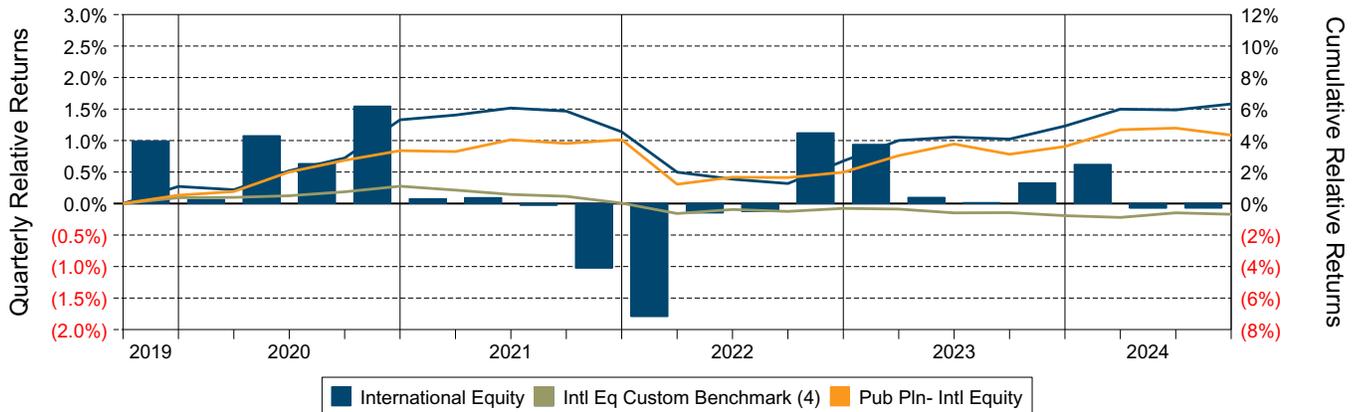
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

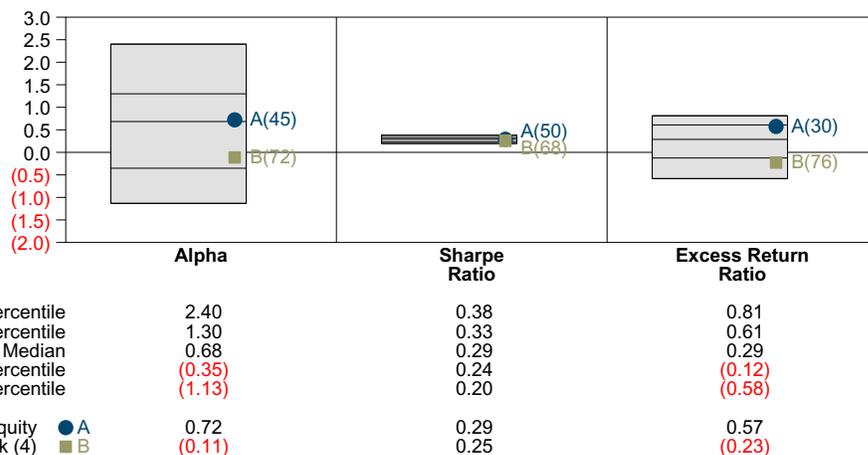
Performance vs Public Fund - International Equity (Gross)



Cumulative and Quarterly Relative Returns vs International Equity Benchmark (3)



Risk Adjusted Return Measures vs International Equity Benchmark (3) Rankings Against Public Fund - International Equity (Gross) Five Years Ended September 30, 2024



Principal Sm Cap Intl Period Ended September 30, 2024

Investment Philosophy

Principal believes that markets are not perfectly efficient and that investors are inherently change and risk averse. Through focused stock selection centered on the early identification of fundamental change and strategic portfolio construction that embraces rewarded risks and minimizing unnecessary systematic biases, they seek to consistently capitalize on persistent biases, anomalies and inefficiencies. They believe bottom-up stock selection, based on fundamental and earnings-based characteristics, is the most reliable and repeatable source of long-term, consistent performance. They believe fundamental research is most effective when it is focused on exploiting anomalies and inefficiencies and that the integration of traditional and quantitative fundamental research is superior to either in isolation. They believe three key characteristics consistently distinguish superior stocks: positive and sustainable fundamental change; investor expectation gaps; and attractive relative valuation. The Fund's inception date is October 2018.

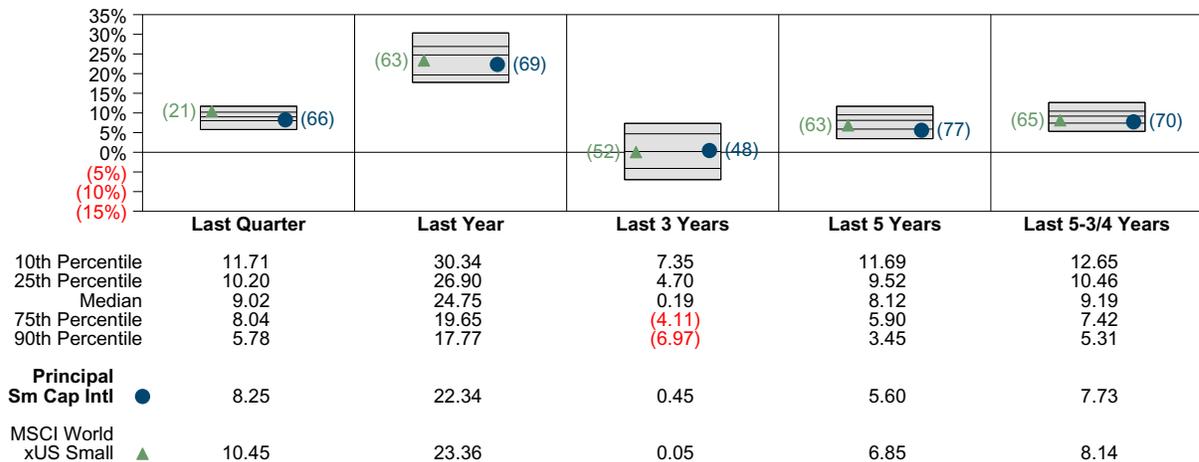
Quarterly Summary and Highlights

- Principal Sm Cap Intl's portfolio posted a 8.25% return for the quarter placing it in the 66 percentile of the Callan International Small Cap group for the quarter and in the 69 percentile for the last year.
- Principal Sm Cap Intl's portfolio underperformed the MSCI World xUS Small by 2.19% for the quarter and underperformed the MSCI World xUS Small for the year by 1.02%.

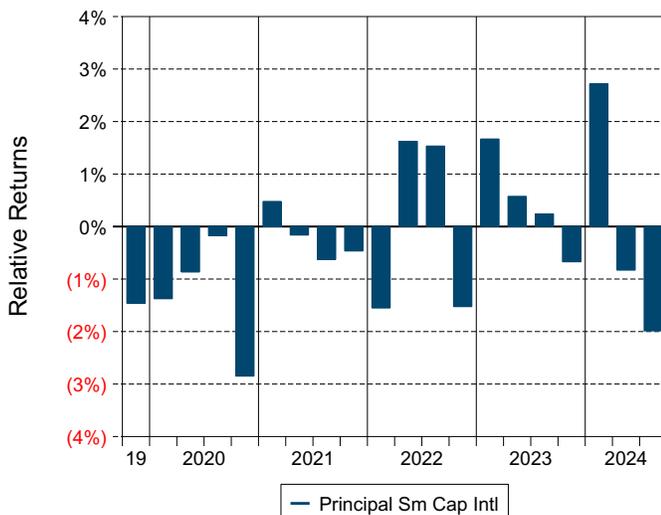
Quarterly Asset Growth

Beginning Market Value	\$346,146,887
Net New Investment	\$-307,591
Investment Gains/(Losses)	\$28,554,937
Ending Market Value	\$374,394,233

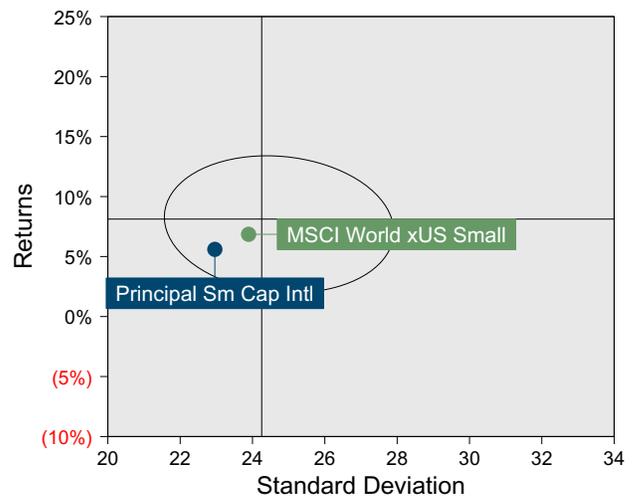
Performance vs Callan International Small Cap (Gross)



Relative Return vs MSCI World xUS Small



Callan International Small Cap (Gross) Annualized Five Year Risk vs Return

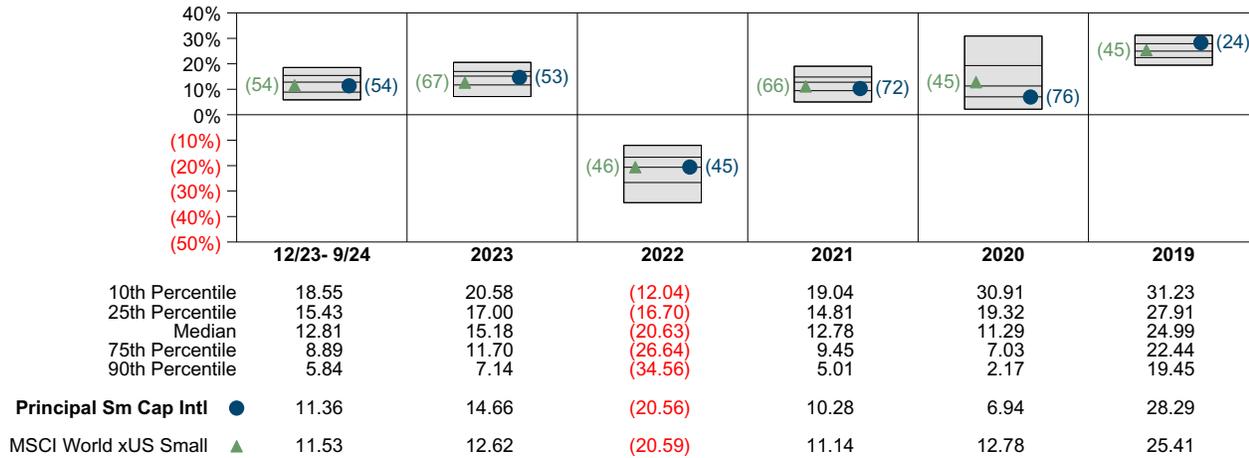


Principal Sm Cap Intl Return Analysis Summary

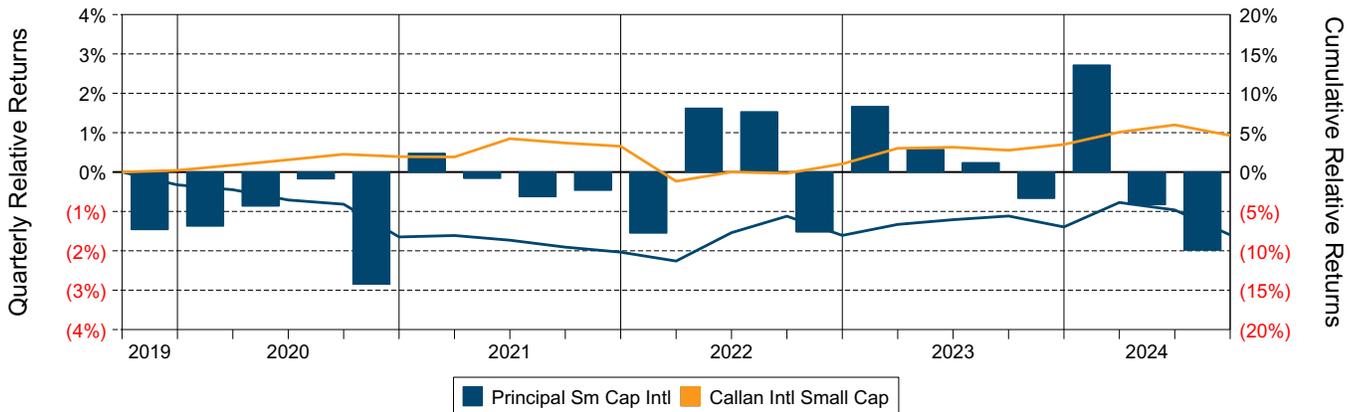
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

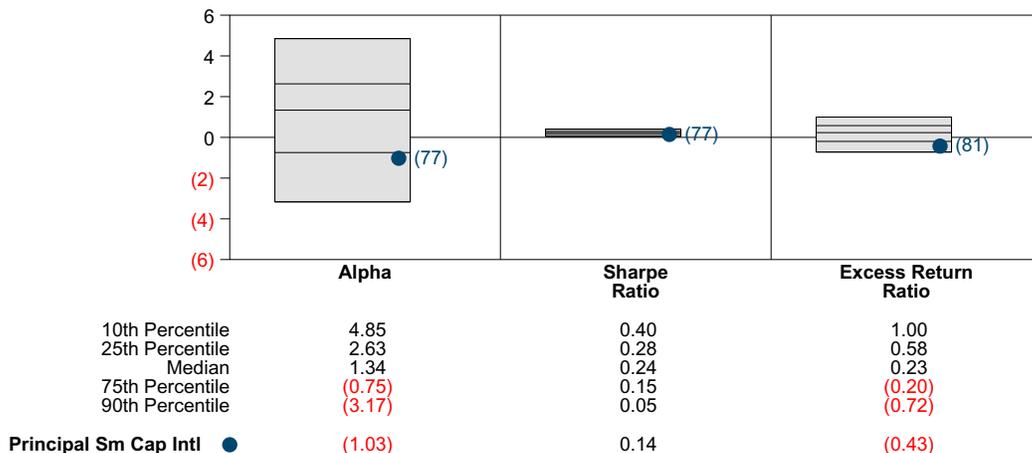
Performance vs Callan International Small Cap (Gross)



Cumulative and Quarterly Relative Returns vs MSCI World xUS Small



Risk Adjusted Return Measures vs MSCI World xUS Small Rankings Against Callan International Small Cap (Gross) Five Years Ended September 30, 2024



Arrowstreet Capital Period Ended September 30, 2024

Investment Philosophy

Arrowstreet is a 100% employed-owned firm whose strategies are team-managed by a deep and experienced group of individuals. The firm employs a quantitative process that identifies direct and indirect relationships to forecast stock price returns. The investment approach seeks to provide a risk controlled, core exposure to Non-US developed and emerging countries. The portfolio is diversified with 150 to 775 holdings (typically 300-475) across countries and sectors. The firm's dedication to research has led to a model that has adapted to multiple market environments and provided consistent results over time. The Fund's inception date is June 2013.

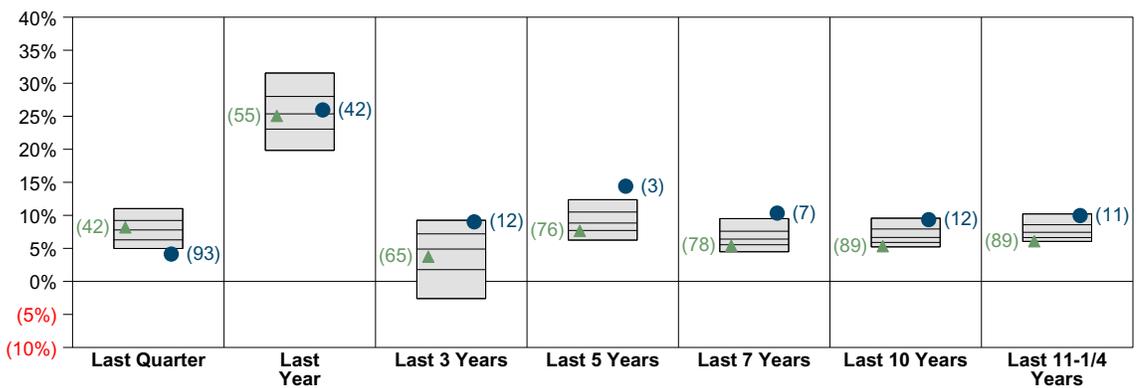
Quarterly Summary and Highlights

- Arrowstreet Capital's portfolio posted a 4.13% return for the quarter placing it in the 93 percentile of the Non-U.S. Equity Database group for the quarter and in the 42 percentile for the last year.
- Arrowstreet Capital's portfolio underperformed the MSCI ACWI xUS IMI by 4.05% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 0.89%.

Quarterly Asset Growth

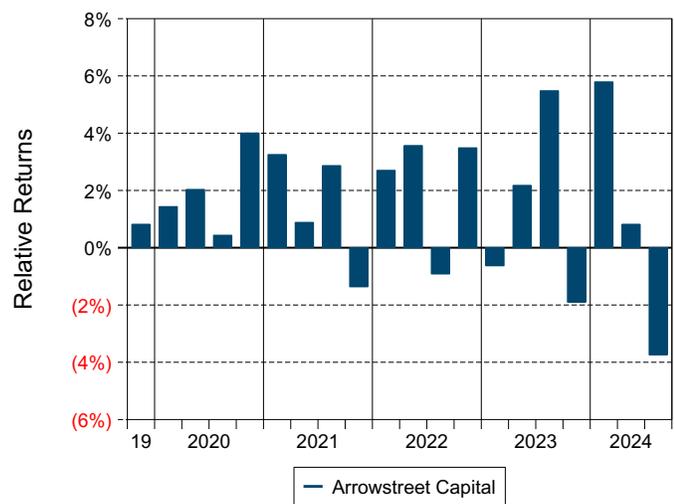
Beginning Market Value	\$691,803,730
Net New Investment	\$-878,279
Investment Gains/(Losses)	\$28,567,460
Ending Market Value	\$719,492,910

Performance vs Non-U.S. Equity Database (Gross)

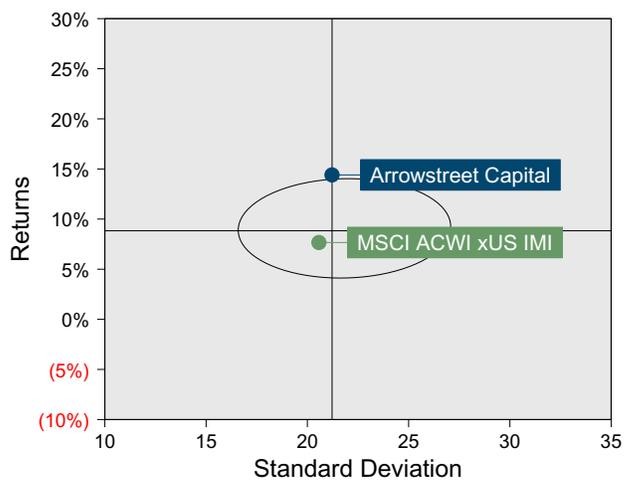


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-1/4 Years
10th Percentile	11.02	31.54	9.26	12.37	9.50	9.57	10.22
25th Percentile	9.22	28.00	7.20	10.50	7.59	7.94	8.58
Median	7.79	25.36	4.90	8.83	6.41	6.65	7.43
75th Percentile	6.29	23.06	1.78	7.71	5.55	5.90	6.64
90th Percentile	4.98	19.84	(2.60)	6.25	4.49	5.23	6.05
Arrowstreet Capital ●	4.13	25.95	9.01	14.41	10.34	9.35	9.97
MSCI ACWI xUS IMI ▲	8.18	25.06	3.74	7.66	5.40	5.33	6.08

Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Five Year Risk vs Return

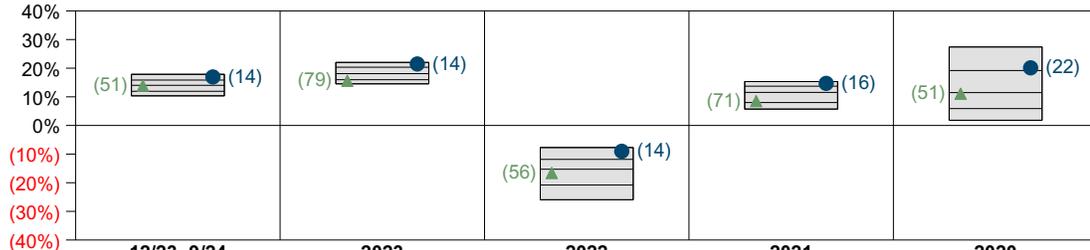


Arrowstreet Capital Return Analysis Summary

Return Analysis

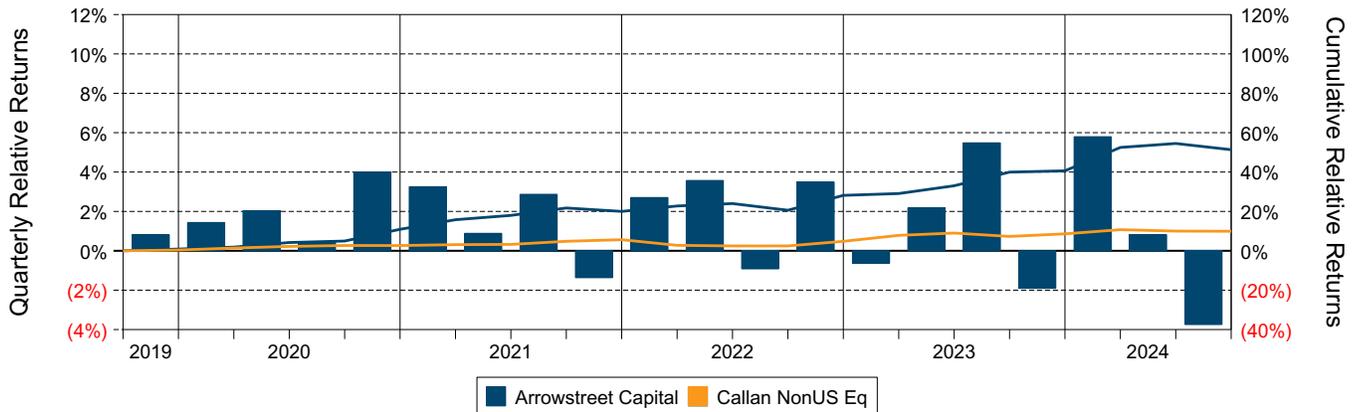
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

Performance vs Callan Non-US Equity (Gross)

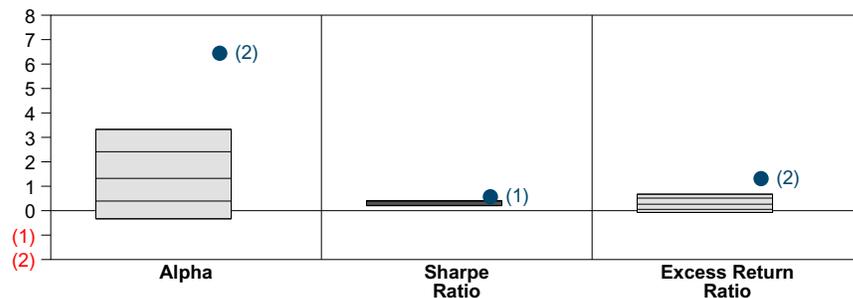


10th Percentile	17.86	22.01	(7.71)	15.33	27.40
25th Percentile	15.85	20.33	(11.84)	13.71	19.18
Median	14.01	18.09	(15.29)	11.54	11.47
75th Percentile	11.93	15.97	(20.81)	8.00	5.89
90th Percentile	10.35	14.53	(25.95)	5.71	1.81
Arrowstreet Capital	● 16.93	21.47	(9.02)	14.70	20.12
MSCI ACWI xUS IMI	▲ 13.90	15.62	(16.58)	8.53	11.12

Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Callan Non-US Equity (Gross) Five Years Ended September 30, 2024



10th Percentile	3.33	0.41	0.67
25th Percentile	2.41	0.37	0.51
Median	1.32	0.31	0.26
75th Percentile	0.39	0.26	0.05
90th Percentile	(0.33)	0.20	(0.07)
Arrowstreet Capital	● 6.44	0.57	1.31

Baillie Gifford

Period Ended September 30, 2024

Investment Philosophy

Baillie Gifford is a 100% employee-owned investment manager based in Edinburgh, Scotland. As of March 31, 2022, the firm managed \$365 billion in assets, primarily across growth-oriented equity strategies. The ACWI ex US All Cap strategy seeks to exploit inefficiencies through bottom-up stock selection with a focus on companies with superior profit growth that can be held for the long term. The portfolio typically holds 60-90 companies and has historically exhibited a turnover rate of less than 20% over rolling 12-month periods. Both short- and long-term performance has been very strong relative to the MSCI ACWI ex-US Index. The Fund's inception date is September 2014.

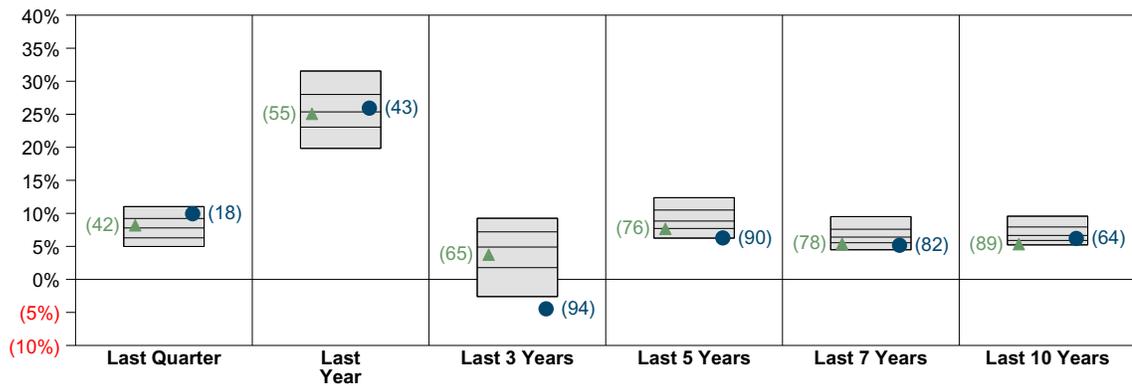
Quarterly Summary and Highlights

- Baillie Gifford's portfolio posted a 9.94% return for the quarter placing it in the 18 percentile of the Non-U.S. Equity Database group for the quarter and in the 43 percentile for the last year.
- Baillie Gifford's portfolio outperformed the MSCI ACWI xUS IMI by 1.76% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 0.86%.

Quarterly Asset Growth

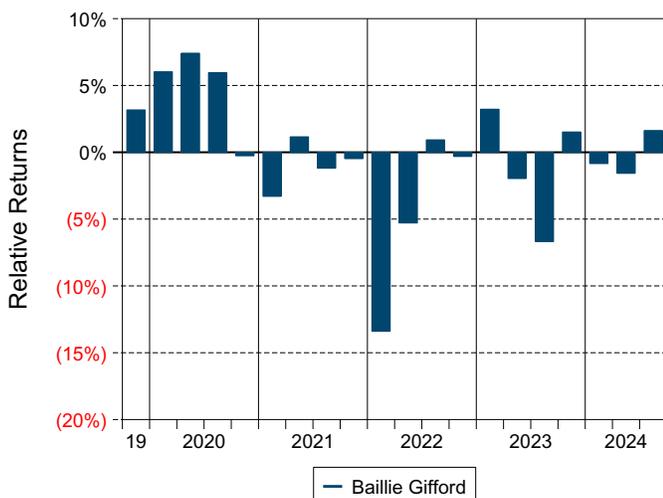
Beginning Market Value	\$739,729,782
Net New Investment	\$-686,047
Investment Gains/(Losses)	\$73,459,397
Ending Market Value	\$812,503,131

Performance vs Non-U.S. Equity Database (Gross)

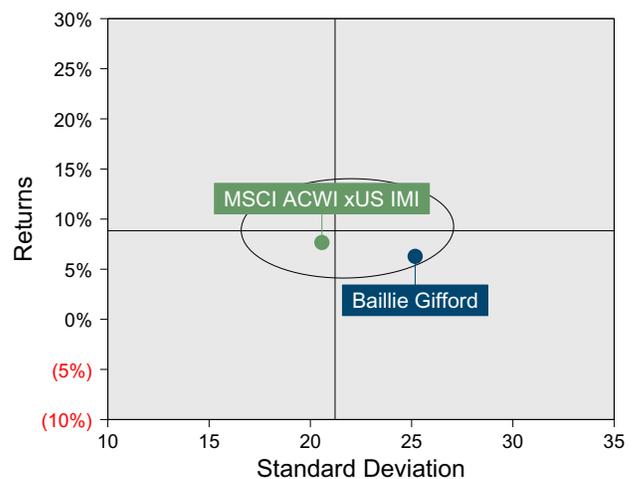


10th Percentile	11.02	31.54	9.26	12.37	9.50	9.57
25th Percentile	9.22	28.00	7.20	10.50	7.59	7.94
Median	7.79	25.36	4.90	8.83	6.41	6.65
75th Percentile	6.29	23.06	1.78	7.71	5.55	5.90
90th Percentile	4.98	19.84	(2.60)	6.25	4.49	5.23
Baillie Gifford ●	9.94	25.93	(4.46)	6.28	5.17	6.20
MSCI ACWI xUS IMI ▲	8.18	25.06	3.74	7.66	5.40	5.33

Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Five Year Risk vs Return

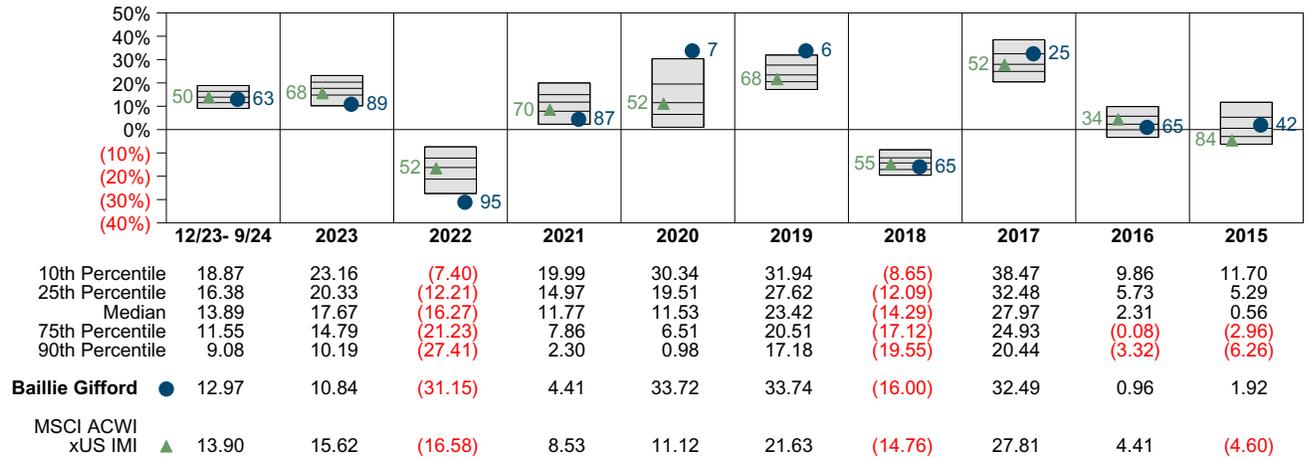


Baillie Gifford Return Analysis Summary

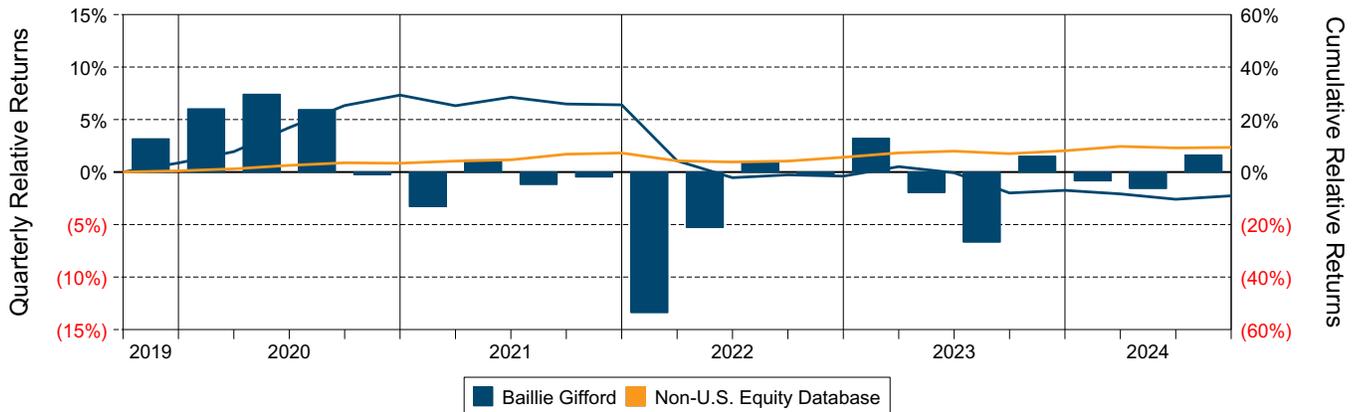
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

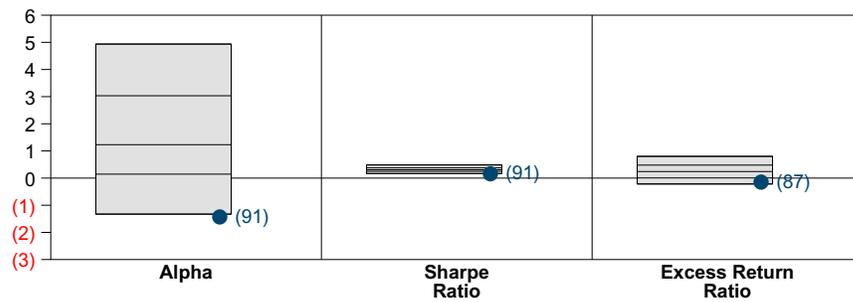
Performance vs Non-U.S. Equity Database (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Non-U.S. Equity Database (Gross) Five Years Ended September 30, 2024



Marathon Asset Mgmt Period Ended September 30, 2024

Investment Philosophy

At the heart of Marathon's investment philosophy is the "capital cycle" approach to investment. This is based on the idea that the prospect of high returns will attract excessive capital (and hence competition), and vice versa. In addition, the assessment of how management responds to the forces of the capital cycle - particularly whether they curtail investment when returns have been poor - and how they are incentivized are critical to the investment outcome. Given the contrarian and long-term nature of the capital cycle, the investment philosophy results in strong views versus the market and long holding periods (5 years plus). The attractiveness of an individual security, therefore, should be evaluated within this timeframe. The Fund's inception date is May 2016.

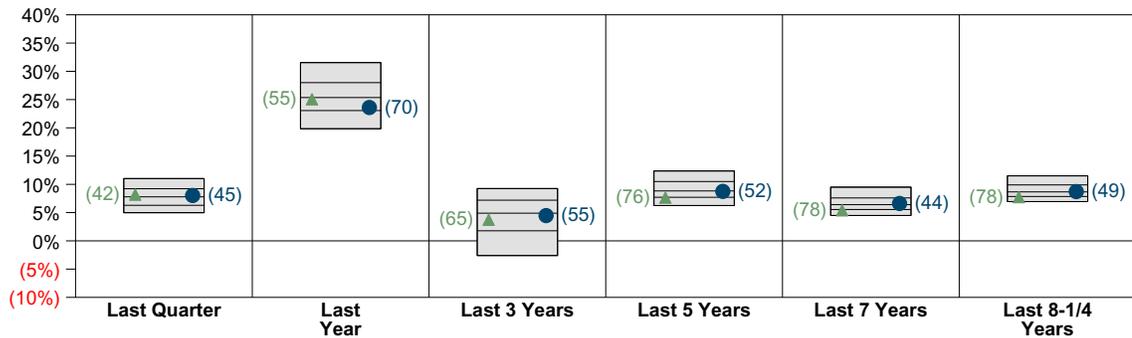
Quarterly Summary and Highlights

- Marathon Asset Mgmt's portfolio posted a 8.02% return for the quarter placing it in the 45 percentile of the Non-U.S. Equity Database group for the quarter and in the 70 percentile for the last year.
- Marathon Asset Mgmt's portfolio underperformed the MSCI ACWI xUS IMI by 0.16% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 1.47%.

Quarterly Asset Growth

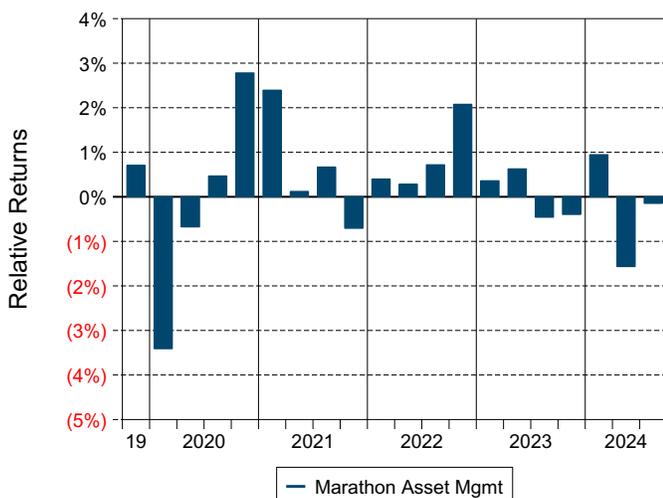
Beginning Market Value	\$849,979,181
Net New Investment	\$-1,243,721
Investment Gains/(Losses)	\$68,140,098
Ending Market Value	\$916,875,558

Performance vs Non-U.S. Equity Database (Gross)

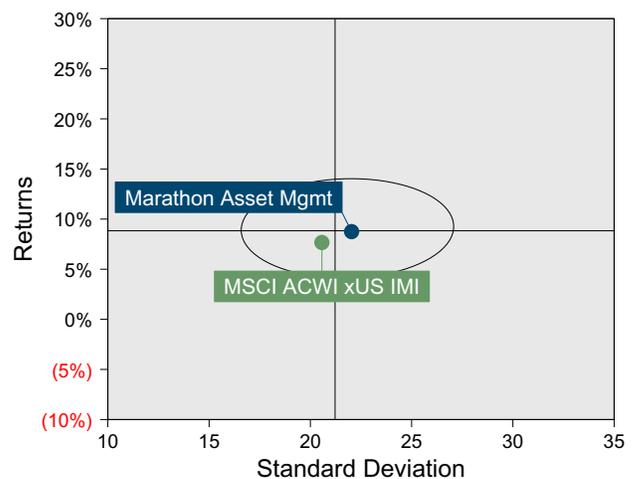


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 8-1/4 Years
10th Percentile	11.02	31.54	9.26	12.37	9.50	11.51
25th Percentile	9.22	28.00	7.20	10.50	7.59	9.90
Median	7.79	25.36	4.90	8.83	6.41	8.67
75th Percentile	6.29	23.06	1.78	7.71	5.55	7.86
90th Percentile	4.98	19.84	(2.60)	6.25	4.49	6.95
Marathon Asset Mgmt ●	8.02	23.60	4.47	8.75	6.61	8.71
MSCI ACWI xUS IMI ▲	8.18	25.06	3.74	7.66	5.40	7.74

Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Five Year Risk vs Return

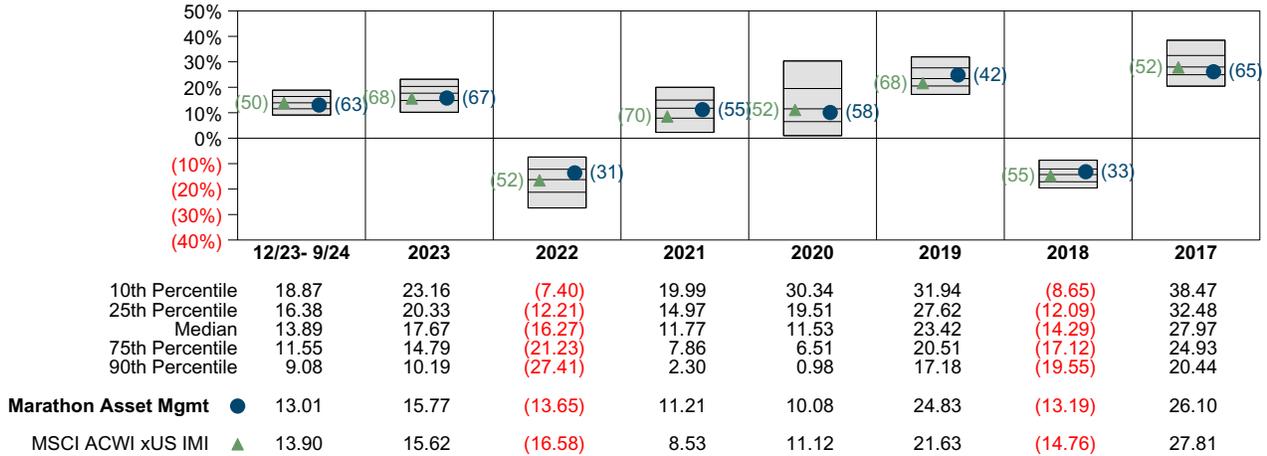


Marathon Asset Mgmt Return Analysis Summary

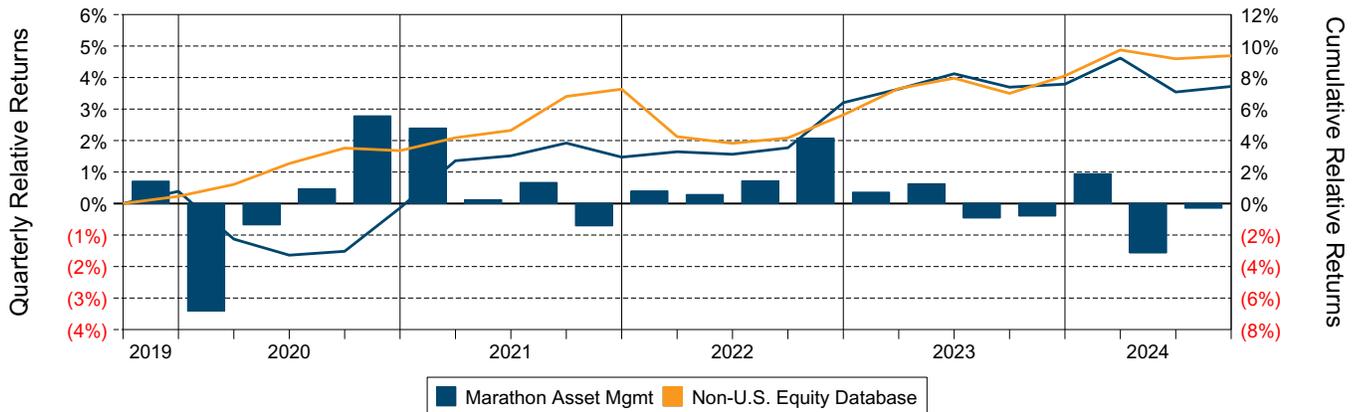
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures and returns for rising/declining periods.

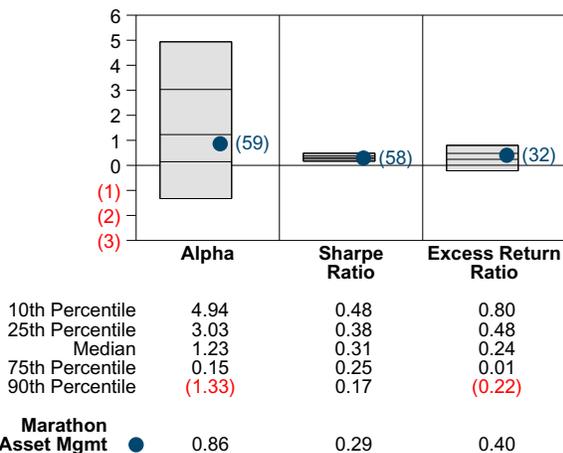
Performance vs Non-U.S. Equity Database (Gross)



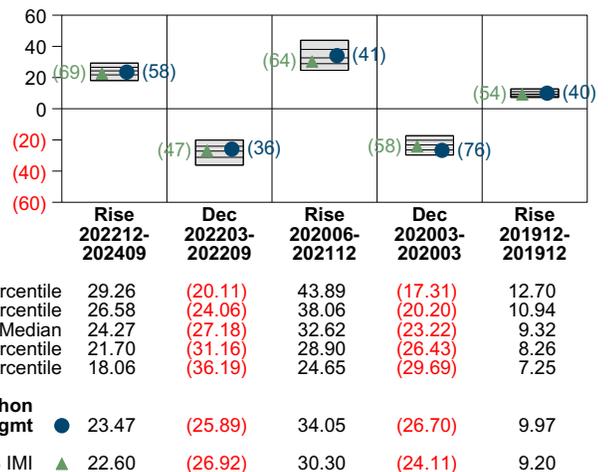
Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Non-U.S. Equity Database (Gross) Five Years Ended September 30, 2024



Returns for International Equity Rising/Declining Periods Five Years Ended September 30, 2024



NT MSCI World ex US Period Ended September 30, 2024

Investment Philosophy

Northern Trust believes that providing low cost market exposure is vital to investors in order to maximize investment returns over the long term. The core objective is to replicate the benchmark characteristics while minimizing transaction costs and preserving wealth throughout the process. Northern Trust core principles: 1) Discipline portfolio construction of portfolios using full replication and optimization where it allows for risk reduction, increased liquidity, and lower costs. 2) Minimizing costs such as commissions, bid/ask spread, and market impact by utilizing sophisticated trading techniques Multi-dimensional risk controls and careful oversight throughout the investment process. The Fund's inception date is April 2022.

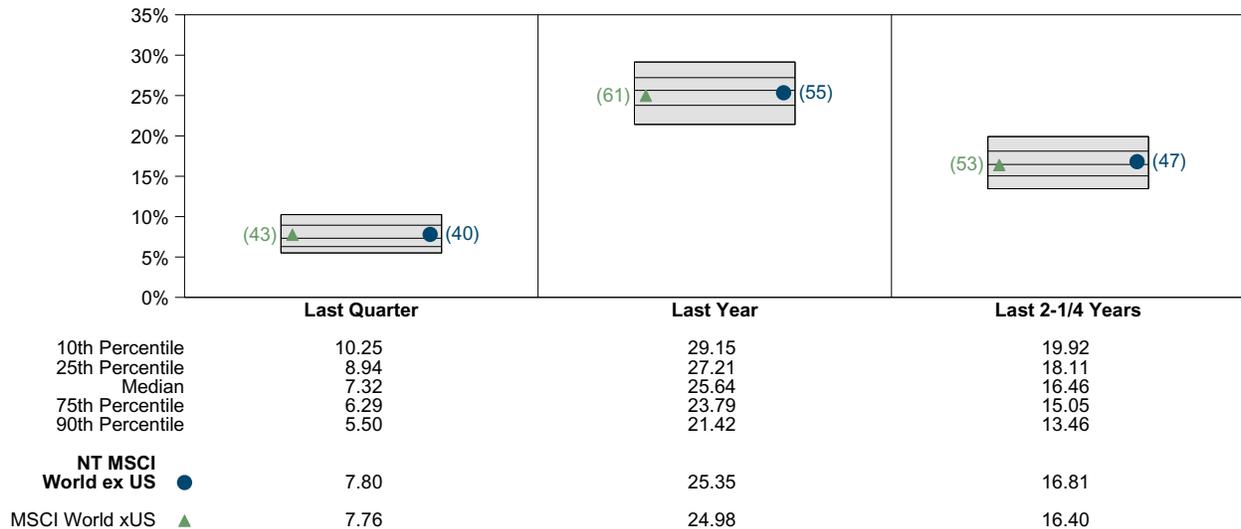
Quarterly Summary and Highlights

- NT MSCI World ex US's portfolio posted a 7.80% return for the quarter placing it in the 40 percentile of the Callan Non-US Equity group for the quarter and in the 55 percentile for the last year.
- NT MSCI World ex US's portfolio outperformed the MSCI World xUS by 0.04% for the quarter and outperformed the MSCI World xUS for the year by 0.36%.

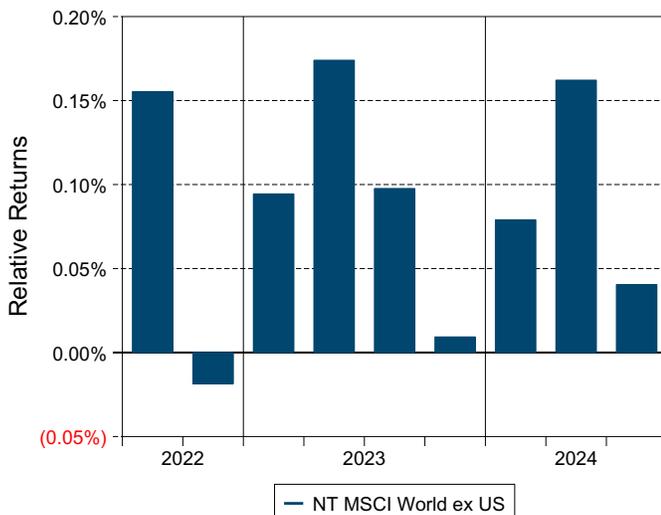
Quarterly Asset Growth

Beginning Market Value	\$2,331,497,296
Net New Investment	\$-58,288
Investment Gains/(Losses)	\$181,901,681
Ending Market Value	\$2,513,340,690

Performance vs Callan Non-US Equity (Gross)

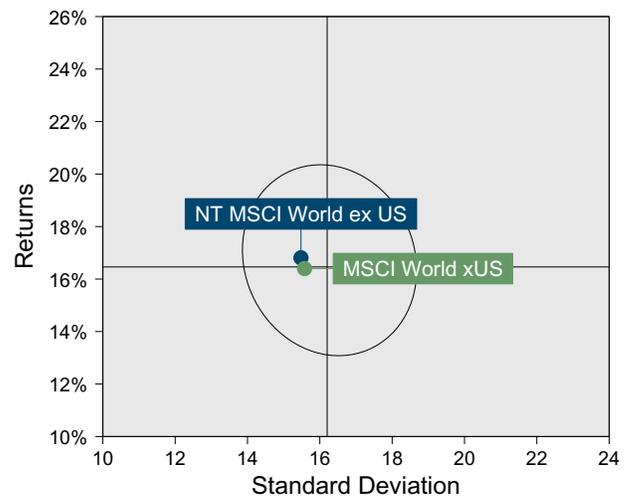


Relative Return vs MSCI World xUS



Callan Non-US Equity (Gross)

Annualized Two and One-Quarter Year Risk vs Return



Lazard Emerging Markets Period Ended September 30, 2024

Investment Philosophy

Similar to its developed market-only products, Lazard employs a bottom-up stock selection process focusing on companies which are financially productive yet inexpensively priced. The firm utilizes quantitative and qualitative factors in its stock selection process, incorporating three levels of investment research. Lazard begins with a universe of 2,000 companies to screen for stocks with high return-on-equity and return-on-assets, and yet are attractively priced (low price/book and price/cash flow). After the initial screening, 250 issues undergo further analysis of their financial statistics and business value to uncover any hidden opportunities. Once the companies have passed the "health check" the focus is on the future outlook. This team has been one of the more stable and longest tenured teams at Lazard, with the lead PM, James Donald, on the product since 1996. The Fund's inception date is April 1998.

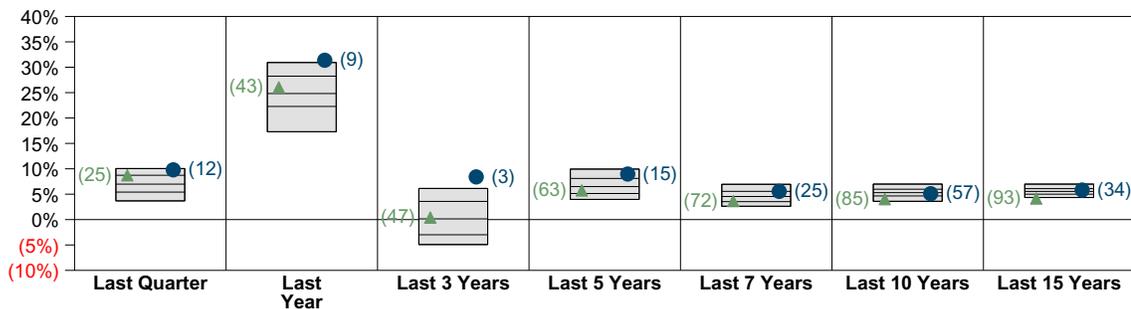
Quarterly Summary and Highlights

- Lazard Emerging Markets's portfolio posted a 9.79% return for the quarter placing it in the 12 percentile of the Callan Emerging Broad group for the quarter and in the 9 percentile for the last year.
- Lazard Emerging Markets's portfolio outperformed the MSCI EM by 1.07% for the quarter and outperformed the MSCI EM for the year by 5.32%.

Quarterly Asset Growth

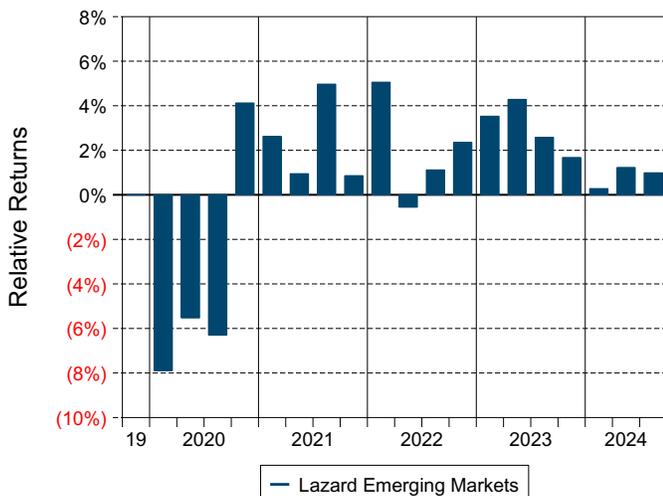
Beginning Market Value	\$741,964,517
Net New Investment	\$-583,482
Investment Gains/(Losses)	\$72,635,923
Ending Market Value	\$814,016,958

Performance vs Callan Emerging Broad (Gross)

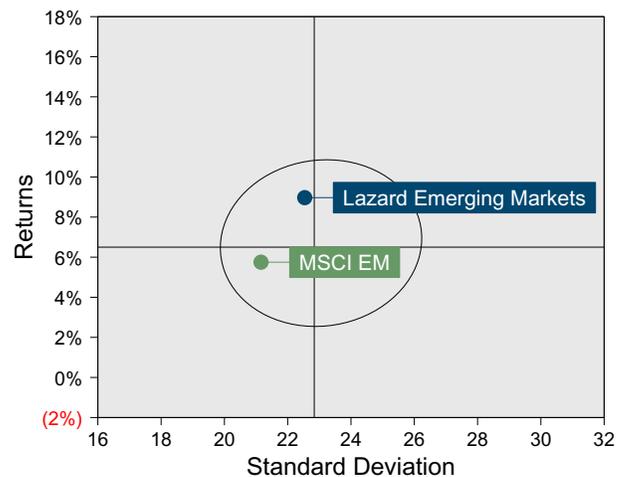


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	10.05	30.93	6.14	9.95	6.95	6.99	6.98
25th Percentile	8.73	28.25	3.58	8.10	5.56	5.98	6.10
Median	6.98	24.82	0.14	6.50	4.55	5.31	5.54
75th Percentile	5.41	22.28	(2.99)	5.14	3.54	4.65	5.00
90th Percentile	3.68	17.30	(4.92)	3.97	2.62	3.59	4.34
Lazard Emerging Markets	● 9.79	31.38	8.41	8.97	5.56	5.09	5.81
MSCI EM	▲ 8.72	26.05	0.40	5.75	3.65	4.03	4.16

Relative Return vs MSCI EM



Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return

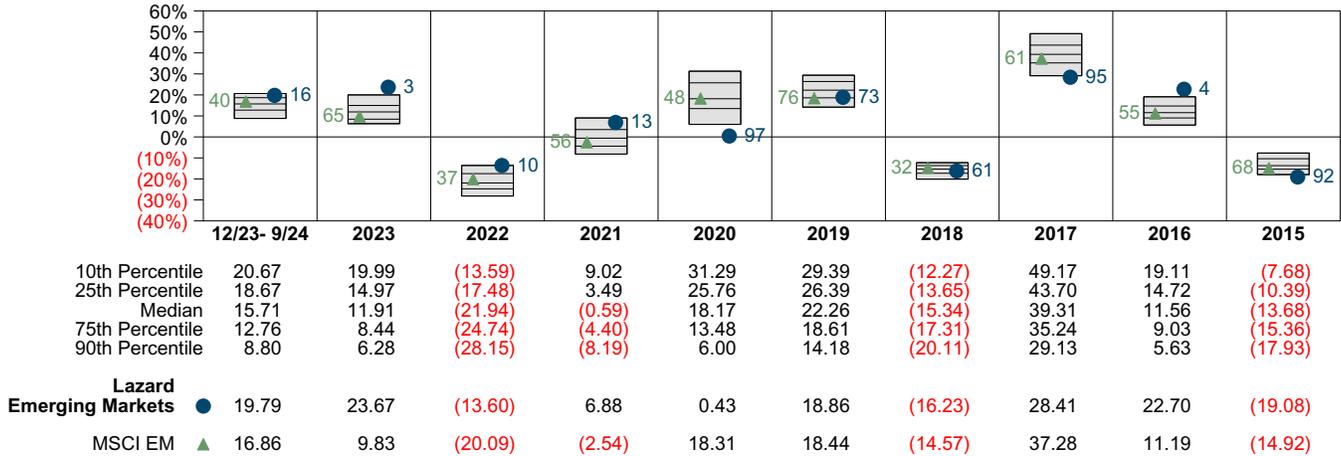


Lazard Emerging Markets Return Analysis Summary

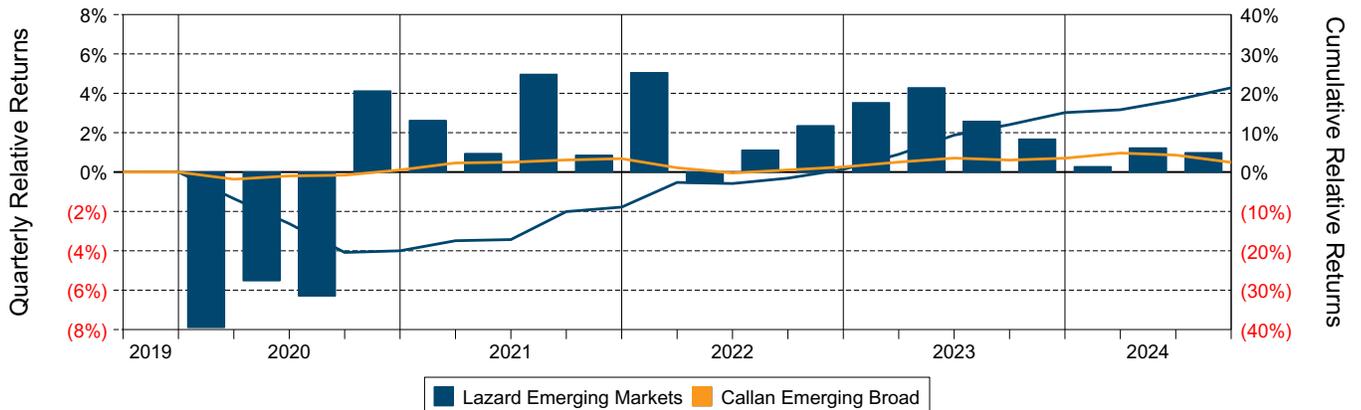
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

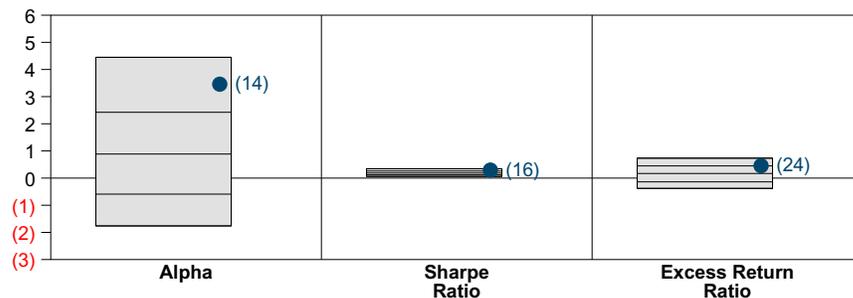
Performance vs Callan Emerging Broad (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended September 30, 2024



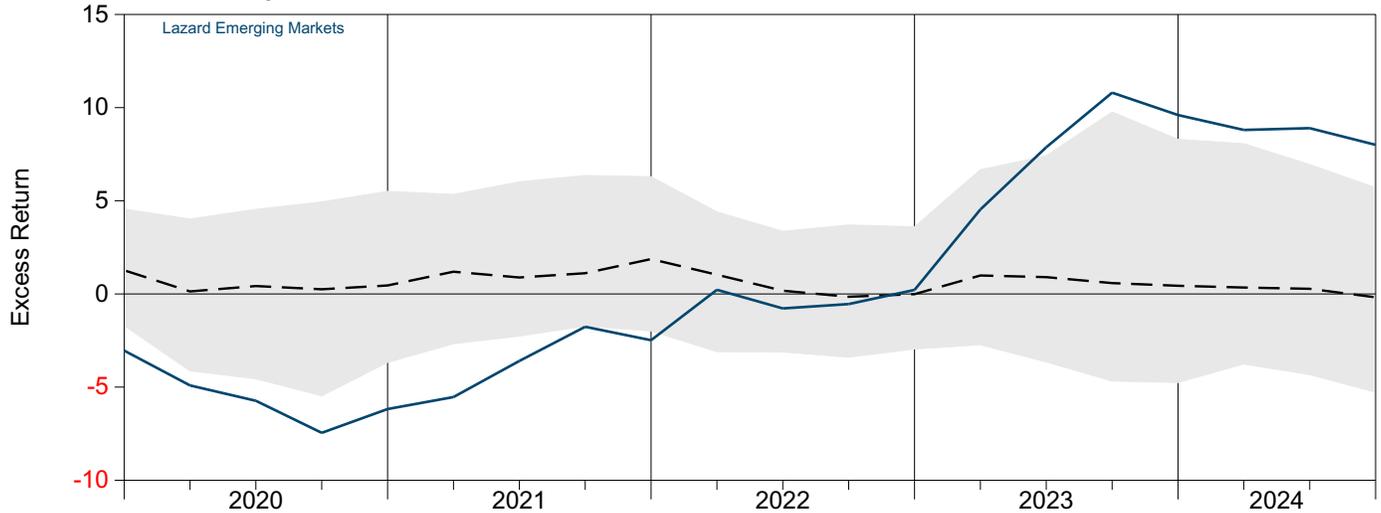
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.45	0.35	0.73
25th Percentile	2.42	0.26	0.45
Median	0.89	0.18	0.17
75th Percentile	(0.59)	0.12	(0.14)
90th Percentile	(1.76)	0.06	(0.38)
Lazard Emerging Markets	● 3.46	● 0.30	● 0.45

Lazard Emerging Markets Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

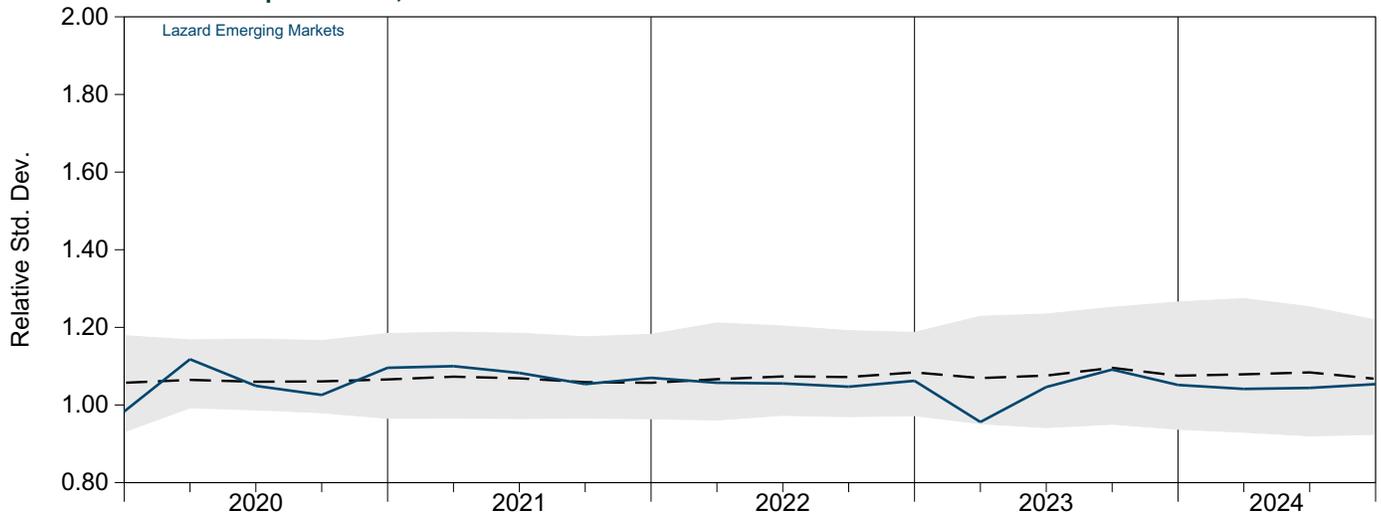
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI EM. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Emerging Broad. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to MSCI EM Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.60%	0.85%
% Positive Periods	85%	45%
Average Ranking	50	57

Rolling Three Year Relative Std. Dev. Relative to MSCI EM Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.07%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	57

Fisher Investments

Period Ended September 30, 2024

Investment Philosophy

Founded by Ken Fisher in 1979, Fisher Investments (FI) manages global, U.S., non-U.S., and emerging markets portfolios for a broad client base. The Emerging Markets strategy, as well as all FI strategies, are managed by a five-person portfolio construction group (PCG) including Ken Fisher, Jeff Silk, Aaron Anderson, William Glaser, and Michael Hanson. The PCG is supported by a large research team focused on both security and macroeconomic analysis. The investment process is top-down and bottom-up but the thematic drivers are responsible for two-thirds of the strategy's performance. From the bottom up FI seeks companies with underappreciated competitive advantages, strong management teams, and good valuations. Portfolios hold between 50 and 100 holdings with low turnover. The Fund's inception date is April 2016.

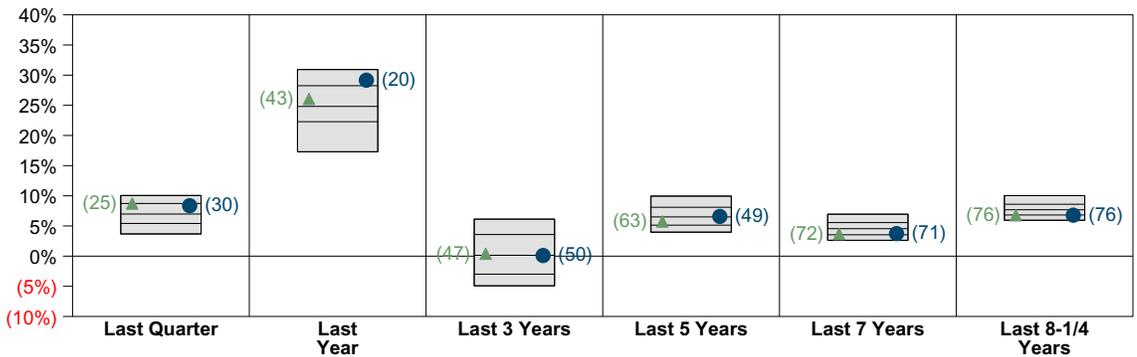
Quarterly Summary and Highlights

- Fisher Investments's portfolio posted a 8.35% return for the quarter placing it in the 30 percentile of the Callan Emerging Broad group for the quarter and in the 20 percentile for the last year.
- Fisher Investments's portfolio underperformed the MSCI EM by 0.37% for the quarter and outperformed the MSCI EM for the year by 3.11%.

Quarterly Asset Growth

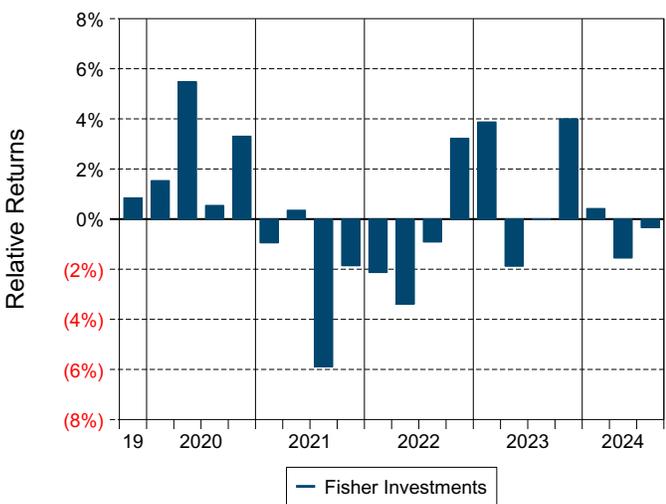
Beginning Market Value	\$701,032,720
Net New Investment	\$-1,008,920
Investment Gains/(Losses)	\$58,505,293
Ending Market Value	\$758,529,093

Performance vs Callan Emerging Broad (Gross)

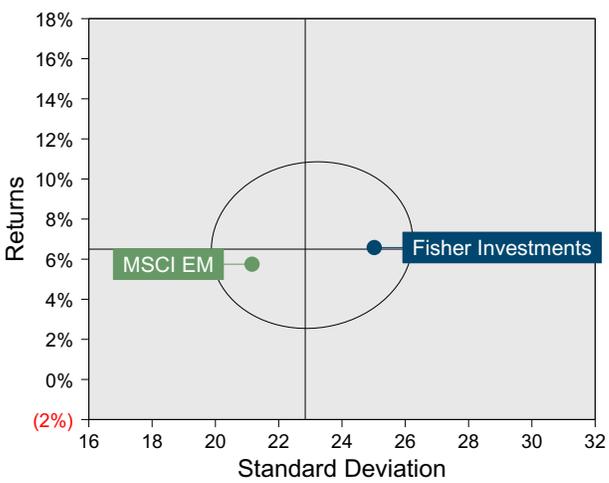


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 8-1/4 Years
10th Percentile	10.05	30.93	6.14	9.95	6.95	10.03
25th Percentile	8.73	28.25	3.58	8.10	5.56	8.60
Median	6.98	24.82	0.14	6.50	4.55	7.69
75th Percentile	5.41	22.28	(2.99)	5.14	3.54	6.82
90th Percentile	3.68	17.30	(4.92)	3.97	2.62	5.95
Fisher Investments ●	8.35	29.17	0.10	6.58	3.73	6.78
MSCI EM ▲	8.72	26.05	0.40	5.75	3.65	6.77

Relative Return vs MSCI EM



Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return

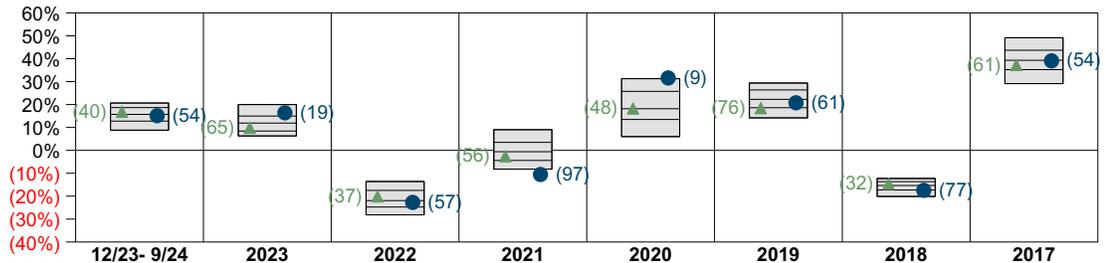


Fisher Investments Return Analysis Summary

Return Analysis

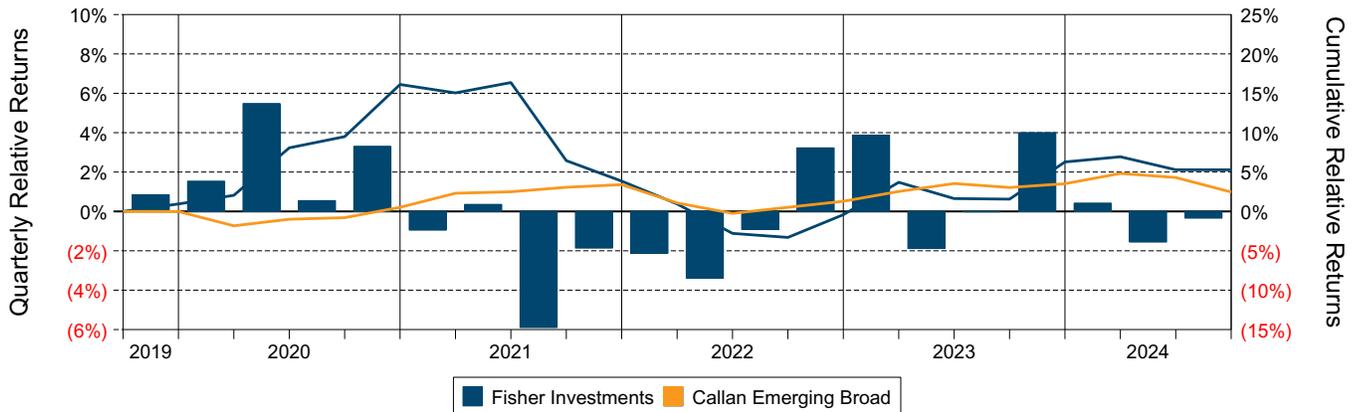
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

Performance vs Callan Emerging Broad (Gross)

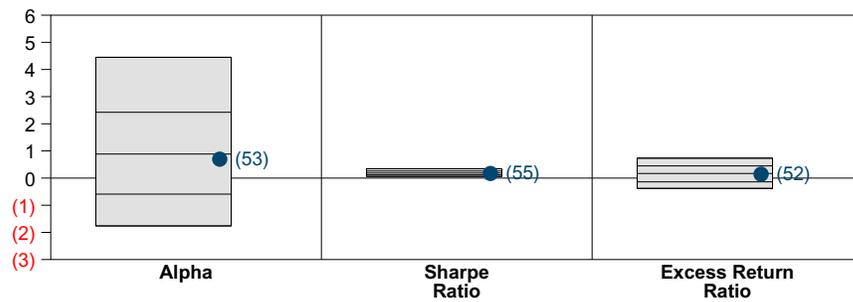


10th Percentile	20.67	19.99	(13.59)	9.02	31.29	29.39	(12.27)	49.17
25th Percentile	18.67	14.97	(17.48)	3.49	25.76	26.39	(13.65)	43.70
Median	15.71	11.91	(21.94)	(0.59)	18.17	22.26	(15.34)	39.31
75th Percentile	12.76	8.44	(24.74)	(4.40)	13.48	18.61	(17.31)	35.24
90th Percentile	8.80	6.28	(28.15)	(8.19)	6.00	14.18	(20.11)	29.13
Fisher Investments	● 15.14	16.39	(22.72)	(10.53)	31.60	20.77	(17.46)	39.07
MSCI EM	▲ 16.86	9.83	(20.09)	(2.54)	18.31	18.44	(14.57)	37.28

Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended September 30, 2024



10th Percentile	4.45	0.35	0.73
25th Percentile	2.42	0.26	0.45
Median	0.89	0.18	0.17
75th Percentile	(0.59)	0.12	(0.14)
90th Percentile	(1.76)	0.06	(0.38)
Fisher Investments	● 0.70	0.17	0.14

Total Fixed Income Period Ended September 30, 2024

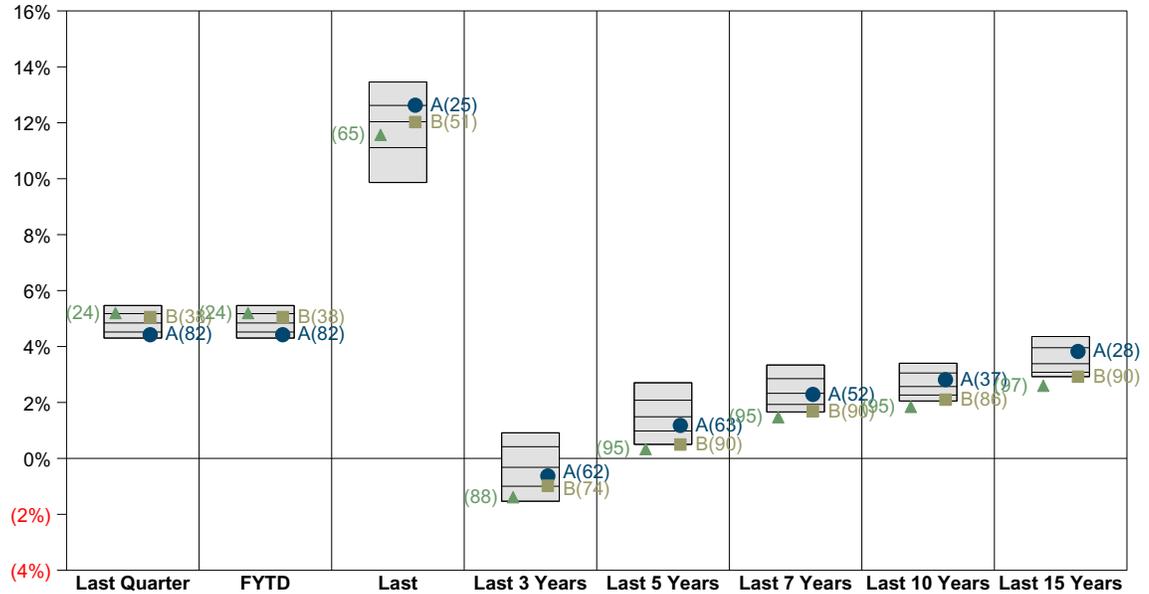
Quarterly Summary and Highlights

- Total Fixed Income's portfolio posted a 4.42% return for the quarter placing it in the 82 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 25 percentile for the last year.
- Total Fixed Income's portfolio underperformed the Blmbg:Aggregate by 0.78% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.06%.

Quarterly Asset Growth

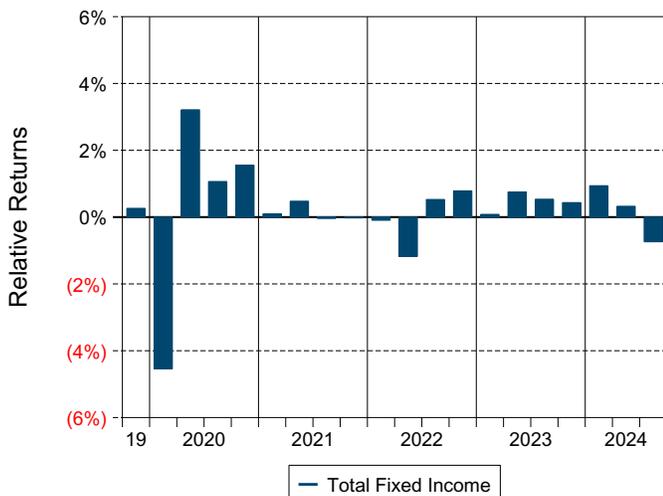
Beginning Market Value	\$7,028,831,035
Net New Investment	\$-3,473,382
Investment Gains/(Losses)	\$310,712,451
Ending Market Value	\$7,336,070,104

Performance vs Public Fund - Domestic Fixed (Gross)

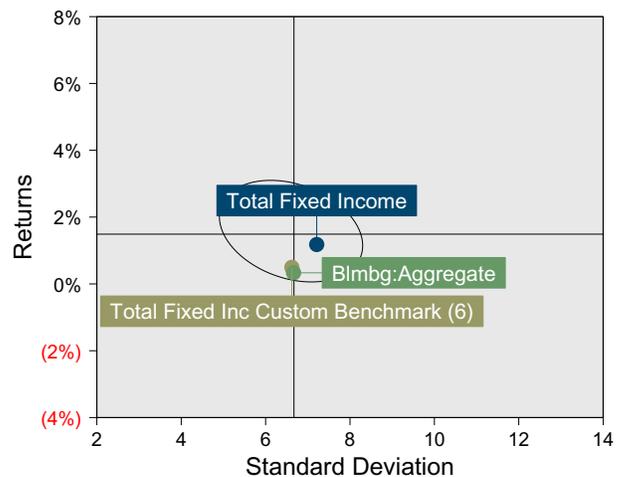


10th Percentile	5.47	5.47	13.46	0.91	2.70	3.34	3.40	4.36	
25th Percentile	5.18	5.18	12.62	0.42	2.08	2.85	3.05	3.96	
Median	4.84	4.84	12.04	(0.32)	1.49	2.33	2.57	3.39	
75th Percentile	4.52	4.52	11.11	(1.00)	0.98	1.93	2.26	3.08	
90th Percentile	4.30	4.30	9.86	(1.53)	0.50	1.66	2.05	2.92	
Total Fixed Income	● A	4.42	4.42	12.63	(0.63)	1.18	2.29	2.82	3.82
Total Fixed Inc Custom Benchmark (6)	■ B	5.05	5.05	12.03	(0.98)	0.50	1.69	2.10	2.92
Blmbg:Aggregate	▲	5.20	5.20	11.57	(1.39)	0.33	1.47	1.84	2.60

Relative Return vs Blmbg:Aggregate



Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return

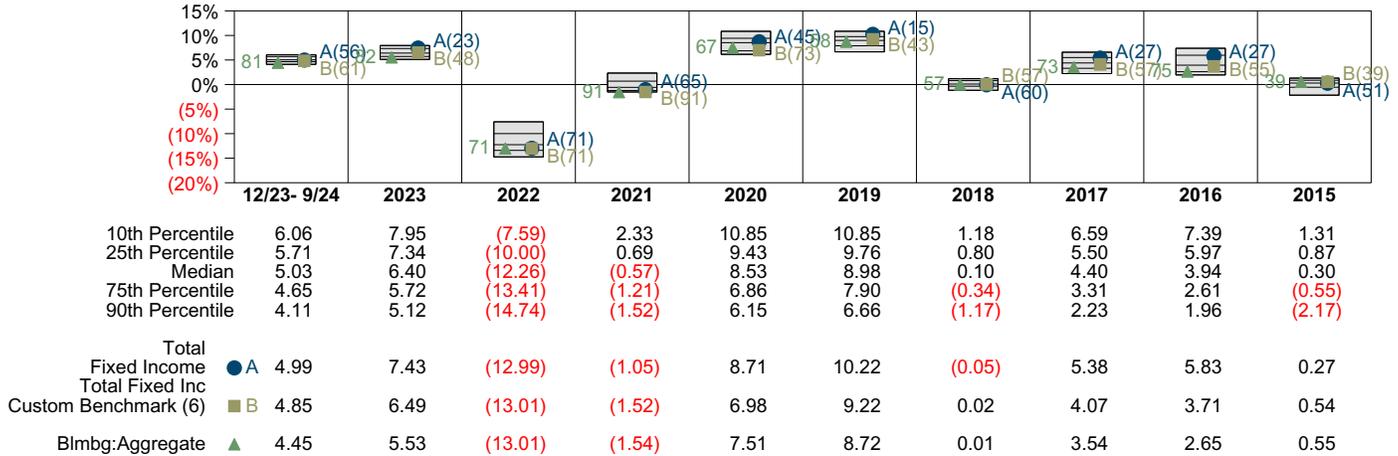


Total Fixed Income Return Analysis Summary

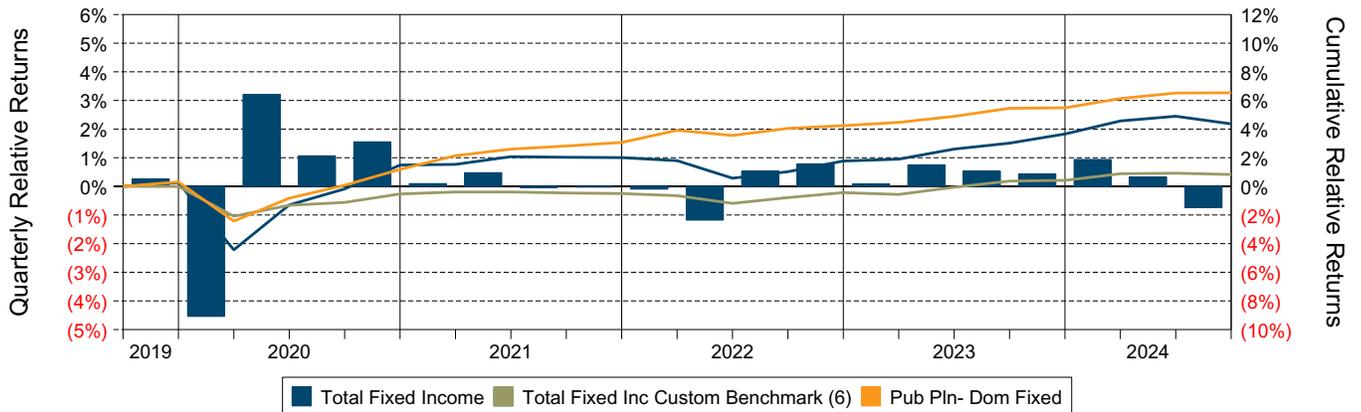
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

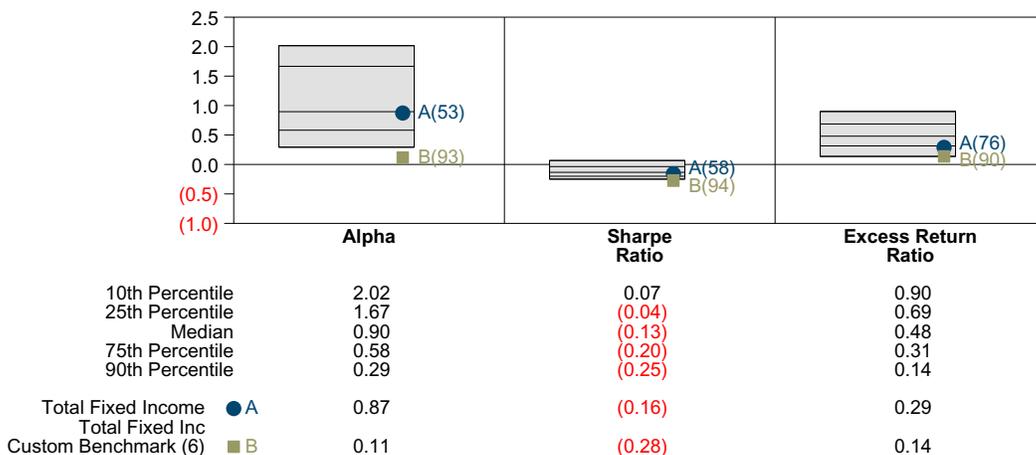
Performance vs Public Fund - Domestic Fixed (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Public Fund - Domestic Fixed (Gross) Five Years Ended September 30, 2024



Domestic Fixed Income Period Ended September 30, 2024

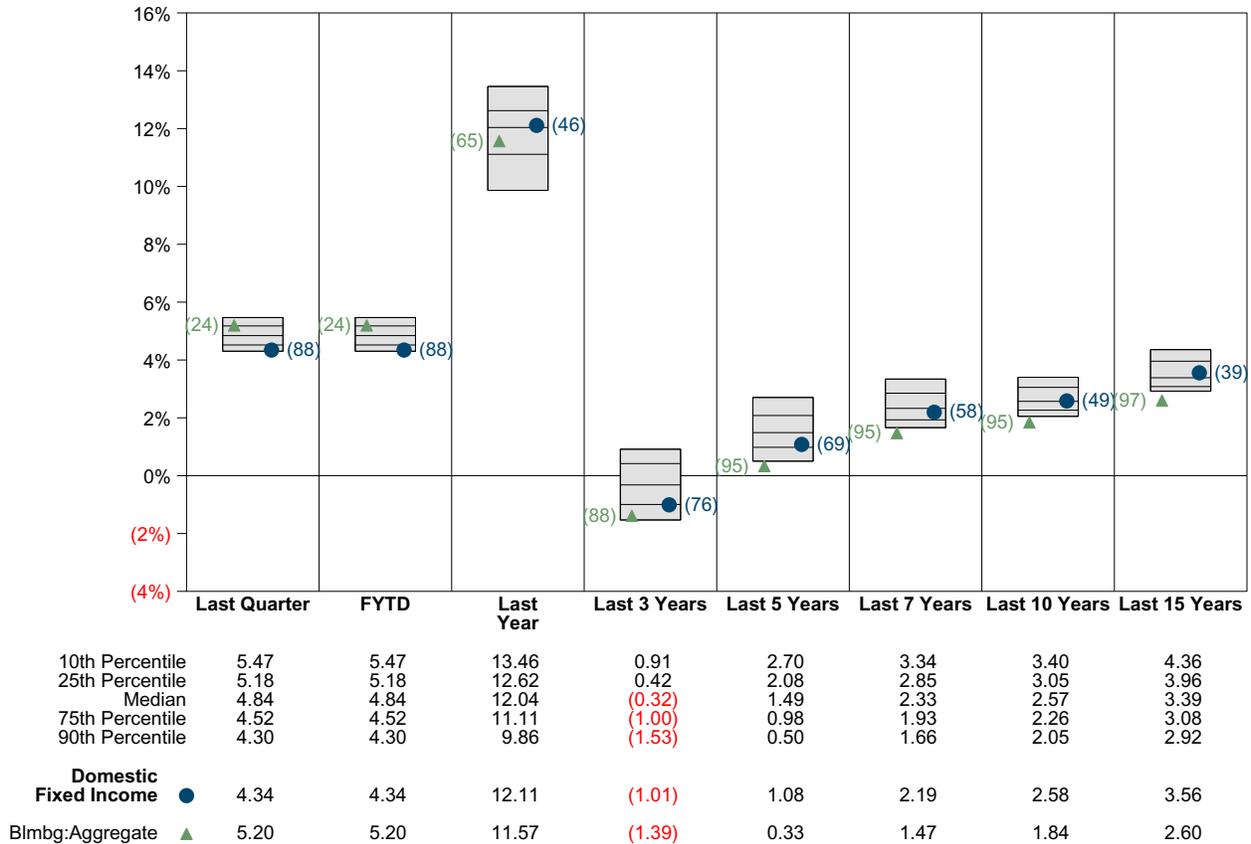
Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 4.34% return for the quarter placing it in the 88 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 46 percentile for the last year.
- Domestic Fixed Income's portfolio underperformed the Blmbg:Aggregate by 0.85% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.54%.

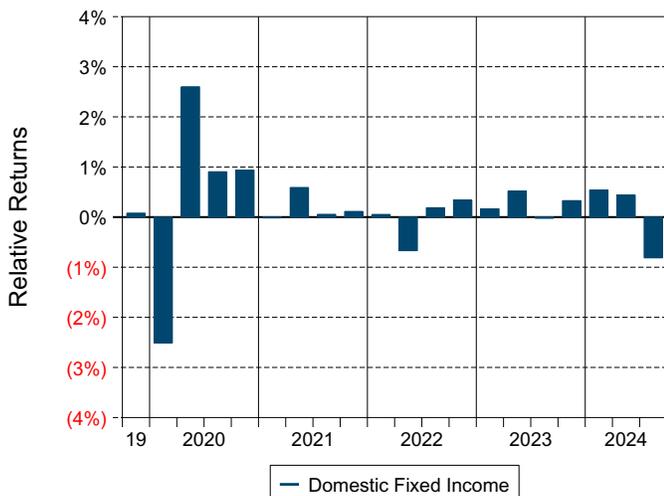
Quarterly Asset Growth

Beginning Market Value	\$4,791,416,148
Net New Investment	\$-1,759,381
Investment Gains/(Losses)	\$208,048,728
Ending Market Value	\$4,997,705,496

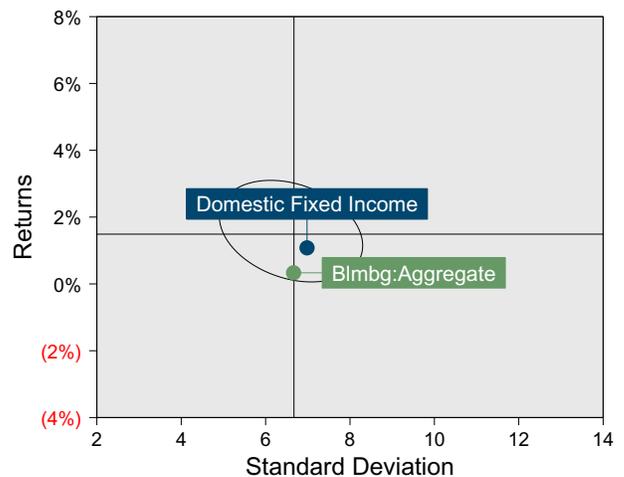
Performance vs Public Fund - Domestic Fixed (Gross)



Relative Return vs Blmbg:Aggregate



Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return

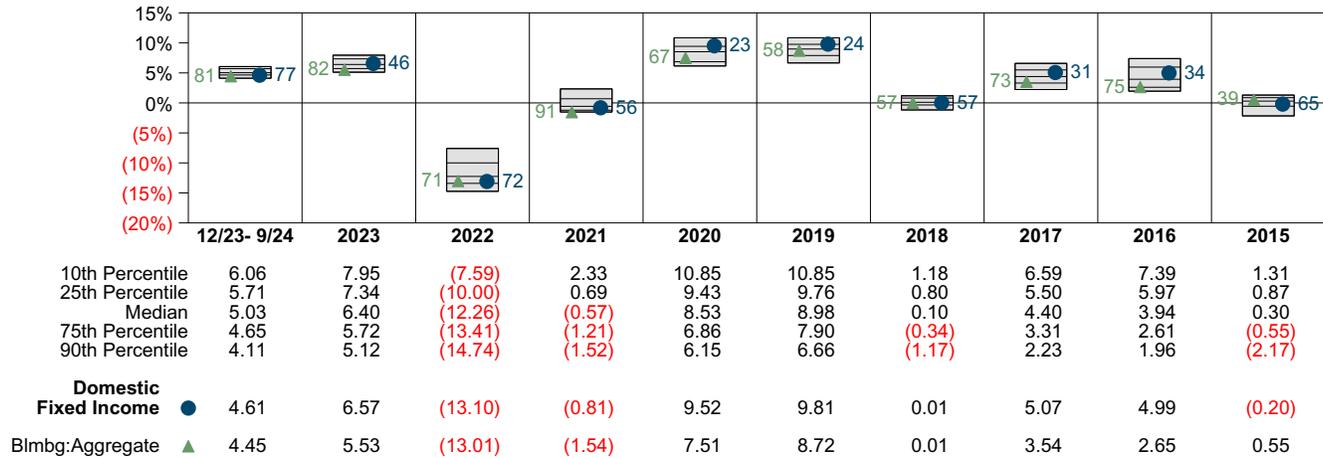


Domestic Fixed Income Return Analysis Summary

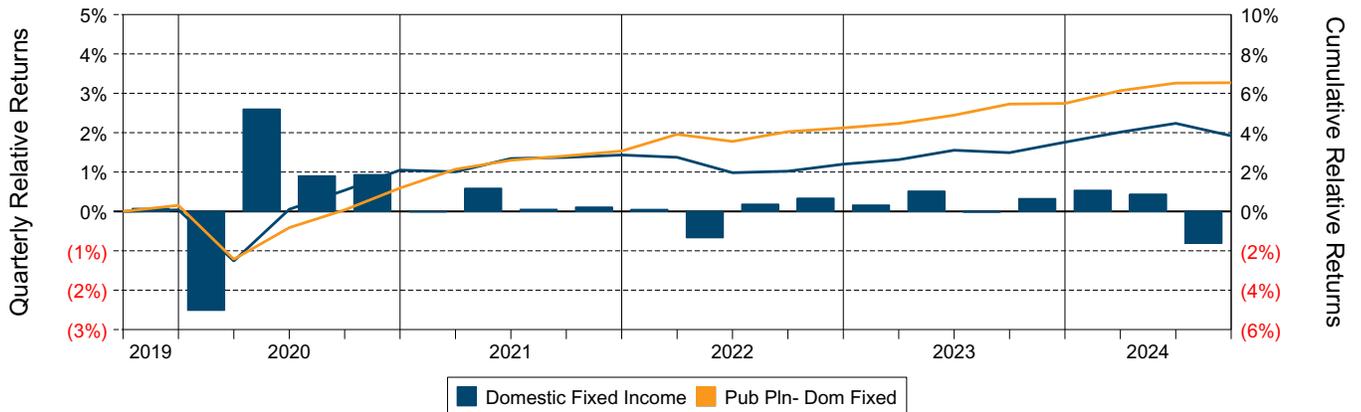
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

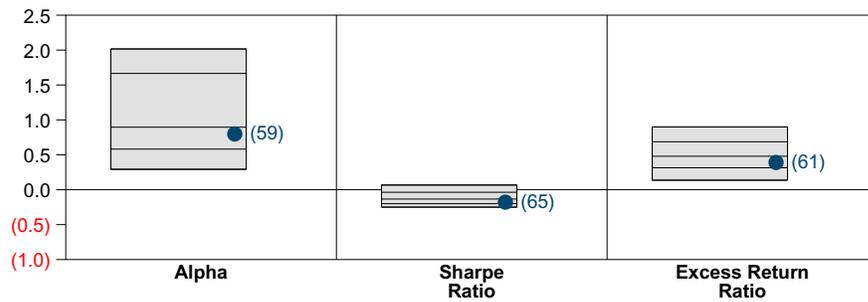
Performance vs Public Fund - Domestic Fixed (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Public Fund - Domestic Fixed (Gross) Five Years Ended September 30, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.02	0.07	0.90
25th Percentile	1.67	(0.04)	0.69
Median	0.90	(0.13)	0.48
75th Percentile	0.58	(0.20)	0.31
90th Percentile	0.29	(0.25)	0.14
Domestic Fixed Income	0.80	(0.18)	0.39

SIT Short Duration FI

Period Ended September 30, 2024

Investment Philosophy

The firm believes the consistent attainment of superior risk-adjusted returns is achievable using a conservative investment management approach with: 1) investment grade securities; 2) special emphasis on interest income; and, 3) significant stability of principal value. To this end, they utilize an active sector rotation strategy which looks for market sectors with strong risk/reward potential. Although they do place a great deal of emphasis on interest rate projection and interest rate movement, they are not duration managers -- as stated above. The Fund's inception date is September 2023.

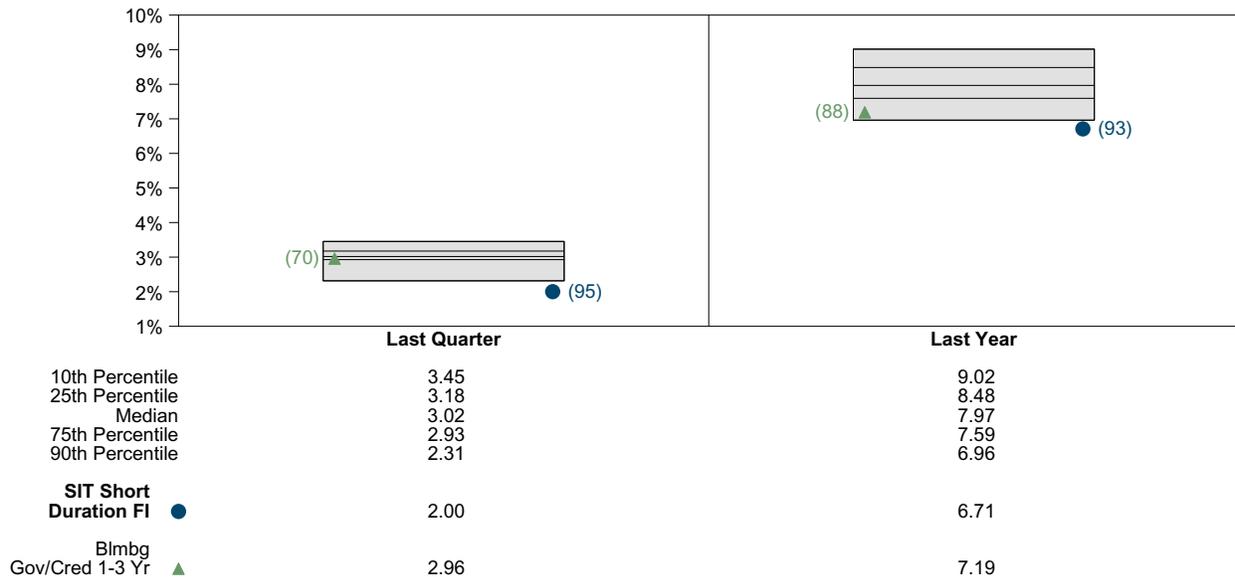
Quarterly Summary and Highlights

- SIT Short Duration FI's portfolio posted a 2.00% return for the quarter placing it in the 95 percentile of the Callan Short Term Fixed Income group for the quarter and in the 93 percentile for the last year.
- SIT Short Duration FI's portfolio underperformed the Blmbg Gov/Cred 1-3 Yr by 0.96% for the quarter and underperformed the Blmbg Gov/Cred 1-3 Yr for the year by 0.48%.

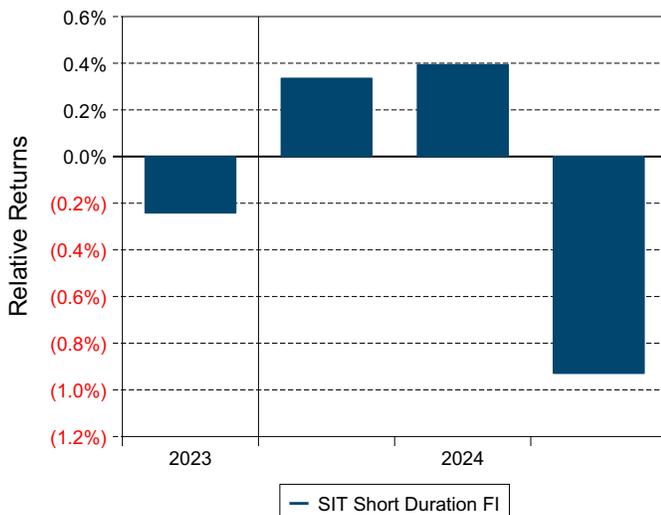
Quarterly Asset Growth

Beginning Market Value	\$1,173,194,966
Net New Investment	\$-376,612
Investment Gains/(Losses)	\$23,474,602
Ending Market Value	\$1,196,292,956

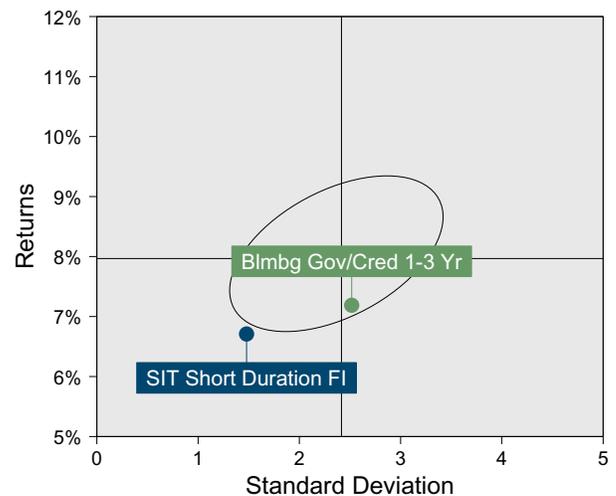
Performance vs Callan Short Term Fixed Income (Gross)



Relative Return vs Blmbg Gov/Cred 1-3 Yr



Callan Short Term Fixed Income (Gross) One Year Risk vs Return



PIMCO

Period Ended September 30, 2024

Investment Philosophy

The Total Return Fund II Fund is a constrained version of the Total Return Fund. The Fund can only invest in fixed income investment grade securities of US issuers and, unlike the larger Total Return Fund, may purchase only investment grade issues. Both funds are co-managed by a team of senior portfolio managers. PIMCO is well-known for its macroeconomic forecasts, which contribute to the top down elements of its investment process while sector teams and analysts help drive the bottom-up security selection choices. Duration is generally maintained within a band of 2 years around the Bloomberg Aggregate benchmark. There are no limitations on the use of derivatives. The Fund's inception date is July 1983.

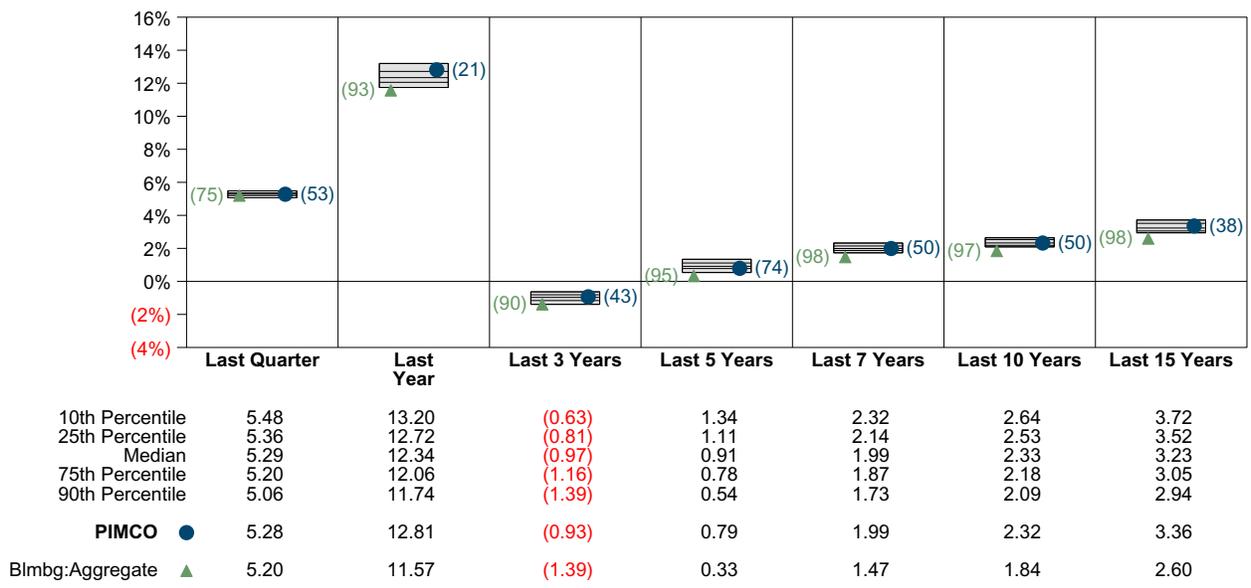
Quarterly Summary and Highlights

- PIMCO's portfolio posted a 5.28% return for the quarter placing it in the 53 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 21 percentile for the last year.
- PIMCO's portfolio outperformed the Blmbg:Aggregate by 0.08% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.24%.

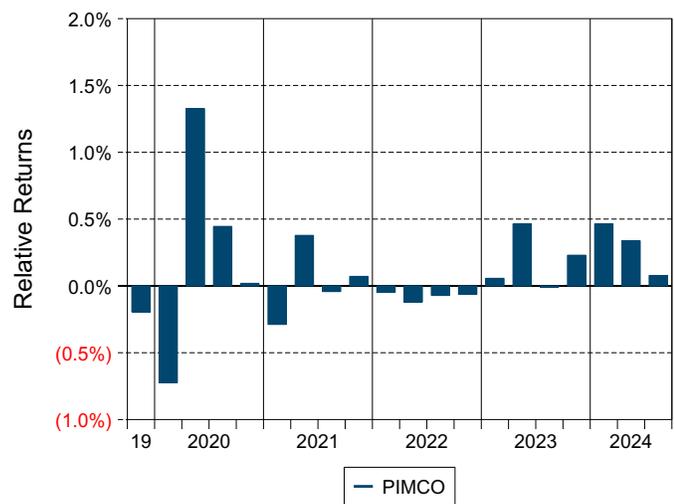
Quarterly Asset Growth

Beginning Market Value	\$665,901,093
Net New Investment	\$-249,713
Investment Gains/(Losses)	\$35,140,655
Ending Market Value	\$700,792,035

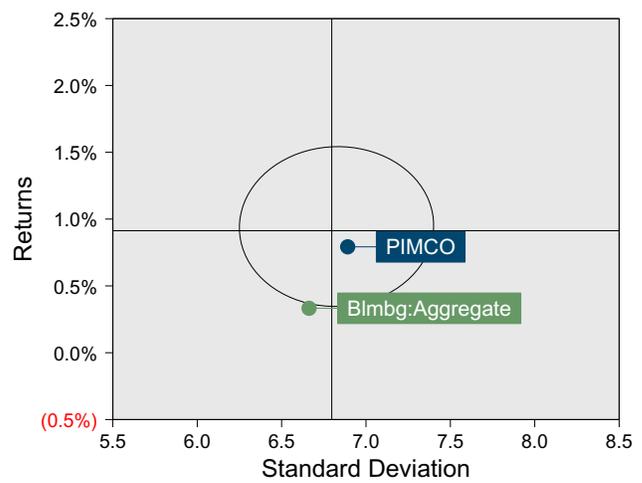
Performance vs Callan Core Bond Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



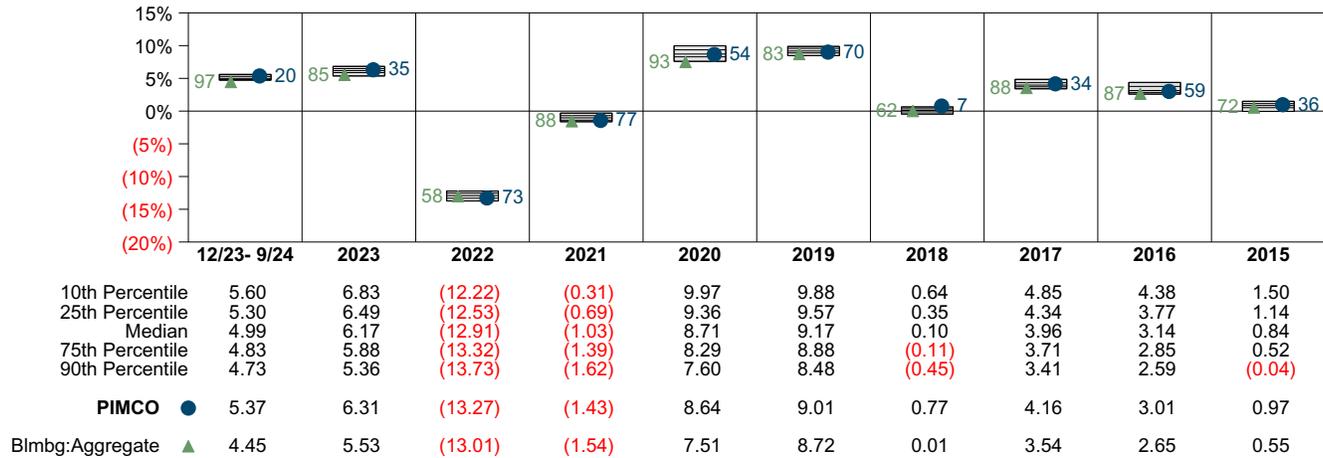
PIMCO

Return Analysis Summary

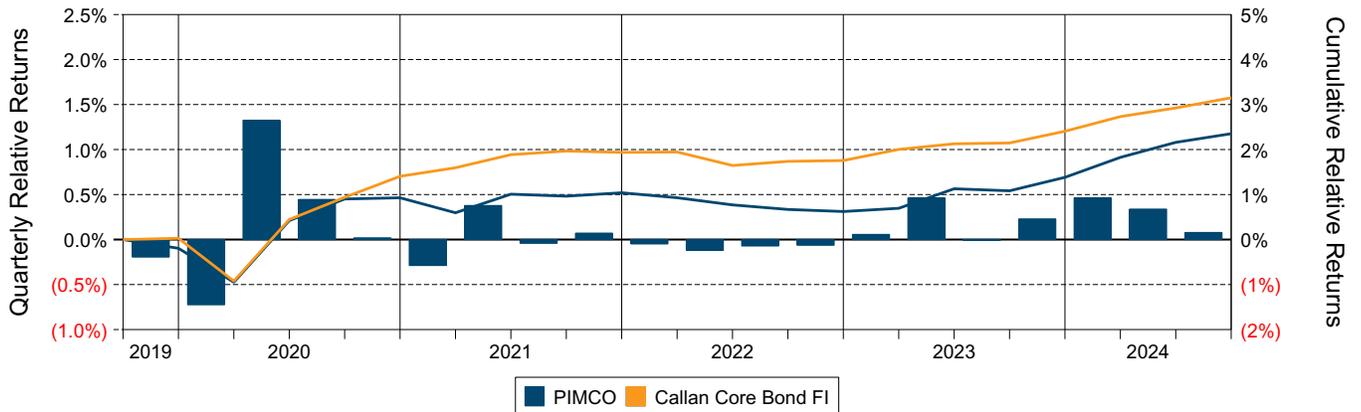
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

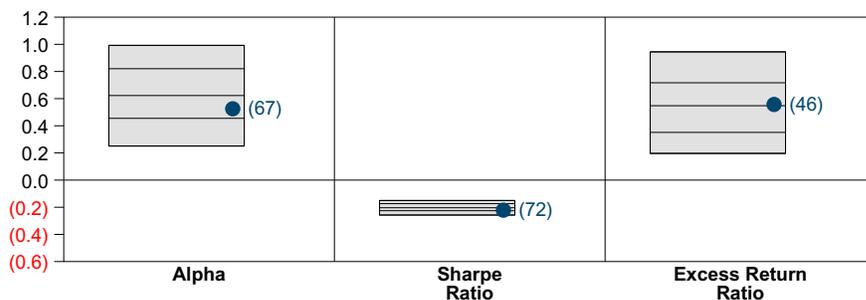
Performance vs Callan Core Bond Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended September 30, 2024



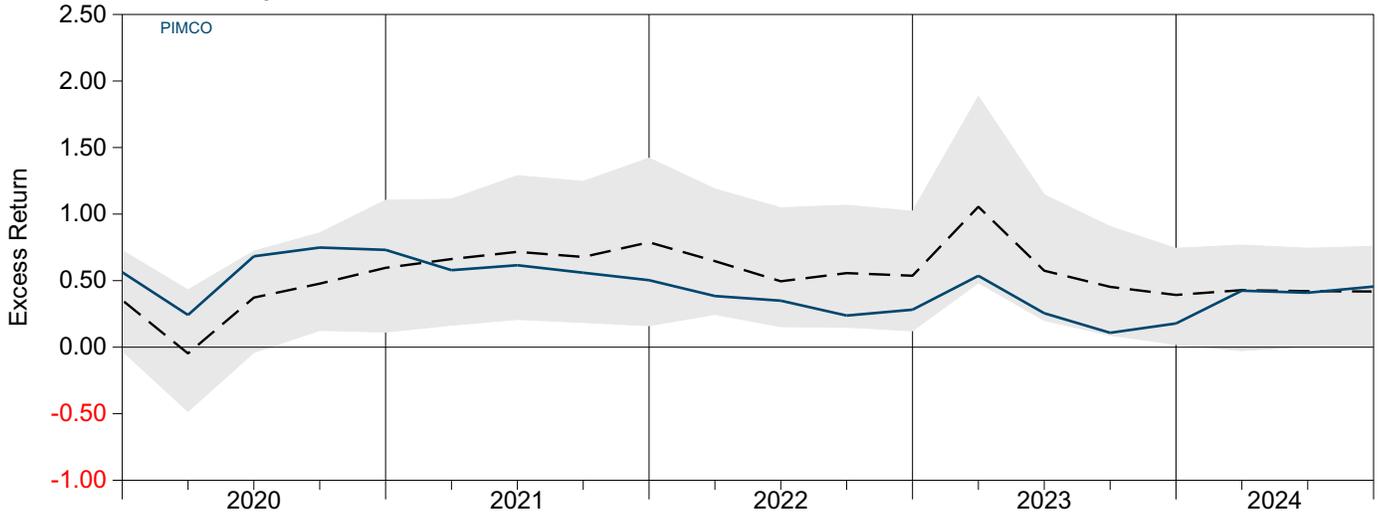
PIMCO

Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

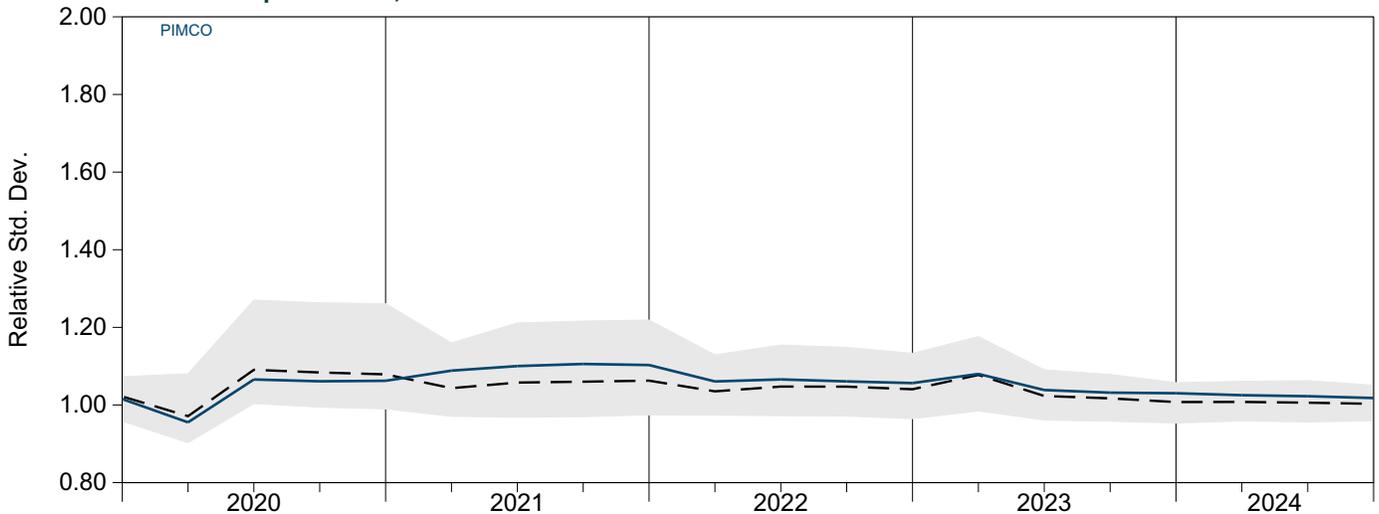
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Bond FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate
Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.53%	0.44%
% Positive Periods	95%	100%
Average Ranking	50	58

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate
Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.04%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	41

Manulife Asset Management Period Ended September 30, 2024

Investment Philosophy

Manulife believes strong performance can be generated through bottom-up active management of sector allocation, issue selection and yield curve positioning. The team's disciplined investment process seeks to add value by: following a relative value approach to sector allocation and issue selection, engaging in intensive fundamental credit research and identifying points on the yield curve with the greatest return potential. Additionally the team seeks to maintain a yield that is above the benchmark yield in order to reduce portfolio volatility. The Fund's inception date is March 2017.

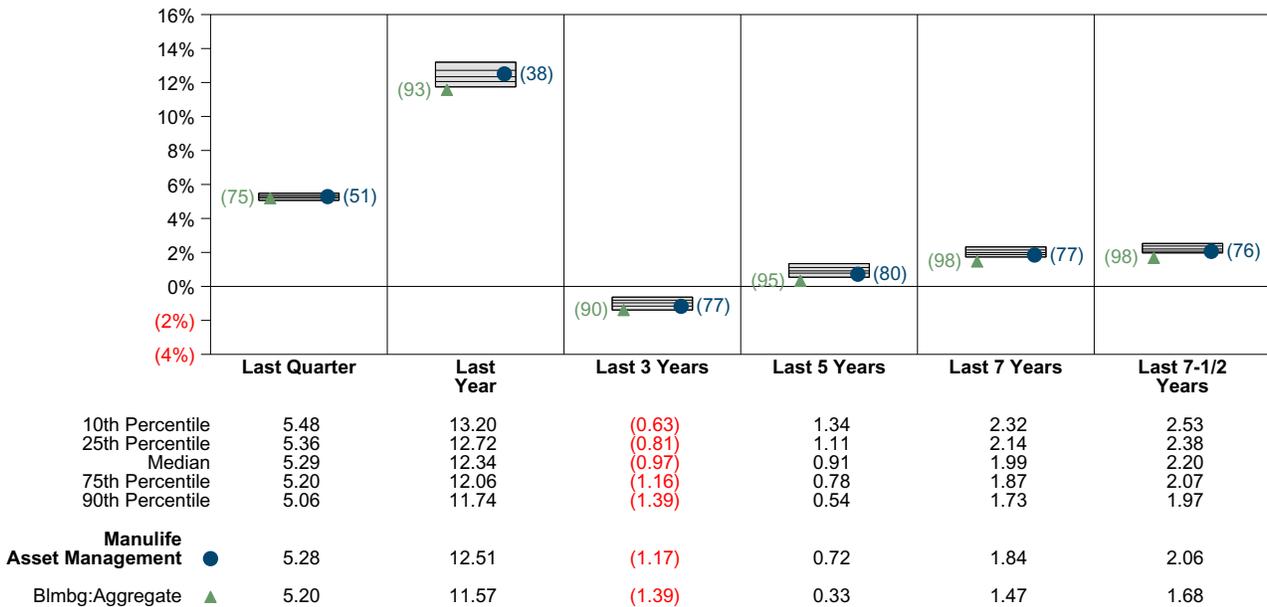
Quarterly Summary and Highlights

- Manulife Asset Management's portfolio posted a 5.28% return for the quarter placing it in the 51 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 38 percentile for the last year.
- Manulife Asset Management's portfolio outperformed the Blmbg:Aggregate by 0.09% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.94%.

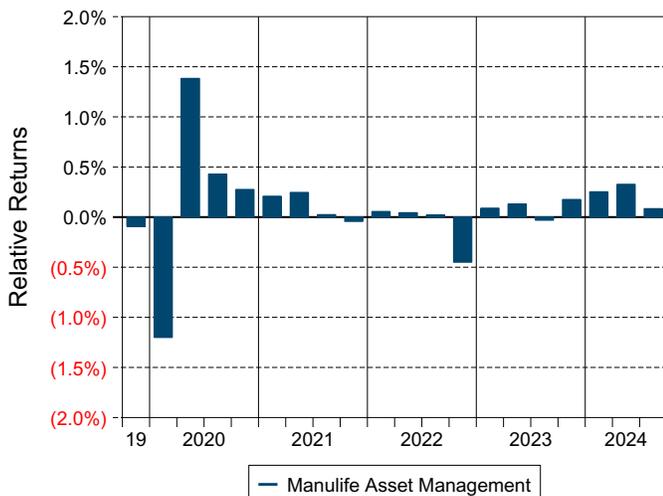
Quarterly Asset Growth

Beginning Market Value	\$662,034,012
Net New Investment	\$-244,212
Investment Gains/(Losses)	\$34,980,896
Ending Market Value	\$696,770,696

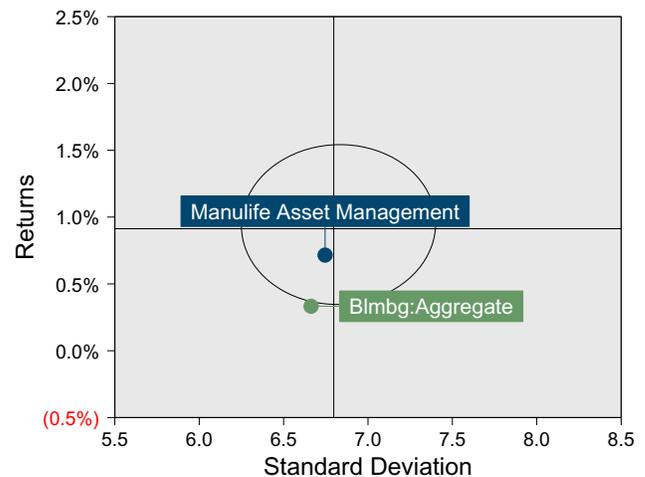
Performance vs Callan Core Bond Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return

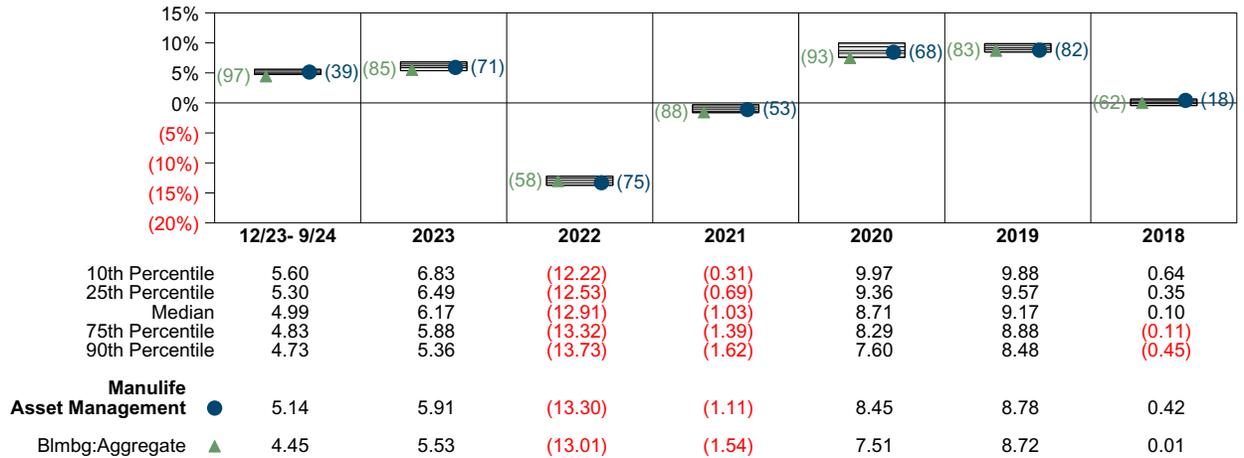


Manulife Asset Management Return Analysis Summary

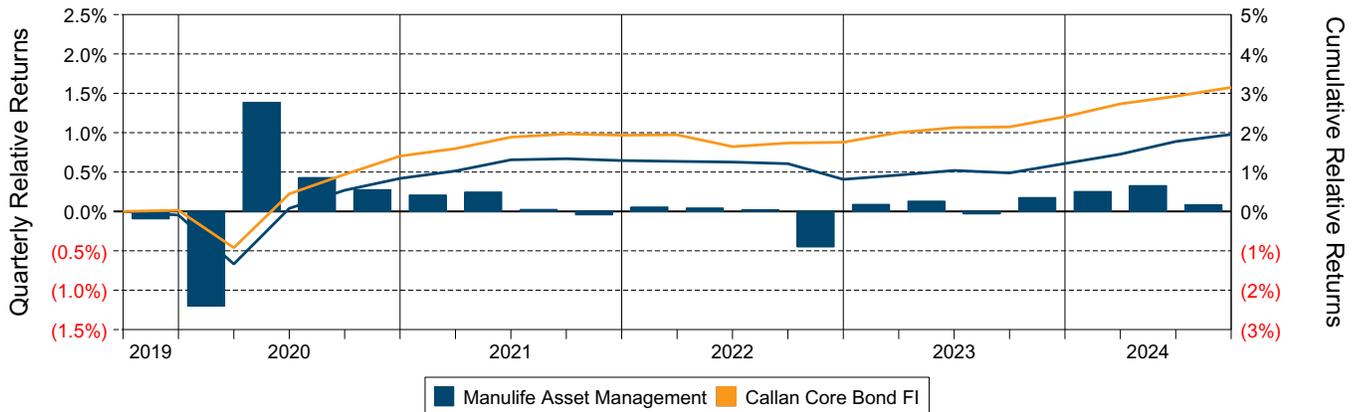
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

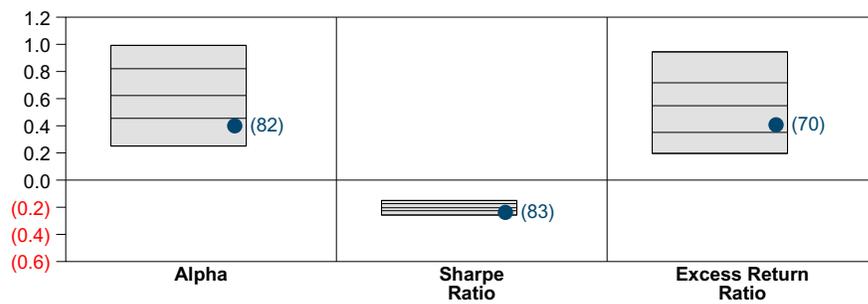
Performance vs Callan Core Bond Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended September 30, 2024



Loomis Sayles

Period Ended September 30, 2024

Investment Philosophy

This Loomis Core Plus strategy strives to outperform the Bloomberg Aggregate by 100 to 175 bps over a market cycle. The strategy incorporates both top-down and bottom-up elements and adds value through active sector rotation, security selection, curve positioning and duration. The Fund can purchase up to 20% in non-investment grade securities and up to 10% in non-dollar securities, including local currency emerging markets debt. Duration is generally within two years of the benchmark. The Fund's inception date is September 2009.

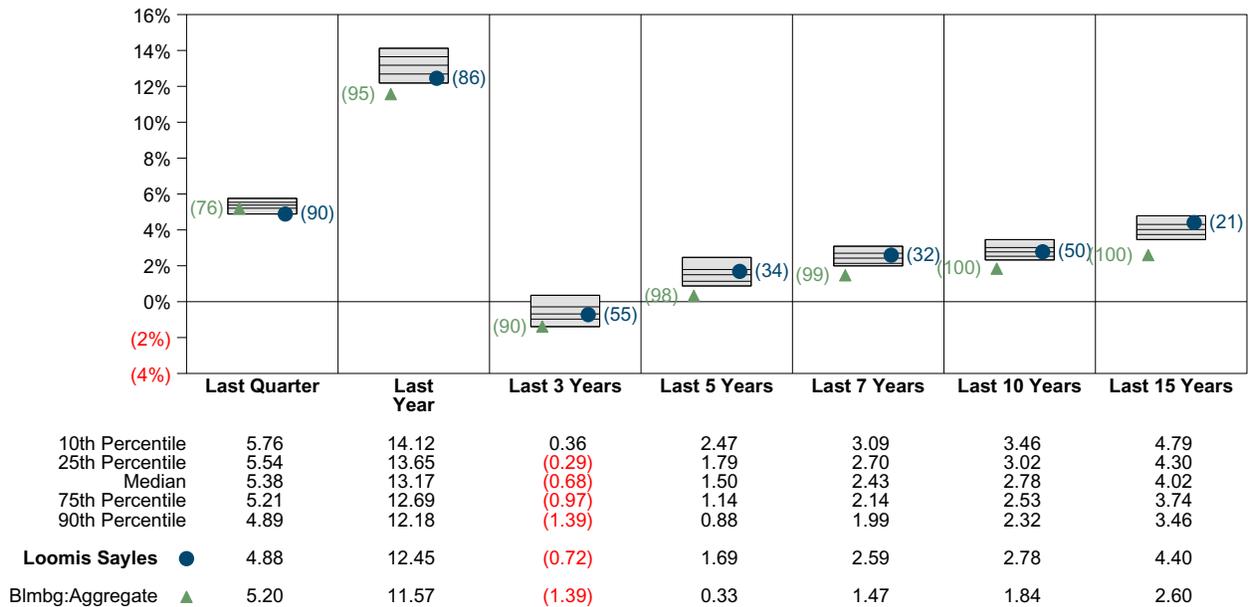
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a 4.88% return for the quarter placing it in the 90 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 86 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Blmbg:Aggregate by 0.31% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.88%.

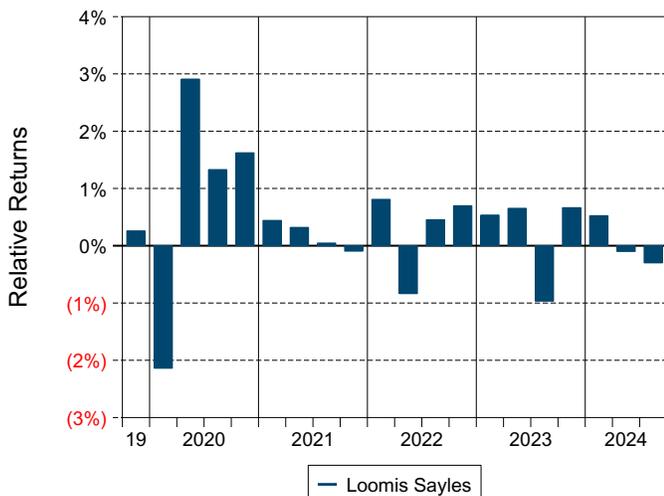
Quarterly Asset Growth

Beginning Market Value	\$1,130,178,614
Net New Investment	\$-498,817
Investment Gains/(Losses)	\$55,178,530
Ending Market Value	\$1,184,858,328

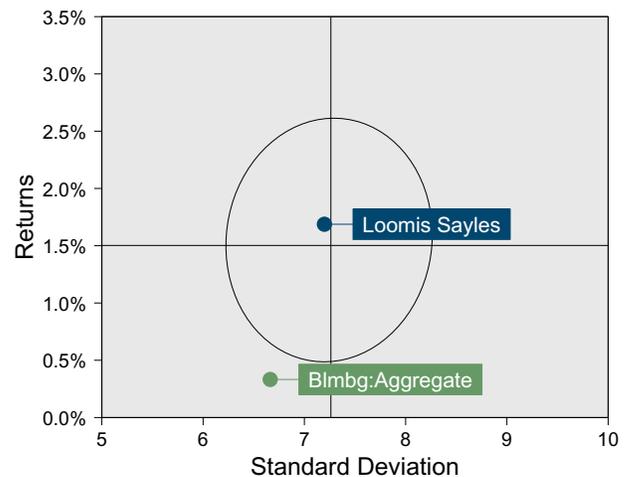
Performance vs Callan Core Plus Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return

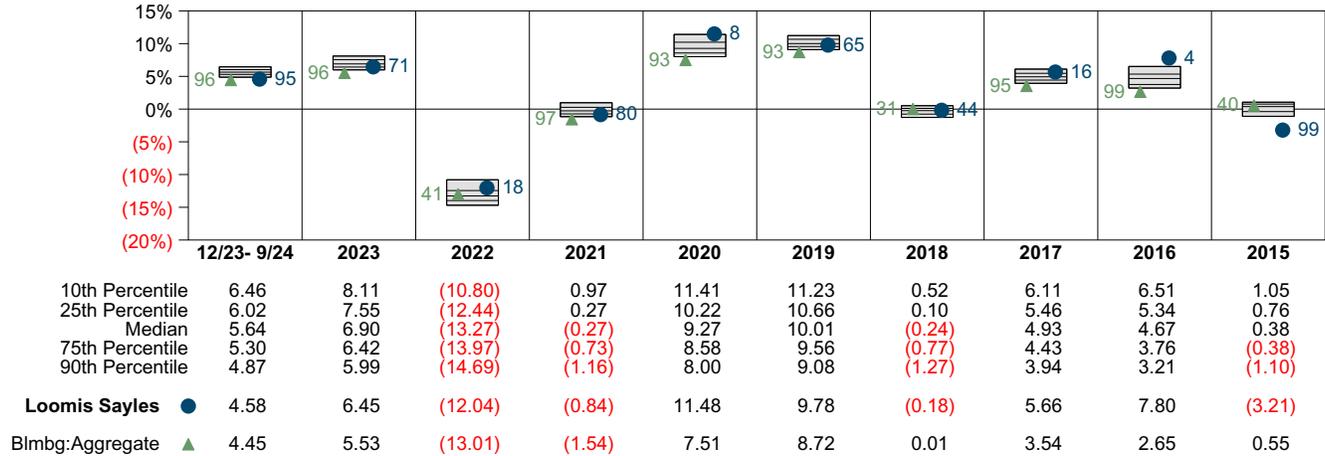


Loomis Sayles Return Analysis Summary

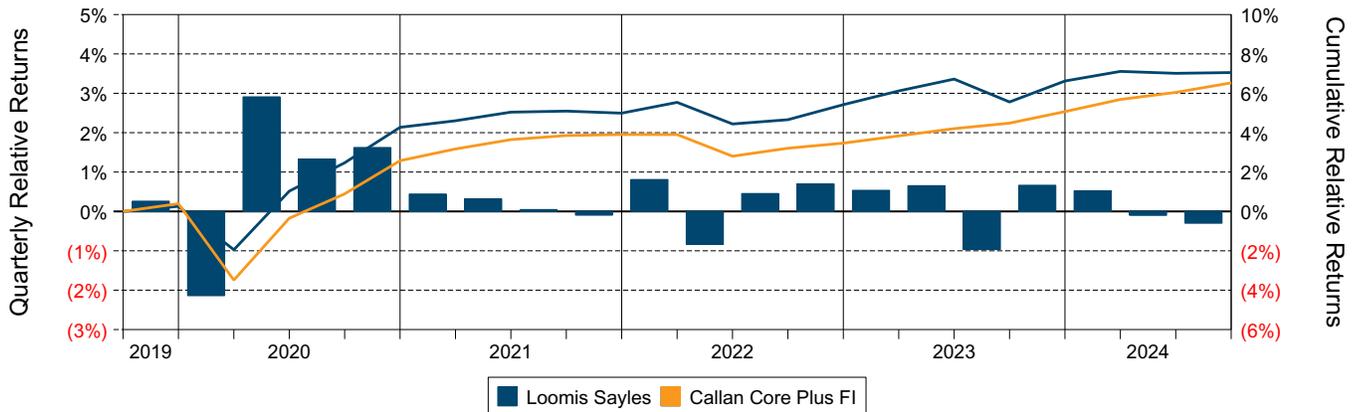
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

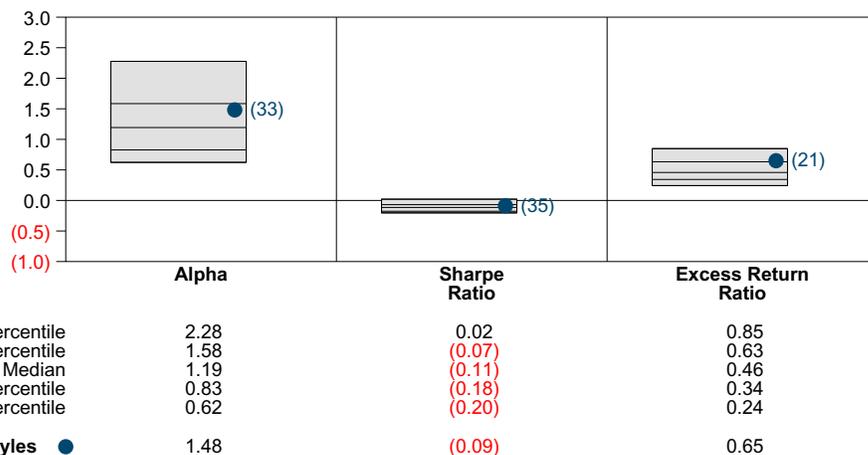
Performance vs Callan Core Plus Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended September 30, 2024



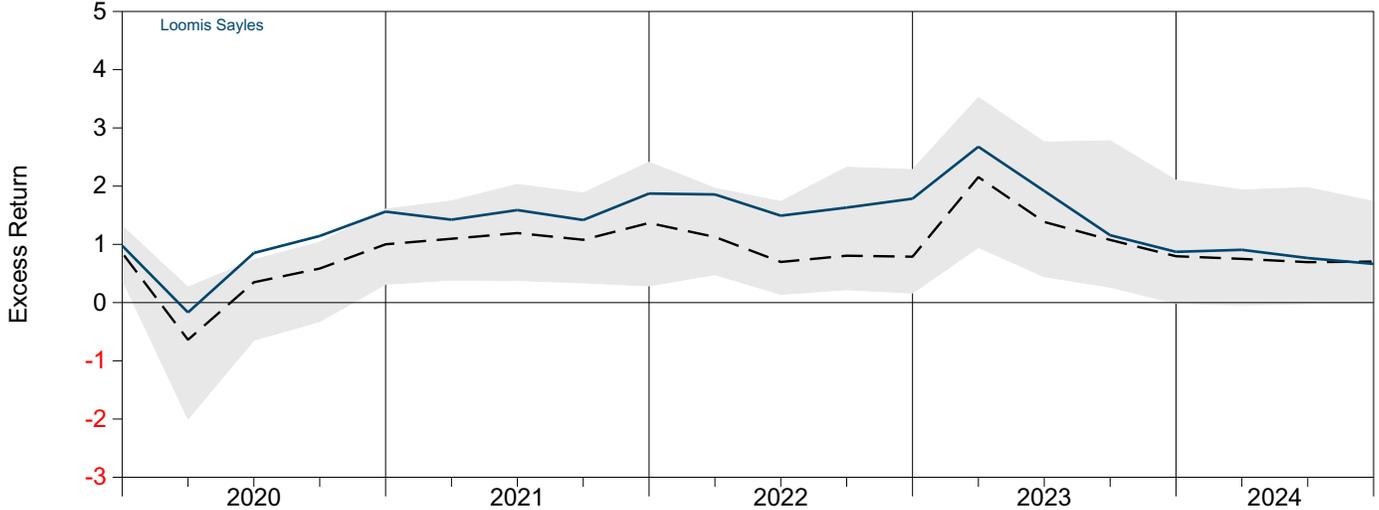
Loomis Sayles

Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

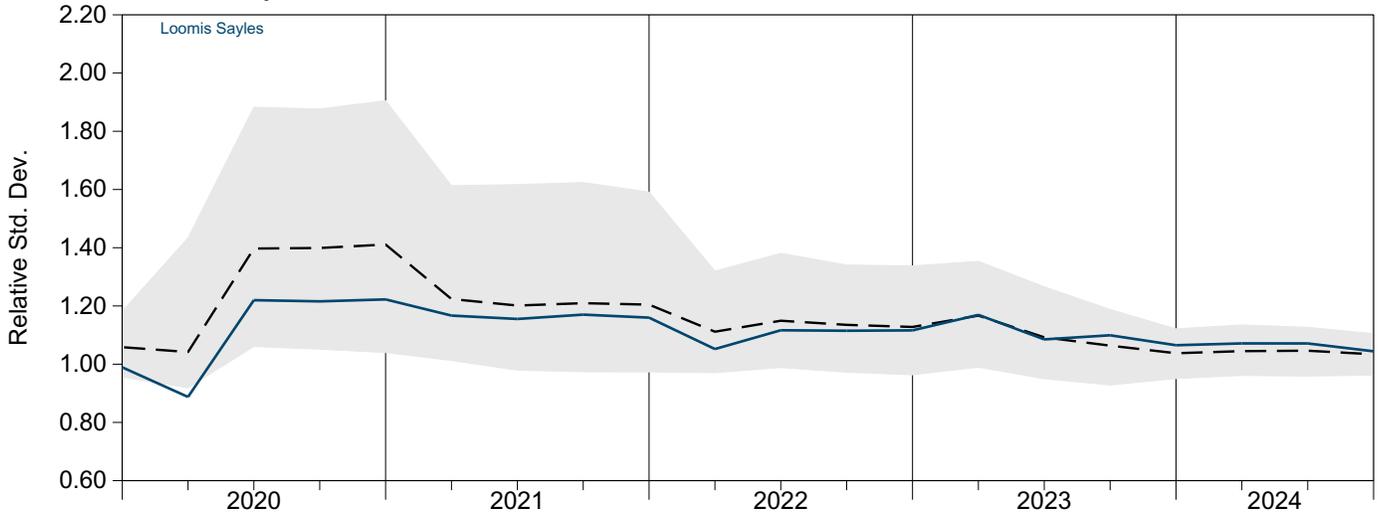
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate
Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.89%	1.32%
% Positive Periods	95%	95%
Average Ranking	50	26

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate
Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.16%	1.11%
% Positive Periods	100%	100%
Average Ranking	50	57

Prudential Core Plus Period Ended September 30, 2024

Investment Philosophy

The PGIM Core Plus strategy is an actively managed strategy that seeks +150 bps over the Bloomberg Aggregate Index. Portfolio duration is kept within +/- 20% of its benchmark. The lead portfolio managers are Mike Collins, Rich Piccirillo and Greg Peters. (Please note Collins is set to retire in April 2024). The Fund's inception date is January 2012.

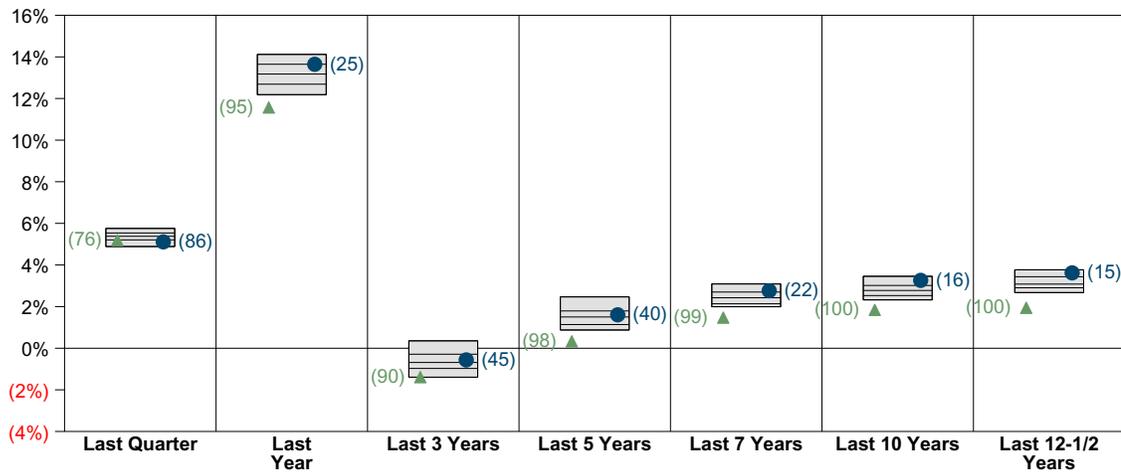
Quarterly Summary and Highlights

- Prudential Core Plus's portfolio posted a 5.11% return for the quarter placing it in the 86 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 25 percentile for the last year.
- Prudential Core Plus's portfolio underperformed the Blmbg:Aggregate by 0.09% for the quarter and outperformed the Blmbg:Aggregate for the year by 2.08%.

Quarterly Asset Growth

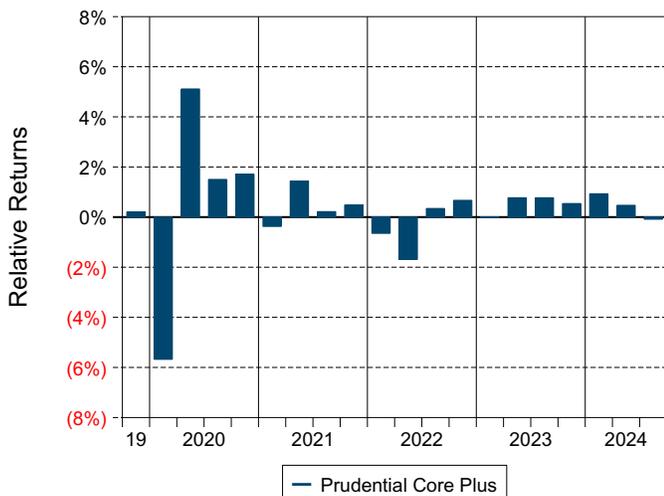
Beginning Market Value	\$1,160,107,602
Net New Investment	\$-390,027
Investment Gains/(Losses)	\$59,274,047
Ending Market Value	\$1,218,991,622

Performance vs Callan Core Plus Fixed Income (Gross)

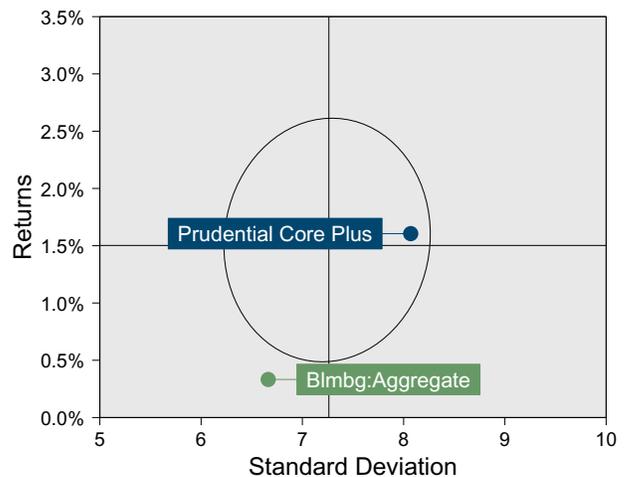


		Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-1/2 Years
10th Percentile		5.76	14.12	0.36	2.47	3.09	3.46	3.77
25th Percentile		5.54	13.65	(0.29)	1.79	2.70	3.02	3.43
Median		5.38	13.17	(0.68)	1.50	2.43	2.78	3.08
75th Percentile		5.21	12.69	(0.97)	1.14	2.14	2.53	2.90
90th Percentile		4.89	12.18	(1.39)	0.88	1.99	2.32	2.67
Prudential Core Plus	●	5.11	13.64	(0.56)	1.61	2.76	3.26	3.62
Blmbg:Aggregate	▲	5.20	11.57	(1.39)	0.33	1.47	1.84	1.94

Relative Return vs Blmbg:Aggregate



Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return

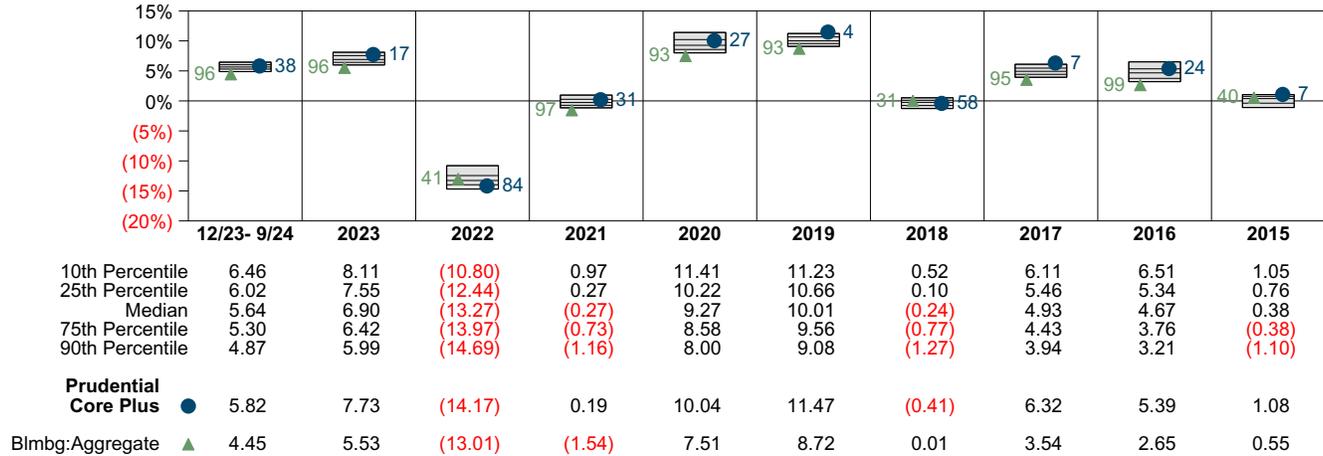


Prudential Core Plus Return Analysis Summary

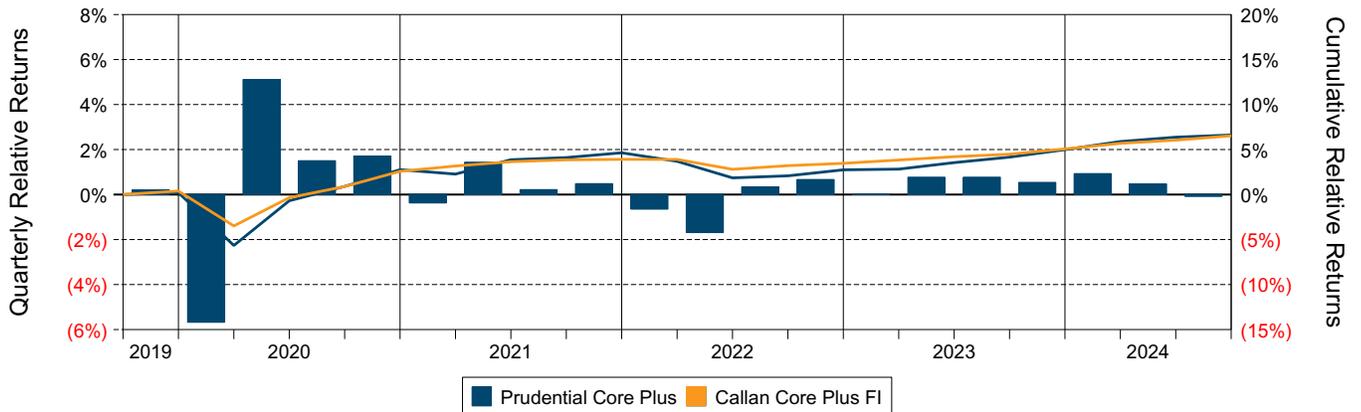
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

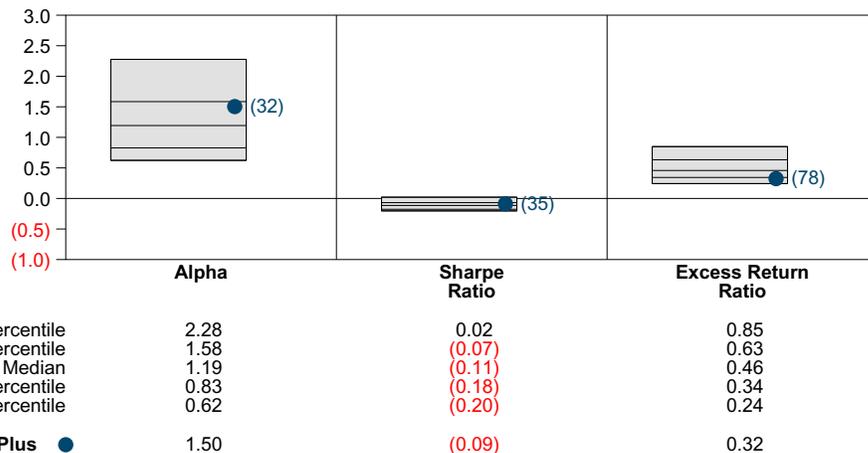
Performance vs Callan Core Plus Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Bmbg:Aggregate



Risk Adjusted Return Measures vs Bmbg:Aggregate Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended September 30, 2024

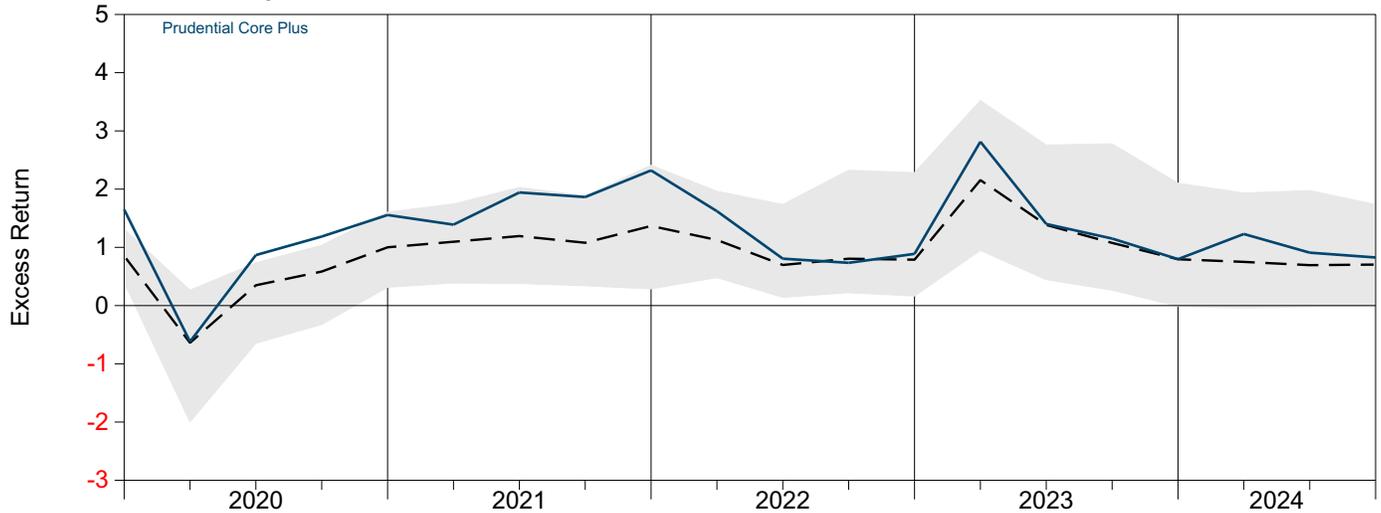


Prudential Core Plus Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

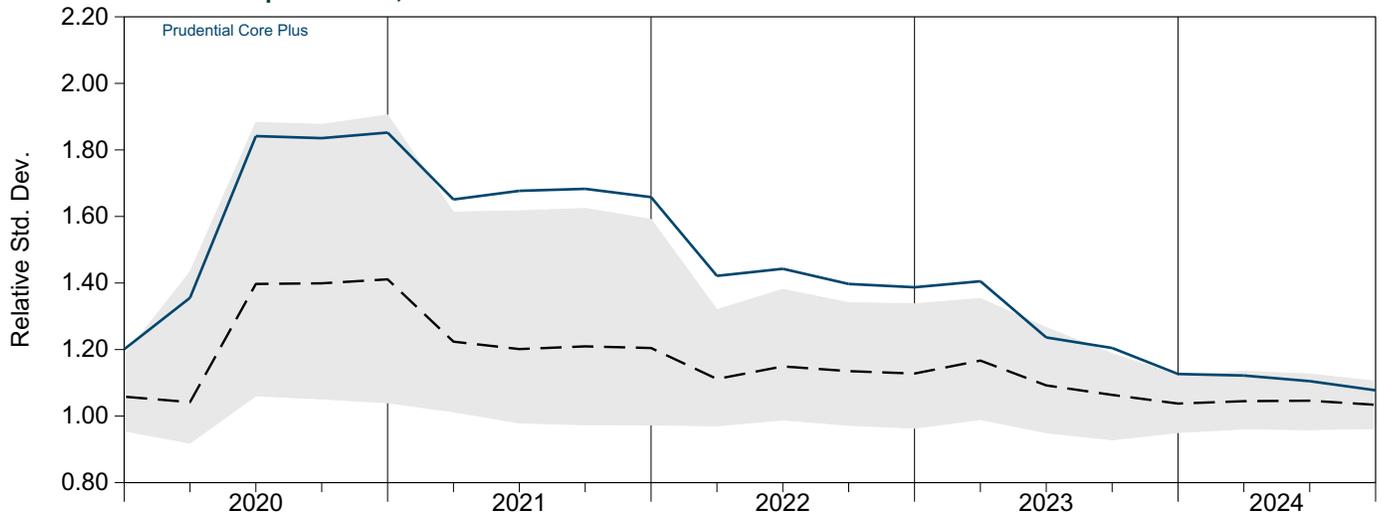
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.89%	1.27%
% Positive Periods	95%	95%
Average Ranking	50	29

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate Five Years Ended September 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.16%	1.43%
% Positive Periods	100%	100%
Average Ranking	50	10

Wellington EMD

Period Ended September 30, 2024

Investment Philosophy

Wellington is stable, experienced and deeply resourced at the portfolio management and research levels. Its research-intensive approach is a key element that has contributed to the success of this strategy. It is a solid option for exposure to primarily U.S. dollar-denominated, sovereign, emerging markets debt. The Fund's inception date is May 2010.

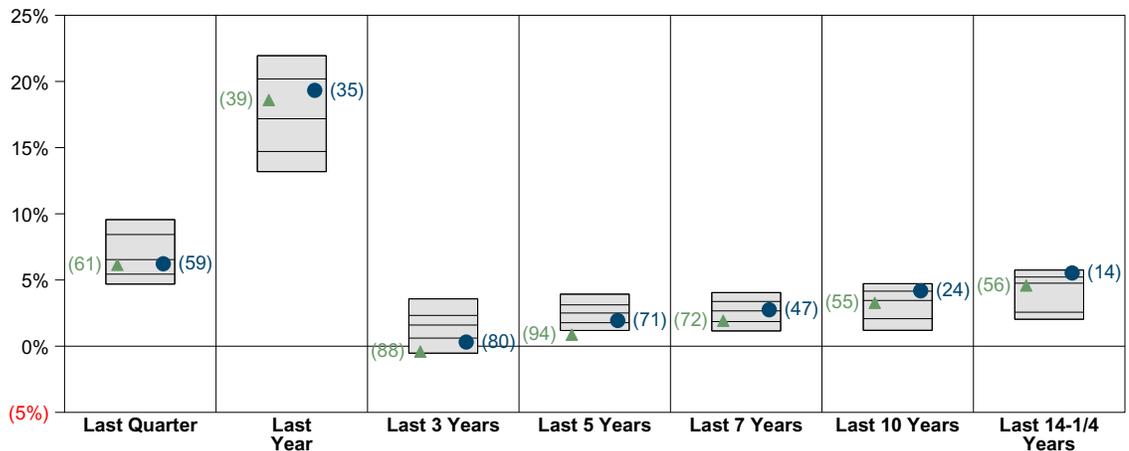
Quarterly Summary and Highlights

- Wellington EMD's portfolio posted a 6.23% return for the quarter placing it in the 59 percentile of the Emerging Debt Database group for the quarter and in the 35 percentile for the last year.
- Wellington EMD's portfolio outperformed the JPM:EMBI Global Divsfd by 0.07% for the quarter and outperformed the JPM:EMBI Global Divsfd for the year by 0.73%.

Quarterly Asset Growth

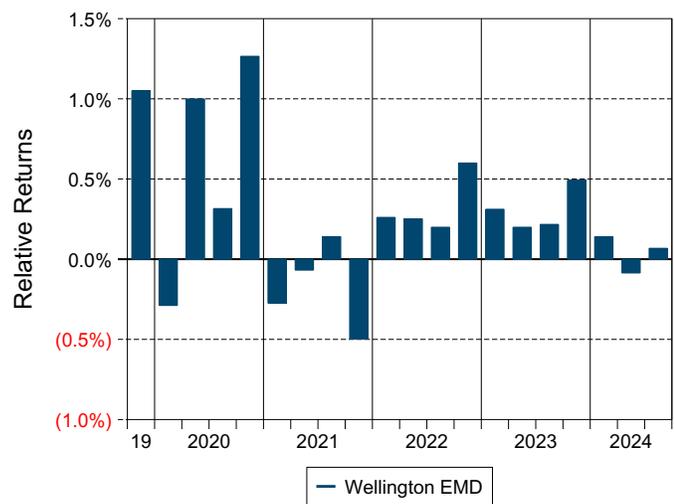
Beginning Market Value	\$708,865,358
Net New Investment	\$-809,974
Investment Gains/(Losses)	\$44,112,565
Ending Market Value	\$752,167,950

Performance vs Emerging Debt Database (Gross)

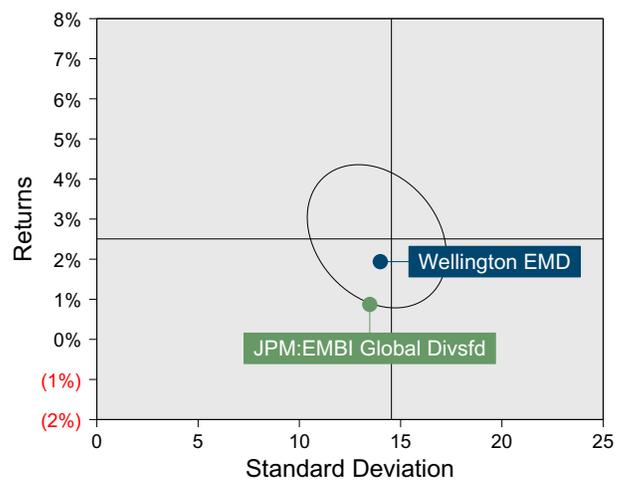


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 14-1/4 Years
10th Percentile	9.56	21.95	3.58	3.93	4.05	4.72	5.75
25th Percentile	8.44	20.19	2.32	3.12	3.38	4.16	5.22
Median	6.54	17.18	1.60	2.51	2.67	3.45	4.76
75th Percentile	5.44	14.71	0.61	1.77	1.86	2.08	2.57
90th Percentile	4.69	13.19	(0.53)	1.19	1.15	1.20	2.03
Wellington EMD	6.23	19.33	0.31	1.94	2.75	4.18	5.53
JPM:EMBI Global Divsfd	6.15	18.60	(0.40)	0.87	1.92	3.28	4.58

Relative Return vs JPM:EMBI Global Divsfd



Emerging Debt Database (Gross) Annualized Five Year Risk vs Return

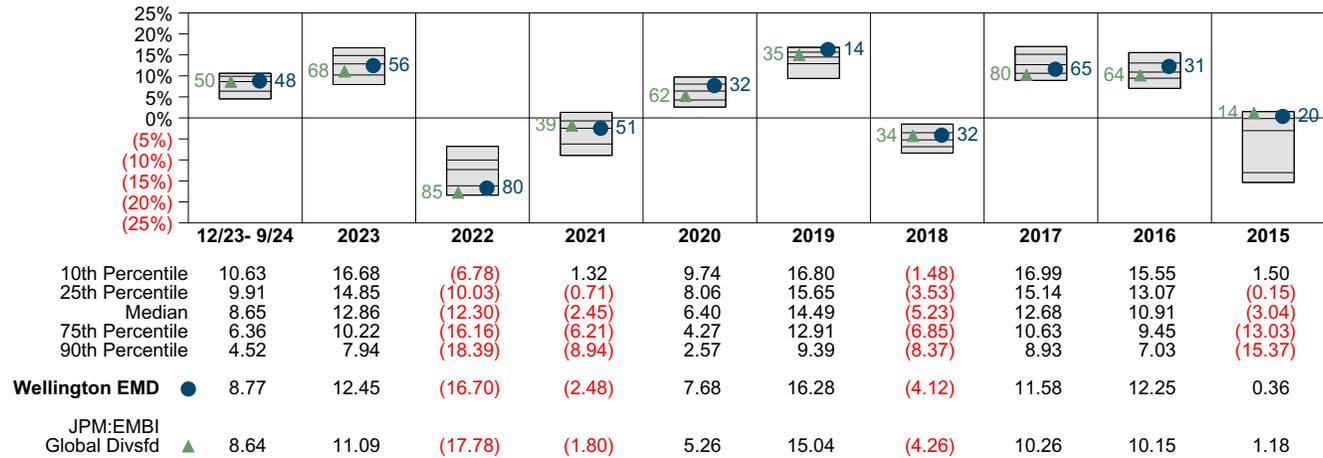


Wellington EMD Return Analysis Summary

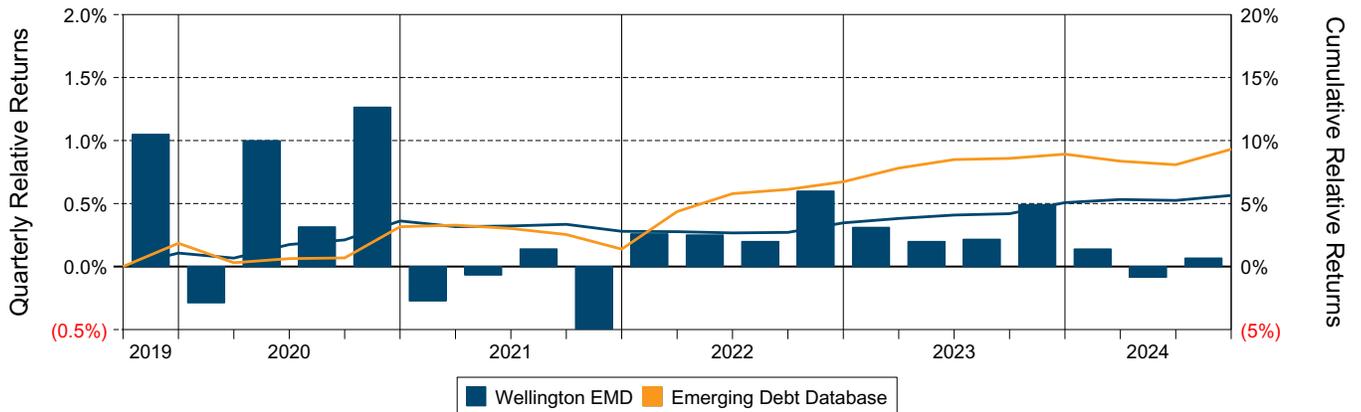
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

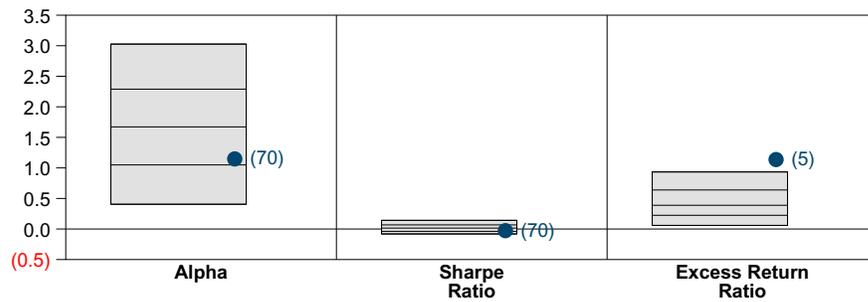
Performance vs Emerging Debt Database (Gross)



Cumulative and Quarterly Relative Returns vs JPM:EMBI Global Divsfd



Risk Adjusted Return Measures vs JPM:EMBI Global Divsfd Rankings Against Emerging Debt Database (Gross) Five Years Ended September 30, 2024



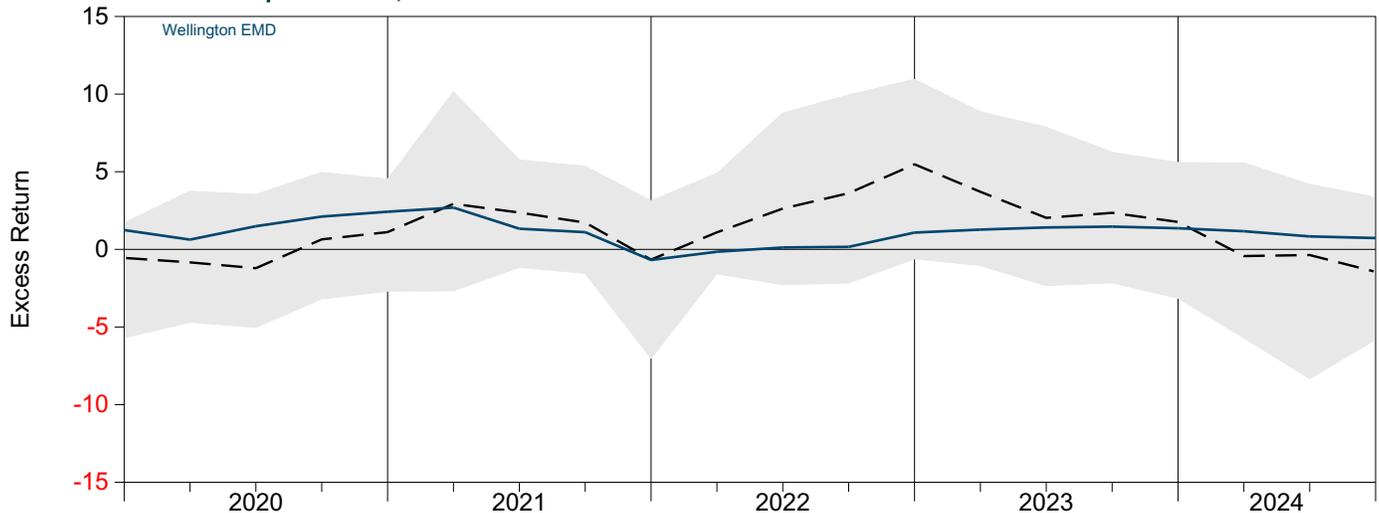
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.03	0.14	0.93
25th Percentile	2.29	0.07	0.64
Median	1.67	0.01	0.39
75th Percentile	1.05	(0.04)	0.22
90th Percentile	0.40	(0.08)	0.06
Wellington EMD	● 1.15	(0.03)	1.14

Wellington EMD Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

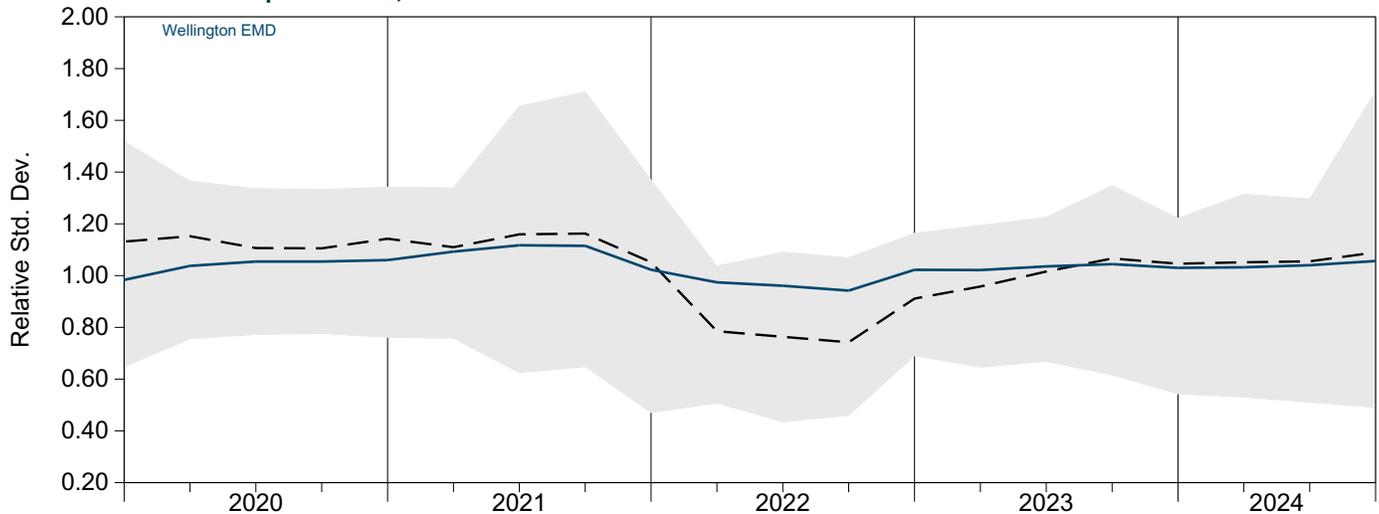
The first chart below illustrates the consistency of excess return over rolling one year periods versus the JPM:EMBI Global Divsfd. The gray area represents the range of excess return for the 10th through 90th percentile for the Emerging Debt Database. The second chart below illustrates the consistency of relative std. dev. over rolling one year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling One Year Excess Return Relative to JPM:EMBI Global Divsfd Five Years Ended September 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.30%	1.09%
% Positive Periods	65%	90%
Average Ranking	50	50

Rolling One Year Relative Std. Dev. Relative to JPM:EMBI Global Divsfd Five Years Ended September 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.03%	1.03%
% Positive Periods	100%	100%
Average Ranking	50	50

Global Fixed Income Period Ended September 30, 2024

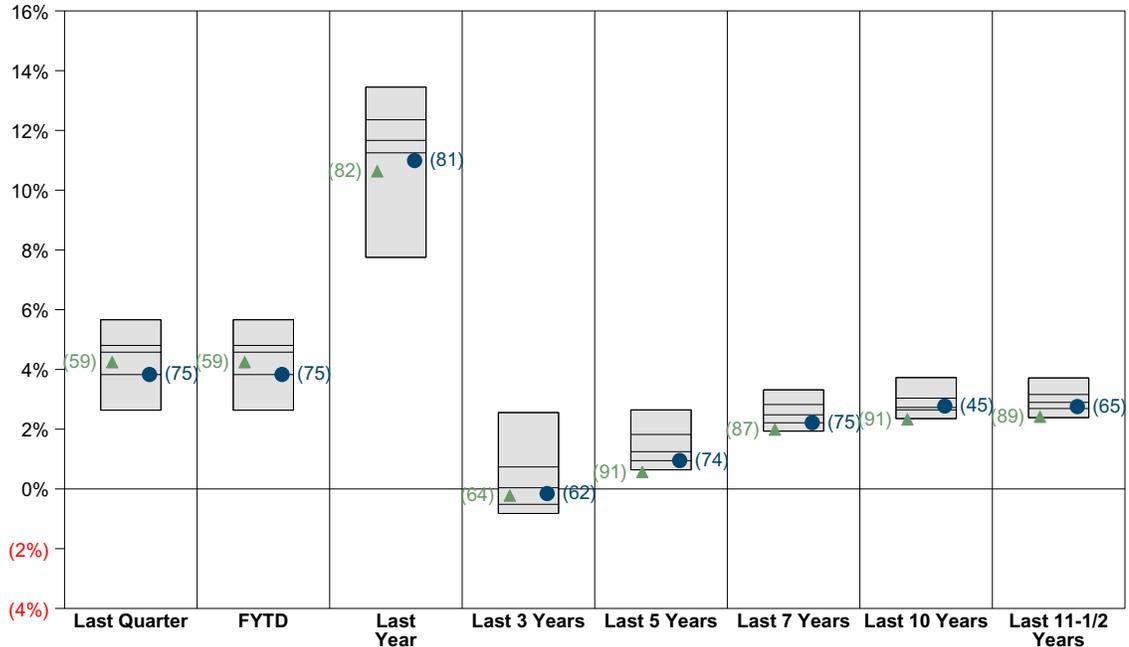
Quarterly Summary and Highlights

- Global Fixed Income's portfolio posted a 3.83% return for the quarter placing it in the 75 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 81 percentile for the last year.
- Global Fixed Income's portfolio underperformed the Blmbg Glb Agg Hdg by 0.41% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.36%.

Quarterly Asset Growth

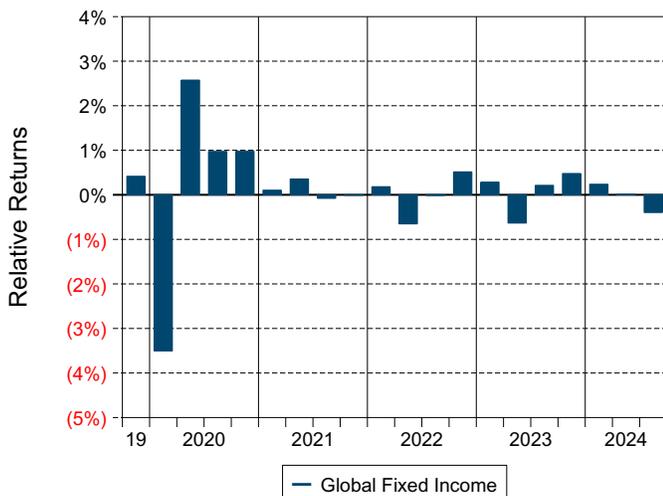
Beginning Market Value	\$1,528,549,529
Net New Investment	\$-904,028
Investment Gains/(Losses)	\$58,551,158
Ending Market Value	\$1,586,196,659

Performance vs Callan Global Fixed Income (Hedged) (Gross)

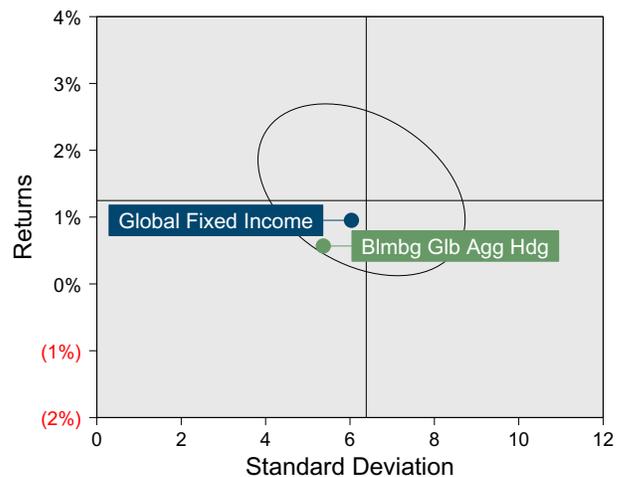


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-1/2 Years
10th Percentile	5.66	5.66	13.45	2.56	2.65	3.32	3.73	3.72
25th Percentile	4.80	4.80	12.36	0.74	1.82	2.83	3.04	3.16
Median	4.58	4.58	11.67	0.04	1.25	2.48	2.73	2.90
75th Percentile	3.83	3.83	11.25	(0.51)	0.95	2.21	2.65	2.69
90th Percentile	2.64	2.64	7.75	(0.82)	0.64	1.94	2.35	2.39
Global Fixed Income	● 3.83	3.83	10.99	(0.15)	0.95	2.22	2.78	2.76
Blmbg Glb Agg Hdg	▲ 4.24	4.24	10.63	(0.22)	0.57	1.99	2.33	2.42

Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Five Year Risk vs Return

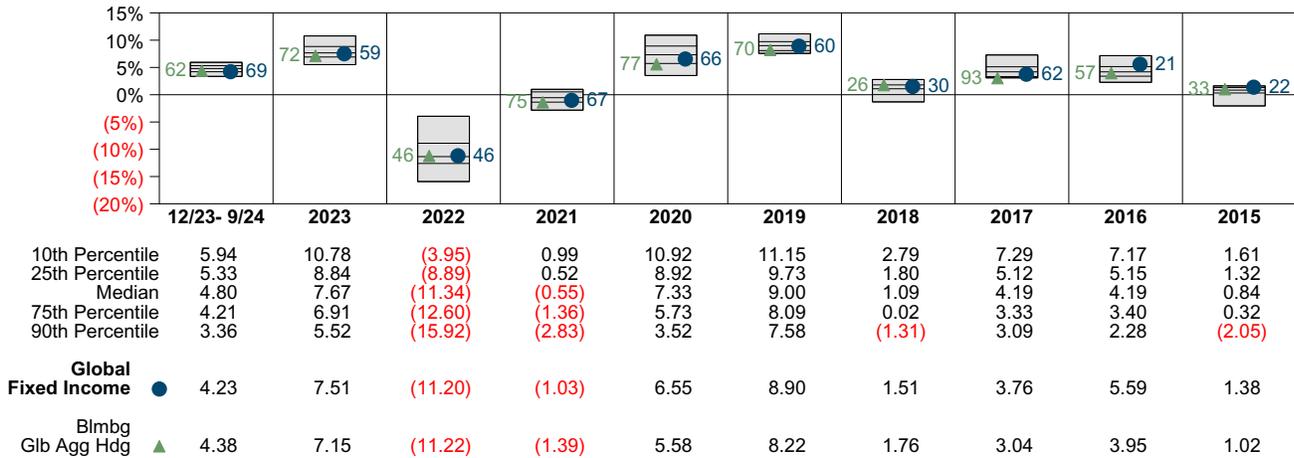


Global Fixed Income Return Analysis Summary

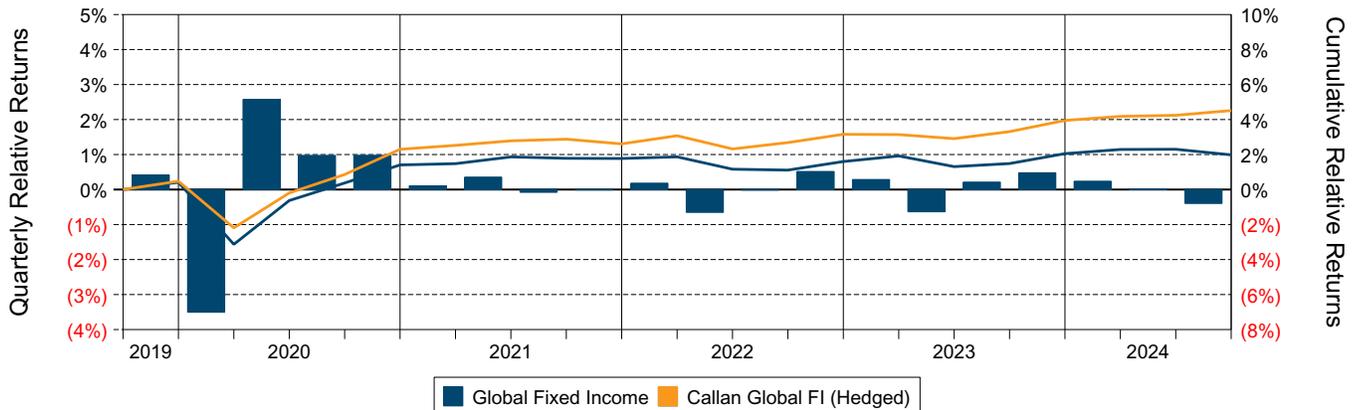
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

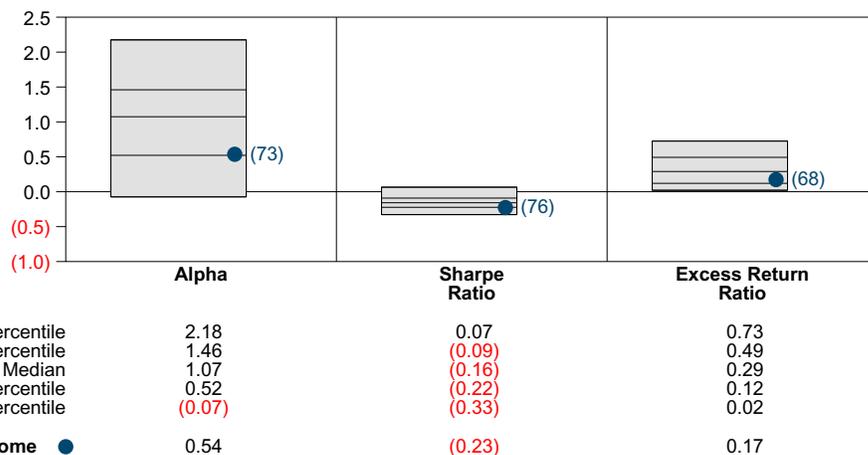
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended September 30, 2024



PIMCO Global

Period Ended September 30, 2024

Investment Philosophy

The Fund's inception date is February 2013.

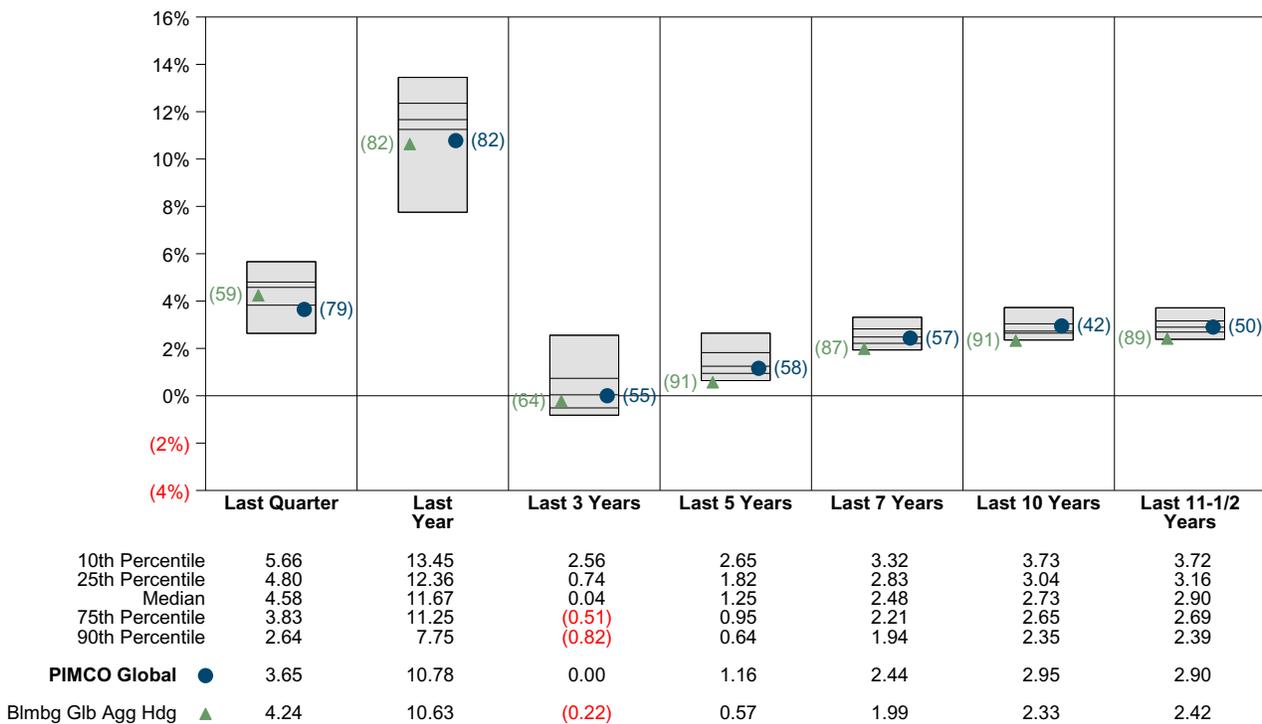
Quarterly Summary and Highlights

- PIMCO Global's portfolio posted a 3.65% return for the quarter placing it in the 79 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 82 percentile for the last year.
- PIMCO Global's portfolio underperformed the Blmbg Glb Agg Hdg by 0.60% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.15%.

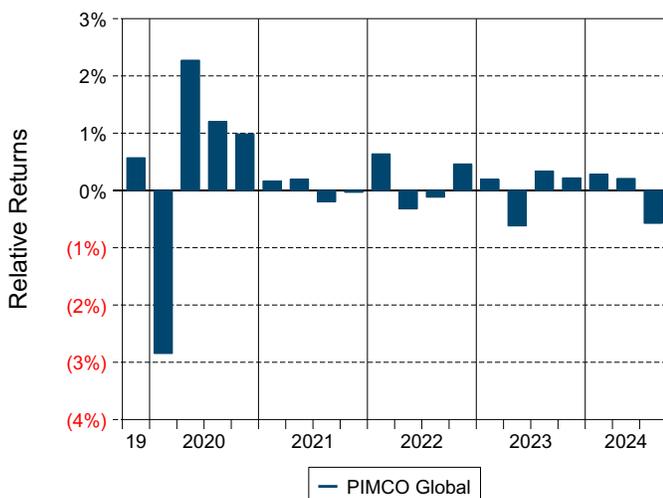
Quarterly Asset Growth

Beginning Market Value	\$762,499,179
Net New Investment	\$-456,250
Investment Gains/(Losses)	\$27,805,583
Ending Market Value	\$789,848,512

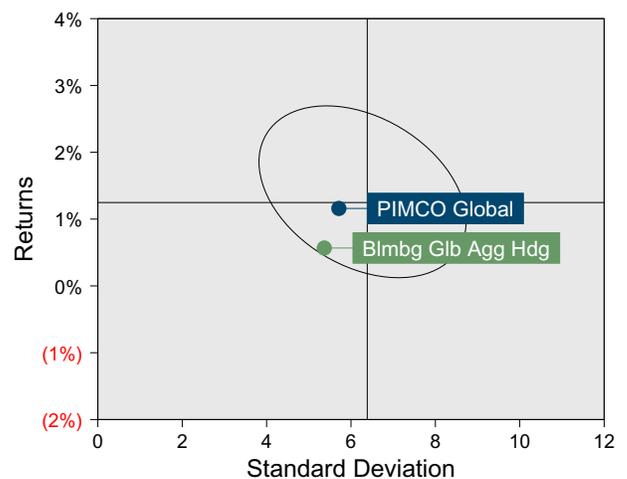
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Five Year Risk vs Return

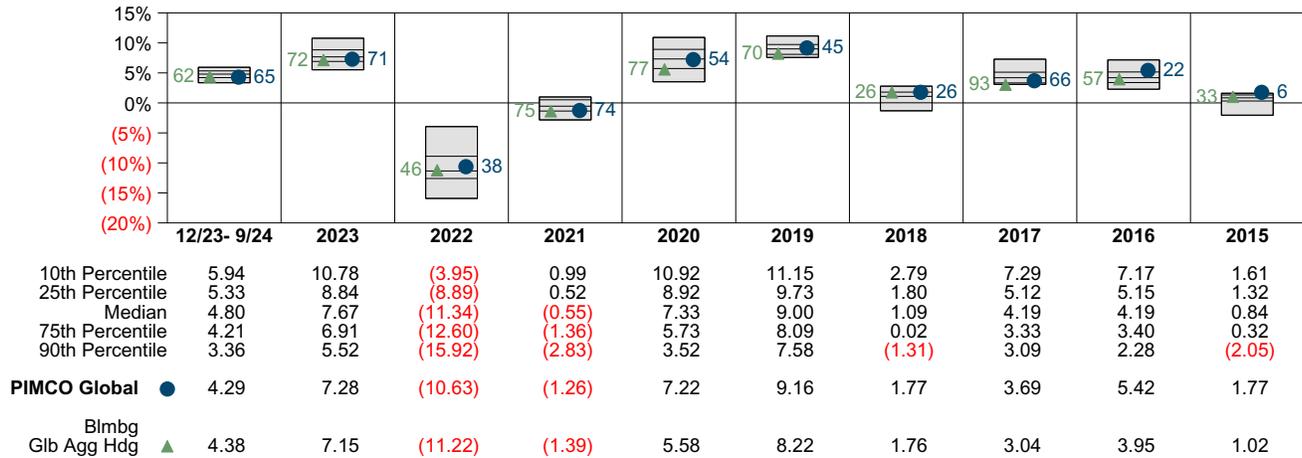


PIMCO Global Return Analysis Summary

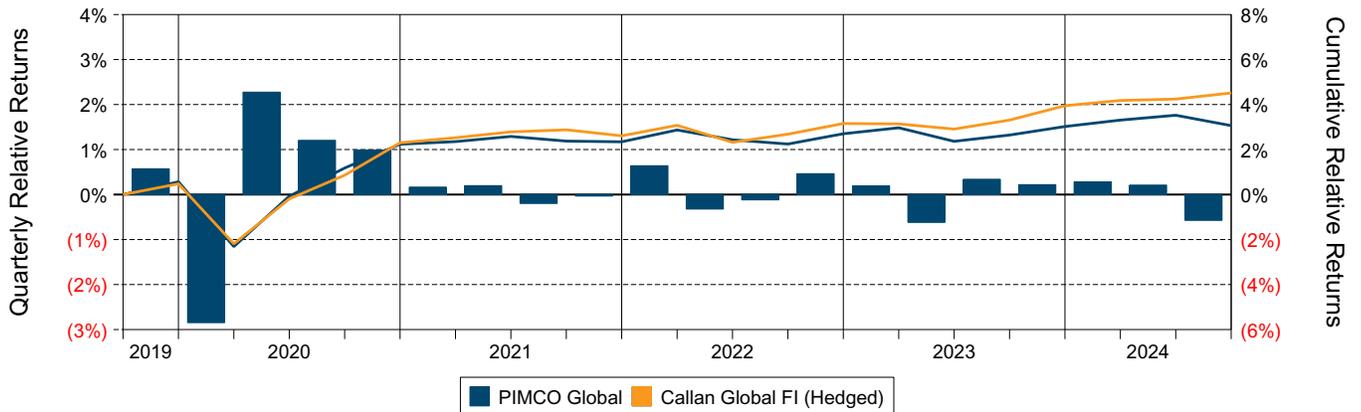
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

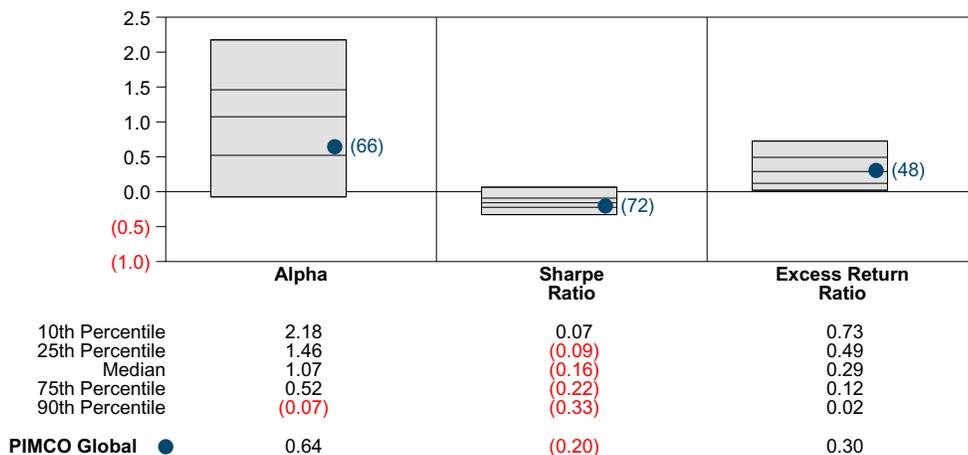
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended September 30, 2024



AllianceBernstein Global Period Ended September 30, 2024

Investment Philosophy

AB utilizes a combination of both Quantitative and Fundamental (Economic, Credit and Securitized) Research to identify and exploit Global Debt Market inefficiencies. The Fund's inception date is February 2013.

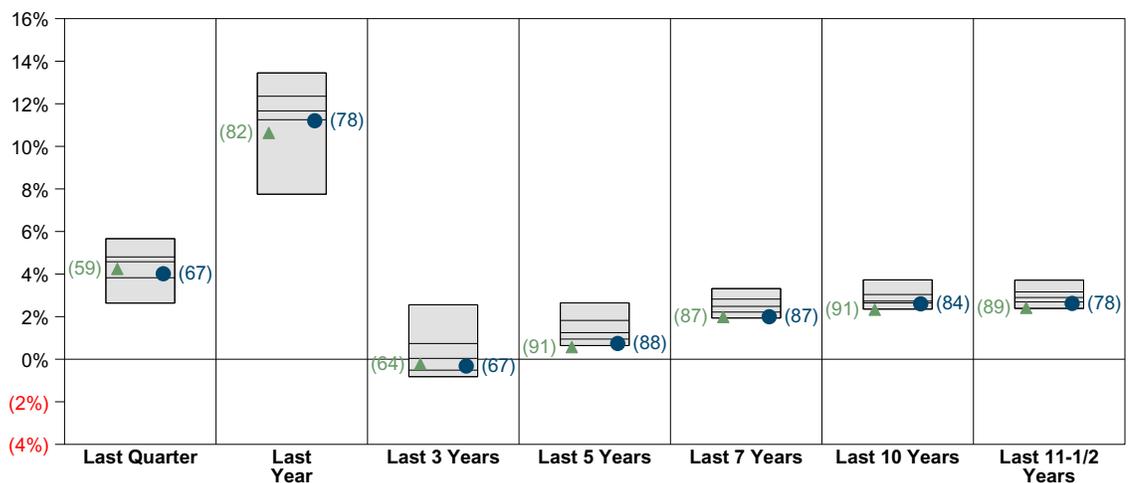
Quarterly Summary and Highlights

- AllianceBernstein Global's portfolio posted a 4.01% return for the quarter placing it in the 67 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 78 percentile for the last year.
- AllianceBernstein Global's portfolio underperformed the Blmbg Glb Agg Hdg by 0.23% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.57%.

Quarterly Asset Growth

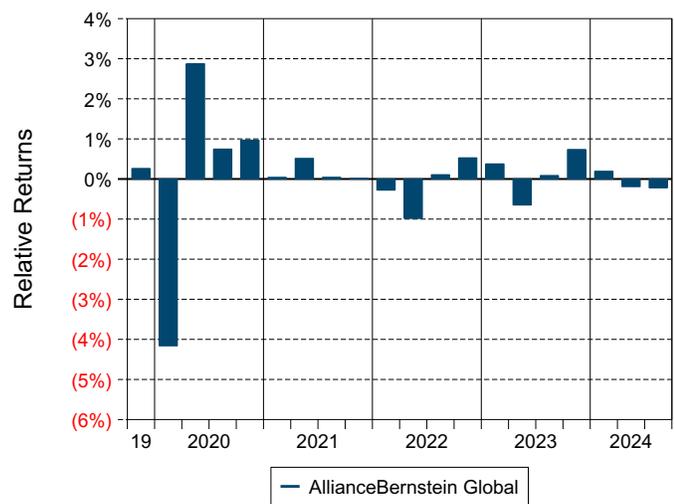
Beginning Market Value	\$766,050,350
Net New Investment	\$-447,778
Investment Gains/(Losses)	\$30,745,575
Ending Market Value	\$796,348,147

Performance vs Callan Global Fixed Income (Hedged) (Gross)

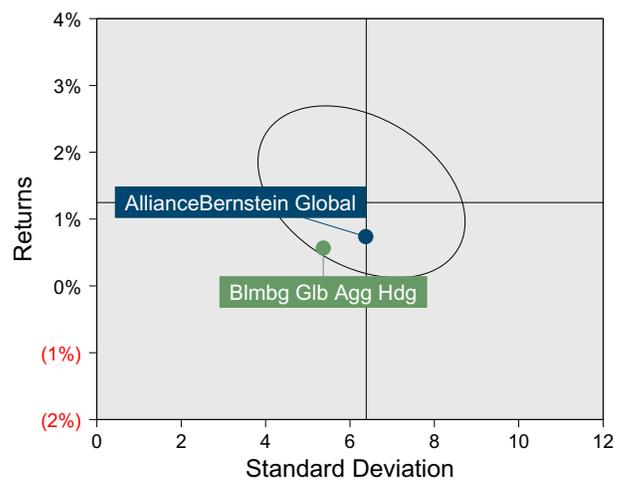


10th Percentile	5.66	13.45	2.56	2.65	3.32	3.73	3.72
25th Percentile	4.80	12.36	0.74	1.82	2.83	3.04	3.16
Median	4.58	11.67	0.04	1.25	2.48	2.73	2.90
75th Percentile	3.83	11.25	(0.51)	0.95	2.21	2.65	2.69
90th Percentile	2.64	7.75	(0.82)	0.64	1.94	2.35	2.39
AllianceBernstein Global ●	4.01	11.20	(0.32)	0.74	2.00	2.60	2.62
Blmbg Glb Agg Hdg ▲	4.24	10.63	(0.22)	0.57	1.99	2.33	2.42

Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Five Year Risk vs Return

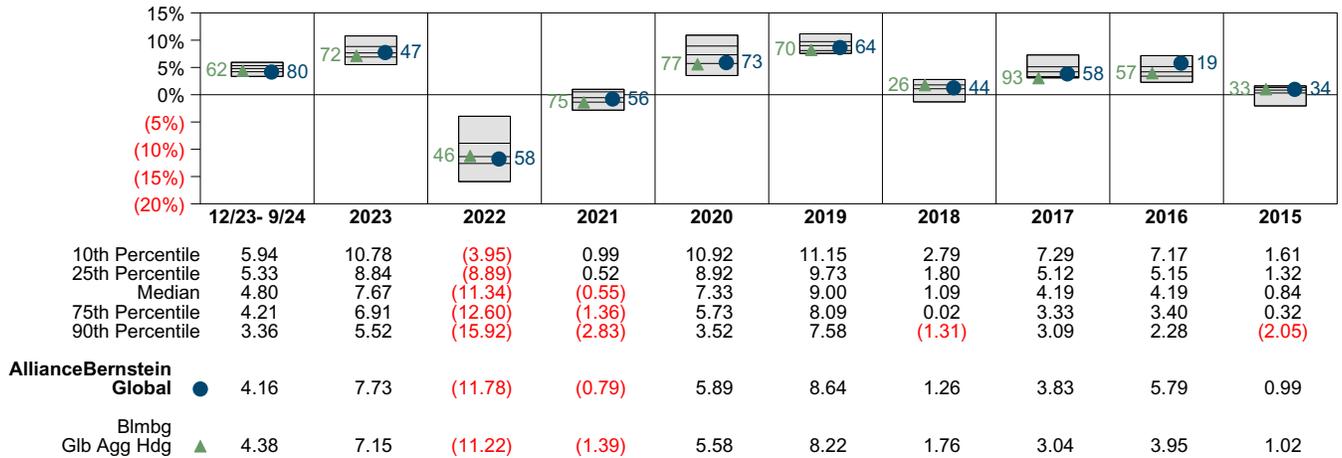


AllianceBernstein Global Return Analysis Summary

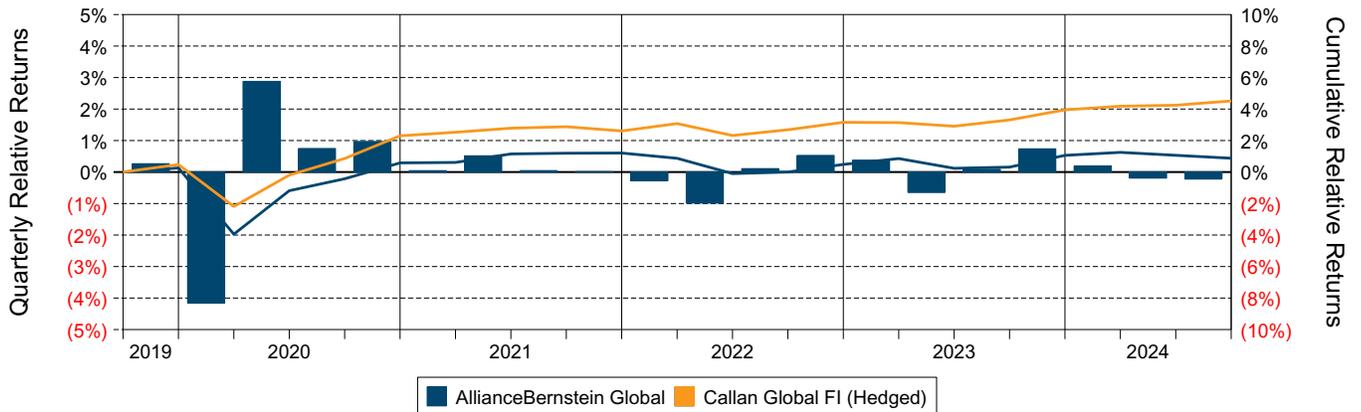
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

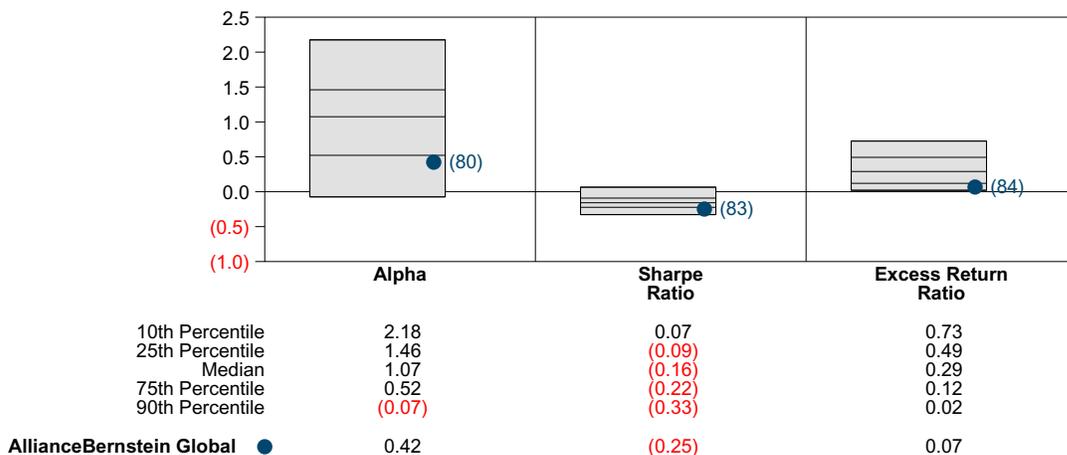
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended September 30, 2024



REIT Composite Period Ended September 30, 2024

Investment Philosophy

The Real Estate Investment Trust managers invest in companies that own, operate and dispose of commercial real estate properties. These companies provide high current yields and the potential for capital appreciation through increases in property values.

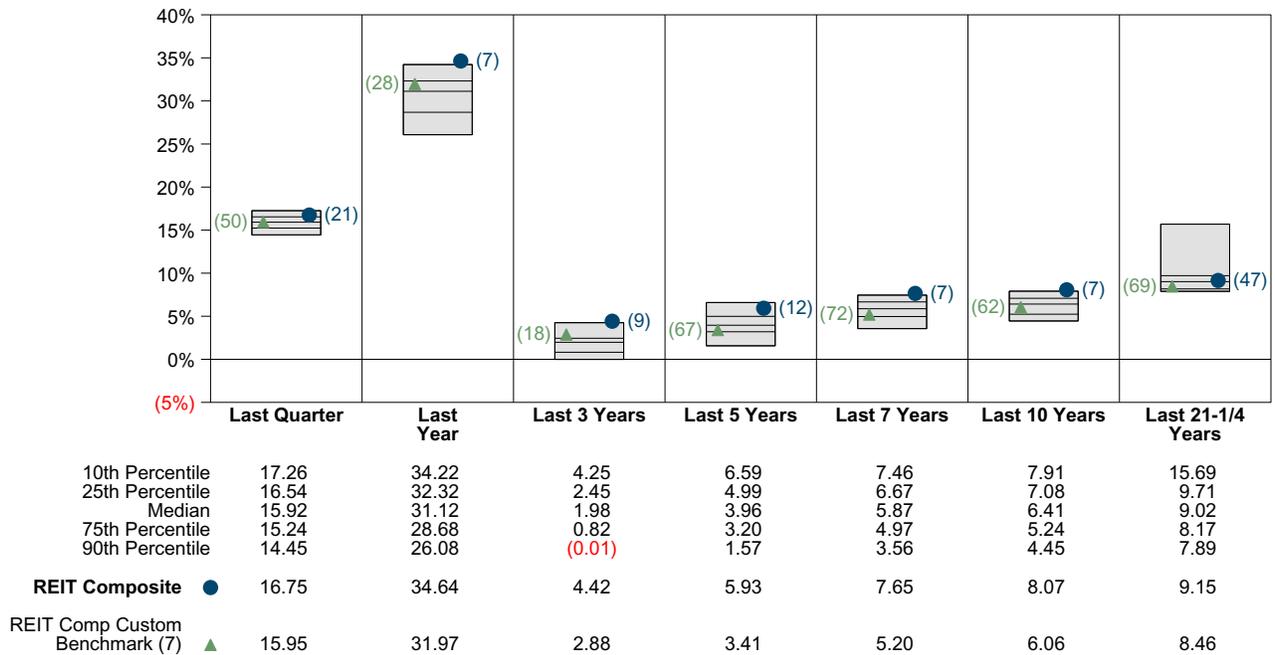
Quarterly Summary and Highlights

- REIT Composite's portfolio posted a 16.75% return for the quarter placing it in the 21 percentile of the Callan Real Estate Global REIT group for the quarter and in the 7 percentile for the last year.
- REIT Composite's portfolio outperformed the REIT Comp Custom Benchmark (7) by 0.80% for the quarter and outperformed the REIT Comp Custom Benchmark (7) for the year by 2.66%.

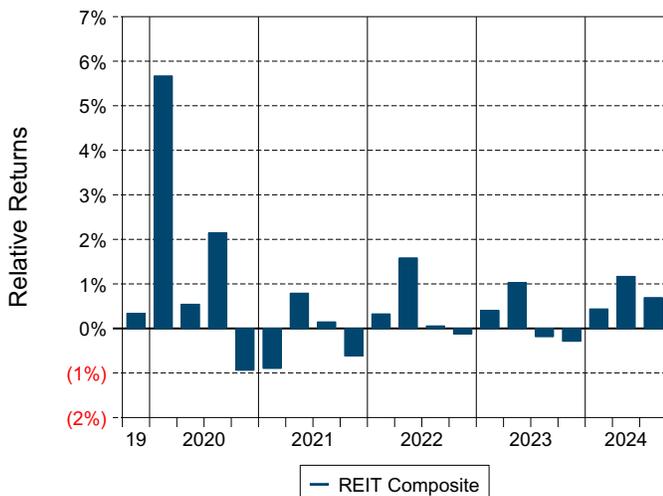
Quarterly Asset Growth

Beginning Market Value	\$313,525,055
Net New Investment	\$-324,196
Investment Gains/(Losses)	\$52,490,697
Ending Market Value	\$365,691,556

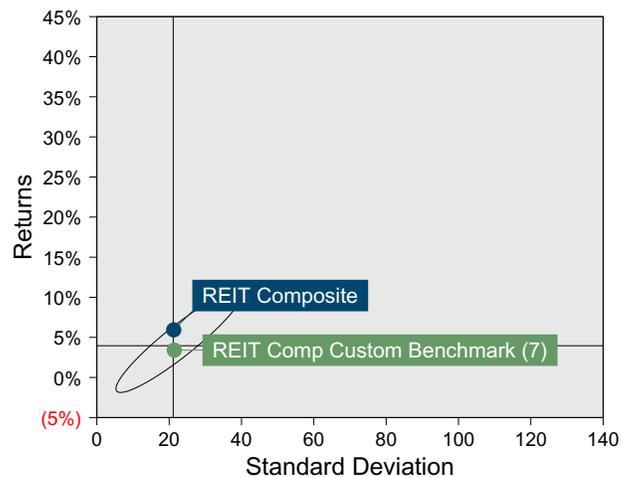
Performance vs Callan Real Estate Global REIT (Gross)



Relative Returns vs REIT Comp Custom Benchmark (7)



Callan Real Estate Global REIT (Gross) Annualized Five Year Risk vs Return

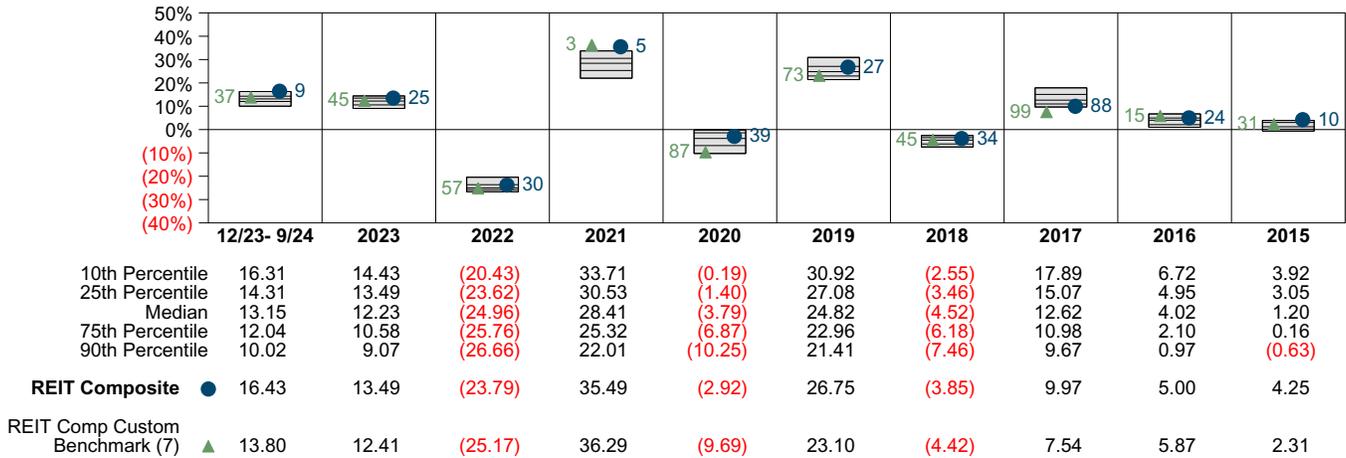


REIT Composite Return Analysis Summary

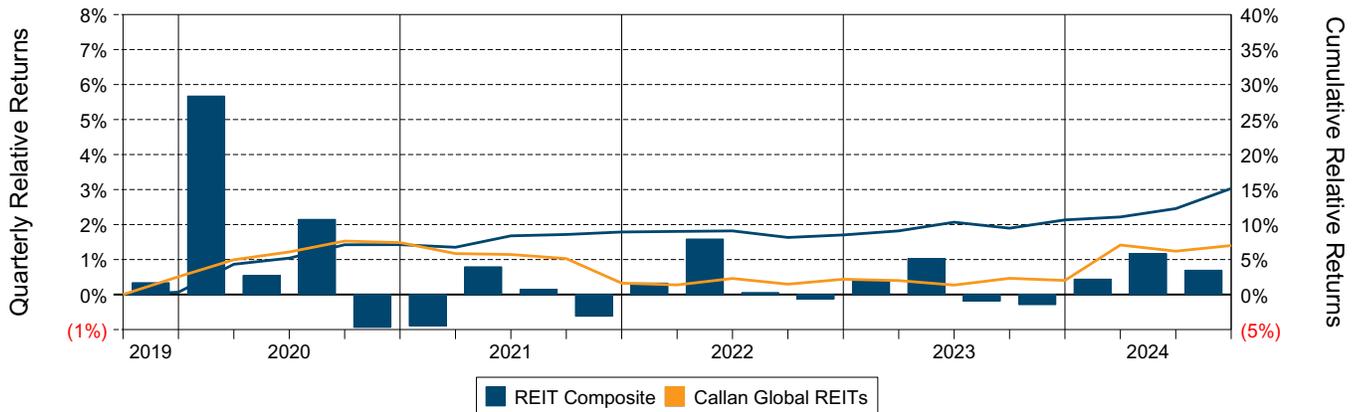
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

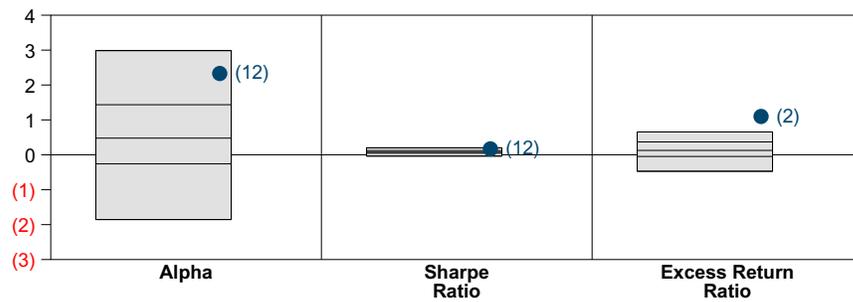
Performance vs Callan Real Estate Global REIT (Gross)



Cumulative and Quarterly Relative Returns vs REIT Comp Custom Benchmark (7)



Risk Adjusted Return Measures vs REIT Comp Custom Benchmark (7) Rankings Against Callan Real Estate Global REIT (Gross) Five Years Ended September 30, 2024



Core Real Estate (Net) Period Ended September 30, 2024

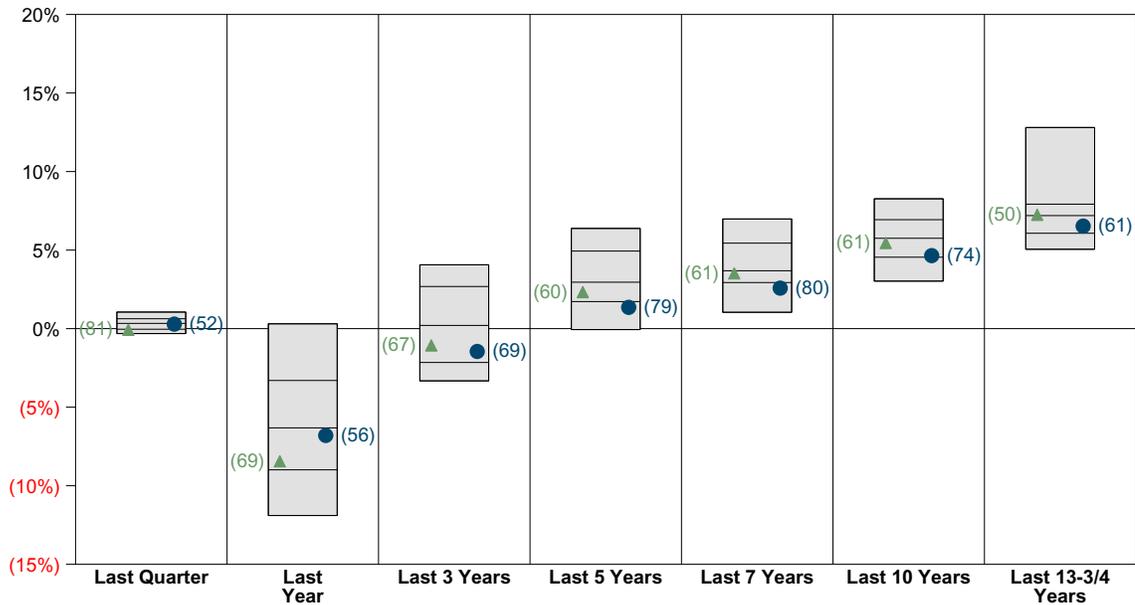
Quarterly Summary and Highlights

- Core Real Estate (Net)'s portfolio posted a 0.29% return for the quarter placing it in the 52 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 56 percentile for the last year.
- Core Real Estate (Net)'s portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.36% for the quarter and outperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 1.64%.

Quarterly Asset Growth

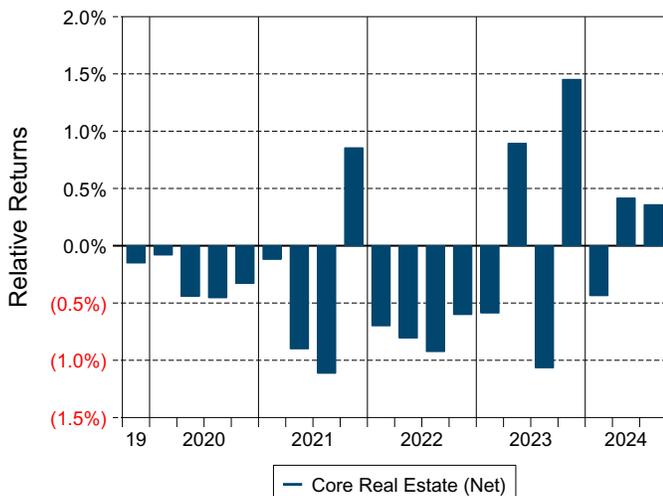
Beginning Market Value	\$1,625,560,560
Net New Investment	\$-65,525,945
Investment Gains/(Losses)	\$7,467,204
Ending Market Value	\$1,567,501,818

Performance vs Callan Open End Core Cmmingled Real Est (Net)

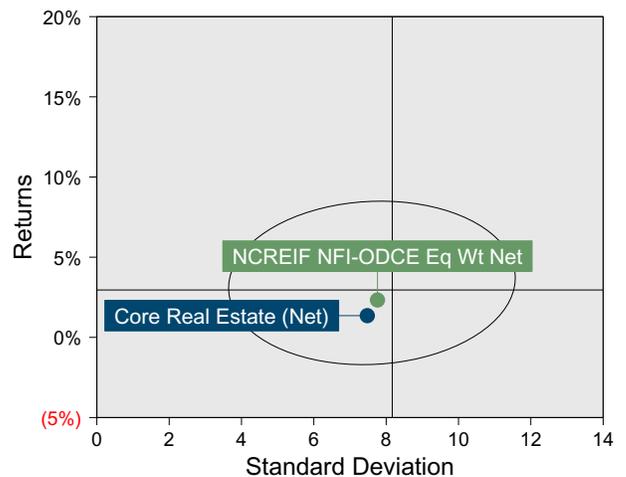


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 13-3/4 Years
10th Percentile	1.06	0.31	4.07	6.38	6.98	8.27	12.80
25th Percentile	0.63	(3.30)	2.68	4.94	5.44	6.94	7.92
Median	0.34	(6.32)	0.20	2.96	3.69	5.75	7.20
75th Percentile	(0.04)	(8.99)	(2.15)	1.72	2.93	4.55	6.07
90th Percentile	(0.31)	(11.90)	(3.33)	(0.06)	1.04	3.02	5.05
Core Real Estate (Net)	● 0.29	(6.80)	(1.45)	1.35	2.58	4.65	6.53
NCREIF NFI-ODCE Eq Wt Net	▲ (0.07)	(8.44)	(1.06)	2.33	3.52	5.46	7.25

Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Callan Open End Core Cmmingled Real Est (Net) Annualized Five Year Risk vs Return

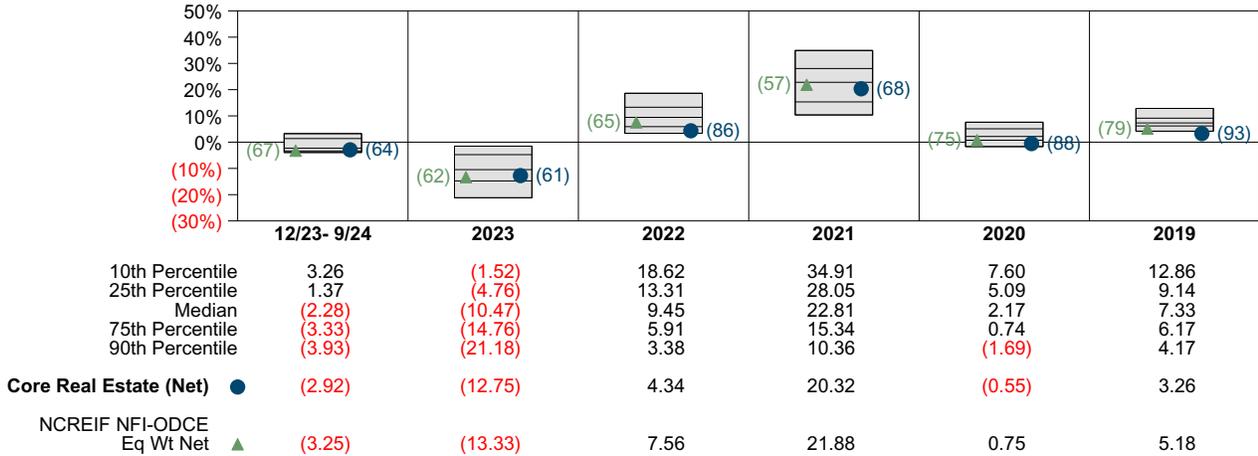


Core Real Estate (Net) Return Analysis Summary

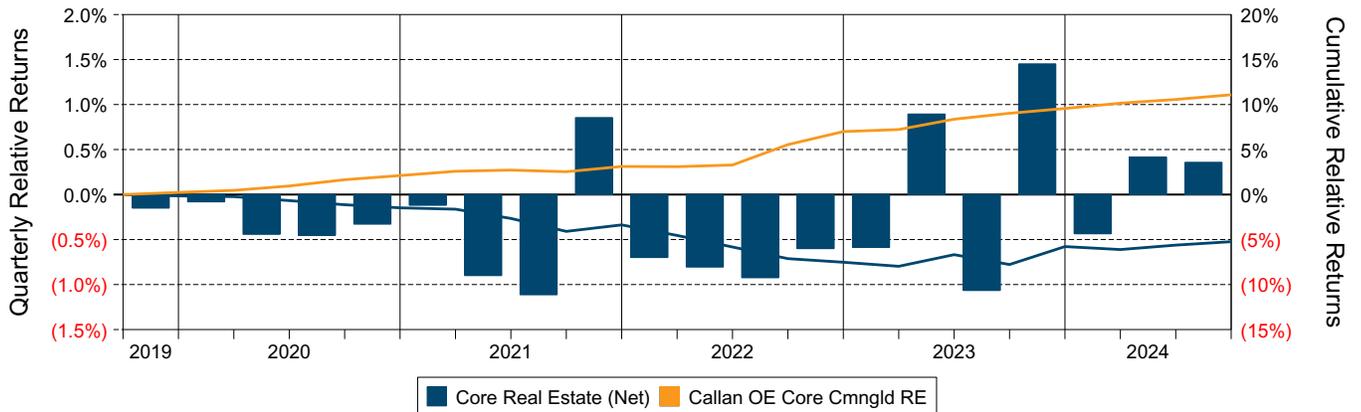
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

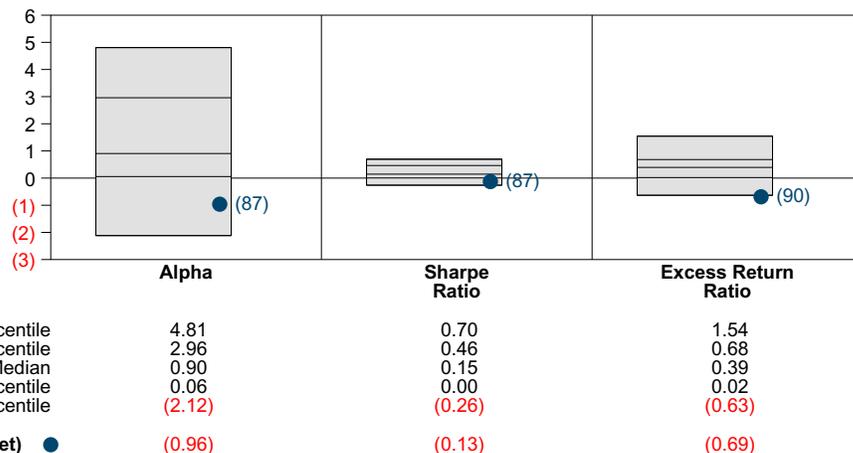
Performance vs Callan Open End Core Cmmingled Real Est (Gross)



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Risk Adjusted Return Measures vs NCREIF NFI-ODCE Eq Wt Net Rankings Against Callan Open End Core Cmmingled Real Est (Gross) Five Years Ended September 30, 2024



Core Plus Real Estate (Net) Period Ended September 30, 2024

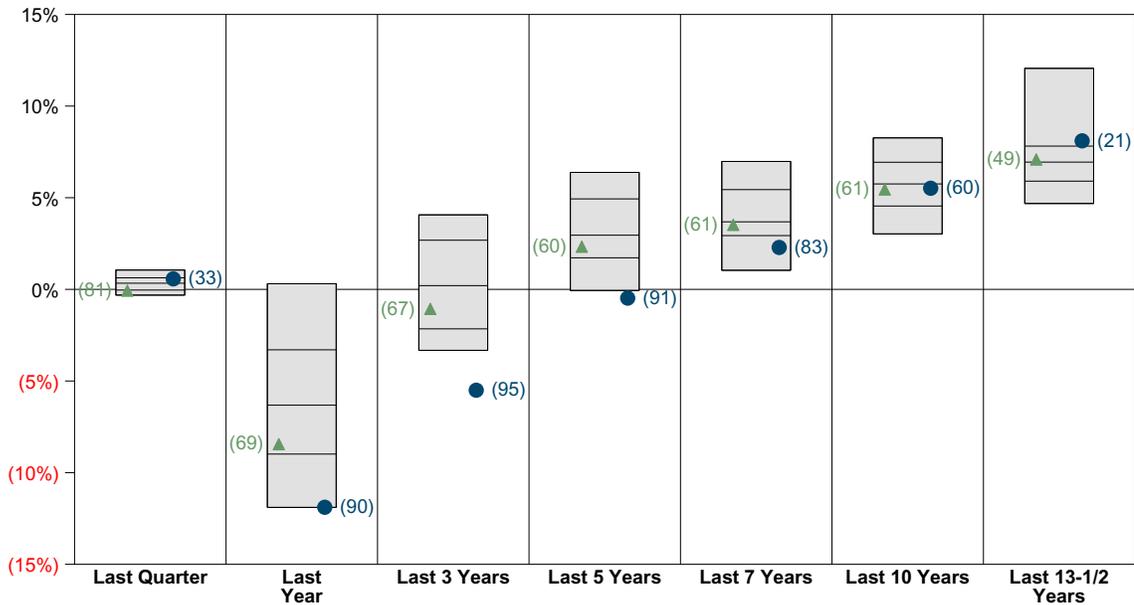
Quarterly Summary and Highlights

- Core Plus Real Estate (Net)'s portfolio posted a 0.57% return for the quarter placing it in the 33 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 90 percentile for the last year.
- Core Plus Real Estate (Net)'s portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.64% for the quarter and underperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 3.45%.

Quarterly Asset Growth

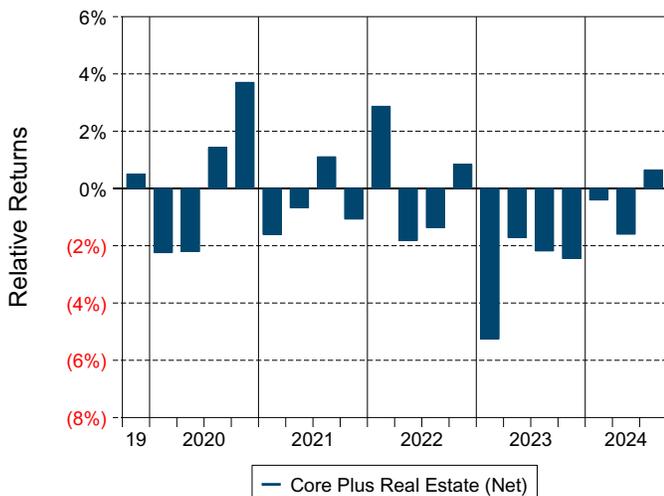
Beginning Market Value	\$222,146,788
Net New Investment	\$-3,482,224
Investment Gains/(Losses)	\$1,755,213
Ending Market Value	\$220,419,777

Performance vs Callan Open End Core Cmmingled Real Est (Net)

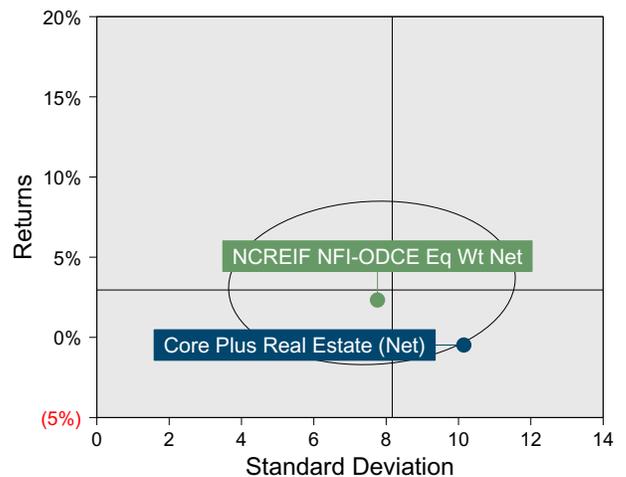


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 13-1/2 Years
10th Percentile	1.06	0.31	4.07	6.38	6.98	8.27	12.06
25th Percentile	0.63	(3.30)	2.68	4.94	5.44	6.94	7.82
Median	0.34	(6.32)	0.20	2.96	3.69	5.75	6.94
75th Percentile	(0.04)	(8.99)	(2.15)	1.72	2.93	4.55	5.90
90th Percentile	(0.31)	(11.90)	(3.33)	(0.06)	1.04	3.02	4.68
Core Plus Real Estate (Net)	● 0.57	(11.89)	(5.50)	(0.48)	2.29	5.52	8.10
NCREIF NFI-ODCE Eq Wt Net	▲ (0.07)	(8.44)	(1.06)	2.33	3.52	5.46	7.09

Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



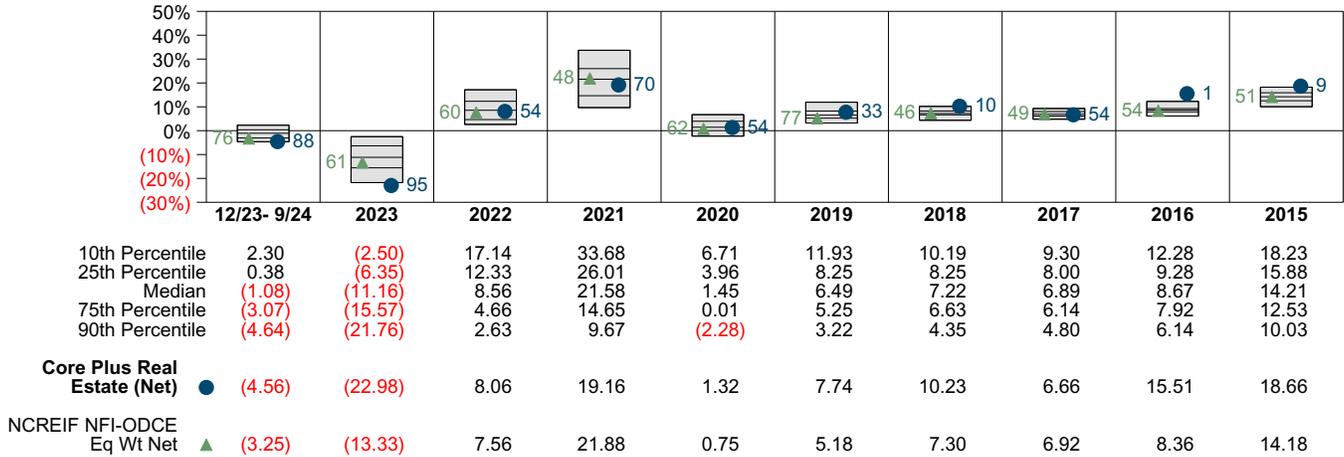
Callan Open End Core Cmmingled Real Est (Net) Annualized Five Year Risk vs Return



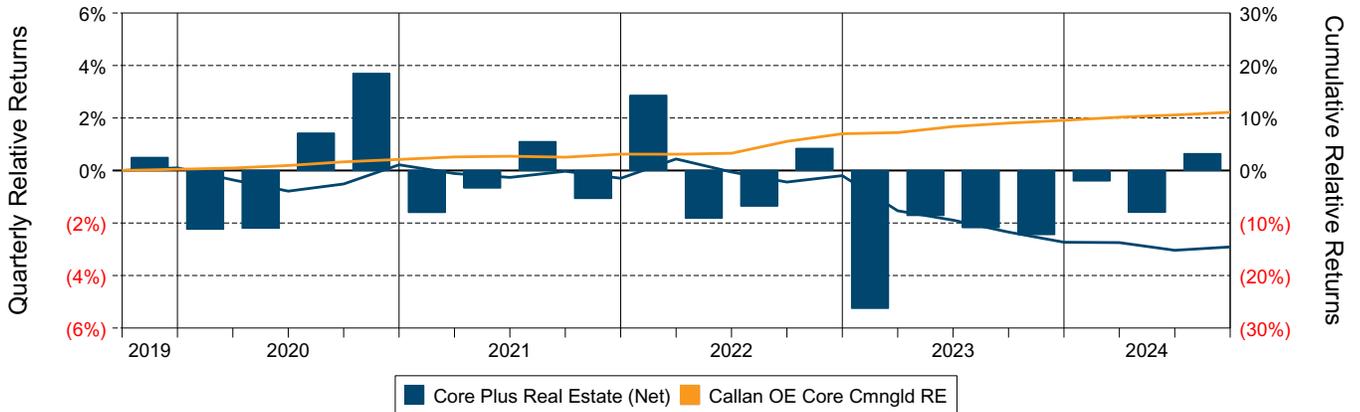
Core Plus Real Estate (Net) Return Analysis Summary

Return Analysis

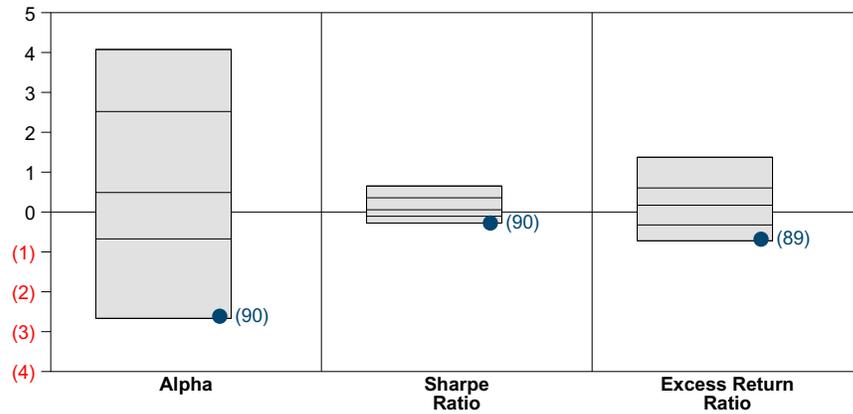
Performance vs Callan Open End Core Cmmngld Real Est (Net)



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Risk Adjusted Return Measures vs NCREIF NFI-ODCE Eq Wt Net Rankings Against Callan Open End Core Cmmngld Real Est (Net) Five Years Ended September 30, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.08	0.65	1.37
25th Percentile	2.52	0.36	0.60
Median	0.49	0.06	0.17
75th Percentile	(0.67)	(0.11)	(0.32)
90th Percentile	(2.67)	(0.28)	(0.72)
Core Plus Real Estate (Net)	● (2.61)	(0.28)	(0.68)

Non-Core Real Estate (Net) Period Ended September 30, 2024

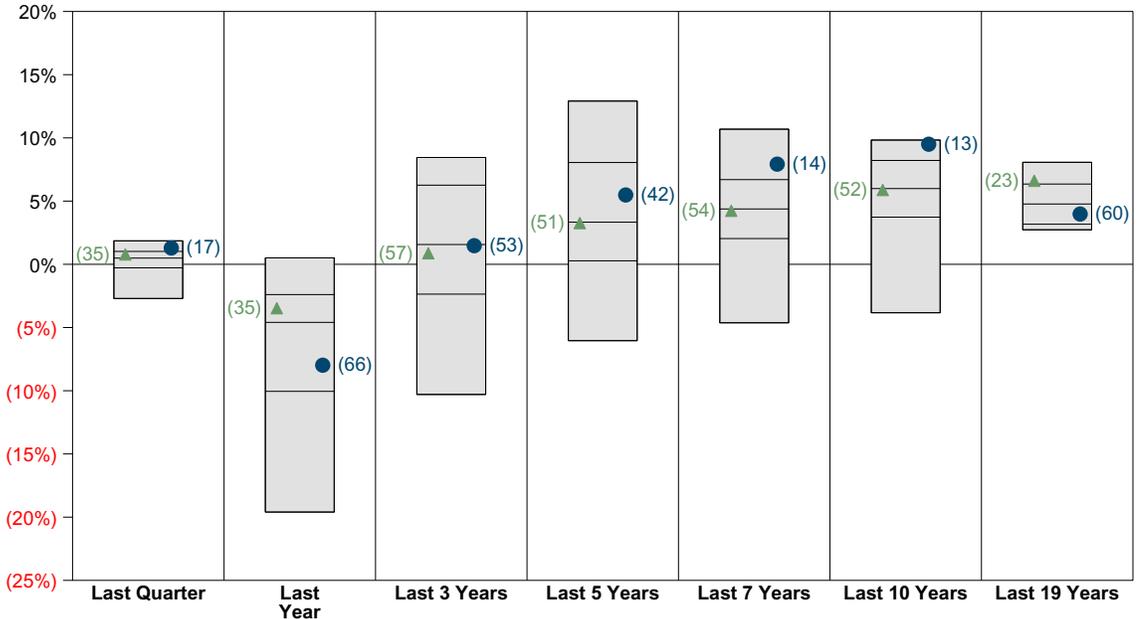
Quarterly Summary and Highlights

- Non-Core Real Estate (Net)'s portfolio posted a 1.29% return for the quarter placing it in the 17 percentile of the Callan Real Estate Value Added group for the quarter and in the 66 percentile for the last year.
- Non-Core Real Estate (Net)'s portfolio outperformed the NCREIF Total Index by 0.51% for the quarter and underperformed the NCREIF Total Index for the year by 4.51%.

Quarterly Asset Growth

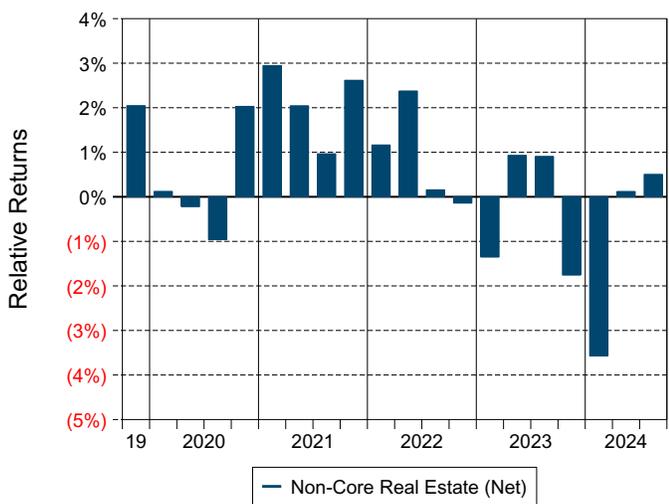
Beginning Market Value	\$743,948,974
Net New Investment	\$-16,280,713
Investment Gains/(Losses)	\$11,017,111
Ending Market Value	\$738,685,372

Performance vs Callan Real Estate Value Added (Net)

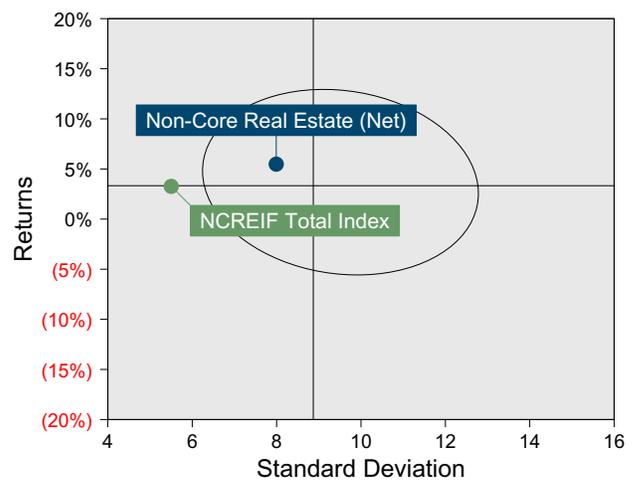


10th Percentile	1.86	0.51	8.45	12.91	10.69	9.83	8.07
25th Percentile	1.02	(2.40)	6.26	8.05	6.70	8.22	6.35
Median	0.49	(4.59)	1.56	3.33	4.38	5.99	4.77
75th Percentile	(0.28)	(10.05)	(2.36)	0.27	2.04	3.73	3.17
90th Percentile	(2.71)	(19.60)	(10.30)	(6.04)	(4.63)	(3.83)	2.73
Non-Core Real Estate (Net)	● 1.29	(7.98)	1.47	5.48	7.92	9.50	3.98
NCREIF Total Index	▲ 0.78	(3.47)	0.87	3.26	4.23	5.88	6.61

Relative Return vs NCREIF Total Index



Callan Real Estate Value Added (Net) Annualized Five Year Risk vs Return

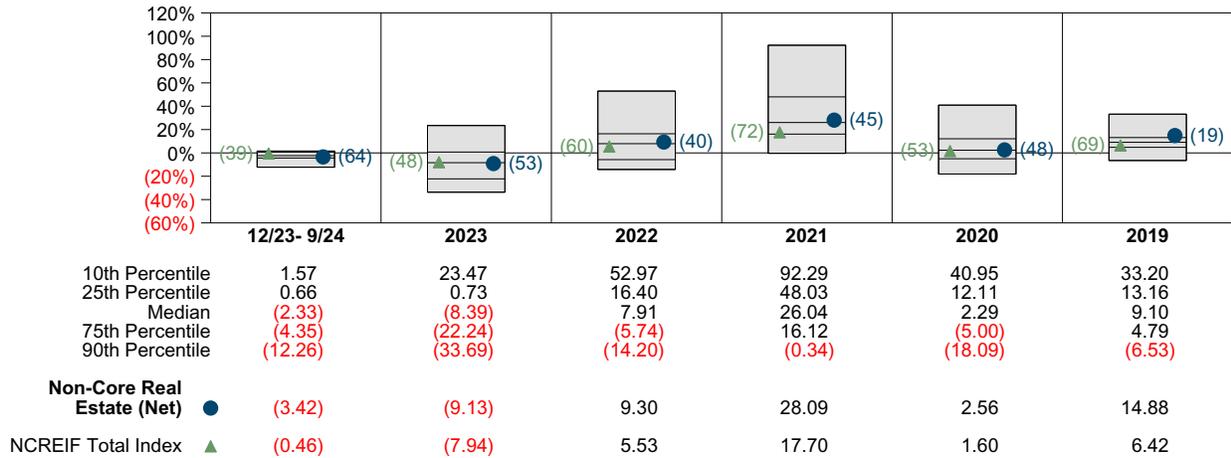


Non-Core Real Estate (Net) Return Analysis Summary

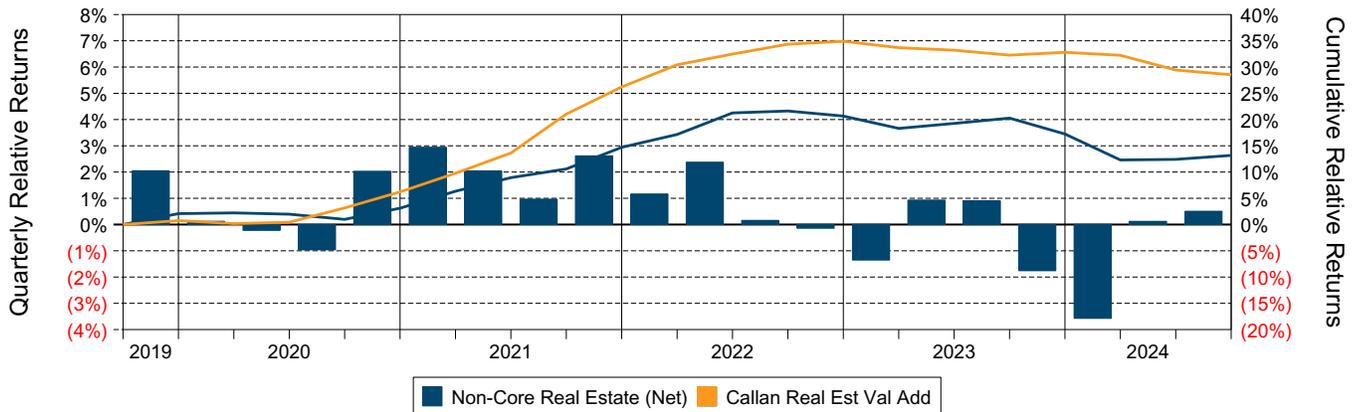
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

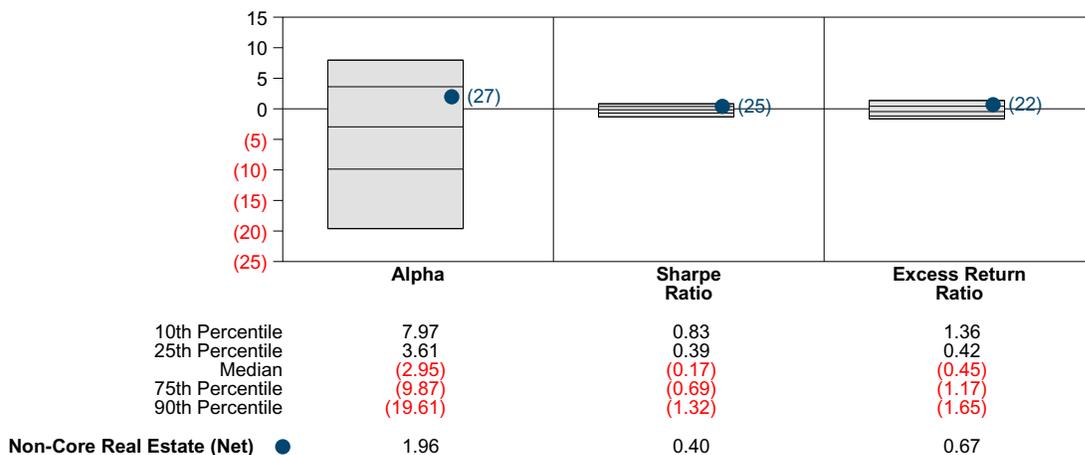
Performance vs Callan Real Estate Value Added (Net)



Cumulative and Quarterly Relative Returns vs NCREIF Total Index



Risk Adjusted Return Measures vs NCREIF Total Index Rankings Against Callan Real Estate Value Added (Net) Five Years Ended September 30, 2024



Timber Composite

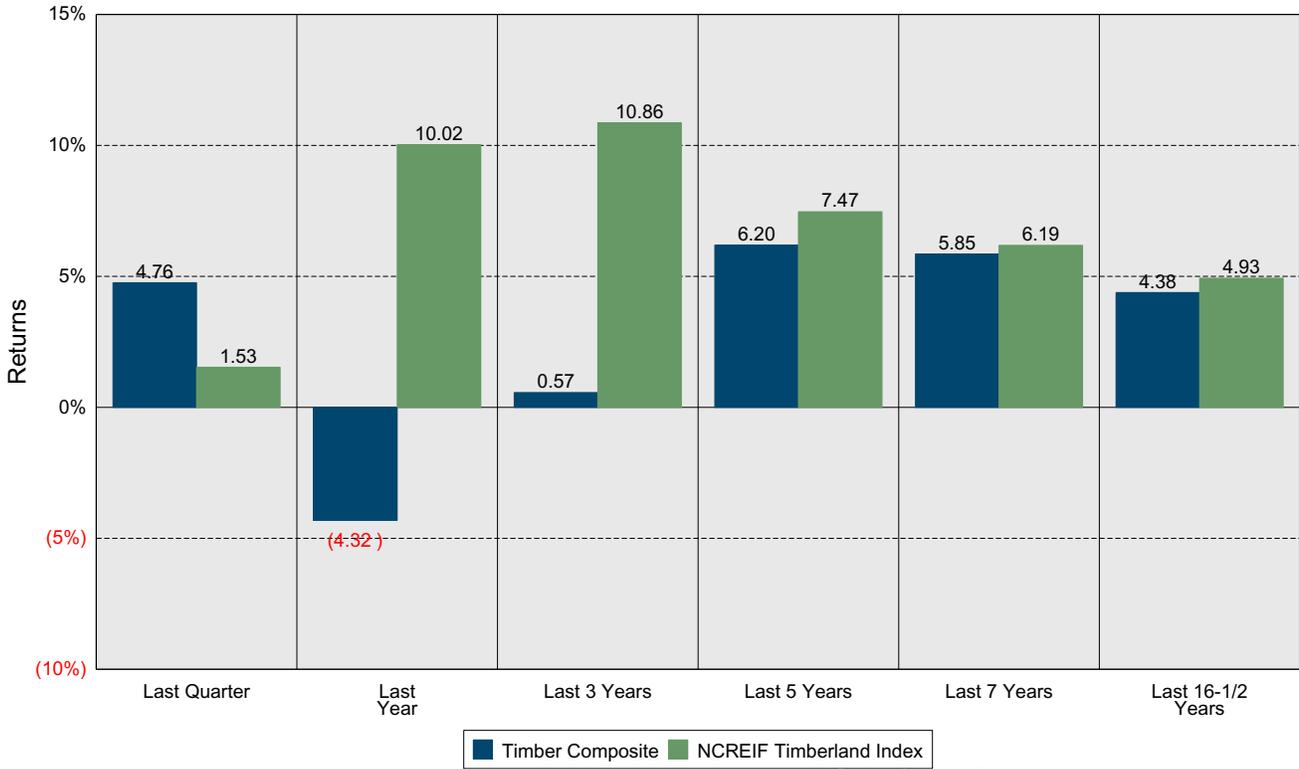
Period Ended September 30, 2024

Quarterly Summary and Highlights

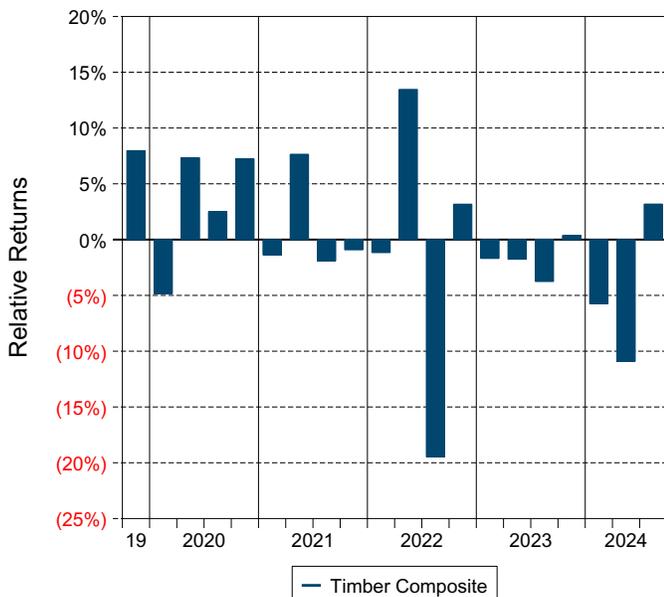
- Timber Composite's portfolio outperformed the NCREIF Timberland Index by 3.23% for the quarter and underperformed the NCREIF Timberland Index for the year by 14.34%.

Quarterly Asset Growth

Beginning Market Value	\$38,244,909
Net New Investment	\$-1,540,568
Investment Gains/(Losses)	\$1,753,540
Ending Market Value	\$38,457,881



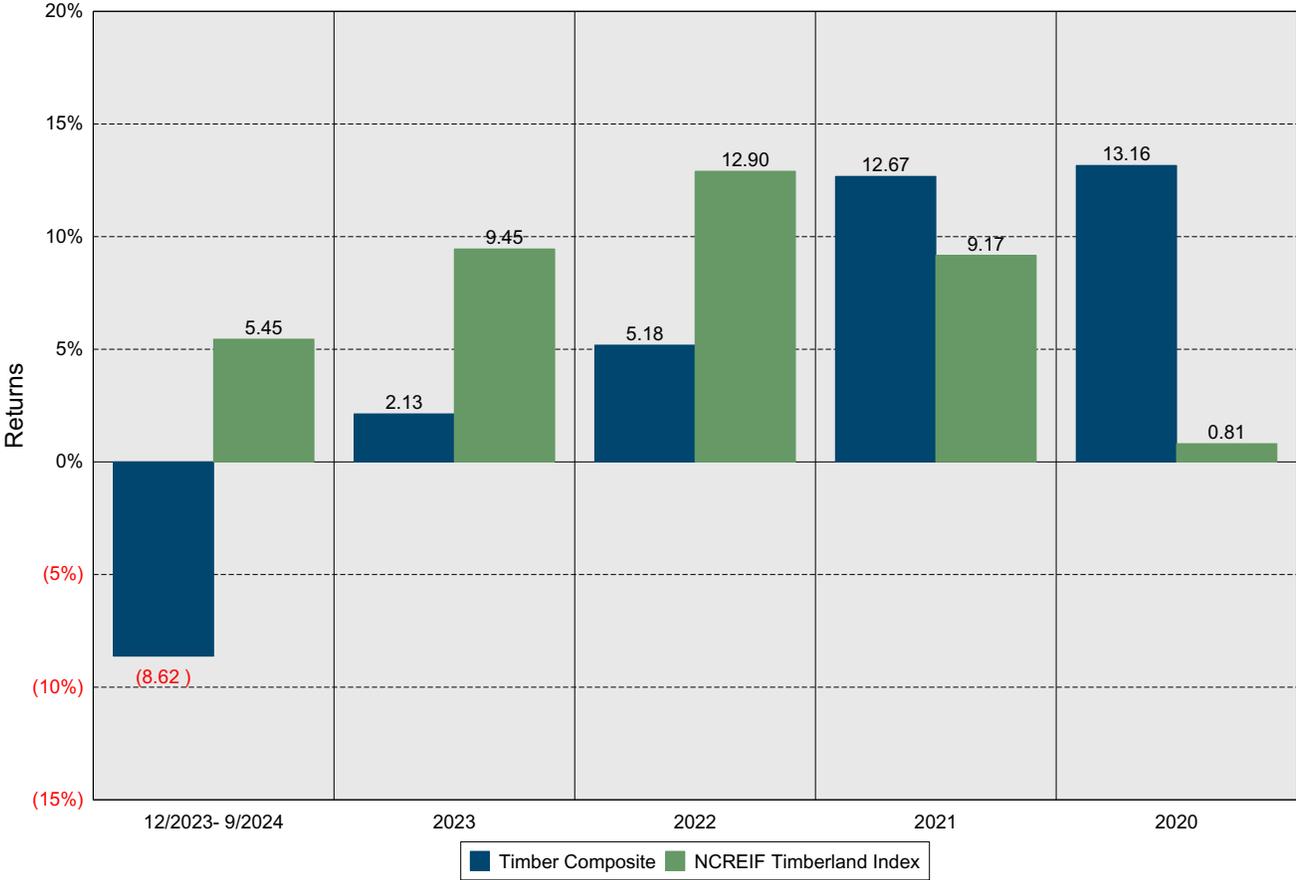
Relative Return vs NCREIF Timberland Index



Cumulative Returns vs NCREIF Timberland Index



Timber Composite
Period Ended September 30, 2024



Private Equity Period Ended September 30, 2024

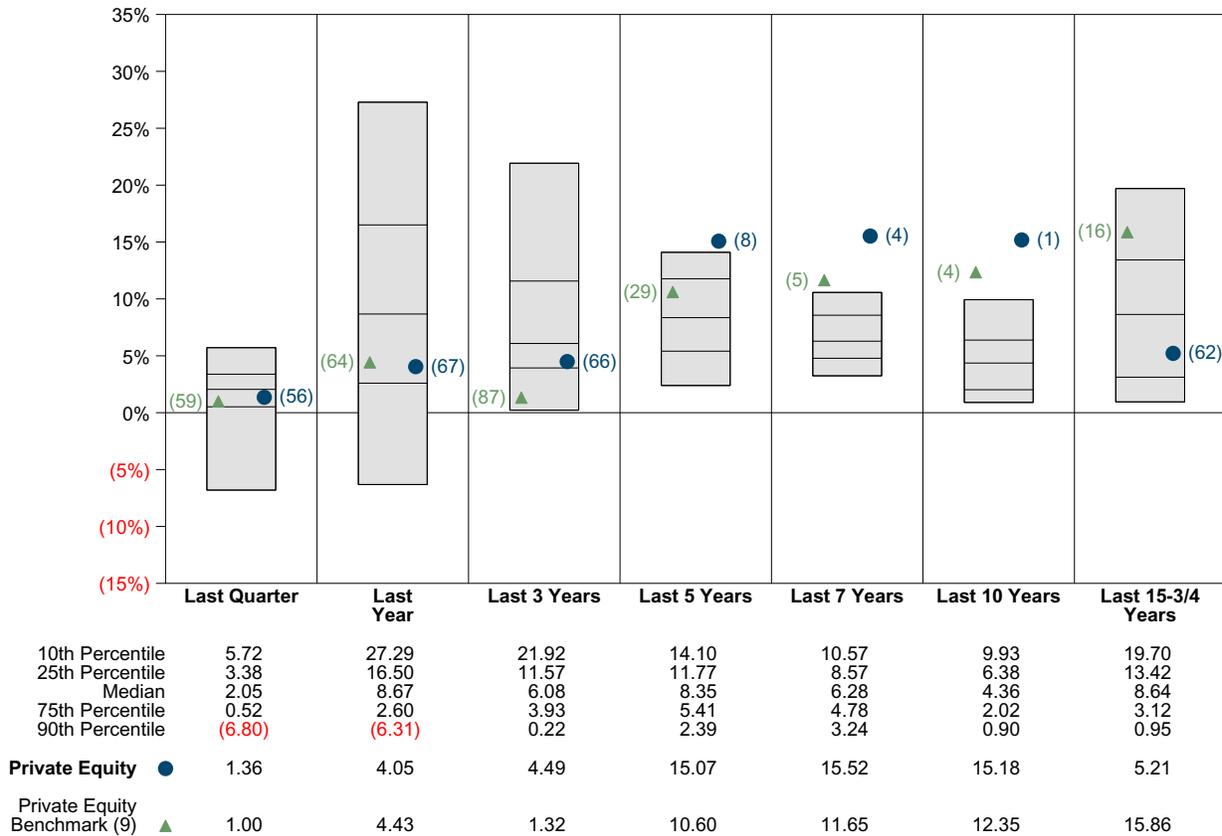
Quarterly Summary and Highlights

- Private Equity's portfolio posted a 1.36% return for the quarter placing it in the 56 percentile of the Callan Alternative Investments DB group for the quarter and in the 67 percentile for the last year.
- Private Equity's portfolio outperformed the Private Equity Benchmark (9) by 0.36% for the quarter and underperformed the Private Equity Benchmark (9) for the year by 0.38%.

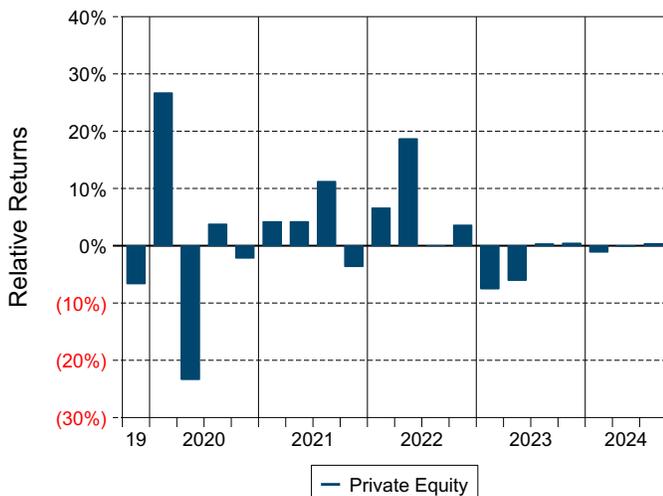
Quarterly Asset Growth

Beginning Market Value	\$3,929,921,211
Net New Investment	\$-155,382,450
Investment Gains/(Losses)	\$52,051,452
Ending Market Value	\$3,826,590,213

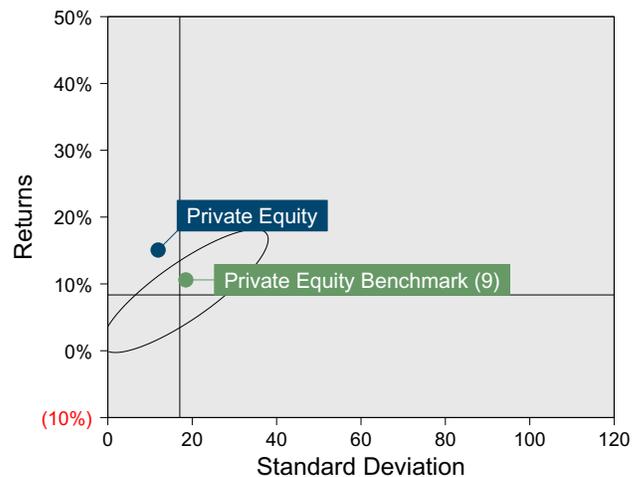
Performance vs Callan Alternative Investments DB (Gross)



Relative Returns vs Private Equity Benchmark (9)



Callan Alternative Investments DB (Gross) Annualized Five Year Risk vs Return

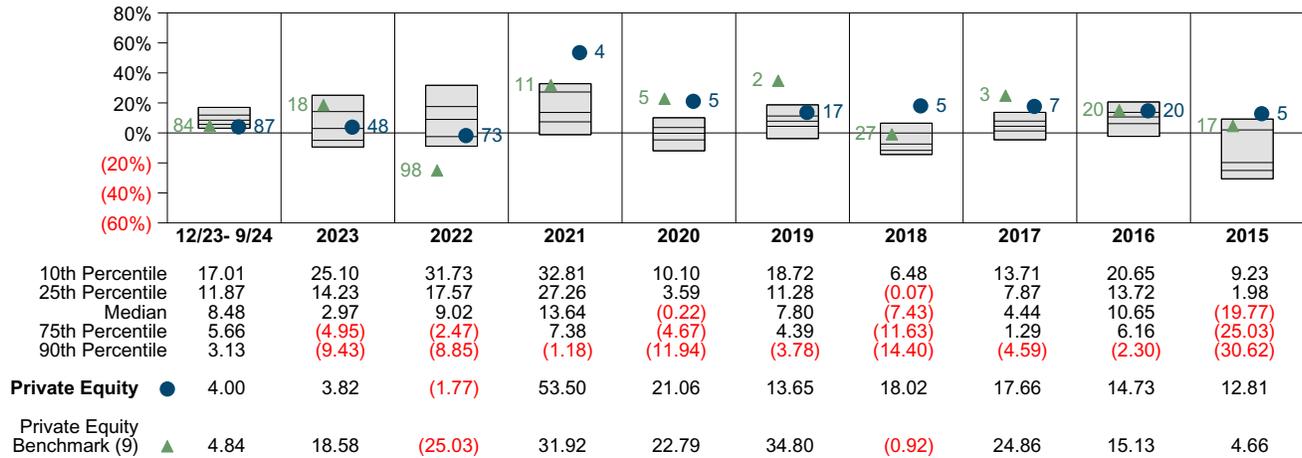


Private Equity Return Analysis Summary

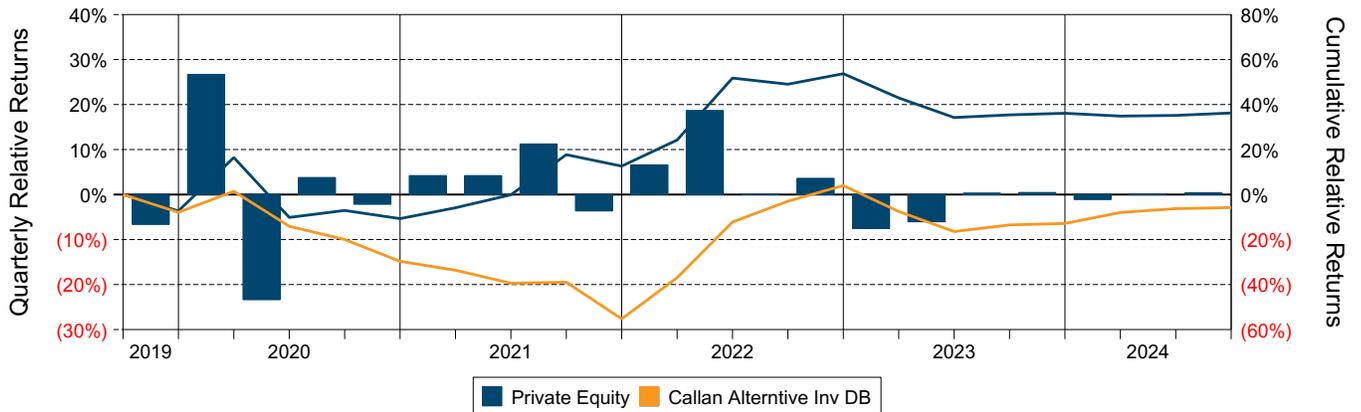
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

Performance vs Callan Alternative Investments DB (Gross)



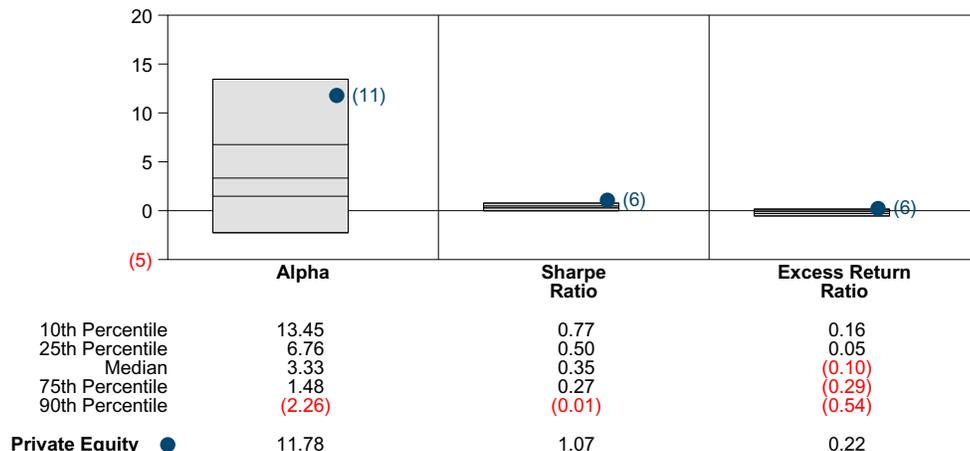
Cumulative and Quarterly Relative Returns vs Private Equity Benchmark (9)



Risk Adjusted Return Measures vs Private Equity Benchmark (9)

Rankings Against Callan Alternative Investments DB (Gross)

Five Years Ended September 30, 2024



Custom Benchmark Definitions

- 1) **Domestic Equity Benchmark:** Russell 3000 Index.
- 2) **Global Equity Benchmark:** MSCI World Index through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.
- 3) **International Equity Benchmark:** MSCI ACWI ex US through 6/30/2013; then MSCI ACWI ex US IMI thereafter.
- 4) **International Equity Custom Benchmark:** MSCI ACWI ex US through 6/30/13; MSCI ACWI ex US IMI Index through 9/30/2015; then 35% MSCI EAFE Hedged; 35% MSCI ACWI ex US IMI; 20% MSCI Emerging Markets; 5% MSCI ACWI ex US Small Cap; and 5% MSCI World ex US Small Cap through 12/31/2017; then 35% MSCI EAFE, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets, 5% MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap thereafter.
- 5) **Total Equity Custom Benchmark:** 49% Russell 3000 Index, 36% MSCI ACWI ex US IMI Index, and 15% MSCI AC World Index through 9/30/2015; then 44% Russell 3000 Index, 36% MSCI ACWI ex US IMI Index, and 20% MSCI ACWI IMI thereafter
- 6) **Total Fixed Income Custom Benchmark:** 55% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, 10% Barclays US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then 65% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.
- 7) **REIT Composite Custom Benchmark:** 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.
- 8) **Real Estate Benchmark:** NFI-ODCE Equal Weight Net to 5/31/99; No Benchmark to 9/30/03; 50% NFI-ODCE Equal Weight Net and 50% US Select REIT Index to 6/30/06; 80% NFI-ODCE Equal Weight Net and 20% US Select REIT Index to 6/30/10; 20% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, 55% NFI-ODCE Equal Weight Net to 6/30/12; 15% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, and 60% NFI-ODCE Equal Weight Net to 6/30/13; then NCREIF Property Index thereafter.
- 9) **Private Equity Benchmark:** S&P 500 Index + 5% through 3/31/13; then S&P 500 Index + 3% through 6/30/2022; then the S&P 500 + 3% (1 Qtr Lag) through 6/30/23; thereafter Cambridge Global Private Equity.
- 10) **Private Credit Benchmark:** 50% Morningstar Leverage Loans, 50% Bloomberg High Yield Corp, + 1% (1 Qtr Lag).

Equity Market Indicators

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

Russell 1000 Index Measures the performance of the large-cap segment of the US equity universe. It is a subset of the Russell 3000 Index and includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 93% of the Russell 3000 Index, as of the most recent reconstitution. The Russell 1000 Index is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to ensure new and growing equities are included.

Russell 2000 Growth Index Measures the performance of the small-cap growth segment of the US equity universe. It includes those Russell 2000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 2000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the small-cap growth segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.

Russell 2000 Index Measures the performance of the small-cap segment of the US equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 7% of the total market capitalization of that index, as of the most recent reconstitution. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2000 is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set.

Russell 2000 Value Index Measures the performance of the small-cap value segment of the US equity universe. It includes those Russell 2000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell 2000 Value Index is constructed to provide a comprehensive and unbiased barometer for the small-cap value segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect value characteristics

Russell 3000 Index Measures the performance of the largest 3,000 US companies representing approximately 96% of the investable US equity market, as of the most recent reconstitution. The Russell 3000 Index is constructed to provide a comprehensive, unbiased and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are included.

Russell MidCap Growth Idx Measures the performance of the mid-cap growth segment of the US equity universe. It includes those Russell Midcap Index companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell Midcap Growth Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap growth market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap growth market.

Russell Midcap Value Index Measures the performance of the mid-cap value segment of the US equity universe. It includes those Russell Midcap Index companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell Midcap Value Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap value market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap value market.

S&P 500 Index Measures performance of top 500 companies in leading industries of U.S. economy. The index covers approximately 80% of available market capitalization.

Fixed Income Market Indicators

Bloomberg Aggregate Represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

Bloomberg Gov/Credit 1-3 Yr Is a broad-based benchmark that measures the non-securitized component of the US Aggregate Index. It includes investment grade, US dollar-denominated, fixed-rate Treasuries, government-related and corporate securities with 1 to 3 years to maturity.

FTSE 1 Month Treasury Bill Is a market value-weighted index of public obligations of the U.S. Treasury with maturities of one month

Real Estate Market Indicators

NCREIF NFI-ODCE Equal Weight Net Is an equally-weighted, net of fee, time-weighted return index with an inception date of December 31, 1977. Equally-weighting the funds shows what the results would be if all funds were treated equally, regardless of size. Open-end Funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, subject to contribution and/or redemption requests, thereby providing a degree of potential investment liquidity. The term Diversified Core Equity style typically reflects lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties.

NCREIF Property Index Is an index composed of existing, investment grade, wholly owned and joint venture investments that is limited to non-agricultural, income-producing properties including apartments, hotels, office, retail, R&D, and warehouses. The current quarter's index returns are subject to revision and therefore are considered preliminary until next quarter's returns are released.

Callan Databases

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

Equity Funds

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

Core Equity - Managers whose portfolio holdings and characteristics are similar to that of the broader market as represented by the Standard & Poor's 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. The core portfolio exhibits similar risk characteristics to the broad market as measured by low residual risk with Beta and R-Squared values close to 1.00 and combined growth and value z-score values close to 0.00.

International Equity - Non-U.S. - The Non-U.S. International Equity Database consists of separate account international equity products that do not generally invest in U.S. equities.

Middle Capitalization (Growth) - Managers who invest primarily in mid-range companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. The average market capitalization is approximately \$7 billion with market capitalizations between core equity companies and small capitalization companies. Invests in companies with P/E ratios, Price-to-Book values, and Growth-in-Earnings values above the broader market as well as the middle capitalization market segment. Invests in securities with greater volatility than the broader market and the middle capitalization segment as measured by the risk statistics Beta and Standard Deviation.

Middle Capitalization (Value) - Managers who invest primarily in mid-range companies believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The average market capitalization is approximately \$7 billion with market capitalizations between core equity companies and small capitalization companies. Invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book value below the broader market and the middle capitalization segment. Invests in securities with risk/reward profiles in the lower risk range of the medium capitalization market.

Non-U.S. Equity A broad array of active managers who employ various strategies to invest assets in a well-diversified portfolio of non-U.S. equity securities. This group consists of all Core, Core Plus, Growth, and Value international products, as well as products using various mixtures of these strategies. Region-specific, index, emerging market, or small cap products are excluded.

Small Capitalization Generally benchmarked to an international small cap index (like MSCI EAFE Small or MSCI ACWI ex-US Small or S&P/Citigroup EMI), International Small Cap managers focus on selecting smaller capitalization stocks. They may pursue any combination of Growth, Value, or Core, or "Plus" strategies. Portfolios are diversified across countries, and may have significant exposure to emerging markets.

Callan Databases

Small Capitalization (Growth) - Managers who invest mainly in small companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. The Small Cap Growth Style invests in companies with P/E ratios, Price-to-Book values, and Growth-in Earnings values above the broader market, in addition to the small capitalization market segment. The companies typically have zero dividends or dividend yields below the broader market. The securities exhibit greater volatility than the broader market as well as the small capitalization market segment as measured by the risk statistics values Beta and Standard Deviation. Portfolios have high growth z-scores and low value z-scores.

Small Capitalization (Value) - Managers who invest in small capitalization companies that are believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. The Small Cap Value Style invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market in addition to the small capitalization market segment. This style invests in securities with dividend yields in the high range for the small capitalization market. The Small Cap Value Style invests in securities with risk/reward profiles in the lower risk range of the small capitalization market. Portfolios have low growth z-scores and high value z-scores.

Special Equity (Small Capitalization) - Managers who hold portfolios with characteristics similar to that of the broader market as represented by the Standard & Poor's 600 or the Russell 2000 indices. Their objective is to add value over and above the index, typically from sector or issue selection.

Fixed Income Funds

Fixed Income funds concentrate their investments in bonds, preferred stocks, and money market securities. The funds included maintain well-diversified portfolios.

Core Bond - Managers who construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

Core Plus Bond - Active managers whose objective is to add value by tactically allocating significant portions of their portfolios among non-benchmark sectors (e.g. high yield corporate, non-US\$ bonds, etc.) while maintaining majority exposure similar to the broad market.

Defensive - Managers whose objective is to minimize interest rate risk by investing predominantly in short to intermediate term securities. The average portfolio duration is similar to the duration of the Merrill Lynch 1-3 Year Bond Index.

International Emerging Markets Fixed Income - The International Emerging Market Fixed-Income Database consists of all separate account international fixed-income products that concentrate on newly emerging second and third world countries in the regions of the Far East, Africa, Europe, and Central and South America.

Real Estate Funds

Real estate funds consist of open or closed-end commingled funds. The returns are net of fees and represent the overall performance of commingled institutional capital invested in real estate properties.

Real Estate Open-End Commingled Funds - The Open-End Funds Database consists of all open-end commingled real estate funds.

Other Funds

CAI Alternative Investments DB Database group representing managers within the alternative investments asset class. This includes, but is not limited to, commodities and private equity.

List of Callan’s Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager’s business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan’s ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan’s Compliance department.

Manager Name
abrdrn Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AllianceBernstein
Allspring Global Investments, LLC
Altrinsic Global Advisors, LLC
American Century Investments
Amundi US, Inc.
Antares Capital LP
Apollo Global Management, Inc.
AQR Capital Management
Ares Management LLC
ARGA Investment Management, LP
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC
Audax Private Debt

Manager Name
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BentallGreenOak
Beutel, Goodman & Company Ltd.
BlackRock
Blackstone Group (The)
Blue Owl Capital, Inc.
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brookfield Asset Management Inc.
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company

Manager Name

Capital Group

CastleArk Management, LLC

Cercano Management LLC

CIBC Asset Management

CIM Group, LP

ClearBridge Investments, LLC

Cohen & Steers Capital Management, Inc.

Columbia Threadneedle Investments

Comvest Partners

Crescent Capital Group LP

Dana Investment Advisors, Inc.

DePrince, Race & Zollo, Inc.

Dimensional Fund Advisors L.P.

DoubleLine

DWS

EARNEST Partners, LLC

Fayez Sarofim & Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Eagle Investment Management, LLC

First Hawaiian Bank Wealth Management Division

Fisher Investments

Franklin Templeton

Fred Alger Management, LLC

GAMCO Investors, Inc.

GlobeFlex Capital, L.P.

Goldman Sachs

Golub Capital

GW&K Investment Management

Harbor Capital Group Trust

Hardman Johnston Global Advisors LLC

Heitman LLC

Hotchkis & Wiley Capital Management, LLC

HPS Investment Partners, LLC

IFM Investors

Impax Asset Management LLC

Income Research + Management

Insight Investment

Intercontinental Real Estate Corporation

Manager Name

Invesco

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

Kayne Anderson Rudnick Investment Management, LLC

King Street Capital Management, L.P.

Kohlberg Kravis Roberts & Co. L.P. (KKR)

Lazard Asset Management

LGIM America

Lincoln National Corporation

Longview Partners

Loomis, Sayles & Company, L.P.

Lord, Abbett & Company

LSV Asset Management

MacKay Shields LLC

Macquarie Asset Management

Manulife Investment Management

Manulife | CQS Investment Management

Marathon Asset Management, L.P.

Mawer Investment Management Ltd.

MetLife Investment Management

MFS Investment Management

Mondrian Investment Partners Limited

Montag & Caldwell, LLC

Morgan Stanley Investment Management

MUFG Bank, Ltd.

Natixis Investment Managers

Neuberger Berman

Newton Investment Management

Northern Trust Asset Management

Nuveen

Oaktree Capital Management, L.P.

Orbis Investment Management Limited

P/E Investments

Pacific Investment Management Company

Parametric Portfolio Associates LLC

Partners Group (USA) Inc.

Pathway Capital Management, LP

Peavine Capital

Manager Name

Peregrine Capital Management, LLC

PGIM DC Solutions

PGIM Fixed Income

PGIM Quantitative Solutions LLC

Pictet Asset Management

PineBridge Investments

Polen Capital Management, LLC

PPM America, Inc.

Pretium Partners, LLC

Principal Asset Management

Raymond James Investment Management

RBC Global Asset Management

Regions Financial Corporation

S&P Dow Jones Indices

Sands Capital Management

Schroder Investment Management North America Inc.

Segall Bryant & Hamill

SLC Management

Star Mountain Capital, LLC

State Street Global Advisors

Strategic Global Advisors, LLC

Manager Name

T. Rowe Price Associates, Inc.

TD Global Investment Solutions – TD Epoch

The D.E. Shaw Group

The TCW Group, Inc.

Thompson, Siegel & Walmsley LLC

TPG Angelo Gordon

UBS Asset Management

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management

Voya

Walter Scott & Partners Limited

WCM Investment Management

Wellington Management Company LLP

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair & Company LLC

Xponance, Inc.

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The content of this document is particular to the client and should not be relied upon by any other individual or entity. There can be no assurance that the performance of any account or investment will be comparable to the performance information presented in this document.

Certain information herein has been compiled by Callan from a variety of sources believed to be reliable but for which Callan has not necessarily verified for accuracy or completeness. Information contained herein may not be current. Callan has no obligation to bring current the information contained herein.

Callan's performance, market value, and, if applicable, liability calculations are inherently estimates based on data available at the time each calculation is performed and may later be determined to be incorrect or require subsequent material adjustment due to many variables including, but not limited to, reliance on third party data, differences in calculation methodology, presence of illiquid assets, the timing and magnitude of unrecognized cash flows, and other data/assumptions needed to prepare such estimated calculations. In no event should the performance measurement and reporting services provided by Callan be used in the calculation, deliberation, policy determination, or any other action of the client as it pertains to determining amounts, timing or activity of contribution levels or funding amounts, rebalancing activity, benefit payments, distribution amounts, and/or performance-based fee amounts, unless the client understands and accepts the inherent limitations of Callan's estimated performance, market value, and liability calculations.

Callan's performance measurement service reports estimated returns for a portfolio and compares them against relevant benchmarks and peer groups, as appropriate; such service may also report on historical portfolio holdings, comparing them to holdings of relevant benchmarks and peer groups, as appropriate ("portfolio holdings analysis"). To the extent that Callan's reports include a portfolio holdings analysis, Callan relies entirely on holdings, pricing, characteristics, and risk data provided by third parties including custodian banks, record keepers, pricing services, index providers, and investment managers. Callan reports the performance and holdings data as received and does not attempt to audit or verify the holdings data. Callan is not responsible for the accuracy or completeness of the performance or holdings data received from third parties and such data may not have been verified for accuracy or completeness.

Callan's performance measurement service may report on illiquid asset classes, including, but not limited to, private real estate, private equity, private credit, hedge funds and infrastructure. The final valuation reports, which Callan receives from third parties, for of these types of asset classes may not be available at the time a Callan performance report is issued. As a result, the estimated returns and market values reported for these illiquid asset classes, as well as for any composites including these illiquid asset classes, including any total fund composite prepared, may not reflect final data, and therefore may be subject to revision in future quarters.

The content of this document may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact. The opinions expressed herein may change based upon changes in economic, market, financial and political conditions and other factors. Callan has no obligation to bring current the opinions expressed herein.

The information contained herein may include forward-looking statements regarding future results. The forward-looking statements herein: (i) are best estimations consistent with the information available as of the date hereof and (ii) involve known and unknown risks and uncertainties. Actual results may vary, perhaps materially, from the future results projected in this document. Undue reliance should not be placed on forward-looking statements.

Callan is not responsible for reviewing the risks of individual securities or the compliance/non-compliance of individual security holdings with a client's investment policy guidelines.

This document should not be construed as legal or tax advice on any matter. You should consult with legal and tax advisers before applying any of this information to your particular situation.

Reference to, or inclusion in this document of, any product, service or entity should not necessarily be construed as recommendation, approval, or endorsement or such product, service or entity by Callan. This document is provided in connection with Callan's consulting services and should not be viewed as an advertisement of Callan, or of the strategies or products discussed or referenced herein.

The issues considered and risks highlighted herein are not comprehensive and other risks may exist that the user of this document may deem material regarding the enclosed information. Please see any applicable full performance report or annual communication for other important disclosures.

Unless Callan has been specifically engaged to do so, Callan does not conduct background checks or in-depth due diligence of the operations of any investment manager search candidate or investment vehicle, as may be typically performed in an operational due diligence evaluation assignment and in no event does Callan conduct due diligence beyond what is described in its report to the client.

Any decision made on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon the client to make an independent determination of the suitability and consequences of such a decision.

Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.



Manager Watch List Review

PERS Fund Watch List

Manager	3-year Criteria	Trend	Comments	Recommendation	Currently on Watch List	Date Added to Watch List
Epoch Global Equity	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group shorter term improvements shown	Initiate Search	Yes	8/23/2022
	Exceeded Peer Median	Declining				
UBS Trumbull Property Fund Core Real Estate	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group Potential for improvement with new PM	Maintain on Watch List	Yes	3/31/2017
	Exceeded Peer Median	Declining				
JP Morgan Strategic Property Fund Core Real Estate	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group	Maintain on Watch List	Yes	3/31/2018
	Exceeded Peer Median	Declining				
Principal International Small Cap	Exceeded Benchmark	Improving	Rolling 3-year relative performance has lagged the benchmark and peer group shorter term improvements shown	Maintain on Watch List	Yes	2/28/2023
	Exceeded Peer Median	Improving				
Wellington Small Cap	Exceeded Benchmark	Stable	Turnover of key personnel	Remove from Watch List	Yes	6/27/2023
	Exceeded Peer Median	Stable				
Baillie Gifford ACWI ex US All Cap	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group	Maintain on Watch List	Yes	6/26/2024
	Exceeded Peer Median	Declining				
Harding Loevner Global Equity	Exceeded Benchmark	Declining	Turnover of key personnel and rolling 3-year relative performance has lagged the benchmark and peer group	Maintain on Watch List	Yes	6/26/2024
	Exceeded Peer Median	Declining				
Artisan Partners Mid Cap Growth	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group	Add to Watch List	No	
	Exceeded Peer Median	Declining				
Riverbridge Small Cap Growth	Exceeded Benchmark	Declining	Rolling 3-year relative performance has lagged the benchmark and peer group	Add to Watch List	No	
	Exceeded Peer Median	Declining				

PERS Fund Watch List Performance

3-year Returns

3-year period ending:		9/30/2024	6/30/2024	3/31/2024	12/31/2023
Epoch - Global	Return	6.04%	3.96%	5.59%	4.23%
	Benchmark	8.09%	5.43%	6.96%	5.75%
	Percentile Rank	66	65	70	68
UBS - Trumbull Property Fund	Return	Data not yet	-1.17%	0.21%	1.20%
	Benchmark	available	1.14%	2.81%	4.35%
	Percentile Rank		82	81	89
JP Morgan - Strategic Property Fund	Return	Data not yet	-0.98%	-0.46%	2.02%
	Benchmark	available	1.14%	2.81%	4.35%
	Percentile Rank		78	88	82
Principal - International Small Cap	Return	0.45%	-2.14%	0.14%	0.15%
	Benchmark	0.05%	-2.98%	-0.93%	-0.20%
	Percentile Rank	48	49	53	48
Wellington - Small Cap	Return	6.56%	2.30%	4.30%	5.39%
	Benchmark	1.84%	-2.58%	-0.10%	2.22%
	Percentile Rank	27	39	54	68
Baillie Gifford - ACWI ex US All Cap	Return	-4.46%	-8.59%	-6.35%	-7.29%
	Benchmark	3.74%	0.19%	1.72%	1.53%
	Percentile Rank	94	99	95	98
Harding Loevner - Global Equity	Return	1.94%	-0.12%	2.31%	0.58%
	Benchmark	8.09%	5.43%	6.96%	5.75%
	Percentile Rank	91	89	90	87
Artisan Partners - Mid Cap Growth	Return	-4.88%	-4.75%	0.38%	-3.57%
	Benchmark	2.32%	-0.08%	4.62%	1.31%
	Percentile Rank	86	78	72	77
Riverbridge - Small Cap Growth	Return	-7.42%	-8.76%	-3.58%	-4.63%
	Benchmark	-0.35%	-4.86%	-2.68%	-3.50%
	Percentile Rank	95	89	67	72

1-year Returns

1-year period ending:		9/30/2024	6/30/2024	3/31/2024	12/31/2023
Epoch - Global	Return	28.08%	18.32%	20.30%	19.47%
	Benchmark	31.76%	19.38%	23.22%	22.20%
	Percentile Rank	63	49	59	61
UBS - Trumbull Property Fund	Return	Data not yet	-8.23%	-10.25%	-15.10%
	Benchmark	available	-10.32%	-12.33%	-13.33%
	Percentile Rank		46	51	70
JP Morgan - Strategic Property Fund	Return	Data not yet	-14.66%	-16.86%	-14.69%
	Benchmark	available	-10.32%	-12.33%	-13.33%
	Percentile Rank		84	82	70
Principal - International Small Cap	Return	22.34%	9.34%	13.19%	14.66%
	Benchmark	23.36%	7.80%	10.04%	12.62%
	Percentile Rank	69	46	43	53
Wellington - Small Cap	Return	27.34%	9.84%	18.16%	18.93%
	Benchmark	26.76%	10.06%	19.71%	16.93%
	Percentile Rank	35	61	62	29
Baillie Gifford - ACWI ex US All Cap	Return	25.93%	3.17%	4.25%	10.84%
	Benchmark	25.06%	11.57%	13.20%	15.62%
	Percentile Rank	43	97	94	97
Harding Loevner - Global Equity	Return	31.25%	18.15%	24.01%	23.28%
	Benchmark	31.76%	19.38%	23.22%	22.20%
	Percentile Rank	49	51	40	39
Artisan Partners - Mid Cap Growth	Return	17.43%	11.28%	23.09%	25.27%
	Benchmark	29.33%	15.05%	26.28%	25.87%
	Percentile Rank	86	45	45	20
Riverbridge - Small Cap Growth	Return	11.08%	-2.24%	15.08%	21.15%
	Benchmark	27.66%	9.14%	20.35%	18.66%
	Percentile Rank	98	100	76	26

Candidate Profile

1. Manager Type

The Public Employees' Retirement System of Mississippi ("MS PERS") is seeking a Global Growth Equity manager.

2. Only qualified investment counselors or organizations registered under the Investment Advisers Act of 1940 that are currently managing ACWI IMI ("global equity") oriented assets will be considered. This includes investment counselors and investment counseling subsidiaries of banks, brokerage houses and insurance companies. Investment Style

MS PERS is seeking a growth-oriented global equity manager that exhibits characteristics (including regions, sectors, risk, and return) consistent with the MSCI ACWI IMI and the Callan Global Equity Peer Group.

3. Managed Assets

The anticipated size of the allocation is approximately \$1.0 - \$1.4 billion (as of September 30, 2024), allocated to a single manager. The firm should have an established presence in the global equity space. For large firms (> \$25 billion in firm AUM), MS PERS allocation should be no greater than 50% of strategy assets. For smaller firms, the allocation should not exceed 25% of the strategy's total assets.

4. Professional Staff

Investment staff should be of sufficient depth and breadth to perform ongoing duties of the firm. Additionally, there should be a sufficient number of client service and investment personnel relative to the firm's account load to ensure that MSPERS has reasonable access to the firm and that the investment portfolios are well attended. If the client service representatives are the main contacts they should be well versed in the firm's investment approach.

5. Portfolio Manager Structure & Experience

While at least ten years of experience by the investment team is preferred, a minimum of five years is mandatory. If key investment personnel for the active strategy do not satisfy these experience criteria, the firm must be able to convincingly demonstrate a strong continuing commitment to this product and currently have other professionals on staff that were major contributors to the performance record being used for evaluation.

6. Investment Vehicle

MS PERS prefers a separate account for this mandate.

Candidate Profile (continued)

7. Historical Performance & Risk Criteria

Performance over multiple cumulative, annual and rolling periods will be evaluated relative to the appropriate peer group and index. Risk-adjusted measures and holdings-based portfolio characteristics will also be considered. A track record of at least three years is preferred, and performance records from previous firms will be evaluated on a case-by-case basis. Strategies based on simulations or back-testing should be clearly indicated as such.

8. Qualities Specifically Sought

- Firm must be a viable, ongoing business
- Organizational infrastructure to support institutional client base
- Disciplined investment process
- Low turnover of key personnel
- Low dispersion of returns within appropriate composite
- Commitment to client service and an ability to effectively articulate their investment process
- Willingness to visit client in person in Jackson, Mississippi for Investment Committee meetings periodically (no more than annually) and as required by Staff.

9. Characteristics To Be Avoided

- Concentrated client base
- Candidates currently involved in a merger, acquisition, or recent transaction impacting the firm's senior executives
- Excessive recent personnel turnover
- Excessive fees. Fees should be competitive for comparable services in the industry

10. Specific Client Requests & Additional Considerations

This is a replacement search for Epoch Global Choice due to performance and personnel reasons. MSPERS staff has a preference for quantitative management styles, and the client is highly fee sensitive. Cost considerations will play a role in the evaluation and selection process

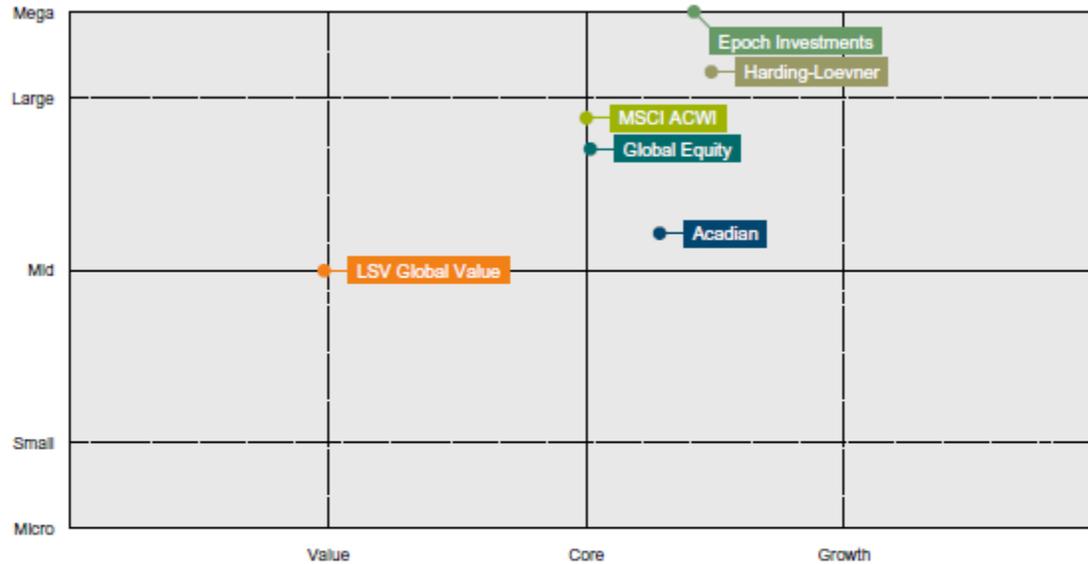
Show MS PERS existing roster of global equity managers other than Epoch as "complement" alongside search candidates for comparison of performance, style, holdings, etc. (style map on following page). Show Epoch as "incumbent" alongside search candidates for comparison of performance, style, holdings, etc. (style map on following page).

MS PERS would like to review 8 to 12 semi-finalist candidates.

MS PERS may have additional candidates they want to include in the search, which the consulting team will supply to Callan's Global manager Research group (GMR) for evaluation.

Candidate Profile (continued)

Style Map
Holdings for One Quarter Ended June 30, 2024



	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
Acadian	25.49%	47.13	0.33	0.24	(0.09)	353	20.76
Epoch Investments	24.98%	301.50	0.46	0.14	(0.32)	32	10.09
Harding-Loevner	25.15%	179.81	0.53	0.07	(0.46)	61	15.87
LSV Global Value	24.26%	22.25	(1.06)	(0.21)	0.85	271	83.61
Global Equity	100.00%	103.73	0.07	0.06	(0.01)	664	43.64
MSCI ACWI	-	124.55	0.05	0.01	(0.05)	2759	104.59



Iran Divestment Act of 2015 PERS Exposure Review

PERS Holdings on Divestment List
Valuations as of 11/30/2024

Company	Shares	Base Cost	Base Market Value	Base Unrealized Gain/Loss
PETROLEOS DE VENEZUELA SA REGS	17,856,000.000	6,014,914.040	1,686,840.580	\$ (4,328,073.46)
PETROCHINA CO LTD	17,019,600.000	9,117,145.190	12,051,326.050	\$ 2,934,180.86
PETRONET LNG LTD	839,412.00	2,298,202.080	3,309,118.960	\$ 1,010,916.88
Total	35,715,012.00	\$ 17,430,261.31	\$ 17,047,285.59	\$ (382,975.72)

§ 27-106-17. Limitation of chapter due to fiduciary obligations. Nothing in this chapter requires the Public Employees' Retirement System of Mississippi or the State Treasurer or their agents to take any action as described in this chapter unless it is determined, in good faith, that the action described in this chapter is consistent with the fiduciary responsibilities of the Public Employees' Retirement System of Mississippi or the State Treasurer or their agents; and there are appropriated funds of the state to absorb the expenses necessary to implement this chapter.



STATE OF MISSISSIPPI
GOVERNOR TATE REEVES

DEPARTMENT OF FINANCE AND ADMINISTRATION

**Entities determined to be non-responsive bidders/offers pursuant to the
Mississippi Iran Divestment Act of 2015**

1. Ak Makina Limited - Turkey
2. Amona - Malaysia
3. Bank Markazi Iran -Iran
4. Bank Mellat - Iran
5. Bank Melli Iran - Iran
6. Bank Saderat Iran - Iran
7. Bank Sepah - Iran
8. Bank Tejarat - Iran
9. China Precision Machinery Import-Export Corporation (CPMIEC) - China
10. China Oil (China National United Oil Corporation) - China
11. China National Offshore Oil Corporation (CNOOC) – China
12. China National Petroleum Corporation (CNPC) -- China
13. Kingdream, PLC - China
14. Naftiran intertrade Co. (NICO) – Iran
15. National Iranian Tanker Co. (NITC) - Iran
16. Oil and Natural Gas Corporation - India
17. Oil India - India
18. Persia International Bank - UAE
19. Petroleos de Venezuela - Venezuela
20. PetroChina Co. - China
21. Petronet LNC, LTD - India
22. Sameh Afzar Tajak, Co. - Iran
23. Shandong FIN CNC Machine Co. - China
24. Sinohydro Co., LTD – China
25. Sinopec Corp. (China Petroleum & Chemical Company) - China
26. SKS Ventures - China
27. SK Energy Company - China
28. Som Petrol AS - Turkey
29. Zhuhai Zhenrong Co. – China

UPDATED: September 25, 2024



Israel Support Act of 2019 PERS Exposure Review

PERS Holdings on Divestment List
Valuations as of 11/30/2024

Company	Shares	Base Cost	Base Market Value	Base Unrealized Gain/Loss
DANSKE BANK A/S	101,947.000	2,658,151.81	2,926,590.71	\$ 268,438.90
DANSKE BANK A/S 144A	5,843,000.000	5,785,903.62	5,763,041.19	\$ (22,862.43)
NORDEA BANK ABP 144A	1,076,000.000	1,076,000.00	1,032,766.32	\$ (43,233.68)
NORDEA BANK ABP	471,831.000	4,471,829.670	5,330,808.20	\$ 858,978.53
Total	7,492,778.00	13,991,885.10	15,053,206.42	\$ 1,061,321.32

(b) "Expense" means all explicit costs associated with divesting of investments, including, but not limited to, trading costs, brokerage commissions, and any realized losses, and all implicit costs, including, but not limited to, lost opportunity costs resulting from the prohibition from making certain investments.

§ 27-106-17. Limitation of chapter due to fiduciary obligations. Nothing in this chapter requires the Public Employees' Retirement System of Mississippi or the State Treasurer or their agents to take any action as described in this chapter unless it is determined, in good faith, that the action described in this chapter is consistent with the fiduciary responsibilities of the Public Employees' Retirement System of Mississippi or the State Treasurer or their agents; and there are appropriated funds of the state to absorb the expenses necessary to implement this chapter.

Prohibited Investment List

Set forth below is a list of entities that have been deemed prohibited from investment through House Bill 761, 2019 Session.

Companies that Boycott Israel

ASN Bank NV

Betsah SA

Betsah Invest SA

Cactus SA

The Co-operative Group Gomersall

Danske Bank

Dexia

Dutch Lion Cooperatief U.A.

FreedomCall UK

Guloguz Dis Deposu Ticaret Ve Pazarlama Ltd.

HEMA BV

KLP Kapitalforvaltning AS

Karsten Farms

Kommunal Landspensjonskasse (KLP)

Nordea

Pensionskassernes Administration A/S

Royal Haskoning DHV

SNS Bank NV

Vitens NV

MUFG Investor Services

Global Securities Lending Solutions

A Global Partner You Can Trust

MPERS Board Meeting – Dec 2024



Mitsubishi UFJ Financial Group (“MUFG”)

Firm Profile

- 360 years of history: **Japan’s largest banking group** and 7th largest bank in the world (USD 3 trillion in assets)
- Services: commercial banking, **trust banking**, securities, credit cards, consumer finance, asset management, leasing
- Securities Lending is provided by the **Global Securities Lending Solutions team (“GSLS”)** based in New York and domiciled within the Trust Division of MUFG’s wholly owned subsidiary, **Mitsubishi UFJ Trust and Banking (“MUTB”)**. Multifaceted Indemnification against counterparty insolvency risk is provided by MUTB (Credit ratings - Moody’s: A1, P-1; S&P: A, A-1).
- We operate as a **fiduciary**, regulated by the OCC (Office of the Comptroller of the Currency)
- We offer Agency **Securities Lending**, **Agency Repo** (for clients looking for liquidity), **Agency Reverse Repo** (for clients looking to place cash)

Number of clients	240	Lendable Base	\$1,317 billion	Number of Counterparties	>120
Locations and support	New York , London, Luxemburg, Tokyo	Trading Staff	18 FTE	Additional Staff Support	148

What is Securities Lending?

- Lenders earn a stable or growing stream of incremental revenues while adding liquidity to financial markets, enabling efficient operations and settlements and a wide spectrum of investment activity
- In its most simple form, securities lending is the temporary loan of securities in exchange for client directed acceptable collateral, such as cash or other securities. The value of the collateral received exceeds the value of the loaned securities. (Generally, 102% to 105% of the security value)
- The collateral is invested by the provider in short-term fixed income investments, generating a yield
- The transaction is between a Beneficial Owner (lender) and an approved Borrower. (i.e. Goldman Sachs, Bank of America, Barclays PLC)
- Lenders are insurers, public and private pensions, asset managers, financial institutions, government entities, central banks, sovereign wealth funds, endowments & foundations.
- Eligible asset classes include domestic and foreign equities (including ETF's and ADR's), US government securities and sovereign debt, corporate bonds.

Asset Classes

Asset Class	2023 Revenue (Billion)
Americas Equities	\$5,098
Asia Equities	\$2,183
Government Bonds	\$1,888
EMEA Equities	\$1,373
Corporate Bonds	\$1,117
ETP's	\$635
ADR's	\$328
Total	\$12,622

Role of Borrower and Lender

SUPPLY

The Lender (Beneficial Owner)

- Receives 100% of the value of the security, or more, in collateral
- Loans the security (title transfer)
- Can recall the loan at any time

What are the Additional Considerations?

- Retains ownership of the loaned security
- Continues to receive distributions in the form of substitute payments (interest, dividends, and corporate action rights)
- Continues to have market exposure to the asset
- Cannot vote proxies; however, loans can be recalled in order to vote

DEMAND

The Borrower (Counterparty)

- Provides 100% of the value of the security, or more, in collateral
- Obligated to return the identical security

Why Do They Borrow?

- Settle Trades / Prevent Fails
- Cover Short Sales - Hedging and Trading Strategies
- Balance Sheet Management

Who Borrows?

- Banks, and Broker Dealers

How does Securities Lending Generate Revenue?

- Cash collateral is invested in short-term high-quality investments (assets) per approved investment guidelines. These investments generate a yield. The loan of the security typically requires a rebate rate (liability) payable to the borrowing counterparty.

Thus, Gross Revenue is Yield – Rebate Rate = Gross Revenue.

- Factors that move the rebate rate higher or lower towards the asset owner are generally the supply for and demand of the security in the market.
- At the inception of a new securities lending program, the provider and the asset owner establish the revenue split, which represents how revenue is shared

2023 Top Revenue Generating Equity Specials

(Fees >20 bps)

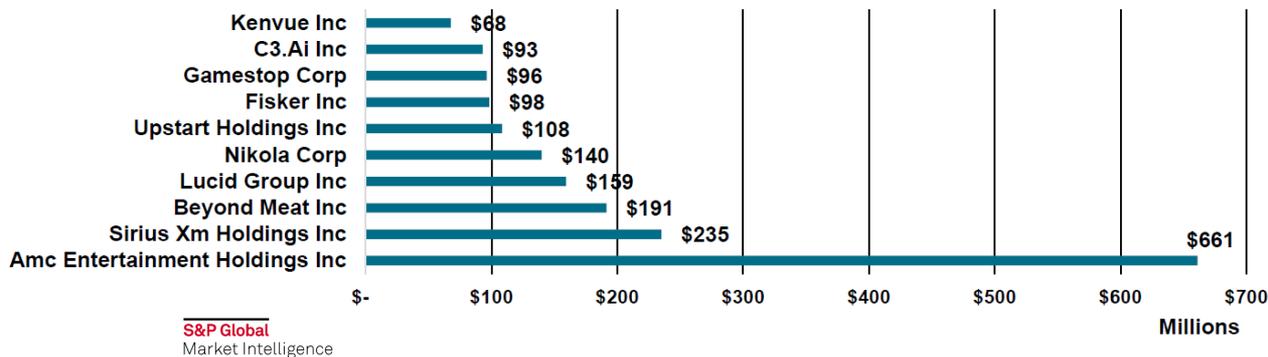
Top 10 Revenue Generating Equities of 2023

Top Earning Assets	Ticker	Sector	Country	Revenue Generated (\$M)
AMC Entertainment Holdings Inc	AMC	North America Media and Entertainment	US	\$661.3
Sirius XM Holdings Inc	SIRI	North America Media and Entertainment	US	\$235.1
Beyond Meat Inc	BYND	North America Food, Beverage & Tobacco	US	\$191.3
Lucid Group Inc	LCID	North America Automobiles & Components	US	\$159.3
Nikola Corp	NKLA	North America Capital Goods	US	\$139.9
Upstart Holdings Inc	UPST	North America Financial Services	US	\$108.4
Fisker Inc	FSR	North America Automobiles & Components	US	\$98.3
Gamestop Corp	GME	North America Consumer Discretionary & Retail	US	\$96.2
C3.Ai Inc	AI	North America Software & Services	US	\$93.0
Visa Inc	V	North America Financial Services	US	\$85.1

Source: S&P Global Market Intelligence Securities Finance

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2023 Top 10 Revenue Generators



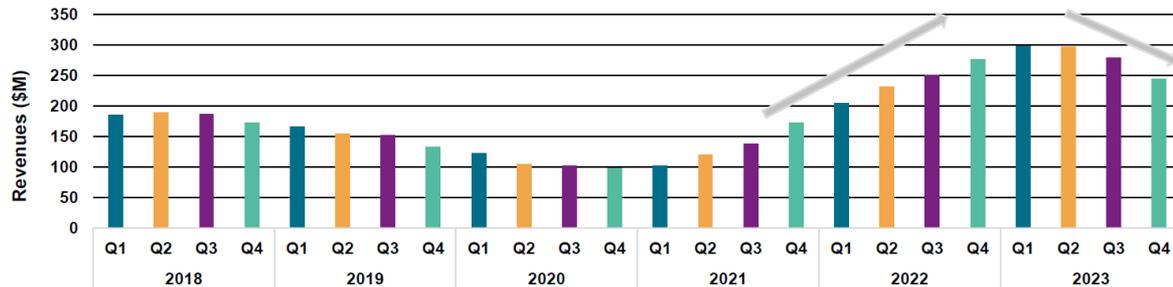
AMC Entertainment was an outsized revenue generator at \$661 million

Market Data: Government Bonds 2023

Government Bond data table for 2023

Region	2023 Revenue (\$M)	Rev YoY % Change	Avg Balances (\$B)	Bal YoY % Change	Avg Fee	Fee YoY % Change	Avg Lendable (\$B)	Lendable YoY % Change	Avg Util	Util YoY % Change
Government Bonds	\$1,888	2%	\$1,078	-11%	0.18%	14%	\$4,162	5%	20.6%	-17%
Americas	\$1,138	5%	\$664	-14%	0.17%	21%	\$2,929	4%	19.7%	-19%
Europe	\$651	-5%	\$362	-10%	0.18%	4%	\$1,092	5%	23.7%	-16%
Asia	\$107	11%	\$52	10%	0.21%	1%	\$141	10%	16.5%	12%
Emerging Market	\$105	344%	\$24	-8%	0.44%	18%	\$295	1%	7.0%	-12%

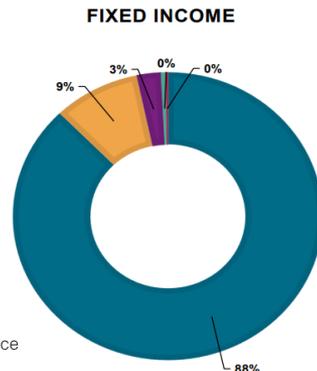
Government Bond quarterly revenues



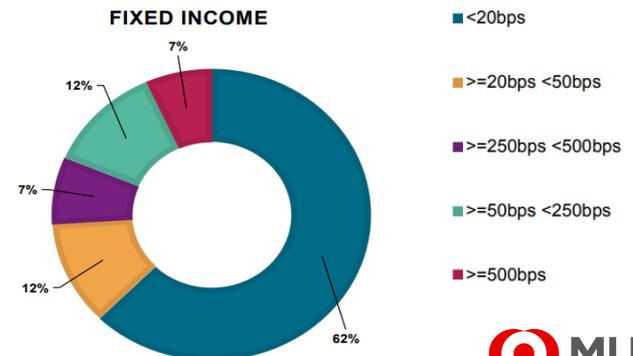
Both corporate and government bond revenues peaked during Q1 2023

12% of fixed income loan volume are “specials” (fees ≥ 20 bps), which accounts for 38% of fixed income loan revenues, amplifying the importance of being able to generate superior returns anywhere along the intrinsic value continuum, from specials to general collateral trading.

Percent of Total Loan Value by fee bucket



Percent of Industry Revenue by fee bucket



S&P Global Market Intelligence

What are the Key Risks?

Risk	Description	Mitigation
Counterparty Insolvency	The counterparty suffers insolvency and cannot meet their obligation to return the loaned security or cash that has been invested in a repo (separate account basis).	MUFG's Credit Risk Function selects and monitors counterparties on an ongoing basis. Clients can strike counterparties if desired. Multifaceted Indemnification: The Bank is contractually obligated to purchase replacement securities in full, as well as replace cash collateral it has invested in repurchase agreements ("Indemnified Repo").
Market Risk	Margin Shortfall	Loans are fully collateralized and marked to market daily.
Reinvestment Risk	Cash pledged as collateral is invested at the Client's risk.	Cash is invested conservatively. Multiple options: <ul style="list-style-type: none">• Separate account with customized guidelines, to include "Indemnified Repo" and money market funds; or• A commingled fund offered by Fort Washington Investment Advisors, Inc.; or Clients can manage cash in-house

Multifaceted Indemnification

Against “Margin Shortfall Risk”

Our team pioneered the concept of non-standard indemnification covering counterparty insolvency risk with respect to loans of securities and investments of cash collateral in repurchase agreements (“indemnified repo”), which remains today the most comprehensive level of contractual protection in the industry.

Multifaceted

Loans of Securities (“Lending Transactions”)

- Loans made versus either cash or securities (“non-cash”) pledged as collateral
- In the event of insolvency by a securities borrower, Bank is responsible for any difference between the value of the collateral and the cost of replacement securities, *determined at the time the Bank purchases replacement positions (without limitation)*

Cash Collateral Invested in Repos (“Reverse Transactions”)

- In the event of insolvency by a counterparty, Bank replaces the amount of cash invested (“Indemnified Repo”)
- Bank is responsible for any difference between the value of the repo collateral and the amount of cash invested with the counterparty (“liquidation risk”), *determined at the time the Bank credits the client’s account (without limitation)*

Real- World Application:

- Structure an ultra-low risk “fully indemnified” securities lending strategy delivering superior risk adjusted returns
- Generate stable or growing monthly revenues underpinned by active asset liability management, i.e., low interest rate (GAP) risk
- Program Attributes: Conservative, mirrors investment policy, separate account, collateral segregation, full-transparency, no cash management fees

Back by World’s Seventh Largest Bank (US\$ 3.2 Trillion Balance Sheet)

Agency Agreement:

13.01 In the event of an Insolvency Default, the Head Office (i.e., MUFG) undertakes to indemnify the Client with respect to any shortfall between the Liquidation Proceeds (i.e., Collateral) and the Market Value (determined at the time MUTB-NY, as Agent, exercises the appropriate remedy in accordance with the terms of the relevant Counterparty Agreement) of: (i) in respect of Lending Transactions, the Securities subject to such Transaction or (ii) in the case of Reverse Transactions, the amount of cash transferred to the Counterparty with respect to such Transaction.

How it Differs from the Industry

MUFG provides:

- ✓ *Full replacement* of positions and/or cash invested in repo *within two business days* (same quantity, identifier) regardless of when the Bank purchases replacement positions or credits cash to the client
- ✓ *Unlimited* protection against margin shortfall risk, i.e., a collateral shortfall caused by price movements following an insolvency default

Covering:

- ✓ *All permissible non-cash collateral types*
- ✓ *Overnight and term repos made versus all traditional and non-traditional collateral types, e.g., investment and non-investment grade securities, equities, ETFs, etc.*
- ✓ *The risk of a legal stay imposed by US and/or non-US regulators under recently enacted ISDA Stay Protocols (“stay risk”)*

Competitors typically:

Contractually limit coverage of overnight market risk to one (1) day (day of default), which does not ensure full replacement of positions or address overnight market risk caused by an insolvency stay
Refrain from indemnifying investments of cash collateral

MPERS Approved Counterparties

ABN Amro Bank NV	Commerz Markets LLC	Macquarie Bank Limited	Standard Chartered Bank
ABN AMRO Securities (USA) LLC	Commerzbank AG	Merrill Lynch International	State Street Bank & Trust Co
Amherst Pierpont Securities LLC	Credit Agricole Corporate and Investment Bank	Mirae Asset Securiteis (USA) Inc.	State Street Corporation
ASL Capital Markets Inc.	Credit Agricole Securities (USA) Inc	Mizuho International plc	Sumitomo Mitsui Banking Corporation
Banco Santander	Daiwa Capital Markets America Inc	Mizuho Securities USA LLC	TD Global Finance Unlimited Company
Banco Santander SA	Daiwa Capital Markets Europe Ltd	Morgan Stanley & Co International Plc	TD Prime Services LLC
Banco Santander SA, London Branch	Danske Bank A/S	Morgan Stanley & Co LLC	TD Securities (USA) LLC
Bank of Americas Securities Inc	Deutsche Bank AG	Morgan Stanley Europe SE	TD Securities Inc
Bank of Montreal	Deutsche Bank Securities Inc	Morgan Stanley MUFG Securities Co. Ltd	The Bank of New York Mellon
Bank of Montreal, London Branch	DZ Bank AG	MS Securities Services, LLC	The Bank of Nova Scotia
Bank of Montreal, NY Branch	Euroclear Bank SA/NV	National Bank Of Canada Financial Inc.	The Bank of Nova Scotia, Houston Branch
Bank of New York	Fidelity Capital Markets LLC	National Financial Services LLC	The Bank of Nova Scotia, London Branch
Barclays Bank Ireland PLC	Goldman Sachs & Co LLC	Natixis	The Bank of Nova Scotia, New York Branch
Barclays Bank PLC	Goldman Sachs Bank Europe SE	Natwest Markets Plc	The Hong Kong & Shanghai Banking Corporation Lt
Barclays Capital Inc	Goldman Sachs International	NatWest Markets Securities Inc.	The Toronto Dominion Bank
Barclays Capital Securities Limited	HSBC Bank PLC	NBC Global Finance Limited	The Toronto Dominion Bank, London Branch
BMO Capital Markets Corp	HSBC Continental Europe	Newedge USA, LLC	Toronto Dominion (South East Asia) Limited
BNP Paribas Arbitrage SNC	HSBC France	Nomura Financial Products Europe GmbH	UBS AG
BNP Paribas Prime Brokerage Intl Limited	HSBC Securities (USA) Inc	Nomura International Plc	UBS AG, London Branch
BNP Paribas SA	ICBC Financial Services LLC	Nomura Securities International Inc	UBS Europe SE
BNP Paribas Securities Corp	ING BANK NV	Oesterreichische Nationalbank	UBS Securities LLC
BofA Securities Europe SA	ING Bank NV Singapore	Pershing LLC	Wedbush Securities Inc.
Canadian Imperial Bank of Commerce	ING Financial Markets LLC	RBC Capital Markets LLC	Wells Fargo Bank N.A.
Cantor Fitzgerald & Co.	J.P. Morgan Chase Bank, NA	RBC Dominion Securities Inc	Wells Fargo Securities LLC
CF Secured LLC	J.P. Morgan Securities LLC	RBC Europe Ltd	
CIBC World Markets Corp	J.P. Morgan Securities PLC	Royal Bank of Canada	
CIBC World Markets Inc.	Janney Montgomery Scott LLC	Scotia Capital (USA) Inc.	
Citadel Clearing LLC	Jefferies GmbH	Scotiabank (Ireland) Designated Activity Company	
Citadel Securities LLC	Jefferies International Ltd	Scotiabank Europe plc	
Citigroup Global Markets Europe AG	Janney Montgomery Scott LLC	SG Americas Securities LLC	
Citigroup Global Markets Inc	Landesbank Baden Wuerttemberg AG	Skandinaviska Enskilda Banken AB	
Citigroup Global Markets Limited	Lloyds Bank Corporate Markets Plc	SMBC Nikko Securities America Inc.	
Clear Street LLC	Lloyds Bank Plc	Societe Generale	
Clearstream Banking SA	Loop Capital Markets LLC	Societe Generale, New York Branch	

Global Securities Lending Solutions: Performance

Mitsubishi's Global Securities Lending Business

Monthly Analysis

2024 Earnings						
	Gov	Equity	Corp	Int'l Fixed	Int'l Equities	Total
October	\$60,694	\$100,271	\$44,693	\$757	\$0	\$206,414
November	\$144,997	\$231,967	\$62,880	\$1,170	\$0	\$441,013
December						
January						
YTD	\$205,691	\$332,238	\$107,573	\$1,927	\$0	\$647,427

November 2024 Earnings		
	This Month	Year-to-Date
Governments	\$144,997	\$205,691
Equities	\$231,967	\$332,238
Corporates	\$62,880	\$107,573
Int'l Fixed	\$1,170	\$1,927
Int'l Equities	\$0	\$0
Total	\$441,013	\$647,427

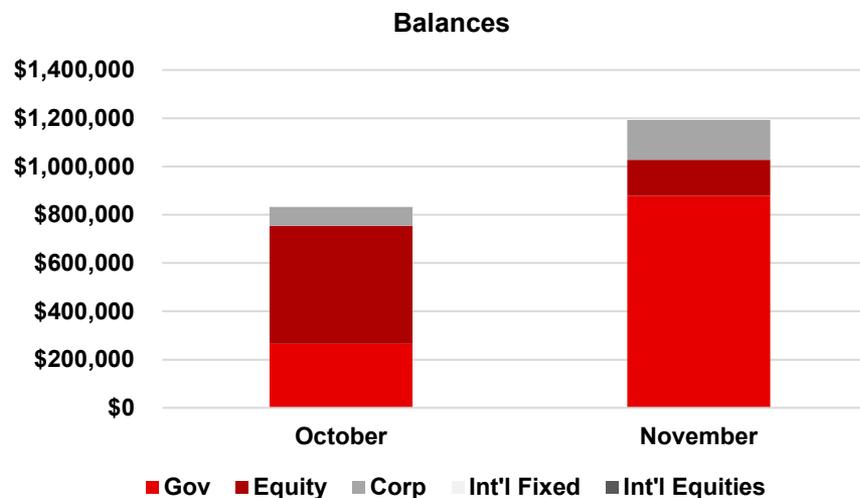
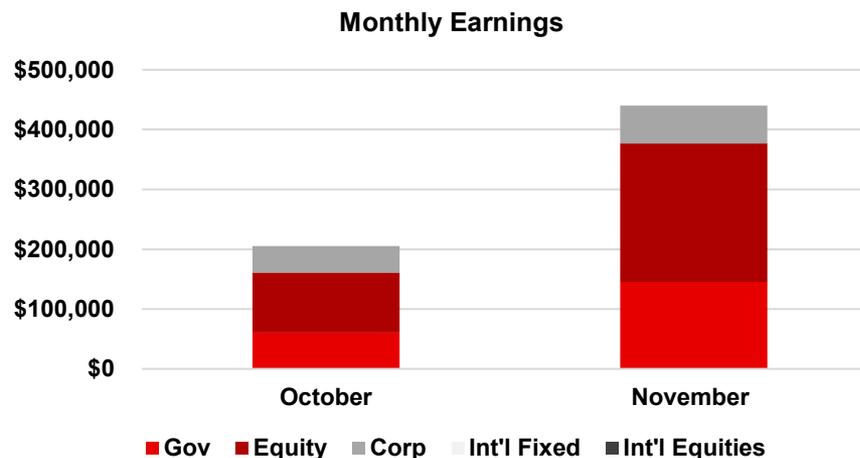
Outstandings (000s)						
	Gov	Equity	Corp	Int'l Fixed	Int'l Equities	Total
October	\$264,706	\$489,476	\$78,969	\$2,474	\$0	\$835,626
November	\$879,460	\$148,464	\$164,913	\$3,987	\$0	\$1,196,826
December						
January						
Average	\$572,083	\$318,970	\$121,941	\$3,231	\$0	\$1,016,226

November Monthly Performance Measures		
	Avg. Loan Volume	Avg. Wgh. Spread (BP)
Governments	\$879,460	22
Equities	\$148,464	22
Corporates	\$164,913	50
Int'l Fixed	\$3,987	39
Int'l Equities	\$0	0
Total	\$1,196,826	24

Spreads						
	Gov	Equity	Corp	Int'l Fixed	Int'l Equities	Total
October	29	27	73	38	0	32
November	22	22	50	39	0	27
December						
January						
AVG	26	25	62	39	0	30

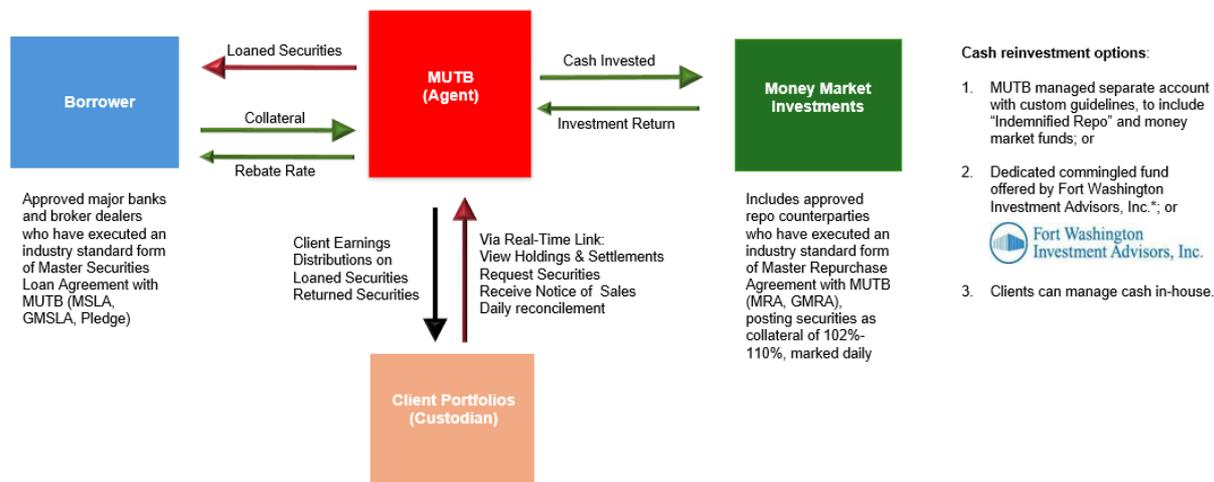
Mitsubishi's Global Securities Lending Business

Monthly Analysis



Transaction Flow

- Loans are negotiated on an overnight basis versus cash or securities pledged as collateral (US 102%, int'l 105%). Loans are marked to market each day in order to maintain collateralization levels.
- The borrower receives a “rebate rate”, which is a mutually agreed upon rate of return on cash collateral commensurate with demand. If the security is highly sought after (“special”), the borrower receives little or no rebate, and may even be charged an additional fee (“negative rebate”). If securities are pledged as collateral (“non-cash”), the borrower is charged a fee.
- Cash collateral is invested in order to generate a rate of return over and above the rebate rate.
- Agent receives a percentage of the loan profits (revenue sharing).
- Client retains the right to sell or recall securities at any time. Distributions continue without interruption (interest, dividends, and corporate action rights). Securities can be recalled for proxy voting.



*Fort Washington Investment Advisors, a unit of Western & Southern Financial Group, is an SEC-registered investment advisor with a total of \$74.3 billion under management as of September 30, 2023. Information about the commingled fund (“Securities Lending Fund, LLC”) is available upon request.

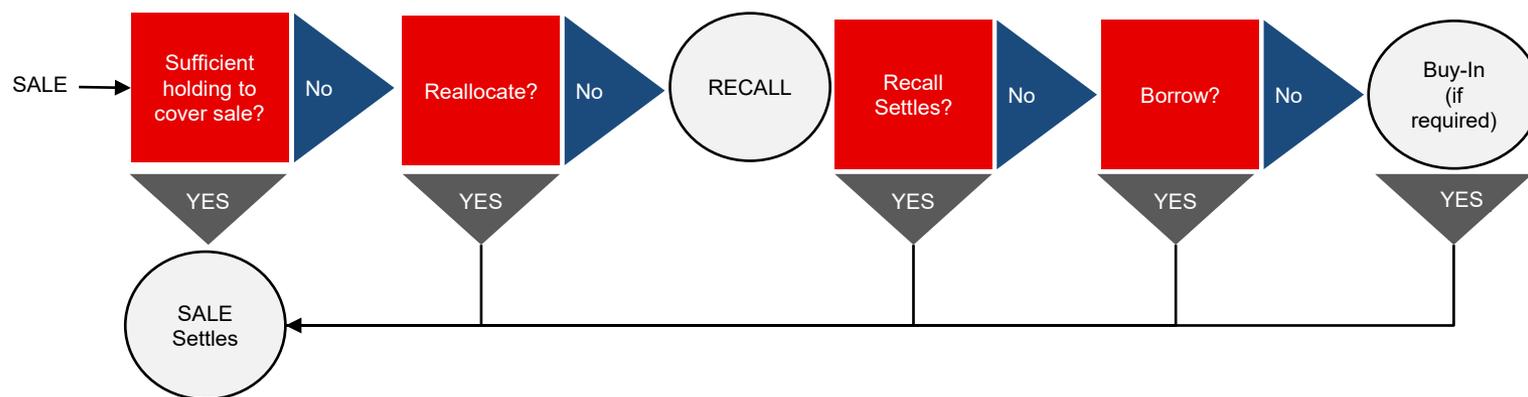
<https://www.westernsouthern.com/fortwashington>

Process for Returns, Sales and Recalls

The GSLS program is designed to ensure minimal disruption to clients

- Returns and recalls are executed by GSLS in **timely fashion** ensuring client's, and their fund manager's, investment activities are not impacted – our recall success rate is over 99.99%
- Our lending system (SPIRE) is a true **front-to-back trading and operations system** – there is no risk of a trade being booked which does not reach operations
- GSLS has its own **dedicated operations team** supporting all settlement management, mark-to-market, fails management, reconciliations and billing functions
- As long as we are notified of a sale within agreed recall deadlines, we will make the lender good for any direct overdraft costs which might be incurred as a result of their sale failing

GSLS Recall Settlement Process



How We Collaborate

Specifically with Clients and Portfolio Managers

- Creation of a customized dashboard: Revenues, balances, loan spreads, return to lendable assets, exposures, rules compliance, etc.
- Access to traders and/or chat rooms: Real-time responses to information requests regarding client or street activity.
- We can deliver qualitative and quantitative analysis on individual positions across various asset classes.
- Fixed income portfolio construction: Many clients employ a securities lending overlay in their portfolio construction. A portfolio manager can assess the total return of an unlent Agency discount instrument versus owning a T-Bill with approx. 100% utilization, swapping in or out of the scenario with highest total return.
- Equity portfolio construction: A portfolio manager can ask us to run securities lending overlays for: a) being long the components of the S&P 500 Index and lending out the underlying's; b) being long the ETF SPY and lending it out; and; c) Entering into a Total Return Swap. The client will opt in or out of these scenarios factoring in the provided securities lending return data. Clients contemplating investment into commingled funds often ask us to advise on the loss of securities lending income.
- ETF Portfolio construction: Clients employ ETF's for asset class replication, rotating out of actively managed mandates across investment managers and into ETF's. This has been prevalent in fixed income and emerging markets, e.g., clients rotating into an ETF such as HYG (iShares Iboxx High Yield Corp) for their High Yield Corporate Bond exposure or using an ETF such as EWY (iShares MSCI South Korea) for their South Korean exposure. How fees are incurred for the various scenarios is a topic of heightened interest for our clients. The equation is essentially: Long Investment + Securities Lending attribution – Fees associated with Long Investment – Securities Lending Fees = Total Return. The feedback we've received is that all things considered equal, the fees associated with the Long Investment scenario is an important consideration in today's environment.
- We advise on securities lending returns in the construction of a new ETF.
- Tender offers: Securities lending is a tool often used in merger arbitrage. Clients that are long a security and want to remain long can take advantage of tender offer premiums. For example, an equity will have a take-out price significantly above the current price. By lending out the security to the street with a Take No Action designation for the tender offer a client can garner some of the tender offer premium while still remaining long the stock.
- Clients can access cash collateral as a source of liquidity or for investment purposes.
- Being a counterparty: Clients that have securities lending or financing needs can face off against our program as an approved counterparty.
- Cash management: We offer a short term, indemnified cash investment solution, i.e., As-Agent Repo.

Presenters

Contact Information



Tom Ryan

Senior Vice President

T 212-915-0166

E T.ryan@ny.tr.mufg.jp

Senior Vice Present – Head of Client Management & Optimization

Head of Client Management & Optimization is responsible for the creation and implementation of client performance and retention planning. In that role Tom is responsible for establishing guidelines, policies, and strategic business plans to achieve client goals. Tom also works on partnership opportunities, joint ventures, acquisitions, and new product ideas. He has worked continuously with the GSLS team for 23 years. Prior to MUTB, Tom was Head of the Deutsche Bank Agency Securities Lending Program in the Americas.



Gus Christakos

First Vice President

T 212-915-0111

E G.Christakos@ny.tr.mufg.jp

First Vice Present – Head of US Client Operations and Relationship Management

Gus is based in New York and reports to Tom Ryan, Head of Asset and Liability Trading in North America. Gus will be responsible for day-to-day interface with MPERS' staff for client servicing needs, including custom reporting, inquiries, performance reporting, benchmarking, performance reviews, compliance certifications, GASB reporting and marshalling MUTB resources as needed. Gus has 23 years of diverse and highly technical securities lending industry experience and has worked continuously with the GSLS team for 18 years. Prior to joining MUFG in June 2022, Gus was Vice President and Head of US Client Service for Deutsche Bank's Agency Securities Lending Program since 2014. Gus joined Deutsche Bank in 2004 as a Mid-Office analyst and progressed through several roles prior to moving into Client Service, including the Head of US Operations. Earlier in his career, he was team leader in AIG's securities lending operations group. He began his career in 1998 at Prudential Securities in their stock loan operations unit.

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*Denotes regulated entities



Investment Committee Meeting

Miscellaneous Updates

F gego dgt'39, 2024

Ryan Holliday

From: Lindsey Andresen <LAndresen@hlmnet.com>
Sent: Monday, October 28, 2024 9:37 AM
To: Charles Nielsen; Ryan Holliday
Cc: Steven Anzalone; Institutional Client Management
Subject: [EXTERNAL] Harding Loevner: Update on Global PM Transition and Personnel

EXTERNAL EMAIL WARNING! Use caution with links or attachments. DO NOT provide your credentials!

Dear Charles and Ryan,

I am writing to share that the Global Equity PM transition began as planned on October 1st and completed October 17th. The transition went smoothly as expected with minimal market impact and costs to our clients. The turnover was slightly over 6%, as the overlap between Rick and Peter's portfolios did increase in the months leading up the transition due to opportunities presented by market volatility. The overlap between Rick's model and Jingyi's model as of 30 September was 45%, which is about the same as the overlap between Peter and Jingyi on that date.

We're happy to speak or write about any other details of the transition that might be helpful.

In addition, I wanted to inform you as part of our contract obligation that Igor Tishin, an information technology analyst, resigned from Harding Loevner. Igor was offered an opportunity at his prior employer that includes work location privileges and changes in responsibilities that we would not contemplate offering. We appointed Moon Surana to take on a new role as an Information Technology analyst, switching from her role as an analyst of Financials companies, where she has covered banks, payments companies, and exchanges with distinction since 2012. We are in the advanced stages of hiring a new IT analyst as well. We expect that person will take on some of the existing tech names that are covered but also bring new ideas.

We're happy to speak or write about any other details of the transition or the investment team changes that might be helpful and of course provide a portfolio review at any time.

Kind regards,

Lindsey

HARDING • LOEVNER | *Fundamental. Thinking. Worldwide.*

Lindsey Andresen | 908-947-0447 (direct) | LAndresen@hlmnet.com

The information contained in this e-mail message, together with any attachment, is intended only for the personal and confidential use of the intended addressee[s].

Ryan Holliday

From: Tom Wright <Tom.Wright@bailliegifford.com>
Sent: Monday, November 11, 2024 9:19 AM
To: Ryan Holliday; Charles Nielsen
Cc: Joe Faraday; Rebecca King
Subject: [EXTERNAL] Baillie Gifford, update

EXTERNAL EMAIL WARNING!: Use caution with links or attachments. DO NOT provide your credentials!

Dear Ryan, Charles – I hope all is well.

This is just to let you know that, after careful consideration, we have decided to withdraw from Climate Action 100+ and the Net Zero Asset Managers Initiative. These memberships have become contested and are distracting from our core investment task. This change in membership status will not affect our commitment to always act in accordance with the mandates given to us by our global client base. This includes appropriate analysis of climate-related risks and opportunities where relevant to any investment case.

We will not be making a public announcement, but this may attract some media comment and could lead to questions from your Board or others.

If you need any more information, please do give either Rebecca or me a call.

Yours
Tom

Tom Wright
Director

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BaillieGifford



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NEWS RELEASE



Prudential appoints Jacques Chappuis as president and chief executive officer of PGIM

- Jacques Chappuis, formerly co-head of Morgan Stanley Investment Management, will lead PGIM, Prudential Financial, Inc.'s global asset management business, effective May 1, 2025
- Chappuis will lead PGIM's next chapter of growth across public and private markets capabilities
- David Hunt will retire as president and CEO of PGIM and stay on as chairman until July 31, 2025 to ensure a smooth transition
- Over his successful 13-year tenure, Hunt led PGIM's significant growth and international expansion

NEWARK, N.J., November 11, 2024 – Prudential Financial, Inc. (NYSE: PRU) announced the appointment of Jacques Chappuis as president and CEO of PGIM, its \$1.4 trillion global investment management business, effective May 1, 2025.

Chappuis will report to Andrew Sullivan, head of International Businesses and Global Investment Management for Prudential Financial, Inc. Chappuis succeeds David Hunt, who will retire as president and CEO and stay on as chairman of PGIM until July 31, 2025, remaining actively involved throughout the transition period.

“Under David’s leadership, PGIM has grown to become one of the premier global asset managers in the world, well known for its public and private markets investment expertise, with assets under management growing to \$1.4 trillion from \$619 billion since David joined the firm in 2011,” said Sullivan.

“David has overseen PGIM’s impressive expansion in the U.K., Europe and Japan, as well as the integration of new capabilities such as private equity secondaries and the expansion of expertise in existing asset classes, including private credit. His contributions and commitment to culture have also led to PGIM being recognized as a Best Place to Work in Money Management by *Pensions & Investments* for several years. We are grateful to David for his 13 years of service to PGIM. He leaves an indelible impression on PGIM’s legacy.”

LEADING PGIM’S NEXT CHAPTER OF GROWTH

With nearly 30 years of investment management experience, Chappuis joins PGIM from Morgan Stanley, where he was most recently co-head of Morgan Stanley Investment Management (MSIM). At MSIM, he played a key role in the transformative and successful integration of Eaton Vance.

“Jacques is well known for his deep commitment to clients, his leadership in acquisitions, and breadth of expertise across public and private market solutions. We know that he is the right person to lead PGIM’s next chapter of growth,” said Sullivan. “Over the last decade, PGIM has meaningfully expanded its third-party asset management business. Jacques’ expertise will allow us to identify opportunities to accelerate our

continued growth through new markets, innovative products, and comprehensive solutions across a wide range of asset classes. I look forward to working with Jacques to lead one of the key growth engines of Prudential.”

“I’m proud to become PGIM’s next president and CEO, leading an incredible team through its next chapter of growth,” said Chappuis. “PGIM’s expertise and capabilities across public and private markets reinforces its commitment to meeting clients’ differentiated long-term investment needs, and I look forward to building upon the firm’s successes.”

ABOUT JACQUES CHAPPUIS

Jacques Chappuis was most recently the co-head of MSIM and a member of the Morgan Stanley Management Committee. From 2006 to 2013, he held senior leadership roles in Morgan Stanley’s Investment Management and Wealth Management businesses, including head of Morgan Stanley Alternative Investment Partners, before joining The Carlyle Group as head of Investment Solutions. Chappuis returned to Morgan Stanley in 2016, where he served as global head of Distribution and co-head of the Solutions and Multi-Asset Group for MSIM before his latest role.

Prior to his experience at Morgan Stanley, Chappuis was head of Alternative Investments for Citigroup’s Global Wealth Management Group. In earlier roles, he was a managing director at Citigroup Alternative Investments, the firm’s proprietary alternative investment unit; a consultant at the Boston Consulting Group; and an investment banker at Bankers Trust Company.

He received his B.A. in finance from Tulane University and an MBA from Columbia Business School. He is a member of the New York Board of Advisors of Teach For America and a board member of Centro para la Nueva Economía, a Puerto Rico-based think tank focused on policy matters related to the island’s economy.

ABOUT PGIM

[PGIM](#) is the global asset management business of Prudential Financial, Inc. ([NYSE: PRU](#)). In 42 offices across 19 countries and jurisdictions, our more than 1,400 investment professionals serve both retail and institutional clients around the world.

As a leading global asset manager with \$1.4 trillion in assets under management,* PGIM is built on a foundation of strength, stability, and disciplined risk management. Our multi-affiliate model allows us to deliver specialized expertise across key asset classes with a focused investment approach. This gives our clients a diversified suite of investment strategies and solutions with global depth and scale across public and private asset classes, including fixed income, equities, real estate, private credit, and other alternatives. For more information visit [pgim.com](#).

ABOUT PRUDENTIAL

Prudential Financial, Inc. ([NYSE: PRU](#)) (PFI), a global financial services leader and premier active global investment manager with approximately \$1.6 trillion in assets under management as of Sept. 30, 2024, has operations in the United States, Asia, Europe, and Latin America. PFI’s diverse and talented employees help make lives better and create financial opportunity for more people by expanding access to investing, insurance, and retirement security. PFI’s iconic Rock symbol has stood for strength, stability, expertise and innovation for nearly 150 years. For more information please visit [news.prudential.com](#).

*As of Sept. 30, 2024.

FORWARD-LOOKING STATEMENTS

Certain of the statements included in this release, including those regarding PGIM’s potential growth, constitute forward-looking statements within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements are made based on management’s current expectations and beliefs concerning future developments and their potential effects upon Prudential Financial, Inc. and its subsidiaries. Prudential Financial,

Inc.'s actual results may differ, possibly materially, from expectations or estimates reflected in such forward-looking statements. Certain important factors that could cause actual results to differ, possibly materially, from expectations or estimates reflected in such forward-looking statements can be found in the "Risk Factors" and "Forward-Looking Statements" sections included in Prudential Financial, Inc.'s Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q. The forward-looking statements herein are subject to the risk, among others, that we will be unable to execute our strategy because of market or competitive conditions or other factors. Prudential Financial, Inc. does not undertake to update any particular forward-looking statement included in this document.

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