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Investment Committee Meeting Agenda

Tuesday, February 25, 2025
10:30 A.M.
(or immediately following the Defined Contribution Committee)

I. **Capital Market Assumptions Overview**
(Information Only)

II. **Market Update and Performance Review - Callan**
(Information Only)

III. **Global Equity Manager Search Update**
(Information Only)

IV. **Pathway Capital Management** – *Private Equity Investments Fifth Series*
(Intended Outcome – Approval of Staff Recommendation)

V. **International Equity Investment Manager Presentations**
(Information Only)

- **a.** **Arrowstreet**
- **b.** **Baillie Gifford**
- **c.** **Marathon**

VI. **Miscellaneous Updates**
(Information Only)

VII. **Other**

Callan

February 25, 2025

Public Employees' Retirement System of Mississippi

2025 Capital Markets Projections

John Jackson, CFA
Investment Consulting

Alexander Ford
Investment Consulting

Adam Lozinski, CFA
Capital Markets Research

Agenda

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Callan

Summary of 2025 Projections

How Are Capital Markets Projections Constructed?

Guiding objectives and process

Underlying beliefs guide the development of the projections:

- An initial bias toward long-run averages
- A conservative bias
- An awareness of risk premiums
- A presumption that markets are ultimately clear and rational

Reflect our beliefs that long-term equilibrium relationships between the capital markets and lasting trends in global economic growth are key drivers to setting capital markets expectations

Long-term compensated risk premiums represent "beta" – exposure to each broad market, whether traditional or "exotic," with limited dependence on successful realization of alpha

The projection process is built around several key building blocks:

- Advanced modeling at the individual asset class level (e.g., a detailed bond model, an equity model)
- A path for interest rates and inflation
- A cohesive economic outlook
- A framework that encompasses Callan beliefs about the long-term operation and efficiencies of the capital markets

Callan's Capital Markets Assumptions: 10 Years (2025–2034)

Key changes from 2024

Summary of important changes for 2025 Capital Markets Assumptions

- Cash return held constant at 3.0%
- Core fixed income return reduced by 0.5%, from 5.25% to 4.75%
- Public equity returns reduced 0.2-0.3%; equity risk premium over cash narrowed and over fixed income widened slightly
- Inflation held at 2.5%
- Private markets returns reduced commensurate with public equity, excluding real estate; hedge funds reflect starting cash return

2025 Risk and Returns Assumptions

Summary of Callan's Long-Term Capital Markets Assumptions (2025–2034)

Asset Class	Index	Projected Return 1-Year Arithmetic	Projected Return 10-Year Geometric*	Real	Projected Risk Standard Deviation	Projected Yield**
Equities						
Broad U.S. Equity	Russell 3000	8.70%	**7.35%**	4.85%	**17.35%**	1.70%
Large Cap U.S. Equity	S&P 500	8.50%	7.25%	4.75%	17.00%	1.75%
Smid Cap U.S. Equity	Russell 2500	9.60%	7.45%	4.95%	22.00%	1.50%
Global ex-U.S. Equity	MSCI ACWI ex USA	9.45%	**7.45%**	4.95%	**21.25%**	3.45%
Developed ex-U.S. Equity	MSCI World ex USA	9.05%	7.25%	4.75%	20.15%	3.50%
Emerging Market Equity	MSCI Emerging Markets	10.30%	7.45%	4.95%	25.65%	3.30%
Global Equity	Custom	9.00%	**7.60%**	5.10%	**17.80%**	2.40%
Fixed Income						
Short Duration Gov/Credit	Bloomberg 1-3 Year Gov/Credit	4.05%	4.00%	1.50%	2.40%	3.65%
Core U.S. Fixed	Bloomberg Aggregate	4.85%	4.75%	2.25%	4.40%	4.60%
Custom Fixed Income	Custom	4.90%	**4.85%**	2.35%	**4.20%**	4.85%
Long Government	Bloomberg Long Gov	5.65%	4.80%	2.30%	13.75%	4.60%
Long Credit	Bloomberg Long Credit	6.05%	5.40%	2.90%	11.90%	5.90%
Long Government/Credit	Bloomberg Long Gov/Credit	5.85%	5.20%	2.70%	11.75%	5.30%
TIPS	Bloomberg TIPS	4.70%	4.55%	2.05%	5.40%	4.30%
High Yield	Bloomberg High Yield	6.65%	6.00%	3.50%	11.75%	8.15%
Global ex-U.S. Fixed	Bloomberg Global Agg ex US	3.30%	2.85%	0.35%	9.80%	2.80%
Emerging Market Sovereign Debt	EMBI Global Diversified	5.85%	5.35%	2.85%	10.65%	7.40%
Alternatives						
Core Real Estate	NCREIF ODCE	7.15%	**6.25%**	3.75%	**14.00%**	4.00%
Private Infrastructure	MSCI GI Infra/FTSE Dev Core 50/50	7.40%	**6.35%**	3.85%	**15.20%**	4.90%
Private Equity	Cambridge Private Equity	11.80%	**8.50%**	6.00%	**27.60%**	0.00%
Private Credit	Cambridge Senior Debt Index	8.35%	**7.25%**	4.75%	**15.70%**	7.25%
Hedge Funds	Callan Hedge FOF Database	6.00%	5.70%	3.20%	8.20%	0.00%
Commodities	Bloomberg Commodity	5.40%	3.90%	1.40%	18.05%	3.00%
Cash Equivalents	90-Day T-Bill	3.00%	**3.00%**	0.50%	**0.90%**	3.00%
Inflation	CPI-U		2.50%		1.60%	

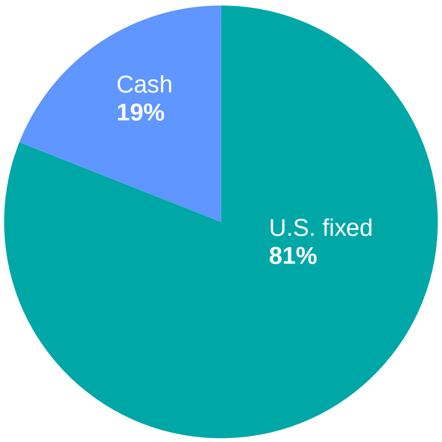
* Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

** Projected Yields represent the expected 10-year average yield

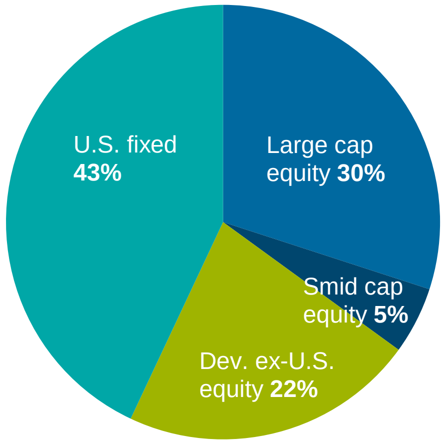
Source: Callan

7% Expected Returns Over Past 30 Years

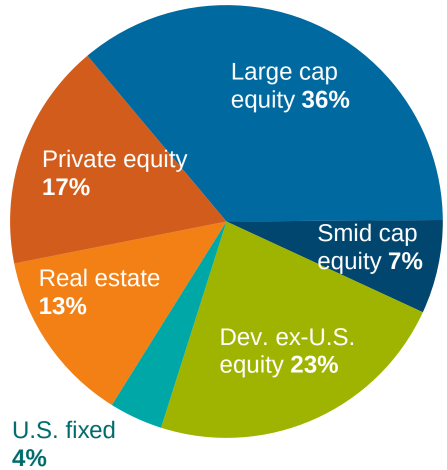
Increasing Complexity



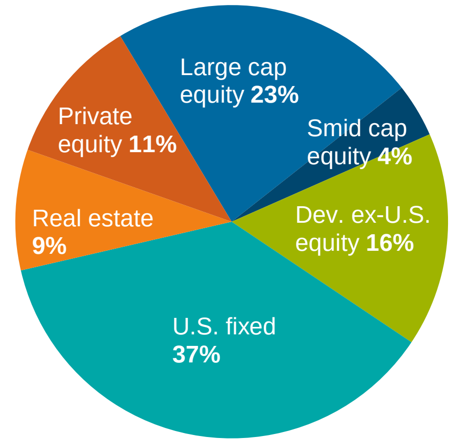
1995
Return: 7.0%
Risk: 4.9%



2010
Return: 7.0%
Risk: 9.9%



2022
Return: 7.0%
Risk: 16.8%



2025
Return: 7.0%
Risk: 10.9%

Increasing Risk

In 1995, our expectations for cash and broad U.S. fixed income were 4.8% and 7.5%, respectively.

Return-seeking assets were not required to earn a 7% projected return.

15 years later, an investor would have needed over half of the portfolio in public equities to achieve a 7% projected return, with double the portfolio volatility of 1995.

In 2022 an investor was required to include 96% in return-seeking assets (including 30% in private markets investments) to earn a 7% projected return at over 3x the volatility compared to 1995.

Today's 7% expected return portfolio is much more reasonable than it was just three years ago. The allocation to fixed income jumps to 37%, while risk is just two-thirds what it was in 2022.

2025 Asset Allocation Modeling – MSPERS Outlook

	MSPERS Target
U.S. Equities	25%
Non-U.S. Equity	20%
Global Equity	12%
Fixed Income	18%
Private Equity	10%
Real Estate	10%
Infrastruture	2%
Private Credit	2%
Cash	1%
Total Portfolio	**100%**

Projections with 2025 Assumptions

Projected 10 Yr. Geometric Return	7.3%
Projected Standard Deviation	13.8%

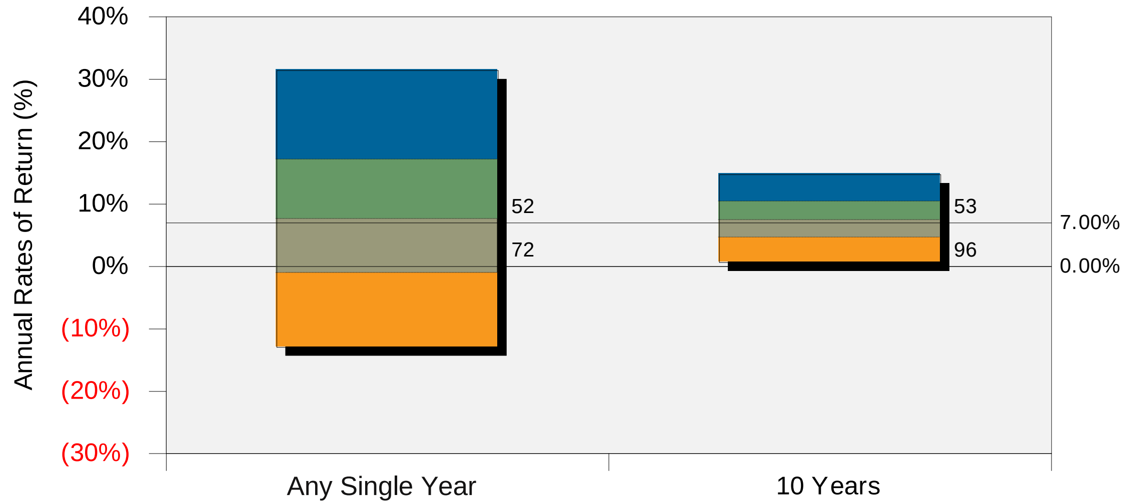
Projections with 2024 Assumptions

Projected 10 Yr. Geometric Return	7.7%
Projected Standard Deviation	13.9%

Difference

Projected 10 Yr. Geometric Return	-0.4%
Projected Standard Deviation	-0.1%

Range of Projected Rates of Return



	Any Single Year	10 Years
5th Percentile	31.4%	14.7%
25th Percentile	17.0%	10.3%
Median	7.5%	7.3%
75th Percentile	(1.1%)	4.5%
95th Percentile	(13.0%)	0.7%
Prob > 7.00%	51.6%	53.2%
Prob > 0.00%	72.2%	96.4%

- The projected return for the Target is down 0.4% from last year and the projected risk is down 0.1%.
- The Target has a 53% probability of achieving the 7% discount rate and a low probability of suffering a negative return over a 10-year horizon.

Note: Based on Callan's 2025-2034 Capital Market Assumptions.

Callan

Current Market Conditions

The Recession Never Came in 2024; Now What?

A recession stayed away after we were sure it would show up.

The economy showed some signs of slowing during 2024, but GDP growth persisted, and the job market proved resilient despite some head fakes.

- The Federal Reserve's process of rate hikes, from elevated inflation, and spreading geopolitical turmoil barely dented the U.S. economic engine.
- Job openings trended down over 2024, and monthly job gains faltered a couple of times, but November (+212,000) and December (+256,000) saw a bounce back after the hurricanes in the Southeast hit in October.
- Real incomes rose and real wage growth boosted consumer incomes and spending.
- GDP grew by 3% in 2Q, 3.1% in 3Q, and 2.3% for 4Q, and hit an annual rate of 2.5%, below the 2.9% notched in 2023.

The Fed completed its mission to raise interest rates to fight inflation and began cutting rates in September 2024.

Current target range of 4.25%–4.50%.

- Inverted yield curve remains in place, but it's been inverted since 2022. By the end of 2024, the inversion was only at the short end; the 2-10 is no longer inverted

Is recession still inevitable, and if so, when?

Strong GDP growth suggests no easing in tight labor markets; the prospect for continued inflationary pressure from the labor market is high.

- Getting inflation down to the Fed's stated goal of 2% will take time, and some discomfort. Squeezing out the last of excess inflation will require a period of below trend growth, a loosening of the labor market, and the pain of a rise in unemployment.

Labor

The unemployment rate was 4.1% as of December.

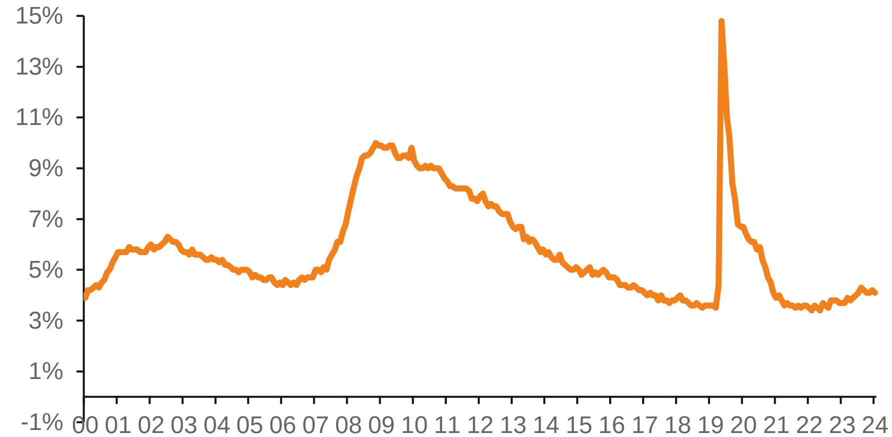
Job openings have declined from post-COVID peaks.

Unemployment claims and layoffs remain low.

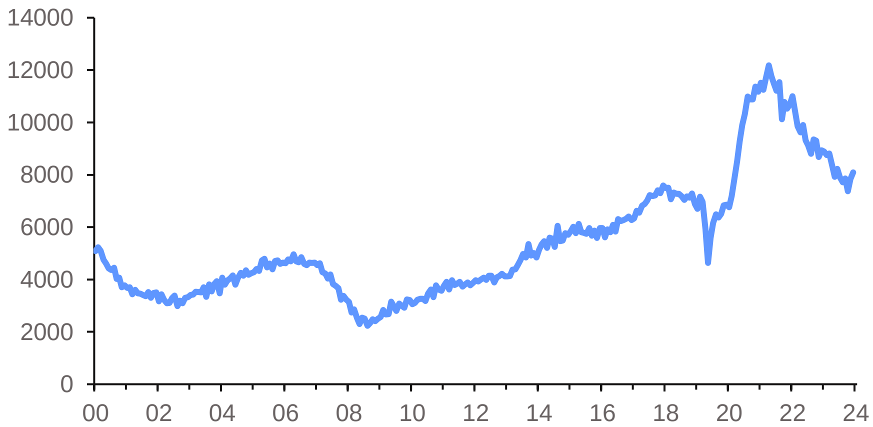
It is likely that labor supply is higher than estimated due to immigration not being counted in official measures.

– Immigration accounted for roughly half of labor force growth from 2021–23.

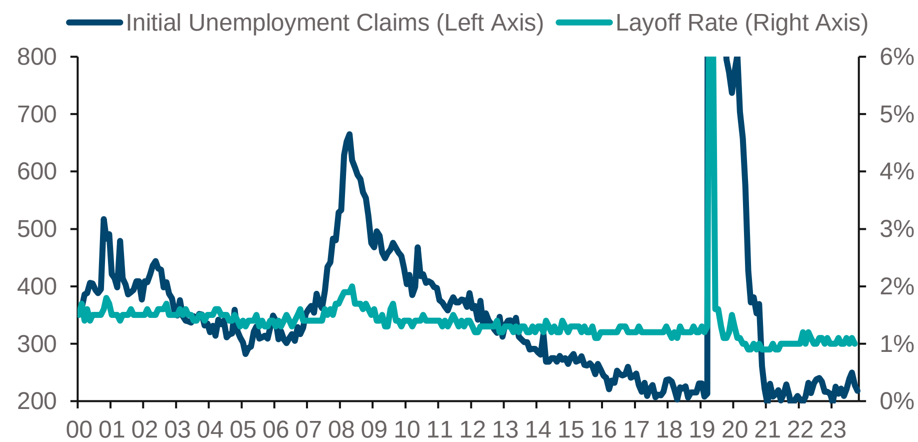
Unemployment Rate



Job Openings (Level in Thousands)



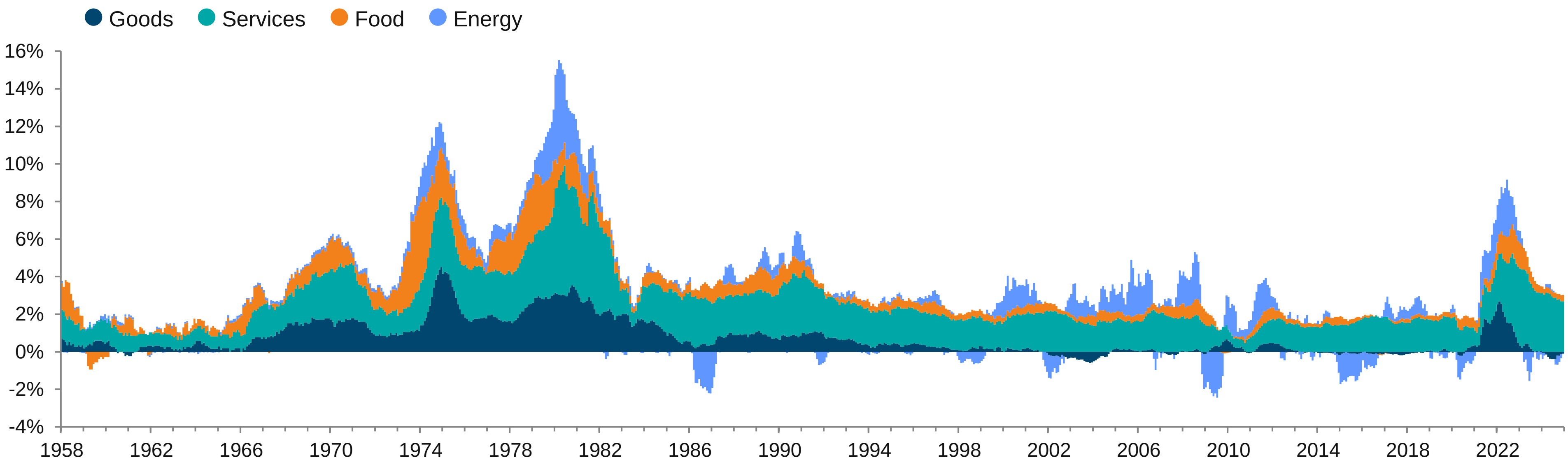
Job Losses (Level in Thousands) and Layoffs



Sources: FRED, U.S. Bureau of Labor Statistics (JOLTS and Unemployment), U.S. Employment and Training Administration (Initial Claims)

Broad Components of Inflation

Contribution to Inflation by Broad Component



Category	Category Weight	Year-over-Year Change											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Headline CPI	**100.0%**	**3.1%**	**3.2%**	**3.5%**	**3.4%**	**3.3%**	**3.0%**	**2.9%**	**2.5%**	**2.4%**	**2.6%**	**2.7%**	**2.9%**
Food	13.6%	2.6%	2.2%	2.2%	2.2%	2.1%	2.2%	2.2%	2.1%	2.3%	2.1%	2.4%	2.5%
Energy	6.7%	-4.6%	-1.9%	2.1%	2.6%	3.7%	1.0%	1.1%	-4.0%	-6.8%	-4.9%	-3.2%	-0.5%
Core CPI	**79.8%**	**3.9%**	**3.8%**	**3.8%**	**3.6%**	**3.4%**	**3.3%**	**3.2%**	**3.2%**	**3.3%**	**3.3%**	**3.3%**	**3.2%**
Goods Less Food and Energy	18.9%	-0.3%	-0.3%	-0.7%	-1.3%	-1.7%	-1.8%	-1.9%	-1.9%	-1.0%	-1.0%	-0.6%	-0.5%
Services Less Energy	60.9%	5.4%	5.2%	5.4%	5.3%	5.3%	5.1%	4.9%	4.9%	4.7%	4.8%	4.6%	4.4%

Source: U.S. Bureau of Labor Statistics. Note Goods excludes food and energy goods while Services excludes energy services.

The Shifting Mindset at the Fed

Projections for the Fed Funds Rate at the end of 2025 reflect expectations for two more 0.25% cuts.

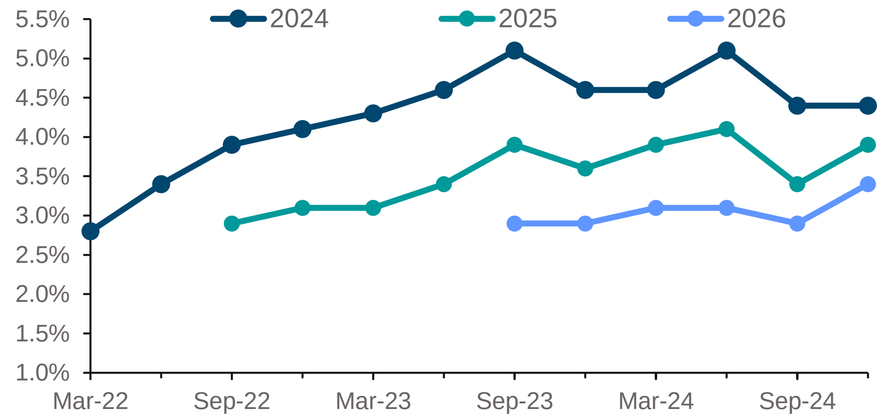
– Long-term neutral rate of 3.0% expected to be hit after 2027.

The big swing in the Fed's GDP projection reflects the surprising nature of economic resilience.

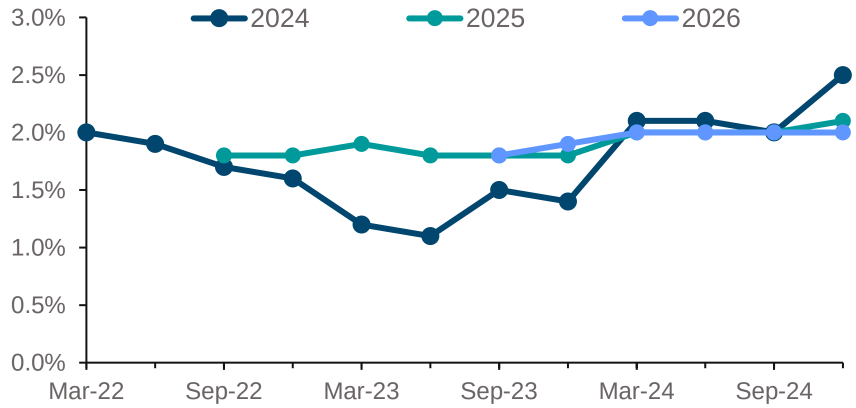
– The Fed now expects 2024 GDP growth to finish at 2.5%.

Inflation is expected to reach Fed's target of 2% in 2027.

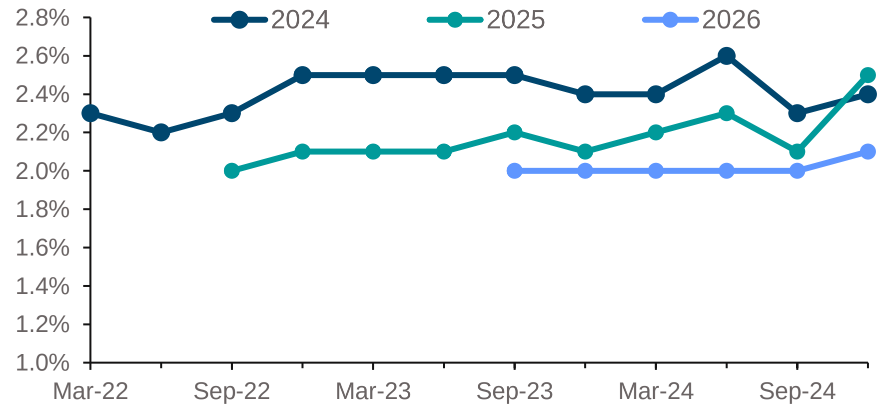
Fed Projection of Fed Funds Rate
By Fed Meeting Date and Projection Year



Fed Projection of Change in Real GDP
By Fed Meeting Date and Projection Year



Fed Projection of Change in PCE Inflation
By Fed Meeting Date and Projection Year



Source: Federal Reserve, Financial Times

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Detailed 2025 Expectations

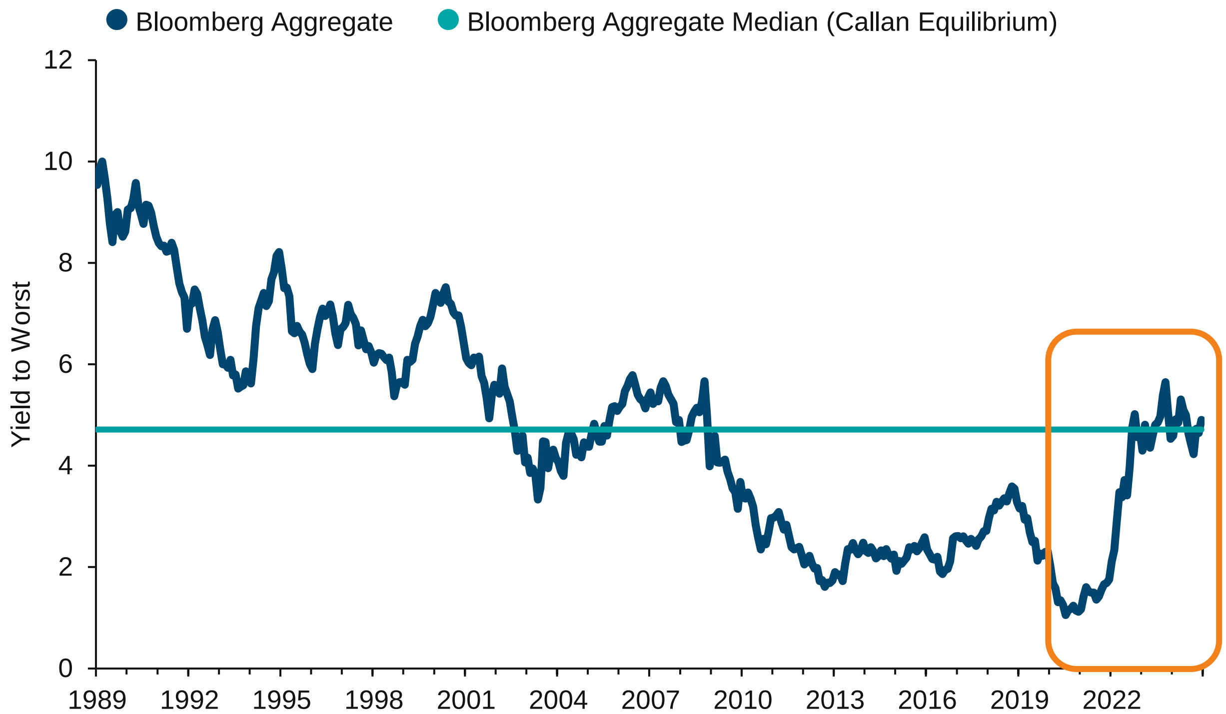
Projected Fixed Income Returns

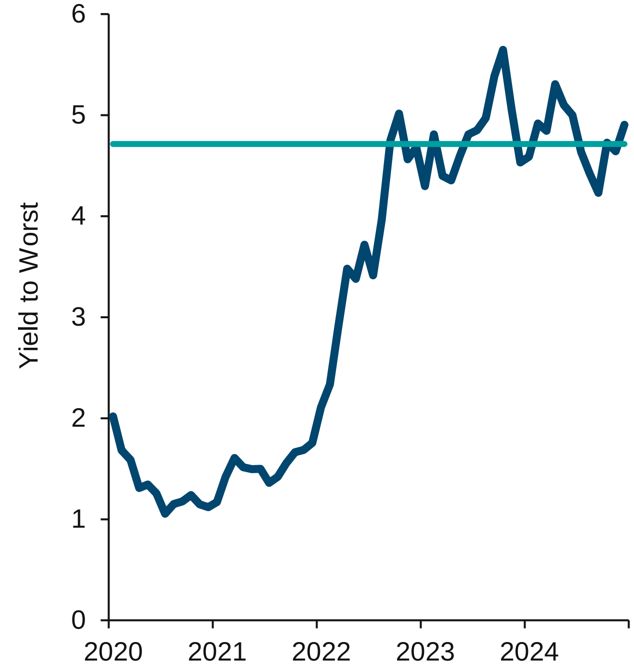
10-year projections

	Income Return	+	Capital Gain/Loss	+	Credit Default	+	Roll Return	=	2025 Expected Return	2024 Expected Return	Change vs. 2024
Cash	**3.00%**		**0.00%**		**0.00%**		**0.00%**		**3.00%**	**3.00%**	**0.00%**
1-3 Year Gov/Credit	**3.65%**		**0.10%**		**0.00%**		**0.25%**		**4.00%**	**4.25%**	**-0.25%**
1-3 Year Government	3.45%		0.10%		0.00%		0.25%		3.80%	4.15%	
1-3 Year Credit	4.05%		0.20%		-0.20%		0.25%		4.30%	4.65%	
Intermediate Gov/Credit	**4.25%**		**0.00%**		**-0.10%**		**0.25%**		**4.40%**	**4.75%**	**-0.35%**
Intermediate Gov	3.95%		0.00%		0.00%		0.25%		4.20%	4.45%	
Intermediate Credit	4.70%		0.00%		-0.20%		0.25%		4.75%	5.25%	
Aggregate	**4.60%**		**0.00%**		**-0.10%**		**0.25%**		**4.75%**	**5.25%**	**-0.50%**
Government	4.20%		0.10%		0.00%		0.25%		4.55%	4.85%	
Securitized	4.35%		0.30%		0.00%		0.25%		4.90%	5.35%	
Credit	5.30%		-0.30%		-0.30%		0.25%		4.95%	5.60%	
Long Duration Gov/Credit	**5.40%**		**-0.60%**		**-0.20%**		**0.60%**		**5.20%**	**6.00%**	**-0.80%**
Long Government	4.60%		-0.40%		0.00%		0.60%		4.80%	5.40%	
Long Credit	5.90%		-0.80%		-0.30%		0.60%		5.40%	6.30%	
TIPS	**4.30%**		**0.00%**		**0.00%**		**0.25%**		**4.55%**	**5.05%**	**-0.50%**
Global ex-U.S. Fixed	**2.80%**		**-0.10%**		**-0.10%**		**0.25%**		**2.85%**	**3.15%**	**-0.30%**
High Yield	**8.15%**		**-0.30%**		**-2.10%**		**0.25%**		**6.00%**	**6.80%**	**-0.80%**
Emerging Markets Debt	**7.40%**		**-0.40%**		**-1.90%**		**0.25%**		**5.35%**	**6.35%**	**-1.00%**
Bank Loans	**8.20%**		**-0.40%**		**-1.70%**		**0.00%**		**6.10%**	**6.55%**	**-0.45%**

Drowning Out the Noise

Historical Yield





There has been a lot of rate volatility, but rates have been range-bound around our equilibrium.

We have been updating our bond assumptions to drown out the short-term noise and focus more on the longer-term trends.

Equity Forecasts

Building block model

Index	Forecasted Dividend Yield	Net Buyback Yield	Inflation	Real Earnings Growth	Valuation Adjustment	Total Expected Return
S&P 500	1.75%	0.75%	2.50%	2.50%	-0.25%	7.25%
MSCI World ex USA	3.50%	0.00%	2.00%	1.75%	0.00%	7.25%
MSCI Emerging Markets	3.30%	-2.90%	3.25%	3.80%	0.00%	7.45%

Our return expectations for U.S. large cap (S&P 500) and developed ex-U.S. markets (MSCI World ex-USA) are the same, but the paths to those returns are different.

U.S. companies tend to deliver more return from earnings growth than from return of capital via dividends or buybacks.

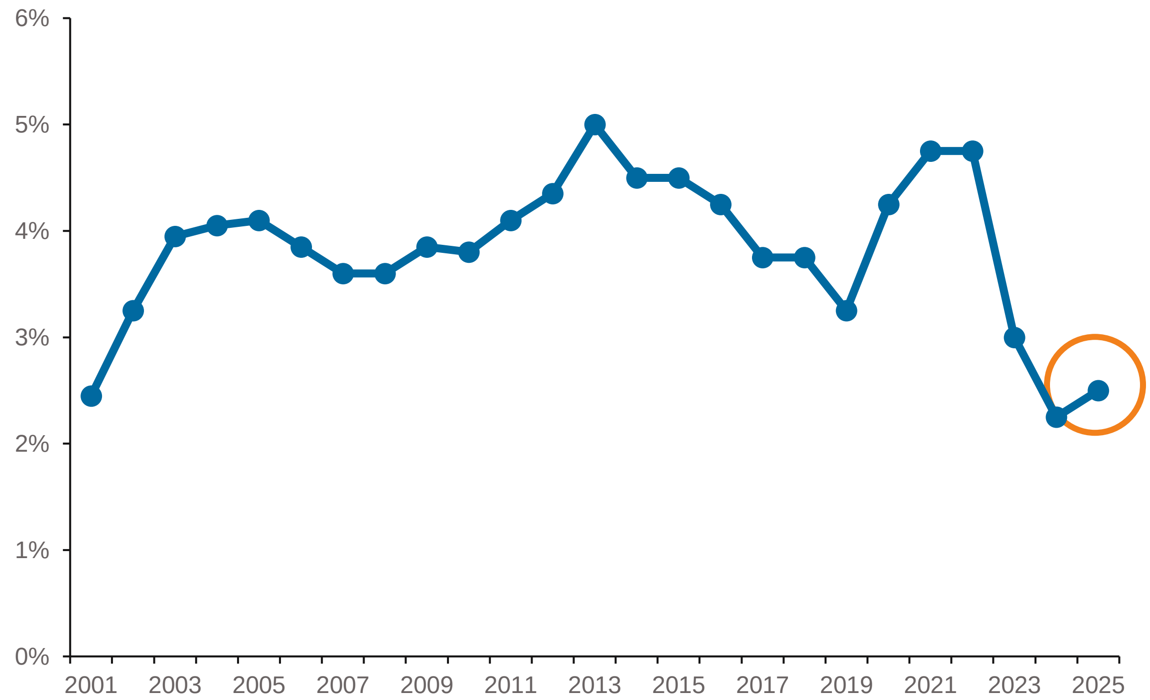
– Developed ex-U.S. companies have the opposite relationship.

– Emerging market companies tend to deliver strong earnings growth, which is somewhat offset by net issuance of shares as these companies issue stock to support growth.

Callan’s Equity Risk Premia Forecasts Over Time

S&P 500 forecast minus Bloomberg Aggregate forecast

Forecasted Equity Risk Premium vs. Bonds



Callan’s forecasted return spread between the S&P 500 and the Bloomberg Aggregate (2.50%) remains narrow.

Forecasts are annualized over 10 years.

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	21.47x	16.86x	1.41
Shiller's P/E	37.04x	28.02x	1.48
Dividend yield	1.33%	1.98%	1.82
Price to book	4.47x	3.19x	1.52
Price to cash flow	16.48x	11.34x	2.17
EY minus Baa yield	-0.85%	0.69%	0.71

– Forward P/E (21.5) is about one standard deviation above its long-term average (16.9).

Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, 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 March 1994 and by FactSet since January 2022. Average P/E and standard deviations are calculated using 30 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 Bloomberg US corporate Baa yield since December 2008 and interpolated using the Moody's Baa seasoned corporate bond yield for values beforehand. Std. dev. over-/under-valued is calculated using the average and standard deviation over 30 years for each measure. *Averages and standard deviations for dividend yield and P/CF are since November 1995 due to data availability. Guide to the Markets – U.S. Data are as of December 31, 2024.

Core Real Estate

Recent price declines may offer more attractive entry points

Background

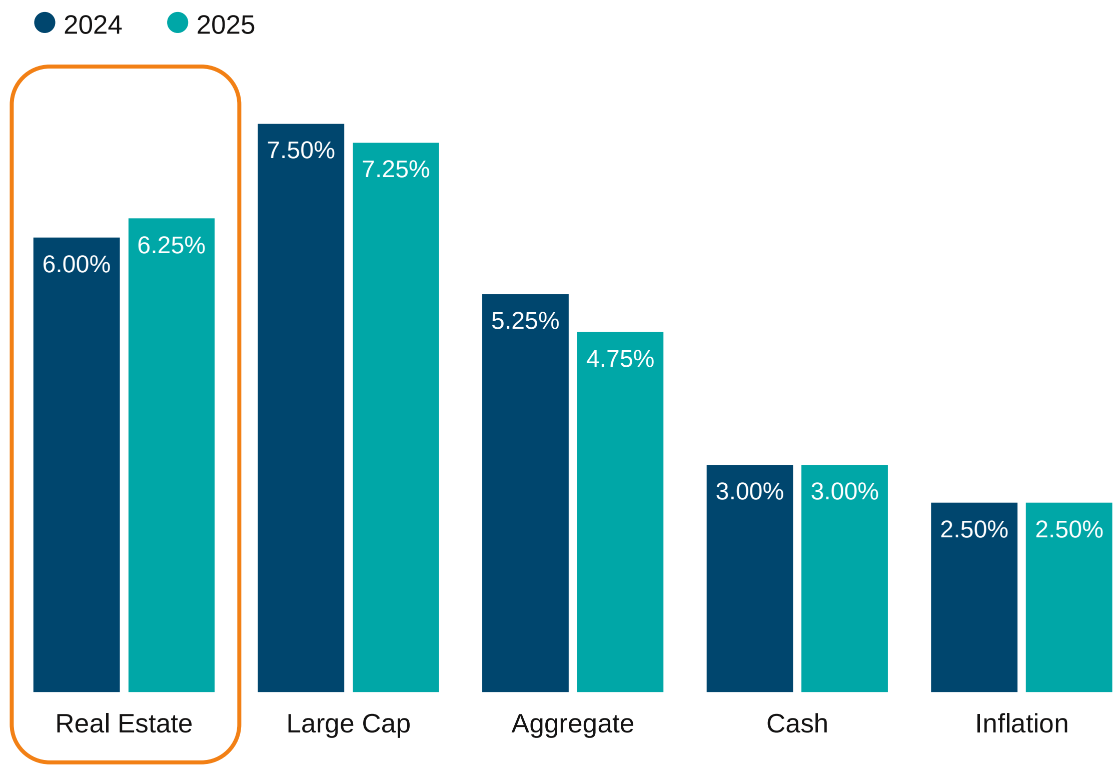
Real estate has characteristics of equity (ownership and appreciation) and bonds (income from rents). Real estate fell 3.5% for the year ended Sept. 30, 2024, on an unlevered property basis.

While real estate, especially within offices, could continue to face headwinds in the short-term, recent price declines could make more attractive entry points available for long-term investors.

Slight increase in real estate returns compared to last year

2025 real estate return projection: 6.25% (up 25 bps)

Return Projections



Source: Callan, NCRIEF NPI index

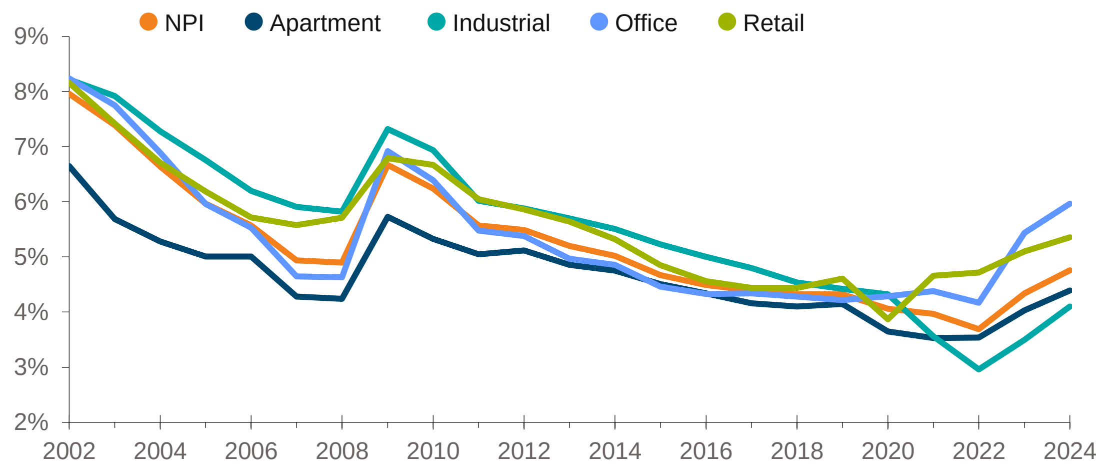
Core Real Estate

6.25% core real estate compound return (net of fees)

Return calculations assume 5.3% cost of leverage and 0.5x debt-to-equity (33% loan-to-value)

Income Return (unlevered property)	5.0%
Appreciation (unlevered property)	1.2%
Total Return (before leverage)	6.2%

Annual Cap Rates (through Sept. 30, 2024)



Callan Return Assumptions (unlevered property returns)

	Office	Retail	Industrial	Apartments	Other	NPI Index
Income	5.9%	5.5%	4.4%	4.7%	5.9%	5.0%
Appreciation	0.7%	0.7%	2.1%	0.9%	0.9%	1.2%
Total Return	6.6%	6.2%	6.5%	5.6%	6.8%	6.2%

Source: NCREIF Property Index (NPI) cap rates correspond to unlevered property valuations

Private Equity

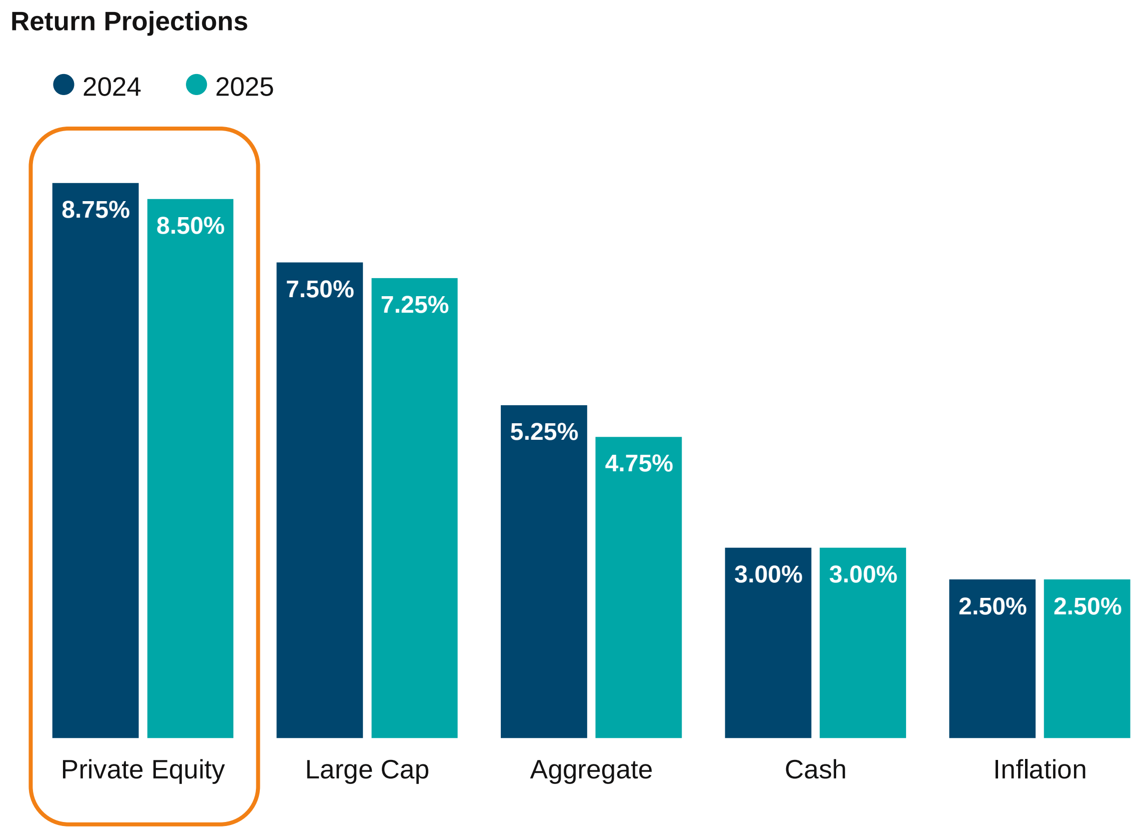
Background

The private equity market is driven by many of the same economic factors as public equity markets. We expect private equity to benefit from more transaction activity and moderating rates.

Private equity performance expectations fell in line with public equity expectations.

We see tremendous disparity between the best- and worst-performing managers. The ability to select skillful managers could result in realized returns significantly greater than projected here.

2025 private equity return projection: 8.50% (down 25 bps)



Source: Callan

Private Credit

Background

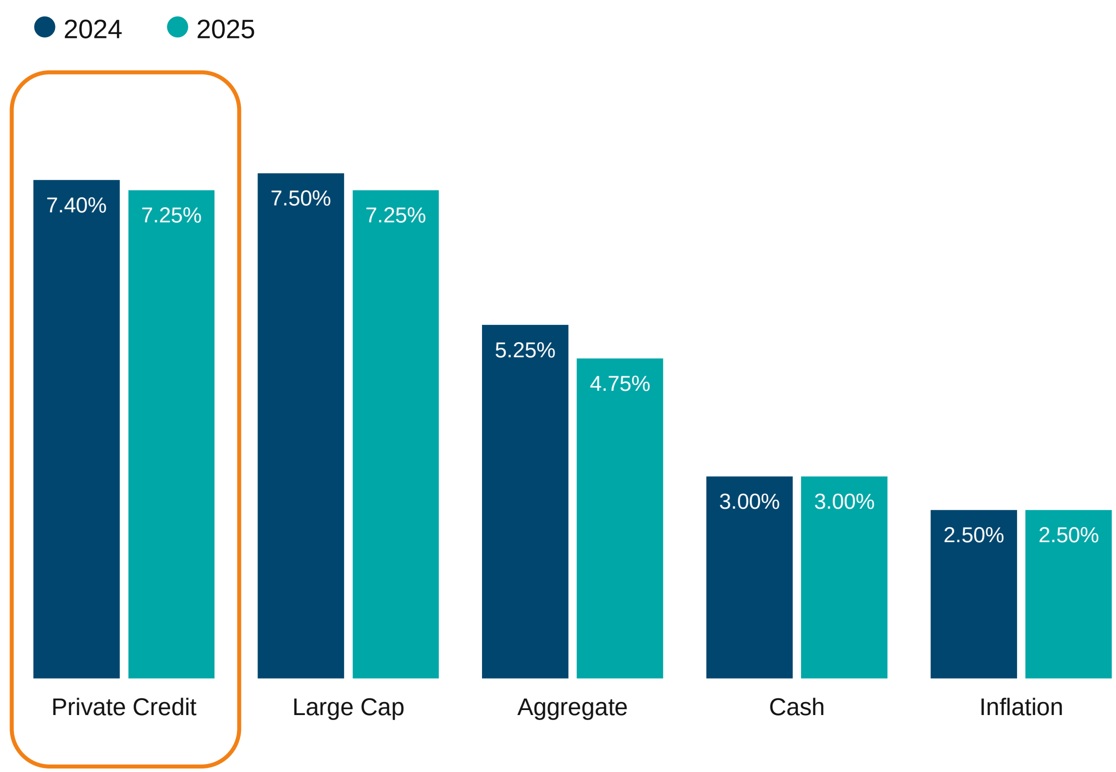
Return projection is anchored on middle market direct lending, where yields have fallen along with public fixed income yields.

Strong appetite from institutional and retail investors persists.

2025 private credit return projection: 7.25% (down 15 bps)

Unlevered Yield	9.5%
Leverage	0.85x
Levered Yield	12.8%
Loss Ratio	2.4%
Net Arithmetic	8.4%
Net Compound Return	7.25%

Return Projections



Source: Callan

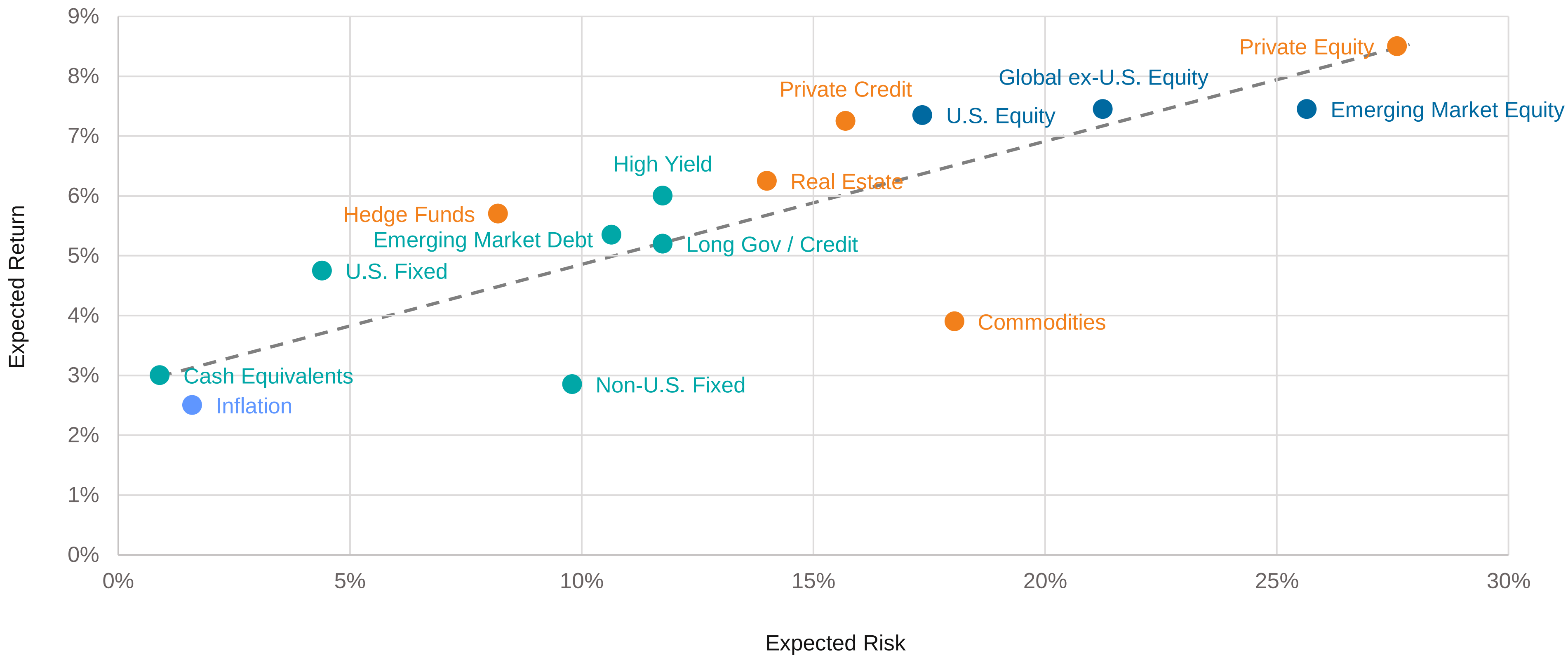
Return calculation assumes 5.5% cost of leverage and 1.3% unlevered loss ratio

Callan

Appendix

Risk Aversion

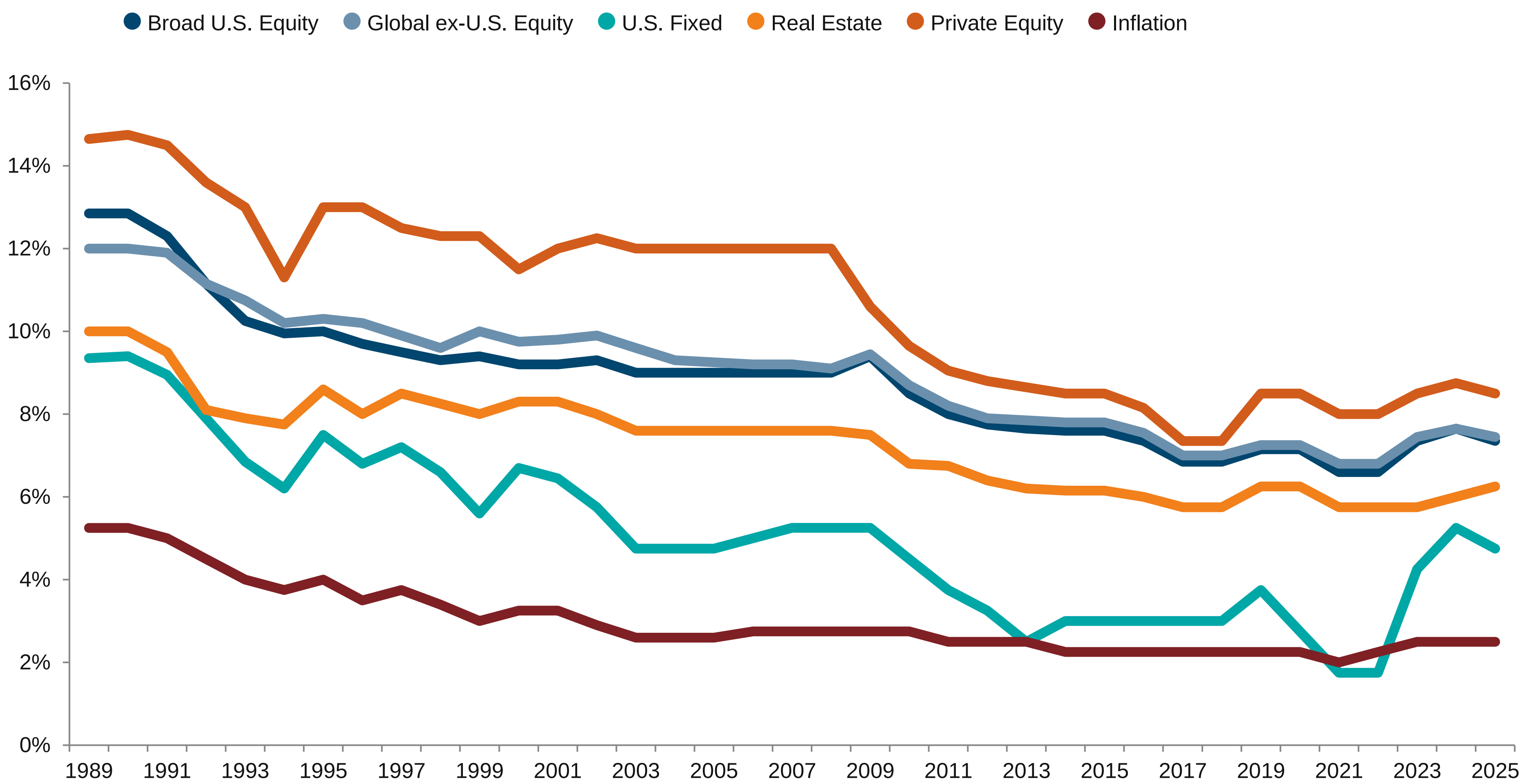
Visualizing Callan's 2025–2034 Capital Market Assumptions



Source: Callan 2025–2034 return-risk capital markets assumptions

Return Projections: Major Asset Classes

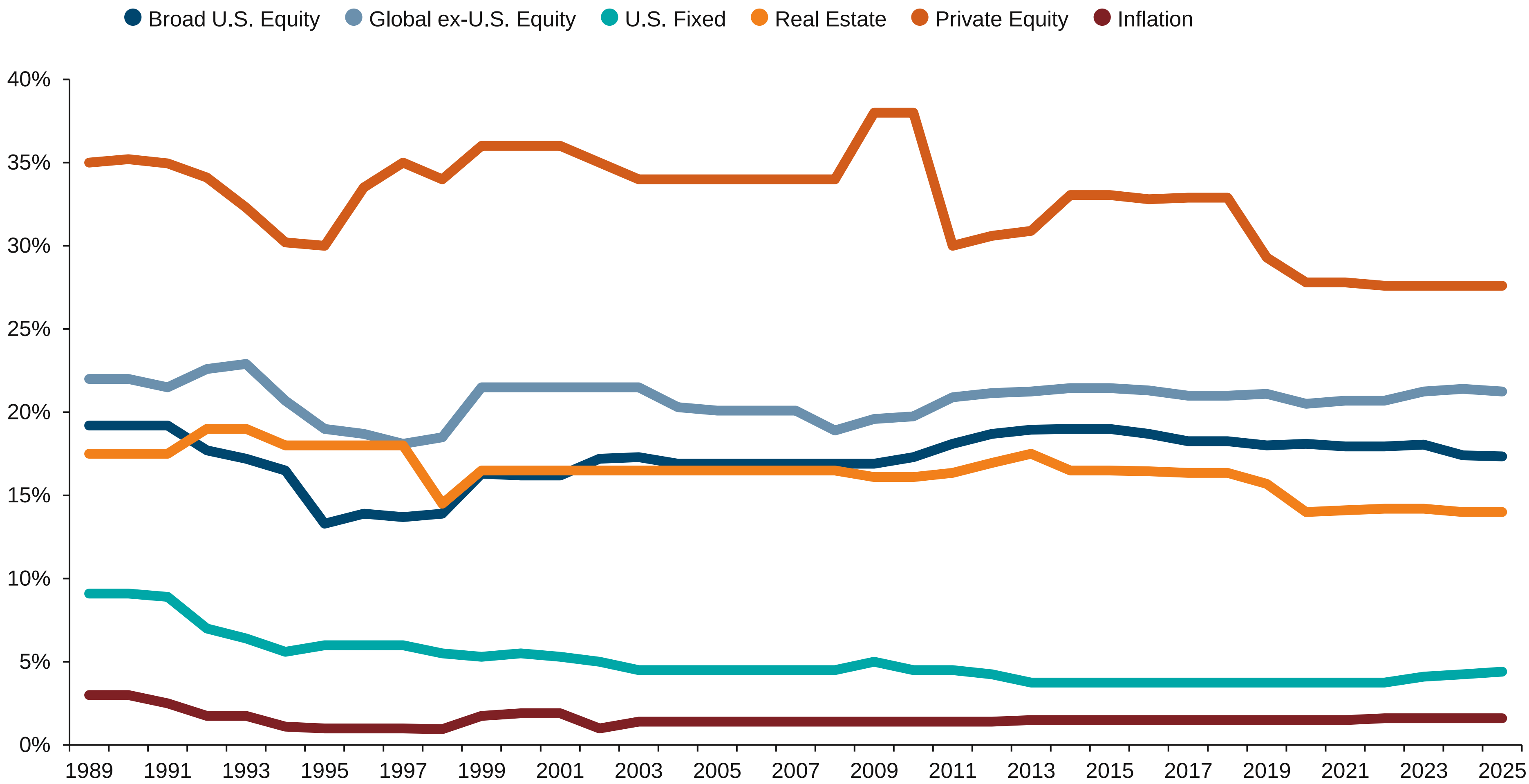
1989–2025



Source: Callan

Risk Projections: Major Asset Classes

1989–2025



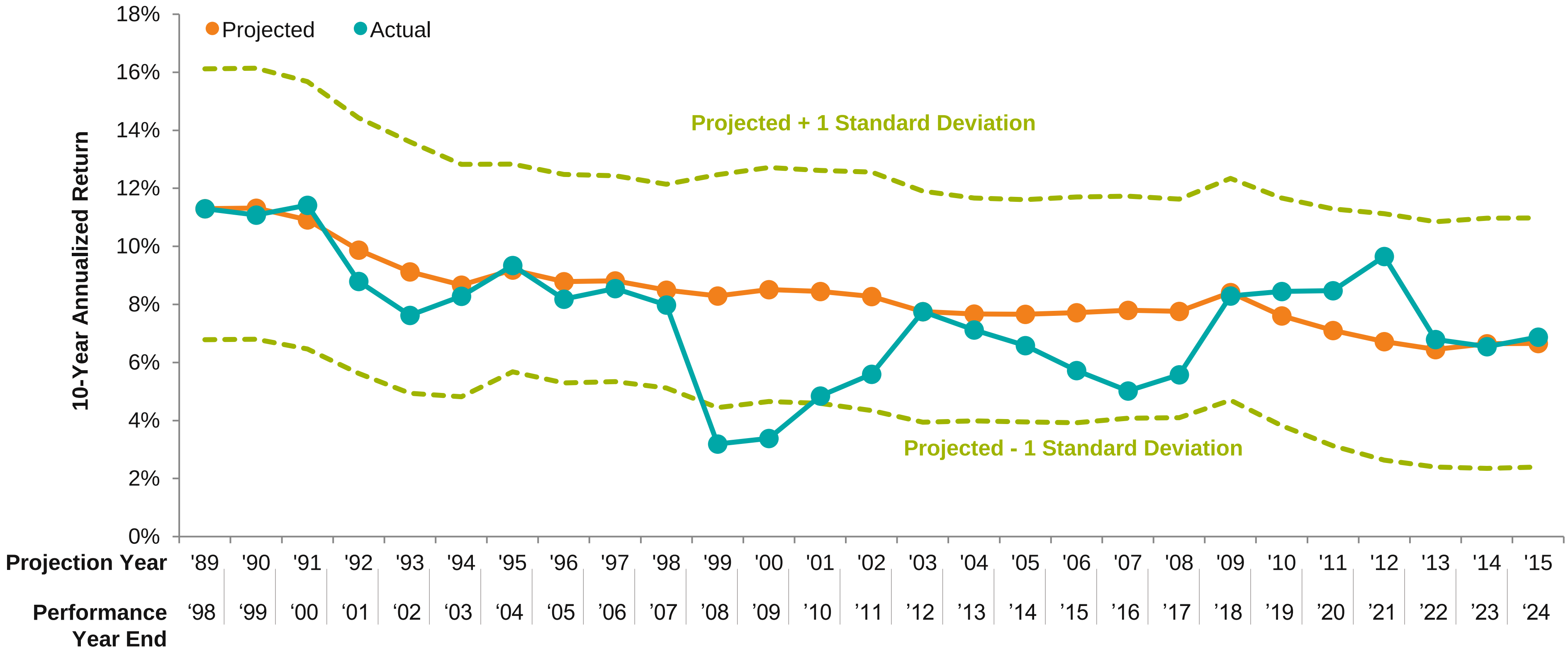
Source: Callan

Actual Returns vs. Callan Projections

Projection Years 1989–2015

Historical Comparison: Actual Returns vs. Callan Capital Markets Projections

Portfolio (60% Equity, 30% Fixed, 10% Real Estate)



- Our projections are generally within one standard deviation of the actual return experienced
- The glaring exceptions are the 10-year periods ended in 2008 and 2009 which contained not one but two major collapses in the equity market: the Dot-Com Bubble in 2001-02 and the Global Financial Crisis in 2008

2025–2034 Callan Capital Markets Assumptions Correlations

	Large Cap	Smid Cap	Dev ex-US	EM Equity	Short Dur	Core Fix	Long Gov	Long Credit	TIPS	High Yield	Gl ex-US Fixed	EMD	Core RE	Pvt Infra	Pvt Equity	Pvt Credit	Hedge Fund	Comm	Cash Eq	Inflation
Large Cap U.S. Equity	**1.00**																			
Smid Cap U.S. Equity	0.86	**1.00**																		
Dev ex-U.S. Equity	0.70	0.81	**1.00**																	
Emerging Market Equity	0.74	0.81	0.90	**1.00**																
Short Dur Gov/Credit	0.05	0.01	0.04	-0.01	**1.00**															
Core U.S. Fixed	0.09	0.03	0.06	0.01	0.80	**1.00**														
Long Government	0.01	0.00	0.03	0.00	0.65	0.82	**1.00**													
Long Credit	0.40	0.35	0.35	0.35	0.62	0.80	0.71	**1.00**												
TIPS	-0.04	-0.05	-0.04	-0.07	0.55	0.75	0.54	0.52	**1.00**											
High Yield	0.74	0.74	0.71	0.74	0.13	0.15	0.02	0.45	0.06	**1.00**										
Global ex-U.S. Fixed	0.12	0.11	0.14	0.10	0.50	0.50	0.42	0.53	0.40	0.16	**1.00**									
EM Sovereign Debt	0.59	0.60	0.61	0.65	0.17	0.23	0.11	0.47	0.11	0.62	0.17	**1.00**								
Core Real Estate	0.38	0.32	0.33	0.30	0.17	0.20	0.08	0.31	0.12	0.30	0.14	0.22	**1.00**							
Private Infrastructure	0.47	0.45	0.45	0.43	0.14	0.18	0.10	0.33	0.08	0.34	0.18	0.32	0.65	**1.00**						
Private Equity	0.79	0.76	0.75	0.73	-0.04	-0.04	-0.08	0.27	-0.12	0.55	0.07	0.44	0.46	0.52	**1.00**					
Private Credit	0.65	0.64	0.62	0.63	0.04	0.00	-0.02	0.32	-0.05	0.55	0.11	0.47	0.26	0.27	0.65	**1.00**				
Hedge Funds	0.60	0.56	0.53	0.53	0.28	0.39	0.25	0.52	0.23	0.50	0.24	0.47	0.20	0.31	0.40	0.47	**1.00**			
Commodities	0.20	0.20	0.20	0.20	-0.04	-0.05	-0.10	0.04	0.00	0.18	0.05	0.15	0.16	0.15	0.16	0.14	0.17	**1.00**		
Cash Equivalents	-0.02	-0.07	-0.08	-0.08	0.27	0.16	0.12	0.04	0.14	-0.03	0.10	-0.02	0.02	-0.04	-0.04	-0.04	0.00	-0.02	**1.00**	
Inflation	0.00	0.02	0.00	0.02	-0.20	-0.22	-0.30	-0.20	0.25	-0.03	-0.12	-0.04	0.20	0.10	0.04	-0.04	-0.01	0.35	0.02	**1.00**

Source: Callan

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February 25, 2025

Public Employees' Retirement System of Mississippi

Executive Summary
4Q 2024 Performance Review

John Jackson, CFA
Senior Vice President

Alexander Ford
Senior Vice President

Mississippi PERS Executive Summary – 4Q 2024

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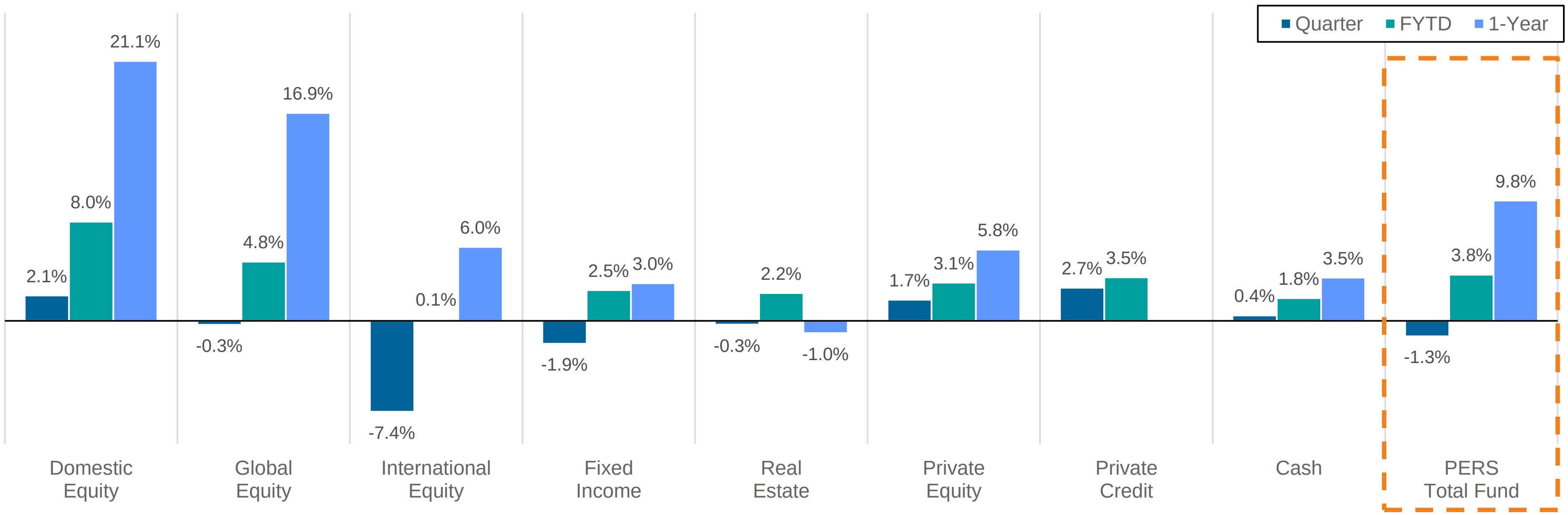
Callan

Fourth Quarter 2024 Performance Review

PERS of Mississippi Performance Highlights

As of December 31, 2024

- **PERS Total Fund assets stood at $33.9 billion at the end of December, a decrease of approximately $1.4 billion from the end of 3Q.**
  - A negative investment return decreased the market value of assets by approximately $424.4 million, while net outflows reduced assets by $1.0 billion.
- **The asset allocation was in line with its strategic targets as of the end of the quarter.**
  - Underweight allocations to Real Estate (-1.3%) and Fixed Income (-0.9%) were offset by overweight allocations to the System's other asset classes.
- **Short-term performance for the Fund is reflected in the chart below:**



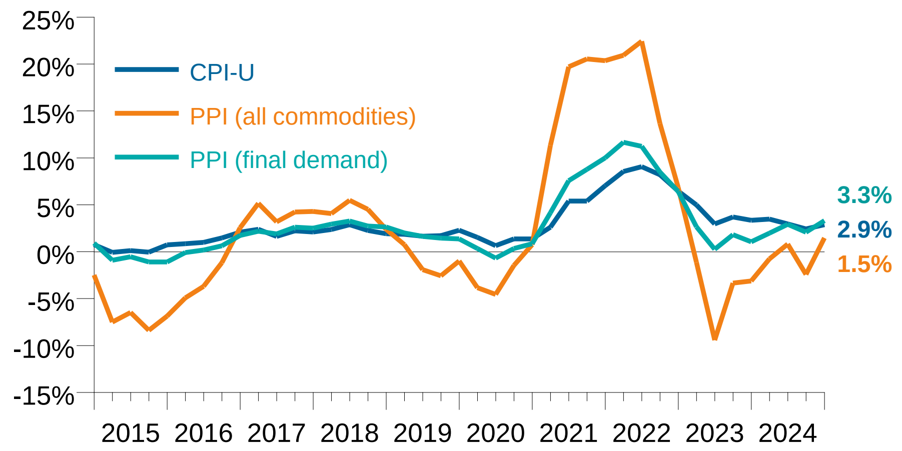
- **Over the long-term, the Total Fund has outperformed its benchmark over the trailing five-, ten-, and fifteen-year periods, with annualized returns of 7.7%, 8.0%, and 8.9%, respectively.**

U.S. Economy—Summary

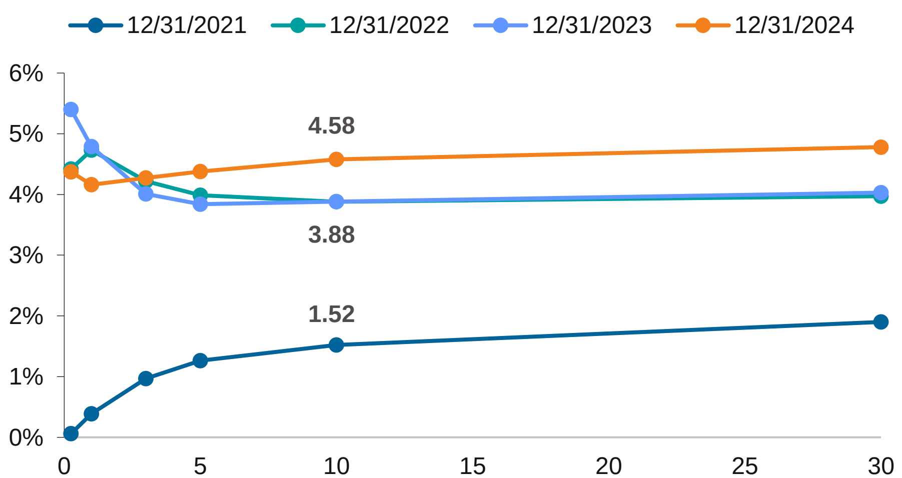
For periods ended 12/31/24

- The unemployment rate in December was 4.1%, down slightly from 4.2% in November. This marks an increase from the 3.7% rate at the start of the year.
- Real gross domestic product (GDP) increased at an annual rate of 2.3% in the fourth quarter of 2024, according to the advance estimate. In the third quarter, real GDP increased 3.1%.
- Headline CPI increased 2.9% year-over-year in December, while core CPI (ex-food and energy) increased 3.2% over the same period.
- The Fed cut rates by 0.25% in both November and December, bringing the target rate to 4.25%-4.50%. This marks a 1.00% reduction in the Fed Funds Rate in 2024.

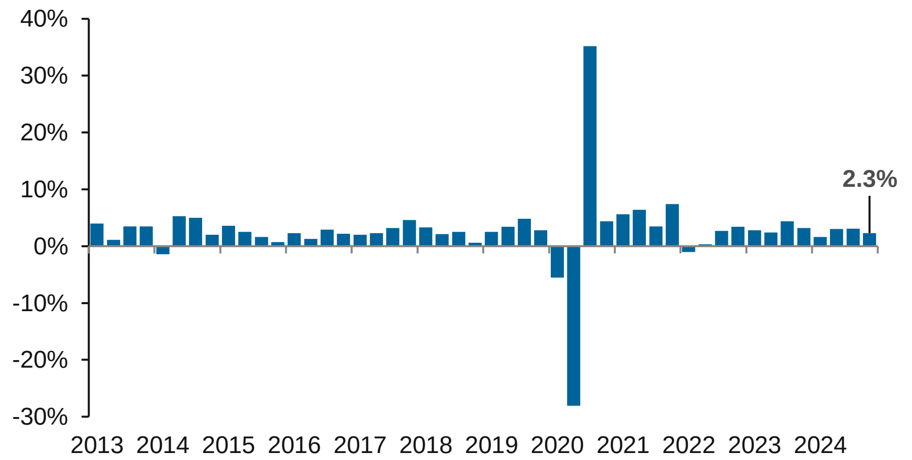
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Quarterly Real GDP Growth



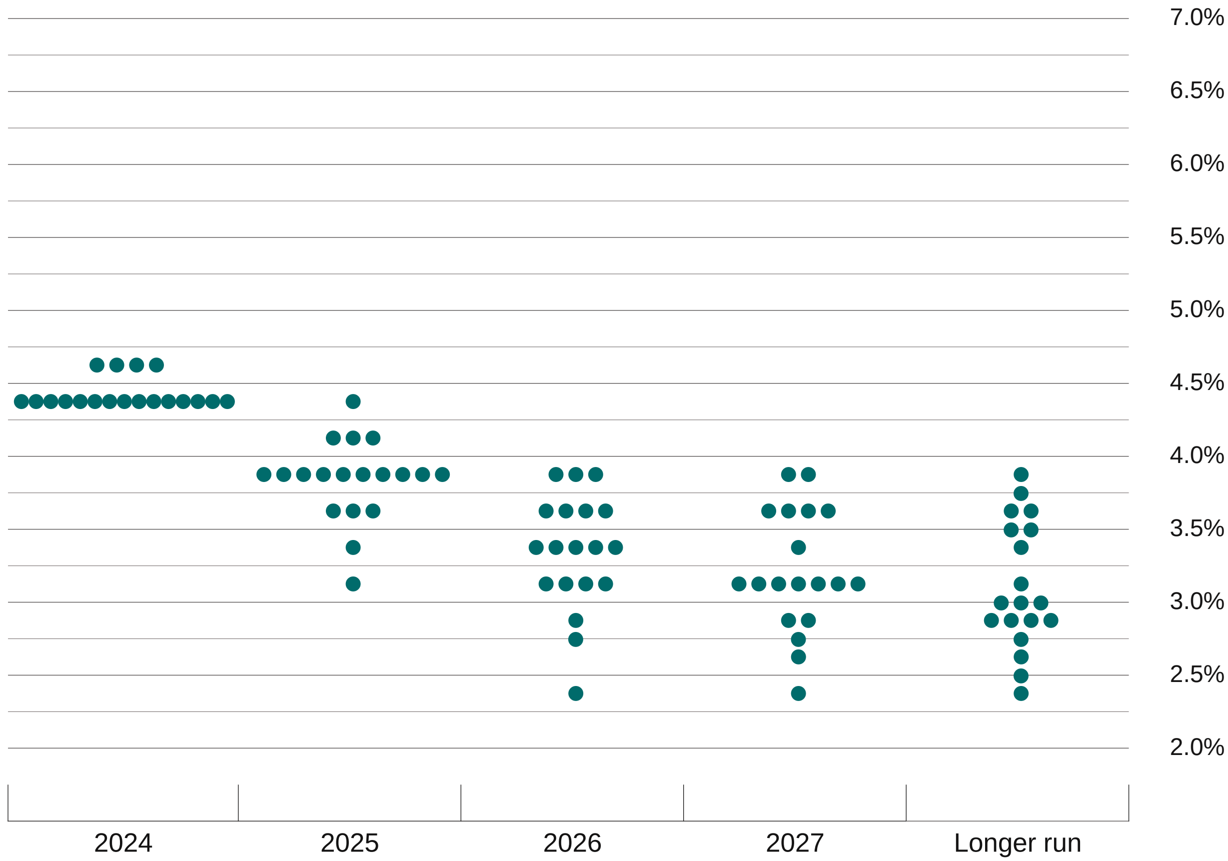
Sources: Bureau of Labor Statistics, Callan, Federal Reserve

The Fed's 'Dot Plot'

December 18, 2024

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

– Median year-end in 2025 = 3.9% (up from 3.4% projection at September meeting)
– "Longer run" median up 10 basis points to 3.0%
  – Bias is toward higher rates; lower bound is 2.4% but higher bound is 3.9%.
– Dispersion of views widens in 2025 and beyond.
– Market expects fewer cuts in 2025 based on CME FedWatch as of January; Fed Funds expectations :
  – Majority expect no cuts through May
  – One cut by end of year has 34% probability
  – Two cuts by end of year has 31% probability



Source: Federal Reserve

Equity Markets Up Sharply in 2024

Stocks have recovered losses of 2022; fixed income still lags

S&P 500 climbed 25% in 2024

- U.S. large cap substantially outperformed U.S. small cap, developed ex-U.S. markets, and emerging markets. Technology and AI drove the S&P 500.

Weak 4Q for core fixed income

- The Bloomberg U.S. Aggregate fell 3.1%. Long duration and non-U.S. bonds saw even greater declines.
- Interest rates remain volatile as the markets assess how the Fed will continue with easing.
- CPI-U came in at 2.9% (year-over-year) through December, up from 3Q, but with a welcome decline in the core figure, which rose 3.2%.

Solid economic growth through 2024

- 3Q GDP came in at a surprisingly strong 3.1%, after another surprise in 2Q, and is expected to see 2.7% growth in 4Q. Consumer spending continues to drive GDP growth.

Returns for Periods ended 12/31/24

	Quarter	1 Year	3 Years	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	2.63	23.81	8.01	13.86	12.55	7.84
S&P 500	2.41	25.02	8.94	14.53	13.10	7.70
Russell 2000	0.33	11.54	1.24	7.40	7.82	7.55
Global ex-U.S. Equity						
MSCI World ex USA	-7.43	4.70	1.91	5.10	5.26	3.78
MSCI Emerging Markets	-8.01	7.50	-1.92	1.70	3.64	--
MSCI ACWI ex USA Small Cap	-7.66	3.36	-1.47	4.30	5.66	6.23
Fixed Income						
Bloomberg Aggregate	-3.06	1.25	-2.41	-0.33	1.35	3.94
90-day T-Bill	1.17	5.25	3.89	2.46	1.77	1.91
Bloomberg Long Gov/Credit	-7.42	-4.15	-9.20	-3.26	0.99	5.36
Bloomberg Global Agg ex-US	-6.84	-4.22	-6.28	-3.37	-0.90	2.45
Real Estate						
NCREIF Property Index	0.90	0.43	-0.82	3.13	5.66	7.58
FTSE Nareit Equity	-6.21	8.73	-2.20	4.27	5.73	9.84
Alternatives						
Cambridge Private Equity*	2.68	7.93	2.75	14.27	13.40	12.39
Cambridge Senior Debt*	3.35	10.18	7.08	7.89	7.31	4.59
HFRI Fund Weighted	1.49	9.83	4.41	7.00	5.26	5.57
Bloomberg Commodity	-0.45	5.38	4.05	6.77	1.28	2.15
Gold Spot Price	-0.69	27.47	13.04	11.64	8.35	9.24
Inflation: CPI-U*	0.10	2.89	4.22	4.20	3.00	2.54

*Cambridge Private Equity and Cambridge Senior Debt data as of 9/30/24. Returns greater than one year are annualized.
Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

Stock Market Returns by Calendar Year

Performance in perspective: History of the U.S. stock market (234 years of returns)

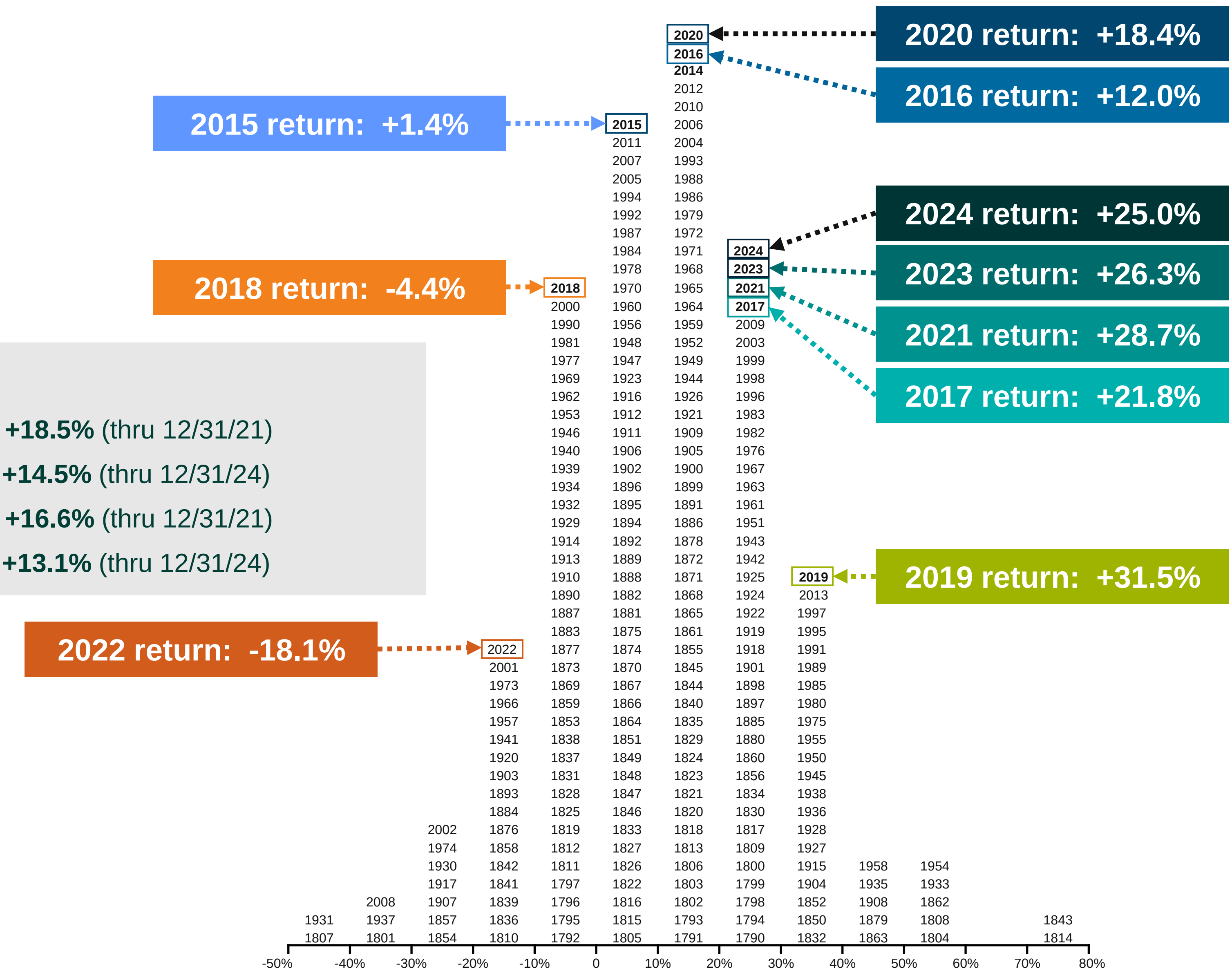
S&P 500

Five-year return: **+18.5%** (thru 12/31/21)

+14.5% (thru 12/31/24)

Ten-year return: **+16.6%** (thru 12/31/21)

+13.1% (thru 12/31/24)



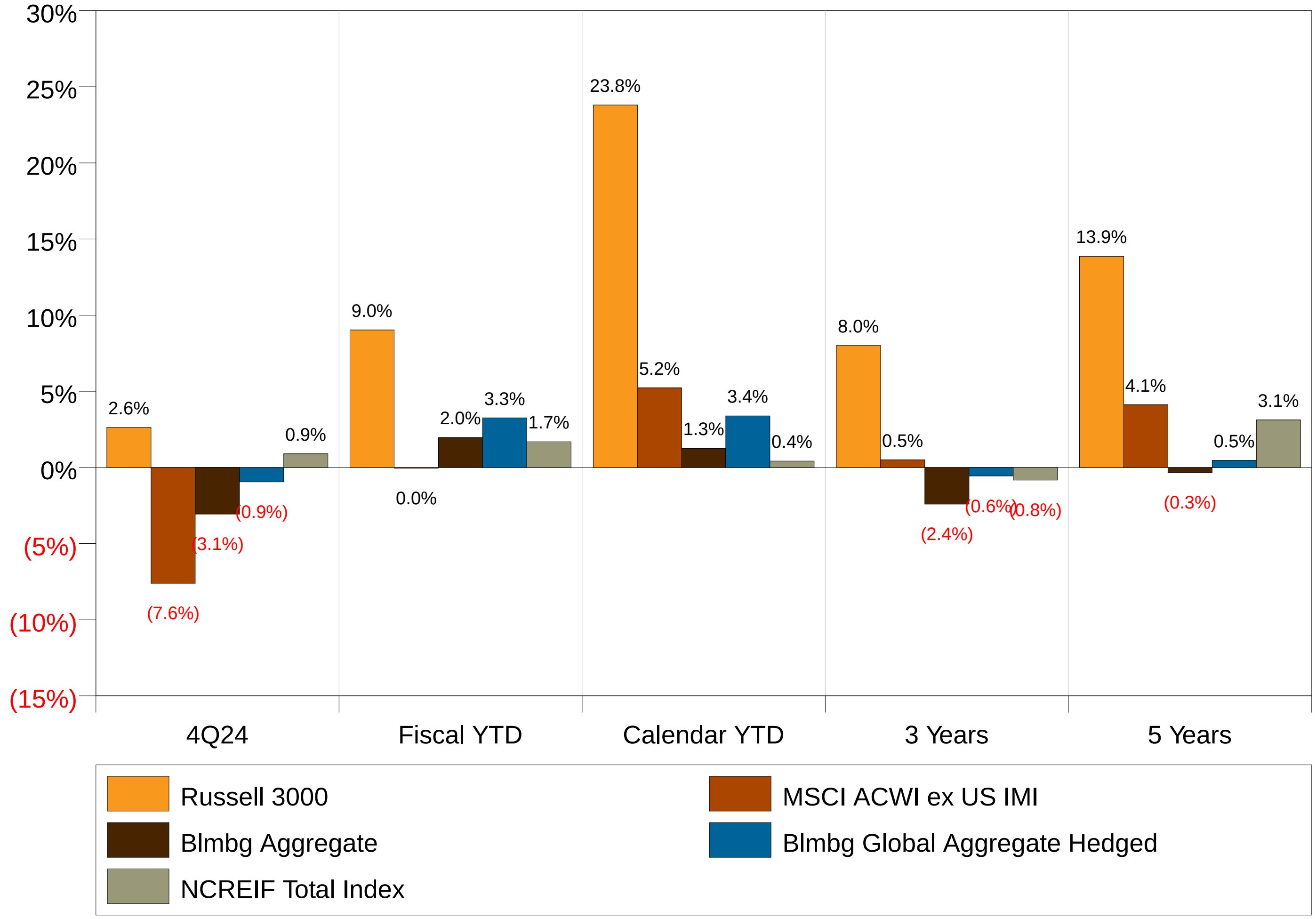
Sources: Callan, Ibbotson

Asset Class Performance

- U.S. equities recorded gains in 4Q, with the Russell 3000 returning 2.6%. The index returned 9.0% Fiscal YTD and 23.8% for the 2024 calendar year.
- Global ex-U.S. equities, as tracked by the MSCI ACWI ex-U.S. IMI, dropped 7.6% for the quarter, leaving fiscal YTD returns flat and the calendar year return at 5.2%.
- U.S. investment grade fixed income recorded losses in 4Q, with the Bloomberg U.S. Aggregate Bond Index down 3.1%. The index gained 2.0% Fiscal YTD and 1.3% for the calendar year. The Bloomberg Global Aggregate (Hedged) Index gained returned -0.9% for the quarter.
- The NCREIF Total Index recorded a 0.9% return in 4Q, lifting fiscal YTD returns to 1.7% and ending the calendar year with a 0.4% gain.

(as of 2/24/2025)	QTD
Russell 3000	
MSCI ACWI ex-U.S. IMI	
Bloomberg U.S. Aggregate	
Bloomberg Global Aggregate *(Hedged)*	

Returns for Periods Ended December 31, 2024



Callan Periodic Table of Investment Returns

As of December 31, 2024

Calendar Year Returns						Quarterly Returns			
2019	**2020**	**2021**	**2022**	**2023**	**2024**	**1Q24**	**2Q24**	**3Q24**	**4Q24**
Large Cap Equity **31.49%**	Small Cap Equity **19.96%**	Large Cap Equity **28.71%**	NCREIF ODCE Eq Wt Net **7.56%**	Large Cap Equity **26.29%**	Large Cap Equity **25.02%**	Large Cap Equity **10.56%**	EM Equity **5.00%**	Real Estate **16.07%**	Large Cap Equity **2.41%**
Small Cap Equity **25.52%**	Large Cap Equity **18.40%**	Real Estate **26.09%**	Interm. Fixed Income **-8.23%**	Dev Non-U.S. Equity **18.24%**	Small Cap Equity **11.54%**	Dev Non-U.S. Equity **5.78%**	Large Cap Equity **4.28%**	Small Cap Equity **9.27%**	NCREIF ODCE Eq Wt Net **0.85%**
Dev Non-U.S. Equity **22.01%**	EM Equity **18.31%**	NCREIF ODCE Eq Wt Net **21.88%**	High Yield **-11.19%**	Small Cap Equity **16.93%**	High Yield **8.19%**	Small Cap Equity **5.18%**	High Yield **1.09%**	EM Equity **8.72%**	Small Cap Equity **0.33%**
Real Estate **21.91%**	Dev Non-U.S. Equity **7.82%**	Small Cap Equity **14.82%**	U.S. Fixed Income **-13.01%**	High Yield **13.44%**	EM Equity **7.50%**	EM Equity **2.37%**	Interm. Fixed Income **0.64%**	Dev Non-U.S. Equity **7.26%**	High Yield **0.17%**
EM Equity **18.44%**	U.S. Fixed Income **7.51%**	Dev Non-U.S. Equity **11.26%**	Dev Non-U.S. Equity **-14.45%**	EM Equity **9.83%**	Dev Non-U.S. Equity **3.82%**	High Yield **1.47%**	U.S. Fixed Income **0.07%**	Large Cap Equity **5.89%**	Interm. Fixed Income **-1.60%**
High Yield **14.32%**	High Yield **7.11%**	High Yield **5.28%**	Large Cap Equity **-18.11%**	Real Estate **9.67%**	Interm. Fixed Income **3.00%**	Interm. Fixed Income **-0.15%**	Dev Non-U.S. Equity **-0.42%**	High Yield **5.28%**	U.S. Fixed Income **-3.06%**
U.S. Fixed Income **8.72%**	Interm. Fixed Income **6.43%**	Interm. Fixed Income **-1.44%**	EM Equity **-20.09%**	U.S. Fixed Income **5.53%**	U.S. Fixed Income **1.25%**	U.S. Fixed Income **-0.78%**	NCREIF ODCE Eq Wt Net **-0.82%**	U.S. Fixed Income **5.20%**	EM Equity **-8.01%**
Interm. Fixed Income **6.80%**	NCREIF ODCE Eq Wt Net **0.75%**	U.S. Fixed Income **-1.54%**	Small Cap Equity **-20.44%**	Interm. Fixed Income **5.24%**	Real Estate **0.94%**	Real Estate **-1.30%**	Real Estate **-2.43%**	Interm. Fixed Income **4.17%**	Dev Non-U.S. Equity **-8.11%**
NCREIF ODCE Eq Wt Net **5.18%**	Real Estate **-9.04%**	EM Equity **-2.54%**	Real Estate **-25.10%**	NCREIF ODCE Eq Wt Net **-13.33%**	NCREIF ODCE Eq Wt Net **-2.43%**	NCREIF ODCE Eq Wt Net **-2.38%**	Small Cap Equity **-3.28%**	NCREIF ODCE Eq Wt Net **-0.07%**	Real Estate **-9.69%**

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 Performance: 4Q24

U.S. market ends on a high note, though with some volatility

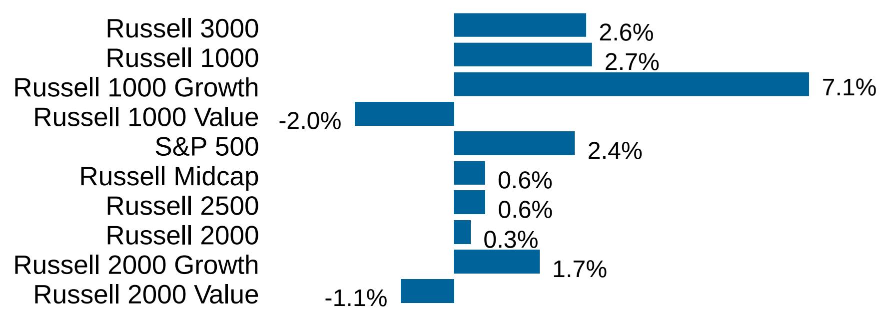
– The U.S. equity market ended on a positive note as the S&P 500 Index was up over 2%. However, the quarter was marked by volatility, particularly during October and December. Negative returns in October were driven by investor anxiety around the U.S. presidential election, uncertainty with the Fed's approach to interest rate cuts on a go-forward basis, and some misses to earnings expectations for companies. December returns, while initially buoyed by the Fed's third consecutive rate cut, cooled after the Fed announced no additional rate cuts until the second half of 2025.

– Sector performance was mixed; only 4 (Communication Services, Consumer Discretionary, Financials, and Information Technology) posted positive returns.

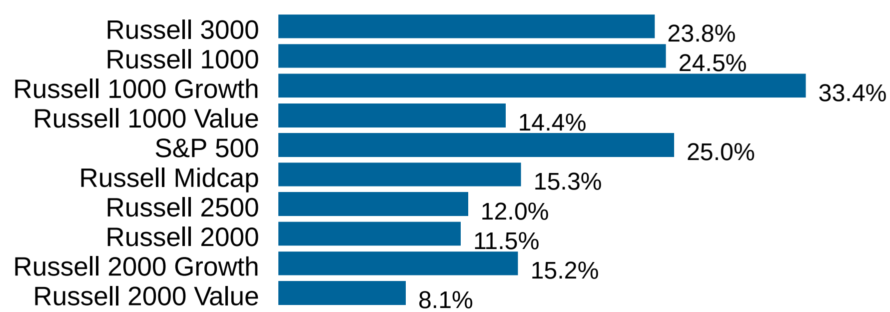
– During 4Q24, large cap stocks outperformed small cap stocks. Growth stocks outperformed value stocks across the market cap spectrum.

– Market concentration remains elevated; the percentage of companies outperforming the S&P 500 is at historic lows and there remains a large divergence between S&P 500 and S&P 500 ex-Magnificent Seven returns.

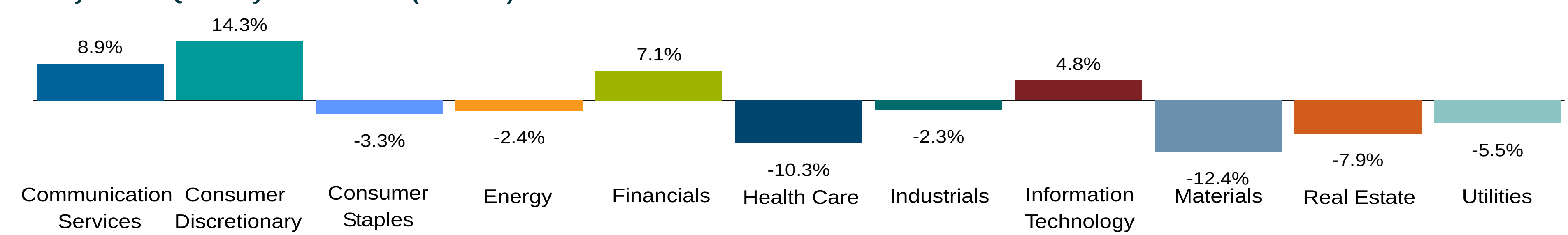
U.S. Equity: Quarter Ended 12/31/24



U.S. Equity: One Year Ended 12/31/24



Industry Sector Quarterly Performance (S&P 500) as of 12/31/24



Sources: FTSE Russell, S&P Dow Jones Indices

U.S. Equity Overview

Narratives around large caps remain unchanged

Large caps keep driving narrow markets

– Concentration and performance contribution of the Mag Seven stocks within the large cap benchmarks remain outsized relative to the aggregate of benchmark constituents. In 2024, the S&P 500's return was 25%; the S&P 500 ex-Mag Seven return was 16%.

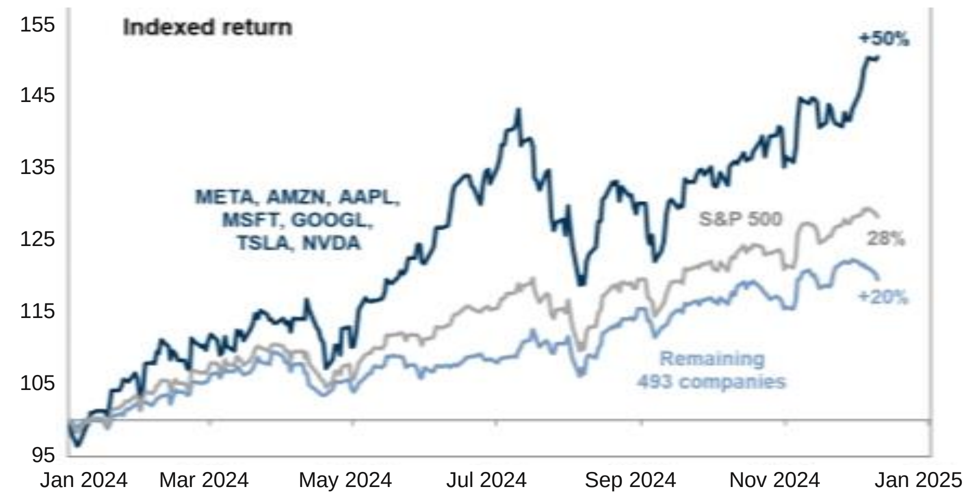
– For the second straight year <30% of S&P 500 stocks outperformed the S&P 500 itself.

Fundamentals key to success of large caps

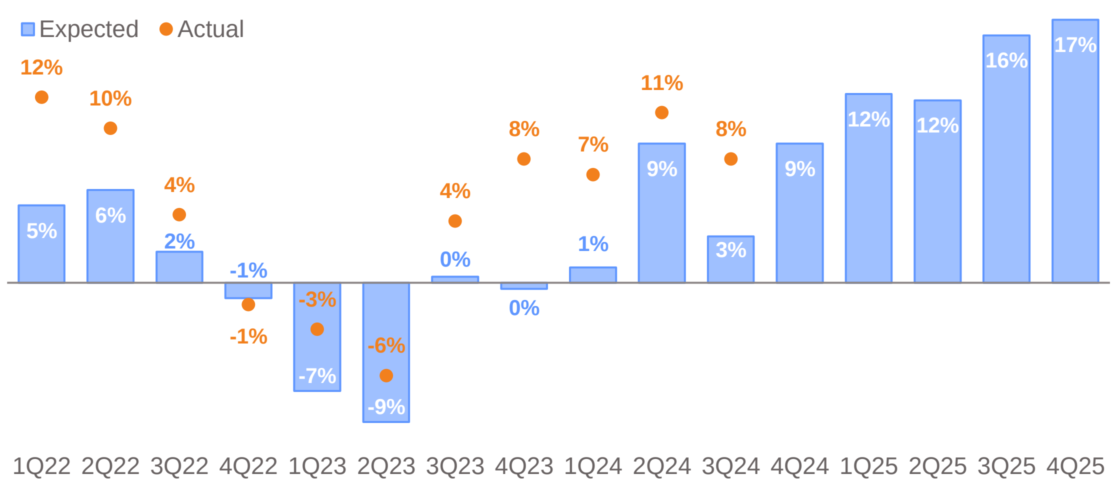
– In recent years, themes—like "work from home" stocks and AI—as well as momentum have been attributed to the prolonged success of the Mag Seven.

– However, Mag Seven valuations have been supported by strong earnings, low debt, and high cash levels. Consensus and forward-looking EPS growth expectations also remain high for large cap companies.

Magnificent Seven Stocks and % Contribution to Benchmark Performance



S&P 500 Quarterly Year / Year EPS Growth Relative to Consensus Expectations



Sources: Factset, Furey Research Partners, Goldman Sachs Global Investment Research (12/12/24), Westfield Capital

Global/Global ex-U.S. Equity Performance: 4Q24

Non-U.S. markets pull back at year-end

Broad market

- Global equity markets had a rough end to the year as concerns around Trump tariffs weighed on Europe and China.
- Europe was one of the worst-performing regions, plagued by political uncertainty and continued economic woes.
- While still negative, Japan's decline over the quarter was stemmed by the approval of a new economic stimulus plan focused on issues such as wage stability and deflation.

Emerging markets

- Emerging markets declined on the heels of poor results out of China and India. Although Chinese stocks initially gained from the announced stimulus, they later declined due to expected tariffs. Economic growth in India fell short of expectations.

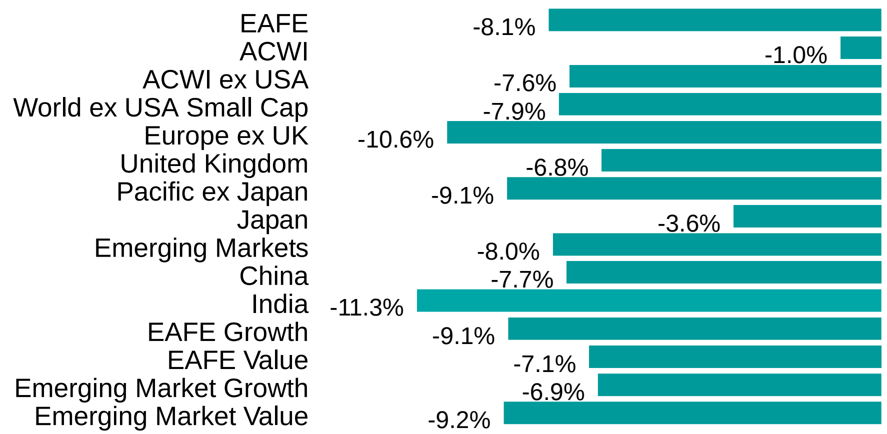
Growth vs. value

- In developed markets outside the U.S., the influence of technology and AI is comparatively more muted, which makes the trend of growth stocks, especially those from the "Magnificent Seven," outperforming value stocks less pronounced.

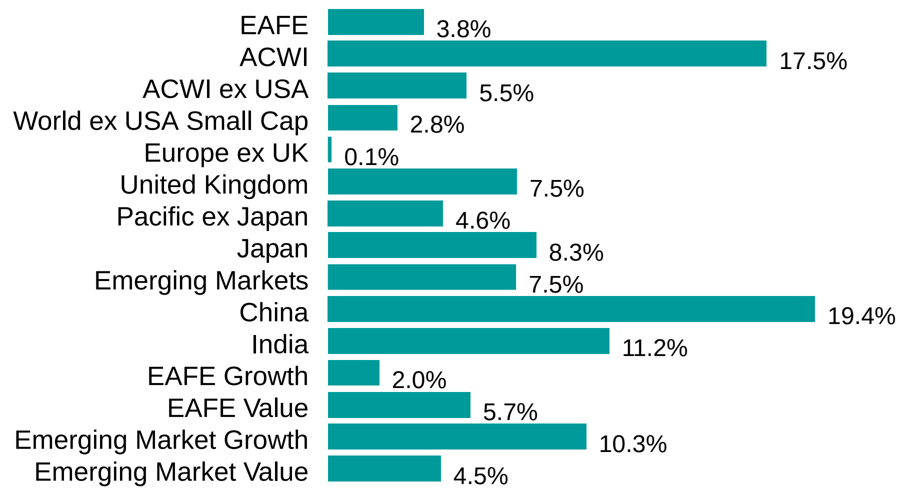
U.S. dollar strength

- The U.S. dollar shifted direction from the last quarter as expectations for interest rate cuts faded, along with the anticipated beneficial effects of the Trump administration on the U.S. economy; in total the U.S. Dollar Index rose over 7% during the quarter.

Global Equity Returns: Quarter Ended 12/31/24



Global Equity Returns: One Year Ended 12/31/24



Source: MSCI

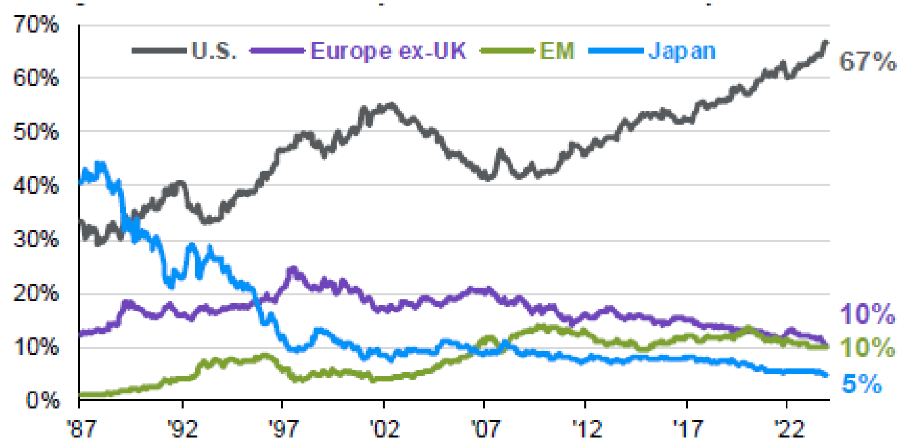
Global/Global ex-U.S. Equity Key Themes

Global market concentration and non-U.S. valuation discounts

Global equity market concentration continues higher

- The U.S. share of market capitalization in global indices is at all-time highs as U.S. technology companies lead markets higher.
- Market capitalization-weighted global benchmarks are providing lower diversification benefits than historically at not only the country level but also the security level as the top five constituents of the MSCI ACWI Index currently comprise over 17% of the benchmark.

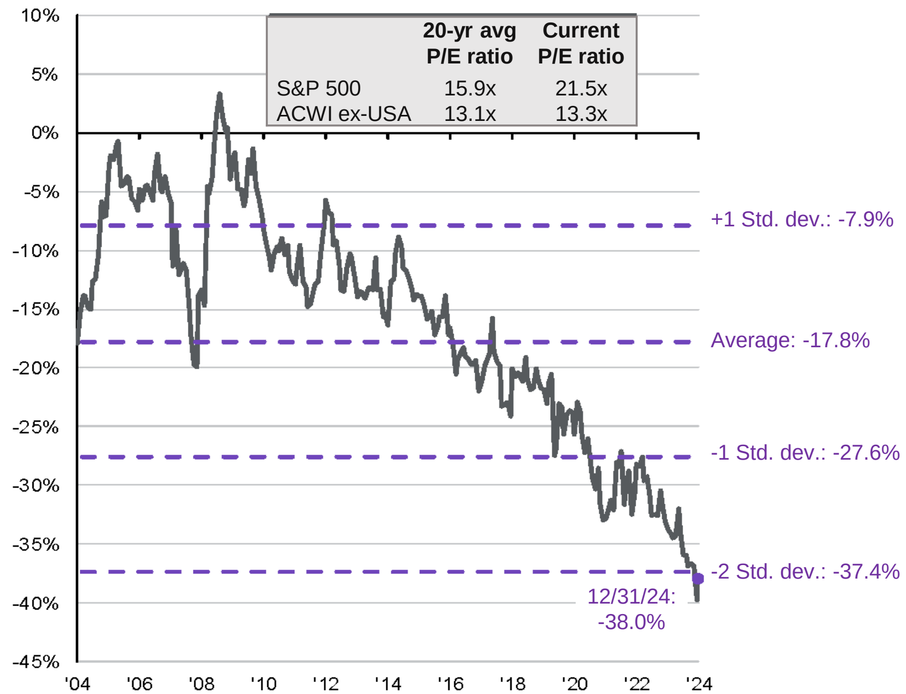
Share of Global Market Capitalization
% Weight in the MSCI ACWI Index, USD, Monthly



Non-U.S. relative valuations at extreme lows

- As U.S stocks trend higher, non-U.S. equity valuations are at extreme discounts vs. the U.S. against historical averages. At the sector level, almost every non-U.S. sector is currently trading at a large discount to its U.S. counterpart.
- While political concerns and economic challenges have been contributing factors to the valuation gap, markets are pricing in high expectations for continued U.S. strength.

Price-to-Earnings Discount vs. U.S.
MSCI ACWI ex-USA vs. S&P 500, next 12 months



Sources: FactSet, J.P. Morgan Asset Management, MSCI, S&P Dow Jones Indices

U.S. Fixed Income Performance: 4Q24

Uncertainty resumes, hurting 4Q fixed income performance

Macro environment

- The Fed continued the rate cutting cycle, most recently in December, bringing the target range to 4.25%-4.50%.
- The yield curve steepened, with rates rising for Treasuries one year and longer. The 10-year rose 77 bps from 3.81% to 4.58%.
- Inflation concerns resurfaced, with the breakeven inflation rate rising by 19 bps to 2.30% over the course of the quarter.

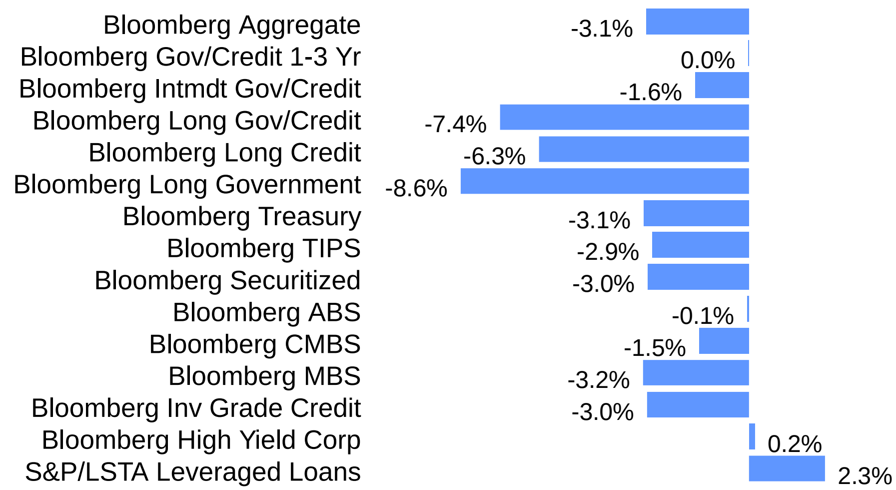
Performance and drivers

- The Bloomberg US Aggregate Bond Index fell 3.1% due to the rise in rates.
- With the steepening yield curve, long government bonds fared the worst among sectors.
- Leveraged finance sectors (High yield: +0.2%, leveraged loans: +2.3%) were the only positive fixed income sectors as spreads tightened.

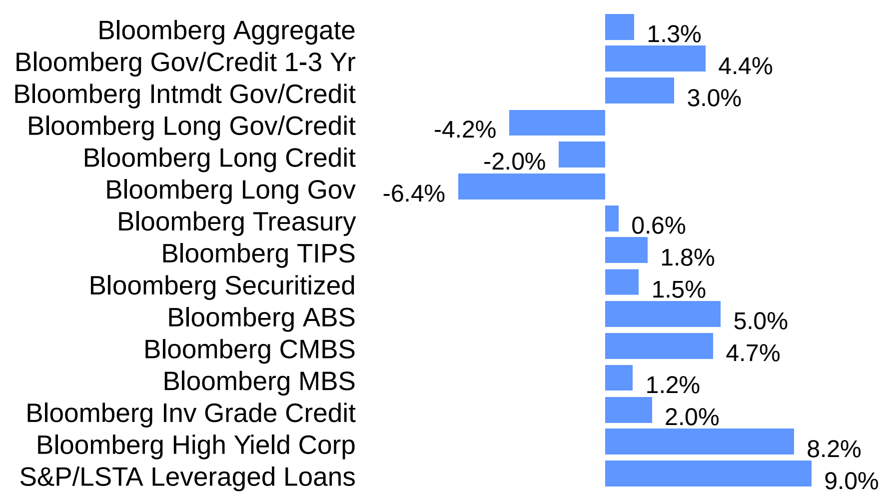
Valuations

- Corporate credit spreads across both investment grade and leveraged finance tightened, with both being “priced to perfection.”
- New issuance continued to be strong, with 2024 totals for both IG and HY outpacing 2023.

U.S. Fixed Income Returns: Quarter Ended 12/31/24



U.S. Fixed Income Returns: One Year Ended 12/31/24



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

U.S. Private Real Estate Performance: 4Q24

Sector appreciation turns positive, outside of office

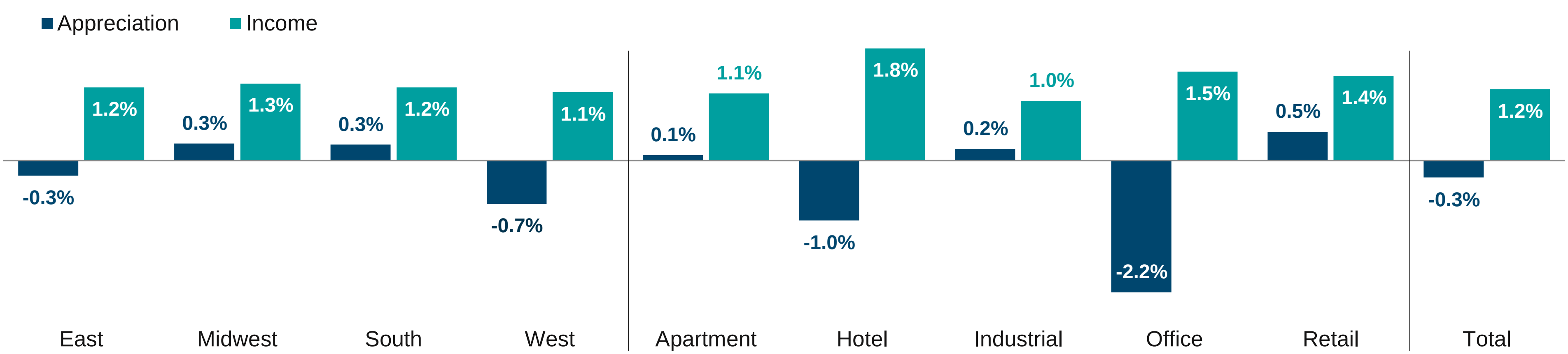
Valuations reflect higher interest rates

– Valuations appear to have bottomed and now reflect higher borrowing costs.
– Income returns were positive across sectors and regions.
– Property sectors were mixed; Office and Hotel experienced negative appreciation, and the remaining sectors had flat or positive appreciation.
– 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	**1.0%**	**-2.3%**	**-3.1%**	**2.0%**	**4.9%**
Income	0.8%	3.3%	2.8%	2.9%	3.2%
Appreciation	0.1%	-5.4%	-5.9%	-0.9%	1.7%
NCREIF Property Index	**0.9%**	**0.4%**	**-0.8%**	**3.1%**	**5.7%**
Income	1.2%	4.8%	4.3%	4.3%	4.5%
Appreciation	-0.3%	-4.2%	-5.0%	-1.1%	1.1%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type

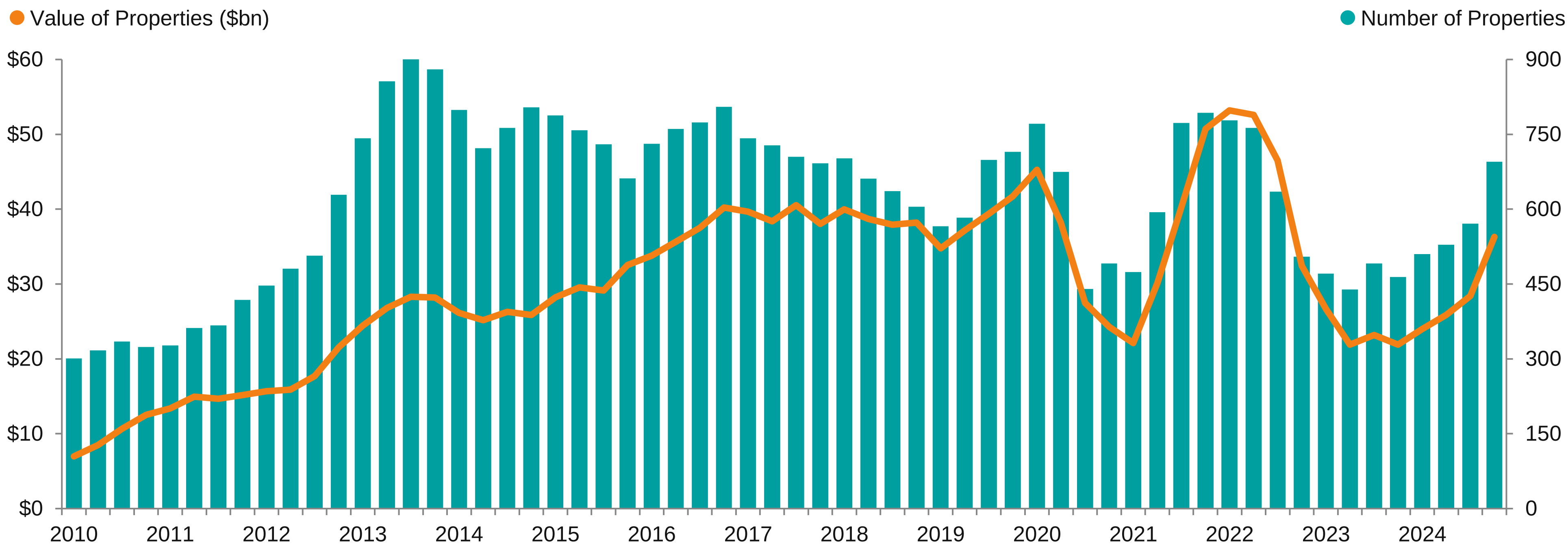


Source: NCREIF; ODCE return is net

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 4Q24, transaction volume increased on a quarter-over-quarter basis. Transaction volume remains 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.

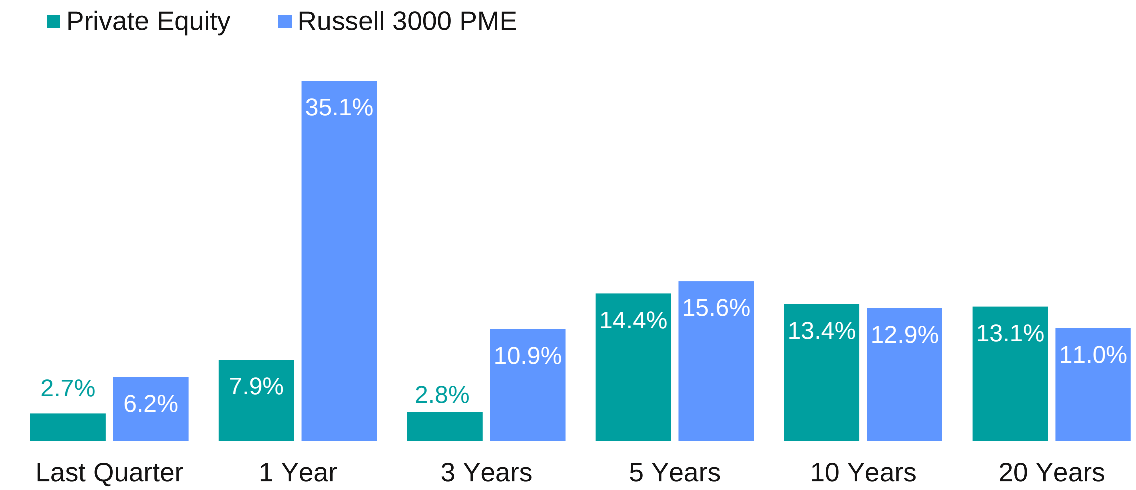
Source: NCREIF

Private Equity Trends

Performance

- Short-term performance continues to lag public equity (driven by the "Magnificent Seven")
- Due to the smoothed nature of its returns, private equity doesn't outperform when public equity is at record highs (it likewise doesn't drop as sharply when public equity drops).
- Long-term return dispersion is typically ~60% between the top 5% and bottom 5% of PE funds, so there are still opportunities to outperform for funds with above-median returns.
- By strategy type, venture capital and growth equity are still recovering after losses in 2022-2023, while buyouts have proven to be much more resilient.

Net IRRs as of 9/30/24



Net IRRs by Strategy as of 9/30/2024

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	1.4%	2.4%	-5.3%	14.9%	14.8%	12.2%
Growth Equity	2.8%	7.7%	-0.5%	13.9%	13.2%	13.5%
Buyouts	3.3%	10.1%	6.3%	15.2%	14.0%	14.0%
Mezzanine	3.0%	10.4%	9.1%	11.7%	10.9%	11.4%
Credit Opportunities	2.5%	9.9%	7.6%	9.2%	7.6%	9.2%
Control-Oriented Distressed	0.9%	3.3%	6.7%	13.3%	10.8%	11.2%
Private Equity	**2.7%**	**7.9%**	**2.8%**	**14.4%**	**13.4%**	**13.1%**

Source: LSEG/Cambridge. PME: Public Market Equivalent

Callan

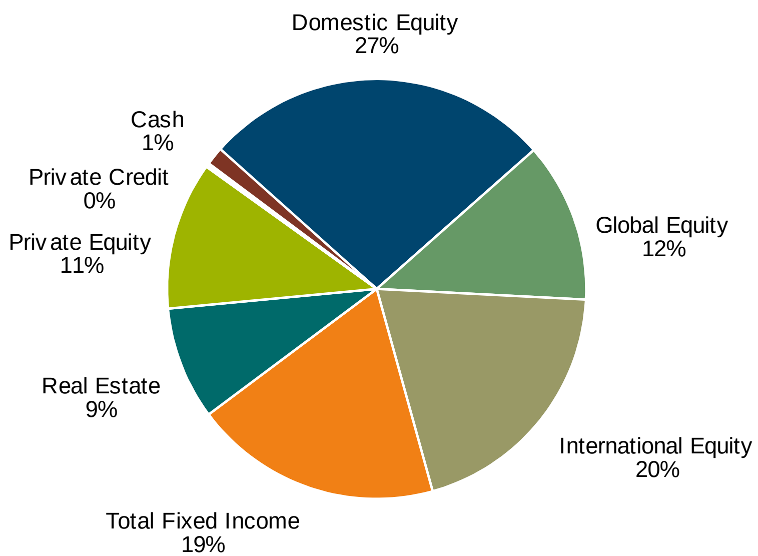
PERS Portfolio Review

4Q 2024

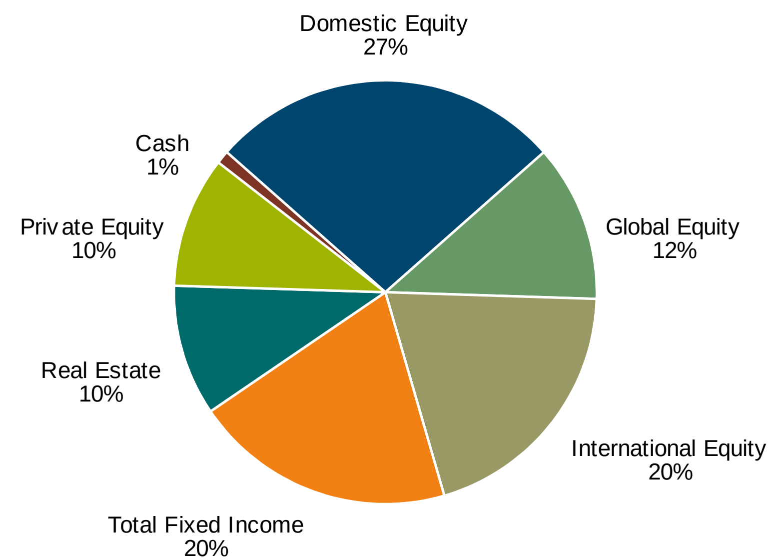
PERS Asset Allocation Versus Policy Target

As of December 31, 2024

Actual Asset Allocation



Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	9,138,799	27.0%	27.0%	(0.0%)	(6,403)
Global Equity	4,150,562	12.3%	12.0%	0.3%	86,028
International Equity	6,740,518	19.9%	20.0%	(0.1%)	(33,706)
Total Fixed Income	6,452,857	19.1%	20.0%	(0.9%)	(321,366)
Real Estate	2,951,995	8.7%	10.0%	(1.3%)	(435,117)
Private Equity	3,851,562	11.4%	10.0%	1.4%	464,450
Private Credit	96,051	0.3%	0.0%	0.3%	96,051
Cash	488,773	1.4%	1.0%	0.4%	150,062
Total	33,871,117	100.0%	100.0%		

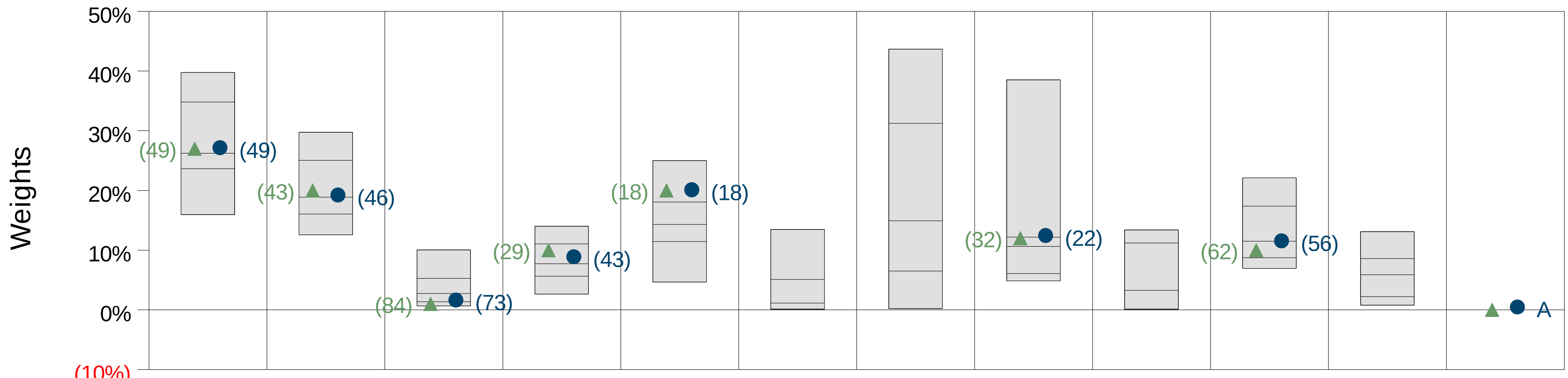
- **Overall, the PERS asset allocation was in line with its strategic target allocation.**
  - Underweight allocations to Real Estate (-1.3%) and Fixed Income (-0.9%) were offset by overweight allocations to the System’s other asset classes.

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 December 31, 2024

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	Dvsfd Real Assets	Private Credit
10th Percentile		39.78	29.75	10.06	14.01	25.00	13.47	43.67	38.53	13.40	22.13	13.09	-
25th Percentile		34.80	25.07	5.28	11.05	18.07	5.10	31.25	12.18	11.20	17.39	8.60	-
Median		26.23	18.87	2.74	7.72	14.33	1.14	14.93	10.64	3.27	11.49	5.88	-
75th Percentile		23.65	16.07	1.36	5.65	11.44	0.15	6.52	6.10	0.17	8.72	2.22	-
90th Percentile		15.96	12.59	0.66	2.63	4.66	0.05	0.22	4.84	0.04	6.94	0.78	-
Fund	●	26.98	19.05	1.44	8.72	19.90	-	-	12.25	-	11.37	-	0.28
Target	▲	27.00	20.00	1.00	10.00	20.00	-	-	12.00	-	10.00	-	0.00
% Group Invested		100.00%	97.44%	82.05%	92.31%	100.00%	48.72%	87.18%	20.51%	28.21%	38.46%	25.64%	0.00%

Note: The private credit asset class does 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 December 31, 2024

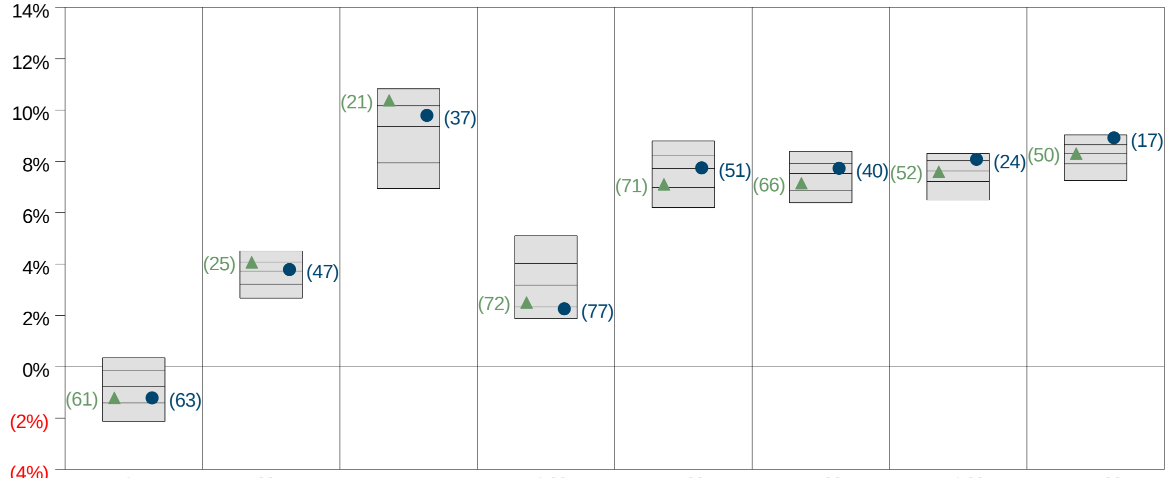
	December 31, 2024				September 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	$9,138,798,789	26.98%	$(154,147,402)	$192,337,597	$9,100,608,594	25.77%
Global Equity	$4,150,562,311	12.25%	$(154,024,145)	$(10,365,831)	$4,314,952,287	12.22%
International Equity	$6,740,517,917	19.90%	$(4,908,151)	$(536,909,609)	$7,282,335,676	20.62%
Total Fixed Income	$6,452,857,375	19.05%	$(753,776,478)	$(129,436,252)	$7,336,070,104	20.77%
Real Estate	$2,951,994,990	8.72%	$30,429,034	$(9,190,448)	$2,930,756,403	8.30%
Private Equity	$3,851,561,839	11.37%	$(40,541,095)	$65,512,721	$3,826,590,213	10.84%
Private Credit	$96,050,619	0.28%	$11,970,629	$1,875,254	$82,204,736	0.23%
Cash	$488,773,098	1.44%	$45,550,821	$746,250	$442,476,027	1.25%
Total Fund	$33,871,116,937	100.00%	$(1,020,448,525)	$(424,428,578)	$35,315,994,040	100.00%

- **PERS Total Fund assets stood at $33.9 billion at the end of December, a decrease of approximately $1.4 billion from the end of 3Q.**
  - A negative investment return decreased the market value of assets by approximately $424.4 million.
  - Net outflows reduced assets by approximately $1.0 billion.

PERS Total Fund Summary Dashboard

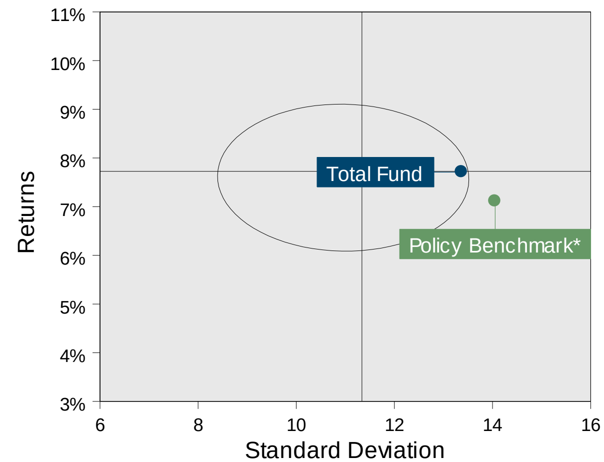
As of December 31, 2024

Performance vs Callan Public Fund Spons- V Lg DB (>10B) (Gross)

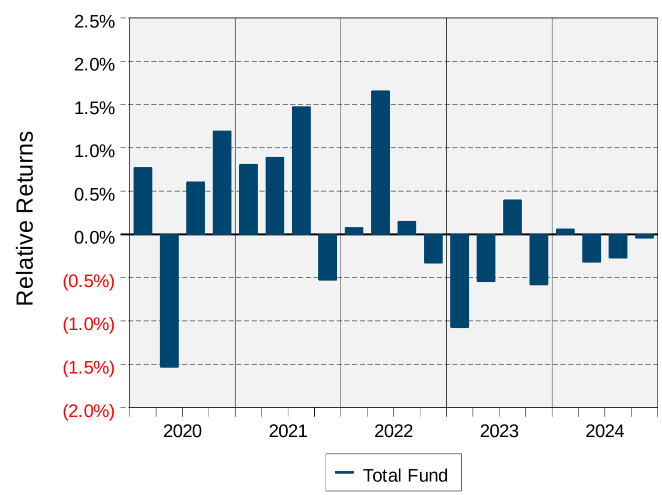


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	0.35	4.51	10.83	5.10	8.80	8.40	8.31	9.03
25th Percentile	(0.15)	4.08	10.17	4.03	8.25	7.92	8.03	8.65
Median	(0.77)	3.73	9.35	3.18	7.73	7.53	7.63	8.32
75th Percentile	(1.41)	3.22	7.95	2.33	6.98	6.88	7.22	7.91
90th Percentile	(2.12)	2.68	6.95	1.88	6.20	6.39	6.49	7.26
Total Fund ●	(1.25)	3.75	9.75	2.22	7.71	7.69	8.04	8.88
Policy Benchmark* ▲	(1.21)	4.07	10.38	2.51	7.11	7.15	7.60	8.31

Callan Public Fund Spons- V Lg DB (>10B) (Gross)
Annualized Five Year Risk vs Return



Relative Return vs Policy Benchmark*



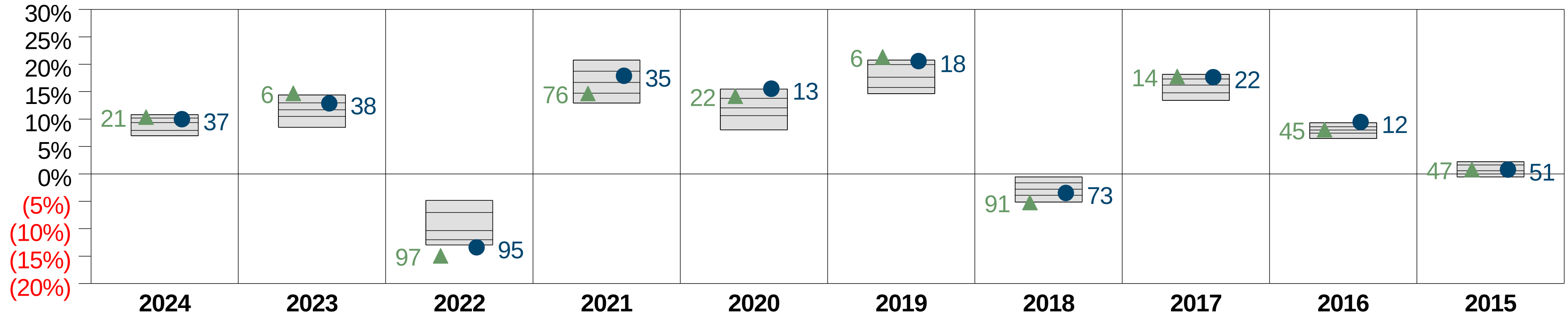
- During the fourth quarter, the PERS Total Fund returned -1.3% (gross of fees) compared with -1.2% for its Policy Benchmark and ranked in the 63rd percentile relative to peers.*
- Fiscal year-to-date, the PERS Total Fund returned 3.8% (gross of fees) versus 4.1% for the Policy Benchmark and ranked in the 47th 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 five years.

*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 Total Fund Performance – By Calendar Year

As of December 31, 2024

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



	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	10.83	14.43	(4.84)	20.76	15.50	20.76	(0.53)	18.15	9.33	2.23
25th Percentile	10.17	12.98	(7.06)	18.73	13.78	19.93	(1.63)	17.32	8.59	1.62
Median	9.35	11.70	(10.32)	16.69	12.06	17.64	(2.78)	16.21	8.01	0.57
75th Percentile	7.95	10.49	(12.01)	14.74	10.63	15.76	(3.89)	14.78	7.42	(0.03)
90th Percentile	6.95	8.47	(12.95)	12.92	8.04	14.65	(5.12)	13.40	6.47	(0.55)
Total Fund ●	9.75	12.66	(13.62)	17.70	15.32	20.36	(3.71)	17.40	9.24	0.57
Policy Benchmark* ▲	10.38	14.72	(14.94)	14.66	14.16	21.35	(5.22)	17.77	8.07	0.81

*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 December 31, 2024

	Market Value $(000)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years
Domestic Equity	**$9,138,799**	**26.98%**	**2.05%**	**8.04%**	**21.08%**	**7.31%**
Domestic Equity Benchmark	-	-	2.63%	9.03%	23.81%	8.01%
Global Equity	**$4,150,562**	**12.25%**	**(0.33%)**	**4.80%**	**16.86%**	**4.28%**
Global Equity Benchmark	-	-	(1.24%)	5.52%	16.37%	4.90%
International Equity	**$6,740,518**	**19.90%**	**(7.37%)**	**0.13%**	**6.00%**	**0.88%**
International Equity Benchmark	-	-	(7.61%)	(0.05%)	5.23%	0.50%
Total Fixed Income	**$6,452,857**	**19.05%**	**(1.85%)**	**2.49%**	**3.04%**	**(1.24%)**
Total Fixed Income Benchmark	-	-	(3.06%)	1.98%	1.25%	(2.41%)
Real Estate	**$2,951,995**	**8.72%**	**(0.31%)**	**2.24%**	**(1.00%)**	**(3.28%)**
Real Estate Benchmark	-	-	0.90%	1.69%	0.43%	(0.82%)
Private Equity	**$3,851,562**	**11.37%**	**1.71%**	**3.09%**	**5.78%**	**2.56%**
Private Equity Benchmark	-	-	2.68%	3.71%	7.65%	(1.46%)
Private Credit	**$96,051**	**0.28%**	**2.05%**	**3.52%**	**-**	**-**
Private Credit Benchmark	-	-	3.80%	5.69%	13.61%	-
Cash Composite	**$488,773**	**1.44%**	**0.44%**	**1.83%**	**4.50%**	**3.95%**
Cash Benchmark	-	-	1.20%	2.58%	5.38%	3.98%
Total Fund	**$33,871,117**	**100.00%**	**(1.25%)**	**3.75%**	**9.75%**	**2.22%**
Total Fund Benchmark	-	-	(1.21%)	4.07%	10.38%	2.51%

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 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%

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

PERS Asset Class Performance – Gross of Fees (Continued)

As of December 31, 2024

	Last 5 Years	Last 10 Years	Last 15 Years
Domestic Equity	**13.49%**	**12.01%**	**13.39%**
Domestic Equity Benchmark	13.86%	12.55%	13.56%
Global Equity	**9.47%**	**9.48%**	**10.04%**
Global Equity Benchmark	9.67%	8.97%	-
International Equity	**4.86%**	**5.70%**	**5.56%**
International Equity Benchmark	4.12%	4.91%	4.77%
Total Fixed Income	**0.71%**	**2.47%**	**3.64%**
Total Fixed Income Benchmark	(0.33%)	1.35%	2.59%
Real Estate	**2.67%**	**5.73%**	**8.08%**
Real Estate Benchmark	3.13%	5.66%	7.92%
Private Equity	**14.92%**	**15.14%**	**13.50%**
Private Equity Benchmark	9.16%	12.03%	14.71%
Cash Composite	**2.46%**	**1.77%**	**1.22%**
Cash Benchmark	2.47%	1.74%	-
Total Fund	**7.71%**	**8.04%**	**8.88%**
Total Fund Benchmark	7.11%	7.60%	8.31%

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 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%

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

Periodic Rates of Return – Gross of Fees

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Domestic Equity	**$9,138,798,789**	**26.98%**	**2.05%**	**39**	**8.04%**	**77**	**21.08%**	**62**	**7.31%**	**56**	**13.49%**	**34**
Russell 3000 Index	-	-	2.63%	7	9.03%	17	23.81%	12	8.01%	21	13.86%	20
Pub Pln- Dom Equity	-	-	1.88%		8.41%		21.55%		7.45%		13.12%	
Large Cap Equity	**$6,940,082,800**	**20.49%**	**2.49%**	**44**	**8.04%**	**38**	**24.98%**	**39**	**9.06%**	**38**	**14.49%**	**43**
Russell 1000 Index	-	-	2.75%	42	9.00%	21	24.51%	42	8.41%	50	14.28%	44
Callan Large Cap	-	-	1.51%		7.39%		21.66%		8.41%		13.28%	
Managed Large Cap Equity	**$904,509,819**	**2.67%**	**3.13%**	**22**	**5.63%**	**78**	**24.97%**	**49**	**9.73%**	**39**	**14.54%**	**50**
Callan Large Cap Core	-	-	2.29%		6.94%		24.87%		9.32%		14.58%	
Eagle Capital	904,509,819	2.67%	3.13%	22	5.63%	78	24.97%	49	9.73%	39	14.54%	50
S&P 500 Index	-	-	2.41%	46	8.44%	25	25.02%	48	8.94%	67	14.53%	51
Callan Large Cap Core	-	-	2.29%		6.94%		24.87%		9.32%		14.58%	
Northern Trust S&P 500	**$6,035,572,981**	**17.82%**	**2.41%**	**46**	**8.42%**	**25**	**24.95%**	**49**	**8.94%**	**67**	**14.52%**	**51**
S&P 500 Index	-	-	2.41%	46	8.44%	25	25.02%	48	8.94%	67	14.53%	51
Callan Large Cap Core	-	-	2.29%		6.94%		24.87%		9.32%		14.58%	

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Mid Cap Equity	**$1,127,439,285**	**3.33%**	**0.61%**	**43**	**6.87%**	**55**	**11.83%**	**57**	**1.57%**	**77**	**9.98%**	**57**
Russell MidCap Index	-	-	0.62%	43	9.89%	41	15.34%	41	3.79%	59	9.92%	57
Callan Mid Cap Core	-	-	(0.10%)		8.28%		13.29%		5.77%		10.60%	
Artisan Partners	544,441,327	1.61%	5.46%	35	8.42%	65	13.40%	64	(3.08%)	81	10.06%	48
Russell MidCap Growth Idx	-	-	8.14%	19	15.22%	15	22.10%	19	4.04%	6	11.47%	19
Callan Mid Cap Growth	-	-	4.77%		9.85%		14.95%		(0.16%)		9.88%	
Victory Mid Cap Value	582,982,526	1.72%	(3.53%)	88	5.46%	75	10.72%	59	-		-	
Russell MidCap Value Idx	-	-	(1.75%)	58	8.16%	34	13.07%	39	3.88%	71	8.59%	77
Callan Mid Cap Value	-	-	(1.49%)		7.41%		11.68%		5.27%		10.08%	
Small Cap Equity	**$1,071,276,704**	**3.16%**	**0.75%**	**40**	**9.32%**	**47**	**7.44%**	**83**	**2.86%**	**55**	**9.93%**	**43**
Russell 2000 Index	-	-	0.33%	47	9.64%	43	11.54%	51	1.24%	82	7.40%	87
Callan Small Cap Core	-	-	0.15%		9.12%		11.73%		3.14%		9.58%	
Dimensional Fund Advisors	357,473,121	1.06%	(0.16%)	40	7.65%	61	7.12%	68	8.39%	12	13.49%	7
Russell 2000 Value Index	-	-	(1.06%)	64	8.98%	39	8.05%	63	1.94%	89	7.29%	84
Callan Small Cap Value	-	-	(0.32%)		8.25%		9.03%		4.33%		9.51%	
Wellington Small Cap	367,259,593	1.08%	(1.02%)	80	9.44%	45	10.92%	58	4.40%	27	8.88%	63
Russell 2000 Index	-	-	0.33%	47	9.64%	43	11.54%	51	1.24%	82	7.40%	87
Callan Small Cap Core	-	-	0.15%		9.12%		11.73%		3.14%		9.58%	
Riverbridge Partners	346,543,990	1.02%	3.70%	29	10.96%	35	4.55%	95	(4.68%)	88	6.91%	87
Russell 2000 Growth Index	-	-	1.70%	52	10.26%	38	15.15%	57	0.21%	48	6.86%	87
Callan Small Cap Growth	-	-	1.80%		9.09%		15.94%		(0.25%)		9.10%	

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Global Equity	**$4,150,562,311**	**12.25%**	**(0.33%)**	**27**	**4.80%**	**37**	**16.86%**	**40**	**4.28%**	**55**	**9.47%**	**53**
Global Equity Benchmark (2)	-	-	(1.24%)	42	5.52%	26	16.37%	42	4.90%	49	9.67%	50
Acadian Global Equity	1,097,527,097	3.24%	2.10%	7	5.00%	33	23.71%	12	8.44%	11	13.76%	8
Epoch Investments	939,057,902	2.77%	0.70%	16	5.89%	18	16.15%	43	3.51%	62	8.27%	75
Harding-Loevner	1,076,910,445	3.18%	(0.85%)	35	4.43%	42	15.01%	47	0.19%	90	9.13%	58
LSV Global Value	1,032,735,115	3.05%	(3.34%)	65	3.80%	53	12.52%	58	-		-	
MSCI ACWI Index	-	-	(0.99%)	38	5.56%	25	17.49%	38	5.44%	41	10.06%	44
Callan Global Equity	-	-	(2.22%)		3.90%		14.40%		4.85%		9.66%	
International Equity	**$6,740,517,917**	**19.90%**	**(7.37%)**	**22**	**0.13%**	**19**	**6.00%**	**27**	**0.88%**	**52**	**4.86%**	**51**
International Equity Bnmk (3)	-	-	(7.61%)	42	(0.05%)	24	5.23%	40	0.50%	63	4.12%	71
International Eq Custom Bnmk (4)	-	-	(7.87%)	67	(0.36%)	44	5.07%	42	0.24%	67	3.90%	78
Pub Pln- Intl Equity	-	-	(7.70%)		(0.44%)		4.95%		1.05%		4.90%	
All Country ex US	**$4,599,567,347**	**13.58%**	**(7.25%)**	**51**	**(0.17%)**	**59**	**5.86%**	**47**	**0.68%**	**61**	**6.42%**	**32**
Arrowstreet Capital	680,929,008	2.01%	(5.25%)	24	(1.33%)	73	10.79%	19	6.98%	8	11.03%	4
Baillie Gifford	741,900,961	2.19%	(8.60%)	81	0.48%	46	3.26%	74	(7.63%)	96	1.93%	93
Marathon Asset Mgmt	848,490,603	2.51%	(7.31%)	53	0.12%	53	4.74%	60	1.55%	49	5.09%	55
MSCI ACWI xUS IMI	-	-	(7.61%)	60	(0.05%)	57	5.23%	54	0.50%	63	4.12%	76
NT MSCI World ex US	2,328,246,775	6.87%	(7.36%)	54	(0.14%)	58	5.06%	57	-		-	
MSCI World xUS	-	-	(7.43%)	55	(0.24%)	61	4.70%	60	1.91%	43	5.10%	54
Non-U.S. Equity Database	-	-	(7.19%)		0.30%		5.57%		1.50%		5.33%	

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Small Cap	**$671,441,421**	**1.98%**	**(7.88%)**	**56**	**0.67%**	**47**	**1.47%**	**66**	**(3.80%)**	**61**	**0.82%**	**85**
Principal Sm Cap Intl	344,027,412	1.02%	(8.02%)	59	(0.43%)	62	2.42%	55	(2.29%)	52	1.93%	74
Northern Trust Intl Small Cap	325,290,359	0.96%	(7.71%)	54	1.86%	36	-		-		-	
MSCI World Small Cap x US	-	-	(7.86%)	56	1.76%	36	2.76%	53	(2.77%)	55	2.87%	62
Callan Intl Small Cap	-	-	(7.47%)		0.38%		3.06%		(1.97%)		4.62%	
Emerging Markets	**$1,452,316,433**	**4.29%**	**(7.54%)**	**63**	**0.87%**	**34**	**8.64%**	**41**	**2.25%**	**17**	**3.80%**	**33**
Lazard Emerging Markets	740,774,021	2.19%	(8.92%)	86	(0.00%)	45	9.10%	36	5.24%	4	4.59%	21
Fisher Investments	711,542,412	2.10%	(6.05%)	31	1.80%	19	8.17%	43	(0.91%)	43	2.76%	46
MSCI Emerging Mkts Idx	-	-	(8.01%)	72	0.02%	45	7.50%	50	(1.92%)	51	1.70%	70
Callan Emerging Broad	-	-	(6.91%)		(0.42%)		7.47%		(1.76%)		2.50%	
EAFE Composite (Terminated)	**$17,192,715**	**0.05%**	**-**		**-**		**-**		**-**		**-**	
Total Equity	**$20,029,879,017**	**59.14%**	**(1.76%)**	**46**	**4.61%**	**39**	**14.82%**	**49**	**4.45%**	**53**	**9.62%**	**52**
MSCI ACWI IMI Index	-	-	(1.24%)	42	5.52%	26	16.37%	42	4.90%	49	9.67%	50
Total Equity Custom Bnmk (5)	-	-	(1.86%)	46	5.06%	33	15.46%	45	4.73%	51	9.52%	53
Callan Global Equity	-	-	(2.22%)		3.90%		14.40%		4.85%		9.66%	

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Domestic Fixed-Income	**$4,142,920,074**	**12.23%**	**(2.21%)**	**39**	**2.04%**	**79**	**2.31%**	**61**	**(1.78%)**	**68**	**0.58%**	**62**
Blmbg Aggregate Index	-	-	(3.06%)	85	1.98%	80	1.25%	87	(2.41%)	89	(0.33%)	96
Pub Pln- Dom Fixed	-	-	(2.40%)		2.47%		2.69%		(1.19%)		0.92%	
Short Duration	**$455,171,931**	**1.34%**	**0.95%**	**7**	**2.97%**	**77**	**5.15%**	**40**	**-**		**-**	
SIT Short Duration FI	455,171,931	1.34%	0.95%	7	2.97%	77	5.15%	40	-		-	
Blmbg Gov/Cred 1-3 Yr	-	-	(0.02%)	77	2.94%	81	4.36%	91	1.69%	83	1.58%	95
Callan Short Fixed Inc	-	-	0.15%		3.15%		5.04%		2.26%		2.12%	
Core Fixed Income	**$1,355,790,617**	**4.00%**	**(2.95%)**	**56**	**2.17%**	**51**	**2.15%**	**38**	**(1.98%)**	**57**	**0.07%**	**81**
Blmbg Aggregate Index	-	-	(3.06%)	78	1.98%	90	1.25%	93	(2.41%)	91	(0.33%)	95
Callan Core Bond FI	-	-	(2.94%)		2.18%		1.93%		(1.95%)		0.30%	
PIMCO	680,187,795	2.01%	(2.90%)	41	2.22%	38	2.31%	25	(1.93%)	48	0.20%	61
Manulife Asset Management	675,602,966	1.99%	(3.00%)	64	2.12%	63	1.99%	47	(2.16%)	78	0.09%	81
Northern Trust BB Agg	-145	(0.00%)	-		-		-		-		-	
Blmbg Aggregate Index	-	-	(3.06%)	78	1.98%	90	1.25%	93	(2.41%)	91	(0.33%)	95
Callan Core Bond FI	-	-	(2.94%)		2.18%		1.93%		(1.95%)		0.30%	
Core Plus	**$2,331,957,527**	**6.88%**	**(2.95%)**	**72**	**1.90%**	**92**	**2.10%**	**81**	**(1.69%)**	**54**	**0.96%**	**35**
Loomis Sayles	1,145,570,145	3.38%	(3.27%)	89	1.45%	100	1.15%	96	(1.79%)	66	0.92%	38
Prudential Core Plus	1,186,387,381	3.50%	(2.64%)	38	2.33%	62	3.03%	31	(1.61%)	51	0.98%	34
Blmbg Aggregate Index	-	-	(3.06%)	80	1.98%	91	1.25%	95	(2.41%)	88	(0.33%)	98
Callan Core Plus FI	-	-	(2.76%)		2.44%		2.74%		(1.59%)		0.78%	
Emerging Markets Debt	**$741,727,697**	**2.19%**	**(1.27%)**	**36**	**4.87%**	**27**	**7.39%**	**46**	**0.20%**	**71**	**1.10%**	**56**
Wellington EMD	741,727,697	2.19%	(1.27%)	36	4.87%	27	7.39%	46	0.20%	71	1.10%	56
EMBI Global Dvsfd Index	-	-	(1.94%)	55	4.10%	48	6.54%	54	(0.91%)	89	0.12%	74
Emerging Debt Database	-	-	(1.62%)		3.99%		7.11%		0.88%		1.27%	
Global Fixed Income	**$1,568,209,603**	**4.63%**	**(1.07%)**	**35**	**2.72%**	**75**	**3.11%**	**59**	**(0.52%)**	**61**	**0.75%**	**70**
PIMCO Global	783,184,387	2.31%	(0.78%)	27	2.83%	72	3.48%	44	(0.26%)	48	0.99%	50
AllianceBernstein Global	785,025,217	2.32%	(1.36%)	74	2.60%	84	2.74%	78	(0.79%)	65	0.51%	85
Blmbg Global Agg (Hedged)	-	-	(0.95%)	30	3.26%	49	3.40%	46	(0.55%)	61	0.48%	85
Callan Global FI (Hedged)	-	-	(1.10%)		3.24%		3.31%		(0.31%)		0.98%	
Total Fixed Income	**$6,452,857,375**	**19.05%**	**(1.85%)**	**25**	**2.49%**	**48**	**3.04%**	**37**	**(1.24%)**	**53**	**0.71%**	**55**
Blmbg Aggregate Index	-	-	(3.06%)	85	1.98%	80	1.25%	87	(2.41%)	89	(0.33%)	96
Total Fixed Inc Custom Bnmk (6)	-	-	(2.42%)	51	2.51%	47	2.31%	61	(1.78%)	68	(0.04%)	86
Pub Pln- Dom Fixed	-	-	(2.40%)		2.47%		2.69%		(1.19%)		0.92%	

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 December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
REIT Composite	**$339,932,360**	**1.00%**	**(6.95%)**	**6**	**8.64%**	**3**	**8.34%**	**3**	**(2.14%)**	**8**	**4.27%**	**7**
REIT Comp Custom Bnmk (7)	-	-	(7.70%)	11	7.02%	12	5.04%	16	(4.04%)	24	1.69%	40
Callan Global REITs	-	-	(9.27%)		4.99%		2.70%		(4.75%)		1.41%	
Centersquare	232,419,744	0.69%	(5.26%)	16	11.21%	10	11.62%	15	(0.57%)	12	6.13%	19
FTSE NAREIT Equity Index	-	-	(6.21%)	39	8.88%	36	8.73%	39	(2.20%)	30	4.27%	66
Callan Real Estate REIT	-	-	(6.57%)		8.35%		8.01%		(2.52%)		5.01%	
Cohen & Steers	107,512,616	0.32%	(10.40%)	85	3.47%	83	2.02%	57	(4.76%)	51	1.73%	40
EPRA/NAREIT Dev REIT Idx	-	-	(9.45%)	55	5.34%	38	2.00%	57	(5.11%)	65	(0.04%)	82
Callan Global REITs	-	-	(9.27%)		4.99%		2.70%		(4.75%)		1.41%	
Core Real Estate	**$1,606,716,696**	**4.74%**	**0.91%**	**26**	**1.20%**	**21**	**(2.05%)**	**54**	**(3.75%)**	**69**	**1.31%**	**77**
Principal Capital (Net)	831,892,118	2.46%	1.10%	14	0.96%	35	(1.82%)	51	(3.02%)	59	2.47%	51
UBS Trumbull Property (Net)	359,404,040	1.06%	(0.22%)	95	0.68%	48	(2.13%)	55	(4.30%)	73	(0.65%)	91
JPMCB Strategic Property (Net)	390,420,538	1.15%	1.56%	10	2.19%	7	(2.40%)	64	(4.70%)	80	0.83%	81
NFI-ODCE Equal Weight Net	-	-	0.85%	33	0.78%	41	(2.43%)	64	(3.11%)	67	2.24%	56
NFI-ODCE Value Weight Net	-	-	0.96%	22	0.99%	34	(2.27%)	62	(3.14%)	67	1.99%	59
Callan OE Core Cmngld RE	-	-	0.72%		0.48%		(1.72%)		(1.95%)		2.55%	
Core Plus Real Estate	**$218,076,916**	**0.64%**	**(1.06%)**	**96**	**(0.50%)**	**81**	**(5.58%)**	**89**	**(7.72%)**	**95**	**(1.05%)**	**94**
UBS Trumbull Property G&I (Net)	218,076,916	0.64%	(1.06%)	96	(0.50%)	81	(5.58%)	89	(7.72%)	95	(1.05%)	94
Callan OE Core Cmngld RE	-	-	0.72%		0.48%		(1.72%)		(1.95%)		2.55%	

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 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%

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Non-Core Real Estate	**$753,546,673**	**2.22%**	**0.78%**	**44**	**2.26%**	**30**	**(1.91%)**	**48**	**(0.09%)**	**44**	**6.29%**	**38**
AEW Partners VII	4,381,750	0.01%	25.80%	1	28.42%	1	36.95%	1	6.01%	12	0.26%	76
AEW Partners VIII	12,513,529	0.04%	7.91%	1	7.53%	2	18.20%	1	12.92%	1	18.70%	1
AEW Partners IX	69,237,784	0.20%	6.26%	1	7.41%	2	11.60%	1	10.12%	1	-	
Heitman VP IV	31,053,184	0.09%	1.14%	33	1.66%	38	1.63%	21	5.71%	15	11.17%	17
Heitman VP V	63,877,391	0.19%	(0.48%)	78	0.35%	53	0.42%	32	6.48%	6	-	
AG Core Plus IV	16,481,266	0.05%	(0.92%)	84	(3.16%)	88	(10.22%)	84	(14.78%)	91	(5.09%)	88
AG Realty Fund X	49,713,639	0.15%	(1.39%)	91	(4.44%)	90	(7.93%)	81	0.73%	41	11.72%	15
AG Realty Value Fd XI	26,735,901	0.08%	1.47%	22	3.50%	8	0.29%	33	-		-	
Invesco US Income Fund	166,117,999	0.49%	2.09%	7	2.83%	14	0.76%	29	-		-	
Invesco VA Fund IV	1,878,871	0.01%	1.15%	33	1.09%	50	(15.84%)	94	(37.76%)	98	(22.62%)	96
Invesco VA Fund V	56,808,187	0.17%	(0.44%)	77	(1.67%)	86	(25.55%)	98	(10.54%)	88	0.82%	73
Invesco Real Estate US Fund VI	38,148,053	0.11%	(3.39%)	98	(5.54%)	93	(15.78%)	94	-		-	
TA Associates Realty Fund XII	84,351,264	0.25%	(1.69%)	93	(1.78%)	86	(2.27%)	51	6.15%	11	-	
Westbrook RE Fund X	11,982,516	0.04%	(8.93%)	100	(13.33%)	99	(33.48%)	99	(16.04%)	92	(6.87%)	89
Westbrook RE Fund XI	64,487,077	0.19%	0.75%	45	3.11%	9	5.10%	3	12.02%	1	-	
NCREIF Total Index	-	-	0.90%	36	1.69%	38	0.43%	32	(0.82%)	50	3.13%	51
Callan Real Est Val Add	-	-	0.51%		1.08%		(2.13%)		(0.79%)		3.26%	
Timber Composite	**$33,722,345**	**0.10%**	**(12.00%)**		**(7.82%)**		**(19.59%)**		**(4.76%)**		**1.95%**	
Hancock Timber Portfolio	33,722,345	0.10%	(12.00%)		(7.82%)		(19.59%)		(4.76%)		1.95%	
NCREIF Timberland Index	-	-	1.44%		3.00%		6.97%		9.75%		7.78%	
Total Real Estate	**$2,951,994,990**	**8.72%**	**(0.31%)**	**86**	**2.24%**	**21**	**(1.00%)**	**52**	**(3.28%)**	**73**	**2.67%**	**50**
Real Estate Benchmark (8)	-	-	0.90%	32	1.69%	30	0.43%	37	(0.82%)	50	3.13%	42
Callan Tot Real Est DB	-	-	0.61%		0.91%		(0.83%)		(0.77%)		2.67%	

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 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%

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

Periodic Rates of Return – Gross of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter		Fiscal YTD		Last Year		Last 3 Years		Last 5 Years	
Private Equity	**$3,851,561,839**	**11.37%**	**1.71%**	**53**	**3.09%**	**56**	**5.78%**	**74**	**2.56%**	**75**	**14.92%**	**9**
Pathway PEF XXIII Ser 2008	213,269,418	0.63%	1.13%	58	1.52%	62	2.15%	93	(4.51%)	97	10.75%	30
Pathway PEF XXIII Ser 2013	638,011,539	1.88%	0.88%	60	0.45%	70	1.84%	95	(1.76%)	95	13.36%	11
Pathway PEF XXIII Ser 2016	1,308,142,104	3.86%	1.61%	56	3.63%	51	7.52%	54	3.99%	68	18.33%	5
Pathway PEF XXIII Ser 2021	403,814,630	1.19%	2.98%	30	5.37%	28	11.55%	31	7.94%	35	-	
Grosvenor Diversified Partners	124,479,367	0.37%	(1.97%)	84	(4.69%)	94	(11.00%)	99	(8.48%)	98	1.78%	86
Grosvenor Div Prtrs Ser 2014	605,105,587	1.79%	2.86%	33	4.39%	44	6.02%	67	6.04%	48	16.16%	8
Grosvenor Div Prtrs Ser 2018	546,375,204	1.61%	1.58%	56	4.35%	45	9.51%	43	10.69%	23	14.28%	10
Grosvenor Div Prtrs Ser 2024	12,363,989	0.04%	14.12%	5	-		-		-		-	
Private Equity Benchmark (9)	-	-	2.68%	37	3.71%	51	7.65%	53	(1.46%)	93	9.16%	32
Callan Alterntive Inv DB	-	-	1.80%		4.13%		8.14%		5.85%		7.74%	
Private Credit	**$96,050,619**	**0.28%**	**2.05%**	**1**	**3.52%**	**96**	**-**		**-**		**-**	
Blue Owl Lending Ser 2023	60,103,257	0.18%	2.29%	1	3.16%	98	-		-		-	
Grosvenor Priv Credit Ser 2023	35,947,362	0.11%	1.72%	2	3.47%	96	-		-		-	
Private Credit Benchmark (10)	-	-	3.80%	1	5.69%	26	13.61%	1	-		-	
Callan Multi-Sector Cr	-	-	0.90%		4.73%		9.22%		4.01%		4.77%	
Cash	**$488,773,098**	**1.44%**	**0.44%**	**98**	**1.83%**	**97**	**4.50%**	**94**	**3.95%**	**50**	**2.46%**	**76**
1mo T-Bill	-	-	1.20%	43	2.58%	81	5.38%	56	3.98%	49	2.47%	74
Callan Cash Database	-	-	1.16%		2.72%		5.40%		3.95%		2.60%	
Total Fund	**$33,871,116,937**	**100.00%**	**(1.25%)**	**63**	**3.75%**	**47**	**9.75%**	**37**	**2.22%**	**77**	**7.71%**	**51**
Policy Benchmark*	-	-	(1.21%)	61	4.07%	25	10.38%	21	2.51%	72	7.11%	71
Callan Public Fd V Lg DB	-	-	(0.77%)		3.73%		9.35%		3.18%		7.73%	

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 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%

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

Callan

Appendix: Net of Fees Performance

Asset Class Performance – Net of Fees

As of December 31, 2024

	Market Value $(000)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years
Domestic Equity	**$9,138,799**	**26.98%**	**2.00%**	**7.94%**	**20.85%**	**7.13%**
Domestic Equity Benchmark	-	-	2.63%	9.03%	23.81%	8.01%
Global Equity	**$4,150,562**	**12.25%**	**(0.42%)**	**4.60%**	**16.43%**	**3.90%**
Global Equity Benchmark	-	-	(1.24%)	5.52%	16.37%	4.90%
International Equity	**$6,740,518**	**19.90%**	**(7.44%)**	**(0.01%)**	**5.69%**	**0.56%**
International Equity Benchmark	-	-	(7.61%)	(0.05%)	5.23%	0.50%
Total Fixed Income	**$6,452,857**	**19.05%**	**(1.90%)**	**2.39%**	**2.84%**	**(1.44%)**
Total Fixed Income Benchmark	-	-	(3.06%)	1.98%	1.25%	(2.41%)
Real Estate	**$2,951,995**	**8.72%**	**(0.55%)**	**1.83%**	**(1.79%)**	**(4.04%)**
Real Estate Benchmark	-	-	0.90%	1.69%	0.43%	(0.82%)
Private Equity	**$3,851,562**	**11.37%**	**1.62%**	**2.90%**	**5.39%**	**2.18%**
Private Equity Benchmark	-	-	2.68%	3.71%	7.65%	(1.46%)
Private Credit	**$96,051**	**0.28%**	**1.95%**	**3.33%**	**-**	**-**
Private Credit Benchmark	-	-	3.80%	5.69%	13.61%	-
Cash Composite	**$488,773**	**1.44%**	**0.44%**	**1.83%**	**4.50%**	**3.95%**
Cash Benchmark	-	-	1.20%	2.58%	5.38%	3.98%
Total Fund	**$33,871,117**	**100.00%**	**(1.33%)**	**3.59%**	**9.42%**	**1.89%**
Total Fund Benchmark	-	-	(1.21%)	4.07%	10.38%	2.51%

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 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%

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

Asset Class Performance – Net of Fees (Continued)

As of December 31, 2024

	Last 5 Years	Last 10 Years	Last 15 Years
Domestic Equity	**13.29%**	**11.75%**	**13.12%**
Domestic Equity Benchmark	13.86%	12.55%	13.56%
Global Equity	**9.08%**	**9.03%**	**9.57%**
Global Equity Benchmark	9.67%	8.97%	-
International Equity	**4.55%**	**5.37%**	**5.24%**
International Equity Benchmark	4.12%	4.91%	4.77%
Total Fixed Income	**0.52%**	**2.27%**	**3.46%**
Total Fixed Income Benchmark	(0.33%)	1.35%	2.59%
Real Estate	**1.84%**	**4.89%**	**7.44%**
Real Estate Benchmark	3.13%	5.66%	7.92%
Private Equity	**14.45%**	**14.50%**	**13.06%**
Private Equity Benchmark	9.16%	12.03%	14.71%
Cash Composite	**2.46%**	**1.77%**	**1.22%**
Cash Benchmark	2.47%	1.74%	-
Total Fund	**7.37%**	**7.67%**	**8.55%**
Total Fund Benchmark	7.11%	7.60%	8.31%

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

Periodic Rates of Return – Net of Fees

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Domestic Equity	**$9,138,798,789**	**26.98%**	**2.00%**	**7.94%**	**20.85%**	**7.13%**	**13.29%**
Russell 3000 Index	-	-	2.63%	9.03%	23.81%	8.01%	13.86%
Large Cap Equity	**$6,940,082,800**	**20.49%**	**2.47%**	**8.00%**	**24.87%**	**8.96%**	**14.37%**
Russell 1000 Index	-	-	2.75%	9.00%	24.51%	8.41%	14.28%
Managed Large Cap Equity	**$904,509,819**	**2.67%**	**2.97%**	**5.29%**	**24.17%**	**9.02%**	**13.81%**
Eagle Capital	904,509,819	2.67%	2.97%	5.29%	24.17%	9.02%	13.81%
S&P 500 Index	-	-	2.41%	8.44%	25.02%	8.94%	14.53%
Northern Trust S&P 500	**$6,035,572,981**	**17.82%**	**2.41%**	**8.42%**	**24.95%**	**8.94%**	**14.51%**
S&P 500 Index	-	-	2.41%	8.44%	25.02%	8.94%	14.53%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Mid Cap Equity	**$1,127,439,285**	**3.33%**	**0.50%**	**6.63%**	**11.33%**	**1.16%**	**9.58%**
Russell MidCap Index	-	-	0.62%	9.89%	15.34%	3.79%	9.92%
Artisan Partners	544,441,327	1.61%	5.34%	8.17%	12.89%	(3.53%)	9.55%
Russell MidCap Growth Idx	-	-	8.14%	15.22%	22.10%	4.04%	11.47%
Victory Mid Cap Value	582,982,526	1.72%	(3.63%)	5.23%	10.22%	-	-
Russell MidCap Value Idx	-	-	(1.75%)	8.16%	13.07%	3.88%	8.59%
Small Cap Equity	**$1,071,276,704**	**3.16%**	**0.62%**	**9.04%**	**6.86%**	**2.30%**	**9.31%**
Russell 2000 Index	-	-	0.33%	9.64%	11.54%	1.24%	7.40%
Dimensional Fund Advisors	357,473,121	1.06%	(0.22%)	7.51%	6.83%	8.07%	13.12%
Russell 2000 Value Index	-	-	(1.06%)	8.98%	8.05%	1.94%	7.29%
Wellington Small Cap	367,259,593	1.08%	(1.17%)	9.11%	10.23%	3.74%	8.21%
Russell 2000 Index	-	-	0.33%	9.64%	11.54%	1.24%	7.40%
Riverbridge Partners	346,543,990	1.02%	3.52%	10.58%	3.80%	(5.38%)	6.11%
Russell 2000 Growth Index	-	-	1.70%	10.26%	15.15%	0.21%	6.86%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Global Equity	**$4,150,562,311**	**12.25%**	**(0.42%)**	**4.60%**	**16.43%**	**3.90%**	**9.08%**
Global Equity Benchmark (2)	-	-	(1.24%)	5.52%	16.37%	4.90%	9.67%
Acadian Global Equity	1,097,527,097	3.24%	2.01%	4.81%	23.27%	8.04%	13.35%
Epoch Investments	939,057,902	2.77%	0.60%	5.68%	15.68%	3.07%	7.79%
Harding-Loevner	1,076,910,445	3.18%	(0.94%)	4.23%	14.58%	(0.20%)	8.71%
LSV Global Value	1,032,735,115	3.05%	(3.43%)	3.62%	12.12%	-	-
MSCI ACWI Index	-	-	(0.99%)	5.56%	17.49%	5.44%	10.06%
International Equity	**$6,740,517,917**	**19.90%**	**(7.44%)**	**(0.01%)**	**5.69%**	**0.56%**	**4.55%**
International Equity Bnmk (3)	-	-	(7.61%)	(0.05%)	5.23%	0.50%	4.12%
International Eq Custom Bnmk (4)	-	-	(7.87%)	(0.36%)	5.07%	0.24%	3.90%
All Country ex US	**$4,599,567,347**	**13.58%**	**(7.31%)**	**(0.29%)**	**5.60%**	**0.41%**	**6.09%**
Arrowstreet Capital	680,929,008	2.01%	(5.36%)	(1.57%)	10.29%	6.50%	10.54%
Baillie Gifford	741,900,961	2.19%	(8.69%)	0.29%	2.88%	(7.98%)	1.56%
Marathon Asset Mgmt	848,490,603	2.51%	(7.46%)	(0.18%)	4.13%	0.95%	4.48%
MSCI ACWI xUS IMI	-	-	(7.61%)	(0.05%)	5.23%	0.50%	4.12%
NT MSCI World ex US	2,328,246,775	6.87%	(7.36%)	(0.14%)	5.06%	-	-
MSCI World xUS	-	-	(7.43%)	(0.24%)	4.70%	1.91%	5.10%

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 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%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Small Cap	**$671,441,421**	**1.98%**	**(7.92%)**	**0.55%**	**1.09%**	**(4.25%)**	**0.33%**
Principal Sm Cap Intl	344,027,412	1.02%	(8.11%)	(0.61%)	2.05%	(2.65%)	1.50%
Northern Trust Intl Small Cap	325,290,359	0.96%	(7.71%)	1.86%	-	-	-
MSCI World Small Cap x US	-	-	(7.86%)	1.76%	2.76%	(2.77%)	2.87%
Emerging Markets	**$1,452,316,433**	**4.29%**	**(7.65%)**	**0.65%**	**8.16%**	**1.79%**	**3.35%**
Lazard Emerging Markets	740,774,021	2.19%	(9.00%)	(0.16%)	8.76%	4.91%	4.25%
Fisher Investments	711,542,412	2.10%	(6.19%)	1.50%	7.54%	(1.48%)	2.17%
MSCI Emerging Mkts Idx	-	-	(8.01%)	0.02%	7.50%	(1.92%)	1.70%
EAFE Composite (Terminated)	**$17,192,715**	**0.05%**	**-**	**-**	**-**	**-**	**-**
Total Equity	**$20,029,879,017**	**59.14%**	**(1.82%)**	**4.48%**	**14.52%**	**4.18%**	**9.34%**
MSCI ACWI IMI Index	-	-	(1.24%)	5.52%	16.37%	4.90%	9.67%
Total Equity Custom Bnmk (5)	-	-	(1.86%)	5.06%	15.46%	4.73%	9.52%

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.
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 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%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Domestic Fixed-Income	**$4,142,920,074**	**12.23%**	**(2.25%)**	**1.96%**	**2.15%**	**(1.93%)**	**0.44%**
Blmbg Aggregate Index	-	-	(3.06%)	1.98%	1.25%	(2.41%)	(0.33%)
Short Duration	**$455,171,931**	**1.34%**	**0.90%**	**2.89%**	**5.02%**	**-**	**-**
SIT Short Duration FI	455,171,931	1.34%	0.90%	2.89%	5.02%	-	-
Blmbg Gov/Cred 1-3 Yr	-	-	(0.02%)	2.94%	4.36%	1.69%	1.58%
Core Fixed Income	**$1,355,790,617**	**4.00%**	**(2.99%)**	**2.10%**	**2.00%**	**(2.12%)**	**(0.05%)**
Blmbg Aggregate Index	-	-	(3.06%)	1.98%	1.25%	(2.41%)	(0.33%)
PIMCO	680,187,795	2.01%	(2.94%)	2.15%	2.16%	(2.07%)	0.05%
Manulife Asset Management	675,602,966	1.99%	(3.04%)	2.05%	1.84%	(2.31%)	(0.06%)
Blmbg Aggregate Index	-	-	(3.06%)	1.98%	1.25%	(2.41%)	(0.33%)
Core Plus	**$2,331,957,527**	**6.88%**	**(2.99%)**	**1.82%**	**1.94%**	**(1.85%)**	**0.81%**
Loomis Sayles	1,145,570,145	3.38%	(3.32%)	1.36%	0.98%	(1.97%)	0.75%
Prudential Core Plus	1,186,387,381	3.50%	(2.67%)	2.27%	2.89%	(1.74%)	0.85%
Blmbg Aggregate Index	-	-	(3.06%)	1.98%	1.25%	(2.41%)	(0.33%)
Emerging Markets Debt	**$741,727,697**	**2.19%**	**(1.39%)**	**4.64%**	**6.90%**	**(0.26%)**	**0.65%**
Wellington EMD	741,727,697	2.19%	(1.39%)	4.64%	6.90%	(0.26%)	0.65%
EMBI Global Dvsfd Index	-	-	(1.94%)	4.10%	6.54%	(0.91%)	0.12%
Global Fixed Income	**$1,568,209,603**	**4.63%**	**(1.13%)**	**2.59%**	**2.86%**	**(0.76%)**	**0.52%**
PIMCO Global	783,184,387	2.31%	(0.84%)	2.71%	3.23%	(0.51%)	0.74%
AllianceBernstein Global	785,025,217	2.32%	(1.42%)	2.48%	2.50%	(1.03%)	0.28%
Blmbg Global Agg (Hedged)	-	-	(0.95%)	3.26%	3.40%	(0.55%)	0.48%
Total Fixed Income	**$6,452,857,375**	**19.05%**	**(1.90%)**	**2.39%**	**2.84%**	**(1.44%)**	**0.52%**
Blmbg Aggregate Index	-	-	(3.06%)	1.98%	1.25%	(2.41%)	(0.33%)
Total Fixed Inc Custom Bnmk (6)	-	-	(2.42%)	2.51%	2.31%	(1.78%)	(0.04%)

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 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%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
REIT Composite	**$339,932,360**	**1.00%**	**(7.04%)**	**8.42%**	**7.91%**	**(2.61%)**	**3.79%**
REIT Comp Custom Bnmk (7)	-	-	(7.70%)	7.02%	5.04%	(4.04%)	1.69%
Centersquare	232,419,744	0.69%	(5.35%)	11.00%	11.20%	(1.00%)	5.70%
FTSE NAREIT Equity Index	-	-	(6.21%)	8.88%	8.73%	(2.20%)	4.27%
Cohen & Steers	107,512,616	0.32%	(10.50%)	3.24%	1.56%	(5.27%)	1.18%
EPRA/NAREIT Dev REIT Idx	-	-	(9.45%)	5.34%	2.00%	(5.11%)	(0.04%)
Core Real Estate	**$1,606,716,696**	**4.74%**	**0.91%**	**1.20%**	**(2.05%)**	**(3.75%)**	**1.31%**
Principal Capital (Net)	831,892,118	2.46%	1.10%	0.96%	(1.82%)	(3.02%)	2.47%
UBS Trumbull Property (Net)	359,404,040	1.06%	(0.22%)	0.68%	(2.13%)	(4.30%)	(0.65%)
JPMCB Strategic Property (Net)	390,420,538	1.15%	1.56%	2.19%	(2.40%)	(4.70%)	0.83%
NFI-ODCE Equal Weight Net	-	-	0.85%	0.78%	(2.43%)	(3.11%)	2.24%
NFI-ODCE Value Weight Net	-	-	0.96%	0.99%	(2.27%)	(3.14%)	1.99%
Core Plus Real Estate	**$218,076,916**	**0.64%**	**(1.06%)**	**(0.50%)**	**(5.58%)**	**(7.72%)**	**(1.05%)**
UBS Trumbull Property G&I (Net)	218,076,916	0.64%	(1.06%)	(0.50%)	(5.58%)	(7.72%)	(1.05%)

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 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%

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Non-Core Real Estate	**$753,546,673**	**2.22%**	**0.34%**	**1.64%**	**(3.09%)**	**(1.26%)**	**4.81%**
AEW Partners VI	758,873	0.00%	-	-	-	-	-
AEW Partners VII	4,381,750	0.01%	25.80%	28.39%	36.67%	7.05%	0.46%
AEW Partners VIII	12,513,529	0.04%	7.71%	7.16%	17.40%	12.21%	17.90%
AEW Partners IX	69,237,784	0.20%	6.08%	7.04%	10.83%	9.05%	-
Heitman VP IV	31,053,184	0.09%	0.97%	1.32%	0.98%	5.07%	10.38%
Heitman VP V	63,877,391	0.19%	(0.70%)	(0.07%)	(0.63%)	5.58%	-
AG Core Plus IV	16,481,266	0.05%	(1.42%)	(4.14%)	(12.02%)	(16.13%)	(6.32%)
AG Realty Fund X	49,713,639	0.15%	(3.56%)	(5.07%)	(9.19%)	(0.42%)	9.68%
AG Realty Value Fd XI	26,735,901	0.08%	0.43%	1.18%	(4.99%)	-	-
Invesco US Income Fund	166,117,999	0.49%	1.87%	2.40%	(0.09%)	-	-
Invesco VA Fund IV	1,878,871	0.01%	1.15%	1.09%	(15.84%)	(38.19%)	(23.30%)
Invesco VA Fund V	56,808,187	0.17%	(0.78%)	(2.33%)	(26.50%)	(11.57%)	(0.40%)
Invesco Real Estate US Fund VI	38,148,053	0.11%	(3.58%)	(5.90%)	(16.59%)	-	-
TA Associates Realty Fund XII	84,351,264	0.25%	(2.00%)	(2.48%)	(3.36%)	4.80%	-
Westbrook RE Fund X	11,982,516	0.04%	(9.33%)	(14.05%)	(34.50%)	(17.16%)	(8.09%)
Westbrook RE Fund XI	64,487,077	0.19%	0.42%	2.39%	3.54%	9.41%	-
NCREIF Total Index	-	-	0.90%	1.69%	0.43%	(0.82%)	3.13%
Timber Composite	**$33,722,345**	**0.10%**	**(12.31%)**	**(8.48%)**	**(20.74%)**	**(5.92%)**	**0.71%**
Hancock Timber Portfolio	33,722,345	0.10%	(12.31%)	(8.48%)	(20.74%)	(5.92%)	0.71%
NCREIF Timberland Index	-	-	1.44%	3.00%	6.97%	9.75%	7.78%
Total Real Estate	**$2,951,994,990**	**8.72%**	**(0.55%)**	**1.83%**	**(1.79%)**	**(4.04%)**	**1.84%**
Real Estate Benchmark (8)	-	-	0.90%	1.69%	0.43%	(0.82%)	3.13%

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

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

Periodic Rates of Return – Net of Fees (Continued)

As of December 31, 2024

	Market Value $(Dollars)	Ending Weight	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
Private Equity	**$3,851,561,839**	**11.37%**	**1.62%**	**2.90%**	**5.39%**	**2.18%**	**14.45%**
Pathway PEF XXIII Ser 2008	213,269,418	0.63%	1.02%	1.31%	1.74%	(4.94%)	10.23%
Pathway PEF XXIII Ser 2013	638,011,539	1.88%	0.79%	0.29%	1.51%	(2.07%)	12.97%
Pathway PEF XXIII Ser 2016	1,308,142,104	3.86%	1.53%	3.48%	7.21%	3.69%	17.89%
Pathway PEF XXIII Ser 2021	403,814,630	1.19%	2.81%	5.02%	10.81%	7.12%	-
Grosvenor Diversified Partners	124,479,367	0.37%	(2.17%)	(5.07%)	(11.64%)	(9.05%)	1.21%
Grosvenor Div Prtrs Ser 2014	605,105,587	1.79%	2.79%	4.23%	5.71%	5.73%	15.77%
Grosvenor Div Prtrs Ser 2018	546,375,204	1.61%	1.49%	4.15%	9.06%	10.11%	13.19%
Grosvenor Div Prtrs Ser 2024	12,363,989	0.04%	13.28%	-	-	-	-
Private Equity Benchmark (9)	-	-	2.68%	3.71%	7.65%	(1.46%)	9.16%
Private Credit	**$96,050,619**	**0.28%**	**1.95%**	**3.33%**	**-**	**-**	**-**
Blue Owl Lending Ser 2023	60,103,257	0.18%	2.23%	3.07%	-	-	-
Grosvenor Priv Credit Ser 2023	35,947,362	0.11%	1.55%	3.11%	-	-	-
Private Credit Benchmark (10)	-	-	3.80%	5.69%	13.61%	-	-
Cash	**$488,773,098**	**1.44%**	**0.44%**	**1.83%**	**4.50%**	**3.95%**	**2.46%**
1mo T-Bill	-	-	1.20%	2.58%	5.38%	3.98%	2.47%
Total Fund	**$33,871,116,937**	**100.00%**	**(1.33%)**	**3.59%**	**9.42%**	**1.89%**	**7.37%**
Policy Benchmark*	-	-	(1.21%)	4.07%	10.38%	2.51%	7.11%

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 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%

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Appendix: Benchmark Definitions

Benchmark Definitions

Total Fund Benchmark (Target): Blend of asset class benchmarks at policy weights. The 4Q 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.

Asset Class	Benchmark	4Q 2024 Target	Long-Term Target
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	*See definition below*	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.

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Appendix: Callan Updates

Callan Institute Events

Upcoming conferences, workshops, and webinars

2025 National Conference

Registration is now open 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, Ethan Mollick, Admiral James Stavridis, Barry Sternlicht, and Evy Poumpouras to the stage! We will be updating our website as we add additional information regarding this event!

Learn more about this event at:
https://www.callan.com/events/2025nationalconference/

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

March 20, 2025

Research Café: Sector-Specific Strategies

March 28, 2025

STAR Webinar

April 25, 2025

Market Intelligence Report and Webinar

Introducing Callan On-Demand Education (CODE)

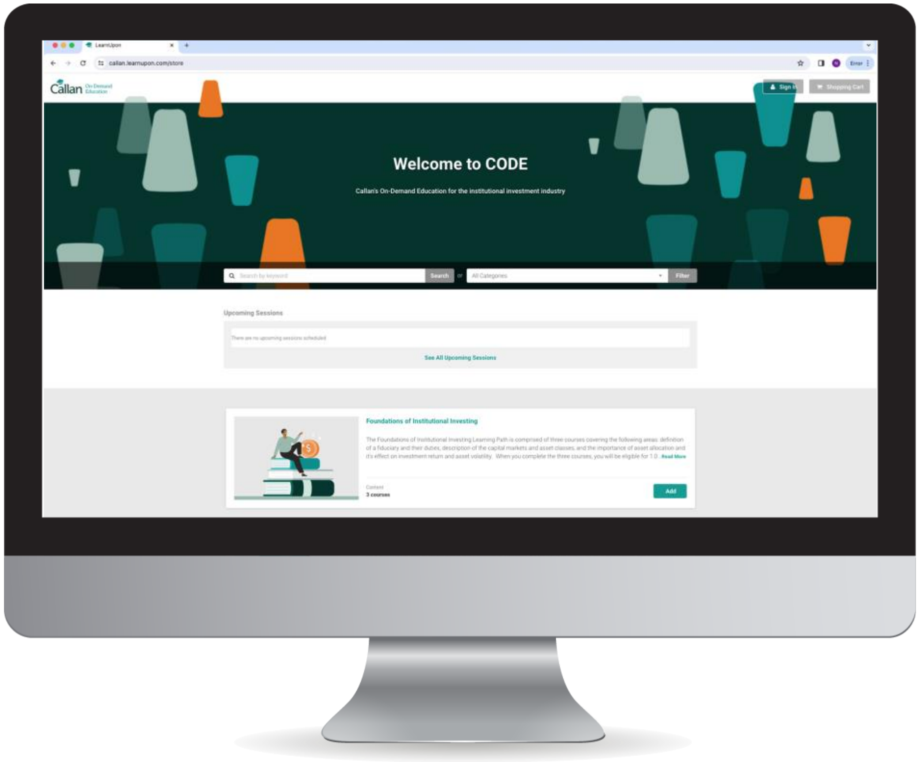
Callan On-Demand Education

- ▶ Variety of educational courses
- ▶ Interactive and engaging
- ▶ Self-guided modules
- ▶ Eligible for continuing education credits
- ▶ Learning at your own pace

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.

CODE is for you, your colleagues, your new hires, and your interns. It's for anyone interested in learning about institutional investing.

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 Dec. 31, 2024

Total Associates: ~200

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

Total 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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Callan

December 31, 2024

Public Employees Retirement System of Mississippi Defined Benefit Plan Board Report

Investment Measurement Service Quarterly Review

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Callan Institute

Fourth Quarter 2024

Capital Markets Review

The Recession Never Came, so Now What?

ECONOMY

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Economists were convinced that a recession would hit the U.S. economy, but it never came. Instead, growth held up, and consumers became more confident. Now what? With mass deportations and tariffs potentially leading to inflation, the fate of the economy is uncertain.

Gains for 2024 but Concerns Over 2025

INSTITUTIONAL INVESTORS

4 PAGE

Institutional investors saw gains over 2024, but struggled against a 60% stocks/40% bonds benchmark. The new administration was the focus of many discussions, and inflation, interest rates, and the Fed continued to dominate asset-allocation decisions.

U.S. Stocks Hit High After Volatility Spike

EQUITY

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U.S. stocks ended up roughly 2% after a volatile quarter. Sector performance was mixed, while large cap stocks outperformed small cap, again. Tariffs threatened by the Trump administration weighed on global equity markets, with Europe one of the worst performers.

Inflation Worries Drag Most Indices Lower

FIXED INCOME

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The Bloomberg US Aggregate Bond Index fell 3.1% due to the rise in interest rates, and credit spreads tightened. The yield curve steepened, with rates rising for Treasuries one year and longer. The U.S. dollar surged.

Valuations May Have Bottomed; REITs Fall

REAL ESTATE/REAL ASSETS

10 PAGE

Valuations appear to have bottomed and now reflect higher borrowing costs. Income returns for private real estate were positive across sectors and regions. REITs fell, both in the U.S. and globally. Redemption queues are starting to decline.

Fundraising Back; Activity Struggles

PRIVATE EQUITY

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Fundraising by dollar is nearing the highs of 2021. Buyout activity is flat, while venture capital activity is significantly depressed. Short-term performance continues to lag, but over longer time periods, private equity maintains a premium.

Gains in 3Q24 but Lags Benchmarks

PRIVATE CREDIT

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Private credit rose 2.0% in 3Q24, lagging two benchmarks. But over longer time periods it has held up well and performed better than either leveraged loans or high yield bonds. Fundraising for private debt was the strongest since 4Q23, with $51 billion raised.

Strong Finish but Choppy Outlook

HEDGE FUNDS/MACs

13 PAGE

Hedge funds finished strong to end the year; the median Callan Institutional Hedge Fund Peer Group rose 2.4%. Within the HFRI indices, the best-performing strategy was event-driven, which was up 2.1% as current M&A deals reacted positively to the new administration.

Index Gains 5.6%; Turnover at Low

DEFINED CONTRIBUTION

15 PAGE

The Callan DC Index™ gained 5.6% in 3Q24. Balances in the index rose entirely due to investment gains, as net flows were negative. Turnover as measured by the index hit its lowest level ever, while fixed income saw the most flows, outpacing even target date funds.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000

2.6%

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

-7.6%

U.S. Fixed Income
Bloomberg Agg

-3.1%

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

-6.8%

Sources: Bloomberg, FTSE Russell, MSCI

Research | Education | Dialogue

The Recession Never Came, so Now What?

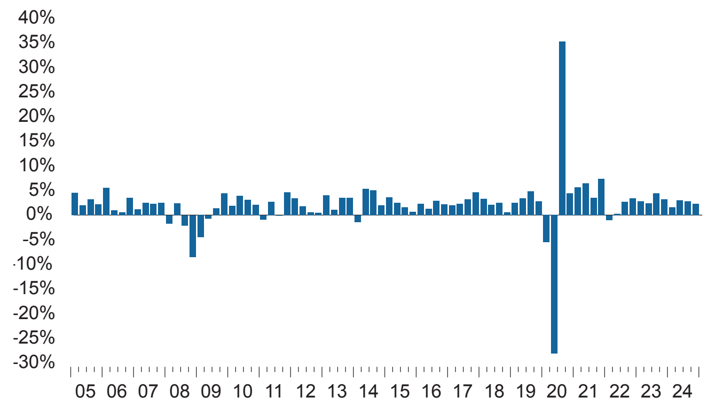
ECONOMY | Jay Kloepfer

Economists and market prognosticators were all so sure that a recession was in the cards, if not in 2023, then surely in 2024. But one never came, and now we are left scratching our collective heads as to what is in store for the global economy. The U.S. economy showed a few signs of slowing during 2024, scattered across indicators like inventories and consumer debt levels, especially for autos, and exports and imports. In the end solid GDP growth persisted, and the job market proved resilient despite some head fakes during the year. The hurricanes in the Southeast took a bite out of consumer optimism and the job market in the fall, when new jobs fell precipitously in October to recessionary readings (below 50,000). But hiring came bouncing back in November and December, and the U.S. economy clocked consecutive months with greater than 200,000 new jobs, a level associated with continued economic expansion. The unemployment rate remains low at 4.1%. GDP grew 2.5% over the course of 2024, after a gain of 2.9% the previous year.

The Federal Reserve's process of rate hikes to tackle elevated inflation, in which the Fed Funds rate and mortgage rates and credit card and auto loan rates all rose dramatically within a very concentrated period of about six quarters, barely dented the U.S. economic growth engine. A tumultuous federal election year and spreading geopolitical turmoil around the globe has not hurt consumer confidence much. We can trace the consumer optimism in broad strokes to the strong, steady job market, and wages and salaries that have risen fast enough to finally outpace inflation, a reversal that took hold when the rate of inflation dropped sharply from its peak in 2022. Real average hourly earnings increased 1% over the course of 2024 (in other words, nominal wages outpaced inflation by 1%). Real wage growth has sustained confidence and boosted disposable income and spending.

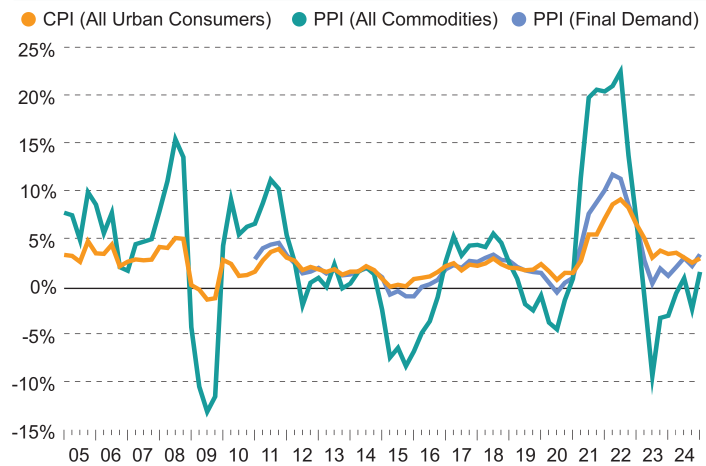
The Fed signaled that it completed its mission to raise interest rates to fight inflation in mid-2024 and began cutting rates in September 2024. The Fed cut a total of 1% in 2024, and the current target range for the Fed Funds rate is 4.25%–4.50%. Longer term, the midpoint of the Fed's target for short rates is 3.0%,

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

but the size of the range around this midpoint is unprecedented, 2.4% to 4%, suggesting a wide range of opinions at the Federal Open Market Committee (FOMC). The debt market is pricing in a halt to the Fed's rate cuts at 4%, suggesting belief that inflation and therefore short rates may have to settle in at levels higher than previously thought.

Despite the gains in real wages, the shadow of inflation still looms. The effects of this once-in-a-generation inflation spike will hang over companies and consumers for years. Inflation is a rate of increase in general prices; even if we hit the Federal Reserve's articulated goal of 2% long term, it still means prices continue to rise, every year. More importantly, that 9% spike in inflation is now baked in. Prices are "permanently" higher, and they are continuing to rise, just at a lower rate. Simple daily indicators abound that remind households and companies and governments that everything is substantially more expensive. None are more prevalent than the cost of food, both at home and at restaurants: How much did I just pay for those eggs?

Strong GDP growth suggests little easing in tight labor markets; the prospect for continued inflationary pressure from the labor market is high. Getting inflation down to the Fed's stated goal of 2% will take time and some discomfort. Squeezing out the last of excess inflation will require a period of below trend growth, a loosening of the labor market, and the pain of a rise in unemployment. In the face of this labor market tightness, deporting undocumented workers has the potential, most mainstream economists agree, to greatly restrict the supply of labor in agriculture across the country and could result in substantial upward pressure on the cost of food either from reduced supply (more likely) or increased wages to lure American workers to do these jobs (less likely). Other sectors including construction and services could see similar severe tightening in their supply of labor and upward pressure on prices.

The other part of the inflation shadow is the prospect of trade wars, namely the imposition of tariffs by the U.S., with potential retaliation from its trading partners. Within the complex web of global sourcing, assembly, and delivery of goods and services by U.S. companies, it is not clear what or who will be subject to a tariff. American automakers source parts, including computer chips, and assemble vehicles outside of the U.S. American tech companies make much of their hardware either entirely overseas or with components from overseas. Auto companies from Germany and Japan assemble autos in the U.S. How do we define an import car, exactly? Tariffs raise the prices to the end buyer, leading to more inflationary pressures. Spiraling prices may be the catalyst of the long-awaited recession, finally killing growth in the current economic cycle.

The Long-Term View

Index	4Q24	Periods Ended 12/31/24 1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	2.6	23.8	13.9	12.5	7.8
S&P 500	2.4	25.0	14.5	13.1	7.7
Russell 2000	0.3	11.5	7.4	7.8	7.6
Global ex-U.S. Equity					
MSCI EAFE	-8.1	3.8	4.7	5.2	3.6
MSCI ACWI ex USA	-7.6	5.5	4.1	4.8	--
MSCI Emerging Markets	-8.0	7.5	1.7	3.6	--
MSCI ACWI ex USA Small Cap	-7.7	3.4	4.3	5.7	6.2
Fixed Income					
Bloomberg Agg	-3.1	1.3	-0.3	1.3	3.9
90-Day T-Bill	1.2	5.3	2.5	1.8	1.9
Bloomberg Long G/C	-7.4	-4.2	-3.3	1.0	5.4
Bloomberg Gl Agg ex US	-6.8	-4.2	-3.4	-0.9	2.4
Real Estate					
NCREIF Property	0.9	0.4	3.1	5.7	7.6
FTSE Nareit Equity	-6.2	8.7	4.3	5.7	9.8
Alternatives					
Cambridge PE*	2.5	9.2	16.4	15.4	13.3
Cambridge Senior Debt*	3.3	10.2	7.9	7.3	4.6
HFRI Fund Weighted	1.5	9.8	7.0	5.3	5.6
Bloomberg Commodity	-0.4	5.4	6.8	1.3	2.1
Inflation – CPI-U	0.1	2.9	4.2	3.0	2.5

*Data for most recent period lags. Data as of 3Q24.
Sources: Bloomberg, Bureau of Economic Analysis, FTSE Russell, Hedge Fund Research, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

Recent Quarterly Economic Indicators

	4Q24	3Q24	2Q24	1Q24	4Q23	3Q23
Employment Cost: Total Compensation Growth	3.8%	3.9%	4.1%	4.2%	4.2%	4.3%
Nonfarm Business: Productivity Growth	1.2%	2.3%	2.1%	0.7%	3.1%	3.8%
GDP Growth	2.3%	2.8%	3.0%	1.6%	3.2%	4.4%
Manufacturing Capacity Utilization	76.3%	76.7%	77.2%	77.1%	77.6%	78.1%
Consumer Sentiment Index (1966=100)	72.1	68.1	71.1	78.4	64.9	69.6

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

Gains for 2024 but Concerns Over 2025

INSTITUTIONAL INVESTORS

– Public defined benefit (DB) plans and nonprofits gained 10% over the last year, easily topping U.S. fixed income and global ex-U.S. stocks.
– Corporate plans, with their heavier allocations to bonds, only rose 6%.
– But extraordinary stock gains easily outpaced those returns, and all institutional investor types lagged a 60% S&P 500/40% Bloomberg Aggregate benchmark.
– Over 5-, 10-, and 20-year time periods, the same pattern held: public DB plans and nonprofits outpaced corporate plans, but all lagged the benchmark.
– The margin of that outperformance narrowed over time.

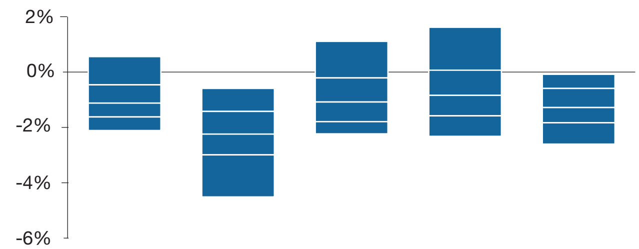
Macroeconomic Issues

– Not surprisingly, the new administration was a major topic of discussions, with investors trying to understand its impact on inflation, trade, taxes, and deregulation.
– Global ex-U.S. markets continue to be a source of consternation, with their underperformance compared to U.S. equities a sore spot.
– At the same time, the excessive concentration within U.S. large cap stocks is a concern, as active managers struggle to outpace benchmarks.

Public DB plans

– Asset-allocation decisions drive many conversations for these plans.
– Fixed income, especially its performance compared to other asset classes, has been a pain point. However, increased capital markets expectations for the asset class, especially compared to two years ago, has led some plans to reconsider bonds.
– Interest rates and the Fed's actions continue to be a top-of-mind issue.

Quarterly Returns, Callan Database Groups (12/31/24)



	Public	Corporate	Nonprofit	Taft-Hartley	Insurance Assets
10th Percentile	0.6	-0.6	1.1	1.6	-0.1
25th Percentile	-0.5	-1.4	-0.2	0.1	-0.6
Median	-1.1	-2.2	-1.1	-0.8	-1.3
75th Percentile	-1.6	-3.0	-1.8	-1.6	-1.8
90th Percentile	-2.1	-4.5	-2.2	-2.3	-2.6

Source: Callan

Callan Database Median and Index Returns* for Periods Ended 12/31/24

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	**-1.1**	**10.0**	**3.0**	**7.2**	**7.3**	**6.9**
Corporate Database	**-2.2**	**6.0**	**-0.7**	**3.9**	**5.5**	**6.2**
Nonprofit Database	**-1.1**	**10.1**	**2.9**	**7.2**	**7.0**	**6.7**
Taft-Hartley Database	**-0.8**	**9.7**	**2.8**	**6.8**	**7.0**	**6.7**
Insurance Assets Database	**-1.3**	**6.4**	**1.5**	**3.4**	**4.1**	**4.5**
All Institutional Investors	**-1.3**	**9.4**	**2.5**	**6.6**	**6.7**	**6.7**
Large (>$1 billion)	**-1.1**	**8.6**	**2.6**	**7.0**	**7.1**	**6.9**
Medium ($100mm - $1bn)	**-1.3**	**9.5**	**2.5**	**6.7**	**6.8**	**6.8**
Small (<$100 million)	**-1.4**	**10.0**	**2.5**	**6.5**	**6.6**	**6.5**
60% S&P 500/40% Bloomberg Agg	0.2	15.1	4.5	8.8	8.6	7.7

*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

- Funded status improvements are leading plans to discuss changes to asset allocation to protect the gains, or to derisk, or to examine pension risk transfer.
- Allocation issues touch a range of asset classes, including hedge funds and growth assets.
- Investors ranked artificial intelligence as the most topical issue they are addressing, followed by geopolitical uncertainty.
- With the pandemic and related lockdowns firmly in the rear-view mirror for many, firm culture after COVID-19 was last in their rankings.

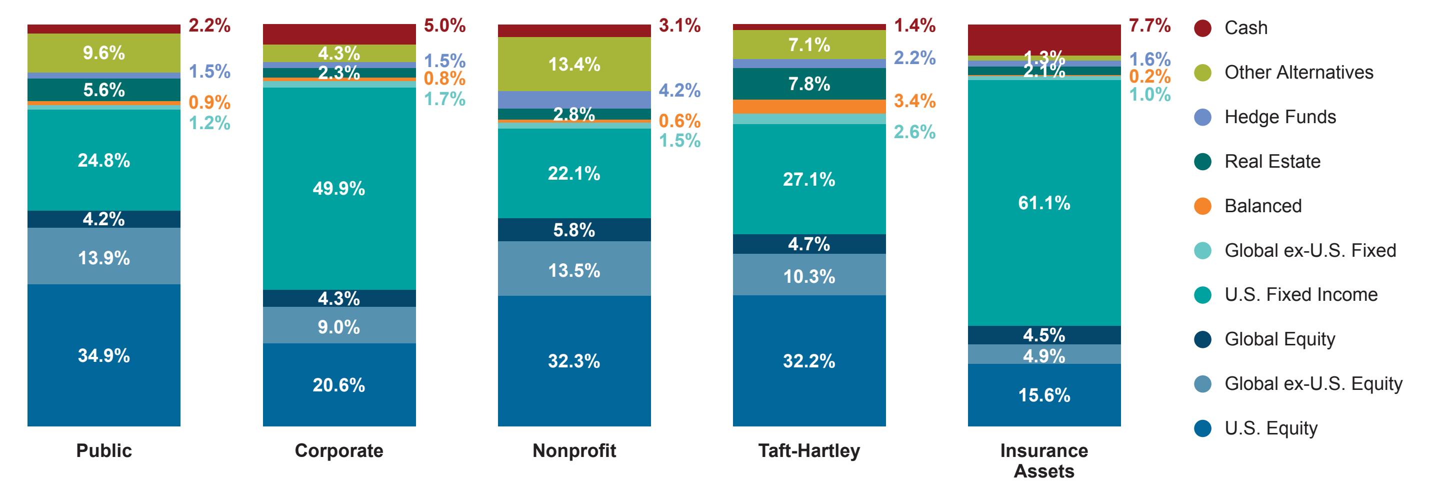
DC plans

- Retirement income is still under discussion by sponsors, to help participants with the “decumulation” phase of their careers and post-career lives.
- Target date funds are attracting scrutiny. They are quite popular, but some plans wonder if they have the “right” ones.
- The implications of SECURE 2.0 and other regulatory changes are uncertain, but sponsors are trying to assess what if any changes they need to make in response.

Nonprofits

- These investors are also weighing critical asset-allocation decisions, including how much to allocate to alternative investments, what to do with fixed income, and whether to overweight U.S. equities vs. global ex-U.S. equities.
- Return enhancement is another area of focus, with a desire to assure the growth of the portfolio.
- Interest in diversity, equity, and inclusion continues to be low, even compared to other types of institutional investors, with only 6% of clients this quarter planning future action and 26% taking no steps to implement DEI policies.

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 ended with the S&P 500 Index up over 2%. However, the quarter was marked by volatility, particularly during October and December.
- Negative returns in October were driven by investor anxiety around the U.S. presidential election, uncertainty with the Fed's approach to interest rate cuts, and some misses to corporate earnings expectations. December returns, while initially buoyed by the Fed's third consecutive rate cut, cooled after the Fed announced no additional rate cuts until the second half of 2025.
- Sector performance was mixed; only four (Communication Services, Consumer Discretionary, Financials, and Information Technology) posted gains.
- During 4Q24, large cap stocks outperformed small caps. Growth outperformed value across the market cap spectrum.

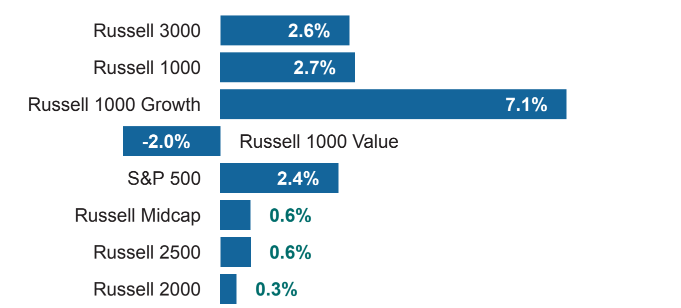
Large caps continue to drive narrow markets

- Concentration and performance contribution of the Magnificent Seven stocks within the large cap benchmarks remain outsized relative to the aggregate of benchmark constituents. In 2024, the S&P 500's return was 25%; the S&P 500 ex-Mag 7 return was 16%.
- For the second year in a row, less than 30% of S&P 500 stocks have outperformed the S&P 500 itself.

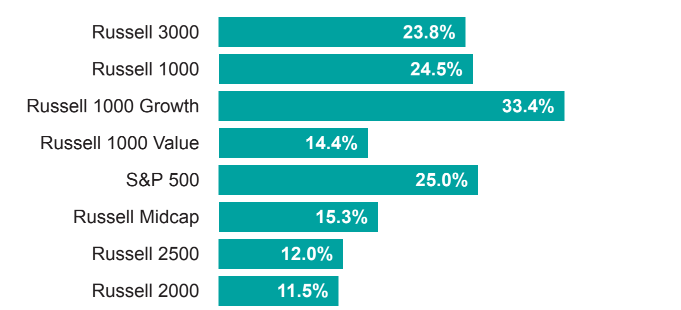
Fundamentals critical to success of large caps

- In recent years, themes—like "work from home" stocks and AI—as well as momentum have been attributed to the prolonged success of the Magnificent Seven.
- However, Magnificent Seven valuations have been supported by strong earnings, low debt, and high cash levels. Consensus and forward-looking EPS growth expectations also remain high for large cap companies.

U.S. Equity: Quarterly Returns (12/31/24)

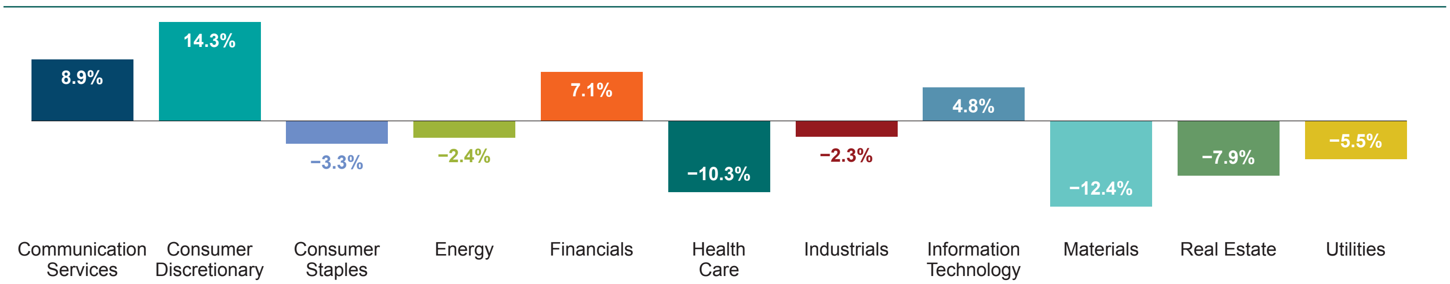


U.S. Equity: One-Year Returns (12/31/24)



Sources: FTSE Russell and S&P Dow Jones Indices

Quarterly Performance of Industry Sectors (12/31/24)



Source: S&P Dow Jones Indices

Global Equities

Trump tariffs weigh on markets

- Global equity markets had a rough end to the year as proposed Trump tariffs weighed on Europe and China.
- Europe was one of the worst-performing regions, plagued by political uncertainty and continued economic woes.
- While still negative, Japan's decline over the quarter was stemmed by the approval of a new economic stimulus plan focused on issues such as wage stability and deflation.

Emerging markets: China, India fall short

- Emerging markets declined on the heels of poor results out of China and India. Although Chinese stocks initially gained from the announced stimulus, they later declined due to expected tariffs. Economic growth in India fell short of expectations.

Growth vs. value: Muted tech influence on growth

- In developed ex-U.S. markets, the influence of technology and AI is comparatively more muted, which makes the trend of growth stocks, especially those from the Magnificent Seven, outperforming value stocks less pronounced.

U.S. dollar: Strength from beneficial effects of Trump

- The U.S. dollar shifted direction from the last quarter as expectations for interest rate cuts faded, along with the anticipated beneficial effects of the Trump administration on the U.S. economy; in total the U.S. Dollar Index rose over 7% during the quarter.

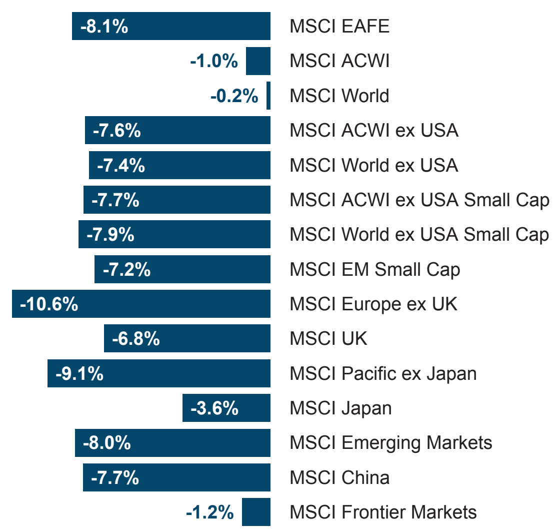
Global equity market concentration continues higher

- The U.S. share of global market capitalization in global indices is at all-time highs as U.S. technology companies lead markets higher.
- Market capitalization-weighted global benchmarks are providing lower diversification benefits than historically at not only the country level but also the security level as the top five constituents of the MSCI ACWI Index currently comprise over 17% of the benchmark.

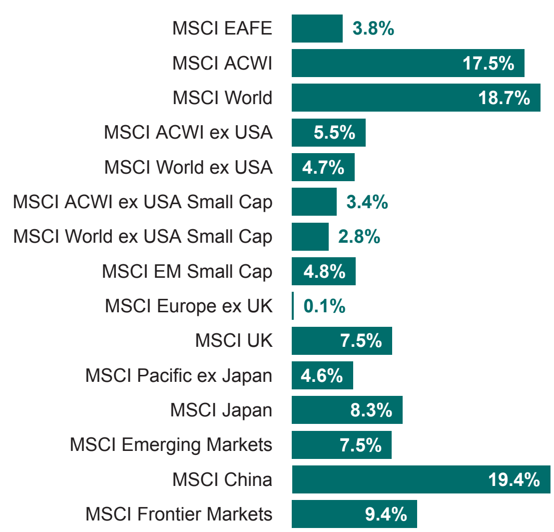
U.S. dollar strength has been a headwind

- Recent U.S. dollar strength has been a notable headwind for non-U.S. equities as local currency revenues of companies continue to weaken against the U.S. dollar.
- Some contributing factors to U.S. dollar strength have been higher interest rate policy by the Federal Reserve compared to other central banks, U.S. economic and market strength, and recent rhetoric regarding potentially higher tariff rates on U.S. imports.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 12/31/24)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 12/31/24)



Source: MSCI

Fixed Income

U.S. Fixed Income

Inflation concerns resurface

- The Fed continued the rate cutting cycle, most recently in December, bringing the target range to 4.25%-4.50%.
- The yield curve steepened, with rates rising for Treasuries one year and longer. The 10-year rose 77 bps to 4.58%.
- Inflation concerns resurfaced, with the breakeven inflation rate rising by 19 bps to 2.30% over the course of the quarter.

Performance drivers

- The Bloomberg US Aggregate Bond Index fell 3.1% due to the rise in rates.
- With the steepening yield curve, long government bonds fared the worst among sectors.
- Leveraged finance sectors (High yield: +0.2%, leveraged loans: +2.3%) were the only positive fixed income sectors as spreads tightened.

Credit spreads tighten

- Corporate credit spreads across both investment grade and leveraged finance tightened, with both being "priced to perfection."
- New issuance continued to be strong, with 2024 totals for both IG and HY outpacing 2023.

Municipal Bonds

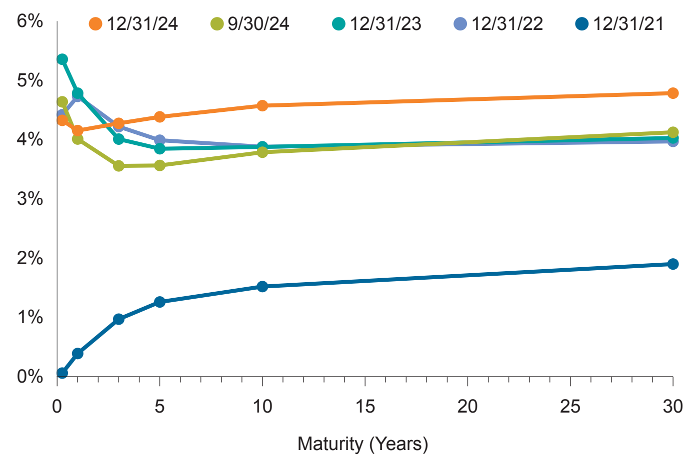
Negative returns in 4Q

- The muni AAA-rated curve shifted upward across the curve and the curve steepened.
- The spreads between the AAA 2s/10s key rates (24 bps) ended the year slightly tighter than Treasuries (33 bps).

Low dispersion across quality in 4Q and for the year

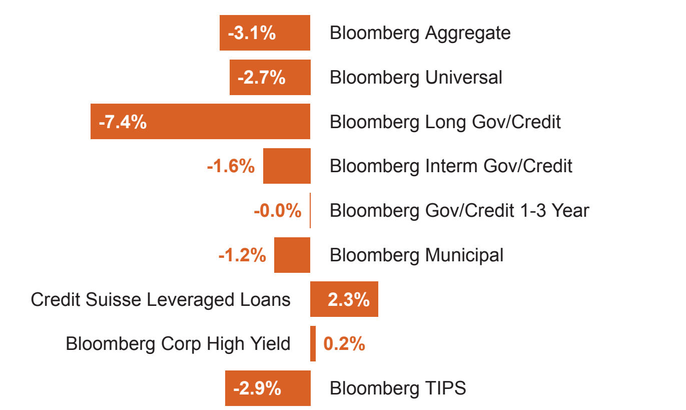
- AAA: -1.3%; +1.4%
- AA: -1.2%: +1.5%
- A: -1.2%; +1.5%
- BBB: -1.3%; +1.6%

U.S. Treasury Yield Curves

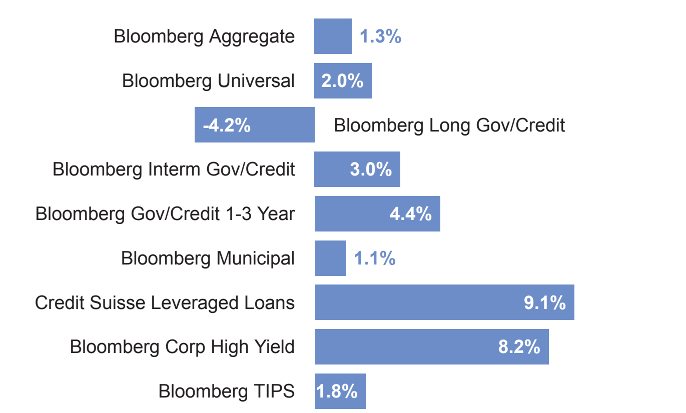


Source: Bloomberg

U.S. Fixed Income: Quarterly Returns (12/31/24)



U.S. Fixed Income: One-Year Returns (12/31/24)



Sources: Bloomberg and Credit Suisse

Robust issuance through 4Q, demand softened slightly

- Total issuance in 2024 was $508 billion, beating the previous high of $485 billion in 2020 and up 32% year over year.
- Demand absorbed issuance most of the quarter, but December exhibited three weeks of fund outflows, after 23 weeks of consecutive net inflows.

Muni valuations vs. U.S. Treasuries remain rich

- 10-year AAA muni/10-year U.S. Treasury yield ratio was rich relative to the 10-year median (67% now vs. 80% historical).

Global Fixed Income

Political controversy dogs euro zone

- The euro zone was marred with political controversy in 4Q, specifically in Germany and France.
- GDP growth in the euro zone rose modestly (+0.4%), while the ECB cut rates in December.
- Japan's GDP grew 1.2% on the back of strong exports and a weaker yen.

U.S. dollar surges

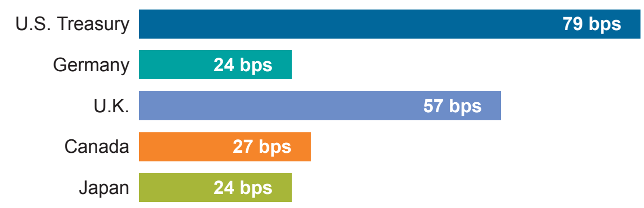
- The U.S. dollar rose 8% versus a basket of six developed market currencies.
- Global fixed income returns varied based on currency exposure, with the Bloomberg Global Aggregate ex US Hedged Index rising 0.7%, while the Bloomberg Global Aggregate ex US Unhedged Index fell by 6.8%.

Emerging market debt faced similar challenges

- Both EM local and hard currency bonds posted negative returns on the quarter, weighed down by the strength of the dollar and geopolitical risk. Hard currency spreads narrowed at the tail end of the quarter, partially offsetting an early quarter drawdown.
- Brazil increased its policy rate by 150 bps in 4Q, resulting in the Brazilian real depreciating by 13.4% versus the U.S. dollar.

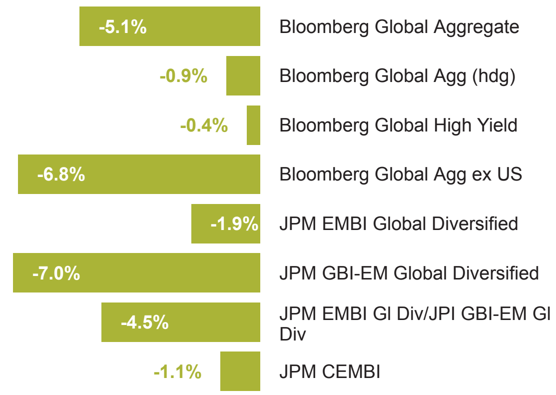
Change in 10-Year Global Government Bond Yields

3Q24 to 4Q24



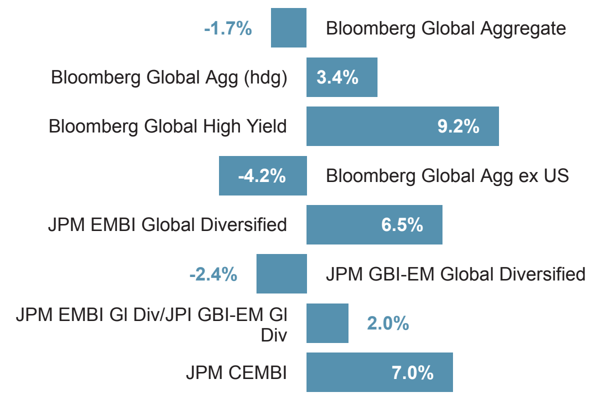
Source: Bloomberg

Global Fixed Income: Quarterly Returns (12/31/24)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns (12/31/24)



Sources: Bloomberg and JPMorgan Chase

Valuations May Have Bottomed; REITs Fall

REAL ESTATE/REAL ASSETS | Munir Iman

Valuations reflect higher interest rates

- Valuations appear to have bottomed and now reflect higher borrowing costs.
- Income returns were positive across sectors and regions.
- Property sectors were mixed; Office and Hotel experienced negative appreciation, and the remaining sectors had flat or positive appreciation.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

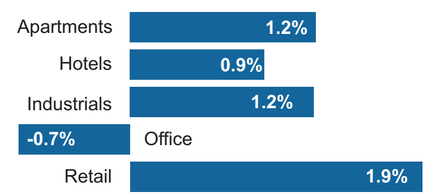
REITs fall and trade at a discount to NAV

- Global REITs underperformed in 4Q24, down 9.7% compared to a 0.2% decline for global equities (MSCI World).
- U.S. REITs fell 6.2% in 4Q24, in contrast with the S&P 500 Index, which rose 2.4%.
- Global REITs are trading at a discount to NAV (-7.0%).
- Historically, global REITS have traded at a 3.9% discount to NAV.

Redemption queues are falling

- ODCE redemption queues are 16.4% of net asset value (NAV), with a median queue of 13.4%. This compares to the GFC, when queues peaked at approximately 15% of NAV.
- Outstanding redemption requests for most large ODCE funds are approximately 6% to 33% of NAV (one outlier at 56%).

Sector Quarterly Returns by Property Type (12/31/24)



Source: NCREIF

- Redemption queues are now sharply decreasing after having peaked at 19.3% of NAV in 1Q24. This has been driven primarily by rescissions of redemption requests within a handful of managers with large queues. In certain cases, this has been due to loyalty fee programs being instituted.

Pricing, transaction volumes increasing

- Transaction volume is increasing on a rolling four-quarter basis yet remains below five-year averages.
- In 4Q24, transaction volume increased on a quarter-over-quarter basis. Volume remains 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.

Callan Database Median and Index Returns* for Periods Ended 12/31/24

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	20 Years
Real Estate ODCE Style	**0.7**	**-2.2**	**-2.2**	**-3.0**	**2.4**	**5.4**	**5.5**
NFI-ODCE (value-weighted, net)	1.0	-2.3	-2.3	-3.1	2.0	4.9	5.5
NCREIF Property	0.9	0.4	0.4	-0.8	3.1	5.7	7.0
NCREIF Farmland	-1.3	-1.0	-1.0	4.4	4.8	5.9	11.2
NCREIF Timberland	1.4	7.0	7.0	9.7	7.8	5.4	6.9
Public Real Estate							
Global Real Estate Style	**-9.3**	**2.7**	**2.7**	**-4.8**	**1.4**	**4.5**	**6.1**
FTSE EPRA Nareit Developed	-5.1	9.3	9.3	1.7	3.1	5.3	--
Global ex-U.S. Real Estate Style	**-15.8**	**-7.9**	**-7.9**	**-9.0**	**-3.9**	**3.1**	**--**
FTSE EPRA Nareit Dev ex US	-15.2	-8.4	-8.4	-9.7	-5.8	-0.2	--
U.S. REIT Style	**-6.6**	**8.0**	**8.0**	**-2.5**	**5.0**	**6.4**	**7.7**
FTSE EPRA Nareit Equity REITs	-6.2	8.7	8.7	-2.2	4.3	5.7	7.0

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

Fundraising Rebounds but Activity Struggles

PRIVATE EQUITY | Ashley Kahn

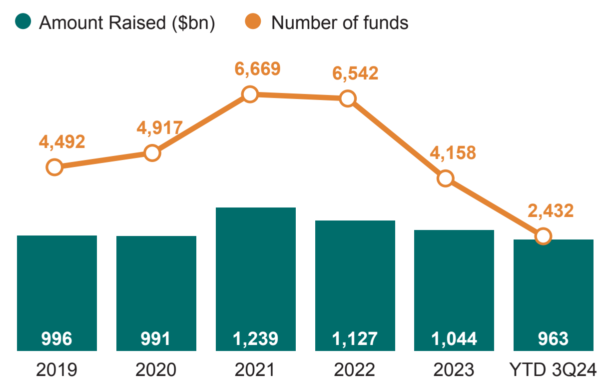
Fundraising ▶ By volume, 2024 fundraising has been creeping toward the highs of 2021 (only 3% off). And compared to the same time last year, volume is up by 7%. On the other hand, fundraising by count was down significantly: 23% fewer funds raised in YTD 3Q24 compared to the same time last year.

Buyouts ▶ Buyout activity in 2024 was essentially flat compared to 2023, by both count and volume. Buyout valuations have started to creep back up, although still off by about a turn from the highs of 2021. They exhibited a large uptick in 3Q24, reflecting the Fed's first interest rate cut that quarter.

Venture Capital and Growth Equity ▶ Deal volume in 2024 was up from 2023 but still significantly depressed compared to the highs of 2021-22. Deal activity by count has declined each year, with the average deal size increasing. Early-stage valuations have reached record highs, up 28% from last year and 44% from 2021. This has been driven by today's AI "supercycle," with greater competition for AI startups pushing up valuations.

Exits ▶ Volume has remained significantly depressed through 3Q24, down 13% from last year and at 43% of 2021 levels.

Annual Fundraising (9/30/24)



Source: Pitchbook

Exit count is also down by 14% from last year and at 67% of 2021 levels.

Returns ▶ Short-term performance continues to lag public equity (driven by the "Magnificent Seven"). Due to the smoothed nature of its returns, private equity doesn't outperform when public equity is at record highs (it likewise doesn't drop as sharply when public equity drops). By strategy type, venture capital and growth equity are still recovering after losses in 2022-23, while buyouts have proven to be much more resilient.

Private Equity Performance (%) (Pooled Horizon IRRs through 9/30/24*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
All Venture	1.4	2.4	-5.3	14.9	14.8	12.2
Growth Equity	2.8	7.7	-0.5	13.9	13.2	13.5
All Buyouts	3.3	10.1	6.3	15.2	14.0	14.0
Mezzanine	3.0	10.4	9.1	11.7	10.9	11.4
Credit Opportunities	2.5	9.9	7.6	9.2	7.6	9.2
Control Distressed	0.9	3.3	6.7	13.3	10.8	11.2
All Private Equity	**2.7**	**7.9**	**2.8**	**14.4**	**13.4**	**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.

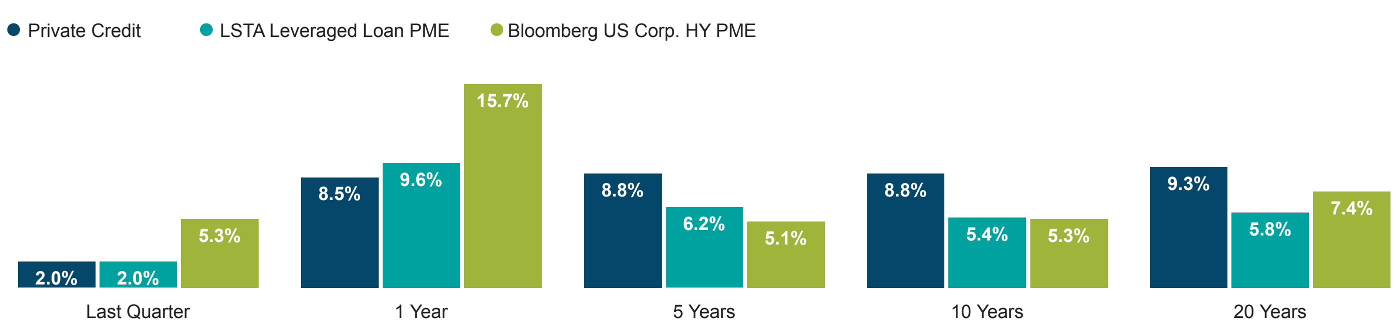
Private Credit Gains in 3Q24 but Lags Benchmarks

PRIVATE CREDIT | Cos Braswell

Private credit gained 2.0% in 3Q24, the most recent quarter available. That matched the LSTA Leveraged Loan PME Index but significantly trailed the Bloomberg US Corporate High Yield PME Index. Results over the trailing one year were roughly the same, but over 5-, 10-, and 20-year time periods private credit topped the two benchmarks.

- Private credit performance varies across sub-asset class and underlying return drivers. Higher-risk strategies have performed better than lower-risk strategies.
- Fundraising for private debt was the strongest since 4Q23, with $51 billion raised.
- Direct lending was responsible for 76% of 3Q fundraising, with $39 billion raised.
- 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%.
- North American private debt AUM is expected to grow significantly, from $1.01 trillion in 2024 to $1.74 trillion in 2029, representing an annualized growth rate of 11%. European private debt AUM is projected to grow at a slower pace of 8%, reflecting resilience despite a more challenging economic environment.
- Fundraising in Europe is forecast to remain static, which could create upside potential as reduced competition for deals may improve investment opportunities.
- The private debt market is positioned to maintain strong growth, particularly in North America, while Europe's steadier trajectory still offers attractive prospects in a less crowded landscape.

Private Credit Performance (%) (Pooled Horizon IRRs through 9/30/24*)



Private Credit Performance (%) (Pooled Horizon IRRs by Strategy through 9/30/24*)

Strategy	Quarter	1 Year	5 Years	10 Years	20 Years
Senior Debt	2.3	9.1	7.8	8.2	8.4
Subordinated	0.8	7.5	10.1	10.3	10.3
Credit Opportunities	1.6	8.1	8.8	8.7	9.4
Total Private Credit	**2.0**	**8.5**	**8.8**	**8.8**	**9.3**

Source: LSEG/Cambridge
*Most recent data available at time of publication

Strong Finish to the Year but Choppy Outlook Ahead

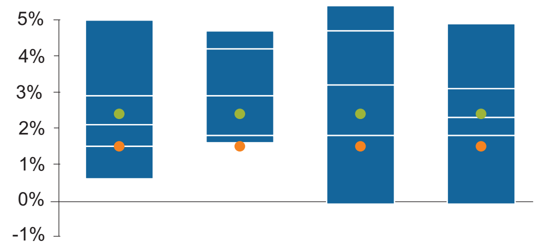
HEDGE FUNDS/MACs | Joe McGuane

U.S. equity markets ended 4Q24 in positive territory, following the U.S. election, the Federal Reserve interest rate cut, and reports of strong economic data. Markets gave back some of that performance in December, as investors grew concerned about inflation and the potential slowdown in future rate cuts. Credit indices generated mixed returns during the quarter, with high yield outperforming investment grade bonds. The 10-year Treasury yield rose throughout the quarter and ended the year at 4.6%.

The S&P 500 gained 2.4%, with performance driven by earnings growth as rising rates caused the market's price-to-earnings ratio to modestly decline despite the Fed cutting interest rates 50 basis points. Index performance was led by Discretionary and Communication Services, which benefited from a better growth outlook, offset by declines in Materials, Health Care and REITs, due to a weaker China outlook and higher rates.

Hedge funds finished strong to end the year, and relative value strategies finished higher, as managers were able to profit off rising bond yields. Equity hedge strategies had strong momentum, as managers profited on both the long and short side during the quarter as stock dispersion remained elevated. Event-driven managers soared in November, on the expectation of a strong M&A cycle in 2025. Macro strategies had a strong November, as managers were able to profit off rates moving higher in the final quarter of the year.

Hedge Fund Style Group Returns (12/31/24)



	Absolute Return FOF	Core Div. FOF	Long/Short Equity FOF	Institutional Hedge Funds
10th Percentile	5.0	4.7	5.4	4.9
25th Percentile	2.9	4.2	4.7	3.1
Median	2.1	2.9	3.2	2.3
75th Percentile	1.5	1.8	1.8	1.8
90th Percentile	0.6	1.6	-0.1	-0.1
HFRI Fund Wtd Index ●	1.5	1.5	1.5	1.5
90-Day T-Bills +5% ●	2.4	2.4	2.4	2.4

Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 12/31/24

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	**2.3**	**9.7**	**6.7**	**7.3**	**6.7**	**7.0**
Callan Fund-of-Funds Peer Group	**2.9**	**10.7**	**4.8**	**6.1**	**4.7**	**5.1**
Callan Absolute Return FOF Style	**2.1**	**9.5**	**5.8**	**6.0**	**4.6**	**4.7**
Callan Core Diversified FOF Style	**2.9**	**10.9**	**4.7**	**6.4**	**4.7**	**5.1**
Callan Long/Short Equity FOF Style	**3.2**	**12.3**	**2.6**	**5.8**	**5.7**	**5.5**
HFRI Fund Weighted Index	1.4	9.8	4.4	7.0	5.3	5.0
HFRI Fixed Convertible Arbitrage	1.4	10.9	4.8	6.9	5.7	5.5
HFRI Distressed/Restructuring	3.4	12.0	5.0	8.4	5.5	5.8
HFRI Emerging Markets	-0.4	9.2	1.0	4.5	4.3	3.4
HFRI Equity Market Neutral	2.4	10.5	5.8	4.8	3.7	3.3
HFRI Event-Driven	2.1	9.8	4.9	7.2	5.5	5.7
HFRI Relative Value	1.9	8.6	4.9	5.1	4.5	5.2
HFRI Macro	0.6	5.5	4.6	5.4	3.1	2.6
HFRI Equity Hedge	1.4	11.9	3.8	8.1	6.3	5.8
HFRI Multi-Strategy	5.0	13.7	4.3	7.0	4.2	4.2
HFRI Merger Arbitrage	1.7	5.6	4.5	5.8	5.0	4.4
90-Day T-Bill + 5%	2.4	10.3	8.9	7.5	6.8	6.2

*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 manager in the Callan Institutional Hedge Fund Peer Group rose 2.3%. Within this style group of 50 peers, the average hedge credit manager gained 2.5%, driven by interest rate volatility in November following the U.S. election. Meanwhile, the average hedge equity manager added 2.1%, as managers were able to profit off elevated disperion across sectors.

Within the HFRI indices the best-performing strategy was multi-strategy, which gained 5.0%, followed by distressed/restructuring, which took advantage of deal activity and was up 3.4%. Equity market neutral gained 2.4%.

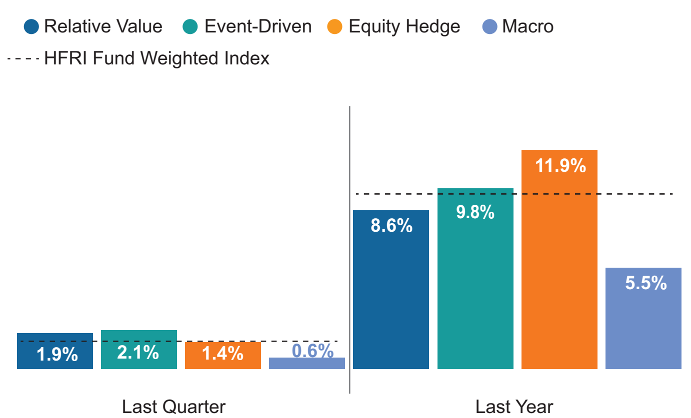
Across the Callan Hedge FOF database, the median Callan Long-Short Equity FOF ended 3.2% higher, as managers profited off the dispersion across sectors. Meanwhile, the median Callan Core Diversified FOF ended 2.9% higher, as equity hedge and event-driven strategies drove performance for the quarter. The Callan Absolute Return FOF ended 2.1% higher, as an overweight to relative value strategies drove performance.

Since the Global Financial Crisis, liquid alternatives to hedge funds have become popular among investors due to their attractive risk-adjusted returns that are similarly uncorrelated with traditional stock and bond investments but offered at a lower cost. Much of that interest is focused on rules-based, long-short strategies that isolate known risk premia such as value, momentum, and carry found across the various capital markets. These alternative risk premia are often embedded, to varying degrees, in hedge funds as well as other actively managed investment products.

Within Callan's database of liquid alternative solutions, the Callan MAC Risk Parity peer group fell 3.6%, as fixed income and commodities were a drag on performance, while U.S. equities were able to offset some of that negative performance. The Callan Long Biased MAC peer group fell 2.7%, as negative performance from fixed income pushed the strategy into negative territory.

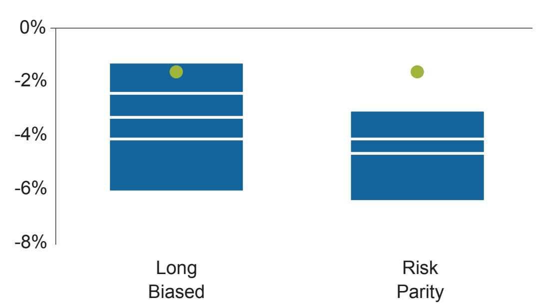
After a strong run for hedge funds in 2024, the market environment outlook appears to be choppier in 2025. While economic growth remains strong and recession probabilities seem low, market expectations remain high, valuations are at all-time highs in equities and spreads are tight in credit markets, leaving investors with limited margin for errors. With a new administration in the White House, change seems the most likely outcome, and uncertainty should be expected for market participants. In this environment, hedge funds should be able to profit off this dispersion.

HFRI Hedge Fund-Weighted Strategy Returns (12/31/24)



Source: HFRI

MAC Style Group Returns (12/31/24)



	Long Biased	Risk Parity
10th Percentile	-0.4	-2.3
25th Percentile	-1.7	-2.4
Median	-2.7	-3.6
75th Percentile	-3.6	-4.2
90th Percentile	-5.8	-6.2
60% ACWI / 40% Bloomberg Agg	-1.8	-1.8

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

Index Gains 5.6%; Turnover at All-Time Low

DEFINED CONTRIBUTION | Scotty Lee

Performance: Index gains for fourth straight quarter

– The Callan DC Index™ gained 5.6% in 3Q24. The Age 45 Target Date Fund (analogous to the 2045 vintage) had a higher quarterly return (6.5%).

Growth sources: Balances rise due to investment gains

– Balances within the DC Index rose by 4.7% after a 1.1% increase in the previous quarter. Investment gains (5.6%) were the sole driver of the gain as net flows (-0.9%) had a contrary effect.

Turnover: Lowest since index inception

– Turnover (i.e., net transfer activity levels within DC plans) in the DC Index decreased to 0.02%, the lowest ever, from the previous quarter's measure of 0.17%.

Net cash flow analysis: U.S. fixed income ousts TDFs

– Automatic features and their appeal to "do-it-for-me" investors typically result in target date funds (TDFs) receiving the largest net inflows in the DC Index. But in 3Q24, as turnover reached the lowest level since the DC Index inception, U.S. fixed income outpaced the asset allocation funds, earning 68.3% of quarterly net flows.

Equity allocation: Exposure rises

– The Index's overall allocation to equity (74.0%) rose slightly from the previous quarter's level (73.7%).

Asset allocation: Smid cap equity gains

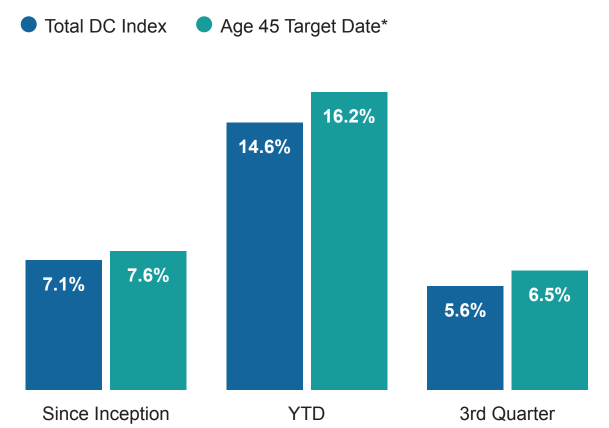
– U.S. small/mid cap equity (7.1%) and target date funds (35.7%) were among the asset classes with the largest percentage increases in allocation, while stable value (6.1%) had the largest decrease in allocation from the previous quarter due to net outflows.

Prevalence of asset class: Global equity funds rise

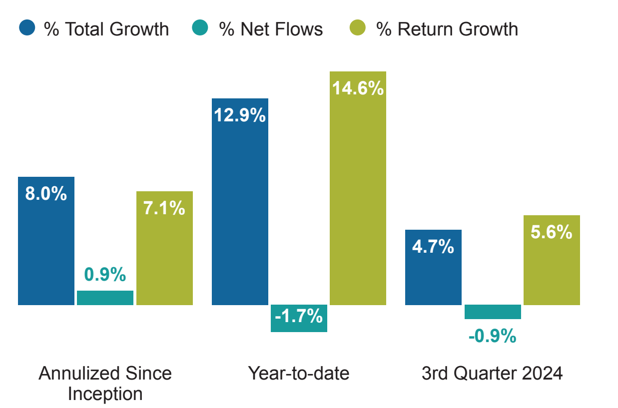
– The prevalence of global equity funds (18.6%) rose by 0.7 percentage points, matching the increase in the prevalence of emerging markets (18.6%), which also rose by 0.7 percentage points. Other notable movements included a 1.4 percentage point increase in the prevalence of U.S. small/mid cap equity offerings (94.3%).

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 (9/30/24)



Growth Sources (9/30/24)



Net Cash Flow Analysis 3Q24)
(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
U.S. Fixed Income	68.3%
High Yield Fixed Income	5.3%
U.S. Small/Mid Cap	-15.2%
U.S. Large Cap	-38.6%
Total Turnover**	**0.02%**

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 2040 TDF to the 2045 TDF in June 2023.

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

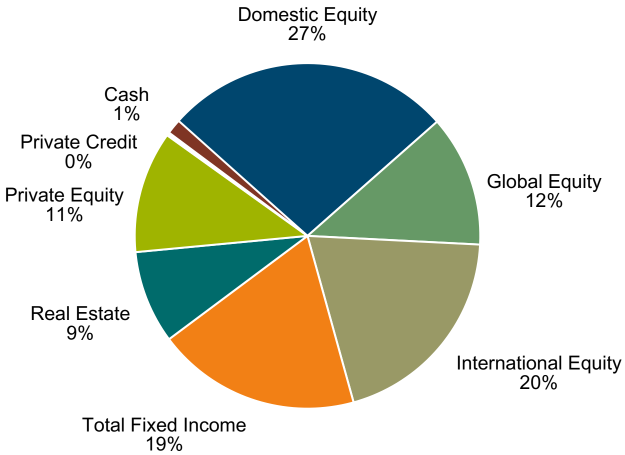
Asset Allocation and Performance

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.

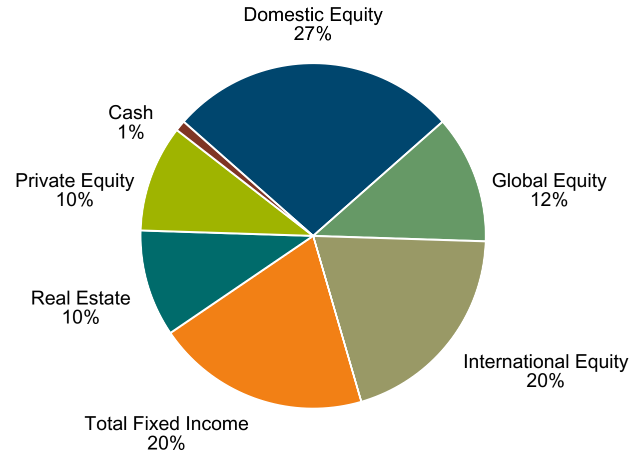
Actual vs Target Asset Allocation
As of December 31, 2024

The top left chart shows the Fund's asset allocation as of December 31, 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).

Actual Asset Allocation

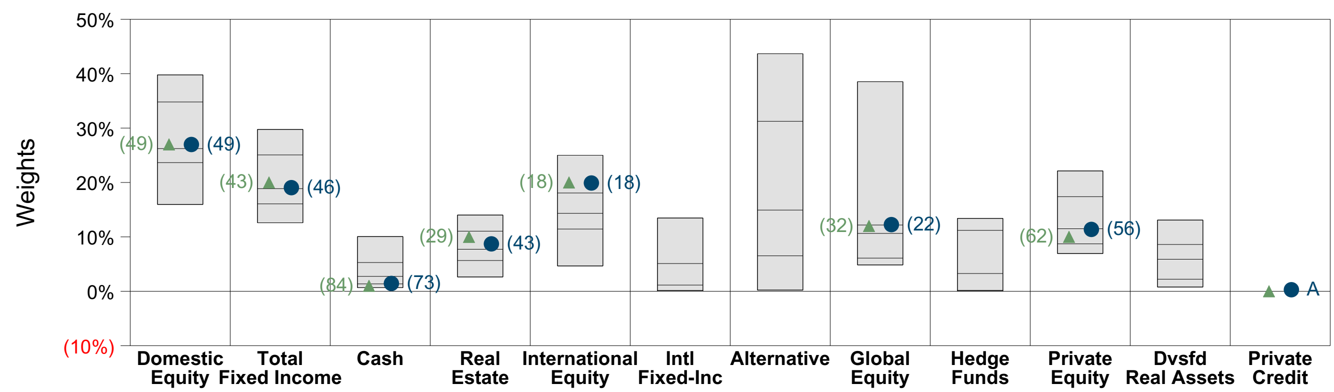


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	9,138,799	27.0%	27.0%	(0.0%)	(6,403)
Global Equity	4,150,562	12.3%	12.0%	0.3%	86,028
International Equity	6,740,518	19.9%	20.0%	(0.1%)	(33,706)
Total Fixed Income	6,452,857	19.1%	20.0%	(0.9%)	(321,366)
Real Estate	2,951,995	8.7%	10.0%	(1.3%)	(435,117)
Private Equity	3,851,562	11.4%	10.0%	1.4%	464,450
Private Credit	96,051	0.3%	0.0%	0.3%	96,051
Cash	488,773	1.4%	1.0%	0.4%	150,062
Total	33,871,117	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	Dvsfd Real Assets	Private Credit
10th Percentile	39.78	29.75	10.06	14.01	25.00	13.47	43.67	38.53	13.40	22.13	13.09	-
25th Percentile	34.80	25.07	5.28	11.05	18.07	5.10	31.25	12.18	11.20	17.39	8.60	-
Median	26.23	18.87	2.74	7.72	14.33	1.14	14.93	10.64	3.27	11.49	5.88	-
75th Percentile	23.65	16.07	1.36	5.65	11.44	0.15	6.52	6.10	0.17	8.72	2.22	-
90th Percentile	15.96	12.59	0.66	2.63	4.66	0.05	0.22	4.84	0.04	6.94	0.78	-
Fund ●	26.98	19.05	1.44	8.72	19.90	-	-	12.25	-	11.37	-	0.28
Target ▲	27.00	20.00	1.00	10.00	20.00	-	-	12.00	-	10.00	-	0.00
% Group Invested	100.00%	97.44%	82.05%	92.31%	100.00%	48.72%	87.18%	20.51%	28.21%	38.46%	25.64%	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 December 31, 2024, with the distribution as of September 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

	December 31, 2024				September 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	**$9,138,798,789**	**26.98%**	**$(154,147,402)**	**$192,337,597**	**$9,100,608,594**	**25.77%**
Large Cap Equity	**$6,940,082,800**	**20.49%**	**$(151,413,606)**	**$177,335,169**	**$6,914,161,238**	**19.58%**
Managed Large Cap Equity	**$904,509,819**	**2.67%**	**$(1,413,606)**	**$27,538,832**	**$878,384,594**	**2.49%**
Eagle Capital	904,509,819	2.67%	(1,413,606)	27,538,832	878,384,594	2.49%
Northern Trust S&P 500	**$6,035,572,981**	**17.82%**	**$(150,000,000)**	**$149,796,337**	**$6,035,776,643**	**17.09%**
Mid Cap Equity	**$1,127,439,285**	**3.33%**	**$(1,286,626)**	**$6,909,518**	**$1,121,816,393**	**3.18%**
Northern Trust Russell Mid-Cap	15,433	0.00%	0	1,471	13,962	0.00%
Artisan Partners	544,441,327	1.61%	(607,275)	28,218,789	516,829,813	1.46%
Victory Mid Cap Value	582,982,526	1.72%	(679,351)	(21,310,741)	604,972,618	1.71%
Small Cap Equity	**$1,071,276,704**	**3.16%**	**$(1,447,169)**	**$8,092,910**	**$1,064,630,963**	**3.01%**
Dimensional Fund Advisors	357,473,121	1.06%	(250,794)	(553,138)	358,277,052	1.01%
Wellington Small Cap	367,259,593	1.08%	(582,400)	(3,757,927)	371,599,920	1.05%
Riverbridge Partners SCG	346,543,990	1.02%	(613,975)	12,403,974	334,753,991	0.95%
Global Equity	**$4,150,562,311**	**12.25%**	**$(154,024,145)**	**$(10,365,831)**	**$4,314,952,287**	**12.22%**
Acadian Global Equity	1,097,527,097	3.24%	(970,038)	22,612,616	1,075,884,519	3.05%
Epoch Investments	939,057,902	2.77%	(151,078,027)	12,109,335	1,078,026,593	3.05%
Harding-Loevner	1,076,910,445	3.18%	(1,040,376)	(9,216,717)	1,087,167,538	3.08%
Longview	947,720	0.00%	0	(73,735)	1,021,455	0.00%
LSV Global Value	1,032,735,115	3.05%	(935,704)	(35,705,748)	1,069,376,568	3.03%
NT Global Equity Index	1,322,099	0.00%	0	(57,640)	1,379,739	0.00%
Northern Trust Transition	2,061,932	0.01%	0	(33,942)	2,095,874	0.01%
International Equity	**$6,740,517,917**	**19.90%**	**$(4,908,151)**	**$(536,909,609)**	**$7,282,335,676**	**20.62%**
All Country ex US	**$4,599,567,347**	**13.58%**	**$(2,870,824)**	**$(359,774,118)**	**$4,962,212,289**	**14.05%**
Arrowstreet Capital	680,929,008	2.01%	(794,493)	(37,769,410)	719,492,910	2.04%
Baillie Gifford	741,900,961	2.19%	(740,627)	(69,861,543)	812,503,131	2.30%
Marathon Asset Mgmt	848,490,603	2.51%	(1,335,704)	(67,049,251)	916,875,558	2.60%
NT MSCI World ex US	2,328,246,775	6.87%	0	(185,093,915)	2,513,340,690	7.12%
Small Cap	**$671,441,421**	**1.98%**	**$(329,835)**	**$(57,460,085)**	**$729,231,341**	**2.06%**
Mondrian	1,984,474	0.01%	0	(254,695)	2,239,169	0.01%
Fidelity	139,176	0.00%	0	(5,414)	144,589	0.00%
Principal Sm Cap Intl	344,027,412	1.02%	(329,835)	(30,036,986)	374,394,233	1.06%
Northern Trust Intl Small Cap	325,290,359	0.96%	0	(27,162,990)	352,453,349	1.00%
Emerging Markets	**$1,452,316,433**	**4.29%**	**$(1,707,486)**	**$(118,522,132)**	**$1,572,546,051**	**4.45%**
Lazard	740,774,021	2.19%	(619,508)	(72,623,428)	814,016,958	2.30%
Fisher Investments	711,542,412	2.10%	(1,087,978)	(45,898,703)	758,529,093	2.15%
EAFE Composite	**$17,192,715**	**0.05%**	**$(5)**	**$(1,153,274)**	**$18,345,995**	**0.05%**
BlackRock EAFE Index	1,326,161	0.00%	(5)	(203,308)	1,529,475	0.00%
Northern Trust EAFE	11,799,140	0.03%	0	(901,700)	12,700,840	0.04%
Dimensional Fund Advisors	158,415	0.00%	0	(12,195)	170,610	0.00%
Jarislowsky Fraser	310,347	0.00%	0	(24,141)	334,488	0.00%
NS Partners	98,322	0.00%	0	(7,648)	105,970	0.00%
Lazard Asset-Intl Transition	3,500,330	0.01%	0	(4,280)	3,504,611	0.01%
Total Equity	**$20,029,879,017**	**59.14%**	**$(313,079,697)**	**$(354,937,843)**	**$20,697,896,556**	**58.61%**

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 December 31, 2024, with the distribution as of September 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

	December 31, 2024				September 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Fixed Income	**$4,142,920,074**	**12.23%**	**$(751,983,044)**	**$(102,802,377)**	**$4,997,705,496**	**14.15%**
Short Duration	**$455,171,931**	**1.34%**	**$(750,564,807)**	**$9,443,782**	**$1,196,292,956**	**3.39%**
SIT Short Duration FI	455,171,931	1.34%	(750,564,807)	9,443,782	1,196,292,956	3.39%
Core Fixed Income	**$1,355,790,617**	**4.00%**	**$(519,167)**	**$(41,252,806)**	**$1,397,562,589**	**3.96%**
PIMCO	680,187,795	2.01%	(262,797)	(20,341,443)	700,792,035	1.98%
Northern Trust BB Agg	-145	(0.00%)	0	(3)	-142	(0.00%)
Manulife Asset Management	675,602,966	1.99%	(256,370)	(20,911,360)	696,770,696	1.97%
Core Plus	**$2,331,957,527**	**6.88%**	**$(899,070)**	**$(70,993,354)**	**$2,403,849,950**	**6.81%**
Loomis Sayles	1,145,570,145	3.38%	(494,322)	(38,793,860)	1,184,858,328	3.36%
Prudential Core Plus	1,186,387,381	3.50%	(404,748)	(32,199,493)	1,218,991,622	3.45%
Emerging Markets Debt	**$741,727,697**	**2.19%**	**$(858,689)**	**$(9,581,564)**	**$752,167,950**	**2.13%**
Wellington EMD	741,727,697	2.19%	(858,689)	(9,581,564)	752,167,950	2.13%
Global Fixed Income	**$1,568,209,603**	**4.63%**	**$(934,745)**	**$(17,052,311)**	**$1,586,196,659**	**4.49%**
PIMCO Global	783,184,387	2.31%	(469,924)	(6,194,201)	789,848,512	2.24%
AllianceBernstein Global	785,025,217	2.32%	(464,821)	(10,858,109)	796,348,147	2.25%
Total Fixed Income	**$6,452,857,375**	**19.05%**	**$(753,776,478)**	**$(129,436,252)**	**$7,336,070,104**	**20.77%**

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 December 31, 2024, with the distribution as of September 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

	December 31, 2024				September 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
REIT Composite	**$339,932,360**	**1.00%**	**$(369,318)**	**$(25,389,878)**	**$365,691,556**	**1.04%**
Centersquare	232,419,744	0.69%	(234,169)	(12,905,246)	245,559,160	0.70%
Cohen & Steers	107,512,616	0.32%	(135,149)	(12,484,631)	120,132,396	0.34%
Core Real Estate	**$1,606,716,696**	**4.74%**	**$22,336,085**	**$16,878,794**	**$1,567,501,818**	**4.44%**
Principal Capital	831,892,118	2.46%	(1,478,539)	10,508,852	822,861,805	2.33%
UBS Trumbull Property	359,404,040	1.06%	(450,447)	(349,927)	360,204,414	1.02%
JPMCB Strategic Property	390,420,538	1.15%	(734,929)	6,719,869	384,435,599	1.09%
TA Realty Core Property	25,000,000	0.07%	25,000,000	0	-	-
Core Plus Real Estate	**$218,076,916**	**0.64%**	**$(483,345)**	**$(1,859,516)**	**$220,419,777**	**0.62%**
UBS Trumbull Property G&I	218,076,916	0.64%	(483,345)	(1,859,516)	220,419,777	0.62%
Non-Core Real Estate	**$753,546,673**	**2.22%**	**$9,064,363**	**$5,796,938**	**$738,685,372**	**2.09%**
AEW Partners VI	758,873	0.00%	(1,694)	8,573	751,994	0.00%
AEW Partners VII	4,381,750	0.01%	(489,564)	991,325	3,879,989	0.01%
AEW Partners VIII	12,513,529	0.04%	(216,687)	931,209	11,799,006	0.03%
AEW Partners IX	69,237,784	0.20%	2,049,931	3,991,599	63,196,253	0.18%
AEW Partners X	4,198,593	0.01%	4,198,593	0	-	-
Heitman VP III	409,737	0.00%	0	4,814	404,923	0.00%
Heitman VP IV	31,053,184	0.09%	(587,162)	349,735	31,290,611	0.09%
Heitman VP V	63,877,391	0.19%	1,602,663	(296,788)	62,571,517	0.18%
AG Core Plus II	825	0.00%	0	3	822	0.00%
AG Core Plus III	136,328	0.00%	807	(1,696)	137,217	0.00%
AG Core Plus IV	16,481,266	0.05%	(84,130)	(152,591)	16,717,987	0.05%
AG Realty Fund X	49,713,639	0.15%	691,273	(695,682)	49,718,048	0.14%
AG Realty Value Fd XI	26,735,901	0.08%	3,344,784	408,458	22,982,660	0.07%
Invesco US Income Fund	166,117,999	0.49%	(353,133)	3,404,051	163,067,081	0.46%
Invesco VA Fund IV	1,878,871	0.01%	0	21,295	1,857,576	0.01%
Invesco VA Fund V	56,808,187	0.17%	(193,785)	(253,506)	57,255,478	0.16%
Invesco Real Estate US Fund VI	38,148,053	0.11%	1,858,730	(1,341,734)	37,631,058	0.11%
TA Associates Realty Fund X	813,067	0.00%	0	18,280	794,787	0.00%
TA Associates Realty Fund XI	489,681	0.00%	(2,358)	17,346	474,693	0.00%
TA Associates Realty Fund XII	84,351,264	0.25%	(8,906,172)	(1,512,446)	94,769,882	0.27%
TA Associates Realty Fund XIII	48,971,158	0.14%	6,418,855	600,812	41,951,491	0.12%
Westbrook RE Fund X	11,982,516	0.04%	(53,000)	(1,179,731)	13,215,247	0.04%
Westbrook RE Fund XI	64,487,077	0.19%	(213,587)	483,612	64,217,052	0.18%
Timber Composite	**$33,722,345**	**0.10%**	**$(118,750)**	**$(4,616,786)**	**$38,457,881**	**0.11%**
Hancock Timber Portfolio	33,722,345	0.10%	(118,750)	(4,616,786)	38,457,881	0.11%
Total Real Estate	**$2,951,994,990**	**8.72%**	**$30,429,034**	**$(9,190,448)**	**$2,930,756,403**	**8.30%**
Private Equity	**$3,851,561,839**	**11.37%**	**$(40,541,095)**	**$65,512,721**	**$3,826,590,213**	**10.84%**
Pathway PEF XXIII Ser 2008	213,269,418	0.63%	(227,259)	2,375,458	211,121,219	0.60%
Pathway PEF XXIII Ser 2013	638,011,539	1.88%	(23,785,372)	5,645,773	656,151,138	1.86%
Pathway PEF XXIII Ser 2016	1,308,142,104	3.86%	(926,250)	20,688,568	1,288,379,787	3.65%
Pathway PEF XXIII Ser 2021	403,814,630	1.19%	19,008,681	11,489,665	373,316,285	1.06%
Grosvenor Diversified Partners	124,479,367	0.37%	(41,194)	(2,502,717)	127,023,279	0.36%
Grosvenor Div Prtrs Ser 2014	605,105,587	1.79%	(45,062,758)	17,779,993	632,388,352	1.79%
Grosvenor Div Prtrs Ser 2018	546,375,204	1.61%	10,493,057	8,506,007	527,376,140	1.49%
Grosvenor Div Prtrs Ser 2024	12,363,989	0.04%	0	1,529,975	10,834,014	0.03%
Private Credit	**$96,050,619**	**0.28%**	**$11,970,629**	**$1,875,254**	**$82,204,736**	**0.23%**
Blue Owl Lending Ser 2023	60,103,257	0.18%	6,957,054	1,344,480	51,801,723	0.15%
Grosvenor Priv Credit Ser 2023	35,947,362	0.11%	5,013,575	530,774	30,403,013	0.09%
Cash	**$488,773,098**	**1.44%**	**$45,550,821**	**$746,250**	**$442,476,027**	**1.25%**
Total Fund	**$33,871,116,937**	**100.00%**	**$(1,020,448,525)**	**$(424,428,578)**	**$35,315,994,040**	**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 December 31, 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 December 31, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Domestic Equity	**2.05%**	**39**	**21.08%**	**62**	**7.31%**	**56**	**13.49%**	**34**	**12.01%**	**50**
Russell 3000 Index	2.63%	7	23.81%	12	8.01%	21	13.86%	20	12.55%	23
Pub Pln- Dom Equity	1.88%		21.55%		7.45%		13.12%		12.01%	
Large Cap Equity	**2.49%**	**44**	**24.98%**	**39**	**9.06%**	**38**	**14.49%**	**43**	**12.77%**	**51**
Russell 1000 Index	2.75%	42	24.51%	42	8.41%	50	14.28%	44	12.87%	48
Callan Large Cap	1.51%		21.66%		8.41%		13.28%		12.78%	
Managed Large Cap Equity	**3.13%**	**22**	**24.97%**	**49**	**9.73%**	**39**	**14.54%**	**50**	**12.27%**	**69**
Callan Large Cap Core	2.29%		24.87%		9.32%		14.58%		12.94%	
Eagle Capital**	3.13%	22	24.97%	49	9.73%	39	14.54%	50	13.38%	32
S&P 500 Index	2.41%	46	25.02%	48	8.94%	67	14.53%	51	13.10%	46
Callan Large Cap Core	2.29%		24.87%		9.32%		14.58%		12.94%	
Northern Trust S&P 500	**2.41%**	**46**	**24.95%**	**49**	**8.94%**	**67**	**14.52%**	**51**	**13.07%**	**46**
S&P 500 Index	2.41%	46	25.02%	48	8.94%	67	14.53%	51	13.10%	46
Callan Large Cap Core	2.29%		24.87%		9.32%		14.58%		12.94%	
Mid Cap Equity	**0.61%**	**43**	**11.83%**	**57**	**1.57%**	**77**	**9.98%**	**57**	**9.16%**	**60**
Russell MidCap Index	0.62%	43	15.34%	41	3.79%	59	9.92%	57	9.63%	57
Callan Mid Cap Core	(0.10%)		13.29%		5.77%		10.60%		10.05%	
Artisan Partners	5.46%	35	13.40%	64	(3.08%)	81	10.06%	48	10.81%	52
Russell MidCap Growth Idx	8.14%	19	22.10%	19	4.04%	6	11.47%	19	11.54%	30
Callan Mid Cap Growth	4.77%		14.95%		(0.16%)		9.88%		10.82%	
Victory Mid Cap Value	(3.53%)	88	10.72%	59	-		-		-	
Russell MidCap Value Idx	(1.75%)	58	13.07%	39	3.88%	71	8.59%	77	8.10%	71
Callan Mid Cap Value	(1.49%)		11.68%		5.27%		10.08%		8.91%	
Small Cap Equity	**0.75%**	**40**	**7.44%**	**83**	**2.86%**	**55**	**9.93%**	**43**	**10.34%**	**27**
Russell 2000 Index	0.33%	47	11.54%	51	1.24%	82	7.40%	87	7.82%	90
Callan Small Cap Core	0.15%		11.73%		3.14%		9.58%		9.37%	
Dimensional Fund Advisors	(0.16%)	40	7.12%	68	8.39%	12	13.49%	7	9.30%	27
Russell 2000 Value Index	(1.06%)	64	8.05%	63	1.94%	89	7.29%	84	7.14%	96
Callan Small Cap Value	(0.32%)		9.03%		4.33%		9.51%		8.68%	
Wellington Small Cap	(1.02%)	80	10.92%	58	4.40%	27	8.88%	63	10.64%	17
Russell 2000 Index	0.33%	47	11.54%	51	1.24%	82	7.40%	87	7.82%	90
Callan Small Cap Core	0.15%		11.73%		3.14%		9.58%		9.37%	
Riverbridge Partners	3.70%	29	4.55%	95	(4.68%)	88	6.91%	87	10.38%	54
Russell 2000 Growth Index	1.70%	52	15.15%	57	0.21%	48	6.86%	87	8.09%	97
Callan Small Cap Growth	1.80%		15.94%		(0.25%)		9.10%		10.57%	

**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 December 31, 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 December 31, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Global Equity	**(0.33%)**	**27**	**16.86%**	**40**	**4.28%**	**55**	**9.47%**	**53**	**9.48%**	**61**
Global Equity Benchmark (2)	(1.24%)	42	16.37%	42	4.90%	49	9.67%	50	8.97%	70
Acadian Global Equity	2.10%	7	23.71%	12	8.44%	11	13.76%	8	10.51%	36
Epoch Investments	0.70%	16	16.15%	43	3.51%	62	8.27%	75	8.57%	76
Harding-Loevner	(0.85%)	35	15.01%	47	0.19%	90	9.13%	58	10.40%	38
LSV Global Value	(3.34%)	65	12.52%	58	-		-		-	
MSCI ACWI Index	(0.99%)	38	17.49%	38	5.44%	41	10.06%	44	9.23%	66
Callan Global Equity	(2.22%)		14.40%		4.85%		9.66%		9.86%	
International Equity	**(7.37%)**	**22**	**6.00%**	**27**	**0.88%**	**52**	**4.86%**	**51**	**5.70%**	**52**
International Equity Benchmark (3)	(7.61%)	42	5.23%	40	0.50%	63	4.12%	71	4.91%	88
International Eq Custom BM (4)	(7.87%)	67	5.07%	42	0.24%	67	3.90%	78	4.91%	88
Pub Pln- Intl Equity	(7.70%)		4.95%		1.05%		4.90%		5.74%	
All Country ex US	**(7.25%)**	**51**	**5.86%**	**47**	**0.68%**	**61**	**6.42%**	**32**	**7.15%**	**29**
Arrowstreet Capital	(5.25%)	24	10.79%	19	6.98%	8	11.03%	4	9.14%	10
Baillie Gifford	(8.60%)	81	3.26%	74	(7.63%)	96	1.93%	93	5.36%	76
Marathon Asset Mgmt	(7.31%)	53	4.74%	60	1.55%	49	5.09%	55	-	
MSCI ACWI xUS IMI	(7.61%)	60	5.23%	54	0.50%	63	4.12%	76	4.91%	88
NT MSCI World ex US	(7.36%)	54	5.06%	57	-		-		-	
MSCI World xUS	(7.43%)	55	4.70%	60	1.91%	43	5.10%	54	5.26%	79
Non-U.S. Equity Database	(7.19%)		5.57%		1.50%		5.33%		6.13%	
Small Cap	**(7.88%)**	**56**	**1.47%**	**66**	**(3.80%)**	**61**	**0.82%**	**85**	**4.35%**	**93**
Principal Sm Cap Intl	(8.02%)	59	2.42%	55	(2.29%)	52	1.93%	74	-	
Northern Trust Intl Small Cap	(7.71%)	54	-		-		-		-	
MSCI World Small Cap x US	(7.86%)	56	2.76%	53	(2.77%)	55	2.87%	62	5.49%	82
Callan Intl Small Cap	(7.47%)		3.06%		(1.97%)		4.62%		6.84%	
Emerging Markets	**(7.54%)**	**63**	**8.64%**	**41**	**2.25%**	**17**	**3.80%**	**33**	**4.40%**	**70**
Lazard Emerging Markets	(8.92%)	86	9.10%	36	5.24%	4	4.59%	21	4.74%	56
Fisher Investments	(6.05%)	31	8.17%	43	(0.91%)	43	2.76%	46	-	
MSCI Emerging Mkts Idx	(8.01%)	72	7.50%	50	(1.92%)	51	1.70%	70	3.64%	85
Callan Emerging Broad	(6.91%)		7.47%		(1.76%)		2.50%		4.86%	
Total Equity	**(1.76%)**	**46**	**14.82%**	**49**	**4.45%**	**53**	**9.62%**	**52**	**9.28%**	**65**
MSCI ACWI IMI Index	(1.24%)	42	16.37%	42	4.90%	49	9.67%	50	9.00%	69
Total Equity Custom Benchmark (5)	(1.83%)	46	15.50%	45	4.72%	51	9.52%	53	9.10%	68
Callan Global Equity	(2.22%)		14.40%		4.85%		9.66%		9.86%	

(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 December 31, 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 December 31, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Domestic Fixed Income	**(2.21%)**	**39**	**2.31%**	**61**	**(1.78%)**	**68**	**0.58%**	**62**	**2.21%**	**43**
Blmbg Aggregate Index	(3.06%)	85	1.25%	87	(2.41%)	89	(0.33%)	96	1.35%	95
Pub Pln- Dom Fixed	(2.40%)		2.69%		(1.19%)		0.92%		2.10%	
Short Duration	**0.95%**	**7**	**5.15%**	**40**	**-**		**-**		**-**	
Blmbg Gov/Cred 1-3 Yr	(0.02%)	77	4.36%	91	1.69%	83	1.58%	95	1.63%	97
Callan Short Fixed Inc	0.15%		5.04%		2.26%		2.12%		2.10%	
SIT Short Duration FI	0.95%	7	5.15%	40	-		-		-	
Blmbg Gov/Cred 1-3 Yr	(0.02%)	77	4.36%	91	1.69%	83	1.58%	95	1.63%	97
Callan Short Fixed Inc	0.15%		5.04%		2.26%		2.12%		2.10%	
Core Fixed Income	**(2.95%)**	**56**	**2.15%**	**38**	**(1.98%)**	**57**	**0.07%**	**81**	**1.73%**	**69**
Blmbg Aggregate Index	(3.06%)	78	1.25%	93	(2.41%)	91	(0.33%)	95	1.35%	98
Callan Core Bond FI	(2.94%)		1.93%		(1.95%)		0.30%		1.86%	
PIMCO	(2.90%)	41	2.31%	25	(1.93%)	48	0.20%	61	1.86%	50
Manulife Asset Management	(3.00%)	64	1.99%	47	(2.16%)	78	0.09%	81	-	
Blmbg Aggregate Index	(3.06%)	78	1.25%	93	(2.41%)	91	(0.33%)	95	1.35%	98
Callan Core Bond FI	(2.94%)		1.93%		(1.95%)		0.30%		1.86%	
Core Plus	**(2.95%)**	**72**	**2.10%**	**81**	**(1.69%)**	**54**	**0.96%**	**35**	**2.60%**	**25**
Loomis Sayles	(3.27%)	89	1.15%	96	(1.79%)	66	0.92%	38	2.38%	44
Prudential Core Plus	(2.64%)	38	3.03%	31	(1.61%)	51	0.98%	34	2.82%	13
Blmbg Aggregate Index	(3.06%)	80	1.25%	95	(2.41%)	88	(0.33%)	98	1.35%	100
Callan Core Plus FI	(2.76%)		2.74%		(1.59%)		0.78%		2.31%	
Emerging Markets Debt	**(1.27%)**	**36**	**7.39%**	**46**	**0.20%**	**71**	**1.10%**	**56**	**4.00%**	**32**
Wellington EMD	(1.27%)	36	7.39%	46	0.20%	71	1.10%	56	4.00%	32
EMBI Global Dvsfd Index	(1.94%)	55	6.54%	54	(0.91%)	89	0.12%	74	3.13%	61
Emerging Debt Database	(1.62%)		7.11%		0.88%		1.27%		3.59%	
Global Fixed Income	**(1.07%)**	**35**	**3.11%**	**59**	**(0.52%)**	**61**	**0.75%**	**70**	**2.46%**	**54**
PIMCO Global	(0.78%)	27	3.48%	44	(0.26%)	48	0.99%	50	2.64%	42
AllianceBernstein Global	(1.36%)	74	2.74%	78	(0.79%)	65	0.51%	85	2.27%	73
Blmbg Global Agg (Hedged)	(0.95%)	30	3.40%	46	(0.55%)	61	0.48%	85	2.01%	92
Callan Global FI (Hedged)	(1.10%)		3.31%		(0.31%)		0.98%		2.50%	
Total Fixed Income	**(1.85%)**	**25**	**3.04%**	**37**	**(1.24%)**	**53**	**0.71%**	**55**	**2.47%**	**33**
Blmbg Aggregate Index	(3.06%)	85	1.25%	87	(2.41%)	89	(0.33%)	96	1.35%	95
Total Fixed Inc Custom Benchmark (6)	(2.42%)	51	2.31%	61	(1.77%)	68	(0.03%)	86	1.70%	86
Pub Pln- Dom Fixed	(2.40%)		2.69%		(1.19%)		0.92%		2.10%	

(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 December 31, 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 December 31, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
REIT Composite	**(6.95%)**	**6**	**8.34%**	**3**	**(2.14%)**	**8**	**4.27%**	**7**	**6.10%**	**10**
REIT Comp Custom Benchmark (7)	(7.70%)	11	5.04%	16	(4.04%)	24	1.69%	40	4.07%	64
Callan Global REITs	(9.27%)		2.70%		(4.75%)		1.41%		4.51%	
Centersquare	(5.26%)	16	11.62%	15	(0.57%)	12	6.13%	19	-	
FTSE NAREIT Equity Index	(6.21%)	39	8.73%	39	(2.20%)	30	4.27%	66	5.73%	72
Callan Real Estate REIT	(6.57%)		8.01%		(2.52%)		5.01%		6.37%	
Cohen & Steers	(10.40%)	85	2.02%	57	(4.76%)	51	1.73%	40	5.14%	27
EPRA/NAREIT Dev REIT Idx	(9.45%)	55	2.00%	57	(5.11%)	65	(0.04%)	82	3.19%	81
Callan Global REITs	(9.27%)		2.70%		(4.75%)		1.41%		4.51%	
Core Real Estate (Net)	**0.91%**	**26**	**(2.05%)**	**54**	**(3.75%)**	**69**	**1.31%**	**77**	**4.40%**	**75**
Principal Capital (Net)	1.10%	14	(1.82%)	51	(3.02%)	59	2.47%	51	5.74%	38
UBS Trumbull Property (Net)	(0.22%)	95	(2.13%)	55	(4.30%)	73	(0.65%)	91	2.30%	92
JPMCB Strategic Property (Net)	1.56%	10	(2.40%)	64	(4.70%)	80	0.83%	81	4.20%	78
NFI-ODCE Equal Weight Net	0.85%	33	(2.43%)	64	(3.11%)	67	2.24%	56	5.25%	61
NFI-ODCE Value Weight Net	0.96%	22	(2.27%)	62	(3.14%)	67	1.99%	59	4.94%	66
Callan OE Core Cmngld RE	0.72%		(1.72%)		(1.95%)		2.55%		5.49%	
Core Plus Real Estate (Net)	**(1.06%)**	**96**	**(5.58%)**	**89**	**(7.72%)**	**95**	**(1.05%)**	**94**	**5.12%**	**63**
UBS Trumbull Property G&I (Net)	(1.06%)	96	(5.58%)	89	(7.72%)	95	(1.05%)	94	5.12%	63
Callan OE Core Cmngld RE	0.72%		(1.72%)		(1.95%)		2.55%		5.49%	
Non-Core Real Estate	**0.78%**	**44**	**(1.91%)**	**48**	**(0.09%)**	**44**	**6.29%**	**38**	**10.59%**	**4**
AEW Partners VII	25.80%	1	36.95%	1	6.01%	12	0.26%	76	6.51%	43
AEW Partners VIII	7.91%	1	18.20%	1	12.92%	1	18.70%	1	-	
AEW Partners IX	6.26%	1	11.60%	1	10.12%	1	-		-	
Heitman VP IV	1.14%	33	1.63%	21	5.71%	15	11.17%	17	-	
Heitman VP V	(0.48%)	78	0.42%	32	6.48%	6	-		-	
AG Core Plus IV	(0.92%)	84	(10.22%)	84	(14.78%)	91	(5.09%)	88	-	
AG Realty Fund X	(1.39%)	91	(7.93%)	81	0.73%	41	11.72%	15	-	
AG Realty Value Fd XI	1.47%	22	0.29%	33	-		-		-	
Invesco US Income Fund	2.09%	7	0.76%	29	-		-		-	
Invesco VA Fund IV	1.15%	33	(15.84%)	94	(37.76%)	98	(22.62%)	96	-	
Invesco VA Fund V	(0.44%)	77	(25.55%)	98	(10.54%)	88	0.82%	73	-	
Invesco Real Estate US Fund VI	(3.39%)	98	(15.78%)	94	-		-		-	
TA Associates Realty Fund XII	(1.69%)	93	(2.27%)	51	6.15%	11	-		-	
TA Associates Realty Fund XIII	1.18%	33	20.41%	1	-		-		-	
Westbrook RE Fund X	(8.93%)	100	(33.48%)	99	(16.04%)	92	(6.87%)	89	-	
Westbrook RE Fund XI	0.75%	45	5.10%	3	12.02%	1	-		-	
NCREIF Total Index	0.90%	36	0.43%	32	(0.82%)	50	3.13%	51	5.66%	60
Callan Real Est Val Add	0.51%		(2.13%)		(0.79%)		3.26%		5.96%	
Timber Composite	**(12.00%)**		**(19.59%)**		**(4.76%)**		**1.95%**		**4.80%**	
Hancock Timber Portfolio	(12.00%)		(19.59%)		(4.76%)		1.95%		4.80%	
NCREIF Timberland Index	1.44%		6.97%		9.75%		7.78%		5.43%	
Total Real Estate	**(0.31%)**	**86**	**(1.00%)**	**52**	**(3.28%)**	**73**	**2.67%**	**50**	**5.73%**	**38**
Real Estate Benchmark (8)	0.90%	32	0.43%	37	(0.82%)	50	3.13%	42	5.66%	42
Callan Tot Real Est DB	0.61%		(0.83%)		(0.77%)		2.67%		5.54%	

* 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 Eql Wgt Net to 5/31/99; No Bench to 9/30/03; 50% NFI-ODCE Eql Wght Net and 50% US Select REIT Idx to 6/30/06; 80% NFI-ODCE Eql 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 Eql Wgt Net to 6/30/12; 15% NAREIT RE 50 Idx, 15% NCREIF Property Idx, 10% NCREIF Timberland Idx, 60% NFI-ODCE Eql 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 December 31, 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 December 31, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Private Equity	**1.71%**	**53**	**5.78%**	**74**	**2.56%**	**75**	**14.92%**	**9**	**15.14%**	**3**
Pathway PEF XXIII Ser 2008	1.13%	58	2.15%	93	(4.51%)	97	10.75%	30	13.14%	4
Pathway PEF XXIII Ser 2013	0.88%	60	1.84%	95	(1.76%)	95	13.36%	11	14.43%	3
Pathway PEF XXIII Ser 2016	1.61%	56	7.52%	54	3.99%	68	18.33%	5	-	
Pathway PEF XXIII Ser 2021	2.98%	30	11.55%	31	7.94%	35	-		-	
Grosvenor Diversified Partners	(1.97%)	84	(11.00%)	99	(8.48%)	98	1.78%	86	7.33%	23
Grosvenor Div Prtrs Ser 2014	2.86%	33	6.02%	67	6.04%	48	16.16%	8	12.42%	4
Grosvenor Div Prtrs Ser 2018	1.58%	56	9.51%	43	10.69%	23	14.28%	10	-	
Grosvenor Div Prtrs Ser 2024	14.12%	5	-		-		-		-	
Private Equity Benchmark (9)	2.68%	37	7.65%	53	(1.46%)	93	9.16%	32	12.03%	4
Callan Alterntive Inv DB	1.80%		8.14%		5.85%		7.74%		4.52%	
Private Credit	**2.05%**	**1**	**-**		**-**		**-**		**-**	
Blue Owl Lending Ser 2023	2.29%	1	-		-		-		-	
Grosvenor Priv Credit Ser 2023	1.72%	2	-		-		-		-	
Private Credit Benchmark (10)	3.80%	1	13.61%	1	-		-		-	
Callan Multi-Sector Cr	0.90%		9.22%		4.01%		4.77%		5.68%	
Cash	**0.44%**	**98**	**4.50%**	**94**	**3.95%**	**50**	**2.46%**	**76**	**1.77%**	**87**
FTSE 1 Mo T-Bill	1.20%	43	5.38%	56	3.98%	49	2.47%	74	1.74%	89
Callan Cash Database	1.16%		5.40%		3.95%		2.60%		2.03%	
Total Fund	**(1.25%)**	**63**	**9.75%**	**37**	**2.22%**	**77**	**7.71%**	**51**	**8.04%**	**24**
Policy Benchmark*	(1.21%)	61	10.38%	21	2.51%	72	7.11%	71	7.60%	52
Callan Public Fd V Lg DB	(0.77%)		9.35%		3.18%		7.73%		7.63%	

* 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	**8.04%**	**77**	**21.63%**	**40**	**19.45%**	**11**	**(14.29%)**	**66**	**46.83%**	**23**
Russell 3000 Index	9.03%	17	23.13%	17	18.95%	25	(13.87%)	58	44.16%	58
Pub Pln- Dom Equity	8.41%		21.21%		18.13%		(13.28%)		44.67%	
Large Cap Equity	**8.04%**	**38**	**25.72%**	**48**	**20.69%**	**41**	**(12.28%)**	**51**	**43.28%**	**47**
Russell 1000 Index	9.00%	21	23.88%	54	19.36%	47	(13.04%)	54	43.07%	47
Callan Large Cap	7.39%		25.12%		18.63%		(12.13%)		42.72%	
Managed Large Cap Equity	**5.63%**	**78**	**33.28%**	**5**	**28.20%**	**3**	**(22.51%)**	**98**	**56.73%**	**2**
Callan Large Cap Core	6.94%		26.57%		18.09%		(11.09%)		42.50%	
Eagle Capital	5.63%	78	33.28%	5	28.20%	3	(22.51%)	98	56.73%	2
S&P 500 Index	8.44%	25	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72
Callan Large Cap Core	6.94%		26.57%		18.09%		(11.09%)		42.50%	
Northern Trust S&P 500	**8.42%**	**25**	**24.52%**	**75**	**19.57%**	**30**	**(10.54%)**	**44**	**40.70%**	**72**
S&P 500 Index	8.44%	25	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72
Callan Large Cap Core	6.94%		26.57%		18.09%		(11.09%)		42.50%	
Mid Cap Equity	**6.87%**	**55**	**11.33%**	**54**	**14.69%**	**43**	**(18.26%)**	**90**	**48.23%**	**64**
Russell MidCap Index	9.89%	41	12.88%	44	14.92%	40	(17.30%)	88	49.80%	55
Callan Mid Cap Core	8.28%		11.46%		12.79%		(11.43%)		50.84%	
Artisan Partners	8.42%	65	11.28%	47	14.29%	88	(32.06%)	65	42.79%	55
Russell MidCap Growth Idx	15.22%	15	15.05%	16	23.13%	15	(29.57%)	62	43.77%	52
Callan Mid Cap Growth	9.85%		11.05%		18.51%		(27.91%)		44.22%	
Small Cap Equity	**9.32%**	**47**	**7.34%**	**77**	**16.93%**	**18**	**(19.24%)**	**66**	**60.83%**	**52**
Russell 2000 Index	9.64%	43	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44
Callan Small Cap Core	9.12%		11.48%		14.11%		(17.02%)		61.06%	
Dimensional Fund Advisors	7.65%	61	14.85%	30	16.81%	18	(7.13%)	19	84.61%	13
Russell 2000 Value Index	8.98%	39	10.90%	71	6.01%	85	(16.28%)	88	73.28%	40
Callan Small Cap Value	8.25%		13.22%		10.96%		(10.84%)		70.76%	
Wellington Small Cap	9.44%	45	9.84%	61	15.36%	36	(15.50%)	36	56.77%	70
Russell 2000 Index	9.64%	43	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44
Callan Small Cap Core	9.12%		11.48%		14.11%		(17.02%)		61.06%	
Riverbridge Partners	10.96%	35	(2.24%)	99	18.57%	40	(34.47%)	71	47.41%	72
Russell 2000 Growth Index	10.26%	38	9.14%	56	18.53%	40	(33.43%)	68	51.36%	64
Callan Small Cap Growth	9.09%		10.09%		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	**4.80%**	**37**	**20.73%**	**40**	**16.71%**	**59**	**(18.73%)**	**65**	**39.03%**	**60**
Global Equity Benchmark (2)	5.52%	26	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43
Acadian Global Equity	5.00%	33	28.93%	6	18.61%	39	(14.72%)	43	44.25%	26
Epoch Investments	5.89%	18	18.32%	49	12.30%	89	(15.44%)	46	37.17%	68
Harding-Loevner	4.43%	42	18.15%	50	17.04%	56	(27.96%)	90	40.41%	47
LSV Global Value	3.80%	53	17.44%	52	-		-		-	
MSCI ACWI Index	5.56%	25	19.38%	45	16.53%	60	(15.75%)	49	39.26%	58
Callan Global Equity	3.90%		18.13%		17.88%		(16.05%)		40.20%	
International Equity	**0.13%**	**19**	**12.57%**	**35**	**14.77%**	**45**	**(22.24%)**	**74**	**40.42%**	**31**
International Equity Benchmark (3)	(0.05%)	24	11.57%	51	12.47%	73	(19.86%)	40	37.18%	62
International Eq Custom BM (4)	(0.36%)	44	11.64%	49	12.31%	75	(20.49%)	44	37.07%	63
Pub Pln- Intl Equity	(0.44%)		11.62%		14.51%		(20.78%)		38.73%	
All Country ex US	**(0.17%)**	**59**	**12.06%**	**43**	**17.02%**	**46**	**(22.85%)**	**72**	**45.49%**	**18**
Arrowstreet Capital	(1.33%)	73	23.13%	5	17.10%	45	(13.51%)	18	49.25%	11
Baillie Gifford	0.48%	46	3.17%	94	14.51%	62	(35.34%)	97	41.81%	31
Marathon Asset Mgmt	0.12%	53	9.92%	65	16.77%	48	(19.34%)	53	45.22%	19
MSCI ACWI xUS IMI	(0.05%)	57	11.57%	50	12.47%	76	(19.86%)	57	37.18%	51
NT MSCI World ex US	(0.14%)	58	11.61%	49	17.89%	39	-		-	
MSCI World xUS	(0.24%)	61	11.22%	55	17.41%	43	(16.76%)	32	33.60%	72
Non-U.S. Equity Database	0.30%		11.54%		16.52%		(19.04%)		37.40%	
Small Cap	**0.67%**	**47**	**6.28%**	**70**	**9.75%**	**76**	**(25.18%)**	**56**	**39.42%**	**78**
Principal Sm Cap Intl	(0.43%)	62	9.34%	48	12.51%	46	(23.83%)	43	38.43%	80
Northern Trust Intl Small Cap	1.86%	36	-		-		-		-	
MSCI World Small Cap x US	1.76%	36	7.80%	64	10.05%	75	(23.02%)	41	42.28%	56
Callan Intl Small Cap	0.38%		9.16%		12.32%		(24.35%)		43.28%	
Emerging Markets	**0.87%**	**34**	**17.54%**	**20**	**10.02%**	**22**	**(26.68%)**	**48**	**44.11%**	**50**
Lazard Emerging Markets	(0.00%)	45	19.15%	14	13.69%	4	(17.37%)	9	42.41%	64
Fisher Investments	1.80%	19	15.70%	29	6.07%	43	(34.76%)	92	45.48%	38
MSCI Emerging Mkts Idx	0.02%	45	12.55%	51	1.75%	79	(25.28%)	41	40.90%	75
Callan Emerging Broad	(0.42%)		12.71%		4.66%		(27.16%)		44.27%	
Total Equity	**4.61%**	**39**	**18.21%**	**49**	**17.29%**	**54**	**(18.07%)**	**62**	**43.04%**	**32**
MSCI ACWI IMI	5.52%	26	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43
Total Equity Custom Benchmark (5)	5.10%	32	17.95%	51	16.14%	62	(16.54%)	55	41.00%	42
Callan Global Equity	3.90%		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	**2.04%**	**79**	**3.95%**	**54**	**0.26%**	**53**	**(10.70%)**	**72**	**2.09%**	**51**
Blmbg Aggregate Index	1.98%	80	2.63%	85	(0.94%)	86	(10.29%)	65	(0.33%)	96
Pub Pln- Dom Fixed	2.47%		4.05%		0.45%		(9.51%)		2.22%	
Short Duration	**2.97%**	**77**	**-**		**-**		**-**		**-**	
SIT Short Duration FI	2.97%	77	-		-		-		-	
Callan Short Fixed Inc	3.15%		5.64%		1.49%		(3.57%)		1.19%	
Core Fixed Income	**2.17%**	**51**	**3.58%**	**36**	**(0.80%)**	**78**	**(10.28%)**	**52**	**0.25%**	**81**
Blmbg Aggregate Index	1.98%	90	2.63%	90	(0.94%)	83	(10.29%)	54	(0.33%)	94
Callan Core Bond FI	2.18%		3.34%		(0.34%)		(10.26%)		1.14%	
PIMCO	2.22%	38	3.68%	31	(0.56%)	64	(10.42%)	62	0.22%	81
Manulife Asset Management	2.12%	63	3.38%	46	(1.15%)	92	(10.22%)	45	0.83%	62
Blmbg Aggregate Index	1.98%	90	2.63%	90	(0.94%)	83	(10.29%)	54	(0.33%)	94
Callan Core Bond FI	2.18%		3.34%		(0.34%)		(10.26%)		1.14%	
Core Plus	**1.90%**	**92**	**4.09%**	**61**	**1.11%**	**33**	**(11.06%)**	**59**	**3.70%**	**36**
Loomis Sayles	1.45%	100	2.75%	95	1.40%	21	(10.37%)	32	3.41%	44
Prudential Core Plus	2.33%	62	5.43%	15	0.83%	44	(11.77%)	81	3.98%	31
Blmbg Aggregate Index	1.98%	91	2.63%	95	(0.94%)	88	(10.29%)	30	(0.33%)	99
Callan Core Plus FI	2.44%		4.31%		0.42%		(10.87%)		3.33%	
Emerging Markets Debt	**4.87%**	**27**	**10.06%**	**39**	**8.80%**	**57**	**(21.10%)**	**72**	**8.86%**	**65**
Wellington EMD	4.87%	27	10.06%	39	8.80%	57	(21.10%)	72	8.86%	65
EMBI Global Dvsfd Index	4.10%	48	9.23%	49	7.39%	71	(21.22%)	74	7.53%	82
Emerging Debt Database	3.99%		8.86%		9.42%		(18.60%)		9.90%	
Global Fixed Income	**2.72%**	**75**	**5.18%**	**52**	**0.66%**	**62**	**(9.45%)**	**44**	**2.51%**	**69**
PIMCO Global	2.83%	72	5.29%	49	0.43%	67	(8.86%)	35	2.65%	62
AllianceBernstein Global	2.60%	84	5.06%	56	0.87%	54	(10.04%)	63	2.36%	70
Blmbg Global Agg (Hedged)	3.26%	49	4.20%	77	0.52%	65	(8.94%)	36	0.08%	91
Callan Global FI (Hedged)	3.24%		5.25%		0.95%		(9.66%)		3.28%	
Total Fixed Income	**2.49%**	**48**	**4.93%**	**25**	**1.19%**	**32**	**(11.49%)**	**92**	**2.87%**	**43**
Blmbg Aggregate Index	1.98%	80	2.63%	85	(0.94%)	86	(10.29%)	65	(0.33%)	96
Total Fixed Inc Custom Benchmark (6)	2.51%	47	3.67%	62	0.25%	53	(11.09%)	82	0.55%	74
Pub Pln- Dom Fixed	2.47%		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	**8.64%**	**3**	**7.63%**	**26**	**(0.78%)**	**13**	**(8.31%)**	**4**	**38.88%**	**10**
REIT Comp Custom Benchmark (7)	7.02%	12	6.43%	53	(2.12%)	26	(9.60%)	13	37.41%	27
Callan Global REITs	4.99%		6.61%		(3.04%)		(11.97%)		34.78%	
Centersquare	11.21%	10	8.40%	26	0.22%	37	(4.62%)	28	38.56%	34
FTSE NAREIT Equity Index	8.88%	36	7.79%	37	(0.13%)	42	(6.27%)	50	38.02%	38
Callan Real Estate REIT	8.35%		7.13%		(0.71%)		(6.27%)		36.65%	
Cohen & Steers	3.47%	83	6.31%	54	(1.99%)	24	(12.02%)	50	39.21%	6
EPRA/NAREIT Dev REIT Idx	5.34%	38	5.66%	70	(3.59%)	64	(12.75%)	64	34.83%	50
Callan Global REITs	4.99%		6.61%		(3.04%)		(11.97%)		34.78%	
Core Real Estate (Net)	**1.20%**	**21**	**(10.00%)**	**62**	**(11.61%)**	**75**	**26.63%**	**59**	**6.04%**	**82**
Principal Capital (Net)	0.96%	35	(8.60%)	51	(10.41%)	62	27.55%	57	8.22%	52
UBS Trumbull Property (Net)	0.68%	48	(8.02%)	45	(15.01%)	88	24.01%	68	1.53%	97
JPMCB Strategic Property (Net)	2.19%	7	(14.43%)	84	(10.92%)	67	27.40%	58	6.00%	82
NFI-ODCE Equal Weight Net	0.78%	41	(10.32%)	65	(10.51%)	65	28.90%	47	7.97%	55
NFI-ODCE Value Weight Net	0.99%	34	(9.99%)	62	(10.73%)	66	28.31%	49	7.09%	72
Callan OE Core Cmngld RE	0.48%		(8.54%)		(9.20%)		28.14%		8.44%	
Core Plus Real Estate (Net)	**(0.50%)**	**81**	**(16.11%)**	**89**	**(17.11%)**	**95**	**30.22%**	**41**	**11.00%**	**23**
UBS Trumbull Property G&I (Net)	(0.50%)	81	(16.11%)	89	(17.11%)	95	30.22%	41	11.00%	23
Callan OE Core Cmngld RE	0.48%		(8.54%)		(9.20%)		28.14%		8.44%	
Non-Core Real Estate	**2.26%**	**30**	**(8.44%)**	**51**	**(5.91%)**	**50**	**32.05%**	**44**	**16.03%**	**44**
AEW Partners VI	-		-		-		-		29.35%	30
AEW Partners VII	28.42%	1	(4.09%)	39	(5.56%)	49	1.94%	91	(11.07%)	94
AEW Partners VIII	7.53%	2	12.84%	10	6.18%	16	45.41%	27	25.48%	34
AEW Partners IX	7.41%	2	7.11%	11	9.76%	15	13.38%	80	-	
Heitman VP III	-		-		-		2.65%	90	21.98%	36
Heitman VP IV	1.66%	38	1.41%	18	(1.39%)	36	41.38%	28	24.73%	35
Heitman VP V	0.35%	53	(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	(3.16%)	88	(19.90%)	79	(18.93%)	71	8.52%	83	13.15%	47
AG Realty Fund X	(4.44%)	90	(7.37%)	46	(1.07%)	33	47.73%	26	32.03%	28
AG Realty Value Fd XI	3.50%	8	7.15%	11	-		-		-	
Invesco US Income Fund	2.83%	14	(8.03%)	49	-		-		-	
Invesco VA Fund IV	1.09%	50	(36.72%)	95	(63.21%)	100	10.98%	81	0.51%	82
Invesco VA Fund V	(1.67%)	86	(28.54%)	92	(7.70%)	52	30.32%	49	14.83%	45
Invesco Real Estate US Fund VI	(5.54%)	93	(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	(1.78%)	86	(4.71%)	41	(4.37%)	46	69.76%	9	28.12%	31
TA Associates Realty Fund XIII	31.25%	1	-		-		-		-	
Westbrook RE Fund X	(13.33%)	99	(30.60%)	93	(5.98%)	50	11.51%	81	11.95%	48
Westbrook RE Fund XI	3.11%	9	4.94%	13	14.37%	14	31.40%	47	-	
NCREIF Total Index	1.69%	38	(5.53%)	43	(6.60%)	51	21.45%	72	7.37%	70
Callan Real Est Val Add	1.08%		(8.21%)		(6.00%)		29.99%		10.97%	
Timber Composite	**(7.82%)**		**(10.88%)**		**(10.82%)**		**22.11%**		**20.32%**	
Hancock Timber Portfolio	(7.82%)		(10.88%)		(10.82%)		22.11%		20.32%	
NCREIF Timberland Index	3.00%		9.84%		11.13%		12.01%		3.10%	
Total Real Estate	**2.24%**	**21**	**(8.43%)**	**69**	**(9.90%)**	**75**	**22.82%**	**48**	**13.62%**	**38**
Real Estate Benchmark (8)	1.69%	30	(5.53%)	58	(6.60%)	64	21.45%	52	7.37%	70
Callan Tot Real Est DB	0.91%		(3.47%)		(0.68%)		22.52%		9.89%	

* 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.

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	
Private Equity	**3.09%**	**56**	**4.64%**	**77**	**(3.76%)**	**56**	**26.03%**	**17**	**58.87%**	**4**
Pathway PEF XXIII Ser 2008	1.52%	62	3.05%	81	(16.04%)	97	13.47%	48	81.56%	3
Pathway PEF XXIII Ser 2013	0.45%	70	2.49%	82	(7.12%)	72	18.67%	36	66.84%	3
Pathway PEF XXIII Ser 2016	3.63%	51	7.95%	56	(3.46%)	56	30.48%	10	63.16%	4
Pathway PEF XXIII Ser 2021	5.37%	28	11.75%	38	(2.45%)	55	3.16%	67	-	
Grosvenor DIversified Partners	(4.69%)	94	(19.67%)	99	(1.27%)	53	14.26%	47	41.43%	32
Grosvenor Div Prtrs Ser 2014	4.39%	44	1.99%	83	1.02%	47	41.96%	6	43.88%	30
Grosvenor Div Prtrs Ser 2018	4.35%	45	10.15%	45	5.89%	32	29.03%	10	16.63%	55
Private Equity Benchmark (9)	3.71%	51	5.05%	74	6.93%	30	(7.04%)	88	44.13%	30
Callan Alterntive Inv DB	4.13%		9.46%		(0.79%)		9.29%		19.98%	
Private Credit	**3.52%**	**96**	**-**		**-**		**-**		**-**	
Blue Owl Lending Ser 2023	3.16%	98	-		-		-		-	
Grosvenor Priv Credit Ser 2023	3.47%	96	-		-		-		-	
Private Credit Benchmark (10)	5.69%	26	-		-		-		-	
Callan Multi-Sector Cr	4.73%		11.51%		8.54%		(8.89%)		15.58%	
Cash	**1.83%**	**97**	**5.70%**	**43**	**4.10%**	**19**	**0.31%**	**18**	**0.07%**	**98**
FTSE 1 Mo T-Bill	2.58%	81	5.56%	69	3.70%	54	0.15%	31	0.06%	98
Callan Cash Database	2.72%		5.66%		3.82%		(0.36%)		0.49%	
Total Fund	**3.75%**	**47**	**10.78%**	**30**	**7.76%**	**46**	**(8.54%)**	**80**	**32.71%**	**7**
Policy Benchmark*	4.07%	25	11.27%	23	9.72%	14	(10.94%)	97	28.17%	45
Callan Public Fd V Lg DB	3.73%		10.39%		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 12/2024		1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024	
Domestic Equity	**2.05%**	**39**	**5.87%**	**84**	**2.01%**	**57**	**9.86%**	**36**
Russell 3000 Index	2.63%	7	6.23%	68	3.22%	15	10.02%	29
Pub Pln- Dom Equity	1.88%		6.48%		2.16%		9.56%	
Large Cap Equity	**2.49%**	**44**	**5.42%**	**48**	**4.37%**	**37**	**10.83%**	**58**
Russell 1000 Index	2.75%	42	6.08%	39	3.57%	45	10.30%	64
Callan Large Cap	1.51%		5.18%		2.51%		11.41%	
Managed Large Cap Equity	**3.13%**	**22**	**2.42%**	**96**	**4.81%**	**30**	**12.88%**	**27**
Callan Large Cap Core	2.29%		5.09%		4.08%		11.82%	
Eagle Capital	3.13%	22	2.42%	96	4.81%	30	12.88%	27
S&P 500 Index	2.41%	46	5.89%	28	4.28%	47	10.56%	71
Callan Large Cap Core	2.29%		5.09%		4.08%		11.82%	
Northern Trust S&P 500	**2.41%**	**46**	**5.87%**	**28**	**4.28%**	**47**	**10.52%**	**72**
S&P 500 Index	2.41%	46	5.89%	28	4.28%	47	10.56%	71
Callan Large Cap Core	2.29%		5.09%		4.08%		11.82%	
Mid Cap Equity	**0.61%**	**43**	**6.22%**	**83**	**(4.65%)**	**77**	**9.75%**	**45**
Russell MidCap Index	0.62%	43	9.21%	27	(3.35%)	38	8.60%	57
Callan Mid Cap Core	(0.10%)		8.17%		(3.84%)		9.56%	
Artisan Partners	5.46%	35	2.81%	88	(5.46%)	81	10.63%	34
Russell MidCap Growth Idx	8.14%	19	6.54%	33	(3.21%)	27	9.50%	48
Callan Mid Cap Growth	4.77%		5.84%		(3.76%)		9.35%	
Victory Mid Cap Value	(3.53%)	88	9.32%	47	(3.96%)	36	9.32%	39
Russell MidCap Value Idx	(1.75%)	58	10.08%	31	(3.40%)	25	8.23%	64
Callan Mid Cap Value	(1.49%)		9.12%		(4.32%)		8.66%	
Small Cap Equity	**0.75%**	**40**	**8.50%**	**55**	**(5.36%)**	**90**	**3.84%**	**85**
Russell 2000 Index	0.33%	47	9.27%	38	(3.28%)	55	5.18%	65
Callan Small Cap Core	0.15%		8.90%		(3.12%)		5.77%	
Dimensional Fund Advisors	(0.16%)	40	7.82%	71	(3.56%)	54	3.18%	86
Russell 2000 Value Index	(1.06%)	64	10.15%	24	(3.64%)	55	2.90%	91
Callan Small Cap Value	(0.32%)		8.37%		(3.48%)		5.00%	
Wellington Small Cap	(1.02%)	80	10.57%	15	(3.00%)	49	4.49%	77
Russell 2000 Index	0.33%	47	9.27%	38	(3.28%)	55	5.18%	65
Callan Small Cap Core	0.15%		8.90%		(3.12%)		5.77%	
Riverbridge Partners	3.70%	29	7.01%	50	(9.51%)	97	4.11%	89
Russell 2000 Growth Index	1.70%	52	8.41%	29	(2.92%)	58	7.58%	49
Callan Small Cap Growth	1.80%		7.01%		(2.40%)		7.46%	

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 12/2024		1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024	
Global Equity	**(0.33%)**	**27**	**5.15%**	**65**	**2.32%**	**43**	**8.98%**	**45**
Global Equity Benchmark (2)	(1.24%)	42	6.84%	33	2.38%	43	7.72%	57
Acadian Global Equity	2.10%	7	2.84%	94	4.21%	12	13.05%	8
Epoch Investments	0.70%	16	5.16%	65	2.59%	38	6.92%	67
Harding-Loevner	(0.85%)	35	5.32%	61	3.00%	31	6.93%	67
LSV Global Value	(3.34%)	65	7.39%	25	(0.52%)	77	8.97%	45
MSCI ACWI Index	(0.99%)	38	6.61%	37	2.87%	32	8.20%	54
Callan Global Equity	(2.22%)		5.80%		1.89%		8.48%	
International Equity	**(7.37%)**	**22**	**8.10%**	**28**	**0.84%**	**50**	**4.98%**	**44**
International Equity Benchmark (3)	(7.61%)	42	8.18%	27	0.92%	48	4.33%	64
International Eq Custom BM (4)	(7.87%)	67	8.15%	27	1.14%	42	4.27%	67
Pub Pln- Intl Equity	(7.70%)		7.81%		0.84%		4.76%	
All Country ex US	**(7.25%)**	**51**	**7.63%**	**52**	**(0.02%)**	**56**	**6.06%**	**35**
Arrowstreet Capital	(5.25%)	24	4.13%	92	1.74%	23	10.37%	6
Baillie Gifford	(8.60%)	81	9.94%	18	(0.67%)	70	3.46%	76
Marathon Asset Mgmt	(7.31%)	53	8.02%	44	(0.66%)	70	5.31%	48
MSCI ACWI xUS IMI	(7.61%)	60	8.18%	40	0.92%	38	4.33%	65
NT MSCI World ex US	(7.36%)	54	7.80%	49	(0.44%)	65	5.68%	43
MSCI World xUS	(7.43%)	55	7.76%	50	(0.60%)	69	5.59%	45
Non-U.S. Equity Database	(7.19%)		7.75%		0.29%		5.23%	
Small Cap	**(7.88%)**	**56**	**9.28%**	**44**	**(1.35%)**	**54**	**2.18%**	**69**
Principal Sm Cap Intl	(8.02%)	59	8.25%	66	(2.37%)	78	5.37%	39
Northern Trust Intl Small Cap	(7.71%)	54	10.36%	21	-		-	
MSCI World Small Cap x US	(7.86%)	56	10.45%	21	(1.56%)	67	2.58%	67
Callan Intl Small Cap	(7.47%)		9.02%		(1.20%)		4.59%	
Emerging Markets	**(7.54%)**	**63**	**9.10%**	**21**	**4.85%**	**48**	**2.72%**	**60**
Lazard Emerging Markets	(8.92%)	86	9.79%	13	6.29%	21	2.65%	61
Fisher Investments	(6.05%)	31	8.35%	29	3.37%	68	2.80%	60
MSCI Emerging Mkts Idx	(8.01%)	72	8.72%	26	5.00%	44	2.37%	68
Callan Emerging Broad	(6.91%)		7.01%		4.66%		3.41%	
Total Equity	**(1.76%)**	**46**	**6.49%**	**39**	**1.67%**	**54**	**7.95%**	**56**
MSCI ACWI IMI	(1.24%)	42	6.84%	33	2.38%	43	7.72%	57
Total Equity Custom Benchmark (5)	(1.83%)	46	7.05%	30	2.22%	46	7.51%	59
Callan Global Equity	(2.22%)		5.80%		1.89%		8.48%	

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 12/2024		1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024	
Domestic Fixed Income	**(2.21%)**	**39**	**4.34%**	**85**	**0.50%**	**38**	**(0.24%)**	**52**
Blmbg Aggregate Index	(3.06%)	85	5.20%	31	0.07%	89	(0.78%)	89
Pub Pln- Dom Fixed	(2.40%)		4.82%		0.37%		(0.18%)	
Short Duration	**0.95%**	**7**	**2.00%**	**95**	**1.35%**	**12**	**0.76%**	**45**
Blmbg Gov/Cred 1-3 Yr	(0.02%)	77	2.96%	66	0.95%	86	0.42%	87
Callan Short Fixed Inc	0.15%		3.02%		1.09%		0.73%	
SIT Short Duration FI	0.95%	7	2.00%	95	1.35%	12	0.76%	45
Blmbg Gov/Cred 1-3 Yr	(0.02%)	77	2.96%	66	0.95%	86	0.42%	87
Callan Short Fixed Inc	0.15%		3.02%		1.09%		0.73%	
Core Fixed Income	**(2.95%)**	**56**	**5.28%**	**51**	**0.40%**	**9**	**(0.42%)**	**42**
Blmbg Aggregate Index	(3.06%)	78	5.20%	74	0.07%	93	(0.78%)	93
Callan Core Bond FI	(2.94%)		5.29%		0.26%		(0.45%)	
PIMCO	(2.90%)	41	5.28%	51	0.40%	8	(0.32%)	33
Manulife Asset Management	(3.00%)	64	5.28%	50	0.39%	11	(0.53%)	55
Blmbg Aggregate Index	(3.06%)	78	5.20%	74	0.07%	93	(0.78%)	93
Callan Core Bond FI	(2.94%)		5.29%		0.26%		(0.45%)	
Core Plus	**(2.95%)**	**72**	**5.00%**	**91**	**0.25%**	**78**	**(0.05%)**	**43**
Loomis Sayles	(3.27%)	89	4.88%	91	(0.03%)	96	(0.26%)	67
Prudential Core Plus	(2.64%)	38	5.11%	88	0.53%	24	0.14%	20
Blmbg Aggregate Index	(3.06%)	80	5.20%	77	0.07%	96	(0.78%)	94
Callan Core Plus FI	(2.76%)		5.38%		0.42%		(0.11%)	
Emerging Markets Debt	**(1.27%)**	**36**	**6.23%**	**58**	**0.22%**	**52**	**2.18%**	**45**
Wellington EMD	(1.27%)	36	6.23%	58	0.22%	52	2.18%	45
EMBI Global Dvsfd Index	(1.94%)	55	6.15%	60	0.30%	48	2.04%	49
Emerging Debt Database	(1.62%)		6.54%		0.26%		2.00%	
Global Fixed Income	**(1.07%)**	**35**	**3.83%**	**76**	**0.13%**	**56**	**0.25%**	**43**
PIMCO Global	(0.78%)	27	3.65%	80	0.33%	33	0.29%	41
AllianceBernstein Global	(1.36%)	74	4.01%	68	(0.07%)	70	0.21%	49
Blmbg Global Agg (Hedged)	(0.95%)	30	4.24%	60	0.12%	57	0.01%	71
Callan Global FI (Hedged)	(1.10%)		4.52%		0.18%		0.19%	
Total Fixed Income	**(1.85%)**	**25**	**4.42%**	**80**	**0.39%**	**47**	**0.15%**	**27**
Blmbg Aggregate Index	(3.06%)	85	5.20%	31	0.07%	89	(0.78%)	89
Total Fixed Inc Custom Benchmark (6)	(2.42%)	51	5.05%	41	0.10%	85	(0.30%)	56
Pub Pln- Dom Fixed	(2.40%)		4.82%		0.37%		(0.18%)	

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 12/2024		1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024	
REIT Composite	**(6.95%)**	**6**	**16.75%**	**21**	**0.00%**	**4**	**(0.27%)**	**32**
REIT Comp Custom Benchmark (7)	(7.70%)	11	15.95%	50	(1.15%)	31	(0.71%)	50
Callan Global REITs	(9.27%)		15.92%		(1.69%)		(0.75%)	
Centersquare	(5.26%)	16	17.38%	18	0.71%	33	(0.34%)	31
FTSE NAREIT Equity Index	(6.21%)	39	16.09%	39	0.06%	52	(0.20%)	23
Callan Real Estate REIT	(6.57%)		15.82%		0.14%		(0.90%)	
Cohen & Steers	(10.40%)	85	15.48%	62	(1.39%)	36	(0.01%)	25
EPRA/NAREIT Dev REIT Idx	(9.45%)	55	16.33%	30	(2.15%)	66	(1.05%)	69
Callan Global REITs	(9.27%)		15.92%		(1.69%)		(0.75%)	
Core Real Estate (Net)	**0.91%**	**26**	**0.29%**	**35**	**(0.41%)**	**55**	**(2.81%)**	**72**
Principal Capital (Net)	1.10%	14	(0.13%)	59	(0.85%)	65	(1.93%)	61
UBS Trumbull Property (Net)	(0.22%)	95	0.90%	17	(1.02%)	74	(1.79%)	54
JPMCB Strategic Property (Net)	1.56%	10	0.62%	24	1.12%	11	(5.55%)	90
NFI-ODCE Equal Weight Net	0.85%	33	(0.07%)	56	(0.82%)	64	(2.38%)	66
NFI-ODCE Value Weight Net	0.96%	22	0.02%	52	(0.66%)	61	(2.58%)	70
Callan OE Core Cmngld RE	0.72%		0.05%		(0.26%)		(1.59%)	
Core Plus Real Estate (Net)	**(1.06%)**	**96**	**0.57%**	**26**	**(2.40%)**	**93**	**(2.77%)**	**71**
UBS Trumbull Property G&I (Net)	(1.06%)	96	0.57%	26	(2.40%)	93	(2.77%)	71
Callan OE Core Cmngld RE	0.72%		0.05%		(0.26%)		(1.59%)	
Non-Core Real Estate	**0.78%**	**44**	**1.48%**	**15**	**0.12%**	**32**	**(4.20%)**	**80**
AEW Partners VII	25.80%	1	2.08%	10	6.83%	12	(0.17%)	39
AEW Partners VIII	7.91%	1	(0.35%)	62	2.80%	13	6.93%	9
AEW Partners IX	6.26%	1	1.08%	20	(0.24%)	44	4.15%	11
Heitman VP IV	1.14%	33	0.52%	41	(0.07%)	37	0.04%	32
Heitman VP V	(0.48%)	78	0.83%	28	1.87%	14	(1.76%)	57
AG Core Plus III	-		-		0.42%	26	5.56%	10
AG Core Plus IV	(0.92%)	84	(2.27%)	74	(5.86%)	85	(1.52%)	55
AG Realty Fund X	(1.39%)	91	(3.09%)	79	(2.55%)	71	(1.13%)	52
AG Realty Value Fd XI	1.47%	22	2.00%	10	(0.47%)	48	(2.65%)	71
Invesco US Income Fund	2.09%	7	0.73%	31	(0.24%)	44	(1.78%)	57
Invesco VA Fund IV	1.15%	33	(0.05%)	59	(4.38%)	83	(12.93%)	97
Invesco VA Fund V	(0.44%)	77	(1.23%)	67	(0.73%)	56	(23.73%)	99
Invesco Real Estate US Fund VI	(3.39%)	98	(2.22%)	74	3.00%	13	(13.44%)	97
TA Associates Realty Fund XI	-		-		3.06%	13	0.56%	25
TA Associates Realty Fund XII	(1.69%)	93	(0.09%)	60	0.94%	19	(1.44%)	55
TA Associates Realty Fund XIII	1.18%	33	29.72%	1	(1.58%)	67	(6.79%)	86
Westbrook RE Fund X	(8.93%)	100	(4.83%)	86	(7.49%)	87	(17.03%)	98
Westbrook RE Fund XI	0.75%	45	2.33%	8	3.14%	13	(1.16%)	52
NCREIF Total Index	0.90%	36	0.78%	29	(0.26%)	44	(0.98%)	51
Callan Real Est Val Add	0.51%		0.04%		(0.55%)		(0.93%)	
Timber Composite	**(12.00%)**		**4.76%**		**(9.38%)**		**(3.74%)**	
Hancock Timber Portfolio	(12.00%)		4.76%		(9.38%)		(3.74%)	
NCREIF Timberland Index	1.44%		1.53%		1.71%		2.12%	
Total Real Estate	**(0.31%)**	**86**	**2.56%**	**18**	**(0.41%)**	**63**	**(2.76%)**	**81**
Real Estate Benchmark (8)	0.90%	32	0.78%	41	(0.26%)	61	(0.98%)	62
Callan Tot Real Est DB	0.61%		0.56%		0.30%		(0.04%)	

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.

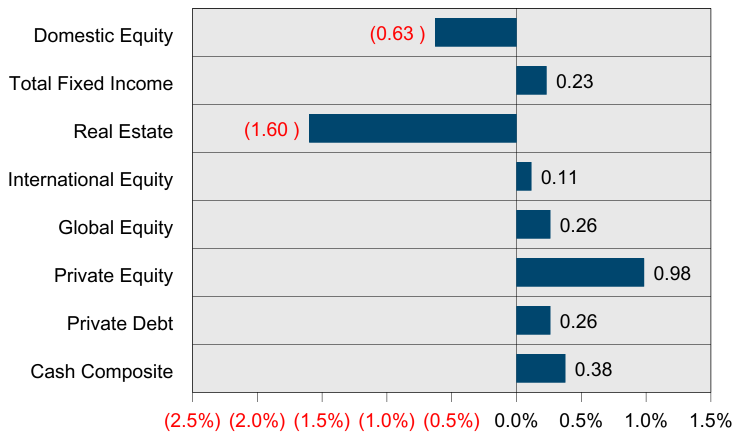
	1/4 Year Ended 12/2024		1/4 Year Ended 9/2024		1/4 Year Ended 6/2024		1/4 Year Ended 3/2024	
Private Equity	**1.71%**	**53**	**1.36%**	**56**	**1.12%**	**63**	**1.47%**	**83**
Pathway PEF XXIII Ser 2008	1.13%	58	0.40%	82	0.60%	74	0.01%	94
Pathway PEF XXIII Ser 2013	0.88%	60	(0.42%)	83	(0.32%)	87	1.71%	82
Pathway PEF XXIII Ser 2016	1.61%	56	1.99%	51	2.86%	30	0.86%	92
Pathway PEF XXIII Ser 2021	2.98%	30	2.32%	43	3.63%	19	2.16%	73
Grosvenor Diversified Partners	(1.97%)	84	(2.77%)	91	(2.51%)	93	(4.22%)	98
Grosvenor Div Prtrs Ser 2014	2.86%	33	1.48%	54	(1.39%)	88	3.00%	61
Grosvenor Div Prtrs Ser 2018	1.58%	56	2.73%	35	1.96%	52	2.92%	62
Grosvenor Div Prtrs Ser 2024	14.12%	5	-		-		-	
Private Equity Benchmark (9)	2.68%	37	1.00%	63	1.17%	63	2.61%	65
Callan Alterntive Inv DB	1.80%		2.03%		2.02%		3.94%	
Private Credit	**2.05%**	**1**	**1.44%**	**99**	**1.79%**	**38**	**-**	
Blue Owl Lending Ser 2023	2.29%	1	0.85%	100	1.12%	62	-	
Grosvenor Priv Credit Ser 2023	1.72%	2	1.72%	99	2.14%	26	-	
Private Credit Benchmark (10)	3.80%	1	1.82%	99	1.97%	31	5.42%	4
Callan Multi-Sector Cr	0.90%		3.83%		1.52%		2.67%	
Cash	**0.44%**	**98**	**1.39%**	**72**	**1.24%**	**76**	**1.36%**	**40**
FTSE 1 Mo T-Bill	1.20%	43	1.36%	83	1.35%	42	1.36%	40
Callan Cash Database	1.16%		1.68%		1.35%		1.35%	
Total Fund	**(1.25%)**	**63**	**5.06%**	**31**	**1.16%**	**69**	**4.57%**	**26**
Policy Benchmark*	(1.21%)	61	5.35%	14	1.48%	42	4.51%	29
Callan Public Fd V Lg DB	(0.77%)		4.59%		1.42%		3.83%	

* 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.

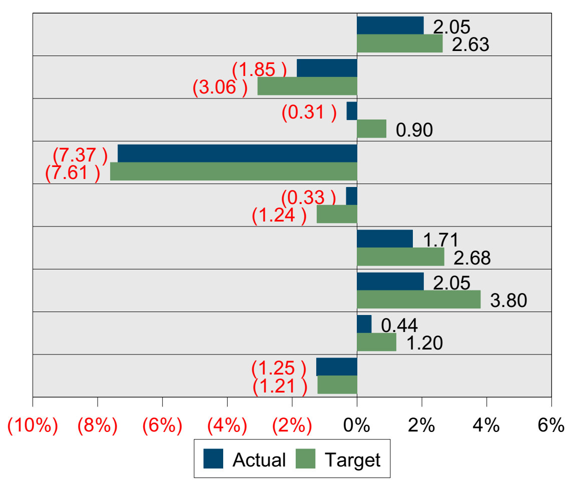
Quarterly Total Fund Relative Attribution - December 31, 2024

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.

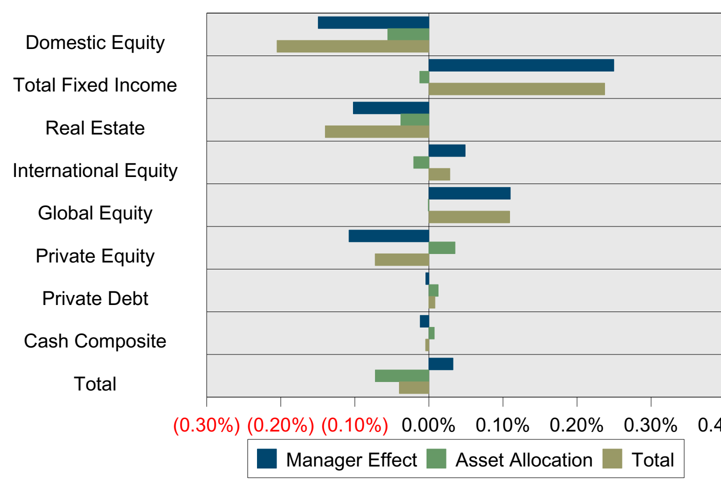
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended December 31, 2024

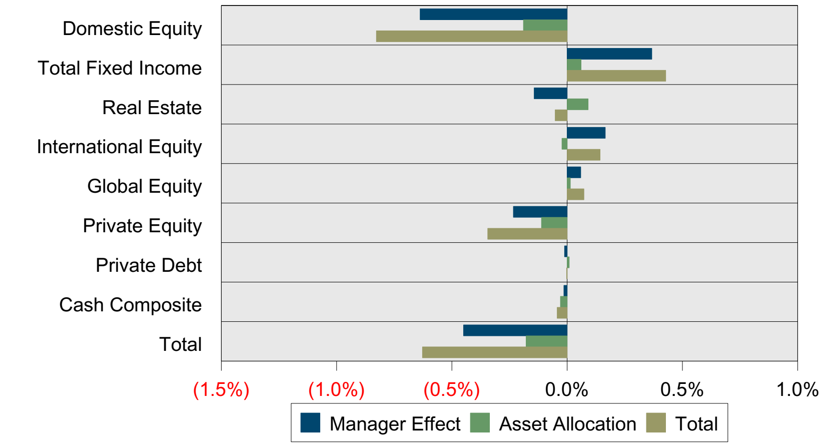
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	2.05%	2.63%	(0.15%)	(0.06%)	(0.21%)
Total Fixed Income	20%	20%	(1.85%)	(3.06%)	0.25%	(0.01%)	0.24%
Real Estate	8%	10%	(0.31%)	0.90%	(0.10%)	(0.04%)	(0.14%)
International Equity	20%	20%	(7.37%)	(7.61%)	0.05%	(0.02%)	0.03%
Global Equity	12%	12%	(0.33%)	(1.24%)	0.11%	(0.00%)	0.11%
Private Equity	11%	10%	1.71%	2.68%	(0.11%)	0.04%	(0.07%)
Private Debt	0%	0%	2.05%	3.80%	(0.00%)	0.01%	0.01%
Cash Composite	1%	1%	0.44%	1.20%	(0.01%)	0.01%	(0.00%)
Total			**(1.25%) =**	**(1.21%) +**	**0.03% +**	**(0.07%)**	**(0.04%)**

* 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.

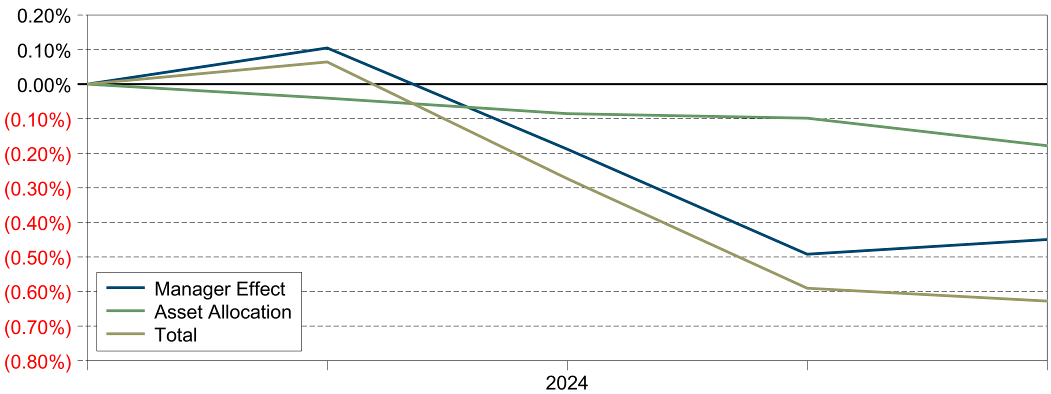
Cumulative Total Fund Relative Attribution - December 31, 2024

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

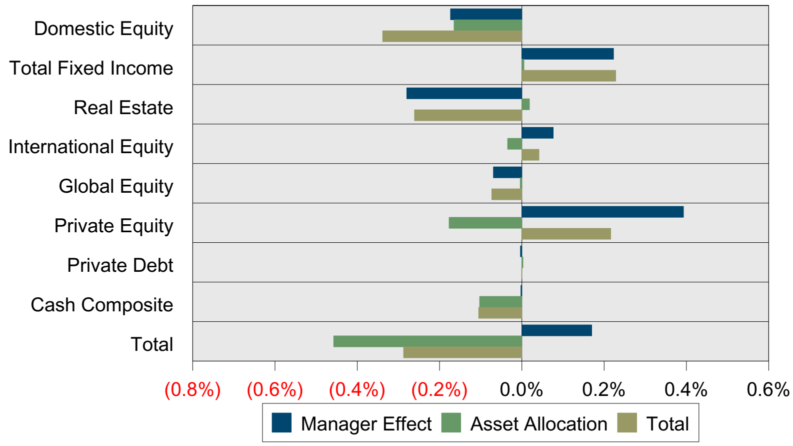
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	21.08%	23.81%	(0.64%)	(0.19%)	(0.83%)
Total Fixed Income	20%	20%	3.04%	1.25%	0.37%	0.06%	0.43%
Real Estate	9%	10%	(1.00%)	0.43%	(0.14%)	0.09%	(0.05%)
International Equity	20%	20%	6.00%	5.23%	0.17%	(0.02%)	0.14%
Global Equity	12%	12%	16.86%	16.37%	0.06%	0.01%	0.07%
Private Equity	12%	9%	5.78%	7.65%	(0.23%)	(0.11%)	(0.34%)
Private Debt	0%	0%	4.61%	14.18%	(0.01%)	0.01%	(0.00%)
Cash Composite	1%	1%	4.50%	5.38%	(0.01%)	(0.03%)	(0.04%)
Total			**9.75% =**	**10.38% +**	**(0.45%) +**	**(0.18%)**	**(0.63%)**

* 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.

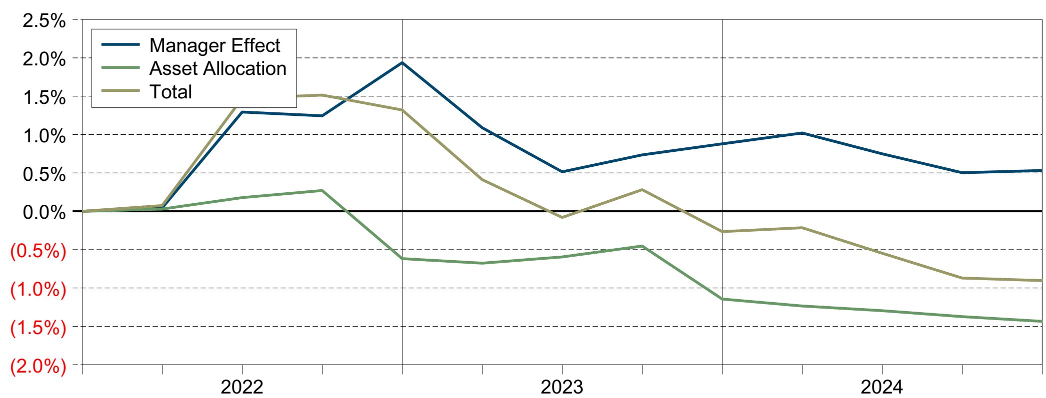
Cumulative Total Fund Relative Attribution - December 31, 2024

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

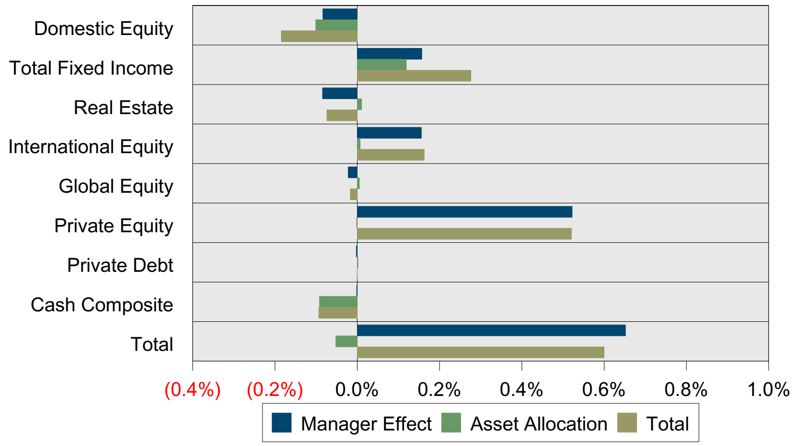
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	25%	27%	7.31%	8.01%	(0.17%)	(0.16%)	(0.34%)
Total Fixed Income	19%	20%	(1.24%)	(2.41%)	0.22%	0.01%	0.23%
Real Estate	10%	10%	(3.28%)	(0.82%)	(0.28%)	0.02%	(0.26%)
International Equity	20%	22%	0.88%	0.50%	0.08%	(0.03%)	0.04%
Global Equity	12%	12%	4.28%	4.90%	(0.07%)	(0.00%)	(0.07%)
Private Equity	12%	8%	2.56%	(1.46%)	0.39%	(0.18%)	0.22%
Private Debt	0%	0%	-	-	(0.00%)	0.00%	(0.00%)
Cash Composite	1%	1%	3.95%	3.98%	(0.00%)	(0.10%)	(0.10%)
Total			**2.22% =**	**2.51% +**	**0.17% +**	**(0.46%)**	**(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.

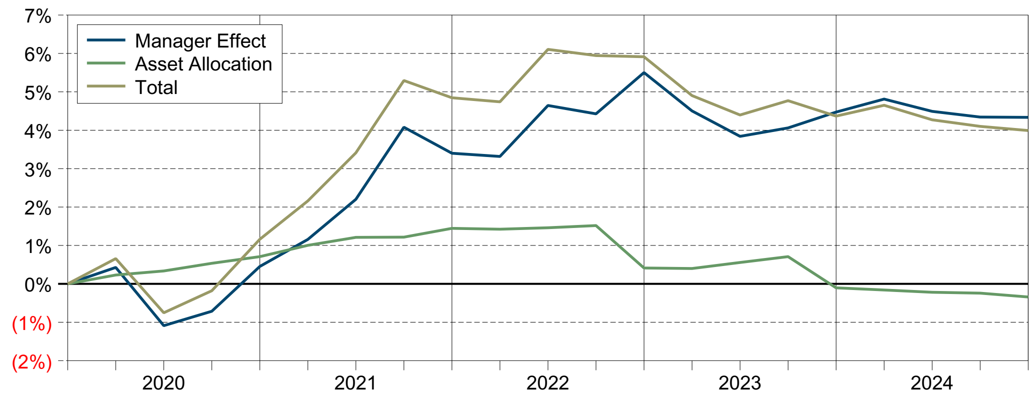
Cumulative Total Fund Relative Attribution - December 31, 2024

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

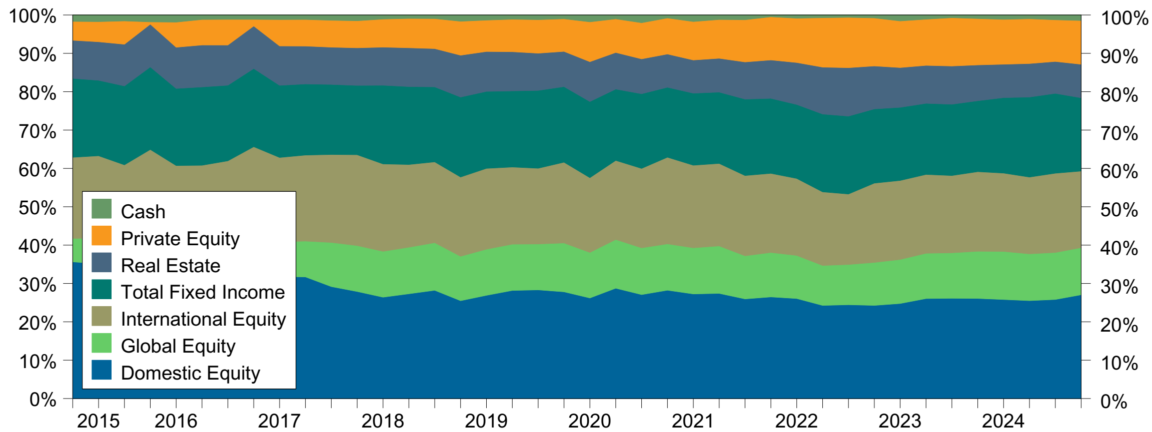
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	13.49%	13.86%	(0.08%)	(0.10%)	(0.18%)
Total Fixed Income	19%	20%	0.71%	(0.33%)	0.16%	0.12%	0.28%
Real Estate	10%	10%	2.67%	3.13%	(0.08%)	0.01%	(0.07%)
International Equity	20%	22%	4.86%	4.12%	0.16%	0.01%	0.16%
Global Equity	12%	12%	9.47%	9.67%	(0.02%)	0.01%	(0.02%)
Private Equity	11%	8%	14.92%	9.16%	0.52%	(0.00%)	0.52%
Private Debt	0%	0%	-	-	(0.00%)	0.00%	(0.00%)
Cash Composite	1%	1%	2.46%	2.47%	(0.00%)	(0.09%)	(0.09%)
Total			**7.71% =**	**7.11% +**	**0.65% +**	**(0.05%)**	**0.60%**

* 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.

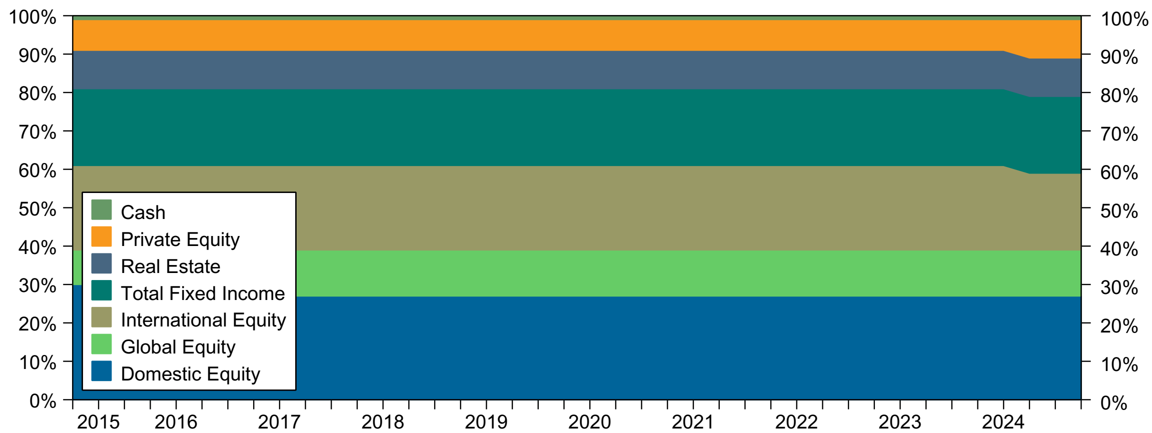
Actual vs Target Historical Asset Allocation

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).

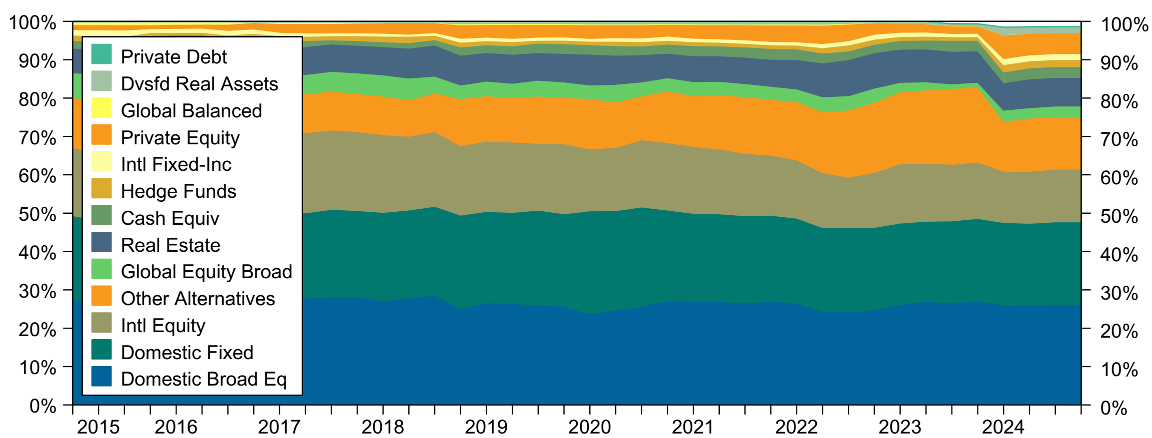
Actual Historical Asset Allocation



Target Historical Asset Allocation



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

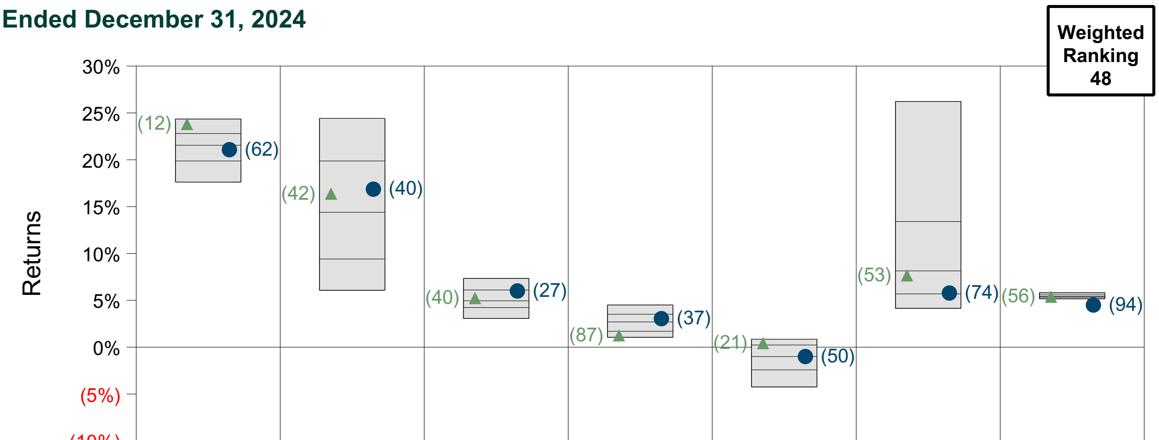


* Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

Asset Class Rankings

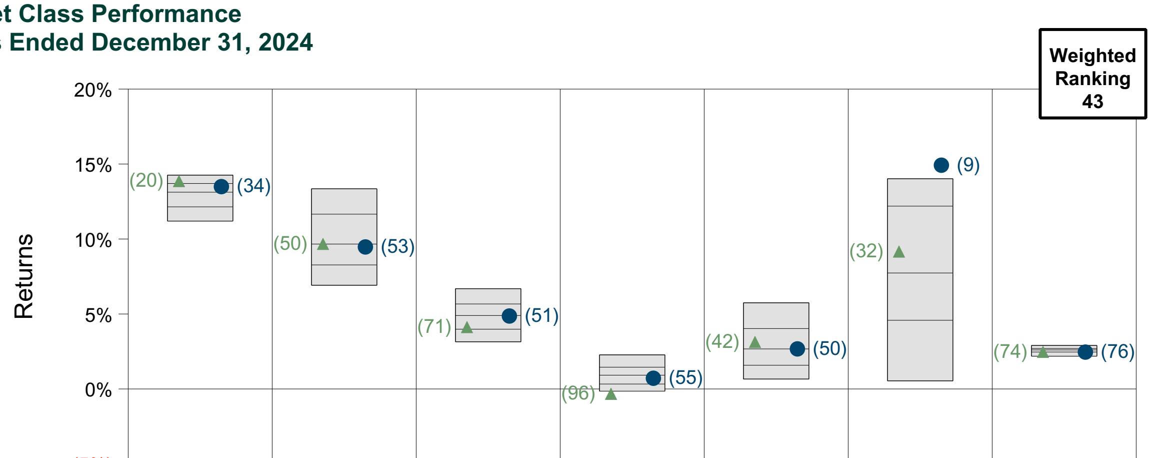
The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used 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 December 31, 2024



	Pub Pln- Dom Equity	Callan Global Equity	Pub Pln- Intl Equity	Pub Pln- Dom Fixed	Pub Pln- Real Estate	Callan Alterntive Inv DB	Callan Cash
10th Percentile	24.35	24.42	7.34	4.51	0.86	26.23	5.81
25th Percentile	22.80	19.87	6.11	3.52	0.23	13.41	5.58
Median	21.55	14.40	4.95	2.69	(1.00)	8.14	5.40
75th Percentile	19.87	9.41	4.23	1.70	(2.42)	5.69	5.33
90th Percentile	17.62	6.07	3.06	1.05	(4.24)	4.15	5.16
Asset Class Composite ●	21.08	16.86	6.00	3.04	(1.00)	5.78	4.50
Composite Benchmark ▲	23.81	16.37	5.23	1.25	0.43	7.65	5.38

Total Asset Class Performance
Five Years Ended December 31, 2024



	Pub Pln- Dom Equity	Callan Global Equity	Pub Pln- Intl Equity	Pub Pln- Dom Fixed	Pub Pln- Real Estate	Callan Alterntive Inv DB	Callan Cash
10th Percentile	14.26	13.35	6.69	2.27	5.75	14.02	2.90
25th Percentile	13.70	11.66	5.67	1.45	4.03	12.19	2.70
Median	13.12	9.66	4.90	0.92	2.67	7.74	2.60
75th Percentile	12.15	8.27	3.98	0.33	1.58	4.58	2.46
90th Percentile	11.20	6.92	3.15	(0.15)	0.66	0.54	2.19
Asset Class Composite ●	13.49	9.47	4.86	0.71	2.67	14.92	2.46
Composite Benchmark ▲	13.86	9.67	4.12	(0.33)	3.13	9.16	2.47

* 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 December 31, 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.

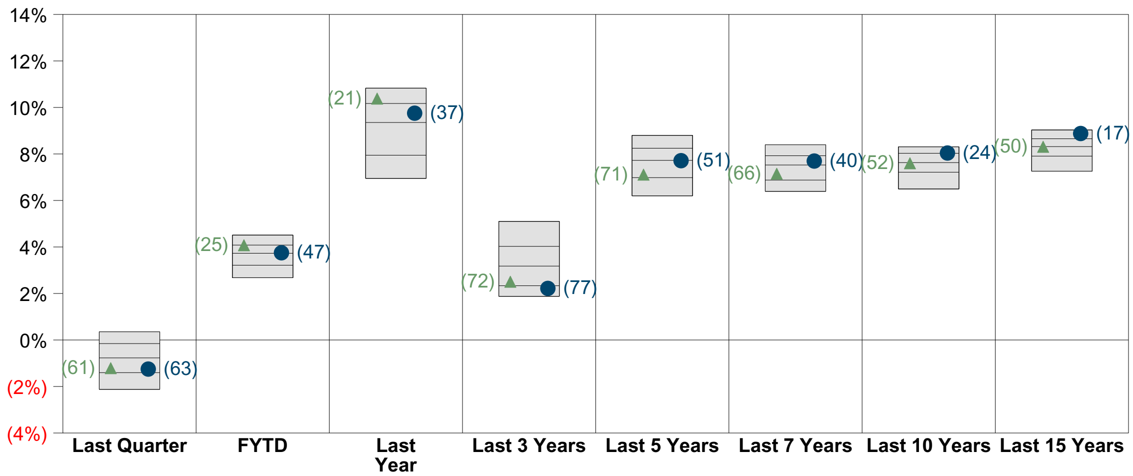
Quarterly Summary and Highlights

- Total Fund's portfolio posted a (1.25)% return for the quarter placing it in the 63 percentile of the Callan Public Fd V Lg DB group for the quarter and in the 37 percentile for the last year.
- Total Fund's portfolio underperformed the Policy Benchmark* by 0.04% for the quarter and underperformed the Policy Benchmark* for the year by 0.63%.

Quarterly Asset Growth

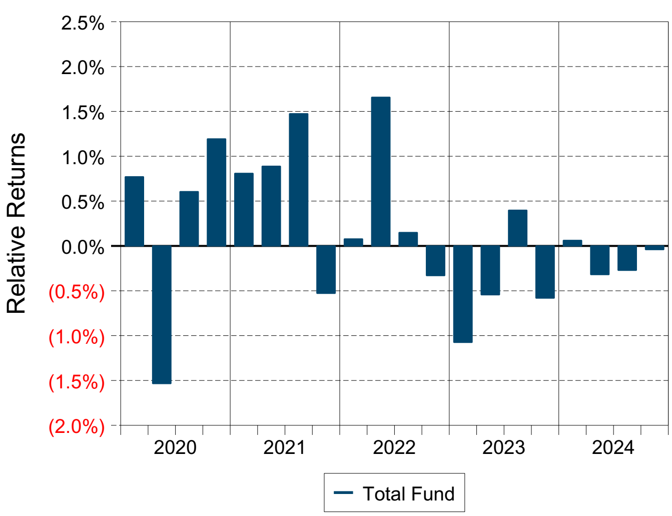
Beginning Market Value	$35,315,994,040
Net New Investment	$-1,020,448,525
Investment Gains/(Losses)	$-424,428,578
Ending Market Value	$33,871,116,937

Performance vs Callan Public Fd V Lg DB (Gross)

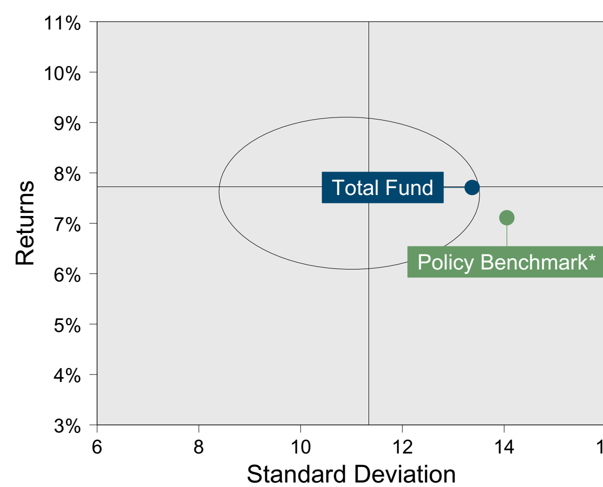


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	0.35	4.51	10.83	5.10	8.80	8.40	8.31	9.03
25th Percentile	(0.15)	4.08	10.17	4.03	8.25	7.92	8.03	8.65
Median	(0.77)	3.73	9.35	3.18	7.73	7.53	7.63	8.32
75th Percentile	(1.41)	3.22	7.95	2.33	6.98	6.88	7.22	7.91
90th Percentile	(2.12)	2.68	6.95	1.88	6.20	6.39	6.49	7.26
Total Fund ●	(1.25)	3.75	9.75	2.22	7.71	7.69	8.04	8.88
Policy Benchmark* ▲	(1.21)	4.07	10.38	2.51	7.11	7.15	7.60	8.31

Relative Return vs Policy Benchmark*



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

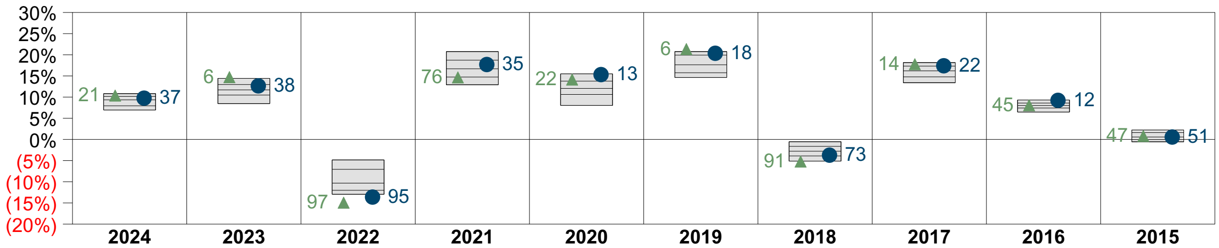


Total Fund
Return Analysis Summary

Return Analysis

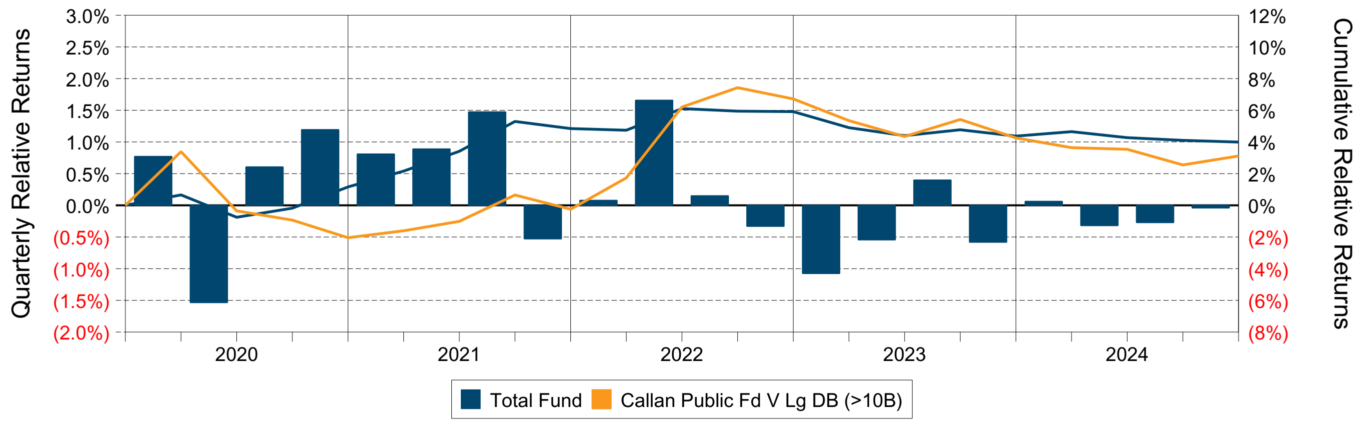
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

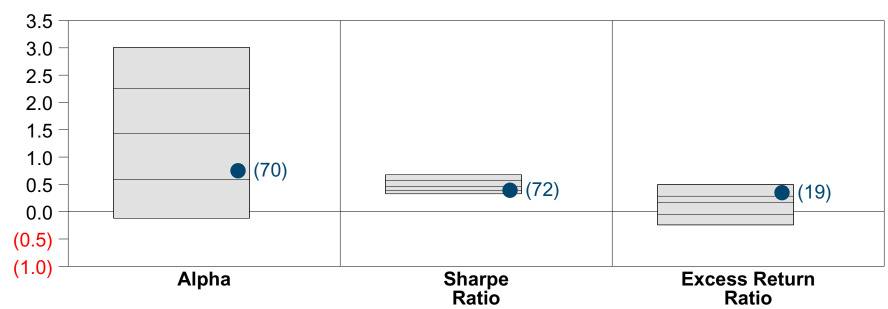


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	10.83	14.43	(4.84)	20.76	15.50	20.76	(0.53)	18.15	9.33	2.23
25th Percentile	10.17	12.98	(7.06)	18.73	13.78	19.93	(1.63)	17.32	8.59	1.62
Median	9.35	11.70	(10.32)	16.69	12.06	17.64	(2.78)	16.21	8.01	0.57
75th Percentile	7.95	10.49	(12.01)	14.74	10.63	15.76	(3.89)	14.78	7.42	(0.03)
90th Percentile	6.95	8.47	(12.95)	12.92	8.04	14.65	(5.12)	13.40	6.47	(0.55)
Total Fund ●	9.75	12.66	(13.62)	17.70	15.32	20.36	(3.71)	17.40	9.24	0.57
Policy Benchmark* ▲	10.38	14.72	(14.94)	14.66	14.16	21.35	(5.22)	17.77	8.07	0.81

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.01	0.68	0.50
25th Percentile	2.26	0.57	0.28
Median	1.43	0.46	0.17
75th Percentile	0.59	0.39	(0.06)
90th Percentile	(0.12)	0.33	(0.24)
Total Fund ●	0.75	0.39	0.35

Total Equity
Period Ended December 31, 2024

Quarterly Summary and Highlights

- Total Equity's portfolio posted a (1.76)% return for the quarter placing it in the 46 percentile of the Callan Global Equity group for the quarter and in the 49 percentile for the last year.
- Total Equity's portfolio underperformed the MSCI ACWI IMI by 0.52% for the quarter and underperformed the MSCI ACWI IMI for the year by 1.55%.

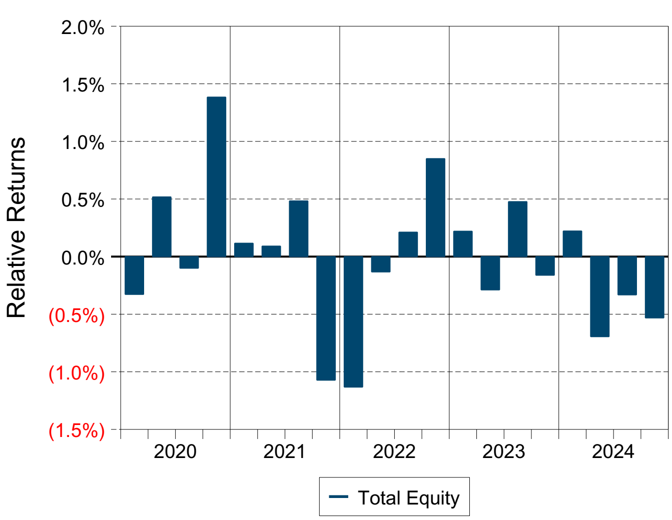
Quarterly Asset Growth

Beginning Market Value	$20,697,896,556
Net New Investment	$-313,079,697
Investment Gains/(Losses)	$-354,937,843
Ending Market Value	$20,029,879,017

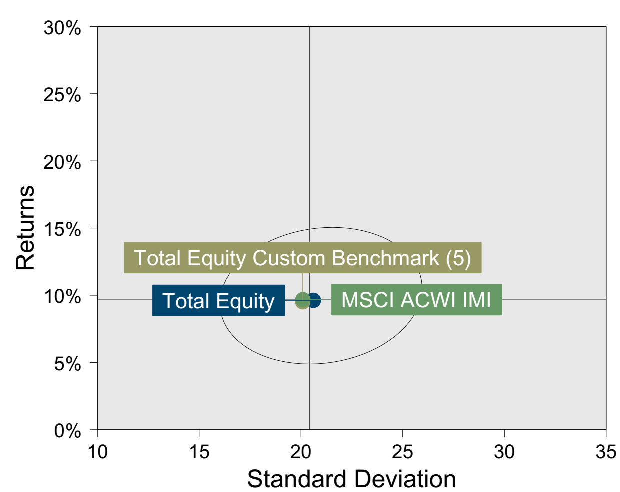
Performance vs Callan Global Equity (Gross)

	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	1.77	6.96	24.42	8.45	13.35	12.65	12.68	12.80
25th Percentile	(0.29)	5.57	19.87	6.89	11.66	10.93	11.05	11.17
Median	(2.22)	3.90	14.40	4.85	9.66	9.62	9.86	10.49
75th Percentile	(4.18)	2.18	9.41	2.60	8.27	8.00	8.68	9.35
90th Percentile	(5.97)	0.38	6.07	0.16	6.92	6.62	7.44	8.49
Total Equity ● A	(1.76)	4.61	14.82	4.45	9.62	9.03	9.28	10.23
Total Equity Custom Benchmark (5) ■ B	(1.83)	5.10	15.50	4.72	9.52	8.78	9.10	9.64
MSCI ACWI IMI ▲	(1.24)	5.52	16.37	4.90	9.67	8.78	9.00	9.16

Relative Return vs MSCI ACWI IMI



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

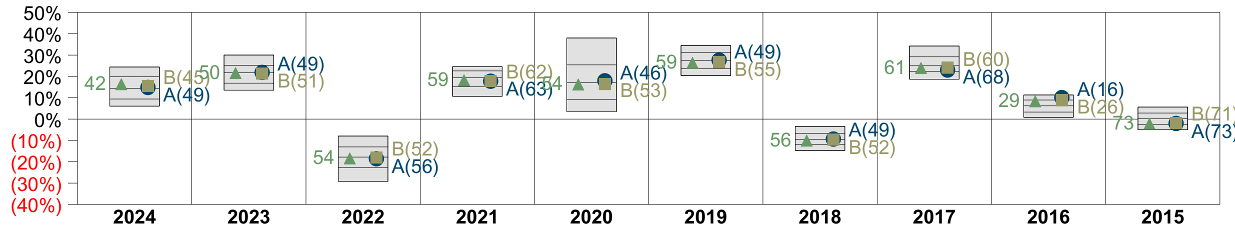


Total Equity
Return Analysis Summary

Return Analysis

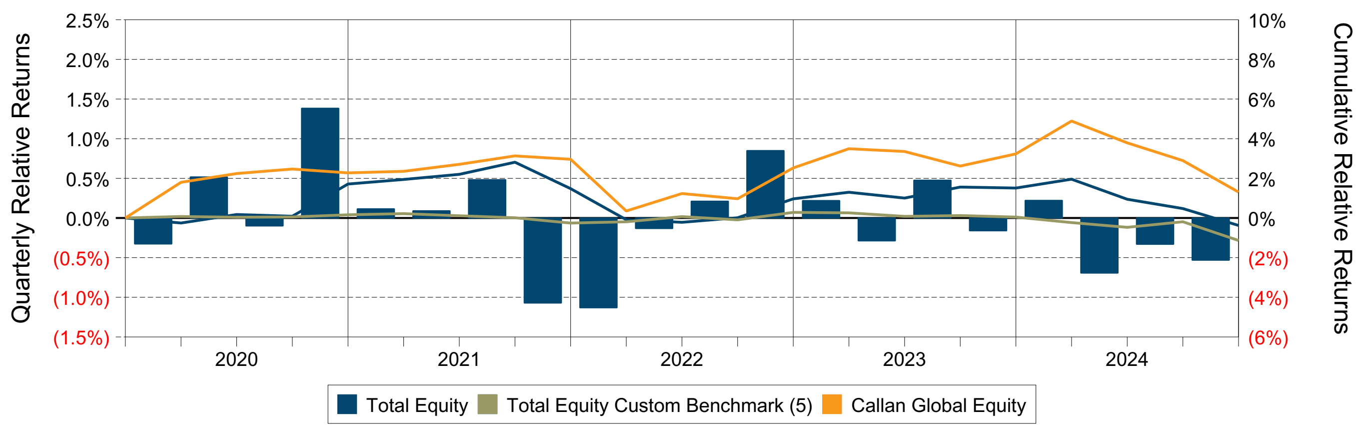
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

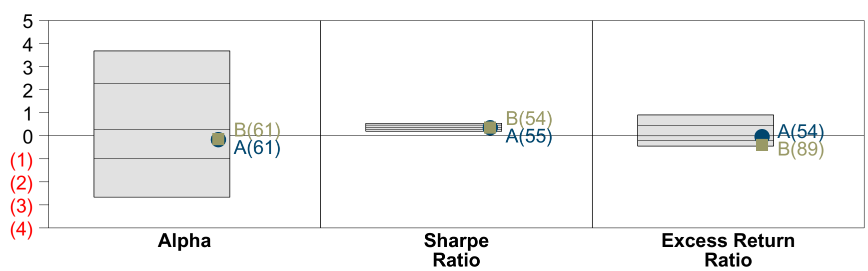


		2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile		24.42	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile		19.87	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median		14.40	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.23	0.16
75th Percentile		9.41	16.85	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile		6.07	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Total Equity	● A	14.82	21.88	(18.58)	17.76	17.96	27.64	(9.35)	23.00	10.10	(2.04)
Total Equity Custom Benchmark (5)	■ B	15.50	21.32	(18.05)	17.84	16.41	26.67	(9.65)	24.08	8.85	(1.85)
MSCI ACWI IMI	▲	16.37	21.58	(18.40)	18.22	16.25	26.35	(10.08)	23.95	8.36	(2.19)

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 December 31, 2024



		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		3.68	0.54	0.90
25th Percentile		2.26	0.46	0.45
Median		0.27	0.37	(0.00)
75th Percentile		(0.99)	0.28	(0.21)
90th Percentile		(2.67)	0.19	(0.45)
Total Equity	● A	(0.17)	0.35	(0.04)
Total Equity Custom Benchmark (5)	■ B	(0.15)	0.35	(0.40)

Domestic Equity
Period Ended December 31, 2024

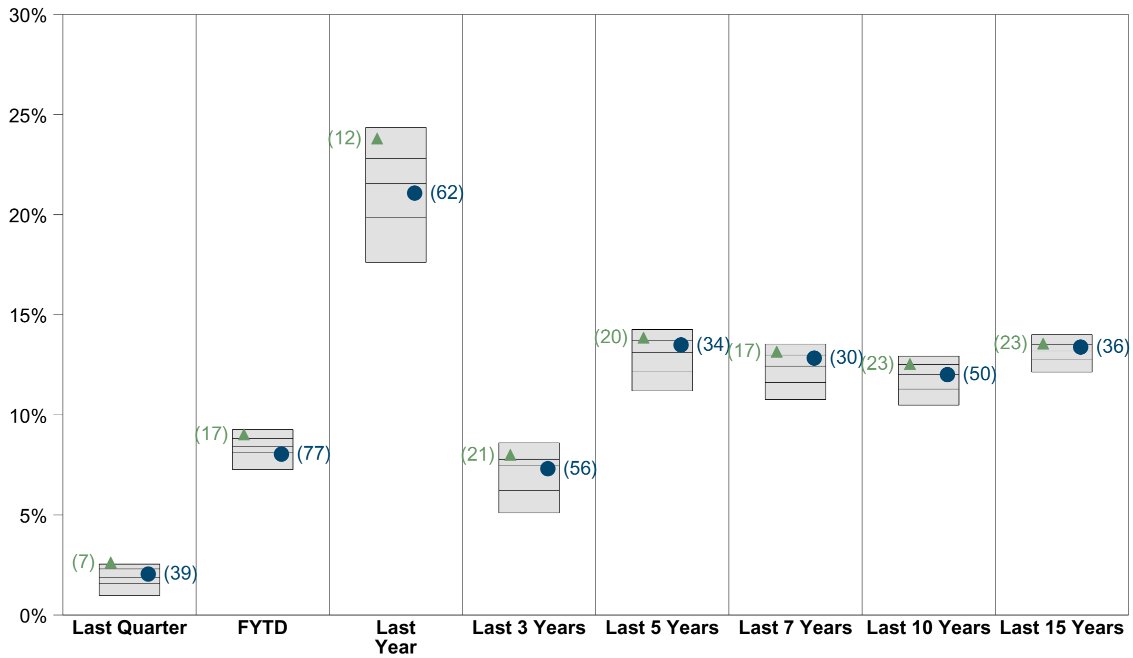
Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a 2.05% return for the quarter placing it in the 39 percentile of the Public Fund - Domestic Equity group for the quarter and in the 62 percentile for the last year.
- Domestic Equity's portfolio underperformed the Russell 3000 Index by 0.59% for the quarter and underperformed the Russell 3000 Index for the year by 2.73%.

Quarterly Asset Growth

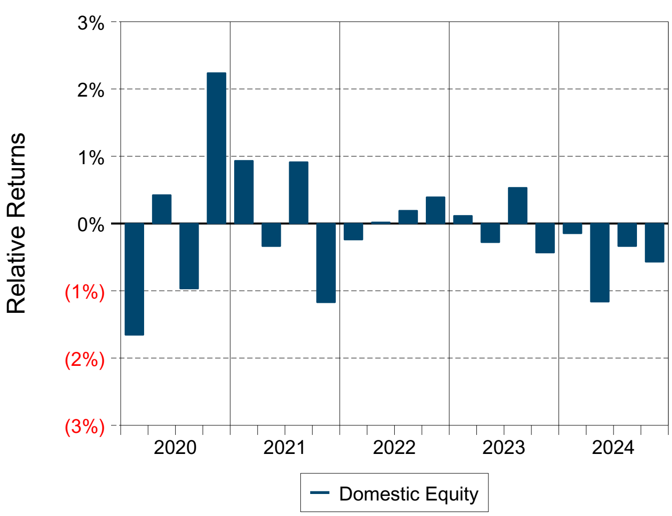
Beginning Market Value	$9,100,608,594
Net New Investment	$-154,147,402
Investment Gains/(Losses)	$192,337,597
Ending Market Value	$9,138,798,789

Performance vs Public Fund - Domestic Equity (Gross)

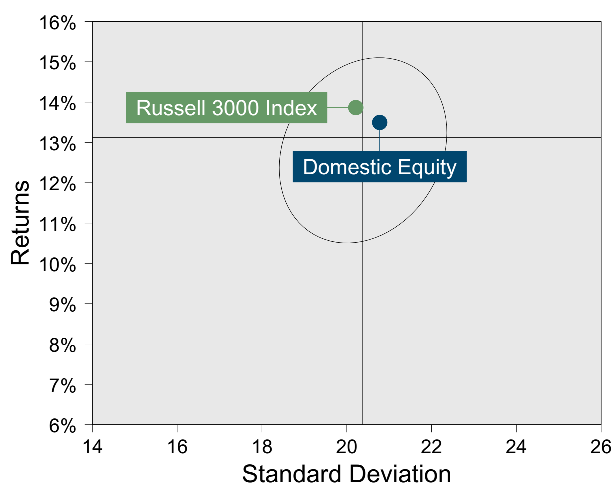


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	2.54	9.26	24.35	8.60	14.26	13.54	12.93	14.00
25th Percentile	2.30	8.82	22.80	7.78	13.70	12.99	12.52	13.53
Median	1.88	8.41	21.55	7.45	13.12	12.43	12.01	13.19
75th Percentile	1.58	8.11	19.87	6.23	12.15	11.62	11.29	12.75
90th Percentile	0.97	7.27	17.62	5.10	11.20	10.77	10.49	12.14
Domestic Equity ●	2.05	8.04	21.08	7.31	13.49	12.83	12.01	13.39
Russell 3000 Index ▲	2.63	9.03	23.81	8.01	13.86	13.16	12.55	13.56

Relative Return vs Russell 3000 Index



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

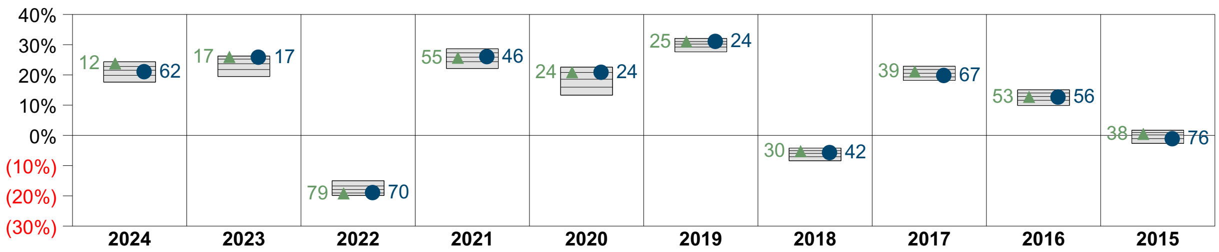


Domestic Equity
Return Analysis Summary

Return Analysis

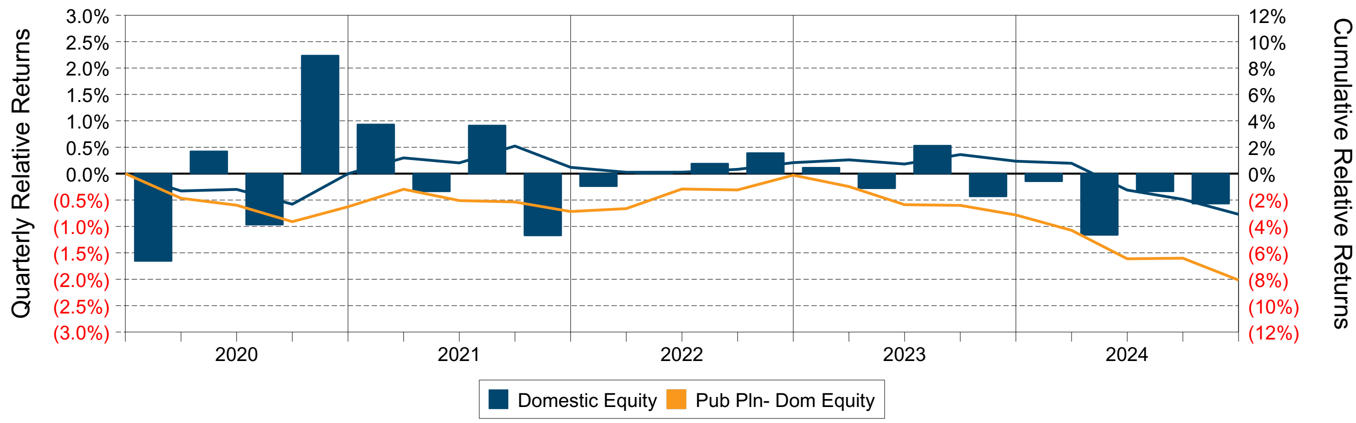
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

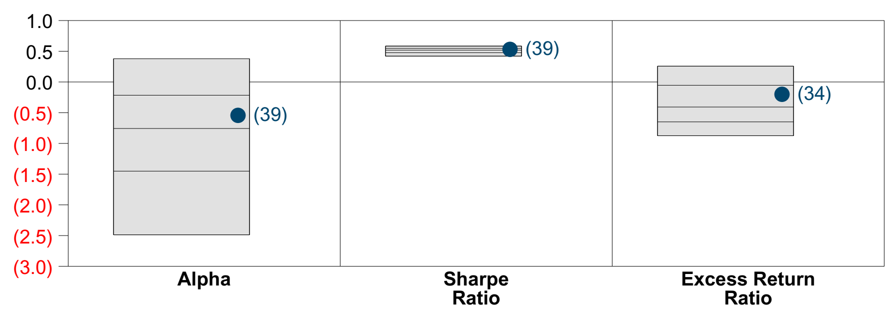


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	24.35	26.24	(15.00)	28.65	22.58	32.07	(4.19)	22.87	15.08	1.71
25th Percentile	22.80	25.23	(16.72)	27.32	20.82	31.03	(5.05)	21.79	14.03	0.94
Median	21.55	23.70	(17.91)	25.88	18.58	30.20	(5.96)	20.55	12.86	0.16
75th Percentile	19.87	21.78	(19.04)	24.38	15.95	29.21	(7.05)	19.34	11.61	(1.07)
90th Percentile	17.62	19.48	(19.88)	22.13	13.31	27.62	(8.39)	18.20	9.89	(2.65)
Domestic Equity ●	21.08	25.87	(18.91)	26.06	20.88	31.10	(5.68)	19.82	12.66	(1.10)
Russell 3000 Index ▲	23.81	25.96	(19.21)	25.66	20.89	31.02	(5.24)	21.13	12.74	0.48

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.38	0.58	0.26
25th Percentile	(0.22)	0.55	(0.05)
Median	(0.76)	0.52	(0.41)
75th Percentile	(1.45)	0.48	(0.65)
90th Percentile	(2.49)	0.42	(0.87)
Domestic Equity ●	(0.54)	0.53	(0.20)

Eagle Capital
Period Ended December 31, 2024

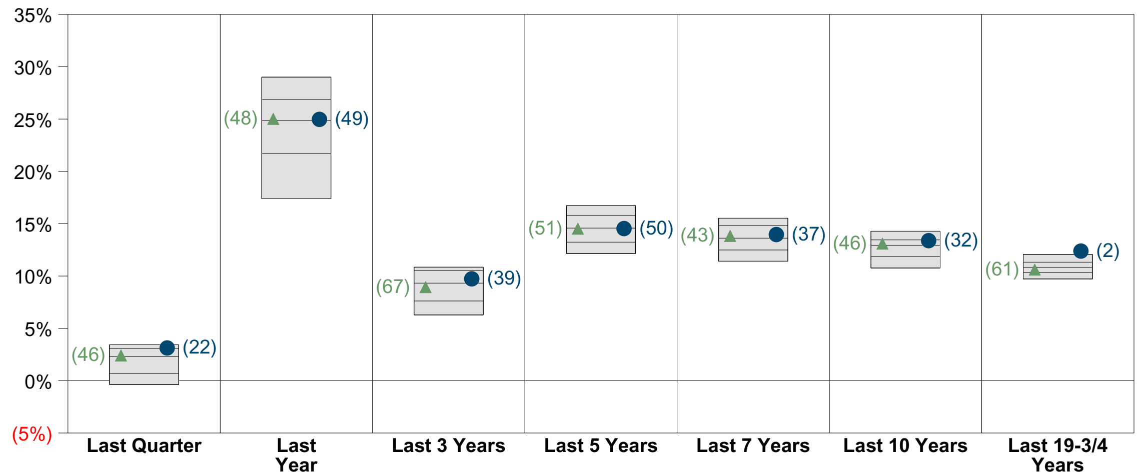
Investment Philosophy
Eagle believes that a team driven process adds value via stock selection. The team emphasizes undervalued growth stocks, focusing on companies that are expected to grow for at least five years at rates well above those implicit in the current stock price. The Fund's inception date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

Quarterly Summary and Highlights
- Eagle Capital's portfolio posted a 3.13% return for the quarter placing it in the 22 percentile of the Callan Large Cap Core group for the quarter and in the 49 percentile for the last year.
- Eagle Capital's portfolio outperformed the S&P 500 Index by 0.72% for the quarter and underperformed the S&P 500 Index for the year by 0.05%.

Quarterly Asset Growth

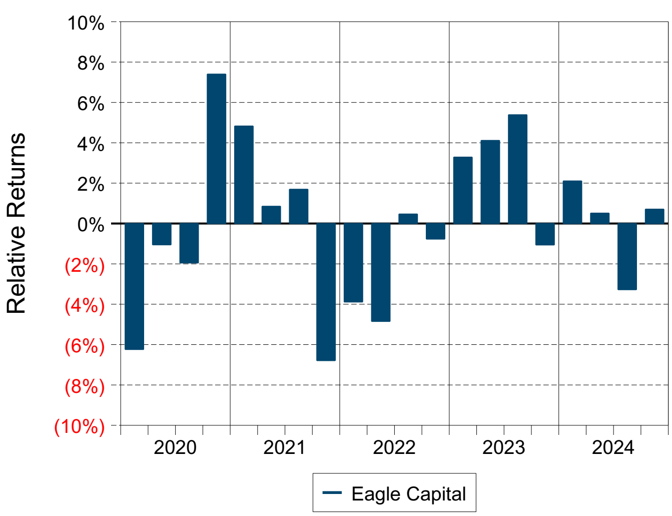
Beginning Market Value	$878,384,594
Net New Investment	$-1,413,606
Investment Gains/(Losses)	$27,538,832
Ending Market Value	$904,509,819

Performance vs Callan Large Cap Core (Gross)

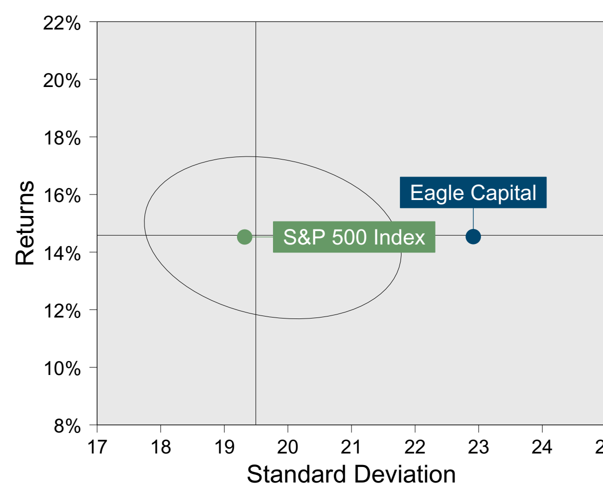


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 19-3/4 Years
10th Percentile	3.44	29.01	10.85	16.73	15.53	14.28	12.07
25th Percentile	3.09	26.88	10.53	15.80	14.81	13.46	11.32
Median	2.29	24.87	9.32	14.58	13.62	12.94	10.84
75th Percentile	0.71	21.69	7.62	13.24	12.49	11.88	10.35
90th Percentile	(0.37)	17.39	6.28	12.15	11.42	10.77	9.72
Eagle Capital ●	3.13	24.97	9.73	14.54	13.96	13.38	12.39
S&P 500 Index ▲	2.41	25.02	8.94	14.53	13.83	13.10	10.61

Relative Return vs S&P 500 Index



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

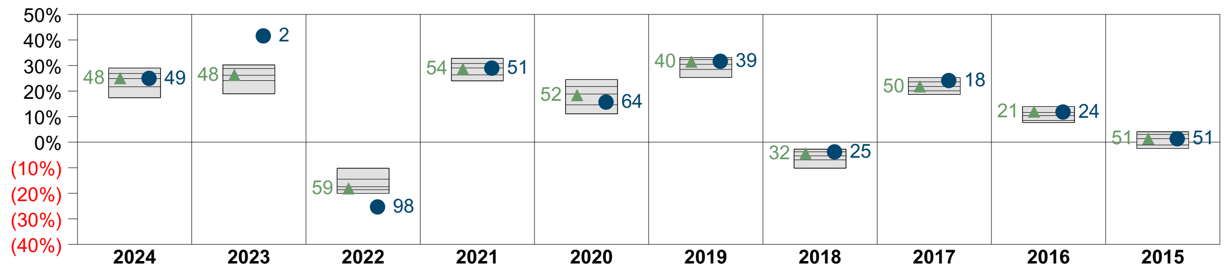


Eagle Capital
Return Analysis Summary

Return Analysis

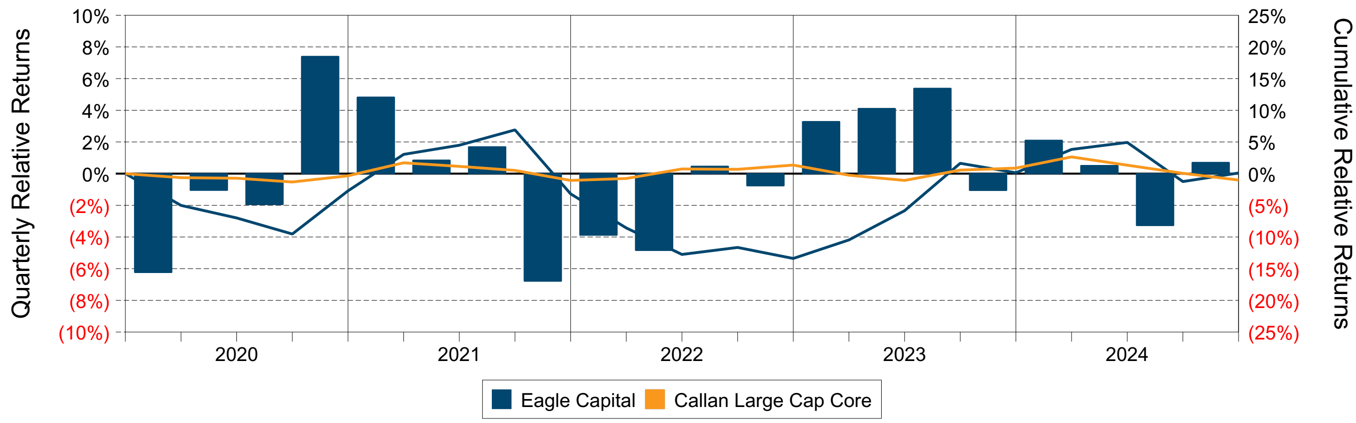
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

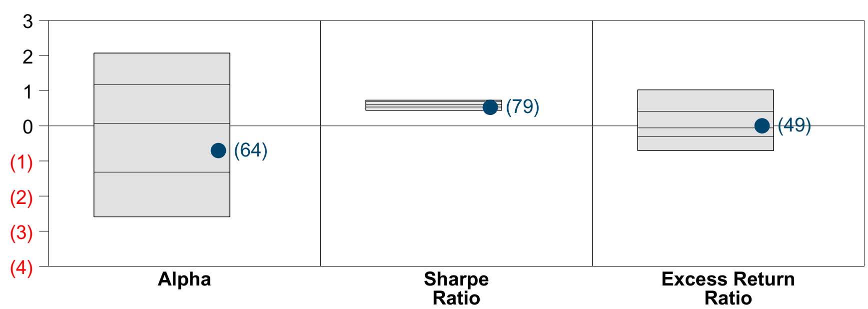


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	29.01	30.23	(10.19)	32.80	24.51	33.09	(2.75)	25.29	13.95	4.08
25th Percentile	26.88	28.82	(14.48)	30.79	21.77	32.33	(3.76)	23.60	11.62	3.04
Median	24.87	26.16	(17.42)	29.05	18.84	30.46	(5.35)	21.79	10.40	1.39
75th Percentile	21.69	24.09	(18.58)	26.34	14.62	28.47	(6.92)	20.10	8.49	(1.11)
90th Percentile	17.39	18.94	(20.04)	24.00	11.09	25.31	(10.17)	18.65	7.67	(2.46)
Eagle Capital ●	24.97	41.59	(25.33)	28.97	15.68	31.66	(3.79)	24.12	11.79	1.35
S&P 500 Index ▲	25.02	26.29	(18.11)	28.71	18.40	31.49	(4.38)	21.83	11.96	1.38

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 December 31, 2024



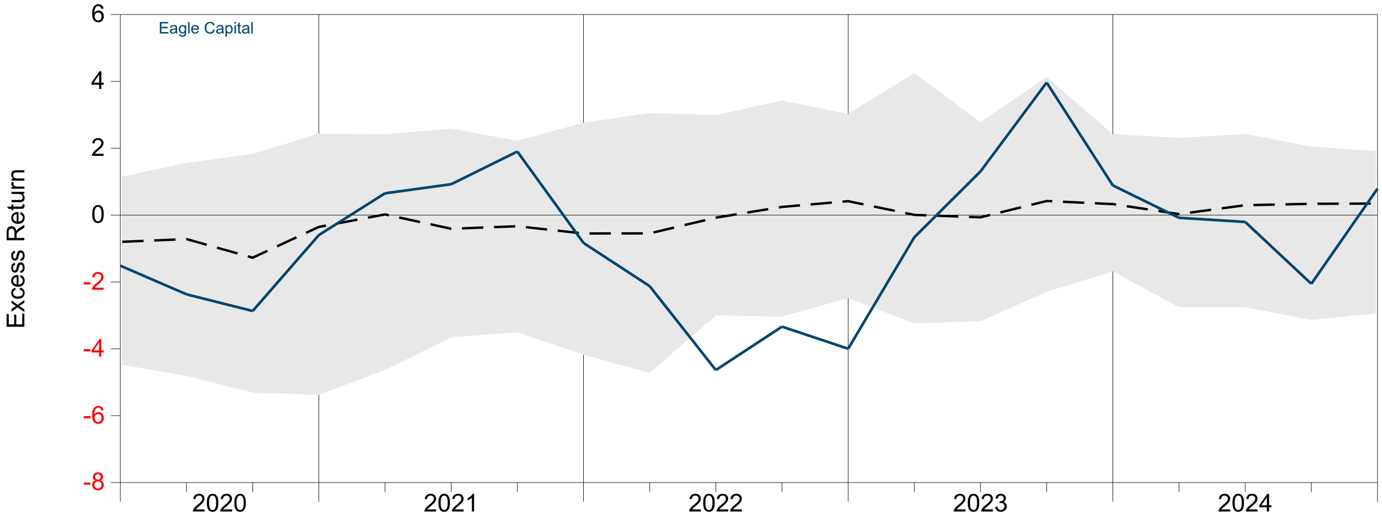
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.07	0.73	1.03
25th Percentile	1.17	0.69	0.42
Median	0.07	0.61	(0.06)
75th Percentile	(1.32)	0.54	(0.30)
90th Percentile	(2.59)	0.44	(0.70)
Eagle Capital ●	(0.70)	0.53	0.00

Eagle Capital
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

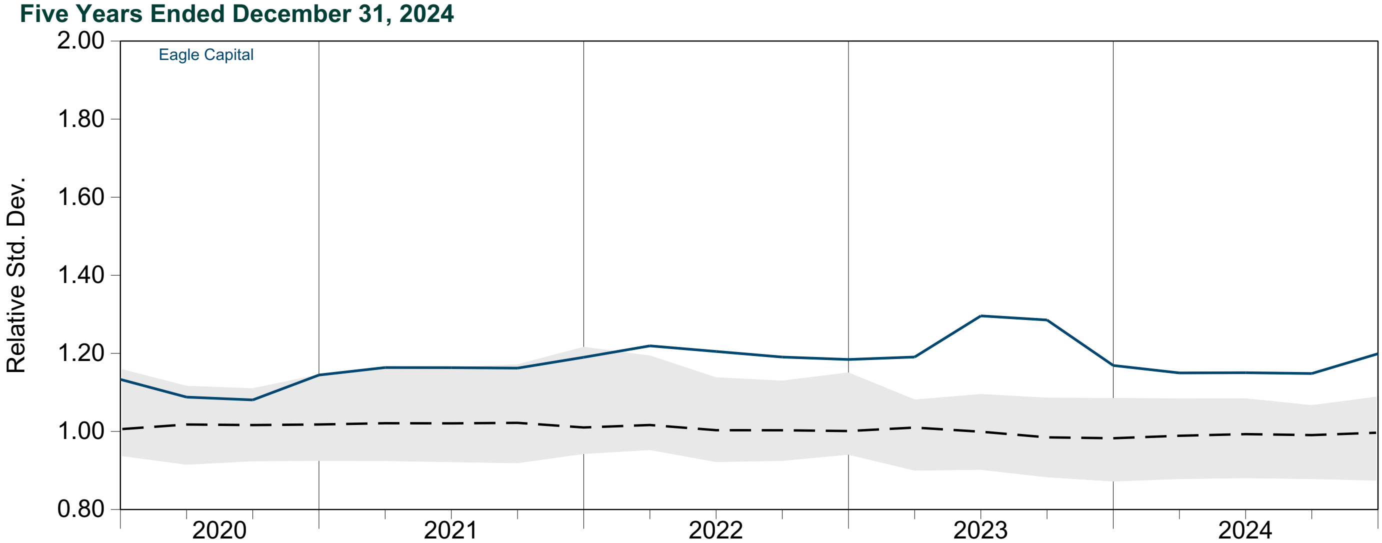
The first chart below illustrates the consistency of excess return over rolling three year periods versus the S&P 500 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Large Cap Core. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	(0.13)	(0.74)
% Positive Periods	50%	35%
Average Ranking	50	57

Rolling Three Year Relative Std. Dev. Relative to S&P 500 Index
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.01%	1.18%
% Positive Periods	100%	100%
Average Ranking	50	7

Northern Trust S&P 500
Period Ended December 31, 2024

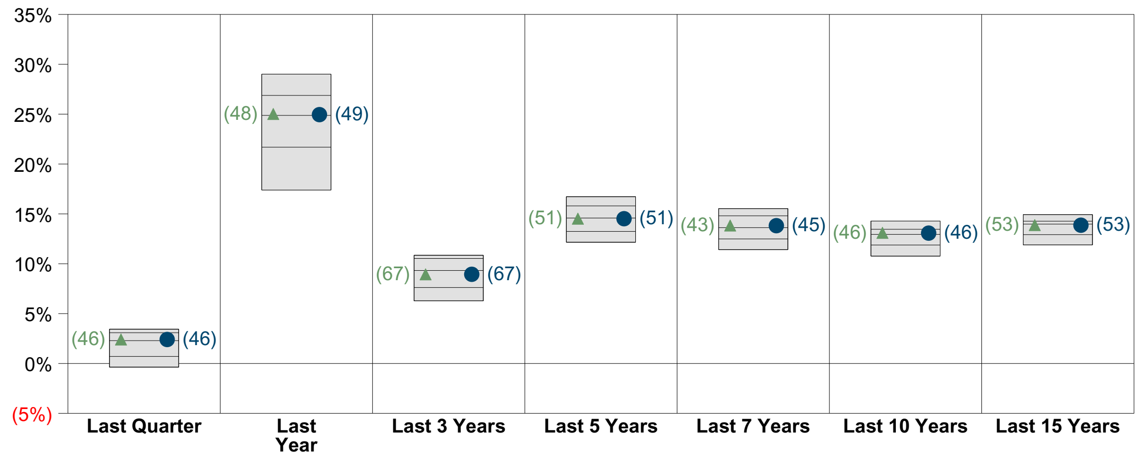
Investment Philosophy
Northern Trust seeks to replicate the risk and returns of the S&P 500 equity index and believes that a passive approach to portfolio management will provide index-like returns with minimal transaction costs. The Fund's inception date is June 1985.

Quarterly Summary and Highlights
- Northern Trust S&P 500's portfolio posted a 2.41% return for the quarter placing it in the 46 percentile of the Callan Large Cap Core group for the quarter and in the 49 percentile for the last year.
- Northern Trust S&P 500's portfolio underperformed the S&P 500 Index by 0.00% for the quarter and underperformed the S&P 500 Index for the year by 0.07%.

Quarterly Asset Growth

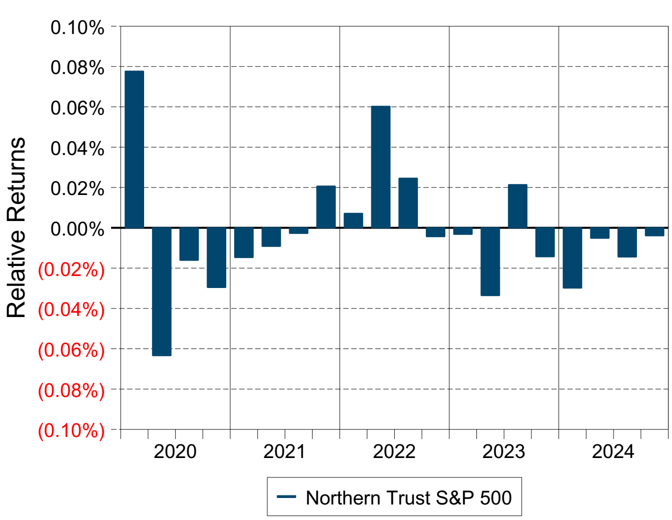
Beginning Market Value	$6,035,776,643
Net New Investment	$-150,000,000
Investment Gains/(Losses)	$149,796,337
Ending Market Value	$6,035,572,981

Performance vs Callan Large Cap Core (Gross)

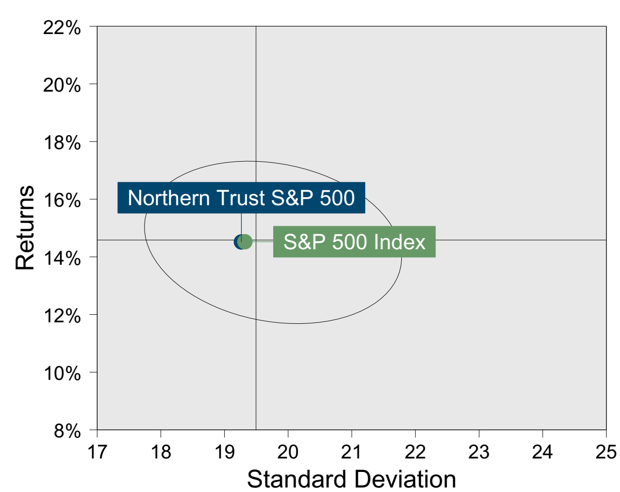


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	3.44	29.01	10.85	16.73	15.53	14.28	14.93
25th Percentile	3.09	26.88	10.53	15.80	14.81	13.46	14.26
Median	2.29	24.87	9.32	14.58	13.62	12.94	13.97
75th Percentile	0.71	21.69	7.62	13.24	12.49	11.88	12.92
90th Percentile	(0.37)	17.39	6.28	12.15	11.42	10.77	11.89
Northern Trust S&P 500 ●	2.41	24.95	8.94	14.52	13.82	13.07	13.86
S&P 500 Index ▲	2.41	25.02	8.94	14.53	13.83	13.10	13.88

Relative Return vs S&P 500 Index



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

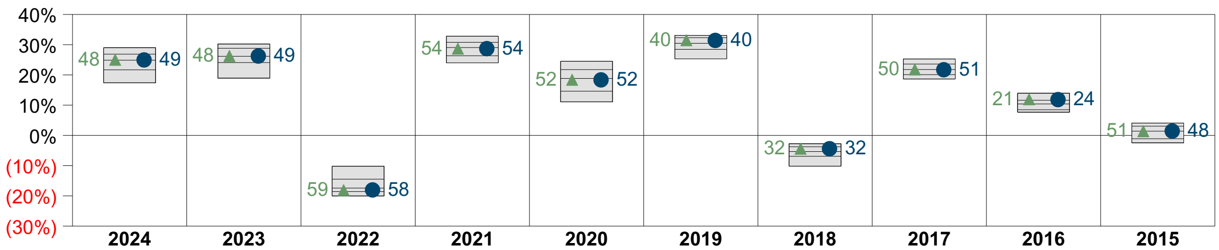


Northern Trust S&P 500
Return Analysis Summary

Return Analysis

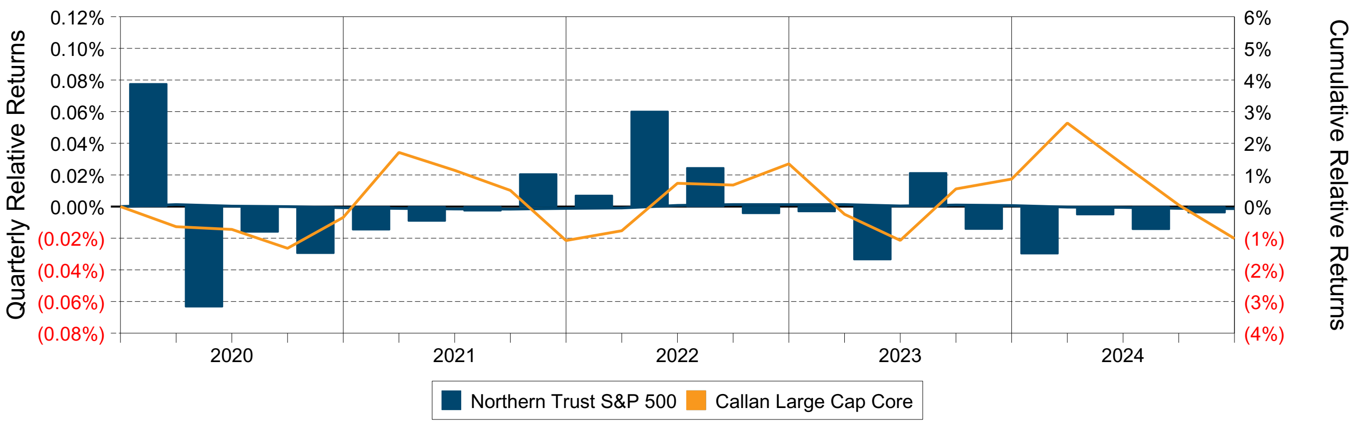
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

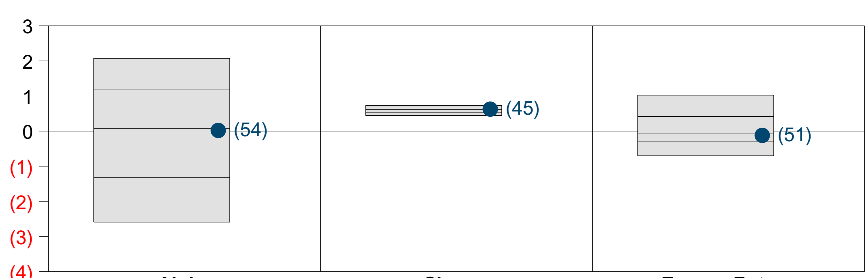


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	29.01	30.23	(10.19)	32.80	24.51	33.09	(2.75)	25.29	13.95	4.08
25th Percentile	26.88	28.82	(14.48)	30.79	21.77	32.33	(3.76)	23.60	11.62	3.04
Median	24.87	26.16	(17.42)	29.05	18.84	30.46	(5.35)	21.79	10.40	1.39
75th Percentile	21.69	24.09	(18.58)	26.34	14.62	28.47	(6.92)	20.10	8.49	(1.11)
90th Percentile	17.39	18.94	(20.04)	24.00	11.09	25.31	(10.17)	18.65	7.67	(2.46)
Northern Trust S&P 500 ●	24.95	26.25	(18.04)	28.70	18.36	31.42	(4.41)	21.72	11.84	1.43
S&P 500 Index ▲	25.02	26.29	(18.11)	28.71	18.40	31.49	(4.38)	21.83	11.96	1.38

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.07	0.73	1.03
25th Percentile	1.17	0.69	0.42
Median	0.07	0.61	(0.06)
75th Percentile	(1.32)	0.54	(0.30)
90th Percentile	(2.59)	0.44	(0.70)
Northern Trust S&P 500 ●	0.02	0.63	(0.12)

Artisan Partners
Period Ended December 31, 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.

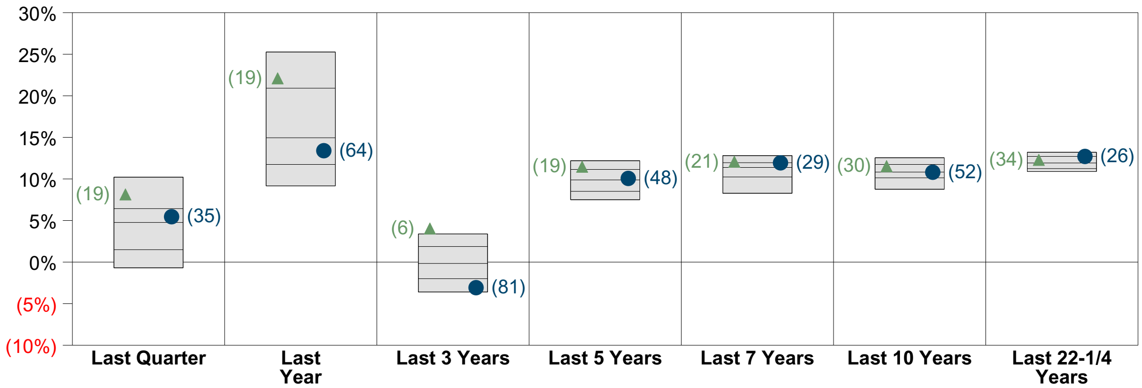
Quarterly Summary and Highlights

- Artisan Partners's portfolio posted a 5.46% return for the quarter placing it in the 35 percentile of the Callan Mid Cap Growth group for the quarter and in the 64 percentile for the last year.
- Artisan Partners's portfolio underperformed the Russell MidCap Growth Idx by 2.68% for the quarter and underperformed the Russell MidCap Growth Idx for the year by 8.70%.

Quarterly Asset Growth

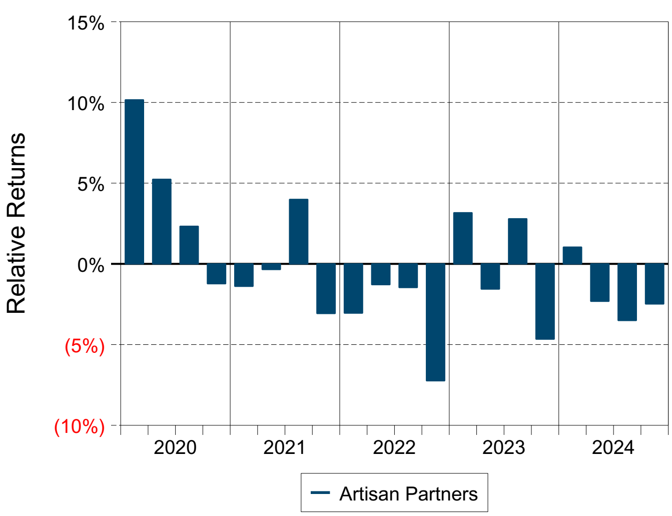
Beginning Market Value	$516,829,813
Net New Investment	$-607,275
Investment Gains/(Losses)	$28,218,789
Ending Market Value	$544,441,327

Performance vs Callan Mid Cap Growth (Gross)

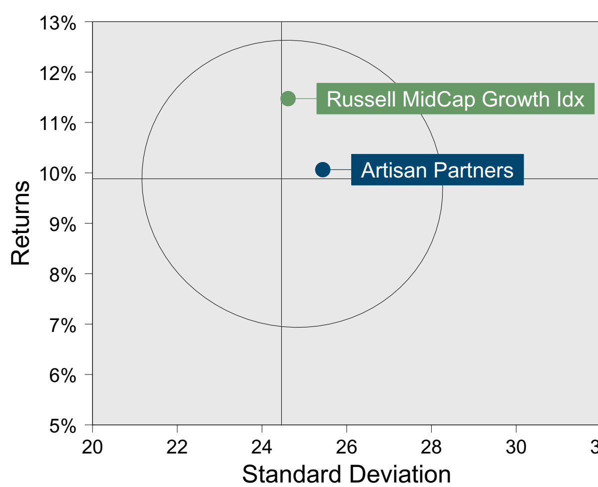


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 22-1/4 Years
10th Percentile	10.22	25.27	3.38	12.19	12.81	12.55	13.21
25th Percentile	6.43	20.92	1.87	11.14	11.96	11.74	12.71
Median	4.77	14.95	(0.16)	9.88	11.38	10.82	11.92
75th Percentile	1.49	11.74	(1.99)	8.51	10.24	10.14	11.24
90th Percentile	(0.69)	9.16	(3.60)	7.50	8.27	8.76	10.90
Artisan Partners ●	5.46	13.40	(3.08)	10.06	11.94	10.81	12.71
Russell MidCap Growth Idx ▲	8.14	22.10	4.04	11.47	12.08	11.54	12.29

Relative Return vs Russell MidCap Growth Idx



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

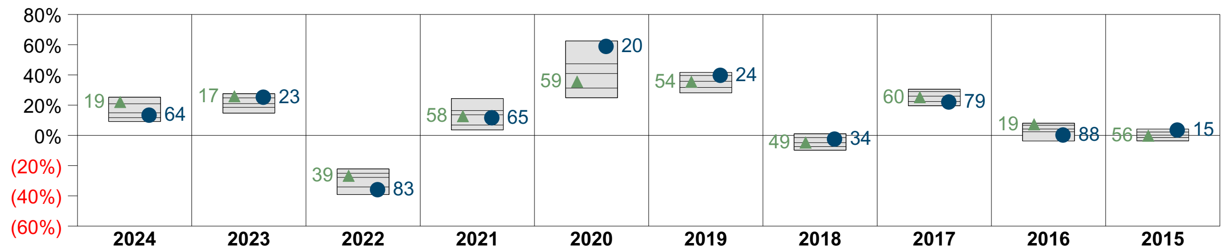


Artisan Partners
Return Analysis Summary

Return Analysis

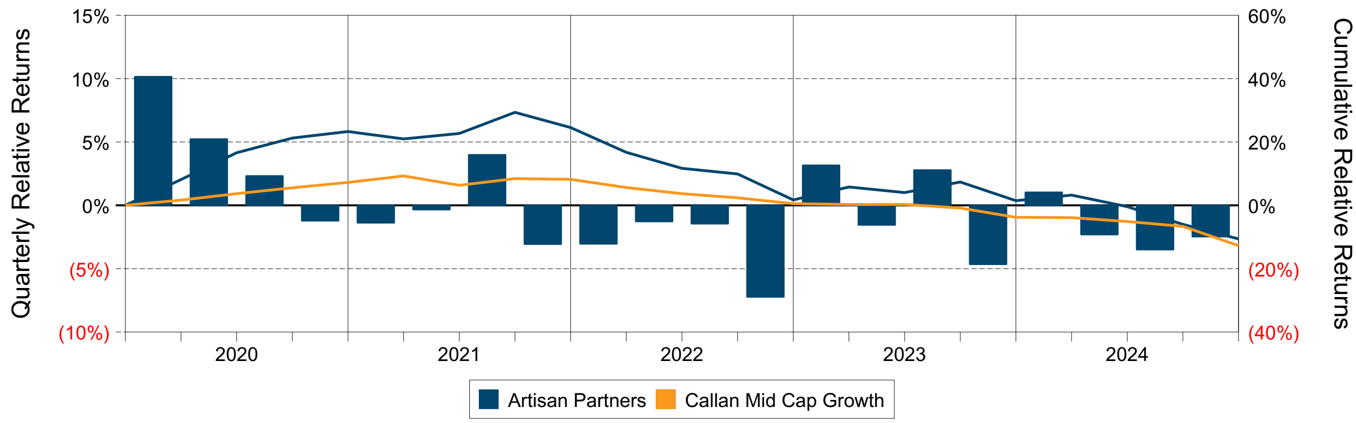
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

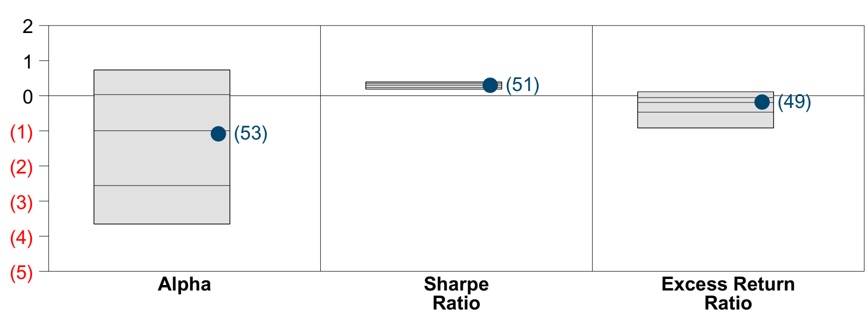


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	25.27	27.60	(22.16)	24.39	62.50	41.70	1.07	30.53	8.07	4.22
25th Percentile	20.92	24.83	(25.08)	16.44	47.37	39.62	(1.48)	29.01	6.72	2.23
Median	14.95	21.03	(27.80)	13.65	40.93	35.80	(4.81)	25.95	4.22	0.14
75th Percentile	11.74	18.56	(34.11)	6.85	31.30	31.73	(7.42)	22.42	2.41	(1.43)
90th Percentile	9.16	14.73	(39.17)	3.62	24.88	28.14	(9.80)	19.62	(3.72)	(3.65)
Artisan Partners ●	13.40	25.27	(35.90)	11.66	58.87	39.75	(2.45)	22.10	0.25	3.52
Russell MidCap Growth Idx ▲	22.10	25.87	(26.72)	12.73	35.59	35.47	(4.75)	25.27	7.33	(0.20)

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 December 31, 2024



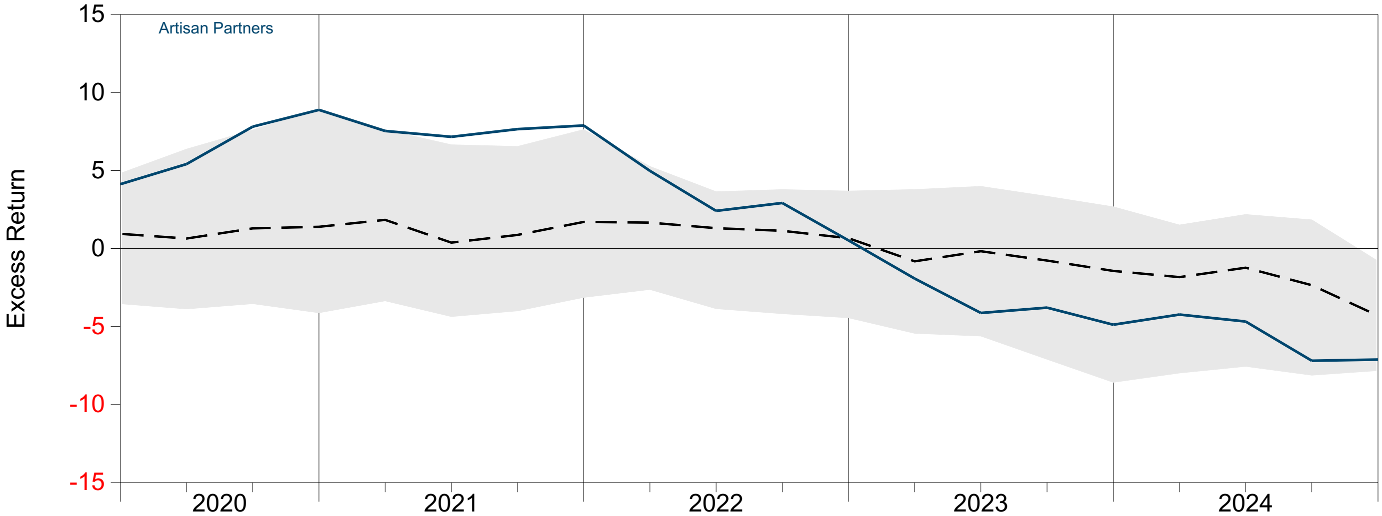
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.74	0.39	0.11
25th Percentile	0.03	0.35	(0.05)
Median	(1.00)	0.30	(0.19)
75th Percentile	(2.56)	0.23	(0.47)
90th Percentile	(3.65)	0.19	(0.92)
Artisan Partners ●	(1.08)	0.30	(0.18)

Artisan Partners
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

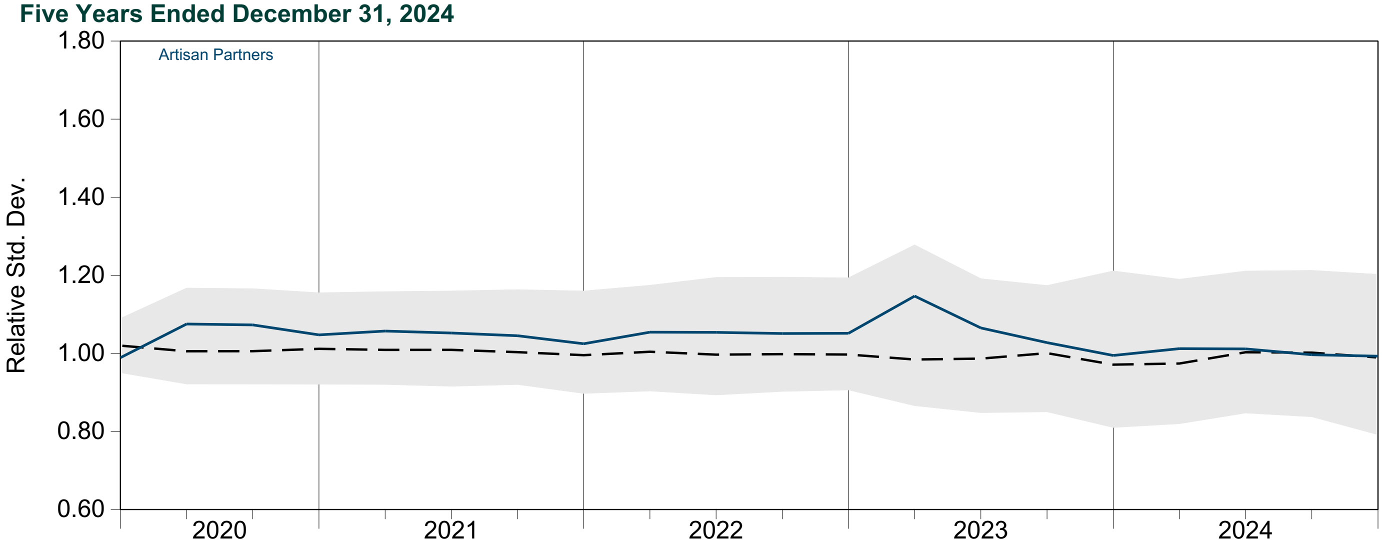
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell MidCap Growth Idx. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Mid Cap Growth. The second chart below illustrates the consistency 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.05%	1.47%
% Positive Periods	60%	60%
Average Ranking	50	40

Rolling Three Year Relative Std. Dev. Relative to Russell MidCap Growth Idx
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.00%	1.04%
% Positive Periods	100%	100%
Average Ranking	50	39

Victory Mid Cap Value
Period Ended December 31, 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.

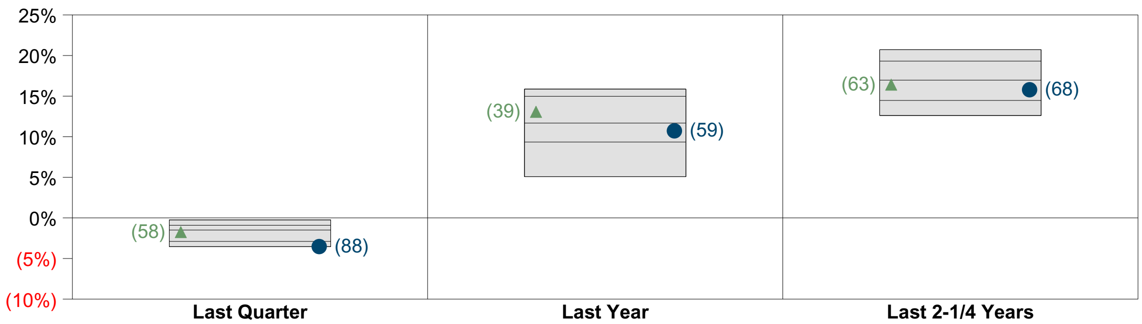
Quarterly Summary and Highlights

- Victory Mid Cap Value's portfolio posted a (3.53)% return for the quarter placing it in the 88 percentile of the Callan Mid Cap Value group for the quarter and in the 59 percentile for the last year.
- Victory Mid Cap Value's portfolio underperformed the Russell MidCap Value Idx by 1.78% for the quarter and underperformed the Russell MidCap Value Idx for the year by 2.35%.

Quarterly Asset Growth

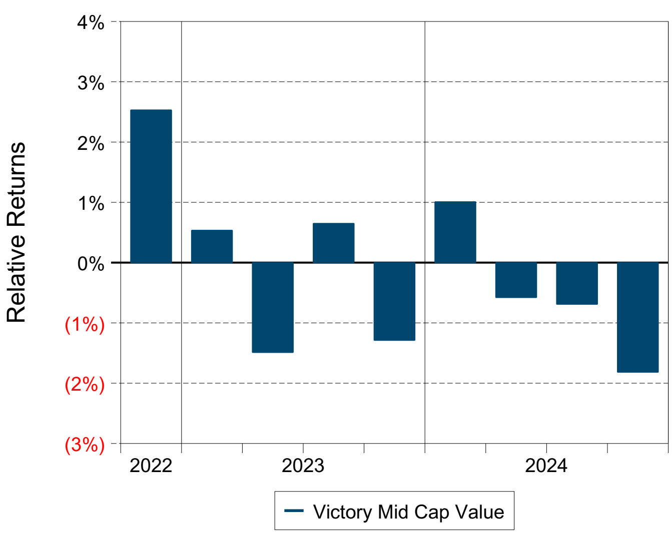
Beginning Market Value	$604,972,618
Net New Investment	$-679,351
Investment Gains/(Losses)	$-21,310,741
Ending Market Value	$582,982,526

Performance vs Callan Mid Cap Value (Gross)

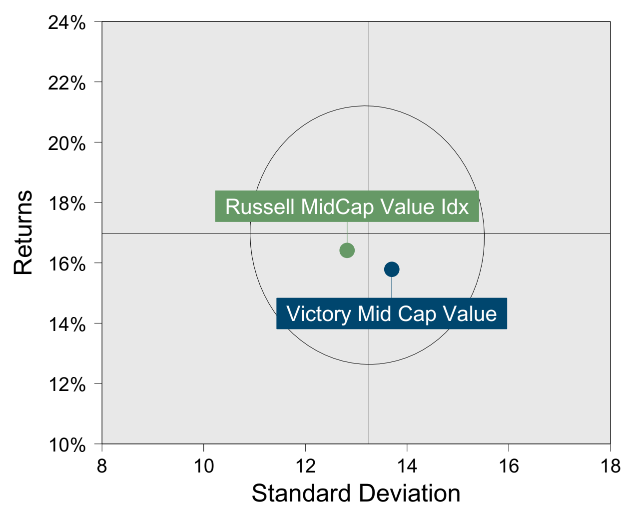


	Last Quarter	Last Year	Last 2-1/4 Years
10th Percentile	(0.24)	15.87	20.72
25th Percentile	(0.90)	14.98	19.31
Median	(1.49)	11.68	16.97
75th Percentile	(2.89)	9.35	14.47
90th Percentile	(3.54)	5.07	12.61
Victory Mid Cap Value ●	(3.53)	10.72	15.79
Russell MidCap Value Idx ▲	(1.75)	13.07	16.41

Relative Return vs Russell MidCap Value Idx



Callan Mid Cap Value (Gross)
Annualized Two and One-Quarter Year Risk vs Return

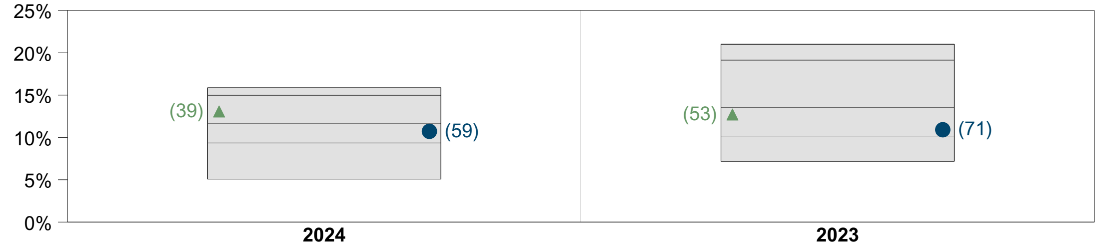


Victory Mid Cap Value
Return Analysis Summary

Return Analysis

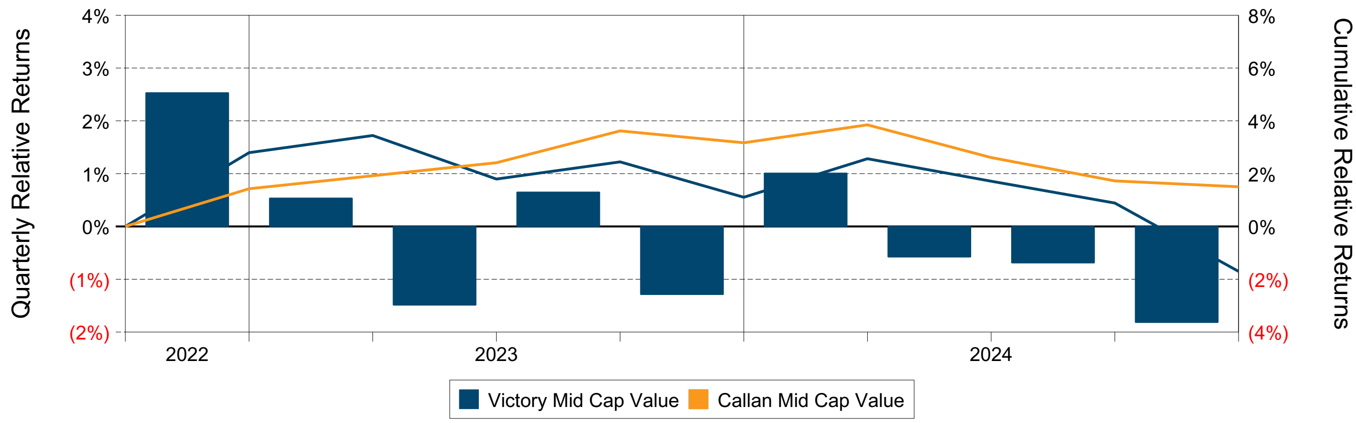
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

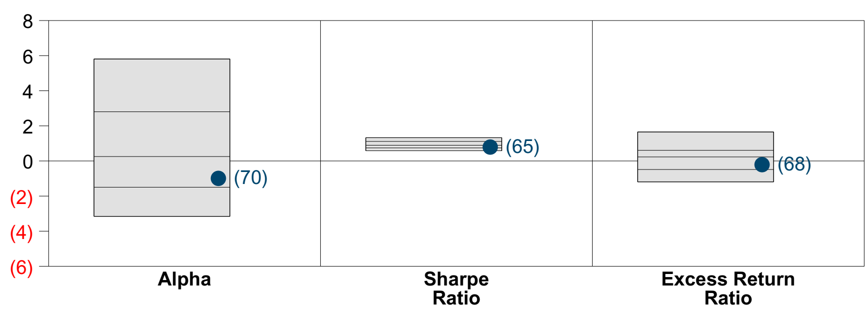


	2024	2023
10th Percentile	15.87	21.01
25th Percentile	14.98	19.13
Median	11.68	13.51
75th Percentile	9.35	10.16
90th Percentile	5.07	7.18
Victory Mid Cap Value ●	10.72	10.91
Russell MidCap Value Idx ▲	13.07	12.71

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 and One-Quarter Years Ended December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.81	1.33	1.65
25th Percentile	2.80	1.11	0.61
Median	0.25	0.89	0.23
75th Percentile	(1.50)	0.74	(0.49)
90th Percentile	(3.16)	0.58	(1.19)
Victory Mid Cap Value ●	(0.99)	0.79	(0.21)

Dimensional Fund Advisors
Period Ended December 31, 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.

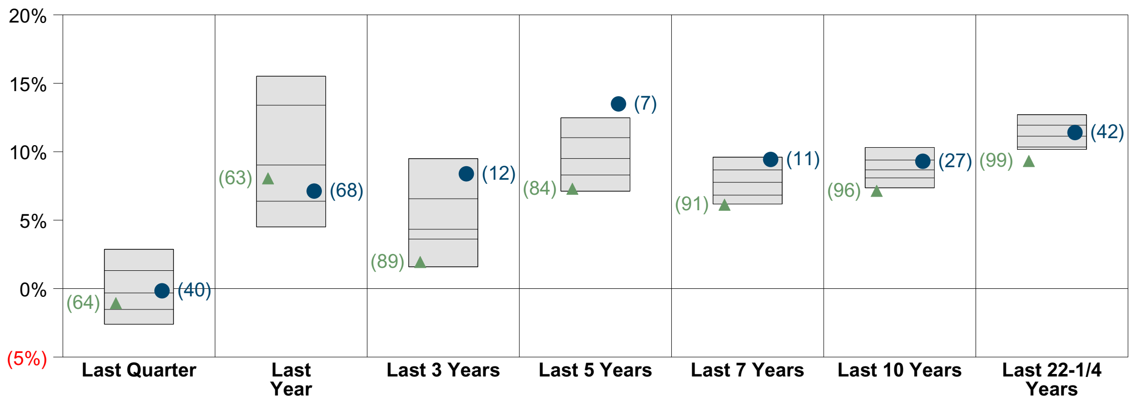
Quarterly Summary and Highlights

- Dimensional Fund Advisors's portfolio posted a (0.16)% return for the quarter placing it in the 40 percentile of the Callan Small Cap Value group for the quarter and in the 68 percentile for the last year.
- Dimensional Fund Advisors's portfolio outperformed the Russell 2000 Value Index by 0.90% for the quarter and underperformed the Russell 2000 Value Index for the year by 0.93%.

Quarterly Asset Growth

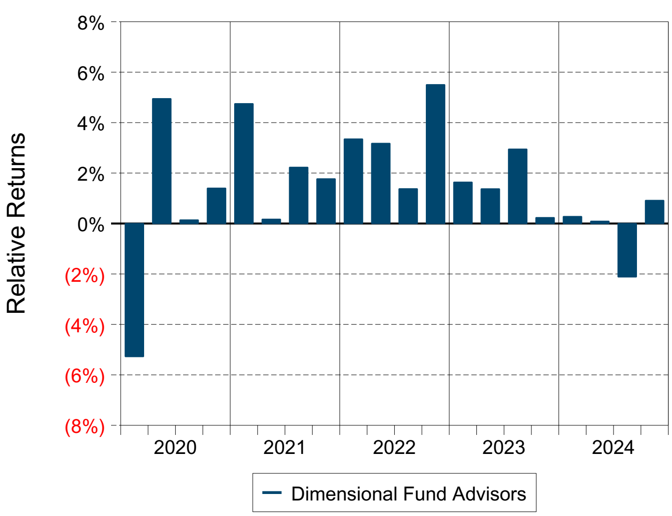
Beginning Market Value	$358,277,052
Net New Investment	$-250,794
Investment Gains/(Losses)	$-553,138
Ending Market Value	$357,473,121

Performance vs Callan Small Cap Value (Gross)

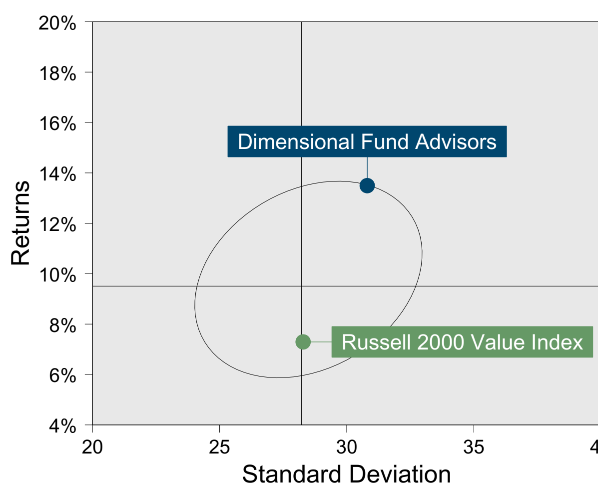


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 22-1/4 Years
10th Percentile	2.87	15.52	9.50	12.48	9.60	10.31	12.71
25th Percentile	1.32	13.40	6.57	11.03	8.67	9.39	11.94
Median	(0.32)	9.03	4.33	9.51	7.77	8.68	11.14
75th Percentile	(1.52)	6.38	3.62	8.30	6.83	8.09	10.34
90th Percentile	(2.60)	4.51	1.59	7.12	6.18	7.36	10.17
Dimensional Fund Advisors ●	(0.16)	7.12	8.39	13.49	9.44	9.30	11.40
Russell 2000 Value Index ▲	(1.06)	8.05	1.94	7.29	6.13	7.14	9.32

Relative Return vs Russell 2000 Value Index



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

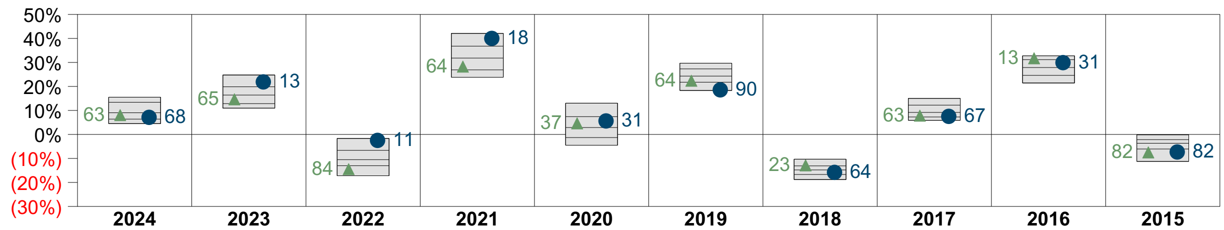


Dimensional Fund Advisors
Return Analysis Summary

Return Analysis

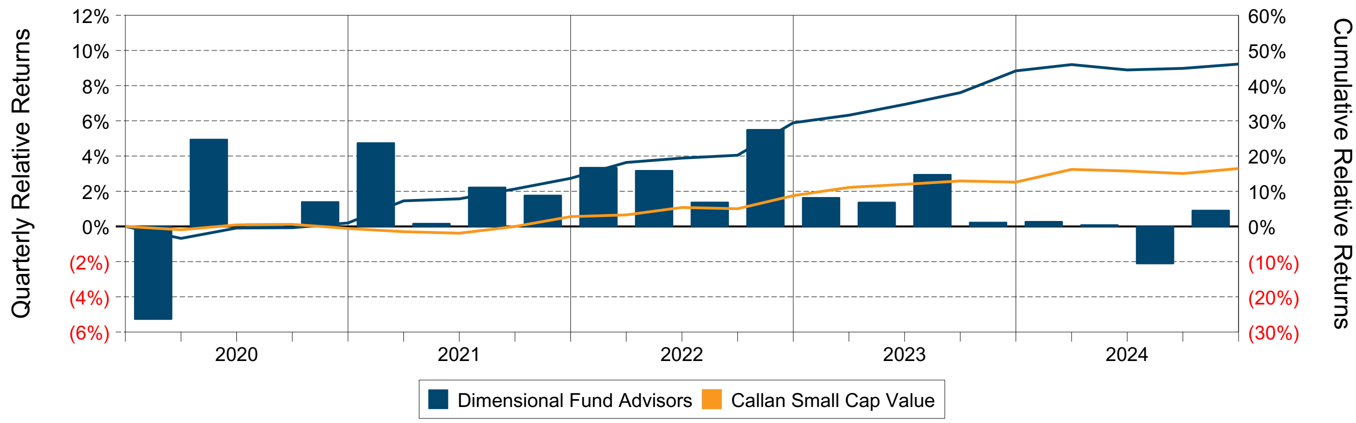
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

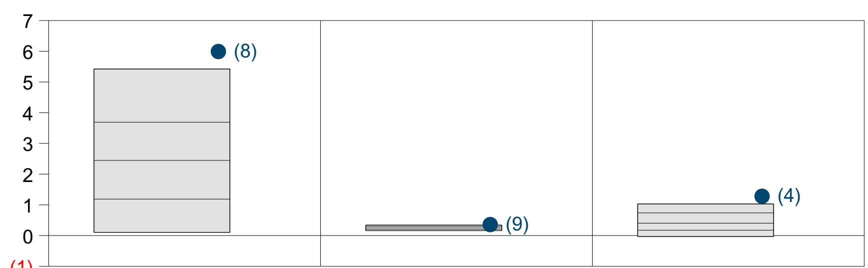


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	15.52	24.77	(1.66)	42.10	13.02	29.68	(10.31)	15.02	32.76	(0.15)
25th Percentile	13.40	19.86	(6.63)	36.79	7.41	27.31	(13.10)	12.21	31.15	(2.17)
Median	9.03	16.41	(10.51)	31.82	2.88	24.31	(14.79)	9.18	27.88	(3.68)
75th Percentile	6.38	12.84	(13.03)	26.90	(1.30)	21.76	(16.68)	7.28	24.62	(6.06)
90th Percentile	4.51	10.95	(17.21)	23.82	(4.50)	18.32	(18.80)	5.88	21.43	(11.23)
Dimensional Fund Advisors ●	7.12	21.88	(2.48)	40.02	5.62	18.57	(15.81)	7.54	29.92	(7.31)
Russell 2000 Value Index ▲	8.05	14.65	(14.48)	28.27	4.63	22.39	(12.86)	7.84	31.74	(7.47)

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 December 31, 2024



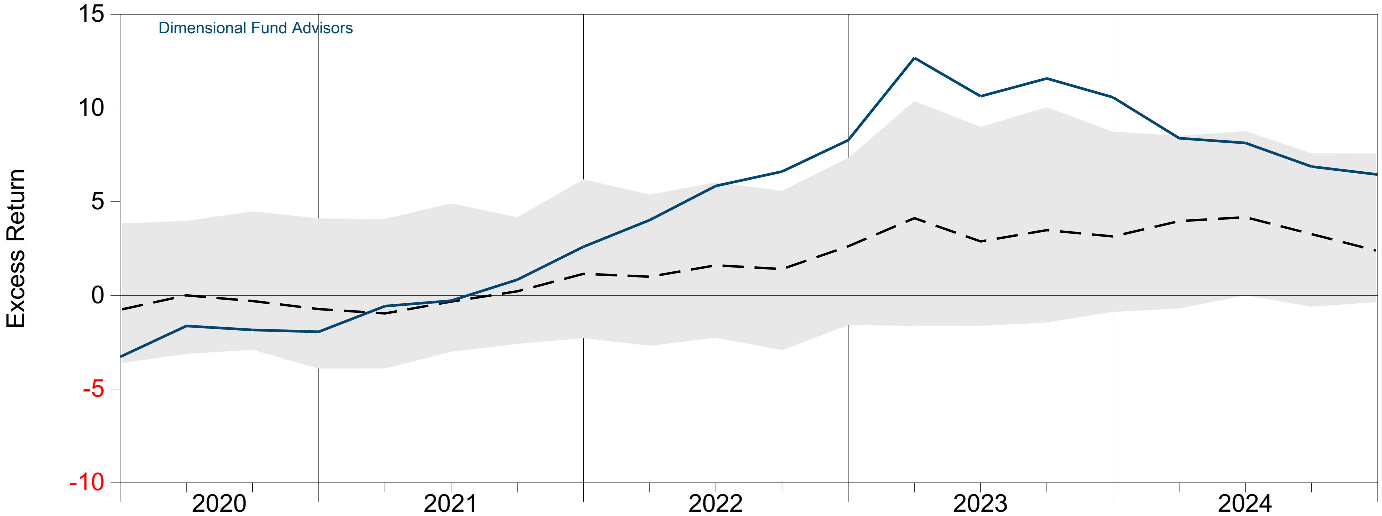
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.42	0.34	1.03
25th Percentile	3.69	0.30	0.74
Median	2.45	0.25	0.40
75th Percentile	1.19	0.19	0.17
90th Percentile	0.10	0.16	(0.03)
Dimensional Fund Advisors ●	5.99	0.36	1.28

Dimensional Fund Advisors
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

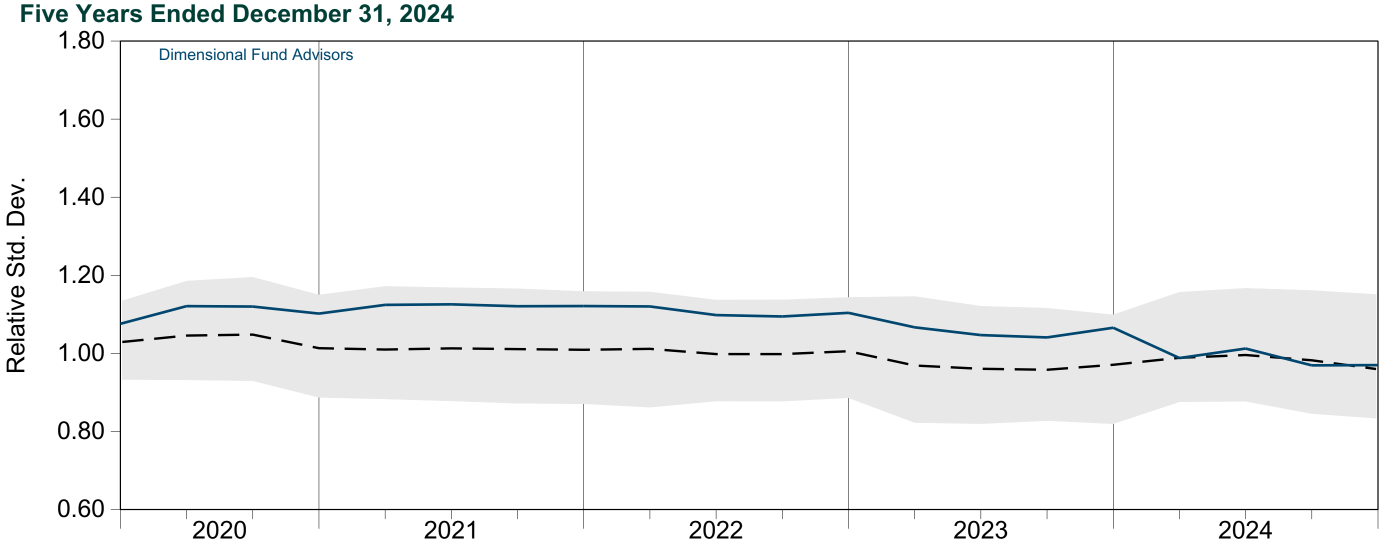
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Value Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Value. The second chart below illustrates the consistency 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.62%	4.69%
% Positive Periods	75%	70%
Average Ranking	50	30

Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Value Index
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.00%	1.07%
% Positive Periods	100%	100%
Average Ranking	50	26

Wellington Small Cap
Period Ended December 31, 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.

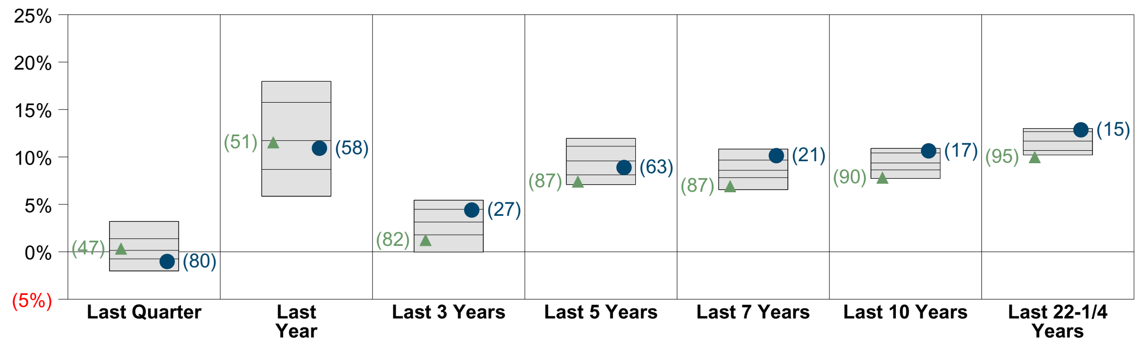
Quarterly Summary and Highlights

- Wellington Small Cap's portfolio posted a (1.02)% return for the quarter placing it in the 80 percentile of the Callan Small Cap Core group for the quarter and in the 58 percentile for the last year.
- Wellington Small Cap's portfolio underperformed the Russell 2000 Index by 1.36% for the quarter and underperformed the Russell 2000 Index for the year by 0.62%.

Quarterly Asset Growth

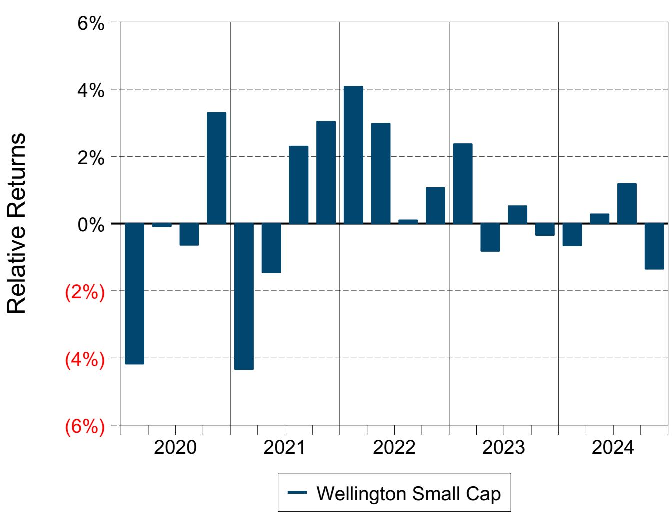
Beginning Market Value	$371,599,920
Net New Investment	$-582,400
Investment Gains/(Losses)	$-3,757,927
Ending Market Value	$367,259,593

Performance vs Callan Small Cap Core (Gross)

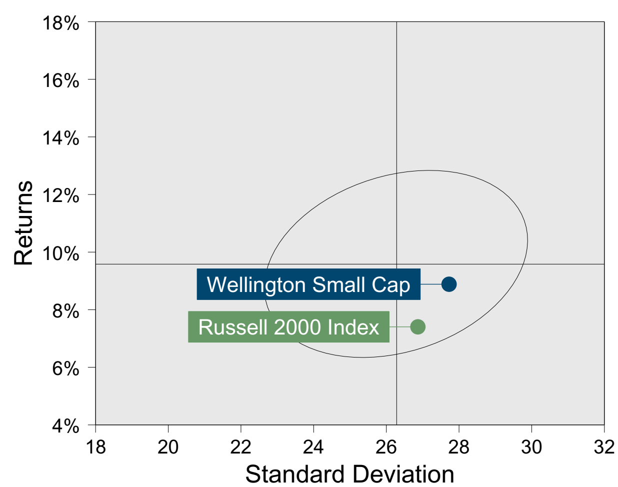


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 22-1/4 Years
10th Percentile	3.20	17.97	5.44	11.96	10.83	10.90	13.00
25th Percentile	1.38	15.75	4.48	11.12	9.67	10.42	12.67
Median	0.15	11.73	3.14	9.58	8.59	9.37	11.67
75th Percentile	(0.75)	8.68	1.79	8.11	7.82	8.64	10.68
90th Percentile	(2.02)	5.85	(0.03)	7.09	6.55	7.73	10.21
Wellington Small Cap ●	(1.02)	10.92	4.40	8.88	10.14	10.64	12.86
Russell 2000 Index ▲	0.33	11.54	1.24	7.40	6.91	7.82	9.97

Relative Return vs Russell 2000 Index



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

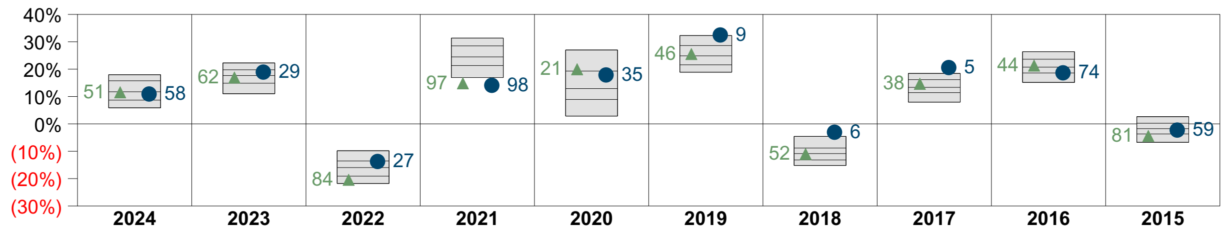


Wellington Small Cap
Return Analysis Summary

Return Analysis

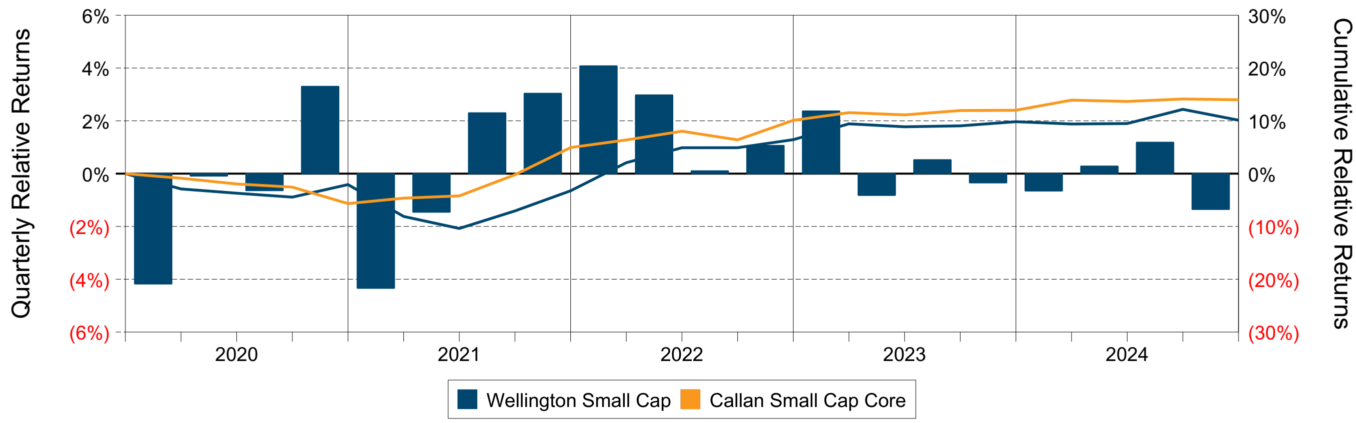
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

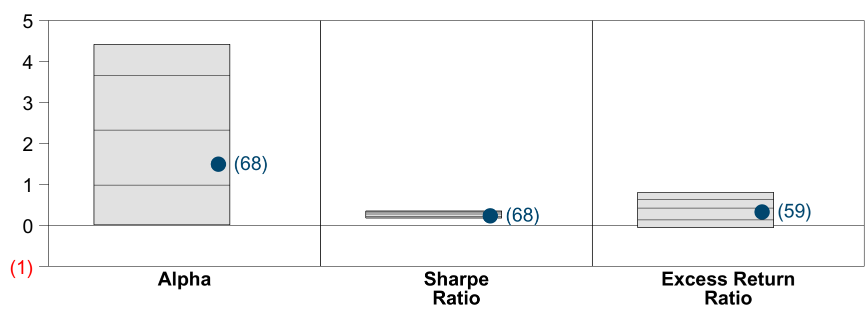


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	17.97	22.26	(9.82)	31.35	27.00	32.27	(4.57)	18.44	26.38	2.64
25th Percentile	15.75	19.77	(13.55)	28.50	19.30	28.61	(8.82)	16.16	23.63	0.24
Median	11.73	17.66	(15.97)	24.48	12.90	24.86	(10.86)	13.35	20.74	(1.75)
75th Percentile	8.68	14.86	(19.09)	21.32	8.92	21.58	(13.18)	11.42	18.60	(3.68)
90th Percentile	5.85	11.02	(21.78)	16.92	2.85	18.88	(15.19)	7.95	15.15	(6.73)
Wellington Small Cap ●	10.92	18.93	(13.73)	14.09	17.88	32.48	(3.05)	20.59	18.66	(2.26)
Russell 2000 Index ▲	11.54	16.93	(20.44)	14.82	19.96	25.52	(11.01)	14.65	21.31	(4.41)

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 December 31, 2024



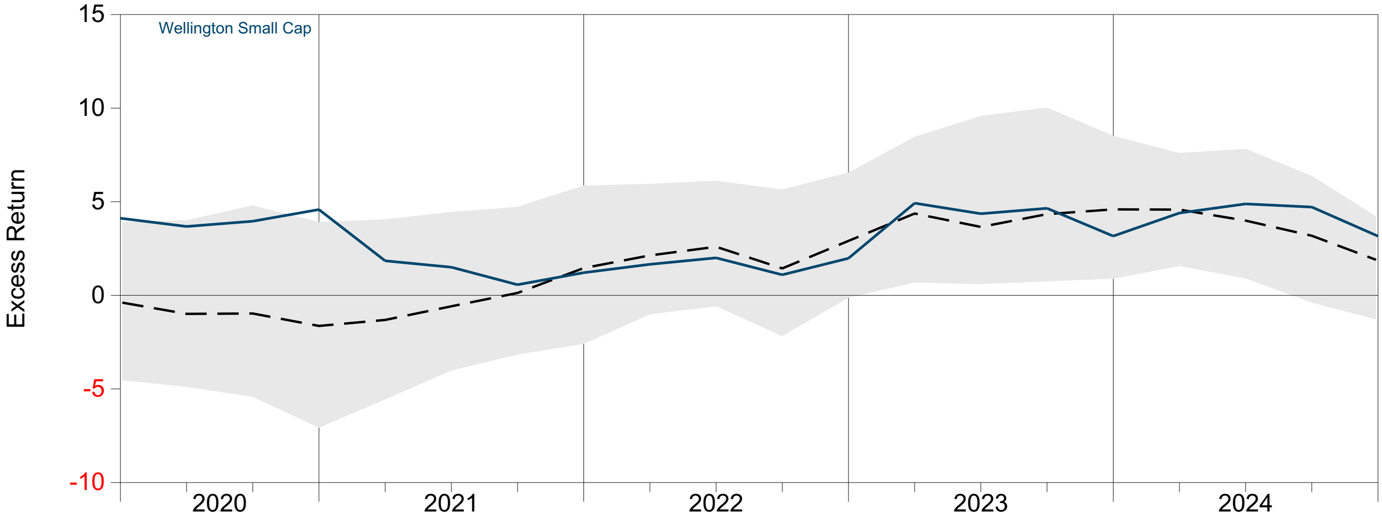
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.42	0.35	0.81
25th Percentile	3.66	0.32	0.63
Median	2.33	0.28	0.42
75th Percentile	0.98	0.22	0.13
90th Percentile	0.01	0.18	(0.06)
Wellington Small Cap ●	1.49	0.23	0.33

Wellington Small Cap
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

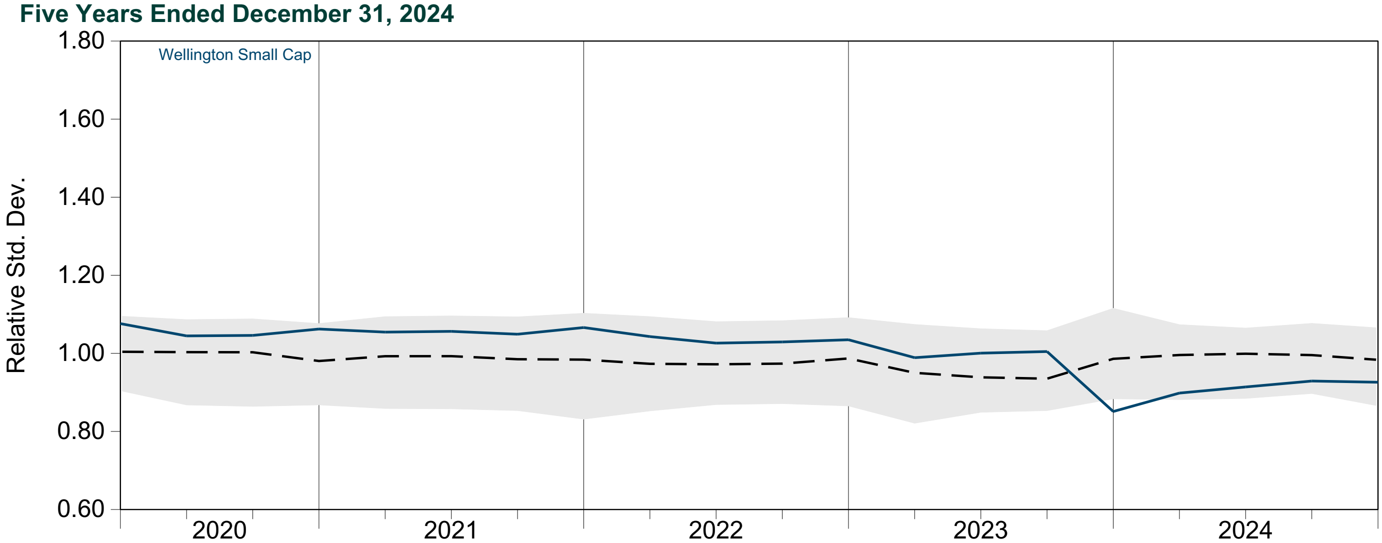
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Core. The second chart below illustrates the consistency 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.77%	3.12%
% Positive Periods	70%	100%
Average Ranking	50	38

Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Index
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	0.98%	1.01%
% Positive Periods	100%	100%
Average Ranking	50	39

Riverbridge Partners
Period Ended December 31, 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.

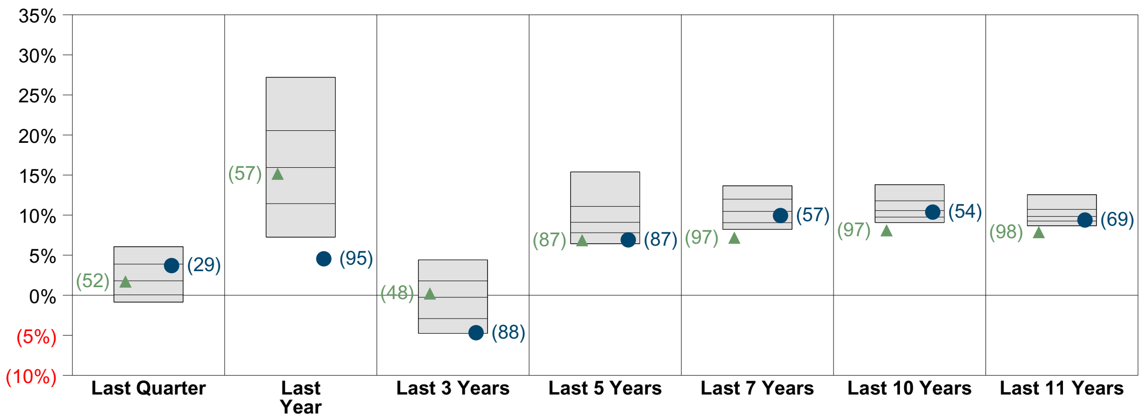
Quarterly Summary and Highlights

- Riverbridge Partners's portfolio posted a 3.70% return for the quarter placing it in the 29 percentile of the Callan Small Cap Growth group for the quarter and in the 95 percentile for the last year.
- Riverbridge Partners's portfolio outperformed the Russell 2000 Growth Index by 2.00% for the quarter and underperformed the Russell 2000 Growth Index for the year by 10.61%.

Quarterly Asset Growth

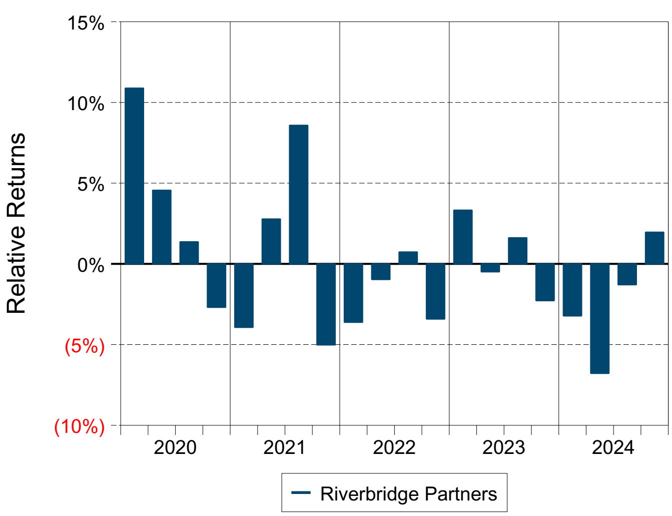
Beginning Market Value	$334,753,991
Net New Investment	$-613,975
Investment Gains/(Losses)	$12,403,974
Ending Market Value	$346,543,990

Performance vs Callan Small Cap Growth (Gross)

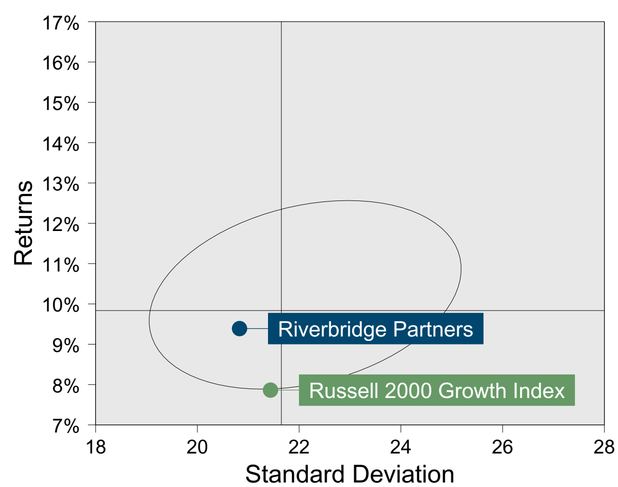


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11 Years
10th Percentile	6.06	27.20	4.41	15.39	13.66	13.80	12.55
25th Percentile	3.88	20.55	1.79	11.09	11.99	11.78	10.71
Median	1.80	15.94	(0.25)	9.10	10.47	10.57	9.84
75th Percentile	0.05	11.43	(2.91)	7.80	9.06	9.75	9.26
90th Percentile	(0.86)	7.25	(4.76)	6.43	8.22	9.07	8.67
Riverbridge Partners ●	3.70	4.55	(4.68)	6.91	9.94	10.38	9.39
Russell 2000 Growth Index ▲	1.70	15.15	0.21	6.86	7.17	8.09	7.86

Relative Return vs Russell 2000 Growth Index



Callan Small Cap Growth (Gross)
Annualized Eleven Year Risk vs Return

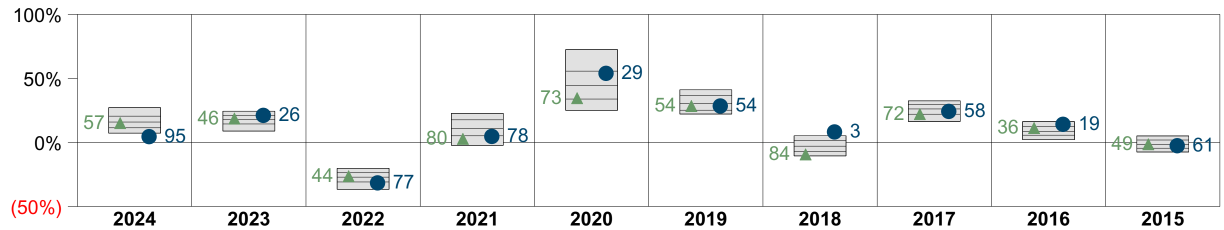


Riverbridge Partners
Return Analysis Summary

Return Analysis

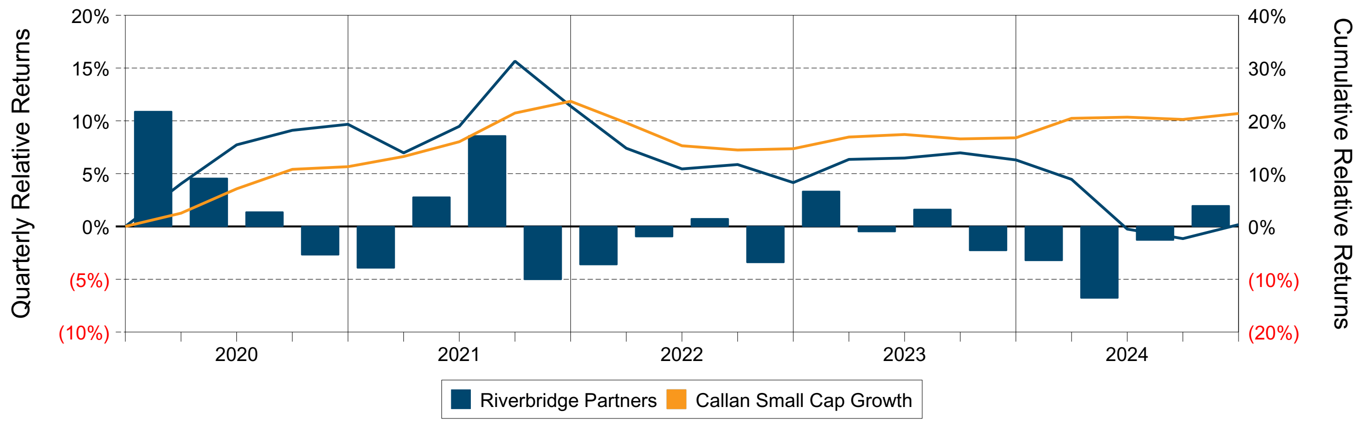
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

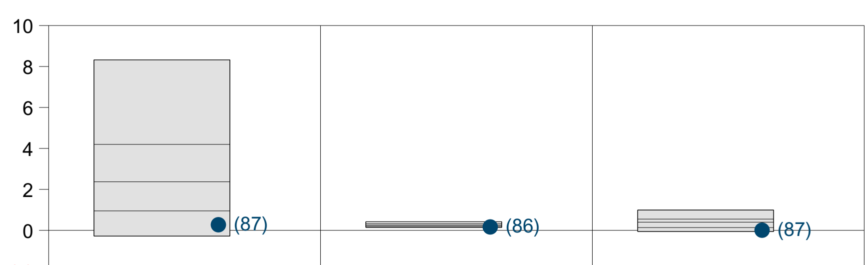


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	27.20	24.39	(20.23)	22.70	72.54	41.14	5.22	32.51	16.32	5.09
25th Percentile	20.55	21.20	(23.68)	17.66	55.71	36.80	1.41	29.62	12.30	1.91
Median	15.94	17.84	(27.10)	10.91	44.48	30.24	(2.91)	26.16	8.62	(1.54)
75th Percentile	11.43	14.43	(30.88)	5.19	33.89	25.20	(7.01)	22.05	5.66	(4.51)
90th Percentile	7.25	8.87	(36.65)	(2.30)	25.07	22.20	(10.52)	16.36	2.15	(7.49)
Riverbridge Partners ●	4.55	21.15	(31.61)	4.71	53.97	28.48	8.21	24.25	14.17	(2.57)
Russell 2000 Growth Index ▲	15.15	18.66	(26.36)	2.83	34.63	28.48	(9.31)	22.17	11.32	(1.38)

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 December 31, 2024



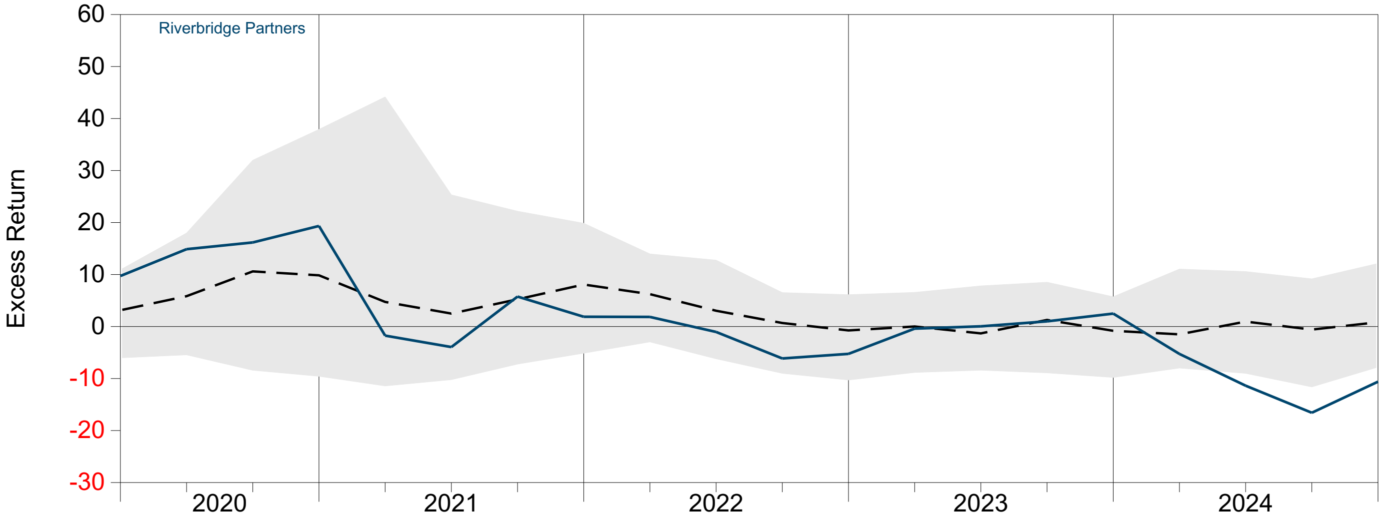
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	8.32	0.42	0.99
25th Percentile	4.20	0.32	0.55
Median	2.37	0.25	0.40
75th Percentile	0.95	0.19	0.13
90th Percentile	(0.28)	0.14	(0.06)
Riverbridge Partners ●	0.27	0.16	0.01

Riverbridge Partners
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

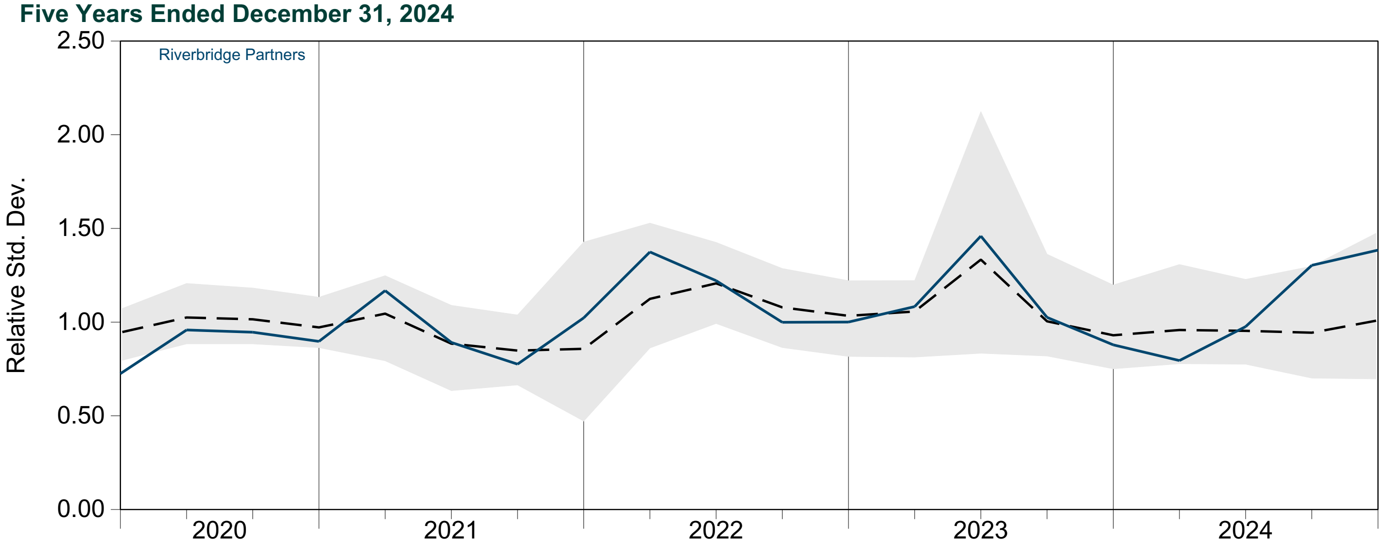
The first chart below illustrates the consistency of excess return over rolling one year periods versus the Russell 2000 Growth Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Growth. The second chart below illustrates the consistency 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
Five Years Ended December 31, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Excess Return	2.90%	0.54%
% Positive Periods	75%	50%
Average Ranking	50	60

Rolling One Year Relative Std. Dev. Relative to Russell 2000 Growth Index
Five Years Ended December 31, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.01%	1.04%
% Positive Periods	100%	100%
Average Ranking	50	52

Global Equity
Period Ended December 31, 2024

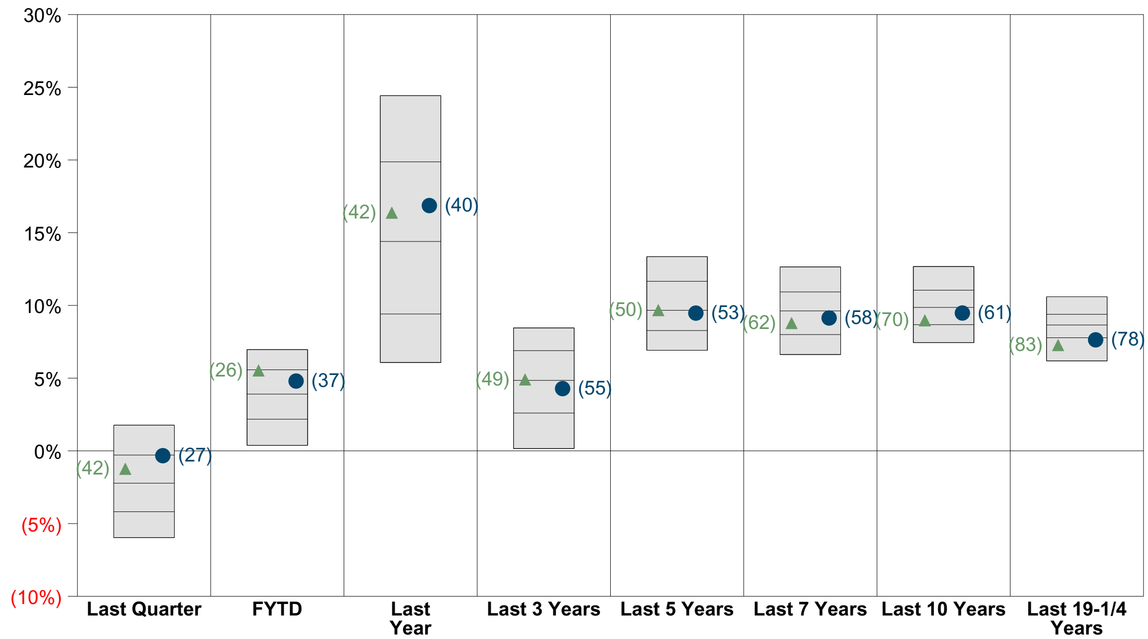
Quarterly Summary and Highlights

- Global Equity's portfolio posted a (0.33)% return for the quarter placing it in the 27 percentile of the Callan Global Equity group for the quarter and in the 40 percentile for the last year.
- Global Equity's portfolio outperformed the Global Equity Benchmark (2) by 0.91% for the quarter and outperformed the Global Equity Benchmark (2) for the year by 0.49%.

Quarterly Asset Growth

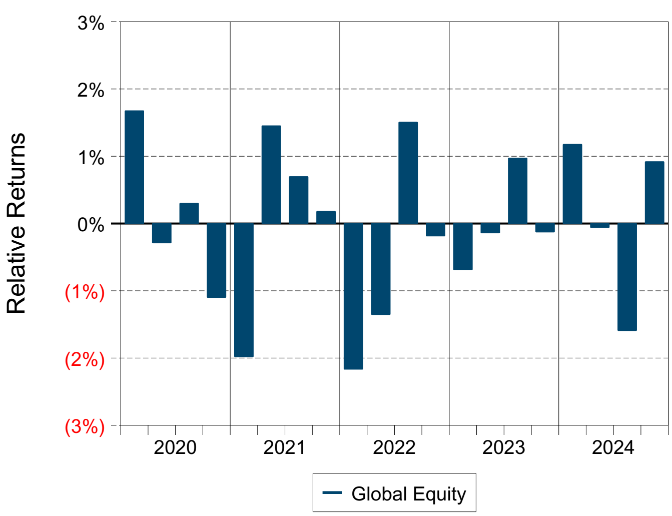
Beginning Market Value	$4,314,952,287
Net New Investment	$-154,024,145
Investment Gains/(Losses)	$-10,365,831
Ending Market Value	$4,150,562,311

Performance vs Callan Global Equity (Gross)

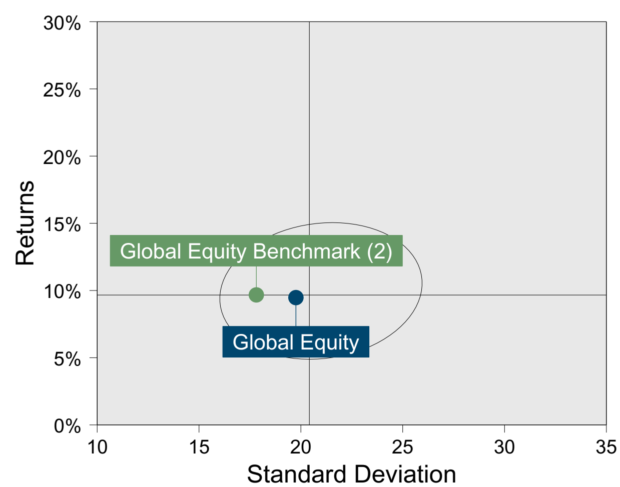


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 19-1/4 Years
10th Percentile	1.77	6.96	24.42	8.45	13.35	12.65	12.68	10.60
25th Percentile	(0.29)	5.57	19.87	6.89	11.66	10.93	11.05	9.39
Median	(2.22)	3.90	14.40	4.85	9.66	9.62	9.86	8.65
75th Percentile	(4.18)	2.18	9.41	2.60	8.27	8.00	8.68	7.78
90th Percentile	(5.97)	0.38	6.07	0.16	6.92	6.62	7.44	6.19
Global Equity ●	(0.33)	4.80	16.86	4.28	9.47	9.13	9.48	7.63
Global Equity Benchmark (2) ▲	(1.24)	5.52	16.37	4.90	9.67	8.78	8.97	7.27

Relative Returns vs Global Equity Benchmark (2)



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

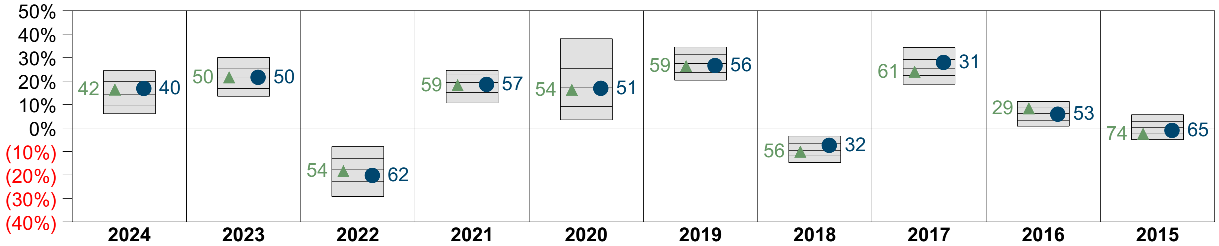


Global Equity
Return Analysis Summary

Return Analysis

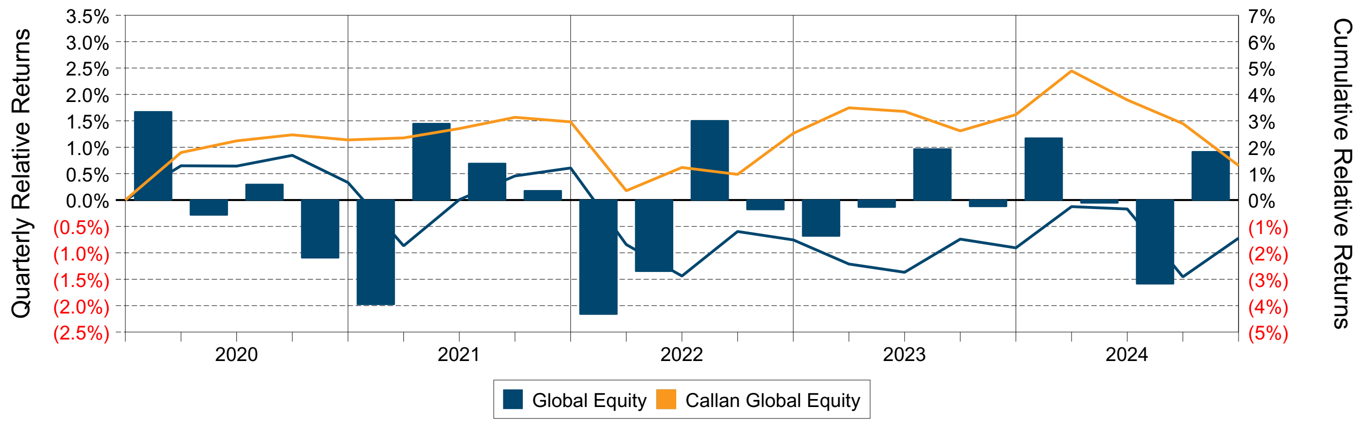
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

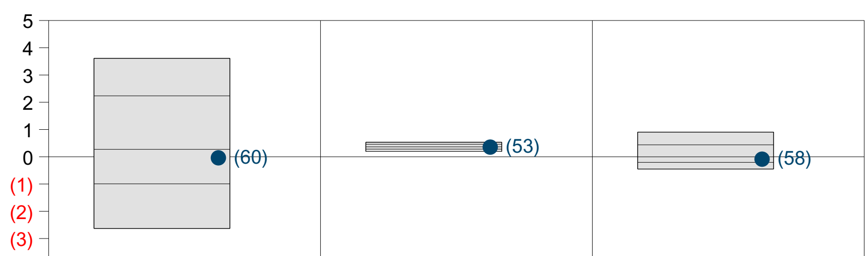


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	24.42	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile	19.87	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median	14.40	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.23	0.16
75th Percentile	9.41	16.85	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile	6.07	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Global Equity ●	16.86	21.61	(20.21)	18.59	16.92	26.62	(7.38)	27.95	5.90	(1.02)
Global Equity Benchmark (2) ▲	16.37	21.58	(18.40)	18.22	16.25	26.35	(10.08)	23.95	8.36	(2.48)

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.61	0.53	0.90
25th Percentile	2.23	0.46	0.44
Median	0.27	0.37	(0.00)
75th Percentile	(0.99)	0.28	(0.21)
90th Percentile	(2.63)	0.20	(0.45)
Global Equity ●	(0.04)	0.35	(0.09)

Acadian Global Equity
Period Ended December 31, 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.

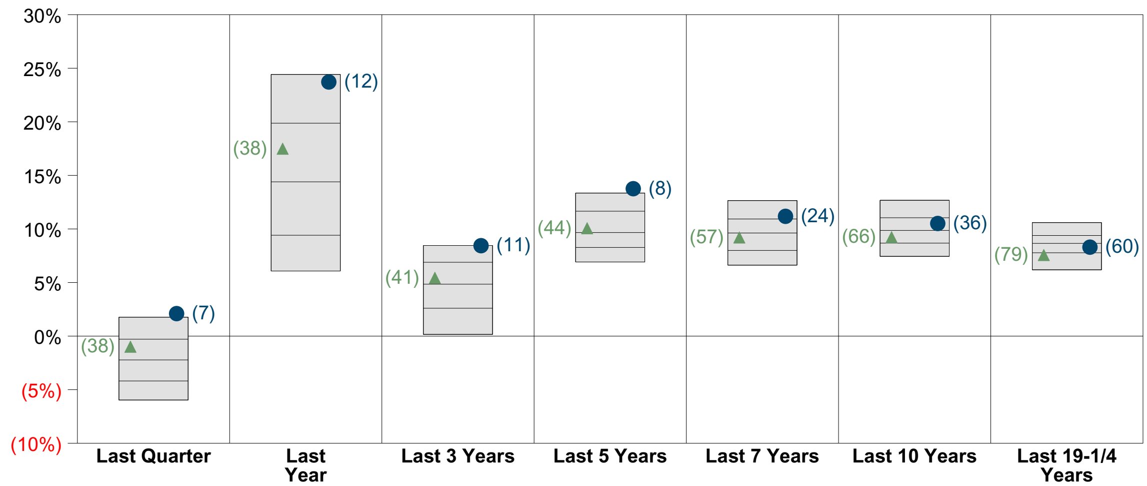
Quarterly Summary and Highlights

- Acadian Global Equity's portfolio posted a 2.10% return for the quarter placing it in the 7 percentile of the Callan Global Equity group for the quarter and in the 12 percentile for the last year.
- Acadian Global Equity's portfolio outperformed the MSCI ACWI Index by 3.09% for the quarter and outperformed the MSCI ACWI Index for the year by 6.22%.

Quarterly Asset Growth

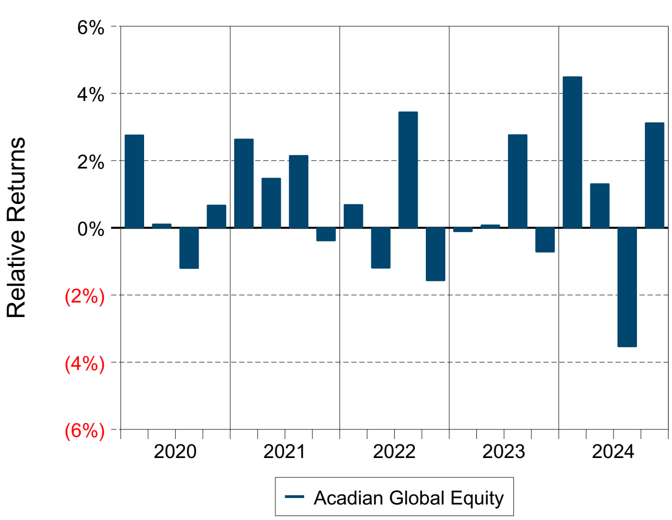
Beginning Market Value	$1,075,884,519
Net New Investment	$-970,038
Investment Gains/(Losses)	$22,612,616
Ending Market Value	$1,097,527,097

Performance vs Callan Global Equity (Gross)

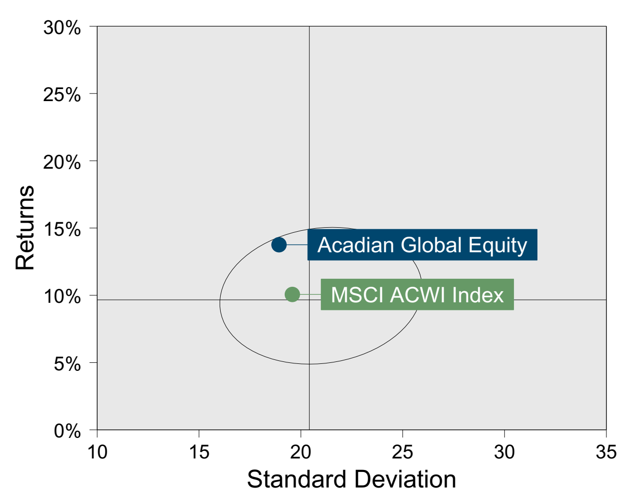


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 19-1/4 Years
10th Percentile	1.77	24.42	8.45	13.35	12.65	12.68	10.60
25th Percentile	(0.29)	19.87	6.89	11.66	10.93	11.05	9.39
Median	(2.22)	14.40	4.85	9.66	9.62	9.86	8.65
75th Percentile	(4.18)	9.41	2.60	8.27	8.00	8.68	7.78
90th Percentile	(5.97)	6.07	0.16	6.92	6.62	7.44	6.19
Acadian Global Equity ●	2.10	23.71	8.44	13.76	11.18	10.51	8.30
MSCI ACWI Index ▲	(0.99)	17.49	5.44	10.06	9.21	9.23	7.57

Relative Return vs MSCI ACWI Index



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

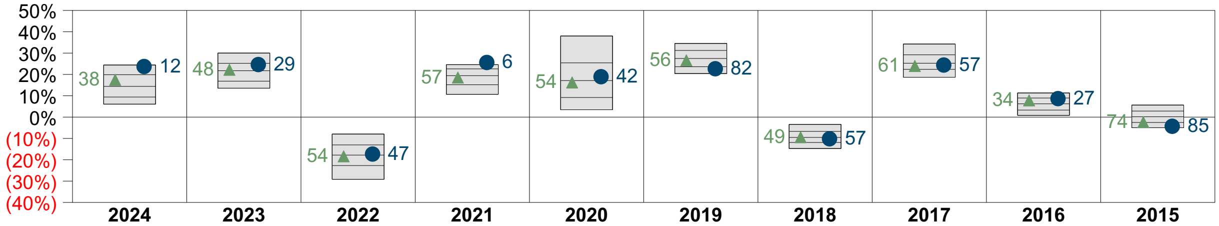


Acadian Global Equity
Return Analysis Summary

Return Analysis

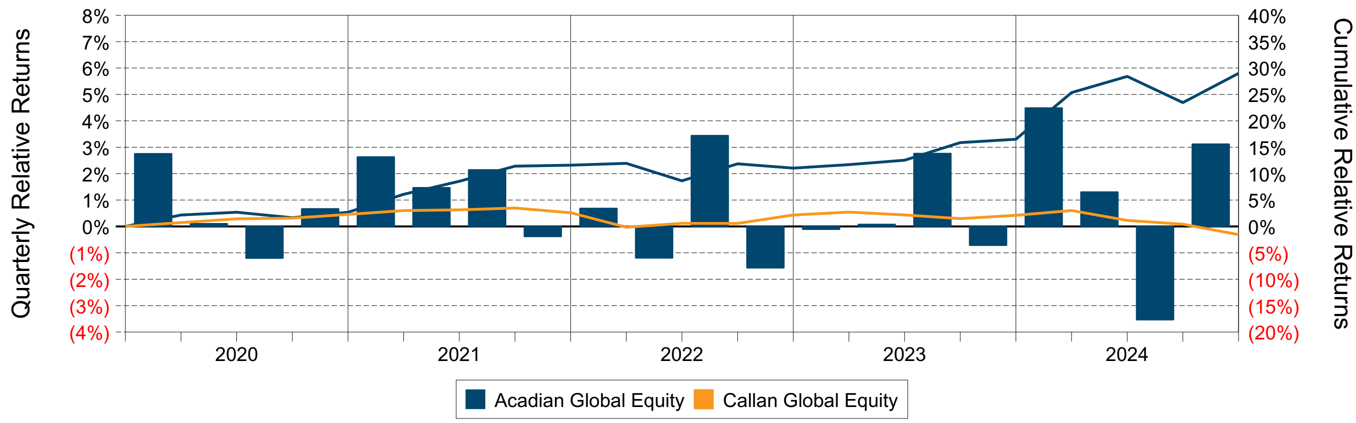
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

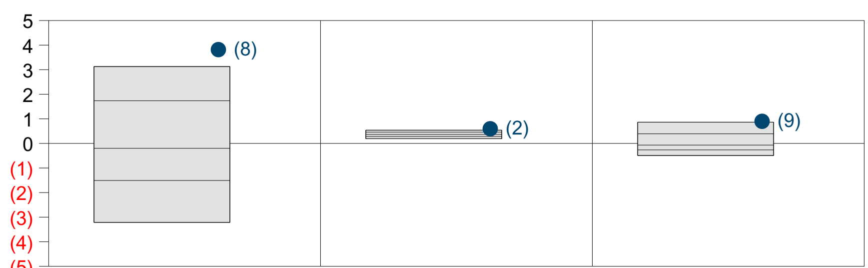


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	24.42	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile	19.87	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median	14.40	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.23	0.16
75th Percentile	9.41	16.85	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile	6.07	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Acadian Global Equity ●	23.71	24.64	(17.31)	25.62	18.94	22.68	(10.16)	24.40	8.67	(4.30)
MSCI ACWI Index ▲	17.49	22.20	(18.36)	18.54	16.25	26.60	(9.41)	23.97	7.86	(2.36)

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 December 31, 2024

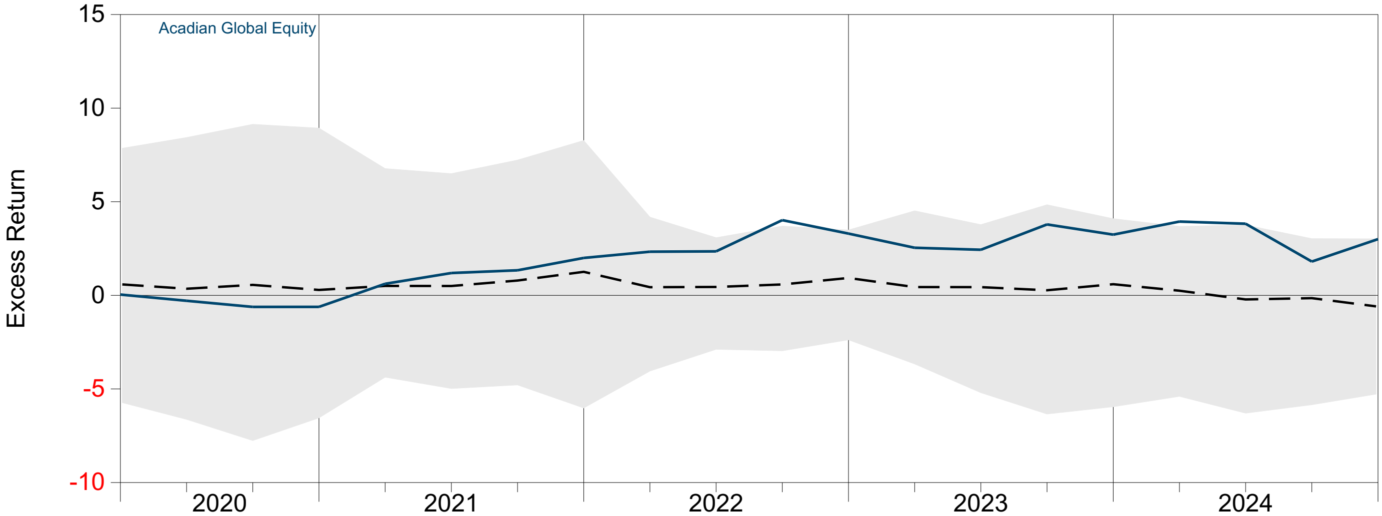


	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.13	0.54	0.86
25th Percentile	1.74	0.46	0.39
Median	(0.20)	0.37	(0.07)
75th Percentile	(1.51)	0.28	(0.26)
90th Percentile	(3.21)	0.19	(0.49)
Acadian Global Equity ●	3.82	0.60	0.90

Consistency of Excess Return and Relative Std. Dev.

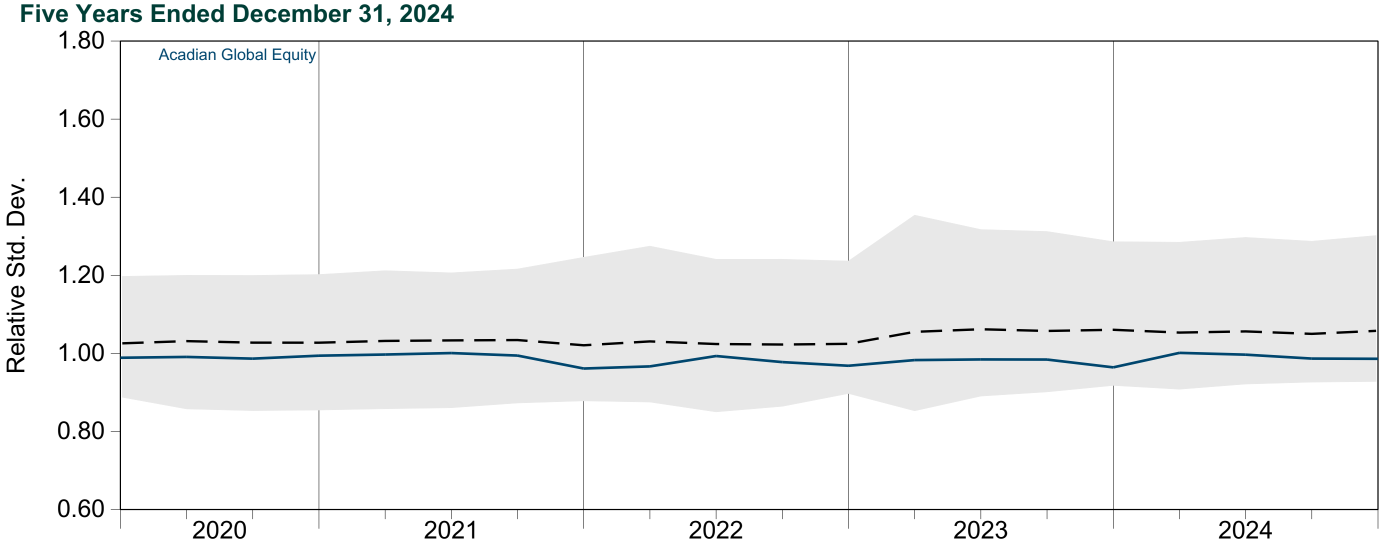
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI ACWI. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Global Equity. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.41%	2.01%
% Positive Periods	85%	85%
Average Ranking	50	30

Rolling Three Year Relative Std. Dev. Relative to MSCI ACWI
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.04%	0.99%
% Positive Periods	100%	100%
Average Ranking	50	70

Epoch Investments
Period Ended December 31, 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.

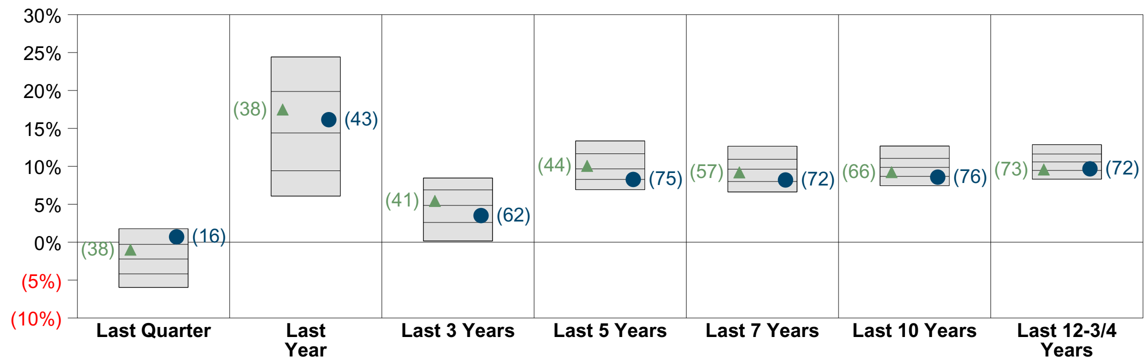
Quarterly Summary and Highlights

- Epoch Investments's portfolio posted a 0.70% return for the quarter placing it in the 16 percentile of the Callan Global Equity group for the quarter and in the 43 percentile for the last year.
- Epoch Investments's portfolio outperformed the MSCI ACWI Index by 1.69% for the quarter and underperformed the MSCI ACWI Index for the year by 1.34%.

Quarterly Asset Growth

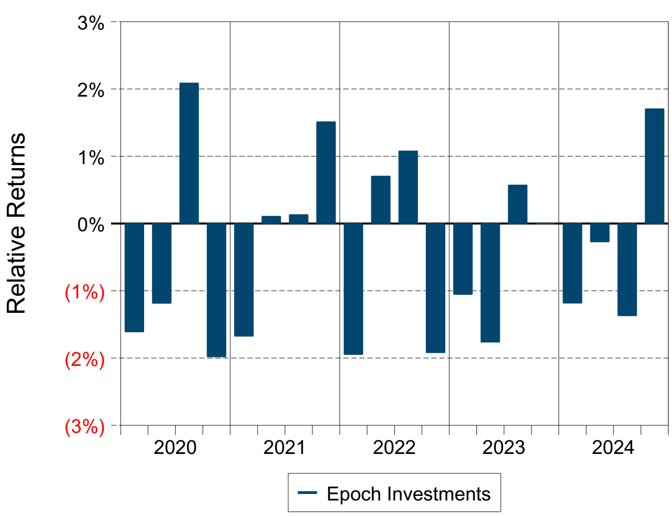
Beginning Market Value	$1,078,026,593
Net New Investment	$-151,078,027
Investment Gains/(Losses)	$12,109,335
Ending Market Value	$939,057,902

Performance vs Callan Global Equity (Gross)

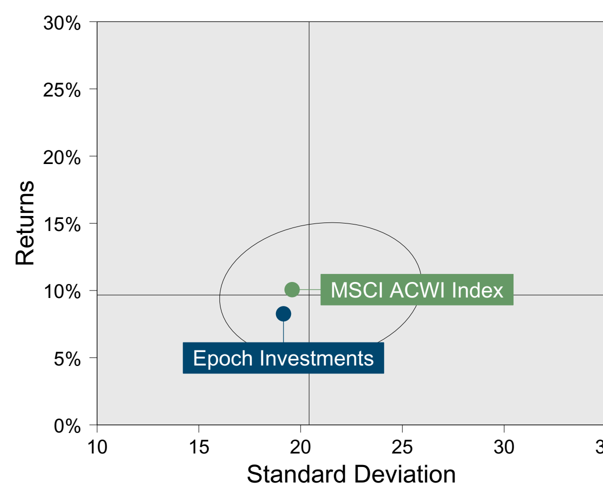


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	1.77	24.42	8.45	13.35	12.65	12.68	12.85
25th Percentile	(0.29)	19.87	6.89	11.66	10.93	11.05	11.62
Median	(2.22)	14.40	4.85	9.66	9.62	9.86	10.58
75th Percentile	(4.18)	9.41	2.60	8.27	8.00	8.68	9.46
90th Percentile	(5.97)	6.07	0.16	6.92	6.62	7.44	8.31
Epoch Investments ●	0.70	16.15	3.51	8.27	8.20	8.57	9.67
MSCI ACWI Index ▲	(0.99)	17.49	5.44	10.06	9.21	9.23	9.58

Relative Return vs MSCI ACWI Index



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

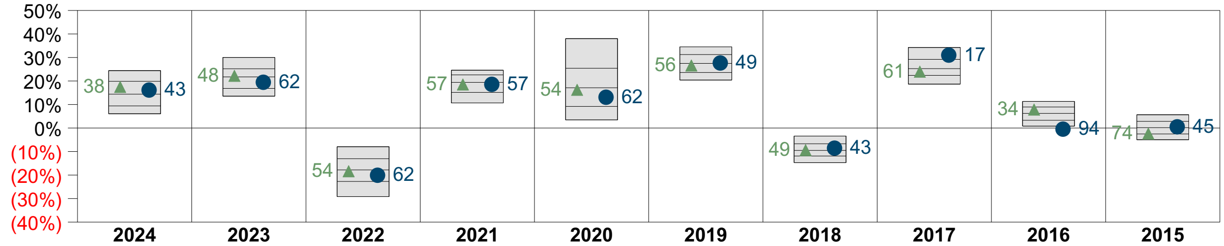


Epoch Investments
Return Analysis Summary

Return Analysis

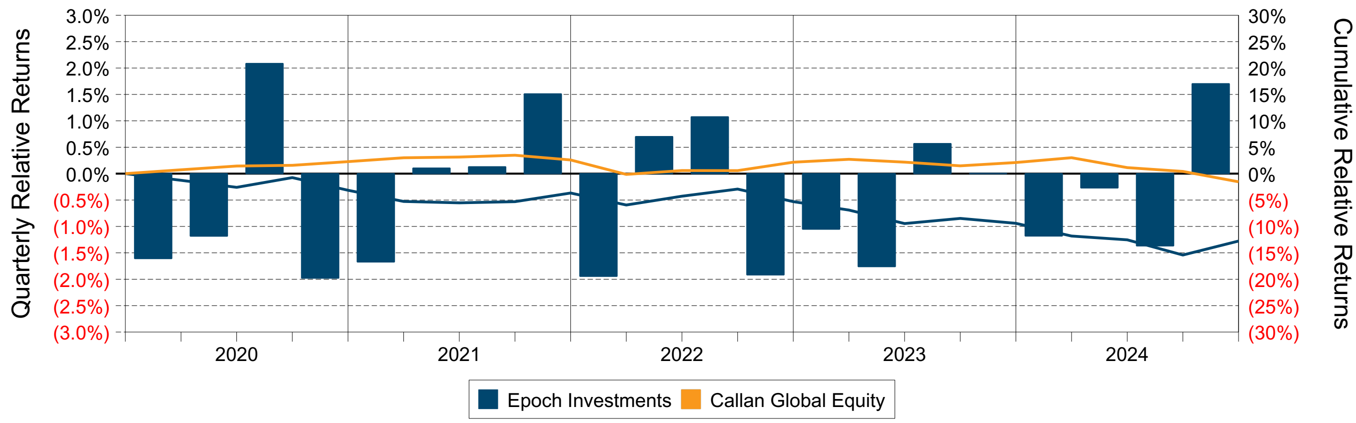
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

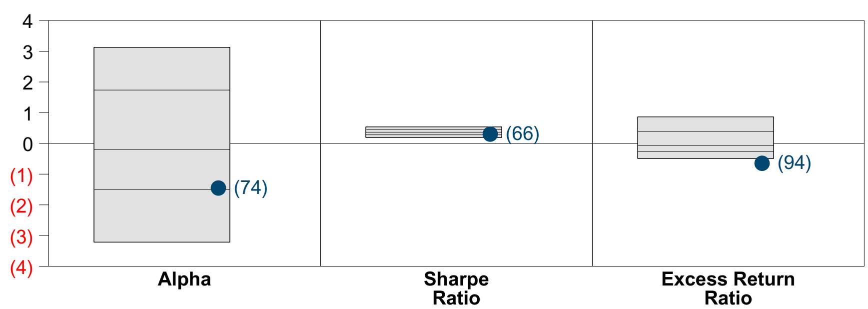


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	24.42	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile	19.87	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median	14.40	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.23	0.16
75th Percentile	9.41	16.85	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile	6.07	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Epoch Investments ●	16.15	19.47	(20.08)	18.59	13.11	27.66	(8.56)	31.01	(0.46)	0.51
MSCI ACWI ▲	17.49	22.20	(18.36)	18.54	16.25	26.60	(9.41)	23.97	7.86	(2.36)

Cumulative and Quarterly Relative Returns vs MSCI ACWI



Risk Adjusted Return Measures vs MSCI ACWI
Rankings Against Callan Global Equity (Gross)
Five Years Ended December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.13	0.54	0.86
25th Percentile	1.74	0.46	0.39
Median	(0.20)	0.37	(0.07)
75th Percentile	(1.51)	0.28	(0.26)
90th Percentile	(3.21)	0.19	(0.49)
Epoch Investments ●	(1.45)	0.30	(0.65)

Harding-Loevner
Period Ended December 31, 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.

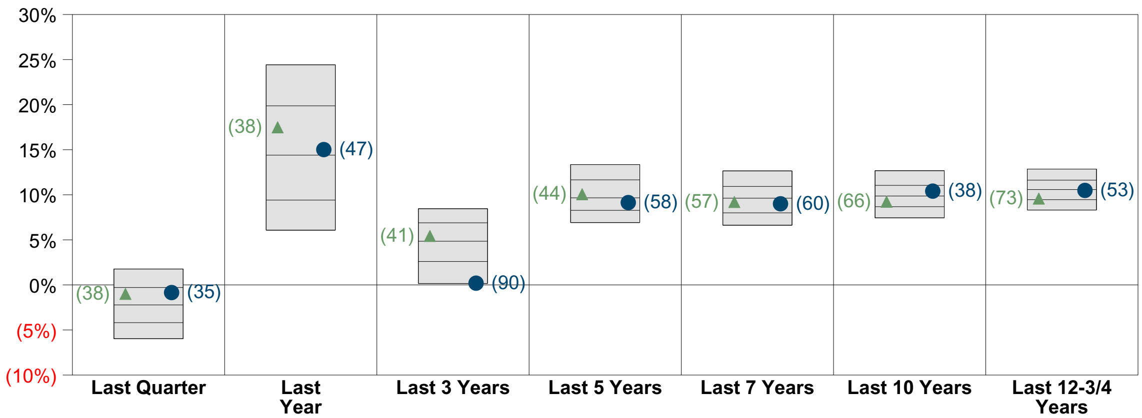
Quarterly Summary and Highlights

- Harding-Loevner's portfolio posted a (0.85)% return for the quarter placing it in the 35 percentile of the Callan Global Equity group for the quarter and in the 47 percentile for the last year.
- Harding-Loevner's portfolio outperformed the MSCI ACWI Index by 0.14% for the quarter and underperformed the MSCI ACWI Index for the year by 2.47%.

Quarterly Asset Growth

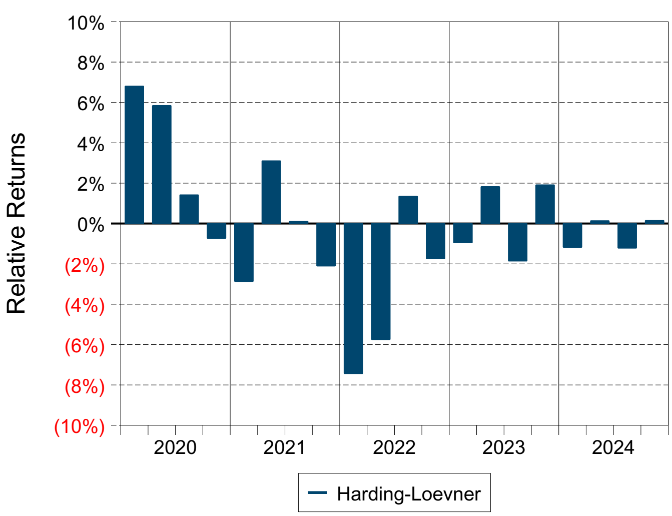
Beginning Market Value	$1,087,167,538
Net New Investment	$-1,040,376
Investment Gains/(Losses)	$-9,216,717
Ending Market Value	$1,076,910,445

Performance vs Callan Global Equity (Gross)

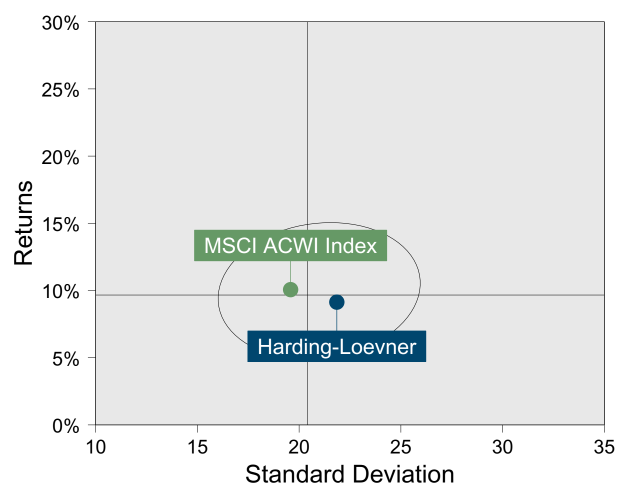


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	1.77	24.42	8.45	13.35	12.65	12.68	12.85
25th Percentile	(0.29)	19.87	6.89	11.66	10.93	11.05	11.62
Median	(2.22)	14.40	4.85	9.66	9.62	9.86	10.58
75th Percentile	(4.18)	9.41	2.60	8.27	8.00	8.68	9.46
90th Percentile	(5.97)	6.07	0.16	6.92	6.62	7.44	8.31
Harding-Loevner ●	(0.85)	15.01	0.19	9.13	9.00	10.40	10.48
MSCI ACWI Index ▲	(0.99)	17.49	5.44	10.06	9.21	9.23	9.58

Relative Return vs MSCI ACWI Index



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

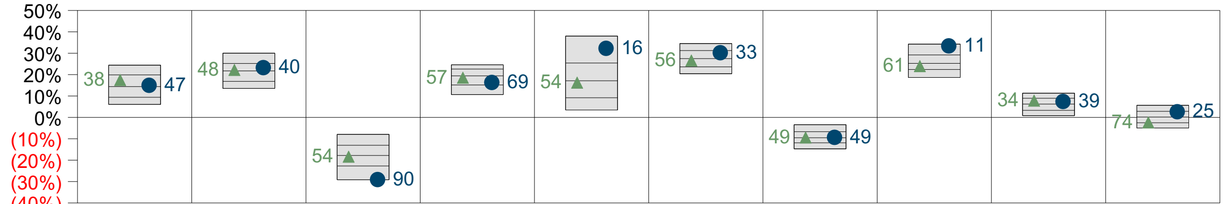


Harding-Loevner
Return Analysis Summary

Return Analysis

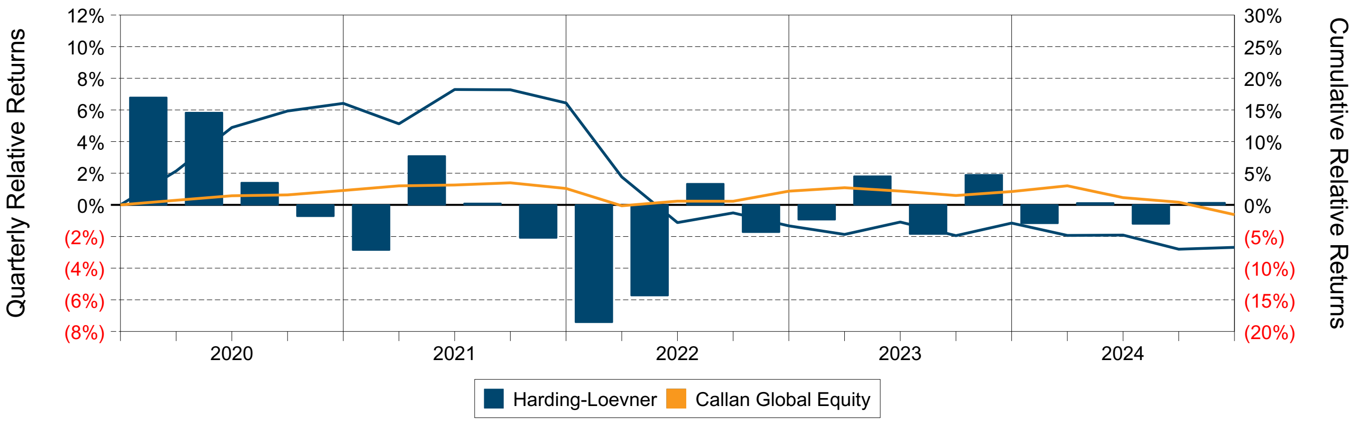
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

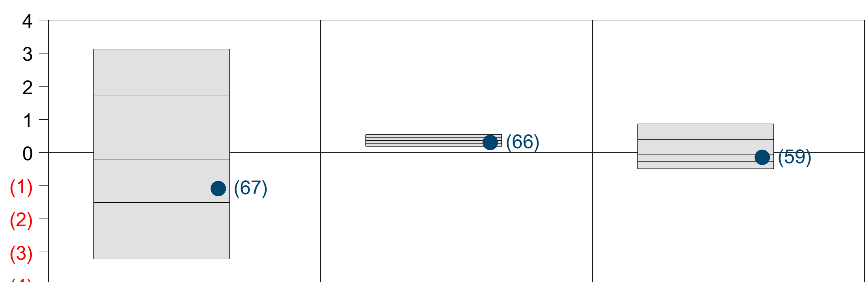


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	24.42	30.03	(7.94)	24.59	38.02	34.52	(3.41)	34.26	11.32	5.65
25th Percentile	19.87	25.21	(13.04)	22.61	25.42	31.25	(6.69)	29.20	8.95	2.84
Median	14.40	21.74	(17.81)	19.42	17.13	27.49	(9.52)	25.26	6.23	0.16
75th Percentile	9.41	16.85	(22.72)	15.16	9.19	23.63	(11.89)	22.40	3.30	(2.51)
90th Percentile	6.07	13.55	(29.17)	10.67	3.45	20.41	(14.71)	18.68	0.81	(4.97)
Harding-Loevner ●	15.01	23.28	(29.06)	16.34	32.30	30.25	(9.32)	33.45	7.44	2.65
MSCI ACWI Index ▲	17.49	22.20	(18.36)	18.54	16.25	26.60	(9.41)	23.97	7.86	(2.36)

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.13	0.54	0.86
25th Percentile	1.74	0.46	0.39
Median	(0.20)	0.37	(0.07)
75th Percentile	(1.51)	0.28	(0.26)
90th Percentile	(3.21)	0.19	(0.49)
Harding-Loevner ●	(1.09)	0.31	(0.14)

LSV Global Value
Period Ended December 31, 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.

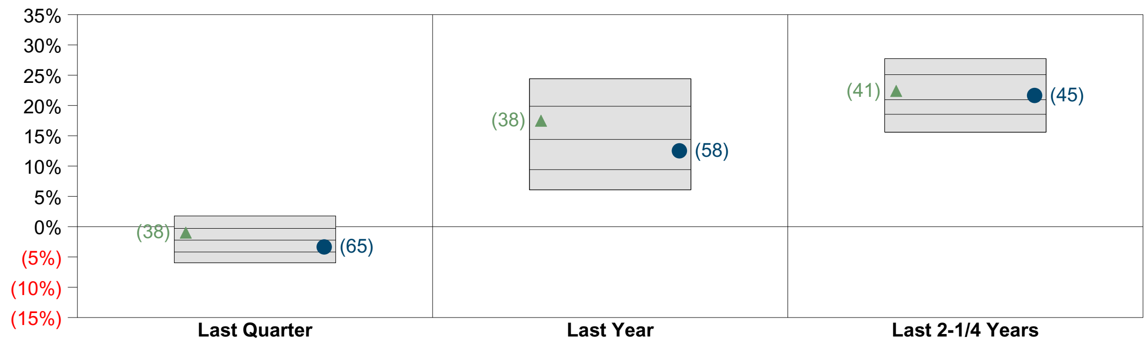
Quarterly Summary and Highlights

- LSV Global Value's portfolio posted a (3.34)% return for the quarter placing it in the 65 percentile of the Callan Global Equity group for the quarter and in the 58 percentile for the last year.
- LSV Global Value's portfolio underperformed the MSCI ACWI Index by 2.35% for the quarter and underperformed the MSCI ACWI Index for the year by 4.97%.

Quarterly Asset Growth

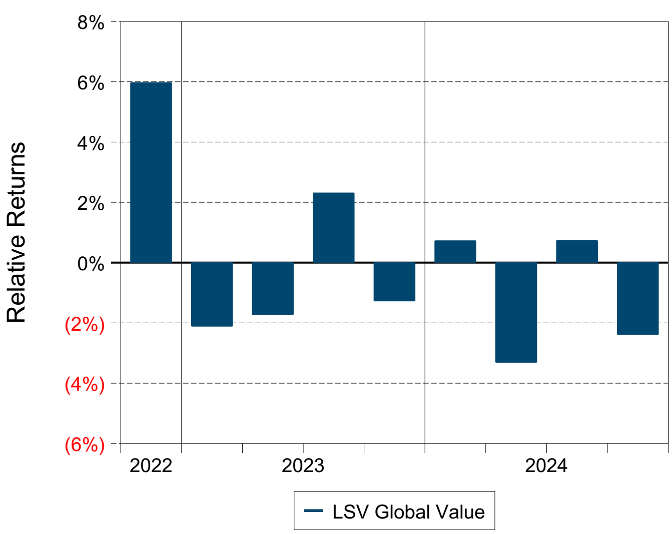
Beginning Market Value	$1,069,376,568
Net New Investment	$-935,704
Investment Gains/(Losses)	$-35,705,748
Ending Market Value	$1,032,735,115

Performance vs Callan Global Equity (Gross)

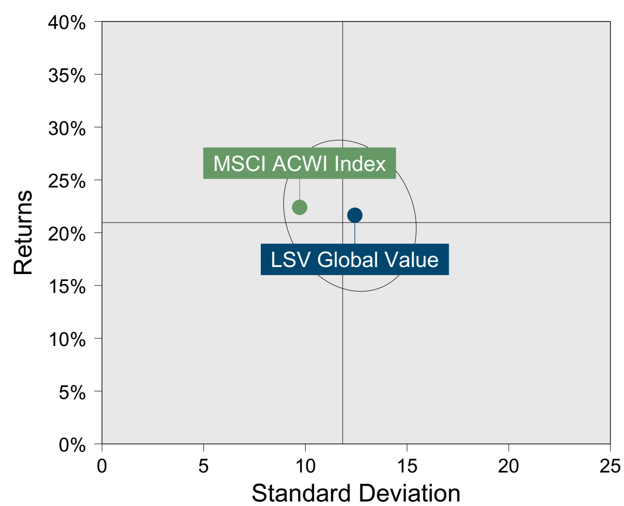


	Last Quarter	Last Year	Last 2-1/4 Years
10th Percentile	1.77	24.42	27.74
25th Percentile	(0.29)	19.87	25.09
Median	(2.22)	14.40	20.96
75th Percentile	(4.18)	9.41	18.55
90th Percentile	(5.97)	6.07	15.59
LSV Global Value ●	(3.34)	12.52	21.65
MSCI ACWI Index ▲	(0.99)	17.49	22.40

Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross)
Annualized Two and One-Quarter Year Risk vs Return

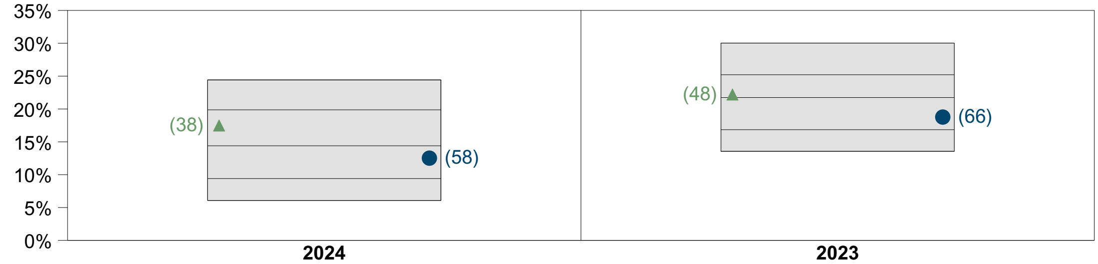


LSV Global Value
Return Analysis Summary

Return Analysis

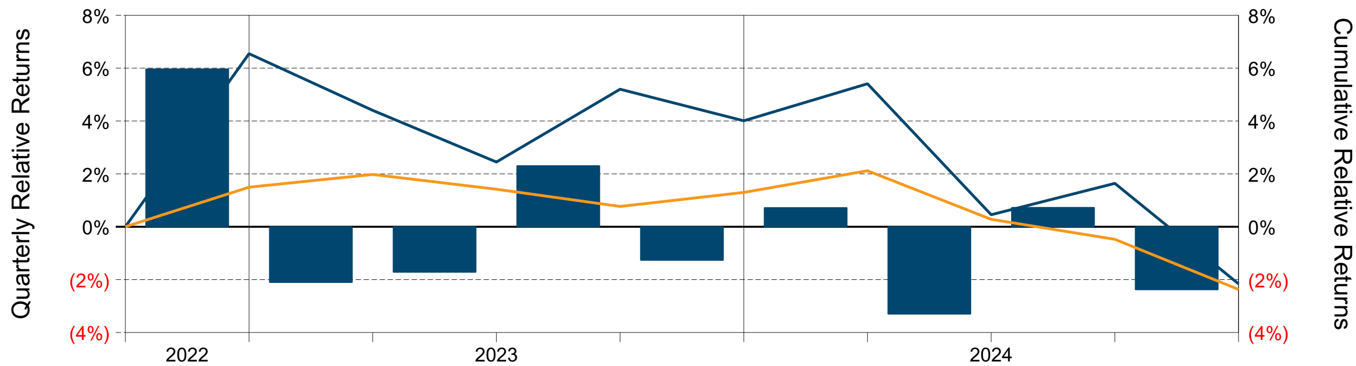
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

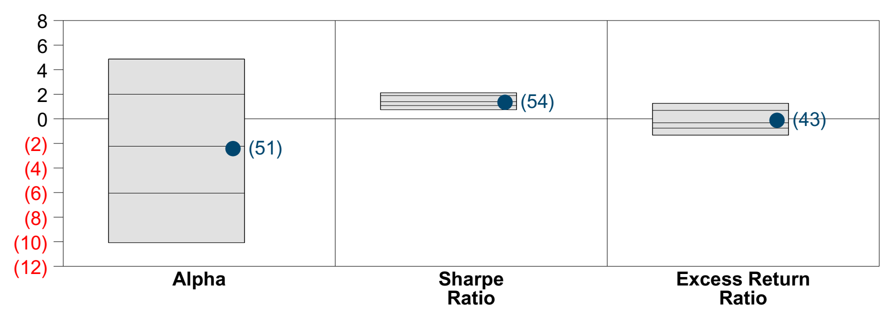


	2024	2023
10th Percentile	24.42	30.03
25th Percentile	19.87	25.21
Median	14.40	21.74
75th Percentile	9.41	16.85
90th Percentile	6.07	13.55
LSV Global Value ●	12.52	18.77
MSCI ACWI Index ▲	17.49	22.20

Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index
Rankings Against Callan Global Equity (Gross)
Two and One-Quarter Years Ended December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.87	2.12	1.26
25th Percentile	2.00	1.89	0.69
Median	(2.23)	1.40	(0.32)
75th Percentile	(6.05)	1.08	(0.75)
90th Percentile	(10.08)	0.74	(1.33)
LSV Global Value ●	(2.42)	1.34	(0.12)

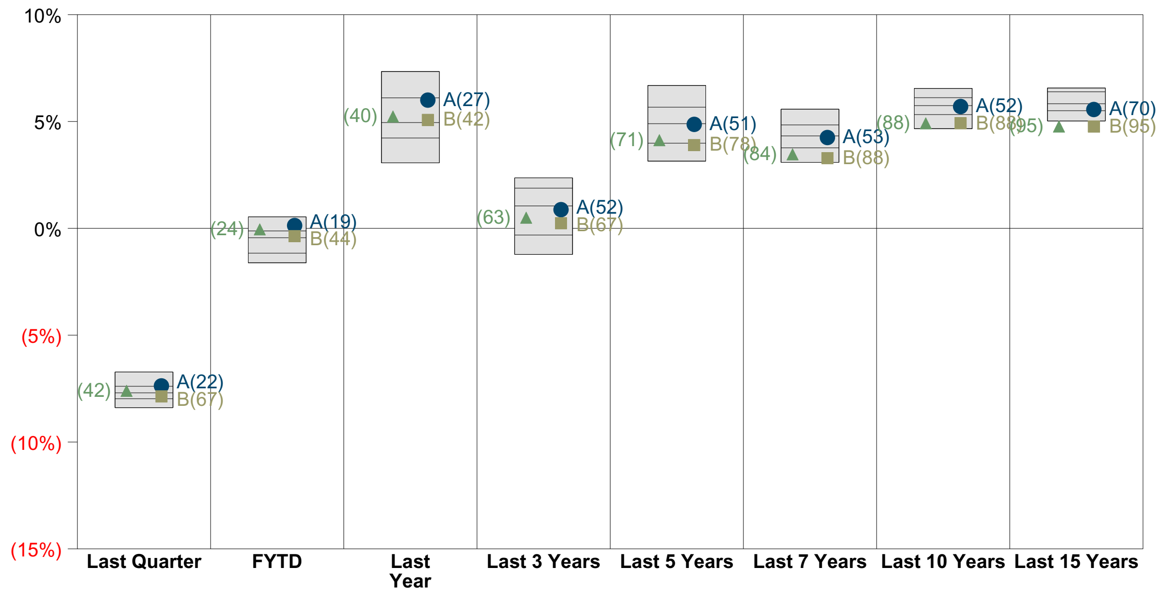
Quarterly Summary and Highlights

- International Equity's portfolio posted a (7.37)% return for the quarter placing it in the 22 percentile of the Public Fund - International Equity group for the quarter and in the 27 percentile for the last year.
- International Equity's portfolio outperformed the International Equity Benchmark (3) by 0.23% for the quarter and outperformed the International Equity Benchmark (3) for the year by 0.77%.

Quarterly Asset Growth

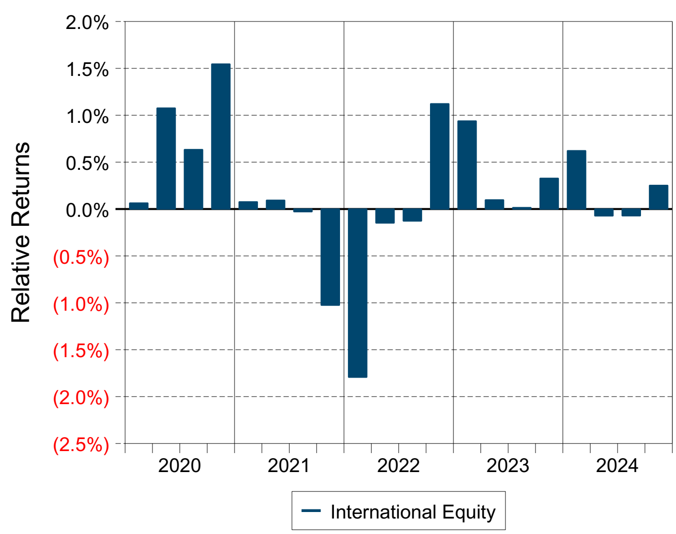
Beginning Market Value	$7,282,335,676
Net New Investment	$-4,908,151
Investment Gains/(Losses)	$-536,909,609
Ending Market Value	$6,740,517,917

Performance vs Public Fund - International Equity (Gross)

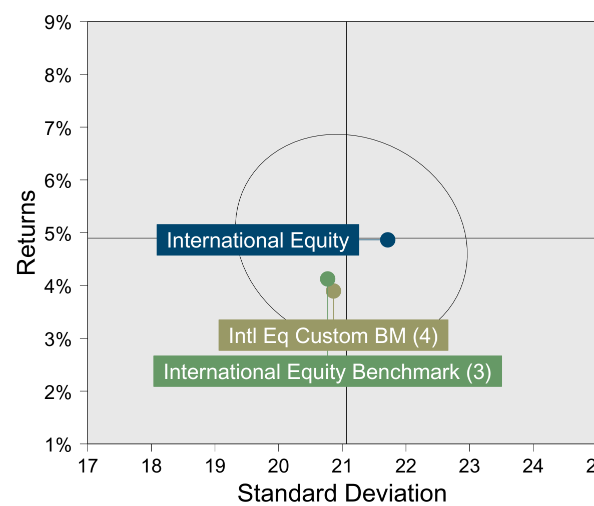


		Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile		(6.72)	0.54	7.34	2.36	6.69	5.58	6.55	6.57
25th Percentile		(7.39)	(0.12)	6.11	1.88	5.67	4.84	6.11	6.39
Median		(7.70)	(0.44)	4.95	1.05	4.90	4.32	5.74	5.83
75th Percentile		(7.97)	(1.16)	4.23	(0.31)	3.98	3.77	5.32	5.51
90th Percentile		(8.39)	(1.61)	3.06	(1.22)	3.15	3.09	4.66	5.02
International Equity	● A	(7.37)	0.13	6.00	0.88	4.86	4.25	5.70	5.56
Intl Eq Custom BM (4)	■ B	(7.87)	(0.36)	5.07	0.24	3.90	3.28	4.91	4.77
International Equity Benchmark (3)	▲	(7.61)	(0.05)	5.23	0.50	4.12	3.46	4.91	4.77

Relative Returns vs International Equity Benchmark (3)



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

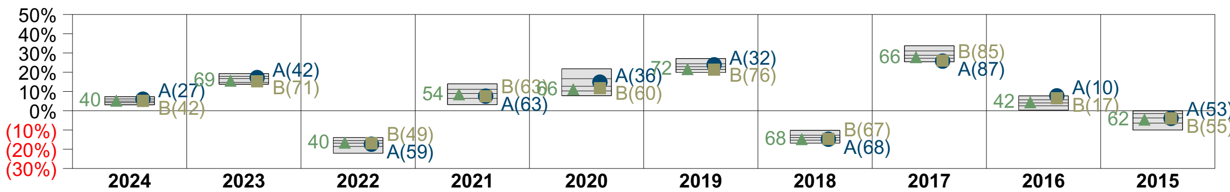


International Equity
Return Analysis Summary

Return Analysis

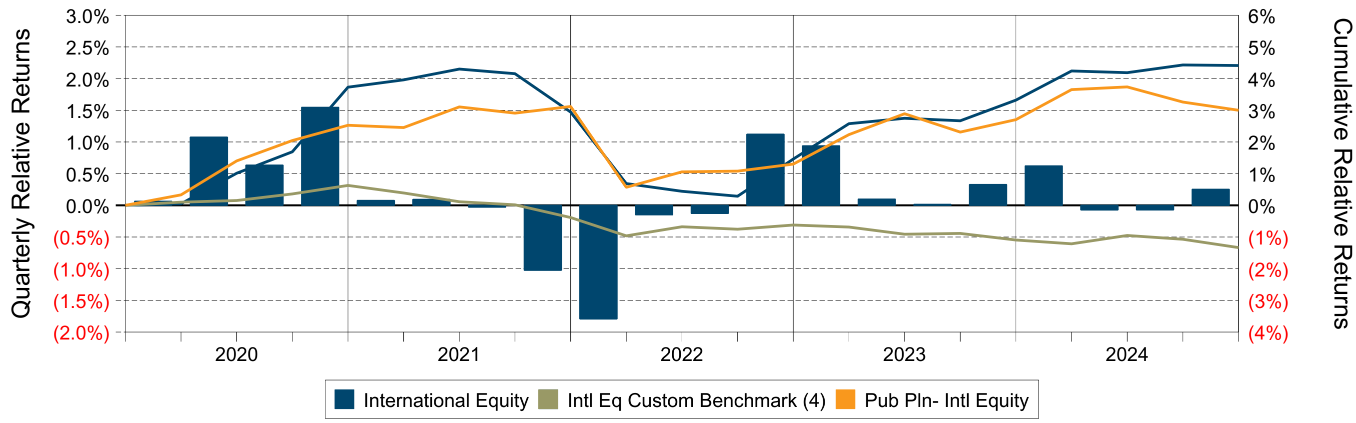
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

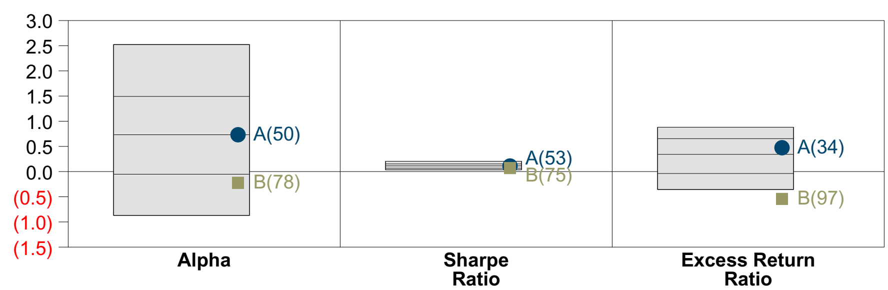


		2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile		7.34	19.32	(13.94)	13.96	21.76	27.10	(10.20)	33.75	7.73	(0.06)
25th Percentile		6.11	17.86	(15.55)	11.13	16.63	24.40	(12.72)	31.06	5.68	(1.51)
Median		4.95	16.71	(16.86)	8.95	12.71	22.88	(13.96)	28.81	4.06	(3.75)
75th Percentile		4.23	14.72	(18.57)	6.42	10.27	21.46	(15.30)	27.27	2.57	(6.43)
90th Percentile		3.06	13.75	(22.08)	3.17	7.82	19.89	(16.85)	25.41	0.31	(10.02)
International Equity	● A	6.00	17.22	(17.39)	7.57	14.85	23.87	(14.80)	25.77	7.73	(3.98)
Intl Eq Custom Benchmark (4)	■ B	5.07	15.25	(16.83)	7.57	11.75	21.38	(14.69)	26.06	6.52	(4.02)
International Equity Benchmark (3)	▲	5.23	15.62	(16.58)	8.53	11.12	21.63	(14.76)	27.81	4.41	(4.60)

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 December 31, 2024



		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		2.52	0.20	0.88
25th Percentile		1.49	0.15	0.65
Median		0.73	0.11	0.34
75th Percentile		(0.05)	0.07	(0.04)
90th Percentile		(0.87)	0.04	(0.36)
International Equity	● A	0.73	0.11	0.47
Intl Eq Custom Benchmark (4)	■ B	(0.22)	0.07	(0.54)

Principal Sm Cap Intl
Period Ended December 31, 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.

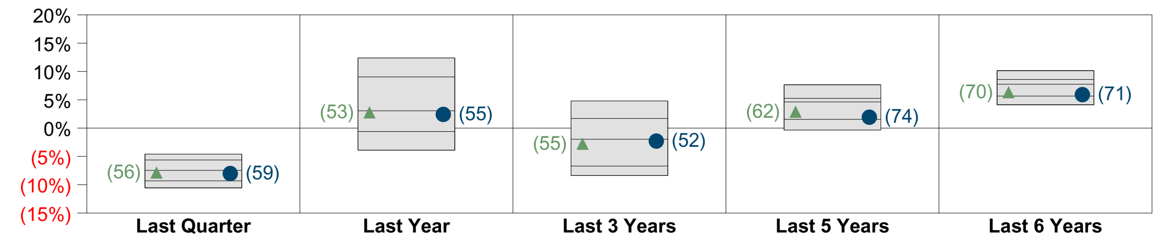
Quarterly Summary and Highlights

- Principal Sm Cap Intl’s portfolio posted a (8.02)% return for the quarter placing it in the 59 percentile of the Callan International Small Cap group for the quarter and in the 55 percentile for the last year.
- Principal Sm Cap Intl’s portfolio underperformed the MSCI World xUS Small by 0.16% for the quarter and underperformed the MSCI World xUS Small for the year by 0.34%.

Quarterly Asset Growth

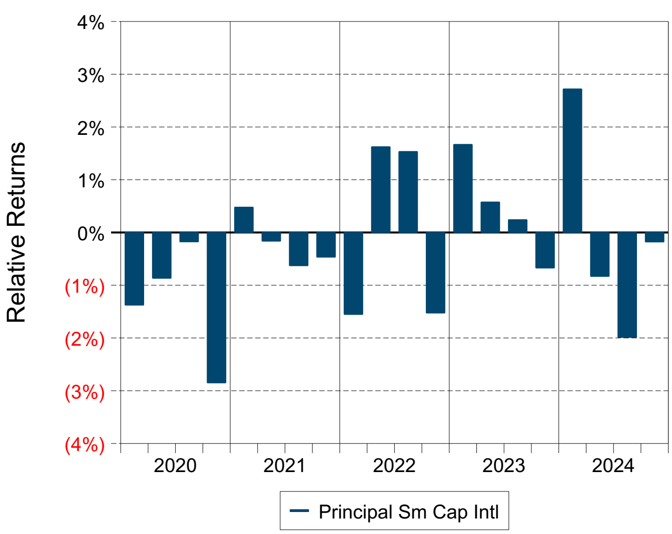
Beginning Market Value	$374,394,233
Net New Investment	$-329,835
Investment Gains/(Losses)	$-30,036,986
Ending Market Value	$344,027,412

Performance vs Callan International Small Cap (Gross)

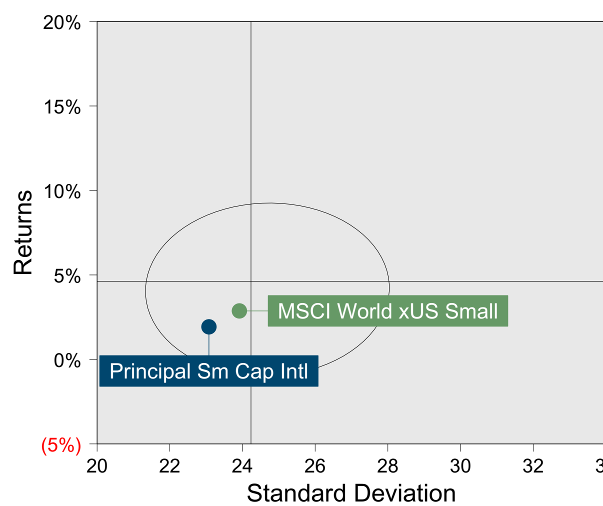


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 6 Years
10th Percentile	(4.59)	12.40	4.80	7.65	10.15
25th Percentile	(5.63)	9.04	1.70	5.25	8.59
Median	(7.47)	3.06	(1.97)	4.62	7.75
75th Percentile	(9.31)	(0.60)	(6.70)	1.55	5.66
90th Percentile	(10.56)	(3.89)	(8.38)	(0.34)	4.12
Principal Sm Cap Intl ●	(8.02)	2.42	(2.29)	1.93	5.91
MSCI World xUS Small ▲	(7.86)	2.76	(2.77)	2.87	6.32

Relative Return vs MSCI World xUS Small



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

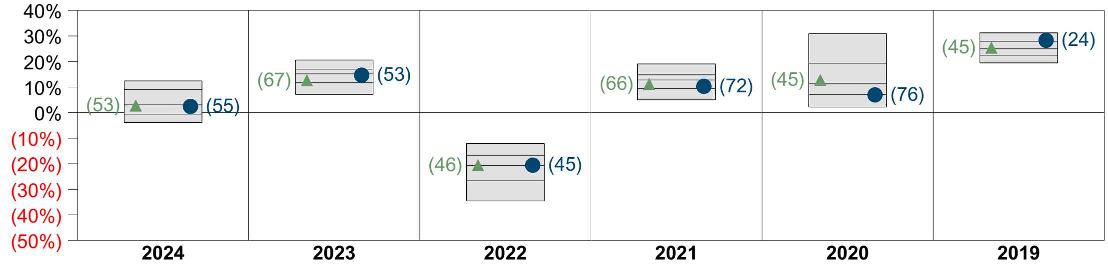


Principal Sm Cap Intl
Return Analysis Summary

Return Analysis

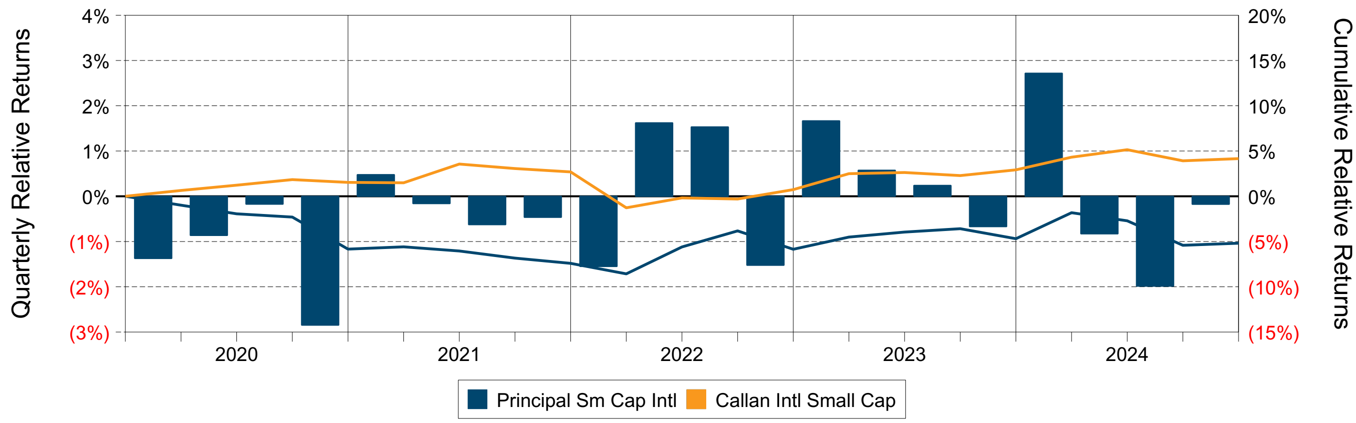
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

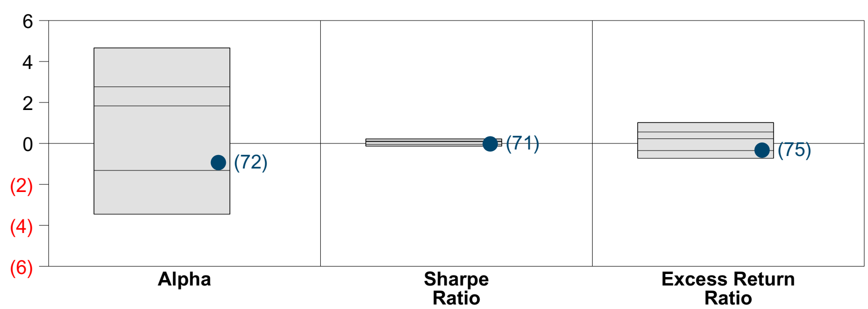


	2024	2023	2022	2021	2020	2019
10th Percentile	12.40	20.58	(12.04)	19.04	30.91	31.23
25th Percentile	9.04	17.00	(16.70)	14.81	19.32	27.91
Median	3.06	15.18	(20.63)	12.78	11.29	24.99
75th Percentile	(0.60)	11.70	(26.64)	9.45	7.03	22.44
90th Percentile	(3.89)	7.14	(34.56)	5.01	2.17	19.45
Principal Sm Cap Intl ●	2.42	14.66	(20.56)	10.28	6.94	28.29
MSCI World xUS Small ▲	2.76	12.62	(20.59)	11.14	12.78	25.41

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.66	0.22	1.02
25th Percentile	2.76	0.11	0.56
Median	1.83	0.08	0.23
75th Percentile	(1.32)	(0.05)	(0.35)
90th Percentile	(3.46)	(0.13)	(0.73)
Principal Sm Cap Intl ●	(0.94)	(0.02)	(0.33)

Arrowstreet Capital
Period Ended December 31, 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 (5.25)% return for the quarter placing it in the 24 percentile of the Non-U.S. Equity Database group for the quarter and in the 19 percentile for the last year.
- Arrowstreet Capital's portfolio outperformed the MSCI ACWI xUS IMI by 2.36% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 5.56%.

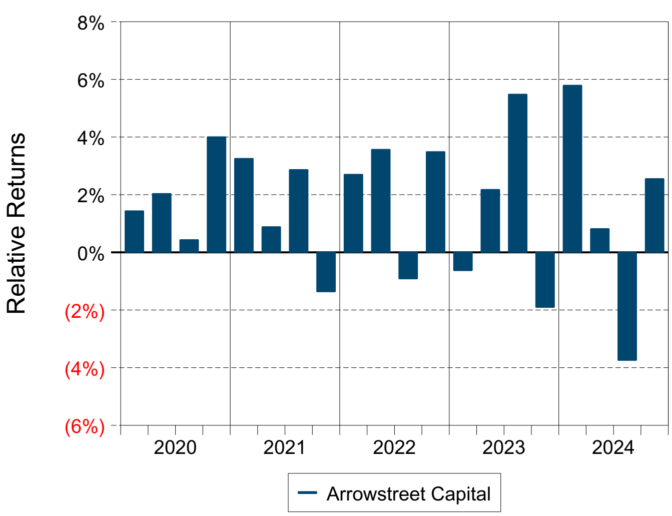
Quarterly Asset Growth

Beginning Market Value	$719,492,910
Net New Investment	$-794,493
Investment Gains/(Losses)	$-37,769,410
Ending Market Value	$680,929,008

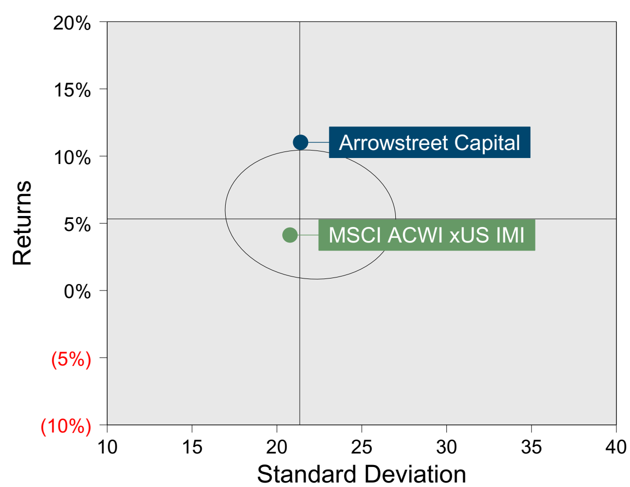
Performance vs Non-U.S. Equity Database (Gross)

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-1/2 Years
10th Percentile	(2.67)	14.24	6.48	9.24	7.68	9.19	9.19
25th Percentile	(5.35)	9.31	4.01	7.05	5.85	7.45	7.77
Median	(7.19)	5.57	1.50	5.33	4.65	6.13	6.57
75th Percentile	(8.27)	3.11	(1.39)	4.20	3.69	5.40	5.78
90th Percentile	(9.31)	(0.20)	(4.97)	2.65	2.62	4.77	5.21
Arrowstreet Capital ●	(5.25)	10.79	6.98	11.03	8.73	9.14	9.23
MSCI ACWI xUS IMI ▲	(7.61)	5.23	0.50	4.12	3.46	4.91	5.22

Relative Return vs MSCI ACWI xUS IMI



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

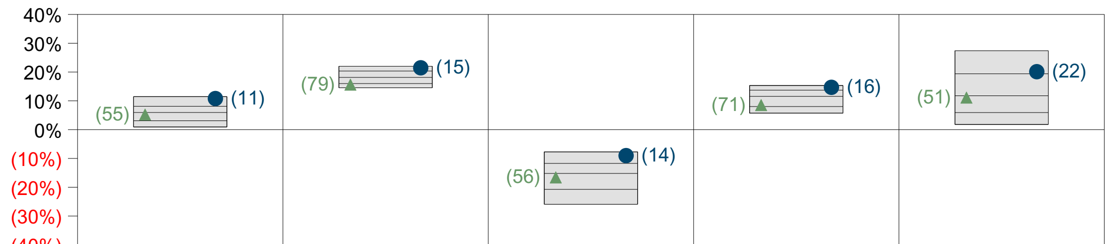


Arrowstreet Capital
Return Analysis Summary

Return Analysis

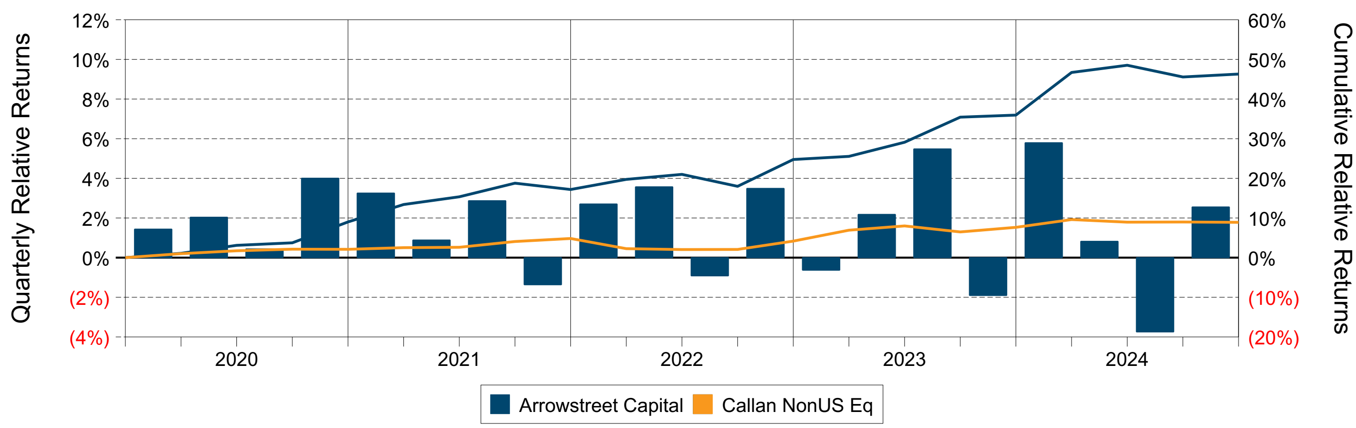
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

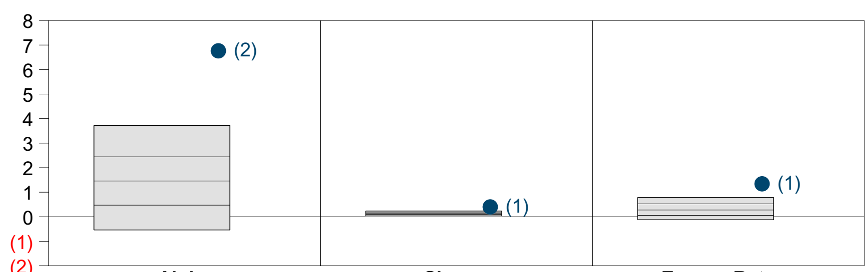


	2024	2023	2022	2021	2020
10th Percentile	11.47	22.01	(7.73)	15.32	27.39
25th Percentile	8.10	20.35	(11.73)	13.71	19.39
Median	5.96	18.14	(15.20)	11.56	11.76
75th Percentile	3.08	16.00	(20.73)	8.02	5.93
90th Percentile	0.93	14.54	(25.92)	5.73	1.81
Arrowstreet Capital ●	10.79	21.47	(9.02)	14.70	20.12
MSCI ACWI xUS IMI ▲	5.23	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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.72	0.24	0.79
25th Percentile	2.44	0.19	0.53
Median	1.46	0.14	0.27
75th Percentile	0.47	0.09	0.06
90th Percentile	(0.54)	0.04	(0.12)
Arrowstreet Capital ●	6.76	0.40	1.34

Baillie Gifford
Period Ended December 31, 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.

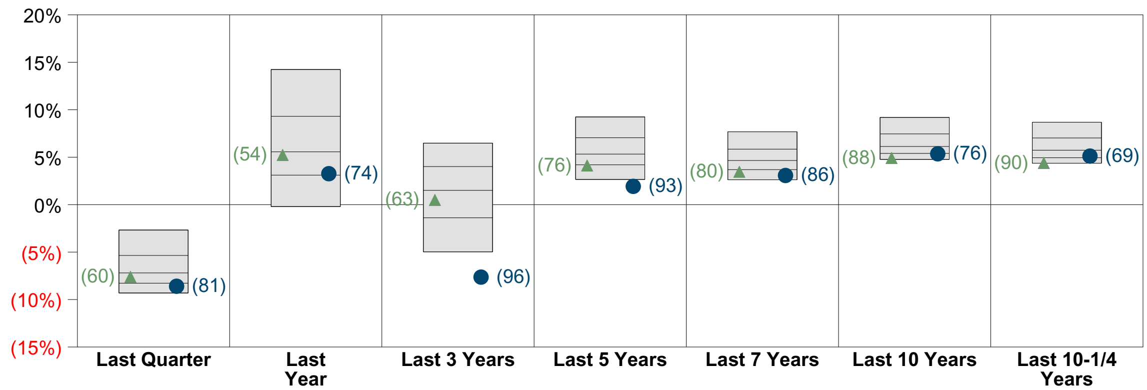
Quarterly Summary and Highlights

- Baillie Gifford's portfolio posted a (8.60)% return for the quarter placing it in the 81 percentile of the Non-U.S. Equity Database group for the quarter and in the 74 percentile for the last year.
- Baillie Gifford's portfolio underperformed the MSCI ACWI xUS IMI by 0.99% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 1.97%.

Quarterly Asset Growth

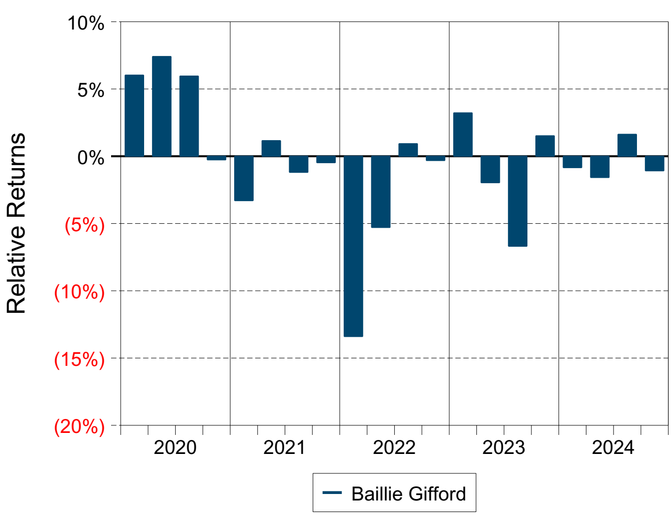
Beginning Market Value	$812,503,131
Net New Investment	$-740,627
Investment Gains/(Losses)	$-69,861,543
Ending Market Value	$741,900,961

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

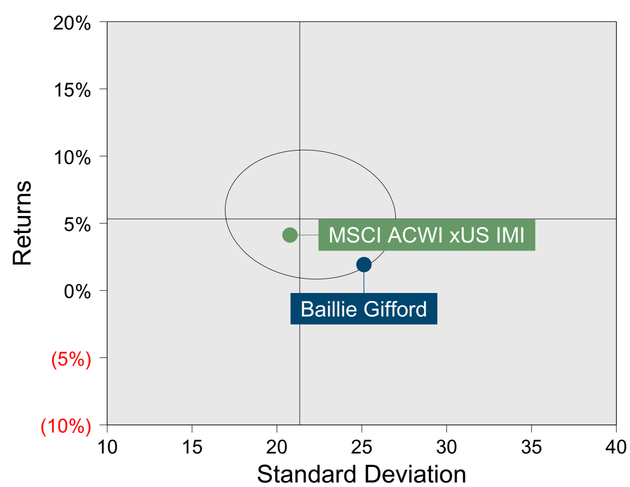


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 10-1/4 Years
10th Percentile	(2.67)	14.24	6.48	9.24	7.68	9.19	8.69
25th Percentile	(5.35)	9.31	4.01	7.05	5.85	7.45	7.03
Median	(7.19)	5.57	1.50	5.33	4.65	6.13	5.74
75th Percentile	(8.27)	3.11	(1.39)	4.20	3.69	5.40	4.94
90th Percentile	(9.31)	(0.20)	(4.97)	2.65	2.62	4.77	4.36
Baillie Gifford ●	(8.60)	3.26	(7.63)	1.93	3.07	5.36	5.11
MSCI ACWI xUS IMI ▲	(7.61)	5.23	0.50	4.12	3.46	4.91	4.39

Relative Return vs MSCI ACWI xUS IMI



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

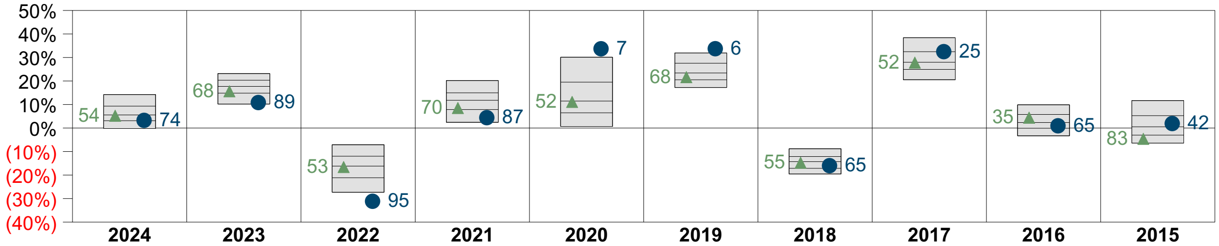


Baillie Gifford
Return Analysis Summary

Return Analysis

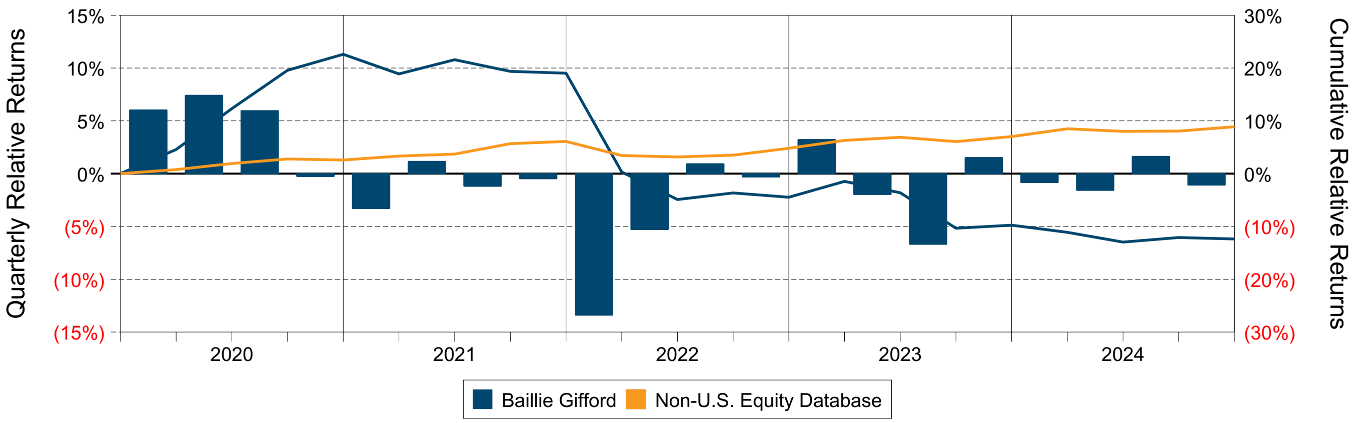
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

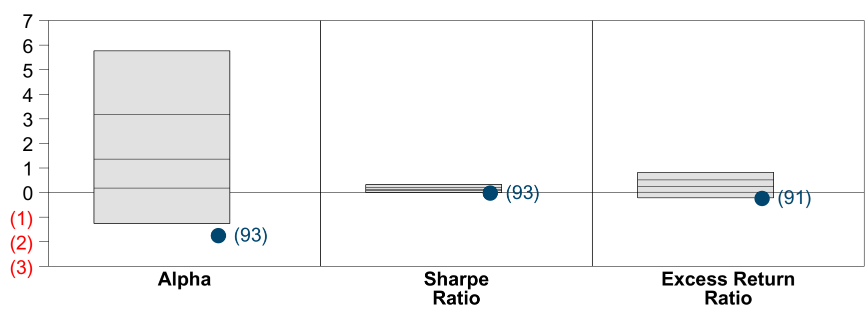


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	14.24	23.17	(7.11)	20.20	30.12	31.93	(8.81)	38.41	9.89	11.68
25th Percentile	9.31	20.33	(11.98)	14.97	19.51	27.55	(12.12)	32.46	5.78	5.27
Median	5.57	17.71	(16.20)	11.79	11.47	23.41	(14.29)	27.98	2.34	0.52
75th Percentile	3.11	14.83	(21.15)	7.86	6.47	20.52	(17.13)	24.93	(0.09)	(3.02)
90th Percentile	(0.20)	10.20	(27.31)	2.42	0.65	17.24	(19.55)	20.54	(3.32)	(6.41)
Baillie Gifford ●	3.26 (74)	10.84 (89)	(31.15) (95)	4.41 (87)	33.72 (7)	33.74 (6)	(16.00) (65)	32.49 (25)	0.96 (65)	1.92 (42)
MSCI ACWI xUS IMI ▲	5.23 (54)	15.62 (68)	(16.58) (53)	8.53 (70)	11.12 (52)	21.63 (68)	(14.76) (55)	27.81 (52)	4.41 (35)	(4.60) (83)

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.77	0.33	0.82
25th Percentile	3.19	0.21	0.52
Median	1.36	0.14	0.25
75th Percentile	0.18	0.08	0.01
90th Percentile	(1.26)	0.00	(0.21)
Baillie Gifford ●	(1.75)	(0.02)	(0.24)

Marathon Asset Mgmt
Period Ended December 31, 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.

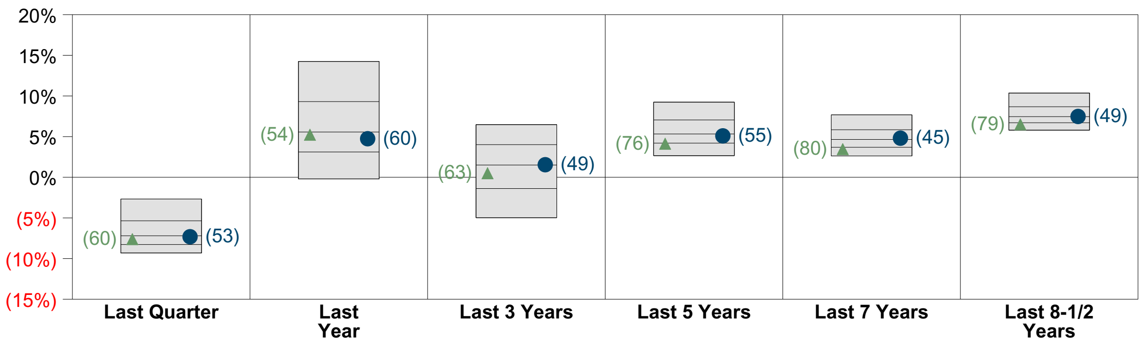
Quarterly Summary and Highlights

- Marathon Asset Mgmt's portfolio posted a (7.31)% return for the quarter placing it in the 53 percentile of the Non-U.S. Equity Database group for the quarter and in the 60 percentile for the last year.
- Marathon Asset Mgmt's portfolio outperformed the MSCI ACWI xUS IMI by 0.29% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 0.49%.

Quarterly Asset Growth

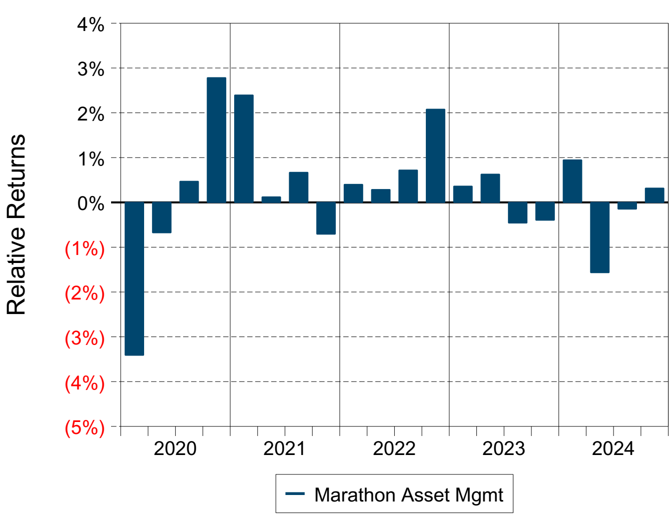
Beginning Market Value	$916,875,558
Net New Investment	$-1,335,704
Investment Gains/(Losses)	$-67,049,251
Ending Market Value	$848,490,603

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

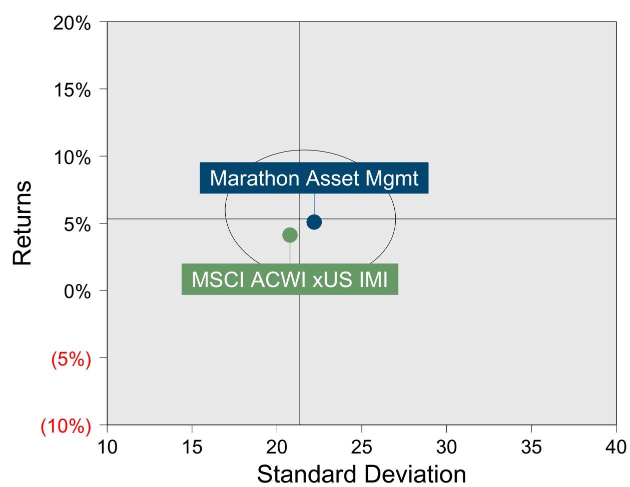


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 8-1/2 Years
10th Percentile	(2.67)	14.24	6.48	9.24	7.68	10.36
25th Percentile	(5.35)	9.31	4.01	7.05	5.85	8.67
Median	(7.19)	5.57	1.50	5.33	4.65	7.46
75th Percentile	(8.27)	3.11	(1.39)	4.20	3.69	6.71
90th Percentile	(9.31)	(0.20)	(4.97)	2.65	2.62	5.79
Marathon Asset Mgmt ●	(7.31)	4.74	1.55	5.09	4.81	7.48
MSCI ACWI xUS IMI ▲	(7.61)	5.23	0.50	4.12	3.46	6.51

Relative Return vs MSCI ACWI xUS IMI



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

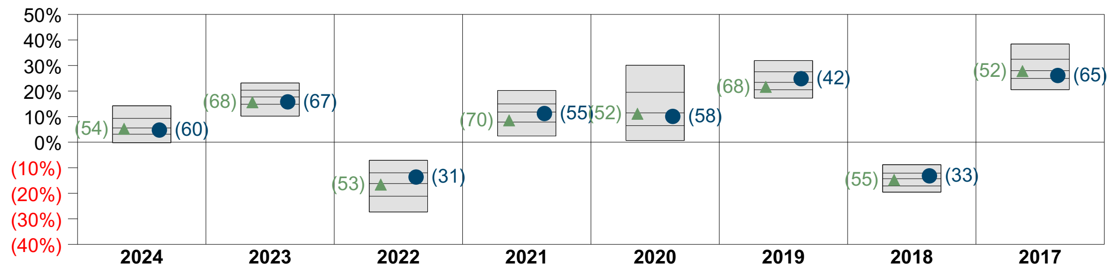


Marathon Asset Mgmt
Return Analysis Summary

Return Analysis

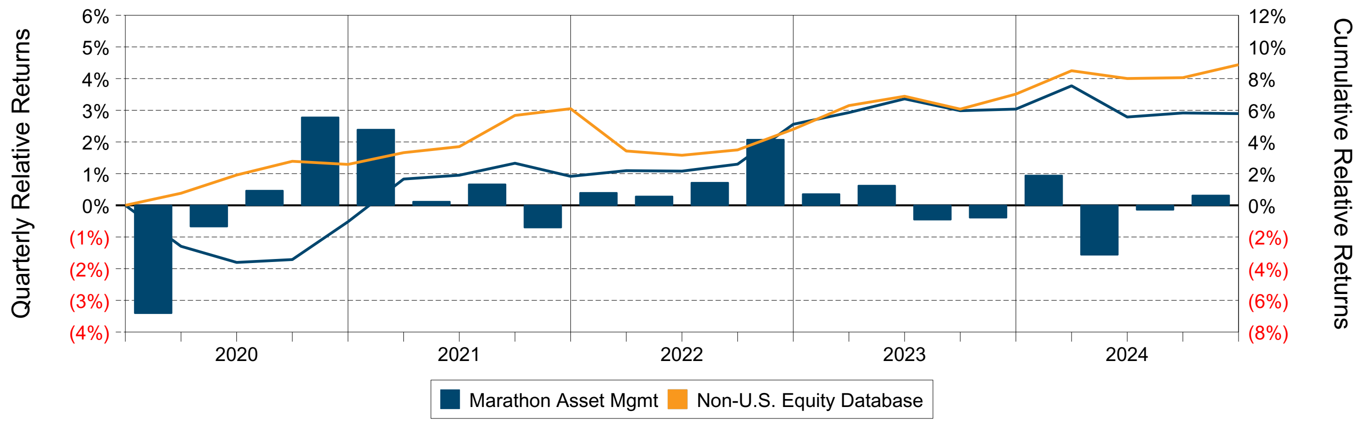
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

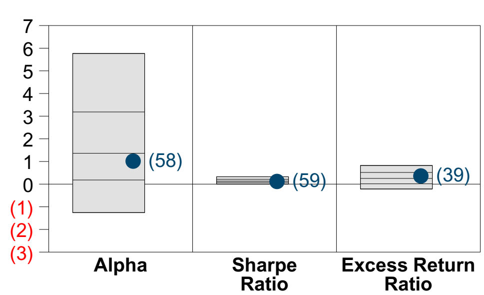


		2024	2023	2022	2021	2020	2019	2018	2017
10th Percentile		14.24	23.17	(7.11)	20.20	30.12	31.93	(8.81)	38.41
25th Percentile		9.31	20.33	(11.98)	14.97	19.51	27.55	(12.12)	32.46
Median		5.57	17.71	(16.20)	11.79	11.47	23.41	(14.29)	27.98
75th Percentile		3.11	14.83	(21.15)	7.86	6.47	20.52	(17.13)	24.93
90th Percentile		(0.20)	10.20	(27.31)	2.42	0.65	17.24	(19.55)	20.54
Marathon Asset Mgmt	●	4.74	15.77	(13.65)	11.21	10.08	24.83	(13.19)	26.10
MSCI ACWI xUS IMI	▲	5.23	15.62	(16.58)	8.53	11.12	21.63	(14.76)	27.81

Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI

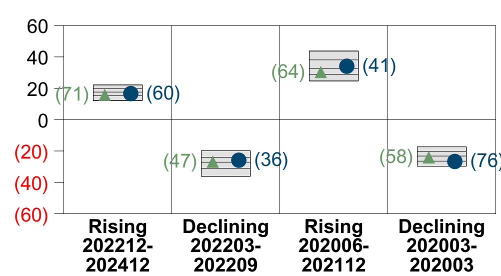


Risk Adjusted Return Measures vs MSCI ACWI xUS IMI
Rankings Against Non-U.S. Equity Database (Gross)
Five Years Ended December 31, 2024



		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		5.77	0.33	0.82
25th Percentile		3.19	0.21	0.52
Median		1.36	0.14	0.25
75th Percentile		0.18	0.08	0.01
90th Percentile		(1.26)	0.00	(0.21)
Marathon Asset Mgmt	●	1.01	0.12	0.36

Returns for International Equity
Rising/Declining Periods
Five Years Ended December 31, 2024



		Rising 202212-202412	Declining 202203-202209	Rising 202006-202112	Declining 202003-202003
10th Percentile		22.14	(19.82)	43.77	(17.33)
25th Percentile		19.79	(24.03)	38.10	(20.26)
Median		17.57	(27.15)	32.62	(23.24)
75th Percentile		15.33	(31.05)	28.89	(26.48)
90th Percentile		12.18	(36.16)	24.67	(29.75)
Marathon Asset Mgmt	●	16.60	(25.89)	34.05	(26.70)
MSCI ACWI xUS IMI	▲	15.72	(26.92)	30.30	(24.11)

NT MSCI World ex US
Period Ended December 31, 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.

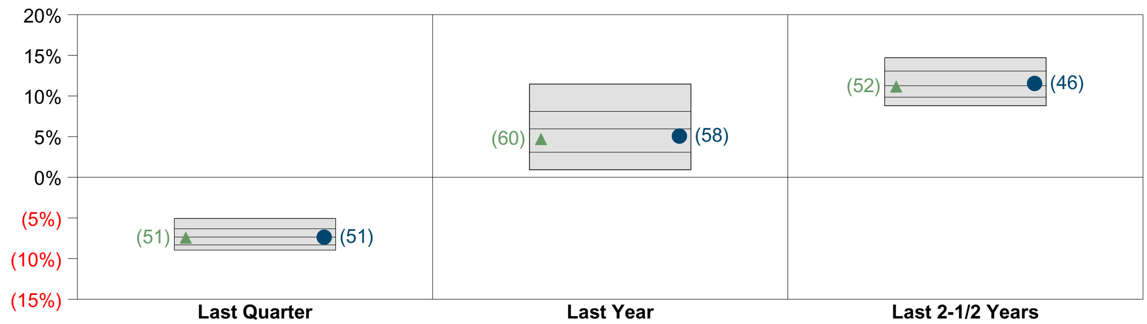
Quarterly Summary and Highlights

- NT MSCI World ex US’s portfolio posted a (7.36)% return for the quarter placing it in the 51 percentile of the Callan Non-US Equity group for the quarter and in the 58 percentile for the last year.
- NT MSCI World ex US’s portfolio outperformed the MSCI World xUS by 0.06% for the quarter and outperformed the MSCI World xUS for the year by 0.36%.

Quarterly Asset Growth

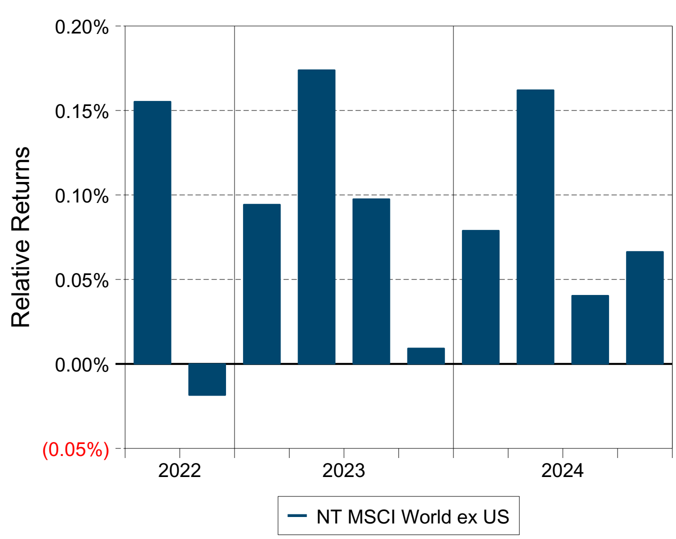
Beginning Market Value	$2,513,340,690
Net New Investment	$0
Investment Gains/(Losses)	$-185,093,915
Ending Market Value	$2,328,246,775

Performance vs Callan Non-US Equity (Gross)

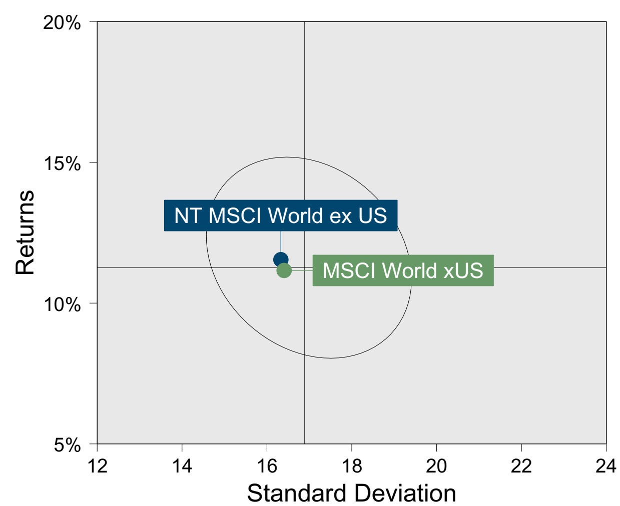


	Last Quarter	Last Year	Last 2-1/2 Years
10th Percentile	(5.07)	11.47	14.71
25th Percentile	(6.33)	8.10	13.06
Median	(7.35)	5.96	11.26
75th Percentile	(8.31)	3.08	9.85
90th Percentile	(8.96)	0.93	8.80
NT MSCI World ex US ●	(7.36)	5.06	11.54
MSCI World xUS ▲	(7.43)	4.70	11.16

Relative Return vs MSCI World xUS



Callan Non-US Equity (Gross)
Annualized Two and One-Half Year Risk vs Return



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.

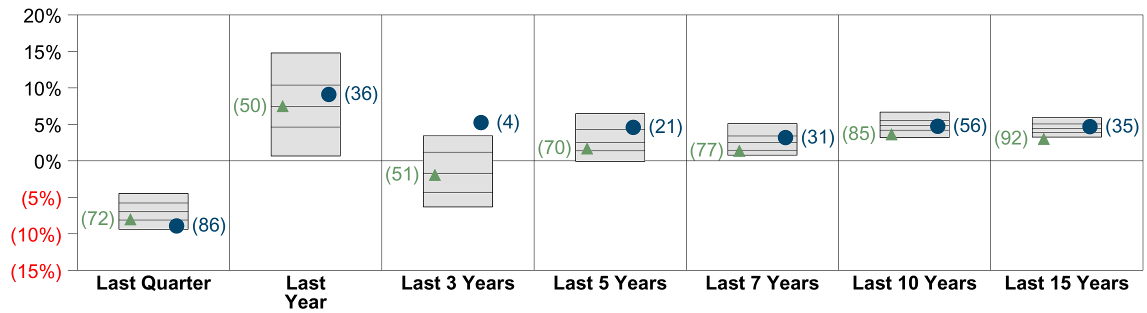
Quarterly Summary and Highlights

- Lazard Emerging Markets's portfolio posted a (8.92)% return for the quarter placing it in the 86 percentile of the Callan Emerging Broad group for the quarter and in the 36 percentile for the last year.
- Lazard Emerging Markets's portfolio underperformed the MSCI EM by 0.92% for the quarter and outperformed the MSCI EM for the year by 1.60%.

Quarterly Asset Growth

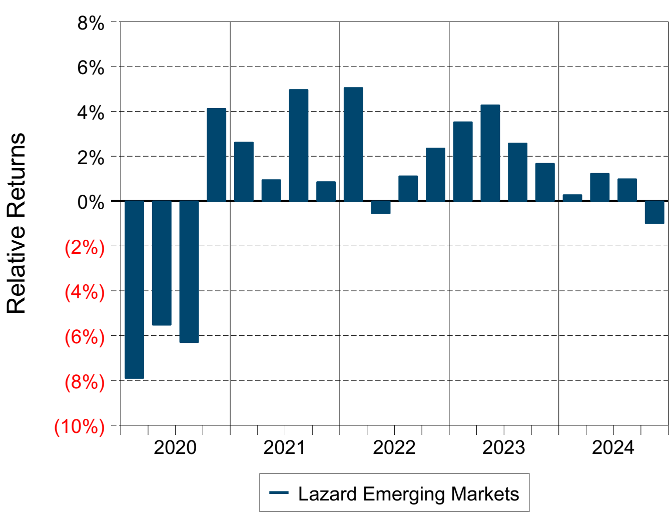
Beginning Market Value	$814,016,958
Net New Investment	$-619,508
Investment Gains/(Losses)	$-72,623,428
Ending Market Value	$740,774,021

Performance vs Callan Emerging Broad (Gross)

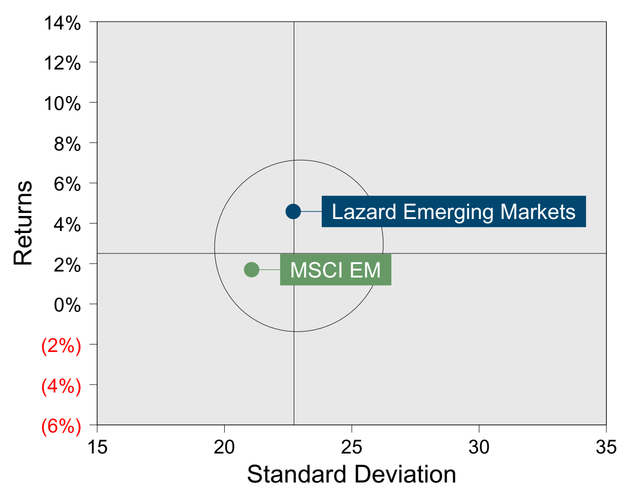


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	(4.47)	14.79	3.44	6.48	5.10	6.68	5.92
25th Percentile	(5.77)	10.39	1.19	4.31	3.41	5.55	5.06
Median	(6.91)	7.47	(1.76)	2.50	2.53	4.86	4.45
75th Percentile	(8.11)	4.63	(4.37)	1.37	1.46	4.21	3.91
90th Percentile	(9.38)	0.67	(6.32)	(0.07)	0.78	3.18	3.26
Lazard Emerging Markets ●	(8.92)	9.10	5.24	4.59	3.19	4.74	4.69
MSCI EM ▲	(8.01)	7.50	(1.92)	1.70	1.38	3.64	3.02

Relative Return vs MSCI EM



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

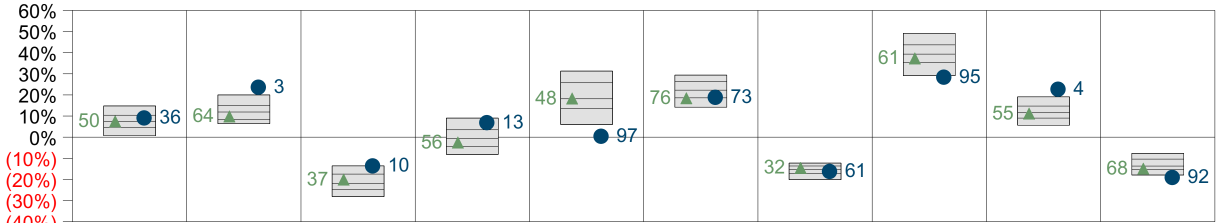


Lazard Emerging Markets
Return Analysis Summary

Return Analysis

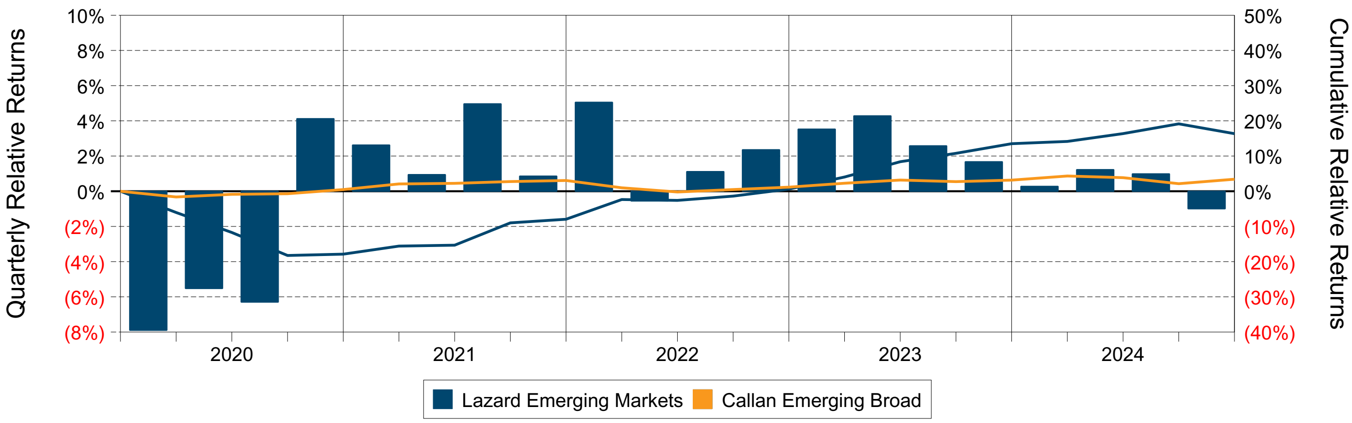
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

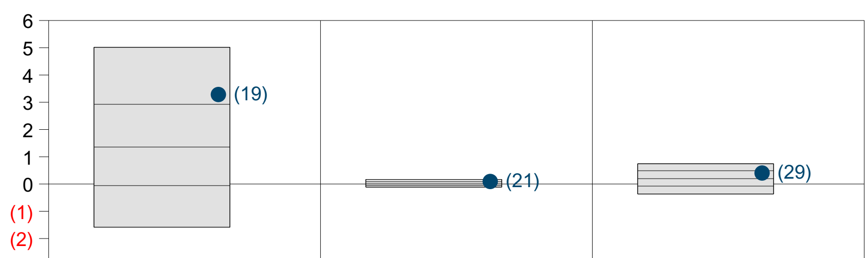


		2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile		14.79	19.99	(13.59)	9.02	31.29	29.39	(12.27)	49.17	19.11	(7.68)
25th Percentile		10.39	14.97	(17.48)	3.49	25.76	26.39	(13.65)	43.70	14.72	(10.39)
Median		7.47	11.91	(21.94)	(0.59)	18.17	22.26	(15.34)	39.31	11.56	(13.68)
75th Percentile		4.63	8.44	(24.74)	(4.40)	13.48	18.61	(17.31)	35.24	9.03	(15.36)
90th Percentile		0.67	6.37	(28.15)	(8.19)	6.00	14.18	(20.11)	29.13	5.63	(17.93)
Lazard Emerging Markets	●	9.10	23.67	(13.60)	6.88	0.43	18.86	(16.23)	28.41	22.70	(19.08)
MSCI EM	▲	7.50	9.83	(20.09)	(2.54)	18.31	18.44	(14.57)	37.28	11.19	(14.92)

Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM
Rankings Against Callan Emerging Broad (Gross)
Five Years Ended December 31, 2024



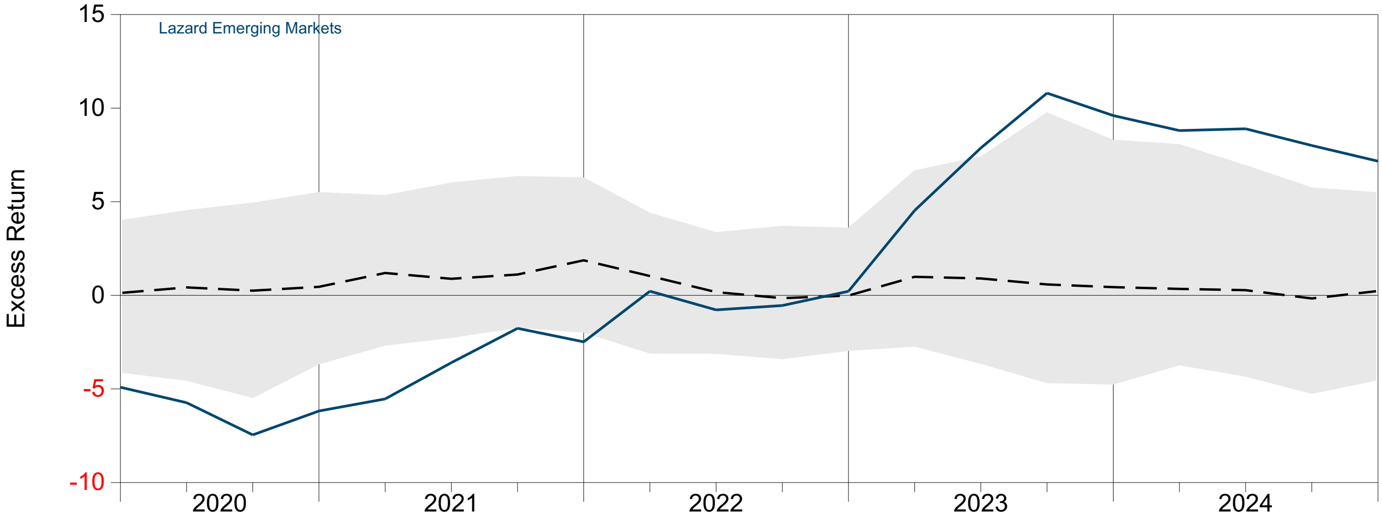
		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		5.02	0.17	0.74
25th Percentile		2.93	0.09	0.49
Median		1.36	0.01	0.20
75th Percentile		(0.06)	(0.05)	(0.08)
90th Percentile		(1.58)	(0.11)	(0.37)
Lazard Emerging Markets	●	3.28	0.09	0.40

Lazard Emerging Markets
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

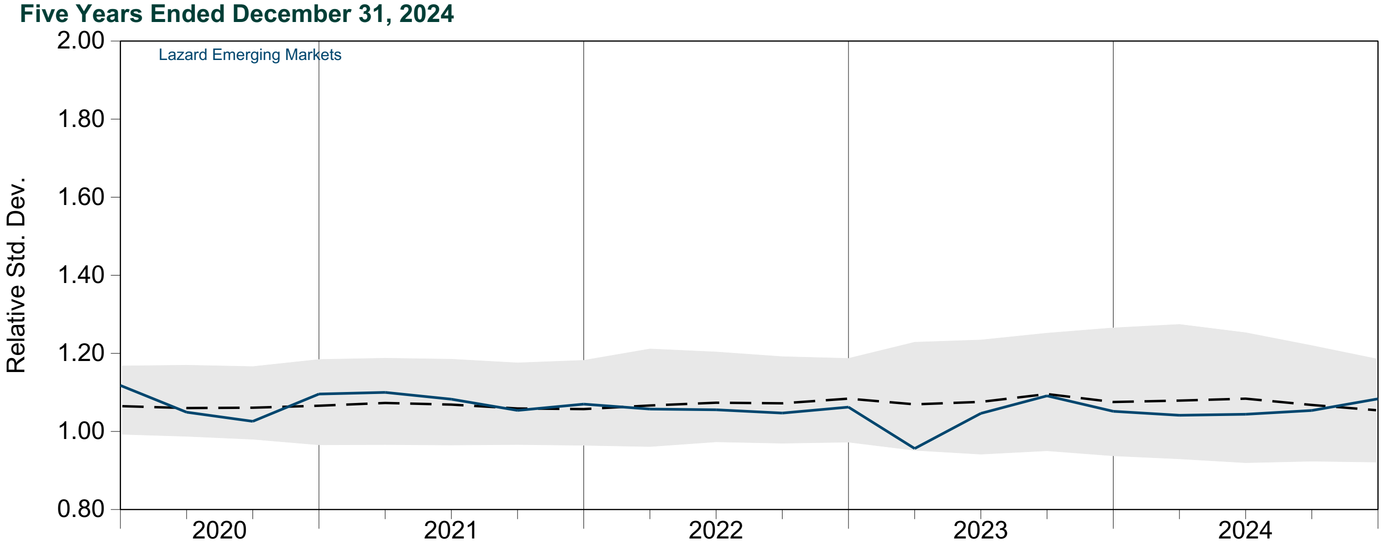
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI EM. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Emerging Broad. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.55%	1.36%
% Positive Periods	85%	50%
Average Ranking	50	53

Rolling Three Year Relative Std. Dev. Relative to MSCI EM
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.07%	1.06%
% Positive Periods	100%	100%
Average Ranking	50	55

Fisher Investments
Period Ended December 31, 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.

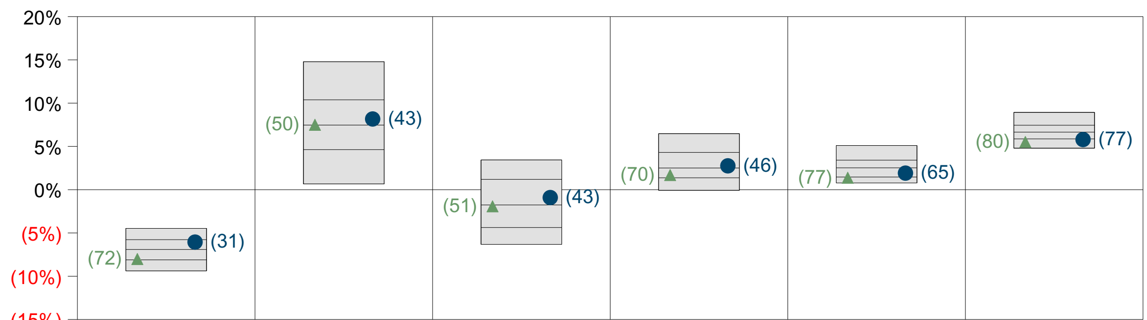
Quarterly Summary and Highlights

- Fisher Investments's portfolio posted a (6.05)% return for the quarter placing it in the 31 percentile of the Callan Emerging Broad group for the quarter and in the 43 percentile for the last year.
- Fisher Investments's portfolio outperformed the MSCI EM by 1.95% for the quarter and outperformed the MSCI EM for the year by 0.67%.

Quarterly Asset Growth

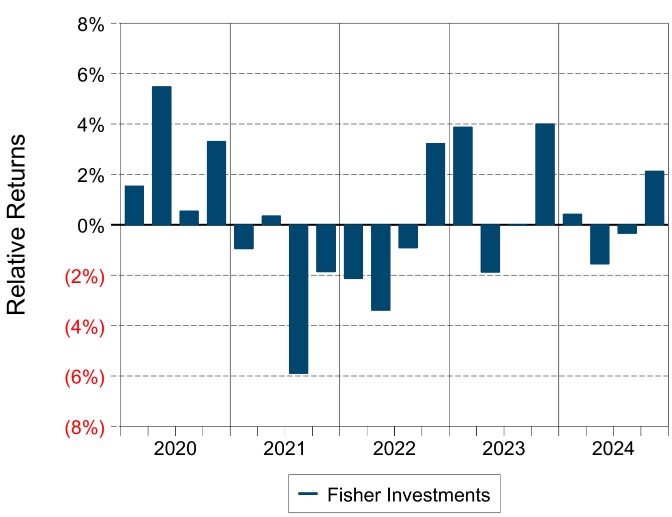
Beginning Market Value	$758,529,093
Net New Investment	$-1,087,978
Investment Gains/(Losses)	$-45,898,703
Ending Market Value	$711,542,412

Performance vs Callan Emerging Broad (Gross)

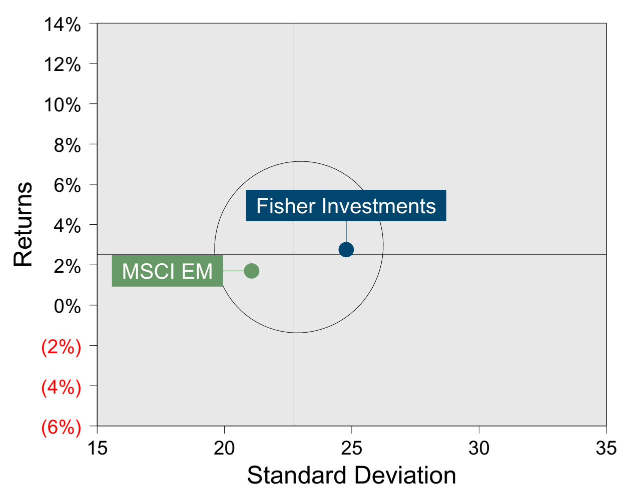


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 8-1/2 Years
10th Percentile	(4.47)	14.79	3.44	6.48	5.10	8.93
25th Percentile	(5.77)	10.39	1.19	4.31	3.41	7.45
Median	(6.91)	7.47	(1.76)	2.50	2.53	6.65
75th Percentile	(8.11)	4.63	(4.37)	1.37	1.46	5.87
90th Percentile	(9.38)	0.67	(6.32)	(0.07)	0.78	4.80
Fisher Investments ●	(6.05)	8.17	(0.91)	2.76	1.91	5.79
MSCI EM ▲	(8.01)	7.50	(1.92)	1.70	1.38	5.52

Relative Return vs MSCI EM



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

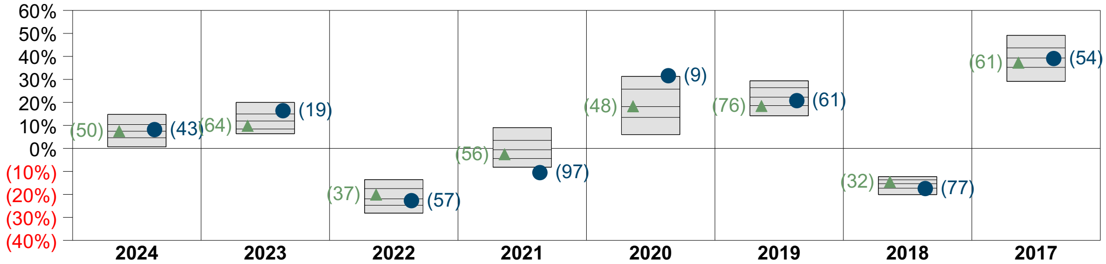


Fisher Investments
Return Analysis Summary

Return Analysis

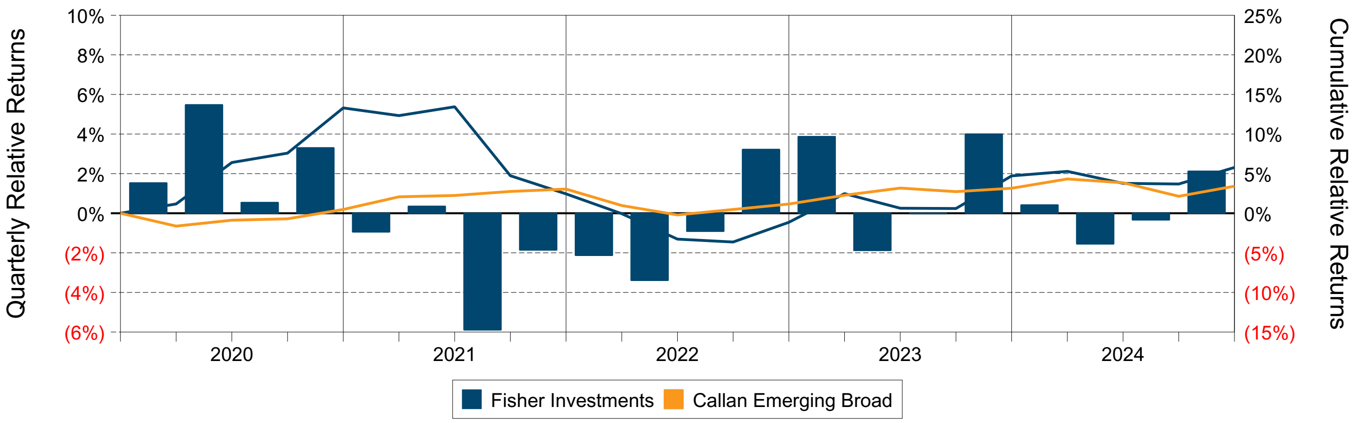
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

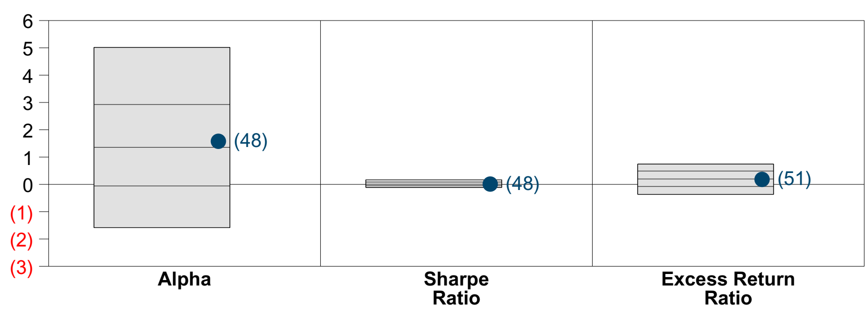


	2024	2023	2022	2021	2020	2019	2018	2017
10th Percentile	14.79	19.99	(13.59)	9.02	31.29	29.39	(12.27)	49.17
25th Percentile	10.39	14.97	(17.48)	3.49	25.76	26.39	(13.65)	43.70
Median	7.47	11.91	(21.94)	(0.59)	18.17	22.26	(15.34)	39.31
75th Percentile	4.63	8.44	(24.74)	(4.40)	13.48	18.61	(17.31)	35.24
90th Percentile	0.67	6.37	(28.15)	(8.19)	6.00	14.18	(20.11)	29.13
Fisher Investments ●	8.17	16.39	(22.72)	(10.53)	31.60	20.77	(17.46)	39.07
MSCI EM ▲	7.50	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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.02	0.17	0.74
25th Percentile	2.93	0.09	0.49
Median	1.36	0.01	0.20
75th Percentile	(0.06)	(0.05)	(0.08)
90th Percentile	(1.58)	(0.11)	(0.37)
Fisher Investments ●	1.58	0.01	0.18

Total Fixed Income

Total Fixed Income
Period Ended December 31, 2024

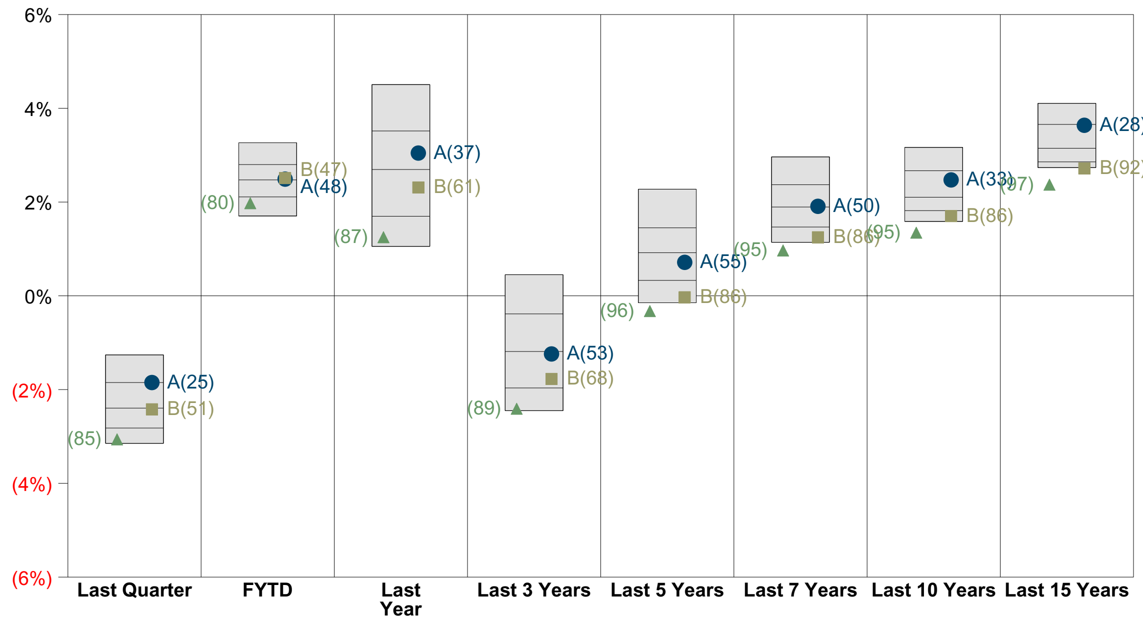
Quarterly Summary and Highlights

- Total Fixed Income's portfolio posted a (1.85)% return for the quarter placing it in the 25 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 37 percentile for the last year.
- Total Fixed Income's portfolio outperformed the Blmbg:Aggregate by 1.21% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.79%.

Quarterly Asset Growth

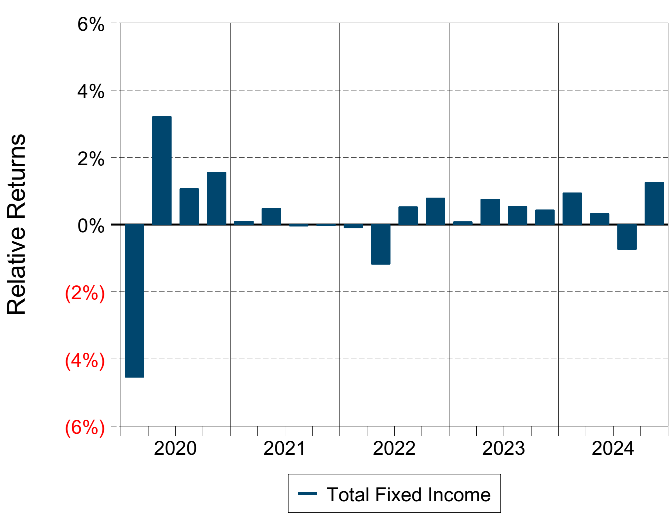
Beginning Market Value	$7,336,070,104
Net New Investment	$-753,776,478
Investment Gains/(Losses)	$-129,436,252
Ending Market Value	$6,452,857,375

Performance vs Public Fund - Domestic Fixed (Gross)

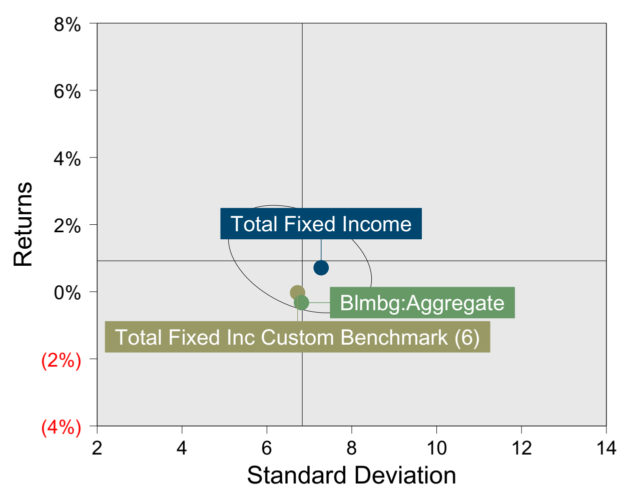


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	(1.26)	3.27	4.51	0.45	2.27	2.96	3.17	4.11
25th Percentile	(1.85)	2.80	3.52	(0.39)	1.45	2.37	2.67	3.66
Median	(2.40)	2.47	2.69	(1.19)	0.92	1.89	2.10	3.15
75th Percentile	(2.82)	2.11	1.70	(1.97)	0.33	1.47	1.82	2.86
90th Percentile	(3.15)	1.70	1.05	(2.45)	(0.15)	1.14	1.59	2.73
Total Fixed Income ● A	(1.85)	2.49	3.04	(1.24)	0.71	1.91	2.47	3.64
Total Fixed Inc Custom Benchmark (6) ■ B	(2.42)	2.51	2.31	(1.77)	(0.03)	1.25	1.70	2.72
Blmbg:Aggregate ▲	(3.06)	1.98	1.25	(2.41)	(0.33)	0.97	1.35	2.37

Relative Return vs Blmbg:Aggregate



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

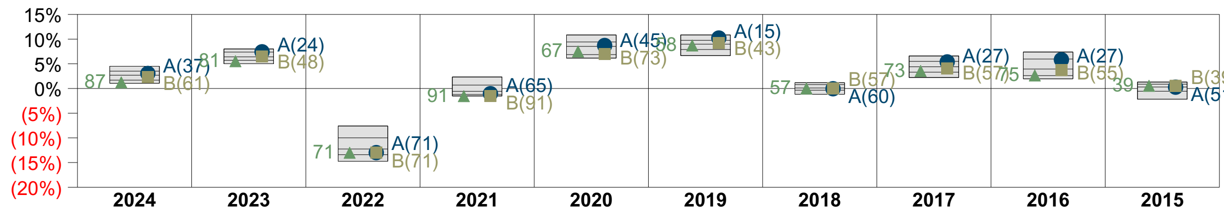


Total Fixed Income
Return Analysis Summary

Return Analysis

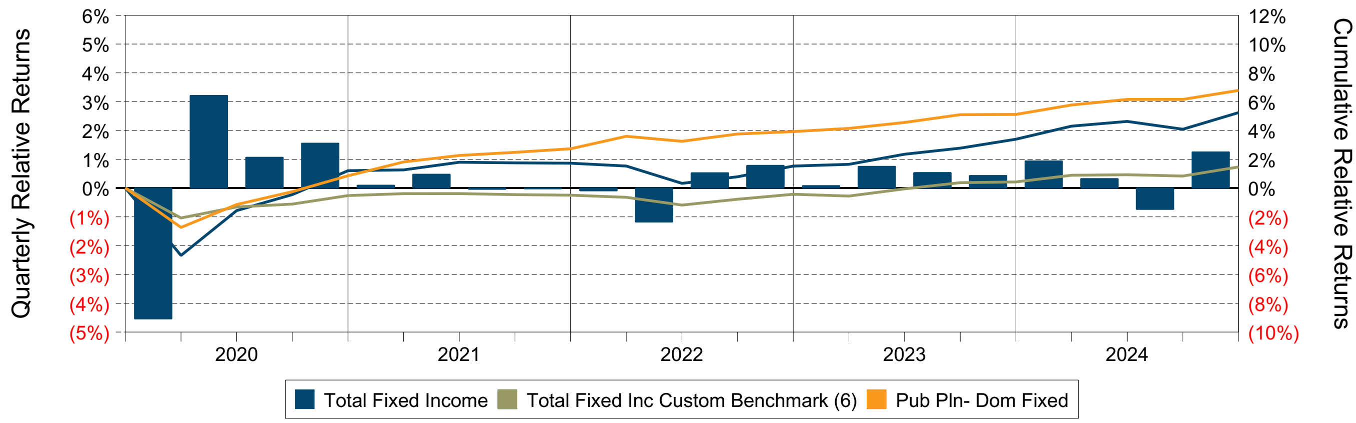
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

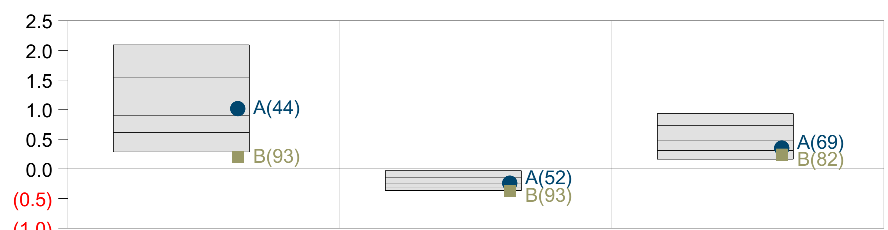


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	4.51	8.01	(7.59)	2.33	10.85	10.85	1.18	6.59	7.39	1.31
25th Percentile	3.52	7.38	(10.00)	0.69	9.43	9.76	0.80	5.50	5.97	0.87
Median	2.69	6.40	(12.26)	(0.57)	8.53	8.98	0.10	4.40	3.94	0.30
75th Percentile	1.70	5.72	(13.41)	(1.21)	6.86	7.90	(0.34)	3.31	2.61	(0.55)
90th Percentile	1.05	5.01	(14.74)	(1.52)	6.15	6.66	(1.17)	2.23	1.96	(2.17)
Total Fixed Income ● A	3.04	7.43	(12.99)	(1.05)	8.71	10.22	(0.05)	5.38	5.83	0.27
Total Fixed Inc Custom Benchmark (6) ■ B	2.31	6.49	(13.01)	(1.52)	6.98	9.22	0.02	4.07	3.71	0.54
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01	3.54	2.65	0.55

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.09	(0.03)	0.93
25th Percentile	1.54	(0.15)	0.73
Median	0.90	(0.24)	0.47
75th Percentile	0.61	(0.31)	0.31
90th Percentile	0.29	(0.37)	0.17
Total Fixed Income ● A	1.02	(0.24)	0.35
Total Fixed Inc Custom Benchmark (6) ■ B	0.20	(0.37)	0.24

Domestic Fixed Income
Period Ended December 31, 2024

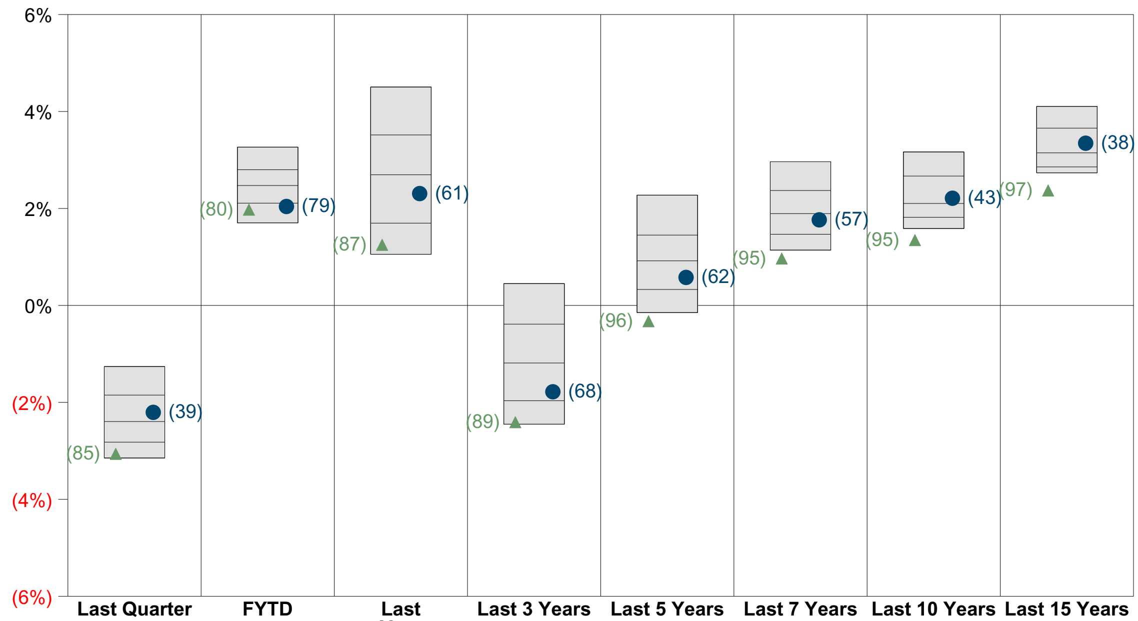
Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a (2.21)% return for the quarter placing it in the 39 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 61 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Blmbg:Aggregate by 0.86% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.06%.

Quarterly Asset Growth

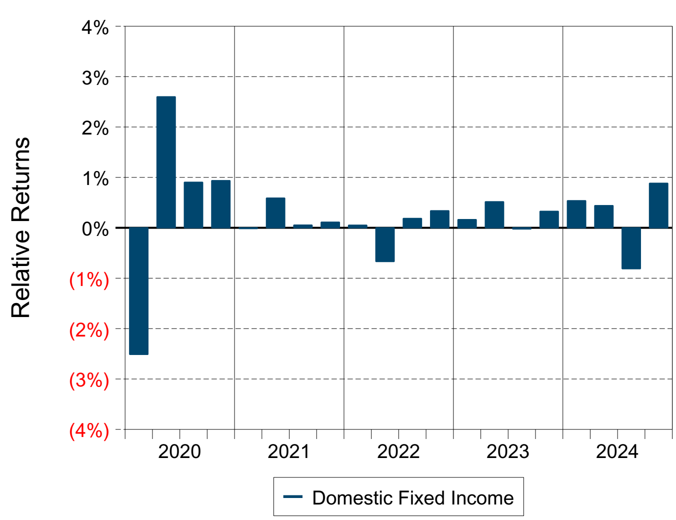
Beginning Market Value	$4,997,705,496
Net New Investment	$-751,983,044
Investment Gains/(Losses)	$-102,802,377
Ending Market Value	$4,142,920,074

Performance vs Public Fund - Domestic Fixed (Gross)

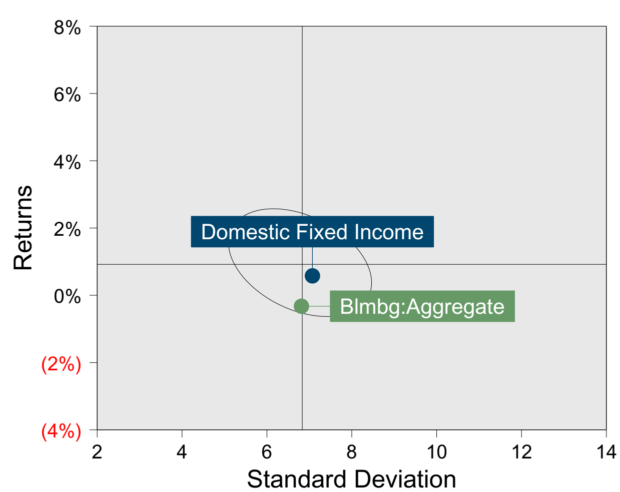


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	(1.26)	3.27	4.51	0.45	2.27	2.96	3.17	4.11
25th Percentile	(1.85)	2.80	3.52	(0.39)	1.45	2.37	2.67	3.66
Median	(2.40)	2.47	2.69	(1.19)	0.92	1.89	2.10	3.15
75th Percentile	(2.82)	2.11	1.70	(1.97)	0.33	1.47	1.82	2.86
90th Percentile	(3.15)	1.70	1.05	(2.45)	(0.15)	1.14	1.59	2.73
Domestic Fixed Income ●	(2.21)	2.04	2.31	(1.78)	0.58	1.76	2.21	3.35
Blmbg:Aggregate ▲	(3.06)	1.98	1.25	(2.41)	(0.33)	0.97	1.35	2.37

Relative Return vs Blmbg:Aggregate



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

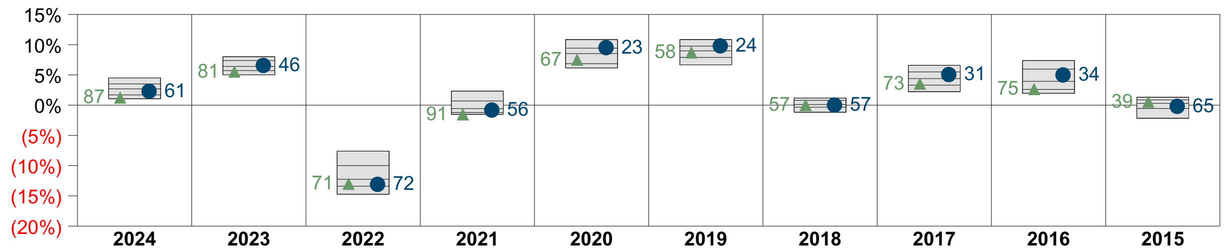


Domestic Fixed Income
Return Analysis Summary

Return Analysis

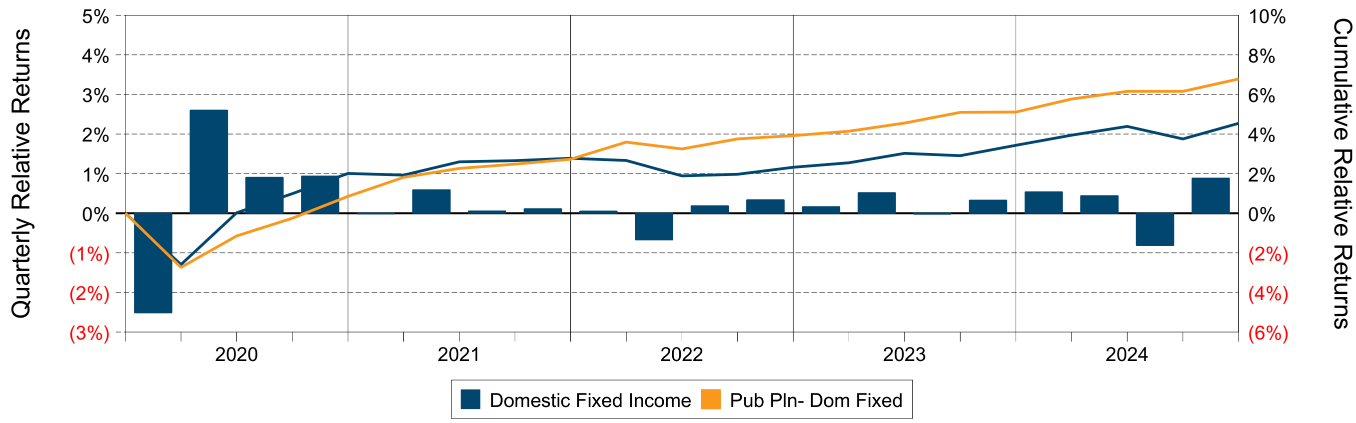
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

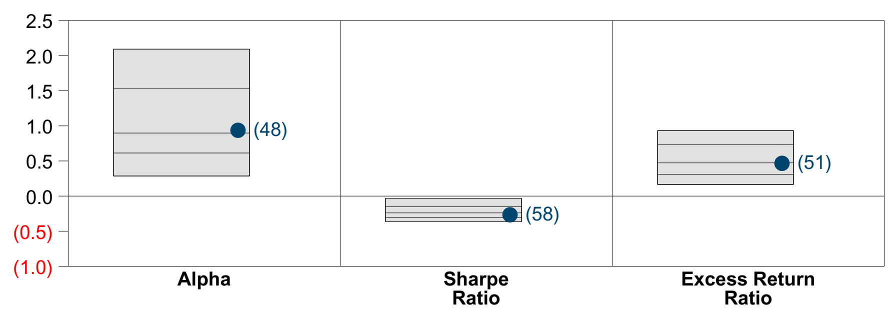


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	4.51	8.01	(7.59)	2.33	10.85	10.85	1.18	6.59	7.39	1.31
25th Percentile	3.52	7.38	(10.00)	0.69	9.43	9.76	0.80	5.50	5.97	0.87
Median	2.69	6.40	(12.26)	(0.57)	8.53	8.98	0.10	4.40	3.94	0.30
75th Percentile	1.70	5.72	(13.41)	(1.21)	6.86	7.90	(0.34)	3.31	2.61	(0.55)
90th Percentile	1.05	5.01	(14.74)	(1.52)	6.15	6.66	(1.17)	2.23	1.96	(2.17)
Domestic Fixed Income ●	2.31	6.57	(13.10)	(0.81)	9.52	9.81	0.01	5.07	4.99	(0.20)
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01	3.54	2.65	0.55

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.09	(0.03)	0.93
25th Percentile	1.54	(0.15)	0.73
Median	0.90	(0.24)	0.47
75th Percentile	0.61	(0.31)	0.31
90th Percentile	0.29	(0.37)	0.17
Domestic Fixed Income ●	0.94	(0.27)	0.47

SIT Short Duration FI
Period Ended December 31, 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.

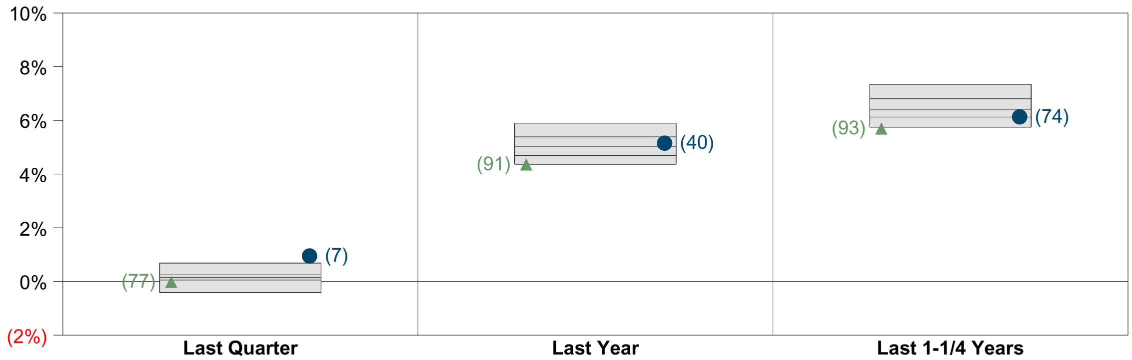
Quarterly Summary and Highlights

- SIT Short Duration FI's portfolio posted a 0.95% return for the quarter placing it in the 7 percentile of the Callan Short Term Fixed Income group for the quarter and in the 40 percentile for the last year.
- SIT Short Duration FI's portfolio outperformed the Blmbg Gov/Cred 1-3 Yr by 0.97% for the quarter and outperformed the Blmbg Gov/Cred 1-3 Yr for the year by 0.80%.

Quarterly Asset Growth

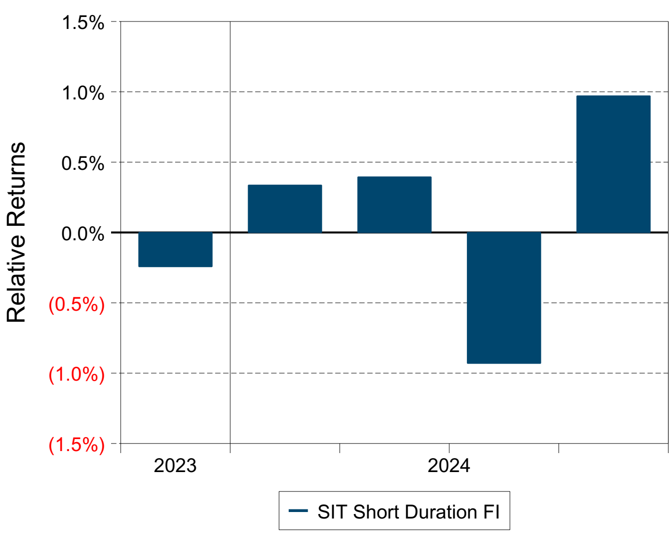
Beginning Market Value	$1,196,292,956
Net New Investment	$-750,564,807
Investment Gains/(Losses)	$9,443,782
Ending Market Value	$455,171,931

Performance vs Callan Short Term Fixed Income (Gross)

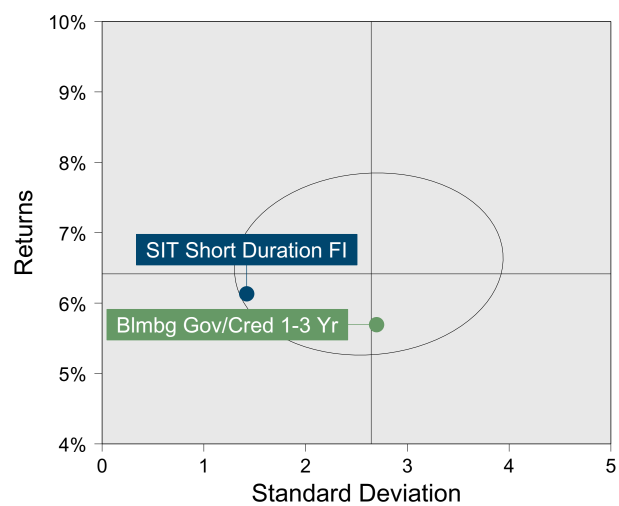


	Last Quarter	Last Year	Last 1-1/4 Years
10th Percentile	0.69	5.90	7.35
25th Percentile	0.25	5.39	6.81
Median	0.15	5.04	6.42
75th Percentile	0.05	4.69	6.12
90th Percentile	(0.41)	4.37	5.75
SIT Short Duration FI ●	0.95	5.15	6.13
Blmbg Gov/Cred 1-3 Yr ▲	(0.02)	4.36	5.69

Relative Return vs Blmbg Gov/Cred 1-3 Yr



Callan Short Term Fixed Income (Gross)
Annualized One and One-Quarter Year Risk vs Return



PIMCO
Period Ended December 31, 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.

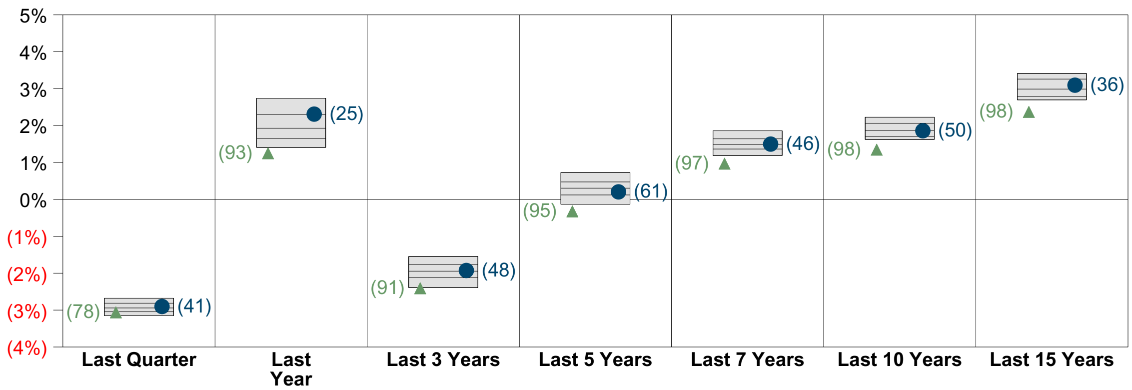
Quarterly Summary and Highlights

- PIMCO's portfolio posted a (2.90)% return for the quarter placing it in the 41 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 25 percentile for the last year.
- PIMCO's portfolio outperformed the Blmbg:Aggregate by 0.16% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.06%.

Quarterly Asset Growth

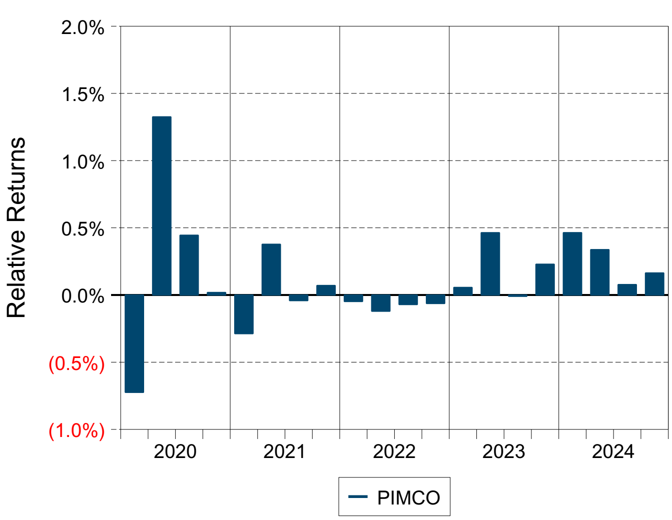
Beginning Market Value	$700,792,035
Net New Investment	$-262,797
Investment Gains/(Losses)	$-20,341,443
Ending Market Value	$680,187,795

Performance vs Callan Core Bond Fixed Income (Gross)

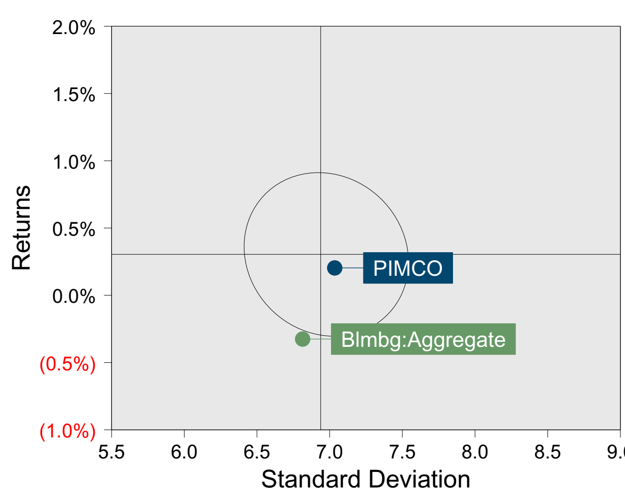


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years
10th Percentile	(2.68)	2.74	(1.55)	0.73	1.86	2.23	3.41
25th Percentile	(2.81)	2.30	(1.77)	0.47	1.64	2.06	3.26
Median	(2.94)	1.93	(1.95)	0.30	1.48	1.86	2.99
75th Percentile	(3.05)	1.66	(2.12)	0.12	1.36	1.70	2.79
90th Percentile	(3.15)	1.41	(2.39)	(0.13)	1.19	1.62	2.70
PIMCO ●	(2.90)	2.31	(1.93)	0.20	1.50	1.86	3.09
Blmbg:Aggregate ▲	(3.06)	1.25	(2.41)	(0.33)	0.97	1.35	2.37

Relative Return vs Blmbg:Aggregate



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

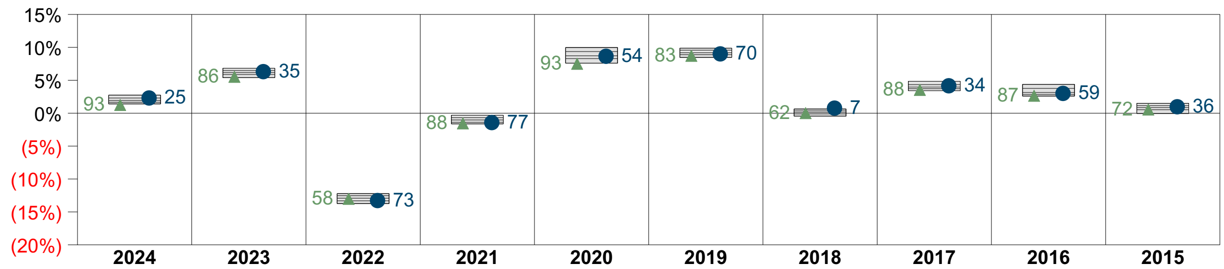


PIMCO
Return Analysis Summary

Return Analysis

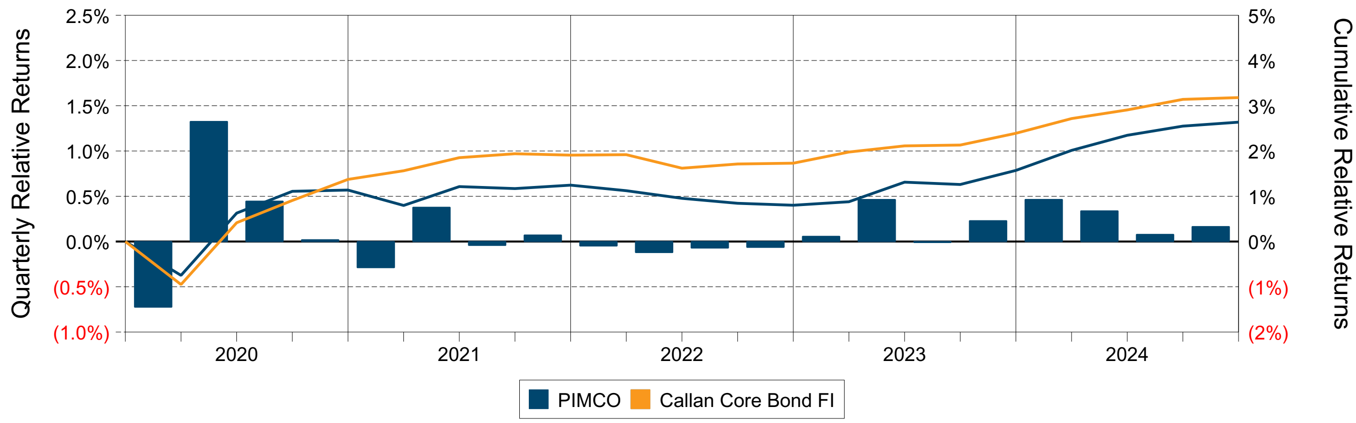
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

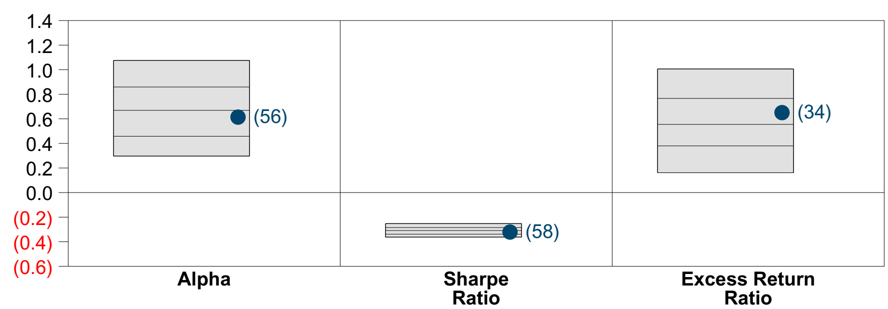


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	2.74	6.83	(12.22)	(0.31)	9.97	9.88	0.64	4.85	4.38	1.50
25th Percentile	2.30	6.49	(12.53)	(0.68)	9.36	9.57	0.35	4.34	3.77	1.14
Median	1.93	6.17	(12.91)	(1.03)	8.71	9.17	0.10	3.96	3.14	0.84
75th Percentile	1.66	5.88	(13.32)	(1.39)	8.29	8.88	(0.11)	3.71	2.85	0.52
90th Percentile	1.41	5.40	(13.73)	(1.62)	7.60	8.48	(0.45)	3.41	2.59	(0.04)
PIMCO ●	2.31	6.31	(13.27)	(1.43)	8.64	9.01	0.77	4.16	3.01	0.97
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01	3.54	2.65	0.55

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 December 31, 2024

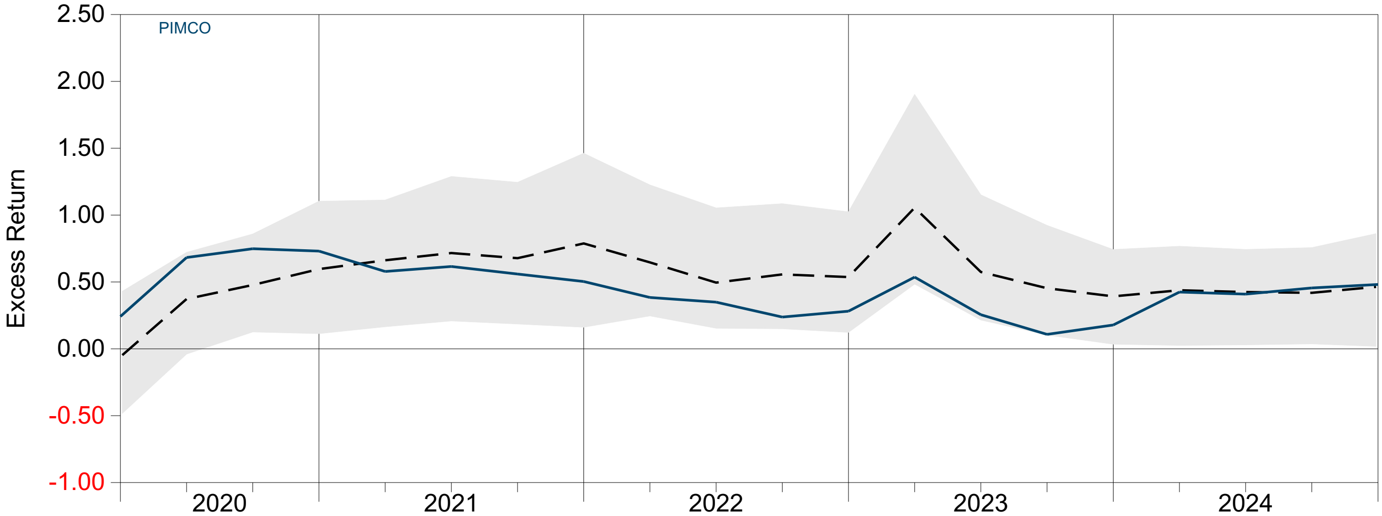


	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.08	(0.25)	1.01
25th Percentile	0.86	(0.28)	0.77
Median	0.67	(0.31)	0.56
75th Percentile	0.46	(0.34)	0.38
90th Percentile	0.30	(0.36)	0.16
PIMCO ●	0.61	(0.32)	0.65

Consistency of Excess Return and Relative Std. Dev.

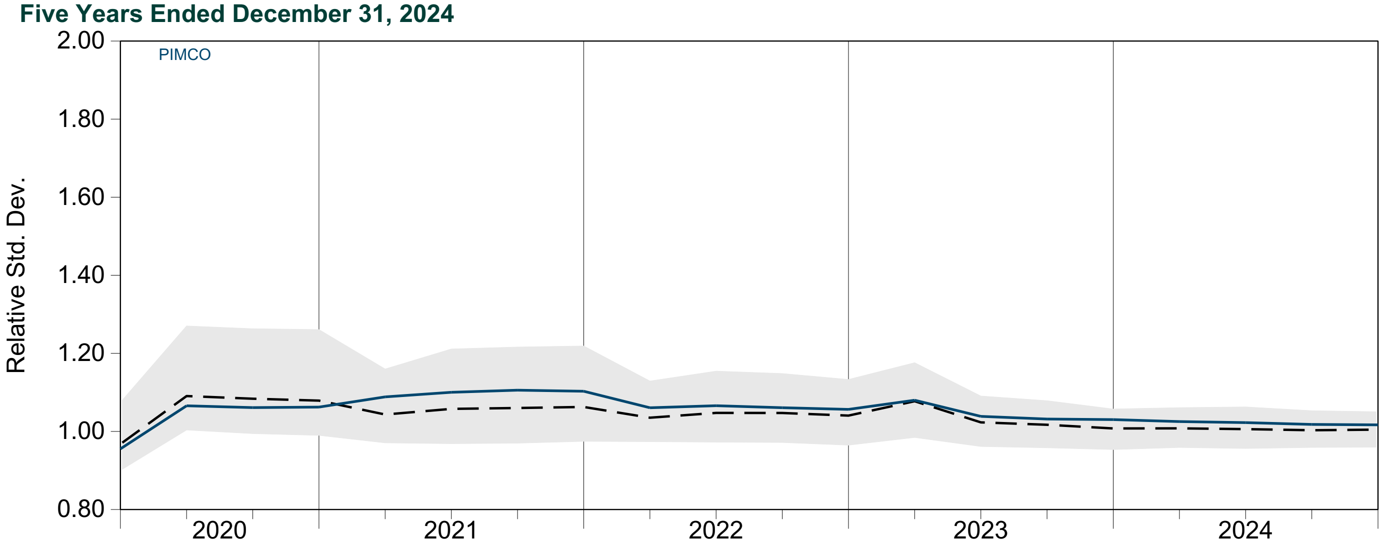
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Bond FI. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.53%	0.44%
% Positive Periods	95%	100%
Average Ranking	50	60

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.04%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	40

Manulife Asset Management
Period Ended December 31, 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.

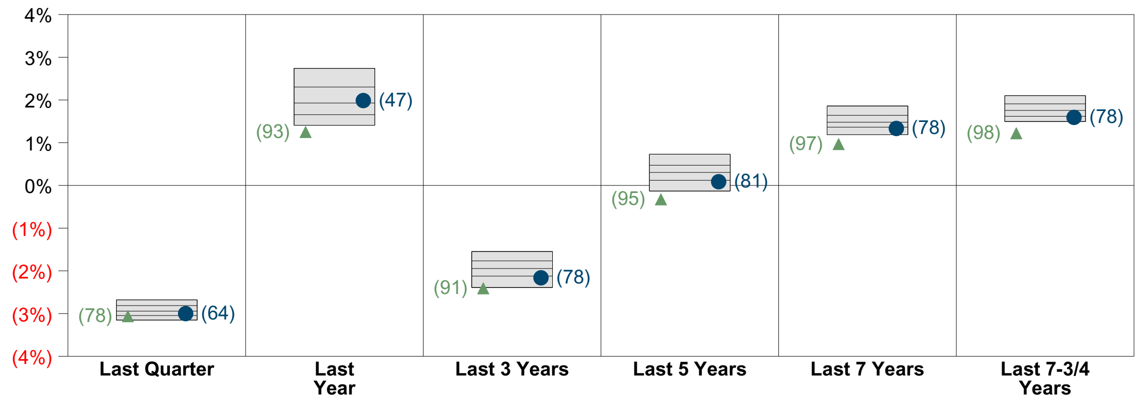
Quarterly Summary and Highlights

- Manulife Asset Management's portfolio posted a (3.00)% return for the quarter placing it in the 64 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 47 percentile for the last year.
- Manulife Asset Management's portfolio outperformed the Blmbg:Aggregate by 0.06% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.74%.

Quarterly Asset Growth

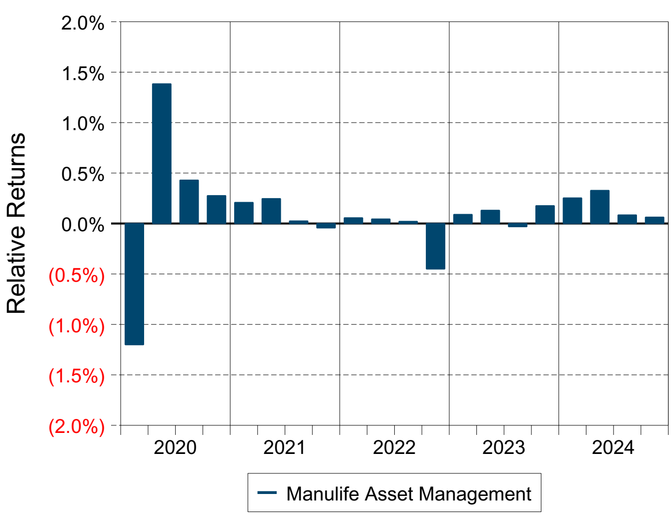
Beginning Market Value	$696,770,696
Net New Investment	$-256,370
Investment Gains/(Losses)	$-20,911,360
Ending Market Value	$675,602,966

Performance vs Callan Core Bond Fixed Income (Gross)

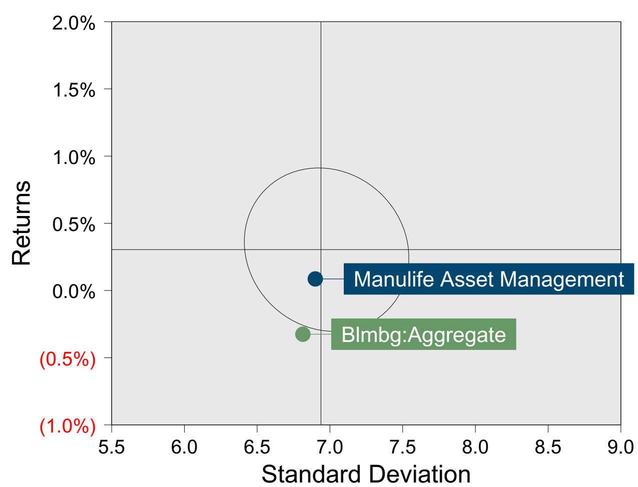


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 7-3/4 Years
10th Percentile	(2.68)	2.74	(1.55)	0.73	1.86	2.10
25th Percentile	(2.81)	2.30	(1.77)	0.47	1.64	1.91
Median	(2.94)	1.93	(1.95)	0.30	1.48	1.76
75th Percentile	(3.05)	1.66	(2.12)	0.12	1.36	1.62
90th Percentile	(3.15)	1.41	(2.39)	(0.13)	1.19	1.50
Manulife Asset Management ●	(3.00)	1.99	(2.16)	0.09	1.33	1.59
Blmbg:Aggregate ▲	(3.06)	1.25	(2.41)	(0.33)	0.97	1.22

Relative Return vs Blmbg:Aggregate



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

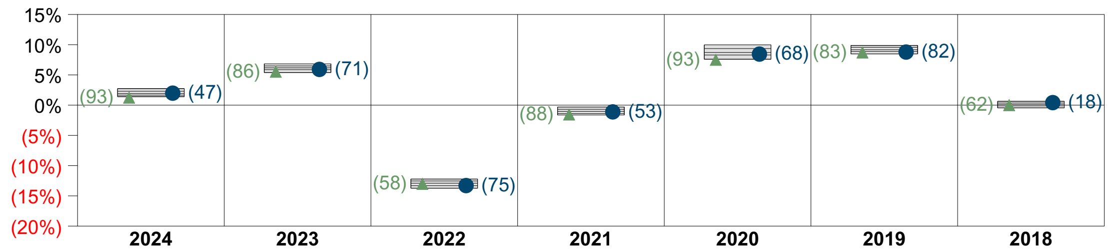


Manulife Asset Management
Return Analysis Summary

Return Analysis

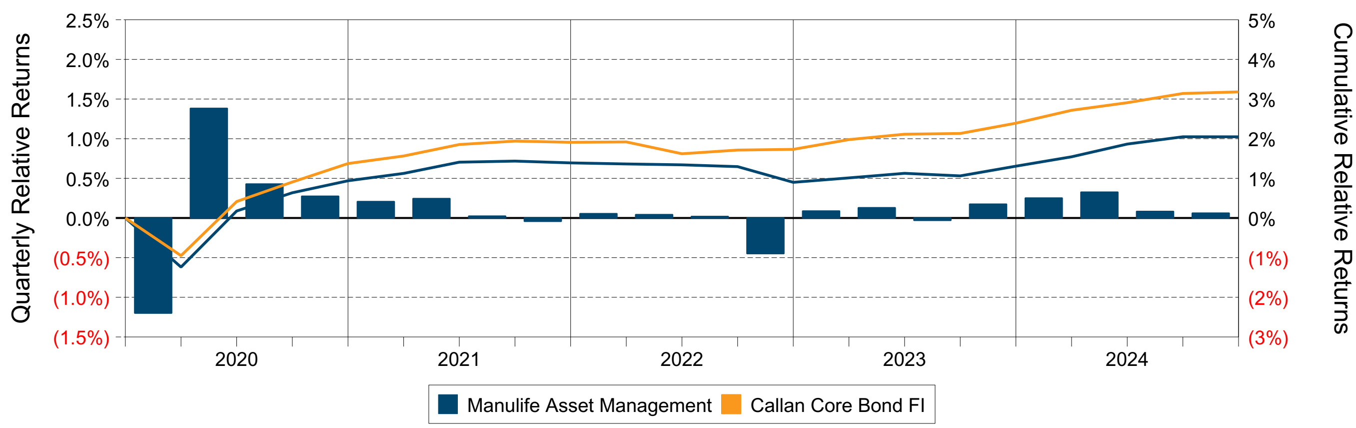
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

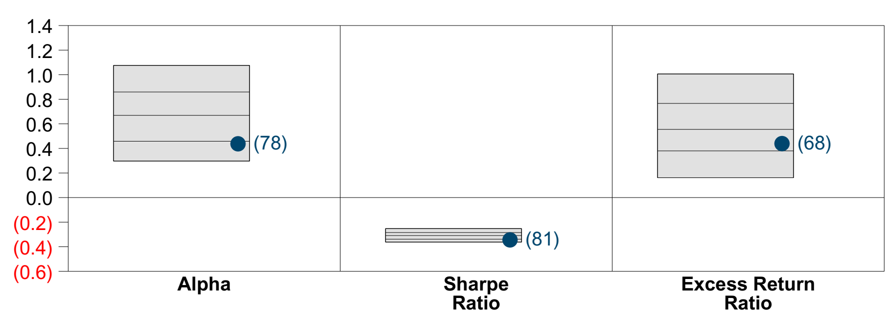


	2024	2023	2022	2021	2020	2019	2018
10th Percentile	2.74	6.83	(12.22)	(0.31)	9.97	9.88	0.64
25th Percentile	2.30	6.49	(12.53)	(0.68)	9.36	9.57	0.35
Median	1.93	6.17	(12.91)	(1.03)	8.71	9.17	0.10
75th Percentile	1.66	5.88	(13.32)	(1.39)	8.29	8.88	(0.11)
90th Percentile	1.41	5.40	(13.73)	(1.62)	7.60	8.48	(0.45)
Manulife Asset Management ●	1.99	5.91	(13.30)	(1.11)	8.45	8.78	0.42
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.08	(0.25)	1.01
25th Percentile	0.86	(0.28)	0.77
Median	0.67	(0.31)	0.56
75th Percentile	0.46	(0.34)	0.38
90th Percentile	0.30	(0.36)	0.16
Manulife Asset Management ●	0.44	(0.34)	0.44

Loomis Sayles
Period Ended December 31, 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.

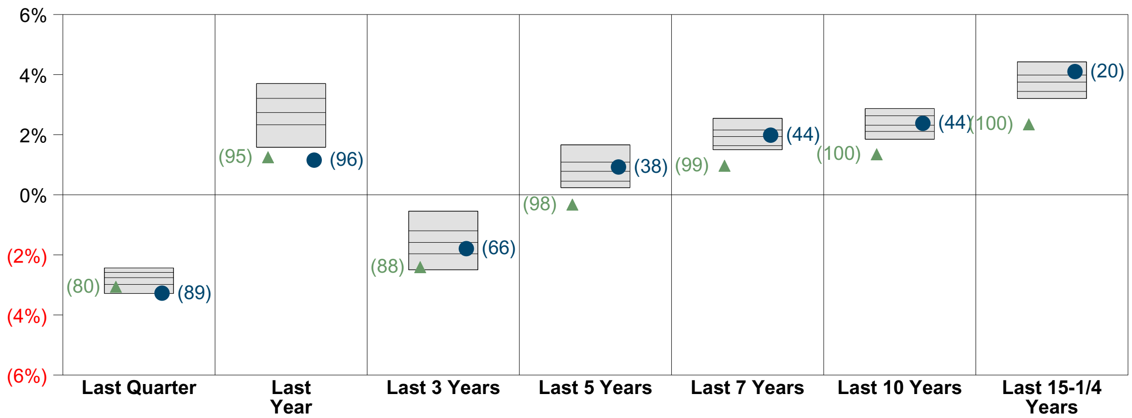
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a (3.27)% return for the quarter placing it in the 89 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 96 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Blmbg:Aggregate by 0.21% for the quarter and underperformed the Blmbg:Aggregate for the year by 0.10%.

Quarterly Asset Growth

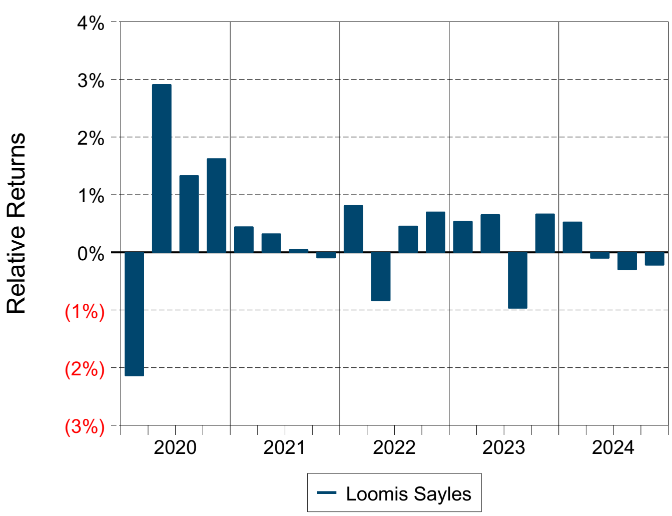
Beginning Market Value	$1,184,858,328
Net New Investment	$-494,322
Investment Gains/(Losses)	$-38,793,860
Ending Market Value	$1,145,570,145

Performance vs Callan Core Plus Fixed Income (Gross)

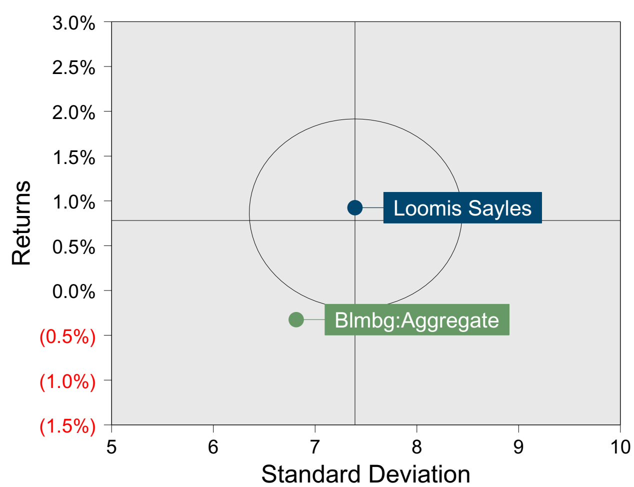


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15-1/4 Years
10th Percentile	(2.44)	3.70	(0.55)	1.66	2.54	2.87	4.43
25th Percentile	(2.58)	3.21	(1.20)	1.09	2.16	2.63	3.99
Median	(2.76)	2.74	(1.59)	0.78	1.94	2.31	3.75
75th Percentile	(2.98)	2.33	(1.96)	0.45	1.63	2.11	3.44
90th Percentile	(3.28)	1.58	(2.50)	0.24	1.50	1.85	3.20
Loomis Sayles ●	(3.27)	1.15	(1.79)	0.92	1.98	2.38	4.10
Blmbg:Aggregate ▲	(3.06)	1.25	(2.41)	(0.33)	0.97	1.35	2.35

Relative Return vs Blmbg:Aggregate



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

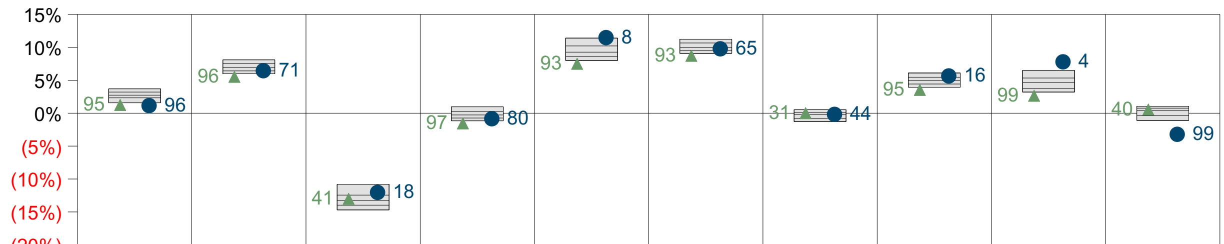


Loomis Sayles
Return Analysis Summary

Return Analysis

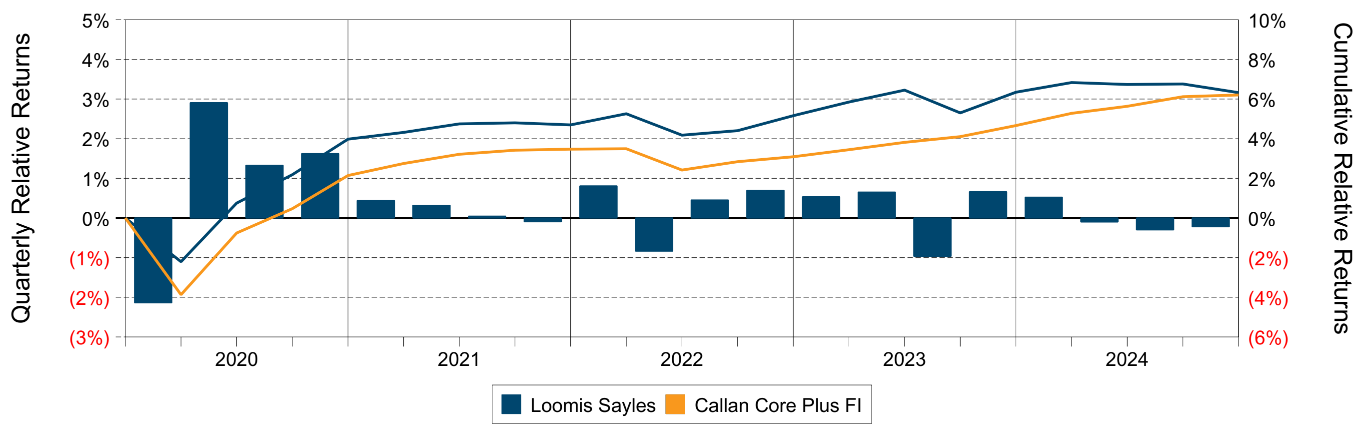
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

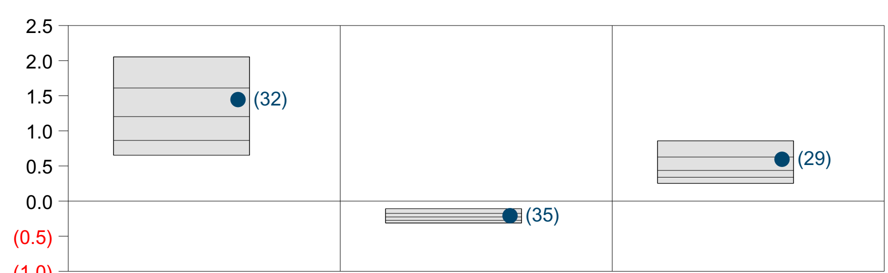


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	3.70	8.11	(10.80)	0.97	11.41	11.23	0.53	6.11	6.51	1.05
25th Percentile	3.21	7.55	(12.44)	0.27	10.22	10.66	0.10	5.46	5.34	0.76
Median	2.74	6.90	(13.27)	(0.27)	9.27	10.01	(0.24)	4.93	4.67	0.38
75th Percentile	2.33	6.42	(13.97)	(0.73)	8.58	9.56	(0.77)	4.43	3.76	(0.38)
90th Percentile	1.58	5.99	(14.69)	(1.16)	8.00	9.08	(1.27)	3.94	3.21	(1.10)
Loomis Sayles ●	1.15	6.45	(12.04)	(0.84)	11.48	9.78	(0.18)	5.66	7.80	(3.21)
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01	3.54	2.65	0.55

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 December 31, 2024



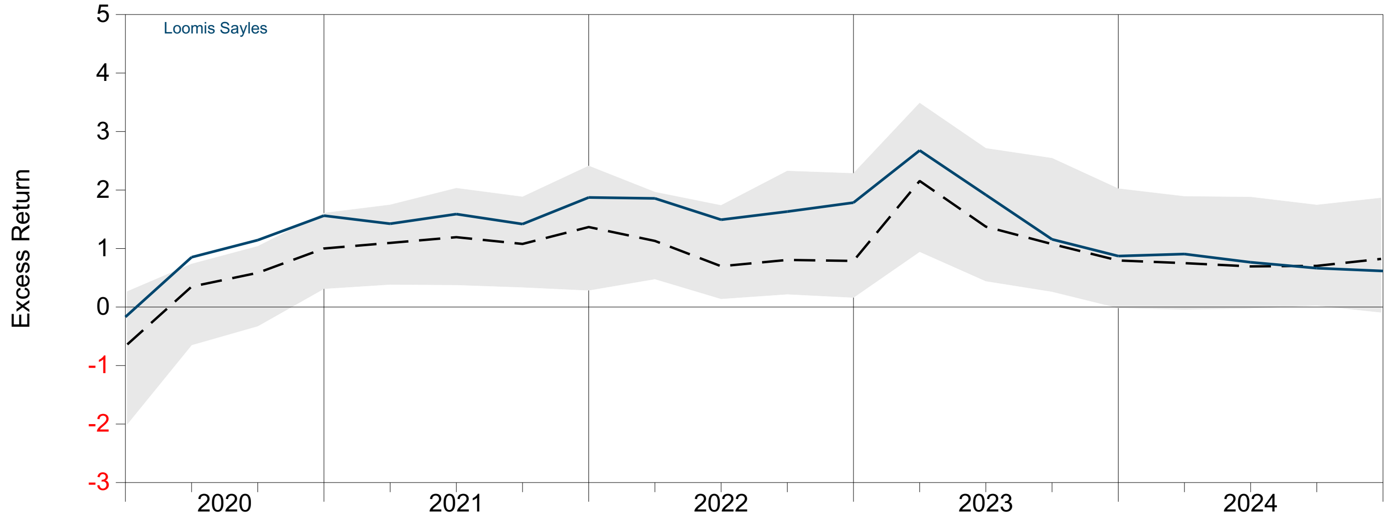
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.05	(0.11)	0.86
25th Percentile	1.61	(0.18)	0.63
Median	1.20	(0.23)	0.44
75th Percentile	0.86	(0.27)	0.34
90th Percentile	0.65	(0.31)	0.25
Loomis Sayles ●	1.45	(0.21)	0.60

Loomis Sayles
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

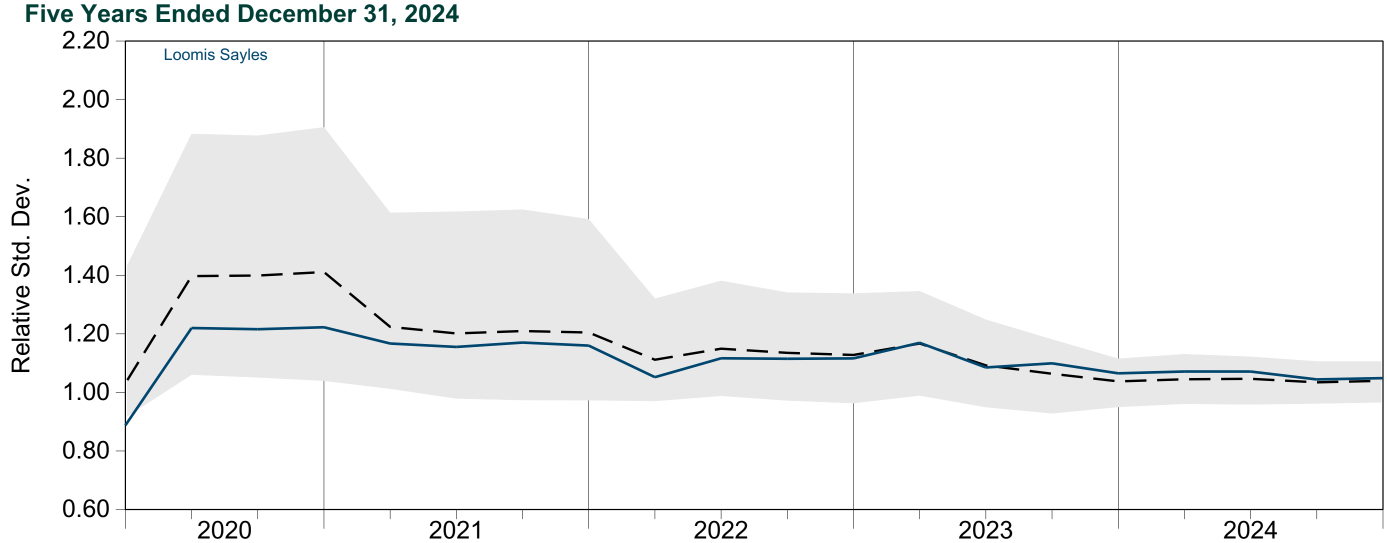
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.89%	1.30%
% Positive Periods	95%	95%
Average Ranking	50	28

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.16%	1.11%
% Positive Periods	100%	100%
Average Ranking	50	55

Prudential Core Plus
Period Ended December 31, 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.

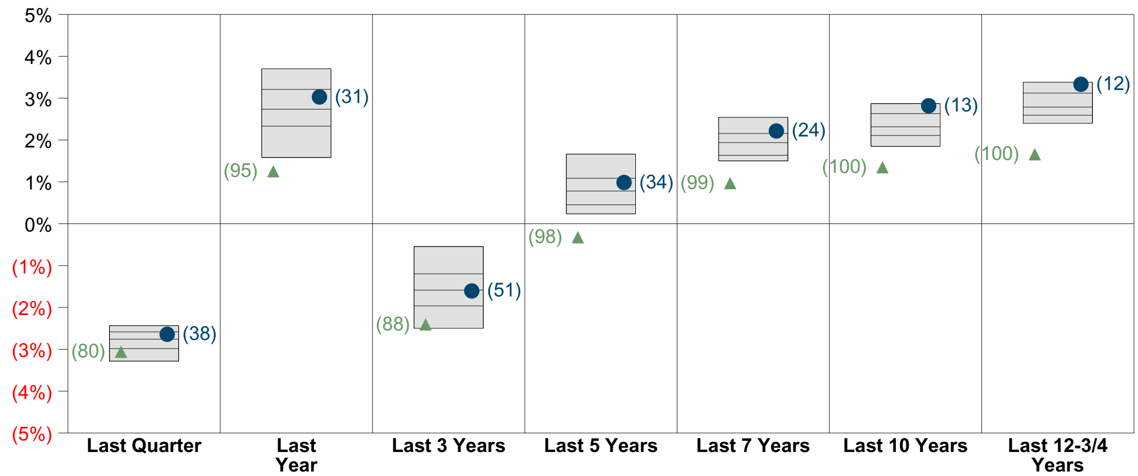
Quarterly Summary and Highlights

- Prudential Core Plus's portfolio posted a (2.64)% return for the quarter placing it in the 38 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 31 percentile for the last year.
- Prudential Core Plus's portfolio outperformed the Blmbg:Aggregate by 0.42% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.78%.

Quarterly Asset Growth

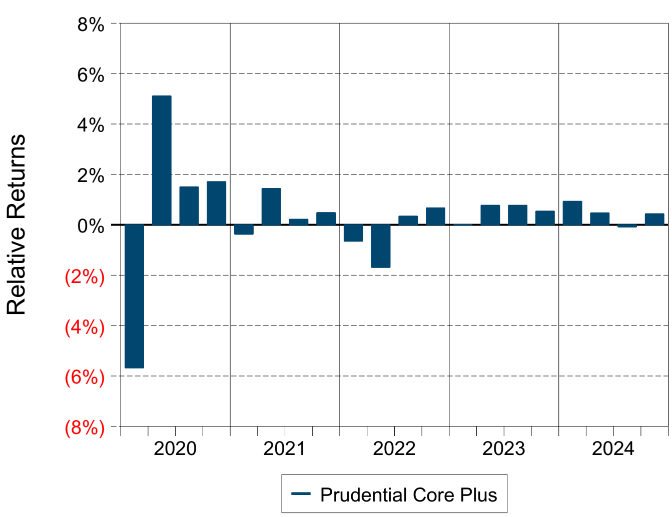
Beginning Market Value	$1,218,991,622
Net New Investment	$-404,748
Investment Gains/(Losses)	$-32,199,493
Ending Market Value	$1,186,387,381

Performance vs Callan Core Plus Fixed Income (Gross)

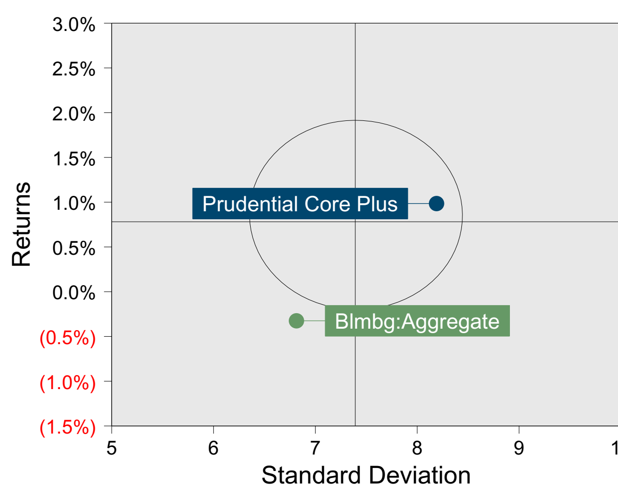


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-3/4 Years
10th Percentile	(2.44)	3.70	(0.55)	1.66	2.54	2.87	3.38
25th Percentile	(2.58)	3.21	(1.20)	1.09	2.16	2.63	3.12
Median	(2.76)	2.74	(1.59)	0.78	1.94	2.31	2.79
75th Percentile	(2.98)	2.33	(1.96)	0.45	1.63	2.11	2.59
90th Percentile	(3.28)	1.58	(2.50)	0.24	1.50	1.85	2.40
Prudential Core Plus ●	(2.64)	3.03	(1.61)	0.98	2.22	2.82	3.33
Blmbg:Aggregate ▲	(3.06)	1.25	(2.41)	(0.33)	0.97	1.35	1.66

Relative Return vs Blmbg:Aggregate



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

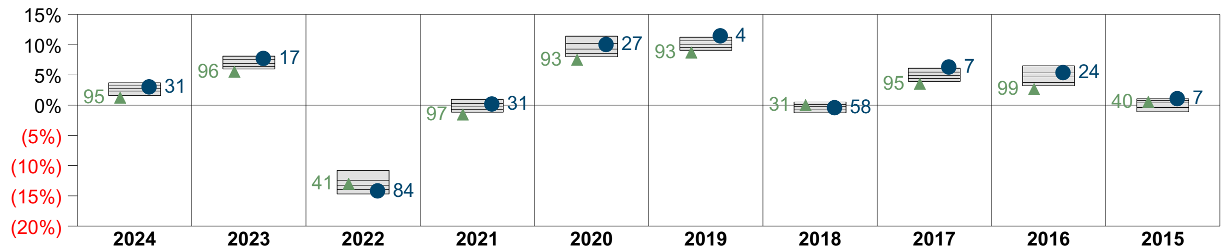


Prudential Core Plus
Return Analysis Summary

Return Analysis

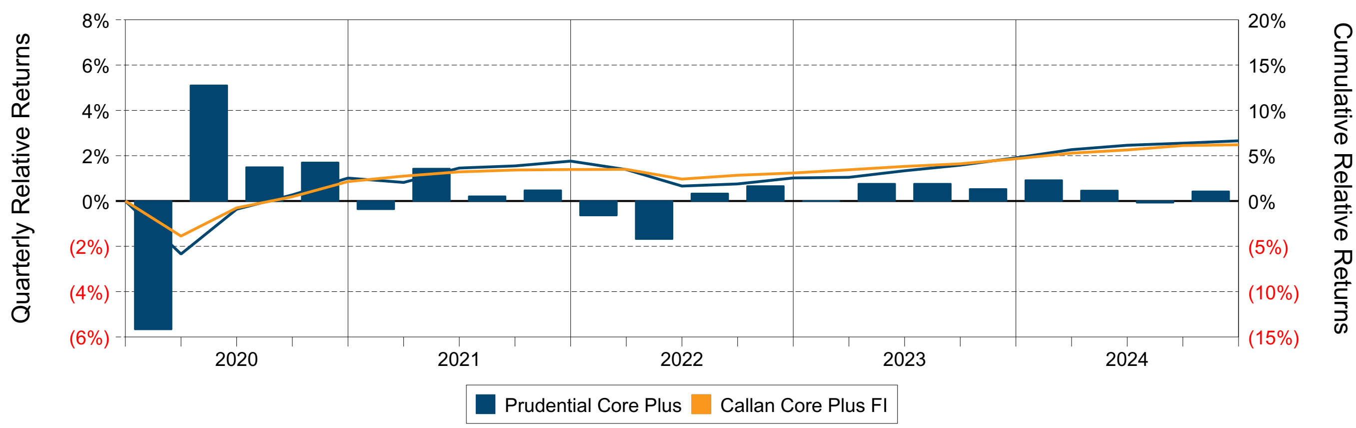
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

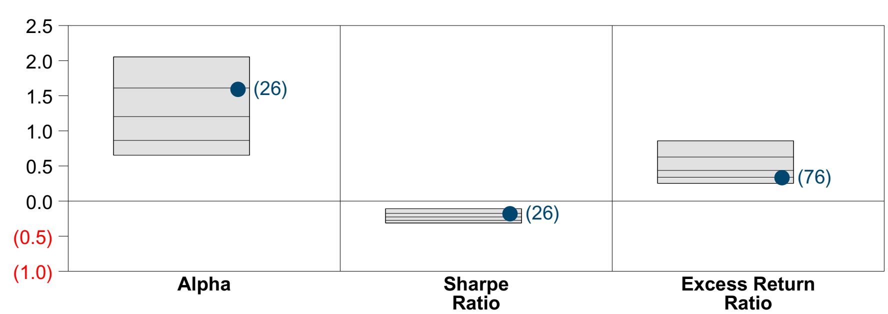


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	3.70	8.11	(10.80)	0.97	11.41	11.23	0.53	6.11	6.51	1.05
25th Percentile	3.21	7.55	(12.44)	0.27	10.22	10.66	0.10	5.46	5.34	0.76
Median	2.74	6.90	(13.27)	(0.27)	9.27	10.01	(0.24)	4.93	4.67	0.38
75th Percentile	2.33	6.42	(13.97)	(0.73)	8.58	9.56	(0.77)	4.43	3.76	(0.38)
90th Percentile	1.58	5.99	(14.69)	(1.16)	8.00	9.08	(1.27)	3.94	3.21	(1.10)
Prudential Core Plus ●	3.03	7.73	(14.17)	0.19	10.04	11.47	(0.41)	6.32	5.39	1.08
Blmbg:Aggregate ▲	1.25	5.53	(13.01)	(1.54)	7.51	8.72	0.01	3.54	2.65	0.55

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 December 31, 2024



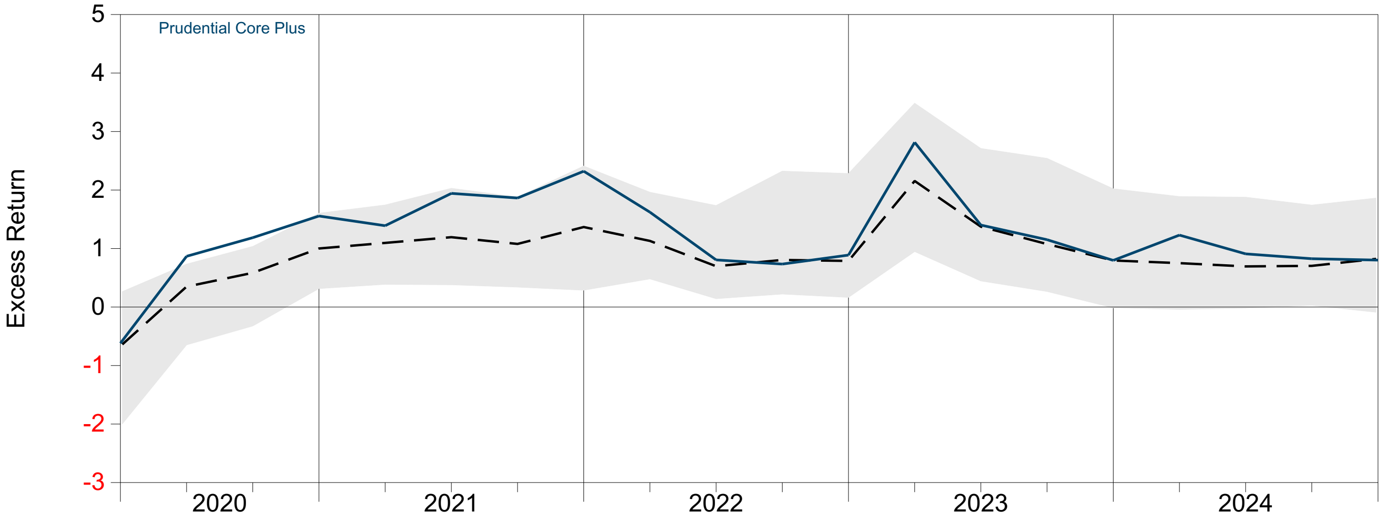
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.05	(0.11)	0.86
25th Percentile	1.61	(0.18)	0.63
Median	1.20	(0.23)	0.44
75th Percentile	0.86	(0.27)	0.34
90th Percentile	0.65	(0.31)	0.25
Prudential Core Plus ●	1.59	(0.18)	0.33

Prudential Core Plus
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

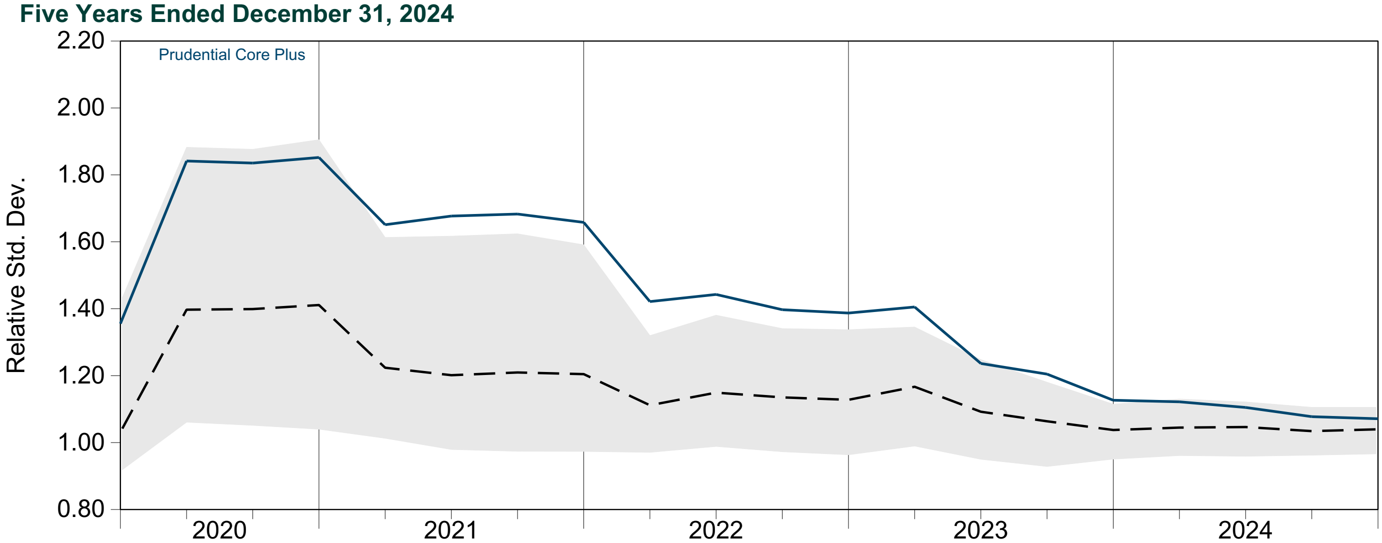
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative 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 December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.89%	1.22%
% Positive Periods	95%	95%
Average Ranking	50	31

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate
Five Years Ended December 31, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.16%	1.43%
% Positive Periods	100%	100%
Average Ranking	50	11

Wellington EMD
Period Ended December 31, 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.

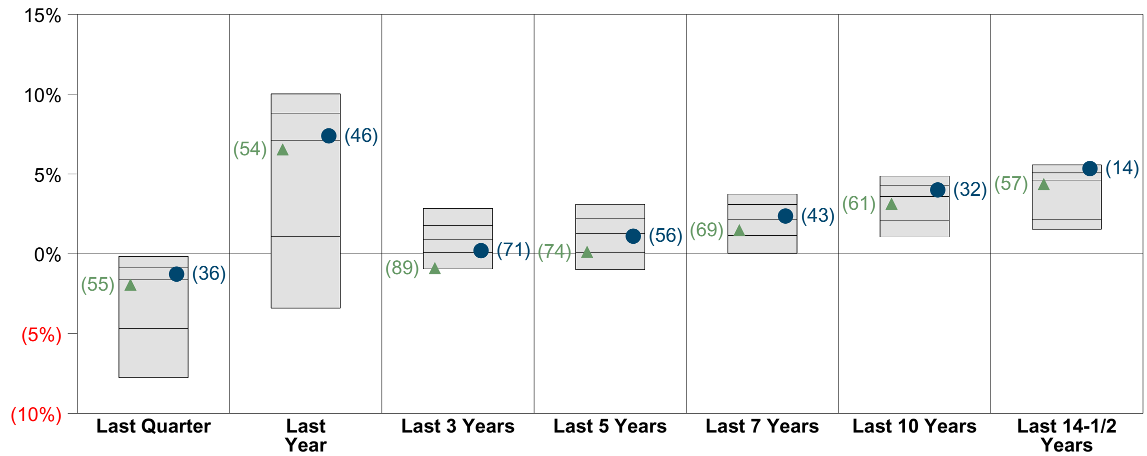
Quarterly Summary and Highlights

- Wellington EMD's portfolio posted a (1.27)% return for the quarter placing it in the 36 percentile of the Emerging Debt Database group for the quarter and in the 46 percentile for the last year.
- Wellington EMD's portfolio outperformed the JPM:EMBI Global Divsfd by 0.67% for the quarter and outperformed the JPM:EMBI Global Divsfd for the year by 0.85%.

Quarterly Asset Growth

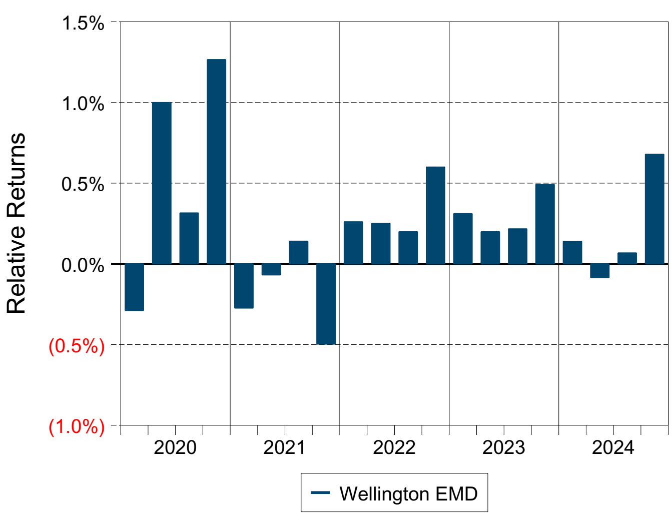
Beginning Market Value	$752,167,950
Net New Investment	$-858,689
Investment Gains/(Losses)	$-9,581,564
Ending Market Value	$741,727,697

Performance vs Emerging Debt Database (Gross)

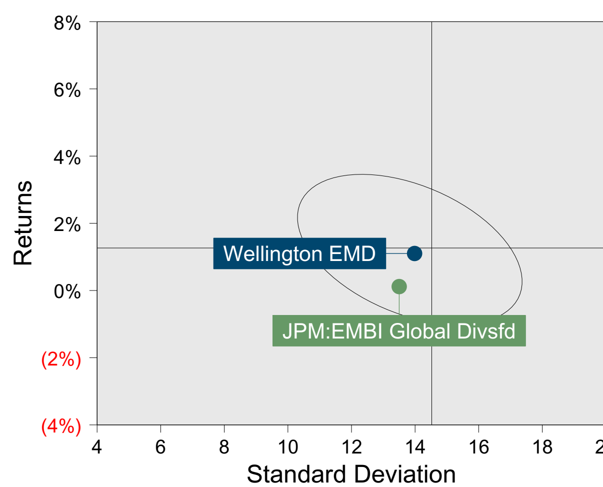


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 14-1/2 Years
10th Percentile	(0.16)	10.02	2.84	3.10	3.74	4.87	5.57
25th Percentile	(0.88)	8.81	1.77	2.22	3.09	4.29	5.08
Median	(1.62)	7.11	0.88	1.27	2.16	3.59	4.61
75th Percentile	(4.67)	1.09	0.09	0.09	1.15	2.07	2.16
90th Percentile	(7.76)	(3.40)	(0.95)	(1.00)	0.04	1.05	1.54
Wellington EMD ●	(1.27)	7.39	0.20	1.10	2.36	4.00	5.34
JPM:EMBI Global Divsfd ▲	(1.94)	6.54	(0.91)	0.12	1.47	3.13	4.36

Relative Return vs JPM:EMBI Global Divsfd



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

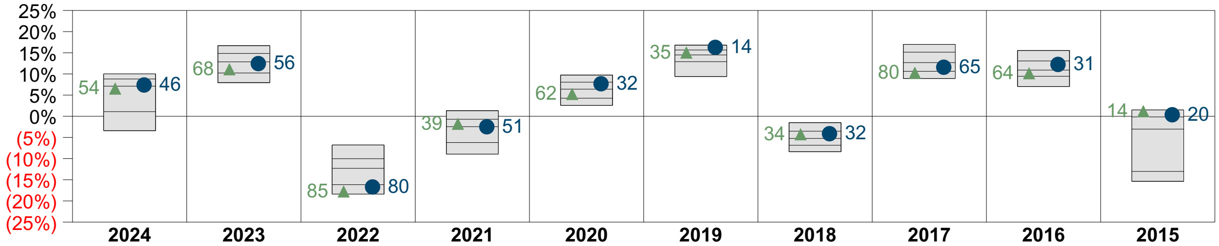


Wellington EMD
Return Analysis Summary

Return Analysis

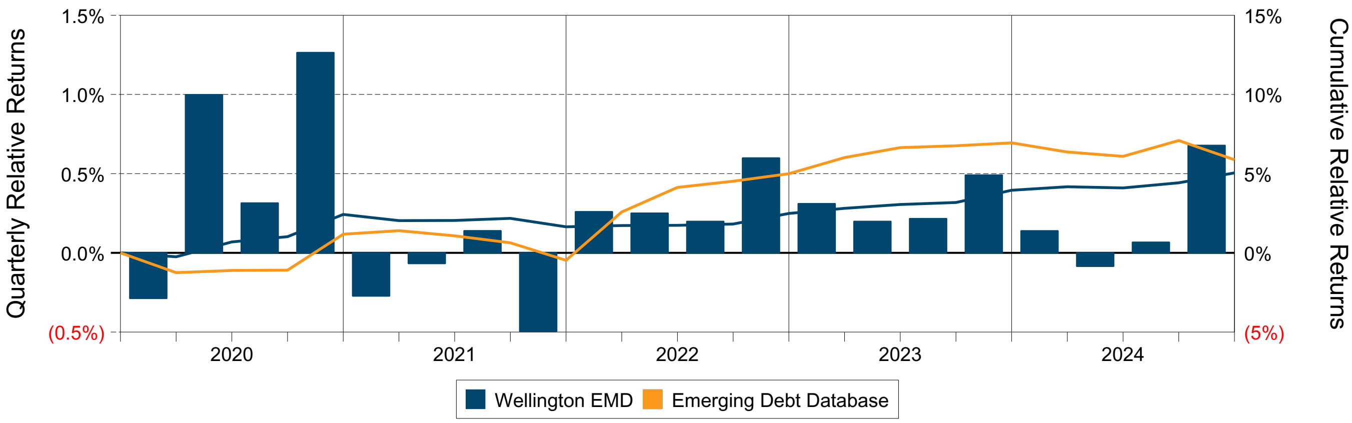
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

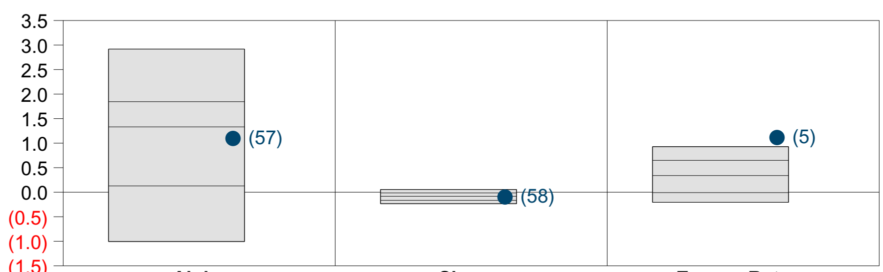


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	10.02	16.68	(6.78)	1.32	9.74	16.80	(1.50)	16.99	15.55	1.50
25th Percentile	8.81	14.85	(10.03)	(0.71)	8.06	15.65	(3.53)	15.14	13.07	(0.15)
Median	7.11	12.86	(12.30)	(2.45)	6.40	14.49	(5.23)	12.68	10.91	(3.04)
75th Percentile	1.09	10.22	(16.16)	(6.21)	4.27	12.91	(6.85)	10.63	9.45	(13.03)
90th Percentile	(3.40)	7.94	(18.39)	(8.94)	2.57	9.39	(8.37)	8.93	7.03	(15.37)
Wellington EMD ●	7.39	12.45	(16.70)	(2.48)	7.68	16.28	(4.12)	11.58	12.25	0.36
JPM:EMBI Global Divsfd ▲	6.54	11.09	(17.78)	(1.80)	5.26	15.04	(4.26)	10.26	10.15	1.18

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 December 31, 2024



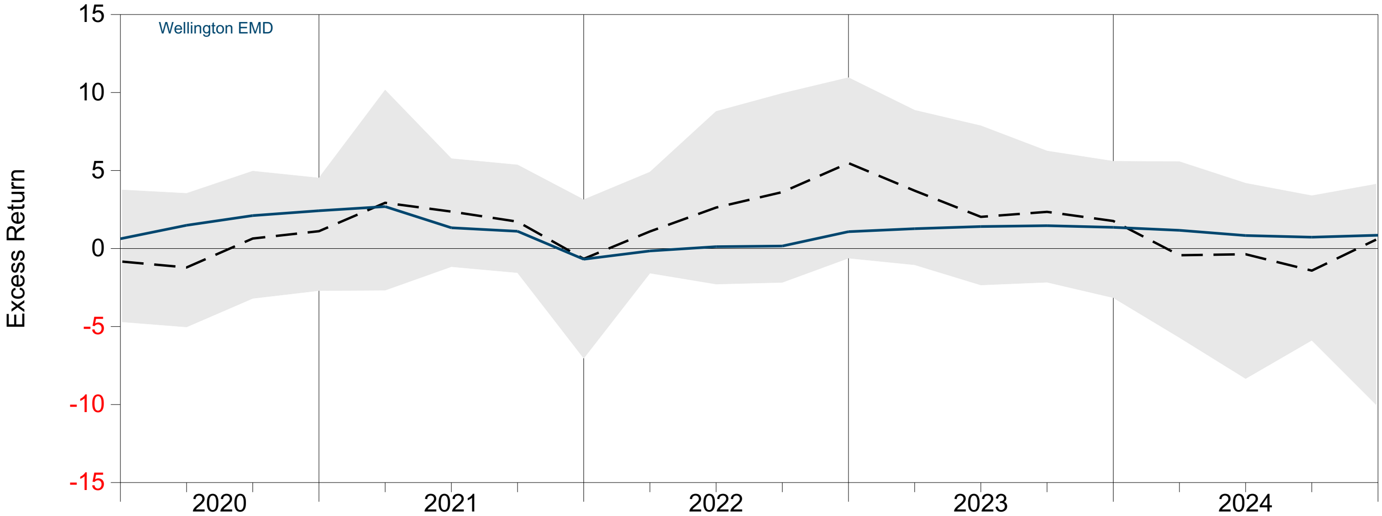
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.92	0.06	0.93
25th Percentile	1.85	(0.01)	0.65
Median	1.33	(0.08)	0.34
75th Percentile	0.13	(0.16)	(0.01)
90th Percentile	(1.01)	(0.23)	(0.21)
Wellington EMD ●	1.10	(0.10)	1.12

Wellington EMD
Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

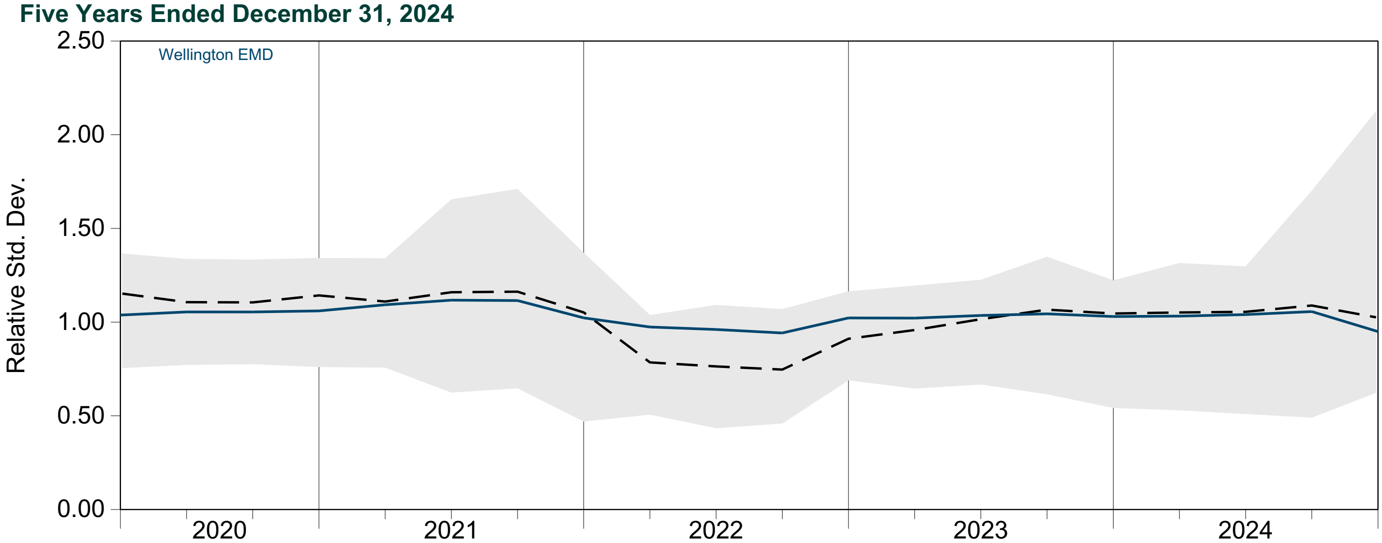
The first chart below illustrates the consistency of excess return over rolling one year periods versus the JPM:EMBI Global Divsfd. The gray area represents the range of excess return for the 10th through 90th percentile for the Emerging Debt Database. The second chart below illustrates the consistency 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 December 31, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.35%	1.07%
% Positive Periods	70%	90%
Average Ranking	50	52

Rolling One Year Relative Std. Dev. Relative to JPM:EMBI Global Divsfd
Five Years Ended December 31, 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 December 31, 2024

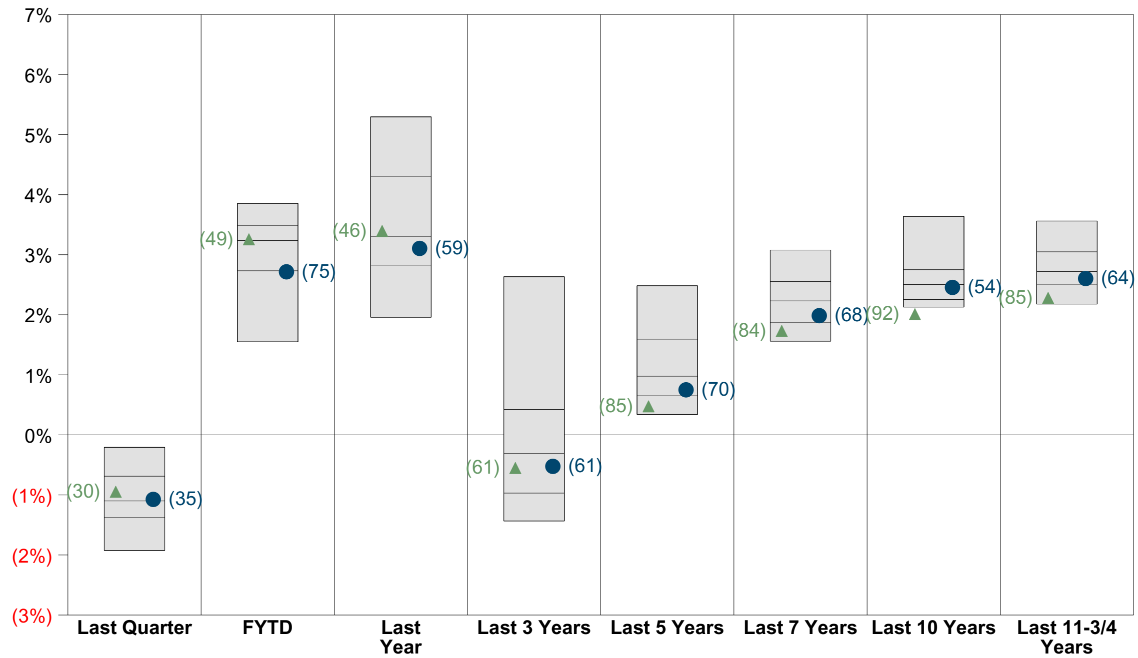
Quarterly Summary and Highlights

- Global Fixed Income's portfolio posted a (1.07)% return for the quarter placing it in the 35 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 59 percentile for the last year.
- Global Fixed Income's portfolio underperformed the Blmbg Glb Agg Hdg by 0.13% for the quarter and underperformed the Blmbg Glb Agg Hdg for the year by 0.29%.

Quarterly Asset Growth

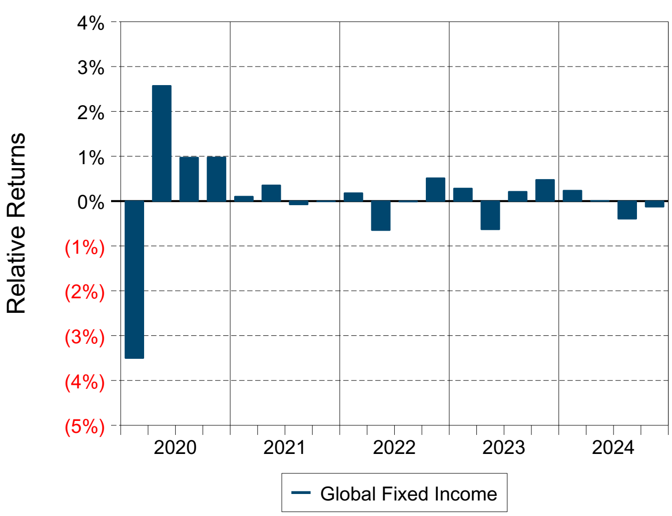
Beginning Market Value	$1,586,196,659
Net New Investment	$-934,745
Investment Gains/(Losses)	$-17,052,311
Ending Market Value	$1,568,209,603

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

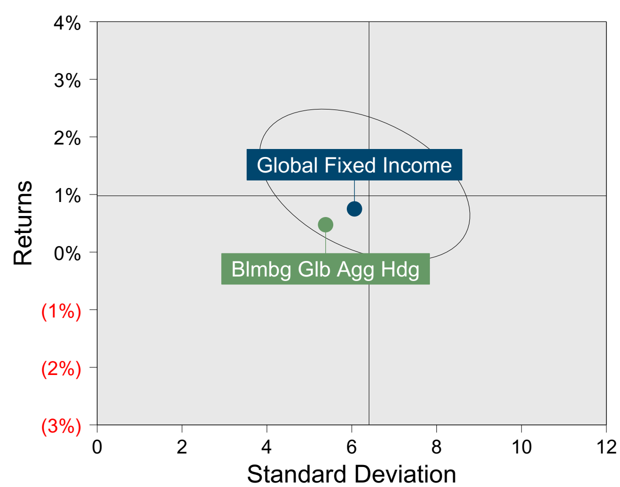


	Last Quarter	FYTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-3/4 Years
10th Percentile	(0.21)	3.85	5.30	2.63	2.48	3.08	3.64	3.56
25th Percentile	(0.69)	3.49	4.31	0.42	1.59	2.55	2.75	3.05
Median	(1.10)	3.24	3.31	(0.31)	0.98	2.23	2.50	2.72
75th Percentile	(1.38)	2.73	2.83	(0.97)	0.65	1.87	2.25	2.51
90th Percentile	(1.92)	1.55	1.96	(1.43)	0.34	1.56	2.13	2.18
Global Fixed Income ●	(1.07)	2.72	3.11	(0.52)	0.75	1.99	2.46	2.60
Blmbg Glb Agg Hdg ▲	(0.95)	3.26	3.40	(0.55)	0.48	1.73	2.01	2.28

Relative Return vs Blmbg Glb Agg Hdg



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

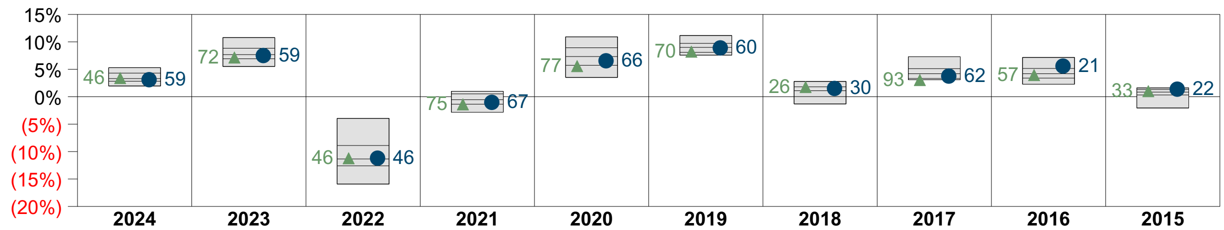


Global Fixed Income
Return Analysis Summary

Return Analysis

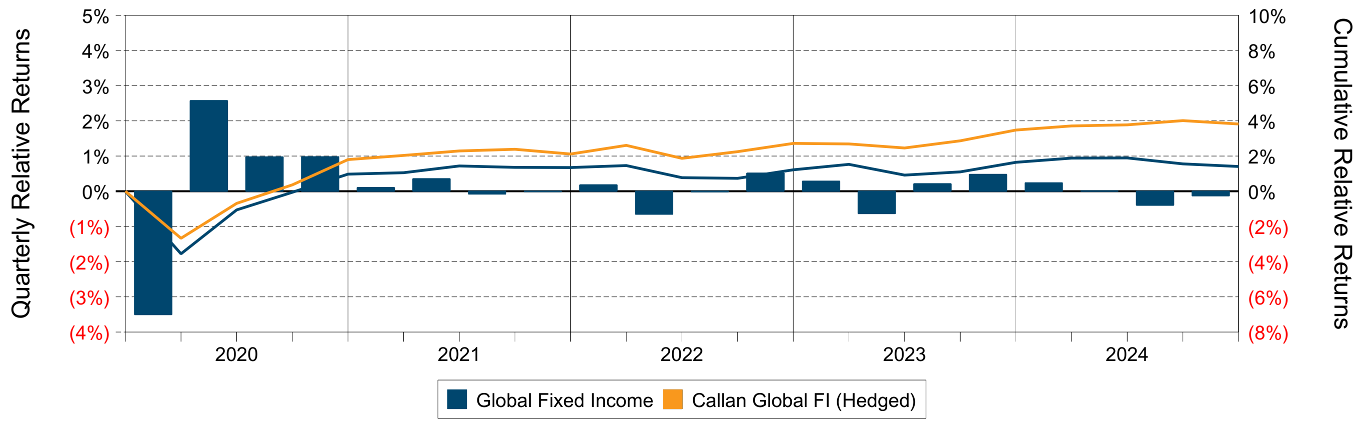
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

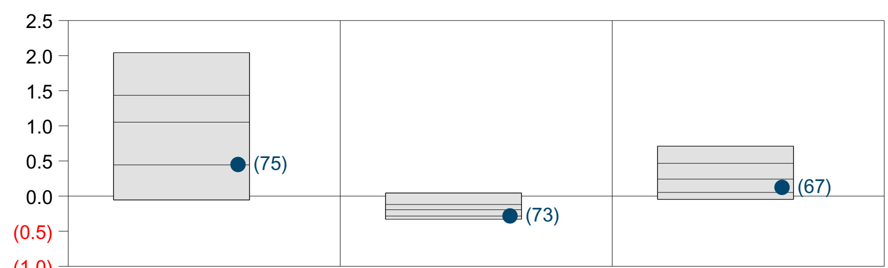


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	5.30	10.78	(3.95)	0.99	10.92	11.15	2.79	7.29	7.17	1.61
25th Percentile	4.31	8.84	(8.89)	0.52	8.92	9.73	1.80	5.12	5.15	1.32
Median	3.31	7.67	(11.34)	(0.55)	7.33	9.00	1.09	4.19	4.19	0.84
75th Percentile	2.83	6.91	(12.60)	(1.36)	5.73	8.09	0.02	3.33	3.40	0.32
90th Percentile	1.96	5.52	(15.92)	(2.83)	3.52	7.58	(1.31)	3.09	2.28	(2.05)
Global Fixed Income ●	3.11 (59)	7.51 (59)	(11.20) (46)	(1.03) (67)	6.55 (66)	8.90 (60)	1.51 (30)	3.76 (62)	5.59 (21)	1.38 (22)
Blmbg Glb Agg Hdg ▲	3.40 (46)	7.15 (72)	(11.22) (46)	(1.39) (75)	5.58 (77)	8.22 (70)	1.76 (26)	3.04 (93)	3.95 (57)	1.02 (33)

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.04	0.04	0.71
25th Percentile	1.44	(0.12)	0.47
Median	1.05	(0.19)	0.24
75th Percentile	0.44	(0.28)	0.05
90th Percentile	(0.06)	(0.33)	(0.05)
Global Fixed Income ●	0.45	(0.28)	0.12

PIMCO Global
Period Ended December 31, 2024

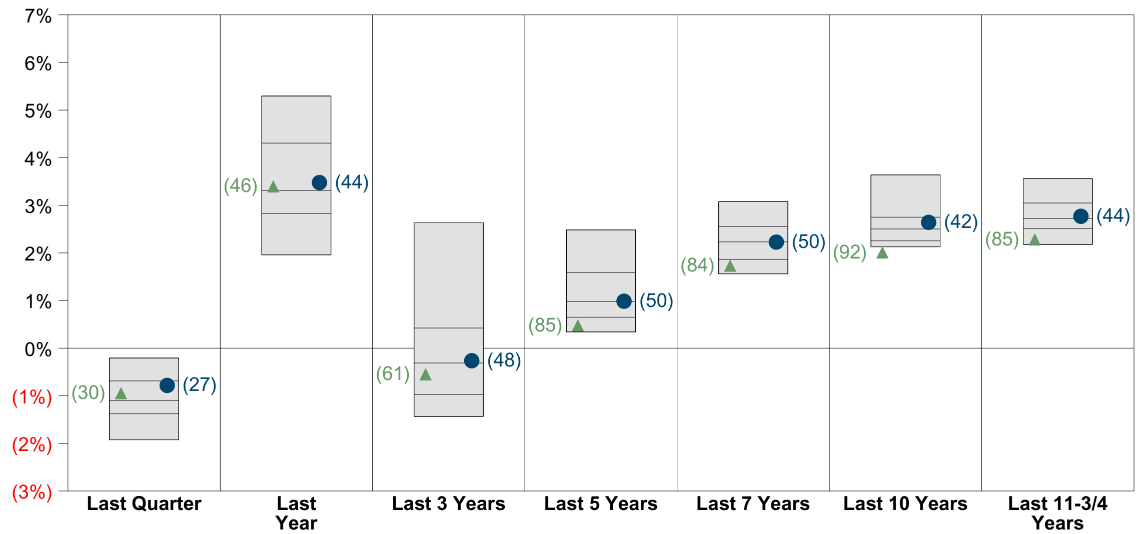
Investment Philosophy
The Fund's inception date is February 2013.

Quarterly Summary and Highlights
- PIMCO Global's portfolio posted a (0.78)% return for the quarter placing it in the 27 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 44 percentile for the last year.
- PIMCO Global's portfolio outperformed the Blmbg Glb Agg Hdg by 0.16% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.08%.

Quarterly Asset Growth

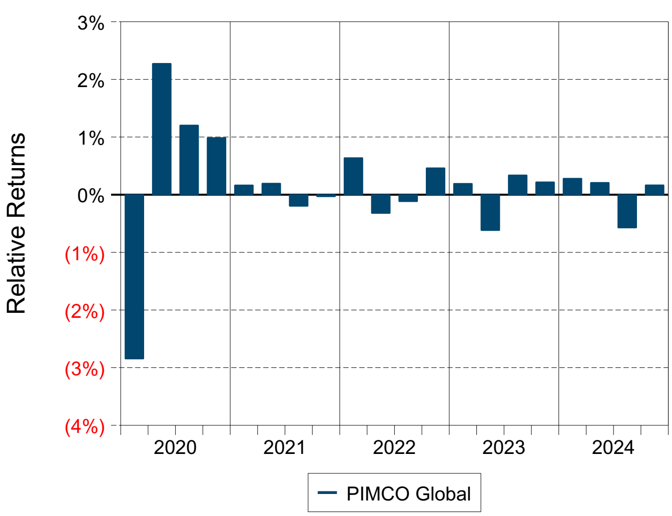
Beginning Market Value	$789,848,512
Net New Investment	$-469,924
Investment Gains/(Losses)	$-6,194,201
Ending Market Value	$783,184,387

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

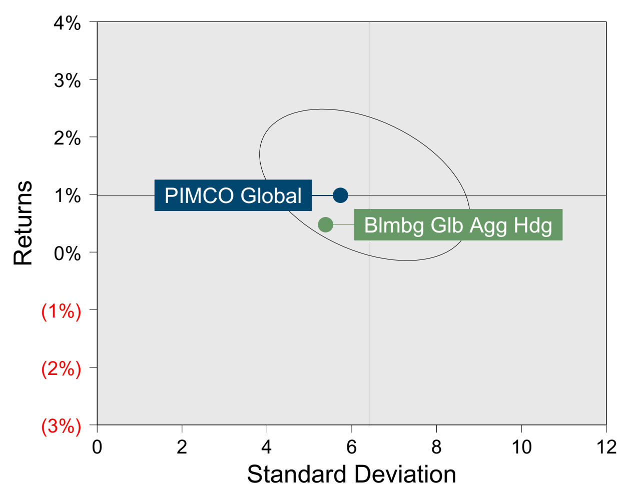


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-3/4 Years
10th Percentile	(0.21)	5.30	2.63	2.48	3.08	3.64	3.56
25th Percentile	(0.69)	4.31	0.42	1.59	2.55	2.75	3.05
Median	(1.10)	3.31	(0.31)	0.98	2.23	2.50	2.72
75th Percentile	(1.38)	2.83	(0.97)	0.65	1.87	2.25	2.51
90th Percentile	(1.92)	1.96	(1.43)	0.34	1.56	2.13	2.18
PIMCO Global ●	(0.78)	3.48	(0.26)	0.99	2.23	2.64	2.77
Blmbg Glb Agg Hdg ▲	(0.95)	3.40	(0.55)	0.48	1.73	2.01	2.28

Relative Return vs Blmbg Glb Agg Hdg



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

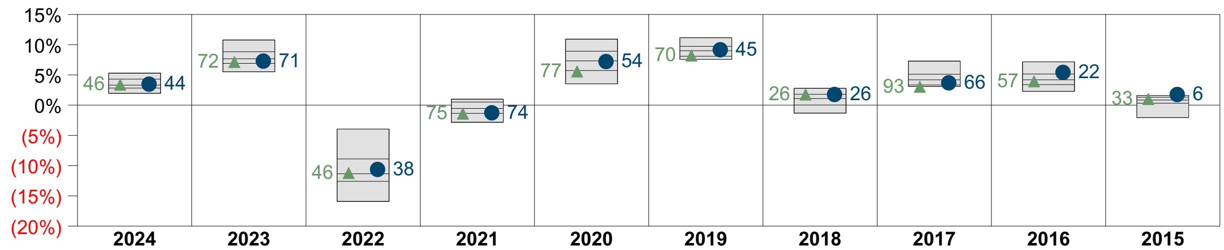


PIMCO Global
Return Analysis Summary

Return Analysis

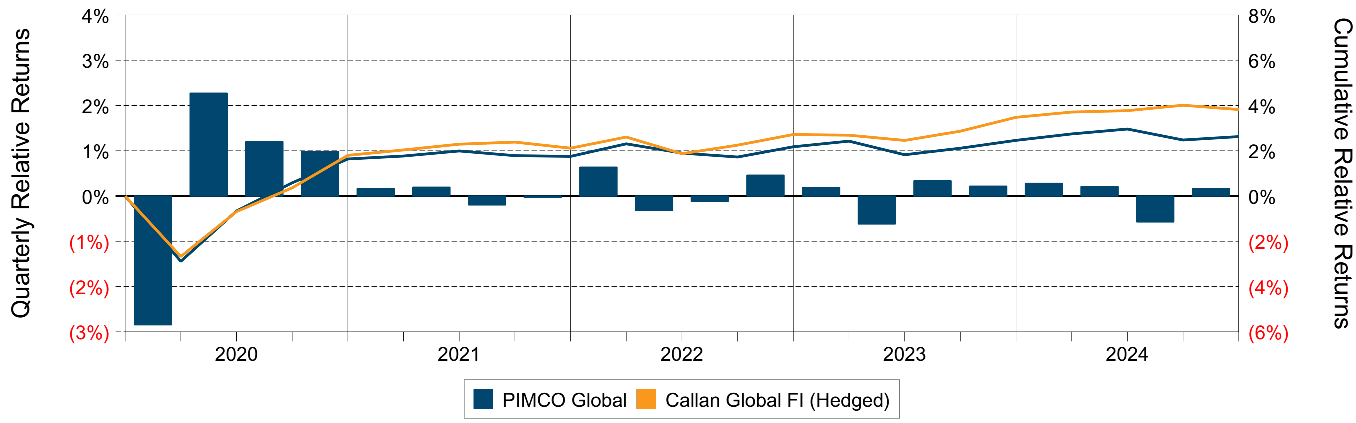
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

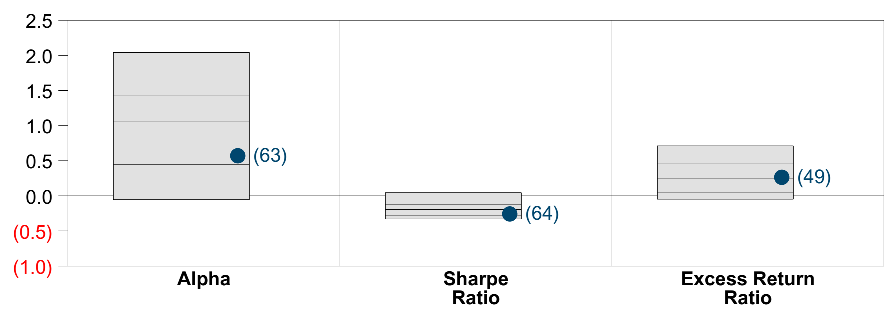


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	5.30	10.78	(3.95)	0.99	10.92	11.15	2.79	7.29	7.17	1.61
25th Percentile	4.31	8.84	(8.89)	0.52	8.92	9.73	1.80	5.12	5.15	1.32
Median	3.31	7.67	(11.34)	(0.55)	7.33	9.00	1.09	4.19	4.19	0.84
75th Percentile	2.83	6.91	(12.60)	(1.36)	5.73	8.09	0.02	3.33	3.40	0.32
90th Percentile	1.96	5.52	(15.92)	(2.83)	3.52	7.58	(1.31)	3.09	2.28	(2.05)
PIMCO Global ●	3.48	7.28	(10.63)	(1.26)	7.22	9.16	1.77	3.69	5.42	1.77
Blmbg Glb Agg Hdg ▲	3.40	7.15	(11.22)	(1.39)	5.58	8.22	1.76	3.04	3.95	1.02

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.04	0.04	0.71
25th Percentile	1.44	(0.12)	0.47
Median	1.05	(0.19)	0.24
75th Percentile	0.44	(0.28)	0.05
90th Percentile	(0.06)	(0.33)	(0.05)
PIMCO Global ●	0.57	(0.26)	0.26

AllianceBernstein Global
Period Ended December 31, 2024

Investment Philosophy

AB utitlizes 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.

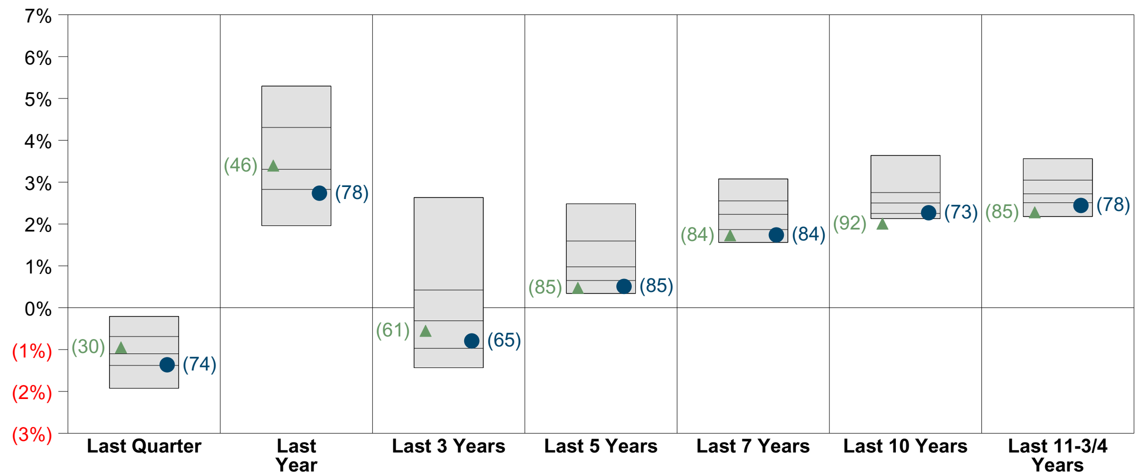
Quarterly Summary and Highlights

- AllianceBernstein Global's portfolio posted a (1.36)% return for the quarter placing it in the 74 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 0.42% for the quarter and underperformed the Blmbg Glb Agg Hdg for the year by 0.66%.

Quarterly Asset Growth

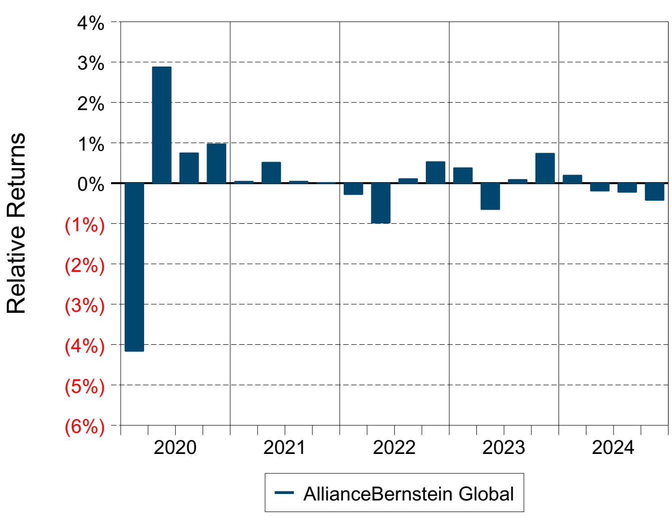
Beginning Market Value	$796,348,147
Net New Investment	$-464,821
Investment Gains/(Losses)	$-10,858,109
Ending Market Value	$785,025,217

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

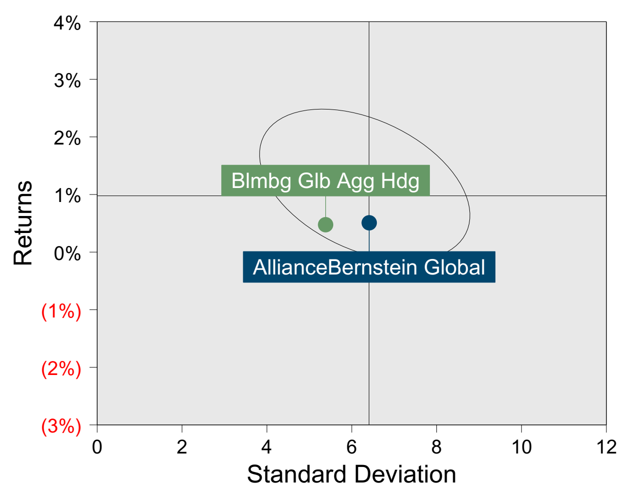


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 11-3/4 Years
10th Percentile	(0.21)	5.30	2.63	2.48	3.08	3.64	3.56
25th Percentile	(0.69)	4.31	0.42	1.59	2.55	2.75	3.05
Median	(1.10)	3.31	(0.31)	0.98	2.23	2.50	2.72
75th Percentile	(1.38)	2.83	(0.97)	0.65	1.87	2.25	2.51
90th Percentile	(1.92)	1.96	(1.43)	0.34	1.56	2.13	2.18
AllianceBernstein Global ●	(1.36)	2.74	(0.79)	0.51	1.74	2.27	2.44
Blmbg Glb Agg Hdg ▲	(0.95)	3.40	(0.55)	0.48	1.73	2.01	2.28

Relative Return vs Blmbg Glb Agg Hdg



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

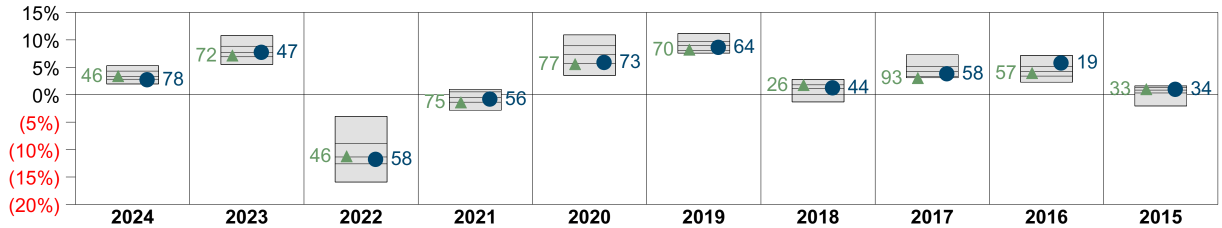


AllianceBernstein Global
Return Analysis Summary

Return Analysis

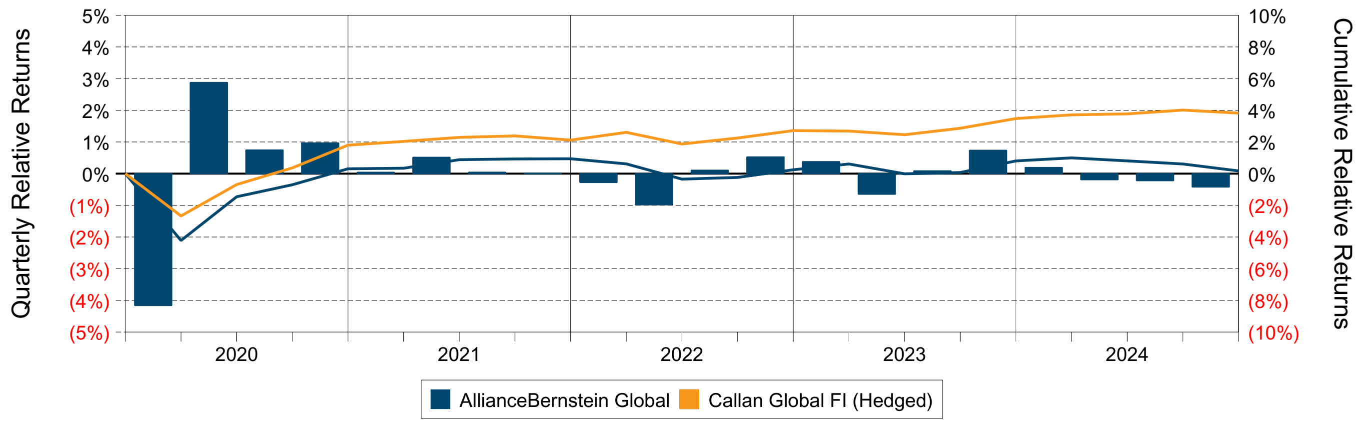
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

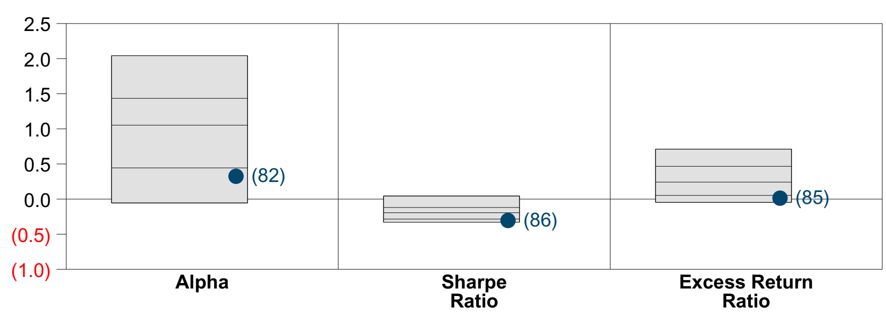


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	5.30	10.78	(3.95)	0.99	10.92	11.15	2.79	7.29	7.17	1.61
25th Percentile	4.31	8.84	(8.89)	0.52	8.92	9.73	1.80	5.12	5.15	1.32
Median	3.31	7.67	(11.34)	(0.55)	7.33	9.00	1.09	4.19	4.19	0.84
75th Percentile	2.83	6.91	(12.60)	(1.36)	5.73	8.09	0.02	3.33	3.40	0.32
90th Percentile	1.96	5.52	(15.92)	(2.83)	3.52	7.58	(1.31)	3.09	2.28	(2.05)
AllianceBernstein Global ●	2.74	7.73	(11.78)	(0.79)	5.89	8.64	1.26	3.83	5.79	0.99
Blmbg Glb Agg Hdg ▲	3.40	7.15	(11.22)	(1.39)	5.58	8.22	1.76	3.04	3.95	1.02

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.04	0.04	0.71
25th Percentile	1.44	(0.12)	0.47
Median	1.05	(0.19)	0.24
75th Percentile	0.44	(0.28)	0.05
90th Percentile	(0.06)	(0.33)	(0.05)
AllianceBernstein Global ●	0.32	(0.30)	0.01

REIT Composite
Period Ended December 31, 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.

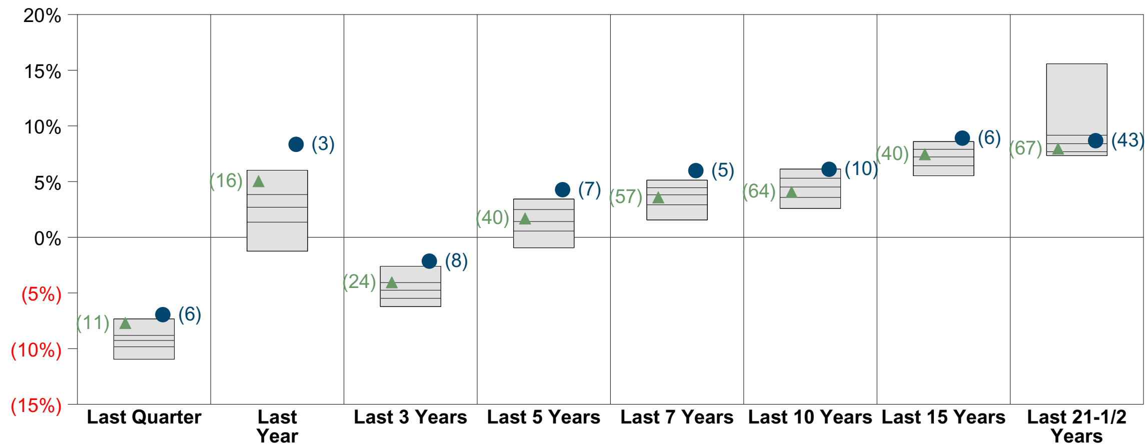
Quarterly Summary and Highlights

- REIT Composite's portfolio posted a (6.95)% return for the quarter placing it in the 6 percentile of the Callan Real Estate Global REIT group for the quarter and in the 3 percentile for the last year.
- REIT Composite's portfolio outperformed the REIT Comp Custom Benchmark (7) by 0.75% for the quarter and outperformed the REIT Comp Custom Benchmark (7) for the year by 3.30%.

Quarterly Asset Growth

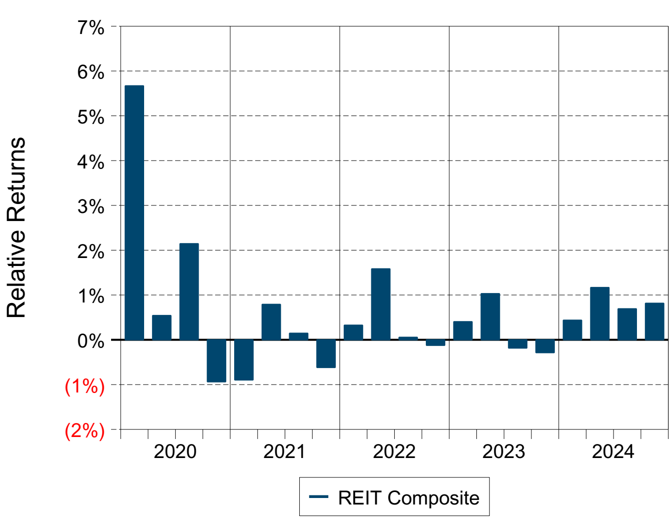
Beginning Market Value	$365,691,556
Net New Investment	$-369,318
Investment Gains/(Losses)	$-25,389,878
Ending Market Value	$339,932,360

Performance vs Callan Real Estate Global REIT (Gross)

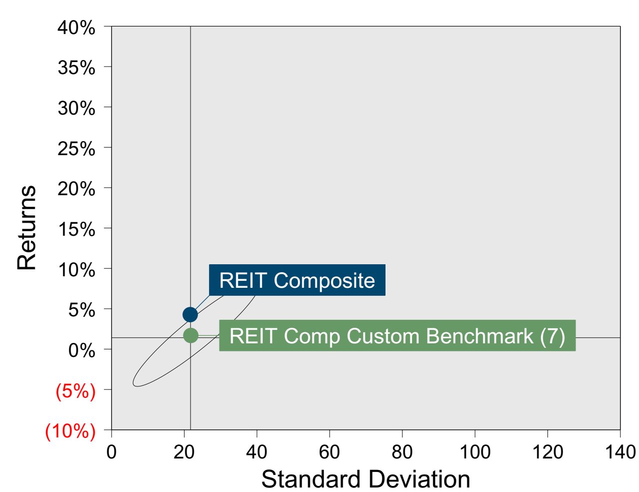


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years	Last 21-1/2 Years
10th Percentile	(7.33)	6.02	(2.60)	3.43	5.13	6.12	8.59	15.58
25th Percentile	(8.81)	3.83	(4.07)	2.49	4.45	5.30	7.90	9.16
Median	(9.27)	2.70	(4.75)	1.41	3.81	4.51	7.21	8.40
75th Percentile	(9.84)	1.36	(5.48)	0.56	2.92	3.58	6.42	7.68
90th Percentile	(10.95)	(1.25)	(6.23)	(0.95)	1.55	2.59	5.52	7.32
REIT Composite ●	(6.95)	8.34	(2.14)	4.27	5.99	6.10	8.90	8.67
REIT Comp Custom Benchmark (7) ▲	(7.70)	5.04	(4.04)	1.69	3.58	4.07	7.46	7.96

Relative Returns vs REIT Comp Custom Benchmark (7)



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

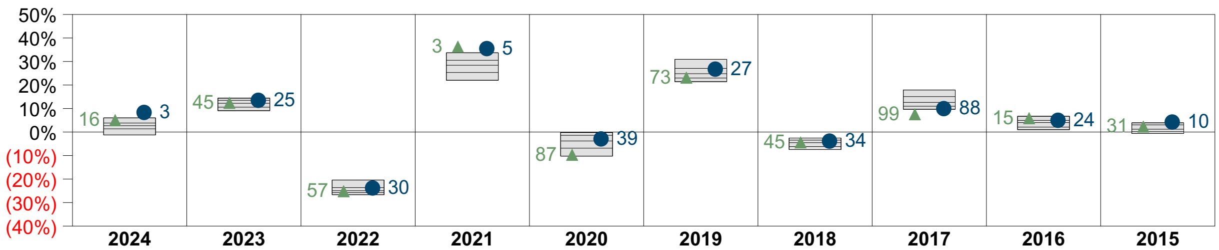


REIT Composite
Return Analysis Summary

Return Analysis

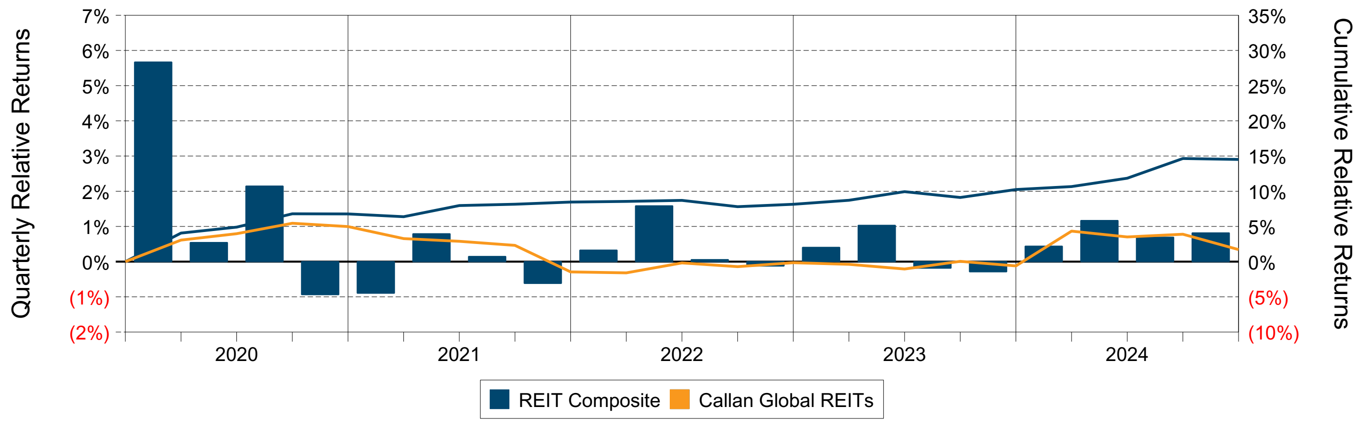
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

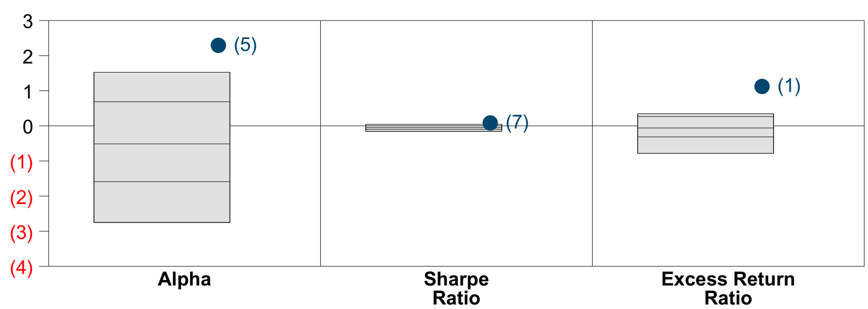


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	6.02	14.43	(20.43)	33.71	(0.19)	30.92	(2.55)	17.89	6.72	3.92
25th Percentile	3.83	13.49	(23.62)	30.53	(1.40)	27.08	(3.46)	15.07	4.95	3.05
Median	2.70	12.23	(24.96)	28.41	(3.79)	24.82	(4.52)	12.62	4.02	1.20
75th Percentile	1.36	10.58	(25.76)	25.32	(6.87)	22.96	(6.18)	10.98	2.10	0.16
90th Percentile	(1.25)	9.07	(26.66)	22.01	(10.25)	21.41	(7.46)	9.67	0.97	(0.63)
REIT Composite ●	8.34	13.49	(23.79)	35.49	(2.92)	26.75	(3.85)	9.97	5.00	4.25
REIT Comp Custom Benchmark (7) ▲	5.04	12.41	(25.17)	36.29	(9.69)	23.10	(4.42)	7.54	5.87	2.31

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.53	0.05	0.34
25th Percentile	0.69	0.00	0.27
Median	(0.51)	(0.05)	(0.06)
75th Percentile	(1.59)	(0.10)	(0.31)
90th Percentile	(2.75)	(0.16)	(0.78)
REIT Composite ●	2.29	0.08	1.12

Core Real Estate (Net)
Period Ended December 31, 2024

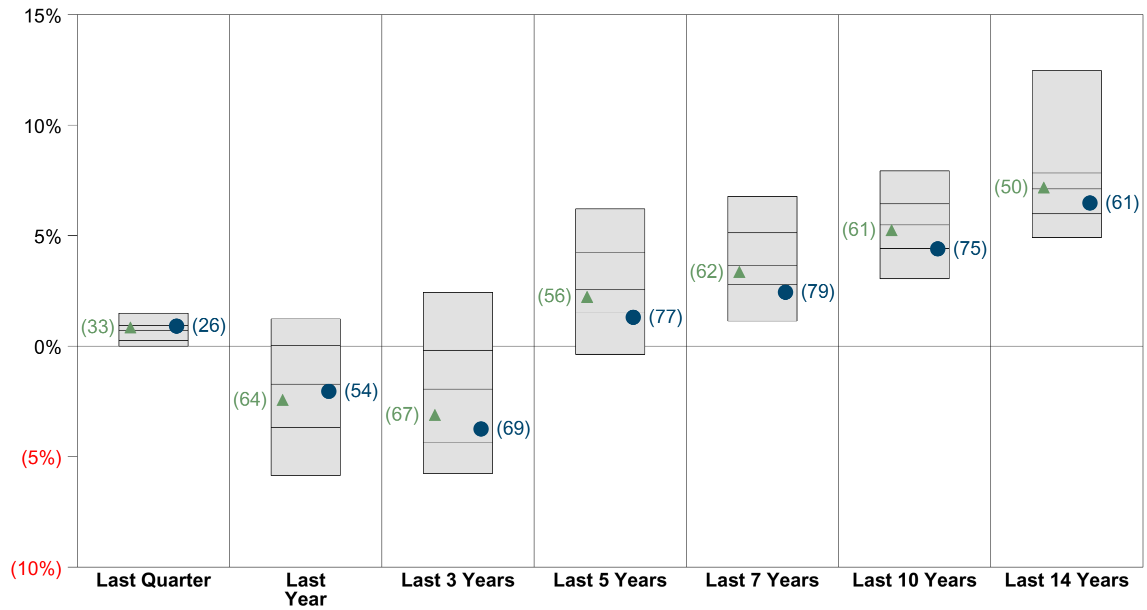
Quarterly Summary and Highlights

- Core Real Estate (Net)'s portfolio posted a 0.91% return for the quarter placing it in the 26 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 54 percentile for the last year.
- Core Real Estate (Net)'s portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.06% for the quarter and outperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 0.39%.

Quarterly Asset Growth

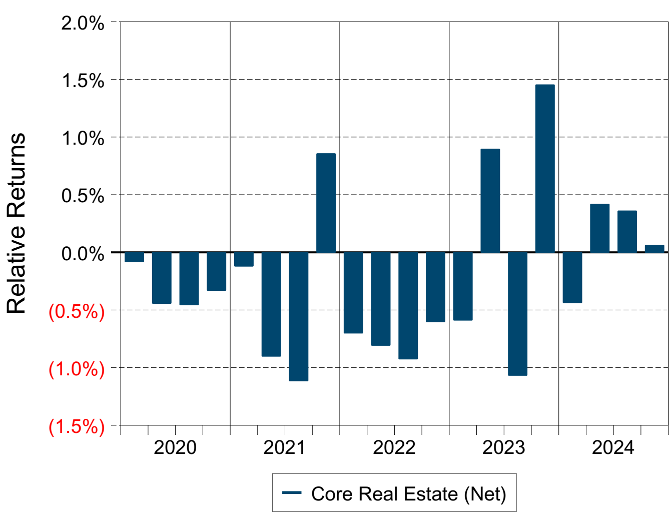
Beginning Market Value	$1,567,501,818
Net New Investment	$22,336,085
Investment Gains/(Losses)	$16,878,794
Ending Market Value	$1,606,716,696

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

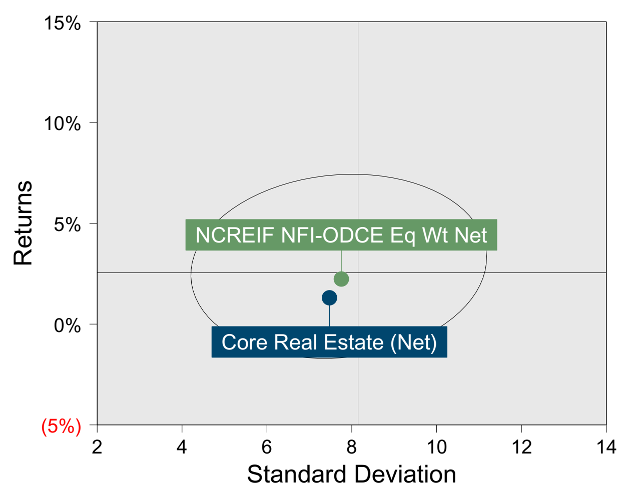


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 14 Years
10th Percentile	1.49	1.23	2.44	6.21	6.77	7.93	12.47
25th Percentile	0.93	0.02	(0.19)	4.25	5.13	6.44	7.84
Median	0.72	(1.72)	(1.95)	2.55	3.66	5.49	7.12
75th Percentile	0.25	(3.68)	(4.38)	1.50	2.80	4.42	5.99
90th Percentile	0.00	(5.86)	(5.77)	(0.37)	1.14	3.05	4.91
Core Real Estate (Net) ●	0.91	(2.05)	(3.75)	1.31	2.44	4.40	6.48
NCREIF NFI-ODCE Eq Wt Net ▲	0.85	(2.43)	(3.11)	2.24	3.36	5.25	7.18

Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



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

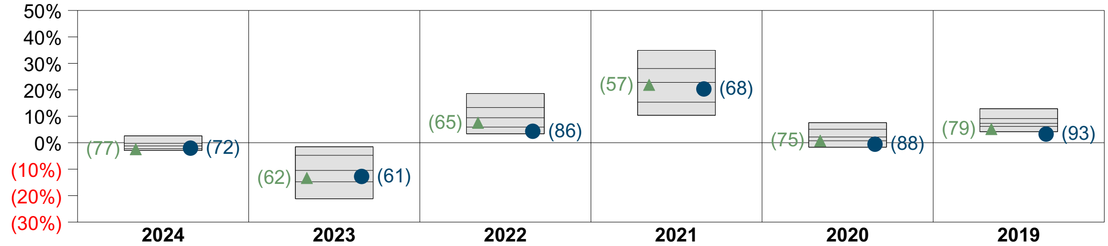


Core Real Estate (Net)
Return Analysis Summary

Return Analysis

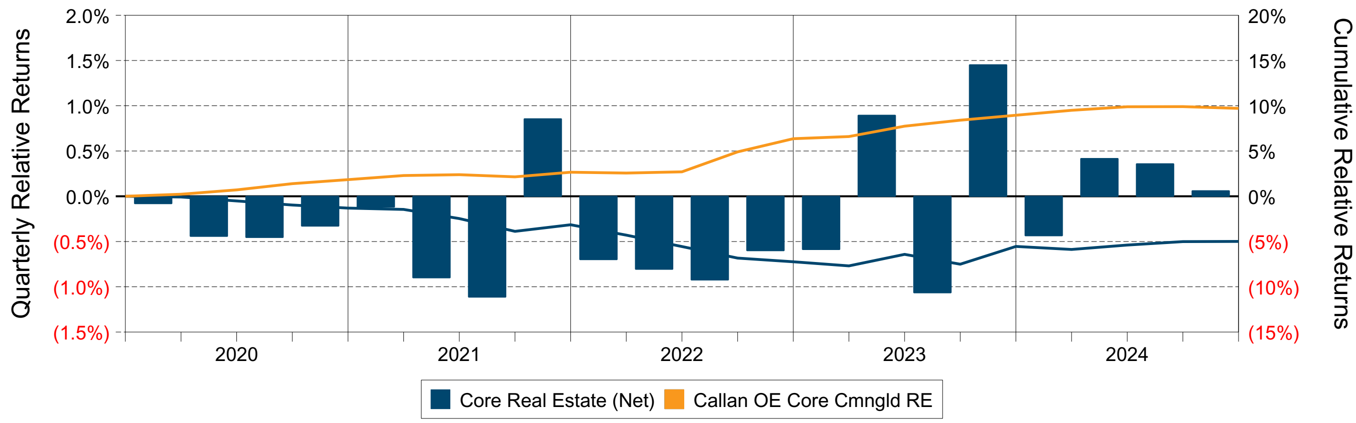
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

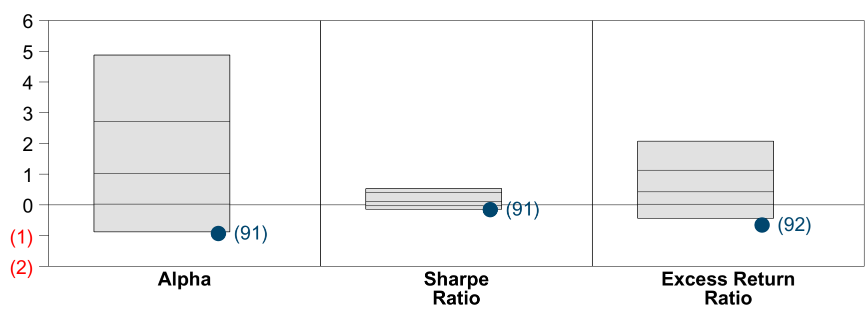


	2024	2023	2022	2021	2020	2019
10th Percentile	2.60	(1.52)	18.62	34.91	7.60	12.86
25th Percentile	(0.22)	(4.76)	13.31	28.05	5.09	9.14
Median	(1.21)	(10.47)	9.45	22.81	2.17	7.33
75th Percentile	(2.27)	(14.76)	5.91	15.34	0.74	6.17
90th Percentile	(2.92)	(21.18)	3.38	10.36	(1.69)	4.17
Core Real Estate (Net) ●	(2.05)	(12.75)	4.34	20.32	(0.55)	3.26
NCREIF NFI-ODCE Eq Wt Net ▲	(2.43)	(13.33)	7.56	21.88	0.75	5.18

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.88	0.53	2.07
25th Percentile	2.71	0.41	1.13
Median	1.02	0.11	0.42
75th Percentile	0.02	(0.03)	0.02
90th Percentile	(0.88)	(0.14)	(0.44)
Core Real Estate (Net) ●	(0.93)	(0.16)	(0.66)

Core Plus Real Estate (Net)
Period Ended December 31, 2024

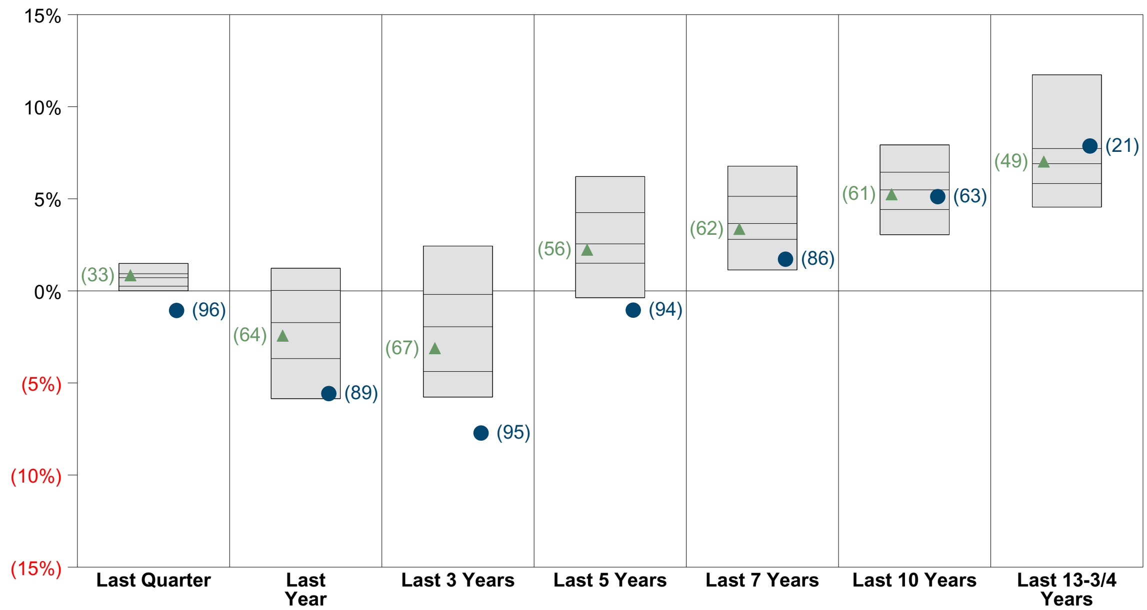
Quarterly Summary and Highlights

- Core Plus Real Estate (Net)'s portfolio posted a (1.06)% return for the quarter placing it in the 96 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 89 percentile for the last year.
- Core Plus Real Estate (Net)'s portfolio underperformed the NCREIF NFI-ODCE Eq Wt Net by 1.91% for the quarter and underperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 3.14%.

Quarterly Asset Growth

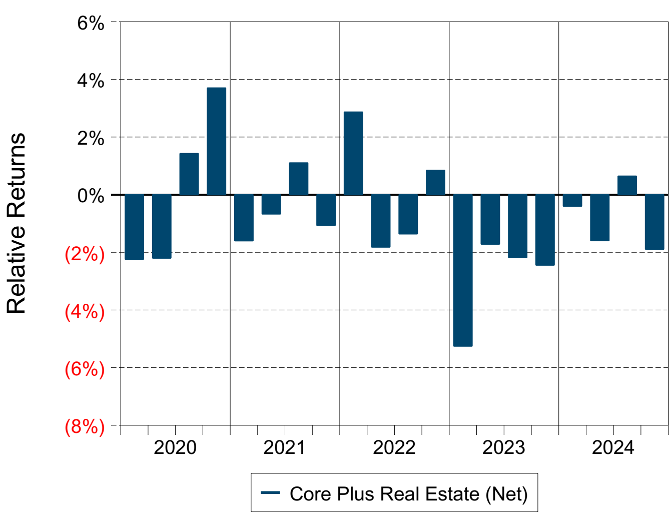
Beginning Market Value	$220,419,777
Net New Investment	$-483,345
Investment Gains/(Losses)	$-1,859,516
Ending Market Value	$218,076,916

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

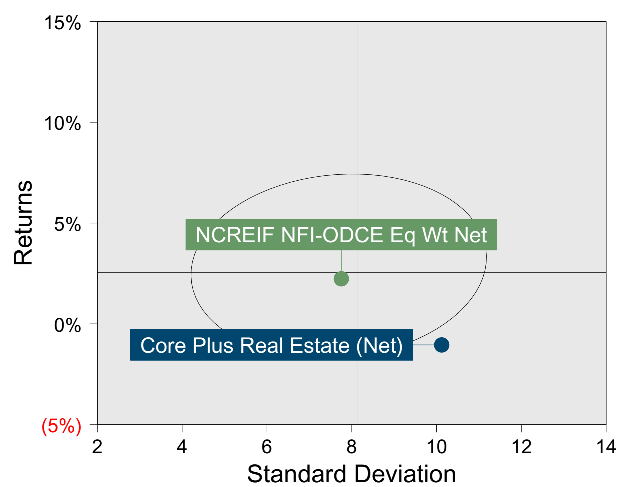


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 13-3/4 Years
10th Percentile	1.49	1.23	2.44	6.21	6.77	7.93	11.73
25th Percentile	0.93	0.02	(0.19)	4.25	5.13	6.44	7.73
Median	0.72	(1.72)	(1.95)	2.55	3.66	5.49	6.91
75th Percentile	0.25	(3.68)	(4.38)	1.50	2.80	4.42	5.83
90th Percentile	0.00	(5.86)	(5.77)	(0.37)	1.14	3.05	4.55
Core Plus Real Estate (Net) ●	(1.06)	(5.58)	(7.72)	(1.05)	1.72	5.12	7.87
NCREIF NFI-ODCE Eq Wt Net ▲	0.85	(2.43)	(3.11)	2.24	3.36	5.25	7.02

Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



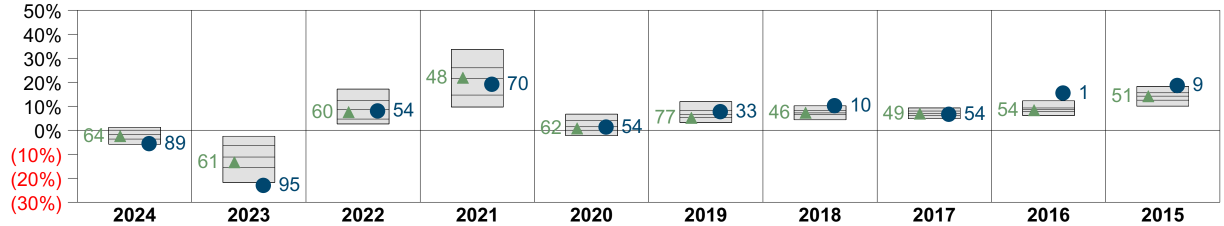
Callan Open End Core Cmmingled Real Est (Net) Annualized Five Year Risk vs Return



Core Plus Real Estate (Net)
Return Analysis Summary

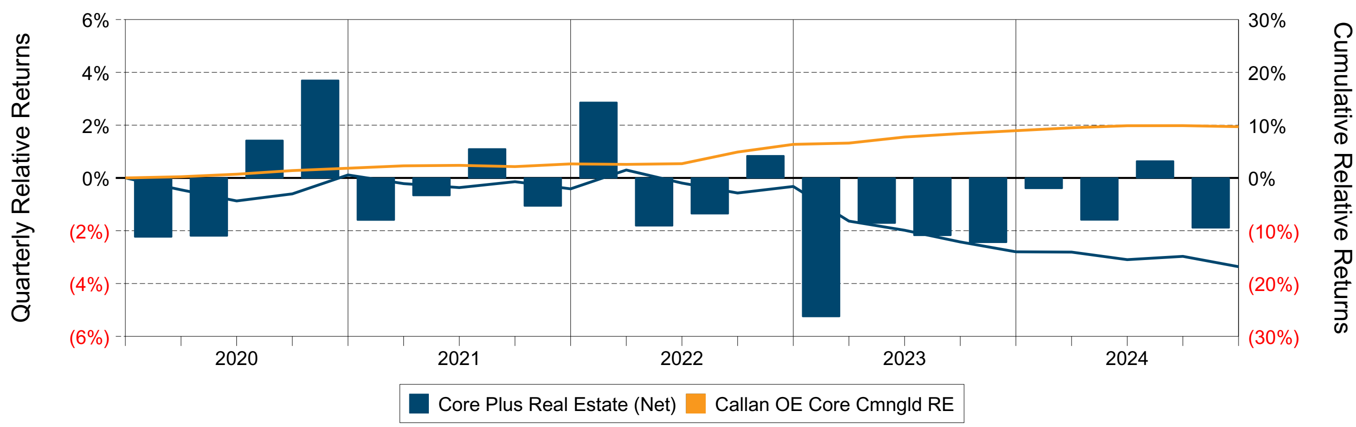
Return Analysis

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

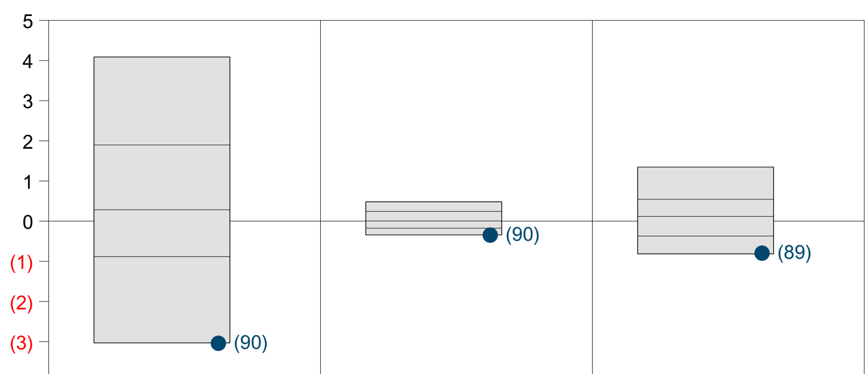


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	1.23	(2.50)	17.14	33.68	6.71	11.93	10.19	9.30	12.28	18.23
25th Percentile	0.02	(6.35)	12.33	26.01	3.96	8.25	8.25	8.00	9.28	15.60
Median	(1.72)	(11.16)	8.56	21.58	1.45	6.49	7.22	6.89	8.67	14.21
75th Percentile	(3.68)	(15.57)	4.66	14.65	0.01	5.25	6.63	6.14	7.92	12.53
90th Percentile	(5.86)	(21.76)	2.63	9.67	(2.28)	3.22	4.35	4.80	6.14	10.03
Core Plus Real Estate (Net) ●	(5.58)	(22.98)	8.06	19.16	1.32	7.74	10.23	6.66	15.51	18.66
NCREIF NFI-ODCE Eq Wt Net ▲	(2.43)	(13.33)	7.56	21.88	0.75	5.18	7.30	6.92	8.36	14.18

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 (Net)
Five Years Ended December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.09	0.48	1.35
25th Percentile	1.90	0.24	0.55
Median	0.28	0.01	0.12
75th Percentile	(0.88)	(0.17)	(0.37)
90th Percentile	(3.03)	(0.34)	(0.82)
Core Plus Real Estate (Net) ●	(3.04)	(0.35)	(0.80)

Non-Core Real Estate (Net)
Period Ended December 31, 2024

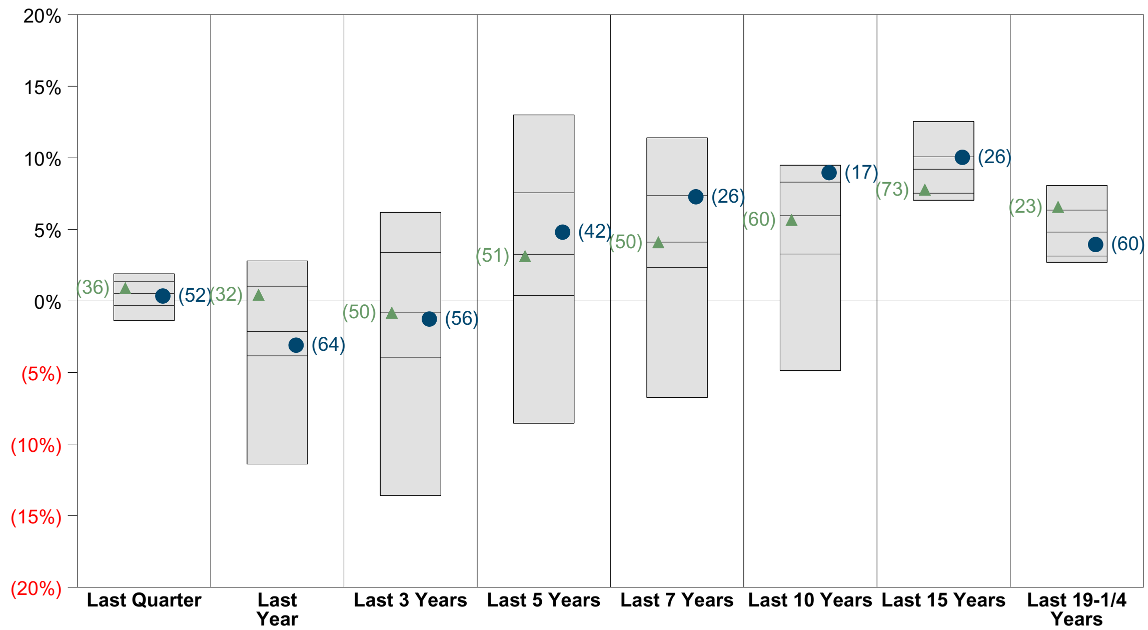
Quarterly Summary and Highlights

- Non-Core Real Estate (Net)'s portfolio posted a 0.34% return for the quarter placing it in the 52 percentile of the Callan Real Estate Value Added group for the quarter and in the 64 percentile for the last year.
- Non-Core Real Estate (Net)'s portfolio underperformed the NCREIF Total Index by 0.55% for the quarter and underperformed the NCREIF Total Index for the year by 3.52%.

Quarterly Asset Growth

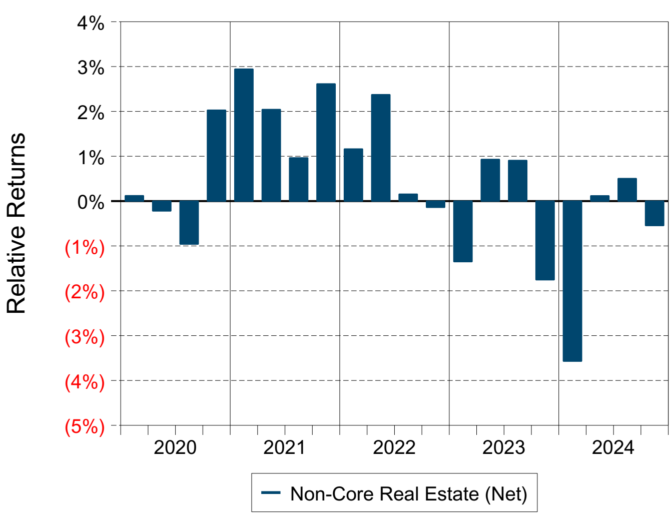
Beginning Market Value	$738,685,372
Net New Investment	$9,064,363
Investment Gains/(Losses)	$5,796,938
Ending Market Value	$753,546,673

Performance vs Callan Real Estate Value Added (Net)

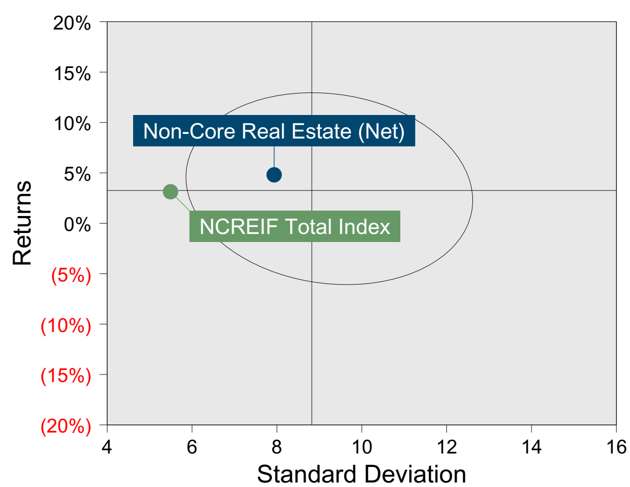


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years	Last 19-1/4 Years
10th Percentile	1.90	2.80	6.19	13.00	11.40	9.48	12.54	8.07
25th Percentile	1.35	1.03	3.39	7.56	7.36	8.30	10.07	6.35
Median	0.51	(2.13)	(0.79)	3.26	4.11	5.96	9.20	4.81
75th Percentile	(0.32)	(3.83)	(3.93)	0.39	2.33	3.28	7.53	3.14
90th Percentile	(1.38)	(11.40)	(13.59)	(8.55)	(6.75)	(4.87)	7.03	2.70
Non-Core Real Estate (Net) ●	0.34	(3.09)	(1.26)	4.81	7.28	8.96	10.03	3.94
NCREIF Total Index ▲	0.90	0.43	(0.82)	3.13	4.10	5.66	7.77	6.57

Relative Return vs NCREIF Total Index



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

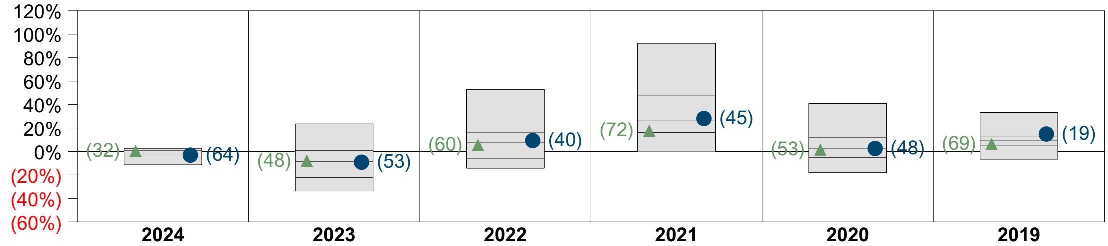


Non-Core Real Estate (Net)
Return Analysis Summary

Return Analysis

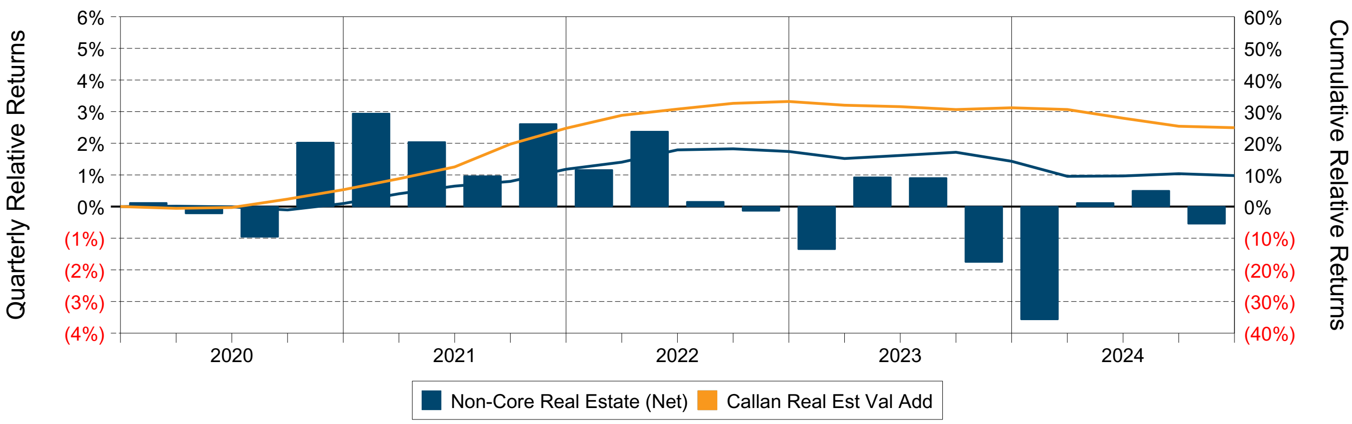
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

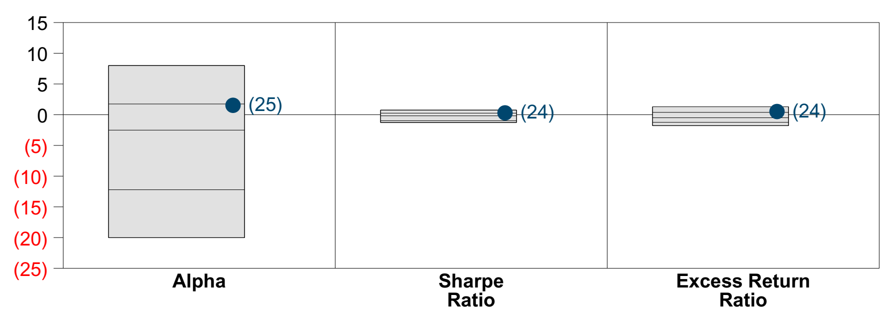


	2024	2023	2022	2021	2020	2019
10th Percentile	2.80	23.47	52.97	92.29	40.95	33.20
25th Percentile	1.03	0.73	16.40	48.03	12.11	13.16
Median	(2.13)	(8.39)	7.91	26.04	2.29	9.10
75th Percentile	(3.83)	(22.24)	(5.74)	16.12	(5.00)	4.79
90th Percentile	(11.40)	(33.69)	(14.20)	(0.34)	(18.09)	(6.53)
Non-Core Real Estate (Net) ●	(3.09)	(9.13)	9.30	28.09	2.56	14.88
NCREIF Total Index ▲	0.43	(7.94)	5.53	17.70	1.60	6.42

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	8.01	0.75	1.29
25th Percentile	1.75	0.25	0.38
Median	(2.51)	(0.18)	(0.49)
75th Percentile	(12.21)	(0.98)	(1.24)
90th Percentile	(20.01)	(1.27)	(1.78)
Non-Core Real Estate (Net) ●	1.53	0.30	0.51

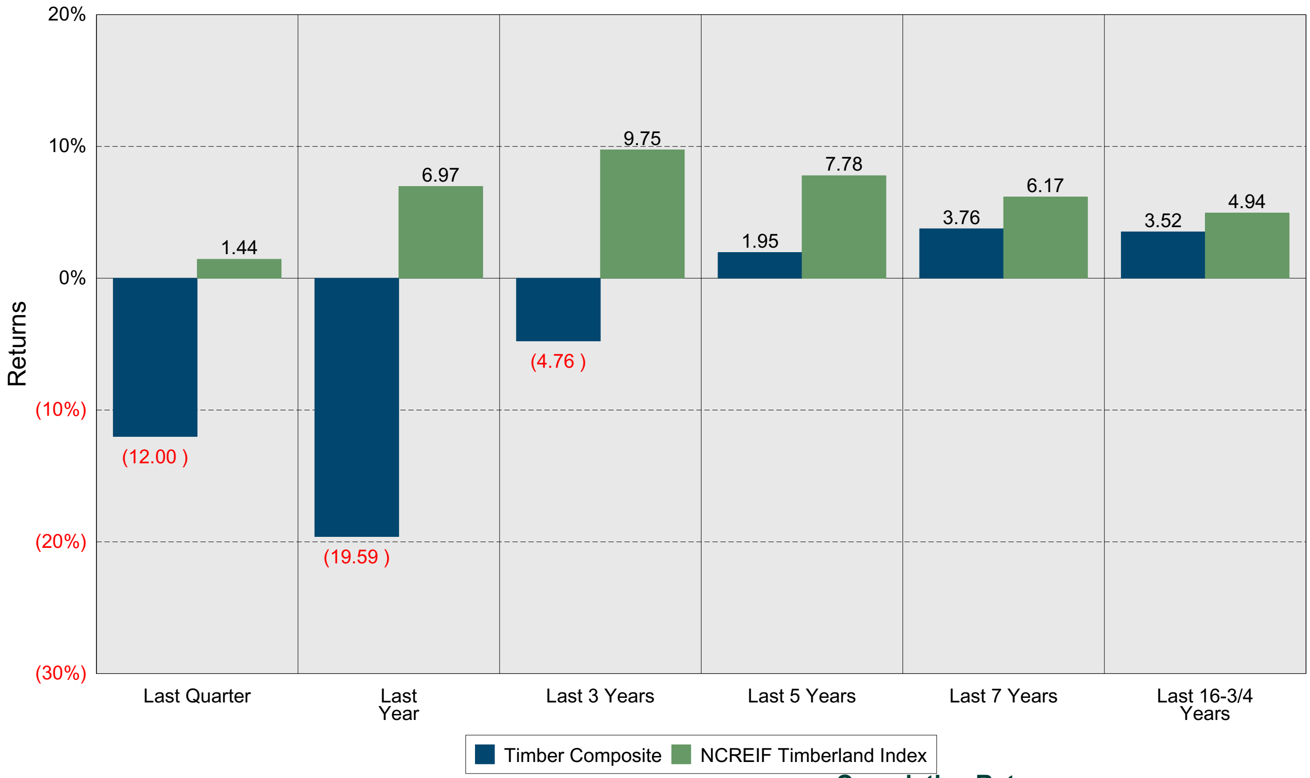
Timber Composite
Period Ended December 31, 2024

Quarterly Summary and Highlights

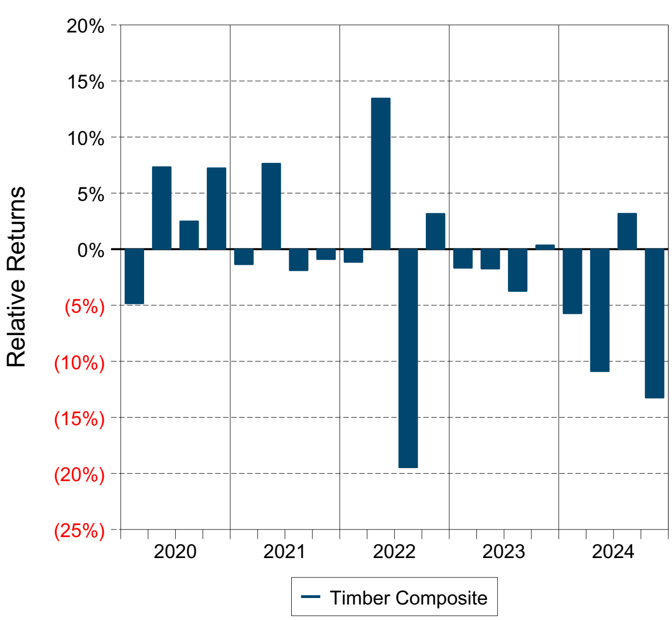
- Timber Composite's portfolio underperformed the NCREIF Timberland Index by 13.45% for the quarter and underperformed the NCREIF Timberland Index for the year by 26.56%.

Quarterly Asset Growth

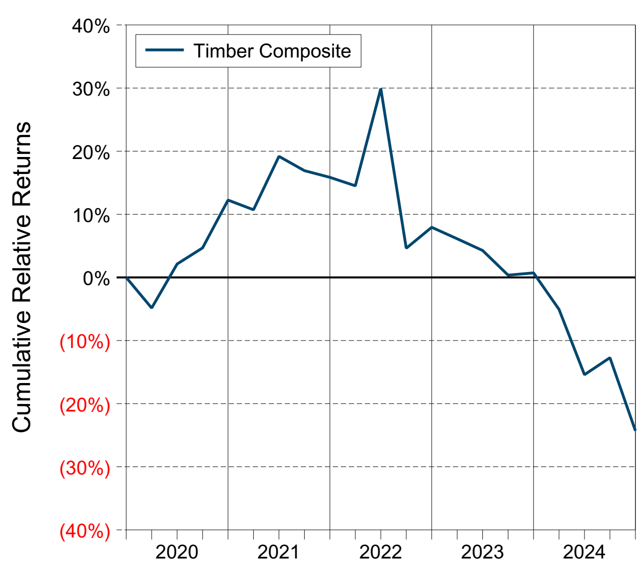
Beginning Market Value	$38,457,881
Net New Investment	$-118,750
Investment Gains/(Losses)	$-4,616,786
Ending Market Value	$33,722,345



Relative Return vs NCREIF Timberland Index



Cumulative Returns vs NCREIF Timberland Index



Timber Composite
Period Ended December 31, 2024

Private Equity
Period Ended December 31, 2024

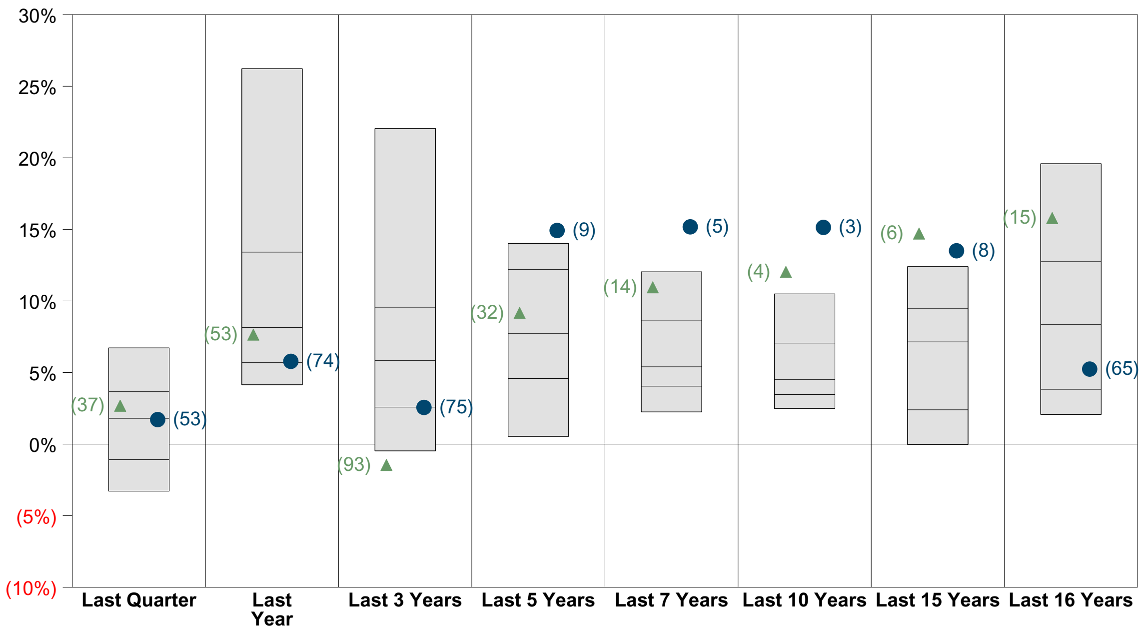
Quarterly Summary and Highlights

- Private Equity's portfolio posted a 1.71% return for the quarter placing it in the 53 percentile of the Callan Alternative Investments DB group for the quarter and in the 74 percentile for the last year.
- Private Equity's portfolio underperformed the Private Equity Benchmark (9) by 0.97% for the quarter and underperformed the Private Equity Benchmark (9) for the year by 1.87%.

Quarterly Asset Growth

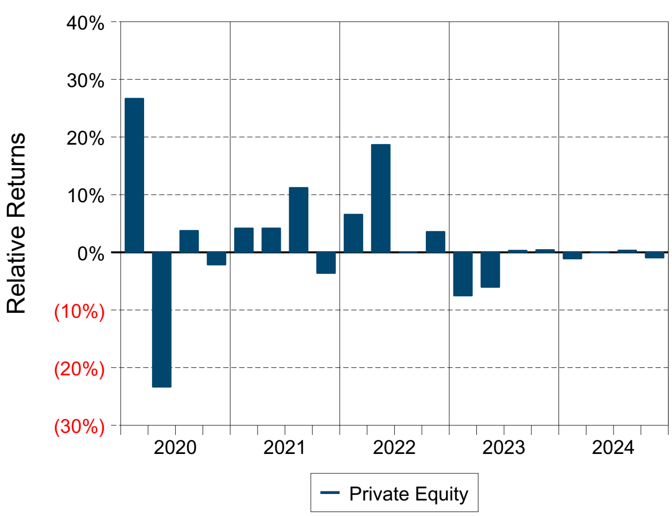
Beginning Market Value	$3,826,590,213
Net New Investment	$-40,541,095
Investment Gains/(Losses)	$65,512,721
Ending Market Value	$3,851,561,839

Performance vs Callan Alternative Investments DB (Gross)

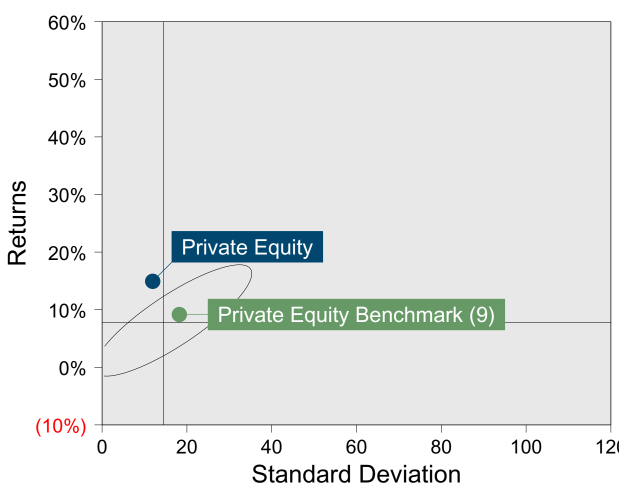


	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 15 Years	Last 16 Years
10th Percentile	6.72	26.23	22.05	14.02	12.03	10.49	12.40	19.59
25th Percentile	3.66	13.41	9.56	12.19	8.61	7.06	9.48	12.75
Median	1.80	8.14	5.85	7.74	5.40	4.52	7.14	8.36
75th Percentile	(1.08)	5.69	2.58	4.58	4.05	3.46	2.40	3.83
90th Percentile	(3.29)	4.15	(0.47)	0.54	2.25	2.49	(0.03)	2.07
Private Equity ●	1.71	5.78	2.56	14.92	15.18	15.14	13.50	5.24
Private Equity Benchmark (9) ▲	2.68	7.65	(1.46)	9.16	10.96	12.03	14.71	15.79

Relative Returns vs Private Equity Benchmark (9)



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

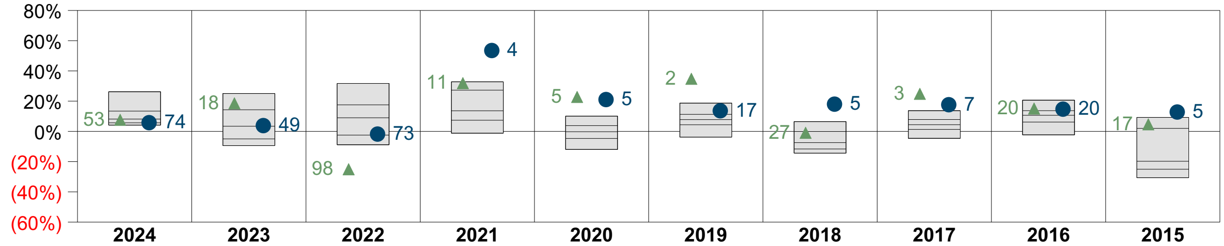


Private Equity
Return Analysis Summary

Return Analysis

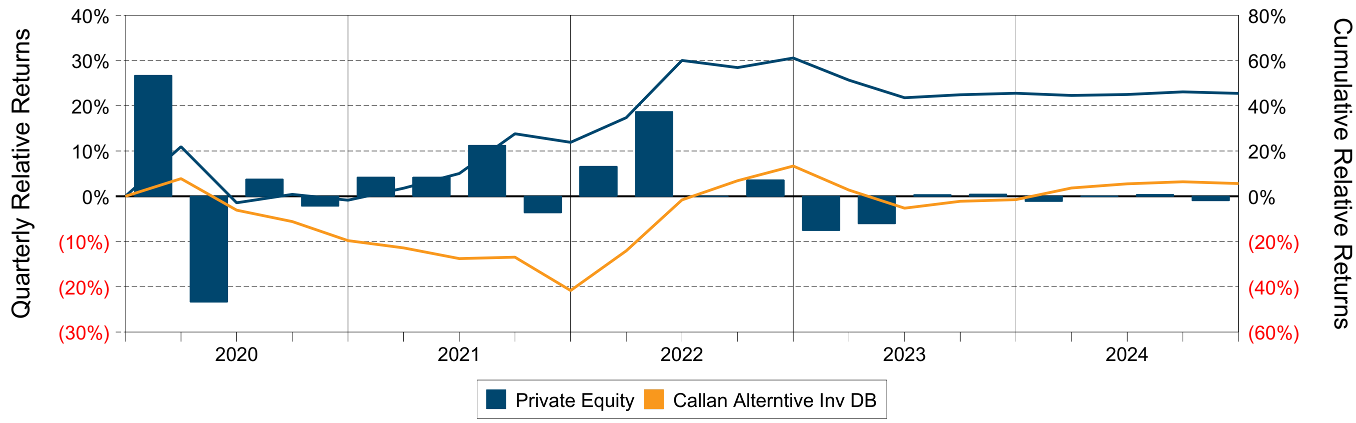
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate 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)

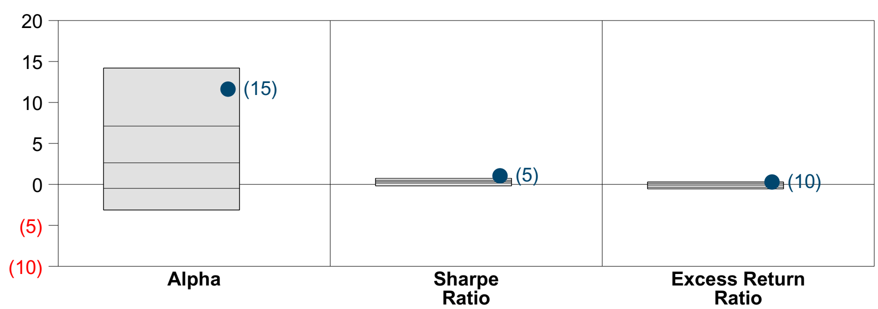


	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
10th Percentile	26.23	25.08	31.73	32.81	10.10	18.72	6.48	13.71	20.65	9.23
25th Percentile	13.41	14.32	17.57	27.26	3.82	11.28	(0.07)	7.87	13.72	1.98
Median	8.14	3.41	9.02	13.64	(0.22)	7.80	(7.43)	4.44	10.65	(19.77)
75th Percentile	5.69	(4.95)	(2.47)	7.38	(4.67)	4.39	(11.63)	1.29	6.16	(25.03)
90th Percentile	4.15	(9.38)	(8.85)	(1.18)	(11.94)	(3.78)	(14.40)	(4.59)	(2.30)	(30.62)
Private Equity ●	5.78	3.82	(1.77)	53.50	21.06	13.65	18.02	17.66	14.73	12.81
Private Equity Benchmark (9) ▲	7.65	18.58	(25.03)	31.92	22.79	34.80	(0.92)	24.86	15.13	4.66

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 December 31, 2024



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	14.20	0.75	0.29
25th Percentile	7.12	0.50	0.09
Median	2.63	0.32	(0.09)
75th Percentile	(0.48)	0.16	(0.35)
90th Percentile	(3.13)	(0.18)	(0.55)
Private Equity ●	11.63	1.04	0.29

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 reconsitution. 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.

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.

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.

Callan

Quarterly List as of December 31, 2024

List of Callan's Investment Manager Clients

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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
abrdn Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AEW Capital Management, L.P.
AllianceBernstein
Allspring Global Investments, LLC
Altrinsic Global Advisors, LLC
American Century Investments
American Realty Advisors
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

Manager Name
Atlanta Capital Management Co., LLC
Audax Private Debt
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.

Manager Name
Brown Brothers Harriman & Company
Brown Investment Advisory & Trust Company
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.
Diamond Hill Capital Management, Inc.
Dimensional Fund Advisors L.P.
DoubleLine
DWS
EAM Investors, LLC
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

Manager Name
Impax Asset Management LLC
Income Research + Management
Insight Investment
Intercontinental Real Estate Corporation
Invesco
J.P. Morgan
Janus
Jennison Associates LLC
Jobs Peak Advisors
Kayne Anderson Rudnick Investment Management, LLC
KeyCorp
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
Newmarket Capital
Newton Investment Management
Nikko Asset Management Co., Ltd.
Ninety One North America, Inc.
Northern Trust Asset Management
Nuveen

Manager Name
Oaktree Capital Management, L.P.
Orbis Investment Management Limited
P/E Investments
Pacer Financial Inc.
Pacific Investment Management Company
Parametric Portfolio Associates LLC
Partners Group (USA) Inc.
Pathway Capital Management, LP
Peavine Capital
Peregrine Capital Management, LLC
PGIM DC Solutions
PGIM Fixed Income
PGIM Quantitative Solutions LLC
Pictet Asset Management
PineBridge Investments
Polaris Capital Management
Polen Capital Management, LLC
PPM America, Inc.
Pretium Partners, LLC
Principal Asset Management
Raymond James Investment Management
RBC Global Asset Management
Regions Financial Corporation
Rockpoint
S&P Dow Jones Indices
Sands Capital Management
Schroder Investment Management North America Inc.

Manager Name
Segall Bryant & Hamill
SLC Management
Star Mountain Capital, LLC
State Street Global Advisors
Strategic Global Advisors, LLC
Tilden Park Capital Management LP
Tri-Star Bank
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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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.

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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.

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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.

Memorandum from

CHARLES NIELSEN
Chief Investment Officer

To: Investment Committee

Date: February 25, 2025

Re: Global Equity Manager Search Update

- Currently — Staff/Callan Data Collection
- March 6-7 — Staff/Callan Pre-Search Committee Call
- March 10 — Staff/Callan Seach Committee Review of Potential Candidates
- March 17-April 8 — Candidate Interviews
- April 22 — Investment Committee

Providing Benefits for Life

Pathway Capital Management

Private Equity Fund Series 2025 Recommendation

February 25, 2025

Jason Clark
Lead Portfolio Manager
Alternative Investments

PERS of MISSISSIPPI

In 2006, the PERS Board of Trustees first adopted an asset allocation target of 5% to Private Equity. In 2008, the private equity investment program was launched with the hiring of Pathway Capital Management and Credit Suisse Custom Funds Group (now Grosvenor Capital Management) to manage diverse and complimentary portfolios of private equity partnerships on behalf of PERS. Each firm received an initial commitment of $750 million to be used for making investments in private equity limited partnership interests, with a fund-of-one structure.

In 2013, an asset allocation study was conducted which resulted in the target allocation for Private Equity being increased to 8%. By this time, the two fund-of-one managers had fully committed the $750 million initial allocation awarded in 2008, yet PERS investments in private equity had not reached the original 5% target for the asset class. Since the private equity investments "committed capital" is not actually invested until the underlying general partner requests the funds, the amount of capital invested can often be a much lower amount than that of the capital contractually committed. This along with the increase in the target allocation resulted in the PERS Board approving a second commitment series of $700 million to each fund manager.

In mid-2013, the Credit Suisse Custom Funds Group team announced it was being acquired by Grosvenor Capital Management (GCM). Because this transaction did not close until January 2014, GCM did not begin making capital commitments for the $700 million until the first quarter of 2014.

As each of the dedicated managers neared the end of committing the capital in their second series, in 2016, PERS' total allocation to private equity was at approximately 6% and still primarily in the investment and growth phases of each commitment series' lifecycle. PERS Investment Staff worked with Callan Consulting to develop a new pacing study for projected capital deployment and distribution activity for all four existing investment series to determine the appropriate commitments needed for future series. Upon completion of this review, it was determined that in the best interest of reaching the plan's target allocation, a third series for both GCM and Pathway should be committed.

As of January 2021, Pathway completed committing the $950 million from the 2016 series, and to continue vintage year diversified investments, a new 2021 Series was proposed and accepted. During the 2020 Private Equity review and pacing study, it was suggested to increase the annual commitment of capital from $190 million ($950million/5) to $240 million annually ($720 million/3) for the new series.

In June of 2022, after an Asset Liability Study the PERS Investment Committee added private credit and infrastructure into the portfolio, as well as increased the allocation to private equity from 8% to 10%. Currently, the Private Equity program is slightly overallocated at approximately 11.1%, due primarily to manager outperformance. Although above target, the maturity of the program has allowed for a portfolio that is cashflow positive and is now distributing more capital than is being called on an annual basis. As the PERS private equity portfolio continues to mature and realize gains from the past series of investments, these net distributions are expected to increase in the coming years allowing for more than enough to fund capital call demands, which will achieve the goal of bringing the portfolio allocation back down below the target of 10% within the next two years, without missing a vintage year of investments.

In June 2024, PERS Staff put forth a proposal and the Investment Committee voted to change the private equity benchmark from a public market equivalent of the S&P 500 with a 3% premium, to that of a peer comparison model with Cambridge Associates. With the continued growth of private market investments among institutional investors, the importance of technology to compile and analyze data has led to the development of peer group comparison benchmarks as a more relative benchmarking methodology for asset classes such as private equity and private credit.

As of the summer of 2024, GCM Grosvenor was approved for a 2024 Series while Pathway completed the three-year investment period for the 2021 Series. The few remaining investments within the Pathway 2008 Series are now mature and at the end of the harvest phase of the fund's lifecycle, when profits are realized, and remaining investment gains are distributed. The Pathway 2013 Series is at the end of the growth stage and well into the maturity and harvest phases, as all committed capital has been deployed, and distributions are being realized. The 2016 Series is well into the growth and equity building lifecycle phases and is still calling capital to fund commitments and add-ons made during the investment period. The most recently completed series was approved in 2021 and has only recently completed closing on investments that make up a very promising series. With the initial three series paying out distributions, the previous series investments have finished their investment phase and are in the process of building equity and/or harvesting profits in the form or distributions.

It is important to understand that this proposal for a new series does not constitute a new contract or partnership between PERS of MS and Pathway Capital Management. This recommendation for a new 2025 private equity series is only an amendment to the existing Limited Partnership Agreement, which began with the initial series of investments in 2008. Below are a few items of note and interest concerning the proposed 2025 Series as well as the on-going relationship between Pathway Capital Management and PERS of Mississippi.

- With PERS private equity being slightly over allocated to the targeted current 10%, PERS thought it best to continue with a shortened commitment phase of each series from 5 years to 3 years. This was done so that the team could be more flexible in making changes to commitment levels and deal flow based on market conditions and future liquidity needs.

- In previous investment commitments to Pathway, PERS as a returning investor has realized a favorable fee level. The 2025 Series fees being the same as the 2021 Series, after realizing a reduction in management fees multiple times over the course of the partnership. It is also notable that there are no carried interest fees charged to PERS at the series management level, nor have there been since inception of the relationship.

- Proposed in this Pathway 2025 Series is an increase to the ceiling by which Pathway can invest in secondary investments from 10% to 15%. With this opportunity, Pathway can look for more existing funds that have great opportunity without suffering from the initial J-curve, as well as the opportunity for a quicker and more secure return of capital.

- While it can be noted that both PERS private equity relationships have performed above initial expectations, a point of interest is that both programs have outperformed the S&P 500 over the life of the relationships beginning in 2008 and 2009 respectively. As of September 30, 2024, the 4 existing Pathway series of investments, beginning in 2008, have outperformed the S&P 500 by over $529 million from a total value perspective. It is also of note that the PERS Private Equity program is now cash flow positive, meaning the partnerships with GCM and Pathway have now distributed more capital back to PERS than has been deployed, while currently maintaining a net asset value of investments of just under $4 billion.

Included in this proposal is a report requested by PERS staff from Pathway explaining the investment benefits PERS has realized since the beginning of the partnership in 2008, as it relates to cash flow, benchmark comparison, as well as performance. Also included for consideration with this proposal to invest is the Callan Consulting Due Diligence report requested by PERS investment staff. The Callan report contains details related to Pathway Capital Management as an organization, and performance of prior series investments. The findings from that analysis have been provided for the Investment Committee's review as confirmation that this fund is suitable for PERS' continued partnership participation. Based on the information provided, as well as the tenure, stability, and their success in managing unique investment opportunities within Private Equity, PERS staff recommends a continued partnership with a fifth commitment of $720 million to a new Pathway 2025 Series.

<u>Pathway 2025 Series target allocation ranges:</u>

- **Primary Funds:**
  - Buyouts: 50 – 80%
  - Venture Capital: 10 – 30%
  - Special Situations: 5 – 25%

- **Co-Investment Opportunities: 0 – 15%**

- **Secondary Funds: 0 – 15%**

Private Equity Strategies

Primary funds are the most common means of accessing Private Equity investments within a portfolio. Primary funds are comingled opportunities offered at the time of fundraising with an expected lifecycle of approximately 15 years. There are three types of Private Equity primary funds utilized within the PERS of Mississippi portfolio. Listing them according to lowest risk/return to highest, they include:

- **Buyouts –** This occurs when a buyer acquires more than 50% of a company, leading to a change of control. In private equity, investors seek out underperforming or undervalued companies that they can take private and make more attractive, before selling or going public years later. The target gross IRR for this type of investment is 18%, with a target gross multiple of 2.0x.

- **Special Situations –** These are investments in companies that may have an element of distress, dislocation, dysfunctional or industry specific and that are perceived to be undervalued. Sought after are those private companies where the general partner can gain control of, or significant influence over, companies exhibiting such characteristics and then actively manage those businesses to deliver value as a private equity-like structure. The target gross IRR for this type of investment is 15% - 20%, with a target gross multiple of 1.6x – 1.8x.

- **Venture / Growth Capital –** This is financing that investors provide to startup companies and small businesses with little to no initial revenue that are believed to have long-term growth potential. Typically, large ownership chunks of a company are created and sold to a few investors through independent limited partnerships that are established by venture capital firms. The target gross IRR for this type of investment is 25% - 30%, with a target gross multiple of > 3.0x.

Co-investments are opportunities for investors to invest outside of the traditional fund structure and instead alongside the asset management company with a more targeted approach. Co-investments are beneficial within a portfolio as they provide greater diversification and opportunities with a more selective and targeted approach to specific market sectors and geographies. Within co-investment opportunities, the pool of investors is smaller than traditional primary opportunities, with shorter timeframes, and increased downside protection with a mitigated J-Curve, which allows for opportunities with increased returns. Another significant benefit to co-investments is the favorable economics and the reduction of fees due to the less complex structure.

Secondary Investments are those that are sold on the open market at a discount to the primary offering. Secondary opportunities allow for the superior returns, a missed J-Curve at the beginning, faster returns and more liquidity, as well as an opportunity to gain diversified exposure to sectors, assets, vintage years, and geography. As investors become distressed or need to sell assets for any reason, a secondary market is available for buyers looking for a discount.

Portfolio Update

Public Employees' Retirement System of Mississippi

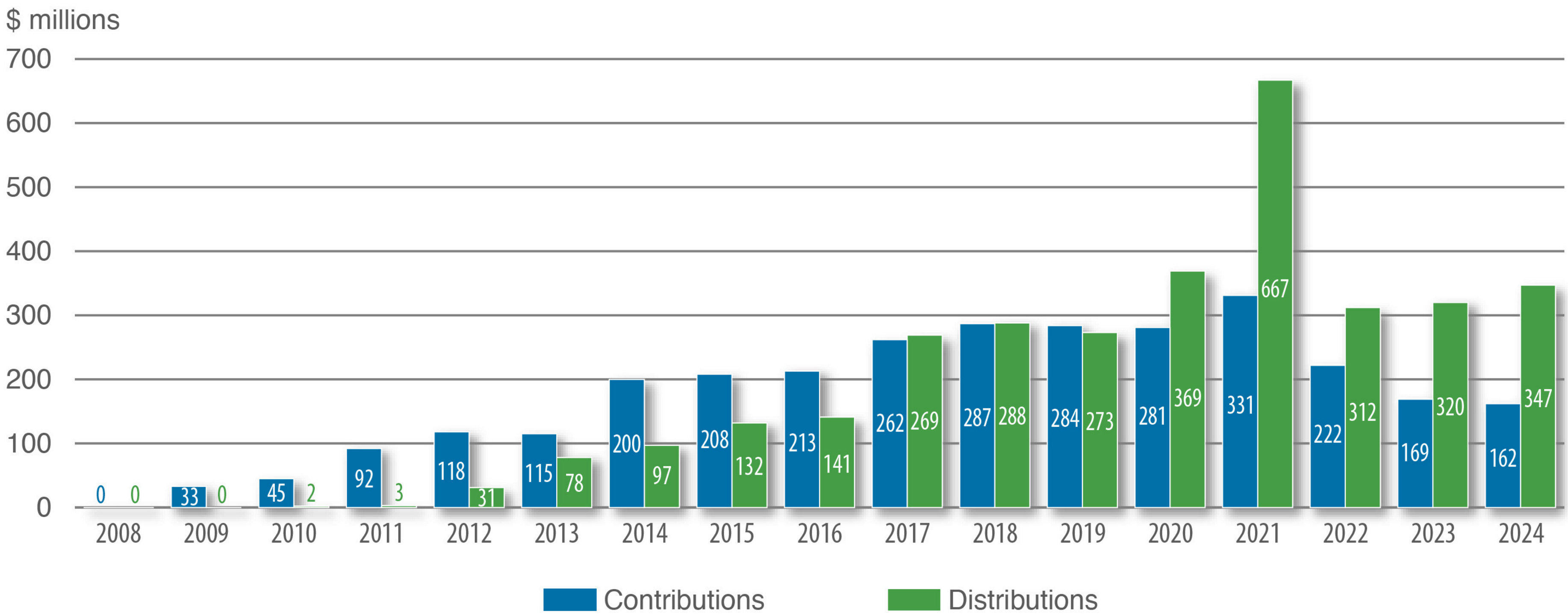
Pathway Private Equity Fund XXIII, LP

JANUARY 2025

PATHWAY®
CAPITAL MANAGEMENT

Cash-Flow Activity

At December 31, 2024



NOTE: Comprises contributions from PPEF XXIII to the underlying partnerships and distributions from the underlying partnerships to PPEF XXIII.

- Distributions have outpaced contributions for the fifth-consecutive year, generating net cash flow of greater than $850 million over the period.
- In 2024, distributions exceeded contributions by more than $185 million, marking the second-highest net cash flow amount recorded in a single calendar year.

Performance by Segment

At September 30, 2024

($ in millions)

By Series	No. of Inv.	Commit. Amount[a]	Cum. Contrib.[b]	% Drawn	Distrib.	Market Value	Total Value	Gain/ Loss	TVPI	DPI	S-I IRR
Series 2008	42	$782.9	$734.0	94%	$1,345.6	$209.8	$1,555.4	$821.4	2.1x	1.8x	14.5%
Series 2013	55	771.3	687.8	89%	986.2	637.8	1,624.0	936.2	2.4x	1.4x	17.9%
Series 2016	127	1,063.7	849.8	80%	365.5	1,293.5	1,659.0	809.2	2.0x	0.4x	18.2%
Series 2021	120	755.8	350.9	46%	11.2	387.9	399.1	48.2	1.1x	0.0x	8.1%
Net Total[c]	**344**	**$3,373.6**	**$2,622.4**	**78%**	**$2,708.6**	**$2,528.9**	**$5,237.5**	**$2,615.1**	**2.0x**	**1.0x**	**16.0%**

By Investment Type	No. of Inv.	Commit. Amount[a]	Cum. Contrib.[b]	% Drawn	Distrib.	Market Value	Total Value	Gain/ Loss	TVPI	DPI	S-I IRR
Primary Investments	195	$2,971.4	$2,606.5	88%	$2,928.5	$2,120.5	$5,049.0	$2,442.5	1.9x	1.1x	17.4%
Direct Equities	118	273.6	254.6	93%	142.6	309.7	452.3	197.7	1.8x	0.6x	21.3%
Secondary Acquisitions	31	128.5	120.1	93%	146.2	70.1	216.3	96.2	1.8x	1.2x	23.1%
Gross Total[d]	**344**	**$3,373.6**	**$2,981.2**	**88%**	**$3,217.3**	**$2,500.3**	**$5,717.5**	**$2,736.3**	**1.9x**	**1.1x**	**17.7%**
Net Total[c]	**344**	**$3,373.6**	**$2,622.4**	**78%**	**$2,708.6**	**$2,528.9**	**$5,237.5**	**$2,615.1**	**2.0x**	**1.0x**	**16.0%**

By Strategy	No. of Inv.	Commit. Amount[a]	Cum. Contrib.[b]	% Drawn	Distrib.	Market Value	Total Value	Gain/ Loss	TVPI	DPI	S-I IRR
Buyouts	224	$1,982.5	$1,796.0	91%	$1,863.5	$1,532.3	$3,395.8	$1,599.8	1.9x	1.0x	19.2%
Venture Capital	66	664.7	557.2	84%	657.7	521.7	1,179.4	622.2	2.1x	1.2x	16.2%
Special Situations	43	580.1	491.5	85%	534.4	411.1	945.6	454.1	1.9x	1.1x	19.3%
Debt	11	146.2	136.6	93%	161.7	35.1	196.7	60.2	1.4x	1.2x	9.1%
Gross Total[d]	**344**	**$3,373.6**	**$2,981.2**	**88%**	**$3,217.3**	**$2,500.3**	**$5,717.5**	**$2,736.3**	**1.9x**	**1.1x**	**17.7%**
Net Total[c]	**344**	**$3,373.6**	**$2,622.4**	**78%**	**$2,708.6**	**$2,528.9**	**$5,237.5**	**$2,615.1**	**2.0x**	**1.0x**	**16.0%**

NOTE: Amounts may not foot due to rounding.

[a] Commitments to non-USD-denominated investments are accounted for by multiplying unfunded commitments by the quarter-ending exchange rate, then adding the result to cumulative capital contributions, causing commitments to non-USD-denominated investments to fluctuate quarterly.

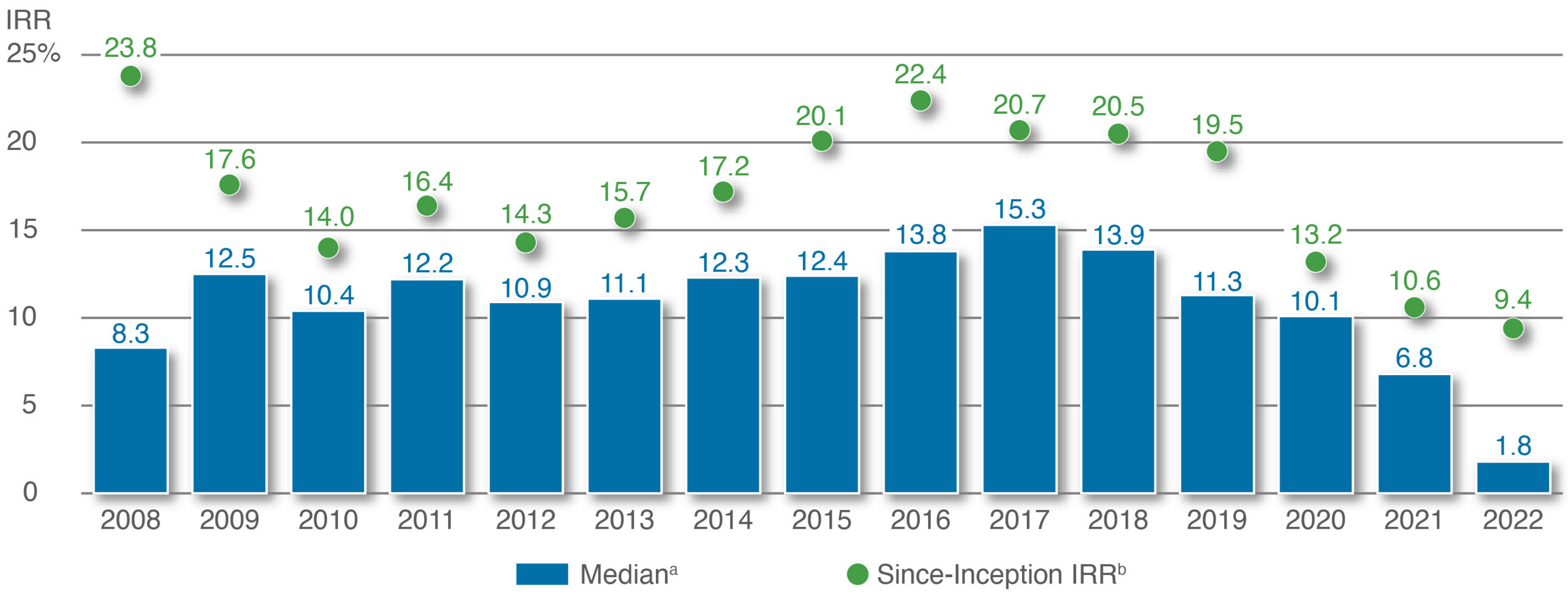
[b] Includes capital contributed for management fees called outside the total commitment.

[c] Net of the underlying partnerships' fees, expenses, and carried interest, as well as of PPEF XXIII's management fees and expenses.

[d] Net of the underlying partnerships' fees, expenses, and carried interest and gross of PPEF XXIII's management fees and expenses.

Vintage Year Performance vs. Private Market Benchmarks

At September 30, 2024

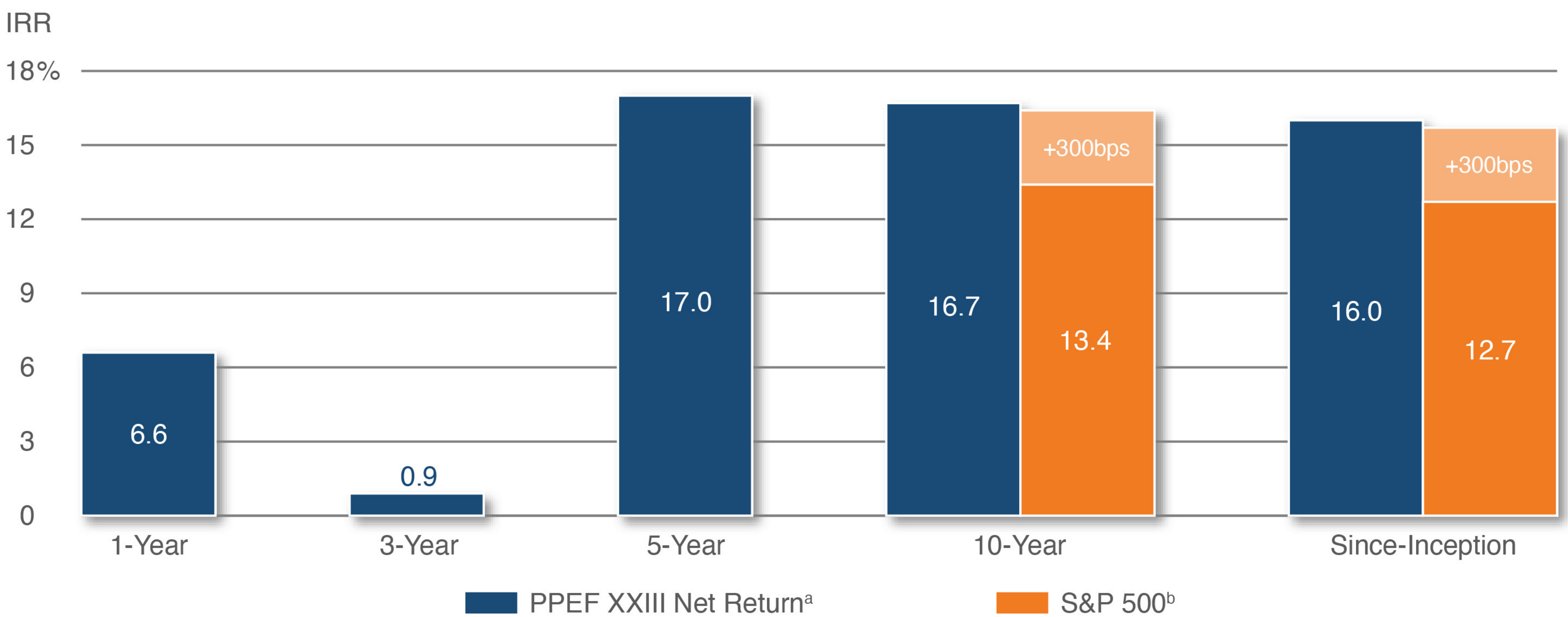


[a]MSCI Private Capital Solutions (formerly Burgiss Private i) global all private equity median return benchmark for each vintage year, as of September 30, 2024, as produced using MSCI Private Capital data.
[b]Net of the underlying partnerships' fees, expenses, and carried interest and gross of PPEF XXIII's management fees and expenses.

- All 15 of PPEF XXIII's more mature vintages (2008–2022) rank above the median for their vintage year peers, collectively exceeding their median IRR benchmarks by an average of more than 610 basis points.

Horizon Performance Summary

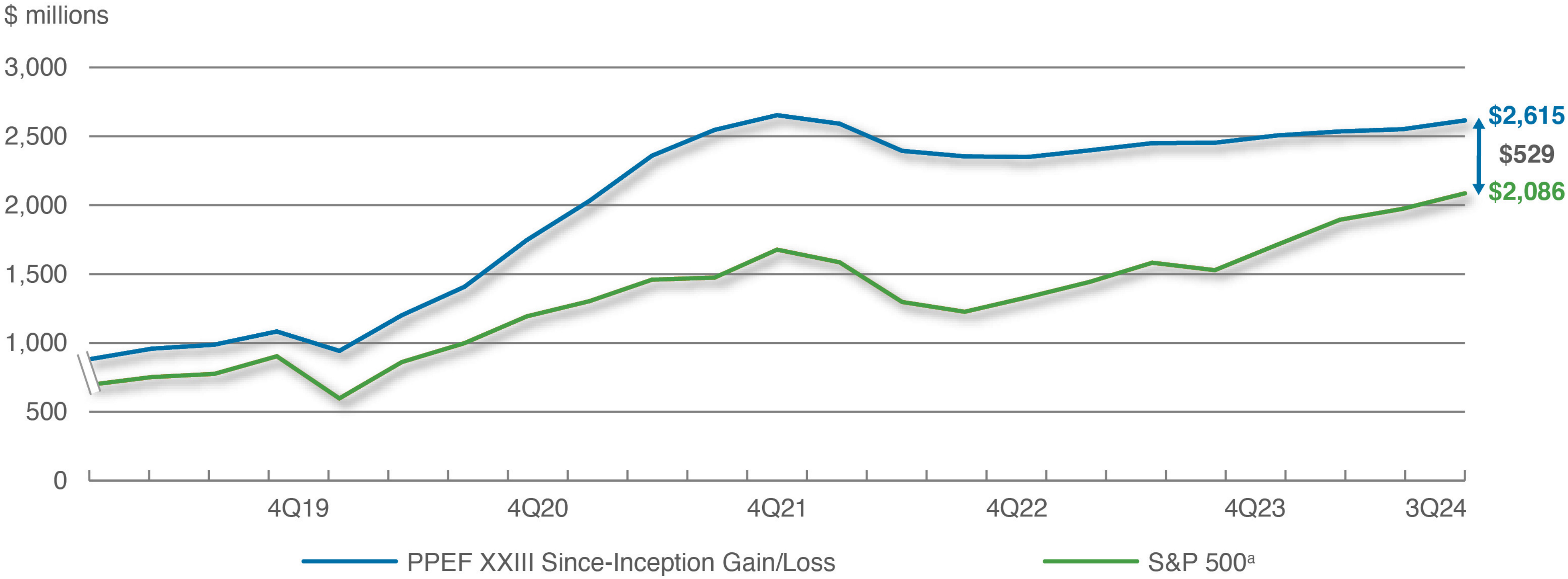
At September 30, 2024



[a]Net of the underlying partnerships' fees, expenses, and carried interest, as well as of PPEF XXIII's management fee and expenses.
[b]Time-weighted.

Historical Since-Inception Net Gain

At September 30, 2024



NOTE: Amounts may not foot due to rounding.
[a]Dollar-weighted. Excludes 300-basis-point premium.

- The portfolio constructed by Pathway has generated net gains of $2.6 billion—$529 million more than what would have been achieved had PPEF XXIII invested in the S&P 500 over the same period.

Callan

February 25, 2025

Public Employees' Retirement System of Mississippi

Pathway – 2025 Series

Table of Contents

Pathway – 2025 Series

Strategy

Asset Class	Private Equity
Strategy Type	Primaries (70-100%), Co-investments (0-15%), Secondary (0-15%)
Currency (Fund)	USD
Control Rights	Various
Industry/Sector	All Sectors
Geography	North America: 65-85%, Europe: 15-35%, Asia/Pacific: 0-10%

Terms

Investment Period (Yrs.)	3
MPERS Commitment ($M)	$720
GP Commitment	0.6%
Management Fee	26bps average on commitment amount on an annual basis (estimated), following a pre-determined fee schedule.
Carry	0%

Manager

Manager	Pathway Capital Management, LP
Headquarters	Irvine, CA
Leadership	Douglas K. Le Bon (Senior Managing Director & co-founder), James H. Reinhardt (Senior Managing Director & co-founder), Karen J. Jakobi (Senior Managing Director & co-founder)
Supervising Regulatory Body	SEC

Executive Summary

Background

Public Employees' Retirement System of Mississippi (MPERS) launched its private equity program in 2008 by engaging two private equity fund-of-funds managers to oversee discretionary fund-of-one (FOO) vehicles. These FOOs operate as separate accounts within a limited partnership structure, where MPERS is the sole limited partner and the manager serves as the general partner. Each manager established a master limited partnership to facilitate ongoing commitments, referred to as Series.

MPERS initially selected Credit Suisse Customized Fund Investment Group (CFIG) and Pathway Capital Management (Pathway or PCM) for this mandate. CFIG has since undergone ownership changes and now operates as GCM Grosvenor Capital Management Private Markets (Grosvenor or GCM). Since inception, MPERS has invested in four Series with each manager, totaling $5.53 billion in commitments—$2.41 billion with Grosvenor and $3.12 billion with Pathway.

Pathway's latest Series, the 2021 Series, is nearing full deployment, prompting MPERS to evaluate a reinvestment in a new 2025 Series. To support this decision, MPERS has engaged Callan to conduct a review of Pathway.

Evaluation Process

Callan has actively monitored Pathway for many years and maintains regular communication with the firm through formal update meetings and ongoing search processes. Additionally, Callan shares multiple clients with Pathway, further strengthening this engagement.

In evaluating MPERS' potential reinvestment in Pathway's 2025 Series, Callan gathered updated information on Pathway's organization, proposed investment strategy, and historical performance—covering both MPERS-specific data and commingled funds. The main section of this report provides a comprehensive review of the firm, its strategy, and performance history. Callan also benchmarks Pathway's historical returns against the Burgiss all-private-equity, all-regions peer group.

Reinvestment Summary

Pathway is a large, stable, and growing organization with a global presence, consistently delivering competitive returns for MPERS. The firm primarily serves pension plans, and its private equity investment team has remained stable over time. Both MPERS staff and Callan agree that reinvesting with Pathway is a prudent decision.

Summary of Key Findings

Merits

- **Pathway's scaled platform and experience**: Pathway is a seasoned private equity investor with $92 billion in assets under management. The firm operates globally with 80 investment professionals, including 22 senior professionals, across four offices. Founded in 1991, Pathway has a 33-year track record in private equity investing.

- **Experienced and stable senior investment team**: Pathway's senior investment team has remained highly stable, with no departures at the Director level or above except for retirements. The current team of 22 professionals has worked together for an average of 21 years and possesses an average of 24 years of industry experience.

- **Consistent performance of prior MPERS' Series:** The four previous fund-of-one Series managed by Pathway on behalf of MPERS have performed well, with most ranking in the second quartile for net IRR and net TVPI.

- **Diversified private equity portfolio**: Pathway's "best ideas" portfolio is strategically constructed to ensure diversification across vintage years, investment types, strategies, managers, geographies, and industries. While the portfolio primarily consists of primary investments, it includes an allocation of up to 15% for co-investments (direct investments) and secondaries to capitalize on market opportunities. The investment strategy spans a broad spectrum, including buyouts of various sizes (small, mid, large, and mega), as well as growth, venture, opportunistic investments, and some debt exposure. Although U.S.-centric, the portfolio maintains diversification with 15-25% exposure to Europe and the Asia-Pacific region. Additionally, industry sector allocation has been well-diversified across multiple sectors in the previous four Series.

Selected Considerations

- **Higher number of loss investments in the 2021 Series**: The 2021 Series has 21 loss investments, which is higher than the previous Series, where loss deals ranged from 0 to 9 per fund.
  <u>Mitigants</u>
  - The 2021 Series began investing in 2021, and the portfolio is still in its early stages.
  - None of the primary fund investments that have experienced losses have been liquidated, and the losses are unrealized. Similarly, none of the co-investments or secondary deals have been realized, leaving potential for recovery.
  - 10 out of the 21 deals are marked at 0.9x, which is only slightly below the 1.0x cost.

- **Less diversity in investor types**: Pathway's largest investor base consists of public pension plans, making up 50% of AUM, followed by sovereign wealth funds at 32%. Together, these two investor types account for 82% of Pathway's total AUM, indicating a significant concentration in these groups.
  <u>Mitigants</u>
  - Pathway's AUM has steadily grown over the past five years and has remained stable, without experiencing significant client losses.

- **Allocation complexity**: As Pathway's AUM grows and incorporates multiple customized SMAs and FOOs, managing allocations across various live client accounts may become increasingly complex. This could lead to potential conflicts if limited high-potential investment opportunities are not evenly accessible to all investors.

  Mitigants

  - Pathway has a well-defined allocation policy that distributes investment opportunities across live accounts in alignment with the investment mandate, ensuring fairness and appropriateness as determined by Pathway in good faith.
  - Pathway maintains strong partnerships with GPs, enabling them to typically secure the full requested amount in co-investment deals.

Performance

PERS of Mississippi Fund of One Series

	Pathway Series 2008	Pathway Series 2013	Pathway Series 2016	Pathway Series 2021
Vintage Years	2008-2014	2014-2024	2017-2024	2021-2024
Commitment Amount	$750	$700	$950	$720
# Investments	42	55	127	120
LP Capital				
Committed Capital	$783	$771	$1,064	$756
% Committed	104%	110%	112%	105%
Invested Capital	$777	$812	$1,041	$351
% Paid-in (over series size)	104%	116%	110%	49%
Realized	$1,448	$1,155	$596	$18
Unrealized Value	$208	$629	$1,277	$386
Total Value	$1,657	$1,784	$1,873	$404
Net Performance				
Net TVPI	**2.1x**	**2.4x**	**2.0x**	**1.1x**
Quartile Ranking	1st	2nd	2nd	3rd
Net IRR	**14.5%**	**17.9%**	**18.2%**	**8.1%**
Quartile Ranking	2nd	2nd	2nd	2nd
Net DPI	**1.8x**	**1.4x**	**0.4x**	**0.0x**
Quartile Ranking	2nd	2nd	3rd	4th
Losses				
#	0	3	9	21
Loss Ratio	0.0%	0.5%	1.2%	2.8%

$ Millions.
As of 9/30/2024.
Quartile rankings against the All Private Equity, All Regions Burgiss Database.

Performance Commentary

2008 Series

The 2008 Series invested $777 million across 39 primary funds (including one co-investment fund) and three secondary deals, with commitments made over six years from 2008 to 2013. The invested capital exceeds the original commitment due to recalled distributions, resulting in a paid-in percentage of 104% as of September 30, 2024. The Series has a net TVPI of 2.1x, ranking in the first quartile, and its net IRR of 14.5% as well as net DPI of 1.8x ranking in the second quartile against the Burgiss private equity database. As of September 30, 2024, three underlying primary funds have been fully liquidated. Nine primary fund investments, spanning buyout, growth, and venture strategies, have a gross TVPI above 3x, while no funds and deals are marked below cost.

2013 Series

The 2013 Series invested $812 million across 40 primary funds (including one co-investment fund), 10 co-investment deals, and five secondary deals, with commitments made over 12 years from 2013 to 2024. Similar to the 2008 Series, the invested capital exceeds the commitment due to recalled distributions, bringing the paid-in percentage to 116% as of September 30, 2024. The Series has a net TVPI of 2.4x, a net IRR of 17.9%, and a net DPI of 1.4x, all ranking in the second quartile against the Burgiss private equity database. As of September 30, 2024, three co-investment deals and one secondary deal have been liquidated. Eleven funds and deals have a gross TVPI above 3x, primarily consisting of buyout, growth, and VC funds, along with two co-investment deals and one secondary deal. One fund and two co-investment deals are currently marked below cost.

2016 Series

The 2016 Series invested $1.04 billion across 56 primary funds (including one co-investment fund), 62 co-investment deals, and nine secondary deals (including one continuation fund), with commitments made over eight years from 2016 to 2024. Recalled distributions have resulted in a paid-in percentage of 110% as of September 30, 2024. The Series has a net TVPI of 2.0x and a net IRR of 18.2%, both ranking in the second quartile, while the net DPI of 0.4x ranks in the third quartile against the Burgiss private equity database. As of September 30, 2024, one primary fund and nine co-investment deals have a gross TVPI above 3x while one primary fund, seven co-investment deals, and one secondary deal are marked below cost.

2021 Series

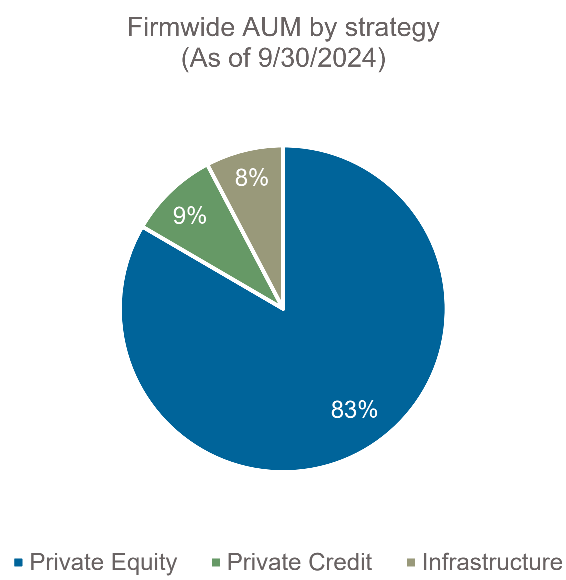
The 2021 Series invested $351 million across 60 primary funds, 46 co-investment deals, and 14 secondary deals (including one continuation fund) over four years, from 2021 to 2024. As of September 30, 2024, the paid-in percentage is 49%, while committed capital stands at 105% of the Series commitment size. The Series has a net IRR of 8.1%, ranking in the second quartile, a net TVPI of 1.1x, ranking in the third quartile, and a net DPI of 0.0x, ranking in the fourth quartile against the Burgiss private equity database. No investments have been marked above 3x gross TVPI, while twelve primary funds, seven co-investment deals, and two secondary deals are currently marked below cost, though no write-offs have occurred.

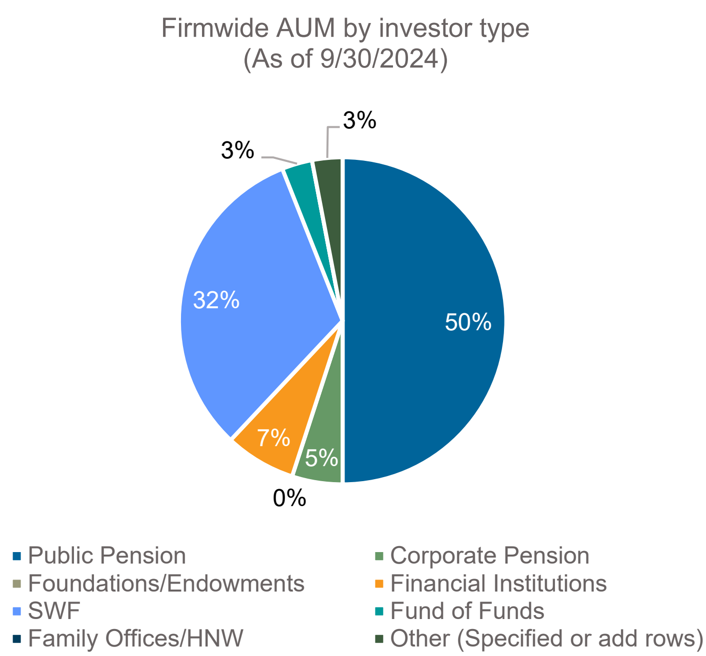
Organization and Team

Pathway Capital Management was founded in 1991 by four private equity consulting professionals from Wilshire Associates. Three of the co-founders—Doug Le Bon, Jim Reinhardt, and Karen Jacoby—remain actively involved in the firm today. Pathway operates as a Delaware limited partnership and is 100% employee-owned by 22 partners. As of September 30, 2024, the firm manages $92 billion in assets. Pathway has 267 employees across offices in Irvine (CA), Providence (RI), London, and Hong Kong and maintains a strategic alliance with Tokio Marine Asset Management in Japan.

Originally established as a non-discretionary specialty consultant, Pathway began transitioning to discretionary asset management in 1993. Initially focused on separate accounts, the firm launched its first commingled fund-of-funds vehicle in 2007. Today, Pathway offers a comprehensive range of private equity investment vehicles, including commingled fund-of-funds, fund-of-ones, and advisory accounts. While historically specializing in primary partnership investments, the firm has expanded into commingled secondary and co-investment fund products in recent years. Pathway now manages strategies across private equity, private credit, and infrastructure, with private equity comprising 83% of its AUM.

Pathway's client base consists of 50% public pensions, followed by 32% sovereign wealth funds. Together, these two investor categories account for 82% of the firm's total client base, representing a significant majority.





Source: Pathway and Callan analysis.

Ownership

The firm is 100% employee-owned by 22 partners at the Director level and above. This includes three Senior Managing Directors, who are the firm's co-founders, 17 Managing Directors, and two Directors as of January 1, 2025.

Investment Team

As of January 1, 2025, Pathway's investment team comprises 80 professionals. The team is led by three Senior Managing Directors, who are the firm's co-founders, along with 17 Managing Directors and two Directors. The remaining team members include 7 Principals, 7 Senior Vice Presidents, 7 Vice Presidents, 11 Associates, 9 Senior Analysts, and 17 Analysts.

Key Professionals, as of 1/1/2025

Professional	Title	Office	Years w/ Firm	# Investments
Douglas K. Le Bon*	Senior Managing Director	Irvine	34	45
James H. Reinhardt*	Senior Managing Director	Irvine	34	42
Karen J. Jakobi*	Senior Managing Director	Irvine	34	34
James R. Chambliss*	Managing Director	Irvine	30	30
Richard S. Mazer*	Managing Director	Irvine	30	30
Alex M. Casbolt*	Managing Director	London	23	23
Vincent P. Dee*	Managing Director	Irvine	23	23
Jason C. Jenkins*	Managing Director	Irvine	21	20
Simon Y. S. Lau	Managing Director	Hong Kong	18	18
Canyon J. Lew*	Managing Director	Irvine	20	25
Matthew M. Lugar*	Managing Director	Providence	23	23
Derrek I. Ransford*	Managing Director	Irvine	23	23
Valerie A. Ruddick*	Managing Director	Irvine	29	29
John T. Ruggieri*	Managing Director	Providence	15	15
Mikael Sand	Managing Director	London	16	16
Nicholas J. Siemsen	Managing Director	Irvine	15	15
Wayne D. Smith*	Managing Director	Providence	13	28
Pete Veravanich*	Managing Director	Irvine	24	24
Bryan P. Nelson*	Managing Director	Irvine	14	14
Stefan Goettl	Managing Director	London	14	14
Kevin W. Bland*	Director	Irvine	11	12
Mitch T. Clemente*	Director	Irvine	6	14

Source: Pathway and Callan analysis.

** Denotes Private Equity Investment Committee member. Pathway has four ICs: primary, direct equity, secondary, and direct credit.*

Investment Team Turnover

Over the past five years, Pathway added 56 investment professionals and lost 37, resulting in a net gain of 19 professionals, or an average annual increase of 3.8 professionals per year. The majority of both new hires and departures have been at the Analyst and Associate levels, which is typical in the industry.

Pathway has maintained strong senior team stability, with no departures above the Director level except for retirements. The most recent retirement was Terrance Melican, Managing Director, who retired in July 2023.

Investment Team Turnover, as of 12/31/2024

Year	# of Joiners	# of Leavers
2020	11	4
2021	6	7
2022	15	12
2023	19	7
2024	5	7
Total	**56**	**37**

Source: Pathway and Callan analysis.

Compensation

Compensation at Pathway includes a mix of salary, benefits, and bonuses, with bonuses paid out semiannually based on both overall firm performance and individual performance. Key professionals are also eligible for carried interest and firm ownership. Additionally, senior professionals have the opportunity to co-invest alongside the firm's clients on the same terms.

Investment Strategy

The model portfolio offered by Pathway reflects the same strategy implemented in the Series 2008, 2013, 2016 and 2021 fund-of-one (FOO) vehicles. While MPERS has the flexibility to adjust the strategy weighting of the recommended FOO portfolio, Callan advises MPERS to select Pathway's model portfolio, as it best represents Pathway's top ideas and firm strengths.

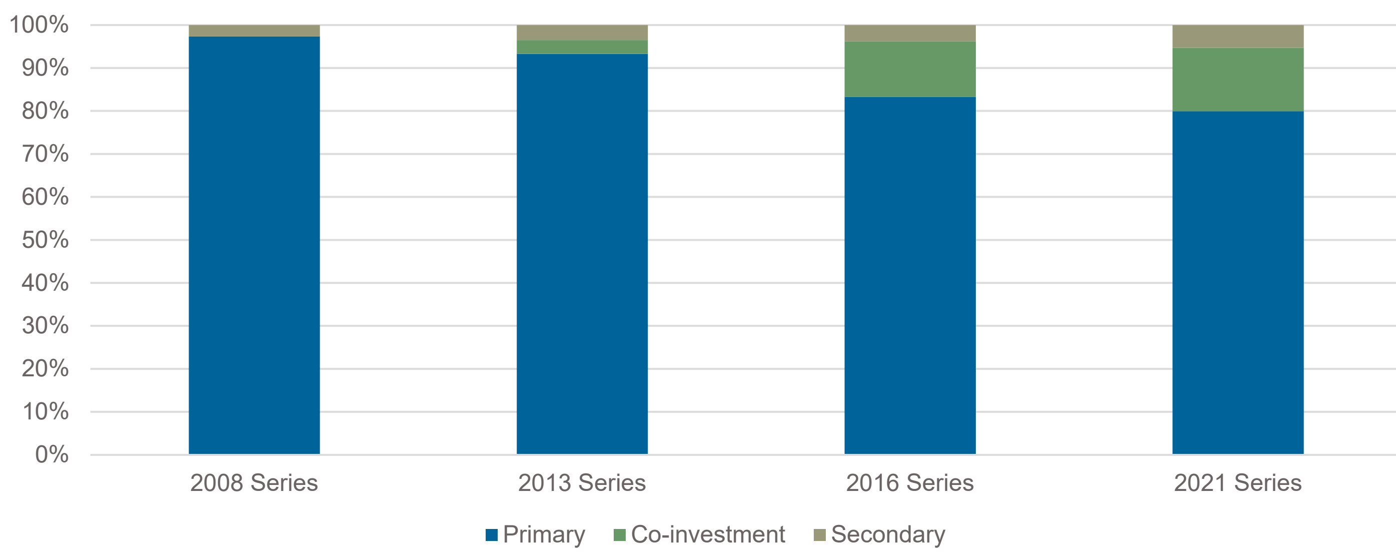
Pathway's approach to portfolio construction emphasizes diversification and investing in leading private equity firms. The firm prioritizes manager selection and remains opportunistic depending on market conditions. When selecting private equity primary investments, Pathway focuses on a stable and experienced management team, a sound business model, proven access to deals, exceptional resources, and a track record of strong performance. Pathway typically reviews between 700 and 1,000 private equity investment opportunities each year, including primary, co-investment, and secondary deals.

While the prior Series had investment periods of approximately five years, the 2025 Series is expected to have a shorter three-year investment period, providing MPERS with greater flexibility to adjust commitment amounts to the FOO more nimbly.

In terms of investment types, the 2025 Series plans to allocate the majority of capital to primary investments, while committing up to 15% of total capital to co-investments and secondary deals. Below is the commitment breakdown by investment type across each of the four existing series:

- Primary investments: 70-100% of total commitment
- Co-investments: 0-15%
- Secondary investments: 0-15%

Commitment (%) by Investment Type, as of 9/30/2024



Source: Pathway and Callan analysis.

Attribution by Investment Type, as of 9/30/2024

	2008 Series		2013 Series		2016 Series		2021 Series	
	% Invested	Gross TVPI	% Invested	Gross TVPI	% Invested	Gross TVPI	% Invested	Gross TVPI
Primary	97%	2.12x	93%	2.18x	83%	1.77x	80%	1.07x
Co-investment	0%	-	3%	2.70x	13%	2.02x	15%	1.26x
Secondary	3%	2.45x	4%	2.16x	4%	1.62x	5%	2.35x

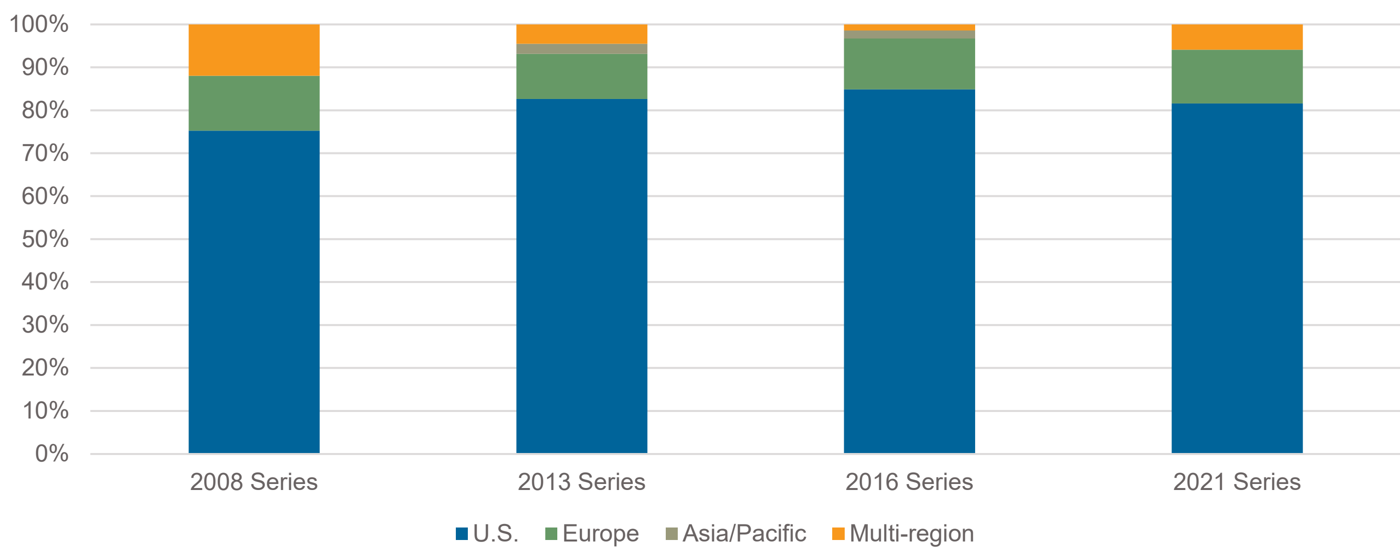
Source: Pathway and Callan analysis.

Country/Regional Allocation

The 2025 Series intends to allocate 65-85% of capital to North America, 15-35% to Europe, and 0-10% to Asia/Pacific, consistent with the geographical allocation of previous Series.

The majority of capital will be directed toward U.S. middle-market buyout managers. International exposure will primarily be allocated to Western Europe, with some exposure to the Asia/Pacific region. The current geographical breakdown of commitments across Series is shown below. The highest international exposure is 25% for the 2008 Series, including funds allocated to multiple regions. Asia/Pacific exposure is typically limited to 0-2% across the Series.

Commitment (%) by Geography, as of 9/30/2024



Source: Pathway and Callan analysis.

Attribution by Geography, as of 9/30/2024

	2008 Series		2013 Series		2016 Series		2021 Series	
	% Invested	Gross TVPI	% Invested	Gross TVPI	% Invested	Gross TVPI	% Invested	Gross TVPI
U.S.	75%	2.25x	83%	2.22x	85%	1.84x	82%	1.16x
Europe	13%	1.71x	10%	1.79x	12%	1.62x	13%	1.02x
Asia/Pacific	0%	-	2%	3.23x	2%	0.80x	0%	-
Multi-region	12%	1.86x	5%	2.10x	1%	1.63x	6%	1.33x

Source: Pathway and Callan analysis.

Strategy Allocation

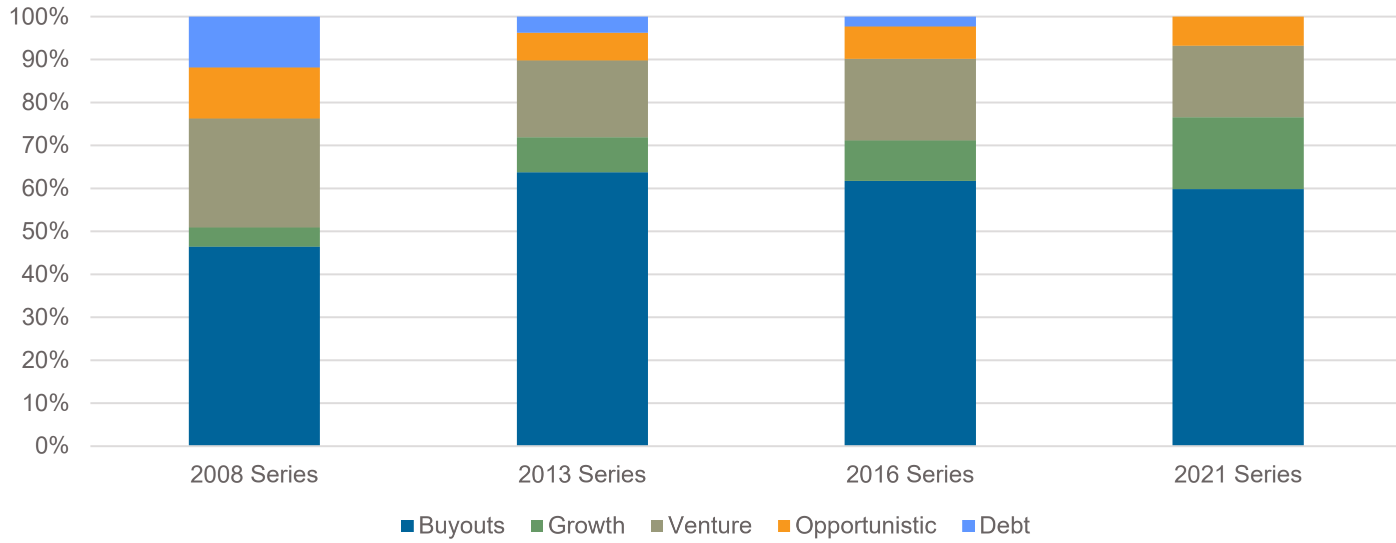
The 2025 Series is expected to focus primarily on buyout transactions, with opportunistic allocations to growth, venture, opportunistic, and debt strategies, consistent with previous Series. Historically, buyout transactions have been the largest allocation, ranging from 46% to 64%. This allocation is further diversified across mega, large, medium, and small buyouts, providing exposure to various company sizes.

The allocation to growth has been increasing over the years, rising from 4% in the 2008 Series to 17% in the 2021 Series. The venture strategy has ranged from 17% to 25%, with expectations to average around 20% in the long term.

Pathway's opportunistic strategy includes sector specialists like Thoma Bravo (technology), EnCap (energy), and Clearlake, Centerbridge, and KPS (distressed or turnaround). Opportunistic investments have averaged an 8% allocation across the Series, peaking at 12% in the 2008 Series.

Debt exposure within private equity has primarily been allocated in the 2009-2016 period, with managers such as Centerbridge (credit-oriented vehicles), Oaktree, and Wayzata. The debt allocation peaked at 12% in the 2008 Series, but has since declined, representing 4% in the 2013 Series, 2% in the 2016 Series, and 0% in the 2021 Series.

Commitment (%) by Strategy, as of 9/30/2024



Source: Pathway and Callan analysis.

Attribution by Strategy, as of 9/30/2024

	2008 Series		**2013 Series**		**2016 Series**		**2021 Series**	
	% Invested	**Gross TVPI**	**% Invested**	**Gross TVPI**	**% Invested**	**Gross TVPI**	**% Invested**	**Gross TVPI**
Buyout	46%	2.13x	64%	2.07x	62%	1.82x	60%	1.22x
Growth	4%	3.73x	8%	2.73x	9%	2.04x	17%	1.00x
Venture	25%	2.32x	18%	2.80x	19%	1.72x	17%	0.98x
Opportunistic	12%	1.77x	6%	1.79x	8%	1.69x	7%	1.10x
Debt	12%	1.46x	4%	1.42x	2%	1.40x	0%	-

Source: Pathway and Callan analysis.

Sector Allocation

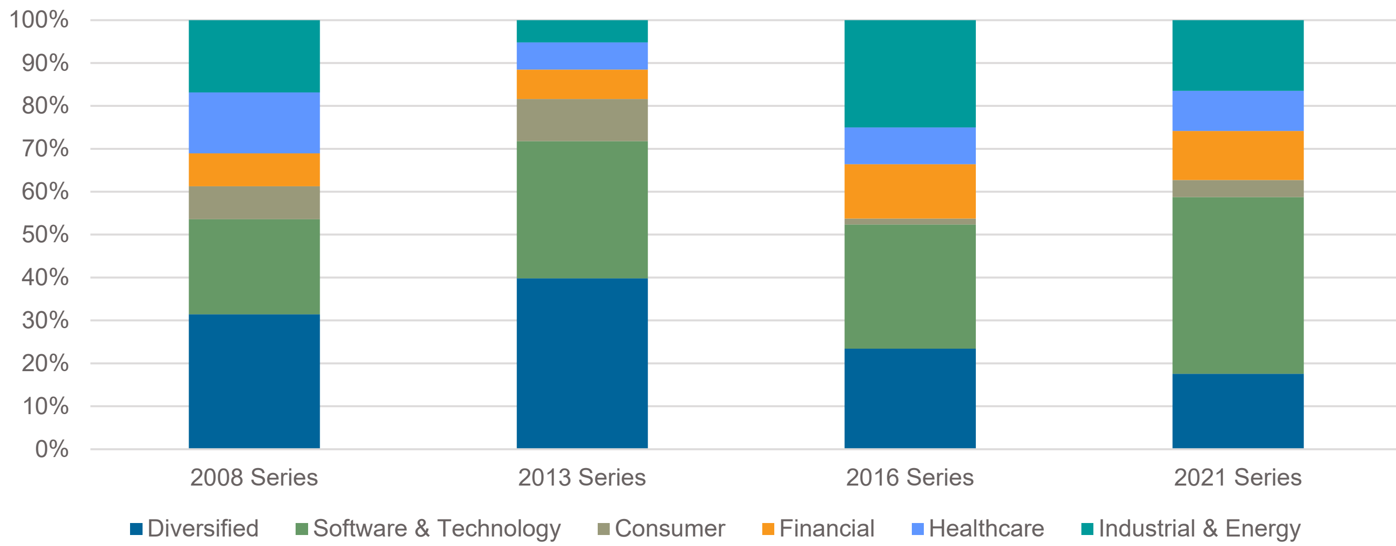
Pathway will invest across a variety of industry sectors, including both generalist and sector-specific funds. The historical sector breakdown by Series is shown below. Diversified funds made up the largest portion of the portfolio, accounting for 31-40% in earlier Series, but has been reduced to 18-23% range in the later Series, as allocations to sector specialists increased.

The largest sector allocation in Pathway's portfolio has consistently been software & technology, with allocations ranging from 22-41%. In the 2021 Series, this sector comprises 41%, marking the highest allocation to any sector in the fund.

The allocation to industrial & energy has varied across the Series, with the smallest being 5% in the 2013 Series and the largest at 25% in the 2016 Series. Over time, however, this sector has remained the second-largest allocation within Pathway's portfolio, following software & technology.

Allocations to financials and healthcare have consistently ranged from 6-14% across the Series. Overall, Pathway has maintained a well-diversified portfolio across various sectors over the years.

Commitment (%) by Sector, as of 9/30/2024



Source: Pathway and Callan analysis.

Attribution by Fund Sector, as of 9/30/2023

	2008 Series		2013 Series		2016 Series		2021 Series	
	% Invested	**Gross TVPI**	**% Invested**	**Gross TVPI**	**% Invested**	**Gross TVPI**	**% Invested**	**Gross TVPI**
Diversified	31%	2.15x	40%	1.80x	23%	1.61x	18%	1.07x
Software & Technology	22%	2.39x	32%	2.64x	29%	1.90x	41%	1.09x
Consumer	8%	2.19x	10%	2.13xx	1%	1.94x	4%	1.09x
Financial	8%	1.33x	7%	2.32x	13%	1.90x	11%	1.21x
Healthcare	14%	2.15x	6%	2.97x	9%	1.74x	9%	1.29x
Industrial & Energy	17%	1.99x	5%	1.80x	25%	1.83x	16%	1.22x

Source: Pathway and Callan analysis.

Operational Due Diligence

Accounting/Finance	
Chief Financial Officer	Ben Brewster, CFO–Corporate Raquel Nicolas, CFO–Fund Accounting
Overview of the accounting and finance team	Pathway takes an active role in the ongoing monitoring of investments and uses a team approach for accounting, valuation, and reporting functions. These activities are completed by several accounting, investment, and operations professionals. Pathway's accounting department is comprised of 92 professionals led by Benjamin Brewster and Raquel Nicolas, the firm's co-chief financial officers. The department is organized into multiple groups whose accounting responsibilities are as follows: The cash accountant team is responsible for analyzing the cash needs of all of the funds of funds and requesting capital from investors and/or making distributions to investors accordingly. The Cash Accountants are also responsible for performing the first approval function for all of the funds of funds' wire transactions in the online banking system and reconciling the daily cash activity of each fund of funds with the activity in the online banking system. The fund accounting team analyzes and inputs all of the investment partnerships' capital account activity into Pathway's investment database and reconciles the quarterly cumulative cash activity with daily cash activity. Additionally, the fund accountants are responsible for recording all of the funds of funds' accounting activity, preparing the funds' financial reporting, and reconciling bank accounts from the bank statements to the general ledger. Fund accounting management is responsible for the oversight of the above groups and is also responsible for additional checks and balances throughout the process.
Fund Administrator	Apex Fund Services
Custodian/Bank	Pathway does not use a custodian or trustee. Pathway is the general partner or managing member of each of its funds of funds and is responsible for the day-to-day management, operations, and administration of these funds. Pathway's services performed for the funds of funds include cash management, financial accounting and reporting, and tax compliance. Silicon Valley Bank, Merrill Lynch and JP Morgan Securities provide banking and brokerage services.
Fund Auditor	KPMG
Overview of cash movements	Capital calls and distributions to and from investments are managed by

	Pathway's fund accounting team. The fund accounting team, led by co-chief financial officer Raquel Nicolas, consists of 62 professional staff whose duties are categorized into three main teams: operations, cash management, and accounting. Pathway has established robust controls and procedures that provide for the segregation of duties around the monitoring and accounting for capital calls/distributions of the investments, timely reconciliations of cash balances, and dual authorization for wire transfers. All capital call requests from investments are entered into Pathway's HUB system by the operations team, where the information is analyzed for consistency across Pathway's investors and compared against the terms of the limited partnership agreement. Wire instructions are compared with pre-approved wire instructions maintained in the HUB, and any changes are subject to a callback verification. Distributions from investments are also entered by the operations team and analyzed for consistency across Pathway's investors. Cash received is reconciled to the distribution notice, and differences are resolved through inquiries with the general partner. If money is received without a notice, an inquiry is sent to the general partner to confirm that the general partner made the distribution and that a notice will be provided. Generally, quarterly financial statements and capital accounts are received from the general partners of the funds. The accounting team reviews and enters the capital account information into Pathway's proprietary database. Total capital calls and distributions reported by the general partner are reconciled by the accountant with the cumulative total cash transactions that occurred during the quarter.

Valuation Policy/Process

Does the Firm have a Valuation Policy?	Yes
Overview of the valuation process	The NAV of the fund of funds will be calculated quarterly by fund administrator with the oversight of Pathway's senior level accounting professionals. In order to ensure that market valuations are reported in a consistent manner across all types of investments and that they are stated at fair value, Pathway requests that the general partners of the underlying partnerships provide valuations based upon the concept of fair value, as defined by U.S. generally accepted accounting principles (GAAP). Pathway generally requests that the investment partnerships report valuations quarterly and that they provide audited financial statements annually. As provided for by GAAP and owing to the general partners' expertise and proprietary knowledge of the portfolio company investments, Pathway generally utilizes the net asset values reported by the general partners as the basis for the fund of funds' reported investment values but may also, in good faith, apply an appropriate adjustment

	to the net asset values reported by the investment partnerships, if deemed necessary. If Pathway becomes aware that the reported values are not stated at fair value (e.g., investments are reported in accordance with another basis of accounting other than U.S. GAAP, such as income tax– based reporting), Pathway will request fair values from the general partner and may, if deemed necessary, establish its own valuation based on information provided by the general partner, other publicly available information, and/or industry knowledge. Additionally, Pathway takes an active role in monitoring its investment partnerships through its participation on more than 350 advisory boards, through attending annual meetings, and by participating in conference calls and meetings with its general partners throughout the year. These points of contact allow Pathway to provide input on valuations as necessary.
Valuation Committee	Yes Committee Members: Ben Brewster (chair), Mark Fuentes, and Hiral Savani.
Frequency of valuations	Quarterly
Are valuations audited annually?	Yes
Is a third-party valuation firm ever used?	No
Are valuations in accordance with U.S. GAAP and ASC 820?	Yes

Allocation of Investment Opportunities

Does the Firm have an Allocation Policy?	Yes
Overview of investment allocation across funds/products	As a reputable and significant investor in the asset class since 1991, Pathway often receives its full allocation requests from general partners. In the instances when Pathway does not receive its full allocation request and allocations across its discretionary accounts become necessary, Pathway implements its allocation policy. The allocation policy is designed to ensure that all accounts, irrespective of size, type, or structure (separate account, single-investor fund of funds, or multi-investor fund of funds), receive an allocation pursuant to the policy in a fair and appropriate manner, as determined by Pathway in good faith. The policy does not give an account preference or priority in new general partner relationships.
If the Firm has a debt product, can it invest alongside the equity product(s)?	Yes In the rare instance in which Pathway is considering a debt-related investment in a company in which Pathway is also considering an equity co-investment, separate investment processes will be run for the debt and equity investments.

	Investment decisions will be made independently by the direct credit and direct equity investment committees, respectively.
Approval process for cross-fund investments	As noted above, investment decisions relating to a debt and equity investment in the same company are made independently by each product's investment committee following a full and standard investment diligence process for each opportunity.
Overview of the allocation of co-investments	Pathway allocates co-investment opportunities across its clients and investors in accordance with its direct equity allocation policy, taking into account factors such as (i) the amount available for investment by Pathway's clients and investors in such co-investment; (ii) the relative amount of capital commitments and the amounts that such other clients and investors have committed for investment in co-investments.

LP Reporting	
Quarterly/annual reporting package	☐ Capital account statements ☒ Quarterly unaudited fund financial statements ☒ Annual audited fund financial statements ☐ Quarterly LP letters/updates ☐ Other
Are the ILPA reporting templates utilized?	No

Legal/Compliance	
Is the Firm a Registered Investment Advisor or an Exempt Reporting Advisor?	Registered Investment Advisor
Chief Compliance Officer	Stefanie Hochman, Senior Vice President & CCO
External compliance consultant	Pathway's primary corporate counsel in the past 25+ years has been Morrison & Foerster LLP. From time to time and as necessary, Pathway has engaged other counsel supplementally, including local counsel, to advise on certain matters.
Compliance Manual	Yes
Code of Ethics	Yes
Legal Counsel	Pathway has an in-house legal team that is led by Ashok Tripathi, senior vice president and general counsel. Mr. Tripathi has 30 years of legal experience, of which 19 years have been at Pathway. Pathway's legal staff comprises nine attorneys and eight administrative assistants.
Is the Firm or any key professional subject to any current material litigation proceedings?	No

Additional Performance Metrics

PME Analysis, as of 09/30/2024

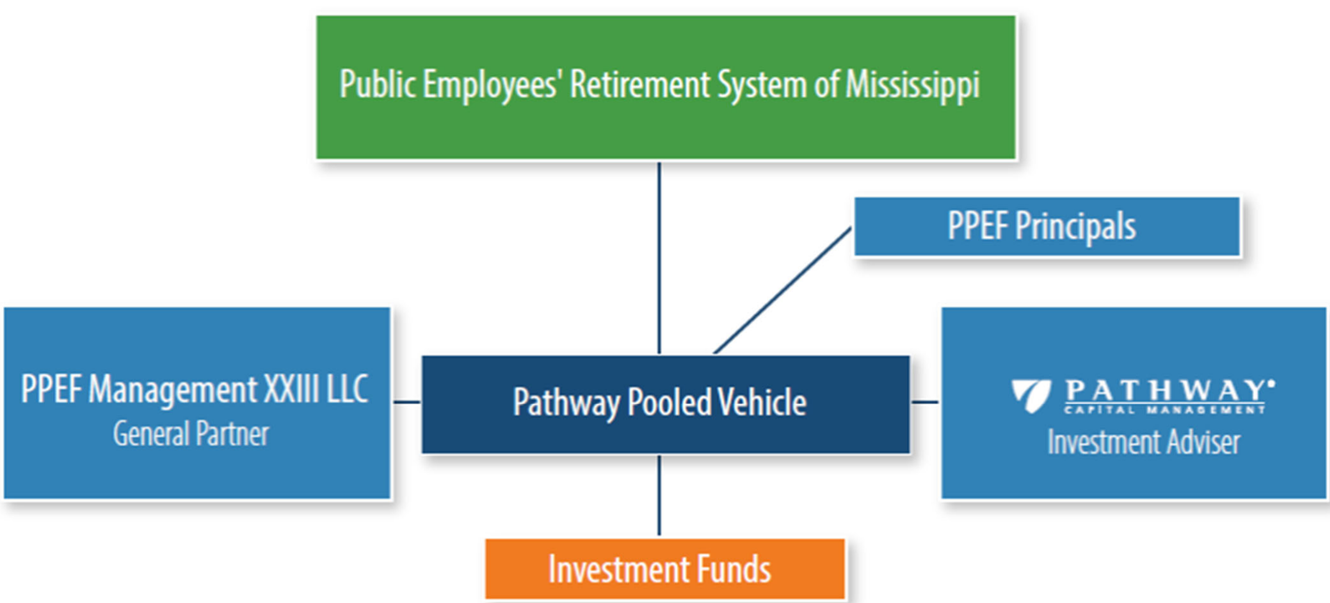
Fund	VY	Net IRR	Net TVPI	MSCI ACWI Index LN PME IRR	MSCI ACWI Index LN PME TVPI	MSCI ACWI Index KS PME	S&P 500 Index LN PME IRR	S&P 500 Index LN PME TVPI	S&P 500 Index KS PME
2009 Series	2009	14.5%	2.1x	8.97%	1.32x	1.26x	14.15%	2.03x	1.01x
2014 Series	2014	17.9%	2.4x	9.91%	1.48x	1.40x	13.87%	1.86x	1.18x
2018 Series	2018	18.2%	2.0x	5.60%	1.50x	1.25x	15.10%	1.75x	1.09x
2021 Series	2021	8.1%	1.1x	14.77%	1.26x	0.88x	18.07%	1.33x	0.83x

LN: Long Nickels PME methodology
KS: Kaplan-Scholar PME methodology; KS PME > 1x signals outperformance

All Series outperformed MSCI ACWI Index and S&P 500 Index on PME basis.

Fund Structure

Public Employees' Retirement System of Mississippi – Fund of One Structure



Source: Pathway.

Investment Team Biographies

Senior Investment Professional Biographies

Douglas K. Le Bon *Senior Managing Director & Co-Founder*	Mr. Le Bon is a senior managing director and cofounder of Pathway whose private market experience dates back to 1979. Based in Pathway's California office, Mr. Le Bon is involved in all aspects of Pathway's investment and client-servicing activities. He is a member of various Pathway committees, including the firm's Management Committee and all the firm's investment committees. Before forming Pathway in 1991, Mr. Le Bon was a vice president and principal of Wilshire Associates Inc. and cofounder and head of Wilshire's Special Investments Division. This independent division of Wilshire focused exclusively on assisting institutions with investment in the private equity asset class. Prior to joining Wilshire in 1983, Mr. Le Bon was a valuation consultant with Houlihan, Lokey, Howard & Zukin Inc. beginning in 1979. Mr. Le Bon has served on the advisory boards and valuation committees of several private market partnerships. He received a BS in business administration and an MBA from California State University, Dominguez Hills.
James H. Reinhardt *Senior Managing Director & Co-Founder*	Mr. Reinhardt is a senior managing director and cofounder of Pathway whose private market experience dates back to 1983. Based in Pathway's California office, Mr. Reinhardt is involved in all aspects of Pathway's investment and client-servicing activities. He is a member of various Pathway committees, including the firm's Management Committee and all the firm's investment committees. Before forming Pathway, Mr. Reinhardt cofounded the Special Investments Division of Wilshire Associates Inc. This independent division of Wilshire focused exclusively on assisting institutions with investment in the private equity asset class. Mr. Reinhardt has served on the advisory boards and valuation committees of several private market investment partnerships. He received a BS in business management from the University of Redlands and an MBA from California State University, Northridge.
Karen J. Jakobi *Senior Managing Director & Co-Founder*	Ms. Jakobi is a senior managing director and cofounder of Pathway whose private market experience dates back to 1991. Based in Pathway's California office, Ms. Jakobi is involved in all aspects of Pathway's investment and client-servicing activities, with particular emphasis on Pathway's new investment department. Ms. Jakobi is a member of various Pathway committees, including the firm's Management Committee and all the firm's investment committees. Before cofounding Pathway, Ms. Jakobi was the assistant treasurer at Wilshire Associates Inc. Joining that firm in 1984, she was responsible for all financial reporting to management and regulatory agencies. Ms. Jakobi received a BS in accounting from the University of Dayton and an MBA from Loyola Marymount University.

James R. Chambliss *Managing Director*	Mr. Chambliss joined Pathway in 1994 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Chambliss is a member of various Pathway committees, including the firm's Management Committee and Compensation Committee and all the firm's investment committees. Mr. Chambliss also serves on the advisory boards of several private market partnerships. Mr. Chambliss received a BS in business administration, with an emphasis in finance, from Loyola Marymount University and an MBA from the Marshall School at the University of Southern California.
Richard S. Mazer *Managing Director*	Mr. Mazer joined Pathway in 1995 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Mazer is a member of various Pathway committees, including the firm's Management Committee, all the firm's investment committees, and the Diversity & Inclusion Committee. Mr. Mazer also serves on the advisory boards of several private market partnerships. Mr. Mazer received a BS in business administration, magna cum laude, with an emphasis in finance and marketing, from Chapman University and an MBA from the Anderson School at the University of California, Los Angeles.
Alex M. Casbolt *Managing Director*	Mr. Casbolt joined Pathway in 2002 and is a managing director in the London office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Casbolt is head of Pathway's European activities and is a member of various Pathway committees, including the firm's Primary Fund Investment Committee and Management Committee. Mr. Casbolt also serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Casbolt worked in the investment banking division of NM Rothschild in London. Mr. Casbolt received a BA in modern languages from Manchester University and an MBA, with distinction, from the Cass Business School at City University.
Vincent P. Dee, CFA *Managing Director*	Mr. Dee joined Pathway in 2002 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Dee is co-head of Pathway's private credit team, which invests across the private credit markets through partnership investments and direct credit investments. Mr. Dee is a member of various Pathway committees, including the firm's Management Committee, Direct Credit Investment Committee, Primary Fund Investment Committee, and Secondaries Investment Committee. Additionally, Mr. Dee serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Dee worked in the Pension Consulting Division of Wilshire Associates Inc. He received a BA in economics from the University of California, San Diego, and an MBA from the Haas School of Business at the University of California, Berkeley. Mr. Dee is a CFA charterholder.
Jason C Jenkins, CFA	Mr. Jenkins joined Pathway in 2004 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Jenkins

Managing Director	oversees Pathway's infrastructure program, which pursues global infrastructure and real asset investment opportunities, and is a member of the firm's Primary Fund Investment Committee and Direct Equity Investment Committee. Additionally, Mr. Jenkins serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Jenkins worked at State Street IMS as a transitions associate. He received a BS in finance, summa cum laude, from Northern Arizona University and an MBA, with a concentration in finance, from the Orfalea College of Business at California Polytechnic University. Mr. Jenkins is a CFA charterholder and a member of the CFA Society of Los Angeles, Inc.
Canyon J. Lew *Managing Director*	Mr. Lew joined Pathway in 2004 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Lew is co-head of Pathway's direct equity team. Mr. Lew is a member of various Pathway committees, including the firm's Direct Equity Investment Committee and Portfolio Construction Committee. Mr. Lew also serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Lew worked for Fleet Fund Investors as an associate, where he monitored investments within Fleet Bank's private equity portfolio and reviewed new investment opportunities. Mr. Lew received an AB in economics and engineering from Brown University and an MS, with high honors, in investment management from Boston University.
Matthew M. Lugar *Managing Director*	Mr. Lugar joined Pathway in 2002 and is a managing director in the Rhode Island office. He is involved in all aspects of Pathway's investment and client-servicing activities. He is co-head of the primary fund team and co-manages the target funds team, which is responsible the firm's proactive investment-origination efforts. Mr. Lugar is a member of various Pathway committees, including the firm's Primary Fund Investment Committee and Technology Committee. Additionally, Mr. Lugar serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Lugar worked for two years as an analyst with Allied Financial Services, a boutique investment-consulting firm focused on high-net-worth individuals. Mr. Lugar received a BA in business administration from Azusa Pacific University and an MBA from the Paul Merage School of Business, at the University of California, Irvine.
Bryan P. Nelson, CFA *Managing Director*	Mr. Nelson joined Pathway in 2011 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Nelson is a senior member of Pathway's direct equity team and also serves on the firm's Direct Equity Investment Committee. Mr. Nelson serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Nelson worked as a senior associate at KPMG. Mr. Nelson received a BA in business economics from the University of California, Santa Barbara, and is a certified public accountant (inactive). Mr. Nelson is a CFA charterholder.

Derrek I. Ransford, CFA *Managing Director*	Mr. Ransford joined Pathway in 2002 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Ransford is co-head of Pathway's direct equity team. Mr. Ransford is a member of various Pathway committees, including the firm's Direct Equity Investment Committee and Management Committee. Mr. Ransford also serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Ransford worked for two years at Deloitte & Touche as an auditor and at Arthur Andersen for one year as a financial analyst in the Financial Valuations Group. Mr. Ransford received a BA in business economics, with an emphasis in accounting, from the University of California, Santa Barbara. He is a CFA charterholder and a certified public accountant (inactive).
Valerie A. Ruddick *Managing Director*	Ms. Ruddick joined Pathway in 1996 and is a managing director in the California office. She is involved in all aspects of Pathway's investment and client-servicing activities. She is co-head of the primary fund team and co-manages the target funds team, which is responsible for the firm's proactive investment-origination efforts. Ms. Ruddick is a member of various Pathway committees, including the firm's Management Committee, Primary Fund Investment Committee, and Diversity & Inclusion Committee. Ms. Ruddick also serves on the advisory boards of several private equity partnerships. Ms. Ruddick received a BS in economics from the University of California, Irvine, and an MBA from the Anderson School at the University of California, Los Angeles.
John T. Ruggieri, CFA *Managing Director*	Mr. Ruggieri joined Pathway in 2010 and is a managing director in the Rhode Island office. He is involved in all aspects of Pathway's investment and client-servicing activities. He is a senior member of Pathway's direct equity team and also serves on the firm's Direct Equity Investment Committee. Mr. Ruggieri serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Ruggieri worked as an investment operations analyst with John Hancock Financial Services. He received a BS in business management from Boston College and an MBA from Providence College. Mr. Ruggieri is a CFA charterholder.
Wayne D. Smith, CFA *Managing Director*	Mr. Smith joined Pathway in 2011 and is a managing director in the Rhode Island office. He is involved in all aspects of Pathway's investment and client servicing activities. Mr. Smith is co-head of Pathway's private credit team, which invests across the private credit markets through partnership investments and direct credit investments. Mr. Smith is a member of various Pathway committees, including the firm's Management Committee, Direct Credit Investment Committee, and Primary Fund Investment Committee. Mr. Smith serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Smith managed the private equity program for the Pension Reserves Investment Management Board (PRIM) in Massachusetts, where he had worked since 2000. In this capacity, he performed due diligence, recommended investments, and had

	oversight responsibility for a portfolio of more than 200 limited partnerships and $15 billion in committed capital. Before joining PRIM, Mr. Smith had worked on private equity investments for Liberty Mutual Group since 1996. He received a BA in management from Assumption College and an MBA from Babson College. Mr. Smith is a CFA charterholder.
Pete Veravanich *Managing Director*	Mr. Veravanich joined Pathway in 2000 and is a managing director in the California office. He is involved in all aspects of Pathway's investment and client-servicing activities. Mr. Veravanich is co-head of Pathway's secondaries team. He is a member of various Pathway committees, including the firm's Secondaries Investment Committee and Compensation Committee. He also serves on the advisory boards of several private market partnerships. Prior to joining Pathway, Mr. Veravanich worked at PIMCO as a performance associate and as a fund accountant. Mr. Veravanich received a BA in economics from the University of California, Los Angeles, and an MBA from the Marshall School at the University of Southern California.
Kevin W. Bland *Director*	Mr. Bland is a director in the California office who rejoined Pathway in 2014 after having worked at Pathway from 2011 to 2013. He is a senior member of Pathway's private credit team and a member of the Direct Credit Investment Committee, where he plays a leading role in the due diligence and underwriting of direct credit opportunities. He also works closely with multiple investors and clients and helps manage analyst recruitment and development for Pathway. Prior to joining Pathway, Mr. Bland worked at Collins/Bay Island Securities, a boutique investment management research firm. He received a BA in business economics from the University of California, Irvine.
Mitchell T. Clemente *Director*	Mr. Clemente joined Pathway in 2018 and is a director in the California office. He is co-head of Pathway's secondaries team and a member of the firm's Secondaries Investment Committee. He is involved in all aspects of Pathway's secondaries investment program, including investment analysis and conducting due diligence, investment monitoring, performance analysis, client reporting, and client servicing. Prior to joining Pathway, Mr. Clemente was a vice president in Greenhill & Co.'s capital advisory group, where he focused on secondary transaction sourcing and execution. Prior to joining Greenhill, Mr. Clemente was a financial analyst with Houlihan Lokey, Inc. He received a BS in finance and international business from New York University's Leonard N. Stern School of Business.

Source: Pathway.

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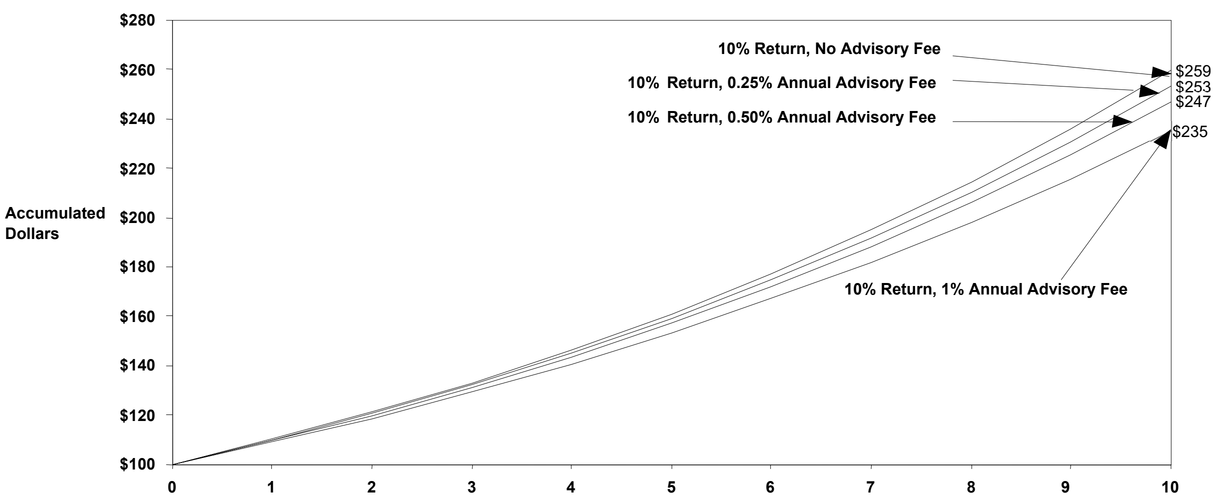
The preceding report has been prepared for the exclusive use of MPERS. Unless otherwise noted, performance returns contained in this report do not reflect the deduction of investment advisory fees. The returns in this report will be reduced by the advisory fees and any other expenses incurred in the management of an investment account. The investment advisory fees applicable to the advisors listed in this report are described in Part II of each advisor’s form ADV.

The following graphical and tabular example illustrates the cumulative effect of investment advisory fees on a $100 investment growing at 10% over ten years. Fees are assumed to be paid monthly.

In addition to asset-based investment advisory fees, some strategies may include performance-based fees (“carry”) that may further lower the returns realized by investors. These performance-based fees can be substantial, are most prevalent in “Alternative” strategies like hedge funds and many types of private markets but can occur elsewhere. The effects of performance-based fees are dependent on investment outcomes and are not included in the example below.

The Cumulative Effect of Advisory Fees



Accumulated Dollars at End of Years

	1	2	3	4	5	6	7	8	9	10
No Fee	110.0	121.0	133.1	146.4	161.1	177.2	194.9	214.4	235.8	259.4
25 Basis Points	109.7	120.4	132.1	145.0	159.1	174.5	191.5	210.1	230.6	253.0
50 Basis Points	109.5	119.8	131.1	143.5	157.1	172.0	188.2	206.0	225.5	246.8
100 Basis Points	108.9	118.6	129.2	140.7	153.3	166.9	181.8	198.0	215.6	234.9

10% Annual Return Compounded Monthly, Annual Fees Paid Monthly.

Disclosure

As indicated below, one or more of the candidates listed in this report may, itself, be a client of Callan as of the date of the most recent quarter end. These clients pay Callan for educational, software, database and/or reporting products and services. Given the complex corporate and organizational ownership structures of investment management firms and/or trust/custody or securities lending firms, the parent and affiliate firm relationships are not listed here.

The client list below may include names of parent companies who allow their affiliates to use some of the services included in their client contract (e.g., educational services including published research and attendance at conferences and workshops). Affiliates will not be listed if they don't separately contract with Callan. Parent company ownership of the firms included in this report and any relationship with Callan can be provided at your request. Because Callan's clients list of investment managers changes periodically, the above information may not reflect recent changes. Clients are welcome to request a complete list of Callan's investment manager clients at any time.

As a matter of policy, Callan follows strict procedures so that investment manager client relationships do not affect the outcome or process by which Callan's searches or evaluations are conducted.

Firm	Is an Investment Manager Client of Callan*	Is Not an Investment Manager Client of Callan*
Pathway Capital Management	X	

*Based upon Callan manager clients as of the most recent quarter end.

International Equity Manager Preview

February 25, 2025

Ryan Holliday
Lead Portfolio Manager – Public Equity

Marathon – International All Markets Equity

As of December 31,2024

Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
ACWI ex U.S. Equity	**$861 million**	**4.0 billion**	**May 2016**

Key Comments:

- Marathon-London, a bottom-up stock picker, seeks out the best companies to invest in by focusing on fundamental research and by utilizing the capital-cycle approach. Through this approach, Marathon aims to identify those industries with favorable long-term capital-cycle dynamics, and to invest in the companies within those industries that possess a track record of being assertive capital allocators and which they believe will produce attractive returns for investors.

- For the 1-year period ending December 31, 2024, the Marathon International Portfolio returned 4.1% underperforming its benchmark return of 5.2% by approximately 110 basis points. Marathon's preference for small and mid-sized companies has been a headwind.

- Marathon's 3-year return outperformed the benchmark by approximately 50 basis points and the 5-year return of 4.4% outperformed the benchmark by approximately 30 basis points. Since inception the portfolio has outperformed the benchmark by approximately 10 basis points on an annualized basis.

Arrowstreet Capital - International All Markets Equity

As of December 31,2024

Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
ACWI ex U.S. Equity	**$907 million**	**19.3 billion**	**June 2013**

Key Comments:

- Arrowstreet's strategy seeks to outperform the ACWI ex-US Index through a risk-controlled core approach. The firm combines sound investment intuition and research with rigorous quantitative models to identify mispriced stocks around the world. They believe that the key to generating alpha involves evaluating the prospects of a security considering both the characteristics of the stock itself (direct effects) as well as the characteristics of other related stocks (indirect effects).

- For the 1-year period ending December 31, 2024, Arrowstreet returned 10.80% outperforming the benchmark return of 5.78% by approximately 502 basis points. For the 3-year period Arrowstreet outperformed the benchmark by approximately 530 basis points.

- Arrowstreet's 5-year return of 10.30% outperformed the benchmark by approximately 567 basis points. Since inception Arrowstreet has returned 8.62% outperforming the benchmark return of 5.70% by approximately 292 basis points on an annualized basis.

Baillie Gifford - International All Markets Equity

As of December 31, 2024

Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
ACWI ex U.S. Equity	**$740 million**	**9.63 billion**	**September 2014**

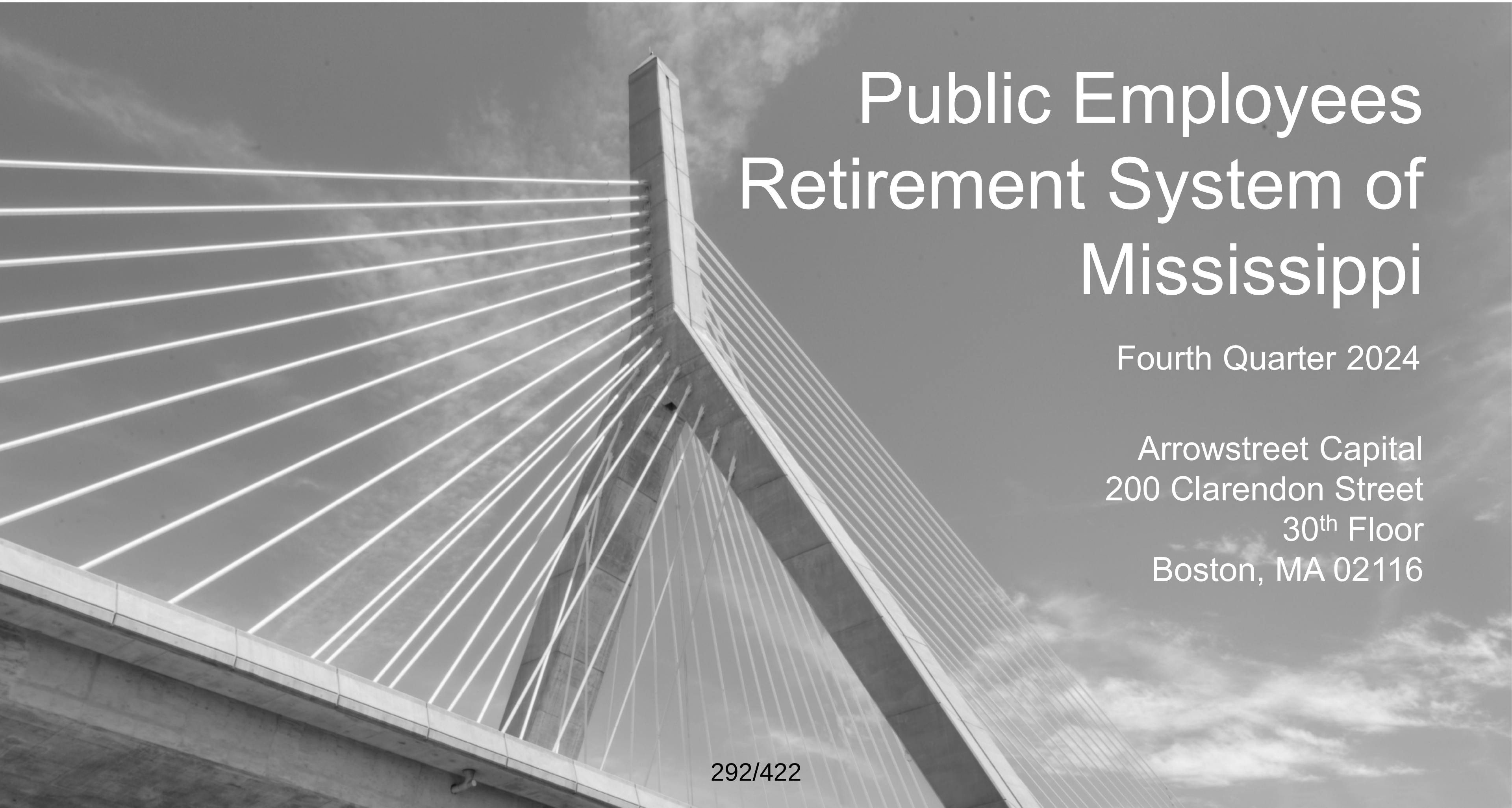
Key Comments:

- Baillie Gifford is a fundamental research focused bottom-up stock picker. Their goal is to deliver value-added performance by investing only in companies they believe will produce superior earnings growth over the long term. Their belief is that sustained growth in company profits leads to higher share prices over time. With a long-term focus, they are not interested in following fads and fashions or pursuing short-term performance and aim to take advantage of worldwide opportunities, with holding periods of five more years.

- For the 1-year period ending December 31, 2024 the Baillie Gifford Portfolio returned 2.9% underperforming its benchmark return of 5.8% by approximately 290 basis points.

- For the 3-year period Baillie Gifford returned -8.0% on an annualized basis, underperforming the benchmark return of 1.0%. Since inception Baillie Gifford has underperformed the benchmark by approximately 20 basis points on an annualized basis.

ARROWSTREET
CAPITAL



Public Employees Retirement System of Mississippi

Fourth Quarter 2024

Arrowstreet Capital
200 Clarendon Street
30th Floor
Boston, MA 02116

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ARROWSTREET CAPITAL

Firm Overview

Sustainable Alpha and Fiduciary Partner

Global systematic equity-focused manager

Single integrated investment process

Commitment to ongoing research

Independent private partnership

ARROWSTREET CAPITAL

Stable Investment Team | One Investment Process

Derek Vance, CFA | Partner, Chief Investment Officer | Joined Arrowstreet in 2008

Research

Name	Joined Firm
Chris Malloy, PhD *Partner, Head of Research*	2019
James Bothwick, CFA *Partner*	2015
Naveen Kartik, CFA *Partner*	2017
Yosef Klein *Partner*	2012
Jonathan Kluberg, PhD *Partner*	2015
Tom Knox, PhD *Partner*	2016
Jeff Li, CFA *Partner*	2010
April Rathe *Partner*	2020
Julia Yuan, CFA *Partner*	2012
EJ Zhang, PhD *Partner*	2006

Investment Processes

Name	Joined Firm
Sam Thompson, PhD *Partner, Head of Investment Processes*	2006
Marta Campillo, PhD *Partner*	1999
Mary Rogers, CFA, CIPM *Partner*	2008
Hui Wang, PhD *Partner*	2012

Investment Services

Name	Joined Firm
Katie McHardy *Partner, Head of Investment Services*	2010
Joe Tiano *Partner*	2014

Investment Analytics

Name	Joined Firm
Rachel Xiao *Partner, Head of Investment Analytics*	2016

Portfolio Management

Name	Joined Firm
Manolis Liodakis, PhD *Partner, Head of Portfolio Management*	2012
Brandon Berger *Partner*	2013
Harry Gakidis, PhD *Senior Director*	2022
Anne Luisi *Partner*	2014
Jonathan Noel *Partner*	2015
Carlos Ontaneda, CFA *Director*	2024
Alex Rodin, CFA *Partner*	2016
Josh Shain, CFA *Director*	2017
Zach Vernon, CFA *Partner*	2008
Michael Zervas, CFA *Partner*	2004

Peter Rathjens, PhD | *Partner, Former Chief Investment Officer*
Co-Founded Arrowstreet in 1999

As of December 31, 2024

ARROWSTREET CAPITAL

Stable Investment Team | One Investment Process

Investment Team Partners by the Numbers:

26 Investment Team Partners

18 Years Average Industry Experience

13 Years Average Tenure with Arrowstreet

Supported by **110** Additional Investment Team Members

Research

Responsible for developing, maintaining and enhancing the firm's investment models, which produce the forecasts of returns, risks, and transaction costs that drive trading decisions.

Investment Processes

Responsible for designing systems that automate our investment decision-making and trading.

Investment Services

Responsible for managing critical inputs to the firm's investment process, managing the services provided by our outsourced middle-office, and supporting our portfolio management team, processes and investment initiatives.

Investment Analytics

Responsible for overseeing and producing metrics related to our investment process. This responsibility includes portfolio attribution and other analyses regarding our investment positioning, weights, shifts and tilts.

Portfolio Management

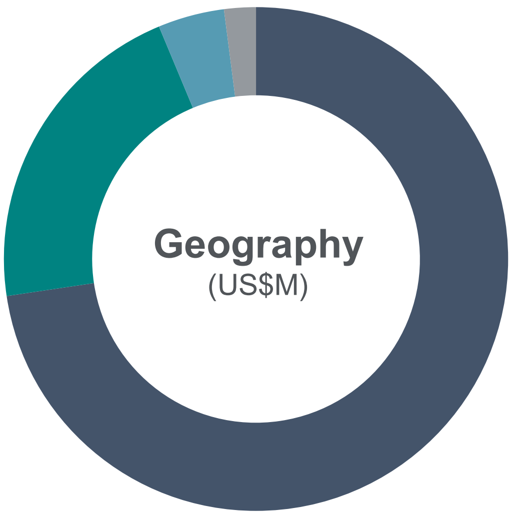
Responsible for managing investment portfolios and executing trade orders proposed by the firm's proprietary portfolio optimization process.

As of December 31, 2024

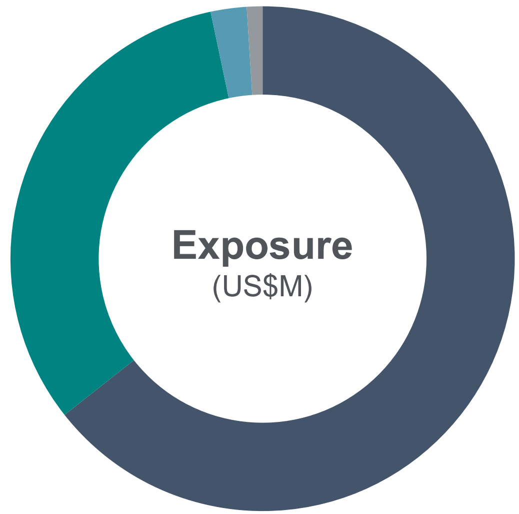
ARROWSTREET CAPITAL

Assets Under Management

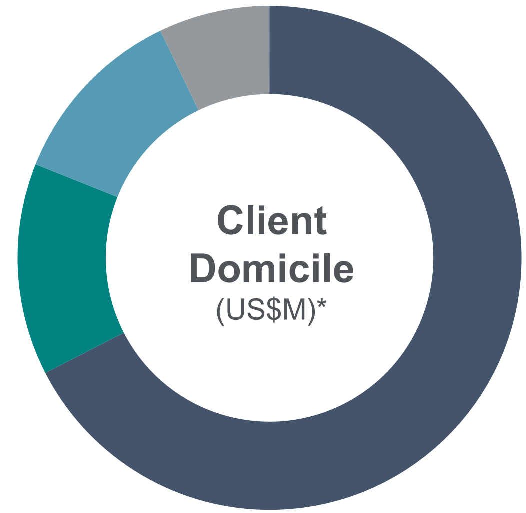
— US$205,146M —



$149,037	■	Global Equities
$43,206	■	Non-US Equities
$8,730	■	Emerging Markets Equities
$4,173	■	US Equities



$132,070	■	Long-Only Equities
$66,285	■	Alpha Extension Equities
$4,724	■	Beta Neutral Equities
$2,068	■	250/150 Alpha Extension Equities



$138,375	■	United States
$27,905	■	EMEA
$24,233	■	Asia-Pacific
$14,510	■	Canada

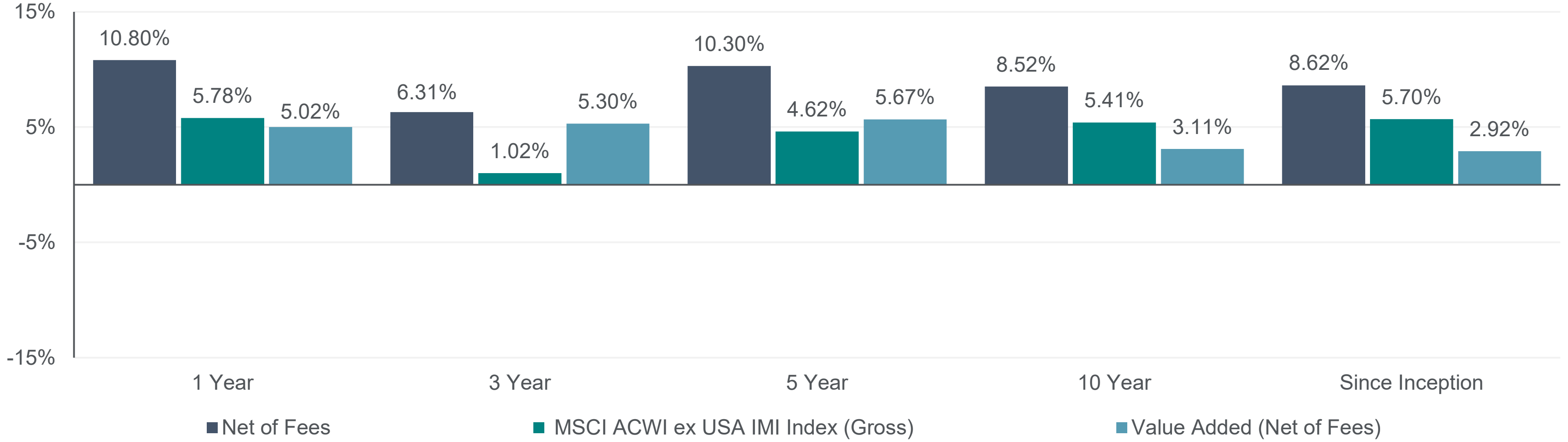
Data as of December 31, 2024.
*Top four Client Domiciles by AUM.
Figures presented above are in USD.
Source: Arrowstreet Internal Databases.

ARROWSTREET CAPITAL

Performance, Attribution, & Positioning

Public Employees Retirement System of Mississippi[1,2]

Performance Since Inception as of December 31, 2024



	1 Year	3 Year	5 Year	10 Year	Since Inception (07/01/2013)
Portfolio Total Return (Net of Fees)[3,4,5]	10.80%	6.31%	10.30%	8.52%	8.62%
Benchmark: MSCI ACWI ex USA IMI Index (Gross)[6]	5.78%	1.02%	4.62%	5.41%	5.70%
Value Added (Net of Fees)[7]	5.02%	5.30%	5.67%	3.11%	2.92%

Portfolio Statistics[8]	Since Inception
Tracking Error	3.68%
Information Ratio	0.93

Source: Arrowstreet Internal Databases.

Please see the Performance Disclosures for important disclosures to be read in conjunction with the performance results presented above

Basket-Based Attribution (Net of Fees):

Quarter Ending December 31, 2024

	Total	COMMUNICATION SERVICES	CONSUMER DISCRETIONARY	CONSUMER STAPLES	ENERGY	FINANCIALS	HEALTH CARE	INDUSTRIALS	INFORMATION TECHNOLOGY	MATERIALS	REAL ESTATE	UTILITIES
Total	262	(32)	49	44	25	44	36	(29)	24	77	17	7
DEV AUSTRALIA	11	1	4	1	1	(10)	1	(1)	0	12	2	(0)
DEV AUSTRIA	1	0	0	0	0	1	0	0	0	0	0	0
DEV BELGIUM	1	(0)	(0)	4	0	(0)	(4)	0	0	0	1	0
DEV CANADA	(13)	(31)	(1)	(1)	9	(5)	(0)	(2)	(1)	7	0	11
DEV DENMARK	23	0	0	1	(5)	(0)	24	2	(0)	1	0	1
DEV FINLAND	(1)	0	0	0	1	0	0	(5)	2	1	0	0
DEV FRANCE	13	(0)	3	7	4	(2)	1	(4)	2	3	0	(1)
DEV GERMANY	14	(1)	3	0	0	1	5	(2)	3	3	1	2
DEV HONG KONG	(2)	(0)	0	(1)	(0)	(5)	(0)	(0)	0	0	3	0
DEV IRELAND	(3)	0	(0)	0	0	(4)	0	1	0	0	(0)	0
DEV ISRAEL	(5)	(0)	(1)	(0)	(0)	0	(0)	(2)	(1)	0	(1)	(0)
DEV ITALY	34	(0)	(0)	0	(1)	30	0	5	(0)	(0)	0	0
DEV JAPAN	(59)	(3)	(14)	(3)	(7)	7	0	(10)	(12)	3	1	(19)
DEV NETHERLANDS	7	(0)	0	1	(0)	(11)	1	10	5	2	0	0
DEV NEW ZEALAND	(1)	0	0	0	0	(0)	(1)	(0)	0	0	0	(0)
DEV NORWAY	1	(0)	(0)	(0)	1	(1)	0	(0)	(0)	0	0	0
DEV PORTUGAL	13	0	0	(0)	0	11	0	(0)	0	0	0	2
DEV SINGAPORE	7	13	(0)	0	(0)	(6)	(0)	(2)	(0)	0	2	(0)
DEV SPAIN	4	1	(2)	(0)	0	3	0	(1)	0	0	0	1
DEV SWEDEN	8	1	0	0	0	(2)	1	5	0	1	2	0
DEV SWITZERLAND	23	0	(1)	10	0	8	(1)	2	1	4	(0)	0
DEV UNITED KINGDOM	0	(5)	(1)	3	(2)	(8)	5	0	(1)	5	3	1
DEV UNITED STATES	0	0	0	0	0	0	0	0	0	0	0	0
EMK BRAZIL	(7)	(0)	(6)	1	4	(10)	1	2	0	0	0	1
EMK CHILE	0	0	1	(0)	0	(0)	0	(0)	0	0	(0)	(0)
EMK CHINA	74	(6)	54	2	(3)	55	1	(31)	2	(3)	3	(0)
EMK COLOMBIA	3	0	0	0	0	3	0	0	0	(0)	0	0
EMK CZECH REPUBLIC	(0)	0	0	(0)	0	(0)	0	(0)	0	0	0	(0)
EMK EGYPT	(0)	0	0	(0)	0	(0)	0	0	0	0	0	0
EMK GREECE	0	0	0	(0)	(0)	0	0	0	0	(0)	0	(0)
EMK HUNGARY	0	(0)	0	0	(0)	0	0	0	0	0	0	0
EMK INDIA	49	2	8	7	9	7	(1)	6	(2)	8	1	6
EMK INDONESIA	5	0	(0)	0	0	3	0	0	0	1	0	(0)
EMK KOREA	15	(5)	(2)	11	0	6	1	1	(2)	5	0	(0)
EMK KUWAIT	(1)	0	(0)	(0)	0	(1)	0	(0)	0	(0)	0	(0)
EMK MALAYSIA	(2)	0	0	(0)	(0)	(0)	(1)	(1)	(0)	0	(0)	(0)
EMK MEXICO	1	1	0	1	0	(0)	(0)	(1)	0	1	0	0
EMK PERU	1	0	0	0	0	(0)	0	0	0	1	0	0
EMK PHILIPPINES	2	0	0	0	(0)	0	0	0	0	0	1	(0)
EMK POLAND	2	0	0	(0)	0	0	0	0	(0)	1	0	0
EMK QATAR	(0)	0	0	0	0	(0)	0	(0)	0	0	0	0
EMK SAUDI ARABIA	1	1	0	0	(1)	(2)	1	0	0	1	(0)	1
EMK SOUTH AFRICA	4	0	1	(0)	0	0	0	0	(0)	2	0	0
EMK TAIWAN	34	(0)	1	1	0	(0)	0	(0)	28	4	0	0
EMK THAILAND	2	(0)	0	1	0	(0)	1	0	(1)	1	0	0
EMK TURKEY	(31)	0	0	0	0	(32)	(0)	0	0	0	(0)	(0)
EMK UAE	(3)	1	0	0	(0)	(1)	0	(0)	0	0	(3)	(0)
FMK ARGENTINA	1	0	0	0	0	0	0	0	0	1	0	0
FMK PAKISTAN	38	0	0	0	14	9	0	0	0	13	0	1
FMK RUSSIA	0	0	0	0	0	0	0	0	0	0	0	0

Legend	
Added Value (Active weight > 15 bps)	X
Lost Value (Active weight > 15 bps)	(X)
Added Value (Active weight < -15 bps)	X
Lost Value (Active weight < -15 bps)	(X)

Date: As of December 31, 2024
Source: Arrowstreet Internal Databases
Note: Basket grid shows value added contributions in basis points. The portfolio performance attribution assesses performance from a country, sector, basket, and stock perspective. The information above is presented net of management fees. Returns for the portfolio as a whole are included herein. Due to rounding, values of 0 represent an effect of less than 0.5 basis points. Numbers in parentheses indicate negative values.

ARROWSTREET CAPITAL

Summary Attribution Results (Net of Fees):
Quarter Ending December 31, 2024

Summary Attribution Results (Net)			
	Developed	**Emerging & Frontier**	**Total**
Equity Allocation	0.64	1.36	2.00
Equity Selection	0.12	0.50	0.62
Total Equity Effect	0.76	1.86	2.62
Currency Allocation	0.09	-0.36	-0.27
Currency Selection	0.00	-0.00	0.00
Total Currency Effect	0.09	-0.36	-0.27
Futures Cash			
Cash			0.01
Total Cash Effect			0.01
Compounding Effect			-0.16
Trade Cost & Unexplained Effects			-0.01
Value Added (Net)			**2.19**

Note: Basket grid shows value added contributions in basis points. The portfolio performance attribution assesses performance from a country, sector, basket, and stock perspective. The information above is presented net of management fees. Returns for the portfolio as a whole are included herein. Due to rounding, values of 0 represent an effect of less than 0.5 basis points. Numbers in parentheses indicate negative values.

ARROWSTREET CAPITAL

Active (Benchmark-Relative) Portfolio Weights

As of December 31, 2024

Country	Total	Comm. Services	Consumer Disc.	Consumer Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Real Estate	Utilities
Total		1.67	-1.46	-3.86	1.98	9.54	-5.09	-2.76	3.68	-3.14	-2.32	0.44
Developed Markets	-7.22	2.41	-2.73	-3.02	-0.35	4.58	-4.02	-3.09	1.64	-1.93	-1.62	0.90
Australia	-3.67	0.06	0.19	-0.09	-0.20	-1.62	-0.41	-0.26	-0.11	-0.87	-0.30	-0.06
Austria	-0.05				-0.02	0.03		-0.02	0.00	-0.01	0.00	-0.02
Belgium	-0.53	0.00	-0.01	-0.17		-0.10	-0.22	-0.03	0.09	-0.04	-0.05	-0.01
Canada	0.63	0.64	0.16	-0.21	0.18	-2.05	-0.01	-0.67	0.16	1.45	-0.04	1.02
Denmark	-1.40		-0.01	-0.05	0.09	-0.05	-1.08	-0.20	-0.01	-0.07		-0.03
Finland	0.77	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	0.35	0.64	-0.09	-0.01	-0.02
France	-4.92	-0.19	-1.12	-0.54	-0.43	0.26	-0.67	-1.51	-0.17	-0.34	-0.04	-0.18
Germany	-0.93	0.53	-0.26	-0.06	0.00	0.12	-0.34	-0.84	0.46	-0.28	-0.12	-0.15
Hong Kong	0.35	-0.03	-0.04	0.39	0.02	0.09	-0.01	-0.02	-0.02		0.06	-0.09
Ireland	0.50		-0.01	-0.06		0.61	0.00	-0.04			0.00	
Israel	-0.03	-0.01	-0.03	-0.02	0.06	0.01	-0.01	0.10	-0.06	0.00	-0.07	-0.02
Italy	2.56	0.07	-0.36	-0.02	-0.05	2.69	-0.04	0.40	-0.02	-0.01		-0.11
Japan	1.64	0.30	-0.06	0.01	0.41	-0.20	0.55	-1.40	1.79	-0.66	-0.49	1.39
Netherlands	2.27	-0.12	-0.19	-0.26	-0.02	2.73	-0.07	1.28	-0.98	-0.11	-0.01	
New Zealand	-0.17	-0.01				-0.02	-0.06	-0.03			-0.01	-0.04
Norway	0.10	-0.02	0.00	-0.05	0.29	-0.08		0.02	-0.01	-0.04	0.00	0.00
Portugal	0.80	0.00		0.04	0.00	0.82		0.00		-0.01		-0.05
Singapore	0.14	0.77	0.00	-0.03	0.00	-0.47	0.00	0.05	-0.01	0.00	-0.16	-0.01
Spain	0.37	-0.11	-0.01	-0.01	0.00	1.04	-0.02	-0.14	0.00	-0.01	-0.02	-0.35
Sweden	-0.64	-0.03	-0.06	-0.03		0.56	-0.10	-0.74	-0.05	-0.09	-0.10	
Switzerland	-0.27	-0.06	-0.30	-0.82		0.92	-0.52	0.66	0.05	-0.12	-0.07	-0.01
United Kingdom	-4.72	0.63	-0.60	-1.03	-0.67	-0.69	-0.99	-0.03	-0.13	-0.63	-0.20	-0.38
United States												
Emerging Markets	4.63	-0.75	1.27	-0.83	1.88	4.69	-1.06	0.33	2.04	-1.58	-0.70	-0.66
Brazil	1.68	0.01	0.13	-0.08	0.72	0.91	-0.02	0.28	-0.01	-0.16	-0.01	-0.08
Chile	0.10	0.00	0.14	-0.02		-0.02		0.04		-0.02	-0.01	-0.02
China	9.55	-0.25	1.54	-0.31	1.90	4.70	-0.16	1.22	1.25	0.04	-0.18	-0.19
Colombia	0.40					0.41				0.00		-0.01
Czech Republic	-0.03			0.00		-0.01		0.00				-0.02
Egypt	0.02	0.00		0.00		0.02				0.00	0.00	
Greece	-0.06	-0.01	-0.01	0.00	0.00	0.01		-0.02		-0.01	0.00	-0.01
Hungary	0.00	0.00			0.00	0.01	-0.01	0.00				
India	-6.25	-0.24	-0.82	-0.37	-0.42	-1.56	-0.46	-0.74	-0.70	-0.55	-0.14	-0.24
Indonesia	-0.45	-0.04	-0.02	-0.04	-0.02	-0.23	-0.01	-0.02	0.00	-0.05	0.00	0.00
Korea	4.17	0.15	0.61	0.49	-0.02	2.53	-0.20	-0.15	0.71	-0.05	-0.01	0.10
Kuwait	-0.24	-0.01	-0.01	0.00		-0.19		-0.01		0.00	-0.01	0.00
Malaysia	-0.49	-0.03	-0.01	-0.06	-0.01	-0.18	-0.03	-0.06	-0.02	-0.03	-0.02	-0.04
Mexico	-0.12	-0.05	0.00	-0.09		0.01	0.00	0.14		-0.09	-0.03	
Peru	-0.08					-0.04				-0.03		
Philippines	-0.17	-0.01	-0.01	-0.01	0.00	-0.04		-0.05		0.00	-0.03	-0.01
Poland	-0.01	0.13	-0.03	-0.02	-0.02	-0.03		-0.01	0.00	-0.02		-0.01
Qatar	-0.24	-0.01		0.00	-0.02	-0.15		-0.03	0.00	-0.01	-0.01	-0.01
Saudi Arabia	-1.24	-0.11	-0.03	-0.06	-0.15	-0.47	-0.05	-0.04	-0.03	-0.20	-0.03	-0.07
South Africa	-0.61	-0.04	0.01	-0.09	-0.01	-0.23	-0.02	-0.03	0.00	-0.16	-0.04	
Taiwan	-0.30	-0.11	-0.14	-0.08		-0.59	-0.05	-0.04	0.91	-0.17	-0.03	-0.01
Thailand	-0.39	-0.06	-0.04	-0.06	-0.03	0.03	-0.04	-0.04	-0.05	-0.02	-0.03	-0.03
Turkey	-0.25	0.00	-0.02	-0.04	-0.01	-0.06	0.00	-0.07	0.00	-0.03	-0.01	-0.01
Uae	-0.37	-0.05	-0.02	0.00	-0.02	-0.14		-0.03	0.00		-0.11	0.00
Frontier Markets	1.29				0.45	0.27				0.36		0.21
Argentina	0.06									0.06		
Pakistan	1.22				0.45	0.26				0.30		0.21
Russia	0.01				0.01	0.01				0.00		

Legend	Color Code
> 0.15	(blue)
< -0.15	(red)

Active Cash Position	1.30
Futures Cash	

Date: As of December 31, 2024
Source: Arrowstreet Internal Databases
Portfolio Weights are measured at the end of the calendar period indicated. Weights may temporarily drift beyond position limits in between trading sessions because of price movements, and weights may be impacted by cash flows occurring around the end of the period. Due to rounding, values of 0.00 represent an exposure of less than 0.005 percent.

ARROWSTREET CAPITAL

Active (Benchmark-Relative) Portfolio Weight Shifts
As of December 31, 2024, from Prior Quarter End

Country	Total	Comm. Services	Consumer Disc.	Consumer Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Real Estate	Utilities
Total		0.78	2.81	0.23	-0.92	-4.64	-0.85	-0.12	2.71	1.86	0.02	-1.42
Developed Markets	0.90	0.35	1.69	0.39	-0.56	-3.06	-0.87	0.63	2.06	1.72	0.03	-1.49
Australia	-0.08	-0.02	0.16	-0.13	0.02	-0.01	-0.29	0.00	0.00	0.16	0.04	0.00
Austria	0.01				0.00	0.00		0.00	0.00	0.00	0.00	0.00
Belgium	0.10	0.00	0.00	0.04		0.00	-0.04	-0.01	0.10	0.01	0.01	0.00
Canada	0.57	-0.62	0.18	0.09	0.17	-1.16	0.01	-0.09	0.19	1.12	0.00	0.68
Denmark	0.26		0.00	0.01	-0.06	0.00	0.25	0.04	0.00	0.01		0.01
Finland	0.75	0.00	0.00	0.00	0.01	0.00	0.00	0.05	0.67	0.01	0.00	0.00
France	0.02	0.02	0.04	0.07	-0.31	0.55	0.04	0.12	0.02	0.03	0.00	-0.57
Germany	1.40	0.61	0.27	0.00	0.00	-0.07	0.02	0.03	0.58	0.03	0.01	-0.09
Hong Kong	0.91	0.00	0.05	0.01	0.00	0.65	0.00	-0.01	0.00		0.22	-0.01
Ireland	-0.06		0.00	0.00		-0.07	0.00	0.01			0.00	
Israel	0.02	0.00	-0.01	0.00	0.00	0.00	0.00	0.03	0.03	0.00	-0.02	0.00
Italy	-0.55	-0.01	-0.02	0.00	-0.01	-0.76	0.00	0.04	0.00	0.00		0.20
Japan	-1.18	0.33	0.80	0.17	-0.35	-1.16	0.26	0.02	0.47	0.00	-0.31	-1.41
Netherlands	-0.62	-0.01	0.01	0.01	0.00	-0.74	0.01	0.04	0.03	0.03	0.00	
New Zealand	-0.01	0.00				0.00	0.00	-0.01			0.00	0.00
Norway	-0.04	0.00	0.00	0.00	-0.03	-0.01	0.00	-0.01	0.00	0.01	0.00	0.00
Portugal	0.08	0.00		-0.03	0.00	0.09		0.00		0.00		0.02
Singapore	0.09	0.12	0.00	0.00	0.00	-0.06	0.00	0.02	0.00	0.00	0.01	0.00
Spain	0.13	0.02	0.11	0.00	0.00	-0.05	0.00	0.03	0.00	0.00	0.00	0.02
Sweden	0.15	-0.01	0.07	0.00		-0.19	0.01	0.19	0.06	0.01	0.02	
Switzerland	0.00	-0.06	0.00	0.10		0.02	-0.37	0.05	0.01	0.24	0.00	0.00
United Kingdom	-1.06	-0.03	0.03	0.04	-0.01	-0.09	-0.78	0.10	-0.10	0.07	0.04	-0.35
United States												
Emerging Markets	-0.95	0.42	1.12	-0.17	-0.50	-1.75	0.02	-0.76	0.65	-0.03	-0.02	0.05
Brazil	1.30	0.00	0.16	0.01	0.15	0.69	0.01	0.23	0.00	0.03	0.00	0.01
Chile	0.00	0.00	0.00	0.00		0.00		0.00		0.00	0.00	0.00
China	-0.17	0.48	1.00	0.02	-0.65	-0.18	0.05	-1.04	0.33	-0.21	0.02	0.00
Colombia	0.02					0.02				0.00		0.00
Czech Republic	0.00			0.00		0.00		0.00				0.00
Egypt	0.00	0.00		0.00		0.00				0.00	0.00	
Greece	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00
Hungary	0.00	0.00			0.00	0.00	0.00	0.00				
India	-0.01	0.00	0.02	0.04	0.06	-0.11	-0.05	0.01	-0.06	0.04	-0.02	0.05
Indonesia	0.05	0.00	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.01	0.00	0.00
Korea	-0.16	-0.21	-0.07	-0.30	0.00	-0.14	0.00	-0.16	0.68	0.05	0.00	-0.01
Kuwait	-0.02	0.00	0.00	0.00		-0.02		0.00		0.00	0.00	0.00
Malaysia	-0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.01
Mexico	0.38	0.00	0.00	0.06		0.10	0.00	0.22		0.00	0.00	
Peru	0.00					0.00				0.01		
Philippines	0.01	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.01	0.00
Poland	0.16	0.15	0.00	0.00	0.00	0.00		0.00	0.00	0.01		0.00
Qatar	-0.02	0.00		0.00	0.00	-0.01		0.00	0.00	0.00	0.00	0.00
Saudi Arabia	-0.11	0.00	0.00	0.00	-0.05	-0.05	0.00	0.00	0.00	0.00	0.00	0.00
South Africa	0.04	0.00	0.01	0.00	-0.01	0.01	0.00	0.00	0.00	0.01	0.00	
Taiwan	-0.28	0.00	0.01	0.00		-0.03	0.01	0.00	-0.29	0.03	0.00	0.00
Thailand	-0.01	-0.01	0.00	0.01	-0.02	0.00	0.01	0.00	-0.02	0.01	0.00	0.00
Turkey	-2.07	0.00	0.00	0.00	0.00	-2.06	0.00	-0.01	0.00	0.00	0.00	0.00
Uae	-0.03	0.00	0.00	0.00	0.00	0.00		0.00	0.00		-0.03	0.00
Frontier Markets	0.50				0.15	0.16				0.17		0.03
Argentina	0.06									0.06		
Pakistan	0.45				0.15	0.16				0.11		0.03
Russia	0.00				0.00	0.00				0.00		

Legend	Color Code
> 0.15	(blue)
< -0.15	(red)

Active Cash Shift	-0.45
Futures Cash	

Date: As of December 31, 2024
Source: Arrowstreet Internal Databases
Portfolio Weights are measured at the end of the calendar period indicated. Weights may temporarily drift beyond position limits in between trading sessions because of price movements, and weights may be impacted by cash flows occurring around the end of the period. Due to rounding, values of 0.00 represent an exposure of less than 0.005 percent.

ARROWSTREET CAPITAL

Currency Weights

As of December 31, 2024

Currency	Portfolio Weight Equity*	Portfolio Weight FX Instruments**	Benchmark Weight	Active Weight*	Active Weight Shifts*
Developed Markets	**63.01**	**1.20**	**70.09**	**-5.89**	**0.51**
Australian Dollar	1.12	0.00	5.01	-3.88	-0.07
British Pound	4.38	0.01	8.36	-3.97	-1.21
Canadian Dollar	8.57	-0.04	7.93	0.59	0.57
Danish Krone	0.31	0.01	1.71	-1.39	0.26
Euro	20.25	0.67	19.82	1.09	1.31
Hong Kong Dollar	1.56	0.02	1.18	0.39	0.84
Israeli New Shekel	0.79	0.01	0.82	-0.03	0.02
Japanese Yen	17.29	0.03	15.65	1.67	-1.37
New Zealand Dollar	0.00	0.00	0.17	-0.17	-0.01
Norwegian Kroner	0.59	0.01	0.50	0.11	-0.03
Singapore Dollar	1.21	0.01	1.07	0.14	0.09
Swedish Krona	1.73	0.01	2.37	-0.63	0.16
Swiss Franc	5.21	0.22	5.49	-0.05	0.11
US Dollar	0.00	0.24	0.01	0.23	-0.15
Emerging Markets	**34.39**	**0.08**	**29.88**	**4.59**	**-1.00**
Brazilian Real	2.85	0.03	1.16	1.72	1.25
Chilean Peso	0.26	0.00	0.16	0.10	0.00
Chinese Yuan Renminbi	17.08	0.00	7.55	9.53	-0.17
Chinese Yuan Renminbi - Offshore	0.00	0.00	0.00	0.00	0.00
Colombian Peso	0.43	0.00	0.03	0.40	0.02
Czech Koruna	0.01	0.00	0.04	-0.03	0.00
Egyptian Pound	0.04	0.00	0.02	0.02	0.00
Hungarian Forint	0.07	0.00	0.07	0.00	0.00
Indian Rupee	0.00	0.00	6.25	-6.25	-0.01
Indonesian Rupiah	0.01	0.00	0.46	-0.45	0.05
Korean Won	6.90	0.01	2.74	4.18	-0.16
Kuwaiti Dinar	0.00	0.00	0.24	-0.24	-0.02
Malaysian Ringgit	0.03	0.00	0.52	-0.49	-0.02
Mexican Peso	0.39	0.01	0.51	-0.11	0.39
Peruvian Nuevo Sol	0.00	0.00	0.08	-0.08	0.00
Philippine Peso	0.00	0.00	0.17	-0.17	0.01
Polish Zloty	0.26	0.00	0.26	0.00	0.15
Qatari Rial	0.00	0.00	0.24	-0.24	-0.02
Saudi Riyal	0.00	0.00	1.24	-1.24	-0.11
South African Rand	0.29	0.01	1.05	-0.74	0.05
Taiwan Dollar	5.63	0.01	5.94	-0.30	-0.28
Thai Baht	0.11	0.00	0.50	-0.39	-0.01
Turkish Lira, New	0.01	0.00	0.27	-0.26	-2.07
United Arab Emirates Dirham	0.02	0.00	0.40	-0.37	-0.03
Frontier Markets	**1.29**	**0.03**	**0.03**	**1.30**	**0.49**
Argentine Peso	0.06	0.00	0.03	0.03	0.06
Georgian Lari	0.00	0.00	0.00	0.00	0.00
Pakistan Rupee	1.22	0.01	0.00	1.23	0.44
Russian Rouble	0.01	0.02	0.00	0.03	0.00

Legend	Color Code
> 1.00	(blue)
< -1.00	(red)

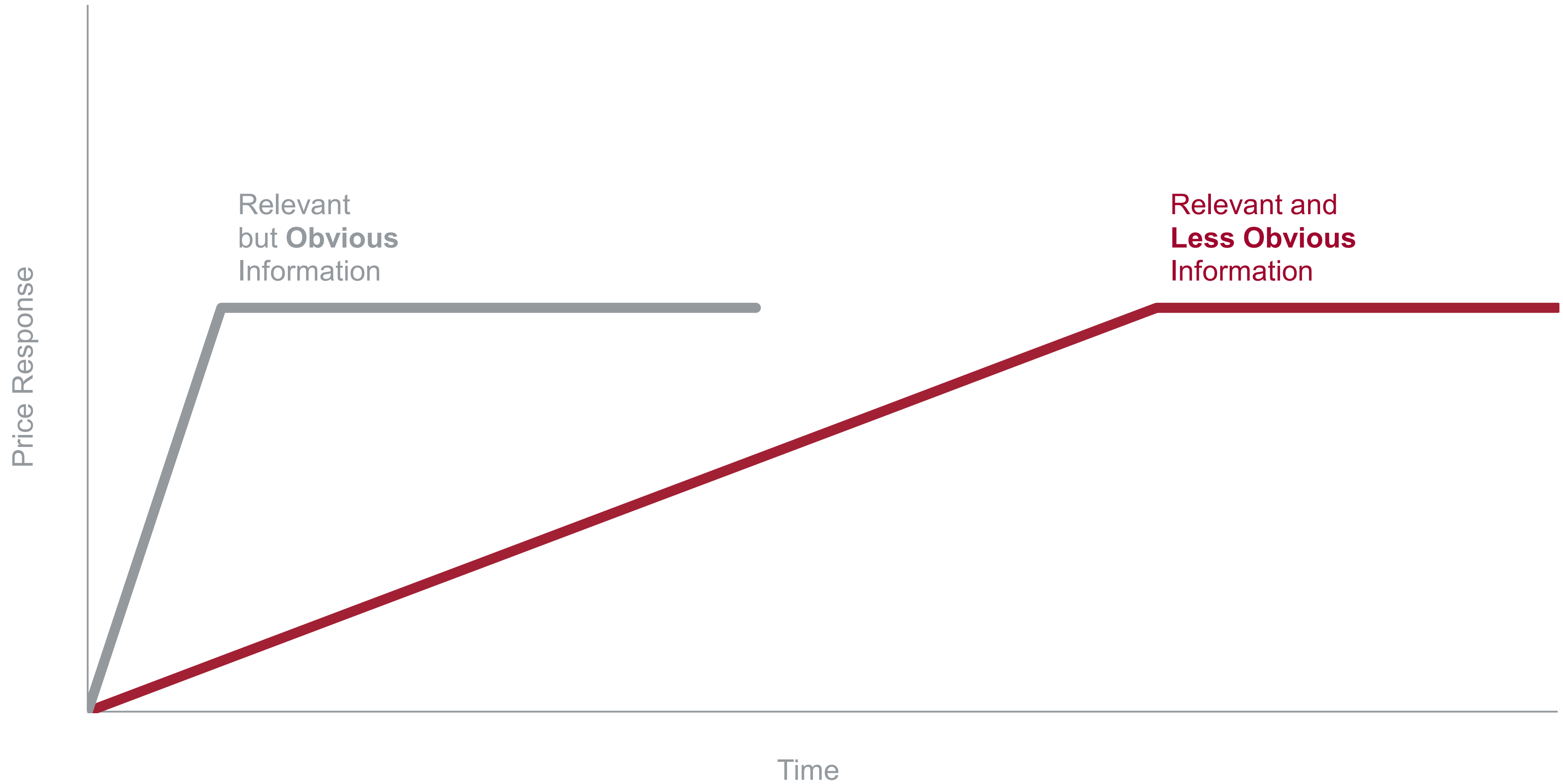
ARROWSTREET CAPITAL

Supporting Materials

Investment Philosophy

Adding Value by Identifying Investment Signals that are

Relevant to Price & Less Obvious to Investors



Stylized representation. For illustrative purposes only.

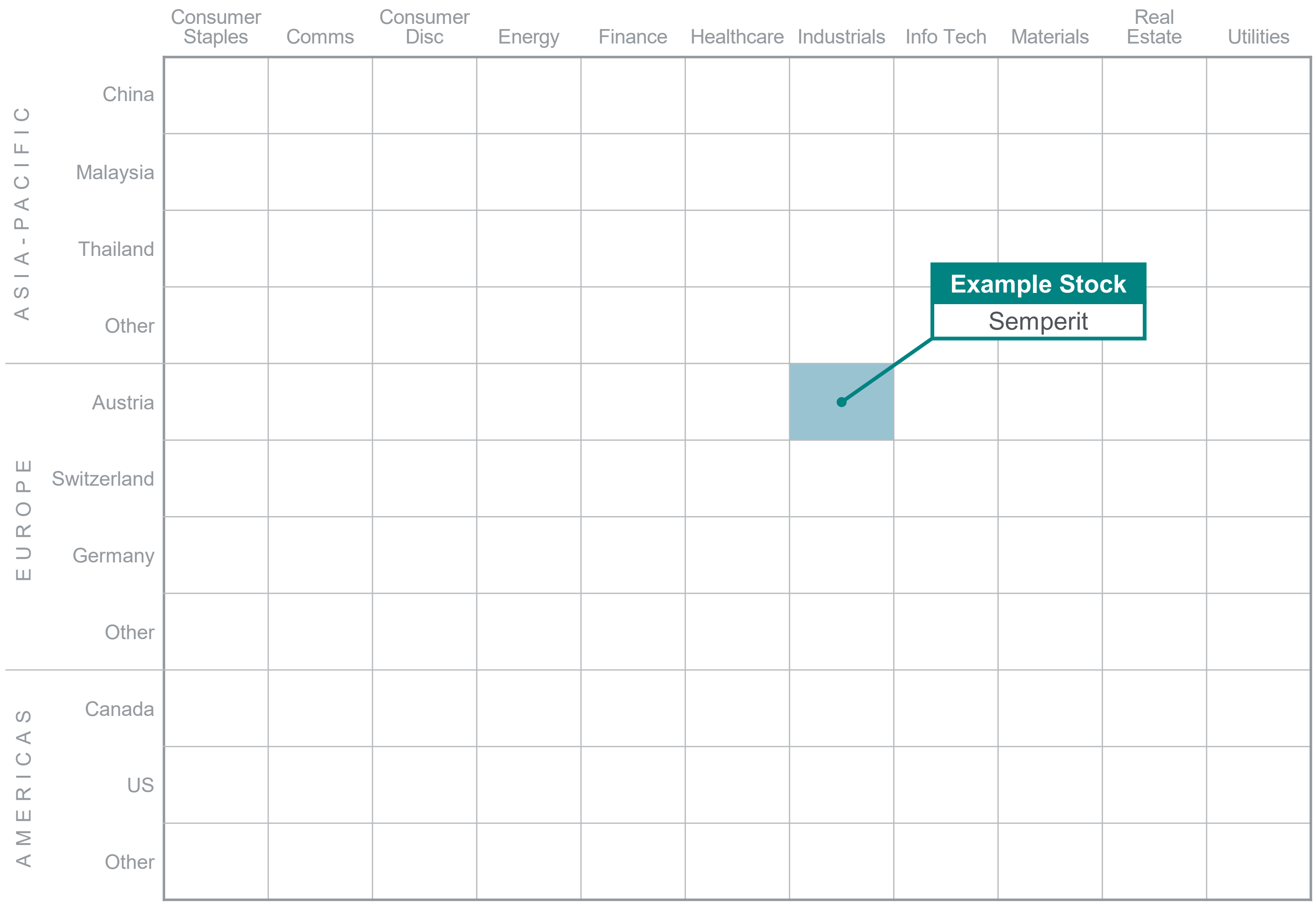
ARROWSTREET CAPITAL

Defining Direct Effects

Influence of Stock Information

Signal Groups

> Catalysts
> Extreme Sentiment
> High Frequency
> Momentum
> Quality
> Value



Data as of June 2023.
Source: Arrowstreet Internal Databases.

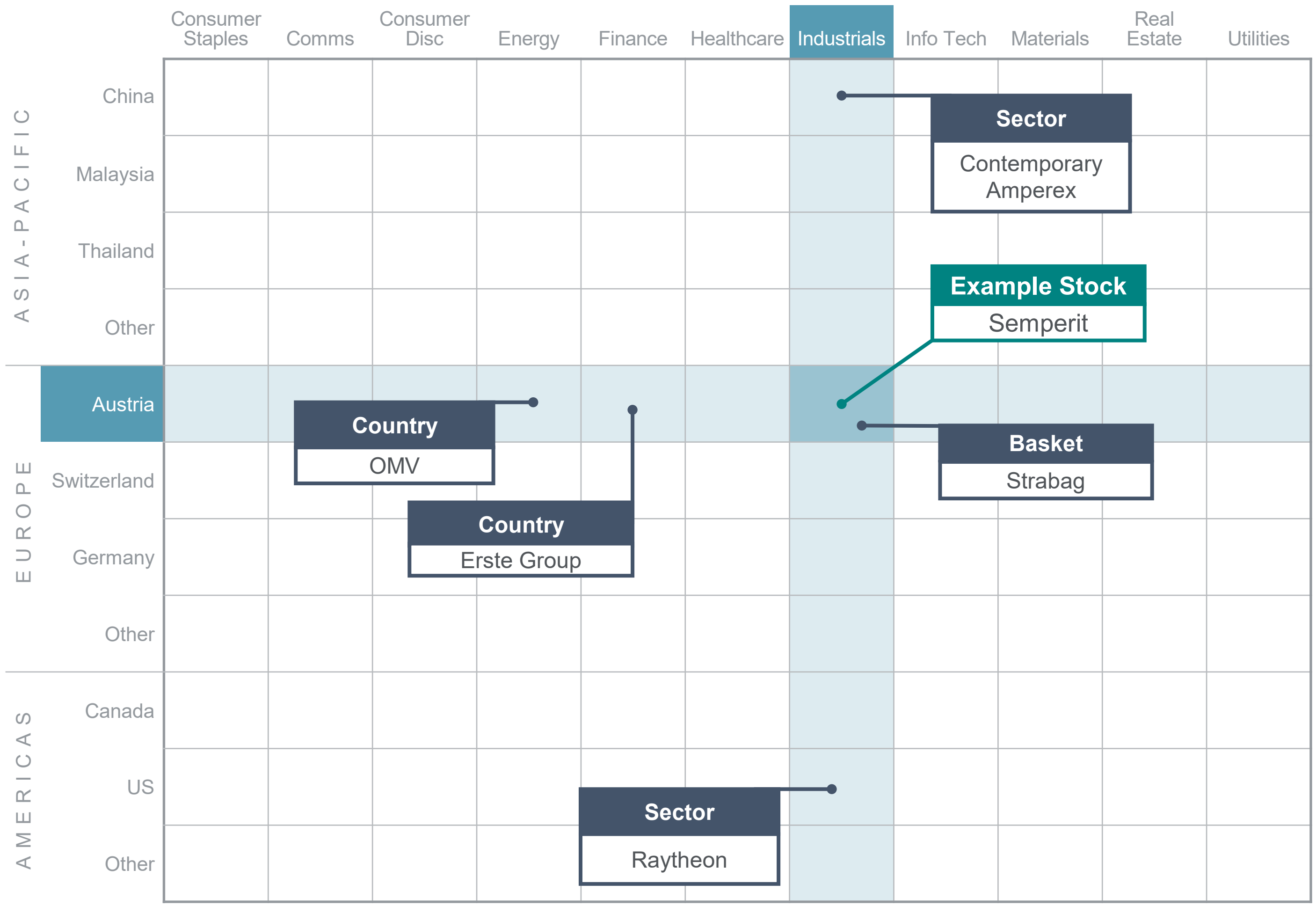
ARROWSTREET CAPITAL

Defining Indirect Effects

Influence of Sector, Country & Basket Information

Signal Groups

- > Catalysts
- > Extreme Sentiment
- > High Frequency
- > Momentum
- > Quality
- > Value



Data as of June 2023.
Source: Arrowstreet Internal Databases.

ARROWSTREET CAPITAL

Portfolio Construction

Client Portfolios Built Considering Forecasts, Transaction Costs, and Risks

Attribution Disclosures

Cash Position

The sum of the active portfolio shifts, inclusive of the active cash shift, may not sum to zero due to certain factors including, subscription or redemption activity in a given period.

Country Classification

Positions outside of the account's investible country universe may arise because of securities received through corporate actions, benchmark country re-classifications, country classifications that differ across benchmark providers, or other passive activities.

Portfolio Attribution: A Guide to Reading the Chart

Arrowstreet Capital, Limited Partnership's ("Arrowstreet") portfolio attribution measures performance simultaneously from a country, sector, basket, and stock perspective, consistent with the way we make our portfolio decisions. Analysis in this form is different from traditional country- or sector- based attribution, which implicitly assumes a manager's decision begins from a country or sector perspective and then moves to the selection of securities within each country or sector group.

Basket Based Performance Attribution

Each cell in the attribution table represents the combined value added (lost) from both the basket over- or under-weighting decision relative to the benchmark and active security selection within each basket using a geometric calculation methodology for the periods covered. Baskets with significant under-weight or over-weight positions (as defined by an active weight of greater than 15 bps or less than -15 bps) are displayed with shading while all others are displayed without shading.

Attribution Results

This section shows the key components of the realized cumulative results of all actual portfolio weights and characteristics **(Value Added): Equity Allocation** value added estimates presented in the table are a function of active daily basket weights and returns of those baskets in excess of the benchmark. They represent the portion of the total portfolio value added that is attributed to basket selection. **Equity Selection** value added estimates presented in the table are a function of daily stock weights and returns of those stocks in excess of the basket itself. They represent the portion of the total portfolio value added that is attributed to active stock selection. The **Total Currency Effect** value added estimate presented in the table is a function of daily currency exposures that differ from those of the benchmark. Currency Allocation value added estimates presented in the table represents the Total Currency Effect that would have been realized if the portfolio had held foreign exchange forward contract(s) that were constant maturity three-month forward maturities. **Currency Selection** value added estimates presented in the table represent the portion of the Total **Currency Effect** that is attributed to active selection of specific foreign exchange forward contract maturities. Please see Note #6 below for additional disclosures related to currency effects. **Cash Effect** value added estimates presented in the table represent the effect of cash held in the portfolio. **Compounding** occurs during the geometric linking of historical attribution effects. Because subsequent portfolio and benchmark returns can distort intra-period attribution results, we separately measure and account for this as the **Compounding Effect**. **Futures Cash** represents the contribution to value added from holding futures contracts in the portfolio. For accounts that utilize futures for beta management, please see additional notes included below the Summary Beta Arb Attribution Results table. The sum of measured attribution effects can differ from actual **Value Added** because of the impact of **Trading Costs and Unexplained Effects**. This latter category is a residual. **USD to Base Effect** represents the effect that results when converting the value added of the portfolio from USD to the portfolio's base currency, noting that the other effects that we calculate in our portfolio attribution are based on USD returns.

Impact of Fees

The attribution results presented herein for a Portfolio are presented gross of management fees and performance fees (where applicable) and net of management fees and performance fees (where applicable). Arrowstreet applies management fees and performance fees (where applicable) to the Portfolio at the investor level. Arrowstreet does not apply management fees and performance fees (where applicable) to the Portfolio at the country, sector, basket or stock level. For purposes of this presentation, attribution results, net of management fees and performance fees (where applicable) are calculated by determining the difference between the Portfolio's total portfolio return (gross of fees) and the Portfolio's total portfolio return (net of fees) and allocating that difference across the corresponding equity, currency and cash attribution components. For example, sector-level attribution reflects an allocation of the difference applicable to equity attribution components specifically. Additional details regarding the methodology for allocating such fee across the various reporting components are available upon request.

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Attribution Disclosures

Notes

1. Arrowstreet's proprietary portfolio attribution system has been used to perform the attribution analysis.
2. The summary attribution results presented herein are calculated by comparing performance of certain investments from the portfolio, gross of management fees and performance fees (where applicable) and include the reinvestment of dividends, to performance of corresponding investments of the benchmark. Returns for the portfolio as a whole are included herein. Please refer to the Performance Disclosures above for further details on the calculation of returns. Past performance is no guarantee of future results.
3. The Global Industry Classification Standard (GICS) is the source for sector classifications and the Benchmark provider, where available, is the source for country classifications. In the absence of a country classification by the Benchmark provider, other relevant index providers may be referenced.
4. The pricing source primarily used by the Portfolio Attribution system is provided via Bloomberg, although alternate pricing sources (mainly MSCI, FTSE, Russell, Citi and State Street Bank) may be used where Bloomberg prices are not readily available.
5. All portfolio records are maintained by a third party middle office service provider. The Portfolio Value Added number is computed using these records and the official benchmark return as provided by the relevant index provider. The difference between the official benchmark return and the benchmark return used in the attribution analysis, calculated from unofficial pricing sources, has been determined to usually be immaterial. This difference is included in the Trading Costs and Unexplained Effects line item in the Attribution Results section.
6. Arrowstreet employs its own proprietary definition for assigning currency exposure associated with each stock in client portfolios and benchmarks. These definitions may, at times, be at odds with those of a particular benchmark provider and result in different assessments of the portfolios' active exposure towards currency lines.
7. For return months April 2020 and earlier, we have recalculated historical attribution coefficients to reflect enhancements to our attribution methodology. Those attribution enhancements include more realistic realized return measurements and an improvement in how we weight as-reported stock forecasts with the objective of focusing more precisely on the stocks that are most relevant for our investment process. These enhancements are minor, and consequently the corresponding changes to historical attribution coefficients are also generally minor. Importantly, while these enhancements lead to a more accurate evaluation of forecast success, the forecasts that we are evaluating remain unchanged: they are the as-reported forecasts that we actually generated at each historical point in time.

Model Attribution Methodology

Arrowstreet’s investment process is driven by our return forecasts. The stock model and basket model are the primary equity return forecasting models and are supplemented by the currency model. These models produce forecasts which are then combined with several additional inputs in a proprietary optimization process to generate a recommended set of stocks to buy and sell that are specific to each portfolio and its overall investment objective, risk tolerances and benchmark.

We assess the effectiveness of our forecasting models using regression analysis. These cross-sectional regressions explain the realized returns during the month with the smoothed forecasts or smoothed forecast components as of the beginning of the month. Each of the realized coefficients (red bar) on the attribution graphs represents the attribution coefficient obtained from one month's regression. The 3-month moving average of the factor coefficient (grey line) is superimposed on top of the bars to smooth out some of the noise in monthly coefficients.

During those months in which the realized coefficient has a positive sign, it is deemed that the forecast or forecast component positively contributed to the model's forecasting power on a smoothed basis. Conversely, if the attribution coefficient is negative, the forecasting power was negative.

We focus on attributions based on forecasts that are smoothed over a trailing window that ends prior to the beginning of each month. Relative to attribution coefficients based on the most recent forecasts only, smoothed forecast attribution coefficients relate more closely to portfolio performance, since they reflect the likely impact not only of current positions originating from recent trades but also of current positions originating from older trades.

ARROWSTREET CAPITAL

Performance Disclosures

1. The composite presentation for the Arrowstreet ACWI ex US Strategy is available upon request and contains important disclosures to be read in conjunction with the performance results presented herein.

2. Individual portfolio returns are time-weighted and based on the accounting, pricing and asset pricing methodologies of Arrowstreet's middle-office data provider, which may include the use of an independent pricing service, as applicable to separately managed portfolios, respectively, and include the reinvestment of income. The returns presented may differ from the results calculated by the portfolio's official record keeper.

3. Prior to January 1, 2019, gross-of-fees returns for separately managed portfolios were calculated net of trading expenses, net of operating expenses (where, as applicable for separately managed portfolios, such expenses were, at the discretion of the client, paid through the portfolio, and gross of operating expenses otherwise) and gross of management fees (including performance fees, where applicable)

Beginning January 1, 2019, gross-of-fees returns for separately managed portfolios are calculated net of trading expenses, gross of operating expenses and gross of management fees (including performance fees, where applicable).

4. Net-of-fees returns for separately managed portfolios are arrived at by deducting management fees (including performance fees, where applicable) from the calculated gross returns, which are net of trading expenses and other applicable expenses or fees as outlined above. Unrealized performance fees are not included in the net-of-fees returns. Prior to October 1, 2022, realized performance fees, if any, were reflected in the applicable month or not until the quarter end in which they were realized, depending on the timing of the calculation of the fee and other characteristics of the portfolio. Effective October 1, 2022, all realized performance fees are reflected in the applicable month in which they were earned.

Where management fees are not charged to an investor or share class, a model fee is applied utilizing the highest fee currently available for the applicable strategy; where performance fees are a component of the management fee based on the strategy and characteristics of the portfolio, performance results equaling that of the applicable portfolio's actual value add are assumed. Note that the use of a model fee makes the corresponding net-of-fees return hypothetical in nature, as it does not reflect the actual return to any investor. Hypothetical returns have inherent limitations and prospective investors should not rely on any hypothetical performance shown herein.

5. Prior to July 1, 2020, depending on the characteristics of the portfolio, management fees (including performance fees) were calculated and reflected on either a monthly or quarterly basis. Where management fees were calculated and reflected on a quarterly basis, the impact of the base management fee component of the quarterly management fee has been applied evenly to each month within the quarter and the impact of the performance fee component has been applied to the month in which the fee was realized; these fees were then used to calculate the net-of-fees returns reported herein.

Beginning July 1, 2020, monthly net-of-fees returns are calculated using actual and/or estimated management fees (including performance fees) for the applicable monthly period, depending on the timing of the calculation of the management fee and other characteristics of the portfolio.

6. The benchmark name presented reflects the current benchmark. The benchmark may have changed over time and as such all presented benchmark performance figures were calculated with respect to the benchmark applicable at each point in time. Unless otherwise noted, benchmark returns assume reinvestment of dividends and do not include any transaction costs, management fees or other costs.

The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by Arrowstreet Capital, Limited Partnership. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products, or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data (the “MSCI Parties’) makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages

Performance Disclosures

7. Value Added represents net performance relative to the benchmark, calculated as the difference between the total return (net-of-fees) and the benchmark.

8. Tracking Error represents the annualized standard deviation of the difference between the portfolio's gross-of-fees return and the portfolio's benchmark return. Information Ratio is determined by dividing the portfolio's annualized gross-of-fees value added by the portfolio's annualized tracking error. Tracking Error and Information Ratio are calculated as of the first full month under management.

Risk Disclosures

All investment strategies have the potential for profit or loss. Past performance may not be indicative of future results. It should not be assumed that the future performance of any specific investment or investment strategy (including those described herein), will be profitable or equal to past performance levels. Changes in investment strategies, investable assets, or contributions or withdrawals may materially alter the performance and results of a client's portfolio.

Economic factors and market conditions will affect the performance of any portfolio and there are no assurances that it will match or outperform any particular benchmark. Different types of investments involve varying degrees of risk, and there can be no assurance that any specific investment will be profitable for a client's portfolio. Our equity investment strategies involve the risks of investing in equities and currencies (which may include entering contracts over the counter) globally. In addition, our alpha extension strategies and long/short strategy involve the risk of shorting equities and leverage.

We actively manage our client assets and therefore the performance of a portfolio will reflect, in part, our ability to make investment decisions that seek to achieve a given strategy's investment objectives. Due to the active management, a portfolio could underperform the target benchmark and/or investment mandates with similar investment objectives.

We use proprietary quantitative models in our investment process. While we expect these models to perform as expected, deviation between model predictions and the actual events can result in either no advantage or in results opposite to those desired by us and our clients. In particular, these models draw from historical data that may not predict future returns, volatilities, correlations or market performance adequately. In addition, market conditions may be such that they are outside of the confidence level employed by the models. There can be no assurances that the models behave as expected. An error in the coding of data or formulas within the models could be magnified by the model and may be difficult to detect. While we maintain internal controls and human oversight of our investment models, no guarantee or warranty can be provided that any quantitative investment model is or will be completely free of errors. Any such errors could have a negative impact on investment results.

Unexpected market turbulence or unanticipated extraneous events could also cause the actual results to fall

ARROWSTREET CAPITAL

Risk Disclosures

Outside of the range predicted from the models' forecasts.

Our equity strategies invest in equity securities of companies with varying market capitalizations. Investment in companies with relatively small market capitalizations generally involve greater risk and price volatility than investment in larger, more established companies, and the equity securities of such companies are typically less liquid than larger capitalization companies.

Where investment in an Arrowstreet Sponsored Fund is contemplated, please refer to the corresponding fund's offering materials for further details on risks specific to such fund.

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To the extent these materials constitute a financial promotion in the UK, such promotion is directed exclusively at persons who are professional clients or eligible counterparties for the purposes of the FCA Conduct of Business Sourcebook (COBS) and consequently the services or instruments that may be referred to in these materials are only available for use by such persons. No other person should act upon or rely on this communication.

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Supplemental Reporting & Portfolio Holdings

PERS of Mississippi

Compulsory Investment Manager Presentations

Submitted by
Arrowstreet Capital, L.P.
February 25, 2025

Arrowstreet Capital, L.P.
200 Clarendon Street, 30th Floor
Boston, MA 02116
617-919-0000

BIENNIAL REPORT

Arrowstreet Capital -- Active Equities
PERS of Mississippi[1,2,7]
Performance Summary
As of December 31, 2024

	Portfolio Total Return (Net)[3,4,5]	Benchmark Index: MSCI ACWI ex USA IMI (Gross)[6]
1Q – 2024	10.38%	4.45%
2Q – 2024	1.89%	1.12%
3Q – 2024	4.06%	8.29%
4Q – 2024	-5.32%	-7.52%
Last 12 Months	10.80%	5.78%
Last 2 Years (Annualized)	15.24%	10.88%
Last 3 Years (Annualized)	6.31%	1.02%
Last 4 Years (Annualized)	8.19%	2.95%
Annualized Return Since Inception (July 1, 2013)	8.62%	5.70%

Footnotes:

These materials are solely for the benefit of select, qualified institutional investors for educational, informational and discussion purposes only.

[1]Individual portfolio returns are time-weighted and based on the accounting, pricing and asset pricing methodologies of Arrowstreet's middle-office data provider, which may include the use of an independent pricing service, as applicable to separately managed portfolios, respectively, and include the reinvestment of income. The returns presented may differ from the results calculated by the portfolio's official record keeper.

[2]See the applicable composite presentation for important disclosures to be read in conjunction with the performance results presented herein. All returns are calculated and presented in U.S. Dollars. The portfolio incepted July 01, 2013.

[3]Prior to January 1, 2019, gross-of-fees returns for separately managed portfolios were calculated net of trading expenses, net of operating expenses (where, as applicable for separately managed portfolios, such expenses were, at the discretion of the client, paid through the portfolio, and gross of operating expenses otherwise) and gross of management fees (including performance fees, where applicable).

Beginning January 1, 2019, gross-of-fees returns for separately managed portfolios are calculated net of trading expenses, gross of operating expenses and gross of management fees (including performance fees, where applicable).

[4]Net-of-fees returns for separately managed portfolios are arrived at by deducting management fees (including performance fees, where applicable) from the calculated gross returns, which are net of trading expenses and other applicable expenses or fees as outlined above. Unrealized performance fees are not included in the net-of-fees returns. Prior to October 1, 2022, realized performance fees, if any, were reflected in the applicable month or not until the quarter end in which they were realized, depending on the timing of the calculation of the fee and other characteristics of the portfolio. Effective October 1, 2022, all realized performance fees are reflected in the applicable month in which they were earned.

Where management fees are not charged to an investor or share class, a model fee is applied utilizing the highest fee currently available for the applicable strategy; where performance fees are a component of the management fee based on the strategy and characteristics of the portfolio, performance results equaling that of the applicable portfolio's actual value add are assumed. Note that the use of a model fee makes the corresponding net-of-fees return hypothetical in nature, as it does not reflect the actual return to any investor. Hypothetical returns have inherent limitations and prospective investors should not rely on any hypothetical performance shown herein.

[5]Prior to July 1, 2020, depending on the characteristics of the portfolio, management fees (including performance fees) were calculated and reflected on either a monthly or quarterly basis. Where management fees were calculated and reflected on a quarterly basis, the impact of the base management fee component of the quarterly management fee has been applied evenly to each month within the quarter and the impact of the performance fee component has been applied to the month in which the fee was realized; these fees were then used to calculate the net-of-fees returns reported herein.

Beginning July 1, 2020, monthly net-of-fees returns are calculated using actual and/or estimated management fees (including performance fees) for the applicable monthly period, depending on the timing of the calculation of the management fee and other characteristics of the portfolio.

[6]The benchmark name presented reflects the current benchmark. The benchmark may have changed over time and as such all presented benchmark performance figures were calculated with respect to the benchmark applicable at each point in time. Unless otherwise noted, benchmark returns assume reinvestment of dividends and do not include any transaction costs, management fees or other costs.

Benchmark Source: MSCI. The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by Arrowstreet Capital, Limited Partnership. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products, or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data (the "MSCI Parties") makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

[7]The information contained herein reflects Arrowstreet's views on the matters set forth herein as of the date this information is being provided and not as of any other date. Arrowstreet undertakes no duty to update the information provided herein.

PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI

December 31, 2024

Investment Philosophy and Strategy Summary

I. What changes took place in the account since the last report:

This is Arrowstreet Capital's sixth report to the Investment Committee since the account was funded in June 2013. The last report took place in February 2023.

Stocks: The Arrowstreet investment process actively rebalances portfolio holdings on an ongoing basis. To give the Committee an idea of our change in positioning since the last report, we have included the year-end 2023 and 2024 active (benchmark relative) portfolio weights. These reports can be found immediately following this page.

Cash Equivalents: Cash is not considered a strategic holding in our strategy. A small cash buffer may be held to facilitate trading. Our strategy strives to be fully invested at all times.

II. Deviations from previous outlined strategy:

Arrowstreet Capital has not deviated from our strategy since PERS of Mississippi has hired our firm.

III. Factors affecting investments over the next 6 to 12 months:

Over the next six to twelve months, we will continue to manage and adjust your portfolio based on our expected return forecasts for individual stocks. We build these forecasts by looking at factors that can be categorized into groups such as valuation, momentum, quality, high frequency, catalysts, and extreme sentiment. Specific signals within these broad groups are selected based on their intuitive investment appeal, historical ability to forecast future returns, statistical and economic significance, and ability to work well in a variety of market environments and across different universes of stocks.

IV. Strategy:

Arrowstreet Capital's International Equity strategies seek to outperform international equity benchmarks through a risk-controlled core approach. We combine sound investment intuition and research with rigorous quantitative tools to identify mispriced stocks around the world. We believe the key to generating alpha involves evaluating securities on an integrated basis taking into consideration direct effects (stock level characteristics) and indirect, or spillover, effects (country, sector, related companies, etc.).

Active (Benchmark Relative) Portfolio Weights as of December 31, 2024

Country	Total	Comm. Services	Consumer Disc.	Consumer Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Real Estate	Utilities
Total		1.67	-1.46	-3.86	1.98	9.54	-5.09	-2.76	3.68	-3.14	-2.32	0.44
Developed Markets	-7.22	2.41	-2.73	-3.02	-0.35	4.58	-4.02	-3.09	1.64	-1.93	-1.62	0.90
Australia	-3.67	0.06	0.19	-0.09	-0.20	-1.62	-0.41	-0.26	-0.11	-0.87	-0.30	-0.06
Austria	-0.05				-0.02	0.03		-0.02	0.00	-0.01	0.00	-0.02
Belgium	-0.53	0.00	-0.01	-0.17		-0.10	-0.22	-0.03	0.09	-0.04	-0.05	-0.01
Canada	0.63	0.64	0.16	-0.21	0.18	-2.05	-0.01	-0.67	0.16	1.45	-0.04	1.02
Denmark	-1.40		-0.01	-0.05	0.09	-0.05	-1.08	-0.20	-0.01	-0.07		-0.03
Finland	0.77	-0.02	-0.01	-0.02	-0.02	-0.02	-0.02	0.35	0.64	-0.09	-0.01	-0.02
France	-4.92	-0.19	-1.12	-0.54	-0.43	0.26	-0.67	-1.51	-0.17	-0.34	-0.04	-0.18
Germany	-0.93	0.53	-0.26	-0.06	0.00	0.12	-0.34	-0.84	0.46	-0.28	-0.12	-0.15
Hong Kong	0.35	-0.03	-0.04	0.39	0.02	0.09	-0.01	-0.02	-0.02		0.06	-0.09
Ireland	0.50		-0.01	-0.06		0.61	0.00	-0.04			0.00	
Israel	-0.03	-0.01	-0.03	-0.02	0.06	0.01	-0.01	0.10	-0.06	0.00	-0.07	-0.02
Italy	2.56	0.07	-0.36	-0.02	-0.05	2.69	-0.04	0.40	-0.02	-0.01		-0.11
Japan	1.64	0.30	-0.06	0.01	0.41	-0.20	0.55	-1.40	1.79	-0.66	-0.49	1.39
Netherlands	2.27	-0.12	-0.19	-0.26	-0.02	2.73	-0.07	1.28	-0.98	-0.11	-0.01	
New Zealand	-0.17	-0.01				-0.02	-0.06	-0.03			-0.01	-0.04
Norway	0.10	-0.02	0.00	-0.05	0.29	-0.08		0.02	-0.01	-0.04	0.00	0.00
Portugal	0.80	0.00		0.04	0.00	0.82		0.00		-0.01		-0.05
Singapore	0.14	0.77	0.00	-0.03	0.00	-0.47	0.00	0.05	-0.01	0.00	-0.16	-0.01
Spain	0.37	-0.11	-0.01	-0.01	0.00	1.04	-0.02	-0.14	0.00	-0.01	-0.02	-0.35
Sweden	-0.64	-0.03	-0.06	-0.03		0.56	-0.10	-0.74	-0.05	-0.09	-0.10	
Switzerland	-0.27	-0.06	-0.30	-0.82		0.92	-0.52	0.66	0.05	-0.12	-0.07	-0.01
United Kingdom	-4.72	0.63	-0.60	-1.03	-0.67	-0.69	-0.99	-0.03	-0.13	-0.63	-0.20	-0.38
United States												
Emerging Markets	4.63	-0.75	1.27	-0.83	1.88	4.69	-1.06	0.33	2.04	-1.58	-0.70	-0.66
Brazil	1.68	0.01	0.13	-0.08	0.72	0.91	-0.02	0.28	-0.01	-0.16	-0.01	-0.08
Chile	0.10	0.00	0.14	-0.02		-0.02		0.04		-0.02	-0.01	-0.02
China	9.55	-0.25	1.54	-0.31	1.90	4.70	-0.16	1.22	1.25	0.04	-0.18	-0.19
Colombia	0.40					0.41				0.00		-0.01
Czech Republic	-0.03			0.00		-0.01		0.00				-0.02
Egypt	0.02	0.00		0.00		0.02				0.00	0.00	
Greece	-0.06	-0.01	-0.01	0.00	0.00	0.01		-0.02		-0.01	0.00	-0.01
Hungary	0.00	0.00			0.00	0.01	-0.01	0.00				
India	-6.25	-0.24	-0.82	-0.37	-0.42	-1.56	-0.46	-0.74	-0.70	-0.55	-0.14	-0.24
Indonesia	-0.45	-0.04	-0.02	-0.04	-0.02	-0.23	-0.01	-0.02	0.00	-0.05	0.00	0.00
Korea	4.17	0.15	0.61	0.49	-0.02	2.53	-0.20	-0.15	0.71	-0.05	-0.01	0.10
Kuwait	-0.24	-0.01	-0.01	0.00		-0.19		-0.01		0.00	-0.01	0.00
Malaysia	-0.49	-0.03	-0.01	-0.06	-0.01	-0.18	-0.03	-0.06	-0.02	-0.03	-0.02	-0.04
Mexico	-0.12	-0.05	0.00	-0.09		0.01	0.00	0.14		-0.09	-0.03	
Peru	-0.08					-0.04				-0.03		
Philippines	-0.17	-0.01	-0.01	-0.01	0.00	-0.04		-0.05		0.00	-0.03	-0.01
Poland	-0.01	0.13	-0.03	-0.02	-0.02	-0.03		-0.01	0.00	-0.02		-0.01
Qatar	-0.24	-0.01		0.00	-0.02	-0.15		-0.03	0.00	-0.01	-0.01	-0.01
Saudi Arabia	-1.24	-0.11	-0.03	-0.06	-0.15	-0.47	-0.05	-0.04	-0.03	-0.20	-0.03	-0.07
South Africa	-0.61	-0.04	0.01	-0.09	-0.01	-0.23	-0.02	-0.03	0.00	-0.16	-0.04	
Taiwan	-0.30	-0.11	-0.14	-0.08		-0.59	-0.05	-0.04	0.91	-0.17	-0.03	-0.01
Thailand	-0.39	-0.06	-0.04	-0.06	-0.03	0.03	-0.04	-0.04	-0.05	-0.02	-0.03	-0.03
Turkey	-0.25	0.00	-0.02	-0.04	-0.01	-0.06	0.00	-0.07	0.00	-0.03	-0.01	-0.01
Uae	-0.37	-0.05	-0.02	0.00	-0.02	-0.14		-0.03	0.00		-0.11	0.00
Frontier Markets	1.29				0.45	0.27				0.36		0.21
Argentina	0.06									0.06		
Pakistan	1.22				0.45	0.26				0.30		0.21
Russia	0.01				0.01	0.01				0.00		

Legend	Color Code
> 0.15	
< -0.15	

Active Cash Position	1.30
Futures Cash	

Note: Portfolio weights are measured at the end of the calendar period indicated. Weights may temporarily drift beyond position limits in between trading sessions because of price movements, and weights may be impacted by cash flows occurring around the end of the period. Due to rounding, values of 0.00 represent an exposure of less than 0.005 percent.

Active (Benchmark Relative) Portfolio Weights as of December 31, 2023

Country	Total	Comm. Services	Consumer Disc.	Consumer Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Real Estate	Utilities
Total		-0.81	1.68	-6.99	7.77	5.45	-4.87	-3.81	8.09	-5.14	-2.93	-0.12
Developed Markets	-12.32	-0.25	2.05	-5.29	1.25	-0.05	-3.59	-4.86	3.99	-3.62	-2.43	0.48
Australia	-3.78	-0.12	-0.36	-0.07	0.14	-0.82	-0.47	-0.35	-0.13	-1.18	-0.34	-0.07
Austria	-0.08				0.00	0.00		-0.03	0.00	-0.02	-0.01	-0.03
Belgium	-0.57	0.00	-0.01	-0.21	0.08	-0.12	-0.13	-0.02	-0.01	-0.06	-0.06	-0.01
Canada	-5.22	0.07	-0.28	-0.34	-0.99	-1.18	-0.02	-0.95	-0.41	-0.70	-0.13	-0.27
Denmark	0.00		-0.02	-0.06	0.12	-0.14	0.07	0.13	-0.01	-0.07		-0.04
Finland	-0.13	-0.02	-0.01	-0.02	-0.05	0.01	-0.02	0.21	-0.07	-0.13	-0.01	-0.02
France	-5.58	-0.22	-1.34	-0.73	-0.35	-0.15	-0.69	-1.63	-0.31	-0.39	-0.09	0.32
Germany	4.54	0.98	3.08	-0.15	0.00	1.01	0.05	-0.43	0.59	-0.36	-0.13	-0.10
Hong Kong	-0.96	-0.03	-0.10	0.26	0.00	-0.57	0.00	-0.11	-0.01		-0.28	-0.12
Ireland	-0.30		-0.10	-0.06		-0.06	0.00	-0.05		-0.04	0.00	
Israel	0.04	-0.02	-0.03	-0.01	0.07	-0.02	-0.05	-0.05	0.23	-0.01	-0.06	-0.02
Italy	2.86	-0.03	2.19	-0.02	0.08	1.13	-0.04	-0.08	-0.02	-0.02		-0.33
Japan	1.30	-0.59	0.35	-0.99	0.66	0.35	-1.02	-1.41	2.17	0.38	-0.65	2.05
Netherlands	2.47	-0.12	-0.17	-0.29	-0.01	-0.32	-0.05	1.39	2.18	-0.13	-0.01	
New Zealand	-0.17	-0.02	0.00				-0.05	-0.05			-0.01	-0.04
Norway	-0.21	-0.01	0.00	-0.08	0.04	-0.12	0.00	0.01	-0.02	-0.04	0.00	0.00
Portugal	0.49	0.00		0.17	-0.02	0.43		0.00		-0.01		-0.08
Singapore	-0.89	-0.11	-0.02	-0.03		-0.39	0.00	-0.09	-0.01	0.00	-0.21	-0.02
Spain	-0.48	0.31	-0.29	-0.01	0.02	0.09	-0.03	-0.17	0.00	-0.02	-0.02	-0.37
Sweden	-1.34	-0.06	0.06	0.02		0.17	-0.10	-1.01	-0.19	-0.11	-0.11	
Switzerland	-1.86	-0.05	-0.30	-1.18		1.41	-0.97	-0.15	-0.02	-0.50	-0.07	-0.01
United Kingdom	-2.44	-0.19	-0.60	-1.48	1.48	-0.75	-0.07	-0.03	0.04	-0.22	-0.24	-0.38
United States												
Emerging Markets	10.07	-0.56	-0.38	-1.70	6.29	5.42	-1.28	1.06	4.10	-1.60	-0.50	-0.78
Brazil	1.29	-0.03	-0.06	-0.14	2.26	-0.11	-0.05	-0.11	-0.02	-0.28	-0.02	-0.16
Chile	0.05	0.00	0.09	-0.01	-0.01	0.05		-0.04		-0.01	-0.01	-0.01
China	9.53	0.43	0.15	-0.36	4.37	3.84	-0.44	1.31	0.18	0.28	-0.05	-0.17
Colombia	0.33					0.34						-0.01
Czech Republic	-0.04			0.00		-0.01		0.00				-0.02
Egypt	0.00	0.00	0.00	0.00		0.01	0.00	0.00		-0.01	0.00	
Greece	0.05	-0.01	-0.01	0.00	0.00	-0.01		0.10		0.00	0.00	-0.01
Hungary	-0.02	0.00			0.00	0.00	-0.01	0.00				
India	-5.05	-0.15	-0.61	-0.39	-0.40	-1.23	-0.31	-0.55	-0.60	-0.52	-0.08	-0.21
Indonesia	-0.52	-0.05	-0.03	-0.04	-0.02	-0.28	-0.01	-0.03	0.00	-0.04	-0.01	0.00
Korea	2.93	-0.22	0.27	-0.09	-0.03	1.83	-0.26	0.01	1.68	-0.24	-0.01	-0.01
Kuwait	-0.17	-0.01	-0.01	0.00		-0.11		-0.02		0.00	-0.01	0.00
Malaysia	-0.41	-0.03	-0.02	-0.05	-0.01	-0.14	-0.02	-0.04	-0.02	-0.03	-0.01	-0.04
Mexico	-0.59	-0.08	0.10	-0.25		-0.14	0.00	-0.10		-0.07	-0.05	
Peru	-0.07					-0.03				-0.04		
Philippines	-0.18	-0.01	-0.01	-0.01	0.00	-0.04		-0.06		0.00	-0.04	-0.01
Poland	0.27	-0.01	-0.04	-0.02	0.32	-0.07		-0.01	-0.01	0.11		-0.01
Qatar	-0.24	-0.01		0.00	-0.02	-0.15	0.00	-0.03		-0.01	-0.01	-0.01
Saudi Arabia	-1.16	-0.11	-0.03	-0.05	-0.09	-0.48	-0.05	-0.03	-0.03	-0.23	-0.02	-0.05
South Africa	-0.63	-0.05	0.08	-0.09	0.00	-0.30	-0.02	-0.01	0.00	-0.18	-0.04	
Taiwan	1.71	-0.10	-0.16	-0.08	-0.01	-0.56	-0.05	0.01	2.95	-0.26	-0.03	0.00
Thailand	-0.51	-0.04	-0.05	-0.07	-0.05	-0.05	-0.05	-0.04	-0.04	-0.05	-0.04	-0.04
Turkey	3.84	0.00	-0.02	-0.03	0.00	3.23	0.00	0.70	0.00	-0.03	-0.01	-0.01
UAE	-0.35	-0.07	-0.02	0.00	0.00	-0.15		-0.03			-0.07	-0.01
Frontier Markets	0.58		0.01		0.22	0.07				0.09		0.18
Pakistan	0.56		0.01		0.22	0.06				0.09		0.18
Russia	0.02				0.01	0.01				0.00		

Legend	Color Code
> 0.15	
< -0.15	

Active Cash Position	1.67
Futures Cash	

** Portfolio weights are measured at the end of the calendar period indicated. Weights may temporarily drift beyond position limits in between trading sessions because of price movements, and weights may be impacted by cash flows occurring around the end of the period.*

PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI

VOLATILITY INDEX

Calendar Year Characteristics - Based on Monthly Gross-of-Fees Returns:

	PERS Account	Benchmark
Calendar Year 2024	21.27%	20.53%

Arrowstreet Capital additionally focuses on tracking error, defined as the annualized standard deviation of portfolio value added versus the benchmark. Your account's annualized tracking error was 4.89% for 2024 and 3.68% from inception through 12/31/2024.

Footnotes:

Source: Arrowstreet's Internal Databases.

Performance Disclosures
These materials are solely for the benefit of select, qualified institutional investors for educational, informational and discussion purposes only.

Individual portfolio returns are time-weighted and based on the accounting, pricing and asset pricing methodologies of Arrowstreet's middle-office data provider, which may include the use of an independent pricing service, as applicable to separately managed portfolios, respectively, and include the reinvestment of income. The returns presented may differ from the results calculated by the portfolio's official record keeper.

See the applicable composite presentation for important disclosures to be read in conjunction with the performance results presented herein. All returns are calculated and presented in U.S. Dollars. The portfolio incepted July 01, 2013.

"Prior to January 1, 2019, gross-of-fees returns for separately managed portfolios were calculated net of trading expenses, net of operating expenses (where, as applicable for separately managed portfolios, such expenses were, at the discretion of the client, paid through the portfolio, and gross of operating expenses otherwise) and gross of management fees (including performance fees, where applicable).

Beginning January 1, 2019, gross-of-fees returns for separately managed portfolios are calculated net of trading expenses, gross of operating expenses and gross of management fees (including performance fees, where applicable)."

"MSCI ACWI ex USA IMI (Gross) is the current benchmark. The benchmark may have changed over time and as such all presented benchmark performance figures were calculated with respect to the benchmark applicable at each point in time. Unless otherwise noted, benchmark returns assume reinvestment of dividends and do not include any transaction costs, management fees or other costs.

Benchmark Source: MSCI. The MSCI data is comprised of a custom index calculated by MSCI for, and as requested by Arrowstreet Capital, Limited Partnership. The MSCI data is for internal use only and may not be redistributed or used in connection with creating or offering any securities, financial products, or indices. Neither MSCI nor any other third party involved in or related to compiling, computing or creating the MSCI data (the ""MSCI Parties"") makes any express or implied warranties or representations with respect to such data (or the results to be obtained by the use thereof), and the MSCI Parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to such data. Without limiting any of the foregoing, in no event shall any of the MSCI Parties have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages."

Tracking Error represents the annualized standard deviation of the difference between the portfolio's gross-of-fees return and the portfolio's benchmark return. Tracking Error is calculated as of the first full month under management.

The information contained herein reflects Arrowstreet's views on the matters set forth herein as of the date this information is being provided and not as of any other date. Arrowstreet undertakes no duty to update the information provided herein.

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Our equity investment strategies involve the risks of investing in equities and currencies (which may include entering contracts over the counter) globally. In addition, our alpha extension strategies and long/short strategy involve the risk of shorting equities and leverage.

We actively manage our client assets and therefore the performance of a portfolio will reflect, in part, our ability to make investment decisions that seek to achieve a given strategy's investment objectives. Due to the active management, a portfolio could underperform the target benchmark and/or investment mandates with similar investment objectives.

We use proprietary quantitative models in our investment process. While we expect these models to perform as expected, deviation between model predictions and the actual events can result in either no advantage or in results opposite to those desired by us and our clients. In particular, these models draw from historical data that may not predict future returns, volatilities, correlations or market performance adequately. In addition, market conditions may be such that they are outside of the confidence level employed by the models. There can be no assurances that the models behave as expected. An error in the coding of data or formulas within the models could be magnified by the model and may be difficult to detect. While we maintain internal controls and human oversight of our investment models, no guarantee or warranty can be provided that any quantitative investment model is or will be completely free of errors. Any such errors could have a negative impact on investment results.

Unexpected market turbulence or unanticipated extraneous events could also cause the actual results to fall outside of the range predicted from the models' forecasts.

Our equity strategies invest in equity securities of companies with varying market capitalizations. Investment in companies with relatively small market capitalizations generally involve greater risk and price volatility than investment in larger, more established companies, and the equity securities of such companies are typically less liquid than larger capitalization companies.

Where investment in an Arrowstreet Sponsored Fund is contemplated, please refer to the corresponding fund's offering materials for further details on risks specific to such fund.

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PUBLIC EMPLOYEES' RETIREMENT SYSTEM OF MISSISSIPPI

STATEMENT OF ASSETS

Please refer to the following Equity Holdings as of September 30, 2024:
This reporting is based on the data provided by Arrowstreet Capital, Limited Partnership's middle-office service provider who maintains the back-office records for Arrowstreet for internal trading purposes. Arrowstreet is not the official record-keeper for the Account and therefore the provided information is not intended to be relied upon to support accounting records, financial statements or regulatory filings for the Account. No representation or warranty is being made with respect to such data.

As of: 9/30/2024
Base Currency: USD

SEDOL	Description	Country
B85LKS1	AAC TECHNOLOGIES HOLDINGS INC COMMON STOCK USD.01	CHINA
7108899	ABB LTD COMMON STOCK CHF.12	SWITZERLAND
7113815	ABB LTD COMMON STOCK CHF.12	SWITZERLAND
BYQP136	ABN AMRO BANK NV DUTCH CERT EUR1.0	NETHERLANDS
7110720	ADECCO GROUP AG COMMON STOCK CHF.1	SWITZERLAND
BZ1HM42	ADYEN NV COMMON STOCK EUR.01	NETHERLANDS
BPH0Y27	AEGON LTD COMMON STOCK EUR.12	NETHERLANDS
BSB7ZN3	AEGON LTD NY REG SHRS	NETHERLANDS
BFSSCF9	AEON REIT INVESTMENT CORP REIT	JAPAN
B1HHKD3	AERCAP HOLDINGS NV COMMON STOCK EUR.01	NETHERLANDS
6055208	AGC INC COMMON STOCK	JAPAN
B86S2N0	AGEAS SA/NV COMMON STOCK	BELGIUM
BSS7GP5	AGL ENERGY LTD COMMON STOCK	AUSTRALIA
2009834	AGNICO EAGLE MINES LTD COMMON STOCK	CANADA
B60LZR6	AGRICULTURAL BANK OF CHINA LTD COMMON STOCK CNY1.0	CHINA
BF0L353	AIB GROUP PLC COMMON STOCK EUR.625	IRELAND
BKDRYJ4	AIRTEL AFRICA PLC COMMON STOCK USD.5	UNITED KINGDOM
6010649	AISAN INDUSTRY CO LTD COMMON STOCK	JAPAN
6010702	AISIN CORP COMMON STOCK	JAPAN
B03MN70	AKBANK TAS COMMON STOCK TRY1.0	TURKEY
B1L95G3	AKER BP ASA COMMON STOCK NOK1.0	NORWAY
BYNBW45	ALAMOS GOLD INC COMMON STOCK	CANADA
7332687	ALFA LAVAL AB COMMON STOCK SEK2.84	SWEDEN
6687214	ALFRESA HOLDINGS CORP COMMON STOCK	JAPAN
5231485	ALLIANZ SE COMMON STOCK	GERMANY
BZ1MXR7	ALPHA SERVICES AND HOLDINGS SA COMMON STOCK EUR.29	GREECE
B43WJC5	ALTAGAS LTD COMMON STOCK	CANADA
6425395	ALUMINUM CORP OF CHINA LTD COMMON STOCK CNY1.0	CHINA
6022105	AMADA CO LTD COMMON STOCK	JAPAN
B1638D8	AMOREPACIFIC CORP PREFERENCE	SOUTH KOREA
BP3RG26	ANHUI HENGYUAN COAL INDUSTRY A CNH BP3RG26	CHINA
0045614	ANTOFAGASTA PLC COMMON STOCK GBP.05	UNITED KINGDOM
4253059	AP MOLLER - MAERSK A/S COMMON STOCK DKK1000.0	DENMARK
4253048	AP MOLLER - MAERSK A/S COMMON STOCK DKK1000.0	DENMARK
5769209	ARCADIS NV COMMON STOCK EUR.02	NETHERLANDS

BZ11XT6	ARCELORMITTAL SA COMMON STOCK	FRANCE
BYPBS67	ARCELORMITTAL SA COMMON STOCK	FRANCE
6253983	ARISTOCRAT LEISURE LTD COMMON STOCK	AUSTRALIA
BDCG2C2	ARITZIA INC COMMON STOCK	CANADA
BFXZDY1	ASE TECHNOLOGY HOLDING CO LTD COMMON STOCK TWD10.0	TAIWAN
6057378	ASICS CORP COMMON STOCK	JAPAN
B929F46	ASML HOLDING NV COMMON STOCK EUR.09	NETHERLANDS
BD9PNF2	ASR NEDERLAND NV COMMON STOCK EUR.16	NETHERLANDS
6051046	ASUSTEK COMPUTER INC COMMON STOCK TWD10.0	TAIWAN
2060615	ATCO LTD/CANADA COMMON STOCK	CANADA
B87CVM3	AURIZON HOLDINGS LT SPN ADR COMMON STOCK	AUSTRALIA
BKDQ800	AVARY HOLDING SHENZHEN CO LTD CNH BKDQ800	CHINA
B019M65	AZIMUT HOLDING SPA COMMON STOCK	ITALY
BG36ZK1	B3 SA - BRASIL BOLSA BALCAO COMMON STOCK	BRAZIL
B1HKSV6	BANCA GENERALI SPA COMMON STOCK EUR1.0	ITALY
7242087	BANCA IFIS SPA COMMON STOCK EUR1.0	ITALY
BYWP840	BANCA MEDIOLANUM SPA COMMON STOCK	ITALY
BK93RS6	BANCA MONTE DEI PASCHI DI SIEN COMMON STOCK	ITALY
4115223	BANCA POPOLARE DI SONDRIO SPA COMMON STOCK NPV	ITALY
2042152	BANCO BILBAO VIZCAYA ARGENTARI ADR	SPAIN
5501906	BANCO BILBAO VIZCAYA ARGENTARI COMMON STOCK EUR.49	SPAIN
BYMD5K9	BANCO BPM SPA COMMON STOCK	ITALY
B00FSK0	BANCO BRADESCO SA ADR	BRAZIL
B00FM86	BANCO BRADESCO SA COMMON STOCK	BRAZIL
B00FM53	BANCO BRADESCO SA PREFERENCE	BRAZIL
BZCNN35	BANCO COMERCIAL PORTUGUES SA COMMON STOCK	PORTUGAL
2100845	BANCO DE CHILE COMMON STOCK	CHILE
2069355	BANCO DE CREDITO E INVERSIONES COMMON STOCK	CHILE
B1X8QN2	BANCO DE SABADELL SA COMMON STOCK EUR.125	SPAIN
B4N20W2	BANCO DO BRASIL SA/CAYMAN ADR	BRAZIL
2328595	BANCO DO BRASIL SA/CAYMAN COMMON STOCK	BRAZIL
2018186	BANCO SANTANDER SA ADR	SPAIN
5705946	BANCO SANTANDER SA COMMON STOCK EUR.5	SPAIN
2082567	BANCOLOMBIA SA ADR	COLOMBIA
B0JDQD4	BANDAI NAMCO HOLDINGS INC COMMON STOCK	JAPAN
B2R7SH0	BANGKOK LIFE ASSURANCE PCL COMMON STOCK THB1.0 L	THAILAND
6075808	BANK HAPOALIM BM COMMON STOCK ILS1.0	ISRAEL
6076425	BANK LEUMI LE-ISRAEL BM COMMON STOCK ILS.1	ISRAEL
BP3R2W8	BANK OF BEIJING CO LTD CNH BP3R2W8	CHINA
B154564	BANK OF CHINA LTD COMMON STOCK CNY1.0	CHINA
B0B8Z29	BANK OF COMMUNICATIONS CO LTD COMMON STOCK CNY1.0	CHINA
BF4HYT8	BANK OF GEORGIA GROUP PLC COMMON STOCK GBP.01	UNITED KINGDOM
BD1RP61	BANK OF IRELAND GROUP PLC COMMON STOCK EUR1.0	IRELAND
2073174	BANK OF MONTREAL COMMON STOCK	CANADA
6620093	BANK OF NAGOYA LTD/THE COMMON STOCK	JAPAN
2076281	BANK OF NOVA SCOTIA/THE COMMON STOCK	CANADA
6075886	BANK OF PUNJAB/THE COMMON STOCK PKR10.0	PAKISTAN
5473113	BANK POLSKA KASA OPIEKI SA COMMON STOCK PLN1.0	POLAND

5474008	BANKINTER SA COMMON STOCK EUR.3	SPAIN
3134865	BARCLAYS PLC COMMON STOCK GBP.25	UNITED KINGDOM
0081180	BARRATT DEVELOPMENTS PLC COMMON STOCK GBP.1	UNITED KINGDOM
2024677	BARRICK GOLD CORP COMMON STOCK	CANADA
BZ1GZ06	BAWAG GROUP AG COMMON STOCK	AUSTRIA
B9N3SQ0	BB SEGURIDADE PARTICIPACOES SA COMMON STOCK	BRAZIL
B188TH2	BCE INC COMMON STOCK	CANADA
B188TJ4	BCE INC COMMON STOCK	CANADA
6098032	BEZEQ THE ISRAELI TELECOMMUNIC COMMON STOCK ILS1.0	ISRAEL
B3S98W7	BNK FINANCIAL GROUP INC COMMON STOCK KRW5000.0	SOUTH KOREA
7309681	BNP PARIBAS SA COMMON STOCK EUR2.0	FRANCE
6001096	BOE TECHNOLOGY GROUP CO LTD COMMON STOCK CNY1.0	CHINA
BN33PL2	BOMBARDIER INC COMMON STOCK	CANADA
0798059	BP PLC COMMON STOCK USD.25	UNITED KINGDOM
4116099	BPER BANCA SPA COMMON STOCK	ITALY
B1FJ0C0	BRAMBLES LTD COMMON STOCK	AUSTRALIA
B4YVF56	BRENNTAG SE COMMON STOCK	GERMANY
2290791	BRITISH AMERICAN TOBACCO PLC ADR	UNITED KINGDOM
BMXWR83	BROOKFIELD RENEWABLE CORP COMMON STOCK USD.01	CANADA
6146500	BROTHER INDUSTRIES LTD COMMON STOCK	JAPAN
3091357	BT GROUP PLC COMMON STOCK GBP.05	UNITED KINGDOM
5782206	BUZZI SPA COMMON STOCK	ITALY
BYYNFR4	BW OFFSHORE LTD COMMON STOCK USD.5	NORWAY
6536651	BYD CO LTD COMMON STOCK CNY1.0	CHINA
B29SHS5	BYD ELECTRONIC INTERNATIONAL C COMMON STOCK	CHINA
B283W97	CAIXABANK SA COMMON STOCK EUR1.0	SPAIN
2418872	CANADIAN IMPERIAL BANK OF COMM COMMON STOCK	CANADA
2180632	CANADIAN NATIONAL RAILWAY CO COMMON STOCK	CANADA
2210959	CANADIAN NATIONAL RAILWAY CO COMMON STOCK	CANADA
2172286	CANADIAN TIRE CORP LTD COMMON STOCK	CANADA
2172639	CANADIAN UTILITIES LTD COMMON STOCK	CANADA
6172323	CANON INC COMMON STOCK	JAPAN
B61KF83	CAPITAL POWER CORP COMMON STOCK	CANADA
6440859	CAPITEC BANK HOLDINGS LTD COMMON STOCK ZAR.01	SOUTH AFRICA
BMDLRD5	CELESTICA INC COMMON STOCK	CANADA
B5BQMT4	CENOVUS ENERGY INC COMMON STOCK	CANADA
B01NXQ4	CENTERRA GOLD INC COMMON STOCK	CANADA
6183552	CENTRAL JAPAN RAILWAY CO COMMON STOCK	JAPAN
BJ2L553	CGI INC COMMON STOCK	CANADA
2181334	CHECK POINT SOFTWARE TECH COMMON STOCK USD.01	ISRAEL
6140579	CHICONY ELECTRONICS CO LTD COMMON STOCK TWD10.0	TAIWAN
B1W0JF2	CHINA CITIC BANK CORP LTD COMMON STOCK CNY1.0	CHINA
B1JNK84	CHINA COAL ENERGY CO LTD COMMON STOCK CNY1.0	CHINA
B0LMTQ3	CHINA CONSTRUCTION BANK CORP COMMON STOCK CNY1.0	CHINA
BP3R4N3	CHINA CSSC HOLDINGS LTD CNH BP3R4N3	CHINA
B44ZV94	CHINA HONGQIAO GROUP LTD COMMON STOCK USD.01	CHINA
BJ6F4P4	CHINA KEPEI EDUCATION GROUP LT COMMON STOCK USD.00001	CHINA
6718976	CHINA LIFE INSURANCE CO LTD COMMON STOCK CNY1.0	CHINA

B6WY993	CHINA MEDICAL SYSTEM HOLDINGS COMMON STOCK USD.005	CHINA
B1DYPZ5	CHINA MERCHANTS BANK CO LTD COMMON STOCK CNY1.0	CHINA
B57JY24	CHINA MINSHENG BANKING CORP LT COMMON STOCK CNY1.0	CHINA
B2Q5H56	CHINA PACIFIC INSURANCE GROUP COMMON STOCK CNY1.0	CHINA
BP3R240	CHINA PETROLEUM & CHEMICAL COR CNH BP3R240	CHINA
6291819	CHINA PETROLEUM & CHEMICAL COR COMMON STOCK CNY1.0	CHINA
B297KM7	CHINA RAILWAY GROUP LTD COMMON STOCK CNY1.0	CHINA
B09N7M0	CHINA SHENHUA ENERGY CO LTD COMMON STOCK CNY1.0	CHINA
BP3R507	CHINA SOUTH PUBLISHING & MEDIA CNH BP3R507	CHINA
BP3R2Q2	CHINA STATE CONSTRUCTION ENGIN CNH BP3R2Q2	CHINA
BP3R1Q5	CHINESE UNIVERSE PUBLISHING AN CNH BP3R1Q5	CHINA
B0BSM06	CHIPMOS TECHNOLOGIES INC COMMON STOCK TWD10.0	TAIWAN
6195609	CHUBU ELECTRIC POWER CO INC COMMON STOCK	JAPAN
6195900	CHUGOKU ELECTRIC POWER CO INC/ COMMON STOCK	JAPAN
B1YCHL8	CIA DE SANEAMENTO BASICO DO ES COMMON STOCK	BRAZIL
2196338	CIA SUD AMERICANA DE VAPORES COMMON STOCK	CHILE
B6SPB49	CITIC SECURITIES CO LTD COMMON STOCK CNY1.0	CHINA
BW9P816	CK HUTCHISON HOLDINGS LTD COMMON STOCK HKD1.0	HONG KONG
BP3R8C0	CMST DEVELOPMENT CO LTD CNH BP3R8C0	CHINA
BK4XS88	CNOOC ENERGY TECHNOLOGY & SERV CNH BK4XS88	CHINA
6163286	COCA-COLA BOTTLERS JAPAN HOLDI COMMON STOCK	JAPAN
BYWR0T5	COLES GROUP LTD COMMON STOCK	AUSTRALIA
6603737	COMFORTDELGRO CORP LTD COMMON STOCK	SINGAPORE
5668287	COMMERCIAL INTERNATIONAL BANK GDR EGP10.0	EGYPT
B90LKT4	COMMERZBANK AG COMMON STOCK	GERMANY
6225744	COMPAL ELECTRONICS INC COMMON STOCK TWD10.0	TAIWAN
6687247	COMSYS HOLDINGS CORP COMMON STOCK	JAPAN
B15C4L6	CONSTELLATION SOFTWARE INC COMMON STOCK	CANADA
BR52TP7	CONSTELLATION SOFTWARE INC WARRANTS CALL EXP 31MAR40	CANADA
4598589	CONTINENTAL AG COMMON STOCK	GERMANY
BP3R552	COSCO SHIPPING HOLDINGS CO LTD CNH BP3R552	CHINA
B0B8Z18	COSCO SHIPPING HOLDINGS CO LTD COMMON STOCK CNY1.0	CHINA
BYSJJ43	COSMO ENERGY HOLDINGS CO LTD COMMON STOCK	JAPAN
6591809	CREDIT SAISON CO LTD COMMON STOCK	JAPAN
B2R2ZC9	CRRC CORP LTD COMMON STOCK CNY1.0	CHINA
6185495	CSL LTD COMMON STOCK	AUSTRALIA
BQT3XY6	CYBERARK SOFTWARE LTD COMMON STOCK ILS.01	ISRAEL
B601QS4	DAI-ICHI LIFE HOLDINGS INC COMMON STOCK	JAPAN
B0J7D91	DAIICHI SANKYO CO LTD COMMON STOCK	JAPAN
6248503	DAISHIN SECURITIES CO LTD PREFERENCE	SOUTH KOREA
B295TM4	DAISHIN SECURITIES CO LTD PREFERENCE	SOUTH KOREA
6250508	DAITO TRUST CONSTRUCTION CO LT COMMON STOCK	JAPAN
6251363	DAIWA HOUSE INDUSTRY CO LTD COMMON STOCK	JAPAN
6251448	DAIWA SECURITIES GROUP INC COMMON STOCK	JAPAN
4588825	DANSKE BANK A/S COMMON STOCK DKK10.0	DENMARK
BNYK8G8	DARKTRACE PLC COMMON STOCK GBP.01	UNITED KINGDOM
BMT9L19	DASSAULT AVIATION SA COMMON STOCK EUR.8	FRANCE
BM8H5Y5	DASSAULT SYSTEMES SE COMMON STOCK EUR.1	FRANCE

6155937	DB INSURANCE CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
2141941	DESCARTES SYSTEMS GROUP INC/TH COMMON STOCK	CANADA
5750355	DEUTSCHE BANK AG COMMON STOCK	GERMANY
2803025	DEUTSCHE BANK AG COMMON STOCK	GERMANY
7021963	DEUTSCHE BOERSE AG COMMON STOCK	GERMANY
5842359	DEUTSCHE TELEKOM AG COMMON STOCK	GERMANY
BNYGMH5	DIGITAL CORE REIT MANAGEMENT P REIT	SINGAPORE
6270948	DISCO CORP COMMON STOCK	JAPAN
BQWSKZ8	DOF GROUP ASA COMMON STOCK NOK2.5	NORWAY
B4TP9G2	DOLLARAMA INC COMMON STOCK	CANADA
6278306	DOWA HOLDINGS CO LTD COMMON STOCK	JAPAN
6465573	DOWNER EDI LTD COMMON STOCK	AUSTRALIA
B1VNSX3	DRAX GROUP PLC COMMON STOCK GBP.1155172	UNITED KINGDOM
BZ13Q93	E-COMMODITIES HOLDINGS LTD COMMON STOCK	HONG KONG
4942904	E.ON SE COMMON STOCK	GERMANY
BP91N98	EASTERN AIR LOGISTICS CO LTD CNH BP91N98	CHINA
6700876	EBARA FOODS INDUSTRY INC COMMON STOCK	JAPAN
6451817	EIZO CORP COMMON STOCK	JAPAN
B02Q328	ELECTRIC POWER DEVELOPMENT CO COMMON STOCK	JAPAN
B16FPG6	EMBRAER SA COMMON STOCK	BRAZIL
2650050	EMERA INC COMMON STOCK	CANADA
2314000	EMPIRE CO LTD COMMON STOCK	CANADA
2466149	ENBRIDGE INC COMMON STOCK	CANADA
2478906	ENBRIDGE INC COMMON STOCK	CANADA
B627LW9	ENEOS HOLDINGS INC COMMON STOCK	JAPAN
B0C2CQ3	ENGIE SA COMMON STOCK EUR1.0	FRANCE
7145056	ENI SPA COMMON STOCK	ITALY
BF4K3J0	EQUINOR ASA ADR	NORWAY
7133608	EQUINOR ASA COMMON STOCK NOK2.5	NORWAY
7440621	ERSTE GROUP BANK AG COMMON STOCK	AUSTRIA
5289837	ERSTE GROUP BANK AG COMMON STOCK	AUSTRIA
BF1K7P7	ESSITY AB COMMON STOCK SEK3.35	SWEDEN
BYZ43T4	EUROBANK ERGASIAS SERVICES AND COMMON STOCK EUR.22	GREECE
BNBNSG0	EURONEXT NV COMMON STOCK EUR1.6	FRANCE
6324511	EVERGREEN INTERNATIONAL STORAG COMMON STOCK TWD10.0	TAIWAN
B19NLV4	EXPERIAN PLC COMMON STOCK USD.1	UNITED KINGDOM
6418801	EXXARO RESOURCES LTD SP ADR COMMON STOCK ZAR.01	SOUTH AFRICA
2771672	FALABELLA SA COMMON STOCK	CHILE
6336088	FAUJI FERTILIZER BIN QASIM LTD COMMON STOCK PKR10.0	PAKISTAN
BNGN9Z1	FINECOBANK BANCA FINECO SPA COMMON STOCK EUR.33	ITALY
6123815	FIRST INTERNATIONAL BANK OF IS COMMON STOCK ILS.05	ISRAEL
6606996	FIRSTRAND LTD COMMON STOCK ZAR.01	SOUTH AFRICA
BJMKSJ5	FIRSTSERVICE CORP COMMON STOCK	CANADA
BYQ8481	FLUGHAFEN ZURICH AG COMMON STOCK CHF10.0	SWITZERLAND
B3BH7R6	FORTIS INC/CANADA COMMON STOCK	CANADA
6349688	FOSCHINI GROUP LTD/THE COMMON STOCK ZAR.0125	SOUTH AFRICA
BMCVDT4	FRONTLINE PLC COMMON STOCK	NORWAY
6356365	FUJI ELECTRIC CO LTD COMMON STOCK	JAPAN

6356525	FUJIFILM HOLDINGS CORP COMMON STOCK	JAPAN
6356707	FUJIKURA LTD COMMON STOCK	JAPAN
6356945	FUJITSU LTD COMMON STOCK	JAPAN
6354626	FUKOKU CO LTD COMMON STOCK	JAPAN
6487072	G-TEKT CORP COMMON STOCK	JAPAN
B1FW751	GALP ENERGIA SGPS SA COMMON STOCK EUR1.0	PORTUGAL
2016629	GAZPROM PJSC ADR	RUSSIA
B59L4L7	GAZPROM PJSC COMMON STOCK RUB5.0	RUSSIA
B1WGG93	GEBERIT AG COMMON STOCK CHF.1	SWITZERLAND
4056719	GENERALI COMMON STOCK	ITALY
B1VXJL8	GENTING BHD COMMON STOCK	MALAYSIA
BDRTVP2	GENTING SINGAPORE LTD COMMON STOCK	SINGAPORE
BW4NKK8	GF SECURITIES CO LTD COMMON STOCK CNY1.0	CHINA
B5B1TX2	GMK NORILSKIY NICKEL PAO COMMON STOCK RUB.01	RUSSIA
B8XW901	GRANITE REAL ESTATE INVESTMENT REIT	CANADA
6718255	GREAT WALL MOTOR CO LTD COMMON STOCK CNY1.0	CHINA
2384951	GREAT-WEST LIFECO INC COMMON STOCK	CANADA
B01RJV3	GS HOLDINGS CORP COMMON STOCK KRW5000.0	SOUTH KOREA
BMTZ571	GSK PLC ADR	UNITED KINGDOM
BD57ZZ6	GUANGDONG TCL SMART HOME APPLI CNH BD57ZZ6	CHINA
BP3RKM4	GUANGXI WUZHOU COMMUNICATIONS CNH BP3RKM4	CHINA
5687431	H & M HENNES & MAURITZ AB COMMON STOCK	SWEDEN
BJK0P85	HAFNIA LTD COMMON STOCK USD.01	NORWAY
BLD4QD0	HAIER SMART HOME CO LTD COMMON STOCK CNY1.0	CHINA
B0RNRF5	HANA FINANCIAL GROUP INC COMMON STOCK KRW5000.0	SOUTH KOREA
B7T5KQ0	HANKOOK TIRE & TECHNOLOGY CO L COMMON STOCK KRW500.0	SOUTH KOREA
6408664	HANKYU HANSHIN HOLDINGS INC COMMON STOCK	JAPAN
B0CSXQ8	HANMI SEMICONDUCTOR CO LTD COMMON STOCK KRW100.0	SOUTH KOREA
B62B9W7	HANWHA LIFE INSURANCE CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6409032	HANYANG SECURITIES CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
BD4HFT1	HD HYUNDAI CO LTD COMMON STOCK KRW1000.0	SOUTH KOREA
6446620	HD KOREA SHIPBUILDING & OFFSHO COMMON STOCK KRW5000.0	SOUTH KOREA
5120679	HEIDELBERG MATERIALS AG COMMON STOCK	GERMANY
BN2RJ91	HEMNET GROUP AB COMMON STOCK SEK.765774	SWEDEN
5002465	HENKEL AG & CO KGAA COMMON STOCK	GERMANY
5076705	HENKEL AG & CO KGAA PREFERENCE	GERMANY
BVZHXQ9	HISCOX LTD COMMON STOCK GBP.065	UNITED KINGDOM
BD5M2M7	HISENSE HOME APPLIANCES GROUP CNH BD5M2M7	CHINA
6405869	HMM CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6431325	HOKKAIDO ELECTRIC POWER CO INC COMMON STOCK	JAPAN
7110753	HOLCIM AG COMMON STOCK CHF2.0	SWITZERLAND
6438564	HON HAI PRECISION INDUSTRY CO COMMON STOCK TWD10.0	TAIWAN
6435145	HONDA MOTOR CO LTD COMMON STOCK	JAPAN
6441506	HOYA CORP COMMON STOCK	JAPAN
BWVFT00	HUATAI SECURITIES CO LTD COMMON STOCK CNY1.0	CHINA
BP3R2T5	HUAXIA BANK CO LTD CNH BP3R2T5	CHINA
6443665	HUB POWER CO LTD/THE COMMON STOCK PKR10.0	PAKISTAN
BD4T5X1	HUB24 LTD DEFERRED EX OPTION COMMON STOCK	AUSTRALIA

BYYXJY9	HYDRO ONE LTD COMMON STOCK	CANADA
B0V3XR5	HYUNDAI GLOVIS CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
B01LXY6	HYUNDAI MARINE & FIRE INSURANC COMMON STOCK KRW500.0	SOUTH KOREA
6449544	HYUNDAI MOBIS CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6451055	HYUNDAI MOTOR CO COMMON STOCK KRW5000.0	SOUTH KOREA
6451022	HYUNDAI MOTOR CO PREFERENCE	SOUTH KOREA
6148272	HYUNDAI MOTOR CO PREFERENCE	SOUTH KOREA
B3LF565	HYUNDAI WIA CORP COMMON STOCK KRW5000.0	SOUTH KOREA
BDB46M5	I-MOBILE CO LTD COMMON STOCK	JAPAN
BJ2ZH37	IA FINANCIAL CORP INC COMMON STOCK	CANADA
2446646	IAMGOLD CORP COMMON STOCK	CANADA
6455530	ICL GROUP LTD COMMON STOCK ILS1.0	ISRAEL
B1FF8P7	IDEMITSU KOSAN CO LTD COMMON STOCK	JAPAN
B06QFB7	IG GROUP HOLDINGS PLC COMMON STOCK GBP.00005	UNITED KINGDOM
6466985	IHI CORP COMMON STOCK	JAPAN
BFDTBS3	IIDA GROUP HOLDINGS CO LTD COMMON STOCK	JAPAN
6461601	INABATA & CO LTD COMMON STOCK	JAPAN
B61TVQ0	INCHCAPE PLC COMMON STOCK GBP.1	UNITED KINGDOM
4476210	INDRA SISTEMAS SA COMMON STOCK EUR.2	SPAIN
BP9DL90	INDUSTRIA DE DISENO TEXTIL SA COMMON STOCK EUR.03	SPAIN
B1G1QD8	INDUSTRIAL & COMMERCIAL BANK O COMMON STOCK CNY1.0	CHINA
6462972	INDUSTRIAL BANK OF KOREA COMMON STOCK KRW5000.0	SOUTH KOREA
B1VSK10	INDUSTRIVARDEN AB COMMON STOCK SEK2.5	SWEDEN
B1VSK54	INDUSTRIVARDEN AB COMMON STOCK SEK2.5	SWEDEN
BZ57390	ING GROEP NV COMMON STOCK EUR.01	NETHERLANDS
6019011	INNER MONGOLIA YITAI COAL CO L COMMON STOCK CNY1.0	CHINA
B10RB15	INPEX CORP COMMON STOCK	JAPAN
6461838	INTERNATIONAL INDUSTRIES LTD COMMON STOCK PKR10.0	PAKISTAN
B468425	INTERNATIONAL STEELS LTD COMMON STOCK LKR10.0	PAKISTAN
4076836	INTESA SANPAOLO SPA COMMON STOCK	ITALY
BMV7PN1	INVESTOR AB COMMON STOCK SEK6.25	SWEDEN
BMV7PQ4	INVESTOR AB COMMON STOCK SEK6.25	SWEDEN
B2Q4CL4	ISETAN MITSUKOSHI HOLDINGS LTD COMMON STOCK	JAPAN
6466866	ISHIHARA SANGYO KAISHA LTD COMMON STOCK	JAPAN
6889678	ISRAEL CORP LTD COMMON STOCK ILS1.0	ISRAEL
6451271	ISRAEL DISCOUNT BANK LTD COMMON STOCK ILS.1	ISRAEL
6467104	ISUZU MOTORS LTD COMMON STOCK	JAPAN
B037HR3	ITAU UNIBANCO HOLDING SA PREFERENCE	BRAZIL
6468204	IWATANI CORP COMMON STOCK	JAPAN
B23TC12	J FRONT RETAILING CO LTD COMMON STOCK	JAPAN
6743882	JAPAN EXCHANGE GROUP INC COMMON STOCK	JAPAN
BYT8165	JAPAN POST BANK CO LTD COMMON STOCK	JAPAN
BYT8143	JAPAN POST HOLDINGS CO LTD COMMON STOCK	JAPAN
BYT8154	JAPAN POST INSURANCE CO LTD COMMON STOCK	JAPAN
6474535	JAPAN TOBACCO INC COMMON STOCK	JAPAN
6472119	JARDINE MATHESON HOLDINGS LTD COMMON STOCK USD.25	HONG KONG
B1V74X7	JBS S/A COMMON STOCK	BRAZIL
BMM27D9	JD.COM INC ADR USD.00002	CHINA

BP3R7P6	JIANGSU KANION PHARMACEUTICAL CNH BP3R7P6	CHINA
BMF7N00	JIANGSU SUZHOU RURAL COMMERCIA CNH BMF7N00	CHINA
BFCCQK0	JIANGSU ZHANGJIAGANG RURAL COM CNH BFCCQK0	CHINA
6000305	JIANGXI COPPER CO LTD COMMON STOCK CNY1.0	CHINA
BP3RDL4	JIANGXI GANYUE EXPRESSWAY CO L CNH BP3RDL4	CHINA
BP3R972	JINNENG HOLDING SHANXI COAL IN CNH BP3R972	CHINA
6497082	JTEKT CORP COMMON STOCK	JAPAN
B3CY5L6	JVCKENWOOD CORP COMMON STOCK	JAPAN
B0386J1	JYSKE BANK A/S COMMON STOCK DKK10.0	DENMARK
6683449	KANGWON LAND INC COMMON STOCK KRW500.0	SOUTH KOREA
6483489	KANSAI ELECTRIC POWER CO INC/T COMMON STOCK	JAPAN
6483809	KAO CORP COMMON STOCK	JAPAN
6888794	KASIKORNBANK PCL FOREIGN SH. THB10.0 A	THAILAND
6484686	KAWASAKI KISEN KAISHA LTD COMMON STOCK	JAPAN
B3DG2Y3	KB FINANCIAL GROUP INC ADR	SOUTH KOREA
B3DF0Y6	KB FINANCIAL GROUP INC COMMON STOCK KRW5000.0	SOUTH KOREA
6248990	KDDI CORP COMMON STOCK	JAPAN
6490928	KIA CORP COMMON STOCK KRW5000.0	SOUTH KOREA
6490809	KIKKOMAN CORP COMMON STOCK	JAPAN
3319521	KINGFISHER PLC COMMON STOCK GBP.157143	UNITED KINGDOM
B04NVW3	KINROSS GOLD CORP COMMON STOCK	CANADA
6493745	KIRIN HOLDINGS CO LTD COMMON STOCK	JAPAN
6494276	KITZ CORP COMMON STOCK	JAPAN
7582556	KLEPIERRE SA REIT EUR1.4	FRANCE
4519449	KOMERCNI BANKA AS COMMON STOCK CZK100.0	CZECH REPUBLIC
6496681	KONAMI GROUP CORP COMMON STOCK	JAPAN
B11WFP1	KONECRANES OYJ COMMON STOCK EUR.5	FINLAND
5208241	KONGSBERG GRUPPEN ASA COMMON STOCK NOK1.25	NORWAY
6495730	KOREA ELECTRIC POWER CORP COMMON STOCK KRW5000.0	SOUTH KOREA
6654586	KOREA INVESTMENT HOLDINGS CO L COMMON STOCK KRW5000.0	SOUTH KOREA
BMBP900	KRAFTON INC COMMON STOCK KRW100.0	SOUTH KOREA
6492838	KRUNG THAI BANK PCL FOREIGN SH. THB5.15 A	THAILAND
6505316	KT CORP COMMON STOCK KRW5000.0	SOUTH KOREA
6175076	KT&G CORP COMMON STOCK KRW5000.0	SOUTH KOREA
6499260	KYOCERA CORP COMMON STOCK	JAPAN
BMV4NR2	KYOTO FINANCIAL GROUP INC COMMON STOCK	JAPAN
6499550	KYOWA KIRIN CO LTD COMMON STOCK	JAPAN
6499806	KYUSHU ELECTRIC POWER CO INC COMMON STOCK	JAPAN
4538002	L E LUNDBERGFORETAGEN AB COMMON STOCK	SWEDEN
BF41XY8	LANDIS+GYR GROUP AG COMMON STOCK CHF10.0	SWITZERLAND
6196077	LAO FENG XIANG CO LTD COMMON STOCK CNY1.0	CHINA
6506267	LASERTEC CORP COMMON STOCK	JAPAN
BQWRB30	LEEDARSON IOT TECHNOLOGY INC CNH BQWRB30	CHINA
6218089	LENOVO GROUP LTD COMMON STOCK	CHINA
B0DJNG0	LEONARDO FINMECCANICA S.P.A. COMMON STOCK	ITALY
B9JHSH7	LET'S GOWEX SA COMMON STOCK EUR.01	SPAIN
6520739	LG ELECTRONICS INC COMMON STOCK KRW5000.0	SOUTH KOREA
6520966	LG ELECTRONICS INC PREFERENCE	SOUTH KOREA

6344456	LG H&H CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6518808	LION CORP COMMON STOCK	JAPAN
6900212	LIXIL CORP COMMON STOCK	JAPAN
2544346	LLOYDS BANKING GROUP PLC ADR	UNITED KINGDOM
0870612	LLOYDS BANKING GROUP PLC COMMON STOCK GBP.1	UNITED KINGDOM
B1921K0	LOGITECH INTERNATIONAL SA COMMON STOCK CHF.25	SWITZERLAND
B18ZRK2	LOGITECH INTERNATIONAL SA COMMON STOCK CHF.25	SWITZERLAND
BP3RD25	LONCIN MOTOR CO LTD CNH BP3RD25	CHINA
BMVB566	LOOMIS AB COMMON STOCK SEK5.0	SWEDEN
BNRQW72	LOTTERY CORP LTD/THE COMMON STOCK	AUSTRALIA
7127979	LPP SA COMMON STOCK PLN2.0	POLAND
B59SNS8	LUKOIL PJSC COMMON STOCK RUB.025	RUSSIA
BBGTNT7	MAIRE SPA COMMON STOCK	ITALY
6555805	MAKITA CORP COMMON STOCK	JAPAN
BJ1DLW9	MAN GROUP PLC/JERSEY COMMON STOCK USD.03428571	UNITED KINGDOM
B1G40S0	MAPFRE SA COMMON STOCK EUR.1	SPAIN
6569464	MARUBENI CORP COMMON STOCK	JAPAN
6429386	MAXELL LTD COMMON STOCK	JAPAN
6900308	MAZDA MOTOR CORP COMMON STOCK	JAPAN
BH0VTS2	MEBUKI FINANCIAL GROUP INC COMMON STOCK	JAPAN
6372480	MEDIATEK INC COMMON STOCK TWD10.0	TAIWAN
4574813	MEDIOBANCA BANCA DI CREDITO FI COMMON STOCK	ITALY
6782090	MEDIPAL HOLDINGS CORP COMMON STOCK	JAPAN
B60DQV3	MEIJI HOLDINGS CO LTD COMMON STOCK	JAPAN
4741844	MERCK KGAA COMMON STOCK	GERMANY
B4WRJD2	MERITZ FINANCIAL GROUP INC COMMON STOCK KRW500.0	SOUTH KOREA
BLC8J12	MFE-MEDIAFOREUROPE NV COMMON STOCK	ITALY
6133450	MICRO-STAR INTERNATIONAL CO LT COMMON STOCK TWD10.0	TAIWAN
BD5CPP1	MIDEA GROUP CO LTD CNH BD5CPP1	CHINA
B0RJCG9	MINTH GROUP LTD COMMON STOCK HKD.1	CHINA
BF0Q262	MIRAE ASSET SECURITIES CO LTD PREFERENCE	SOUTH KOREA
6597045	MITSUBISHI ELECTRIC CORP COMMON STOCK	JAPAN
6268976	MITSUBISHI HC CAPITAL INC COMMON STOCK	JAPAN
6597067	MITSUBISHI HEAVY INDUSTRIES LT COMMON STOCK	JAPAN
6597346	MITSUI MINING & SMELTING CO LT COMMON STOCK	JAPAN
6597584	MITSUI OSK LINES LTD COMMON STOCK	JAPAN
6916703	MIZRAHI TEFAHOT BANK LTD COMMON STOCK ILS.1	ISRAEL
6597960	MIZUNO CORP COMMON STOCK	JAPAN
BD5ZXH8	MOL HUNGARIAN OIL & GAS PLC COMMON STOCK HUF125.0	HUNGARY
5996234	MOTOR OIL HELLAS CORINTH REFIN COMMON STOCK EUR.75	GREECE
BF20GN7	MPC CONTAINER SHIPS ASA COMMON STOCK NOK1.0	NORWAY
BYXW419	MR PRICE GROUP LTD COMMON STOCK ZAR.00025	SOUTH AFRICA
B2Q4CS1	MS&AD INSURANCE GROUP HOLDINGS COMMON STOCK	JAPAN
B09DHL9	MTU AERO ENGINES AG COMMON STOCK	GERMANY
5294121	MUENCHENER RUECKVERSICHERUNGS- COMMON STOCK	GERMANY
BZ04921	MUNTERS GROUP AB COMMON STOCK SEK.03	SWEDEN
6621063	NAMURA SHIPBUILDING CO LTD COMMON STOCK	JAPAN
BG087C6	NATIONAL BANK OF GREECE SA COMMON STOCK EUR1.0	GREECE

BZ8FYV0	NATIONAL GRID PLC ADR	UNITED KINGDOM
6560393	NAVER CORP COMMON STOCK KRW100.0	SOUTH KOREA
BM93SF4	NETEASE INC COMMON STOCK USD.0001	CHINA
BF2S426	NETMARBLE CORP COMMON STOCK KRW100.0	SOUTH KOREA
BP3R6P9	NEUSOFT CORP CNH BP3R6P9	CHINA
2826947	NEW GOLD INC COMMON STOCK	CANADA
6619507	NGK INSULATORS LTD COMMON STOCK	JAPAN
6640767	NH FOODS LTD COMMON STOCK	JAPAN
6619648	NHK SPRING CO LTD COMMON STOCK	JAPAN
6647133	NICE LTD COMMON STOCK ILS1.0	ISRAEL
6639550	NINTENDO CO LTD COMMON STOCK	JAPAN
BKSHP63	NIPPON EXPRESS HOLDINGS INC COMMON STOCK	JAPAN
6470588	NIPPON SHOKUBAI CO LTD COMMON STOCK	JAPAN
6641373	NIPPON TELEGRAPH & TELEPHONE C COMMON STOCK	JAPAN
6643960	NIPPON YUSEN KK COMMON STOCK	JAPAN
6640961	NISSHIN SEIFUN GROUP INC COMMON STOCK	JAPAN
6641760	NISSIN FOODS HOLDINGS CO LTD COMMON STOCK	JAPAN
6641801	NITTO DENKO CORP COMMON STOCK	JAPAN
BNG8PQ9	NN GROUP NV COMMON STOCK EUR.12	NETHERLANDS
5902941	NOKIA OYJ COMMON STOCK	FINLAND
6643108	NOMURA HOLDINGS INC COMMON STOCK	JAPAN
6390921	NOMURA RESEARCH INSTITUTE LTD COMMON STOCK	JAPAN
BYZF9J9	NORDEA BANK ABP COMMON STOCK EUR1.0	FINLAND
BFM0SV9	NORDEA BANK ABP COMMON STOCK EUR1.0	FINLAND
BGJRHX5	NORDEA BANK ABP COMMON STOCK EUR1.0	FINLAND
6717456	NORTHERN STAR RESOURCES LTD COMMON STOCK	AUSTRALIA
2577740	NOVA LTD COMMON STOCK	ISRAEL
2620105	NOVARTIS AG ADR	SWITZERLAND
7103065	NOVARTIS AG COMMON STOCK CHF.49	SWITZERLAND
6805005	NS UNITED KAIUN KAISHA LTD COMMON STOCK	JAPAN
6136749	OBIC CO LTD COMMON STOCK	JAPAN
BJV30F5	OBSIDIAN ENERGY LTD COMMON STOCK	CANADA
6732716	OIL & GAS DEVELOPMENT CO LTD COMMON STOCK PKR10.0	PAKISTAN
B1S0581	OIL REFINERIES LTD COMMON STOCK ILS1.0	ISRAEL
6657701	OJI HOLDINGS CORP COMMON STOCK	JAPAN
6658801	OLYMPUS CORP COMMON STOCK	JAPAN
6660107	ONO PHARMACEUTICAL CO LTD COMMON STOCK	JAPAN
7107250	OPAP SA COMMON STOCK EUR.3	GREECE
2655657	OPEN TEXT CORP COMMON STOCK	CANADA
6659116	ORIENT OVERSEAS INTERNATIONAL COMMON STOCK USD.1	CHINA
6661144	ORIX CORP COMMON STOCK	JAPAN
6527774	ORIX JREIT INC REIT	JAPAN
B1VQF42	ORKLA ASA COMMON STOCK NOK1.25	NORWAY
6661768	OSAKA GAS CO LTD COMMON STOCK	JAPAN
BN60CQ4	OSISKO GOLD ROYALTIES LTD COMMON STOCK	CANADA
7320154	OTP BANK NYRT COMMON STOCK HUF100.0	HUNGARY
6267058	OTSUKA CORP COMMON STOCK	JAPAN
B5LTM93	OTSUKA HOLDINGS CO LTD COMMON STOCK	JAPAN

6677141	PAKISTAN OILFIELDS LTD COMMON STOCK PKR10.0	PAKISTAN
6269861	PAN PACIFIC INTERNATIONAL HOLD COMMON STOCK	JAPAN
6572707	PANASONIC HOLDINGS CORP COMMON STOCK	JAPAN
B44XTX8	PANDORA A/S COMMON STOCK DKK.01	DENMARK
BYVW0F7	PDD HOLDINGS INC ADR USD.00002	CHINA
BYX56S9	PEARL ABYSS CORP COMMON STOCK KRW100.0	SOUTH KOREA
B4PLX17	PEGATRON CORP COMMON STOCK TWD10.0	TAIWAN
BDFS9G8	PEOPLE'S INSURANCE CO GROUP OF CNH BDFS9G8	CHINA
B8RZJZ1	PEOPLE'S INSURANCE CO GROUP OF COMMON STOCK CNY1.0	CHINA
B3CY709	PERSOL HOLDINGS CO LTD COMMON STOCK	JAPAN
BP3R206	PETROCHINA CO LTD CNH BP3R206	CHINA
6226576	PETROCHINA CO LTD COMMON STOCK CNY1.0	CHINA
2682365	PETROLEO BRASILEIRO SA COMMON STOCK	BRAZIL
2684532	PETROLEO BRASILEIRO SA PREFERENCE	BRAZIL
6460590	PHOENIX FINANCIAL LTD COMMON STOCK ILS1.0	ISRAEL
B3ZQM29	PHOSAGRO PJSC COMMON STOCK RUB2.5	RUSSIA
6706250	PICC PROPERTY & CASUALTY CO LT COMMON STOCK CNY1.0	CHINA
B01FLR7	PING AN INSURANCE GROUP CO OF COMMON STOCK CNY1.0	CHINA
BNC0DB0	PIRAEUS FINANCIAL HOLDINGS SA COMMON STOCK EUR.93	GREECE
BBT3PS9	PLUS500 LTD COMMON STOCK ILS.01	UNITED KINGDOM
BN6PP37	POP MART INTERNATIONAL GROUP L COMMON STOCK USD.0001	CHINA
BD8GL18	POSTAL SAVINGS BANK OF CHINA C COMMON STOCK CNY1.0	CHINA
BYYN701	POSTE ITALIANE SPA COMMON STOCK EUR1.0	ITALY
6435327	POWER ASSETS HOLDINGS LTD COMMON STOCK	HONG KONG
B03NGS5	POWSZECHNA KASA OSZCZEDNOSCI B COMMON STOCK PLN1.0	POLAND
B63DG21	POWSZECHNY ZAKLAD UBEZPIECZEN COMMON STOCK PLN.1	POLAND
BLKVVX9	PRIMO WATER CORP COMMON STOCK	CANADA
B00D9P6	PROXIMUS COMMON STOCK	BELGIUM
B1W4V69	PRYSMIAN SPA COMMON STOCK EUR.1	ITALY
B1359J0	PTT EXPLORATION & PRODUCTION P FOREIGN SH. THB1.0 A	THAILAND
BD0BDJ3	PTT PCL FOREIGN SH. THB1.0 A	THAILAND
6715740	QBE INSURANCE GROUP LTD COMMON STOCK	AUSTRALIA
6141011	QUANTA COMPUTER INC COMMON STOCK TWD10.0	TAIWAN
BMTCW60	QUECLINK WIRELESS SOLUTIONS CO CNH BMTCW60	CHINA
B0704T9	RAIFFEISEN BANK INTERNATIONAL COMMON STOCK	AUSTRIA
5228658	RANDSTAD NV COMMON STOCK EUR.1	NETHERLANDS
6198578	REA GROUP LTD COMMON STOCK	AUSTRALIA
6051422	REALTEK SEMICONDUCTOR CORP COMMON STOCK TWD10.0	TAIWAN
6431875	RECHI PRECISION CO LTD COMMON STOCK TWD10.0	TAIWAN
BD1DM79	RELIANCE WORLDWIDE CORP LTD COMMON STOCK	AUSTRALIA
BYRY2M8	RELX PLC ADR	UNITED KINGDOM
BYWLC68	RELX PLC COMMON STOCK GBP.00144397	UNITED KINGDOM
5669354	REPSOL SA COMMON STOCK EUR1.0	SPAIN
BTF8CF0	RESTAURANT BRANDS INTERNATIONA COMMON STOCK	CANADA
BC9ZH86	RICHTER GEDEON NYRT COMMON STOCK HUF100.0	HUNGARY
6738220	RICOH CO LTD COMMON STOCK	JAPAN
7110388	ROCHE HOLDING AG COMMON STOCK	SWITZERLAND
2125268	ROGERS COMMUNICATIONS INC COMMON STOCK	CANADA

B59SS16	ROSNEFT OIL CO PJSC COMMON STOCK RUB.01	RUSSIA
2756196	ROYAL BANK OF CANADA COMMON STOCK	CANADA
6758455	RYOHIN KEIKAKU CO LTD COMMON STOCK	JAPAN
6769833	SAKATA INX CORP COMMON STOCK	JAPAN
BMXX645	SAMPO OYJ COMMON STOCK	FINLAND
6771720	SAMSUNG ELECTRONICS CO LTD COMMON STOCK KRW100.0	SOUTH KOREA
6773812	SAMSUNG ELECTRONICS CO LTD PREFERENCE	SOUTH KOREA
6155250	SAMSUNG FIRE & MARINE INSURANC COMMON STOCK KRW500.0	SOUTH KOREA
6155261	SAMSUNG FIRE & MARINE INSURANC PREFERENCE	SOUTH KOREA
B12C0T9	SAMSUNG LIFE INSURANCE CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
6408448	SAMSUNG SECURITIES CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6070900	SAMUDERA SHIPPING LINE LTD COMMON STOCK	SINGAPORE
6771838	SAMYANG FOODS CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6775432	SANKYO CO LTD COMMON STOCK	JAPAN
7153639	SANTANDER BANK POLSKA SA COMMON STOCK PLN10.0	POLAND
6776606	SANTEN PHARMACEUTICAL CO LTD COMMON STOCK	JAPAN
6776781	SANWA HOLDINGS CORP COMMON STOCK	JAPAN
2775135	SAP SE ADR	GERMANY
4846288	SAP SE COMMON STOCK	GERMANY
6777665	SATO SHOJI CORP COMMON STOCK	JAPAN
4767981	SBERBANK OF RUSSIA PJSC COMMON STOCK RUB3.0	RUSSIA
5036323	SBERBANK OF RUSSIA PJSC PREFERENCE	RUSSIA
BPH0717	SCB X PCL FOREIGN SH. THB10.0 A	THAILAND
BLZH0Z7	SCENTRE GROUP REIT	AUSTRALIA
6251028	SCREEN HOLDINGS CO LTD COMMON STOCK	JAPAN
6858474	SCSK CORP COMMON STOCK	JAPAN
BYWD7L4	SEA LTD ADR USD.0005	SINGAPORE
B55SGV6	SECURE ENERGY SERVICES INC COMMON STOCK	CANADA
B0767Y3	SEEK LTD COMMON STOCK	AUSTRALIA
B02RK08	SEGA SAMMY HOLDINGS INC COMMON STOCK	JAPAN
BKY6H35	SEIBU HOLDINGS INC COMMON STOCK	JAPAN
6616508	SEIKO EPSON CORP COMMON STOCK	JAPAN
6793821	SEKISUI CHEMICAL CO LTD COMMON STOCK	JAPAN
6793906	SEKISUI HOUSE LTD COMMON STOCK	JAPAN
0797379	SERCO GROUP PLC COMMON STOCK GBP.02	UNITED KINGDOM
BMBQHZ4	SGS SA COMMON STOCK CHF.04	SWITZERLAND
BS7K5P8	SHAANXI COAL INDUSTRY CO LTD CNH BS7K5P8	CHINA
BS7K3P4	SHANDONG XINCHAO ENERGY CORP L CNH BS7K3P4	CHINA
6810010	SHANGHAI INDUSTRIAL HOLDINGS L COMMON STOCK	CHINA
BNR4NP1	SHENZHEN TRANSSION HOLDINGS CO CNH BNR4NP1	CHINA
2730800	SHINHAN FINANCIAL GROUP CO LTD ADR	SOUTH KOREA
6397502	SHINHAN FINANCIAL GROUP CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
6804682	SHIONOGI & CO LTD COMMON STOCK	JAPAN
BXDZ9Z0	SHOPIFY INC COMMON STOCK	CANADA
6840954	SIGMA KOKI CO LTD COMMON STOCK	JAPAN
6303866	SINGAPORE EXCHANGE LTD COMMON STOCK	SINGAPORE
6043214	SINGAPORE TECHNOLOGIES ENGINEE COMMON STOCK	SINGAPORE
B02PY11	SINGAPORE TELECOMMUNICATIONS L COMMON STOCK	SINGAPORE

BLF9YV7	SK BIOPHARMACEUTICALS CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
B39Z8L3	SK INC COMMON STOCK KRW200.0	SOUTH KOREA
BMG3GS6	SK SQUARE CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
4813345	SKANDINAVISKA ENSKILDA BANKEN COMMON STOCK SEK10.0	SWEDEN
B1TK234	SKY PERFECT JSAT HOLDINGS INC COMMON STOCK	JAPAN
5966516	SOCIETE GENERALE SA COMMON STOCK EUR1.25	FRANCE
BF5M0K5	SOFTBANK CORP COMMON STOCK	JAPAN
6546359	SOHGO SECURITY SERVICES CO LTD COMMON STOCK	JAPAN
6594143	SOJITZ CORP COMMON STOCK	JAPAN
B62G7K6	SOMPO HOLDINGS INC COMMON STOCK	JAPAN
5973992	SONAE SGPS SA COMMON STOCK EUR1.0	PORTUGAL
7156036	SONOVA HOLDING AG COMMON STOCK CHF.05	SWITZERLAND
6309262	SQUARE ENIX HOLDINGS CO LTD COMMON STOCK	JAPAN
BD5CDJ1	STANLEY AGRICULTURAL GROUP CO CNH BD5CDJ1	CHINA
BMD8F98	STELLANTIS NV COMMON STOCK EUR.01	ITALY
4852832	STOREBRAND ASA COMMON STOCK NOK5.0	NORWAY
6356406	SUBARU CORP COMMON STOCK	JAPAN
BMF4S06	SUMEC CORP LTD CNH BMF4S06	CHINA
6858708	SUMITOMO ELECTRIC INDUSTRIES L COMMON STOCK	JAPAN
6858861	SUMITOMO FORESTRY CO LTD COMMON STOCK	JAPAN
6858849	SUMITOMO METAL MINING CO LTD COMMON STOCK	JAPAN
6563024	SUMITOMO MITSUI FINANCIAL GROU COMMON STOCK	JAPAN
6431897	SUMITOMO MITSUI TRUST GROUP IN COMMON STOCK	JAPAN
6250865	SUMITOMO PHARMA CO LTD COMMON STOCK	JAPAN
6858991	SUMITOMO RUBBER INDUSTRIES LTD COMMON STOCK	JAPAN
6859927	SUN HUNG KAI PROPERTIES LTD COMMON STOCK	HONG KONG
2566124	SUN LIFE FINANCIAL INC COMMON STOCK	CANADA
6985156	SUN-WA TECHNOS CORP COMMON STOCK	JAPAN
B3NB0P5	SUNCOR ENERGY INC COMMON STOCK	CANADA
BBD7Q84	SUNTORY BEVERAGE & FOOD LTD COMMON STOCK	JAPAN
6865560	SUZUKEN CO LTD/AICHI JAPAN COMMON STOCK	JAPAN
BXDZ9Q1	SVENSKA HANDELSBANKEN AB COMMON STOCK SEK1.55	SWEDEN
4846523	SWEDBANK AB COMMON STOCK	SWEDEN
6867748	SWIRE PACIFIC LTD COMMON STOCK	HONG KONG
5533976	SWISSCOM AG COMMON STOCK CHF1.0	SWITZERLAND
B06JSP1	SYDBANK AS COMMON STOCK DKK10.0	DENMARK
6883807	SYSMEX CORP COMMON STOCK	JAPAN
6744294	T&D HOLDINGS INC COMMON STOCK	JAPAN
2113382	TAIWAN SEMICONDUCTOR MANUFACTU ADR	TAIWAN
6889106	TAIWAN SEMICONDUCTOR MANUFACTU COMMON STOCK TWD10.0	TAIWAN
B3VW0Z0	TAKEDA PHARMACEUTICAL CO LTD ADR	JAPAN
6870445	TAKEDA PHARMACEUTICAL CO LTD COMMON STOCK	JAPAN
B8J3TH5	TAMARACK VALLEY ENERGY LTD COMMON STOCK	CANADA
B59BXN2	TATNEFT PJSC COMMON STOCK RUB1.0	RUSSIA
B5B1TJ8	TATNEFT PJSC PREFERENCE	RUSSIA
B0190C7	TECHTRONIC INDUSTRIES CO LTD COMMON STOCK	HONG KONG
6880507	TEIJIN LTD COMMON STOCK	JAPAN
B97C733	TELE2 AB COMMON STOCK SEK1.25	SWEDEN

5959378	TELEFONAKTIEBOLAGET LM ERICSSO COMMON STOCK SEK5.0	SWEDEN
B6XFBX3	TELEFONICA BRASIL S.A. PREF COMMON STOCK	BRAZIL
4732495	TELENOR ASA COMMON STOCK NOK6.0	NORWAY
5978384	TELIA CO AB COMMON STOCK SEK3.2	SWEDEN
6087289	TELSTRA GROUP LTD COMMON STOCK	AUSTRALIA
2381093	TELUS CORP COMMON STOCK	CANADA
6904612	TENAGA NASIONAL BHD COMMON STOCK	MALAYSIA
B3F2DZ7	TENCENT HOLDINGS LTD ADR HKD.00002	CHINA
2883878	TEVA PHARMACEUTICAL INDUSTRIES ADR	ISRAEL
BDRXBF4	TFI INTERNATIONAL INC COMMON STOCK	CANADA
B0305J0	THAI OIL PCL FOREIGN SH. THB10.0 A	THAILAND
BNBXPB4	THOMSON REUTERS CORP COMMON STOCK	CANADA
BN71RB6	TIM SA/BRAZIL COMMON STOCK	BRAZIL
B2Q4CR0	TIS INC COMMON STOCK	JAPAN
6895169	TOBU RAILWAY CO LTD COMMON STOCK	JAPAN
6895200	TOHO CO LTD/TOKYO COMMON STOCK	JAPAN
6895266	TOHOKU ELECTRIC POWER CO INC COMMON STOCK	JAPAN
6513126	TOKIO MARINE HOLDINGS INC COMMON STOCK	JAPAN
6895404	TOKYO ELECTRC POWER COMPANY HO COMMON STOCK	JAPAN
6895675	TOKYO ELECTRON LTD COMMON STOCK	JAPAN
6895448	TOKYO GAS CO LTD COMMON STOCK	JAPAN
6897024	TOPPAN HOLDINGS INC COMMON STOCK	JAPAN
BD3B981	TORM PLC COMMON STOCK USD.01	DENMARK
B15C557	TOTALENERGIES SE COMMON STOCK EUR2.5	FRANCE
6899967	TOYO SUISAN KAISHA LTD COMMON STOCK	JAPAN
6900546	TOYOTA INDUSTRIES CORP COMMON STOCK	JAPAN
6900580	TOYOTA TSUSHO CORP COMMON STOCK	JAPAN
BMDZN39	TP ICAP GROUP PLC COMMON STOCK GBP.25	UNITED KINGDOM
BD5CHX3	TPV TECHNOLOGY CO LTD CNH BD5CHX3	CHINA
2901628	TRANSALTA CORP COMMON STOCK	CANADA
4902384	TRELLEBORG AB COMMON STOCK SEK25.0	SWEDEN
6113485	TRUWORTHS INTERNATIONAL LTD COMMON STOCK ZAR.00015	SOUTH AFRICA
6906704	TSUBAKIMOTO CHAIN CO COMMON STOCK	JAPAN
B03MYN3	TURKCELL ILETISIM HIZMETLERI A COMMON STOCK TRY1.0	TURKEY
B03MYP5	TURKIYE GARANTI BANKASI AS COMMON STOCK TRY1.0	TURKEY
6911377	U-MING MARINE TRANSPORT CORP COMMON STOCK TWD10.0	TAIWAN
BRJL176	UBS GROUP AG COMMON STOCK USD.1	SWITZERLAND
BRTR118	UBS GROUP AG COMMON STOCK USD.1	SWITZERLAND
B0FHTN1	ULTRAPAR PARTICIPACOES SA COMMON STOCK	BRAZIL
6599483	ULVAC INC COMMON STOCK	JAPAN
BF2PQ09	UNIBAIL-RODAMCO-WESTFIELD REIT EUR5.0	FRANCE
BH4H4H0	UNICAJA BANCO SA COMMON STOCK EUR.25	SPAIN
BYMXPS7	UNICREDIT SPA COMMON STOCK	ITALY
B04H0M8	UNID CO LTD COMMON STOCK KRW5000.0	SOUTH KOREA
B7SF135	UNIPOL GRUPPO SPA COMMON STOCK	ITALY
B09RFT5	UNITED BANK LTD/PAKISTAN COMMON STOCK PKR10.0	PAKISTAN
B0FXSY3	UNITED ENERGY GROUP LTD COMMON STOCK HKD.01	HONG KONG
6916628	UNITED MICROELECTRONICS CORP COMMON STOCK TWD10.0	TAIWAN

6230845	UNITED TRACTORS TBK PT COMMON STOCK IDR250.0	INDONESIA
BMCK9H1	UNIVERSAL STORE HOLDINGS LTD COMMON STOCK	AUSTRALIA
B13NPP2	VALID SOLUCOES E SERVICOS DE S COMMON STOCK	BRAZIL
BLGWF90	VALLOUREC SACA COMMON STOCK EUR.02	FRANCE
BD73L09	VATTI CORP LTD CNH BD73L09	CHINA
BPBLV81	VIBRA ENERGIA SA COMMON STOCK	BRAZIL
B3N0H17	VIPSHOP HOLDINGS LTD ADR USD.0001	CHINA
BK019T4	VODAFONE GROUP PLC ADR	UNITED KINGDOM
BH4HKS3	VODAFONE GROUP PLC COMMON STOCK USD.2095238	UNITED KINGDOM
5497168	VOLKSWAGEN AG PREFERENCE	GERMANY
6166100	VT CO LTD COMMON STOCK KRW500.0	SOUTH KOREA
B5B1TP4	VTB BANK PJSC COMMON STOCK RUB50.0	RUSSIA
BW1YVH8	WAL-MART DE MEXICO SAB DE CV COMMON STOCK	MEXICO
4525189	WARTSILA OYJ ABP COMMON STOCK	FINLAND
2945422	WEG SA COMMON STOCK	BRAZIL
6743956	WEICHAI POWER CO LTD COMMON STOCK CNY1.0	CHINA
6948836	WESFARMERS LTD COMMON STOCK	AUSTRALIA
BLLHKZ1	WH GROUP LTD COMMON STOCK USD.0001	HONG KONG
B418WK4	WHITECAP RESOURCES INC COMMON STOCK	CANADA
5699373	WIENERBERGER AG COMMON STOCK	AUSTRIA
BFZCHN7	WIX.COM LTD COMMON STOCK ILS.01	ISRAEL
5671519	WOLTERS KLUWER NV COMMON STOCK EUR.12	NETHERLANDS
6981239	WOOLWORTHS GROUP LTD COMMON STOCK	AUSTRALIA
BGHWH98	WOORI FINANCIAL GROUP INC COMMON STOCK KRW5000.0	SOUTH KOREA
B8P4LP4	XERO LTD COMMON STOCK	AUSTRALIA
BD7XV43	XINHUA WINSHARE PUBLISHING AND CNH BD7XV43	CHINA
6985112	YAKULT HONSHA CO LTD COMMON STOCK	JAPAN
6985587	YAMAZEN CORP COMMON STOCK	JAPAN
B1VT035	YANGZIJIANG SHIPBUILDING HOLDI COMMON STOCK	SINGAPORE
B03MZJ6	YAPI VE KREDI BANKASI AS COMMON STOCK TRY1.0	TURKEY
6986427	YOKOGAWA ELECTRIC CORP COMMON STOCK	JAPAN
6988337	YUHAN CORP COMMON STOCK KRW1000.0	SOUTH KOREA
BYW4289	YUM CHINA HOLDINGS INC COMMON STOCK USD.01	CHINA
BD5C9N7	ZHEJIANG CRYSTAL-OPTECH CO LTD CNH BD5C9N7	CHINA
BMQ8T82	ZHEJIANG QIANJIANG MOTORCYCLE CNH BMQ8T82	CHINA
B734XQ4	ZHEN DING TECHNOLOGY HOLDING L COMMON STOCK TWD10.0	TAIWAN
6725299	ZIJIN MINING GROUP CO LTD COMMON STOCK CNY.1	CHINA
BLC90J0	ZIM INTEGRATED SHIPPING SERVIC COMMON STOCK	ISRAEL
B292RC1	ZOZO INC COMMON STOCK	JAPAN
5983816	ZURICH INSURANCE GROUP AG COMMON STOCK CHF.1	SWITZERLAND

I. <u>Provide an organization chart showing the investment team structure:</u>

Stable Investment Team | One Investment Process

Derek Vance, CFA | Partner, Chief Investment Officer | Joined Arrowstreet in 2008

Research

Name	Joined Firm
Chris Malloy, PhD *Partner, Head of Research*	2019
James Bothwick, CFA *Partner*	2015
Naveen Kartik, CFA *Partner*	2017
Yosef Klein *Partner*	2012
Jonathan Kluberg, PhD *Partner*	2015
Tom Knox, PhD *Partner*	2016
Jeff Li, CFA *Partner*	2010
April Rathe *Partner*	2020
Julia Yuan, CFA *Partner*	2012
EJ Zhang, PhD *Partner*	2006

Investment Processes

Name	Joined Firm
Sam Thompson, PhD *Partner, Head of Investment Processes*	2006
Marta Campillo, PhD *Partner*	1999
Mary Rogers, CFA, CIPM *Partner*	2008
Hui Wang, PhD *Partner*	2012

Investment Services

Name	Joined Firm
Katie McHardy *Partner, Head of Investment Services*	2010
Joe Tiano *Partner*	2014

Investment Analytics

Name	Joined Firm
Rachel Xiao *Partner, Head of Investment Analytics*	2016

Portfolio Management

Name	Joined Firm
Manolis Liodakis, PhD *Partner, Head of Portfolio Management*	2012
Brandon Berger *Partner*	2013
Harry Gakidis, PhD *Senior Director*	2022
Anne Luisi *Partner*	2014
Jonathan Noel *Partner*	2015
Carlos Ontaneda, CFA *Director*	2024
Alex Rodin, CFA *Partner*	2016
Josh Shain, CFA *Director*	2017
Zach Vernon, CFA *Partner*	2008
Michael Zervas, CFA *Partner*	2004

Peter Rathjens, PhD | *Partner, Former Chief Investment Officer*
Co-Founded Arrowstreet in 1999

As of December 31, 2024

II. Provide a list of the key decision makers for the PERS portfolio. Include name, title, and tenure with the firm.

Derek Vance, CFA
Partner, Chief Investment Officer

Derek has the overall responsibility for Arrowstreet's investment products and chairs the firm's Investment Committee. Derek also sits on Arrowstreet's Operating Committee and has served on Arrowstreet's Board of Directors since 2019.

From 2020 to 2023, Derek was the Co-Head of Research at Arrowstreet, managing the Research group on a day-to-day basis and working to advance Arrowstreet's research agenda, focusing on new signals and strategies based on proprietary quantitative research. Prior to his time as Co-Head of Research, Derek was Head of Alpha Development within the Research team from 2015 to 2019. Derek rejoined Arrowstreet in 2008 after a 2006 summer internship in the Research team, and he joined the partnership in 2011. From 2007 to 2008, Derek worked as an analyst in the Quantitative Investment Strategies group at Goldman Sachs Asset Management.

Derek received an AB in Economics from Harvard College in 2007. He is a CFA charterholder.

Research

Chris Malloy, PhD
Partner, Head of Research

Chris is the Head of Research at Arrowstreet. He is responsible for the day-to-day management of the Research group and works with our Chief Investment Officer and our Head of Alpha Development to advance Arrowstreet's Research agenda, focusing on new signals and strategies based on proprietary quantitative research. Prior to becoming the Head of Research, Chris was the Head of Alpha Development.

Prior to joining Arrowstreet, Christopher served as the Sylvan C. Coleman Chaired Professor of Financial Management in the Finance Unit at Harvard Business School, and a Research Associate at the National Bureau of Economic Research. Prior to joining HBS in 2007, Christopher was an Assistant Professor in the Finance Department at London Business School, where he was on faculty from 2003-2007, and previously worked for the Federal Reserve Board in Washington D.C.

Christopher previously taught courses in Investment Strategies, Behavioral Finance, Family Office Wealth Management, and Financial Technology, and was the chair of the HBS executive program, Finance for Senior Executives. His research has appeared in the Journal of Political Economy, the Journal of Finance, and several other academic journals, and has been described in The Financial Times, The Wall Street Journal, The New York Times, and various other media outlets. Further details about Christopher's academic work can be found on Google Scholar.

Christopher received a PhD in Finance and an MBA from the University of Chicago Graduate School of Business in 2003, and a BA in Economics from Yale University in 1996.

James Bothwick, CFA
Partner, Quantitative Researcher

James helps to develop and enhance our return and risk forecasting models. He works primarily on alpha research projects where he contributes both as an individual contributor and also by managing other members of the team on projects. He works closely with Research Systems to set priorities for projects and describe pre-requisites from the research perspective.

James received a BS in Chemistry and Physics with a secondary in Economics from Harvard College in 2015 and joined Arrowstreet after graduating. He is a CFA chartholder.

Naveen Kartik C. K., CFA
Partner, Quantitative Researcher

Naveen is a member of the Research team, where his focus is on the implementation of Arrowstreet's research agenda. He manages and works on projects to develop and enhance the firm's return, risk, beta and transaction cost forecasting models.

Prior to joining Arrowstreet in 2013, Naveen received his SM in Computation for Design and Optimization from Massachusetts Institute of Technology. Before that, he received his BTech in Chemical Engineering from the Indian Institute of Technology, Madras. He is a CFA charterholder.

Yosef Klein
Partner, Quantitative Researcher

Yosef is a member of the Research team and is responsible for managing work initiatives in the Research Core area, including projects related to risk, beta, and trading cost forecasting models, historical research data infrastructure, and Research's technology stack.

Yosef joined Arrowstreet in March 2012 and has over ten years of direct research and investment management experience. Prior to joining Arrowstreet, he was a quantitative analyst at Wellington Management Company, LLP for almost four years, where he was responsible for risk models and the Emerging Markets alpha model.

Yosef has an MBA in Analytic Finance, Econometrics, and Statistics in 2008 from the University of Chicago Booth School of Business, an MS in Mathematics in 2005 from the University of Illinois at Chicago, and a BS in Mathematics in 2000 from the University of Chicago.

Jonathan Kluberg, PhD
Partner, Quantitative Researcher

Jonathan is a member of the Research team. He manages the operations of the firm's portfolio simulation capability (analyses and tool improvements), conducts research on forecasting models, and assists the group with management and recruiting responsibilities.

Jonathan joined Arrowstreet in April 2015. Prior to Arrowstreet, Jonathan was an investment analyst at HighVista Strategies where he developed quantitative strategies for municipal bonds and equities and carried out due diligence on external HF and PE firms in a variety of asset classes (municipal bonds, credit, volatility arbitrage, farmland).

Jonathan received a PhD in Operations Research from Massachusetts Institute of Technology in 2011, and both an MS and BS from Ecole Polytechnique Paris in 2006.

Tom Knox, PhD
Partner, Quantitative Researcher

Tom is a member of the Research team. His focus is on the enhancement of Arrowstreet's return, risk, and transaction cost forecasts.

Prior to joining Arrowstreet in 2016, Tom worked at Convexity Capital Management for seven years starting as a Portfolio Analyst before becoming a Quantitative Portfolio Manager. While at Convexity, Tom designed and evaluated trading strategies in interest rates, FX, credit, and ETFs; he constructed a comprehensive set of analytics to support his work. Tom worked at QVT Financial from 2007 to 2009, ultimately as a Portfolio Manager focused on emerging markets currencies, debt, and derivatives. From 2004 to 2007, he was a Vice President at Bracebridge Capital. During this time, he built a firm-wide risk system and valued emerging markets instruments and structured products.

Tom was an Assistant Professor of Finance at the University of Chicago Graduate School of Business from 2003 to 2004.

Tom received a PhD in Business Economics in 2003 and both an SM in Applied Mathematics and an AB in Applied Mathematics in 1999 from Harvard University.

Jeff Li, CFA

Partner, Quantitative Researcher

Jeff leads Forecast Production, which includes the software, software processes and human workflow required to deliver the forecasts to the investment process on a timely and accurate basis. He also leads Research Group Operations, which includes training/onboarding initiatives, process streamlining and other general department-level management responsibilities.

Prior to joining Arrowstreet in 2010, Jeff worked as an economic consultant at Cornerstone Research and as a software/mechanical engineer at Raytheon Company.

Jeff graduated magna cum laude with an MS in Economics and a BS in Computer Systems engineering with a minor in Management from Boston University in 2009. He is a CFA charterholder.

April Rathe

Partner, Quantitative Developer

April leads the Quantitative Development group within the Research team. She manages Quantitative Developers on initiatives to advance the Research team's technology agenda, developing and integrating technology that improves the firm's forecasting research and portfolio simulation efforts.

April joined Arrowstreet in 2020 and has over twenty years of experience building software and leading software engineering teams, primarily focused on finance and data. Before joining Arrowstreet, she worked at AQR for five years managing development teams and delivering next-generation data platforms for research model data, central data management and risk. Prior to AQR, April spent seven years at UBS Investment Bank, where she led teams in developing new data and analytics systems in finance, treasury, counterparty risk and collateral optimization. From 2000 to 2006, April was a technology consultant working for global clients in financial services, retail, and travel and tourism.

April received a BSE in Industrial Engineering, with a Computer Science concentration from the University of Iowa in 1999.

Peter Rathjens, PhD

Partner, Chairman, Former Chief Investment Officer

Peter serves as the chairman of the board of directors of Arrowstreet Capital. He focuses on the governance of the firm and the execution of the firm's mission. He also holds a part-time advisory role at Arrowstreet, working with his successor as CIO, Derek Vance. Peter co-founded Arrowstreet in 1999, serving as the Chief Investment Officer from 1999 to 2023, during which time he chaired the firm's Investment Committee.

Prior to founding Arrowstreet in 1999, Peter was the Chief Investment Officer at PanAgora Asset Management from 1998 to 1999, and prior to that the Director of Global Investments from 1995 to 1999. He oversaw all of PanAgora's investment strategies, with particular responsibility for the global strategies, including Global Asset Allocation, International Equities, and Emerging Market Equities. Prior to that, he directed PanAgora's research team beginning in 1992. In that role, he was responsible for coordinating and overseeing all of the research undertaken at PanAgora. Peter started his career in quantitative asset management at Colonial Asset Management, where he built quantitative models for forecasting and managing active equity portfolios. His previous work experience includes jobs at Data Resources and Lehman Bros., where he built economic forecasting models.

Peter's academic career included positions as an Instructor at Princeton University and as an Assistant Professor and Adjunct Professor at Brandeis University. His publications include papers in the Journal of Forecasting and in the Review of Economics and Statistics.

Peter received a PhD and MA in Economics from Princeton University in 1990, and a BA in Economics and Mathematics from Oberlin College in 1981.

Julia Yuan, CFA
Partner, Head of Alpha Development

Julia leads Arrowstreet's Research team in the development and enhancement of the firm's return forecasting models.

Julia joined Arrowstreet in 2012. Julia has been a key contributor to implementing Arrowstreet's research agenda. Her responsibilities have included developing and enhancing forecasting models and conducting and managing research projects to uncover new signals and strategies.

Julia received a MS in Finance from Massachusetts Institute of Technology in 2012 and a BS in Economics from Guanghua School of Management, Peking University in 2011. She is a CFA charterholder.

EJ Zhang, PhD
Partner, Quantitative Researcher

EJ is involved with the implementation of Arrowstreet's research agenda. In particular, he works on developing and enhancing the firm's return, risk, and transaction cost forecasting models.

Prior to joining Arrowstreet, EJ obtained his PhD in Finance from Yale University in 2006. During this time, he served as a teaching assistant in both MBA and PhD level courses.

EJ received an MS in Economics from Rutgers University in 2000 and a BA in Finance from Tsignhua (Qinghua) University in 1997.

Portfolio Management

Manolis Liodakis, PhD
Partner, Head of Portfolio Management and Trading

Manolis leads the Portfolio Management team. He is responsible for many of the functions associated with the day to day implementation of the firm's investment strategies. This includes portfolio construction, risk management, cash management and portfolio finance as well as trading. In addition, he is a member of the Investment and Operating committee of the firm and participates in several firm wide initiatives.

Prior to joining Arrowstreet, Manolis worked at Citadel Investment Group in Chicago where he was responsible for running $2 billion in global market neutral strategies. In addition, he has substantial sell-side research experience. He worked at Citigroup in London for seven years, where he was Head of European Quantitative Equity Research and was recognized as Best Quantitative Analyst by Institutional Investor from 2004 to 2008. He has also worked in quantitative research groups at both Morgan Stanley and Salomon Brothers.

Manolis received a PhD in Finance from City University, London in 1999 and an MBA in Finance from the University of Birmingham in 1996. Manolis graduated from Athens University of Economics & Business in 1994 with a BS in Economics and Business.

Brandon Berger
Partner, Portfolio Management

Brandon's focus within the Portfolio Management team is on the implementation of the investment process with continued efforts related to portfolio construction and various firm-wide initiatives. He also oversees project work and ongoing matters related to the portfolio finance function.

Brandon joined Arrowstreet in 2013, prior to which he worked as a derivatives market maker at ABR Management LLC. In that role, he managed a volatility arbitrage strategy across various derivative products and asset classes and contributed to the development of a pricing model. From 2010 to 2011, Brandon worked at Toro Trading LLC as an electronic market maker in equity options and environmental derivatives.

He was responsible for the development and automation of an exchange rebate arbitrage strategy, as well as assisting in the ongoing market making functions across other products.

Brandon received an MBA with a concentration in Finance from Fordham University's Gabelli School of Business in 2011, and a BS in Business Administration with concentrations in Finance and International Business from Fordham University in 2010.

Anne Luisi
Partner, Portfolio Management

Anne is responsible for many of the functions associated with the day-to-day implementation of the firm's investment strategies, including communicating Arrowstreet's investment approach and performance to clients, consultants, and prospective investors. Anne joined Arrowstreet in 2014 as an investment specialist and transitioned to portfolio management in 2017.

Prior to joining Arrowstreet, Anne was an investment specialist with J.P. Morgan's Private Bank from 2011 to 2014. In that role, she managed multi-asset class investment portfolios for high net worth and ultra-high net worth individuals, in addition to advising on various investment and wealth management related topics. From 2002 to 2008, Anne worked in the Investment Bank at J.P. Morgan, first as an analyst in syndicated and leverage finance, and later on the high yield credit sales team. She was responsible for the distribution of a range of leveraged credit products, including high yield corporate bonds, CDs, leveraged loans, and distressed credit, in both the primary and secondary markets.

Anne graduated from Dartmouth College with a BS in Economics in 2002. She received her MBA from the Darden Business School at the University of Virginia in 2012.

Jonathan Noel
Partner, Trading

Jonathan is a senior trader in the Portfolio Management team, contributing to the implementation of the firm's investment strategies. He manages execution across all asset classes, with a focus on equities.

Prior to joining Arrowstreet in 2015, Jonathan was Director of Program Trading at ITG, where he executed global equity program trades for institutional clients and managed the firm's Latin American trading desk. Jonathan began his career at ITG in 2004 and worked as a key contributor on their electronic sales and trading desks in New York and London.

Jonathan received his BS in Applied Economics and Management from Cornell University in 2004.

Alex Rodin, CFA
Partner, Portfolio Management

Alex focuses on the implementation and quantitative analysis of client portfolios and trading strategies, including matters related to portfolio construction as well as research related to developing Arrowstreet's algorithmic trading initiatives.

Before joining Arrowstreet in 2016, Alex was an equity research analyst at Spot Trading, a Chicago-based market maker for U.S. listed equity derivatives. In this role he covered upstream oil & gas and biotechnology companies, with a focus on volatility arbitrage strategies around idiosyncratic catalysts. In 2011 Alex completed an internship with Citadel Securities, where he assisted equity research analysts covering the lodging, gaming, and leisure industries.

Alex received a Bachelor of Business Administration degree from the Goizueta Business School at Emory University in 2012. At Goizueta, he concentrated in Finance while also completing a joint Mathematics & Economics major through Emory College.

Zach Vernon, CFA
Partner, Trading

Zach is a member of the Portfolio Management team. He began working at Arrowstreet in October 2008 and is a lead contributor specializing in portfolio construction and trading.

Prior to joining Arrowstreet Capital, Zach was an equity derivative trading operations analyst at Blackrock from 2006 to 2008.

Zach received a BS in Finance from Boston College in 2006. He is a CFA charterholder.

Michael Zervas, CFA
Partner, Trading

Michael is responsible for many of the functions associated with the day to day implementation of the firm's investment strategies. He specifically oversees execution across a wide range of equity, currency, and futures markets and manages a team of associate traders.

Prior to joining Arrowstreet, Michael worked as a consultant for FactSet Research Systems, where he facilitated the sales process through product demonstrations and project work for current and prospective clients.

Michael graduated from Stonehill College with a BS in Finance in 2001. He is a CFA charterholder.

Investment Processes

Sam Thompson, PhD
Partner, Head of Investment Processes

Sam leads the Investment Processes team which is responsible for the design, development, and deployment of new systems applications and capabilities related to portfolio management including portfolio construction and other related portfolio management and trading activities.

Prior to joining Arrowstreet, he held a position as an Associate Professor of Economics at Harvard University.

Sam has published in top finance and economics journals, such as the Review of Financial Studies, the Journal of Financial Economics, the Journal of Econometrics, and Econometric Theory. His research focused on the intersection between finance, statistics, and computational methods.

Sam graduated from the University of California at Berkeley with a PhD in Economics and an MA in Statistics in 2000. He received a BA in Economics from Yale University in 1995.

Marta Campillo, PhD
Partner, Investment Processes

Marta is a member of the Investment Processes team and leads efforts to enhance the portfolio management systems platform and related applications interfacing with trading and investment services.

Prior to joining the Investment Processes team, Marta was a member of the Portfolio Management team primarily focused on overseeing the automated processes that are used in portfolio construction efforts, including the implementation of the research models and trading. She started her career at Arrowstreet as a member of the Research Team developing and enhancing the firm's forecasting and risk models.

Marta’s related professional experience prior to joining Arrowstreet includes a position as a research associate at the Foundation for Studies in Applied Economics (Fundación de Estudios de Economía Aplicada, FEDEA), a think tank based in Madrid, Spain. As part of her responsibilities at FEDEA, she co-authored a regular column about inflation in Cinco Dias, the main Spanish business newspaper. She also taught Macroeconomics and collaborated on and co-authored research papers and projects in Macroeconomics during her time as a graduate student at Boston University.

Marta received a PhD degree in Economics from Boston University in 2000, an MS in Public Expenditures and Economic Programming from the Institute of Fiscal Studies in Madrid, and a BA (Licenciado) in Quantitative Economics from the Universidad Autonoma in Madrid.

Mary Rogers, CFA, CIPM
Partner, Investment Processes

Mary began working at Arrowstreet in 2008. She oversees and executes on a wide range of investment projects at Arrowstreet.

Prior to joining Arrowstreet Capital, Mary was an associate at JPMorgan Chase, and completed internships at KPMG and Citizens Bank Foreign Exchange during her undergraduate studies. Just prior to her current role, Mary led the Investment Analytics team. Prior to her role leading the Investment Analytics team, she led the Client Operations team. In Mary's other roles at Arrowstreet, she was a manager in the Trade Compliance team through 2013 as well as a manager in the Investment Services Group from 2014 through 2016.

Mary received her BS in Finance from Bentley University in 2007 and is a CFA charterholder. Mary has also received the Certificate in Investment Performance Measurement (CIPM) designation, a credential offered through the CFA Institute.

Hui Wang, PhD
Partner, Investment Processes

Hui is a member of the Investment Processes team and is involved with the design and development of the portfolio construction platform and applications related to trading activities.

Prior to joining Arrowstreet, Hui served as teaching assistant and research assistant between 2006 and 2012 in the Department of Physics and Astronomy at the University of Rochester.

Hui received a PhD in Physics from the University of Rochester in 2012 and a BS in Physics from the University of Science and Technology of China in 2006. He is a CFA charterholder.

Investment Services

Katie McHardy
Partner, Head of Investment Services

Katie is the Head of the Investment Services team at Arrowstreet, an investment function that supports the daily investment process. The Investment Services team is responsible for the quality of pre-trade portfolio and security reference data inputs, post trade monitoring, and management of the outsourced third-party middle office services and data. She also is responsible for supporting the implementation of investment-related initiatives and a member of the firm's Operating Committee. Prior to taking on this role in 2014, Katie was the Chief Compliance Officer responsible for the overall compliance function at Arrowstreet.

Prior to joining Arrowstreet in 2010, Katie had over ten years of public accounting experience focused on large multi-national or global banking and financial institutions. She served as an auditor in the Financial Services Practice for Deloitte LLP from 2002 to 2010. From 2000 to 2002 she was an auditor at Arthur Andersen LLP. Katie has extensive experience in managing global audits of financial institutions and related capital raising projects, performing risk and control assessments, and evaluating the implementation of complex accounting matters and operational changes.

Katie received her BA in Business Administration in Accounting from the University of Massachusetts, Amherst with Honors in 2000 and in 2004 earned her CPA license (currently inactive).

Joe Tiano
Partner, Portfolio Management and Investment Services

Joe works across the Investment Services and Portfolio Management teams, overseeing the market, data and post trade groups.

From 2010 to 2014 Joe managed a portfolio and algorithmic trading desk for Sanford C. Bernstein in Hong Kong, trading directly for large institutional clients as well as creating and modifying the algorithmic strategies used across the Asia Pacific equities markets. Prior to that, he was an Associate on the Portfolio Management team at Arrowstreet, trading equities and supporting the investment process.

Joe started his career at FactSet Research Systems where he helped asset managers design and implement solutions to their investment needs using FactSet software.

Joe received an MS in Computer Information Systems from Boston University in 2019, and a BS in Economics-Finance from Bentley University in 2006.

Investment Analytics

Rachel Xiao
Partner, Head of Investment Analytics

Rachel is the Head of Investment Analytics at Arrowstreet. She joined Arrowstreet in 2016. The Investment Analytics team is responsible for overseeing and producing analytics to support the investment process. This includes producing attribution, and calculating, analyzing, and generating additional analytics to explain the results of Arrowstreet's return forecasting and portfolio construction processes. These additional analytics include portfolio positioning and exposures to various factors, active weights and shifts, model attribution, and tactical portfolio tilts.

Prior to joining Arrowstreet, Rachel was a research analyst in State Street Associates where she conducted research on asset allocation. Prior to her role in the Investment Analytics team, she worked in the Investment Processes Group, focusing on the design and development of trade scheduling applications.

Rachel received a MS in Mathematical Finance from Boston University in 2015 and a BS in Financial Engineering from Wuhan University in 2013.

Arrowstreet Capital, Limited Partnership
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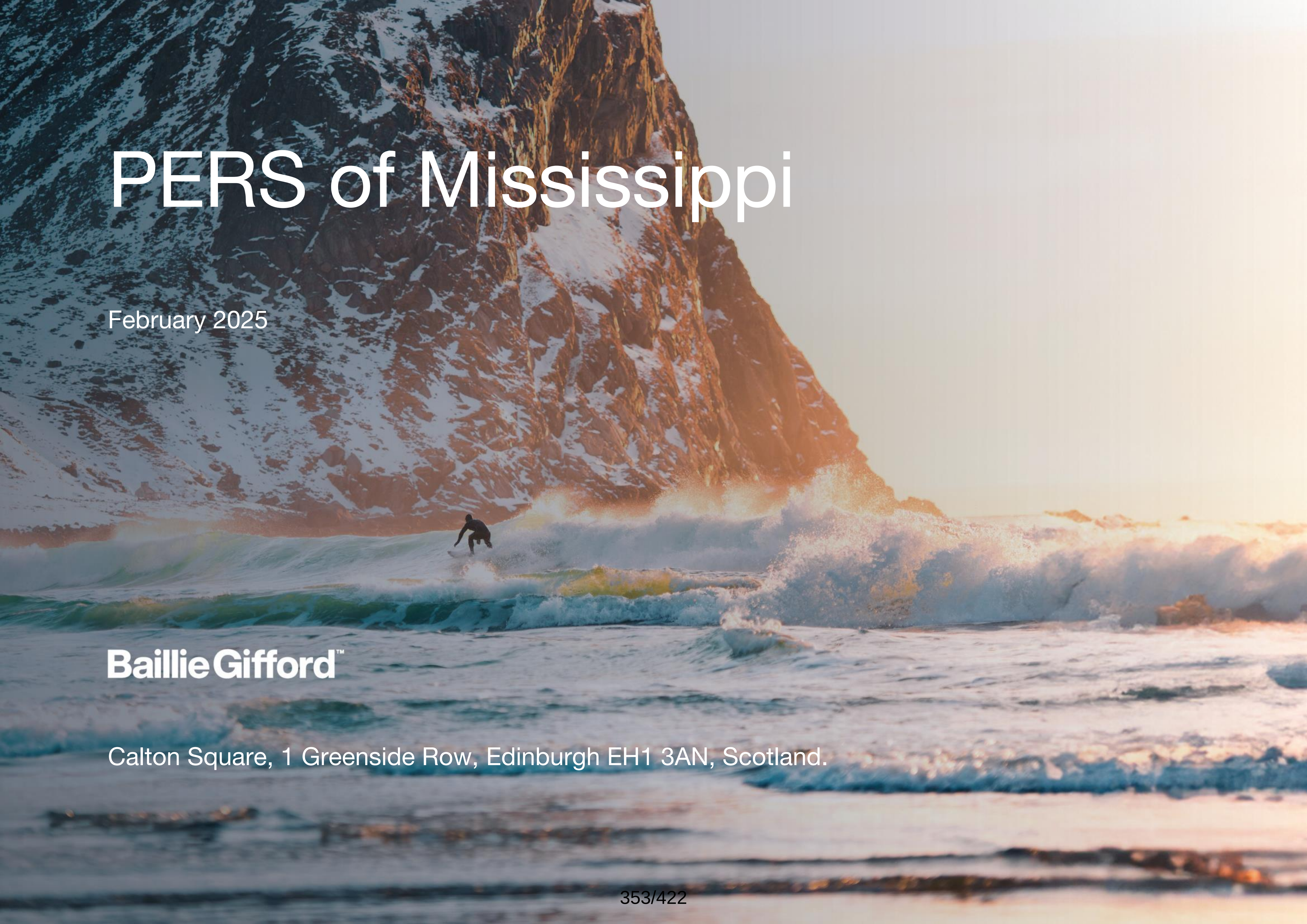
www.arrowstreetcapital.com



PERS of Mississippi

February 2025

Baillie Gifford™

Calton Square, 1 Greenside Row, Edinburgh EH1 3AN, Scotland.

Presenter biographies

Rebecca King

Client Relationship Director

13 years' experience (8)

Rebecca is a Client Relationship Director responsible for servicing North American clients, with a particular focus on public plans. Before joining Baillie Gifford in 2016, Rebecca worked at Ernst & Young and qualified as a Chartered Accountant in 2014. She graduated BSc in Management and International Business from the University of Tennessee in 2011. Alongside her studies, Rebecca competed on the women's golf team as a scholarship athlete.

Joe Faraday

Investment Manager

22 years' experience (22)

Joe is an Investment Manager and a lead member of the International All Cap Portfolio Construction Group. He joined Baillie Gifford in 2002 and worked in various equity teams before moving to International Equities Joe graduated MEng in Chemical Engineering from the University of Cambridge in 2002 and gained an MBA from the University of Edinburgh in 2009. Joe is a CFA Charterholder.

Tom Wright

Client Relationship Director

25 years' experience (25)

Tom is a Client Relationship Director responsible for a number of US public plans. He previously ran Baillie Gifford's UK public sector pensions business and also has a particular interest in private companies. Tom joined Baillie Gifford in 1999 having graduated BA (Joint Hons) in History and Economics from the University of Durham. He is also a qualified Chartered Accountant.

As at 31 December 2024. (Years with Baillie Gifford).

Our relationship

Appointed

21 August 2014

Strategy

ACWI ex US All Cap

Objective

To exceed the MSCI ACWI ex-U.S. IMI (gross) Index by 200 basis points (net of fees) over a rolling three year period.

Portfolio value as at 31 December 2024

US$740,250,011

Baillie Gifford: why you hired us

Stability

Independent partnership since 1908

Wholly owned by partners who work in the firm

Differentiated

Headquartered in Edinburgh, Scotland

Sole focus on active, fundamental investment management

Aligned

Prioritising clients' interests over business growth

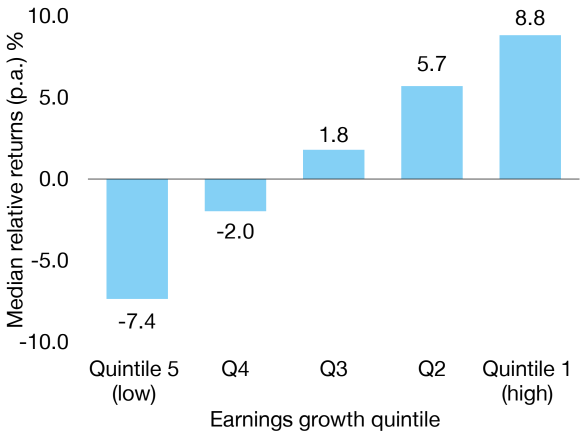
Investing over decades, not quarters

Enduring investment philosophy

Growth	Bottom-up stock selection	Long-term perspective
Superior profit growth leads to outperformance in the long run	Active and very different to the index	Share prices reflect fundamentals over the long-term

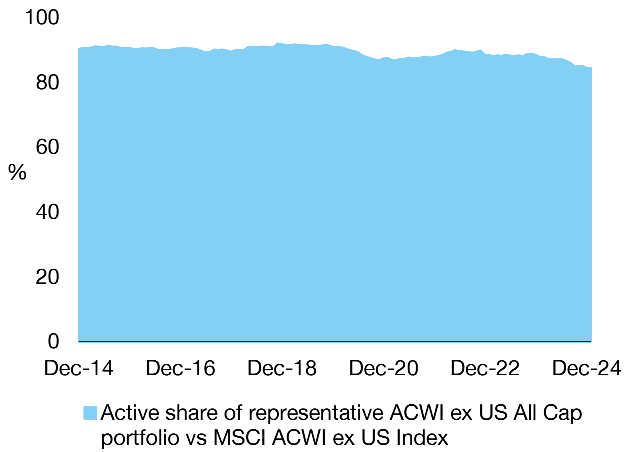
Delivered median relative returns by earnings growth quintile

Rolling five year horizons (1999 - 2023)



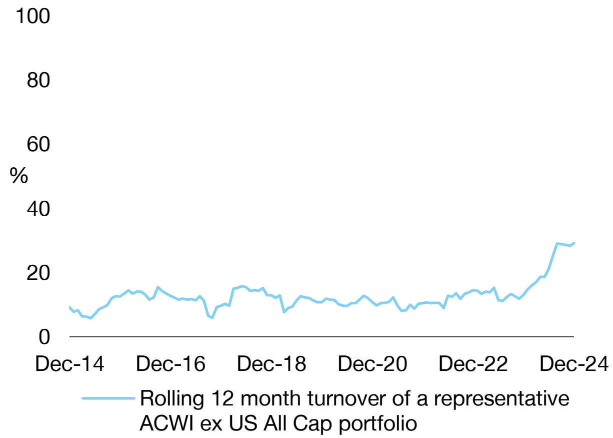
Source: FactSet, MSCI. US dollar.
The universe consists of all stocks listed in the MSCI ACWI ex US at each starting point.

Active share for a typical International All Cap portfolio



Source: Baillie Gifford & Co, MSCI.

Turnover for a typical International All Cap portfolio

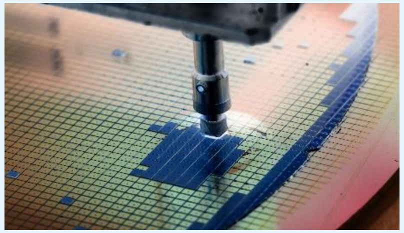


Source: Baillie Gifford & Co, MSCI.

Growth, active, long-term

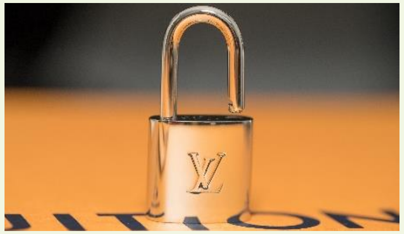
Backing world class growth businesses - at a discount

Enabling NVIDIA and AI winners



TSMC: Must - have machines for chip makers
Tokyo Electron: Leader in production equipment

Emerging wealth



LVMH: Luxury brands with centuries of heritage
AB InBev: Global beer franchise

Transformative medicine

Lonza: Leading pharma manufacturing company
Sartorius Group: Biopharma and lab equipment supplier

Tech driven growth in industry

Atlas Copco: Manufacturer of industrial compressors
Nemetschek: Building and construction software

Not all stocks held across all portfolios.
Image sources: © ASML, Kristoffer Tripplaar / Alamy Stock Photo, Atlas Copco, © Nemetschek Group.

Performance summary

Market environment

Inflationary pressures abating

Interest rates starting to come down

Geopolitical concerns remain

Disruption and innovation continue

One year

Detractors

Exposure to China/Japan

Weak $ returns

Contributors

UOB: “The J.P. Morgan of Asia”

MakeMyTrip: Indian online travel platform

Three years

Detractors

Exposure to China

Weak $ returns

Covid hangover

Contributors

Enablers of the AI revolution

Platforms: MercardoLibre, Spotify

Performance and attribution

Net investment returns to 31 December 2024

	Fund %	Index %	Difference %
Since inception* (p.a.)	4.1	4.3	-0.2
4 years (p.a.)	-5.1	3.0	-8.0
3 years (p.a.)	-8.0	1.0	-9.0
2 years (p.a.)	6.6	10.8	-4.3
12 months	2.9	5.8	-2.9
6 months	0.3	0.1	+0.1

Quarterly performance (net)

	Q1 2024	Q2 2024	Q3 2024	Q4 2024
Fund %	3.4	-0.8	9.8	-8.7
Index %	4.5	1.1	8.3	-7.5

Top and bottom five relative stock contributors to 31 December 2024

12 months

Stock	Fund (avg. weight) %	Index (avg. weight) %	Contribution %
TSMC	5.3	2.2	1.4
MakeMyTrip	1.2	0.0	0.9
Spotify	1.0	0.0	0.9
United Overseas Bank	2.7	0.1	0.6
Recruit Holdings	1.4	0.3	0.6
Raia Drogasil	1.2	0.0	-0.7
Remy Cointreau	0.8	0.0	-0.6
Sartorius Group	1.2	0.0	-0.6
Shiseido	1.2	0.0	-0.6
SMC	1.5	0.1	-0.5

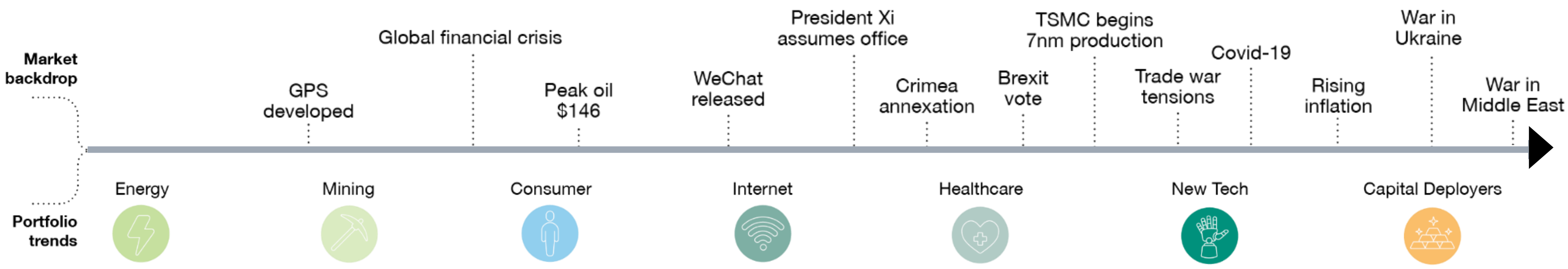
3 years

Stock	Fund (avg. weight) %	Index (avg. weight) %	Contribution %
MakeMyTrip	0.7	0.0	1.2
TSMC	4.2	1.8	1.1
United Overseas Bank	2.5	0.1	0.8
Spotify	0.9	0.0	0.7
MercadoLibre	1.9	0.0	0.6
Sartorius Group	1.8	0.0	-1.8
Shiseido	1.7	0.1	-1.5
Remy Cointreau	1.3	0.0	-1.5
Zalando†	0.7	0.0	-1.4
Sysmex	1.3	0.0	-1.3

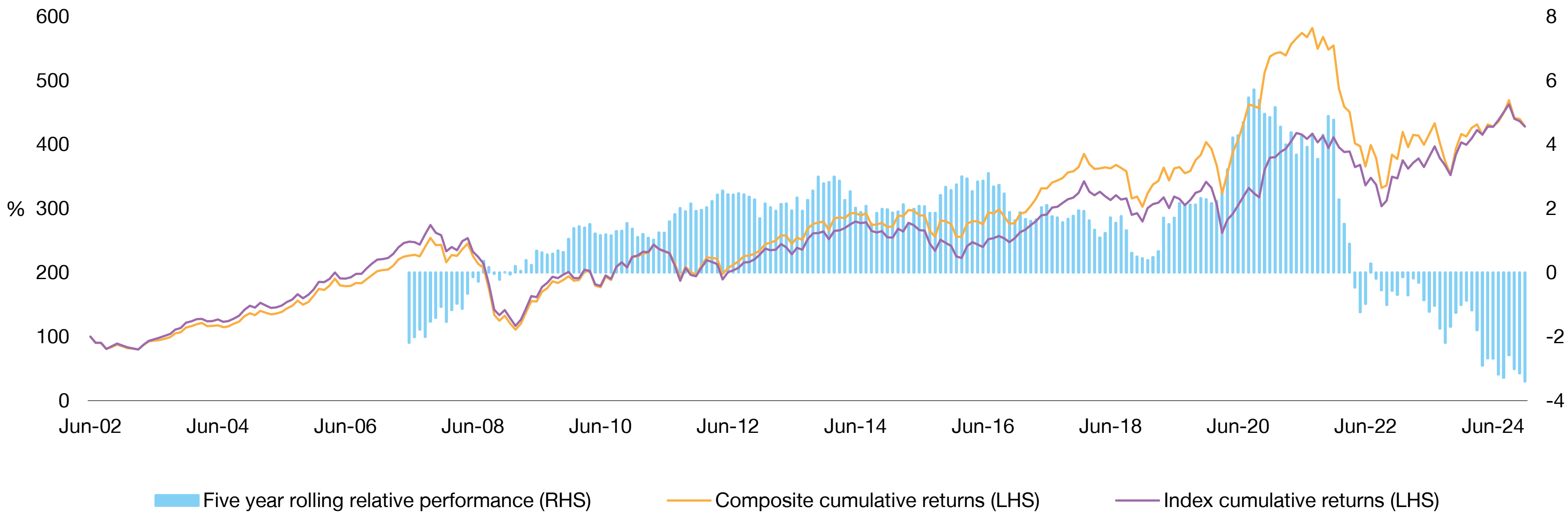
Source: Revolution, MSCI. Totals may not sum due to rounding. Based on PERS of Mississippi.
Index: MSCI ACWI ex USA IMI Index.
*31 August 2014. †Sold during the period.
All attribution figures are calculated gross of fees, relative to the Index from stock level up, based on closing prices.

All investment strategies have the potential for profit and loss. Past performance is not a guide to future returns.

Delivering long-term returns



Cumulative returns and five year rolling relative returns



Source: Revolution, MSCI. As at 31 December 2024. US dollar. Five year rolling relative returns for the ACWI ex US All Cap Composite (30/06/2002 to 31/12/2024) vs MSCI ACWI ex US. Net of fees. The ACWI ex US All Cap strategy is more concentrated than the MSCI ACWI ex US. Rebased to 100 as at 30 June 2002.

Portfolio

Compounders

Holding	%
Auto Trader	2.0
Richemont	2.0
Games Workshop	2.0
Tencent (NB)	2.0
Experian	1.9
HDFC Bank	1.7
Unilever (NB)	1.5
Olympus	1.4
Jeronimo Martins	1.4
Air Liquide (NB)	1.3
LVMH	1.3
AIA	1.2
AB InBev	1.2
Rightmove	1.1
CPKC	1.1
Sysmex	1.0
Greggs (NB)	1.0
Cosmos Pharmaceutical (NB)	0.9
Shiseido	0.8
Unicharm	0.8
FEMSA (NB)	0.7
Chugai Pharmaceutical (NB)	0.7
Trainline	0.7
Softcat (NB)	0.6
Walmex	0.6
Midea (NB)	0.6
LY Corporation	0.6
Remy Cointreau	0.5
Alibaba	0.5
Kweichow Moutai (NB)	0.4
Burberry	0.4
Li Ning	0.4
	34.2

Cyclical growth

Holding	%
TSMC	6.6
United Overseas Bank	3.2
ASML	2.6
Atlas Copco	2.0
Techtronic Industries	1.8
Weir	1.4
Ryanair (NB)	1.3
Tokyo Electron (NB)	1.1
Epiroc	1.1
Hong Kong Exchanges & Clearing (NB)	1.1
Partners (NB)	1.0
BHP Group (NB)	1.0
Banco de Chile (NB)	0.9
Shimano	0.9
Murata Manufacturing	0.8
Samsung Electronics (NB)	0.8
SEB (NB)	0.8
SMC	0.7
B3 (NB)	0.7
Chroma ATE (NB)	0.6
Silergy (NB)	0.6
Soitec (NB)	0.5
	31.5

Rapid growth

Holding	%
Lonza	1.9
Recruit Holdings	1.9
Shopify	1.8
MercadoLibre	1.7
MakeMyTrip	1.4
Adyen	1.4
Wise	1.3
Keyence	1.1
Raia Drogasil	1.1
Nemetschek	1.1
Spotify	1.0
Sartorius Group	0.9
CATL	0.8
Centre Testing International (NB)	0.5
Yifeng Pharmacy Chain (NB)	0.5
	18.2

Capital allocators

Holding	%
DSV (NB)	1.9
Investor	1.8
Bunzl (NB)	1.5
Assa Abloy (NB)	1.4
Exor N.V.	1.3
IMCD	1.3
Topicus.com (NB)	1.2
Ashtead	1.1
Nippon Paint (NB)	1.0
Total (NB)	0.9
Intertek	0.8
Prosus	0.8
	15.0

As at 31 December 2024. Cash: 1.2%. Totals may not sum due to rounding. Based on PERS of Mississippi.
Notable transactions shown two years to 31 December 2024.
New buy (NB) and Complete sales: adidas, Asian Paints, Auto1, Baidu.com, BeiGene, Cochlear, Coupang, Ctrip.com, Denso, Farfetch, Hargreaves Lansdown, ICICI, Jio Financial Services Ltd, Kao, Kering, LONGi Green Energy Technology, Meituan, Mettler-Toledo, NAVER Corp, NIBE, Nidec, Pigeon, Ping An Insurance, Reliance Industries, Softbank, Sugi Holdings, Suzuki Motor Corp, Thai Beverage, Ubisoft Entertainment, United Spirits Limited, Xero, Zalando.

Areas ready for growth acceleration

Internet platforms

Spotify

Operating profitability improved from €32m in September 2023 to €454m in September 2024

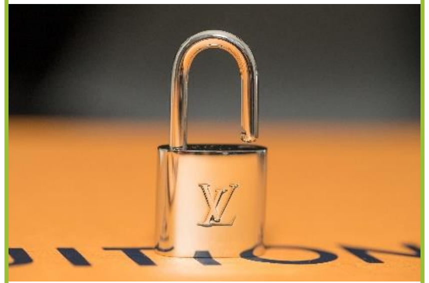
Industrial spending

Air Liquide

Rising growth and margins as demand for hydrogen increases

Emerging Markets consumer

LVMH



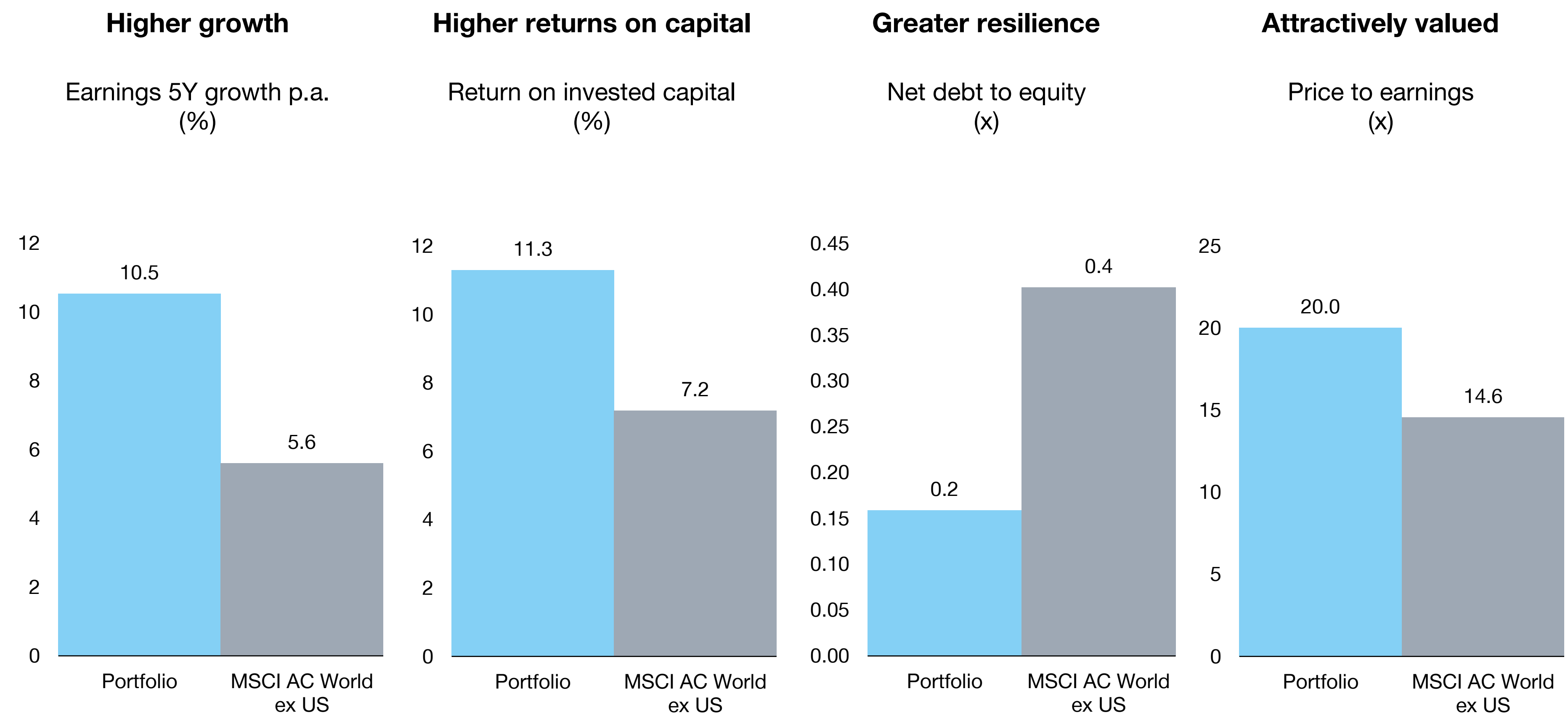
Asia’s share of global luxury goods revenues forecast to reach 69% by 2028

Japan

Keyence

Automation demand has driven 10% p.a. earnings growth for the past 5 years

Positioned for outperformance



Source: Baillie Gifford & Co, FactSet, MSCI. US dollar. As at 31 December 2024. Based on Baillie Gifford International All Cap Fund.
Net debt to equity ratio (excludes financials).

Process enhancements

Our core investment principles are unchanged, but we continually reflect on where we can improve:

Strengthening investment team

Central team of experienced investors with increased resource

Risk focus

Deeper integration with our independent Risk team. Expanded and strengthened quarterly risk monitoring

Balanced growth portfolio

We have re-tested and broadened the type of growth businesses we invest in on your behalf

Outlook

Your portfolio is very well placed to deliver outperformance again given:

Our five-year earnings growth expectations for your portfolio are double what consensus expects for the benchmark

Strong competitive advantages and robust financials mean companies can reinvest for future growth

Experienced management teams with effective track records

Several themes in your portfolio are set to deliver growth that is currently misunderstood by the market and valuations do not reflect this

Appendices

US public plan clients

Over two decades of enduring client partnerships

$12.9 billion
added value after fees for clients >10 years tenure

77% of clients
>10 years tenure

$37.7 billion
across 28 states for 57 clients

Representative client list

Arkansas Public Employees Retirement System
California Public Employees' Retirement System
California State Teachers
Colorado Public Employees' Retirement Association
Indiana Public Retirement System
Maryland State Retirement Agency
Massachusetts Pension Reserves Investment Management Board
Oklahoma Public Employees Retirement System
Pennsylvania Public School Employees' Retirement System
State Board of Administration of Florida
The Public Employees' Retirement System of Mississippi
Virginia Retirement System

Industry memberships

National Association of State Retirement Administrators
National Council on Teacher Retirement
National Institute on Retirement Security
National Conference on Public Employee Retirement Systems
State Association of County Retirement Systems
California Association of Public Retirement Systems

As at 31 December 2024. US dollar.
The clients identified in the above list were selected based on a variety of factors, including name recognition, industry, geographic region and investment mandate. The selection of clients for the list is not based on performance criteria. It is not known whether the listed clients approve or disapprove of Baillie Gifford or services provided.
Money earned data is estimated and calculated via Revolution returns.

An important and valued part of our business

Portfolio Construction Group (PCG)

Iain Campbell*†

Investment Manager, International All Cap

20 years' experience (20)

Joined PCG: 2010

Joe Faraday

Investment Manager, International All Cap

22 years' experience (22)

Joined PCG: 2007

Sophie Earnshaw

Investment Manager, China

14 years' experience (14)

Joined PCG: 2014

Milena Mileva*

Investment Manager, UK

15 years' experience (15)

Joined PCG: 2022

Stephen Paice*

Investment Manager, Europe

19 years' experience (19)

Joined PCG: 2022

Alex Summers

Investment Manager, Emerging Markets

11 years' experience (2)

Joined PCG: March 2024

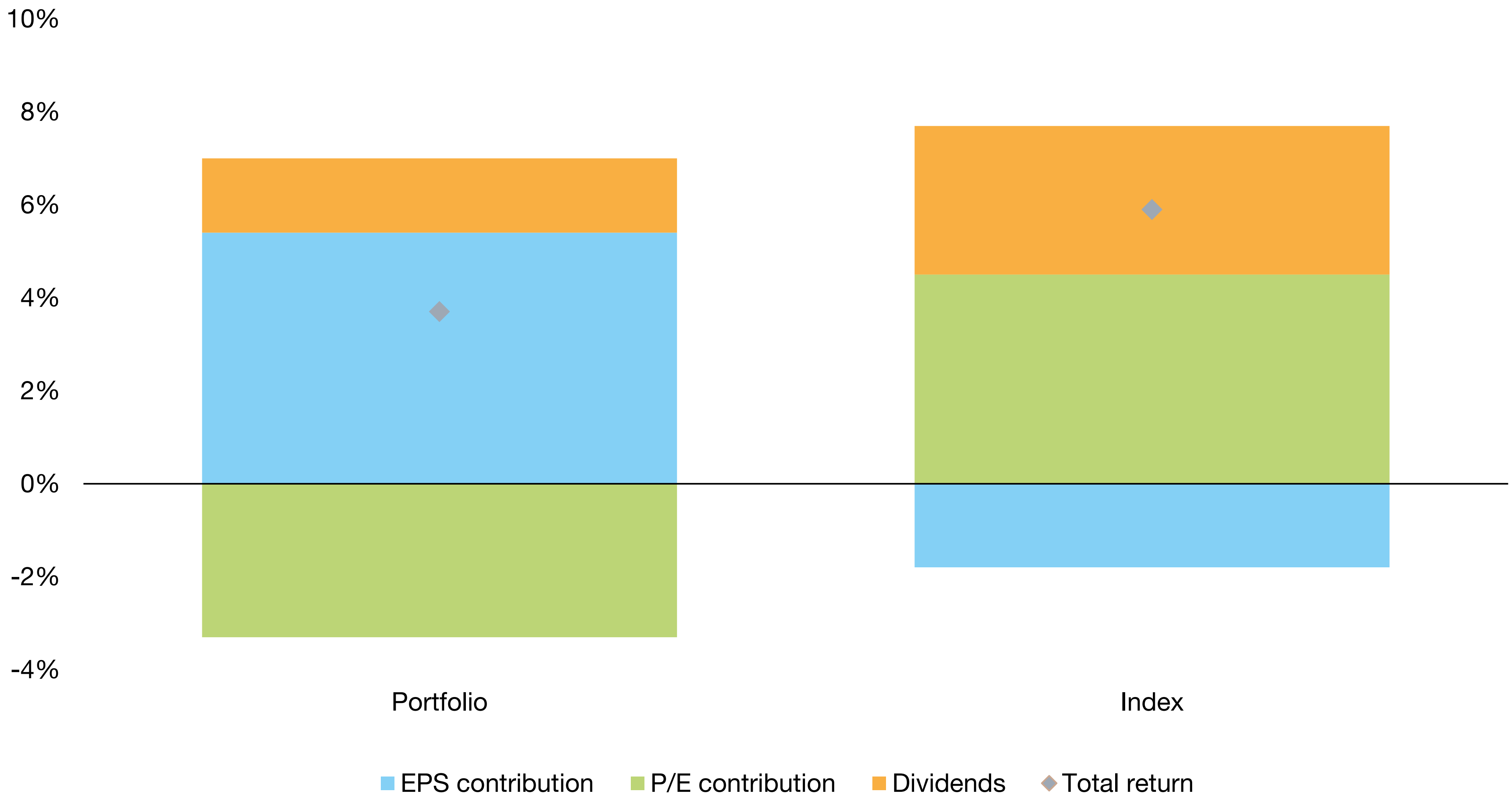
Blending proprietary research with the very best firmwide ideas

Japan/Developed Asia	China	UK	Europe	Emerging Markets

Over 100 years of collective experience within the team

As at 31 December 2024. (Years with Baillie Gifford). *Partner. †Chair.

Performance decomposition



Source: Baillie Gifford & Co, MSCI. US dollar. Date one year to 31 December 2024. Based on a representative ACWI ex US All Cap portfolio. Index: MSCI ACWI ex US.

International All Cap: your performance experience

Calendar year performance heatmap (net)

	Portfolio %	Index %	Difference %	Annual turnover %
2015	1.7	-5.3	7.0	12.6
2016	0.6	5.0	-4.5	12.8
2017	31.6	27.8	3.8	9.7
2018	-17.0	-13.8	-3.2	13.0
2019	33.4	22.1	11.2	10.8
2020	33.2	11.1	22.0	10.8
2021	3.2	8.3	-5.1	10.4
2022	-32.0	-15.6	-16.4	14.6
2023	10.4	16.2	-5.8	13.1
2024	2.9	6.1	-3.1	29.2

Source: Revolution, MSCI. As at 31 December 2024. US dollar.
Based on the ACWI ex US All Cap Composite. Index: MSCI ACWI ex US.
Shading represents relative performance of the Composite over each annual period: Underperformance and Overperformance.

Investment risk

Insight

Detailed company analysis

Rigorous PCG debate

Collective responsibility

Diversification guidelines

Investment guidelines	
Index	MSCI ACWI ex US
Number of holdings (guideline range)	60-90
Stock positions	+/-5%
Geographical location positions	+/-10%
Sector positions	+/-15%*

Oversight

Risk modelling and bespoke analysis

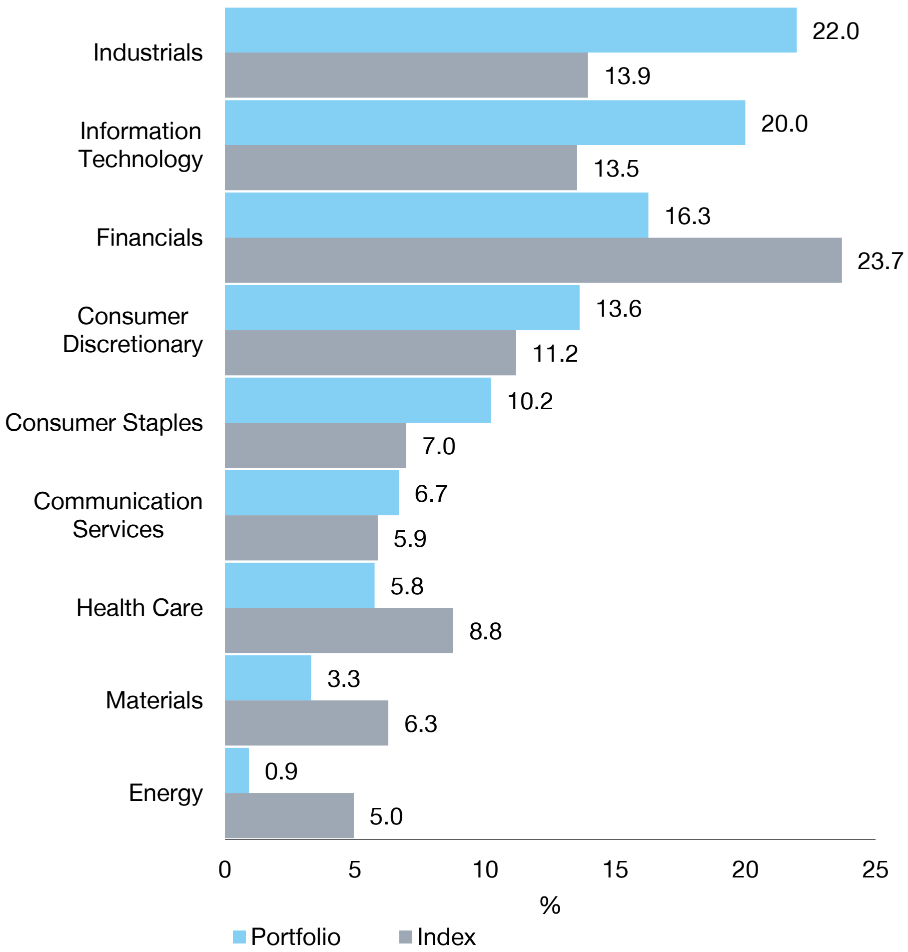
Independent Investment Risk team

Partner led Risk Committee

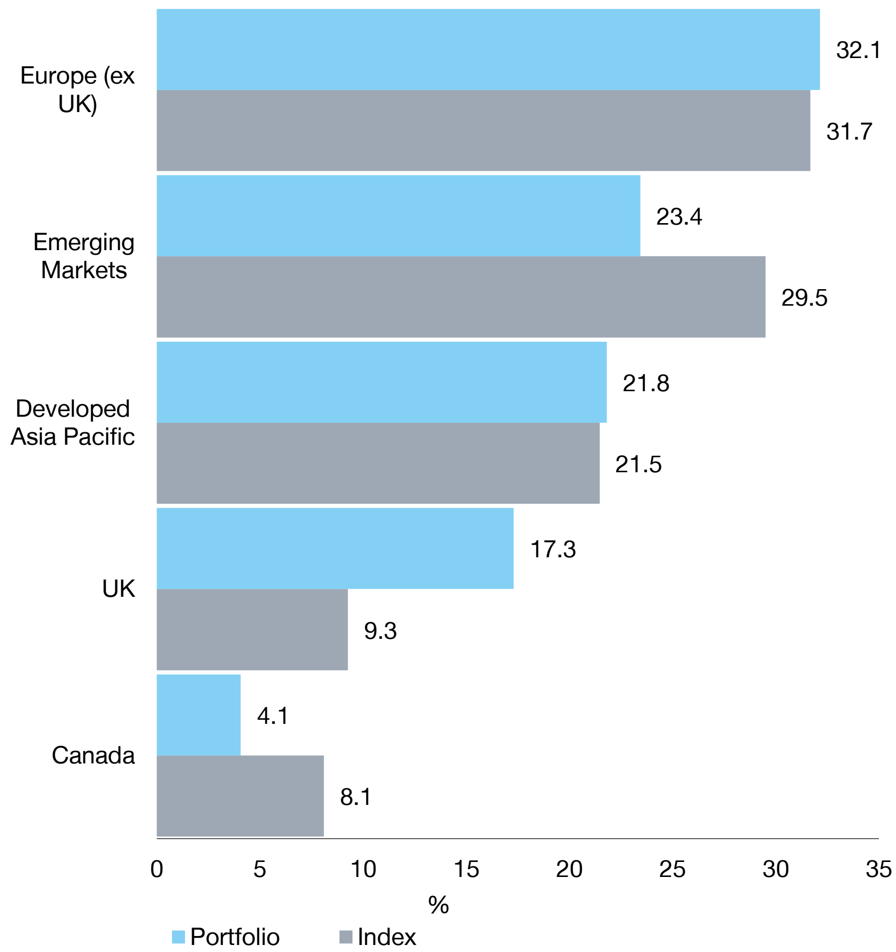
Investment guidelines shown are accurate at time of purchase unless otherwise stated. *Investment in at least 5 sectors (with at least 3% in each).

Portfolio positioning

Sector exposure



Regional exposure



Source: Baillie Gifford & Co, MSCI . Index: MSCI ACWI ex US Index.
Based on a representative ACWI ex US All Cap portfolio. As at 31 December 2024. Excludes cash.

Performance

Net annual discrete performance

	31/12/2019-31/12/2020	31/12/2020-31/12/2021	31/12/2021-31/12/2022	31/12/2022-31/12/2023	31/12/2023-31/12/2024
Fund %	33.2	4.1	-31.4	10.4	2.9
Index %	11.6	9.0	-16.2	16.2	5.8

Source: Revolution, MSCI. Based on PERS of Mississippi.
Index: MSCI ACWI ex USA IMI Index.

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All information is current and sourced from Baillie Gifford & Co unless otherwise stated.

Contracting Entity

Baillie Gifford Overseas Limited

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MARATHON
LONDON

Public Employees' Retirement System of Mississippi

Investment Management Presentation

Tuesday 25th February 2025

Marathon-London
Orion House
5 Upper St Martin's Lane
London, WC2H 9EA
United Kingdom

Contents

Presentation #1 - Performance summary

Public Employees' Retirement System of Mississippi – ACWI ex US account as at 31 December 2024

	PERS Return (Gross)	PERS Return (Net)	MSCI All Country World ex US IMI Net Return
Q4 2024	-7.3	-7.5	-7.6
Q3 2024	8.0	7.9	8.2
Q2 2024	-0.7	-0.8	0.9
Q1 2024	5.3	5.2	4.3
Last 12 months	4.8	4.1	5.2
Last 2 Years*	10.2	9.5	10.3
Last 3 Years*	1.6	1.0	0.5
Last 4 Years*	3.9	3.3	2.4
Last 5 Years*	5.0	4.4	4.1
Last 6 Years*	8.1	7.5	6.9
Last 7 Years*	4.8	4.2	3.5
Last 8 Years*	7.2	6.6	6.2
Since Inception (6^{th} May 2016)*	7.1	6.5	6.4

*Periods over 1 year are annualised

Presentation #2 - Investment philosophy and strategy summary

I. What changes took place in the account since last report: 2023 & 2024 Portfolio activity

	Trailing 12 month turnover (%)	Implied average holding period
31 Dec 2023	24%	4 years
31 Dec 2024	22%	5 years

Number of holdings	Portfolio	Benchmark
31 Dec 2023	297	6,684
31 Dec 2024	245	6,321

	Cash level (%)*
31 Dec 2023	2.7
31 Dec 2024	2.3

As at 31 December 2024. *Tax reclaims are not included

Investment philosophy and strategy summary

I. What changes took place in the account since last report: 2023 & 2024 Portfolio activity

New holdings	Total sales	Total sales	Total sales	Total sales
Arca Continental SAB de CV	Abb Ltd	Dowlais Group Plc	Logitech International Reg	Saipem SpA
AVI Ltd	Accelleron Industries ltd	East Japan Railway	Macquarie Group Limited	Sawai Group Holdings Co Ltd
Biomerieux	Adecco Group AG	Esprit Holdings Ltd	Mandatum Holdings OYJ	Schibsted ASA - A Shs
Cemex Sab-Spons ADR Part Cer	Aeon Delight Co Ltd	Ferrovial SA	Marui Group Co Ltd	Schibsted ASA - B Shs
Dassault Systemes SE	Air Canada	First Pacific	MatsukiyoCocokara and Co	SCSK Corp
Dominos Pizza Enterprises	Airbus SE	Fletcher Building Ltd	Melrose Industries PLC	Sekisui Chemical Co Ltd
Dowlais Group Plc	Alleima AB	Fukuoka Financial Group Inc	Metcash Ltd	Senko Group Holdings Co Ltd
Embotelladora Andina - B PREF	AMP Ltd	Gestamp Automocion SA	MIPS AB	Singapore Land Group Ltd
Exchange Income Corp	Anglo Platinum Ltd	Getinge AB B	Miura Co Ltd	SK Hynix Inc
Gruma S.A.B.-B	Anheuser-Busch Inbev SA	Getlink SE	Modern Times Group-B SHS	Smith And Nephew Plc
HDFC Bank Limited	ANZ Banking Group Ltd.	Great Eastern Holdings	National Express group plc	SNC-Lavalin Group Inc
Henderson Land Development	Aveva Group Plc	Grupo Aeroport Del Pacific - B	Net One Systems Co Ltd	Softcat Plc
Idemitsu Kosan Co Ltd	Axa	GWA Group Ltd	Newcrest Mining Ltd	Sonova Holding Ag-reg
IHI Corporation	Baidu Inc - Spon ADR	Hays Plc	Nintendo Co Ltd	St James's Place Plc
Japan Post Bank Co Ltd	Barratt Developments	HDFC Bank Ltd-ADR	Nissan Chemical Corporation	Stella International
Kinden Corporation	Basf SE	Heineken	Nomura Co Ltd	Sumitomo Mitsui Financial Group
Komatsu Ltd	Bce Inc	Hello Fresh SE	Non Standard Finance	Taylor Wimpey Plc
Laureate Education Inc	Beach Energy Ltd	Helvetia Holding AG Reg	NSK Ltd	Tdk Corp
Lumine Group Inc	Beijing Oriental Yuhong-A	Homeserve PLC	NTT Data Corp	Technopro Holdings
M3 Inc	Bluescope Steel Ltd	Housing Development Finance	Oesterreichische Post AG	Teleperformance
Mandatum Holdings OYJ	Bnp Paribas	HSBC Holdings Plc	Oji Holdings Corp	Telstra Group Ltd
Mitsubishi Corp	Brambles Ltd	Imerys SA	Omron Corp	Tesco Plc
Mitsubishi UFJ Financial Group Inc	British American Tobacco Plc	Informa Plc	Orsted A/S	Thales Sa
National Bank of Greece	CAR Group Ltd	Infosys Ltd ADR	OZ Minerals Ltd	Topcon Corp
Newmont Corp-CDI	Carnival Plc	Infroneer Holdings Inc	Penta-Ocean Construction Co	Toyota Motor Corp
Nitori Holdings Co Ltd	Cazoo Group Ltd	Intesa Sanpaolo SpA	Pepkor Holdings Ltd	Tui AG
NTT Data Group Corporation	Chailease Holdings Co Ltd	Itochu Corp	Pernod Ricard SA	UBS Group AG
Olympus Corp	Challenger Ltd	Iveco Group NV	Persol Holdings Co Ltd	Unilever Plc
Pilbara Minerals Ltd	China Mengniu Dairy Co	James Hardie Industries - CDI	Petrofac Ltd	United Overseas Bank Ltd
Prio SA	Cleanaway Waste Management Ltd	JC Decaux SE	Philips Electronics Nv	Vanquis Banking Group Plc
Richelieu Hardware Ltd	Clicks Group Ltd	Just Eat Takeaway.com NV	Porto Seguro SA	Viaplay Group AB
Seria Co Ltd	CRH Plc	Kawasaki Kisen Kaisha Ltd	Quadient	Vicat
Shiseido Co Ltd	CTS Eventim AG Co. KGAA	Kddi Corp	Reply SPA	Volkswagen AG-PFD
SNC-Lavalin Group Inc	Dabur India Ltd	Komatsu Ltd	Rio Tinto Plc	Weichai Power Co Ltd-H
Stella-Jones Inc	Daifuku Co Ltd	Kpn Nv	Ritchie Bros Auctioneers	Woodside Energy Group Ltd
Taisei Corp	Daiwa Securities Group Inc	Kyocera Corp	Roche Holding Ag - Genusschein	Yakult Honsha Co Ltd
Whitbread Plc	Danske Bank A/s	Lixil Corp.	Rogers Communications B Shares	Zalando SE
	Deutsche Telekom AG-REG	Localiza Rent a Car	Rohm Company Ltd	
	Devro International Plc	LOccitane International SA	RWS Holdings PLC	

Investment philosophy and strategy summary

II. Deviations from previous outlined strategy:
None

III. Factors affecting investments over the next 6-12 months:
2024 was positive for global equities, in a year characterised by a normalisation of interest rate policy worldwide. Resilient growth and sticky inflation, however, meant that investors did have to pare back expectations around the pace of rate cuts, particularly by the US Federal Reserve. More recently, whilst now-President Donald Trump's election in November led to excitement for US equities, it increased uncertainty elsewhere due to concerns around tariffs and trade policies. Further afield in Japan, many companies have begun to focus more on corporate governance, paying increased attention to their share price due to a combination of regulatory changes, investor activism and improving governance structures.

We enter 2025 with a complex macroeconomic situation, and fiscal policies and protectionist measures are expected to play an increasingly pivotal role. While Marathon-London does not produce any forecasts or outlooks, nor do we undertake any macroeconomic research, these wider issues feed into out bottom-up company analysis. As such, we do not have a view on the "absolute" outlook for markets, but have identified companies which we believe have the characteristics that mean they are more likely to outperform the average sector peer in the long-term. Wherever we invest, Marathon's value proposition to clients is anchored around three key factors: we assess companies (and industries) according to where they are in the capital cycle, looking predominantly at the supply side; we take positions expecting to hold them for several years, and are therefore comfortable with volatility in returns; and our approach is generalist in that it does not easily fit into a style categorisation. For example, in Japan, Marathon is invested in companies which we believe have the most scope to change and unlock value that is currently trapped in typically unproductive structures (like cross-shareholdings or unrelated subsidiaries), as corporate governance reform continues to accelerate.

Globally, with the above noted, one interesting observation in hindsight has been the effect of the extended low interest rates on Marathon's approach. Capital cycle analysis seeks opportunities both amongst high return on capital companies benefitting from a positive ("top half") capital cycle and those in a lower return ("bottom half") universe. Usually the bottom-half offers up opportunities for companies that must consolidate to improve profitability. However, there has been a dearth of opportunity for the portfolio in the bottom-half because very low interest rates have allowed "zombie" companies to borrow at minimal cost and continue operating. The rises in interest rates since 2021/2022 has incrementally generated some of the "creative destruction" which has been largely lacking in markets since the global financial crisis and which creates bottom-half opportunities for Marathon's portfolio managers; however, the lag between interest rate changes and economic impact varies and can be several years. We are beginning to see signs that the unprecedented global tightening cycle of the past two plus years is having an impact on companies. The interest cycle has turned in many countries, however, with rates being cut recently. Nevertheless, due to the lag in impact, we expect to see increased opportunity in the bottom-half in the coming years.

Investment philosophy and strategy summary

IV. Strategy:

Marathon invests according to the capital cycle: a framework that describes the relationship between the return on capital invested in a business, the actions of management, and the valuation of that company's equity by outside investors. The simple but powerful central concept is that high returns on capital attract competition, whilst low returns repel it. By understanding the ebb and flow of capital and focusing on the supply side of an industry, we hope to identify attractive opportunities. These fall into two categories:

- Firstly, those companies earning low returns on capital but with the potential for it to increase. Such businesses are typically lowly valued by investors, often below the replacement cost of the company's assets. This discourages investment in both that particular business and the broader industry. As the level of investment decreases, competition and capacity follows suit, and the returns of well-managed businesses rise – along with the valuation of the company. Industry consolidation and the exit of weak players catalyse this process.
- Secondly, those companies earning high returns on capital which are sustainable over the long-term. Some businesses are capable of repelling the forces of competition because they have an advantage over rivals not easily replicated. This advantage may be scale, network effects, branding, or some other valuable intangible asset. Consistent investment in these intangibles by sensible management enables this to endure. High returns, compounded over time, are immensely valuable.

The capital cycle is a framework that allows Marathon to anticipate changes in profitability and equity valuation over the long-term. It is neither traditional Value nor Growth investing, but lends itself to contrarianism and extended long-term holding periods.

Presentation #3 -Volatility index

Public Employees' Retirement System of Mississippi – ACWI ex US account as at 31 December 2024

Annualised periods	Public Employees' Retirement System of Mississippi Standard Deviation	MSCI All Country World ex US IMI Net Standard Deviation
1 year	9.6	8.7
2 years	13.4	13.2
3 years	16.1	16.1
4 years	14.8	14.6
5 years	18.4	17.4
6 years	17.5	16.7
7 years	16.9	16.3
8 years	15.9	15.4
Since inception (6th May 2016)	15.5	15.0

Source: Marathon, 31 December 2024. Currency: USD

Presentation #5 - ACWI ex US investment team

A team of generalists, one consistent philosophy

Europe	Pacific		Emerging Markets	North America	
	Japan	Pacific ex Japan		US small-mid cap / Canada	US large cap
Portfolio Managers					
Charles Carter (35/26) **Nick Longhurst** (30/21)	**Bill Arah** (42/37) **Toma Kobayashi** (10/6) **Justin Hill** (28/3)		**Alex Duffy** (20/3)	**Robert Anstey**[1] (30/10)	*Ian Deacon*[2] *(17/8)*
Analysts					
Jordane Guillot (14/5)	Masanaga Kono (40/8)		Kai Chen (11/2) Laura Fyfe (5/2)	Tom Wharram (9/2)	
Junior Analysts					

As of 31 December 2024. Numbers in brackets denote experience in the industry/years at Marathon.
[1]Robert Anstey manages Canadian equities for International mandates which include Canada. [2]Ian Deacon also manages Marathon's Global Opportunities strategy.

Biographies
ACWI ex US Investment team

Robert Anstey, Portfolio Manager, North America

Robert joined Marathon in January 2014 and is responsible for US small and mid-cap and Canadian equities within Global and International portfolios. He is a member of Marathon’s Partners Group. Prior to Marathon, Robert worked at Hermes Fund Managers for 12 years latterly as Head of US equities, leading a team of four managing the Hermes US small and mid-cap equity strategy.

Robert holds an M.A. from the University of Cambridge and is a CFA charterholder.

William Arah, Co-founder and Portfolio Manager, Japan

William (Bill) is a co-founder of Marathon and has been a Portfolio Manager of Marathon's Japanese equities since 1987. Bill is a Director of the company and sits on the Board. He is also a member of Marathon’s Partners Group. He has worked in the investment management industry since 1982.

Bill holds an M.A. from the University of Oxford.

Charles Carter, Managing Director and Portfolio Manager, Europe

Charles manages European equities across Marathon's Global, International and European equity portfolios. He joined Marathon as a European equity Analyst in 1998 and assumed portfolio management responsibilities of European equities in 2007. In 2018 Charles joined the firm's Board of Directors and was appointed Managing Director of the business in 2019. He is also a member of Marathon’s Partners Group and Management Committee. Prior to joining Marathon, Charles was part of Olivetti's internal M&A team in Italy involved in the disposal programme to restructure Olivetti's business. Prior to that, Charles worked for Lazard Brothers initially in the Corporate Strategy group and latterly in the Corporate Finance division.

Charles holds an M.A. from the University of Oxford and an MBA from INSEAD.

Biographies

ACWI ex US Investment team

Kai Chen, Analyst, Emerging Markets

Kai, who is based in Hong Kong, joined Marathon in 2022 as an Emerging Markets Analyst with a primary focus on the Greater China markets. He joined the business from FSSA Investment Managers, where he performed a similar role, and previously worked for Fidelity International, where he started his investment career in 2013, as an Analyst covering Greater China small cap, and previously the automobile, consumer and online gaming industries. Before joining the investment industry, Kai spent six years working as a design engineer for Intel.

Kai holds a B.Sc. from Cornell University and an MBA from The Wharton School of the University of Pennsylvania.

Alex Duffy, Portfolio Manager, Emerging Markets

Alex joined Marathon in 2021 as an Emerging Markets equity Portfolio Manager. He is responsible for Global Emerging Markets investments within Global and International strategies as well as in standalone Emerging Markets funds and accounts. He is a member of Marathon's Partners Group and Management Committee. Alex joined Marathon from Fidelity International, where he began his career in 2004 as an equity Analyst before being appointed a Portfolio Manager in 2008, initially for Latin American equities and, from 2013 for Global Emerging Markets.

Alex holds an M.A. from the University of Nottingham.

Laura Fyfe, Analyst, Emerging Markets

Laura joined Marathon in 2022, as an Emerging Markets Analyst. Prior to joining the team, Laura worked as an Investment Analyst at Stewart Investors in Edinburgh, where she had spent the previous three years conducting research into Emerging Markets companies globally.

Laura holds a B.A. from Western University, and an M.Sc. from both Ivey Business School and the Norwegian School of Economics.

Biographies

ACWI ex US Investment team

Jordane Guillot, Analyst, Europe

Jordane joined Marathon in 2019 as a European equity Analyst. He joined from Jupiter Asset Management where, from 2015, he was an Analyst in the European Growth team.

Jordane holds an M.A. from Ecole Centrale d'Electronique, Paris.

Justin Hill, Portfolio Manager, Pacific

Justin joined Marathon in 2021, initially to manage Asia Pacific ex-Japan across Marathon's Global and International equity portfolios, before also taking on responsibility for a portion of Japanese assets for Marathon's International strategies in April 2024. He is also a member of Marathon's Partners Group. Justin started his career at Arthur Andersen as a tax specialist before moving into investment management in 1996 at Friends Ivory & Sime where he was responsible for UK Smaller Companies. In 2001 he moved to Pictet Asset Management where he covered Asian equities. Prior to joining Marathon-London he spent two years at BP Investment Management, covering Developed Asia.

Justin holds an M.A. from the University of Oxford, is ASIP Qualified (CFA UK member) and holds the ACA Chartered Accountancy designation.

Toma Kobayashi, Portfolio Manager, Japan

Toma manages Japanese equities across Marathon's Global, International and Japanese equity portfolios and is a member of Marathon's Partners Group. He joined Marathon in August 2018, initially as a Japan equity Analyst before assuming portfolio management responsibilities in July 2022. Toma joined from Orbis Investments where, from 2014, he worked as a generalist in the Japanese equity team.

Toma holds a BEng from University College London and holds an MPhil from the University of Cambridge. He is also a CFA charterholder.

Biographies

ACWI ex US Investment team

Masanaga Kono, Analyst, Japan

Masanaga (Masa), who is based in Tokyo, joined Marathon in 2016 and focuses on corporate governance and engagement. Prior to joining Marathon, he was Japanese equities chief strategist at Amundi Japan in Tokyo. He started his career at Yamaichi Securities and worked as a strategist at Yamaichi Securities Institute of Economic Research before moving to UBS Securities Japan. He then held senior positions in research planning at Deutsche Securities Ltd. and HSBC Securities Limited both in Tokyo.

Masa holds a B.A. from Keio University and a CMA certificate.

Nick Longhurst, Portfolio Manager, Europe

Nick manages European equities across Marathon's International and European equity portfolios and is a member of Marathon’s Partners Group. He joined Marathon in 2003 as a European equity Analyst and assumed portfolio management responsibilities for European equities in 2010. Nick has worked in the investment management industry since 1994. Previous roles included that of Investment Analyst at American Express Asset Management and Schroders.

Nick holds an M.A. from the University of Cambridge.

Tom Wharram, Analyst, North America

Tom joined Marathon in 2022 as an Analyst for Marathon's North America Team. Tom started his career in 2011 at PricewaterhouseCoopers before moving to a role as an equity Analyst at AB Bernstein. Immediately prior to joining Marathon, he worked as a Global Generalist Investment Analyst at Velanne Asset Management.

Tom holds an MChem degree from the University of Oxford, is a member of the Institute of Chartered Accountants in England and Wales (ICAEW) and is a CFA charterholder.

Biography

Client Service

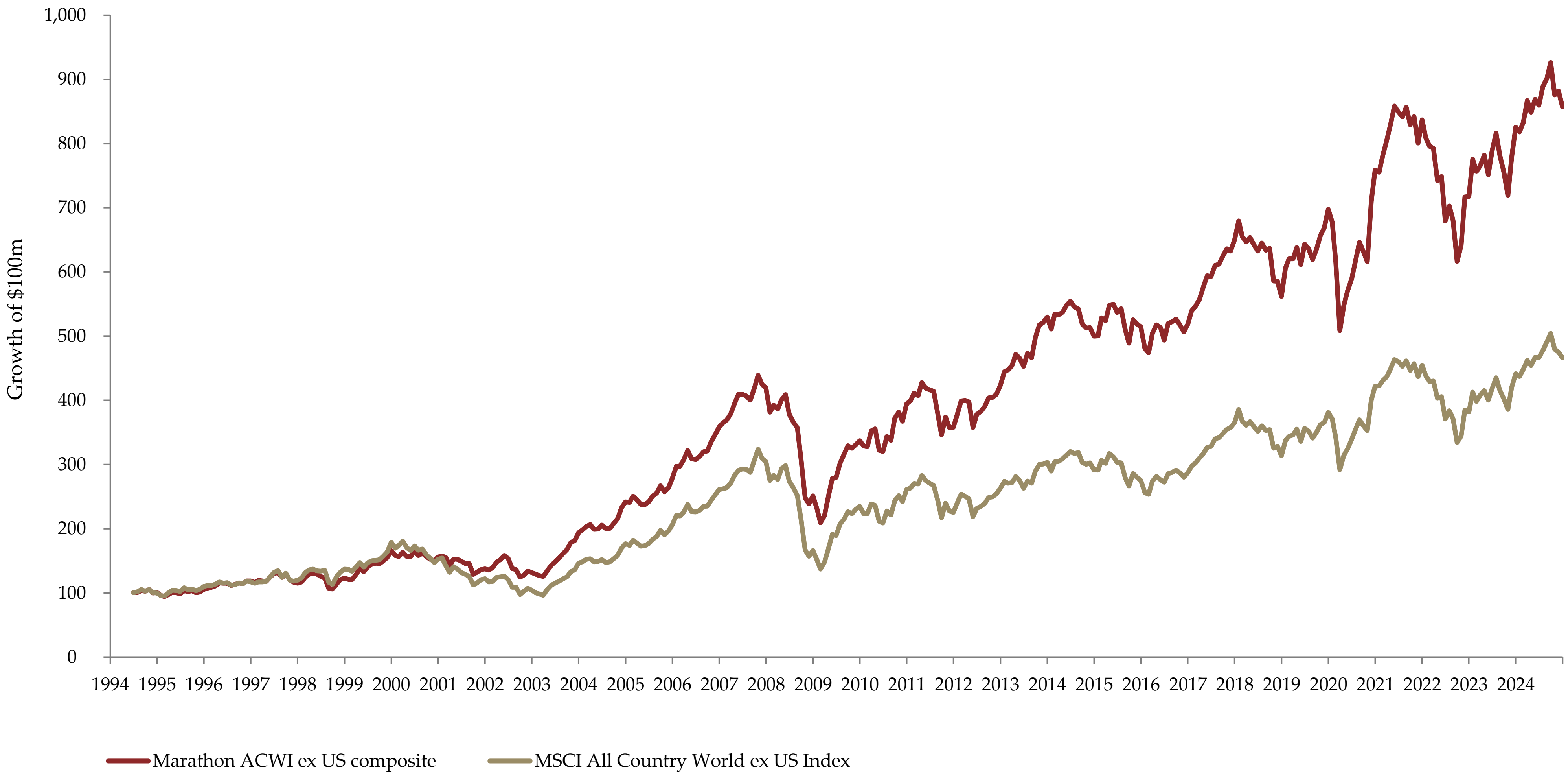
Ben Kottler, Client Manager

Ben joined Marathon in 2018 as a Client Manager, and is responsible for overseeing a number of client relationships in Canada, the US and other countries. Prior to joining Marathon, Ben was at MFS Investments from 2005, where he was an Institutional Portfolio Manager for Global Equity strategies in both Boston and London. Earlier roles include Senior International Portfolio Manager at State Street Global Advisors in Boston and European Portfolio Manager & Analyst at Brown Brothers Harriman, New York. Ben started his career at NatWest Investment Management in London, where he was a UK Portfolio Manager & Analyst.

Ben is a CFA charterholder and holds the Certificate in ESG Investing (CFA Institute), the Certificate in Climate and Investing (CFA UK) and a B.A. degree from Durham University.

Appendix

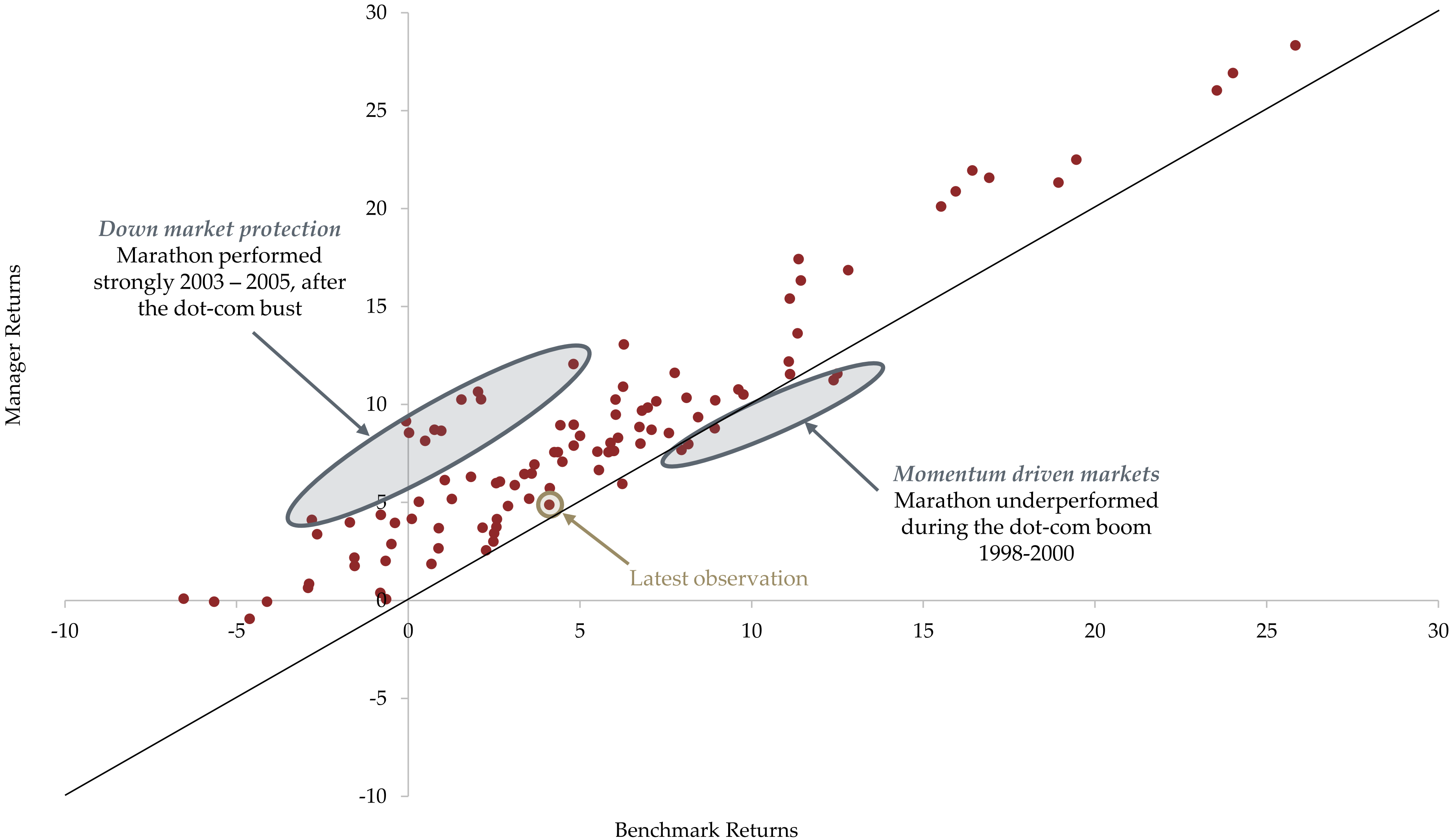
Marathon ACWI ex US: long-term capital growth



Source: Marathon. Currency: USD. Data from 30 June 1994 through to 31 December 2024. Returns stated are net of fees. The analysis is based on an initial investment of $100m.
A copy of the full GIPS compliant composite performance report can be found later in this presentation.
Past performance is not necessarily a guide to future performance. The figures refer to the past and past performance might not be a reliable indicator of future results.

Consistent record of added value

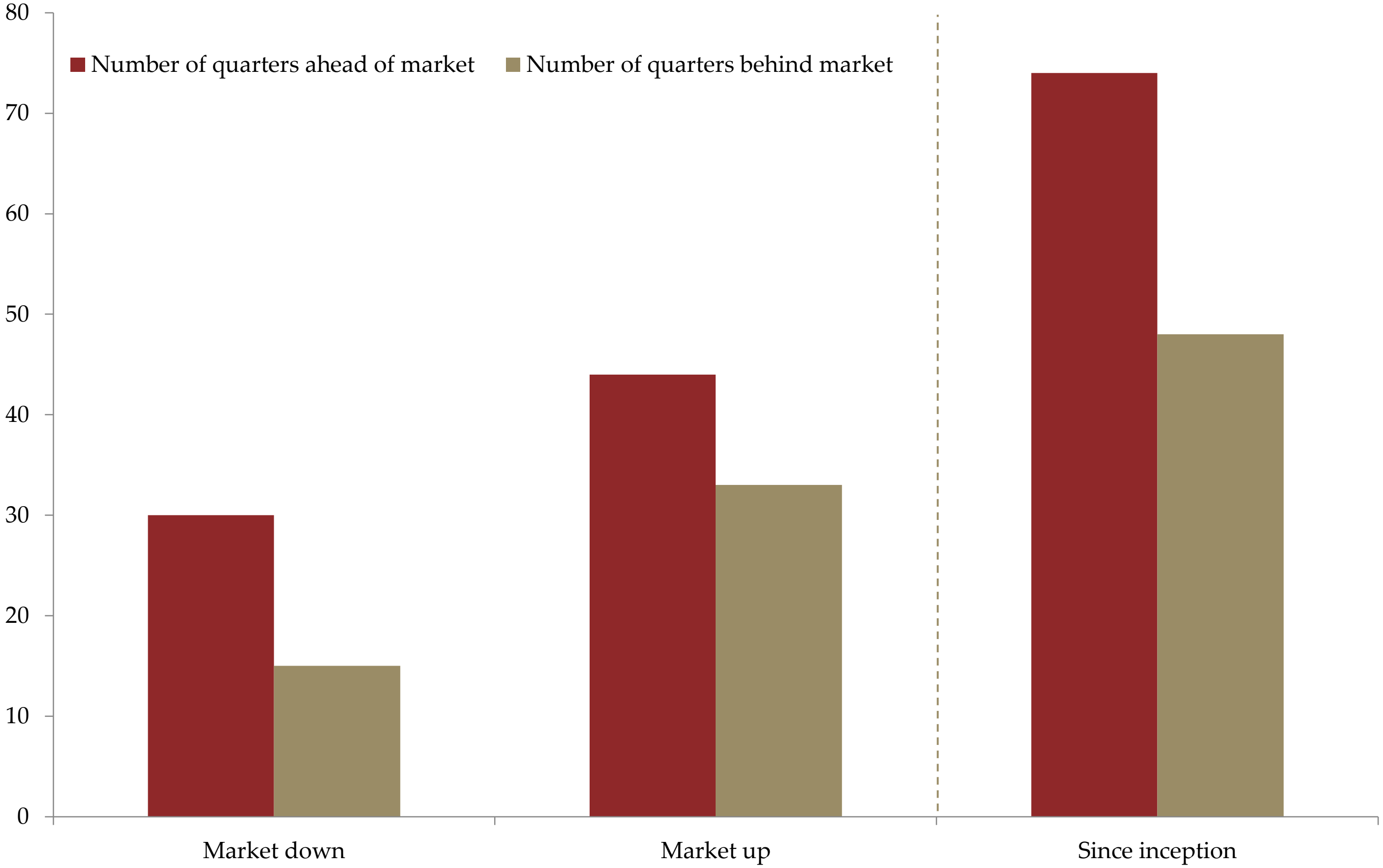
Marathon ACWI ex-US Equity Rolling 5 Year Gross Returns Since Inception



Source: eVestment, 31 December 2024. Benchmark: MSCI ACWI ex-US-GD Index (from start of Q3 1994 to end of Q4 2000), MSCI ACWI ex-US-ND Index (start of Q1 2001 onwards). Data shown with gross returns that does not include deductions for fees or expenses; client returns will vary accordingly (see disclaimer for more information). A copy of the full GIPS compliant composite performance report can be found later in this presentation. This data has been provided for Public Employees' Retirement System of Mississippi's sole use only and is expressly not for wider distribution. Past performance is not necessarily a guide to future performance.

Number of quarters outperforming benchmark: ACWI ex-US composite

Keeping pace in up markets, protecting capital in down markets



	Market down	Market up	Since inception
Average outperformance per Quarter (gross of fees):	**1.2%**	**0.3%**	**0.6%**
Hit Rate:	**67%**	**57%**	**61%**

Source: Marathon. Data shown June 1994 to 31 December 2024. Strategy inception date 30 June 1994. Benchmark: MSCI ACWI ex-US Net. Currency: USD. Data shown with gross returns that does not include deductions for fees or expenses; client returns will vary accordingly (see disclaimer for more information). A copy of the full GIPS compliant composite performance report can be found later in this presentation. This data has been provided for Public Employees' Retirement System of Mississippi's sole use only and is expressly not for wider distribution. Past performance is not necessarily a guide to future performance.

Performance

Inception to 31 December 2024 - Public Employees' Retirement System of Mississippi

Cumulative performance (%)			
Period	Gross	Index	Relative
Current quarter	-7.3	-7.6	**0.3**
Year to date	4.8	5.2	**-0.5**
Since inception	81.1	70.9	**10.2**

Annualised (%)			
Period	Gross	Index	Relative
1 Year	4.8	5.2	**-0.5**
2 Years	10.2	10.3	**-0.1**
3 Years	1.6	0.5	**1.1**
4 Years	3.9	2.4	**1.5**
5 Years	5.0	4.1	**0.9**
7 Years	4.8	3.5	**1.3**
Since Inception	7.1	6.4	**0.7**

Calendar years (%)			
Period	Gross	Index	Relative
2024	4.8	5.2	**-0.5**
2023	15.9	15.6	**0.3**
2022	-13.6	-16.6	**3.0**
2021	11.2	8.5	**2.7**
2020	9.7	11.1	**-1.4**
2019	24.9	21.6	**3.2**
2018	-13.2	-14.8	**1.6**
2017	26.2	27.8	**-1.6**
2016	3.5	5.4	**-1.9**

Inception: 06 May 2016. Index: MSCI All Country World ex US IMI Net. Currency: USD

Past performance is not necessarily a guide to future performance. The figures refer to the past and past performance might not be a reliable indicator of future results.

Source: Marathon, 31 December 2024

Current active stock positioning

Public Employees' Retirement System of Mississippi

Top 10 largest positions (%)					
Security	**Country**	**Sector**	**Fund**	**Index**	**Active**
Taiwan Semiconductor Manufacturing	Taiwan	Information Technology	2.7	2.7	0.0
Novo Nordisk A/S Class B	Denmark	Health Care	1.8	0.9	0.9
3i Group plc	United Kingdom	Financials	1.7	0.1	1.6
HDFC Bank Ltd	India	Financials	1.6	0.4	1.2
AIA Group Ltd	Hong Kong	Financials	1.5	0.3	1.2
PT Bank Central Asia Tbk	Indonesia	Financials	1.3	0.1	1.2
Rolls-Royce Holdings plc	United Kingdom	Industrials	1.2	0.2	1.0
Naspers Limited Class N	South Africa	Consumer Discretionary	1.2	0.1	1.1
Flutter Entertainment plc	United States	Consumer Discretionary	1.1	0.0	1.1
Fairfax Financial Holdings	Canada	Financials	1.1	0.1	1.0

Top 10 overweight positions (%)					
Security	**Country**	**Sector**	**Fund**	**Index**	**Active**
3i Group plc	United Kingdom	Financials	1.7	0.1	1.6
AIA Group Ltd	Hong Kong	Financials	1.5	0.3	1.2
PT Bank Central Asia Tbk	Indonesia	Financials	1.3	0.1	1.2
HDFC Bank Ltd	India	Financials	1.6	0.4	1.2
Flutter Entertainment plc	United States	Consumer Discretionary	1.1	0.0	1.1
Naspers Limited Class N	South Africa	Consumer Discretionary	1.2	0.1	1.1
Rolls-Royce Holdings plc	United Kingdom	Industrials	1.2	0.2	1.0
Fairfax Financial Holdings	Canada	Financials	1.1	0.1	1.0
Midea Group Co Ltd Class H	China	Consumer Discretionary	1.0	0.0	0.9
Nippon Telegraph and Telephone	Japan	Communication Services	1.0	0.1	0.9

Top 10 underweight positions (%)					
Security	**Country**	**Sector**	**Fund**	**Index**	**Active**
Tencent Holdings Ltd	China	Communication Services	0.0	1.2	-1.2
SAP SE	Germany	Information Technology	0.0	0.8	-0.9
Nestle SA	Switzerland	Consumer Staples	0.0	0.7	-0.7
AstraZeneca plc	United Kingdom	Health Care	0.0	0.7	-0.7
Toyota Motor Corp	Japan	Consumer Discretionary	0.0	0.7	-0.7
Roche Holding	Switzerland	Health Care	0.0	0.7	-0.7
Novartis AG	Switzerland	Health Care	0.0	0.6	-0.6
Shell plc	United Kingdom	Energy	0.0	0.6	-0.6
Moet Hennessy Louis Vuitton	France	Consumer Discretionary	0.0	0.6	-0.6
HSBC Holdings plc	United Kingdom	Financials	0.0	0.6	-0.6

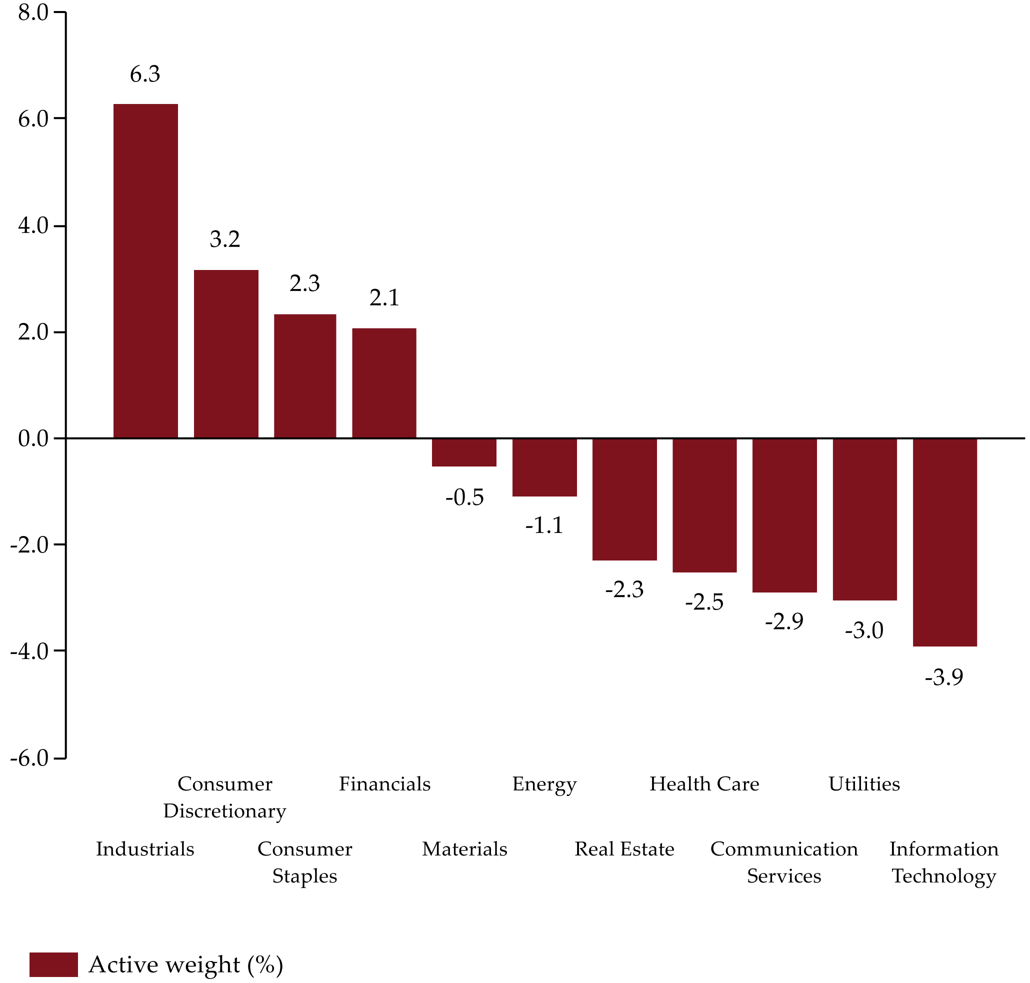
Index: MSCI All Country World ex US IMI Net. Currency: USD

Source: Marathon, 31 December 2024

Current sector positioning

Public Employees' Retirement System of Mississippi

Sector (%)	Fund	Index	Active
Energy	3.7	4.8	-1.1
Materials	6.4	7.0	-0.5
Industrials	21.2	14.9	6.3
Consumer Discretionary	14.5	11.3	3.2
Consumer Staples	9.2	6.8	2.3
Health Care	6.0	8.5	-2.5
Financials	24.1	22.0	2.1
Information Technology	9.3	13.3	-3.9
Communication Services	2.7	5.5	-2.9
Utilities	0.0	3.0	-3.0
Real Estate	0.6	2.8	-2.3
Cash	2.4	0.0	2.4
Total	100.0	100.0	



Index: MSCI All Country World ex US IMI Net. Currency: USD

Source: Marathon, 31 December 2024

Current industry positioning

Public Employees' Retirement System of Mississippi

Sector/Industry (%)	Fund	Index
ENERGY	**3.7**	**4.8**
Energy Equipment & Services	0.3	0.2
Oil Gas & Consumable Fuels	3.4	4.6
MATERIALS	**6.4**	**7.0**
Chemicals	0.2	2.5
Construction Materials	1.1	0.6
Containers & Packaging	0.4	0.2
Metals & Mining	4.4	3.4
Paper & Forest Products	0.2	0.2
INDUSTRIALS	**21.2**	**14.9**
Aerospace & Defense	1.8	1.6
Building Products	1.7	0.7
Construction & Engineering	1.2	1.1
Electrical Equipment	2.5	1.9
Industrial Conglomerates	1.3	1.5
Machinery	4.9	2.6
Trading Companies & Distributors	2.3	1.3
Commercial Services & Supplies	0.8	0.6
Professional Services	2.5	1.3
Air Freight & Logistics	0.0	0.4
Passenger Airlines	1.6	0.2
Marine Transportation	0.1	0.3

Sector/Industry (%)	Fund	Index
Ground Transportation	0.4	0.9
Transportation Infrastructure	0.1	0.5
CONSUMER DISCRETIONARY	**14.5**	**11.3**
Automobile Components	0.6	0.8
Automobiles	0.5	2.4
Household Durables	1.9	1.0
Leisure Products	0.5	0.2
Textiles Apparel & Luxury Goods	2.6	1.9
Hotels Restaurants & Leisure	4.2	1.9
Diversified Consumer Services	0.4	0.1
Distributors	0.2	0.0
Broadline Retail	2.0	1.8
Specialty Retail	1.7	1.1
CONSUMER STAPLES	**9.2**	**6.8**
Consumer Staples Distribution & Retail	2.5	1.5
Beverages	3.8	1.2
Food Products	2.2	2.1
Tobacco	0.0	0.5
Household Products	0.5	0.3
Personal Care Products	0.1	1.2
HEALTH CARE	**6.0**	**8.5**
Health Care Equipment & Supplies	2.2	1.3

Sector/Industry (%)	Fund	Index
Health Care Providers & Services	0.7	0.5
Health Care Technology	0.2	0.1
Biotechnology	0.4	0.8
Pharmaceuticals	2.0	5.3
Life Sciences Tools & Services	0.5	0.4
FINANCIALS	**24.1**	**22.0**
Banks	13.9	13.0
Financial Services	0.6	1.1
Consumer Finance	0.0	0.3
Capital Markets	3.7	2.9
Insurance	5.9	4.7
INFORMATION TECHNOLOGY	**9.3**	**13.3**
It Services	1.5	1.8
Software	1.2	1.9
Communications Equipment	0.0	0.3
Technology Hardware Storage & Peripherals	1.5	1.6
Electronic Equipment Instruments & Components	0.5	1.9
Semiconductors & Semiconductor Equipment	4.6	5.8
COMMUNICATION SERVICES	**2.7**	**5.5**
Diversified Telecommunication Services	1.0	1.4
Wireless Telecommunication Services	0.0	1.0

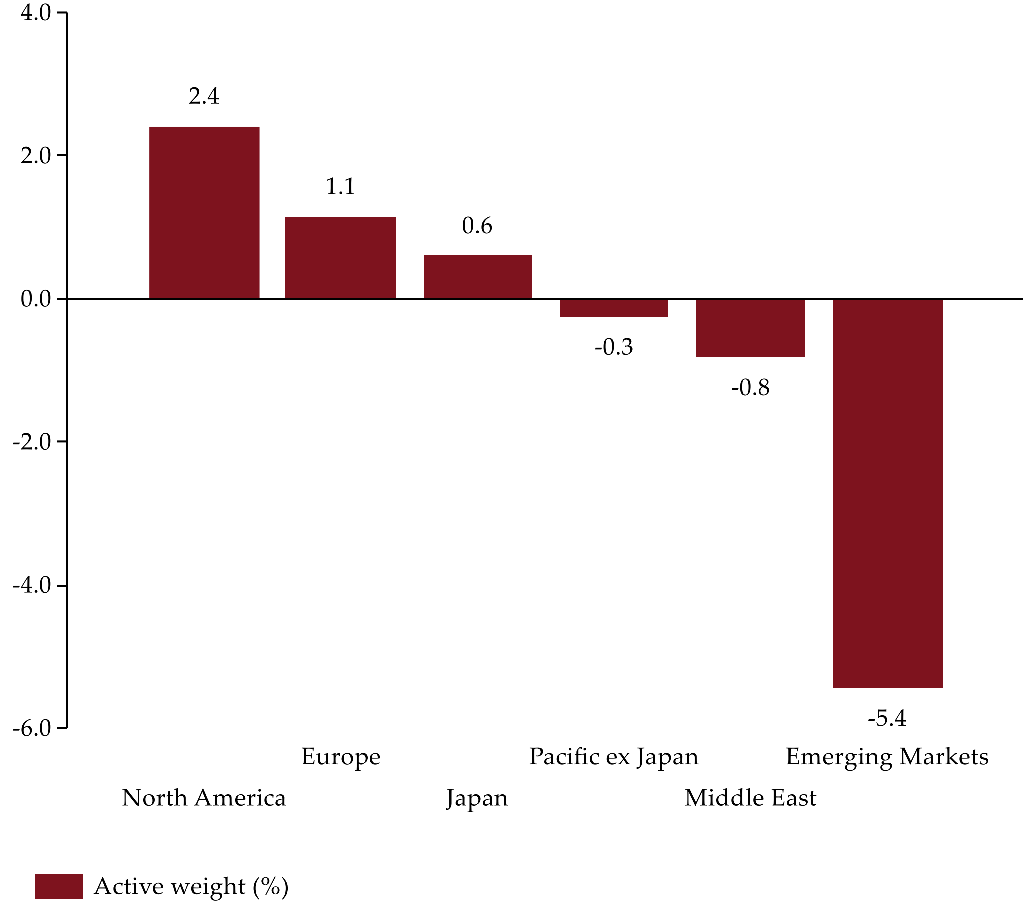
Index: MSCI All Country World ex US IMI Net. Currency: USD

Source: Marathon, 31 December 2024

Current regional positioning

Public Employees' Retirement System of Mississippi

Region (%)	Fund	Index	Active
Europe	39.7	38.5	1.1
Emerging Markets	24.4	29.8	-5.4
Japan	16.3	15.6	0.6
North America	10.4	7.9	2.4
Pacific ex Japan	7.0	7.3	-0.3
Cash	2.4	0.0	2.4
Middle East	0.0	0.8	-0.8
Total	100.0	100.0	



Index: MSCI All Country World ex US IMI Net. Currency: USD

Source: Marathon, 31 December 2024

Current geographical positioning

Public Employees' Retirement System of Mississippi

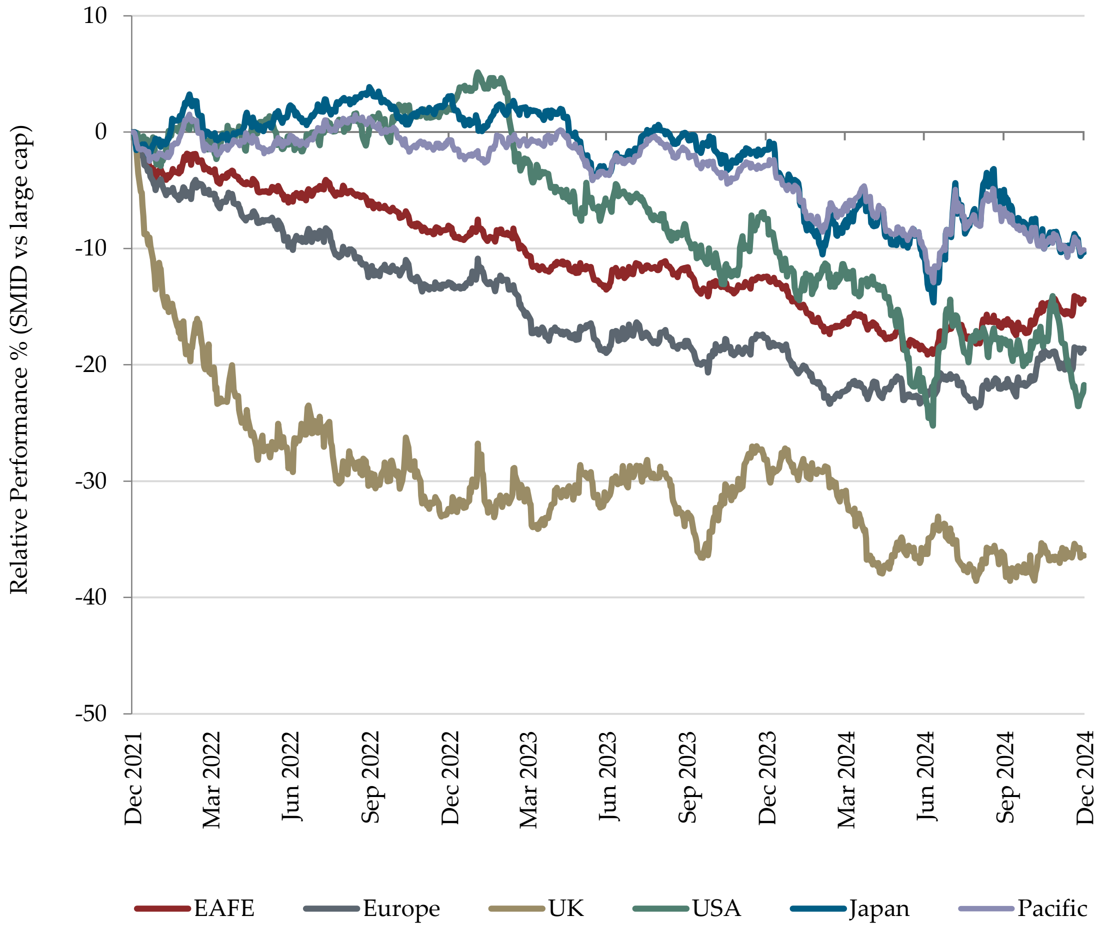
Country (%)	Fund	Index
EUROPE	**39.7**	**38.5**
Austria	0.7	0.2
Belgium	0.0	0.7
Denmark	3.7	1.7
Finland	0.7	0.6
France	4.0	6.2
Germany	2.8	5.3
Ireland	0.6	0.2
Italy	1.5	1.8
Netherlands	1.8	2.6
Norway	0.9	0.5
Portugal	0.0	0.1
Spain	1.3	1.6
Sweden	1.3	2.4
Switzerland	1.9	5.5
United Kingdom	18.6	9.2
JAPAN	**16.3**	**15.6**
Japan	16.3	15.6
PACIFIC EX JAPAN	**7.0**	**7.3**
Australia	2.9	4.8
Hong Kong	3.4	1.2
New Zealand	0.0	0.2
Singapore	0.7	1.1
EMERGING MARKETS	**24.4**	**29.8**
Brazil	1.0	1.2
Chile	0.5	0.1
China	3.8	7.5
Colombia	0.0	0.0

Country (%)	Fund	Index
Czech Republic	0.0	0.0
Egypt	0.0	0.0
Greece	0.5	0.2
Hungary	0.0	0.1
India	3.8	6.2
Indonesia	1.3	0.5
Korea	1.6	2.7
Kuwait	0.0	0.2
Malaysia	0.0	0.5
Mexico	2.3	0.5
Panama	0.6	0.0
Peru	0.8	0.1
Philippines	0.0	0.2
Poland	0.0	0.3
Qatar	0.0	0.2
Saudi Arabia	0.0	1.2
South Africa	3.3	0.9
Taiwan	4.9	5.9
Thailand	0.0	0.5
Turkey	0.0	0.3
United Arab Emirates	0.0	0.4
NORTH AMERICA	**10.4**	**7.9**
Canada	8.4	7.9
United States	2.0	0.0
MIDDLE EAST	**0.0**	**0.8**
Israel	0.0	0.8
CASH	**2.4**	**0.0**
TOTAL	**100.0**	**100.0**

Index: MSCI All Country World ex US IMI Net. Currency: USD

Source: Marathon, 31 December 2024

SMID cap vs large cap

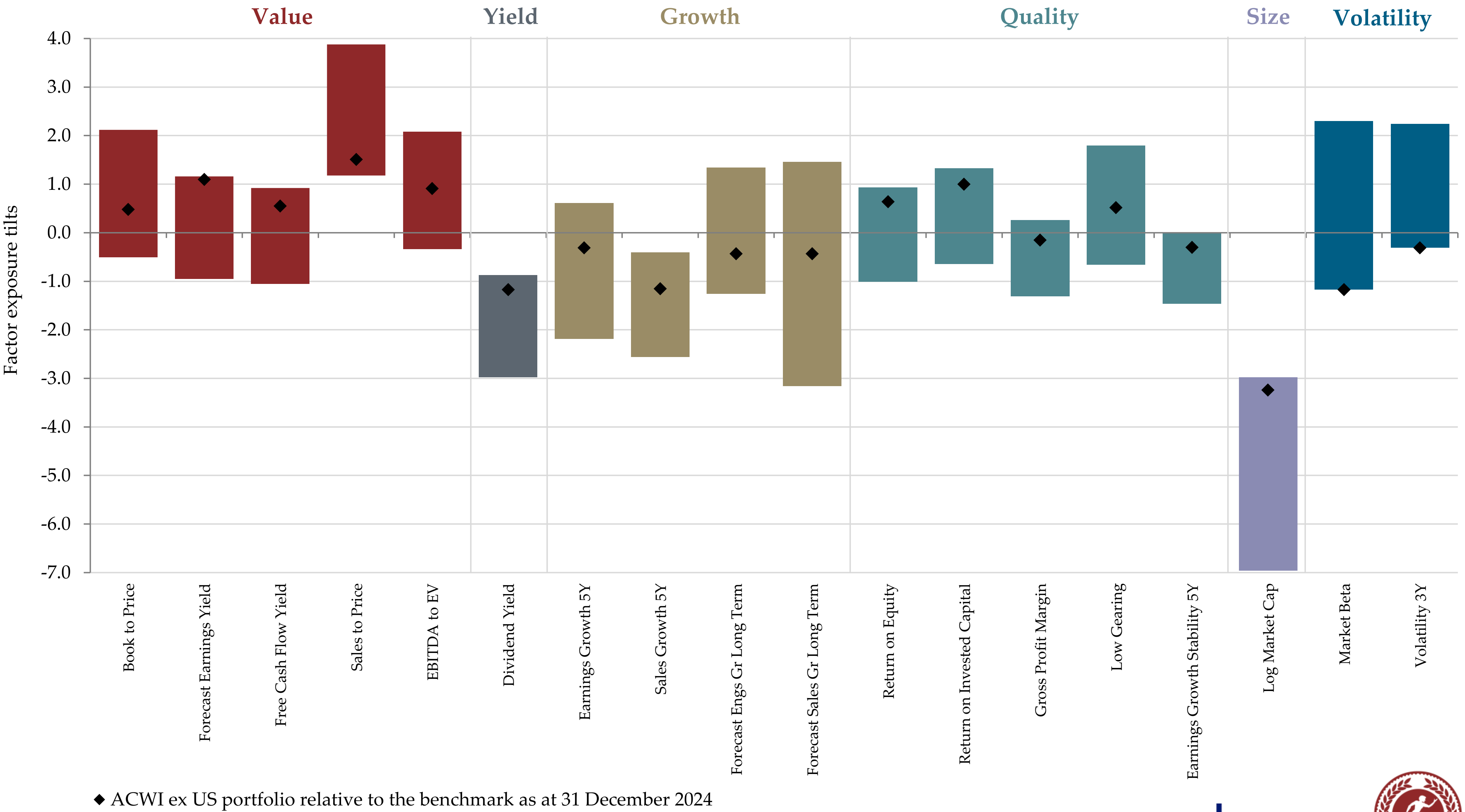


- Since 2021, large-cap has materially outperformed SMID cap globally; the UK, Italy, France and Germany have seen some of the largest differentials
- UK large-caps are more heavily skewed towards the Energy, Pharmaceuticals and Financials sectors
- Marathon's long-standing preference for small- and mid-sized companies has been a material headwind for performance
- As a result of recent underperformance, relative valuations of SMID versus large caps appear to be attractive

Source: FactSet, 31 December 2024

Marathon ACWI ex US portfolio

Style skyline range - 5 years to 31 December 2024



Source: Style Analytics, representative Marathon ACWI ex US account data vs MSCI All Country World ex USA (Net) as at 31 December 2024 in the context of the 5 year range.

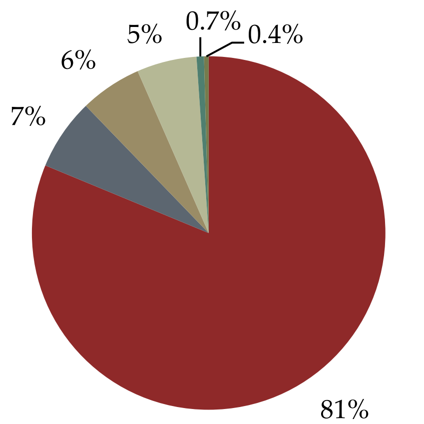
Marathon

- Independent, multi-generational firm
- Investment-led culture
- Institutional client focus for over 35 years
- Global, international and regional equities only
- Experienced, accountable team with strong performance record

Assets under management

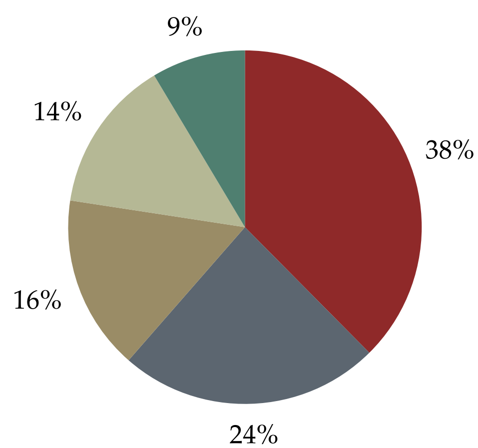
42% of AUM represented by clients with 20 year plus relationships

By domicile



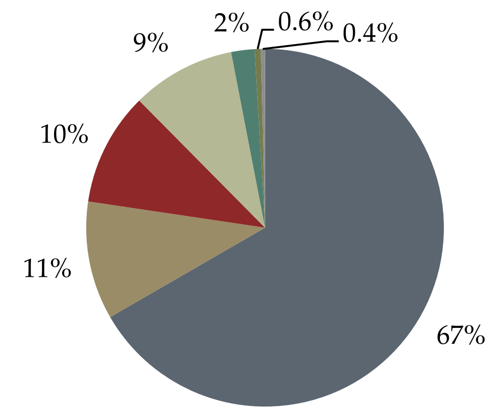
- USA
- Asia Pacific
- Canada
- Europe
- Africa / Middle East
- UK

By client type



- State / municipal / local authority
- Sub-Advisory
- Endowments / foundations
- Corporate pension funds
- Other

By mandate



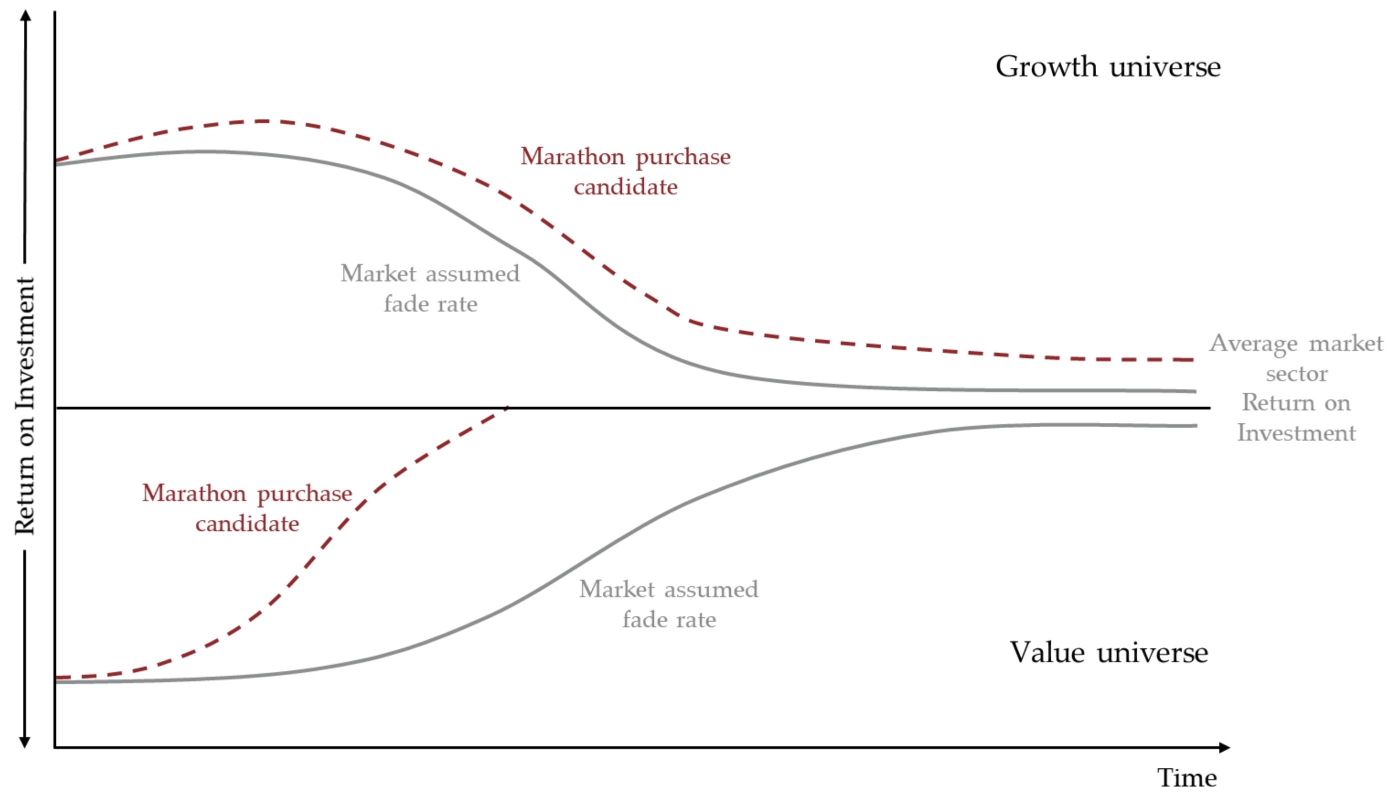
- EAFE*
- Japan
- ACWI ex US
- Global
- Europe
- UK
- Emerging Markets

Firm assets under management: **US$36.8bn**

Source: Marathon, 31 December 2024. *Includes all products benchmarked against MSCI EAFE or MSCI World ex US. Pie chart totals may not equal 100% due to rounding. Approximately US$294m of AUM are hedge fund assets, which are not included in the charts above.

Marathon Approach: a recap

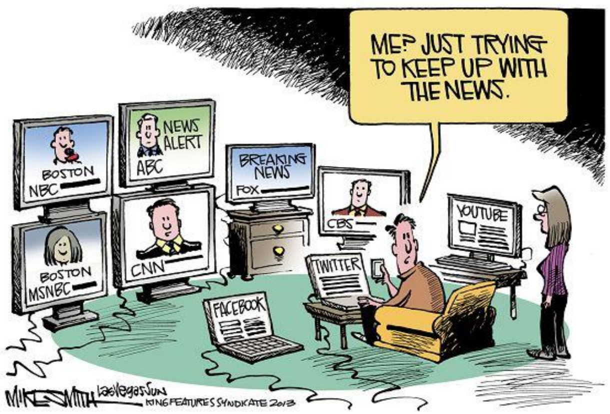
- High returns attract capital just as low returns repel it
- The ebb and flow of capital impacts industries in predictable ways – the Capital Cycle
- Our job is to analyse the dynamics of these cycles, when they work and when they are broken
- Management is key in this process so we seek to identify managers who allocate capital in sensible ways
- Pay-offs take time and are uncertain which leads to long holding periods and diverse portfolios



Source: Marathon, Holt Value Associates. For information on the approach taken to sustainability please see our website: https://www.marathon.co.uk/sustainability/

Behavioural traps to avoid

Problem	Our Solution
Investment management by committee	PM bonus paid on sleeve performance, no discretion
Led by armies of analysts; overconfidence from 'in-depth' analysis	Generalists not specialists
Short-termism due to inappropriate incentives	Long termism: • Capital cycle focus • Long-term incentive structure • Alignment with client goals reflected in client tenure
Benchmark relative approach to risk	Focus on capital loss - the greatest long-term risk to investors
Marketing-led/asset gathering	Founded, owned and run by investors



Sustainability

For clients' assets and the firm

Investment

Integration

Portfolio managers commit to consider sustainability issues at all stages of the investment process

- Marathon's primary objective is to add value within clients' agreed risk parameters
- Sustainability is critical to long-term investors as such risks tend to materialise over many years
- Materiality is key – sustainability risks/opportunities may already be reflected in valuations

Stewardship

The investment team engages with company management and votes their own proxies

Contentious issues in votes include:

- Director tenure
- Family ownership
- Pay and incentives
- M&A

Marathon

Internal focus

Environmentally responsible firm:
CarbonNeutral®, recycling initiative

Human capital

Staff and community focus:
inclusive culture, mentoring, #10,000 Interns

Signatory of the UK and Japanese Stewardship Codes and the Principles for Responsible Investing (PRI)

For further information on the approach taken to sustainability please see our website: https://www.marathon.co.uk/sustainability/

Presentation #4 -Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Europe				
Austria				
ANDRITZ AG	38,296	54.80	2,181,621	0.25
Wienerberger AG	128,539	28.26	3,776,177	0.43
Total Austria			**5,957,797**	**0.68**
Denmark				
Carlsberg AS Class B	44,318	754.60	4,658,879	0.53
Coloplast A/S Class B	40,051	830.00	4,631,012	0.53
Demant A/S	94,418	290.00	3,814,497	0.43
GN Store Nord A/S	38,777	148.20	800,584	0.09
Novo Nordisk A/S Class B	173,111	607.30	14,645,776	1.67
Vestas Wind Systems A/S	222,823	98.94	3,071,258	0.35
Total Denmark			**31,622,006**	**3.60**
Finland				
Sampo Oyj	91,046	39.78	3,765,051	0.43
Wartsila Oyj Abp	101,385	18.26	1,923,981	0.22
Total Finland			**5,689,032**	**0.65**
France				
Alten SA	18,082	89.25	1,677,644	0.19
ArcelorMittal SA	146,781	24.17	3,688,007	0.42
bioMerieux SA	3,951	117.10	480,960	0.05
Dassault Systemes SE	49,244	37.80	1,935,042	0.22
Edenred SA	147,502	33.24	5,096,877	0.58
Elis SA	85,602	19.74	1,756,614	0.20
EssilorLuxottica SA	14,873	265.70	4,108,047	0.47
Eurofins Scientific SE	49,990	51.86	2,695,013	0.31
Legrand SA	22,892	98.88	2,353,084	0.27
Rexel SA	56,597	25.58	1,505,009	0.17
Schneider Electric SE	34,344	245.35	8,759,558	1.00

Country	Holding	Market price (local)	Market value	% of fund
Europe				
France				
Technip Energies NV	90,825	27.48	2,594,582	0.30
Total France			**36,650,438**	**4.17**
Germany				
adidas AG	18,127	254.90	4,803,314	0.55
Bayerische Motoren Werke AG	42,799	78.60	3,497,047	0.40
BefeSA SA	25,708	21.00	561,220	0.06
Brenntag SE	58,070	60.78	3,669,085	0.42
Fresenius Medical Care AG	55,924	48.04	2,792,843	0.32
GEA Group Aktiengesellschaft	47,576	51.05	2,524,811	0.29
Gerresheimer AG	19,371	67.90	1,367,310	0.16
Hannover Rueck SE	14,133	254.30	3,736,164	0.42
Stabilus SE	21,495	31.95	713,927	0.08
Total Germany			**23,665,721**	**2.69**
Ireland				
Bank of Ireland Group plc	406,775	9.63	4,071,323	0.46
Irish Continental Group plc	160,436	5.12	853,920	0.10
Total Ireland			**4,925,243**	**0.56**
Italy				
Amplifon SPA	55,138	25.89	1,483,981	0.17
Davide Campari-Milano NV	326,743	5.59	1,898,051	0.22
UniCredit SpA	222,224	44.42	10,261,592	1.17
Total Italy			**13,643,625**	**1.55**
Netherlands				
ASML Holding NV	10,798	722.70	8,112,349	0.92
Coca-Cola Europacific	26,431	78.55	2,076,155	0.24
Koninklijke Ahold Delhaize	112,169	34.16	3,983,235	0.45
Randstad NV	46,298	41.86	2,014,683	0.23
Total Netherlands			**16,186,422**	**1.84**

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Europe				
Norway				
DNB Bank ASA	246,719	240.80	5,255,470	0.60
Equinor ASA	98,702	273.65	2,389,318	0.27
Total Norway			**7,644,788**	**0.87**
Spain				
Acerinox SA	56,164	9.71	566,629	0.06
CaixaBank SA	1,137,828	5.86	6,926,645	0.79
Fluidra SA	140,265	24.88	3,627,813	0.41
Viscofan SA	18,453	61.10	1,172,070	0.13
Total Spain			**12,293,157**	**1.40**
Sweden				
Alfa Laval AB	32,701	495.70	1,465,718	0.17
ASSA ABLOY AB Class B	173,818	340.60	5,353,155	0.61
Sandvik AB	117,053	230.00	2,434,338	0.28
Svenska Handelsbanken A	266,765	122.80	2,962,086	0.34
Total Sweden			**12,215,296**	**1.39**
Switzerland				
Compagnie Financiere	45,754	177.10	8,923,554	1.01
Geberit AG	8,589	510.80	4,831,519	0.55
Holcim Ltd	36,837	91.94	3,729,744	0.42
Total Switzerland			**17,484,817**	**1.99**
United Kingdom				
3i Group plc	332,412	39.04	16,125,016	1.83
Admiral Group plc	44,172	27.03	1,483,566	0.17
Auto Trader Group plc	249,628	7.90	2,451,624	0.28
BAE Systems plc	336,289	12.24	5,114,554	0.58
Barclays plc	2,414,770	2.97	8,911,399	1.01
Barratt Redrow plc	211,463	4.56	1,196,841	0.14
BP plc	1,806,866	4.23	9,485,633	1.08

Country	Holding	Market price (local)	Market value	% of fund
Europe				
United Kingdom				
Bunzl plc	132,823	34.48	5,690,549	0.65
Capita plc	1,240,892	0.14	222,338	0.03
Close Brothers Group plc	94,251	3.19	374,054	0.04
Compass Group plc	224,661	27.91	7,791,143	0.89
ConvaTec Group plc	877,153	2.47	2,692,068	0.31
DCC plc	50,786	56.00	3,533,830	0.40
Diageo plc	233,650	24.19	7,022,881	0.80
DS Smith plc	349,775	5.83	2,531,619	0.29
easyJet plc	384,129	5.12	2,442,818	0.28
Entain plc	473,851	7.07	4,161,520	0.47
Experian plc	56,198	40.07	2,798,040	0.32
Future plc	90,657	9.20	1,035,778	0.12
Glencore plc	1,300,797	3.51	5,665,147	0.64
Hiscox Ltd	186,265	10.93	2,529,677	0.29
IG Group Holdings plc	105,714	10.19	1,338,506	0.15
Inchcape plc	138,597	6.75	1,162,442	0.13
InterContinental Hotels Group	30,439	108.20	4,092,336	0.47
International Personal	100,686	1.29	160,763	0.02
Intertek Group plc	74,220	51.10	4,712,545	0.54
ITV plc	1,310,051	0.74	1,207,016	0.14
John Wood Group plc	544,333	0.72	490,023	0.06
Jupiter Fund Management plc	334,797	0.80	333,633	0.04
Lloyds Banking Group plc	4,667,295	0.62	3,615,311	0.41
PageGroup plc	502,193	3.28	2,044,223	0.23
Pets At Home Group plc	450,044	2.26	1,263,796	0.14
Prudential plc	483,265	6.78	4,072,460	0.46
Rathbones Group plc	47,266	17.34	1,018,384	0.12
Reckitt Benckiser Group plc	67,959	53.30	4,500,781	0.51

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Europe				
United Kingdom				
RELX plc	177,936	40.25	8,899,044	1.01
Rightmove plc	384,879	6.69	3,201,279	0.36
Rolls-Royce Holdings plc	1,456,811	6.06	10,969,567	1.25
Rotork plc	408,289	3.49	1,772,573	0.20
Serco Group plc	1,047,128	1.55	2,021,922	0.23
SSP Group plc	1,197,223	1.83	2,722,324	0.31
Standard Chartered plc	607,234	10.92	8,239,339	0.94
WH Smith plc	152,163	13.07	2,471,145	0.28
Whitbread plc	39,484	28.13	1,380,081	0.16
WPP plc	113,361	7.73	1,089,385	0.12
Total United Kingdom			**166,038,972**	**18.89**
Total Europe			**354,017,313**	**40.27**
Japan				
Japan				
ABC-MART INC	106,700	3,245.00	2,235,979	0.25
Air Water Inc	93,700	1,938.00	1,172,687	0.13
Asahi Group HoldingsLtd	339,600	1,684.00	3,693,162	0.42
Bridgestone Corp	100,900	5,589.00	3,641,782	0.41
Daiei Kankyo Co Ltd	39,400	2,835.00	721,337	0.08
Dai-ichi Life HoldingsInc	37,800	4,261.00	1,040,140	0.12
Daiwa House Industry Co Ltd	124,400	4,898.00	3,934,846	0.45
Dowa Holdings Co Ltd	38,900	4,646.00	1,167,125	0.13
Fuji Media Holdings Inc	84,800	2,191.00	1,199,850	0.14
Hakuhodo DY Holdings	178,100	1,155.00	1,328,417	0.15
HitachiLtd	96,800	3,946.00	2,466,727	0.28
Idemitsu Kosan Co Ltd	311,000	1,042.00	2,092,747	0.24
IHI Corp	89,700	9,375.00	5,430,657	0.62

Country	Holding	Market price (local)	Market value	% of fund
Japan				
Japan				
Inpex Corp	197,600	1,870.00	2,386,257	0.27
Japan Post Bank Co Ltd	210,800	1,610.50	2,192,401	0.25
JAPAN POST HOLDINGS Co	249,400	1,626.00	2,618,820	0.30
Kinden Corp	62,900	3,182.00	1,292,526	0.15
Kirin Holdings Co Ltd	256,700	1,964.50	3,256,616	0.37
Kubota Corp	113,200	1,951.50	1,426,605	0.16
M3 Inc	165,100	1,420.00	1,513,994	0.17
MEDIPAL HOLDINGS Corp	33,000	2,336.00	497,824	0.06
MEGMILK SNOW BRAND Co	37,000	2,662.00	636,060	0.07
Mitsubishi Corp	98,100	2,489.50	1,577,138	0.18
Mitsubishi Electric Corp	170,200	2,571.50	2,826,407	0.32
Mitsubishi Heavy	127,800	2,296.00	1,894,922	0.22
Mitsubishi Logistics	168,500	1,111.50	1,209,478	0.14
Mitsubishi UFJ Financial Group	296,800	1,978.50	3,792,177	0.43
Murata Manufacturing Co Ltd	44,700	2,469.50	712,862	0.08
NEC Corp	17,100	15,525.00	1,714,417	0.19
NH Foods Ltd	49,000	5,071.00	1,604,643	0.18
Nippon Telegraph	8,311,600	152.70	8,196,195	0.93
Nippon Television Holdings	100,600	2,875.50	1,868,099	0.21
Nisshinbo Holdings Inc	86,300	890.30	496,176	0.06
Nitori Holdings Co Ltd	14,700	18,170.00	1,724,888	0.20
Nomura Holdings Inc	477,200	1,019.00	3,140,243	0.36
NS Solutions Corp	17,400	3,962.00	445,197	0.05
NTT DATA GROUP Corp	88,700	3,029.00	1,735,048	0.20
Obayashi Corp	214,800	2,090.50	2,899,834	0.33
Olympus Corp	316,000	2,367.00	4,830,298	0.55
Oracle Corporation Japan	16,900	14,205.00	1,550,303	0.18
Renesas Electronics	64,500	2,107.50	877,841	0.10

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Japan				
Japan				
Resona Holdings Inc	656,200	1,159.00	4,911,434	0.56
Secom Co Ltd	50,000	5,233.00	1,689,699	0.19
Sega Sammy Holdings Inc	113,500	3,015.00	2,209,896	0.25
Seria Co Ltd	34,100	2,668.00	587,528	0.07
Seven & I Holdings Co Ltd	210,200	2,469.50	3,352,203	0.38
Ship Healthcare Holdings Inc	82,600	2,121.00	1,131,382	0.13
Shiseido CompanyLimited	65,700	2,617.50	1,110,557	0.13
Sony Group Corp	282,700	3,440.00	6,280,191	0.71
Sumitomo Bakelite Co Ltd	11,100	3,761.00	269,597	0.03
Sumitomo Metal Mining	99,300	3,588.00	2,300,861	0.26
Sumitomo Mitsui Trust	224,100	3,882.00	5,618,055	0.64
Taiheiyo Cement Corp	102,400	3,929.00	2,598,188	0.30
Taisei Corp	42,353	6,519.00	1,783,010	0.20
TBS HOLDINGS INC	51,700	4,245.00	1,417,284	0.16
Tokio Marine Holdings Inc	153,500	5,160.00	5,115,013	0.58
Toyo Seikan	93,300	2,361.00	1,422,546	0.16
Toyo Suisan Kaisha Ltd	27,800	10,050.00	1,804,262	0.21
Toyota Industries Corp	32,600	13,025.00	2,742,104	0.31
Tsumura & Co	55,400	4,580.00	1,638,566	0.19
USS Co Ltd	295,600	1,393.50	2,660,113	0.30
West Japan Railway Co	37,800	2,863.00	698,879	0.08
ZOZO Inc	68,600	5,106.00	2,262,005	0.26
Total Japan			**142,646,095**	**16.22**
Total Japan			**142,646,095**	**16.22**
North America				
Canada				
Alimentation Couche-Tard Inc	63,789	76.75	3,380,498	0.38

Country	Holding	Market price (local)	Market value	% of fund
North America				
Canada				
Atkinsrealis Group Inc	88,998	72.82	4,474,942	0.51
Bank of Nova Scotia	58,678	74.36	3,012,806	0.34
Barrick Gold Corp	187,735	23.76	3,079,982	0.35
Brookfield Asset Management	26,203	86.98	1,573,718	0.18
Brookfield Corp	105,451	88.86	6,470,137	0.74
Canadian Natural	131,294	44.15	4,002,507	0.46
Canadian Pacific Kansas City	42,642	115.50	3,400,760	0.39
CONSTELLATION	3,362	0.00	0	0.00
Constellation Software Inc	2,053	4,753.02	6,737,753	0.77
Exchange Income Corp	59,131	55.93	2,283,581	0.26
Fairfax Financial Holdings	6,693	1,956.26	9,040,738	1.03
Finning International Inc	55,450	36.29	1,389,457	0.16
First Quantum Minerals Ltd	195,111	18.19	2,450,591	0.28
Franco-Nevada Corp	23,286	197.57	3,176,672	0.36
Gildan Activewear Inc	60,087	74.95	3,109,629	0.35
Loblaw Companies Ltd	37,905	181.98	4,762,957	0.54
Lumine Group Inc	7,753	38.55	206,372	0.02
Magna International Inc	27,779	57.62	1,105,214	0.13
PrairieSky Royalty Ltd	129,136	27.06	2,412,857	0.27
Richelieu Hardware Ltd	67,414	41.08	1,912,216	0.22
Spin Master Corp	89,296	30.77	1,897,212	0.22
Stella-Jones Inc	33,562	70.13	1,625,205	0.18
Total Canada			**71,505,802**	**8.13**
United States				
CNH Industrial NV	372,465	12.88	4,797,349	0.55
Flutter Entertainment plc	36,653	266.97	9,785,251	1.11

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
North America				
United States				
Laureate Education Inc	171,352	18.72	3,207,709	0.36
Total United States			**17,790,310**	**2.02**
Total North America			**89,296,112**	**10.16**
Pacific Ex Japan				
Australia				
ALS Ltd	152,085	16.43	1,558,599	0.18
Aristocrat Leisure Ltd	62,661	75.57	2,953,638	0.34
BHP Group Ltd	218,985	39.95	5,456,846	0.62
CSL Ltd	21,086	280.43	3,688,325	0.42
Domino's Pizza Enterprise	25,385	30.09	476,442	0.05
Evolution Mining Ltd	215,225	5.70	765,206	0.09
IPH Ltd	119,586	5.01	373,705	0.04
Newmont CDI	30,797	69.20	1,329,306	0.15
Pilbara Minerals Ltd	201,443	2.30	288,995	0.03
Qantas Airways Ltd	497,743	9.42	2,924,601	0.33
QBE Insurance Group Ltd	281,277	20.94	3,673,850	0.42
Santos Ltd	574,495	7.05	2,526,306	0.29
Total Australia			**26,015,819**	**2.96**
Hong Kong				
AIA Group Ltd	1,761,000	54.25	12,261,185	1.39
ASMPT Ltd	53,600	71.05	488,767	0.06
CK Hutchison Holdings Ltd	296,500	39.20	1,491,709	0.17
Galaxy Entertainment	509,000	33.25	2,172,115	0.25
Henderson Land Dev	320,468	21.60	888,407	0.10
Jardine Matheson Holdings	31,400	40.35	1,266,990	0.14
Johnson Electric Holdings	338,026	10.30	446,849	0.05
Prudential plc	14,300	64.00	117,460	0.01

Country	Holding	Market price (local)	Market value	% of fund
Pacific Ex Japan				
Hong Kong				
Samsonite Group SA	602,700	22.60	1,748,167	0.20
Swire Pacific Limited Class A	177,500	67.40	1,535,436	0.17
Techtronic Industries	453,000	104.60	6,081,395	0.69
Total Hong Kong			**28,498,479**	**3.24**
Singapore				
DBS Group Holdings Ltd	180,363	44.61	5,936,688	0.68
Total Singapore			**5,936,688**	**0.68**
Total Pacific Ex Japan			**60,450,986**	**6.88**
Emerging Markets				
Brazil				
B3 SA - Brasil Bolsa Balcao	2,635,500	11.19	5,048,574	0.57
Prio SA	607,986	40.99	4,266,258	0.49
Total Brazil			**9,314,832**	**1.06**
Chile				
Embotelladora Andina SA Pfd	1,326,196	3,280.00	4,430,483	0.50
Total Chile			**4,430,483**	**0.50**
China				
BOC Aviation Ltd	507,900	58.45	3,810,097	0.43
Li Ning Company Ltd	930,000	16.02	1,912,136	0.22
Midea Group Co Ltd Class A	745,173	73.88	7,578,361	0.86
Sany Heavy Industry A	2,351,200	16.10	5,210,828	0.59
Shenzhou International Group	502,000	58.65	3,778,723	0.43
Tencent Music Entertainment	246,931	11.98	2,958,233	0.34
Vipshop Holdings ADR	416,202	14.37	5,980,823	0.68
Zhongsheng Group Holdings	1,646,000	12.28	2,594,189	0.30
Total China			**33,823,390**	**3.85**

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Emerging Markets				
Greece				
National Bank of Greece SA	560,039	8.38	4,878,738	0.55
Total Greece			**4,878,738**	**0.55**
India				
Havells India Ltd	244,766	1,566.65	4,427,145	0.50
HDFC Bank Ltd	628,379	1,699.25	12,327,632	1.40
Marico Ltd	840,316	670.70	6,506,863	0.74
Tata Consultancy Services	165,051	4,109.00	7,829,878	0.89
Total India			**31,091,518**	**3.54**
Indonesia				
PT Bank Central Asia Tbk	19,009,600	9,450.00	11,020,958	1.25
Total Indonesia			**11,020,958**	**1.25**
Korea				
Samsung Electronics Co Ltd	163,260	52,400.00	5,887,687	0.67
Shinhan Financial Group	219,209	51,100.00	7,709,263	0.88
Total Korea			**13,596,950**	**1.55**
Mexico				
Arca Continental SAB de CV	665,200	189.38	6,102,950	0.69
Cemex SAB de CV Sponsored	698,391	5.93	4,141,459	0.47
Gruma SAB de CV Class B	306,291	359.13	5,328,922	0.61
Grupo Financiero Banorte O	750,400	143.20	5,205,822	0.59
Total Mexico			**20,779,152**	**2.36**
Panama				
Copa Holdings SA Class A	61,265	93.22	5,711,123	0.65
Total Panama			**5,711,123**	**0.65**
Peru				
Southern Copper Corp	75,180	91.62	6,887,992	0.78
Total Peru			**6,887,992**	**0.78**

Country	Holding	Market price (local)	Market value	% of fund
Emerging Markets				
Russia				
Severstal GDR	252,323	0.00	3	0.00
X5 Retail Group GDR	110,517	0.00	1	0.00
Total Russia			**4**	**0.00**
South Africa				
African Rainbow Minerals	290,240	161.84	2,515,931	0.29
AVI Limited Class Y	603,552	98.52	3,184,892	0.36
Bid Corporation Ltd	249,401	476.50	6,365,269	0.72
Capitec Bank Holdings Ltd	44,356	2,972.62	7,062,320	0.80
Naspers Limited Class N	47,931	3,947.61	10,134,595	1.15
Total South Africa			**29,263,007**	**3.33**
Taiwan				
Advantech Co Ltd	648,742	379.00	7,512,627	0.85
Delta Electronics Inc	401,000	437.50	5,360,472	0.61
MediaTek Inc	164,000	1,465.00	7,341,115	0.83
Taiwan Semiconductor	696,000	1,135.00	24,137,133	2.75
Total Taiwan			**44,351,347**	**5.04**
Total Emerging Markets			**215,149,495**	**24.47**
TOTAL EQUITIES			**861,560,002**	**97.99**
Cash				
AUD Cash account	35	0.00	22	0.00
BRL Cash account	0	0.00	0	0.00
CAD Cash account	62,199	0.00	42,947	0.00
CAD Other Receivables	23,343	0.00	16,118	0.00
CHF Cash account	47	0.00	51	0.00
CHF Tax Reclaims	553,056	0.00	609,059	0.07
CLP Cash account	156,524,940	0.00	159,424	0.02

Source: Marathon, 31 January 2025. Currency: USD

Holdings report by country

As at 31 January 2025 - Public Employees' Retirement System of Mississippi

Country	Holding	Market price (local)	Market value	% of fund
Cash				
DKK Cash account	3,143	0.00	438	0.00
DKK Tax Reclaims	1,299,845	0.00	181,082	0.02
EUR Cash account	4	0.00	4	0.00
EUR Tax Reclaims	1,667,701	0.00	1,733,658	0.20
EUR Trade Payables	-63,873	0.00	-66,399	-0.01
GBP Cash account	22,181	0.00	27,561	0.00
GBP Other Receivables	158,793	0.00	197,309	0.02
GBP Tax Reclaims	8,404	0.00	10,442	0.00
GBP Trade Payables	-43,223	0.00	-53,707	-0.01
INR Cash account	2,484	0.00	29	0.00
INR Other Receivables	10,710,168	0.00	123,651	0.01
JPY Cash account	49,998	0.00	323	0.00
JPY Other Receivables	45,510,850	0.00	293,903	0.03
JPY Trade Payables	-29,414,549	0.00	-189,955	-0.02
JPY Trade Receivables	22,942,272	0.00	148,158	0.02
KRW Other Receivables	49,484,922	0.00	34,057	0.00
NOK Cash account	0	0.00	0	0.00
NOK Tax Reclaims	76,513	0.00	6,768	0.00
NZD Cash account	0	0.00	0	0.00
SEK Tax Reclaims	140,793	0.00	12,731	0.00
TRY Cash account	0	0.00	0	0.00
TWD Cash account	3,757,240	0.00	114,802	0.01
USD Cash account	15,953,922	0.00	15,953,922	1.81
USD Trade Payables	-1,719,889	0.00	-1,719,889	-0.20
ZAR Cash account	0	0.00	0	0.00
Total			**17,636,508**	**2.01**
Total Cash			**17,636,508**	**2.01**
TOTAL CASH			**17,636,508**	**2.01**

Country	Holding	Market price (local)	Market value	% of fund
Spot Fx				
BUY CAD:SELL USD 03/02/25	0	0.00	43,152	0.00
BUY EUR:SELL USD 03/02/25	0	0.00	66,399	0.01
BUY GBP:SELL USD 03/02/25	0	0.00	26,403	0.00
BUY GBP:SELL USD 03/02/25	0	0.00	27,304	0.00
BUY GBP:SELL USD 03/02/25	0	0.00	27,005	0.00
BUY JPY:SELL USD 03/02/25	0	0.00	37,289	0.00
BUY JPY:SELL USD 04/02/25	0	0.00	4,508	0.00
SELL CAD:BUY USD 03/02/25	0	0.00	-42,947	0.00
SELL EUR:BUY USD 03/02/25	0	0.00	-66,451	-0.01
SELL GBP:BUY USD 03/02/25	0	0.00	-26,946	0.00
SELL GBP:BUY USD 03/02/25	0	0.00	-27,327	0.00
SELL GBP:BUY USD 03/02/25	0	0.00	-26,426	0.00
SELL JPY:BUY USD 03/02/25	0	0.00	-37,394	0.00
SELL JPY:BUY USD 04/02/25	0	0.00	-4,511	0.00
Total			**57**	**0.00**
Total Spot Fx			**57**	**0.00**
TOTAL SPOT FX			**57**	**0.00**
Total			**879,196,567**	**100.00**

Source: Marathon, 31 January 2025. Currency: USD

Marathon ACWI ex US composite

Performance report (USD) – 31 December 2024

Calendar years	Marathon Gross Return (%)	Marathon Net Return (%)	MSCI AC World Ex US Return (%)	Gross Excess Return (%)	Net Excess Return (%)
2024	4.51	3.83	5.53	-1.03	-1.71
2023	15.78	15.03	15.62	0.16	-0.59
2022	-13.70	-14.26	-16.00	2.30	1.74
2021	11.05	10.34	7.82	3.23	2.51
2020	9.43	8.72	10.65	-1.22	-1.93
2019	24.97	24.16	21.51	3.46	2.65
2018	-13.05	-13.61	-14.20	1.15	0.59
2017	26.26	25.44	27.19	-0.93	-1.75
2016	1.49	0.83	4.50	-3.01	-3.66
2015	3.51	2.84	-5.66	9.17	8.50
2014	-4.96	-5.57	-3.87	-1.09	-1.71
2013	25.88	25.07	15.29	10.59	9.78
2012	19.08	18.30	16.83	2.25	1.47
2011	-8.68	-9.27	-13.71	5.03	4.44
2010	17.84	17.08	11.15	6.69	5.92
2009	35.05	34.17	41.45	-6.40	-7.28
2008	-39.76	-40.15	-45.53	5.76	5.37
2007	17.90	17.14	16.65	1.25	0.48
2006	29.38	28.54	26.65	2.73	1.89
2005	16.03	15.28	16.62	-0.58	-1.34
2004	25.40	24.59	20.91	4.50	3.68
2003	48.35	47.38	40.83	7.52	6.56
2002	-3.51	-4.13	-14.95	11.44	10.82
2001	-11.34	-11.91	-19.73	8.40	7.82
2000	-5.34	-5.95	-15.09	9.75	9.13

Annualised periods	Marathon Gross Return (%)	Marathon Net Return (%)	MSCI AC World Ex US Return (%)	Gross Excess Return (%)	Net Excess Return (%)
1 Year	4.51	3.83	5.53	-1.03	-1.71
3 Year(s)	1.45	0.79	0.82	0.63	-0.03
5 Year(s)	4.88	4.20	4.10	0.77	0.09
7 Year(s)	4.70	4.02	3.53	1.17	0.49
10 Year(s)	6.22	5.53	4.80	1.42	0.73
15 Year(s)	7.12	6.42	4.68	2.44	1.74
20 Year(s)	7.23	6.53	4.97	2.26	1.57
25 Year(s)	7.49	6.79	3.90	3.59	2.89
30 Year(s)	8.10	7.40	5.27	2.84	2.14
Since Inception (30/06/1994)	8.00	7.30	5.18	2.82	2.12

This composite currently consists of 7 portfolios valued as of 31 December 2024 at USD3,862m representing fully discretionary segregated and commingled portfolios, and 10.50% of total firm assets.

Marathon ACWI ex US composite

Performance report (USD) – 31 December 2024

Periods	Marathon Gross Return (%)	Marathon Net Return (%)	MSCI AC World Ex US Index Return (%)	Year end composite assets (USDmn.)	Year end total firm assets under management (USDmn.)	% of total assets managed	Number of accounts in composite	Composite 3 year standard deviation (Gross)	Benchmark 3 year standard deviation	Standard deviation of underlying portfolio returns (Gross)
2024	4.51	3.83	5.53	3,862.21	36,775.19	10.50	7	16.20	16.02	0.26
2023	15.78	15.03	15.62	4,116.91	39,037.35	10.55	7	16.29	16.07	0.14
2022	-13.70	-14.26	-16.00	4,302.62	38,514.97	11.17	7	21.02	19.26	0.16
2021	11.05	10.34	7.82	5,756.18	57,013.96	10.10	6	18.55	16.79	0.17
2020	9.43	8.72	10.65	5,517.52	55,954.39	9.86	6	19.16	17.94	0.16
2019	24.97	24.16	21.51	6,358.65	60,713.72	10.47	9	10.61	11.34	0.25
2018	-13.05	-13.61	-14.20	5,254.61	60,574.05	8.67	9	10.69	11.38	0.18
2017	26.26	25.44	27.19	5,364.10	63,023.41	8.51	9	11.08	11.87	0.33
2016	1.49	0.83	4.50	2,930.14	53,679.76	5.46	7	11.42	12.51	N/A
2015	3.51	2.84	-5.66	2,324.78	52,935.53	4.39	<6	11.11	12.13	N/A
2014	-4.96	-5.57	-3.87	1,868.32	50,230.54	3.72	<6	11.56	12.81	N/A
2013	25.88	25.07	15.29	1,746.61	50,863.36	3.43	<6	14.27	16.23	N/A
2012	19.08	18.30	16.83	1,360.63	42,263.09	3.22	<6	17.03	19.26	N/A
2011	-8.68	-9.27	-13.71	1,120.05	48,657.91	2.30	<6	20.15	22.71	N/A
2010	17.84	17.08	11.15	1,329.29	52,787.95	2.52	<6	24.41	27.29	N/A
2009	35.05	34.17	41.45	1,202.74	40,322.81	2.98	<6	22.35	25.24	N/A
2008	-39.76	-40.15	-45.53	1,406.18	29,596.69	4.75	<6	18.63	20.88	N/A
2007	17.90	17.14	16.65	2,685.22	44,911.27	5.98	<6	9.64	10.63	N/A
2006	29.38	28.54	26.65	2,713.66	41,832.98	6.49	<6	9.97	10.22	N/A
2005	16.03	15.28	16.62	2,163.56	36,010.90	6.01	<6	10.90	11.63	N/A
2004	25.40	24.59	20.91	1,947.79	30,660.35	6.35	<6	14.10	15.28	N/A
2003	48.35	47.38	40.83	1,520.98	21,288.81	7.14	<6	16.53	17.92	N/A
2002	-3.51	-4.13	-14.95	927.55	10,973.26	8.45	<6	15.36	16.37	N/A
2001	-11.34	-11.91	-19.73	1,168.67	9,835.17	11.88	<6	14.65	15.89	N/A
2000	-5.34	-5.95	-15.09	1,326.34	9,855.98	13.46	<6	15.04	16.55	N/A
1999	35.54	34.66	30.91	1,507.33	10,646.78	14.16	<6	15.33	16.66	N/A
1998	7.57	6.87	14.46	75.91	9,160.70	0.83	<6	13.75	15.32	N/A
1997	-2.04	-2.67	2.04	74.18	8,936.55	0.83	<6	10.46	12.01	N/A
1996	12.98	12.25	6.68	72.61	6,590.23	1.10	<6	N/A	N/A	N/A
1995	5.54	4.86	9.94	60.89	3,993.46	1.52	<6	N/A	N/A	N/A
1994 (from 30/6)	0.88	0.55	-0.11	30.82	2,293.50	1.34	<6	N/A	N/A	N/A

For each of the years from 1994 to 2023, Marathon Asset Management has been verified by an independent verifier.

Marathon ACWI ex US composite

Disclosure report – 31 December 2024

Performance Standards	Disclosures
Definition of the Firm	For the purpose of complying with the GIPS® standards, the firm is defined as all assets managed and advised by Marathon Asset Management Limited, otherwise Marathon Asset Management. The firm offers active global, international and regional equity management services either as an investment manager or an investment advisor.
Compliance Statement	Marathon Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Marathon Asset Management has been independently verified for the periods 1994 to 2023. The verification report(s) is/are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report.
GIPS ®	GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.
Composite & Limited Distribution Pooled Fund List Availability	A list of composite descriptions and a list of limited distribution pooled fund descriptions are available upon request.
Policies	Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available on request.
Composite Description	The Marathon All Country World ex US Composite includes all pooled and segregated portfolios invested in the Marathon All Country World ex US Equity strategy. The objective of the strategy is to achieve greater capital growth than the market index over the long term, using a bottom up process of stock selection following Marathon's capital cycle investment philosophy. All constituent portfolios are actively managed long-only equity funds.
Composite Name Change	As of 01 April 2021, the Segregated & Commingled, US$-based, Tax-Exempt Assets, Hybrid MSCI All Country World ex US Free Benchmarked Portfolios composite was renamed Marathon All Country World ex US Composite.
Composite Creation Date	This composite was created on 01/03/2001.
Composite Inception Date	The composite inception date is 30/06/1994.
Benchmark Description	From 30 June 1994 to 31 Dec 2000 the benchmark is MSCI All Country World ex US Index with gross dividends re-invested. Since 31 Dec 2000 the benchmark is MSCI All Country World ex US with net dividends re-invested. 31 Dec 2000 is when MSCI created the net version of the index.
Standard Deviation Calculation	The standard deviation (population) methodology is an equal weighted calculation based on 3 prior years of monthly returns. The standard deviation will only be presented if there are 36 continuous monthly composite returns available.
Dispersion of Fund Returns	Dispersion of fund returns within the composite is measured using an equally weighted standard deviation of the constituent accounts' calendar year returns. Dispersion is not considered meaningful in composites with five or fewer constituents, and so is not presented in this case.
Accounting Methods	Accrual and trade date accounting are used. Accrued dividend income is included in portfolio market values. Returns are shown with dividends re-invested.
Treatment of Expenses	Gross returns are presented gross of management and custodial fees but net of all trading expenses and irrecoverable withholding tax. Net returns are net of model fees and are derived from the gross returns by deducting the applicable fee rate from the tiered fee schedule described below, based on an assumed constant market value of $200m. Only reports produced from June 2018 onwards include the model net returns.
Fee Schedule	Marathon offers two fee schedules: a tiered asset based annual fee of 90bps on the first US$50m, 70bps on the next US$50m and 50bps on amounts over US$100m; or a performance-based fee consisting of a flat annual management fee of 35bps plus a performance fee of 20% of alpha (outperformance against the benchmark) over rolling five-year periods.
Model Fee Rate	The model fee applied is a blended rate of 0.65% pa, calculated based on the information contained in the above Treatment of Expenses and Fee Schedule disclosures.
Important Legal Notice	Issued by Marathon Asset Management Limited ("Marathon"), which is authorised and regulated by the Financial Conduct Authority in the United Kingdom and registered with the Securities and Exchange Commission as an investment adviser in the United States of America. Note that Marathon, its affiliates and funds, and any associated documents, may not be registered or approved for marketing and distribution in the jurisdiction in which the reader resides, and therefore this document should not be seen as investment advice or as an invitation to invest to anyone to whom it would be unlawful to make such an offer or solicitation under applicable law and regulation. Past performance is not a reliable indicator of future performance or results. The value of investments and the income from them can fall as well as rise. An investment may involve a high degree of risk and any investment objective may not be realised so that the original amount invested may not be returned. Returns data will be shown with dividends re-invested. Where gross returns are presented they do not reflect the deduction of investment advisory fees but are net of tax and trading expenses. Actual returns will be reduced by Marathon's fees and any other expenses which may be incurred. Representative fee structures and effect of fees upon client accounts are available on request; with further details set out in Part 2A of Marathon's Form ADV. Please note certain risk metrics and statistics are provided based upon gross of performance data. No assumption should be made that investment in any security listed were or will be profitable nor will this fully represent a client's investment experience. Where Marathon provides illustrative data in respect of a strategy, this may be based on one or more selected Marathon client accounts (with multiple data sets linked) to create the representative account. Information provided does not constitute and should not be relied upon as investment advice nor any other advice; and may be based on research which has been acted on by Marathon or its employees for their own purposes. It also does not constitute an offer or solicitation to acquire units in a collective investment scheme to anyone to whom it would be unlawful to make such an offer or solicitation under applicable law and regulation. Marathon is not a fiduciary with respect to any person or plan by reason of providing this document. Recipients should carefully consider their own circumstances in assessing any potential investment course of action and consult their advisors accordingly; referring to relevant fund prospectuses, offering memorandums, key information documents or investment advisory agreements prior to making any final investment decisions. Please note that whilst this information has been prepared using best available data, Marathon assumes no responsibility for the consequences of any investment decisions made in reliance upon it. Where information contains data provided or derived from third parties and/or is data that may have been categorised or otherwise reported based upon client direction - Marathon assumes no responsibility for the accuracy, timeliness or completeness of any such information. Separately, fund prices may not have been audited by external auditors. This document is intended solely for the recipient to whom Marathon has addressed it and should not be transmitted to any other person, or reproduced or shared (in whole or part) with any third party without our written consent. All parties acknowledge they are duly licenced as applicable to receive index data. Further, any information, data or material attributed to a party other than Marathon shall not be reproduced without the written permission of the relevant party. © Marathon 2025

Marathon business

Board of Directors

Robert Hingley – Independent Non-Executive Director (Chair)
Anna Troup – Independent Non-Executive Director
Dianna Gonzales-Burdin – Independent Non-Executive Director
Neil Ostrer – Co-founder & Non-Executive Director
Bill Arah – Co-founder & Portfolio Manager
Charles Carter – Managing Director & Portfolio Manager
Joe Diment – Managing Director

Risk, Audit and Compliance (RAC) Committee

Management Committee

Partners Group

Risk Committee

Investment team (21)
- Portfolio Managers & Analysts
- Portfolio Analytics
- Secretarial

Client Service (15)
- Client Managers
- Business Development
- Marketing
- Secretarial
- Administration

Operations & Technology (30)
- Investment Operations
- Client Operations
- Performance
- IT

Support Services (5)
- HR
- Legal
- Administration

Investment Implementation (6)
- Investment Implementation & Analysis
- Traders

Finance (5)
- Financial management
- Management accounts
- Accounts payable

Compliance & Risk (3)
- Advisory
- Assurance
- Regulatory liaison

Total number of staff: 85

Locations: London (82), Tokyo (1 Investment Analyst), Hong Kong (1 Investment Analyst) and US (1 Business Development & Consultant Relationship Manager).
In addition to the total number of staff there is currently 1 contractor.

Source: Marathon, 31 December 2024

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PERS
of MISSISSIPPI

Investment Committee Meeting

Miscellaneous Updates

February 25, 2024

Ryan Holliday

From:	Rebecca King <Rebecca.King@bailliegifford.com>
Sent:	Thursday, January 9, 2025 10:09 AM
To:	Ryan Holliday
Cc:	Tom Wright; Charles Nielsen
Subject:	[EXTERNAL] Baillie Gifford: Partnership Update

EXTERNAL EMAIL WARNING!: Use caution with links or attachments. DO NOT provide your credentials!

Hi Ryan,

I hope this finds you well. As usual at this time of year, we have an update on the Baillie Gifford Partnership to share with you.

This year we are pleased to let you know that four colleagues are being promoted to the partnership, effective 1st April, while three existing Partners will be retiring, effective 31st March. The total number of Partners will therefore rise from 58 to 59.

The promotions and retirements have no direct impact on the management of your portfolio.

The four promotions include two Investment Managers: Kirsty Gibson (US Equity) and Mike Taylor (Global Equity) and two Client Directors: Ryan Fitzpatrick and Grant Walker. Three partners, Andrew Telfer, (Joint Managing Partner/CEO), David Henderson (Client Director) and Richard McGrail (Operations), will retire on 31 March 2025 each after several decades with the firm. As previously communicated, Tim Campbell will succeed Andrew as Managing Partner and CEO, joining Amy Atack and Malcolm MacColl as Managing Partners on 1 April 2025.

We currently have the end of the month pencilled in to present at your Board meeting. If we are still required to present, I would be very grateful if you could please confirm the timings of this meeting.

Best,
Rebecca

Rebecca King
Client Relationship Director
+44 (0) 131 275 3875

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Edinburgh, EH1 3AN
United Kingdom

Baillie Gifford

Fisher Investments®
Institutional Group

January 14, 2025

To Our Valued Clients and Interested Parties,

As a follow-up to our previously shared announcement, Advent International ("Advent") and a wholly owned subsidiary of the Abu Dhabi Investment Authority ("ADIA") have completed separate minority investments in Fisher Investments ("FI"), effective January 6, 2025. Ken Fisher retains a majority of beneficial ownership and approximately 70% of voting shares in FI.

Importantly, this investment will not impact our clients, vendors, employees or operations. The transaction was part of Ken Fisher's long-term estate planning and ensures FI's long-term private independence, culture, growth evolution and devotion to exceptional client service. There is also no change in FI's management: Ken Fisher will remain active in his current role as FI's Executive Chairman and Co-CIO, and CEO Damian Ornani will continue to drive day-to-day operations and business strategy.

Concurrent with the closing of the deal, FI's board of managers now comprises Ken Fisher, Damian Ornani, and David Mussafer, a Managing Partner of Advent. Gabriela Weiss, a Principal at Advent, has joined as a board observer (i.e., no voting rights). Nathan Fisher is no longer a member of FI's board of managers.

Please let us know if you have questions.

Best regards,

Liz Dhillon
Fisher Investments
Group Vice President – Client Service

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