

**New Hampshire Retirement System (NHRS)
Investment Committee Meeting**

(Certain portions of the meeting may be held in Non-Public Session)

**Agenda
Tuesday, February 11, 2025**

- 12:30 pm Call to Order
- 12:30 pm Approve Minutes [Tab 1]
 - January 14, 2025, Public Meeting Minutes *(Action Expected)*
- 12:35 pm Comments from the Chief Investment Officer [Tab 2]
 - Portfolio: Performance & Manager Update(s)
 - Holdings Update
 - Work Plan
 - Non-U.S. Equity Benchmark Recommendation *(Action Expected)*
- 1:00 pm Callan Presentation: Calendar Year 2025 Capital Market Assumptions [Tab 3]
- 1:45 pm Boston Trust Walden Presentation (Public Equity) [Tab 4]
- 2:30 pm Abel Noser Presentation: Annual Trading Cost Analysis and Commission Sharing Agreement Review [Tab 5]
- 3:15 pm Adjournment

Informational Materials [Separate Binder]

- Callan Monthly Review – December 2024
- Asset Allocation Update
- Private Debt & Equity Summary
- Abel Noser TCA Annual Summary
- Updated Investment Manual
- Quarterly Real Estate Report for Period Ending September 30, 2024
- Callan Executive Summary for Period Ending September 30, 2024
- Callan Quarterly Review for Period Ending September 30, 2024

Next Meeting: Tuesday, April 8, 2025



Boston Trust Walden

Principled Investing.

Boston Trust Walden Small Cap Strategy Update

New Hampshire Retirement System

February 11, 2025

Nick Caldwell, CFA
Richard Williams, CFA

Boston Trust Walden Company
One Beacon Street, Boston, MA 02108
bostontrustwalden.com

Distinctions & Strategic Advantages

FIRM

- Independent
- Employee owned
- Diverse client base
- Profitable and growing
- Sustainable

INVESTMENTS

- Compelling investment philosophy
- Disciplined investment process
- Collaborative teams
- Leadership in ESG investing and active ownership

SERVICE MODEL

- Vertically integrated, scalable business model
- Direct access to investment professionals
- Customized portfolios and services
- Collaborative, relationship approach
- Exemplary client retention

December 31, 2024

Company Overview

Firm Established

1974

Firm AUM*

\$16.7 billion

Total Staff

92

Investment Professionals

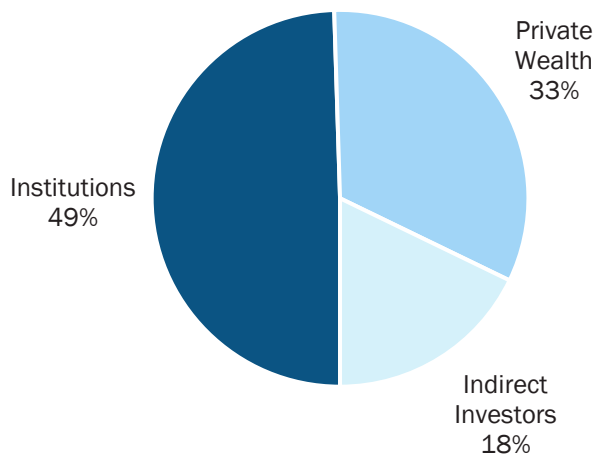
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ESG Investing & Active Ownership

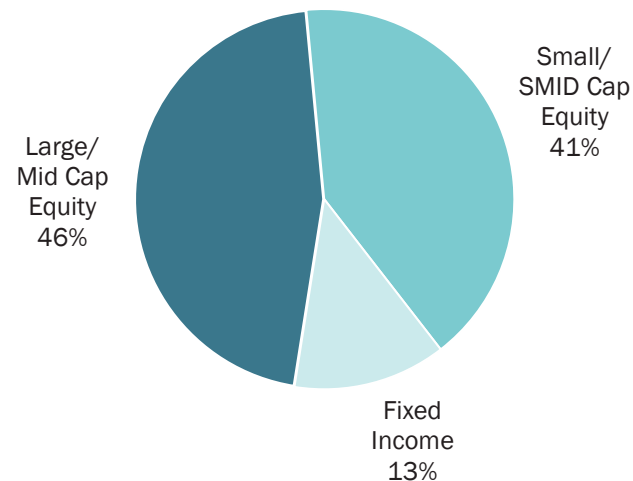
50 years

ASSET BREAKDOWN BY

Client Type



Asset Class



*Includes assets managed by Boston Trust Walden Company and its wholly owned investment adviser subsidiary, Boston Trust Walden Inc.

Small/SMID Cap Investment Team

Portfolio Management Team
Bradley Hunnewell, CFA
Leanne Moore
Kenneth Scott, CFA
Richard Williams, CFA
Supporting Resources
6 ESG Analysts
13 Investment + Quantitative Analysts
2 Traders

- Research on companies and sectors is produced by the firm's team of investment and ESG research analysts
- Strategy PMs contribute to research and are responsible for portfolio construction

Objectives and Investment Philosophy

What We Seek to Achieve

- Superior investment returns with less risk over full market cycles
- Diversified exposure to the US small cap market

What We Believe

- Higher quality stocks deliver persistent economic returns
- Stocks of higher quality companies are frequently mispriced
- ESG factors can impact a company's long-term prospects
- Additional risks can be mitigated through a disciplined approach to valuation and diversification

Investment Process



Managing Investment Risks

Risk	Management Approach
Security Specific	• High quality focus • Valuation discipline • Diversification (max position size = 2.5%)
Sector Specific	• Portfolio construction parameters • +/-5% relative to Russell 2000® Index
Factor Specific	• Portfolio risk models • Financial risk metrics
Portfolio Manager Behavior	• Teams • Disciplined process • Compensation structure
Independent Oversight	• Compliance audit • Investment Committee review

December 31, 2024

Portfolio Characteristics

Boston Trust Walden		
	Small Cap	Russell 2000® Index
Profitability		
Return on Invested Capital	13.4%	-2.9%
Return on Equity	18.7%	3.7%
Risk		
ROIC Variability	0.26	0.66
Sales Variability	0.20	0.31
Weighted Avg. Market Cap. (Bil)	\$5.1	\$3.6
Debt/EBITDA	2.1	5.4
Carbon Intensity (tCO ₂ e/\$million sales)	83	400
Growth		
Sales per Share	9.7%	7.5%
Earnings per Share	13.0%	12.7%
Valuation		
Weighted Average P/E (GAAP)	21x	122x
Weighted Average P/E (Operating)	21x	63x

Sources: Boston Trust Walden, FactSet, MSCI, FTSE Russell

The data shown above represents the weighted averages of the aggregate characteristics of the securities held in the model Boston Trust Walden Small Cap portfolio. GHG emissions data for companies is based on reported figures or MSCI estimates. Footprints omit carbon benefits and intensity of company products, and ignore future carbon emissions implied by company goals. Historical metrics are based on 5 years of data. The Average Price/Earnings (GAAP) is the inverse of the weighted average earnings yield, based on end-of-period price and the most recent twelve months of available earnings data. Earnings are "as reported" by the company in adherence with GAAP and include any extraordinary items. Companies reporting negative earnings are included in the calculation. The weighted average is calculated using end-of-period weights. Earnings yield is limited to +/- 50% at the company level in order to reduce any outlier effect on the weighted average. Average Price/Earnings (Operating) is the inverse of the weighted average earnings yield, based on end-of-period price and the most recent twelve months of available earnings data. Earnings are non-GAAP and exclude any extraordinary items as deemed by company management. Companies reporting negative earnings are included in the calculation. The holdings of any particular account may vary based on any investment restrictions applicable to the account. This information is for illustrative purposes only and is subject to change at any time. There is no guarantee that holding securities with any particular portfolio characteristics will cause the portfolio to outperform the index.

December 31, 2024

Portfolio Snapshot

Change in Value Since Inception*	
Beginning Value	\$61,893,076
Contributions	\$18,108,856
Distributions/Transfers	(\$50,000,000)
Investment Returns	\$232,769,637
Income (dividends/interest)	\$31,501,161
Market Value Gains/Losses	\$201,268,475
Ending Value	\$262,652,741

*Inception Date: October 31, 2010

December 31, 2024

Investment Performance

	4Q 2024	1 Year	3 Year	5 Year	10 Year	Since Inception
NHRS (Gross of Fees)	0.6%	13.1%	4.9%	10.6%	11.0%	11.8%
NHRS (Net of Fees)	0.5%	12.7%	4.4%	10.1%	10.5%	11.3%
Russell 2000® Index	0.3%	11.5%	1.2%	7.4%	7.8%	10.0%

Since Inception	Standard Deviation	Sharpe Ratio
NHRS	16.6%	0.63
Russell 2000® Index	19.5%	0.45

Standard deviation and Sharpe ratios are since inception (10/31/2010). These figures are calculated using gross monthly returns. Performance is presented gross of fees except where noted. Performance is annualized except for QTR and 1 year periods. The index returns reflect neither the deduction of fees nor the impact of taxes. It is not possible to invest directly in an index. Past performance does not guarantee future results. See additional regulatory and fee disclosures in the appendix.

December 31, 2024

Five Year Attribution

GICS Sector	Average Sector Weights		Returns		Attribution Effects		
	Boston Trust Walden Small Cap	Russell 2000® Index	Boston Trust Walden Small Cap	Russell 2000® Index	Sector Allocation	Stock Selection*	Total Effect
Communication Services	1.1%	2.6%	-18.7%	-3.0%	0.2%	-0.3%	-0.1%
Consumer Discretionary	10.5%	11.2%	8.8%	9.6%	-0.2%	0.0%	-0.2%
Consumer Staples	4.9%	3.4%	16.3%	15.6%	0.2%	0.2%	0.4%
Energy	3.8%	5.1%	2.5%	11.8%	-0.3%	-0.3%	-0.6%
Financials	14.8%	16.4%	9.4%	5.7%	0.0%	0.6%	0.7%
Health Care	17.7%	17.9%	11.4%	-1.0%	0.0%	2.0%	2.0%
Industrials	17.8%	16.0%	13.8%	14.5%	0.1%	-0.2%	-0.1%
Information Technology	14.9%	13.6%	16.8%	11.1%	0.1%	0.7%	0.8%
Materials	5.4%	4.2%	10.3%	8.3%	0.0%	0.1%	0.1%
Real Estate	5.0%	6.6%	7.7%	1.2%	0.1%	0.5%	0.6%
Utilities	4.2%	3.1%	1.8%	0.8%	-0.1%	0.0%	0.0%
Total	100.0%	100.0%	11.0%	7.4%	0.2%	3.4%	3.6%

Sources: Boston Trust Walden, FactSet, FTSE Russell

Percentages may not add to 100% due to rounding.

The data shown above represents the holdings-based performance attribution of the securities held in the model Boston Trust Walden Small Cap portfolio. The above table is not composite-level attribution. The account's performance, and the performance and weights of each of its sectors, were calculated using daily individual asset level internal rates of returns, aggregated to time-weighted returns. Returns are represented in U.S. dollars net of transaction costs. Interest and dividends are accrued. The attribution was calculated using the portfolio's daily sector weights and sector returns, and those of the Russell 2000® Index Average sector weights over the three-month analysis period(s) are included for informational purposes, but were not used in constructing the attribution analysis.

The "Sector Allocation Effect" measures how much of the client portfolio's relative performance is attributable to sector allocation decisions. The "Sector Allocation Effect" is measured first by constructing the performance of a portfolio that uses the client portfolio's beginning-of-month sector allocation but buys the Russell 2000® Index sector portfolio instead of the client portfolio's stocks. The "Sector Allocation Effect" compares the performance of this theoretical portfolio to the performance of the Russell 2000® Index.

The "Stock Selection Effect" measures how much of the client portfolio's relative performance is attributable to stock selection. The "Stock Selection Effect" is measured first by constructing the performance of a portfolio that replicates the client portfolio stock selection decisions, but maintains the sector allocation of the Russell 2000® Index. The "Stock Selection Effect" compares the performance of this theoretical portfolio to the performance of the Russell 2000® Index.

*Stock selection includes the "Interaction Effect," which is measured by multiplying the relative sector weight of the portfolio to the index by the relative sector performance of the portfolio to the index.

The "Total Effect" is the sum of the "Sector Allocation Effect," "Stock Selection Effect," and "Interaction Effect," and represents the total relative performance of the client portfolio.

December 31, 2024

Performance Commentary

4Q 2024

- The Russell 2000 was essentially flat in the fourth quarter
- Strategy performance was in line with the benchmark
- Health care sector aided relative results, while information technology detracted

Trailing Twelve Months

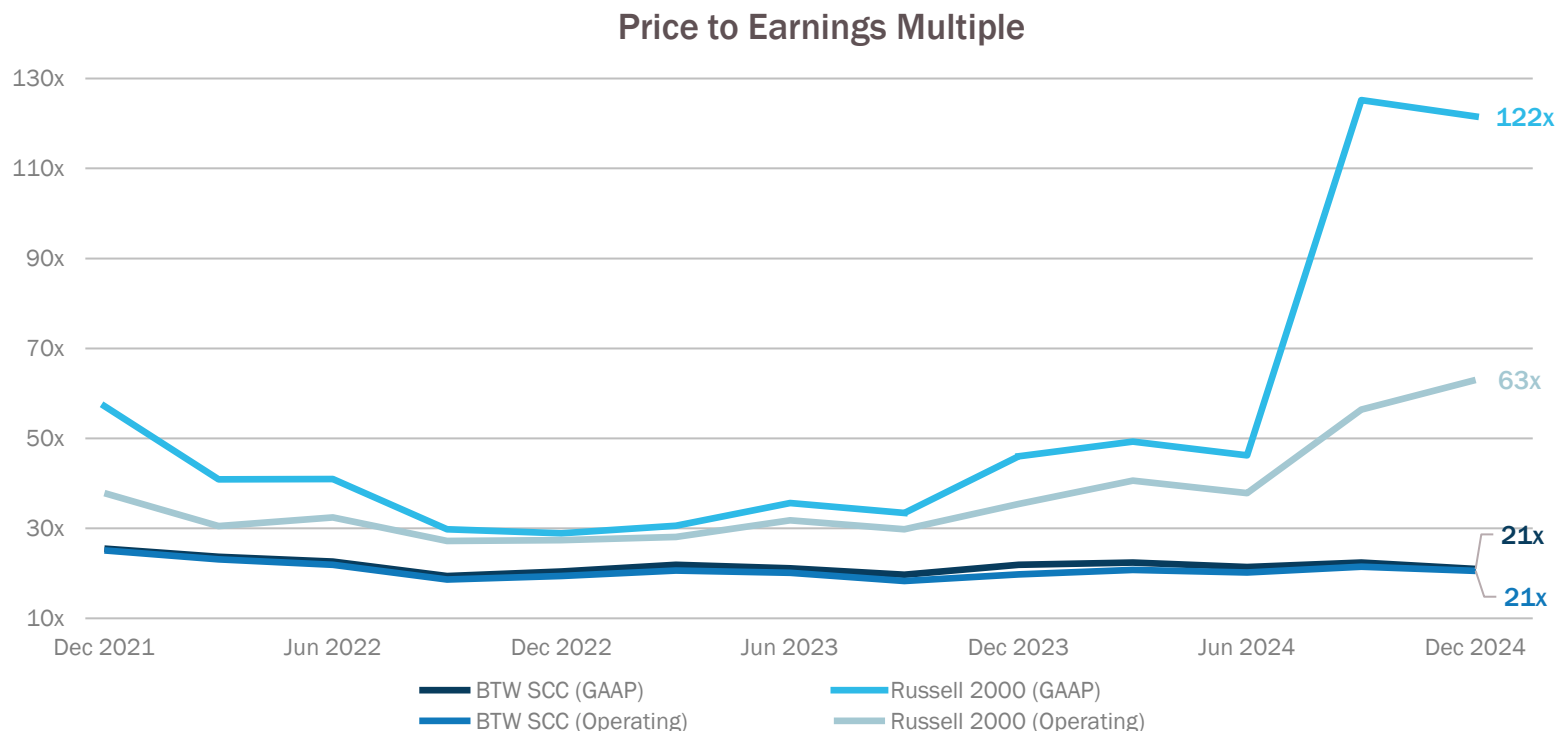
- Small Cap strategy outperformed the Russell 2000 return of 11.5%
- Strategy overcame notable style headwinds, particularly valuation
- Health care sector aided relative results, while information technology detracted

Long-Term Perspective

- Strategy returns are superior to the index, with less volatility
- Portfolio continues to be well positioned relative to the Russell 2000® as a result of its:
 - Superior fundamental profile
 - Lower risk profile
 - Relative valuation discount

Performance is reported net of fees. Past performance does not guarantee future results. The information contained herein has been prepared from sources and data we believe to be reliable, but we make no guarantee as to its adequacy, accuracy, timeliness, or completeness. Neither Boston Trust Walden Company nor any of its contributors make any representations about the suitability of the information contained herein. All Boston Trust Walden Small Cap portfolios are managed to a model. Opinions expressed herein are subject to change without notice.

Valuation Expansion: Strategy vs Small Cap Market



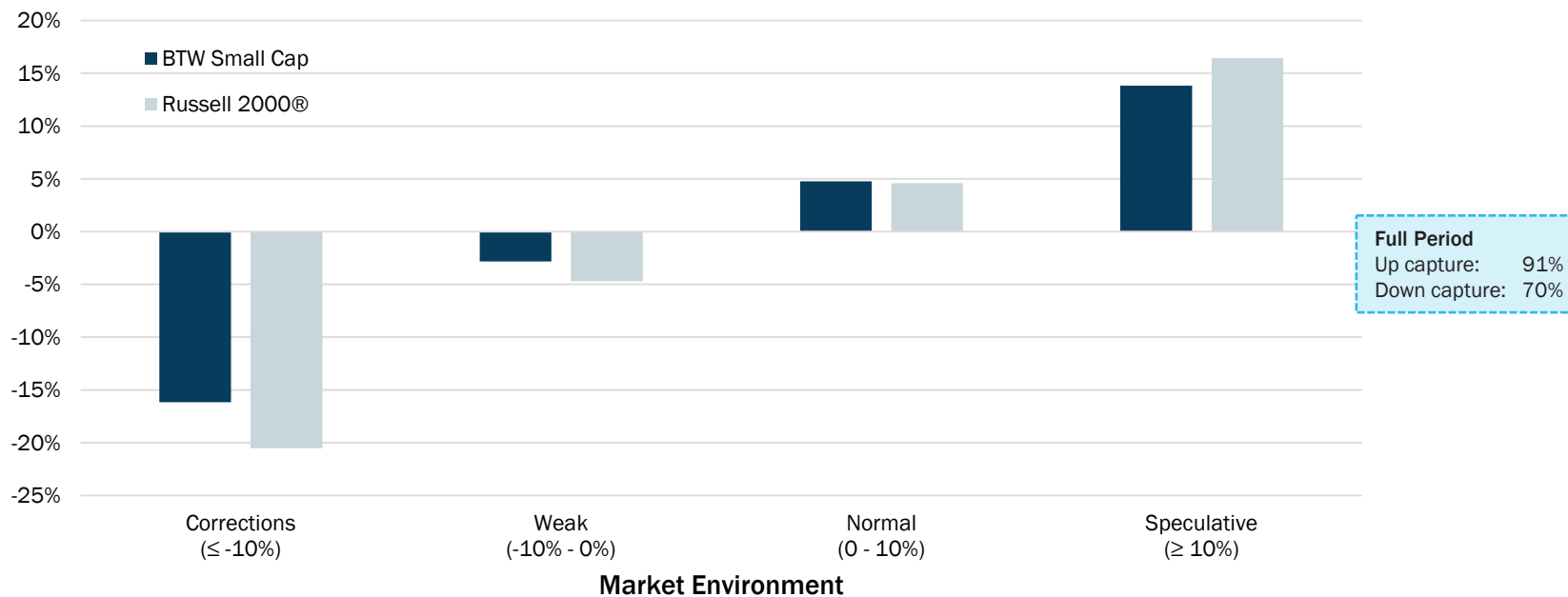
Data as of December 31, 2024

Sources: Boston Trust Walden, FactSet

The data shown above represents the weighted average price/earnings of the Boston Trust Walden Small Cap model portfolio and the Russell 2000® Index. The Average Price/Earnings (GAAP) is the inverse of the weighted average earnings yield, based on end-of-period price and the most recent twelve months of available earnings data. Earnings are "as reported" by the company in adherence with GAAP and include any extraordinary items. Companies reporting negative earnings are included in the calculation. The weighted average is calculated using end-of-period weights. Earnings yield is limited to +/- 50% at the company level in order to reduce any outlier effect on the weighted average. Average Price/Earnings (Operating) is the inverse of the weighted average earnings yield, based on end-of-period price and the most recent twelve months of available earnings data. Earnings are non-GAAP and exclude any extraordinary items as deemed by company management. Companies reporting negative earnings are included in the calculation. The holdings of any particular account may vary based on any investment restrictions applicable to the account. This information is for illustrative purposes only and is subject to change at any time. There is no guarantee that holding securities with any particular portfolio characteristics will cause the portfolio to outperform the index.

December 31, 1998 — December 31, 2024

Performance Across Market Environments



	Corrections	Weak	Normal	Speculative
Capture	79%	60%	104%	84%
Index Frequency	9%	25%	44%	21%

Sources: Boston Trust Walden, FactSet, FTSE Russell

Performance is preliminary. Performance values represent the arithmetic average of net-of-fees returns for calendar quarters during the designated period ("market environment" is defined by Boston Trust Walden). Full period up capture and down capture are calculated using quarterly net-of-fees returns. Please see the GIPS Report at the end of this presentation for a complete description of the Boston Trust Walden Company Small Cap Equity Composite.

January 2025

Outlook

Macroeconomic Considerations

- The Fed has cut rates by 100bp from previously restrictive levels
- Despite the Fed's restrictive policy of the last couple of years, the US economy has shown resilience and continues to grow at a steady pace.
- Inflation has moderated, and notwithstanding some recent softening, the labor market also remains healthy
- Geopolitical conflicts, trade and growth concerns, and pockets of stretched valuations represent areas of risk

US Small Cap Equities

- 2025 Russell 2000® earnings expected to grow over 40% after a modest decline in 2024
- Recent market appreciation has been due to multiple expansion

Boston Trust Walden Small Cap Strategy

- Over the long term, companies with stronger fundamentals generate superior returns
- We believe that our well-diversified portfolio of reasonably valued stocks of higher quality companies will continue to add value *over full market cycles*

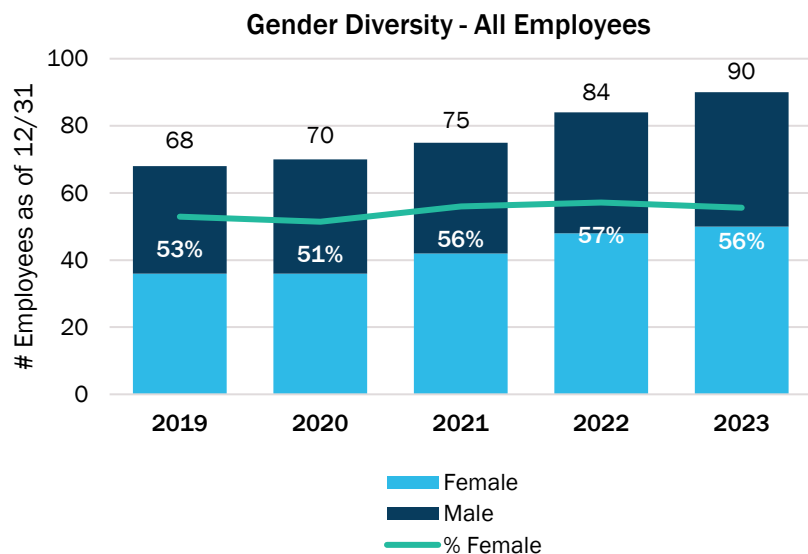
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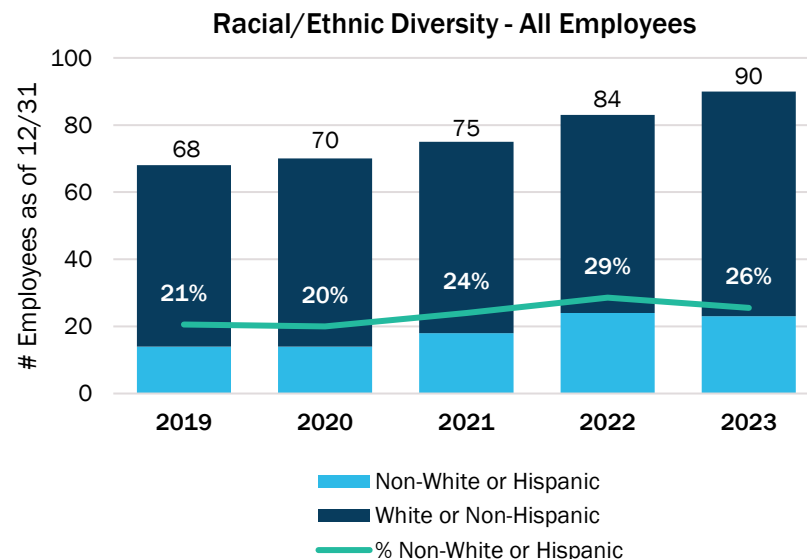
Appendix

Our Workforce

Human capital management is a key driver of our success. We seek to attract and retain talent by fostering a positive workplace committed to diversity, equity, and inclusion.



Industry: 37% Female



Industry: 23% Non-white or Hispanic*

Industry data sourced from US Bureau of Labor Statistics - Financial activities - Securities, commodities, funds, trusts, and other financial investments (January 26, 2024).

*Derived by subtracting the percentage of employed persons identifying as "White" from 100%.

December 31, 2024

Fiscal Year Investment Performance

	Fiscal YTD 2025	Fiscal 2024	Fiscal 2023	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013	Fiscal 2012	Fiscal 2011*
NHRS (Gross of Fees)	10.9%	8.4%	12.5%	-5.4%	51.3%	-7.2%	9.2%	15.1%	19.1%	3.4%	2.9%	18.4%	20.3%	-1.6%	21.6%
NHRS (Net of Fees)	10.6%	7.9%	12.0%	-5.9%	50.6%	-7.7%	8.6%	14.6%	18.5%	2.8%	2.4%	17.7%	19.6%	-2.2%	21.3%
Russell 2000® Index	9.6%	10.1%	12.3%	-25.2%	62.0%	-6.6%	-3.3%	17.6%	24.6%	-6.7%	6.5%	23.6%	24.2%	-2.1%	18.6%

*Fiscal 2011 Partial: October 31, 2010 through June 30, 2011.

Fiscal Year End is June 30. Performance is presented gross of fees except where noted. The index returns reflect neither the deduction of fees nor the impact of taxes. It is not possible to invest directly in an index. Past performance does not guarantee future results. See additional regulatory and fee disclosures in the appendix.

December 31, 2024

Quarterly Attribution

GICS Sector	Average Sector Weights		Returns		Attribution Effects		
	Boston Trust Walden Small Cap	Russell 2000® Index	Boston Trust Walden Small Cap	Russell 2000® Index	Sector Allocation	Stock Selection*	Total Effect
Communication Services	1.2%	2.7%	-4.2%	0.2%	0.0%	-0.1%	-0.1%
Consumer Discretionary	7.3%	9.7%	-4.2%	-1.7%	0.1%	-0.2%	-0.1%
Consumer Staples	5.4%	2.8%	7.5%	5.6%	0.1%	0.1%	0.2%
Energy	5.4%	5.2%	1.3%	-2.7%	0.0%	0.2%	0.2%
Financials	16.5%	18.7%	6.2%	3.5%	-0.1%	0.4%	0.3%
Health Care	16.6%	16.9%	-2.2%	-7.6%	0.0%	1.0%	1.0%
Industrials	17.9%	17.6%	0.2%	4.0%	0.0%	-0.7%	-0.7%
Information Technology	16.3%	13.1%	2.6%	9.7%	0.3%	-1.1%	-0.8%
Materials	6.7%	4.5%	-2.5%	-4.7%	-0.1%	0.1%	0.0%
Real Estate	2.7%	6.1%	-10.1%	-6.0%	0.2%	-0.1%	0.1%
Utilities	4.0%	2.7%	-2.1%	-4.6%	-0.1%	0.1%	0.0%
Total	100.0%	100.0%	0.6%	0.3%	0.5%	-0.2%	0.3%

Sources: Boston Trust Walden, FactSet, FTSE Russell

Percentages may not add to 100% due to rounding.

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December 31, 2024

Quarterly Contribution

Positive Contributors	Ticker	Sector	Contribution (bps)
InterDigital	IDCC	Information Technology	69
Cullen/Frost Bankers	CFR	Financials	41
Sprouts Farmers Market	SFM	Consumer Staples	38
ExlService	EXLS	Industrials	36
Globus Medical	GMED	Health Care	22

Negative Contributors	Ticker	Sector	Contribution (bps)
Axcelis Technologies	ACLS	Information Technology	-35
Installed Building Products	IBP	Consumer Discretionary	-30
Amphastar Pharmaceuticals	AMPH	Health Care	-25
Chemed	CHE	Health Care	-25
ICU Medical	ICUI	Health Care	-23

Sources: Boston Trust Walden, FactSet

The data shown above represents the top and bottom contributors for the securities held in the model Boston Trust Walden Small Cap portfolio. Contribution is based on daily average weights. A description of the methodology used to calculate the performance attribution, as well as a full list showing the contribution of all holdings to the overall performance of the representative account during the indicated time period, are available upon request. The particular holdings identified do not represent all of the securities purchased, sold, or recommended for clients. Past performance is no guarantee of future results.

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Quarterly Buys & Sells

Buys	Ticker	Sector
H&R Block	HRB	Consumer Discretionary
Graphic Packaging	GPK	Materials
UFP Technologies	UFPT	Health Care

Sells	Ticker	Sector
Sprouts Farmers Market	SFM	Consumer Staples

Sources: Boston Trust Walden, FactSet

The data above represents the securities bought and sold in the model Boston Trust Walden Small Cap portfolio during the period. This information is for illustrative purposes only, is confidential, and should not be considered investment advice or a recommendation to buy or sell any particular security. It should not be assumed that investment in any or all of the securities listed will be profitable.

December 31, 2024

Small Cap Holdings

COMMUNICATIONS SERVICES

CABO	CABLE ONE INC	0.7%
SSTK	SHUTTERSTOCK INC	0.5%

CONSUMER DISCRETIONARY

HRB	BLOCK H & R INC	0.7%
CRI	CARTER INC	0.8%
CVCO	CAVCO INDUSTRIES INC	1.6%
CHH	CHOICE HOTELS INTL INC	1.8%
COLM	COLUMBIA SPORTSWEAR CO	1.8%
IBP	INSTALLED BLDG PRODS INC	0.8%

CONSUMER STAPLES

FLO	FLOWERS FOODS INC COM	1.4%
LANC	LANCASTER COLONY CORP	1.5%
SMPL	SIMPLY GOOD FOODS CO	2.1%

ENERGY

WHD	CACTUS INC CL A	1.7%
HP	HELMERICH & PAYNE INC	0.9%
MGY	MAGNOLIA OIL & GAS CORP	1.6%
MTDR	MATADOR RESOURCES CO	0.9%

FINANCIALS

SRCE	1ST SOURCE CORP	0.7%
CATY	CATHAY GENRAL BANCORP	0.9%
CNS	COHEN & STEERS INC	1.6%
CBSH	COMMERCE BANCSHARES INC	1.4%
CFR	CULLEN/FROST BANKERS INC	2.3%
DFIN	DONNELLEY FINL SOLUTIONS INC	1.4%
EVR	EVERCORE PARTNERS INC-CL A	1.3%
THG	HANOVER INSURANCE GROUP INC	1.6%

FINANCIALS (CONT'D)

INDB	INDEPENDENT BANK CORP/MA	1.1%
IBOC	INTERNATIONAL BANCSHARES CF	1.8%
SIGI	SELECTIVE INS GROUP INC	1.8%
UMBF	UMB FINANCIAL CORP	0.9%

HEALTHCARE

AMPH	AMPHASTAR PHARMACEUTICALS I	1.1%
CHE	CHEMED CORP	2.0%
CORT	CORCEPT THERAPEUTICS INC	1.3%
CRVL	CORVEL CORP	2.2%
GMED	GLOBUS MEDICAL INC-A	1.3%
HAE	HAEMONETICS CORP/MASS	2.1%
HALO	HALOZYME THERAPEUTICS INC	1.2%
ICUI	ICU MEDICAL INC	1.4%
INMD	INMODE LTD	0.7%
PBH	PRESTIGE CONSMR HEALTHCARE	1.9%
USPH	U.S. PHYSICAL THERAPY INC	1.3%
UFPT	UFP TECHNOLOGIES INC	0.8%

INDUSTRIALS

AYI	ACUITY BRANDS INC	1.4%
AIT	APPLIED INDUSTRIAL TECH INC	1.9%
ATKR	ATKORE INC	0.7%
CSGS	CSG SYSTEMS INTL INC	1.7%
DCI	DONALDSON CO INC	1.8%
EXLS	EXLSERVICE HOLDINGS INC	2.1%
FELE	FRANKLIN ELECTRIC CO INC	1.7%
NSP	INSPERITY INC	0.5%
LSTR	LANDSTAR SYSTEM INC	1.4%
MSM	MSC INDUSTRIAL DIRECT CO-A	1.3%

INDUSTRIALS (CONT'D)

VMI	VALMONT INDUSTRIES	1.0%
WTS	WATTS WATER TECHNOLOGIES-A	2.0%

INFORMATION TECHNOLOGY

ACLS	AXCELIS TECHNOLOGIES INC	1.0%
BMI	BADGER METER INC	1.4%
DLB	DOLBY LABORATORIES INC-CL A	1.3%
IDCC	INTERDIGITAL INC	1.5%
LFUS	LITTELFUSE INC	1.8%
PLXS	PLEXUS CORP	1.7%
POWI	POWER INTEGRATIONS INC	1.2%
PRGS	PROGRESS SOFTWARE CORP	1.9%
QLYS	QUALYS INC	2.2%
TDC	TERADATA CORP DEL COM	1.5%

MATERIALS

ATR	APTARGROUP INC	1.0%
GPK	GRAPHIC PACKAGING HLDG CO	1.0%
MTX	MINERALS TECHNOLOGIES INC	1.3%
SXT	SENSIENT TECHNOLOGIES CORP COM	1.1%
SLGN	SILGAN HOLDINGS INC	2.0%

REAL ESTATE

FCPT	FOUR CORNERS PPTY TR INC COM	1.0%
STAG	STAG INDUSTRIAL INC	1.5%

UTILITIES

CPK	CHESAPEAKE UTILITIES CORP	1.0%
IDA	IDACORP INC	1.2%
OGS	ONE GAS INC	1.1%
UTL	UNITIL CORP	0.6%

The holdings above represent the securities held in the model Boston Trust Walden Small Cap Equity portfolio. This information is for illustrative purposes only, is confidential, and should not be considered investment advice or a recommendation to buy or sell any particular security. It should not be assumed that investment in any or all of the securities listed will be profitable.

Attendee Biographies

Nichols W. Caldwell, CFA

Senior Manager, Institutional Markets

Nick is responsible for managing institutional consultant and client relationships. In addition, Nick chairs the Institutional Strategy Analysis and Review team, is a member of the Investment and ESG integration Committees, and supports the development and implementation of the firm's quantitative research tools.

Nick began his career in 2007 and joined Boston Trust Walden in 2009. Previously he worked as an Analyst at State Street Global Advisors. He earned a BS from Skidmore College and an MS from Boston College. He holds the Chartered Financial Analyst® designation and is a member of the CFA Society Boston and the CFA Institute.

Richard Q. Williams, CFA

Managing Director and Portfolio Manager

Richard is a portfolio manager for the Small, SMID, and Mid Cap equity strategies and directs the firm's equity investing efforts. He is a member of the Boston Trust Walden Board of Directors as well as the Investment, ESG Integration, and Quantitative Tools & Methodologies (QTM) Committees. He contributes to securities research across sectors.

Richard began his career in 1997 and joined Boston Trust Walden in 2013. He previously worked at BlackRock, J.L. Kaplan Associates, Village Ventures, and Wellington Management. He earned an MBA from Dartmouth College, an MSc from the London School of Economics, and a BA from Williams College. He holds the Chartered Financial Analyst® designation and is a member of the CFA Society Boston and the CFA Institute.

December 31, 2023

Boston Trust Walden Small Cap Equity Composite

Year	Gross-of-Fees	Net-of-Fees		Composite			Composite	Benchmark	Total Firm Assets (\$MM)
	Composite Return	Composite Return	Benchmark Return	Composite Assets (\$MM)	Composite Portfolios	Composite Dispersion	Standard Deviation	Standard Deviation	
2023	11.2%	10.5%	16.9%	\$2,829.4	43	0.7%	17.7%	21.4%	\$15,723.1
2022	-8.2%	-8.8%	-20.4%	\$2,191.1	40	0.6%	21.6%	26.4%	\$13,575.4
2021	29.5%	28.7%	14.8%	\$2,186.0	38	0.3%	19.0%	23.7%	\$14,867.4
2020	10.1%	9.4%	20.0%	\$1,699.8	41	1.0%	20.8%	25.6%	\$11,633.0
2019	31.1%	30.3%	25.5%	\$1,204.8	36	0.5%	14.1%	15.9%	\$10,481.1
2018	-5.0%	-5.6%	-11.0%	\$885.7	35	0.4%	13.8%	16.0%	\$8,024.6
2017	13.2%	12.4%	14.6%	\$1,174.6	39	0.4%	12.2%	14.1%	\$8,372.8
2016	24.7%	23.9%	21.3%	\$1,777.1	47	0.7%	14.1%	16.0%	\$7,897.4
2015	-2.8%	-3.5%	-4.4%	\$1,422.6	49	0.2%	13.3%	14.2%	\$6,946.6
2014	0.2%	-0.5%	4.9%	\$1,720.3	58	0.2%	12.3%	13.3%	\$8,120.7

Disclosures

- (a) The firm as defined herein claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS Standards. The firm has been independently verified for the period January 1, 2003 to December 31, 2022. The verification reports 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. (b) For the purpose of GIPS compliance, the "Firm" is defined as the investment firm Boston Trust Walden Company (Boston Trust Walden) and its subsidiary Boston Trust Walden Inc. (BTW Inc.). BTW Inc., a wholly owned subsidiary of Boston Trust Walden Company, is an SEC-registered investment adviser. (c) A complete list and description of all composites and pooled funds is available upon request. (d) 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 Methodology: (a) The Small Cap Equity Composite includes all fully discretionary portfolios invested in the Boston Trust Walden Small Cap equity strategy as well as the strategy mutual fund and CIT. The Small Cap strategy is comprised of smaller capitalization companies that are higher quality with sustainable business models. The strategy is broadly diversified and possesses portfolio characteristics superior to those of the small cap equity market in aggregate. Minimum portfolio market value for composite inclusion is \$1mm at inception. Portfolios that initially qualify are excluded later from the composite if their asset size decreases below \$750,000 due to capital disbursements and/or market movement. (b) All valuation is computed and performance is reported in USD. (c) Gross-of-fees performance includes reinvestment of income and is reported before management and custodial fees but net of all trading costs. Some portfolios in the composite may not incur transaction costs. Actual returns will be reduced by investment advisory fees and other expenses that may be incurred in the management of the account. Net-of-fees returns are calculated by deducting the weighted average management fees paid during the period. (d) Composite dispersion is calculated using the equal-weighted standard deviation of annual gross-of-fees returns of all composite portfolios included in the composite for the full year. (e) Composite returns are calculated in Advent APX, which uses the aggregate return method. (f) Composite and benchmark standard deviation represents the annualized 3-year ex-post standard deviation of monthly gross-of-fees returns. (g) Policies for valuing investments, calculating performance, and preparing GIPS reports are available upon request.
- (a) Standard fee schedule is 1.0% on first \$2mm, 0.7% on next \$8mm, 0.6% on next \$15mm, 0.5% on next \$25mm, 0.4% on balance, per annum. (b) The collection of fees produces a compounding effect on the total rate of return net of management fees.
- (a) The reported benchmark for the Small Cap Equity Composite is the Russell 2000® Index. The Russell 2000® index is representative of the investible universe of US small capitalization companies. (b) The Small Cap Equity Composite was created and inception in January 1998. The Small Cap Equity Composite was redefined in January 2020 to include portfolios with fossil fuel free screens as eligible for inclusion in the composite.
- (a) Past performance does not guarantee future results.

Additional Disclosures

- The information provided in this presentation has been prepared in accordance with the information requested. This presentation is for informational purposes only and should not be considered as financial, legal, tax or investment advice. This presentation is confidential and is not intended for public distribution.
- This presentation is neither an offer nor a recommendation to buy or sell any particular security. It should not be assumed that investment in any of the securities displayed was or will be profitable.
- The material herein is based on information from a variety of sources we consider reliable, but we do not represent that the information is accurate or complete. Opinions expressed are current opinions as of the date appearing in this material only.
- Performance of the portfolio relative to its respective performance benchmark(s) may have been impacted positively or negatively by economic and market conditions which affect either the benchmark or the portfolio to a greater degree.
- Gross and net of management fee returns include the income received through dividends, interest and other earnings.
- Your returns may differ, or may have differed materially from the reported composite returns for reasons including, but not limited to: your specific tax status, timing of cash flows, or specific security or investment restrictions.
- Gross performance does not reflect the deduction of fees and other expenses, and the portfolio's return will be reduced by fees and any other expenses it may incur in the management of the account. The collection of fees produces a compounding effect on the total rate of return net of management fees. Calculation of Gross Returns: Returns are gross of investment management fees, net of transaction costs, and include the reinvestment of dividends. If the expenses were reflected, the performance shown would be lower. A description of investment management fees are available upon request by sending an email to info@bostontrustwalden.com. The fee will vary depending on, among other things, the applicable fee schedule based on the investment strategy and account size. For example, if \$100,000 were invested and experienced a 10% annual return compounded annually for 10 years, its ending value, without giving effect to the deduction of advisory fees, would be \$259,374. If an advisory fee of 1.00% of the market value of the account were deducted annually for the 10-year period, the annualized compounded return would be 9.00% and the ending dollar value would be \$236,736.
- Past performance does not guarantee future results. All investments involve risk, including the risk of losing principal.
- References to market or composite indices, benchmarks or other measures of relative market performance over a specified period of time are provided for your information only. Reference to an index does not imply that the portfolio will experience returns, volatility or other results similar to the index. The composition of a benchmark index may not reflect the manner in which a portfolio is constructed in relation to expected or achieved returns, investment holdings, portfolio guidelines, restrictions, sectors, correlations, concentrations, volatility or tracking error targets, all of which are subject to change over time.
- Russell Investment Group is the source and owner of all trademarks, service marks, and copyrights related to the Russell Indexes. Russell® is a trademark of Russell Investment Group.
- The firm's portfolio risk management process includes an effort to monitor and manage risk, but should not be confused with and does not imply low risk.
- Weightings in the portfolios may change at any time without notice subject to the portfolio manager's discretion.
- Boston Trust Walden Company does not provide legal or accounting services or prepare personal, gift or estate tax returns. Clients are responsible to consult with the appropriate professionals in those areas either independently or in conjunction with your Boston Trust Walden team.

NOTE: The draft of these minutes from the January 14, 2025, Independent Investment Committee meeting is subject to approval and execution at a subsequent meeting.

**Independent Investment Committee Meeting
January 14, 2025
DRAFT Public Minutes**

**New Hampshire Retirement System
54 Regional Drive
Concord, NH 03301**

Committee Members:

- Christine Clinton, CFA, *Chair*
- Brian Bickford, CFA, CFP®, *Member*
- Maureen Kelliher, CFA, *Member*
- Mike McMahon, *Non-Voting Member*
- Paul Provost, CFP®, *Member (Absent)*

Staff:

- Jan Goodwin, *Executive Director*
- Raynald Leveque, *Chief Investment Officer*
- Gregory Richard, CAIA, CFA, CTP, *Senior Investment Officer*
- Shana Bilech, CFP®, *Investment Officer*
- Jonathan Diaz, *Investment Officer*
- Jesse Pasierb, *Investment Operations Analyst*
- Tim Crutchfield, *Deputy Director, and Chief Legal Counsel (by video conference)*
- Heather Hoffacker, *Internal Auditor (by video conference)*

Guests:

- Pete Keliuotis, CFA, *Executive Vice President, Callan LLC*
- Angel Haddad, *Senior Vice President, Callan LLC*
- David Smith, CFA, CTP, *Senior Vice President, Callan LLC*
- Britton Murdoch, *Senior Vice President, Callan LLC (by video conference)*
- Francis Griffin, *Senior Vice President, Callan LLC*
- Anthony Frammartino, *Chief Executive Officer, The Townsend Group*
- Tony Pietro, *Partner, The Townsend Group*
- Christian Nye, CFA, *Associate Partner, The Townsend Group*
- Joe Davenport, *Partner, The Townsend Group*

Chair Clinton called the meeting to order at 12:34 PM.

On a motion by Mr. Bickford, seconded by Ms. Kelliher, the Independent Investment Committee (IIC, Committee) unanimously approved the public minutes of the January 14, 2025, Investment Committee meeting as presented.

Mr. Leveque reviewed investment returns through recent periods and referred to the Callan Monthly Review for the period ending November 30, 2024. He shared an update on holdings within the NHRS portfolio, total plan liquidity, and discussed the Work Plan and Investment Team initiatives for calendar year 2025.

On a motion by Ms. Kelliher, seconded by Mr. Bickford, the Committee unanimously approved the Work Plan for the fourth quarter of fiscal year 2025.

The Committee discussed the presentation made by non-U.S. equity manager Artisan Partners at the December 2024 IIC meeting. On a motion by Mr. Bickford, seconded by Ms. Kelliher, the Committee unanimously voted to renew the investment management agreement with Artisan Partners for a two-year term through December 2026.

Next, Mr. Leveque introduced The Townsend Group. Mr. Frammartino provided an overview of the firm's history, team, and strategy. Mr. Nye and Mr. Davenport presented a market overview for 2025. Mr. Pietro reviewed real estate investment performance in recent years and since inception, emphasizing NHRS's strong performance relative to peers. Townsend concluded with a discussion of the anticipated Investment Pacing Plan for the 2025 real estate allocation and the challenges and opportunities expected for market participants.

On a motion by Mr. Bickford, seconded by Ms. Kelliher, the Committee unanimously approved the Calendar Year 2025 Real Estate Pacing Plan as presented.

Next, Mr. Leveque introduced Callan. Mr. Keliuotis, Mr. Griffin, and Mr. Smith provided a review of private credit and private equity performance in 2024, highlighting key trends and NHRS's positioning relative to benchmarks. They concluded their presentation with the 2025 Pacing Plan for private credit, private equity, and infrastructure, outlining anticipated commitments and strategies to align with NHRS's long-term objectives, while addressing expected market dynamics and challenges for the coming year.

On a motion by Mr. Bickford, seconded by Ms. Kelliher, the Committee unanimously voted to approve the Calendar Year 2025 Private Equity, Private Credit, and Infrastructure Pacing Plan as presented.

Next, Mr. Leveque and Mr. Diaz reviewed proposed updates to the NHRS Investment Manual, highlighting efforts to modernize its content and align it with the strategic asset allocation and benchmark adjustments previously approved by the Board.

The Committee discussed Callan's recommendation to include Real Estate guidelines within the Private Markets guidelines and use the IMI version of the MSCI All Country World Ex-U.S. Index for the Non-U.S. Equity benchmark. The Investment Team agreed to research the merits of the proposed Non-U.S. Equity benchmark and revise the Investment Manual as needed.

On a motion by Ms. Kelliher, seconded by Mr. Bickford the Committee unanimously voted to approve the draft Investment Manual as revised. The Committee directed staff to submit the revised Investment Manual to the Board of Trustees at its upcoming meeting with a formal recommendation from the IIC.

On a motion by Ms. Kelliher, seconded by Mr. Bickford, the Committee unanimously voted to adjourn the meeting.

The meeting adjourned at 2:56 PM.

Market Environment

As of December 31, 2024

Index	Last Month	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell 3000	(3.06)	2.63	23.81	8.01	13.86	12.55
S&P 500	(2.38)	2.41	25.02	8.94	14.53	13.10
Russell 2000	(8.26)	0.33	11.54	1.24	7.40	7.82
MSCI ACWI ex USA	(1.94)	(7.60)	5.53	0.82	4.10	4.80
MSCI Emerging Markets	(0.14)	(8.01)	7.50	(1.92)	1.70	3.64
Bloomberg Aggregate	(1.64)	(3.06)	1.25	(2.41)	(0.33)	1.35
NCREIF NFI-ODCE	0.01	0.02	(3.17)	(3.44)	1.80	4.85
Bloomberg Commodity Price	0.63	(1.57)	0.12	(0.14)	4.07	(0.55)

Both equities and fixed income posted losses in December. The December FOMC meeting reflected a cautious yet strategic shift in monetary policy, emphasizing the focus on inflation. Despite the widely anticipated rate cut, the reduction in projected cuts for 2025 from prior estimates led to a market selloff, showcasing investor sensitivity to tighter monetary conditions. Equity markets responded negatively overall. U.S. equities lagged non-U.S. equities, and U.S. mid and small cap stocks were the weakest performers. Emerging markets outperformed developed. In fixed income, bond prices fell as interest rates rose. The Treasury yield curve steepened, underscoring uncertainty about inflation and the Fed's actions.

Real, annualized U.S. GDP increased 3.1% in 3Q24, according to the third estimate, up from the second estimate of 2.8%. This marks a slight increase from the 3.0% growth in 2Q. The third estimate reflects an upward revision to exports and consumer spending and a downward revision to private inventory investment. Imports, which are subtracted in the calculation of GDP, were revised upward.

The U.S. economy added approximately 256,000 jobs in December, compared to 227,000 in November. Sectors experiencing employment growth included health care, government, social assistance, and retail trade. The seasonally adjusted unemployment rate for December was 4.1%, a slight decrease from the November reading of 4.2%. The labor force participation rate was 62.5%, unchanged from November.

The headline Consumer Price Index (CPI) rose 2.9% year-over-year in December, a slight increase from the November reading of 2.7%. Over 40% of the overall increase in the all-items index was driven by gains in the energy index. The food index and gasoline index both increased. Price levels rose 0.4% month-over-month in December, up slightly from November's 0.3% increase. Core CPI, which excludes more volatile food and energy prices, increased 3.2% year-over-year, lower than the November reading of 3.3%. On a monthly basis, core CPI rose 0.2% in December, a decrease from the November reading of 0.3%.

*Due to a lag in the reporting of NCREIF NFI-ODCE Index returns, the monthly return shown is deduced from the most recent quarterly return.

U.S. Equity Overview

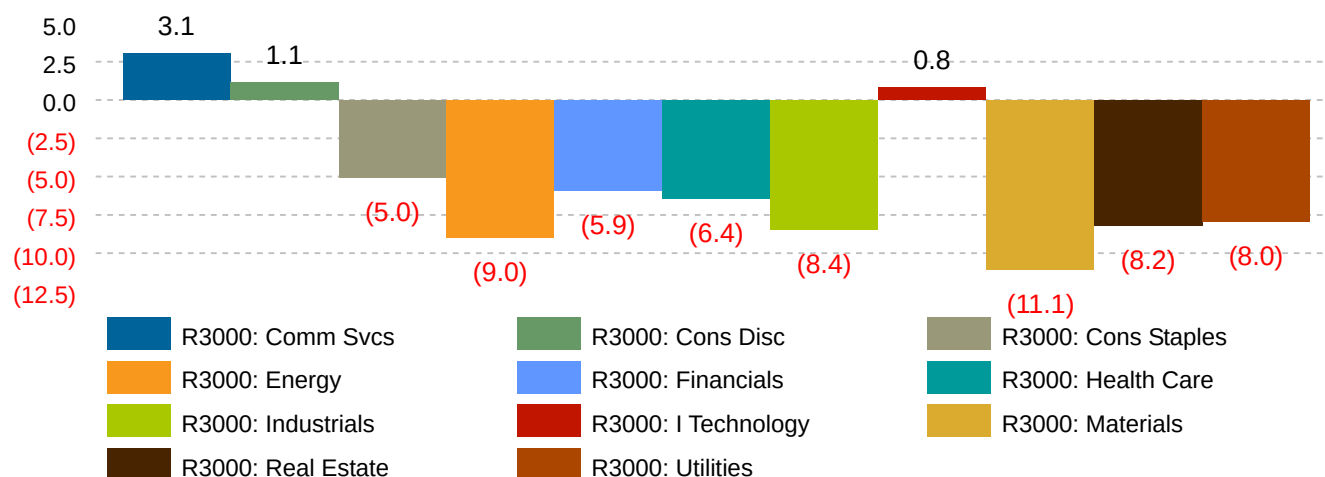
As of December 31, 2024

Index	Last Month	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Russell 3000	(3.06)	2.63	23.81	8.01	13.86	12.55
Russell 1000	(2.79)	2.75	24.51	8.41	14.28	12.87
Russell 1000 Growth	0.88	7.07	33.36	10.47	18.96	16.78
Russell 1000 Value	(6.84)	(1.98)	14.37	5.63	8.68	8.49
Russell Midcap	(7.04)	0.62	15.34	3.79	9.92	9.63
Russell 2000	(8.26)	0.33	11.54	1.24	7.40	7.82
Russell 2000 Growth	(8.19)	1.70	15.15	0.21	6.86	8.09
Russell 2000 Value	(8.33)	(1.06)	8.05	1.94	7.29	7.14

U.S. equities fell in December (Russell 3000 Index: -3.1%). Investor optimism about growth-oriented policies under President-elect Donald Trump quickly faded following the Federal Reserve's December FOMC meeting. The Fed raised its median projected federal funds rate for the end of 2025 from 3.4% to 3.9%. The adjustment addresses rising concerns about inflation, which has been accelerating over the past two months. This shift in outlook dampened investor sentiment, contributing to the month's negative market performance. Despite this, the S&P 500 capped 2024 with its strongest two-year run in more than 25 years. For the month, large cap stocks outperformed small caps (Russell 1000 Index: -2.8% vs. Russell 2000 Index: -8.3%). Large cap growth stocks posted modest gains (Russell 1000 Growth Index: +0.9%), while large cap value stocks declined significantly (Russell 1000 Value Index: -6.8%). Small cap stocks performed poorly across the board (Russell 2000 Growth Index: -8.2% vs. Russell 2000 Value Index: -8.3%).

Sector performance was broadly negative in December, with only three of the eleven sectors that comprise the Russell 3000 posting gains. The positive-performing sectors were Communication Services (+3.1%), Consumer Discretionary (+1.1%), and Technology (+0.8%). Materials (-11.1%), Energy (-9.0%), Industrials (-8.4%), and Real Estate (-8.2%) were the worst performing sectors over the month.

Russell 3000 Index 1 Month Sector Returns



Global ex-U.S. Equity Overview

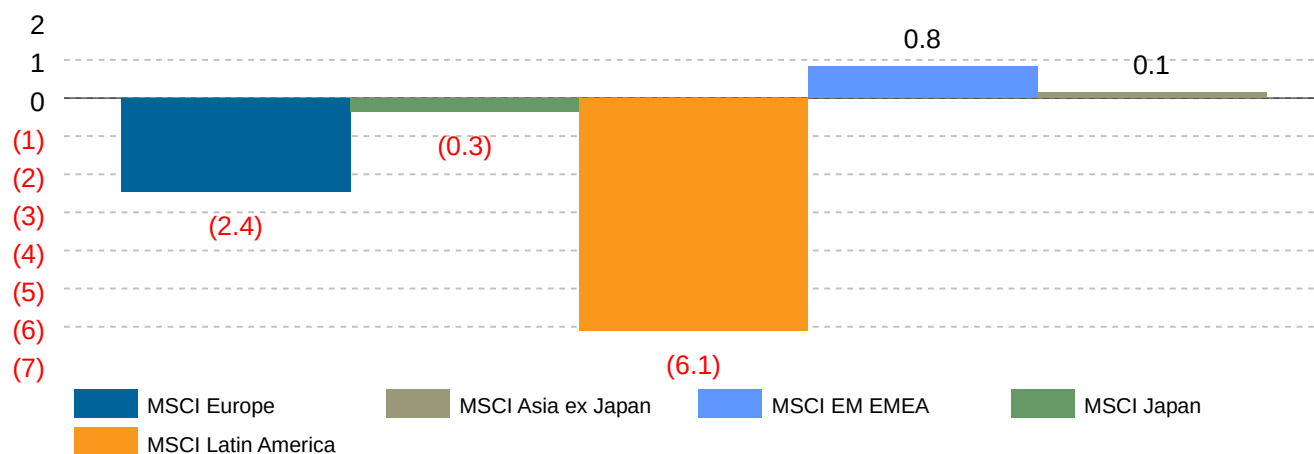
As of December 31, 2024

Index	Last Month	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
MSCI ACWI ex USA	(1.94)	(7.60)	5.53	0.82	4.10	4.80
MSCI EAFE	(2.27)	(8.11)	3.82	1.65	4.73	5.20
MSCI EAFE Hedged	0.61	0.09	14.14	9.31	9.84	8.98
MSCI Emerging Markets	(0.14)	(8.01)	7.50	(1.92)	1.70	3.64
MSCI ACWI ex USA Small Cap	(2.13)	(7.66)	3.36	(1.47)	4.30	5.66

Global ex-U.S. equities fell in December. The MSCI ACWI ex-USA Index dropped 1.9%, with growth stocks underperforming value (MSCI ACWI ex-USA Growth Index: -2.1% vs. MSCI ACWI ex-USA Value Index: -1.7%) and large cap stocks outperforming small cap (MSCI ACWI ex-USA Large Cap Index: +0.3% vs. MSCI ACWI ex-USA Small Cap Index: -2.1%). In the euro zone, slowing growth continued, prompting the European Central Bank (ECB) to cut rates by 25 basis points and signal additional cuts in 2025. Markets remained under pressure due to political instability and ongoing U.S. trade tensions. In the U.K., rising long-term bond yields and fiscal concerns weighed on markets. The Bank of England surprised markets by holding rates steady at 4.75%, a decision influenced by rising inflation. The Bank of Japan similarly bucked expectations by keeping rates unchanged at its December meeting. Limited macroeconomic support continued to challenge markets, contributing to overall negative performance. The U.S. dollar strengthened against a basket of developed market currencies over the month (MSCI EAFE Index: -2.3% vs. MSCI EAFE Hedged Index: +0.6%).

Emerging markets outperformed developed markets in December (MSCI Emerging Markets Index: -0.1% vs. MSCI EAFE Index: -2.3%). The U.S. dollar surged following the Fed's 25-basis-point rate cut, and an upward revision to the median year-end target rate created headwinds for both developed and emerging markets. Emerging markets were able to pull ahead despite the challenging environment. Taiwan posted positive returns as investor enthusiasm for AI remained strong. In China, expectations of looser monetary policy in 2025 and discussions of continued fiscal stimulus lifted markets, bolstering emerging market indices and offsetting losses in other countries. Emerging Europe, the Middle East, and Africa saw modest returns (MSCI EM EMEA: +0.8%), while Latin American markets plummeted (MSCI Emerging Markets Latin America Index: -6.1%).

MSCI Regional 1 Month Returns

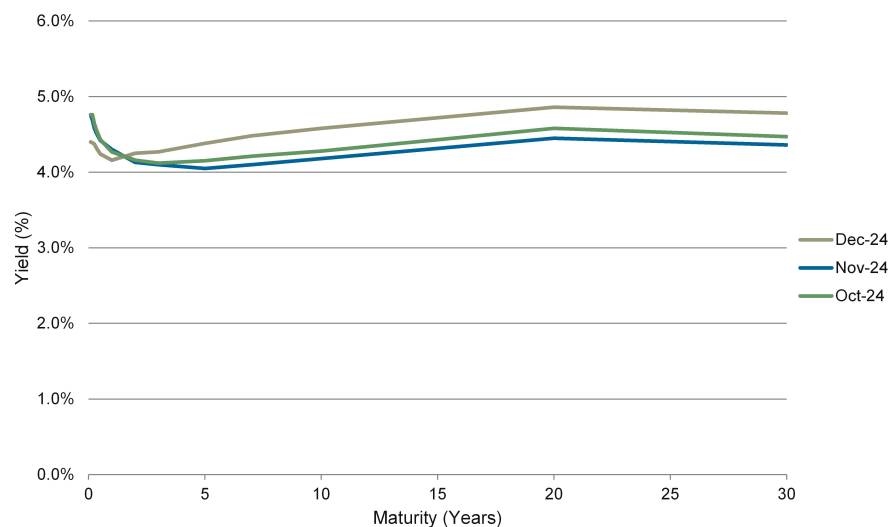


Fixed Income Overview

As of December 31, 2024

Index	Last Month	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Bloomberg Aggregate	(1.64)	(3.06)	1.25	(2.41)	(0.33)	1.35
Bloomberg Long Gov/Credit	(4.79)	(7.42)	(4.15)	(9.20)	(3.26)	0.99
Bloomberg Treasury	(1.54)	(3.14)	0.58	(2.88)	(0.68)	0.83
Bloomberg Credit	(1.89)	(3.04)	2.03	(2.20)	0.23	2.29
Bloomberg Mortgage	(1.65)	(3.16)	1.20	(2.13)	(0.74)	0.91
Bloomberg TIPS	(1.58)	(2.88)	1.84	(2.30)	1.87	2.24
Bloomberg Corp High Yield	(0.43)	0.17	8.19	2.92	4.21	5.17
Credit Suisse Leveraged Loans	0.59	2.29	9.05	6.85	5.73	5.13
90-day T-bill	0.40	1.17	5.25	3.89	2.46	1.77

Treasury Yield Curve



Fixed Income markets posted losses in December (Bloomberg US Aggregate Bond Index: -1.6%). Bond markets experienced significant shifts due to central bank policies and economic conditions. U.S. Treasury yields rose, with the 10-year yield reaching 4.62% during the month, driven by shifting expectations around Fed policy, economic growth, and inflation. The Fed implemented a 25-basis point rate cut to a target range of 4.25% - 4.50%, but adopted a cautious outlook on future reductions, adding to market uncertainty. In the municipal bond market, fund inflows turned negative for the first time in 19 weeks, though overall issuance increased by 37% year-over-year.

Investment-grade bond issuance totaled \$41 billion in December, surpassing forecasts. Total issuance for 2024 was \$1.5 trillion, a 26% year-over-year increase. Yields on investment-grade corporates rose 28 basis points to 5.33%. High yield bond activity added \$12 billion in new issuance. The year ended with almost \$279 billion in new issues priced. High yield spreads ended the month at 287 bps, 21 bps wider than November. Yields increased 35 bps to 7.49%. Short-term Treasury yields decreased, while long-term yields rose: the 90-day T-bill yield fell 21 bps to 4.37%, the 2-year rose 12 bps to 4.25%, the 10-year increased 40 bps to 4.58%, and the 30-year was up 42 bps to 4.78%. The 2-10 year Treasury yield spread widened from 5 bps to 33 bps, potentially signaling nervousness among investors.

Sector performance within fixed income was mostly negative. The Bloomberg Credit Index and the Bloomberg High Yield Corporate Index decreased 1.9% and 0.4%, respectively. Long bonds (Bloomberg Long Gov/Credit Index) fell 4.8% this month. TIPS (Bloomberg US TIPS Index: -1.6%) marginally underperformed nominal Treasuries (Bloomberg Treasury Index: -1.5%). The 10-year breakeven inflation rate increased from 2.26% to 2.34%.

The table below details the rates of return for the fund's asset classes over various time periods ended December 31, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended December 31, 2024									
Composite	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Domestic Equity	31.83%	-4.39%	1.59%	8.89%	20.11%	20.11%	6.41%	12.13%	11.14%
Domestic Equity Benchmark(1)		-3.06%	2.63%	9.03%	23.81%	23.81%	8.01%	13.42%	12.63%
Excess Return		-1.33%	-1.04%	-0.13%	-3.70%	-3.70%	-1.59%	-1.29%	-1.50%
Total Non US Equity	18.58%	-2.92%	-5.92%	0.90%	6.73%	6.73%	1.55%	4.43%	5.44%
Non US Equity Benchmark(2)		-1.94%	-7.60%	-0.15%	5.53%	5.53%	0.82%	4.10%	4.80%
Excess Return		-0.97%	1.68%	1.04%	1.19%	1.19%	0.73%	0.32%	0.64%
Total Fixed Income	21.29%	-1.71%	-3.10%	2.14%	1.55%	1.55%	-1.48%	0.92%	2.11%
Bloomberg Capital Universe Bond Index		-1.51%	-2.73%	2.32%	2.04%	2.04%	-1.95%	0.06%	1.73%
Excess Return		-0.20%	-0.37%	-0.19%	-0.49%	-0.49%	0.47%	0.87%	0.38%
Total Cash	1.72%	0.40%	1.21%	2.54%	5.25%	5.25%	4.00%	2.52%	1.85%
3-Month Treasury Bill		0.40%	1.17%	2.55%	5.25%	5.25%	3.89%	2.46%	1.77%
Excess Return		0.00%	0.04%	-0.02%	0.00%	0.00%	0.11%	0.06%	0.09%
Total Real Estate (Q3)*	8.78%	0.03%	-0.18%	-0.01%	-5.40%	-5.40%	0.95%	5.63%	8.06%
Real Estate Benchmark(3)		0.01%	0.02%	-0.64%	-8.04%	-8.04%	-1.04%	2.05%	5.22%
Excess Return		0.03%	-0.20%	0.63%	2.64%	2.64%	1.99%	3.58%	2.84%
Total Private Equity (Q3)*	13.34%	1.49%	1.46%	1.50%	5.23%	5.23%	4.43%	12.88%	12.18%
Private Equity Benchmark(4)		2.20%	6.64%	10.62%	37.37%	37.37%	13.74%	18.55%	16.43%
Excess Return		-0.71%	-5.18%	-9.11%	-32.14%	-32.14%	-9.32%	-5.68%	-4.25%
Total Private Debt (Q3)*	4.46%	1.81%	1.73%	1.74%	5.71%	5.71%	6.00%	5.86%	6.18%
Private Debt Benchmark(5)		1.19%	3.82%	5.70%	13.61%	13.61%	6.29%	5.43%	5.22%
Excess Return		0.62%	-2.09%	-3.96%	-7.90%	-7.90%	-0.29%	0.44%	0.97%
Total Fund Composite	100.00%	-2.05%	-0.89%	3.85%	8.37%	8.37%	3.16%	7.41%	7.39%
Total Fund Benchmark(6)		-1.40%	-0.58%	4.57%	11.85%	11.85%	4.02%	7.57%	7.72%
Excess Return		-0.65%	-0.31%	-0.72%	-3.48%	-3.48%	-0.86%	-0.16%	-0.33%

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.

(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.

(7) For the trailing 25 year period ended 12/31/24, the Total Fund has returned 5.93% versus the Total Fund Custom Benchmark return of 6.41%.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

Investment Manager Asset Allocation

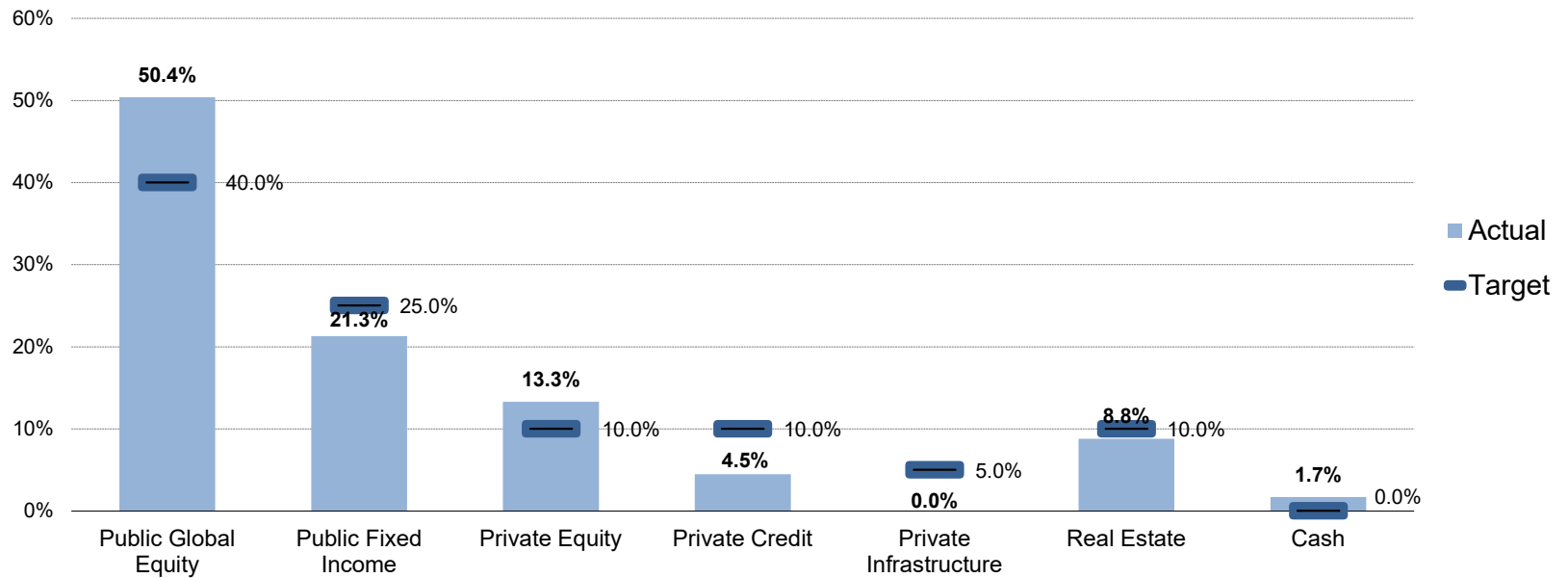
The table below contrasts the distribution of assets across the Fund's investment managers as of December 31, 2024, with the distribution as of November 30, 2024. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

Asset Distribution Across Investment Managers

	December 31, 2024				November 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$4,011,772,952	31.83%	\$(300,000,000)	\$(181,555,932)	\$4,493,328,885	34.93%
Large Cap Domestic Equity	\$2,403,099,778	19.07%	\$(100,000,000)	\$(57,749,583)	\$2,560,849,362	19.91%
Blackrock S&P 500	2,403,099,778	19.07%	(100,000,000)	(57,749,583)	2,560,849,362	19.91%
SMid Cap Domestic Equity	\$766,265,066	6.08%	\$0	\$(52,522,948)	\$818,788,014	6.36%
AllianceBernstein	484,319,368	3.84%	0	(38,889,388)	523,208,756	4.07%
TSW	281,945,698	2.24%	0	(13,633,560)	295,579,257	2.30%
Small Cap Domestic Equity	\$842,408,108	6.68%	\$(200,000,000)	\$(71,283,401)	\$1,113,691,509	8.66%
Boston Trust	262,663,157	2.08%	0	(22,700,699)	285,363,856	2.22%
Segall Bryant & Hamill	278,576,506	2.21%	0	(22,223,892)	300,800,398	2.34%
Wellington	301,168,445	2.39%	(200,000,000)	(26,358,810)	527,527,255	4.10%
Total Non US Equity	\$2,341,386,892	18.58%	\$0	\$(69,279,002)	\$2,410,665,894	18.74%
Core Non US Equity (1)	\$1,419,297,456	11.26%	\$0	\$(31,976,599)	\$1,451,274,055	11.28%
Aristotle	184,261,031	1.46%	0	(5,344,906)	189,605,937	1.47%
Artisan Partners	417,917,802	3.32%	0	(11,333,226)	429,251,028	3.34%
BlackRock Superfund	198,813,151	1.58%	0	(4,291,207)	203,104,358	1.58%
Causeway Capital	453,812,704	3.60%	0	(5,450,265)	459,262,969	3.57%
Lazard	164,004,481	1.30%	0	(5,547,235)	169,551,715	1.32%
Emerging Markets	\$180,917,946	1.44%	\$0	\$(4,506,042)	\$185,423,988	1.44%
Wellington Emerging Markets	180,917,946	1.44%	0	(4,506,042)	185,423,988	1.44%
Non US Small Cap	\$137,538,873	1.09%	\$0	\$(4,432,837)	\$141,971,710	1.10%
Wellington Int'l Small Cap Research	137,538,873	1.09%	0	(4,432,837)	141,971,710	1.10%
Global Equity	\$603,632,618	4.79%	\$0	\$(28,363,524)	\$631,996,142	4.91%
Walter Scott Global Equity	603,632,618	4.79%	0	(28,363,524)	631,996,142	4.91%
Total Fixed Income	\$2,683,675,107	21.29%	\$300,000,000	\$(46,548,493)	\$2,430,223,600	18.89%
BlackRock SIO Bond Fund	280,412,435	2.22%	0	(928,164)	281,340,599	2.19%
Brandywine Asset Mgmt	218,003,975	1.73%	0	(10,916,634)	228,920,609	1.78%
FIAM (Fidelity) Tactical Bond	383,928,220	3.05%	0	(7,768,783)	391,697,002	3.04%
Income Research & Management	801,047,806	6.36%	0	(13,377,597)	814,425,403	6.33%
Loomis Sayles	302,245,379	2.40%	0	(2,719,207)	304,964,586	2.37%
Manulife Strategic Fixed Income	222,406,981	1.76%	0	(2,043,556)	224,450,536	1.74%
Mellon US Agg Bond Index	475,630,310	3.77%	300,000,000	(8,794,553)	184,424,864	1.43%
Total Cash	\$217,258,340	1.72%	\$5,856,885	\$829,675	\$210,571,781	1.64%
Total Marketable Assets	\$9,254,093,292	73.43%	\$5,856,885	\$(296,553,753)	\$9,544,790,159	74.19%
Total Real Estate	\$1,106,859,014	8.78%	\$(7,737,948)	\$2,610,935	\$1,111,986,028	8.64%
Strategic Core Real Estate	628,459,573	4.99%	(4,626,168)	843,946	632,241,795	4.91%
Tactical Non-Core Real Estate	478,399,440	3.80%	(2,251,926)	907,135	479,744,232	3.73%
Total Alternative Assets	\$2,242,319,233	17.79%	\$(7,538,139)	\$41,918,304	\$2,207,939,068	17.16%
Private Equity	1,680,665,885	13.34%	4,594,536	27,819,708	1,648,251,641	12.81%
Private Debt	561,653,348	4.46%	(12,132,675)	14,098,596	559,687,427	4.35%
Total Fund Composite	\$12,603,271,539	100.0%	\$(9,419,202)	\$(252,024,513)	\$12,864,715,255	100.0%

-Alternatives market values reflect current custodian valuations, which may not be up to date.

(1) Includes \$488,286 in legacy assets that are not actively managed and in liquidation following the termination of Fisher Investments.



Figures in bold represent actual allocation amount.

Source: NHRS

Asset Class Allocations Relative to Policy Targets and Ranges



As of December 31, 2024 (preliminary)

Asset Class	Allocation				Objective	Comments
	Range ¹	Target	Actual	Variance		
Public Markets						
Global Equity	30 - 50%	40.0%	50.4%	10.4%	Action	Actual allocation to be reduced over subsequent periods to fund new infrastructure allocation and increase to private credit.
Fixed Income	18 - 32%	25.0%	21.3%	-3.7%	Monitor	Portfolio was rebalanced on December 5, 2024, using funds drawn from Global Equity.
Private Markets						
Equity ¹	5 - 15%	10.0%	13.3%	3.3%	Monitor	No immediate action needed.
Credit ¹	0 - 15%	10.0%	4.5%	-5.5%	Action	To be scaled up incrementally over subsequent periods as part of SAA implementation.
Infrastructure	0 - 15%	5.0%	0.0%	-5.0%	Action	To be scaled up incrementally over subsequent periods as part of SAA implementation.
Real Estate (RE) ³	5 - 20%	10.0%	8.8%	-1.2%	Monitor	No immediate action needed.
Cash Equivalents	0 - 5%	0.0%	1.7%	1.7%	No Action	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls and other plan needs.
		100.0%	100.0%	0.0%		



NHRS

New Hampshire Retirement System

To: Investment Committee
From: Raynald Leveque, Chief Investment Officer
Date: February 11, 2025
Re: **Work Plan / Recap of January Investment Committee Meeting**
Item: Action: ☐ Discussion: ☐ Informational: ☒

The attached six-month Work Plan summarizes the high-level tasks and projects being addressed by the Investment Committee and Staff.

A recap of the January Investment Committee (IIC) meeting is as follows:

- Staff presented an update on the monthly performance of the public market asset classes of the NHRS, holdings and the Work Plan.
- Investment Staff unanimously voted for the renewal of the investment management agreement with Artisan Partners, for a two-year period through December 31, 2026.
- The Committee received a semiannual real estate portfolio update from Townsend and unanimously voted to approve the Real Estate Investment Plan for calendar year 2025.
- Callan presented a detailed review of the private equity and private debt assets of the NHRS portfolio, and the Committee unanimously voted to approve the Callan Calendar Year 2025 Private Equity, Private Credit, and Infrastructure Pacing Plan.
- The Committee unanimously voted for the approval of the proposed guidelines for the Infrastructure Asset Class.
- The Committee unanimously voted to approve the revised Investment Manual and Policy as presented and directed staff to submit the revised documents to the Board of Trustees at its upcoming meeting, with a formal recommendation from the IIC.

Our Mission: To provide secure retirement benefits and superior service.



To: Investment Committee
From: Raynald Leveque, Chief Investment Officer
Date: February 11, 2025
Re: **Six-Month Investment Work Plan**
Item: Action: ☐ Discussion: ☐ Informational: ☒

As time progresses, the Work Plan will be updated to reflect tasks and initiatives associated with the current and subsequent quarter. Items completed over the fiscal year will also be included.

Presentations are displayed using the following format:
IC meeting date – Pertinent details

Updates from the prior month are highlighted in **bold**.

3rd Quarter FY 2025: January – March 2025

Investment Program

- Continue implementation of Strategic Asset Allocation
- Discuss macroeconomic investment themes that may impact the portfolio
 - January - Review of Investment Manual, **Unanimous approval of Investment Staff suggested changes and recommendation to the Board of Trustees for approval**
 - February – Callan Capital Market Assumptions

Marketable Investments

- Schedule contract renewal presentations of current investment managers
- **February – Boston Trust Walden, Small Cap U.S. Equity Contract Renewal Presentation**
- Monitor marketable assets portfolio

Alternative Investments

- January – Callan, Annual Review of Private Credit & Private Equity Investment Plan
Approve 2025 Pacing Plan for Private Credit, Private Equity & Infrastructure

Real Estate

- January – Townsend review of the CY 2024 Investment Plan and **approve proposed CY 2025 Plan**

Vendors

- February – Abel Noser, trading cost analysis
- February – Abel Noser, annual update on Commission Sharing Agreements

4th Quarter FY 2025: April – June 2025

Investment Program

- Continue implementation of Strategic Asset Allocation
- Rebalance portfolio as needed to fund increases to private credit and infrastructure sourced from global equity

Marketable Investments

- Schedule presentations of current investment managers
- Monitor and execute structure of marketable assets portfolio

Alternative Investments

- Continue implementation of 2025 Private Credit & Equity Strategic Plan
June - Callan, Semi-Annual Update on the Private Credit & Equity program
- Review Private Credit & Equity investments

Real Estate

- Continue implementation of 2025 Real Estate Investment Plan
June - Townsend, Semi-Annual Update on the Real Estate Investment Plan

Completed Items – Fiscal Year 2025

2nd Quarter FY 2025: October – December 2024

Investment Program

- October / November – SAA Strategy & Implementation Plan:
Global Equity, Global Fixed Income, Infrastructure
- October - 2025 Investment Committee meeting schedule, unanimous approval in December
- December - FY 2024 Comprehensive Annual Investment Report, unanimous approval in December for recommendation to the Board of Trustees.

Marketable Investments

- Schedule presentations of current investment managers
- December – Causeway, Artisan, Non-U.S. Equity Contract Renewals, unanimous five-year renewal vote of Causeway contract in December; **Artisan unanimous two-year renewal vote in January**
- Monitor and execute structure of marketable assets portfolio

Alternative Investments

- Continue implementation of the 2024 Private Debt & Equity Investment Plan
December – TopTier, Venture Velocity Fund V, Private Equity, unanimous approval of \$25 million commitment
December – Blackstone, Blackstone Multi Asset Credit, Private Credit, unanimous approval of \$75 million commitment

Real Estate

- Continue implementation of Calendar Year 2024 Real Estate Investment Plan

1st Quarter FY 2025: July – September 2024

Investment Program

- Discuss macroeconomic investment themes that may impact the portfolio
 - July – NHRS Investment Office Strategic Plan Presentation
 - July – Funston Advisory Service Review of Investment Office Strategic Plan

Marketable Investments

- Schedule presentations of current investment managers
- Monitor and execute structure of marketable assets portfolio

Alternative Investments

- Continue implementation of 2024 Private Debt & Equity Strategic Plan
 - August – Oak Hill Advisors, Senior Private Lending Fund (OLEND), Private Debt, unanimous approval of \$100 million commitment
 - August – HarbourVest, HIPEP X, Private Equity, unanimous approval of \$75 million commitment

Real Estate

- Continue implementation of 2024 Real Estate Investment Plan

To: Board of Trustees
From: Raynald Leveque, Chief Investment Officer
Date: February 11, 2025
Re: **Revised Investment Manual and Policy**
Item: Action: ☒ Discussion: ☐ Informational: ☐

Attached for your review and feedback is the clean and redlined versions of the System's Investment Manual, which incorporates the latest updates to reflect significant changes in the NHRS asset classes, benchmarks, and internal procedures. These revisions also include the most recent Board-approved adjustments to the asset allocation strategy.

The changes to the Investment Manual are reflected in several key sub-components, including the Investment Policy, Global Equity Guidelines, Fixed Income Guidelines, Private Markets Investment Guidelines (formerly known as Alternative Investment Guidelines), and the Accountability Matrix.

The Private Markets Investment Guidelines have been modernized to reflect current industry language and practices, with updated targets and revised asset allocation to better align with evolving market trends.

These updates are designed to ensure alignment with the System's long-term investment objectives and to enhance the overall investment framework.

Please note that the Investment Manual was last reviewed and formally approved by the Board of Trustees (BOT) on June 14, 2022.

Changes to the Investment Policy are reflected on the following pages:

- Pages 2 – 6: Revisions related to additional parties and stakeholders; reclassification of the lead investment executive from Director of Investments to Chief Investment Officer (CIO), Investment Staff to Investment Team;
- Page 9: Relative to the approved asset classes and target allocation ranges;
- Pages 10 – 11: Revisions to asset class definitions to align with current industry terminology;
- Pages 13 – 15: Relative to benchmarks;
- Addition of previously approved Infrastructure guidelines;

Changes to the **Global Equities Guidelines Policy**

- Transitioning from the Domestic Equities and Non-US Equities policy to a Global Equities policy to align with the newly approved Global Equity asset class as of December 2023;

Changes to **Fixed Income Guidelines**

- Updates to allowable ranges based on prior BOT approval at the December 10, 2024 meeting;

Changes to **Private Markets Guidelines**

- Reclassification of asset class grouping from Alternative Investments to Private Markets;
- Pages 1 – 5: Revisions to update language found in document to current industry language and practices;
- Page 1: Changes to allocation targets, in addition to new Infrastructure asset class;

Changes to **Accountability Matrix**

- Pages 1 – 11: Reclassification of the lead investment executive role from Director of Investments to Chief Investment Officer (CIO);
- Page 11: Update to Legal Counsel responsibility/duty in relation to proxy voting service provider;

At its January meeting, the Independent Investment Committee unanimously voted to update the Investment Manual, as outlined below, for recommendation to the Board of Trustees for approval.

This recommendation will include the specification of the Non-US Equity benchmark as the MSCI All Country World excluding US Investable Market Index (MSCI ACWI ex. US IMI). This specific benchmark will be presented to the IIC for approval at today's meeting. This benchmark will ensure alignment with the Total Equity benchmark at the asset class level, which is the MSCI ACWI IMI).

I recommend that the Board of Trustees conditionally approve the updated Investment Manual and Investment Policy, inclusive of the MSCI ACWI ex. US IMI benchmark specification.

For completeness and transparency, the Board materials include all the same materials from the January 2025 IC meeting supporting this recommendation, which includes the clean and redline version.



Angel G. Haddad is a senior vice president in Callan's New Jersey consulting office. Angel works with a variety of clients, including corporate and public defined benefit plans, corporate defined contribution plans, endowments, and foundations. His client responsibilities include strategic planning, plan implementation, investment monitoring, and coordination of special client projects. Angel is a member of Callan's Client Policy Review Committee and is a shareholder of the firm.

Prior to joining Callan in 2012, Angel worked at Fischer, Francis, Trees & Watts, Inc., a specialty fixed income global investment management firm, as a relationship manager focusing on central bank and official institution clients. Prior to this, Angel was a principal with Mercer Investment Consulting, Inc., where he spent 11 years working with corporate defined benefit and defined contribution plans, endowments, and foundations in the U.S. and Caribbean, and a large sovereign wealth fund in South America.

Angel earned a BBA and MBA from the City University of New York - Baruch College, the Zicklin School of Business.



Pete Keliuotis, CFA, is an executive vice president and the head of Callan's Alternatives Consulting group. He joined Callan in 2019 to lead the private equity, private credit, and hedge fund consulting teams, in addition to advising clients' alternatives investment portfolios. Pete co-chairs Callan's Alternatives Review Committee and is a member of the Client Policy Review, Management, and Institute Advisory committees. He is a shareholder of the firm.

Prior to joining Callan, Pete was a senior managing director of Cliffwater LLC and a senior member of their portfolio advisory team, specializing in alternative investing for institutional clients. Prior to Cliffwater, Pete was a managing director and the CEO of Strategic Investment Solutions, where he led the general and private markets consulting teams and advised several large institutional investors. Previous experience also includes Mercer Investment Consulting, where he was a principal and senior consultant, Hotchkis and Wiley in Los Angeles, and Northern Trust Company in Chicago.

Pete earned an MBA in analytic finance from the University of Chicago Booth School of Business and a BS in economics from the University of Illinois at Urbana-Champaign. He is a holder of the right to use the Chartered Financial Analyst® designation and is a member of CFA Institute and CFA Society New York.



Britton M. Murdoch is a senior vice president in Callan's New Jersey consulting office. He works with a variety of fund sponsors, including corporate, public, endowment, and foundation clients. His responsibilities include strategic planning, implementation, investment manager evaluation and monitoring, education, business development, and other special projects. Britt is member of Callan's Manager Search Committee and is a shareholder of the firm.

Prior to joining Callan in 2014, Britt worked as an associate at J.P. Morgan Private Bank, where he was responsible for managing and developing private client relationships. In this role, he provided daily support to clients, performed annual reviews, and managed new client prospecting and integration. Britt began his career as a financial adviser and held the Financial Industry Regulatory Authority (FINRA) Series 6, 7, and 63 licenses.

Britt earned a BS in business administration from the University of Delaware, where he was the captain of the men's golf team.



Jay V. Kloepper is an executive vice president and the director of Capital Markets Research group, helping clients with their strategic planning, conducting asset allocation and asset/liability studies, developing optimal investment manager structures, evaluating defined contribution plan investment lineups, and providing custom research on a variety of investment topics. He is a member of the Callan Institute Advisory Committee and is a shareholder of the firm.

Jay is the author of the Callan Periodic Table of Investment Returns, which he created in 1999. Prior to joining Callan, he was a senior economist and the Western Regional Manager for Standard & Poor's DRI.

Jay earned an MA in economics from Stanford and a BS with honors in economics from the University of Oregon.

February 2025



2025 Capital Markets Assumptions

Capital Markets Research Group

Angel Haddad

Fund Sponsor Consulting

Britt Murdoch

Fund Sponsor Consulting

Jay Kloepfer

Capital Market Research

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

Callan

Summary

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 50 bps, from 5.25% to 4.75%
- ▶ Public equity returns reduced 20–30 bps; 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

Allocations within equity reflect neutral weights to the broad markets

- ▶ Efficient SMID cap weight set to 15% of broad U.S. equity
- ▶ Efficient emerging market equity weight set to 30% of global ex-U.S. equity
- ▶ Efficient U.S. / global ex-U.S. equity set to 60/40 neutral weight (not a change, but the market has now caught up to us!)

Broadened set of diversifying asset classes to consider

- ▶ Private credit
- ▶ Private infrastructure
- ▶ Inflation-sensitive equity – REITs, natural resources, global listed infrastructure

NHRS

- ▶ Increased target allocation to Private Credit from 5% to 10%
- ▶ New 5% target allocation to Infrastructure
- ▶ Reduced public equity allocation from 50% to 40% to fund Private Credit and Infrastructure allocation
- ▶ Expected return for the next 10 years reduced from 7.65% in 2024 to 7.30% in 2025 with a similar level of risk
- ▶ Expected return for the next 20 years reduced from 7.80% in 2024 to 7.45% in 2025 with a similar level of risk

Customized NHRS Capital Market Projections – 10-Year Time Horizon

NHRS Asset Allocation Model 2025-2034

Asset Class	Prior Target Weight	New Target Weight	PROJECTED RETURN		PROJECTED RISK
			Single-Period Arithmetic Return	10-Year Geometric Return	Annualized Standard Deviation
Public Equity	50.0%	40.0%			
Broad US Equity (1)	30.0%	24.0%	8.70%	7.35%	17.35%
Global Ex-US Equity (2)	20.0%	16.0%	9.40%	7.45%	21.25%
Fixed Income	25.0%	25.0%			
Universal Fixed Income (3)	25.0%	25.0%	4.90%	4.85%	4.30%
Private Equity	10.0%	10.0%			
Private Equity	10.0%	10.0%	11.80%	8.50%	27.60%
Private Credit	5.0%	10.0%			
Private Credit	5.0%	10.0%	8.35%	7.25%	15.70%
Private Real Estate	10.0%	10.0%			
Private Real Estate	10.0%	10.0%	7.15%	6.25%	14.00%
Private Infrastructure	0.0%	5.0%			
Private Infrastructure (new)	0.0%	5.0%	7.40%	6.35%	15.20%
Cash Equivalents	0.0%	0.0%			
Cash Equivalents	0.0%	0.0%	3.00%	3.00%	0.90%
Inflation				2.50%	1.60%
Total Fund	100.0%	100.0%			
Single-Period Arithmetic Return	8.05%	7.90%			
10-Year Geometric Return	7.30%	7.30%			
Annualized Standard Deviation	12.70%	12.00%			

(1) Broad US equity = 85% large cap, 15% mid and small cap

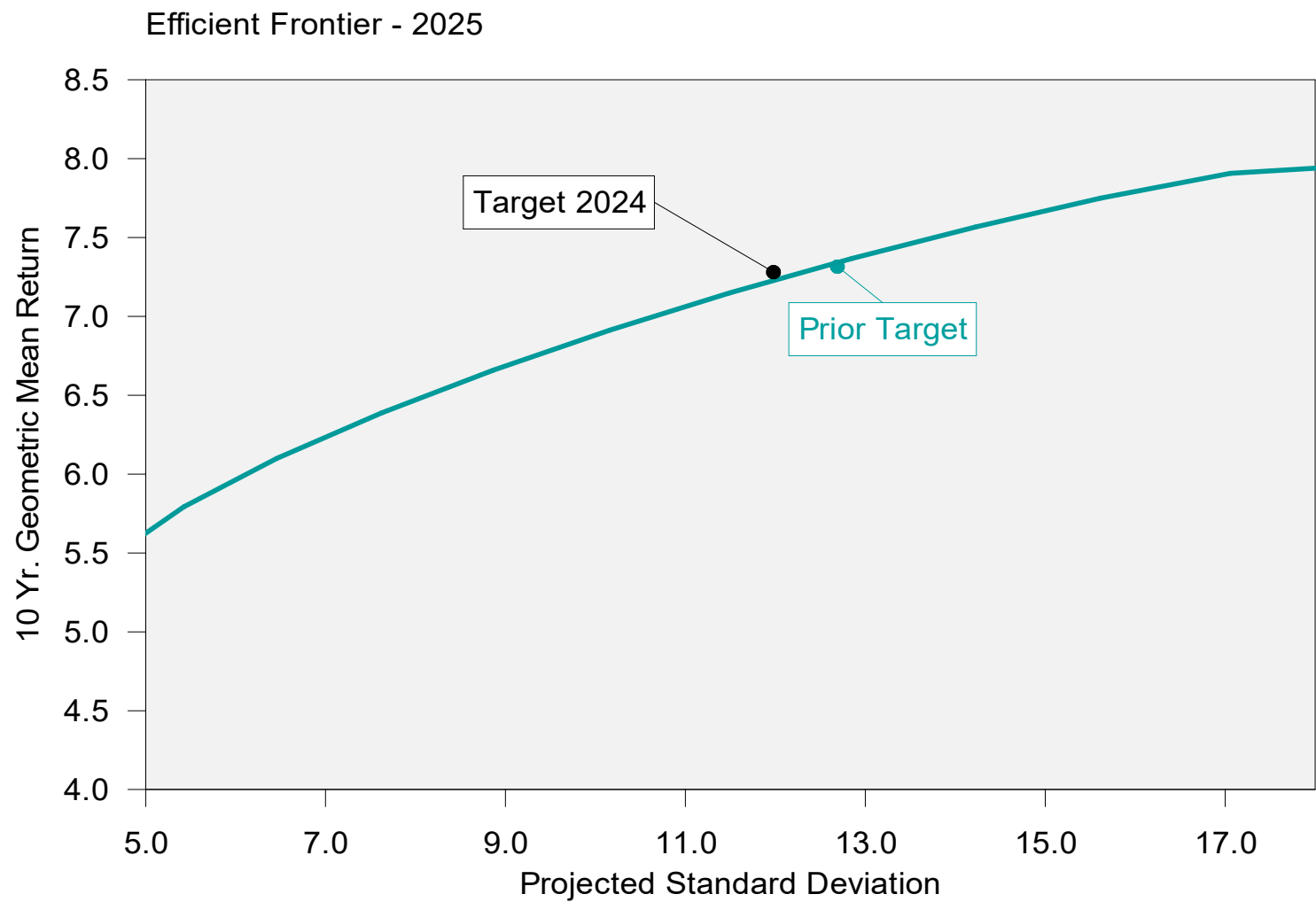
(2) Global ex-US equity = 70% developed markets, 30% emerging markets

(3) NHRS fixed income benchmarked to the Bloomberg Universal; modeled as 96% Barclays Aggregate, 4% high yield

New target projected return of 7.30% compounded over 10 years, at a risk (standard deviation) of 12.0%

Source: Callan LLC

2025 Efficient Frontier – Prior and New Target



Source: Callan LLC

Customized NHRS Capital Market Projections – 20-Year Time Horizon

NHRS Asset Allocation Model 2024-2053

Asset Class	Prior Target Weight	New Target Weight	PROJECTED RETURN		PROJECTED RISK
			Single-Period Arithmetic Return	20-Year Geometric Return	Annualized Standard Deviation
Public Equity	50.0%	40.0%			
Broad US Equity (1)	30.0%	24.0%	8.90%	7.55%	17.35%
Global Ex-US Equity (2)	20.0%	16.0%	9.65%	7.65%	21.25%
Fixed Income	25.0%	25.0%			
Universal Fixed Income (3)	25.0%	25.0%	5.00%	4.90%	4.30%
Private Equity	10.0%	10.0%			
Private Equity	10.0%	10.0%	12.00%	8.65%	27.60%
Private Credit	5.0%	10.0%			
Private Credit	5.0%	10.0%	8.40%	7.25%	15.70%
Private Real Estate	10.0%	10.0%			
Private Real Estate	10.0%	10.0%	7.35%	6.45%	14.00%
Private Infrastructure	0.0%	5.0%			
Private Infrastructure (new)	0.0%	5.0%	7.70%	6.65%	15.20%
Cash Equivalents	0.0%	0.0%			
Cash Equivalents	0.0%	0.0%	3.00%	3.00%	0.90%
Inflation				2.50%	1.60%
Total Fund	100.0%	90.0%			
Single-Period Arithmetic Return	8.20%	8.10%			
20-Year Geometric Return	7.50%	7.45%			
Annualized Standard Deviation	12.70%	12.00%			

(1) Broad US equity = 85% large cap, 15% mid and small cap

(2) Global ex-US equity = 70% developed markets, 30% emerging markets

(3) NHRS fixed income benchmarked to the Bloomberg Universal; modeled as 96% Barclays Aggregate, 4% high yield

New target projected return of 7.45% compounded over 30 years, at a risk (standard deviation) of 12.0%

Source: Callan LLC

Callan

Summary of 2025 Projections

Why Make Capital Market Projections?

Guiding objectives and process

Cornerstone of a prudent process is a long-term strategic investment plan

- ▶ Capital market projections are key elements — set reasonable return and risk expectations for the appropriate time horizon
- ▶ Projections represent our best thinking regarding the long-term (10-year) outlook, recognizing our median projections represent the midpoint of a range, rather than a specific number
- ▶ Develop results that are readily defensible both for individual asset classes and for total portfolios
- ▶ Be conscious of the level of change suggested in strategic allocations for long-term investors: DB plan sponsors, foundations, endowments, trusts, DC participants, families and individuals
- ▶ Reflect common sense and recent market developments, within reason

Callan's forecasts are informed by current market conditions, but are not built directly from them

- ▶ Balance recent, immediate performance and valuation against long-term equilibrium expectations

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

How Are Capital Market Projections Constructed?

Projections are 10-year forward-looking, representing a medium to long-term planning horizon:

Differs from the actuarial assumptions, which tend to reflect longer-term horizons of 30-40 years

Projections consist of return and two measures that contribute to portfolio volatility: standard deviation and correlation

Cover most broad asset classes and inflation

Broad U.S. equity

- ▶ Large cap
- ▶ Small/mid cap

Global ex-U.S. equity

- ▶ Developed market
- ▶ Emerging market

U.S. fixed income

- ▶ Short duration
- ▶ Core U.S. fixed
- ▶ TIPS
- ▶ High yield
- ▶ Long duration (government, credit and G/C)
- ▶ Global ex-U.S. fixed income

Real estate

Alternative investments: private equity, hedge funds, private credit

Cash

Inflation

2025 Risk and Returns Assumptions

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

Asset ClassIndex		Projected Return		Real	Projected Risk	Projected Yield**
		1-Year Arithmetic	10-Year Geometric*		Standard Deviation	
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%
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%
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						

Yellow = asset classes used in the NHRS portfolio target

Source: Callan

2025 vs. 2024 Risk and Returns Assumptions

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

		Projected Return			Projected Risk		2024–2033		
		1-Year Arithmetic	10-Year Geometric*	Real	Standard Deviation		Projected Yield**	1-Year Arithmetic	10-Year Geometric*
Asset Class		Index							
Equities									
Broad U.S. Equity	Russell 3000	8.70%	7.35%	4.85%	17.35%	1.70%	8.85%	7.65%	17.40%
Large Cap U.S. Equity	S&P 500	8.50%	7.25%	4.75%	17.00%	1.75%	8.70%	7.50%	17.00%
Smid Cap U.S. Equity	Russell 2500	9.60%	7.45%	4.95%	22.00%	1.50%	9.80%	7.70%	22.00%
Global ex-U.S. Equity	MSCI ACWI ex USA	9.45%	7.45%	4.95%	21.25%	3.45%	9.65%	7.65%	21.40%
Developed ex-U.S. Equity	MSCI World ex USA	9.05%	7.25%	4.75%	20.15%	3.50%	9.25%	7.50%	20.15%
Emerging Markets Equity	MSCI Emerging Markets	10.30%	7.45%	4.95%	25.65%	3.30%	10.65%	7.70%	25.60%
Fixed Income									
Short Duration Gov/Credit	Bloomberg 1-3 Year Gov/Credit	4.05%	4.00%	1.50%	2.40%	3.65%	4.25%	4.25%	2.40%
Core U.S. Fixed	Bloomberg Aggregate	4.85%	4.75%	2.25%	4.40%	4.60%	5.25%	5.25%	4.25%
Long Government	Bloomberg Long Gov	5.65%	4.80%	2.30%	13.75%	4.60%	6.20%	5.40%	13.75%
Long Credit	Bloomberg Long Credit	6.05%	5.40%	2.90%	11.90%	5.90%	6.85%	6.30%	11.90%
Long Government/Credit	Bloomberg Long Gov/Credit	5.85%	5.20%	2.70%	11.75%	5.30%	6.55%	6.00%	11.70%
TIPS	Bloomberg TIPS	4.70%	4.55%	2.05%	5.40%	4.30%	5.10%	5.05%	5.40%
High Yield	Bloomberg High Yield	6.65%	6.00%	3.50%	11.75%	8.15%	7.30%	6.80%	11.75%
Global ex-U.S. Fixed	Bloomberg Global Agg ex US	3.30%	2.85%	0.35%	9.80%	2.80%	3.60%	3.15%	9.80%
Emerging Markets Sov Debt	EMBI Global Diversified	5.85%	5.35%	2.85%	10.65%	7.40%	6.75%	6.35%	10.65%
Alternatives									
Core Real Estate	NCREIF ODCE	7.15%	6.25%	3.75%	14.00%	4.00%	6.85%	6.00%	14.00%
Private Infrastructure	MSCI GI Infra/FTSE Dev Core 50/50	7.40%	6.35%	3.85%	15.20%	4.90%	7.30%	6.35%	15.20%
Private Equity	Cambridge Private Equity	11.80%	8.50%	6.00%	27.60%	0.00%	12.15%	8.75%	27.60%
Private Credit	Cambridge Senior Debt Index	8.35%	7.25%	4.75%	15.70%	7.25%	8.40%	7.40%	15.70%
Hedge Funds	Callan Hedge FOF Database	6.00%	5.70%	3.20%	8.20%	0.00%	6.25%	6.05%	8.20%
Commodities	Bloomberg Commodity	5.40%	3.90%	1.40%	18.05%	3.00%	5.45%	3.90%	18.05%
Cash Equivalents	90-Day T-Bill	3.00%	3.00%	0.50%	0.90%	3.00%	3.00%	3.00%	0.90%
Inflation	CPI-U		2.50%		1.60%			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

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 growth hit 3% in 2Q and 3.1% in 3Q, slowing to 2.3% in 4Q, but it still notched an annual rate of 2.5%, just 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%–4.5%.

- ▶ Inverted yield curve remains in place, but it's been inverted since 2022.

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.

Equity Markets Up Sharply in 2024

Stocks have recovered losses of 2022; fixed income still lags

SS&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 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 saw 2.3% 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

The Callan Periodic Table of Investment Returns

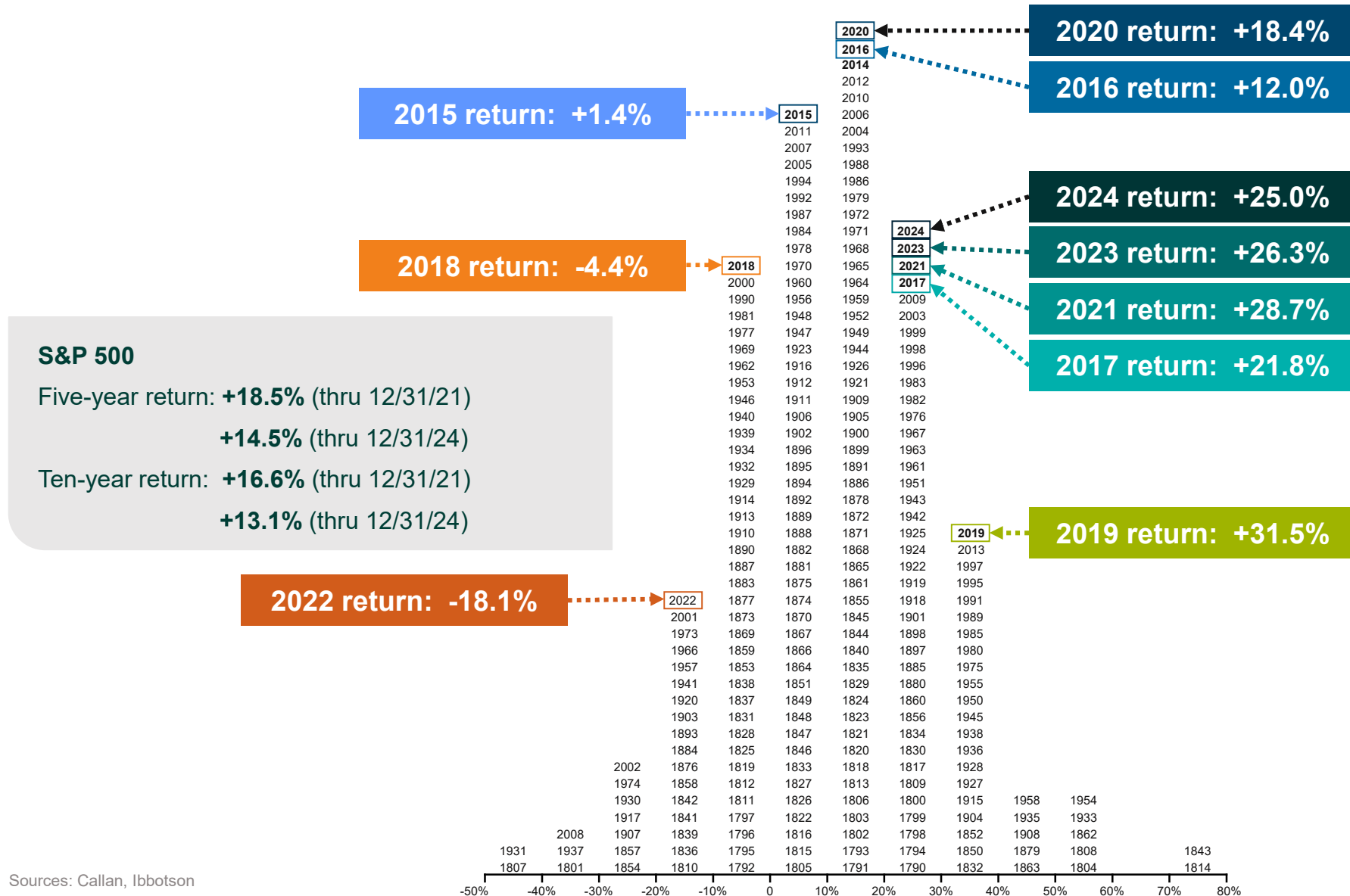
Annual Returns for Key Indices Ranked in Order of Performance (2005–2024)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Emerging Market Equity	Real Estate	Emerging Market Equity	U.S. Fixed Income	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate	Small Cap Equity	Real Estate	Large Cap Equity	Small Cap Equity	Emerging Market Equity	Cash Equivalent	Large Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity	Large Cap Equity
34.00%	42.12%	39.38%	5.24%	78.51%	26.85%	7.84%	27.73%	38.82%	15.02%	1.38%	21.31%	37.28%	1.87%	31.49%	19.96%	28.71%	1.46%	26.29%	25.02%
Real Estate	Emerging Market Equity	Developed ex-U.S. Equity	Global ex-U.S. Fixed	High Yield	Real Estate	High Yield	Emerging Market Equity	Large Cap Equity	Large Cap Equity	U.S. Fixed Income	High Yield	Developed ex-U.S. Equity	U.S. Fixed Income	Small Cap Equity	Large Cap Equity	Real Estate	High Yield	Developed ex-U.S. Equity	Small Cap Equity
15.35%	32.17%	12.44%	4.39%	58.21%	19.63%	4.98%	18.23%	32.39%	13.69%	0.55%	17.13%	24.21%	0.01%	25.52%	18.40%	26.09%	-11.19%	17.94%	11.54%
Developed ex-U.S. Equity	Developed ex-U.S. Equity	Global ex-U.S. Fixed	Cash Equivalent	Real Estate	Emerging Market Equity	Global ex-U.S. Fixed	Developed ex-U.S. Equity	Developed ex-U.S. Equity	U.S. Fixed Income	Cash Equivalent	Large Cap Equity	Large Cap Equity	High Yield	Developed ex-U.S. Equity	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Small Cap Equity	High Yield
14.47%	25.71%	11.03%	2.06%	37.13%	18.88%	4.36%	16.41%	21.02%	5.97%	0.05%	11.96%	21.83%	-2.08%	22.49%	18.31%	14.82%	-13.01%	16.93%	8.19%
Large Cap Equity	Small Cap Equity	U.S. Fixed Income	High Yield	Developed ex-U.S. Equity	High Yield	Large Cap Equity	Small Cap Equity	High Yield	Small Cap Equity	Real Estate	Emerging Market Equity	Small Cap Equity	Global ex-U.S. Fixed	Real Estate	Global ex-U.S. Fixed	Developed ex-U.S. Equity	Developed ex-U.S. Equity	High Yield	Emerging Market Equity
4.91%	18.37%	6.97%	-26.16%	33.67%	15.12%	2.11%	16.35%	7.44%	4.89%	-0.79%	11.19%	14.65%	-2.15%	21.91%	10.11%	12.62%	-14.29%	13.44%	7.50%
Small Cap Equity	Large Cap Equity	Large Cap Equity	Small Cap Equity	Small Cap Equity	Large Cap Equity	Cash Equivalent	Large Cap Equity	Real Estate	High Yield	Developed ex-U.S. Equity	Real Estate	Global ex-U.S. Fixed	Large Cap Equity	Emerging Market Equity	Developed ex-U.S. Equity	High Yield	Large Cap Equity	Emerging Market Equity	Cash Equivalent
4.55%	15.79%	5.49%	-33.79%	27.17%	15.06%	0.10%	16.00%	3.67%	2.45%	-3.04%	4.06%	10.51%	-4.38%	18.44%	7.59%	5.28%	-18.11%	9.83%	5.25%
Cash Equivalent	High Yield	Cash Equivalent	Large Cap Equity	Large Cap Equity	Developed ex-U.S. Equity	Small Cap Equity	High Yield	Cash Equivalent	Cash Equivalent	Small Cap Equity	Developed ex-U.S. Equity	Real Estate	Real Estate	High Yield	U.S. Fixed Income	Cash Equivalent	Global ex-U.S. Fixed	Real Estate	Developed ex-U.S. Equity
3.07%	11.85%	5.00%	-37.00%	26.47%	8.95%	-4.18%	15.81%	0.07%	0.03%	-4.41%	2.75%	10.36%	-5.63%	14.32%	7.51%	0.05%	-18.70%	9.67%	4.70%
High Yield	Global ex-U.S. Fixed	High Yield	Developed ex-U.S. Equity	Global ex-U.S. Fixed	U.S. Fixed Income	Real Estate	U.S. Fixed Income	U.S. Fixed Income	Emerging Market Equity	High Yield	U.S. Fixed Income	High Yield	Small Cap Equity	U.S. Fixed Income	High Yield	U.S. Fixed Income	Emerging Market Equity	Global ex-U.S. Fixed	U.S. Fixed Income
2.74%	8.16%	1.87%	-43.56%	7.53%	6.54%	-6.46%	4.21%	-2.02%	-2.19%	-4.47%	2.65%	7.50%	-11.01%	8.72%	7.11%	-1.54%	-20.09%	5.72%	1.25%
U.S. Fixed Income	Cash Equivalent	Small Cap Equity	Real Estate	U.S. Fixed Income	Global ex-U.S. Fixed	Developed ex-U.S. Equity	Global ex-U.S. Fixed	Emerging Market Equity	Global ex-U.S. Fixed	Global ex-U.S. Fixed	Global ex-U.S. Fixed	U.S. Fixed Income	Developed ex-U.S. Equity	Global ex-U.S. Fixed	Cash Equivalent	Emerging Market Equity	Small Cap Equity	U.S. Fixed Income	Real Estate
2.43%	4.85%	-1.57%	-48.21%	5.93%	4.95%	-12.21%	4.09%	-2.60%	-3.09%	-6.02%	1.49%	3.54%	-14.09%	5.09%	0.67%	-2.54%	-20.44%	5.53%	0.94%
Global ex-U.S. Fixed	U.S. Fixed Income	Real Estate	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Global ex-U.S. Fixed	Developed ex-U.S. Equity	Emerging Market Equity	Cash Equivalent	Cash Equivalent	Emerging Market Equity	Cash Equivalent	Real Estate	Global ex-U.S. Fixed	Real Estate	Cash Equivalent	Global ex-U.S. Fixed
-8.65%	4.33%	-7.39%	-53.33%	0.21%	0.13%	-18.42%	0.11%	-3.08%	-4.32%	-14.92%	0.33%	0.86%	-14.57%	2.28%	-9.04%	-7.05%	-25.10%	5.01%	-4.22%

Sources: ● Bloomberg Aggregate ● Bloomberg High Yield Bond Index ● Bloomberg Global Aggregate ex US ● FTSE EPRA Nareit Developed
 ● MSCI Emerging Markets ● MSCI World ex USA ● Russell 2000 ● S&P 500 ● 90-day T-bill

Stock Market Returns by Calendar Year

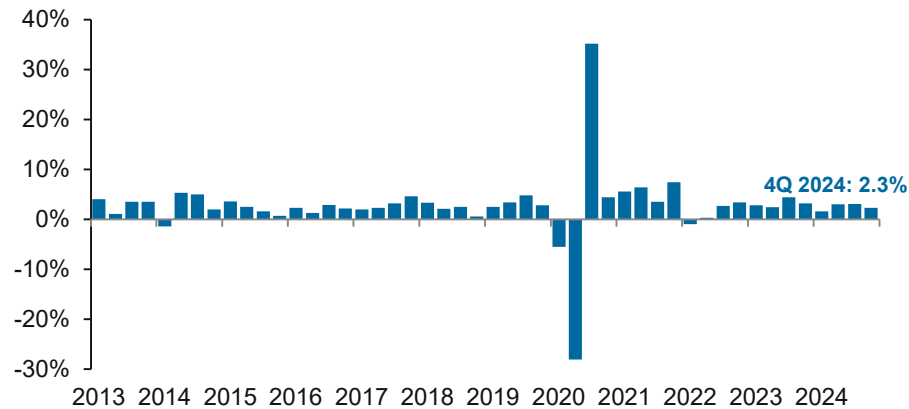
Performance in perspective: History of the U.S. stock market (234 years of returns)



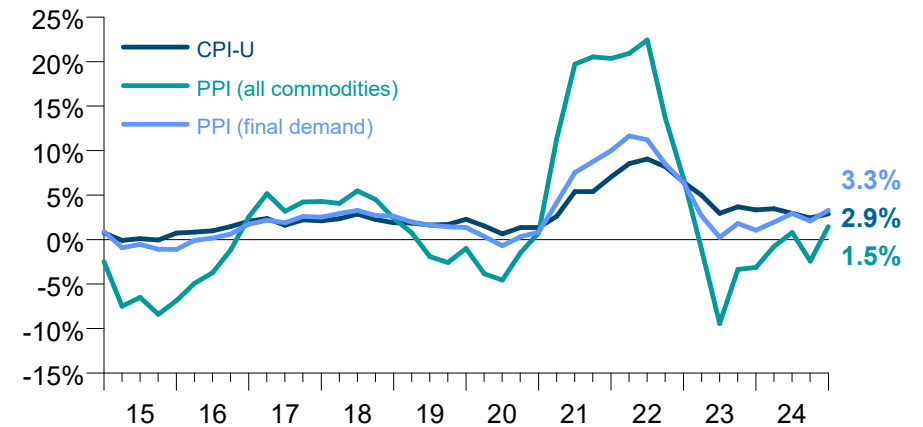
Sources: Callan, Ibbotson

U.S. Economy—Summary

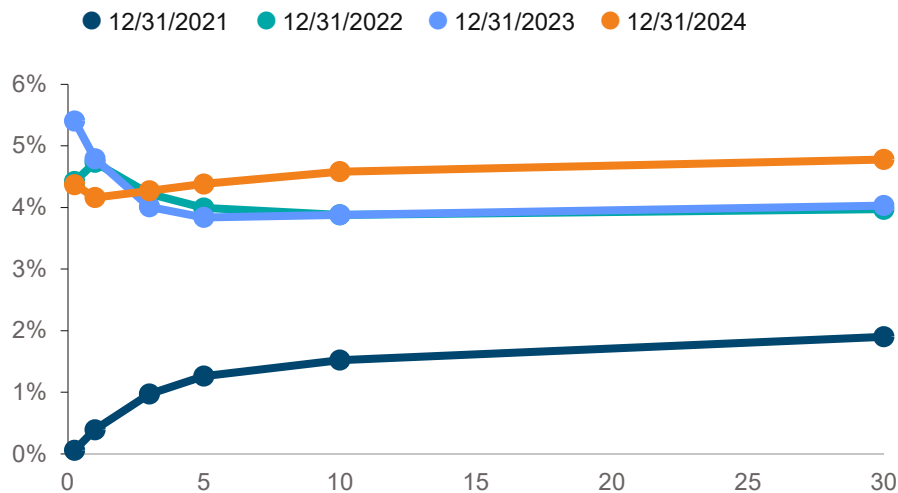
Quarterly Real GDP Growth



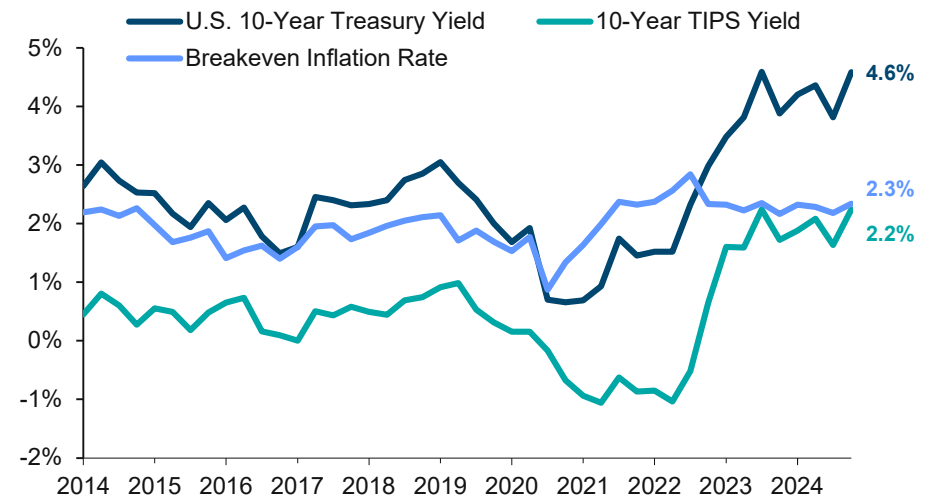
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Historical 10-Year Yields



Sources: Bloomberg, Bureau of Labor Statistics, Callan

Labor

The unemployment rate was 4.1% as of December.

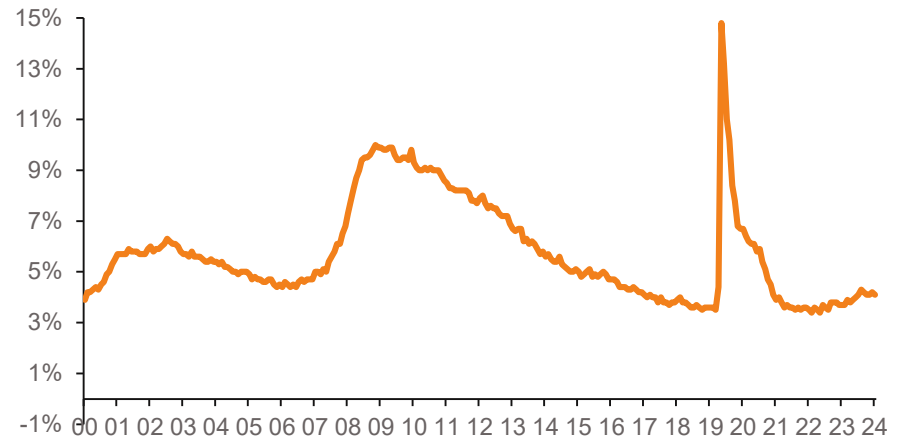
Job openings have declined from post-COVID peaks.

Unemployment claims and layoffs remain low.

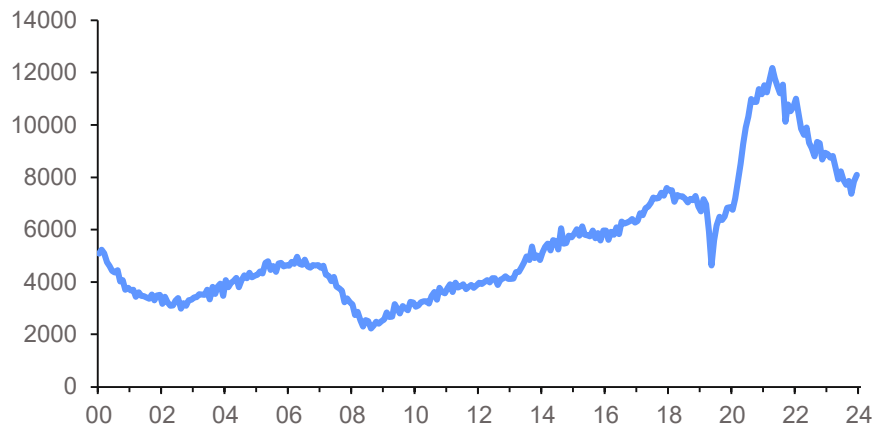
It is likely that labor supply is higher than estimated due to immigration not being counted in official measures.

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

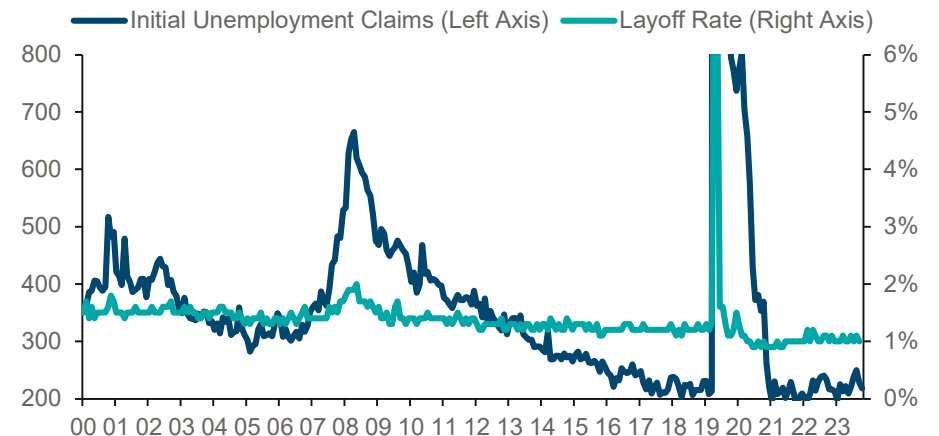
Unemployment Rate



Job Openings (Level in Thousands)



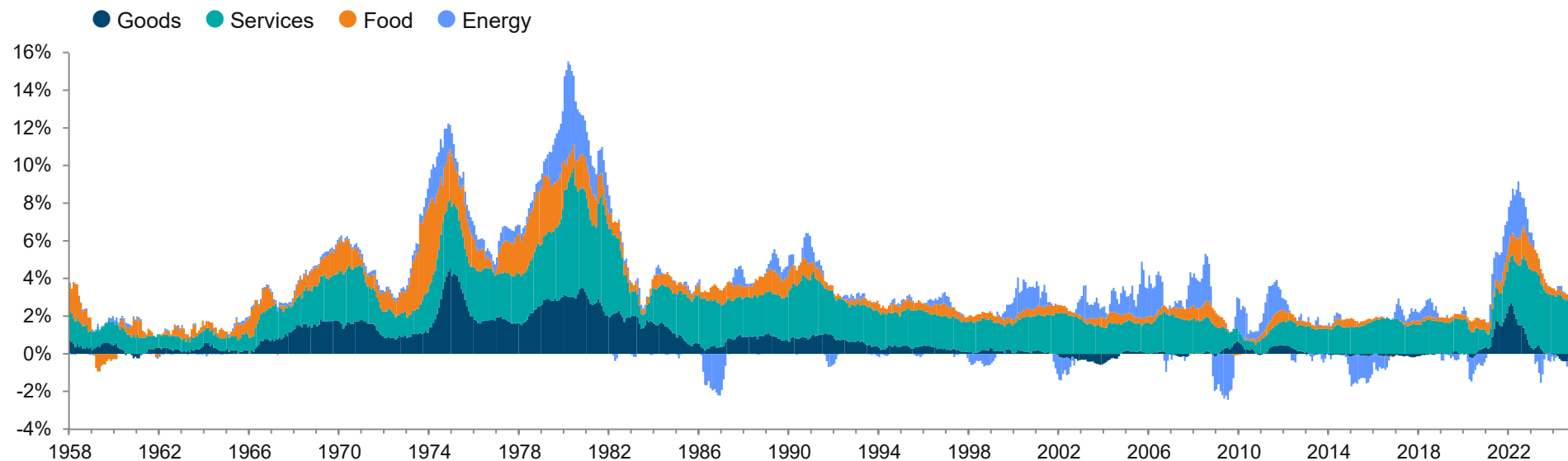
Job Losses (Level in Thousands) and Layoffs



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.

Contributors to Recent Inflation: Primary Categories

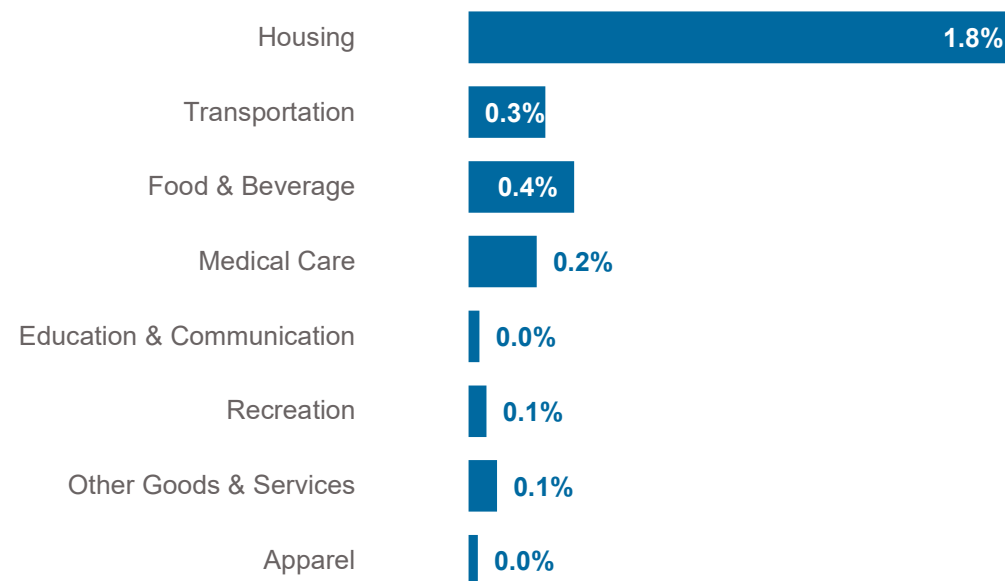
Housing is a broad category that includes Shelter, Fuels and Utilities, and Household Furnishings and Operations as sub-components.

- The Shelter sub-component makes up 36.2% of the overall index and accounted for 57% of December's increase in year-over-year headline CPI.

Energy is not shown in this view of CPI because it is a sub-component of other categories.

- Energy makes up 6.7% of the index and is split roughly evenly between Housing (fuel for powering homes) and Transportation (motor fuel).

Contribution to December 2024 Year-Over-Year Inflation

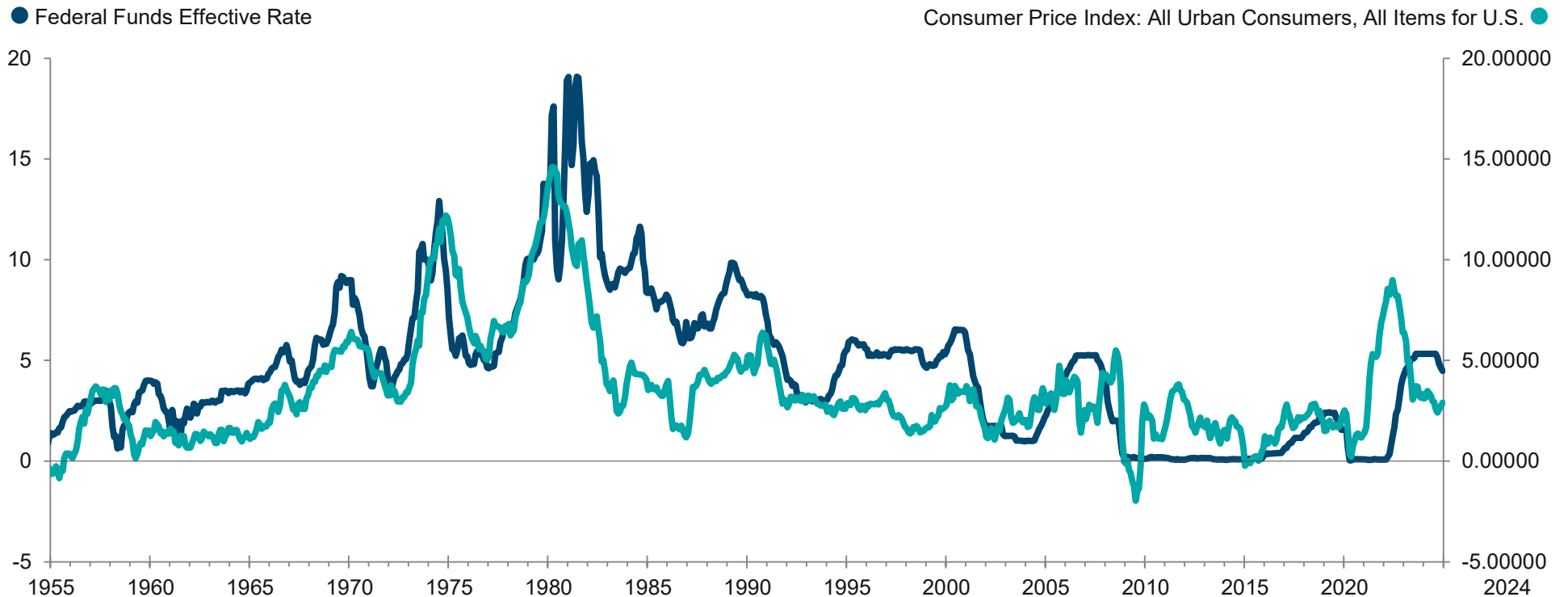


Primary Category	Primary Category Weight	Year-over-Year Change											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
All Items	100.0%	3.1%	3.2%	3.5%	3.4%	3.3%	3.0%	2.9%	2.5%	2.4%	2.6%	2.7%	2.9%
Housing	45.1%	4.6%	4.5%	4.7%	4.5%	4.6%	4.4%	4.4%	4.4%	4.1%	4.2%	4.1%	4.1%
Transportation	15.9%	1.6%	2.7%	4.0%	3.5%	2.9%	1.3%	1.0%	-1.0%	-1.1%	-0.1%	0.5%	1.6%
Food & Bev	14.4%	2.6%	2.2%	2.2%	2.2%	2.1%	2.2%	2.2%	2.0%	2.2%	2.1%	2.3%	2.4%
Medical Care	8.0%	1.1%	1.4%	2.2%	2.6%	3.1%	3.3%	3.2%	3.0%	3.3%	3.3%	3.1%	2.8%
Education & Communication	5.9%	0.0%	0.4%	0.2%	0.4%	0.5%	0.7%	0.9%	1.0%	0.9%	0.8%	0.7%	0.6%
Recreation	5.3%	2.8%	2.1%	1.8%	1.5%	1.3%	1.3%	1.4%	1.6%	0.7%	1.0%	1.5%	1.1%
Other Goods & Svcs	2.9%	5.7%	4.7%	4.7%	4.3%	3.8%	4.2%	4.2%	3.9%	3.5%	3.3%	3.4%	3.3%
Apparel	2.5%	0.1%	0.0%	0.4%	1.3%	0.8%	0.8%	0.2%	0.3%	1.8%	0.3%	1.1%	1.2%

Source: U.S. Bureau of Labor Statistics

Inflation vs. Interest Rates Over the Long Term

Federal Funds vs. Consumer Price Index



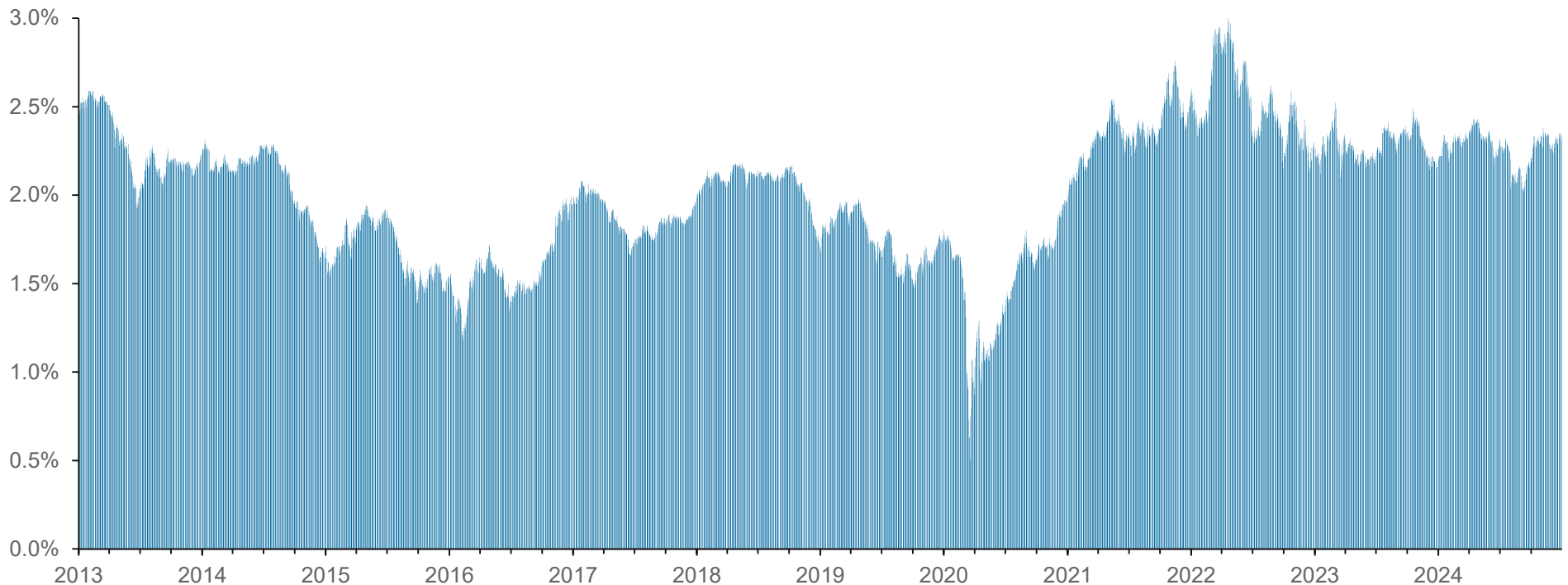
The post-Covid inflation spike capped out at 9% in June 2022, well above the last inflation peak from 2005–08.

- ▶ The gap between inflation and the Fed Funds rate reached an unprecedented level going back to 1955 but closed quickly, as the Fed acted on rates and inflation came down.
- ▶ Yield history suggests that the Fed Funds rate is typically above inflation, not below it, a relationship that has now been restored.

Source: Federal Reserve Bank of St. Louis

10-Year Breakeven Rate: Bond Market Forecast of Inflation

10-Year Breakeven Inflation Rate

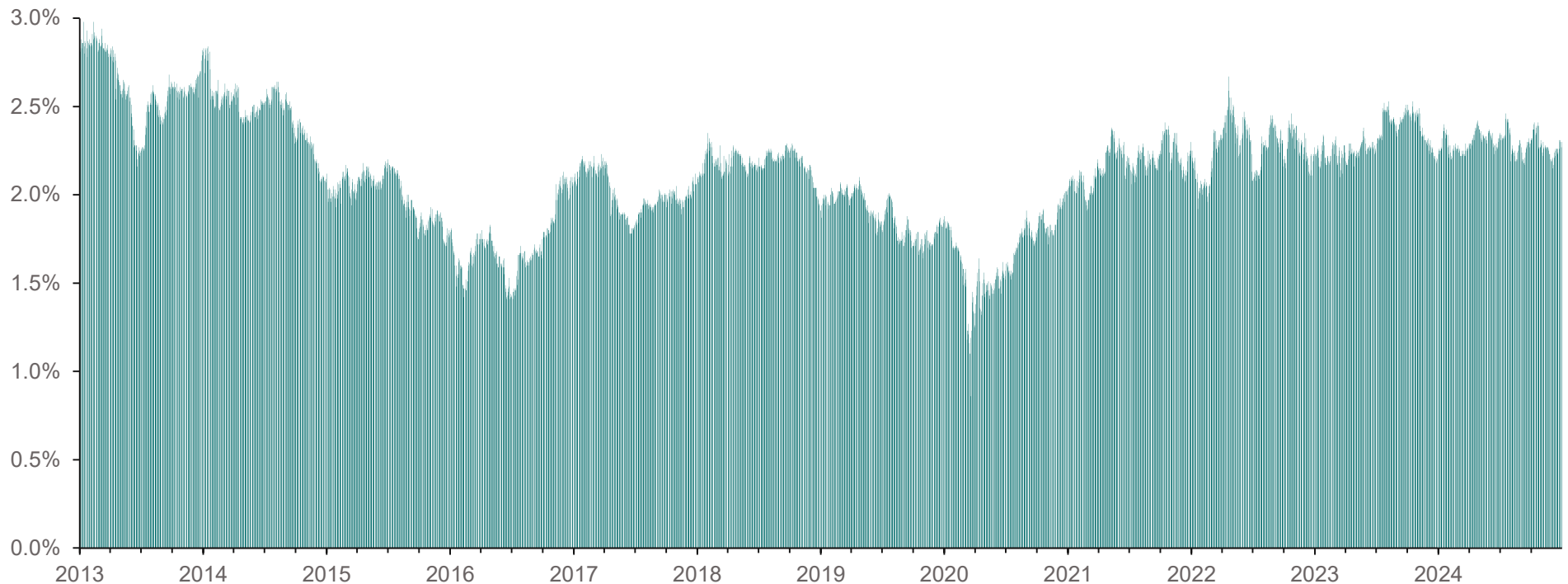


- ▶ 10-year breakeven inflation rate is the difference in yield between the nominal 10-year Treasury and the 10-year Treasury Inflation-Protected Security (TIPS).
 - Includes current higher levels of inflation
 - Extra yield nominal Treasury would have to earn to maintain the same purchasing power as a TIPS investment.
- ▶ Values of implied inflation reached highs of just over 3% in April 2022 but have recently ranged between 2.25% and 2.50%.

Source: Federal Reserve Bank of St. Louis

5-Year, 5-Year Forward Rate: Bond Market Forecast of Inflation

5-Year, 5-Year Forward Inflation Expectation Rate



- The 5-year, 5-year forward rate is the bond market's estimate of the 5-year inflation rate 5 years from now.
 - Excludes current high levels of inflation
- The market inflation expectation for the years 2030 through 2034 is between 2.25% and 2.50% after peaking at 2.7% in April 2022.

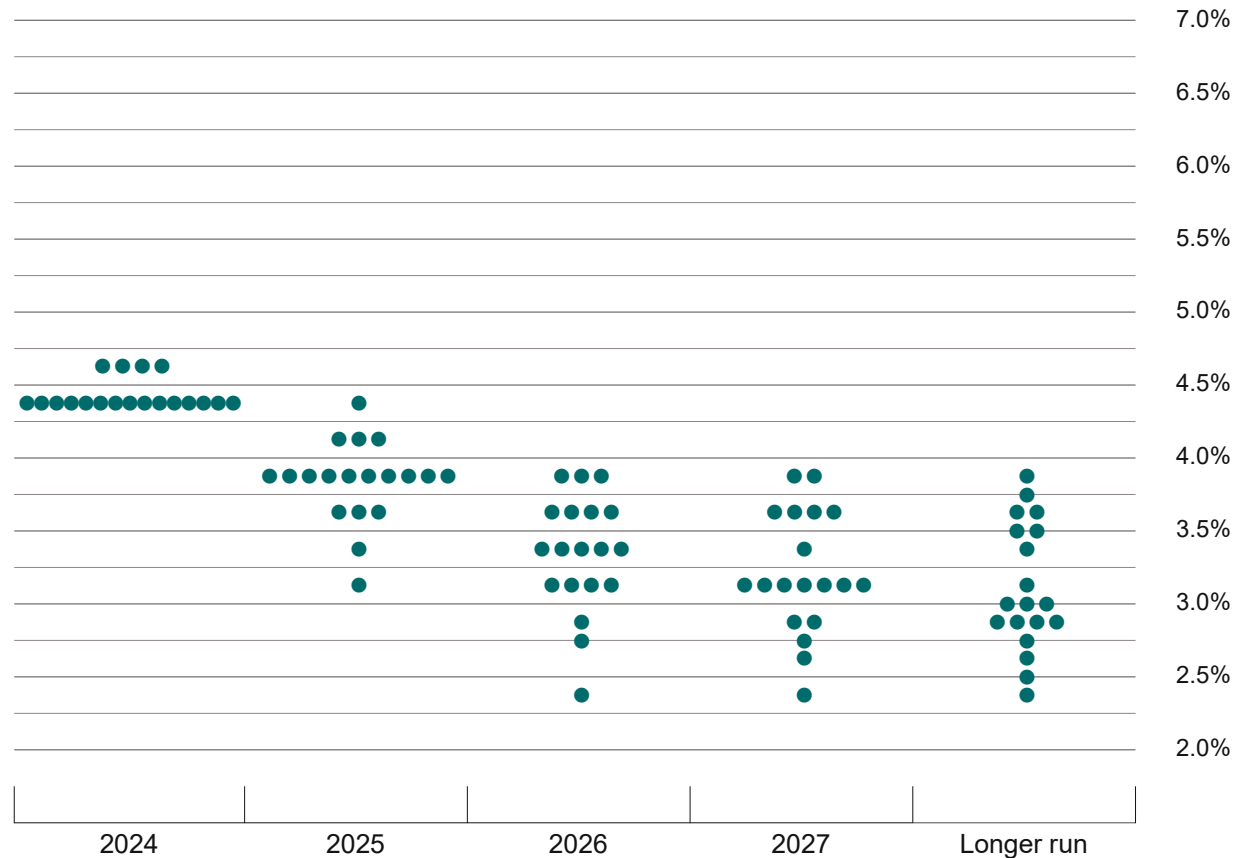
Source: Federal Reserve Bank of St. Louis

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

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.

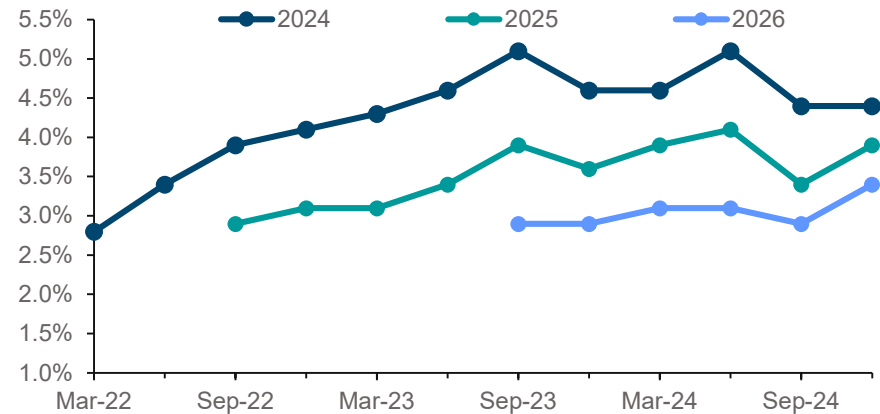
- Long-term neutral rate of 3.0% expected to be hit after 2027.

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

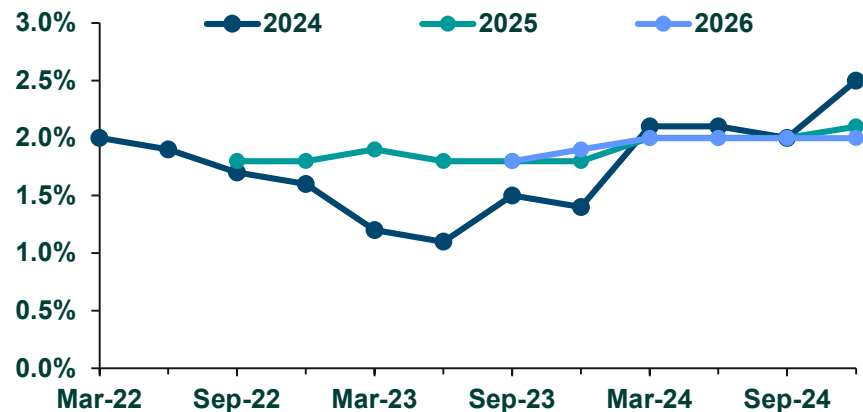
- The Fed now expects 2024 GDP growth to finish at 2.5%.

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

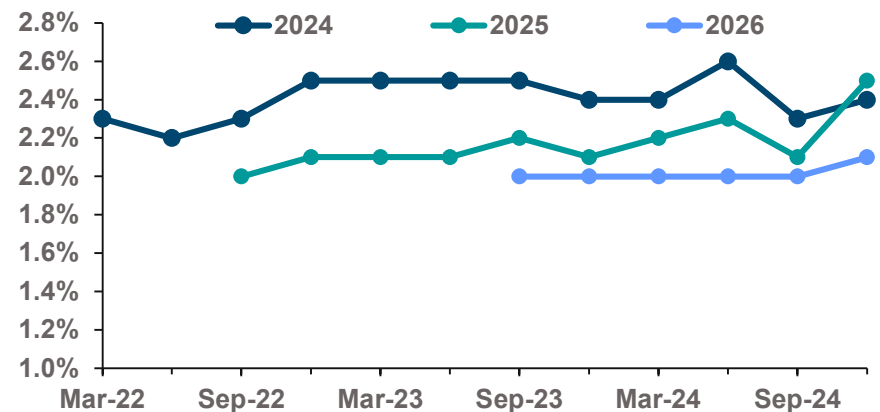
**Fed Projection of Fed Funds Rate
By Fed Meeting Date and Projection Year**



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



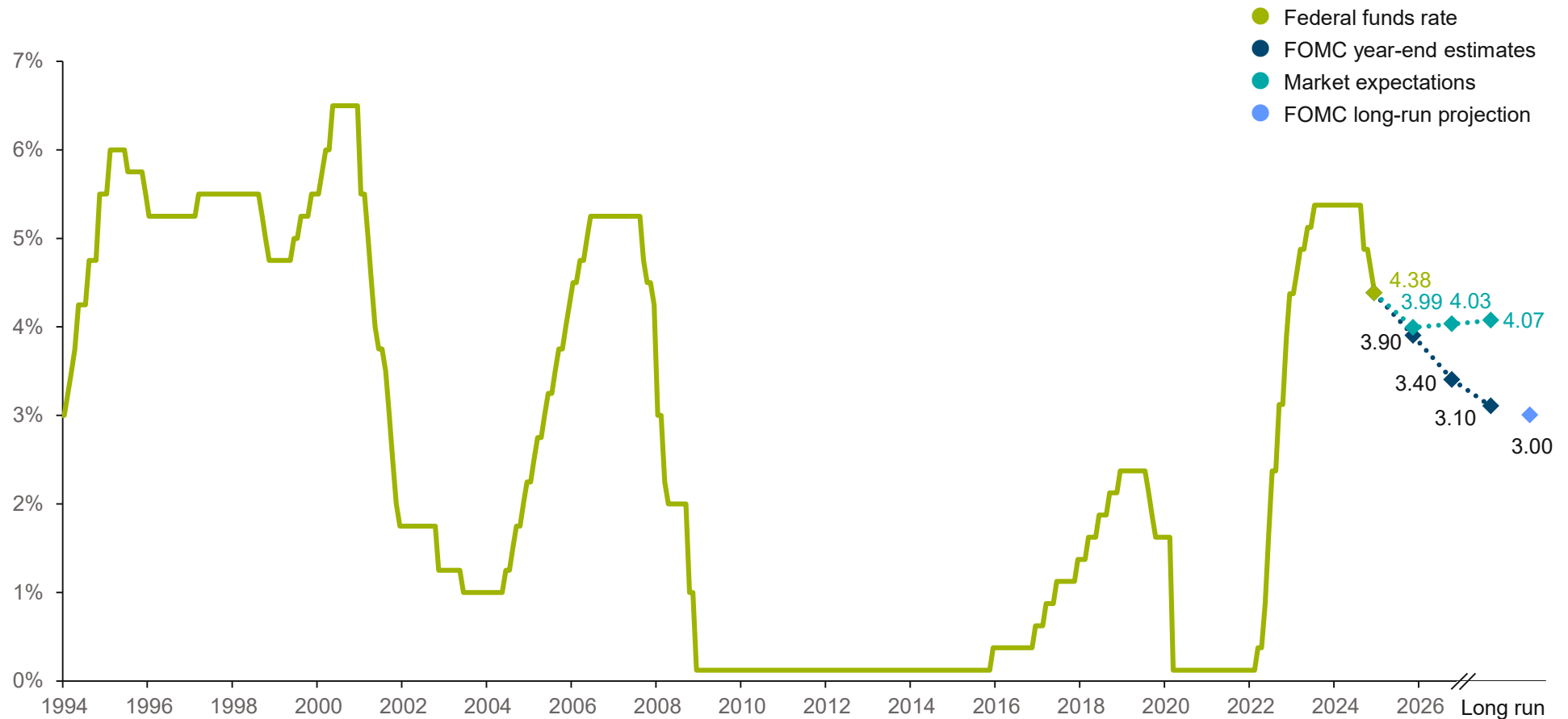
**Fed Projection of Change in PCE Inflation
By Fed Meeting Date and Projection Year**



Source: Federal Reserve, Financial Times

Market and Fed Expectations Diverging

FOMC and market expectations for the federal funds rate



Sources: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management Guide to the Markets – U.S. Data are as of Jan. 9, 2025.

2025 Expectations

Fixed Income

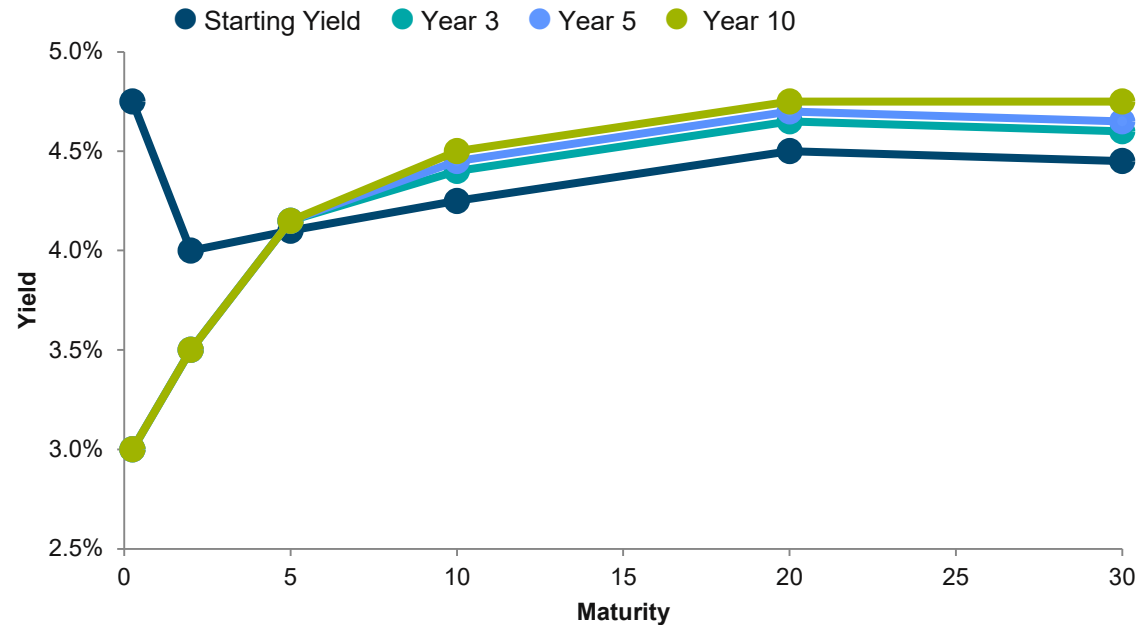
Projected Fixed Income Returns

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%

Shape of Yield Curve at Different Points in Forecast Horizon

Forecasted Yield Curves



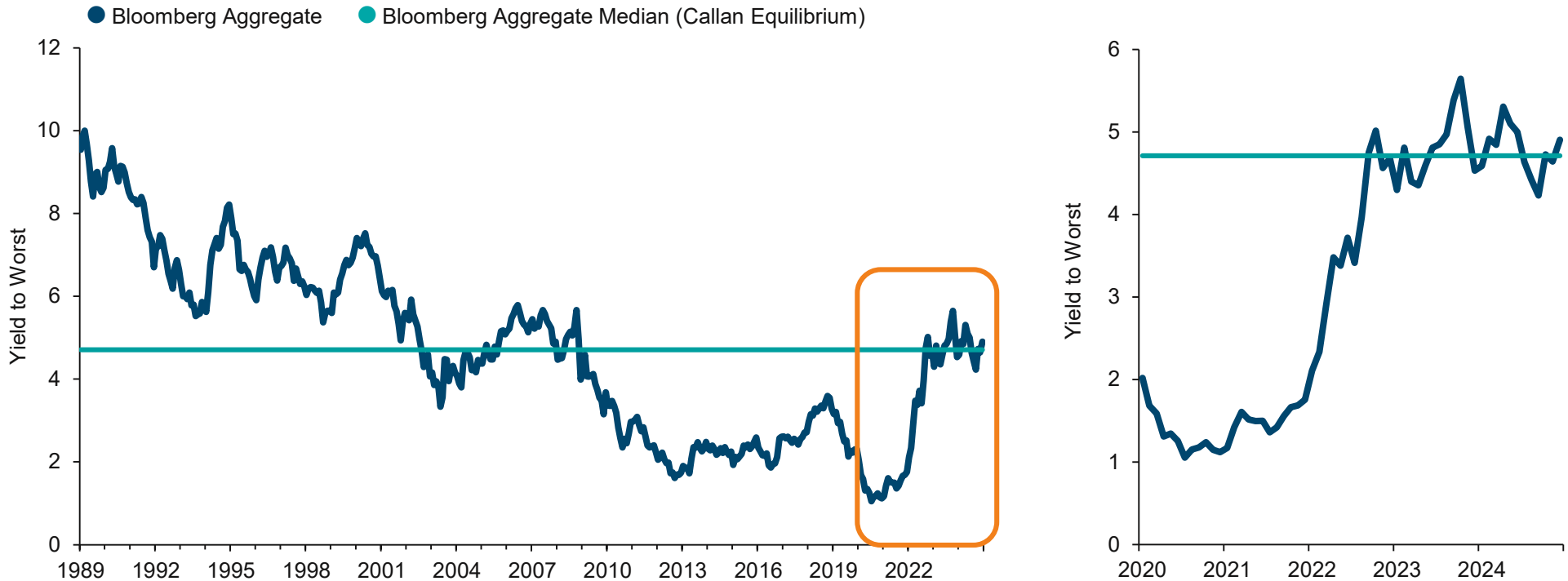
Our fixed income projections assume the yield curve returns to an upward-sloping pattern within the next few years.

Short rates fall to Callan's equilibrium while intermediate and longer rates rise to equilibrium.

	3 Month	2 Year	5 Year	10 Year	20 Year	30 Year
Forecast Year 0	4.75	4.00	4.10	4.25	4.50	4.45
Forecast Year 3	3.00	3.50	4.15	4.40	4.65	4.60
Forecast Year 5	3.00	3.50	4.15	4.45	4.70	4.65
Forecast Year 10 (Equilibrium Reached)	3.00	3.50	4.15	4.50	4.75	4.75

Drowning Out the Noise

Historical Yield

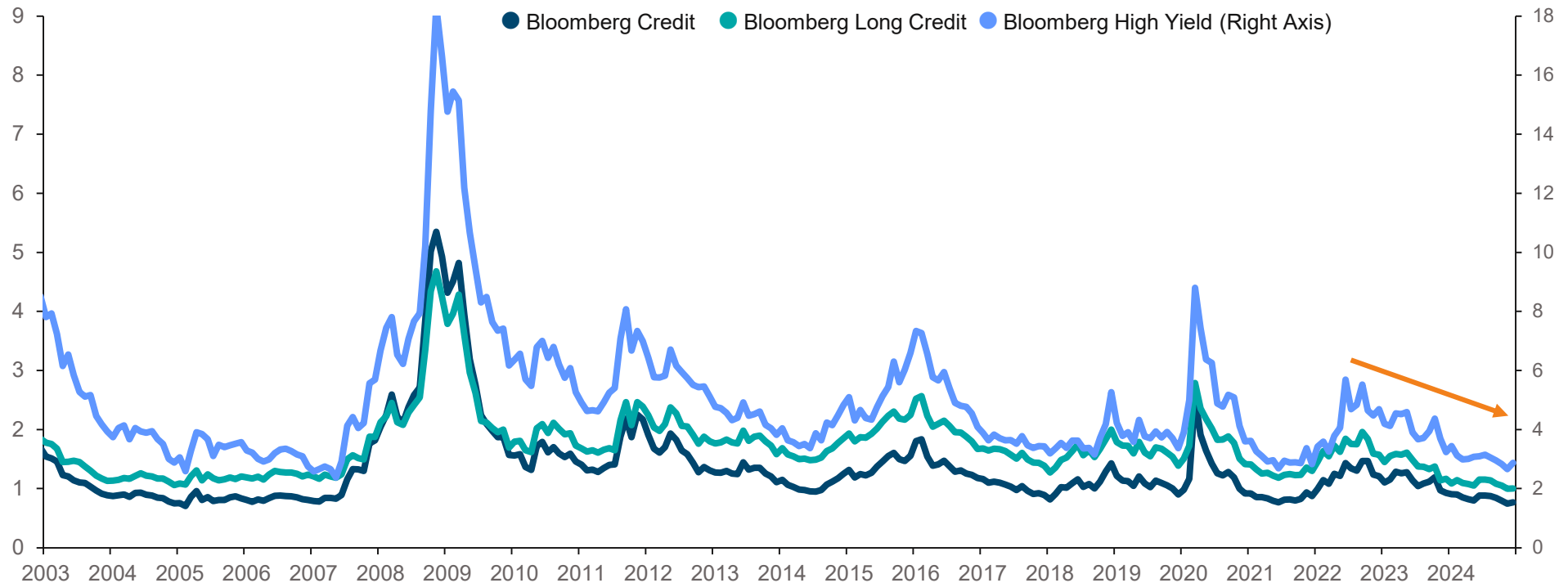


There has been a lot of rate volatility, but rates have been range-bound around our equilibrium.

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

Spreads Act as a Headwind

Historical Option Adjusted Spreads (OAS)



Spreads are at some of the tightest levels they have been in the last 20+ years as the risk-on mentality in the stock market has carried over into bonds.

We assume spreads will widen to levels consistent with long-term history, which is a headwind to returns.

– This is akin to a valuation adjustment in equities.

Callan

2025 Expectations

Equity

Equity Forecasts

Overview

Fundamental Relationship

$$\text{Equity Return} = \text{Capital Appreciation} + \text{Income} + \text{+/- Valuation Adjustment}$$

The diagram illustrates the components of the equity return equation. Below 'Capital Appreciation', a bracket connects it to 'Real Earnings Growth + Inflation'. Below 'Income', a bracket connects it to 'Dividend Yield + Net Share Buybacks'.

Building up U.S. equity (S&P 500) returns from long-term fundamentals, we arrive at 7.25%.

Real earnings growth is linked to real GDP growth over long horizons; we forecast U.S. real GDP of 2.50% over the next decade.

Inflation (CPI-U) is forecasted at 2.50% over the next 10 years.

- Slightly above the Fed's inflation target of 2%
- Realized inflation over the past quarter century is 2.6%
- In line with the market-based forecast of breakeven inflation (yield difference between Treasuries and TIPS)

Income return of 2.50% from dividend yield and share buybacks

U.S. equity valuation adjustment of -0.25% as current valuations exceed historical norms

Small premium for global ex-U.S. over U.S. stems from emerging market growth potential.

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.

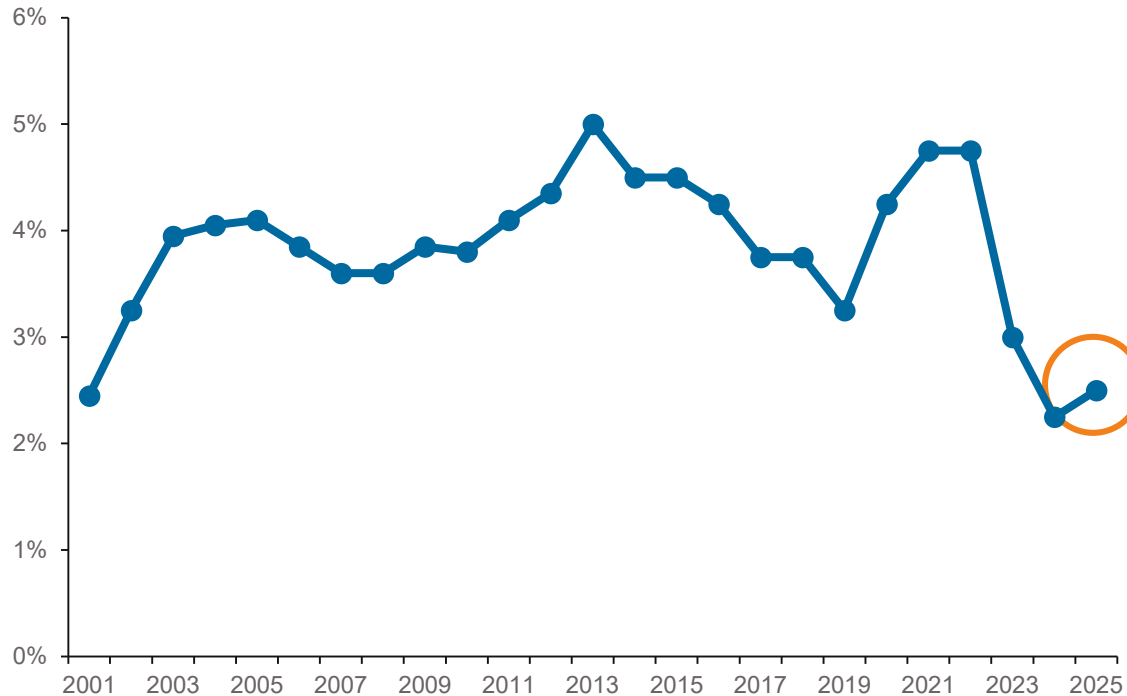
U.S. companies tend to deliver more return from earnings growth than from return of capital via dividends or buybacks.

- 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

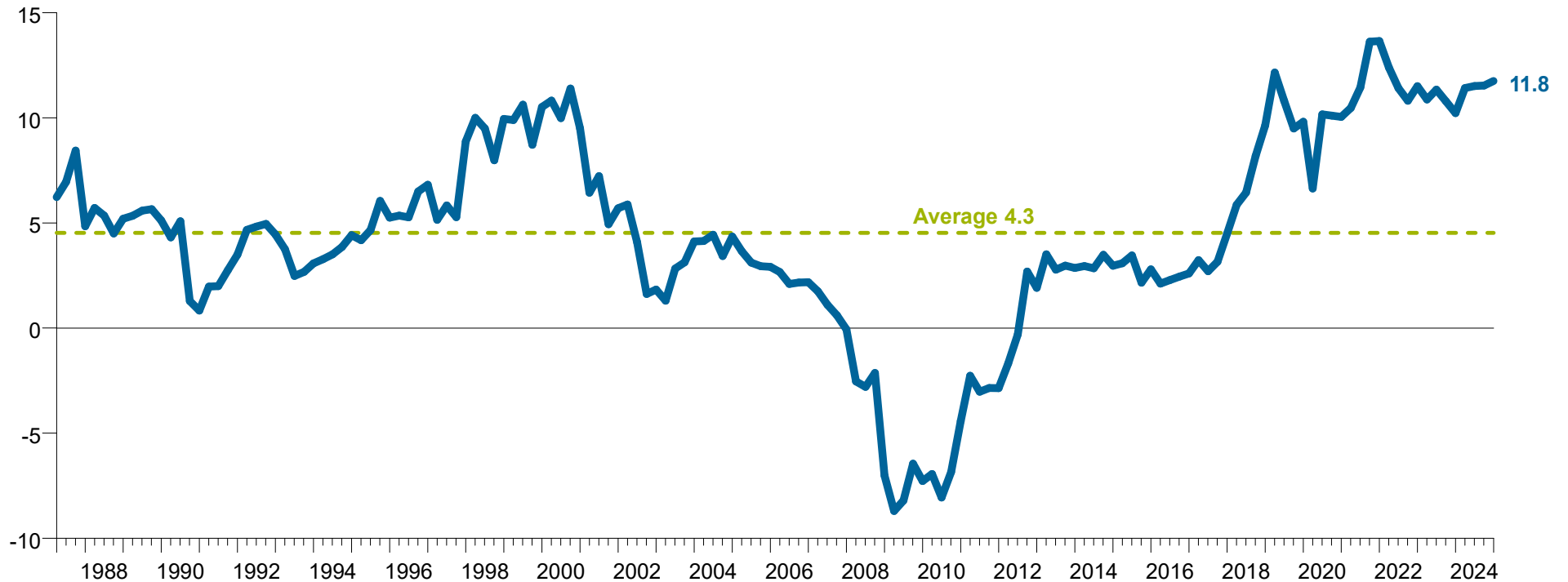


Callan's forecasted return spread between the S&P 500 and the Bloomberg Aggregate (2.50%) remains narrow.

Forecasts are annualized over 10 years.

Historical Equity Risk Premium Over Bonds

S&P 500 Rolling 40 Quarter Excess Return Relative to Bloomberg Aggregate



- Our 2.50% equity risk premium over core bonds is low relative to the historical average of 4.3%, but the premium has been volatile and 2.50 is within the historical range

Sources: Bloomberg, S&P Dow Jones Indices

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).

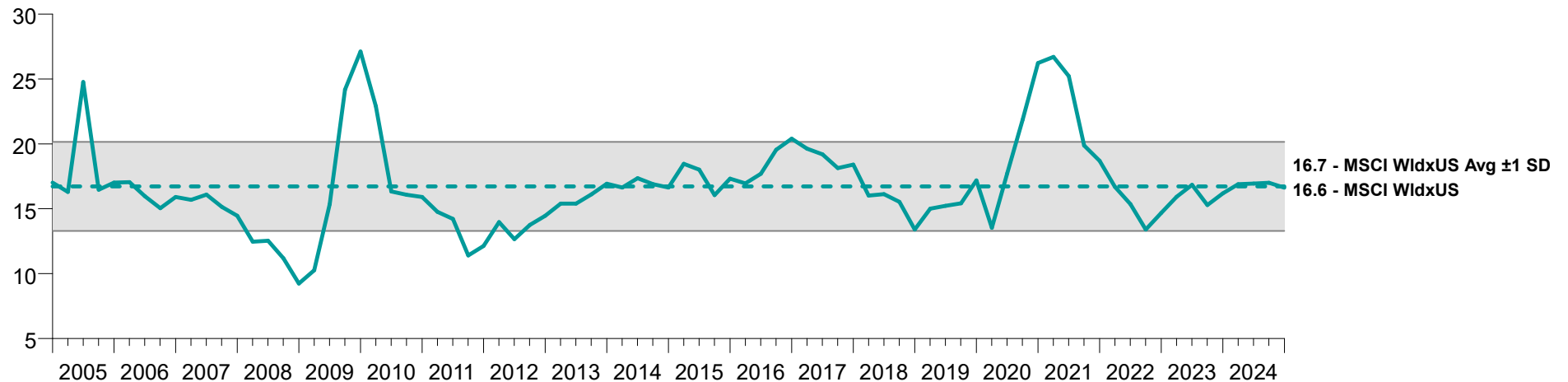
Source: FactSet, FRB, Refinitiv Datastream, Robert Shiller, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.

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.

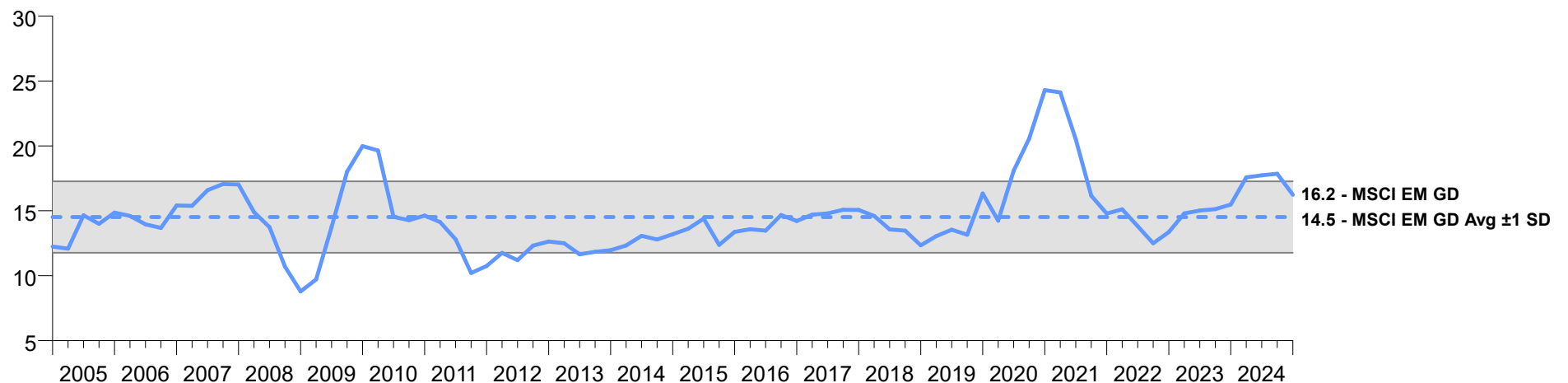
Equity Forecasts

In contrast, global ex-U.S. equity markets appear less stretched than the U.S.

Developed Markets ex-U.S. Price/Earnings Ratio (inc neg)



Emerging Markets Price/Earnings Ratio (inc neg)

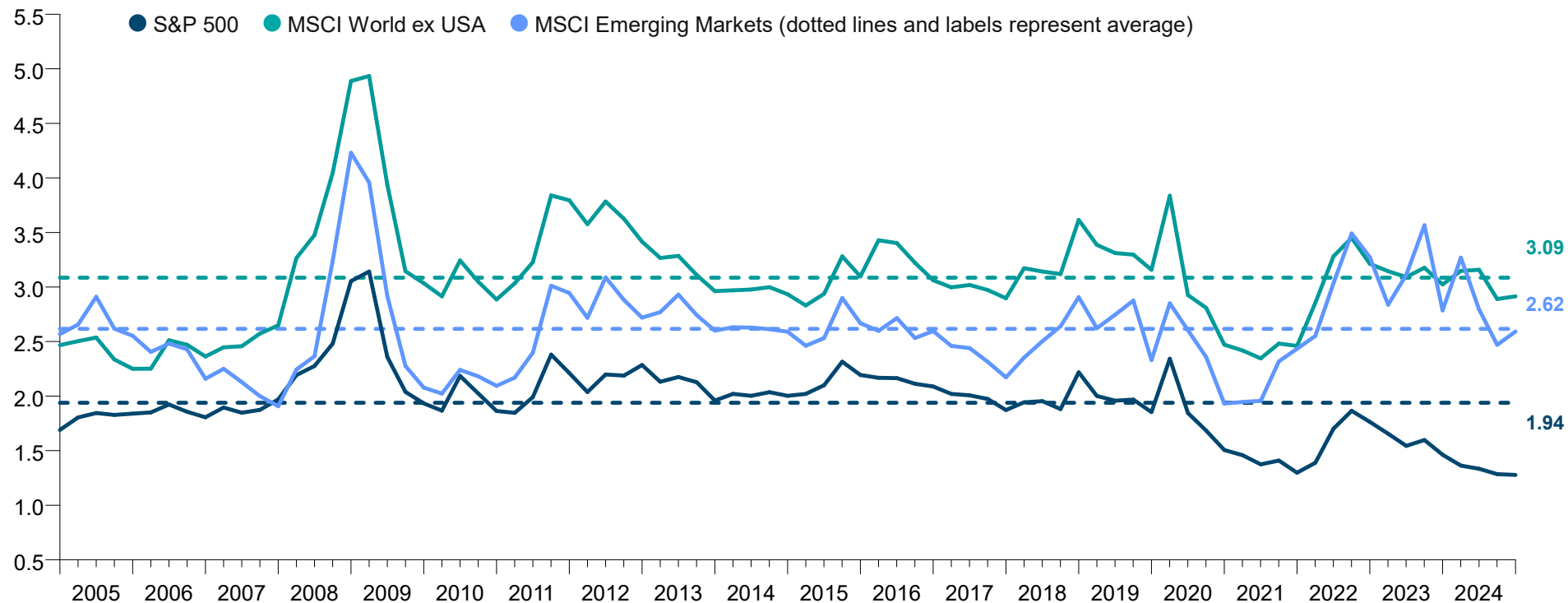


P/E measure is one year trailing.

Equity Forecasts

Dividend yields (past 20 years)

Dividend Yield for 20 Years Ended December 31, 2024



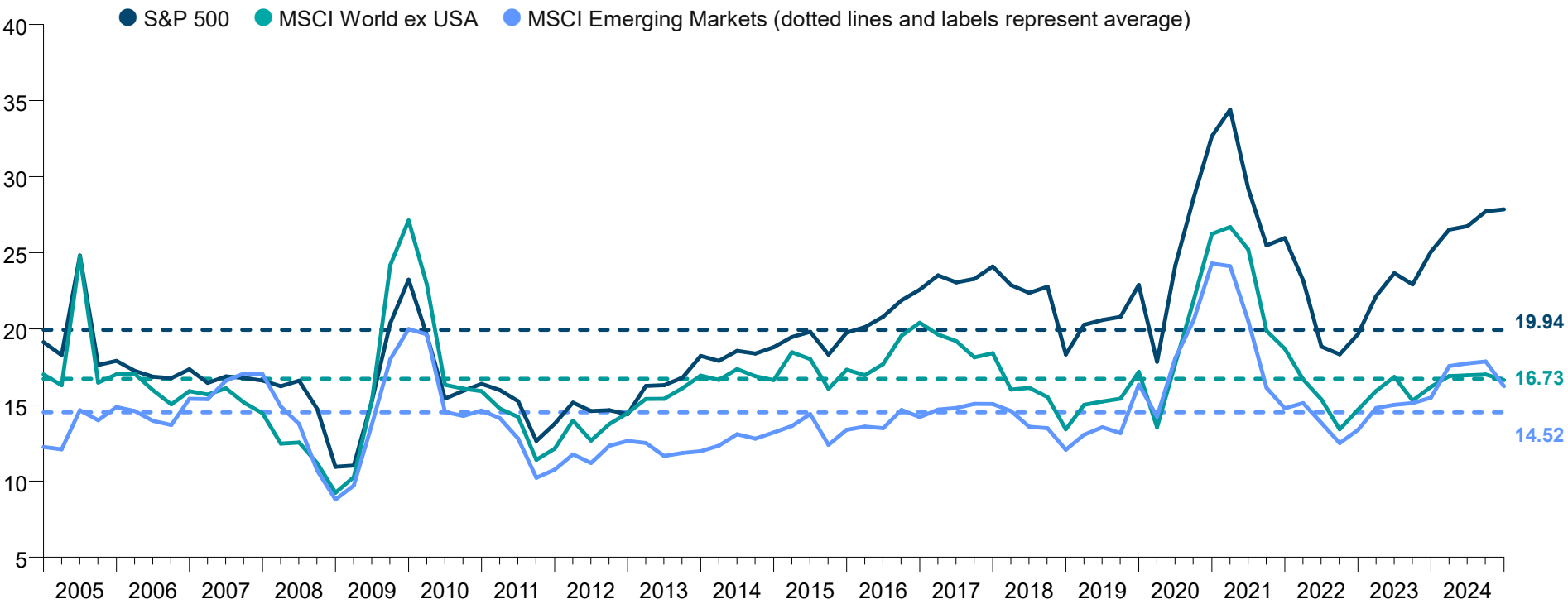
Global ex-U.S. equity has consistently provided higher dividend yields than U.S. equity.

Dividend yield measure is one-year trailing.

Equity Forecasts

Price / Earnings Ratio

Price/Earnings Ratio (inc neg) for 20 Years Ended December 31, 2024



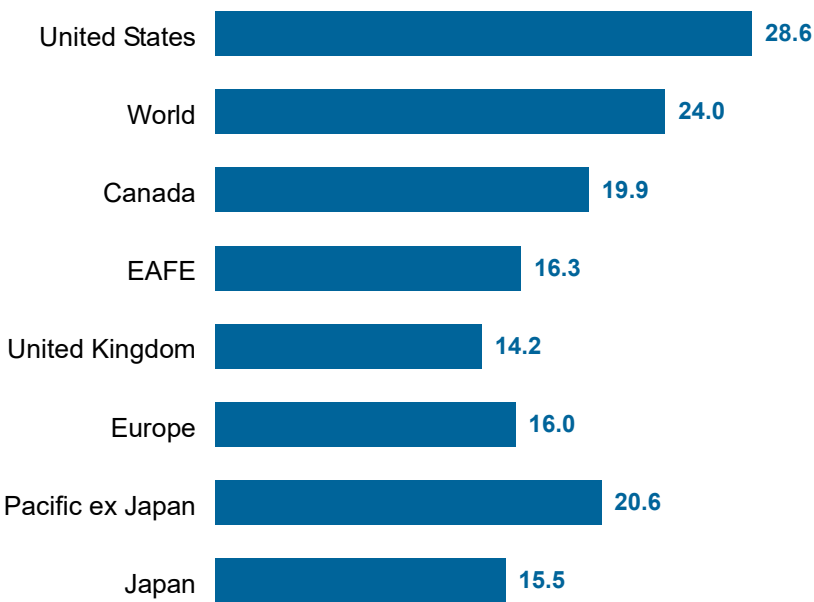
U.S., developed, and emerging price/earnings are broadly consistent with historical averages

P/E measure is one year trailing.

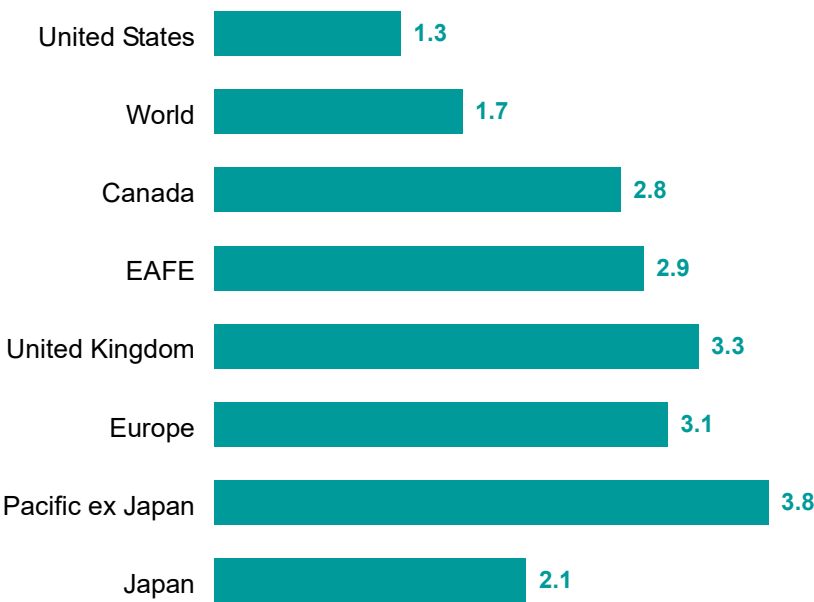
Global ex-U.S. Equity Assumptions

Developed market valuations and dividend yield

Price Earnings Ratio



Dividend Yield



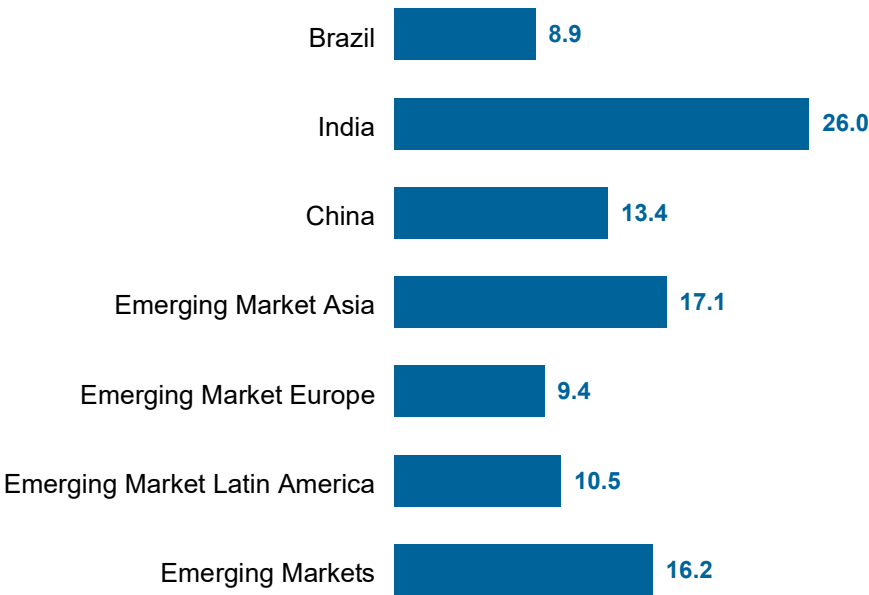
Valuations have increased in most developed markets, especially the United States.
Dividend yields continue to decline.

Source: MSCI (Dec. 31, 2024)

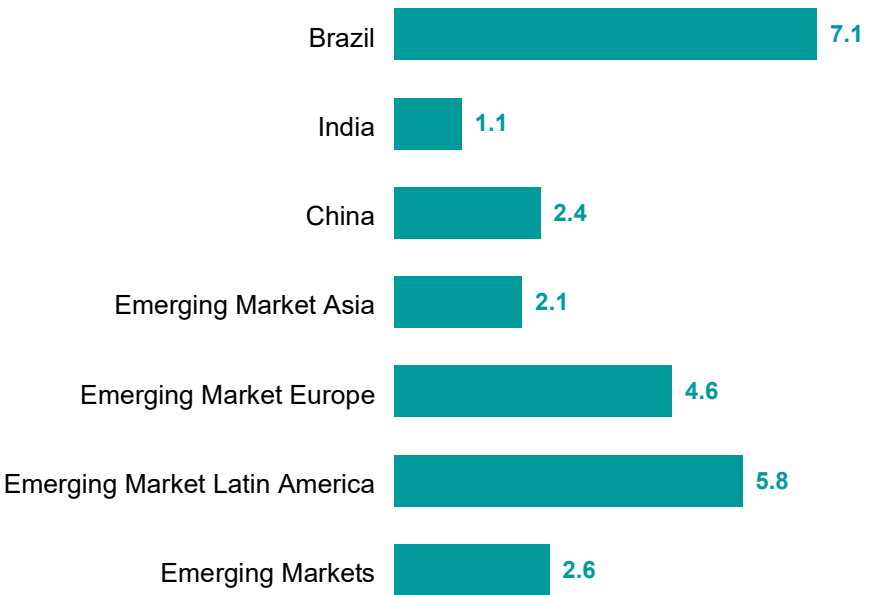
Global ex-U.S. Equity Assumptions

Emerging market valuations and dividend yield

Price Earnings Ratio



Dividend Yield



Emerging market valuations increased over 2024.
Dividend yields declined across most emerging market indices.

Source: MSCI (Dec. 31, 2024)

Callan

2025 Expectations

Alternatives

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.

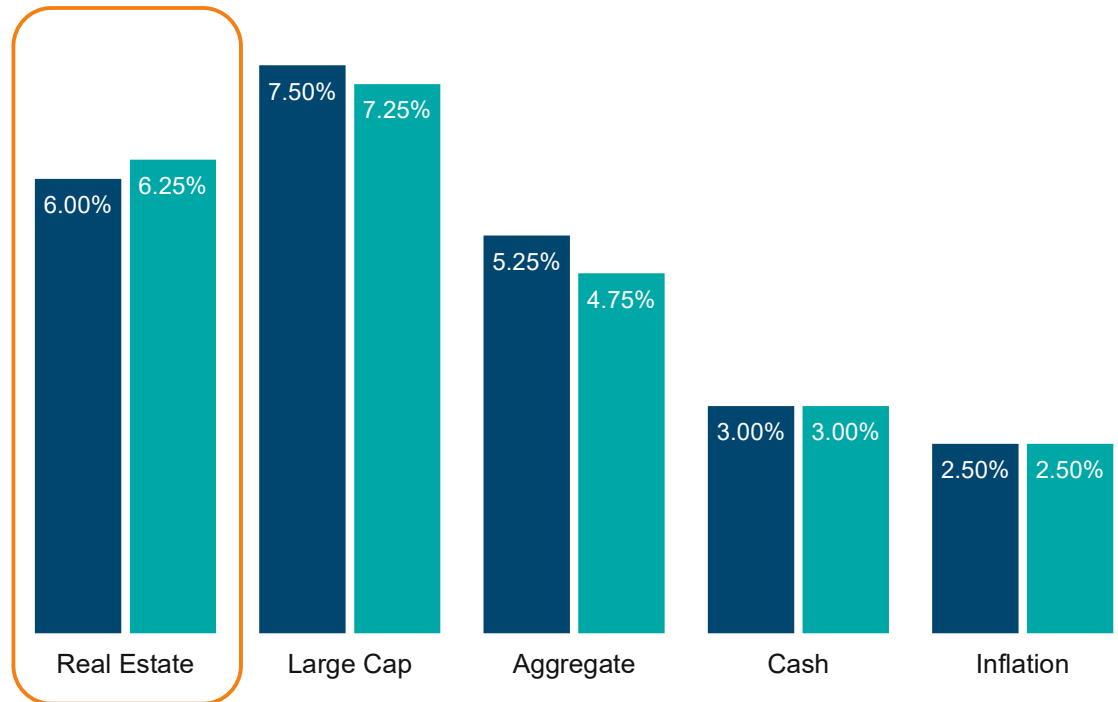
While real estate, especially within offices, could continue to face headwinds in the short-term, recent price declines could make more attractive entry points available for long-term investors.

Slight increase in real estate returns compared to last year

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

Return Projections

● 2024 ● 2025



Source: Callan, NCREIF NPI index

Core Real Estate

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

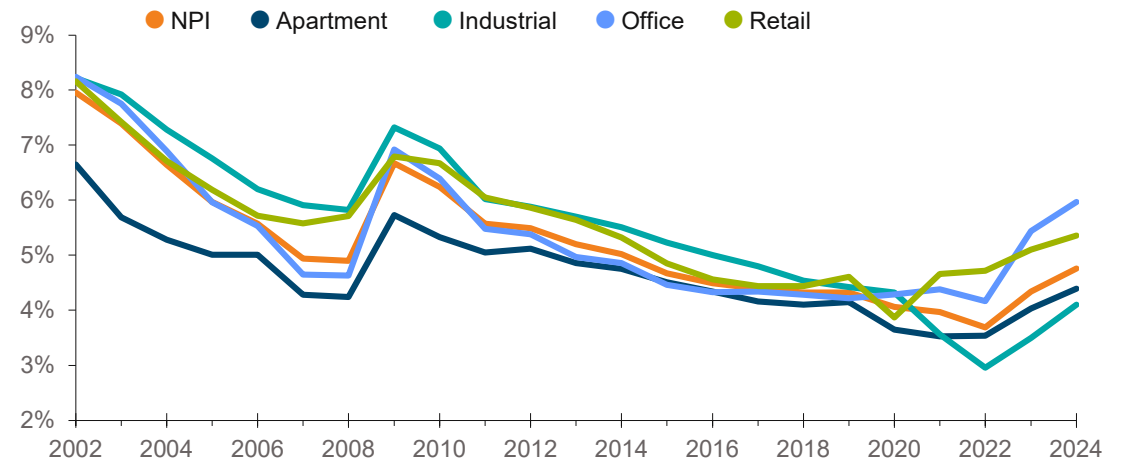
Return calculations assume 5.3% cost of leverage and 0.5x debt-to-equity (33% loan-to-value)

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.

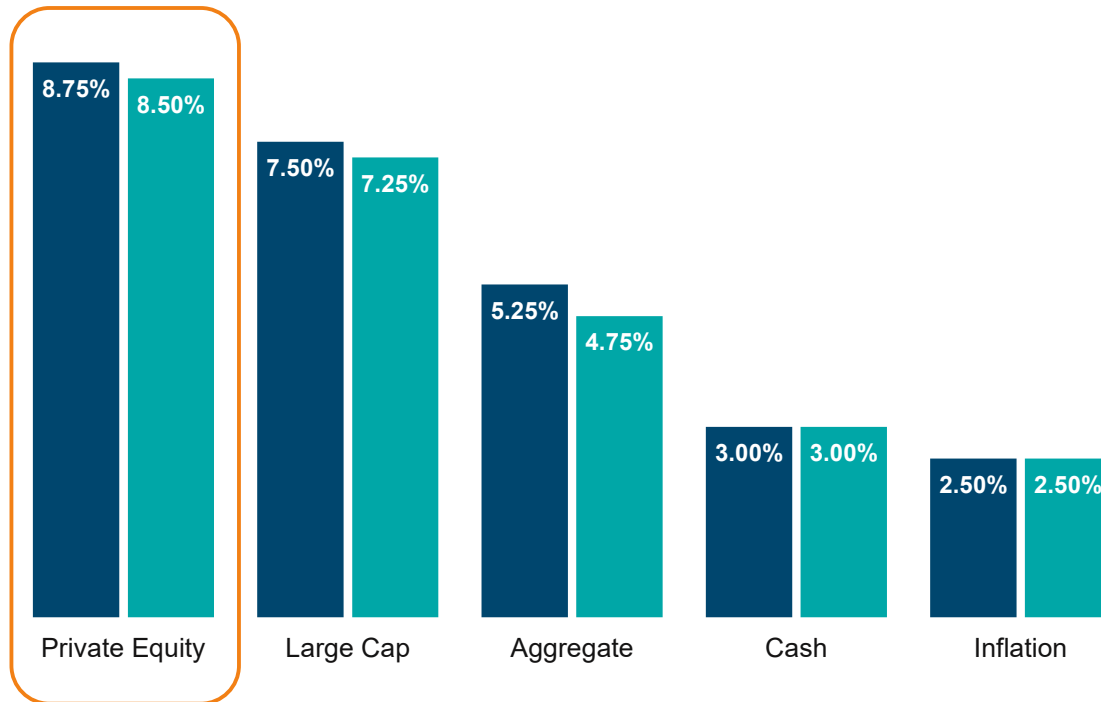
Private equity performance expectations fell in line with public equity expectations.

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)

Return Projections

● 2024 ● 2025



Source: Callan

Private Credit

Background

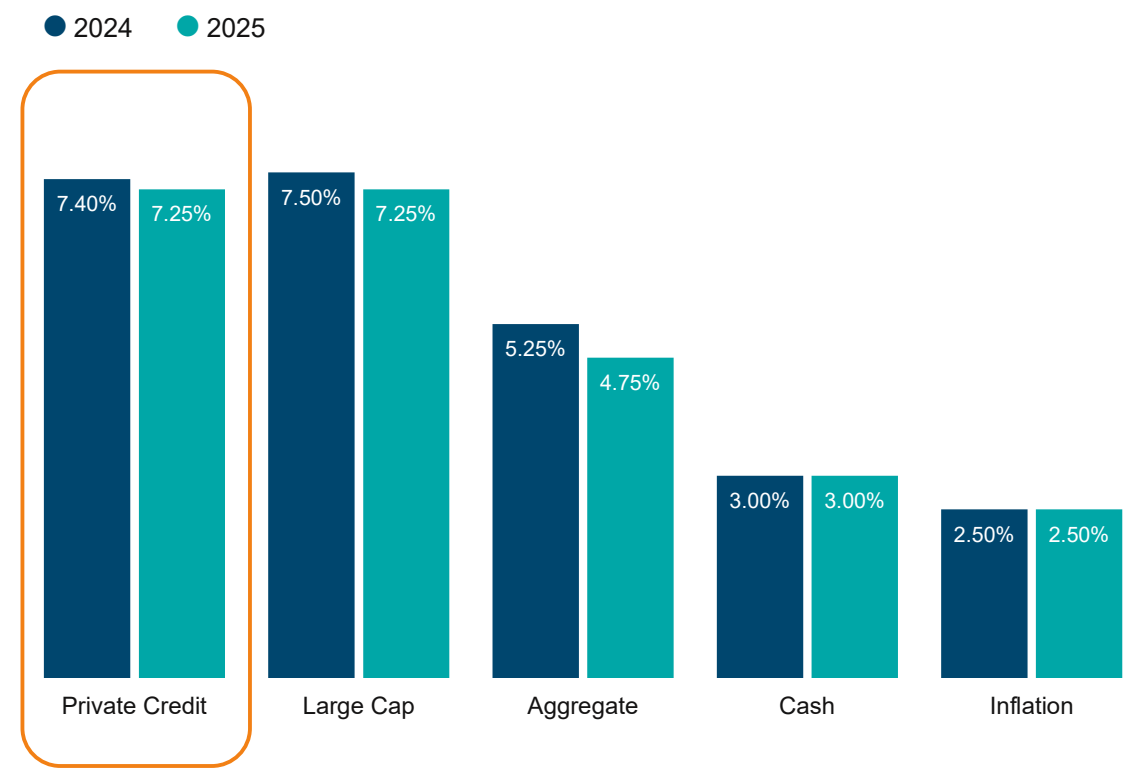
Return projection is anchored on middle market direct lending, where yields have fallen along with public fixed income yields.

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

Private Infrastructure

Background

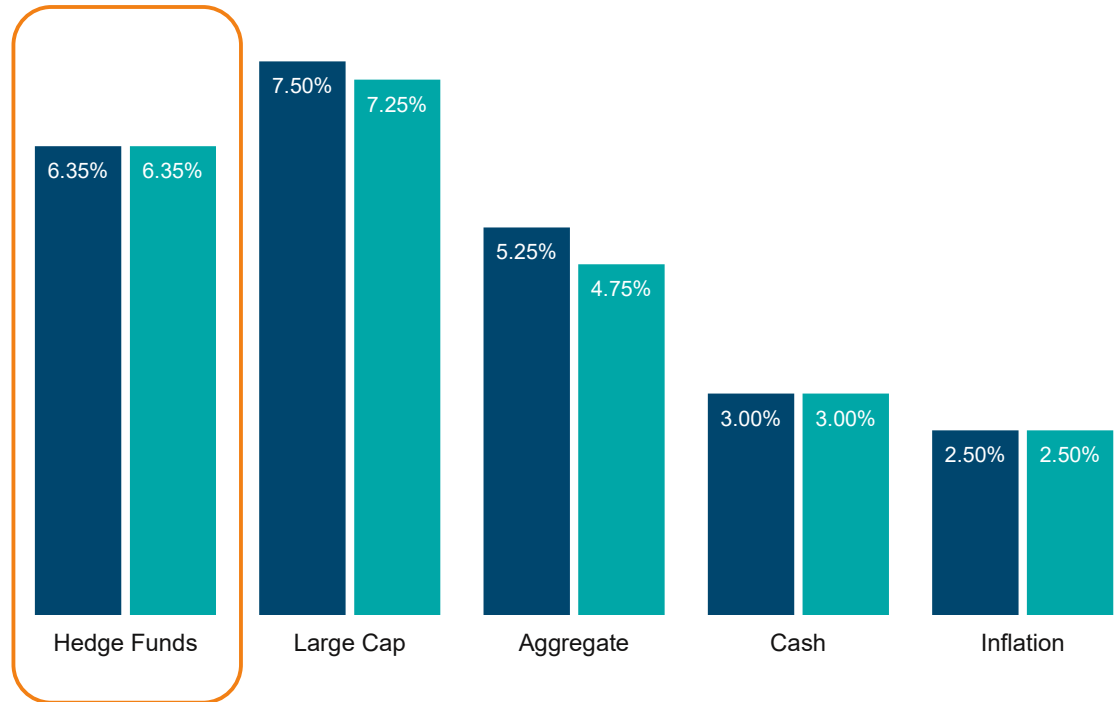
Infrastructure has characteristics of equity (ownership and appreciation) and bonds (income from fees, tolls, rent). Infrastructure typically levers steady cash flows with some unique element of monopoly of service, regulated rates or priority access to dedicated capital, like roads, tolls, airports, telecommunication, power supply.

Infrastructure shares elements of investing with private equity (closed- and open-end funds) and real estate.

Infrastructure has not been subject to the level of volatility that has hit real estate. Returns were held constant to those projected in 2024, with a slight bump up in the yield. Valuations haven't entirely caught up to the increased yields from inflation pass through.

Return Projections

● 2024 ● 2025



**2025 infrastructure return projection:
6.35% (unchanged from 2024)**

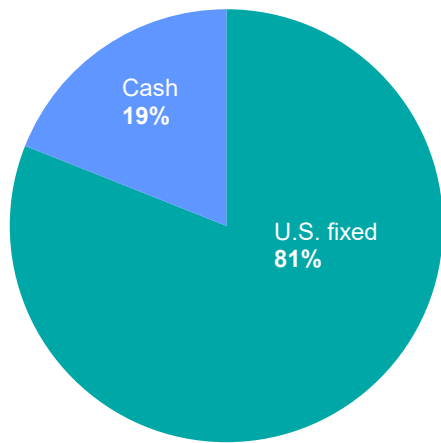
Source: Callan

Callan

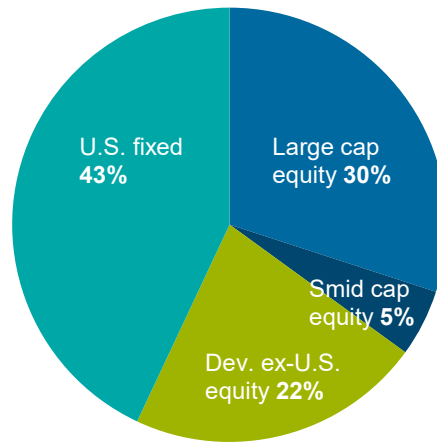
Appendix

7% Expected Returns Over Past 30 Years

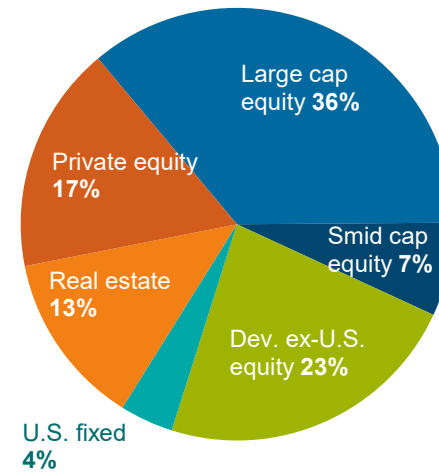
Increasing Complexity →



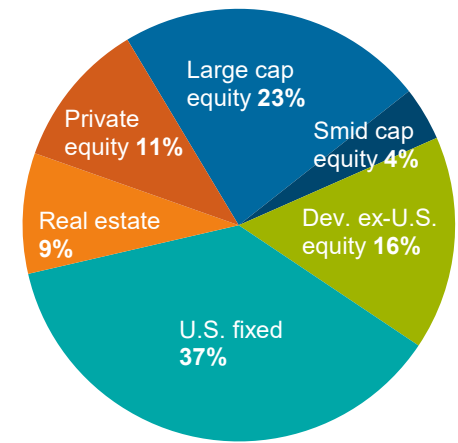
1995
Return: 7.0%
Risk: 4.9%



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.

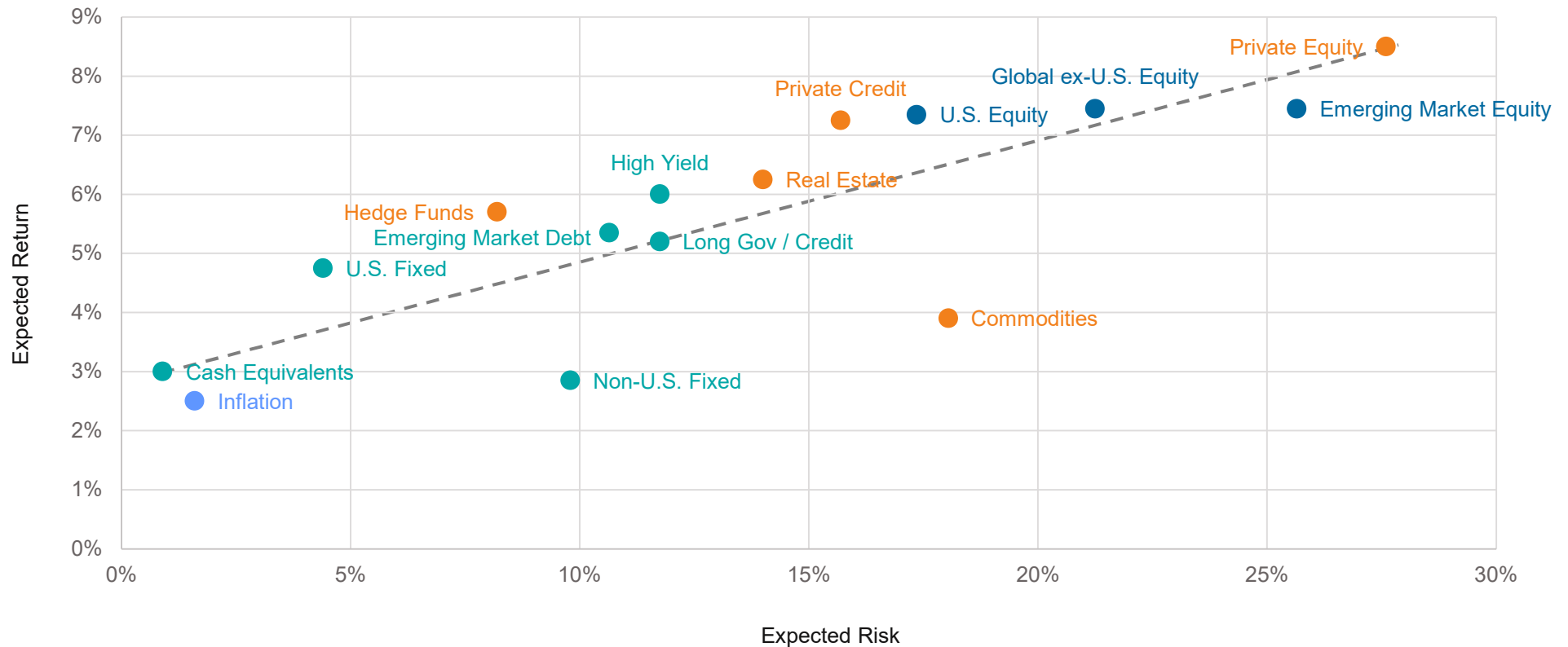
15 years later, an investor would have needed over half of the portfolio in public equities to achieve a 7% projected return, with double the portfolio volatility of 1995.

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.

Risk Aversion

Visualizing Callan's 2025–2034 Capital Market Assumptions



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

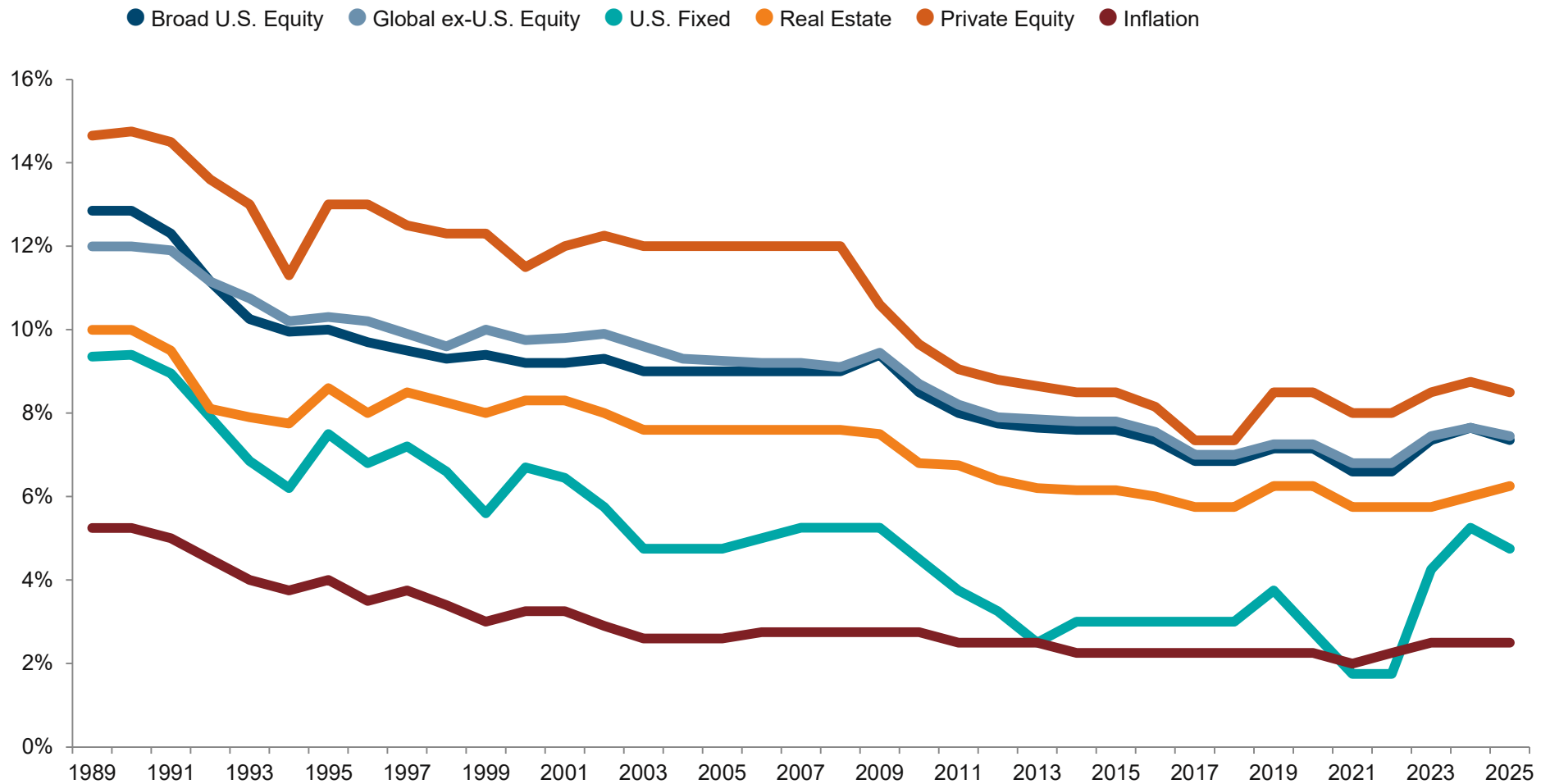
2025–2034 Callan Capital Markets Assumptions Correlations

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		
	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		

Source: Callan

Return Projections: Major Asset Classes

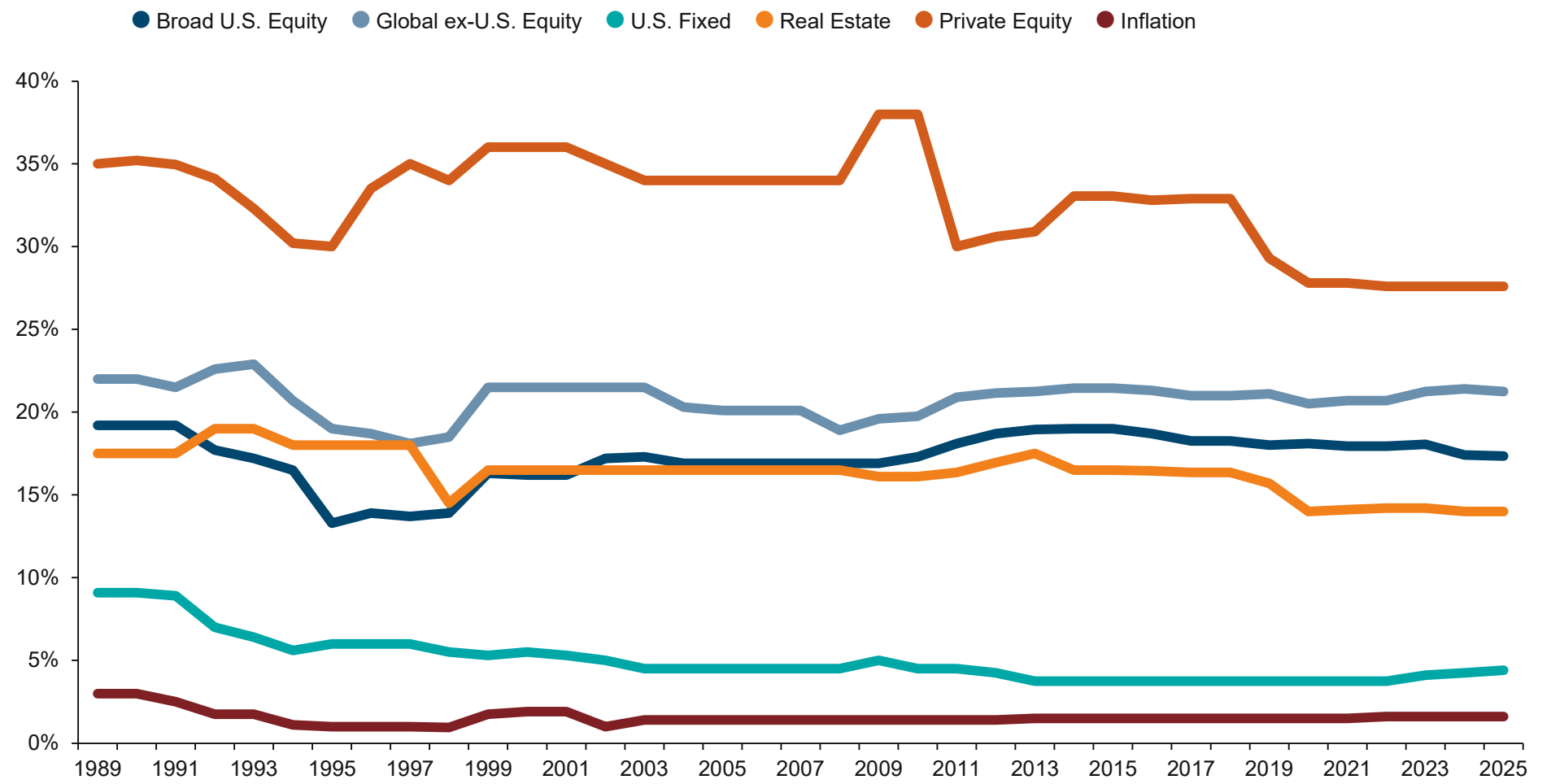
1989–2025



Source: Callan

Risk Projections: Major Asset Classes

1989–2025



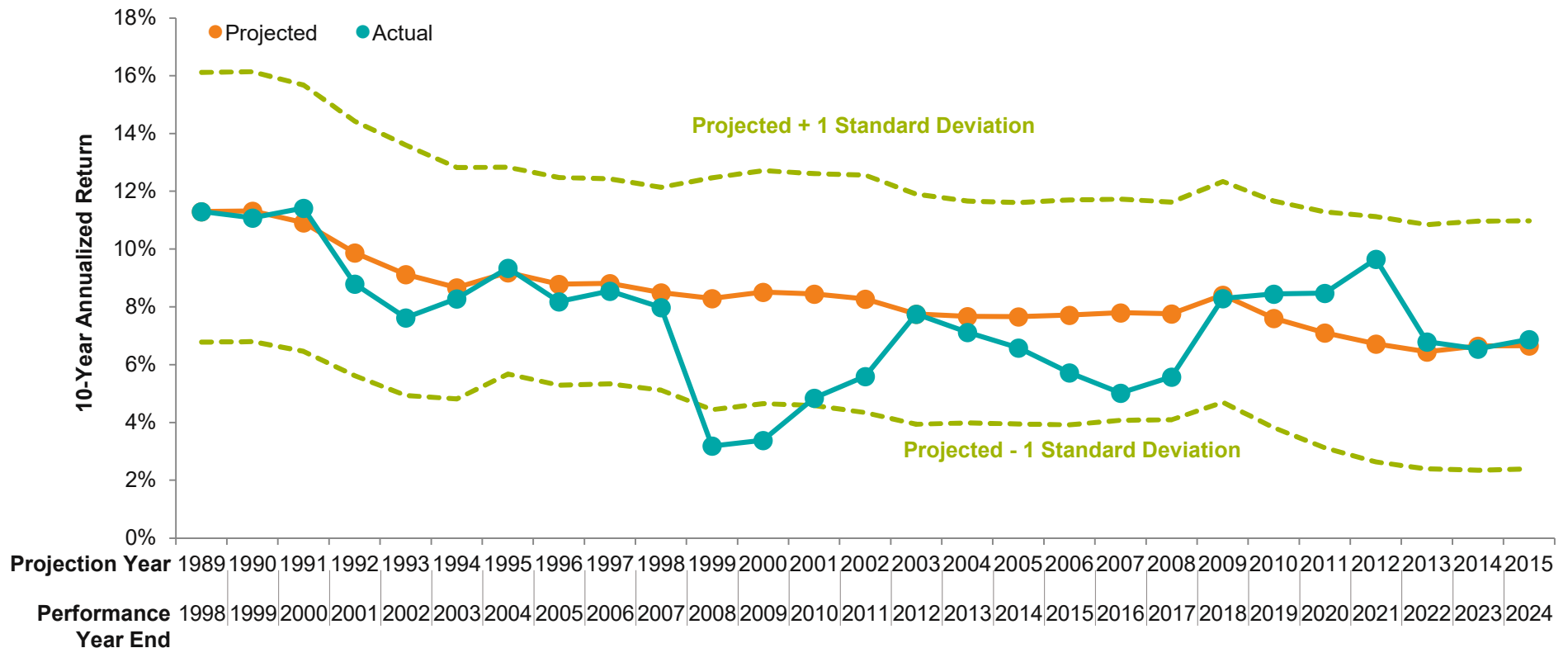
Source: Callan

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

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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.

About Callan

Callan was founded as an employee-owned investment consulting firm in 1973. Ever since, we have empowered institutional investor with creative, customized investment solutions backed by proprietary research, exclusive data, and ongoing education. Today, Callan provides advisory services to institutional investor clients with more than \$3 trillion in total assets, which makes it among the largest independently owned investment consulting firms in the U.S. Callan uses a client-focused consulting model to serve pension and defined contribution plan sponsors, endowments, foundations, independent investment advisers, investment managers, and other asset owners. Callan has six offices throughout the U.S. For more information, please visit www.callan.com.



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Callan

Callan's 2023 vs 2025 CMAs

Asset Class		2023 CMAs		2025 CMAs		2025 minus 2023	
		10-Yr Geometric Return	10-Yr Standard Deviation	10-Yr Geometric Return	10-Yr Standard Deviation	10-Yr Ret. Difference	10-Yr Risk Difference
Equities							
Global Equity	MSCI ACWI	7.60%	18.35%	7.60%	19.40%	0.00%	1.05%
Broad US Equity	Russell 3000	7.35%	18.05%	7.35%	17.35%	0.00%	-0.70%
Large Cap US Equity	S&P 500	7.25%	17.75%	7.25%	17.00%	0.00%	-0.75%
Small/Mid Cap US Equity	Russell 2500	7.45%	22.15%	7.45%	22.00%	0.00%	-0.15%
Global ex-US Equity	MSCI ACWI ex USA	7.45%	21.25%	7.45%	21.25%	0.00%	0.00%
Developed ex-US Equity	MSCI World ex USA	7.25%	20.15%	7.25%	20.15%	0.00%	0.00%
Emerging Market Equity	MSCI Emerging Markets	7.45%	25.70%	7.45%	25.65%	0.00%	-0.05%
Fixed Income							
Cash Equivalents	90-Day T-Bill	2.75%	0.90%	3.00%	0.90%	0.25%	0.00%
Short Duration Gov't/Credit	Bloomberg Barclays 1-3 Yr G/C	3.80%	2.30%	4.00%	2.40%	0.20%	0.10%
Core US Fixed	Bloomberg Barclays Aggregate	4.25%	4.10%	4.75%	4.40%	0.50%	0.30%
High Yield	Bloomberg Barclays High Yield	6.25%	11.75%	6.00%	11.75%	-0.25%	0.00%
Bank Loans	S&P/LSTA Leveraged Loan Index	6.10%	9.70%	6.10%	9.90%	0.00%	0.20%
EMD	EMBI Global Diversified	5.85%	10.65%	5.35%	10.65%	-0.50%	0.00%
Private Markets							
Core Real Estate	NCREIF ODCE	5.75%	14.20%	6.25%	14.00%	0.50%	-0.20%
Private Infrastructure	MSCI Glb Infra/FTSE Dev Core	6.15%	15.45%	6.35%	15.20%	0.20%	-0.25%
Private Equity	Cambridge Private Equity	8.50%	27.60%	8.50%	27.60%	0.00%	0.00%
Private Credit	N/A	7.00%	15.50%	7.25%	15.70%	0.25%	0.20%
Hedge Funds	Callan Hedge FoF Database	5.55%	8.45%	5.70%	8.20%	0.15%	-0.25%
Inflation	Consumer Price Index - Urban	2.50%	1.60%	2.50%	1.60%	0.00%	0.00%
Relative Comparisons (10-Yr Estimates)							
Equity Risk Premium (Private Equity minus Global Equity)		0.90%		0.90%			
Equity Volatility Differential (Private Equity minus Global Equity)			9.25%		8.20%		
Credit Risk Premium (Private Credit minus Public High Yield)		0.75%		1.25%			
Credit Volatility Differential (Private Credit minus Public High Yield)			3.75%		3.95%		
Real Return Differential (Cash Equivalents minus Inflation)		0.25%		0.50%			

Source: Callan, NHRS

Source: Callan, NHRS

Source: Callan, NHRS

Attendee Biographies

Nichols W. Caldwell, CFA

Senior Manager, Institutional Markets

Nick is responsible for managing institutional consultant and client relationships. In addition, Nick chairs the Institutional Strategy Analysis and Review team, is a member of the Investment and ESG integration Committees, and supports the development and implementation of the firm's quantitative research tools.

Nick began his career in 2007 and joined Boston Trust Walden in 2009. Previously he worked as an Analyst at State Street Global Advisors. He earned a BS from Skidmore College and an MS from Boston College. He holds the Chartered Financial Analyst® designation and is a member of the CFA Society Boston and the CFA Institute.

Richard Q. Williams, CFA

Managing Director and Portfolio Manager

Richard is a portfolio manager for the Small, SMID, and Mid Cap equity strategies and directs the firm's equity investing efforts. He is a member of the Boston Trust Walden Board of Directors as well as the Investment, ESG Integration, and Quantitative Tools & Methodologies (QTM) Committees. He contributes to securities research across sectors.

Richard began his career in 1997 and joined Boston Trust Walden in 2013. He previously worked at BlackRock, J.L. Kaplan Associates, Village Ventures, and Wellington Management. He earned an MBA from Dartmouth College, an MSc from the London School of Economics, and a BA from Williams College. He holds the Chartered Financial Analyst® designation and is a member of the CFA Society Boston and the CFA Institute.



Vinod Pakianathan – Abel Noser Solutions

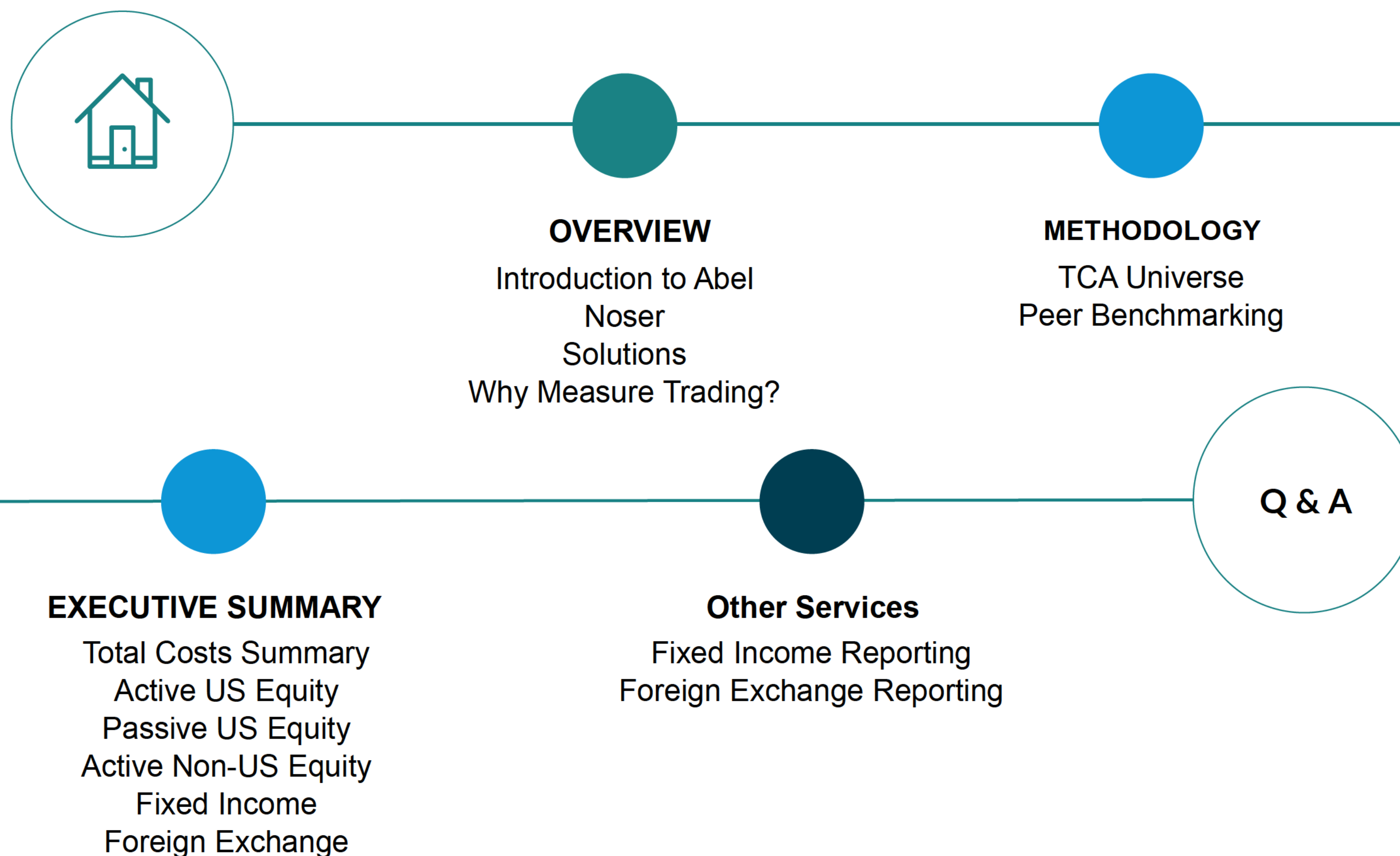
Vinod heads up Abel Noser's Asset Owner group, including products that address the cost exposures and risks from trading Equities, Foreign Exchange Futures and Fixed Income instruments. For the past twenty-nine years Vinod has been involved with all aspects of predecessor TCA firms, from modeling and creating the benchmarks that are used within reports, to managing legacy market-data, to managing products and consulting. He is a Senior Consultant to some of the largest Plan Sponsor and Fund Oversight Boards. In this role, he quantifies the risks arising from external and internal asset manager's trading of client's assets.

Transaction Cost Analysis

(Covering the fourth quarter 2023 to the fourth quarter 2024)

Vinod Pakianathan / Asset Owner Division

Table of Contents





Abel Noser Solutions

Over 30 Years of Industry Leading Analytics

Since its founding in 1975 by Stanley S. Abel and Eugene A. Noser, Jr., Abel Noser has been on the forefront of initiatives - now viewed as industry best practice – aimed at adding transparency, optimizing efficiencies and lowering the cost of trading. Its multi-asset suite of Trade Cost Analytics, Compliance and Regulatory reporting speaks to each stakeholder’s unique goals and needs from the institutional asset owner to the buy-side manager to the sell side broker. Abel Noser is a global company with offices in New York, London, Metro DC, Atlanta and Los Angeles.

New Hampshire Retirement System

Our long-standing relationship

Abel Noser has measured NHRS’s equity trading costs since 1996. We receive a quarterly file from the fund’s custodian with all the trade confirms for the active and passive separately managed accounts. We quantify the explicit costs (commissions) and implicit costs (execution price vs. VWAP or Closing Strike) incurred on each trade and roll up the results for a candid look at each manager’s transaction costs. Quarterly consultative meetings are conducted with NHRS investment staff to review the results and provide actionable recommendations yielded from the data.



Meaningful oversight using transaction cost measure

Asset Owners employ Transaction Cost oversight for three key reasons:

Fiduciary Duty	Performance	Transparency
Satisfies fiduciary duty to monitor trading processes for best execution	Helps maximize performance by monitoring trade (implementation) costs	Provides transparency and insight into investment managers trading/operational processes
<i>What is measured gets managed. This often results in trading cost reduction</i>	<i><u>Example:</u> Zeno helped negotiate commission reductions of 0.6 cps equaling thousands of dollars from recent passive transition</i>	<i><u>Example:</u> Administered DDQs provided greater insight into manager's trading and investment process</i>

Measuring and monitoring Mitigates investment and fiduciary risk

Why Measure Trading Costs?

Trade Cost Analysis provides asset owners with a candid look at how investment managers are handling fund assets and the efficiency in which they are capturing investment ideas. Using Abel Noser as an extension of staff, TCA improves efficiencies and facilitates more focused dialogue with managers.

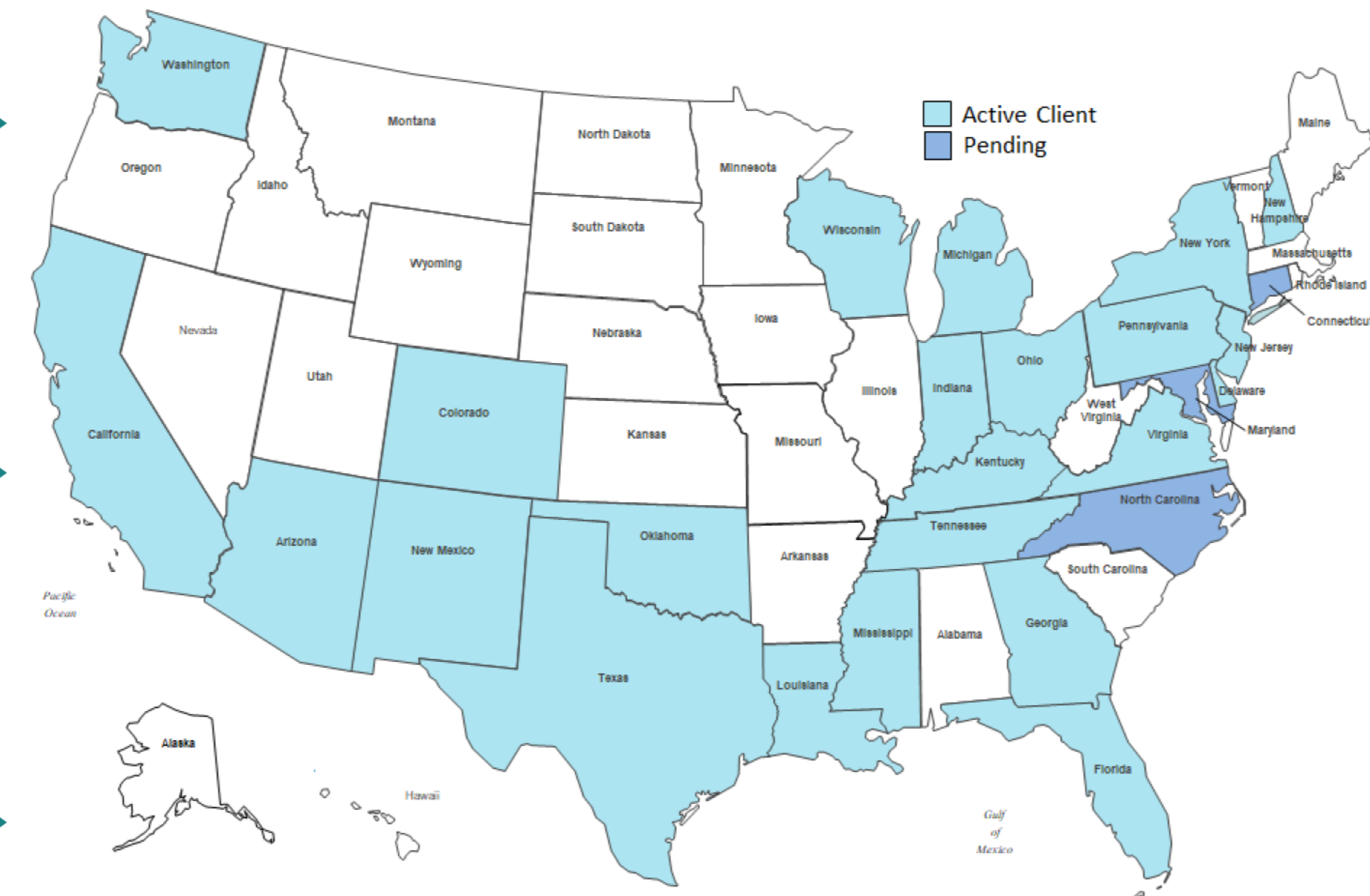
Meaningful oversight...

Adds transparency and oversight otherwise absent in the investment process

Identifies the impact of a manager's trading disciplines on performance

Safeguards fund assets with actionable recommendations that often result in concrete savings

State Funds measuring with Abel Noser



Multi-Asset Class TCA Oversight

(Applies to Equity, Fixed Income, FX and Futures)

[DOL Release 86-1, Reg 38-1, CFA](#)

Since 1986, plan sponsors and other asset owners have had an **explicit fiduciary responsibility** to monitor their managers to ensure their fund was paying reasonable commissions and receiving “Best Execution.”

As prudent fiduciaries, more than ever before, asset owners should understand their managers’ trading process, what they pay to execute trades, whether they obtained best execution, and its impact on performance.

Abel Noser Solutions Asset Owner service was designed to assist asset owners in achieving two goals:

1. Meeting their fiduciary obligations to monitor for “Best Execution”
2. Provide greater transparency in how investment managers handle their assets when trading

But how can this be achieved?

Multi –Asset Class TCA: Equity, Fixed Income, FX & Futures Versatile Platform and Customizable Deliverables

Customizable solutions to fit each unique client's needs and budget constraints.

Sponsor Monitor TCA Reports

A comprehensive oversight platform, driven by detailed qualitative content and full-service consultation, addressing:

- Commission/Impact Costs
- Delay costs/Capacity Issues
- Turnover Rates/Effect on Performance
- Decision Value- Before and after trading costs
- Broker usage
- Historical Trends by Manager

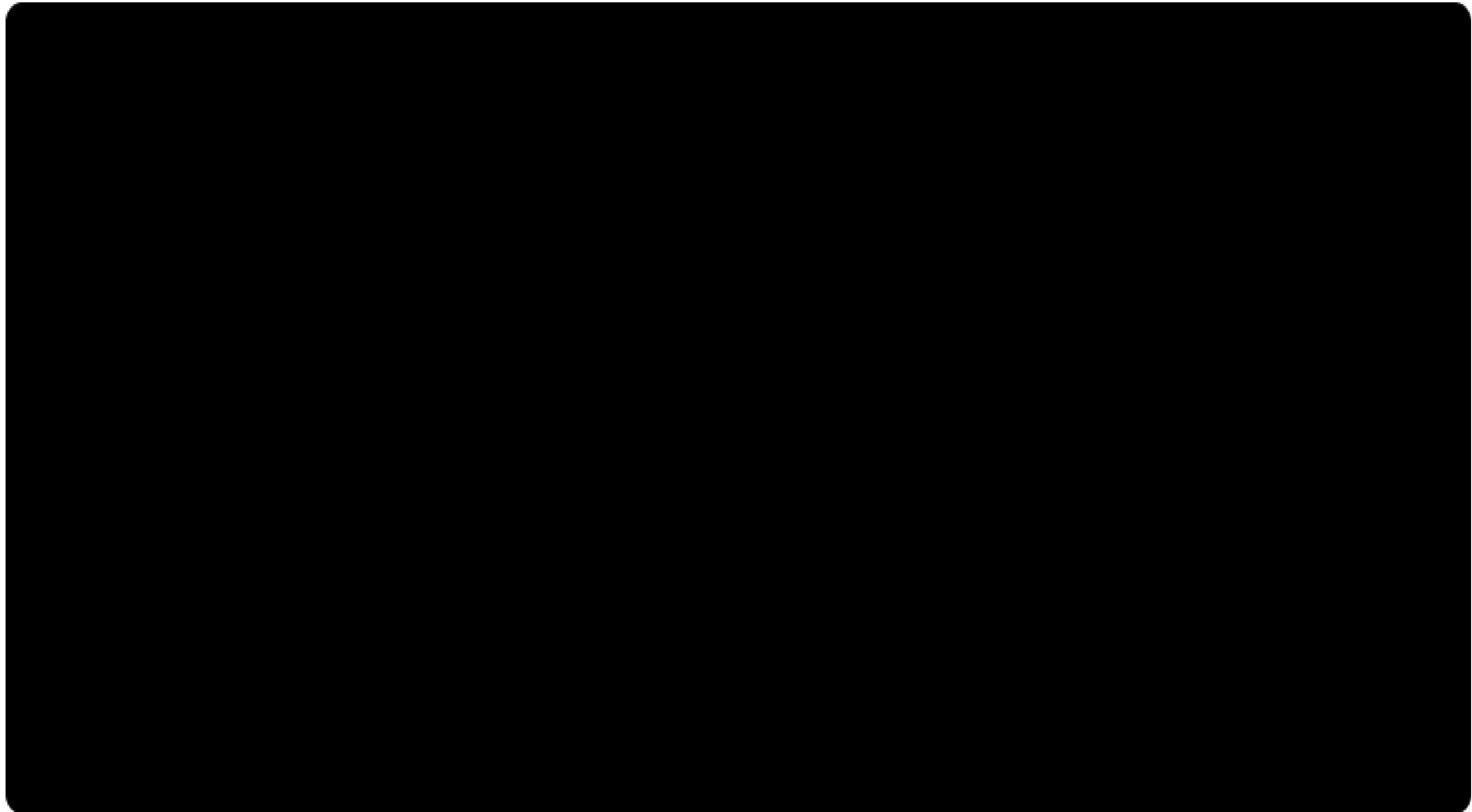
Trade Zoom Drill-Down Platform

Automated, consultative analysis quantifying the costs incurred over the course of a trade focusing on:

- Commission rates
- Execution costs
- Benchmarking by Market, Capitalization and Price Trend
- Outlier trades
- Frequently used Brokers
- Customized Reporting

All TCA clients are empowered with web drill down

Multi-Asset Class TCA Oversight (Equity, Fixed Income, FX and Futures)



TCA Universe and Peer Benchmarking

We compare the Retirement System's managers' trading costs to those of their peers in the Abel Noser Universe of trade data. The Universe is comprised of data from over 350 Plan Sponsors, approximately \$16.5 trillion in principal traded. In the interest of a robust and dynamic comparison, we look at each manager's strategy and trading discipline to compare their costs against corresponding segments of the Universe.

Dimensions	Prin /K	Shares	bPlcStrike /BP	ubPlcStrike50 /BP	bPlcStrike Ra...
Grand Total	67,360.59	1,450,673	-7.77	-16.77	40.6%
+ CAE	4,228.57	144,740	-75.46	-166.10	5.0%
+ CRC	917.91	37,702	68.36	-0.62	5.0%
+ EADSY	5,446.92	182,024	18.65	-1.99	5.0%
+ FHN	197.00	11,449	9.50	-0.25	5.0%
+ YELL	298.94	32,937	15.42	-1.07	5.0%
+ NVST	4,077.64	93,971	10.70	-0.30	16.4%
+ BRKS	195.25	2,009	8.96	-0.44	22.6%
+ RE	8,141.23	31,985	37.44	-1.03	23.6%
+ PRPL	1,283.57	38,859	-55.91	-106.91	25.9%
+ MRVI	2,207.29	67,444	-116.77	-180.49	29.5%
+ QTRX	2,859.46	44,394	151.98	65.55	29.5%
+ BKU	103.65	2,397	-2.54	-21.11	30.9%
+ CSTL	548.17	7,452	21.65	9.07	41.6%
+ GPPE	2,900.86	102,425	151.19	137.15	46.6%
+ MBII					
+ SIEN					
+ APAM					
+ TRHC					
+ OSUR					
+ MGLU3					
+ VSPR					
+ ROK					
+ DAYC					

Benchmarks: 2020Q4			
Region/Country :	Breakdown :	Daily % of Total Mkt :	Price Trend :
World	Combined	Combined	Combined
Percentile Rank	mEntStrike /BP	mAVWAP /BP	d20% Test /BP
5th Percentile	23.15	8.89	19.79
25th Percentile	-9.06	0.33	-1.49
Median	-21.62	-3.32	-9.56
75th Percentile	-34.23	-7.67	-20.14
95th Percentile	-66.27	-18.64	-48.44

Market (U.S. vs. Non-U.S)

Capitalization (Small, Mid, Large)

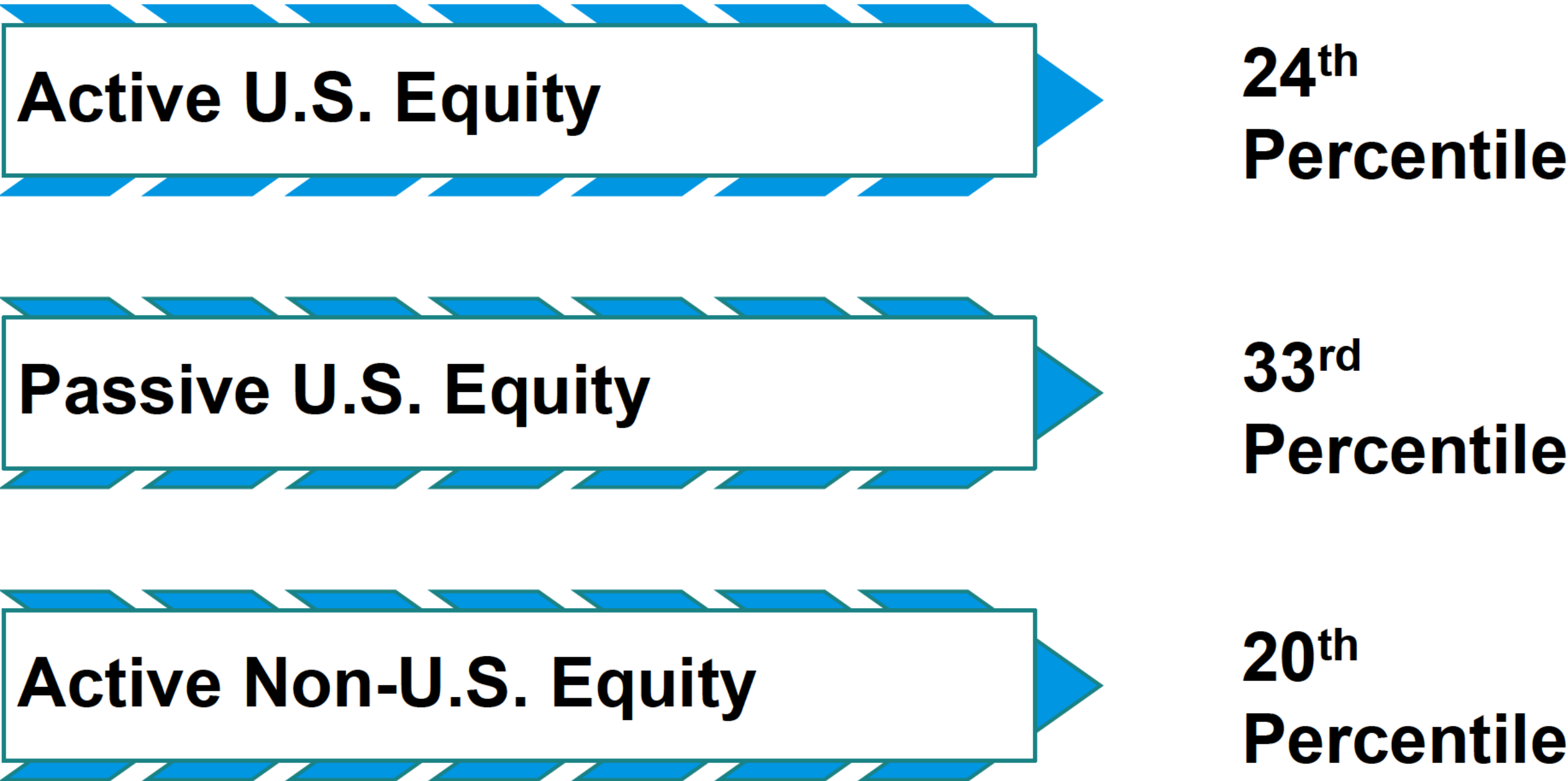
Style (Core, Growth, Value)

Price Trend (Neutral vs. Momentum)

Executive Summary-Equities

Trading costs reflect how managers implement their investment ideas. Optimizing costs is integral to investment performance. Ultimately, managers are judged on their investment performance and their ability to exceed their portfolio benchmark over a market cycle.

Rankings:



Active U.S. Equity

**24th
Percentile**

Passive U.S. Equity

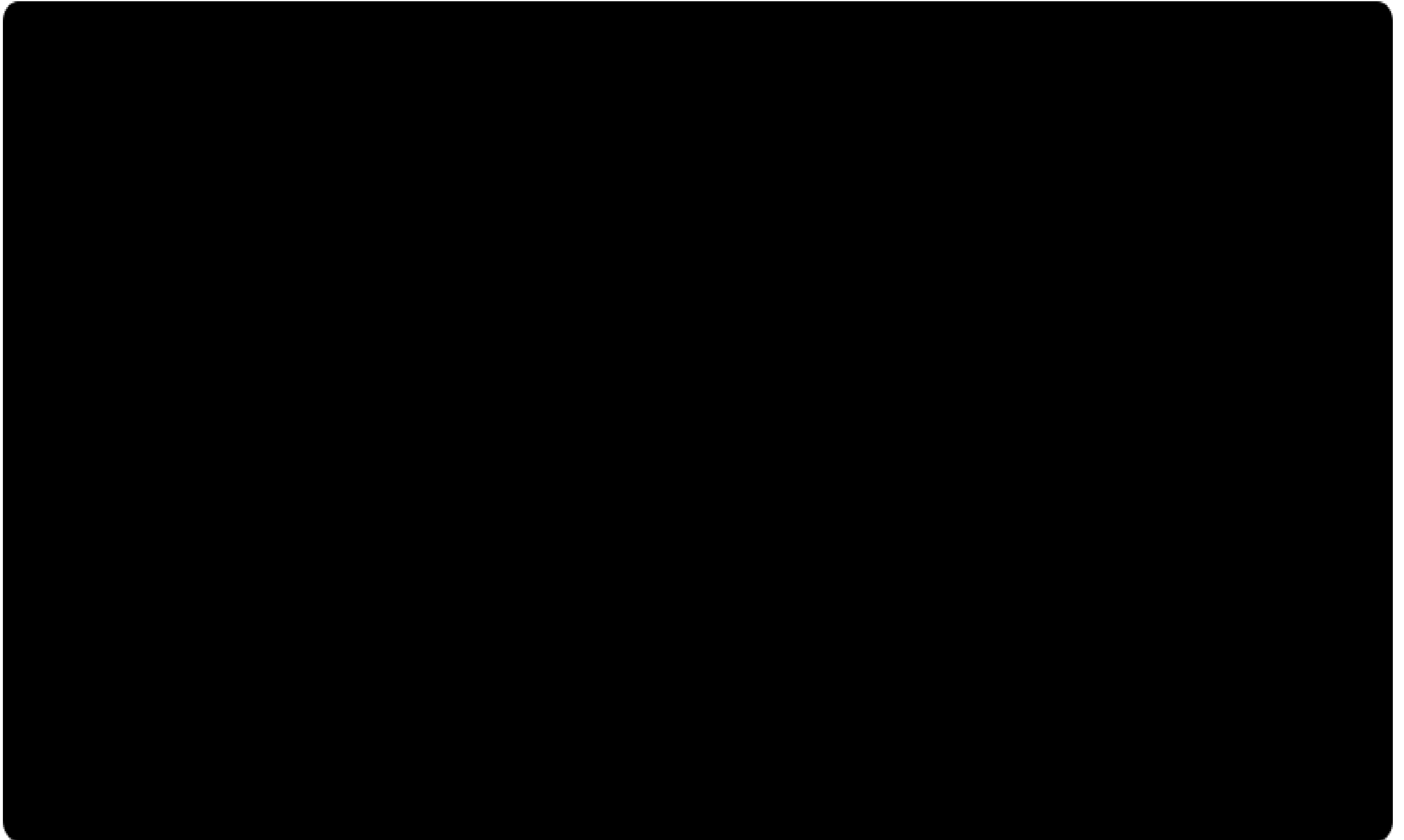
**33rd
Percentile**

Active Non-U.S. Equity

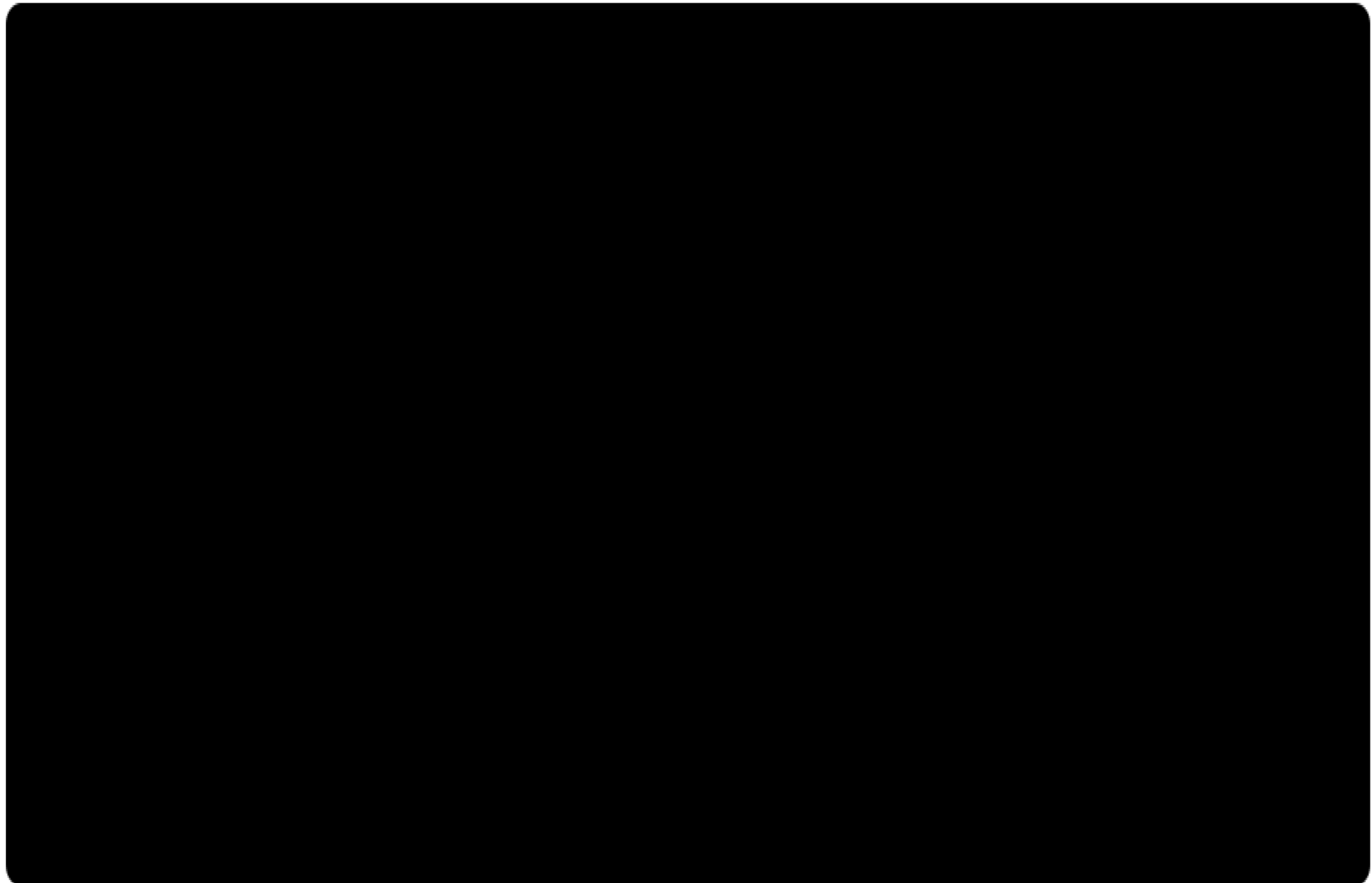
**20th
Percentile**

As of 4Q2024 , NHRS's managers consistently paid relatively low commissions and received competitive execution prices when trading on the Fund's behalf.

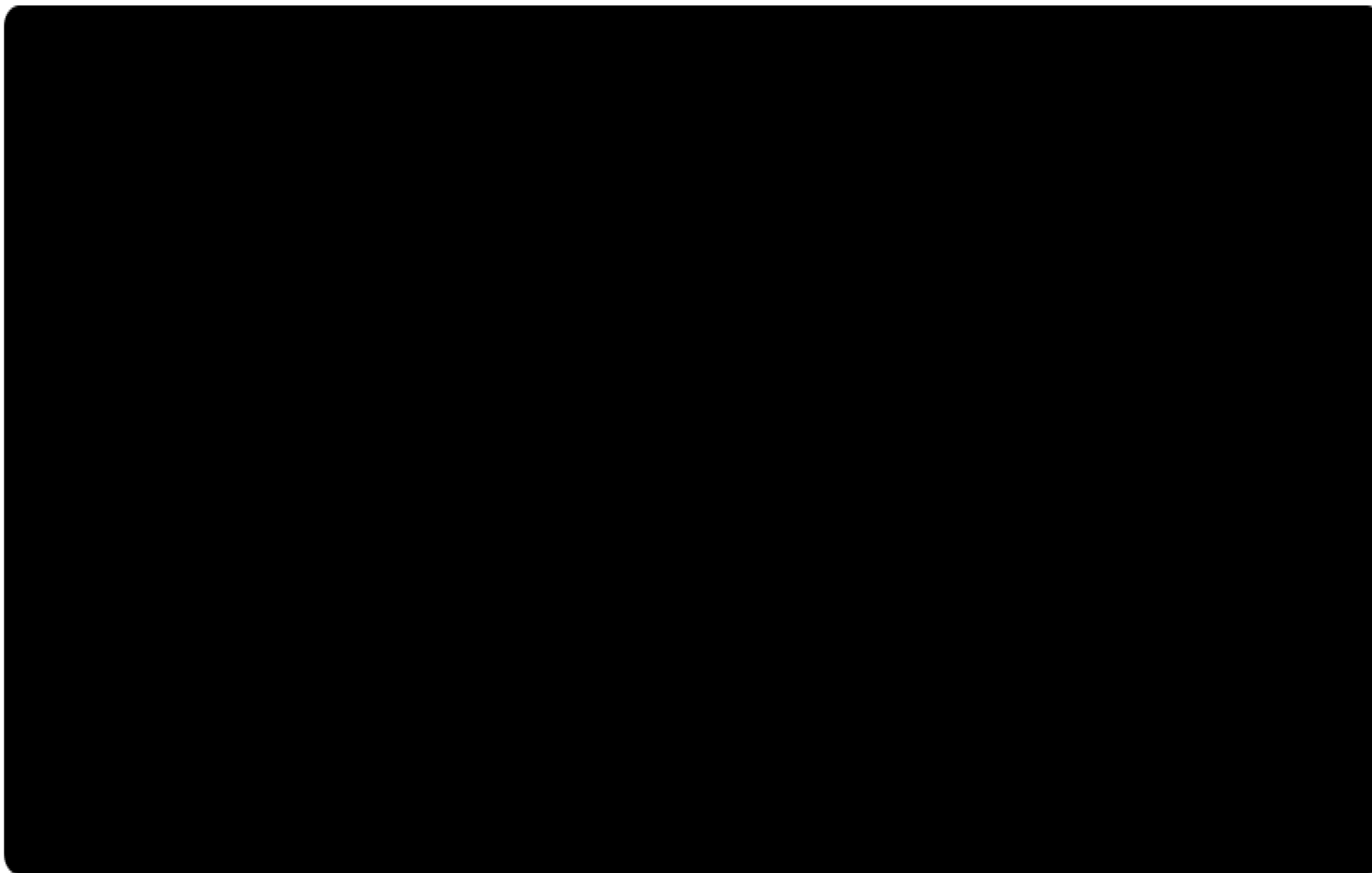
Executive Summary – Active U.S. Equity



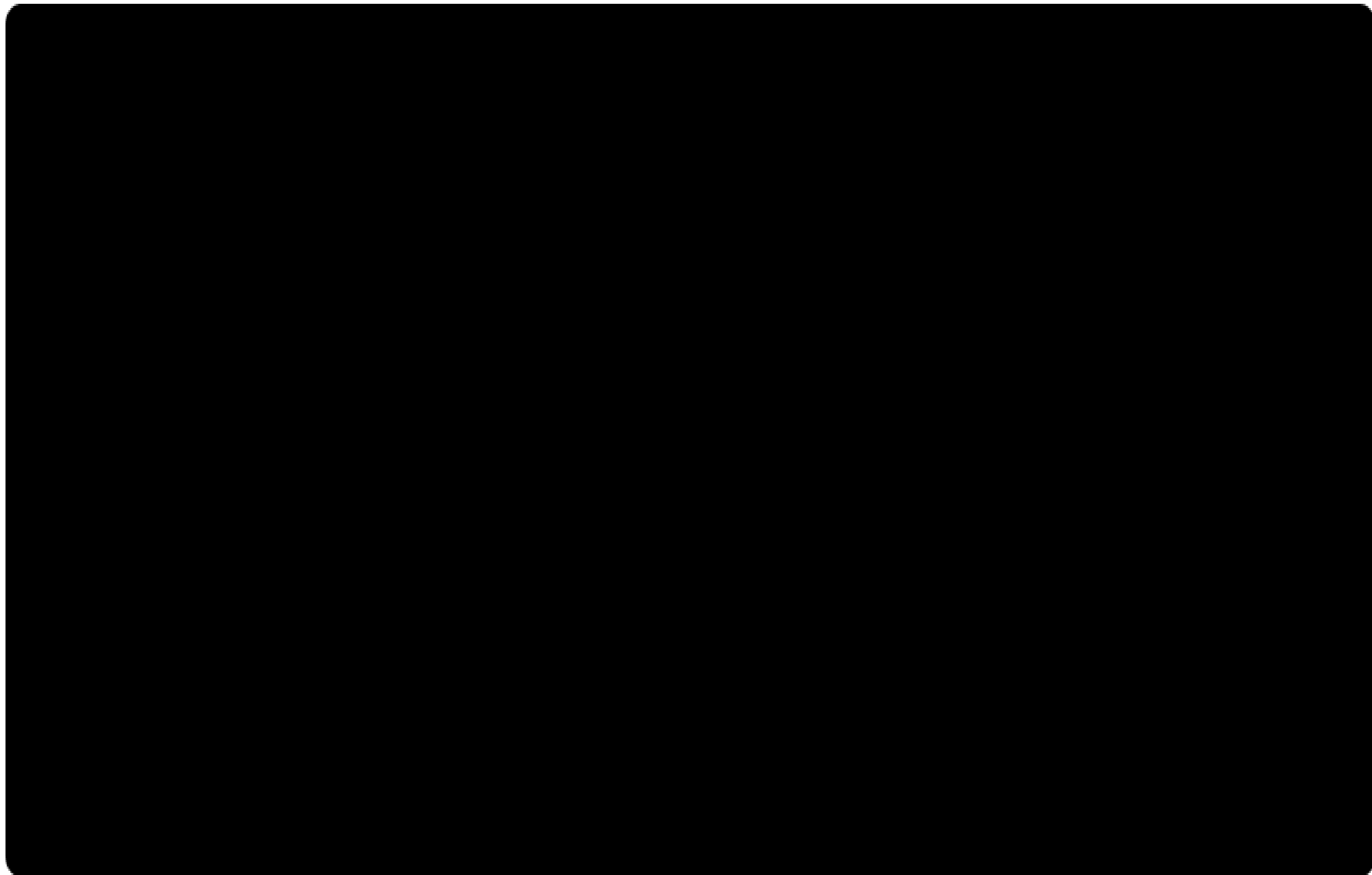
Executive Summary – Passive U.S. Equity (BlackRock)



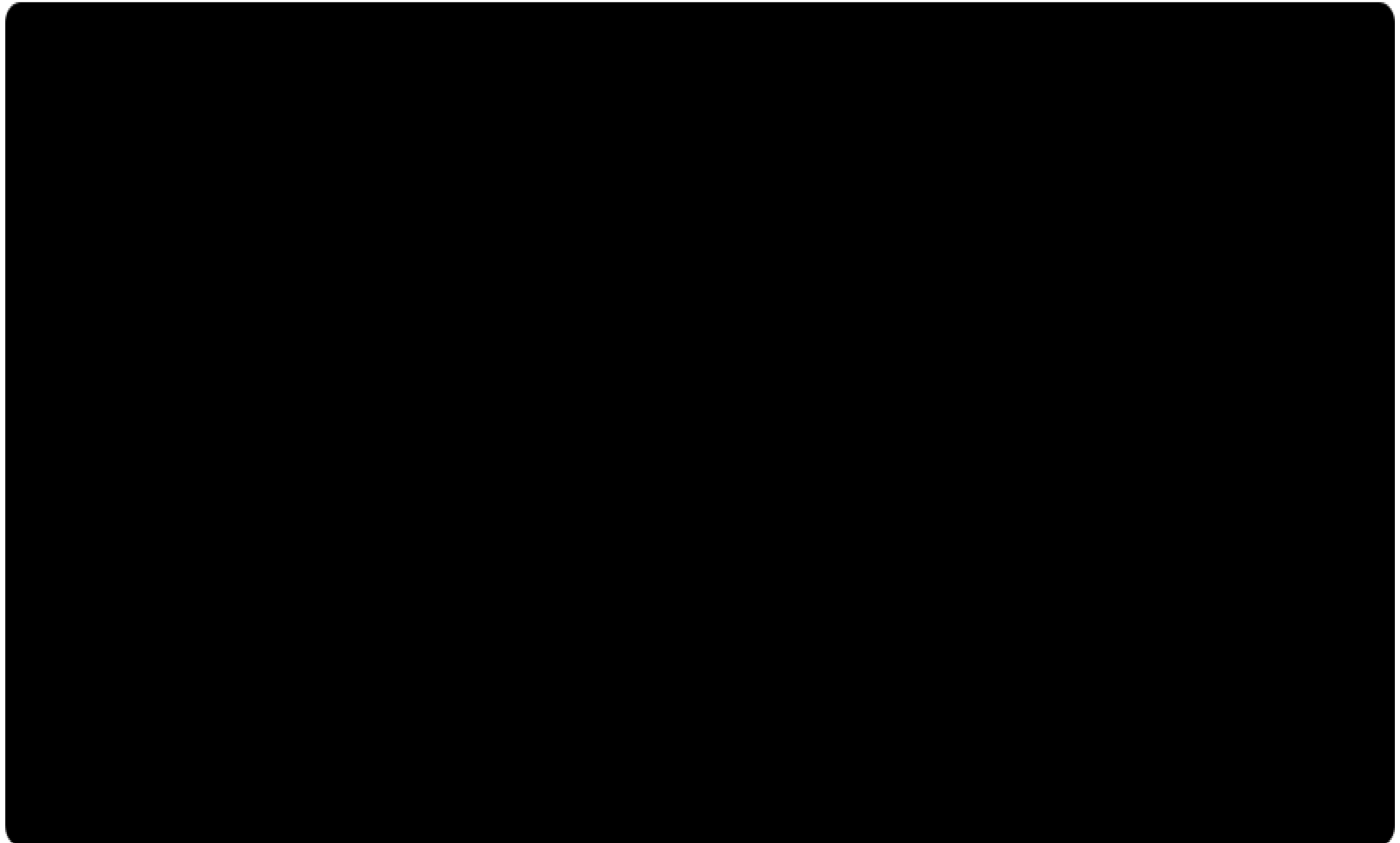
Executive Summary – Active Non-U.S. Equity



Executive Summary – Fixed Income



Executive Summary – Foreign Exchange



Commission Sharing Agreements

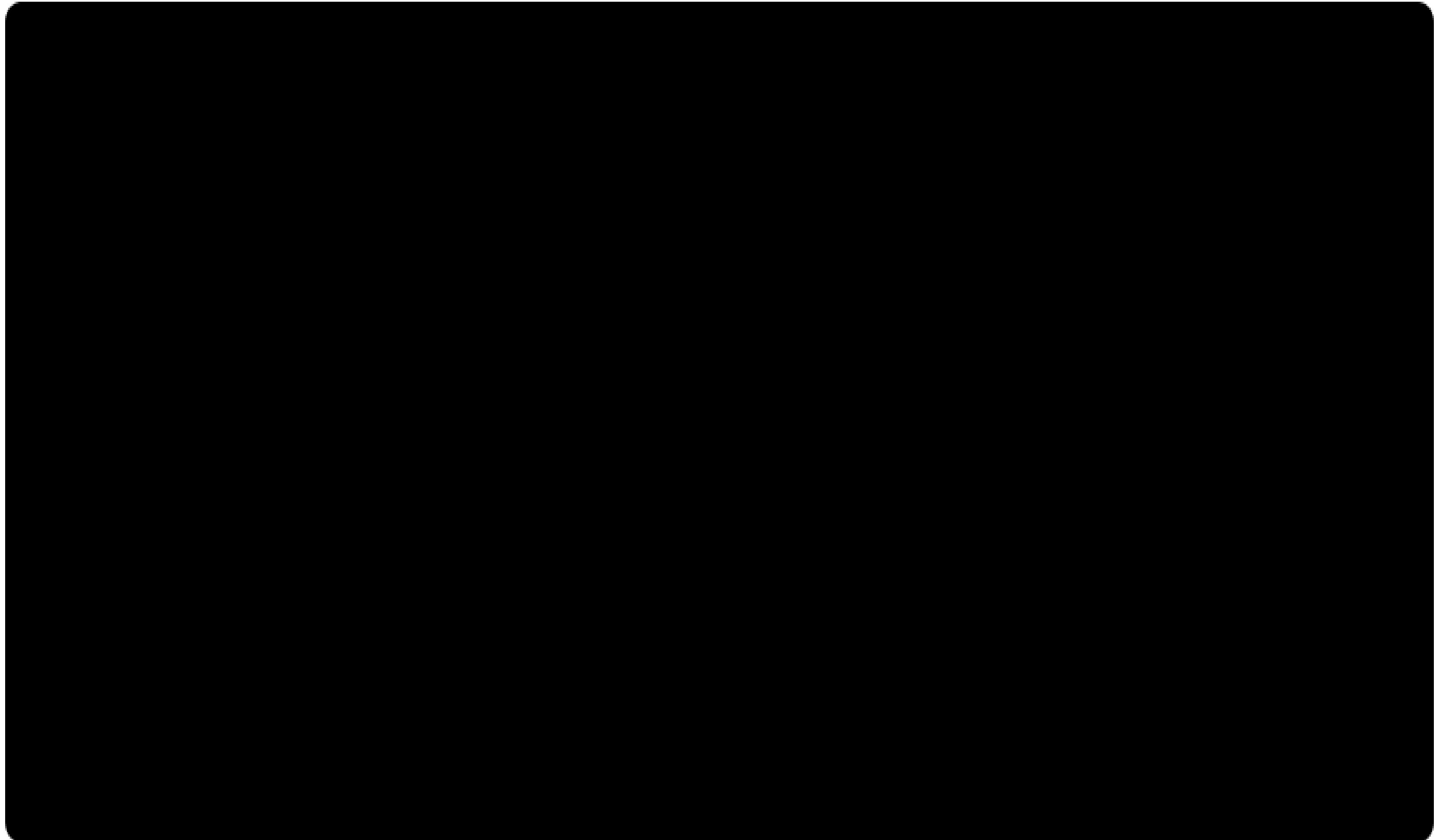
February 2025

Investment Committee Meeting
For Fiscal Years 2023 and 2024

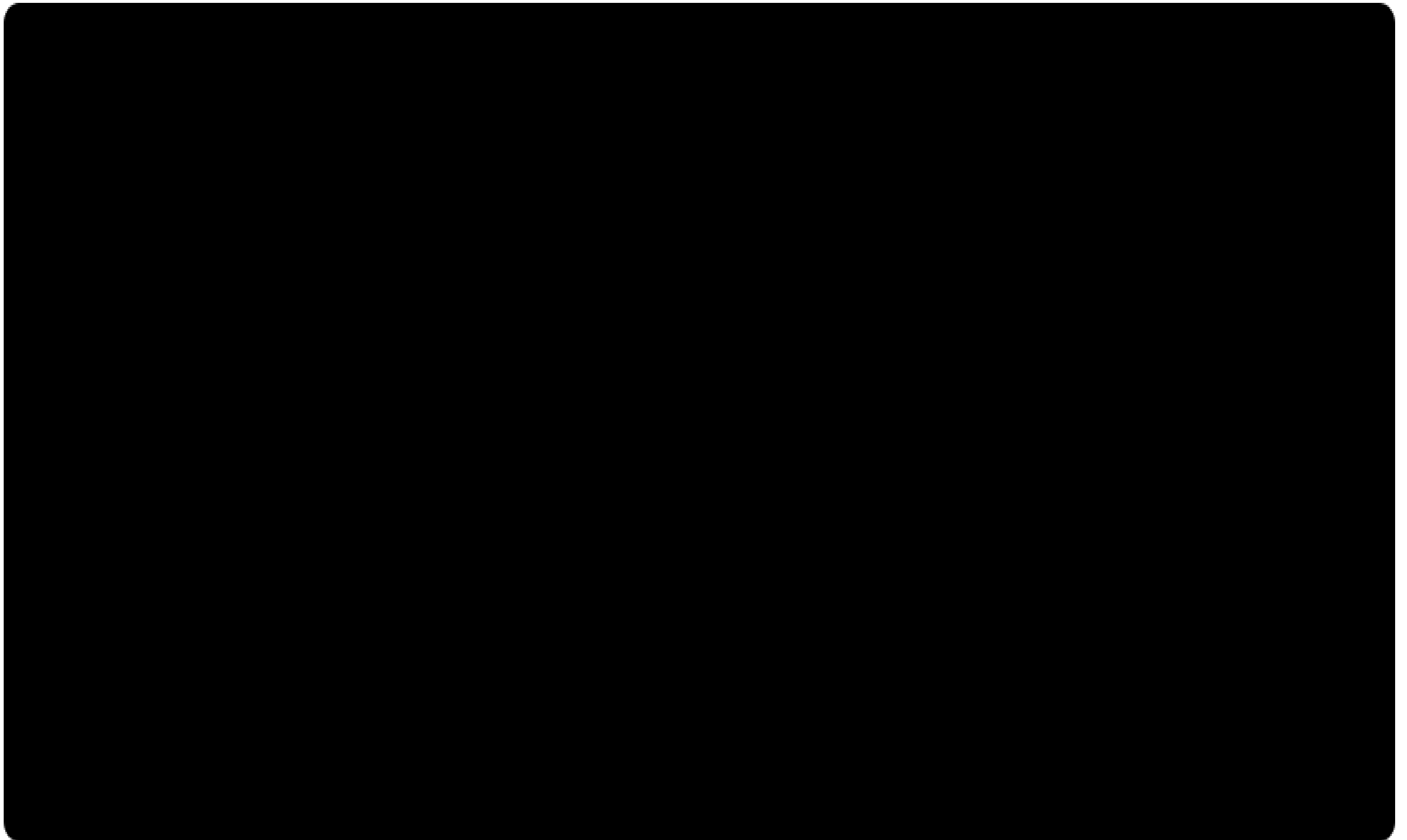
Summary of agreements

- As of June 30, 2024, ten of thirteen NHRS equity mandates reported the use of commission sharing agreements (“CSAs”) and/or payments for research either directly or to third parties through similar structures. The use of these agreements is common practice in the industry.
- These agreements, including the practice of using NHRS commissions to purchase research from approved brokers, are in compliance with Section 28(e) of the Securities Exchange Act of 1934.
- Within the NHRS public equity portfolio, approximately 68.7% of commission costs go toward execution costs with the remaining 31% funding research costs (page 18). The research purchased through these agreements is expected to add value to the NHRS portfolio.
- All managers using CSAs perform and document regular procedural reviews to confirm compliance with internal policy and regulatory guidance.
- Absolute costs decreased among seven managers and improved versus Abel Noser’s peer universes. Though assets rose in 2023 and 2024 across all managers total research costs as a percentage of equity manager assets under management rose slightly in 2024 but fell slightly in fiscal year 2023 compared to prior fiscal years (page 20).

Equity Managers' Use of Commissions - Fiscal Year 2023



Equity Managers' Use of Commissions - Fiscal Year 2022





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Atlanta, GA



Vinod Pakianathan – Abel Noser Solutions

Vinod heads up Abel Noser's Asset Owner group, including products that address the cost exposures and risks from trading Equities, Foreign Exchange Futures and Fixed Income instruments. For the past twenty-nine years Vinod has been involved with all aspects of predecessor TCA firms, from modeling and creating the benchmarks that are used within reports, to managing legacy market-data, to managing products and consulting. He is a Senior Consultant to some of the largest Plan Sponsor and Fund Oversight Boards. In this role, he quantifies the risks arising from external and internal asset manager's trading of client's assets.

December 31, 2024



New Hampshire Retirement System

Investment Measurement Service Monthly Review

The table below details the rates of return for the fund's asset classes over various time periods ended December 31, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended December 31, 2024									
Composite	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Domestic Equity	31.83%	-4.39%	1.59%	8.89%	20.11%	20.11%	6.41%	12.13%	11.14%
Domestic Equity Benchmark(1)		-3.06%	2.63%	9.03%	23.81%	23.81%	8.01%	13.42%	12.63%
Excess Return		-1.33%	-1.04%	-0.13%	-3.70%	-3.70%	-1.59%	-1.29%	-1.50%
Total Non US Equity	18.58%	-2.92%	-5.92%	0.90%	6.73%	6.73%	1.55%	4.43%	5.44%
Non US Equity Benchmark(2)		-1.94%	-7.60%	-0.15%	5.53%	5.53%	0.82%	4.10%	4.80%
Excess Return		-0.97%	1.68%	1.04%	1.19%	1.19%	0.73%	0.32%	0.64%
Total Fixed Income	21.29%	-1.71%	-3.10%	2.14%	1.55%	1.55%	-1.48%	0.92%	2.11%
Bloomberg Capital Universe Bond Index		-1.51%	-2.73%	2.32%	2.04%	2.04%	-1.95%	0.06%	1.73%
Excess Return		-0.20%	-0.37%	-0.19%	-0.49%	-0.49%	0.47%	0.87%	0.38%
Total Cash	1.72%	0.40%	1.21%	2.54%	5.25%	5.25%	4.00%	2.52%	1.85%
3-Month Treasury Bill		0.40%	1.17%	2.55%	5.25%	5.25%	3.89%	2.46%	1.77%
Excess Return		0.00%	0.04%	-0.02%	0.00%	0.00%	0.11%	0.06%	0.09%
Total Real Estate (Q3)*	8.78%	0.03%	-0.18%	-0.01%	-5.40%	-5.40%	0.95%	5.63%	8.06%
Real Estate Benchmark(3)		0.01%	0.02%	-0.64%	-8.04%	-8.04%	-1.04%	2.05%	5.22%
Excess Return		0.03%	-0.20%	0.63%	2.64%	2.64%	1.99%	3.58%	2.84%
Total Private Equity (Q3)*	13.34%	1.49%	1.46%	1.50%	5.23%	5.23%	4.43%	12.88%	12.18%
Private Equity Benchmark(4)		2.20%	6.64%	10.62%	37.37%	37.37%	13.74%	18.55%	16.43%
Excess Return		-0.71%	-5.18%	-9.11%	-32.14%	-32.14%	-9.32%	-5.68%	-4.25%
Total Private Debt (Q3)*	4.46%	1.81%	1.73%	1.74%	5.71%	5.71%	6.00%	5.86%	6.18%
Private Debt Benchmark(5)		1.19%	3.82%	5.70%	13.61%	13.61%	6.29%	5.43%	5.22%
Excess Return		0.62%	-2.09%	-3.96%	-7.90%	-7.90%	-0.29%	0.44%	0.97%
Total Fund Composite	100.00%	-2.05%	-0.89%	3.85%	8.37%	8.37%	3.16%	7.41%	7.39%
Total Fund Benchmark(6)		-1.40%	-0.58%	4.57%	11.85%	11.85%	4.02%	7.57%	7.72%
Excess Return		-0.65%	-0.31%	-0.72%	-3.48%	-3.48%	-0.86%	-0.16%	-0.33%

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.

(2) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(3) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(4) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(6) Current Month Target = 30.0% Russell 3000 Index, 25.0% Bloomberg Universal, 20.0% MSCI ACWI ex-US, 10.0% NCREIF NFI-ODCE Value Weight Net lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg High Yield Corp lagged 3 months+1.0% and 2.5% MStar LSTA Lev Loan 100 lagged 3 months +1.0%.

(7) For the trailing 25 year period ended 12/31/24, the Total Fund has returned 5.93% versus the Total Fund Custom Benchmark return of 6.41%.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

The table below details the rates of return for the fund's investment managers over various time periods ended December 31, 2024. Negative manager excess returns are shown in **red**, positive excess returns in **green**. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended December 31, 2024									
Composite	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Domestic Equity	31.83%	-4.39%	1.59%	8.89%	20.11%	20.11%	6.41%	12.13%	11.14%
Domestic Equity Benchmark(1)		-3.06%	2.63%	9.03%	23.81%	23.81%	8.01%	13.42%	12.63%
Excess Return		-1.33%	-1.04%	-0.13%	-3.70%	-3.70%	-1.59%	-1.29%	-1.50%
Large Cap Domestic Equity	19.07%	-2.38%	2.41%	8.43%	25.08%	25.08%	8.90%	13.74%	12.24%
S&P 500 Index		-2.38%	2.41%	8.44%	25.02%	25.02%	8.94%	14.53%	13.10%
Excess Return		0.00%	0.00%	-0.01%	0.06%	0.06%	-0.04%	-0.79%	-0.86%
BlackRock S&P 500	19.07%	-2.38%	2.41%	8.43%	25.08%	25.08%	8.90%	14.48%	13.07%
S&P 500 Index		-2.38%	2.41%	8.44%	25.02%	25.02%	8.94%	14.53%	13.10%
Excess Return		0.00%	0.00%	-0.01%	0.06%	0.06%	-0.04%	-0.05%	-0.03%
Smid Cap Domestic Equity	6.08%	-6.46%	0.40%	8.51%	11.90%	11.90%	1.81%	9.14%	8.47%
Russell 2500 Index		-7.54%	0.62%	9.42%	12.00%	12.00%	2.39%	8.77%	8.85%
Excess Return		1.08%	-0.23%	-0.92%	-0.10%	-0.10%	-0.58%	0.37%	-0.38%
AllianceBernstein	3.84%	-7.48%	0.25%	8.31%	13.20%	13.20%	0.31%	9.87%	9.50%
Russell 2500 Index		-7.54%	0.62%	9.42%	12.00%	12.00%	2.39%	8.77%	8.85%
Excess Return		0.06%	-0.37%	-1.11%	1.20%	1.20%	-2.08%	1.10%	0.65%
TSW	2.24%	-4.66%	0.65%	8.84%	9.73%	9.73%	4.62%	7.95%	6.92%
TSW Blended Benchmark (2)		-7.18%	-0.26%	9.34%	10.98%	10.98%	3.81%	8.44%	8.69%
Excess Return		2.52%	0.91%	-0.50%	-1.26%	-1.26%	0.81%	-0.49%	-1.77%
Small Cap Domestic Equity	6.68%	-7.83%	0.15%	9.91%	14.40%	14.40%	3.79%	10.58%	10.40%
Russell 2000 Index		-8.26%	0.33%	9.64%	11.54%	11.54%	1.24%	7.40%	7.82%
Excess Return		0.43%	-0.18%	0.27%	2.86%	2.86%	2.55%	3.18%	2.58%
Boston Trust	2.08%	-7.98%	0.47%	10.65%	12.69%	12.69%	4.45%	10.10%	10.45%
Russell 2000 Index		-8.26%	0.33%	9.64%	11.54%	11.54%	1.24%	7.40%	7.82%
Excess Return		0.27%	0.13%	1.02%	1.15%	1.15%	3.21%	2.69%	2.64%
Segall Bryant & Hamill	2.21%	-7.45%	-0.06%	6.41%	12.27%	12.27%	3.86%	11.24%	9.88%
Russell 2000 Index		-8.26%	0.33%	9.64%	11.54%	11.54%	1.24%	7.40%	7.82%
Excess Return		0.81%	-0.39%	-3.22%	0.73%	0.73%	2.62%	3.83%	2.06%
Wellington	2.39%	-8.03%	0.02%	11.52%	16.53%	16.53%	3.36%	10.46%	10.68%
Russell 2000 Index		-8.26%	0.33%	9.64%	11.54%	11.54%	1.24%	7.40%	7.82%
Excess Return		0.23%	-0.31%	1.88%	4.99%	4.99%	2.12%	3.06%	2.86%

(1) The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

The table below details the rates of return for the fund's investment managers over various time periods ended December 31, 2024. Negative manager excess returns are shown in **red**, positive excess returns in **green**. Returns for one year or greater are annualized.

Composite	Net of Fees Returns for Periods Ended December 31, 2024								
	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Non US Equity	18.58%	-2.92%	-5.92%	0.90%	6.73%	6.73%	1.55%	4.43%	5.44%
Non US Equity Benchmark (1)		-1.94%	-7.60%	-0.15%	5.53%	5.53%	0.82%	4.10%	4.80%
Excess Return		-0.97%	1.68%	1.04%	1.19%	1.19%	0.73%	0.32%	0.64%
Core Non US Equity	11.26%	-2.24%	-6.53%	0.86%	6.23%	6.23%	2.79%	4.56%	5.03%
Core Non US Benchmark (2)		-1.94%	-7.60%	-0.15%	5.53%	5.53%	0.82%	4.10%	4.80%
Excess Return		-0.30%	1.07%	1.01%	0.70%	0.70%	1.97%	0.45%	0.22%
Aristotle	1.46%	-2.85%	-6.79%	3.42%	6.25%	6.25%	-0.06%	-	-
MSCI EAFE		-2.27%	-8.11%	-1.44%	3.82%	3.82%	1.65%	-	-
Excess Return		-0.58%	1.32%	4.86%	2.43%	2.43%	-1.70%	-	-
Artisan Partners	3.32%	-2.69%	-3.42%	2.34%	11.15%	11.15%	1.43%	4.14%	5.11%
MSCI EAFE		-2.27%	-8.11%	-1.44%	3.82%	3.82%	1.65%	4.73%	5.20%
Excess Return		-0.42%	4.70%	3.78%	7.33%	7.33%	-0.21%	-0.59%	-0.08%
BlackRock SuperFund	1.58%	-2.12%	-7.67%	-0.34%	5.49%	5.49%	-	-	-
MSCI ACWI Ex-US		-1.94%	-7.60%	-0.15%	5.53%	5.53%	-	-	-
Excess Return		-0.17%	-0.07%	-0.19%	-0.04%	-0.04%	-	-	-
Causeway Capital	3.60%	-1.23%	-7.95%	0.64%	4.95%	4.95%	7.58%	7.72%	5.99%
MSCI EAFE		-2.27%	-8.11%	-1.44%	3.82%	3.82%	1.65%	4.73%	5.20%
Excess Return		1.04%	0.16%	2.08%	1.13%	1.13%	5.94%	3.00%	0.79%
Lazard	1.30%	-3.31%	-8.44%	-3.40%	-0.73%	-0.73%	-0.79%	-	-
MSCI EAFE		-2.27%	-8.11%	-1.44%	3.82%	3.82%	1.65%	-	-
Excess Return		-1.04%	-0.33%	-1.96%	-4.55%	-4.55%	-2.44%	-	-
Emerging Markets	1.44%	-2.51%	-9.11%	0.10%	6.68%	6.68%	-3.03%	-0.30%	2.28%
MSCI EM		-0.14%	-8.01%	0.02%	7.50%	7.50%	-1.92%	1.70%	3.64%
Excess Return		-2.38%	-1.10%	0.09%	-0.83%	-0.83%	-1.11%	-2.00%	-1.36%
Wellington Emerging Markets	1.44%	-2.51%	-9.11%	0.10%	6.68%	6.68%	-3.08%	-0.13%	2.97%
MSCI EM		-0.14%	-8.01%	0.02%	7.50%	7.50%	-1.92%	1.70%	3.64%
Excess Return		-2.38%	-1.10%	0.09%	-0.83%	-0.83%	-1.16%	-1.83%	-0.67%
Non US Small Cap	1.09%	-3.18%	-9.15%	0.31%	1.19%	1.19%	-3.65%	-1.34%	1.09%
MSCI EAFE Small Cap		-2.30%	-8.36%	1.30%	1.82%	1.82%	-3.25%	2.30%	5.52%
Excess Return		-0.88%	-0.79%	-0.99%	-0.63%	-0.63%	-0.40%	-3.64%	-4.44%
Wellington Int'l Small Cap Research	1.09%	-3.18%	-9.15%	0.31%	1.19%	1.19%	-3.65%	-	-
MSCI EAFE Small Cap		-2.30%	-8.36%	1.30%	1.82%	1.82%	-3.25%	-	-
Excess Return		-0.88%	-0.79%	-0.99%	-0.63%	-0.63%	-0.40%	-	-
Global Equity	4.79%	-4.52%	-2.62%	1.37%	9.30%	9.30%	2.76%	9.01%	10.72%
MSCI ACWI net		-2.37%	-0.99%	5.56%	17.49%	17.49%	5.44%	10.06%	9.23%
Excess Return		-2.16%	-1.63%	-4.19%	-8.19%	-8.19%	-2.67%	-1.06%	1.49%
Walter Scott Global Equity	4.79%	-4.52%	-2.62%	1.37%	9.30%	9.30%	2.76%	9.01%	10.72%
Walter Scott Blended Benchmark (3)		-2.37%	-0.99%	5.56%	17.49%	17.49%	5.44%	10.06%	9.23%
Excess Return		-2.16%	-1.63%	-4.19%	-8.19%	-8.19%	-2.67%	-1.06%	1.49%

(1) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(2) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(3) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

The table below details the rates of return for the fund's investment managers over various time periods ended December 31, 2024. Negative manager excess returns are shown in **red**, positive excess returns in **green**. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended December 31, 2024									
Composite	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Fixed Income	21.29%	-1.71%	-3.10%	2.14%	1.55%	1.55%	-1.48%	0.92%	2.11%
Fixed Income Benchmark (1)		-1.51%	-2.73%	2.32%	2.04%	2.04%	-1.95%	0.06%	1.73%
Excess Return		-0.20%	-0.37%	-0.19%	-0.49%	-0.49%	0.47%	0.87%	0.38%
BlackRock SIO Bond Fund	2.22%	-0.37%	-0.85%	3.30%	4.80%	4.80%	1.83%	2.74%	-
BlackRock Custom Benchmark (2)		0.40%	1.20%	2.62%	5.41%	5.41%	4.07%	2.61%	-
Excess Return		-0.77%	-2.05%	0.68%	-0.61%	-0.61%	-2.24%	0.13%	-
Brandywine Asset Mgmt	1.73%	-4.79%	-9.79%	-1.95%	-9.11%	-9.11%	-6.25%	-2.60%	-0.05%
Brandywine Custom Benchmark (3)		-2.64%	-5.93%	0.84%	-3.58%	-3.58%	-6.07%	-3.22%	-0.63%
Excess Return		-2.15%	-3.85%	-2.79%	-5.53%	-5.53%	-0.18%	0.63%	0.58%
FIAM (Fidelity) Tactical Bond	3.05%	-2.01%	-3.06%	2.10%	1.94%	1.94%	-0.92%	1.49%	-
Bloomberg Aggregate		-1.64%	-3.06%	1.98%	1.25%	1.25%	-2.41%	-0.33%	-
Excess Return		-0.37%	0.01%	0.13%	0.69%	0.69%	1.49%	1.82%	-
Income Research & Management	6.36%	-1.66%	-2.87%	2.00%	1.75%	1.75%	-2.36%	0.27%	1.81%
Bloomberg Gov/Credit		-1.67%	-3.08%	1.87%	1.18%	1.18%	-2.59%	-0.21%	1.50%
Excess Return		0.01%	0.21%	0.14%	0.57%	0.57%	0.22%	0.48%	0.31%
Loomis Sayles	2.40%	-0.92%	-1.40%	4.18%	5.40%	5.40%	0.39%	3.11%	3.72%
Loomis Sayles Custom Benchmark (4)		-1.21%	-1.93%	3.19%	3.64%	3.64%	-0.54%	1.31%	2.72%
Excess Return		0.30%	0.54%	0.99%	1.76%	1.76%	0.93%	1.80%	1.00%
Manulife Strategic Fixed Income	1.76%	-0.93%	-1.95%	2.94%	3.20%	3.20%	0.03%	1.61%	-
Bloomberg Multiverse		-2.09%	-4.96%	1.66%	-1.34%	-1.34%	-4.22%	-1.77%	-
Excess Return		1.16%	3.02%	1.27%	4.54%	4.54%	4.25%	3.38%	-
Mellon US Agg Bond Index	3.77%	-1.70%	-3.13%	1.91%	1.19%	1.19%	-	-	-
Bloomberg Aggregate Bond Index		-1.64%	-3.06%	1.98%	1.25%	1.25%	-	-	-
Excess Return		-0.07%	-0.07%	-0.06%	-0.06%	-0.06%	-	-	-
Total Cash	1.72%	0.40%	1.21%	2.54%	5.25%	5.25%	4.00%	2.52%	1.85%
3-month Treasury Bill		0.40%	1.17%	2.55%	5.25%	5.25%	3.89%	2.46%	1.77%
Excess Return		0.00%	0.04%	-0.02%	0.00%	0.00%	0.11%	0.06%	0.09%
Total Marketable Assets	73.43%	-3.14%	-1.55%	4.93%	11.18%	11.18%	2.92%	6.79%	6.89%
Total Marketable Index (5)		-2.24%	-1.91%	4.34%	11.40%	11.40%	2.90%	6.63%	7.07%
Excess Return		-0.89%	0.35%	0.58%	-0.22%	-0.22%	0.02%	0.16%	-0.18%

(1) The Fixed Income Benchmark is the Bloomberg Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

The table below details the rates of return for the fund's investment managers over various time periods ended December 31, 2024. Negative manager excess returns are shown in red, positive excess returns in green. Returns for one year or greater are annualized.

Net of Fees Returns for Periods Ended December 31, 2024									
Composite	Total Fund Weighting As of 12/31/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
Total Real Estate (Q3)* (5)	8.78%	0.03%	-0.18%	-0.01%	-5.40%	-5.40%	0.95%	5.63%	8.06%
Real Estate Benchmark (1)		0.01%	0.02%	-0.64%	-8.04%	-8.04%	-1.04%	2.05%	5.22%
Excess Return		0.03%	-0.20%	0.63%	2.64%	2.64%	1.99%	3.58%	2.84%
Strategic Core Real Estate (Q3)*	4.99%	0.09%	0.09%	0.11%	-8.18%	-8.18%	-0.21%	3.52%	6.74%
Real Estate Benchmark (1)		0.01%	0.02%	-0.64%	-8.04%	-8.04%	-1.04%	2.05%	5.22%
Excess Return		0.09%	0.07%	0.75%	-0.14%	-0.14%	0.83%	1.46%	1.52%
Tactical Non-Core Real Estate (Q3)*	3.80%	-0.04%	-0.54%	-0.16%	-1.00%	-1.00%	2.80%	9.32%	10.37%
Real Estate Benchmark (1)		0.01%	0.02%	-0.64%	-8.04%	-8.04%	-1.04%	2.05%	5.22%
Excess Return		-0.05%	-0.56%	0.48%	7.03%	7.03%	3.84%	7.26%	5.15%
Total Alternative Assets (Q3)*	17.79%	1.57%	1.53%	1.56%	5.35%	5.35%	4.82%	10.72%	9.30%
Alternative Assets Benchmark (2)		1.86%	5.69%	9.00%	29.11%	29.11%	11.41%	14.12%	11.70%
Excess Return		-0.29%	-4.16%	-7.43%	-23.76%	-23.76%	-6.59%	-3.39%	-2.41%
Total Private Equity (Q3)*	13.34%	1.49%	1.46%	1.50%	5.23%	5.23%	4.43%	12.88%	12.18%
Private Equity Benchmark (3)		2.20%	6.64%	10.62%	37.37%	37.37%	13.74%	18.55%	16.43%
Excess Return		-0.71%	-5.18%	-9.11%	-32.14%	-32.14%	-9.32%	-5.68%	-4.25%
Total Private Debt (Q3)*	4.46%	1.81%	1.73%	1.74%	5.71%	5.71%	6.00%	5.86%	6.18%
Private Debt Benchmark (4)		1.19%	3.82%	5.70%	13.61%	13.61%	6.29%	5.43%	5.22%
Excess Return		0.62%	-2.09%	-3.96%	-7.90%	-7.90%	-0.29%	0.44%	0.97%

(1) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(2) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 2% lagged 1 quarter and 33.3% ((50% S&P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%) lagged 1 quarter as of 7/1/2022.

(3) The Private Equity Benchmark is the Russell 3000 Index + 2% lagged 1 quarter as of 7/1/2022.

(4) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Index / 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(5) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

*Real Estate and Alternatives market values reflect current custodian valuations, which are typically lagged approximately 1 quarter.

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 November 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				November 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$4,011,772,952	31.83%	\$(300,000,000)	\$(181,555,932)	\$4,493,328,885	34.93%
Large Cap Domestic Equity	\$2,403,099,778	19.07%	\$(100,000,000)	\$(57,749,583)	\$2,560,849,362	19.91%
Blackrock S&P 500	2,403,099,778	19.07%	(100,000,000)	(57,749,583)	2,560,849,362	19.91%
SMid Cap Domestic Equity	\$766,265,066	6.08%	\$0	\$(52,522,948)	\$818,788,014	6.36%
AllianceBernstein	484,319,368	3.84%	0	(38,889,388)	523,208,756	4.07%
TSW	281,945,698	2.24%	0	(13,633,560)	295,579,257	2.30%
Small Cap Domestic Equity	\$842,408,108	6.68%	\$(200,000,000)	\$(71,283,401)	\$1,113,691,509	8.66%
Boston Trust	262,663,157	2.08%	0	(22,700,699)	285,363,856	2.22%
Segall Bryant & Hamill	278,576,506	2.21%	0	(22,223,892)	300,800,398	2.34%
Wellington	301,168,445	2.39%	(200,000,000)	(26,358,810)	527,527,255	4.10%
Total Non US Equity	\$2,341,386,892	18.58%	\$0	\$(69,279,002)	\$2,410,665,894	18.74%
Core Non US Equity (1)	\$1,419,297,456	11.26%	\$0	\$(31,976,599)	\$1,451,274,055	11.28%
Aristotle	184,261,031	1.46%	0	(5,344,906)	189,605,937	1.47%
Artisan Partners	417,917,802	3.32%	0	(11,333,226)	429,251,028	3.34%
BlackRock Superfund	198,813,151	1.58%	0	(4,291,207)	203,104,358	1.58%
Causeway Capital	453,812,704	3.60%	0	(5,450,265)	459,262,969	3.57%
Lazard	164,004,481	1.30%	0	(5,547,235)	169,551,715	1.32%
Emerging Markets	\$180,917,946	1.44%	\$0	\$(4,506,042)	\$185,423,988	1.44%
Wellington Emerging Markets	180,917,946	1.44%	0	(4,506,042)	185,423,988	1.44%
Non US Small Cap	\$137,538,873	1.09%	\$0	\$(4,432,837)	\$141,971,710	1.10%
Wellington Int'l Small Cap Research	137,538,873	1.09%	0	(4,432,837)	141,971,710	1.10%
Global Equity	\$603,632,618	4.79%	\$0	\$(28,363,524)	\$631,996,142	4.91%
Walter Scott Global Equity	603,632,618	4.79%	0	(28,363,524)	631,996,142	4.91%
Total Fixed Income	\$2,683,675,107	21.29%	\$300,000,000	\$(46,548,493)	\$2,430,223,600	18.89%
BlackRock SIO Bond Fund	280,412,435	2.22%	0	(928,164)	281,340,599	2.19%
Brandywine Asset Mgmt	218,003,975	1.73%	0	(10,916,634)	228,920,609	1.78%
FIAM (Fidelity) Tactical Bond	383,928,220	3.05%	0	(7,768,783)	391,697,002	3.04%
Income Research & Management	801,047,806	6.36%	0	(13,377,597)	814,425,403	6.33%
Loomis Sayles	302,245,379	2.40%	0	(2,719,207)	304,964,586	2.37%
Manulife Strategic Fixed Income	222,406,981	1.76%	0	(2,043,556)	224,450,536	1.74%
Mellon US Agg Bond Index	475,630,310	3.77%	300,000,000	(8,794,553)	184,424,864	1.43%
Total Cash	\$217,258,340	1.72%	\$5,856,885	\$829,675	\$210,571,781	1.64%
Total Marketable Assets	\$9,254,093,292	73.43%	\$5,856,885	\$(296,553,753)	\$9,544,790,159	74.19%
Total Real Estate	\$1,106,859,014	8.78%	\$(7,737,948)	\$2,610,935	\$1,111,986,028	8.64%
Strategic Core Real Estate	628,459,573	4.99%	(4,626,168)	843,946	632,241,795	4.91%
Tactical Non-Core Real Estate	478,399,440	3.80%	(2,251,926)	907,135	479,744,232	3.73%
Total Alternative Assets	\$2,242,319,233	17.79%	\$(7,538,139)	\$41,918,304	\$2,207,939,068	17.16%
Private Equity	1,680,665,885	13.34%	4,594,536	27,819,708	1,648,251,641	12.81%
Private Debt	561,653,348	4.46%	(12,132,675)	14,098,596	559,687,427	4.35%
Total Fund Composite	\$12,603,271,539	100.0%	\$(9,419,202)	\$(252,024,513)	\$12,864,715,255	100.0%

-Alternatives market values reflect current custodian valuations, which may not be up to date.

(1) Includes \$488,286 in legacy assets that are not actively managed and in liquidation following the termination of Fisher Investments.

New Hampshire Retirement System Target History

30-Jun-2022 - 31-Dec-2024		
Domestic Broad		
Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Russell 3000 Index+2.00%	10.00%
Other Alternatives	Bloomberg HY Corporate+1.00%	2.50%
Other Alternatives	Morningstar LSTA Leveraged Loan 100+1.00%	2.50%
		100.00%
30-Jun-2021 - 30-Jun-2022		
Domestic Broad		
Eq	Russell 3000 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%
30-Sep-2020 - 30-Jun-2021		
Domestic Broad		
Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+3.00%	10.00%
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%
		100.00%
30-Jun-2015 - 30-Sep-2020		
Domestic Broad		
Eq	S&P 500 Index	30.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	15.00%
		100.00%
31-Mar-2015 - 30-Jun-2015		
Domestic Broad		
Eq	Russell 3000 Index	37.30%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	9.00%
		100.00%
31-Dec-2014 - 31-Mar-2015		
Domestic Broad		
Eq	Russell 3000 Index	37.70%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	8.50%
		100.00%
30-Sep-2014 - 31-Dec-2014		
Domestic Broad		
Eq	Russell 3000 Index	39.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	7.40%
		100.00%
30-Jun-2014 - 30-Sep-2014		
Domestic Broad		
Eq	Russell 3000 Index	39.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.90%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	6.50%
		100.00%
31-Mar-2014 - 30-Jun-2014		
Domestic Broad		
Eq	Russell 3000 Index	42.20%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.20%
		100.00%
31-Dec-2013 - 31-Mar-2014		
Domestic Broad		
Eq	Russell 3000 Index	41.80%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.10%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	4.10%
		100.00%
30-Sep-2013 - 31-Dec-2013		
Domestic Broad		
Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%
30-Jun-2013 - 30-Sep-2013		
Domestic Broad		
Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	9.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	S&P 500 Index+5.00%	3.50%
		100.00%
31-Mar-2013 - 30-Jun-2013		
Domestic Broad		
Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	3.40%
		100.00%
31-Dec-2012 - 31-Mar-2013		
Domestic Broad		
Eq	Russell 3000 Index	43.60%
Domestic Fixed	Bloomberg Universal	25.00%
Real Estate	NCREIF Property Index+0.50%	8.80%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.60%
		100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).

From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System Target History

30-Sep-2012 - 31-Dec-2012			31-Dec-2010 - 31-Mar-2011		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	43.90%	Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	25.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	8.70%	Real Estate	NCREIF Property Index+0.50%	5.20%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.40%	Other Alternatives	Alternative Asset Benchmark	1.80%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
30-Jun-2012 - 30-Sep-2012			30-Sep-2010 - 31-Dec-2010		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	43.50%	Eq	Russell 3000 Index	42.80%
Domestic Fixed	Bloomberg Universal	25.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.00%	Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.50%	Other Alternatives	Alternative Asset Benchmark	1.80%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
31-Mar-2012 - 30-Jun-2012			30-Jun-2010 - 30-Sep-2010		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	40.10%	Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.60%	Real Estate	NCREIF Property Index+0.50%	5.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.30%	Other Alternatives	Alternative Asset Benchmark	2.10%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
31-Dec-2011 - 31-Mar-2012			31-Dec-2009 - 30-Jun-2010		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	39.70%	Eq	Russell 3000 Index	43.30%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	8.00%	Real Estate	NCREIF Property Index+0.50%	4.70%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.30%	Other Alternatives	Alternative Asset Benchmark	2.00%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
30-Sep-2011 - 31-Dec-2011			30-Sep-2009 - 31-Dec-2009		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	40.20%	Eq	Russell 3000 Index	42.30%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.40%	Real Estate	NCREIF Property Index+0.50%	5.50%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.40%	Other Alternatives	Alternative Asset Benchmark	2.20%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
30-Jun-2011 - 30-Sep-2011			30-Jun-2009 - 30-Sep-2009		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	42.50%	Eq	Russell 3000 Index	41.50%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%	Real Estate	NCREIF Property Index+0.50%	6.20%
Intl Equity	MSCI ACWI xUS (Net)	20.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.10%	Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%	Global Equity		
			Broad	MSCI ACWI (Net)	5.00%
					100.00%
31-Mar-2011 - 30-Jun-2011					
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	43.00%	Eq	Russell 3000 Index	41.50%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.30%	Real Estate	NCREIF Property Index+0.50%	6.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%	Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.70%	Other Alternatives	Alternative Asset Benchmark	2.30%
Global Equity			Global Equity		
Broad	MSCI ACWI (Net)	5.00%	Broad	MSCI ACWI (Net)	5.00%
		100.00%			100.00%

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).

From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leveraged Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leveraged Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leveraged Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

New Hampshire Retirement System Target History

31-Mar-2009 - 30-Jun-2009			30-Jun-2003 - 30-Nov-2006		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	38.00%	Eq	Russell 3000 Index	47.00%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index+0.50%	9.30%	Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%	Intl Equity	MSCI ACWI xUS (Net)	12.00%
Other Alternatives	Alternative Asset Benchmark	2.70%	Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Equity			Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
Broad	MSCI ACWI (Net)	5.00%			100.00%
		100.00%			
31-Dec-2008 - 31-Mar-2009			31-Oct-1997 - 30-Jun-2003		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	37.20%	Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index+0.50%	9.70%	Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%	Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Alternative Asset Benchmark	3.10%	Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Equity			Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
Broad	MSCI ACWI (Net)	5.00%			100.00%
		100.00%			
30-Sep-2008 - 31-Dec-2008			31-Mar-1990 - 31-Oct-1997		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	38.90%	Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	30.00%	Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	8.20%	Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%	Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.90%	Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Equity			Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
Broad	MSCI ACWI (Net)	5.00%			100.00%
		100.00%			
30-Jun-2008 - 30-Sep-2008			30-Jun-1975 - 31-Mar-1990		
Domestic Broad			Domestic Broad		
Eq	Russell 3000 Index	40.00%	Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	30.00%	Real Estate	NCREIF Property Index	10.00%
Real Estate	NCREIF Property Index	7.30%	Intl Equity	MSCI EAFE (Net)	9.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%	Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.70%	Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
Global Equity					82.00%
Broad	MSCI ACWI (Net)	5.00%			
		100.00%			
30-Jun-2007 - 30-Jun-2008					
Domestic Broad					
Eq	Russell 3000 Index	44.00%			
Domestic Fixed	Bloomberg Universal	30.00%			
Real Estate	NCREIF Property Index	5.00%			
Intl Equity	MSCI ACWI xUS (Net)	16.00%			
Other Alternatives	Consumer Price Index (W) + 5%	5.00%			
		100.00%			
30-Nov-2006 - 30-Jun-2007					
Domestic Broad					
Eq	Russell 3000 Index	44.00%			
Domestic Fixed	Bloomberg Universal	26.00%			
Real Estate	NCREIF Property Index	5.00%			
Intl Equity	MSCI ACWI xUS (Net)	16.00%			
Other Alternatives	Consumer Price Index (W) + 5%	5.00%			
Global Fixed-Inc	Brandywine Blended Benchmark	4.00%			
		100.00%			

Alternatives Benchmark represents from 7/1/2022 to present: 66.7% Russell 3000 Idx + 2% (1 qtr lag) and 33.3% ((50% S&P LSTA Leveraged Loan 100 Idx + 50% Bloomberg HY Idx) + 1%) (1 qtr lag).

From 7/1/2019 to 7/1/2022: 66.7% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019: 33.3% S&P 500 +3% (1 qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag) + 33.3% of Cash (6-mo USD LIBOR) + 5%. From 7/1/2015 to 7/1/2016: 33.3% S&P 500 +3% (1qtr lag) + 33.3% S&P LSTA Leverage Loan 100 Idx(1 qtr lag) + 33.3% of Cash (1 month USD LIBID) +5%. From 7/1/2013 to 7/1/2015: S&P 500 plus 5% (1 qtr lag). From 7/1/2011 to 7/1/2013: Qtr ending weight of Private Equity x S&P 500 plus 5% + Qtr ending weight Absolute Return x CPI + 5%. Prior to 7/1/2011: CPI + 5%.

Important Disclosures

Information contained in this document may include confidential, trade secret and/or proprietary information of Callan and the client. It is incumbent upon the user to maintain such information in strict confidence. Neither this document nor any specific information contained herein is to be used other than by the intended recipient for its intended purpose.

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Certain information herein has been compiled by Callan from a variety of sources believed to be reliable but for which Callan has not necessarily verified for accuracy or completeness. Information contained herein may not be current. Callan has no obligation to bring current the information contained herein.

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Callan's performance measurement service reports estimated returns for a portfolio and compares them against relevant benchmarks and peer groups, as appropriate; such service may also report on historical portfolio holdings, comparing them to holdings of relevant benchmarks and peer groups, as appropriate ("portfolio holdings analysis"). To the extent that Callan's reports include a portfolio holdings analysis, Callan relies entirely on holdings, pricing, characteristics, and risk data provided by third parties including custodian banks, record keepers, pricing services, index providers, and investment managers. Callan reports the performance and holdings data as received and does not attempt to audit or verify the holdings data. Callan is not responsible for the accuracy or completeness of the performance or holdings data received from third parties and such data may not have been verified for accuracy or completeness.

Callan's performance measurement service may report on illiquid asset classes, including, but not limited to, private real estate, private equity, private credit, hedge funds and infrastructure. The final valuation reports, which Callan receives from third parties, for of these types of asset classes may not be available at the time a Callan performance report is issued. As a result, the estimated returns and market values reported for these illiquid asset classes, as well as for any composites including these illiquid asset classes, including any total fund composite prepared, may not reflect final data, and therefore may be subject to revision in future quarters.

The content of this document may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact. The opinions expressed herein may change based upon changes in economic, market, financial and political conditions and other factors. Callan has no obligation to bring current the opinions expressed herein.

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The issues considered and risks highlighted herein are not comprehensive and other risks may exist that the user of this document may deem material regarding the enclosed information. Please see any applicable full performance report or annual communication for other important disclosures.

Unless Callan has been specifically engaged to do so, Callan does not conduct background checks or in-depth due diligence of the operations of any investment manager search candidate or investment vehicle, as may be typically performed in an operational due diligence evaluation assignment and in no event does Callan conduct due diligence beyond what is described in its report to the client.

Any decision made on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon the client to make an independent determination of the suitability and consequences of such a decision.

Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.

NHRS Asset Allocation Update

NHRS Investment Team
Independent Investment Committee Meeting

February 11, 2025

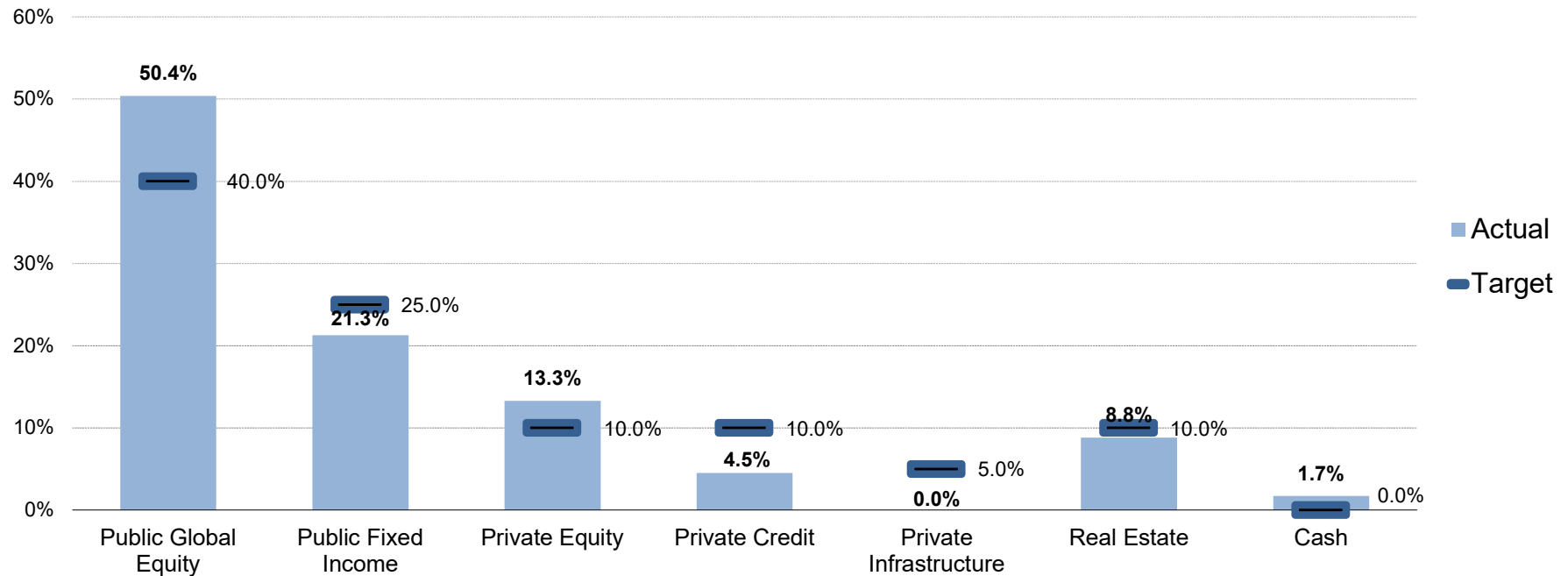
Summary



- On December 31, 2024, the preliminary Total Fund value was approximately \$12.6 billion.
- Current asset allocation targets were approved by the Board of Trustees on December 12, 2023 (targets) and December 10, 2024 (ranges), respectively.
 - The new Target Asset Allocation, approved by the Board in December 2023, took effect at the start of the new fiscal year on July 1, 2024. Implementation will occur over a multi-year timeframe, with interim targets to be determined in subsequent meetings by the Investment Committee.
- Allocations are managed within approved allocation ranges. All asset classes are continually monitored and Staff takes action to prudently rebalance as a range limit is approached. A rebalance of the portfolio was completed on December 5, 2024 bringing fixed income within target and reducing global equity.
- Current status of Targets vs. Actual is illustrated on page 2.
- All asset classes are within approved allocation ranges (page 3) as of December 31, 2024.
 - The investment team will adjust the allocation within the target ranges at the conclusion of the ongoing implementation plan for the total plan.
- Total Fund allocation is above and below the target of 70% Equity-like and 30% Fixed Income investments, respectively as of December 31, 2024 (page 4).

Current Status

Class Targets vs. Actual Allocation as of December 31, 2024 (Preliminary)



Figures in bold represent actual allocation amount.

Source: NHRS

Asset Class Allocations Relative to Policy Targets and Ranges



As of December 31, 2024 (preliminary)

Asset Class	Allocation				Objective	Comments
	Range ¹	Target	Actual	Variance		
Public Markets						
Global Equity	30 - 50%	40.0%	50.4%	10.4%	Action	Actual allocation to be reduced over subsequent periods to fund new infrastructure allocation and increase to private credit.
Fixed Income	18 - 32%	25.0%	21.3%	-3.7%	Monitor	Portfolio was rebalanced on December 5, 2024, using funds drawn from Global Equity.
Private Markets						
Equity ¹	5 - 15%	10.0%	13.3%	3.3%	Monitor	No immediate action needed.
Credit ¹	0 - 15%	10.0%	4.5%	-5.5%	Action	To be scaled up incrementally over subsequent periods as part of SAA implementation.
Infrastructure	0 - 15%	5.0%	0.0%	-5.0%	Action	To be scaled up incrementally over subsequent periods as part of SAA implementation.
Real Estate (RE) ³	5 - 20%	10.0%	8.8%	-1.2%	Monitor	No immediate action needed.
Cash Equivalents	0 - 5%	0.0%	1.7%	1.7%	No Action	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls and other plan needs.
		100.0%	100.0%	0.0%		

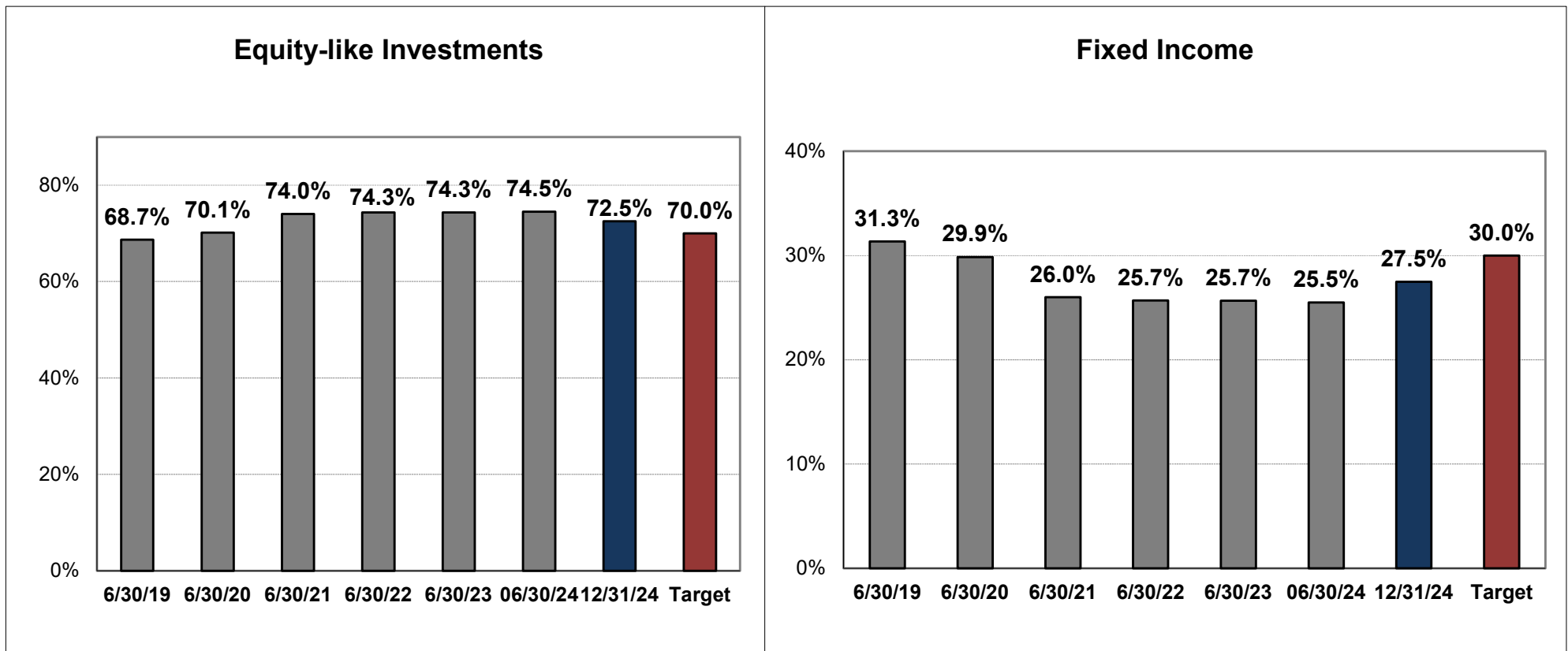
1As reported on the December 31, 2024 Callan Monthly Review.

Source: NHRS

Total Fund Allocation from 6/30/18 through 12/31/24 (Preliminary)



- The Total Fund allocation is above and below the target of 70% Equity-like and 30% Fixed Income investments, respectively.



Source: NHRS

Private Debt & Equity Summary: As of December 31, 2024

<u>IIC Approval</u>	<u>Investment Name</u>	<u>Amount</u>	<u>Strategy</u>
June 2009	Lexington Capital Partners VII	\$ 20,000,000	Secondaries
March 2011	Siguler Guff Distressed Opportunities IV *	\$ 20,000,000	Distressed
April 2011	Avenue Special Situations Fund VI	\$ 20,000,000	Distressed
April 2011	Lexington Capital Partners VII	\$ 20,000,000	Secondaries
May 2011	Industry Ventures Fund VI *	\$ 20,000,000	Secondaries
August 2011	RFE Investment Partners VIII *	\$ 20,000,000	Buyout
August 2011	Tennenbaum Opportunities Fund VI	\$ 20,000,000	Distressed
September 2011	Edgewater Growth Capital Partners Fund III *	\$ 20,000,000	Buyout
November 2011	SL Capital European Smaller Funds I *	\$ 20,000,000 **	Buyout
July 2012	Ironwood Mezzanine Fund III *	\$ 20,000,000	Mezzanine
July 2012	Coller International Partners VI	\$ 20,000,000	Secondaries
December 2012	Paul Capital Partners X *	\$ 12,500,000	Secondaries
February 2013	HarbourVest Dover Street VIII *	\$ 50,000,000	Secondaries
May 2013	Gramercy Distressed Opportunity Fund II *	\$ 50,000,000	Distressed
July 2013	Monroe Capital Senior Secured Direct Loan Fund *	\$ 50,000,000	Direct Lending
September 2013	Industry Ventures Fund VII *	\$ 20,000,000	Secondaries
September 2013	Industry Ventures Partnership Holdings Fund III *	\$ 20,000,000	Venture Capital
October 2013	Pine Brook Capital Partners II	\$ 50,000,000	Growth
February 2014	CCMP Capital Investors III	\$ 50,000,000	Buyout
February 2014	Carlyle Group *	\$ 150,000,000	Growth
March 2014	Crescent Direct Lending Levered Fund *	\$ 50,000,000	Direct Lending
April 2014	Lexington Capital Partners VIII *	\$ 50,000,000	Secondaries
August 2014	Alcentra European Direct Lending Fund	\$ 50,000,000	Direct Lending
August 2014	HarbourVest HIPEP VII *	\$ 50,000,000	Buyout
September 2014	Top Tier Venture Velocity Fund *	\$ 20,000,000	Secondaries
October 2014	BlackRock Private Opportunities Fund - 2014 Series	\$ 150,000,000	Co-Investments
November 2014	NGP Natural Resources XI *	\$ 75,000,000	Energy
January 2015	Comvest Capital III *	\$ 40,000,000	Direct Lending
January 2015	CarVal Investors Credit Value Fund III *	\$ 50,000,000	Multi-sector
April 2015	Coller International Partners VII	\$ 50,000,000	Secondaries
August 2015	Gramercy Distressed Opportunity Fund III *	\$ 50,000,000	Distressed
August 2015	Monroe Capital Private Credit Fund II *	\$ 50,000,000	Direct Lending
August 2015	BlueBay Direct Lending Fund II *	\$ 50,000,000 **	Direct Lending
September 2015	Industry Ventures Partnership Holdings Fund IV *	\$ 20,000,000	Venture Capital
September 2015	Warburg Pincus XII	\$ 64,000,000 ***	Growth
November 2015	HarbourVest Dover Street IX *	\$ 50,000,000	Secondaries
November 2015	Kayne Anderson Energy Fund VII *	\$ 50,000,000	Energy
February 2016	Alcentra European Direct Lending Fund II *	\$ 50,000,000	Direct Lending
February 2016	Riverstone Credit Partners *	\$ 50,000,000	Energy
March 2016	Thoma Bravo Fund XII	\$ 46,000,000 ***	Buyout
October 2016	Comvest Capital IV *	\$ 50,000,000	Direct Lending
December 2016	HarbourVest HIPEP VIII *	\$ 50,000,000	Buyout
January 2017	Actis Energy 4	\$ 50,000,000	Energy
February 2017	Edgewater Growth Capital Partners Fund IV *	\$ 50,000,000	Buyout
February 2017	Top Tier Venture Velocity Fund 2 *	\$ 25,000,000	Secondaries
April 2017	Apollo Investment Fund IX	\$ 40,000,000 ***	Buyout
June 2017	Crescent Direct Lending Levered Fund II *	\$ 50,000,000	Direct Lending
September 2017	Carlyle Asia V *	\$ 50,000,000	Growth
September 2017	CarVal Investors Credit Value Fund IV *	\$ 50,000,000	Multi-sector
October 2017	BlackRock Private Opportunities Fund - 2018 Series	\$ 150,000,000	Co-Investments
November 2017	Riverstone Credit Partners II *	\$ 50,000,000	Energy
February 2018	Industry Ventures Partnership Holdings Fund V *	\$ 25,000,000	Venture Capital
March 2018	BlueBay Direct Lending Fund III *	\$ 50,000,000	Direct Lending
April 2018	Monroe Capital Private Credit Fund III *	\$ 50,000,000	Direct Lending
September 2018	Alcentra European Direct Lending Fund III *	\$ 50,000,000	Direct Lending
September 2018	Thoma Bravo Fund XIII	\$ 50,000,000	Buyout
September 2018	Warburg Pincus Global Growth	\$ 50,000,000	Growth
April 2019	HarbourVest Dover Street X *	\$ 50,000,000	Secondaries
April 2019	Top Tier Venture Velocity Fund 3 *	\$ 25,000,000	Secondaries

Private Debt & Equity Summary: As of December 31, 2024

<u>IIC Approval</u>	<u>Investment Name</u>	<u>Amount</u>	<u>Strategy</u>
March 2020	Collier International Partners VIII	\$ 75,000,000	Secondaries
March 2020	HarbourVest HIPEP IX *	\$ 75,000,000	Buyout
April 2020	Comvest Capital V *	\$ 50,000,000	Direct Lending
September 2020	Thoma Bravo Fund XIV	\$ 50,000,000 ***	Buyout
October 2020	CarVal Investors Credit Value Fund V *	\$ 50,000,000	Multi-sector
October 2020	Industry Ventures Fund IX *	\$ 50,000,000	Secondaries
November 2020	BlackRock Private Opportunities Fund - 2021 Series	\$ 150,000,000	Co-Investments
December 2020	Monroe Capital Private Credit Fund IV *	\$ 50,000,000	Direct Lending
February 2021	Crescent Direct Lending Levered Fund III *	\$ 50,000,000	Direct Lending
June 2021	Industry Ventures Partnership Holdings Fund VI *	\$ 25,000,000	Venture Capital
September 2021	Top Tier Venture Velocity Fund 4 *	\$ 25,000,000	Secondaries
November 2021	Atalaya Special Opportunities Fund VIII	\$ 50,000,000	Specialty Finance
February 2022	Clearlake Capital Partners VII	\$ 50,000,000	Buyout
February 2022	Thoma Bravo Fund XV	\$ 50,000,000	Buyout
March 2022	Comvest Capital VI *	\$ 50,000,000	Direct Lending
March 2022	Warburg Pincus 14	\$ 50,000,000	Growth
May 2022	HarbourVest Dover Street XI *	\$ 50,000,000	Secondaries
May 2023	American Industrial Partners VIII	\$ 50,000,000	Buyout
May 2023	Apollo X	\$ 40,000,000	Buyout
May 2023	Apollo X Co-Investment	\$ 40,000,000	Buyout
Aug / Sept 2023	Ares Pathfinder II	\$ 75,000,000	Specialty Finance
October 2023	Strategic Value Partners Capital Solutions II	\$ 50,000,000	Multi-sector
December 2023	Sixth Street Partners TAO Global	\$ 75,000,000	Multi-sector
February 2024	H.I.G. Capital Advantage Buyout Fund II	\$ 50,000,000	Buyout
February 2024	H.I.G. Capital Advantage Buyout Fund II Co-Investment	\$ 50,000,000	Buyout
June 2024	Ares Senior Direct Lending Fund III	\$ 100,000,000	Direct Lending
August 2024	HarbourVest HIPEP X	\$ 75,000,000	Buyout
August 2024	Oak Hill Advisors Senior Private Lending Fund (OLEND)	\$ 100,000,000	Direct Lending
December 2024	Top Tier Venture Velocity Fund 5 *	\$ 25,000,000	Secondaries
December 2024	Blackstone Multi Asset Credit Fund (BMAC)	\$ 75,000,000	Multi-sector
		\$ 4,457,500,000	

Red indicates Private Equity (\$2,712.5m or 61% of commitments)

Green indicates Private Debt (\$1,745.0m or 39% of commitments)

Investments that are bolded and shaded represent re-ups

* Advisory Board Member (includes observer seats)

** Commitment made in Euros

*** Amount reduced due to oversubscription



To: Board of Trustees
From: Raynald Leveque, Chief Investment Officer
Date: February 11, 2025
Re: **Revised Investment Manual and Policy**
Item: Action: ☒ Discussion: ☐ Informational: ☐

Attached for your review and feedback is the clean and redlined versions of the System's Investment Manual, which incorporates the latest updates to reflect significant changes in the NHRS asset classes, benchmarks, and internal procedures. These revisions also include the most recent Board-approved adjustments to the asset allocation strategy.

The changes to the Investment Manual are reflected in several key sub-components, including the Investment Policy, Global Equity Guidelines, Fixed Income Guidelines, Private Markets Investment Guidelines (formerly known as Alternative Investment Guidelines), and the Accountability Matrix.

The Private Markets Investment Guidelines have been modernized to reflect current industry language and practices, with updated targets and revised asset allocation to better align with evolving market trends.

These updates are designed to ensure alignment with the System's long-term investment objectives and to enhance the overall investment framework.

Please note that the Investment Manual was last reviewed and formally approved by the Board of Trustees (BOT) on June 14, 2022.

Changes to the Investment Policy are reflected on the following pages:

- Pages 2 – 6: Revisions related to additional parties and stakeholders; reclassification of the lead investment executive from Director of Investments to Chief Investment Officer (CIO), Investment Staff to Investment Team;
- Page 9: Relative to the approved asset classes and target allocation ranges;
- Pages 10 – 11: Revisions to asset class definitions to align with current industry terminology;
- Pages 13 – 15: Relative to benchmarks;
- Addition of previously approved Infrastructure guidelines;

Changes to the **Global Equities Guidelines Policy**

Our Mission: To provide secure retirement benefits and superior service.

- Transitioning from the Domestic Equities and Non-US Equities policy to a Global Equities policy to align with the newly approved Global Equity asset class as of December 2023;

Changes to **Fixed Income Guidelines**

- Updates to allowable ranges based on prior BOT approval at the December 10, 2024 meeting;

Changes to **Private Markets Guidelines**

- Reclassification of asset class grouping from Alternative Investments to Private Markets;
- Pages 1 – 5: Revisions to update language found in document to current industry language and practices;
- Page 1: Changes to allocation targets, in addition to new Infrastructure asset class;

Changes to **Accountability Matrix**

- Pages 1 – 11: Reclassification of the lead investment executive role from Director of Investments to Chief Investment Officer (CIO);
- Page 11: Update to Legal Counsel responsibility/duty in relation to proxy voting service provider;

At its January meeting, the Independent Investment Committee unanimously voted to update the Investment Manual, as outlined below, for recommendation to the Board of Trustees for approval.

This recommendation will include the specification of the Non-US Equity benchmark as the MSCI All Country World excluding US Investable Market Index (MSCI ACWI ex. US IMI). This specific benchmark will be presented to the IIC for approval at today's meeting. This benchmark will ensure alignment with the Total Equity benchmark at the asset class level, which is the MSCI ACWI IMI).

I recommend that the Board of Trustees conditionally approve the updated Investment Manual and Investment Policy, inclusive of the MSCI ACWI ex. US IMI benchmark specification.

For completeness and transparency, the Board materials include all the same materials from the January 2025 IC meeting supporting this recommendation, which includes the clean and redline version.

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- Investment Policy
- Proxy Voting Policy
- Securities Lending Policy
- Securities Litigation Policy
- Private Markets Disclosure Policy

Section II

- Accountability Matrix

Section III

- Independent Investment Committee Charter

Section IV

- Investment Guidelines
 - Global Equity
 - Global Fixed Income
 - Private Markets Investments
 - Real Estate
 - Infrastructure

New Hampshire Retirement System Investment Policy Amended by NHRS Board of Trustees on February 11, 2025

I. Introduction to the Investment Policy

The purpose of this Investment Policy is to:

- A. Fulfill the Board's and IIC's statutory duty to oversee the investments of NHRS in accordance with the basic fiduciary responsibilities. These duties include:
 - Managing the fund with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character with like objectives.
 - Making all decisions solely in the interest of, and for the exclusive purpose of providing benefits to the members, retirees, and their beneficiaries.
 - Defraying reasonable administrative expenses.
- B. Set forth the investment policies the Board and IIC judge to be appropriate, prudent and, in consideration of the Systems' needs, to comply with current laws and to direct the investment of the System's assets.
- C. Ensure appropriate flexibility within the investment process to allow for the System to participate in prudent investment opportunities while also establishing risk parameters within which the portfolio will operate.
- D. Establish criteria to evaluate the System's investment performance.
- E. Communicate investment policies, objectives, asset class guidelines, and performance criteria to the investment team, external investment managers/advisors, consultants, custodians, and all other interested parties.
- F. Serve as a review document to guide ongoing oversight of the System's investments for compliance with the laws of New Hampshire.

II. Responsible Parties and Their Duties

Key parties that participate in the investment decision-making and oversight process for NHRS include the:

- Board of Trustees
- Independent Investment Committee (IIC)
- Investment Team (Team)
- Investment Consultants
- Investment Advisors
- Investment Managers
- Custodian Bank
- Proxy Voting Service Provider
- Investment Service Providers
- External Fund Counsel
- Internal Stakeholders:
 - Finance & Accounting
 - Legal
 - Information Technology
 - Communications

Board of Trustees:

The Board sets investment policy in accordance with applicable State and Federal laws, hires the investment consultant(s), and sets policy for establishing and modifying investment objectives. The Board also has responsibility to review quarterly and annual reports from the IIC.

Independent Investment Committee:

The IIC prepares for the Board's review and approval an investment policy statement, including investment objectives, an expected rate of return the System is attempting to earn, asset allocation targets and ranges, and identification of appropriate benchmarks. The IIC has the full power to hold, purchase, sell, assign, transfer, and dispose of any securities and investments, as well as the proceeds of such investments, in accordance with the policy set by the Board. The IIC has the responsibility to establish asset class guidelines and for selecting, monitoring, and terminating investment managers. The IIC is responsible for reporting to the Board on a quarterly and annual basis as directed by the statute.

Investment Team:

The NHRS Investment Team, led by the Chief Investment Officer (CIO), is responsible for implementation of the investment decisions made by the Board of Trustees and/or the IIC. In general, the responsibilities of the Investment Team include:

- Ensuring the asset allocation of the Fund is implemented in accordance with the policy approved by the Board, including rebalancing as necessary in accordance with the investment policy
- Monitoring policy and statutory compliance of the portfolio

- Assisting the IIC in developing investment policy recommendations to present to the Board for approval
- Monitoring investment managers and performing due diligence on new investment opportunities or managers as directed by the IIC
- Coordinating work with the investment consultant or any other investment-related service provider selected by the Board
- Conducting special research or analysis as directed by the Board, IIC, or CIO
- Ensuring the Board and IIC receive appropriate reporting regarding the investment portfolio

Investment Consultants:

The investment consultant will perform those services as described in its contract, either general consulting or specific asset class consulting. The investment consultant is hired by the Board and is expected to work cooperatively and collaboratively with the Board, the IIC, as well as the Investment Team.

In general, the investment consultant's responsibilities may include:

- Providing advice on total plan asset allocation, or specific asset class guidance
- Assisting the Board, IIC, and Team with decision-making
- Providing reviews of investment policy, asset class structure, and investment manager due diligence
- Calculating performance
- Reporting and analyzing performance of the total portfolio, asset classes, and individual investment managers
- Performing research as needed
- Providing investment education to the Board, IIC and team as requested
- Reporting quarterly to the Board on investment consultant contract fulfillment actions
- Reporting quarterly to the Board on recommendations made to the IIC and the status of their recommendations.

Investment Advisors:

The investment advisor will carry out the duties stipulated in their contractual agreements. Engaged by the Board, they are expected to actively cooperate and collaborate with the Investment Team, IIC, and the Board. The advisors may have full and complete discretion and authority with respect to the selection and management of investments in a specific asset class.

Broadly, the responsibilities of the investment advisors encompass:

- Assisting the Board, IIC and team with due diligence, selection, review, management and reporting.
- Providing strategic guidance to the IIC and Team on investment strategies, market trends, and economic developments as requested

- Ensuring all investments comply with legal and regulatory requirements and preparing detailed reports for stakeholders on the fund's financial health and performance.

Investment Managers:

The investment managers hired by the IIC have the duty to manage the assets allocated to them as fiduciaries and in accordance with the Investment Management Guidelines established for their accounts and their individual contracts. Investment managers must execute all transactions for the benefit of NHRS and update NHRS regarding any major changes to the portfolio management team, investment strategy, portfolio structure, ownership, organizational structure, or other changes relevant to the account.

Managers may also play a role in transition management, which includes the following responsibilities:

- Transition Planning: Develop transition strategies, including setting timelines and milestones.
- Execution Management: Oversee trade execution and coordinate with custodians, brokers, and other relevant parties.
- Risk Management and Compliance: Manage risks, ensure compliance, and oversee transition processes.
- Performance Monitoring: Track the transition's performance against benchmarks and objectives and provide regular updates.
- Providing guidance to investment office when executing asset class transition management.

Custodian Bank:

The duties of the custodian bank are set forth by their contract with NHRS.

In general, the custodian's responsibilities include:

- Safekeeping of NHRS assets
- Settling investment transactions and collecting income
- Preparing monthly and year-end accounting statements
- Serving as the "book of record" for investment transactions and valuations
- Properly recording and reporting investment activities, transactions, income, and valuations
- Calculating and reporting on gross and net investment performance as well as other investment analytics

When selecting the custodian bank, the IIC will use the current industry standards appropriate for evaluating the qualifications of a custodian bank.

Proxy Voting Service Provider:

The duties of the proxy voting service provider are set forth by their contract with NHRS.

In general, those responsibilities include:

- Voting proxies on behalf of NHRS per the Proxy Voting Policy
- Providing research reports
- Preparing monthly and year-end summaries
- Alerting the Investment Team to issues not covered by the NHRS Proxy Voting Policy
- Recommending revisions to the NHRS Proxy Voting Policy
- Assisting in revising the NHRS Proxy Voting Policy

Transparency / Monitoring Service Provider:

The duties of the Transparency and Monitoring Service Provider, as outlined in their contract with NHRS, include:

- Analyzing financial documentation: Identify and advise on any potential fee discrepancies between contracted Investment Managers and NHRS
- Detecting hidden fees and costs: Search for and analyze hidden fees or costs charged to funds or portfolio investments (e.g., double fee layers, placement agents) and assess any excessive high operating expenses
- Presenting findings: Report findings to NHRS and the respective managers.
- Negotiating resolutions: Work to resolve any identified issues
- Monitoring refunds and optimizations: Oversee the refund process and ensure optimization where applicable

External Fund Counsel:

The duties of external fund counsel, as outlined in their contract with NHRS, include but not limited to:

- Engagement and legal diligence for prospective contracts for fund investments and subscription to private fund mandates and commitments
- Review and assistance with negotiating private investments with external general partners and fund managers
- Representation and assistance in administrative, regulatory proceedings, or litigation related to investment matters
- Ongoing notification and education relevant to changes in the law and industry practices affecting investments

Internal Partners:

The duty of the internal NHRS partners, is to support and/or facilitate activities being performed by the Investment Team to fulfill fiduciary responsibilities to the beneficiaries. The internal partners are made up of the following teams:

Finance & Accounting:

- Cash Management and Financial Reporting
- Processing wires required to fund new investments and/or capital calls, pay service providers and vendors
- Maintaining log of Investment-related transactions
- Budget oversight ensuring the alignment of investment decisions with the fund's budgetary constraints and cash flow needs

Legal:

- Regulatory compliance: Ensure investment activities align with local, state, and federal laws
- Vendor contract review: Assess and approve agreements with external managers, custodians, and consultants
- Coordination with external fund counsel in the legal diligence of investment management agreements with external general partners and fund managers

Information Technology:

- Supporting the secure storage and accessibility of investment-related data systems
- Ensuring that software platforms for investment analytics, risk management, and accounting work seamlessly
- Overseeing the implementation process, ensuring the system is tested and seamlessly integrated

Communications:

- Stakeholder engagement: Facilitate communication between the Investment Team, board members and plan participants
- Policy dissemination: Ensure clarity and accessibility of the investment policy statement to relevant parties.

The Accountability Matrix incorporated herein by reference further summarizes key responsibilities and duties of the Board; IIC; Chief Investment Officer and Investment Team; Internal Legal Team; Investment Consultant(s); and Actuary. Additional responsibilities are also detailed in the Board's governance manual, contracts, and NHRS's position descriptions for Team.

III. Investment Objectives

Considering the purpose of the System, the Board, based on the recommendation of the IIC, has adopted the following investment objectives:

- Efficiently allocate and manage the assets of the Fund so that beneficiaries will receive promised benefits.
- Manage the portfolio on a total return basis, which recognizes the importance of the preservation of capital, as well as the fact that reasonable and varying degrees of investment risk are generally rewarded over the long-term
- Work towards achieving and then maintaining a fully funded pension status.
- Exceed the Policy benchmark on a net of fees basis over a full market cycle.

IV. Risk Management

The Board's role in risk management is to approve the asset allocation targets and ranges for each asset class of the Fund. The Board recognizes that in order for the Fund to achieve its investment objectives, a reasonable level of risk must be present within the investment portfolio. Risk is referenced both in terms of absolute risk (the risk of loss) and volatility (the variability of returns). The Board will seek to minimize the risk of loss by approving an asset allocation that includes an appropriate level of diversification of Fund assets. The Board will periodically review the level of risk as represented by the asset allocation targets and ranges within the Fund and each asset class to ensure it is reasonable and within its tolerance for risk. Equity volatility (risk) is among the highest for any asset class. Other risks that the Board will consider when approving investment policy include benchmark risk, timing risk, market risk, credit risk, currency risk, liquidity risk, and any other risk it determines is relevant.

The Board acknowledges that the IIC also has a responsibility to consider risk when recommending asset allocation, and to monitor risks within the portfolio. The IIC will consider market risk, credit risk, currency risk, liquidity risk, and any other risk it believes to be relevant when it determines an asset allocation to recommend to the Board. The IIC is responsible for risk management at the manager level as it decides upon the number and types of managers to utilize within each asset class portfolio. When making decisions, the IIC will consider idiosyncratic risk (firm specific risk), benchmark risk, timing risk, market risk, credit risk, liquidity risk, interest rate risk, operational risk, concentration risk or any other risk it determines relevant as it makes its decisions.

The investment managers are responsible for risk management within the portfolio they manage on behalf of NHRS. Investment managers will consider those risks most relevant to their portfolio, which could include market risk, credit risk, currency risk, liquidity risk, inflation risk, geo-political risk, political risk, interest rate risk, and operational risk.

Descriptions of major types of risk follow:

- A. Credit Risk: The risk of default of a party owing cash to the System as the result of a transaction. These parties may include, but are not limited to, the counterparty and the issuer.
- B. Counterparty risk (default risk): The risk to each party of a contract that the counterparty will not live up to its contractual obligations. Counterparty risk is a risk to both parties and should be considered when evaluating a contract.
- C. Liquidity Risk: There are two types of liquidity risk: market liquidity risk and funding liquidity risk. Market liquidity risk is the risk of being unable to purchase or liquidate a security quickly enough (or in requisite quantities) at a fair price. Market liquidity risk differs from market risk (defined below). Market liquidity risk only reflects realized price changes, while market risk reflects both realized and unrealized price changes. Funding liquidity risk relates to the relative ease of the organization to meet its cash flow needs as they come due.
- D. Market Risk: The risk of unexpected change in market price (amount or direction). Price changes in securities can result from movements in equity markets, interest rates, and currency exchange rates, in addition to various other factors. Market risk incorporates both realized and unrealized price changes.
- E. Systemic Risk: Risk that affects an entire financial market or system, and not just specific asset classes. Systemic risk cannot be avoided through diversification.
- F. Absolute Risk: Risk of loss of capital.
- G. Volatility Risk: The variability of returns often used as a proxy for risk.
- H. Operational Risk: The risk of inadequate controls against fraud, incorrect market valuation, failure to record or settle a deal, settlement with the wrong counterparty, failure to collect amounts due, failure of the computer system, or enforceability of contracts. The implications of operational risk include both financial loss and loss of reputation.
- I. Geo-Political Risk: The risk of the occurrence of an unanticipated international and/or domestic incident such as war, assassination, terrorism or energy shock that adversely affects global and capital markets resulting in the re-pricing of securities.
- J. Political Risk: The risk of nationalization or other unfavorable government action.

- K. Idiosyncratic Risk: Firm specific risk or the risk of the change in price of a security due to the unique circumstances of that security.
- L. Benchmark Risk: The risk that an investment may outperform or underperform its target return.
- M. Interest rate risk: The risk of an investment losing value (such as bonds) when interest rates rise. Rising interest rates increase the cost of doing business for most companies and can also, thereby, raise market risk.
- N. Inflation risk: The risk that rising inflation may erode the value of income and/or assets.
- O. Currency risk: The risk that currency movements will negatively impact an investment's return. If the value of the U.S. dollar rises in relation to other currencies, the value of foreign stock shares translates into a smaller number of U.S. dollars for investors who hold those shares. Put another way, a "strong" dollar can buy more foreign goods, including foreign stocks. Conversely, if the dollar falls in relation to other currencies, the value of foreign stock shares rises, as more "weak" dollars are needed to buy a given amount of foreign stock.
- P. Timing risk: The risk that the market will not move in the anticipated direction when an investment is made (upward for long positions, and downward for short positions).
- Q. Concentration risk: The risk that the System does not appropriately and effectively diversify the assets within an asset class. An example of concentration risk is having too large a percentage of System assets with a single investment manager.

V. Asset Allocation

The Board approves the asset allocation targets and ranges for each asset class of the Fund (the allowable asset classes and the distribution of assets among those asset classes) based on recommendations from the IIC. As fiduciaries, the Board and the IIC have a duty to diversify the investments of the System to reduce risk, while maximizing the investment return. Approximately ninety percent (90%) of the long-term total return stems from the asset allocation decision. The remaining ten percent (10%) is expected to be attributable to either the selection of individual assets or timing. Accordingly, asset allocation is one of the most important fiduciary decisions. The Board adopts an asset allocation based on recommendations from the IIC, which relies upon the advice from the Chief Investment Officer and the investment consultant to formulate its recommendations to the Board.

The asset allocation approved by the Board will reflect the results of an Asset Allocation Study performed at least once in every five-year period, or more often, as recommended by the IIC, in consultation with the Investment Team and investment consultant. The study may also include an Asset Liability Study that analyzes the current assets and projected liabilities under various scenarios to ensure long-term funding for retiree benefits.

The Asset Allocation Study identifies a mix of investments, by asset class, which is expected to produce the return required to meet future funding requirements at the lowest level of risk, given all of the assumptions made and employing a mean-variance optimization model.

The asset allocation chart, which follows, lists the approved asset classes in the portfolio and the target percentages and ranges, at market value, of the System's assets to be invested in each. Due to fluctuations of market values, positioning within a specified range is acceptable and constitutes compliance with the policy. Based on the approved asset allocation, recommendations from the System's consulting actuary, IIC, investment managers and the Team, the Board adopts an assumed rate of return, which is subject to periodic change and which is the long-term return that can be expected from this combination of assets. As of June 9, 2020, the assumed rate of return was 6.75%.

Asset Class	Target Allocation	Allocation Range
Public Markets:		
Global Equity	40%	30 – 50%
Global Fixed Income	25%	18 – 32%
Private Markets:		
Private Equity	10%	5 – 15%
Private Credit	10%	0 – 15%
Infrastructure	5%	0 – 10%
Real Estate	10%	5 – 20%
Cash:	0%	0 – 5%

Asset Allocation Targets were approved in December 2023 and the Ranges approved in December 2024.

The Board has approved the use of the above listed asset classes for the following reasons:

Global Equity: The allocation to global equity serves to expose the fund to economic growth throughout the world and will serve as the primary growth engine for capital appreciation.

Global Fixed Income: The investment in fixed income will serve to reduce volatility experienced in the equity markets, as well as offer an opportunity for return enhancement by investment in selected securities (for example, investment grade corporates and high yield). A portion of the fixed income allocation is expected to be invested in Treasury or other government-related issues, which will serve to reduce risk within the portfolio.

Private Markets: Private markets investments are non-traditional investments, not covered by another investment class. In general, private market investments are incorporated into the NHRS asset allocation to enhance the portfolio's risk-adjusted return (private equity/private credit) or to diversify volatility. While the risk associated with these types of investments is higher than that of other asset classes, the expected return is also higher.

- Private Equity: generates attractive risk-adjusted rates of return through investments in private companies and earns returns in excess of the public equity markets over the long-term. Private Equity sub asset classes include leveraged buyouts, venture capital, growth equity and special situations such as investment in general partner interests and industry sector funds, and include co-investments, secondaries and other customized strategies.
- Private Credit: investments will be made across the credit universe, seeking attractive risk-adjusted returns using a diverse set of strategies. Sub asset class strategies include direct lending, mezzanine finance, distressed and special situations, specialty finance, structured credit, real assets credit, real estate credit, and liquid credit.
- Infrastructure: refers to physical assets or facilities that are used to provide essential services or support economic activity, and which are privately owned and managed rather than publicly owned or operated. This category typically includes assets in sectors such as energy (e.g., power plants, renewable energy installations), transportation (e.g., toll roads, bridges, ports, airports), utilities (e.g., water, sewage, telecommunications), and social infrastructure (e.g., schools, hospitals, and housing projects). Private infrastructure investments often involve long-term capital commitments, offering the potential for stable, inflation-linked cash flows and diversification benefits within a broader investment portfolio.
- Real Estate: The investment in real estate will serve as an inflation hedge, return enhancement opportunity, income generator, and diversification source and will include investments within core, value-added, and opportunistic opportunities.

VI. Rebalancing

The actual asset class allocation of the Fund will be continuously reviewed by the Investment Team relative to the asset class policy targets. Market movements or cash flow requirements may require the actual allocations in the portfolio to deviate from the target allocations. The Team shall seek to maintain the Fund's actual asset allocation within allocation ranges at all times. When rebalancing is required, the team will develop a rebalancing plan that, when possible, minimizes transaction costs. The plan will identify whether the assets will be rebalanced to a point within the allowable range, or to the allocation target. The Team will give due consideration to market environments, costs and risks of implementation, potential impacts on manager-level performance, and other relevant factors. The Team will report to the IIC and the Board regarding rebalancing activities that have occurred.

VII. Equity Investment in Another Entity

When the System makes an equity investment in another entity, the underlying assets of such other entity will be deemed "assets" of the System for purposes of Section 100-A15, I-b of the RSA except with respect to investments in the following entities:

- (a) Publicly-offered securities
- (b) An investment company registered under the Investment Company Act of 1940
- (c) A Company primarily engaged, either directly or through majority-owned subsidiaries, in the production and/or sale of goods and/or services (other than the investment of capital) ("Operating Company")
- (d) A private equity fund whose primary objective is to invest in Operating Companies in which it has contractual rights to influence company management
- (e) A private investment fund whose primary objective is to invest in real estate with respect to which it has the right to participate directly in the development or management
- (f) A government mortgage pool guaranteed by the United States or an agency or instrumentality thereof
- (g) An investment fund or entity in which:
 - (1) (i) private U.S. employee benefit plans subject to Part 4 of Subtitle B of Title 1 of the Employee Retirement Income Security Act of 1974 ("ERISA Plans"), (ii) plans subject to Section 4975 of the Internal Revenue Code ("4975 Plans"), and (iii) other entities deemed under ERISA to hold assets of such

ERISA Plans and 4975 Plans (together with ERISA Plans and 4975 Plans, “Benefit Plan Investors”), hold less than 25% of any class of equity interests and

(2) the System holds less than 25% of the total equity interests

- (h) An insurance company general account to the extent that the non-guaranteed policy portion of such account is less than 25% held by Benefit Plan Investors and less than 25% held by the System.

It is the intention of the Board that in settling any ambiguity regarding this section of policy, the Board shall look to available guidance under ERISA to settle such ambiguity.

VIII. Liquidity

Currently, each fiscal year, the member benefit payments paid by the System exceed the employer contributions received by the System. As a result, maintaining appropriate liquidity is critical to the System’s operations and the System’s ability to meet its financial obligations. The Team will be responsible for ensuring the System maintains the appropriate liquidity for the payment of member benefits, fund expenses and capital calls from its General Partners.

IX. Active and Passive Management

The IIC may implement the Board’s approved asset allocation through the use of both passive and active management. The use of active and passive management is detailed in the guidelines for each asset class. The goal of passive management is to gain diversified exposure to the desired asset class while incurring minimal expense and seeking a performance return comparable to the asset class benchmark. The goal of active management is to exceed the performance of the appropriate index on a net-of-fees basis at a commensurate level of risk over a full market cycle.

X. Benchmarks

The following benchmarks represent the standards of measurement to be used for the various investment asset classes of the New Hampshire Retirement System as determined by the Board and IIC.

Asset Class	Benchmark
Global Equity	MSCI ACWI IMI (All Country World Index Investable Market Index)
Sub-asset class:	
Domestic Equity	Russell 3000 Index
Non-U.S Equity	MSCI ACWI ex USA IMI Index

Global Fixed Income	Bloomberg Barclays Capital U.S. Universal Bond Index
Private Markets:	
Private Equity	Russell 3000 Index + 2.0%
Private Credit	(50% S&P/LSTA U.S. Leveraged Loan 100 Index and 50% Bloomberg High Yield Index) + 1.0%
Infrastructure	Consumer Price Index + 4%
Real Estate	NCREIF NFI-ODCE Index (net of fees)
Cash Equivalents	Three-month Treasury Bill Index
Total Fund	Total Fund Custom Benchmark

The Total Fund Custom Benchmark is a weighted average return comprised of the respective asset class benchmarks in the same proportion as the target asset allocation.

As performance results may vary under different economic conditions and market cycles, an effective period for measuring performance would span three to five years or more. Performance returns are expected to meet or exceed the relevant benchmark on a net-of-fees basis over time.

The IIC has responsibility for identifying appropriate benchmarks for each investment in the Fund.

Definitions of the benchmarks are listed below:

- A. The MSCI ACWI (All Country World Index) IMI is a global equity benchmark that includes large, mid, and small-cap companies across 23 developed and 26 emerging markets. It is designed to represent the performance of global equity markets and provides broad diversification across regions and sectors.
- B. The Russell 3000 Index measures the performance of the largest 3,000 U.S. companies, representing approximately 98% of the investable U.S. equity market.
- C. The MSCI ACWI ex USA (All Country World Index excluding the United States) IMI is a global equity benchmark that includes large, mid, and small-cap companies across 23 developed markets and 26 emerging markets, excluding the United States. It is designed to represent the performance of global equity markets outside of the U.S. and provides broad diversification across regions and sectors.
- D. The Bloomberg Barclays Capital U.S. Universal Index represents the union of Bloomberg Barclays Capital's U.S. Aggregate Index (see below), U.S. Corporate High-Yield, Investment Grade 144A Index, Eurodollar Index, U.S. Emerging

Markets Index, and the non-ERISA eligible portion of the CMBS Index. The index covers USD-denominated, taxable bonds that are rated either investment grade or below investment grade.

- E. The Bloomberg Barclays Capital U.S. Aggregate Index is an unmanaged, market-value-weighted index of taxable investment-grade fixed-rate debt issues, including government, corporate, asset-backed and mortgage-backed securities, with maturities of one year or more.
- F. The National Council of Real Estate Investment Fiduciaries (NCREIF) Fund Index Open-End Diversified Core (NFI-ODCE) is a composite comprised of primarily Core open-end funds widely used by institutional investors for exposure to domestic private market real estate. An open-end fund is a large pool of properties held in a commingled fund structure where investors have redemption rights (typically quarterly right to make capital deposits or withdrawals). Because of quarterly purchase or redemption of fund shares, open-end funds have some of the best valuation disciplines in private market real estate. The funds report performance quarterly to NCREIF. Nearly all open-end funds are designed to be perpetual life vehicles, with many having history dating back to the 1970s.
- G. The S&P/LSTA U.S. Leveraged Loan 100 Index is a daily tradable index for the U.S. market that seeks to mirror the market-weighted performance of the largest institutional leverage loans. The constituents are drawn from a universe of syndicated leveraged loans representing over 90% of the leveraged loan market.
- H. The Bloomberg High Yield Index measures the USD-denominated, high-yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below. Consumer Price Index (CPI) measures the average change over time in the prices paid by urban consumers for a basket of goods and services. It is commonly used as a gauge of inflation and to assess changes in the cost of living. The CPI is a key economic indicator and is often used to adjust income and investment returns for inflation.
- I. The Three-month Treasury bill serves as a common benchmark for cash equivalents in an institutional portfolio due to its risk-free rate, backed by the full faith and credit of the US government, high liquidity, short-term maturity capturing current interest rate conditions, and widely published, accessible and transparent benchmark for performance comparison.

XI. Reporting to the Board

Pursuant to RSA 100-A:15, II-a, the IIC will report to the Board at least quarterly on the management, investment, and reinvestment activities of the IIC, and may delegate such reporting as it deems appropriate.

The quarterly report will include:

- A report on the investment performance of the assets of the System
- Changes, if any, in the investment managers of the System
- Changes, if any, in the investment guidelines for each of the asset classes
- Rebalancing activities, if any

Pursuant to RSA 100-A:15, VII, the IIC will prepare, for Board approval, a comprehensive annual investment report for the Board.

The annual report will include:

- A description of the IIC's philosophy for investing the assets of the System
- An analysis of the return on investment, by category
- An annual investment policy statement
- Any suggested changes in legislation which the Board may seek in order to better serve the members of the system

After Board approval, the comprehensive annual investment report is submitted to the president of the senate, the speaker of the house, and the governor.

The Investment Team, investment consultant(s), custodian bank, and other parties will also provide reporting to the Board as requested or needed.

XII. Manager Selection, Monitoring, and Termination

The IIC, with the assistance of the Investment Team and the investment consultant, will establish a process by which to select investment managers. Criteria for each manager search will be tailored to the search underway and NHRS' specific needs and requirements.

Examples of criteria include:

- Organizational stability
- Investment team, experience and tenure
- Investment process
- Ownership
- Fees
- Performance

Manager searches will be conducted in a fair and transparent manner. During a manager search, a "no contact policy" will be in effect. During this time, only the Investment Team members designated by the Chief Investment Officer will have any contact with potential candidates. Trustees, IIC members, and other team members will refrain from discussing the search with candidate firms or potential candidate firms. This policy does not preclude existing managers from carrying out their normal business requirements with NHRS.

The IIC has delegated selected manager monitoring efforts to the Team and the investment consultant. Any significant changes to a manager's investment philosophy, fees, personnel, ownership or organizational structure will be summarized and reported to the IIC. The IIC will receive quarterly and annual reporting regarding the performance of the investment managers within the fund.

The IIC has the right to terminate any investment manager at any time. Grounds for termination may include, but are not limited to:

- Changes in asset allocation that require re-structuring of the portfolio
- Failure to comply with investment management agreements
- Underperformance over the short to medium term, with consideration of long-term investment strategy and time horizon
- Significant process, organizational, ownership or personnel changes
- Unethical behavior
- Loss of confidence in the organization
- Unresponsiveness or inability to satisfy reporting requests

XIII. Private Markets Fund Advisory Board/Committee Participation

The primary purpose of a private markets fund advisory board/committee is to (1) provide “checks and balances” on the general partner’s power and authority to operate the fund; and (2) act as a “sounding board” for matters where the interests of all the fund’s partners may not be aligned.

The System has determined that the benefits of the Investment Team participating on advisory boards/committees far outweigh the risks or potential risks of not participating on advisory boards/committees. As a result, it is appropriate for the CIO or designated team member to represent the System as a member of an advisory board/committee, with the approval of the IIC and provided that there are appropriate protections for such members (e.g., with respect to fiduciary duty/standard of care, indemnification, confidentiality, etc.).

XIV. Use of Derivatives

Derivatives may only be used to modify risk/return characteristics of the portfolio, implement asset allocation changes in a cost-effective manner, or reduce transaction costs or taxes. Derivatives may not be used for speculation or leverage (borrowing).

Contracts with separate account managers will identify the types of derivatives that may be used, consistent with this Manual and prudent discretion. Managers must notify the CIO of modifications in the types of derivatives used and obtain the CIO’s approval of

such modifications. The System's Non-U.S. Equity managers generally have authorization for broader use of derivatives; however, their actions will be monitored for excessive risk.

Investments in commingled funds are open to other investors; therefore, it is not possible for the System to insist that the managers of such funds abide by System policy regarding the use of derivatives; however, their actions will be monitored for excessive risk. The CIO will monitor a manager's use of derivatives on an ongoing basis to determine whether continued investment in a fund is prudent.

XV. Prohibited Transactions

The following transactions will be prohibited unless stated otherwise in the investment manager guidelines:

- "Prohibited transactions" as defined under the Employee Retirement Income Security Act of 1974 (ERISA).
- Transactions that involve a broker acting as a "principal", where such broker is also the investment manager who is making the transaction.
- Any or all investment activities forbidden by SEC or other applicable governing bodies.

The exposure for options, when permitted by contract, must be based on an appropriate options pricing model.

XVI. Review of Investment Policy

The IIC will review the investment policy at least annually to ensure it remains appropriate and to determine whether any modifications are needed and make a recommendation to the Board for changes, if any, to the investment policy. The Board will review the recommendations of the IIC regarding the investment policy and review the policy at least annually.

XVII. Glossary of Common Investment Terms

Investment in any particular instrument or security remains subject to applicable law and circumstances then prevailing. Notwithstanding, the most common investments are cited below:

- A. Private Markets Investments are investable assets that fall outside traditional investments (stocks, bonds, cash), and involve less liquid and more specialized strategies (e.g. private equity / private credit and other private markets strategies)

- B. American Depositary Receipts (ADRs) are receipts for the shares of a foreign-based corporation held in the vault of a U.S. bank and entitling the shareholder to all dividends and capital gains. These are traded on various U.S.-based exchanges and are available for hundreds of stocks from numerous countries.
- C. Commercial Mortgage-Backed Securities (CMBS) are multi-class bonds backed by pools of commercial mortgages.
- D. Commercial Mortgage Lending investments are notes and bonds secured by a mortgage or deed of trust providing first lien on real estate.
- E. Derivatives are financial instruments such as forwards, futures, options, or other instruments whose values are “derived” from another financial instrument.
- F. Domestic Equity Securities for System purposes typically consist of corporate common stock. These stocks must be registered on a national securities exchange or must be otherwise registered as provided in the Securities Exchange Act of 1934 as amended, with price quotations furnished through a nationwide automated quotations system approved by the National Association of Securities Dealers, Inc. (NASD). Domestic Equity Securities also include stock in corporate real estate investment trusts (REITs), which are traded on a national exchange and acquired as part of an index fund or by one of the System’s domestic equity managers.
- G. Domestic Fixed Income Securities are U.S. Treasury or Government agency obligations; equipment trust certificates; corporate, industrial, or utility bonds; U.S. dollar denominated Euro or Yankee bonds, including Canadian obligations payable in U.S. dollars; residential and commercial mortgage-backed securities; and pass-through certificates. For System purposes, Domestic Fixed Income Securities primarily consist of instruments with maturities in excess of twelve (12) months at time of purchase.
- H. Emerging Market Equities are common or preferred stocks and investment shares which are registered on exchanges outside the U.S. Emerging market countries are the developing international countries which have a relatively low per capita Gross National Product. There is wide variety of economic, regulatory, and market development among the emerging countries.
- I. Equity Real Estate Investments are any investments in real property, either made directly or through the use of pooled vehicles such as limited partnerships, open or closed-end commingled funds, Real Estate Investment Trusts (REITs) including publicly traded REIT securities, and Real Estate Operating Companies (REOCs).

- J. Non-U.S. Equity Securities are common or preferred corporate stocks and investment trust shares. Only stocks registered on recognized exchanges outside the U.S. are to be considered Non-U.S. Equity Securities.
- K. Real Estate Mezzanine Funds are investments in funds or partnerships whose portfolios consist of junior loans secured by real estate or partnership interests in real estate ownership.
- L. Repurchase Agreements are agreements between a seller and a buyer, whereby the seller agrees to repurchase the securities at an agreed upon price and, usually, at a stated time.
- M. Securities Lending occurs when a lender transfers a security to a borrower for cash or non-cash collateral pursuant to an agreement to return the collateral for an identical security in the future.
- N. Short Term Investments (Cash Equivalents) include, but are not limited to, interest bearing or discount instruments such as money market funds; U.S. Treasury Bills; corporate-issued commercial paper; bank-issued Certificates of Deposit; bankers' acceptances; and fully collateralized repurchase agreements. For System purposes, short-term investments consist primarily of instruments maturing in twelve (12) months or less at time of purchase.

New Hampshire Retirement System Accountability Matrix

Total Fund Investment Policy¹

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants	Actuary
1. Establishing (and modifying when necessary) investment policy, which includes risk tolerances and investment objectives	Recommends 100-A:14-b, III; A:15, I-a(b) & VII(c)	Decides 100-A:15, I; I-a(b) & (c) & VII(c)	Provides advice/analysis		Provides advice/analysis	Provides input
2. Establishing asset allocation targets and ranges	Recommends A:15, VII(c)(2)	Decides A:15, VII(c)(2)	Provides advice/analysis		Provides advice/analysis	Provides input
3. Determining Investment Committee's philosophy for investing assets	Decides A:15, VII(a)	Reviews A:15, VII(a)	Provides advice/analysis			
4. Rebalancing procedures	Decides A:15, I, II-a(b) & VII(c)(2)	Reviews A:15, I-a(c) & VII(c)(2)	Provides advice/analysis		Provides advice/analysis	
5. Monitoring policy compliance	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees		Serves as a double check	
6. Ensuring statutory compliance of investments parameters	Reviews quarterly A:15, I-a(a)	Reviews annually A:15, I-a(a)	Monitors compliance	Reviews for legal compliance	Abides by parameters	
7. Monitoring Total Fund performance	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis	
8. Completing comprehensive annual investment report (as outlined in HB 1645)	Prepares A:15, VII	Approves A:15, VII	Provides assistance	Provides assistance	Provides assistance	Provides assistance

¹ Items in red are responsibilities dictated by statute.

Global Equity²

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants
1. Determining global equity asset class guidelines (active vs. passive, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing domestic and international equity benchmarks	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides Advice/Analysis		Provides advice/analysis
3. Determining number and types of managers for the asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences/recommends
5. Monitoring compliance with asset class strategy and guidelines	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, I-a(a) & VII(c)(3)	Oversees		Serves as a double check
6. Reviewing asset class performance	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

² Items in red are responsibilities dictated by statute.

Global Fixed Income³

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants
1. Determining global fixed income asset class guidelines (active vs. passive, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Recommends		Provides advice/analysis
3. Determining number and types of managers for each asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences/ Recommends
5. Monitoring compliance with asset class strategy and guidelines	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, VII(c)(3)	Oversees		Serves as a double check
6. Reviewing performance of asset classes	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

³ Items in red are responsibilities dictated by statute.

Real Estate ⁴

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants
1. Determining real estate asset class guidelines (diversification, style, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:14-b, III; A:15, VII	Reviews A:15, VII	Provides advice/analysis		Provides advice/analysis
3. Determining number and types of managers for the asset class	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences
5. Monitoring compliance with policy	Reviews and assigns responsibility	Reviews A:15, I-a(a)	Oversees		Serves as a double check
6. Reviewing performance of the asset class	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities
8. Valuation of real estate	Reviews quarterly A:15, I-a(b)(3); A:15, VII(c)(3)	Monitors A:15, I-a(a)	Ensures valuations are completed		Assists as needed
9. Executing purchase and sale agreements on real estate	Reviews quarterly A:15, II-a(b) & VII(c)(3)		Ensures valuations are completed	Reviews contracts	

⁴ Items in red are responsibilities dictated by statute.

Private Markets Policy⁵

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants
1. Determining private markets class guidelines (style, diversification, limitations, etc.)	Decides A:15, I-a(a)	Reviews A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
2. Setting and reviewing asset class benchmarks	Decides A:14-b, III; A:15, VII	Reviews A:15, VII	Provides advice/analysis		Provides advice/analysis
3. Approving number and types of external managers	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Provides advice/analysis		Provides advice/analysis
4. Selecting external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences
5. Monitoring compliance with policy	Reviews and assigns responsibility A:15, VII(c)(3)	Reviews A:15, I-a(a)	Oversees		Serves as a double check
6. Reviewing performance of the asset class	Reviews and reports to the Board quarterly A:15, II-a(c)	Reviews quarterly IIC reports A:15, II-a(c)	Provides advice/analysis		Provides advice/analysis
7. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities
8. Valuation of private equity	Reviews quarterly A:15, I-a(b)(3); A:15, VII(c)(3)		Ensures valuations are completed		Assists as needed
9. Executing partnership agreements on private equity	Reviews quarterly A:14-b, III; A:15, II-a(b)		Ensures agreements are executed	Reviews agreements	

⁵ Items in red are responsibilities dictated by statute.

Selection and Monitoring of Investment Managers⁶

Function	Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultants
1. Selecting specific external investment management firms	Decides A:14-b, III; A:15, II-a(b)	Monitors A:15, I-a(a)	Recommends	Reviews contracts	Influences
2. Conducting due diligence meetings and activities	Reviews staff/consultants A:15, I-a(a); A:15, VII(c)(3); A:15, (c)(3)		Completes investment manager due diligence		Completes independent due diligence activities
3. Developing individual manager guidelines			Recommends	Reviews	Provides advice/analysis
4. Executing investment manager contracts			Approves	Conducts legal diligence	Provides assistance
5. Monitoring performance of external investment managers	Reviews on on-going basis A:14-b, III; A:15, VII(c)(3)	Reviews quarterly reports A:15, II-a(c)	Completes monitoring activities		Completes monitoring activities

⁶ Items in red are responsibilities dictated by statute.

Selection of Other Service Providers⁷

Function	Independent Investment Committee	Board	Chief Investment Officer and Investment Team	Legal Counsel	Investment Consultant
1. Selecting (and periodically reviewing) custodian banks	Decides A:15, II-a(a)	Monitors A:15, I-a(a)	Influences	Reviews contract	Influences
2. Selecting (and periodically reviewing) general investment consultant	Recommends A:14-b, III	Decides A:15, II(c)	Provides input	Reviews contract	
3. Selecting (and periodically reviewing) specialty investment consultants	Recommends A:14-b, III	Decides A:15, II(c)	Provides input	Reviews contract	
4. Selecting (and periodically reviewing) the fund's actuary		Decides A:15, II(a)	Influences	Reviews contract	
5. Selecting (and periodically reviewing) outside legal counsel for investment issues		Decides A:15, IV	Influences	Recommends	
6. Selecting (and periodically reviewing) proxy voting service provider		Approves A:15, I-a(a)	Recommends	Oversees/Recommends/Reviews Contract	Influences
7. Selecting (and periodically reviewing) transition managers	Decides A:14-b, III; A:15, II-a(b)	Reviews A:15, I-a(a)	Recommends	Reviews contract	Influences
8. Selecting (and periodically reviewing) transaction analysis provider	Decides A:15, II-a(b)	Reviews A:15, I-a(a)	Recommends	Reviews contract	Influences

⁷ Items in red are responsibilities dictated by statute.

Proxy Voting

Function	Investment Committee	Board	Executive Director or Chief Investment Officer	Legal Counsel	Investment Consultant
1. Setting (and modifying) proxy voting policy		Decides A:15, I-a(a)	Recommends	Provides input	Provides advice/analysis
2. Identifying proxy voting issues and positions		Decides A:15, I-a(a)	Provides advice/analysis	Provides input	Provides advice/analysis
3. Monitoring proxy voting activity		Reviews annually A:15, I-a(a)	Prepares		
4. Approving exceptions to the policy		Reviews annually A:15, I-a(a)	Oversees/recommends	Provides input	Provides advice/analysis
5. Ensuring policy compliance		Reviews annually A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis

Securities Lending

Function	Investment Committee	Board	Executive Director or Chief Investment Officer	Legal Counsel	Investment Consultant
1. Setting (and modifying) securities lending policy	Provides Input A:15, I-a(a)	Decides A:15, I-a(a)	Provides advice/analysis	Provides input	Provides advice/analysis
2. Creating and updating securities lending guidelines	Approves A:15, I-a(a)	Reviews A:15, I-a(a)	Recommends	Provides input	Provides advice/analysis
3. Monitoring securities lending activity	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis
4. Ensuring policy compliance	Reviews and assigns responsibility A:15, I-a(a)	Reviews A:15, I-a(a)	Oversees	Provides input	Provides advice/analysis

Global Equity Investment Guidelines

Purpose: The Global Equity allocation provides the assets of the System with broad participation in global equity markets, including both domestic and international equities. This diversified allocation, across various styles, capitalizations, and geographies, aims to maximize long-term total returns while mitigating risk through geographical and sector diversification.

Allocation: The target allocation to Global Equity is 40% of the Total Fund, with an allowable range of 30 – 50%.

Structure: The Global Equity portfolio is structured to incorporate both active and passive management strategies. Active management is utilized where there is the greatest potential for alpha generation, while passive management is employed in regions or sectors where alpha generation is difficult to obtain, focusing instead on low-cost, efficient beta exposure. The portfolio is diversified across styles, capitalizations, and geographies, with a focus on areas where active management is expected to add value. Global Equity will encompass the Domestic Equity asset class and the Non-US Equity asset class.

Domestic Equity: The Domestic Equity portion is primarily managed with both active and passive strategies, with a minimum of 50% allocated to passive, large-cap equity securities domiciled in the US.

Non-U.S. Equity: The Non-U.S. Equity portion is predominantly actively managed and diversified across global markets, including developed and emerging markets excluding the US. Passive management may be used if determined to be beneficial by Investment Team and the Independent Investment Committee (IIC).

Custody: All Global Equity securities, including both Domestic and Non-U.S. equities, shall be maintained in the custody and safekeeping of the System's master custodian bank. Commingled fund assets may be held in custody at the discretion of the fund manager.

Use of Commingled Funds: Mutual funds and other types of commingled investment vehicles provide, under some circumstances, lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment guidelines to the specific needs of individual clients. The Independent Investment Committee (IIC) is willing to accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled funds, as long as the commingled guidelines are consistent with the spirit of those specified herein and the underlying individual investment manager portfolio-level guidelines. The IIC relies on the Investment Team and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines for Separate Accounts: Portfolio-level guidelines are negotiated with each IIC-approved investment manager with the purpose of establishing agreed-upon parameters for the management of assets. These guidelines are generally based on the guidelines for the respective manager's composite portfolio and investment style; are reviewed by the Team in collaboration with the System's Investment Consultant; and are subject to execution by the Chief Investment Officer and the manager prior to implementation. Each manager will be granted full discretion within the context of their respective portfolio-level negotiated guidelines.

Managers are prohibited from deviating from their respective portfolio-level guidelines without prior written approval from the Chief Investment Officer. Any guideline violation must be reported by the manager in writing as soon as it is discovered (within 24 hours). Recommendations for guideline revisions are to be provided to the Chief Investment Officer in writing, and shall include the rationale for the changes and all relevant research. Any guideline revision requests are reviewed by the Chief Investment Officer in consultation with the System's Investment Consultant prior to approval. All substantive changes to manager guidelines will be reported to the IIC at the next meeting.

Permissible Investments: All eligible securities shall be traded in domestic markets and be of a class listed on a national securities exchange or traded in the over-the-counter market.

Permissible investments are defined within individual manager portfolio-level guidelines, and generally include:

- Common stocks, preferred stocks, and securities with equity characteristics (including, but not limited to, American Depositary Receipts and Shares, warrants, and rights) of U.S. and foreign issuers
- European Depositary Receipts listed and traded on major U.S. exchanges and in over-the-counter markets
- Securities convertible into common stocks
- 144A securities
- Futures contracts
- Exchange traded funds and similar vehicles
- Closed-end funds
- Private placements, Secondary Offerings, IPO investments and offers for sale
- Real Estate Investment Trusts and Income Trusts
- Short-term fixed income securities and cash equivalents

Prohibited Investments: Any security or strategy not specifically permitted in the respective manager portfolio guidelines requires written permission from the Chief Investment Officer prior to purchase.

Prohibited investments are defined within individual manager portfolio-level guidelines, and generally include:

- Short sales
 - Margin transactions
 - Use of leverage
 - Stock in non-public corporations, private placements or other non-marketable issues
 - Specialized investment vehicles
 - Direct investments in commodities
 - Direct investments in real estate
 - Direct investments in Venture Capital
 - Lettered stock
 - Foreign securities other than those noted in *Permissible Investments* above
 - Direct investments in oil, gas, or other mineral exploration or development programs
-
- **Concentration Limits:** The System shall closely monitor instances where its investments represent a significant component of a commingled fund or total assets under management (AUM) at the strategy level. If the System's positions become more than 20% of any commingled investment fund, or total strategy AUM, Investment Team will notify the IIC and the investment will be monitored to see if any changes are warranted.

Global Fixed Income Investment Guidelines

Purpose: The allocation to Global Fixed Income serves to provide income and potentially reduce volatility experienced in the equity markets, as well as offer an opportunity for return enhancement by investing in selected global debt sectors (for example, investment grade corporate bonds and high yield debt). A portion of the Global Fixed Income allocation is expected to be invested in U.S. Treasury securities or other government-related issues, which will potentially reduce risk within the portfolio.

Allocation: The current target allocation to Global Fixed Income is 25% of the Total Fund, with an allowable range of 18% – 32%.

Structure: The Global Fixed Income portfolio is currently 100% actively managed, as fixed income has been identified as an area in the capital markets where it is more likely that active management will add value. The portfolio is broadly diversified across global markets, sectors, securities and maturities. Active management is focused where there is the greatest potential for alpha generation. Passive management is focused where alpha generation has been demonstrated to be difficult to obtain while also allowing the ability to gain low-cost efficient beta exposure. Passive management may be utilized if determined to be beneficial by the Independent Investment Committee (IIC).

Component	Allocation Target*
Core	Minimum of 60%

* As a percentage of Global Fixed Income.

The Global Fixed Income Core component is defined as securities held within the Bloomberg Barclays U.S. Aggregate Index which measures the investment grade, U.S. dollar-denominated, fixed-rate taxable bond market. The index includes U.S. Treasuries, government-related and corporate securities, mortgage backed securities, asset backed securities, and commercial mortgage backed securities. TIPS, 144a securities with registration rights and permanent 144a securities are also permitted.

Custody: All Global Fixed Income securities shall be maintained in the custody and safekeeping of the System's master custodial bank. Commingled fund assets, however, are held in custody at the discretion of the fund manager.

Use of Commingled Funds: Mutual funds and other types of commingled investment vehicles provide, under some circumstances, lower costs and better diversification than can be obtained with a separately managed account pursuing the same investment objectives. However, commingled investment funds cannot customize investment guidelines to the specific needs of individual clients. The IIC is willing to accept the policies of such funds in order to achieve the lower costs and diversification benefits of commingled funds, as long as the commingled guidelines are consistent with the spirit of those specified herein and the underlying individual investment manager portfolio-level

guidelines. The IIC relies on the Team and the Investment Consultant to assess and monitor the investment policies of any commingled fund used by the System.

Manager Guidelines for Separate Accounts: Portfolio-level guidelines are negotiated with each IIC-approved investment manager with the purpose of establishing agreed-upon parameters for the management of assets. These guidelines are generally based on the guidelines for the respective manager's composite portfolio and investment style; are reviewed by the Team in collaboration with the System's Investment Consultant; and are subject to execution by the Chief Investment Officer and the manager prior to implementation. Each manager will be granted full discretion within the context of their respective portfolio-level negotiated guidelines.

Managers are prohibited from deviating from their respective portfolio-level guidelines without prior written approval from the Chief Investment Officer. Any guideline violation must be reported by the manager in writing as soon as it is discovered (within 24 hours). Recommendations for guideline revisions are to be provided to the Chief Investment Officer in writing, and shall include the rationale for the changes and all relevant research. Any guideline revision requests are reviewed by the Team and the System's Investment Consultant prior to approval. All substantive changes to manager guidelines will be reported to the IIC at the next meeting.

Permissible Investments: Permissible investments are defined within individual manager portfolio-level guidelines, and generally include:

- U.S. Treasuries and U.S. Treasury Inflation Protected Securities
- Obligations of U.S. Federal Agencies and Government Sponsored Enterprises (GSEs)
- Foreign Sovereign Debt
- Small Business Administration Securities
- Municipal Securities
- Corporate Obligations, including but not limited to, Convertible Bonds
- Foreign Sovereign Debt
- Structured Securities including Asset Backed Securities; Collateralized Mortgage Obligations; Commercial Mortgage Backed Securities; Residential Mortgage Backed Securities
- Zero Coupon Securities
- Non-Sovereign Government/Non-Supranational Debt
- Emerging Market Debt
- Forward exchange contracts/currency derivatives, when used to protect the U.S. Dollar value of the portfolio, dampen portfolio volatility, or to facilitate the settlement of securities
- Private Placements, including 144A securities
- Exchange traded funds and similar vehicles
- Common Stock (shall not exceed 5% of the market value of any individual manager)
- Preferred Stock (shall not exceed 20% of the market value of any individual manager)
- Capital Securities

- Trust Preferred Securities
- Real Estate Investment Trust debt
- Short-term fixed income securities and cash equivalents

Prohibited Investments: Any security or strategy not specifically permitted in the respective manager portfolio guidelines requires written permission from the Chief Investment Officer prior to purchase.

Prohibited investments are defined within individual manager portfolio-level guidelines, and generally include:

- Short Sales
- Margin transactions
- Use of leverage
- Specialized investment vehicles
- Direct investments in commodities
- Direct investments in real estate
- Direct investments in Venture Capital
- Direct investments in oil, gas, or other mineral exploration or development programs

Concentration Limits:

- The System shall closely monitor instances where its investments represent a significant component of a commingled fund or total assets under management (AUM) at the strategy level. If the System's positions become more than 20% of any commingled investment fund, or total strategy AUM, the Team will notify the IIC and the investment will be monitored to see if any changes are warranted.

Private Markets Guidelines

Purpose: Private markets investments or alternative investments represent non-traditional vehicles that do not fit within conventional investment asset classes. These investments aim primarily to achieve superior risk-adjusted returns. They may also exhibit a low correlation with broader stock and bond market returns, potentially reducing the volatility of the plan's total returns. Examples of private markets investments encompass private equity, private credit, real estate, infrastructure, hedge funds, and opportunistic strategies.

Due to their non-traditional, long-term, and illiquid nature, private markets investments necessitate the development of an Annual Strategic Plan. This plan will be prepared and presented to the Independent Investment Committee (IIC) for approval.

Allocation: The current target allocation to Private Markets Investments is 25% of the Total Fund, with an allowable range of 15 – 35%.

In order to reach and maintain the target allocation, capital commitments in excess of 25% of the Total Fund may be made. The primary reasons for permitting such an over commitment are the staged capital calls for new investments and anticipated returns of capital.

Targets:

Sub Strategy	Allocation Target*
Private Equity	10%
Private Credit	10%
Infrastructure	5%

* As a percentage of Total Fund

Custody: All assets are held in custody at the discretion of the fund manager.

Structure: The Private Markets portfolio primarily includes the following:

Private Equity – The purpose of Private Equity is to earn risk-adjusted returns in excess of public equity markets. These investments are also expected to decrease the volatility of the System's assets through the diversification benefits of having lower correlations with other asset classes.

Sub-strategies include:

- *Buyouts/Corporate Finance* – Provides leveraged capital and business development capital to enable the restructuring of existing business and industries.

- *Private Energy* – Investments may include exploration & production, generation, storage, transmission, distribution, renewable energy sources, clean technologies, energy technologies and other similar investments.
- *Growth Equity* – Provides expansion capital for small, growing businesses that are generating cash flow and profits. Generally, these types of investments have reduced exposure to technology risk compared with venture capital.
- *Secondaries* – Private equity interests that are generally purchased at a discount from valuation from motivated sellers. The interests purchased are generally venture and buyout interests with limited exposure to unfunded capital commitments. The strategy also includes the purchase of direct interests in companies through the secondary market.
- *Distressed/Special Situations* – A strategy whereby a manager invests in the distressed debt of companies that likely will undergo some sort of financial and/or operational restructuring. A manager will usually build a controlling stake in a distressed company through the “fulcrum security” which is generally a high yield bond or bank debt. The investment team will then work actively to maximize the value of the investment through driving either an informal restructuring or a formal bankruptcy procedure. The balance sheet may be restructured; new management inserted; cost cutting implemented; as well as other operational improvements put in place. Distressed debt returns are generally comprised of a combination of a debt coupon; capital appreciation of the distressed security; and, participation in the upside of post-reorganization equity.
- *Venture Capital* – Implies early, late and balanced-stages of financing, as well as growth capital, of rapidly growing companies with an innovative/disruptive business idea for a proprietary product or service.

Private Credit - diversify the portfolio and aim to generate higher risk-adjusted returns compared to public credit markets. These investments focus on opportunities in private lending, providing stable income and reducing overall portfolio volatility. They complement traditional fixed income investments by offering lower correlation with public markets and potential for attractive yields. Our strategy aims to preserve capital, generate income sustainably, and enhance overall portfolio performance over the long term.

Sub-strategies include:

- *Direct Lending* – An investment strategy involving senior or unitranche lending directly to companies that seek to generate high current income while focusing on preservation of capital.
- *Distressed* – Includes trading strategies through control positions. For trading strategies, distressed securities are defined as securities experiencing financial or operational distress, default, or are under bankruptcy. Investment instruments

include publicly-traded debt securities, private debt, trade claims, mortgage debt, common and preferred stock and commercial paper. Control strategies involve companies with poorly-organized capital structures, turnaround situations and bankrupt companies. Long and short positions are commonly used as a technique to lock in profit or reduce risk.

- *Mezzanine/Junior Capital* – An investment strategy involving subordinated debt (the level of financing tranche that is senior to equity but below senior debt). Capital supplied by mezzanine or junior capital financing is used for various situations such as facilitating changes in ownership through leveraged buyouts or recapitalizations, financing acquisitions, or enabling growth. Venture lending and leasing is a subset of mezzanine financing that targets venture-backed companies. Revenue and Royalty interests are a subset of mezzanine financing that targets intellectual property, license agreements and other similar property that has the ability to restrict the rights to commercialization.
- *Asset-Based Lending* – providing loans that are secured by a borrower's tangible assets, such as accounts receivable, inventory, equipment, or real estate. This strategy focuses on lending to companies that may not have access to traditional credit markets but possess valuable physical assets that can be used as collateral. ABL investments are typically structured as revolving credit facilities or term loans, and are primarily used to finance working capital needs, acquisitions, or other corporate requirements.
- *Structured Credit* – A private credit strategy which, involves investing in complex financial instruments that are typically collateralized by a pool of assets, such as collateralized loan obligations (CLOs), collateralized debt obligations (CDOs), or asset-backed securities (ABS). Returns are driven by a combination of underlying loan coupon; value enhancement through servicing; and, upside through public market securitization.
- *Specialty Finance* – A private credit strategy which generally provides growth capital in the form of senior secured loans to loan origination platforms such as mortgage; consumer debt and transportation leasing. These loans are securitized by a pool of underlying loans which are placed in a bankruptcy remote structure and pay amortize over time. Specialty finance lenders' returns are generated by a combination of a coupon and, in some cases, equity kickers in the underlying borrower. These loan pools may be securitized and sold into the public market.
- *Litigation Finance* – A private credit strategy which lends money to corporations or law firms to fund the cost of prolonged litigation, often contingent on a favorable payout. Financings may be pre-settlement in which returns are driven by a combination of a debt coupon and upside participation in one, or a diversified pool of legal cases. Litigation funding in the form of a loan may also be provided post a legal settlement. This type of funding is used to bridge a payment expected by the law firm or other entity entitled to litigation proceeds.

- Real Asset Lending – Private asset-backed loans including backed by real asset collateral such as real estate and infrastructure. Real Assets credit investments may include senior debt or project finance loans, often with long-term, stable cash flows.

Risk Management: Private Markets strategies do not lend themselves to traditional quantitative measures of risk such as standard deviation and benchmark tracking error. Rather, risk is managed through a combination of quantitative and qualitative constraints. The following sections identify the unique risks with private markets investments and method of control:

- Industry – Typically, private markets funds are permitted to invest in a wide variety of industries with limited controls. Industry risk is controlled primarily through appropriate diversification across strategies and sub-strategies.
- Leverage – Many underlying private markets programs will utilize leverage. The intent of the System is to not rely on managers employing high degrees of leverage.
- Vintage Year – Vintage year reflects the year of first capital draw and vintage risk refers to the variability of investment commitments over time. A long-term investment pacing schedule is developed which minimizes vintage risk while achieving targeted exposure.
- Concentration Limits –The System shall not own more than 10% of any single investment vehicle except with prior approval of the NHRS IIC.
- Due Diligence – Each potential investment will be evaluated for portfolio fit; organizational stability; investment staff; investment strategy; investment process; and fund economics.
- Annual Strategic Plan – Given the non-traditional, long-term and illiquid nature of private markets investments, an Annual Strategic Plan will be prepared and presented to the IIC for approval. The Annual Strategic Plan will include a review of performance; cash flow and liquidity analyses; commitment pacing; and sub-strategy recommendations.

Infrastructure Investment Guidelines

Purpose: The allocation to Infrastructure serves to provide diversification to the overall plan as well as offer the opportunity to generate superior risk-adjusted returns through income and capital appreciation. This allocation is expected to have a lower overall correlation with other asset classes, thus potentially reducing the volatility of the return of the Total Fund. Moreover, like real estate assets, infrastructure investments may serve as an inflation hedge.

Allocation: The target allocation to Infrastructure is 5% of the Total Fund per the strategic asset allocation, with an allowable range of 0 – 10%.

During the initial investment period the portfolio is likely to be below the 5% target as infrastructure funds often require several years to identify and acquire assets.

To achieve and maintain the target allocation, capital commitments in excess of 5% of the Total Fund may be made. An annual pacing pace will be approved by the Independent Investment Committee (IIC). This flexibility in over-commitment is designed to accommodate the nature of capital calls, offering periods, and the anticipated return of capital.

Structure: The Infrastructure portfolio seeks to be broadly diversified and consists of two strategy segments: Core and Non-Core, defined below.

Core Infrastructure: Core Infrastructure are typically investments which produce stable, long-lived current income through assets with operating history and high level of contracted revenues with no capital appreciation. Core infrastructure assets generally have been operationally de-risked, with fixed pricing through long-term contracts and contractual inflation escalation. Core investments are typically located in developed markets, which infrastructure managers commonly refer to as the Organization for Economic Co-operation and Development (“OECD”) markets; member countries represent approximately 80% of world trade. Core investments offer relatively high current income returns, and as a result, a greater predictability of total returns under normal market conditions. The income component typically represents a significant component of the expected total return.

Core Plus: Core Plus Infrastructure investments are expected to have low to moderate levels of capital appreciation through improvements, repairs, or expansion with little to no construction risk. Core Plus investments will have a higher exposure to fluctuations in demand compared to Core assets, with features that will limit overall risk (e.g., long-term contracts, regulatory price support, etc.). Core Plus assets are typically found in OECD markets, although may include investments in non-OECD countries. Core Plus infrastructure will yield exposure primarily to current income with some capital

appreciation exposure through higher operational or structural complexity.

Non-Core Infrastructure includes Value-Add and Opportunistic strategies, which are accessed through closed-end funds.

Value-Add Infrastructure: Value-Add Infrastructure investments are expected to have moderate levels of capital appreciation through improvements, repairs, or expansion with little to no construction risk. Value-Add investments will exhibit higher operating risk with higher growth potential compared to Core strategies. Value-Add assets are typically found in OECD markets, although may include investments in non-OECD countries. Value Add infrastructure derives a higher share return from capital appreciation than current income, which is often re-invested into the infrastructure business.

Opportunistic Infrastructure: Opportunistic Infrastructure investments are assets with a high exposure to capital appreciation returns through development or construction. Opportunistic investments exhibit the highest risk-return profile, focusing on capital growth of the underlying asset and very little on stable cash flows, with no contracted revenues and higher exposure to market competition. Opportunistic investments can be found in both OECD and emerging markets. Opportunistic investments will attribute most of its returns to capital growth and appreciation.

Portfolio Composition	Lower Target	Upper Target	OECD	Non-OECD
Core / Core Plus Infrastructure	70%	100%		
Non-core Infrastructure	0%	30%		
Total Portfolio		100%	≥ 75%	≤ 25%

Target: 75% Core / Core Plus & 25% Non-core

Infrastructure sectors vary across three project stages or development stages that are analogous to risk profile:

- *Secondary* – a fully operational asset or structure that has no further need for development investment, with fully developed operational cash flow and revenue.
- *Brownfield* – an existing structure or asset that requires improvements, repairs or expansion, that is partially operational and may be generating income.
- *Greenfield* – an asset that does not currently exist and needs to be designed and constructed, with uncertain demand, usage, price and development costs. Greenfield investments have no revenue generation prior to existence.

The infrastructure investment opportunity set can be broken into six sector groupings:

- *Transportation* – includes toll roads, bridges, tunnels, airports, ports, rail and mass transit networks
- *Energy and Power Generation* – includes both conventional and renewable power generation, storage and pipelines
- *Utilities* – includes power utilities, water utilities, regulated transmission and distribution assets, water treatment and processing,
- *Telecommunications* – includes fiber optics networks, broadcast and mobile towers, data centers and digital assets
- *Energy transition* – includes electric vehicle charging infrastructure, smart metering, hydrogen, carbon capture, waste to energy, microgrids
- *Social* – includes educational facilities, health care offices, courts, police stations, defense, judicial and community centers

Implementation: Investment vehicles for the infrastructure asset class will be made primarily through private open-end funds and closed-end commingled funds. Other structures such as fund of funds, fund-of-one mandates, or managed accounts by an advisor approved by the IIC may be considered. Additionally, investments may also include secondaries and co-investments alongside a general partner or a dedicated co-investment vehicle. Open-end funds will have defined investment and redemption provisions and/or limited partnerships will have fund expiration and extension provisions.

Custody: All assets are held in custody at the discretion of the general partner (investment manager) of the fund vehicle.

Currency: NHRS accepts the currency risks consistent with the geographic exposures of the infrastructure asset class. Infrastructure managers may or may not offer investment vehicles that are hedged back to United States Dollars (USD), but the Fund will not implement currency hedges. Where possible, the Fund will make investments in USD-hedged vehicles and receive distributions in USD.

Benchmark: The portfolio will initially benchmark performance against an absolute benchmark Consumer Price Index (CPI) + 400 bps and evaluate the universe of benchmarks as the asset class continues to evolve.

Portfolio Construction: Portfolio investments will be allocated across various factors to achieve the intended target. The attributes by which investments should be distributed or diversified to most effectively reduce risk are:

- 1) Sector
- 2) Geographic location
- 3) Manager allocation and investment size
- 4) Leverage

As such, within the infrastructure asset class allocation, the guidelines are as follows:

Sector - The portfolio will limit exposure to any single infrastructure sub-sector to avoid over-concentration. This strategy is designed to mitigate sector-specific risks and enhance the overall stability and resilience of the portfolio.

Geographic Location – Investments within the Infrastructure allocation will be distributed geographically for the purpose of attaining economic market diversification. OECD markets are expected to represent a minimum of 75% of the portfolio. Non-OECD markets may represent up to 25% of the portfolio.

Manager Allocation and Investment Size – Investments within the Infrastructure allocation will be diversified both by individual investment exposure and manager exposure, as the System does not want the failure of a single investment to have a significant or material impact on the performance of the overall asset class.

- No more than 50% of capital committed to any single investment manager
- No more than 50% of the non-OECD exposure to come from investments in emerging markets

Leverage – infrastructure investments will utilize leverage based on risk profile, with the amount of leverage related to the level and security of the asset's revenue streams. Core investments will usually have higher levels of leverage and Non-Core investments may have lower leverage levels. The intent for the asset class is to have a moderate level of leverage with respect to the overall portfolio exposure, typically at the fund level.

Permissible leverage: The total Program shall, in aggregate, utilize no more than 65% fund level leverage. Any single fund shall utilize no more than 75% leverage.

Summary of Policy Limits

Policy Parameter	Policy Limit
Allocation to Infrastructure	5% of total plan assets; range of 0-10%.
Permissible Investments	Equity investments in infrastructure.
Investment Styles • Core / Core Plus • Non-Core	Core / Core Plus: Target: 70% to 100% Non-Core: Target 0% to 30%
Manager Exposure	No more than 50% of capital committed to any single investment manager
Infrastructure Sector Ranges • Communications / Data • Power / Energy (including Renewables) • Water / Wastewater • Transportation • Social	The portfolio will limit exposure to any single infrastructure sub-sector to avoid over-concentration. This strategy is designed to mitigate sector-specific risks and enhance the overall stability and resilience of the portfolio.
Geographic Exposures Developed Markets / OECD Emerging Markets / Non-OECD	The Fund aims to invest in a broadly diversified range of geographic markets, with a primary focus on major investable infrastructure markets within the OECD, specifically North America, Europe, and Australia. Investments in these regions will comprise at least 75% of the Fund's infrastructure allocation. Additionally, investments in emerging markets and/or non-OECD countries will be capped at a maximum of 25% of the Fund's infrastructure allocation.
Leverage	Underlying investment managers may use various forms of debt financing to execute their respective investment mandates. The use of leverage will be monitored for prudence and will maintain the following loan to value ratios. ▪ The total Program shall, in aggregate, utilize no more than 65% fund level leverage ▪ Any single fund shall utilize no more than 75% leverage
Portfolio Buildout	During the initial investment period the portfolio is likely to be below the 5% target as infrastructure funds often require several years to identify and acquire assets.

New Hampshire Retirement System

ADJUSTED ENDING VALUE WITH TVPI, DPI & RVPI As of 12/31/2024

NHRS - Real Estate

Base Currency: USD

			Contributions	Distributions	Valuation				Performance			
Investment	Commitment	Vintage Year	Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI
New Hampshire Retirement System												
Alm na Realty Securities (ARS) VII Sidecar	14,965,000	2018	12,508,525									
Alm na Realty Securities VII LP	20,000,000	2014	20,679,299									
Alm na Realty Securities VIII LP	20,000,000	2018	17,103,476									
Alterra IOS Venture II	20,000,000	2022	20,996,183									
Are Industrial Real Estate Fund LP	25,000,000	2020	26,646,952									
Asana Real Estate Partners I	20,000,000	2016	18,438,881									
Asana Real Estate Partners III	20,000,000	2022	10,866,667									
Berkshi e Bridge Loan Investors II	8,055,600	2021	8,162,044									
Berkshi e MF Income	20,000,000	2015	20,916,585									
Bozzuto Capital Partners II, LLC	22,400,000	2011	21,939,555									
Bridge Logistics US Venture I LP	20,400,000	2022	19,562,946									
Bridge Logistics US Venture II	12,875,000	2023	11,853,007									
Broadview Real Estate Partners LP	20,000,000	2018	14,727,695									
Brockton Capital II	8,353,508	2010	12,845,545									
Brookfield Premier Real Estate Partners	60,000,000	2016	67,762,347									
BRV Pa tners I	8,420,000	2015	8,783,923									
Bryanston Retail Opportunity Fund	7,000,000	2005	3,252,537									
Buckingham BTR Fund I LP	13,918,919	2024	2,360,417									
Buckingham Multifamily Fund I	14,810,000	2018	13,992,937									
Buckingham Multifamily Fund II	12,242,991	2022	10,435,692									
Caprock Partners Industrial Co-Investment Fund III	13,233,333	2020	11,130,615									
Carlyle Property Investors	15,981,000	2016	20,057,833									
Car oll Fund V Bedrock Sidecar	8,860,000	2017	7,421,419									
Car oll Multifamily Real Estate Fund VI LP	20,000,000	2019	20,478,810									
Car oll Multifamily Real Estate VII	20,000,000	2021	14,471,273									
Car oll Multtifamily Real Estate Fund V LP	15,960,000	2017	15,511,201									
Cinespace Studio Venture	14,206,788	2023	7,397,204									
CITIC Capital China Retail Properties Investment Fund LP	15,000,000	2011	14,347,168									
Cla ion Lion Properties Fund	14,699,339	2021	14,871,637									
Cor land Growth & Income Fund	20,000,000	2018	22,005,293									
Cro sbay Townsend Feeder	16,019,185	2020	18,316,241									
Dream U.S. Industrial Fund	30,000,000	2021	31,316,567									
Fortress Japan Opportunity Fund I	5,822,092	2010	9,909,354									
Fortress Japan Opportunity Fund II	5,174,641	2011	8,898,276									
Fortress Japan Opportunity Fund IV	8,625,000	2018	6,508,689									

New Hampshire Retirement System

ADJUSTED ENDING VALUE WITH TVPI, DPI & RVPI As of 12/31/2024

NHRS - Real Estate

Base Currency: USD

			Contributions	Distributions	Valuation				Performance			
Investment	Commitment	Vintage Year	Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI
New Hampshire Retirement System												
Fortress Japan Residential Co-Investment	20,000,000	2017	15,083,288									
Gerrity Retail II	20,000,000	2015	22,711,368									
GID Mainstay Fund	40,000,000	2022	41,102,801									
Grame y Property EUR IV Townsend Feeder Limited	18,210,365	2019	20,033,165									
Greenfield Partners	9,000,000	2013	8,859,130									
Greenfield VII	13,500,000	2015	14,781,536									
Greysta Growth And Income Fund LP	11,564,013	2017	12,135,839									
H/2 SOF III	20,000,000	2015	21,106,313									
H2 Special Opportunities II	10,000,000	2010	10,000,000									
Hancock US Real Estate Fund LP	30,000,000	2019	31,629,348									
Heitman Asia-Pacific Property Fund	15,000,000	2018	14,229,280									
HSRE Quad V	20,000,000	2015	20,061,735									
IG S Asia Data Center 2	9,416,196	2023	2,861,442									
Jadi n IOS Fund 1-A	25,000,000	2023	13,229,554									
Jadi n IT AIV POV I LP	14,194,123	2022	9,894,298									
Jadi n Real Estate Fund I	20,000,000	2020	32,025,155									
Jadi n Real Estate Fund II LP	20,000,000	2024	2,223,888									
Jamestown Premier Property Fund	40,000,000	2011	63,877,195									
JP Morgan Strategic Property Fund	40,000,000	2010	40,460,693									
Kayne Anderson Core Real Estate LP	45,706,887	2017	48,937,911									
Lion Industrial Trust	30,000,000	2012	32,055,338									
Lone Star Fund V	8,100,000	2005	8,100,000									
MetLife Core Property Fund LP	85,000,000	2013	92,062,754									
Noble Hospitality Fund IV- SSCIV	12,500,000	2020	11,933,138									
Oaktree Real Estate Opportunities Fund VIII LP	20,000,000	2020	18,067,279									
Prime Property Fund LLC	40,000,000	2010	40,000,000									
Prosperitas Real Estate Partners III	10,000,000	2010	11,079,511									
Resma k-Townsend Model Home Leaseback	11,818,182	2021	9,161,066									
Rockpoint Real Estate Fund III, L.P.	6,646,661	2011	6,406,914									
Slate Canadian Real Estate Opportunities Fund I (SCREO)	10,568,767	2018	12,589,834									
Slate Canadian Real Estate Opportunities Fund II (SCREO)	19,468,780	2020	12,223,051									
Sma t Markets Fund	30,273,946	2013	34,486,585									
TTG BTR Aggregator LLC	675,676	2024	185,529									
TTG FrelD Feeder	18,285,040	2022	13,773,047									

New Hampshire Retirement System

ADJUSTED ENDING VALUE WITH TVPI, DPI & RVPI As of 12/31/2024

NHRS - Real Estate												Base Currency: USD	
			Contributions	Distributions	Valuation				Performance				
Investment	Commitment	Vintage Year	Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI	
New Hampshire Retirement System													
UBS (US) Trumbull Property Fund LP	6,881,365	2024	6,881,365										
Unico Core Plus Partners LP	20,000,000	2019	19,213,724										
VBI Brazil Real Estate Opportunities II	15,000,000	2011	14,157,540										
Waterton Residential Property Venture XI	20,000,000	2010	20,896,431										
WCP NewCold III LP	20,000,000	2024	13,200,000										
Wo ff C edit Partners III LP	20,000,000	2021	12,490,196										
Total: Real Estate	75		1,438,832,397	1,400,684,034									
</													



November 22, 2024

New Hampshire Retirement System – Defined Benefit Plan

Third Quarter 2024

Executive Summary

Angel G. Haddad

Senior Vice President, Fund Sponsor Consulting

Britton M. Murdoch

Senior Vice President, Fund Sponsor Consulting

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

Equity and Bond Markets Up Sharply in 3Q

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

S&P 500 climbed 5.9% in 3Q24

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

Strong quarter for core fixed income

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

Economy reignites in 2Q

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

Returns for Periods ended 9/30/24

	Quarter	1 Year	1/1/22 - Current	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	6.23	35.19	7.74	15.26	12.83	8.38
S&P 500	5.89	36.35	8.85	15.98	13.38	8.20
Russell 2000	9.27	26.76	1.23	9.39	8.78	8.27
Global ex-U.S. Equity						
MSCI World ex USA	7.76	24.98	4.99	8.36	5.68	4.77
MSCI Emerging Markets	8.72	26.05	0.92	5.75	4.03	--
MSCI ACWI ex USA Small Cap	8.90	23.25	1.29	8.21	6.08	6.79
Fixed Income						
Bloomberg Aggregate	5.20	11.57	-1.52	0.33	1.84	4.06
90-day T-Bill	1.37	5.46	3.81	2.32	1.65	1.92
Bloomberg Long Gov/Credit	7.96	17.24	-7.43	-1.97	2.32	5.62
Bloomberg Global Agg ex-US	8.52	12.28	-4.40	-1.86	-0.50	2.62
Real Estate						
NCREIF Property	0.78	-3.47	-1.21	3.26	5.88	7.67
FTSE Nareit Equity	16.09	34.74	-0.10	5.46	7.83	10.08
Alternatives						
Cambridge Private Equity*	1.00	4.62	1.94	13.84	13.10	12.73
Cambridge Senior Debt*	1.19	7.51	6.08	6.92	6.76	4.33
HFRI Fund Weighted	2.84	12.64	4.23	7.41	5.12	6.09
Bloomberg Commodity	0.68	0.96	4.60	7.79	0.03	2.21
CPI-U	0.36	2.44	4.58	4.19	2.85	2.55

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

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

Key Observations

NHRS Pension Plan

Asset Allocation and Portfolio Structure

- Overall, the Fund's asset allocation was close to the permissible Policy ranges at quarter-end. The Fund's allocation to defensive positions, including fixed income and cash, represented 20.9% of total assets. The fixed income allocation was slightly below the policy range by 0.7%, partially balanced by a 1.6% allocation to cash equivalent instruments. The Fund had an overweight to domestic equity and alternatives relative to target, and underweight positions to international equity fixed income, and real estate.

Investment Performance

- The Fund had a gross return of 4.94% over the first quarter of Fiscal Year 2025, underperforming the market benchmark return of 5.18% and ranking in the 39th percentile of its peers. On a net-of-fees basis, the Fund returned 4.78%
 - The Alternative Assets and Non-U.S. Equity portfolios detracted most from relative performance over the quarter. The Fund's overweight to Alternatives Assets and active manager performance in Non-U.S. Equity also detracted from performance.
 - By contrast, the Domestic Equity, Fixed Income, and Real Estate portfolios contributed to performance. The Fund's overweight to Domestic Equity and underweight to Real Estate also contributed to performance.
- Overall, performance is competitive relative to both benchmarks over longer periods measured. The Fund outperformed the peer group median over the long term, ranking in the top 23% of peers for the trailing 10-year period, and in the top 49% of peers over the last 25 years.
- The Fund exhibits attractive risk-adjusted performance, as measured by the Sharpe Ratio over the last five years. In addition, relative risk-adjusted scores, as measured by the Excess Return Ratio, are also strong. Both of these ratios ranked in the top 30% of peers.

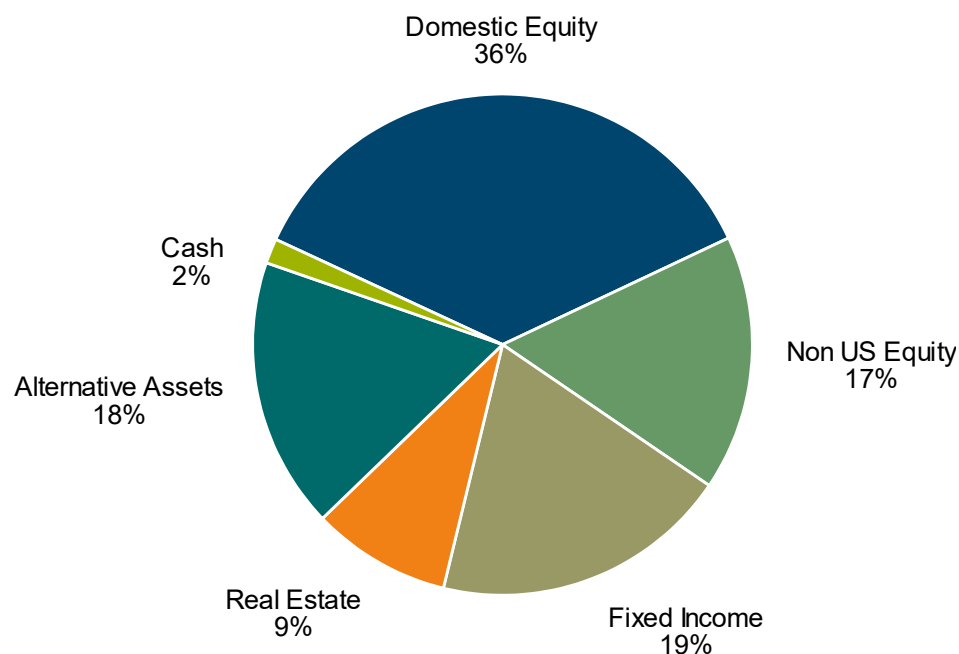
Other Developments

- Callan and NHRS Staff are working to implement the recently approved asset allocation strategy.

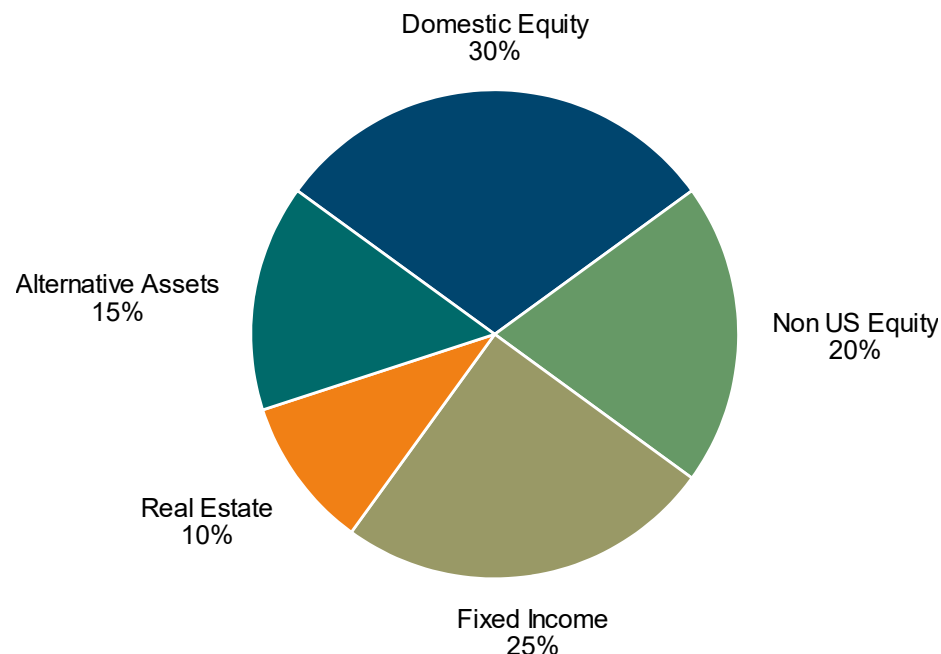
Total Fund

Actual Asset Allocation vs. Target as of September 30, 2024

Actual Asset Allocation



Target Asset Allocation



Asset Class	\$Millions Actual	Weight Actual	Target	Percent Difference	\$Millions Difference
Domestic Equity	4,604	36.1%	30.0%	6.1%	777
Non US Equity	2,108	16.5%	20.0%	(3.5%)	(444)
Fixed Income	2,464	19.3%	25.0%	(5.7%)	(726)
Real Estate	1,146	9.0%	10.0%	(1.0%)	(129)
Alternative Assets	2,235	17.5%	15.0%	2.5%	321
Cash	201	1.6%	0.0%	1.6%	201
Total	12,759	100.0%	100.0%		

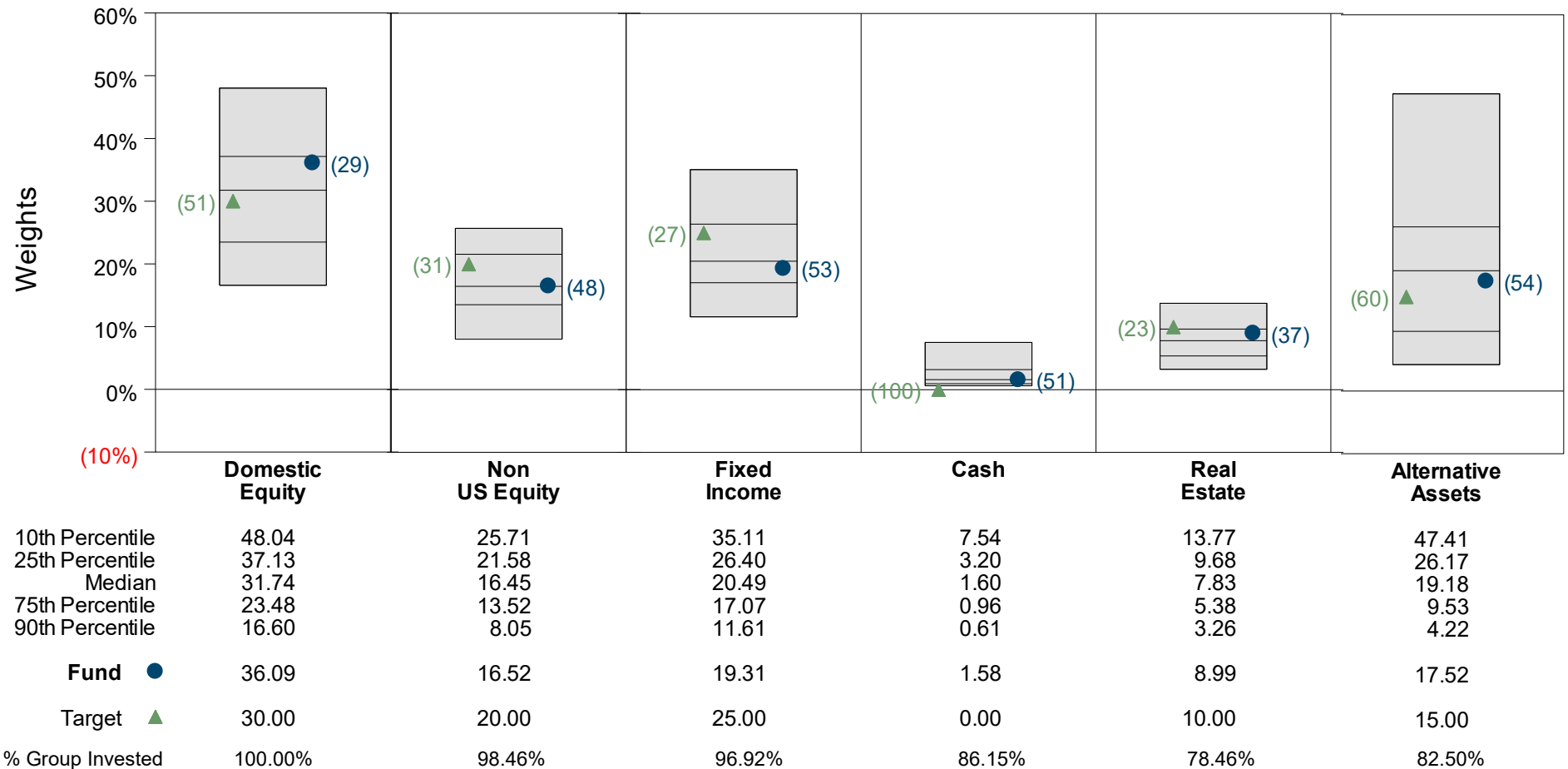
*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

**The United States equity portion of the Walter Scott Global Equity fund is allocated to the Domestic Equity composite.

Total Fund

Actual Asset Allocation vs. Large Public DB Plan (>\$1B) Peer Group, as of September 30, 2024

Asset Class Weights vs Callan Public Fund Spons - Large (>1B)



*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Total Fund

Market Values

	September 30, 2024		Net New Inv.	Inv. Return	June 30, 2024	
	Market Value	Weight			Market Value	Weight
Total Domestic Equity	\$4,227,034,257	33.13%	\$0	\$285,886,867	\$3,941,147,389	32.28%
Large Cap Domestic Equity	\$2,441,030,094	19.13%	\$0	\$135,609,111	\$2,305,420,983	18.88%
Blackrock S&P 500	2,441,030,094	19.13%	0	135,609,111	2,305,420,983	18.88%
S Mid Cap Domestic Equity	\$762,151,429	5.97%	\$0	\$57,931,271	\$704,220,158	5.77%
AllianceBernstein	482,465,366	3.78%	0	36,505,869	445,959,496	3.65%
TSW	279,686,063	2.19%	0	21,425,402	258,260,662	2.12%
Small Cap Domestic Equity	\$1,023,852,733	8.02%	\$0	\$92,346,486	\$931,506,248	7.63%
Boston Trust	261,186,224	2.05%	0	24,262,913	236,923,311	1.94%
Segall Bryant & Hamill	278,200,376	2.18%	0	17,398,160	260,802,217	2.14%
Wellington	484,466,133	3.80%	0	50,685,413	433,780,720	3.55%
Total Non US Equity *	\$2,485,416,621	19.48%	\$(152,456)	\$170,882,442	\$2,314,686,635	18.96%
Core Non US Equity *	\$1,516,566,261	11.89%	\$(152,456)	\$112,654,367	\$1,404,064,350	11.50%
Aristotle	197,464,893	1.55%	0	19,676,907	177,787,986	1.46%
Artisan Partners	432,012,442	3.39%	0	24,950,183	407,062,258	3.33%
BlackRock Superfund	215,311,909	1.69%	0	15,864,231	199,447,677	1.63%
Causeway Capital	492,353,617	3.86%	0	42,578,934	449,774,683	3.68%
Lazard	178,897,125	1.40%	0	9,558,045	169,339,080	1.39%
Emerging Markets	\$198,532,252	1.56%	\$0	\$18,719,190	\$179,813,061	1.47%
Wellington Emerging Markets	198,532,252	1.56%	0	18,719,190	179,813,061	1.47%
Non US Small Cap	\$151,107,247	1.18%	\$0	\$14,486,883	\$136,620,364	1.12%
Wellington Int'l Small Cap Research	151,107,247	1.18%	0	14,486,883	136,620,364	1.12%
Global Equity	\$619,210,861	4.85%	\$0	\$25,022,002	\$594,188,859	4.87%
Walter Scott Global Equity	619,210,861	4.85%	0	25,022,002	594,188,859	4.87%

*Includes \$526,276 in legacy assets that are not actively managed and in liquidation following the termination of Fisher

Total Fund

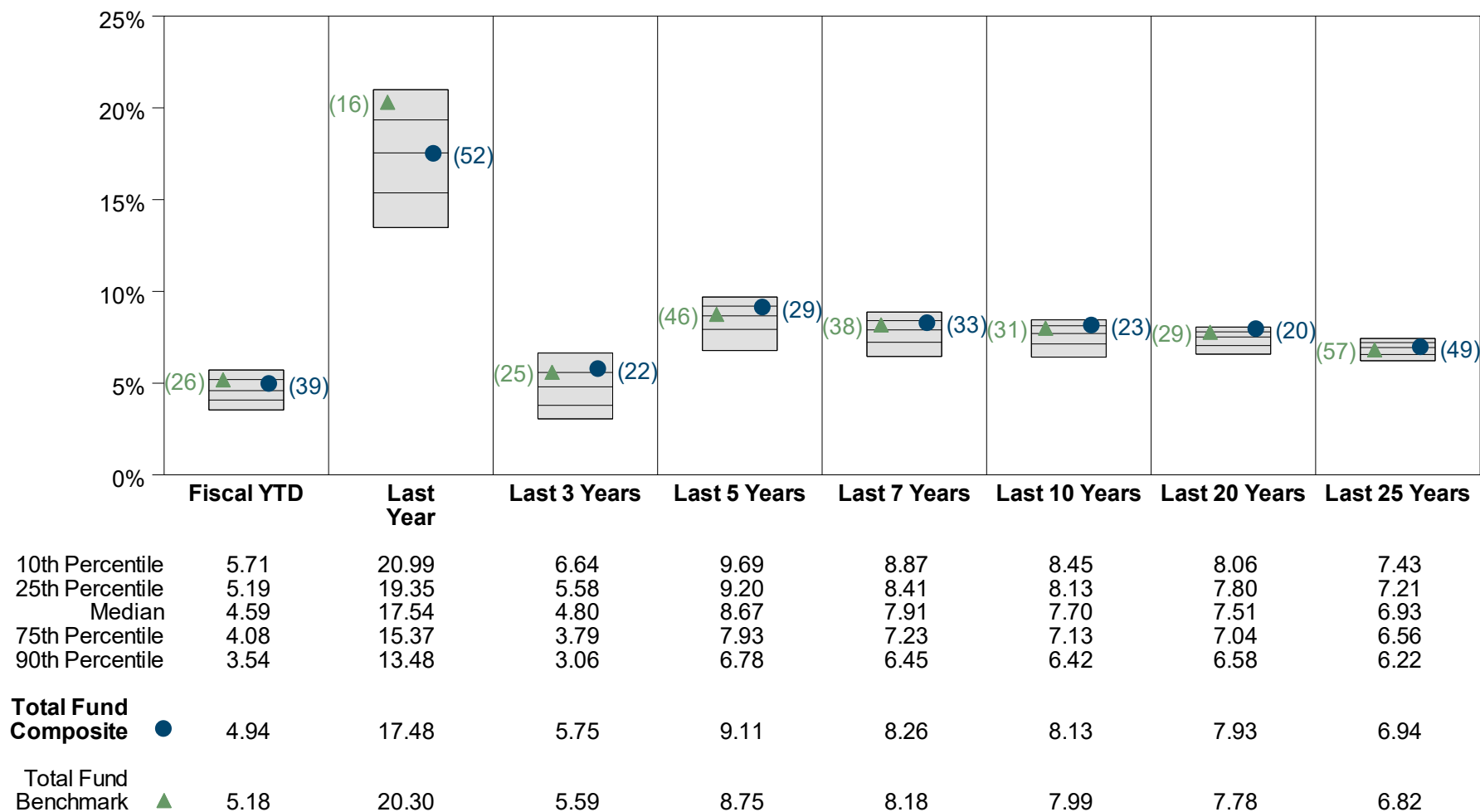
Market Values

	September 30, 2024		Net New Inv.	Inv. Return	June 30, 2024	
	Market Value	Weight			Market Value	Weight
Total Fixed Income	\$2,464,075,780	19.31%	\$0	\$127,938,217	\$2,336,137,563	19.14%
BlackRock SIO Bond Fund	282,468,468	2.21%	0	11,678,756	270,789,712	2.22%
Brandywine Asset Mgmt	241,475,361	1.89%	0	19,477,818	221,997,543	1.82%
FIAM (Fidelity) Tactical Bond	395,706,696	3.10%	0	20,299,077	375,407,619	3.08%
Income Research & Management	824,351,731	6.46%	0	39,700,360	784,651,371	6.43%
Loomis Sayles	306,275,081	2.40%	0	16,618,917	289,656,164	2.37%
Manulife Strategic Fixed Income	226,664,388	1.78%	0	10,898,964	215,765,425	1.77%
Mellon US Agg Bond Index	187,134,054	1.47%	0	9,264,326	177,869,728	1.46%
Total Cash	\$201,248,714	1.58%	\$1,709,481	\$3,074,990	\$196,464,243	1.61%
Total Marketable Assets	\$9,377,775,372	73.50%	\$1,557,025	\$587,782,517	\$8,788,435,830	71.99%
Total Real Estate	\$1,146,471,318	8.99%	\$12,901,125	\$5,016,645	\$1,128,553,548	9.24%
Strategic Core Real Estate	652,699,773	5.12%	(7,889,712)	863,586	659,725,899	5.40%
Tactical Non-Core Real Estate	493,771,544	3.87%	21,520,720	3,423,176	468,827,648	3.84%
Total Alternative Assets	\$2,234,846,942	17.52%	\$(66,377,801)	\$9,969,633	\$2,291,255,110	18.77%
Private Equity	1,673,128,673	13.11%	(43,697,241)	5,503,643	1,711,322,271	14.02%
Private Debt	561,718,269	4.40%	(22,680,560)	4,465,990	579,932,839	4.75%
Total Fund Composite	\$12,759,093,632	100.00%	\$(51,919,651)	\$602,768,795	\$12,208,244,488	100.00%

Total Fund Performance – Gross of Investment Management Fees

Performance vs. Large Public DB Plan (>\$1B) Peers, as of September 30, 2024

Performance vs Callan Public Fund Large DB (Gross)



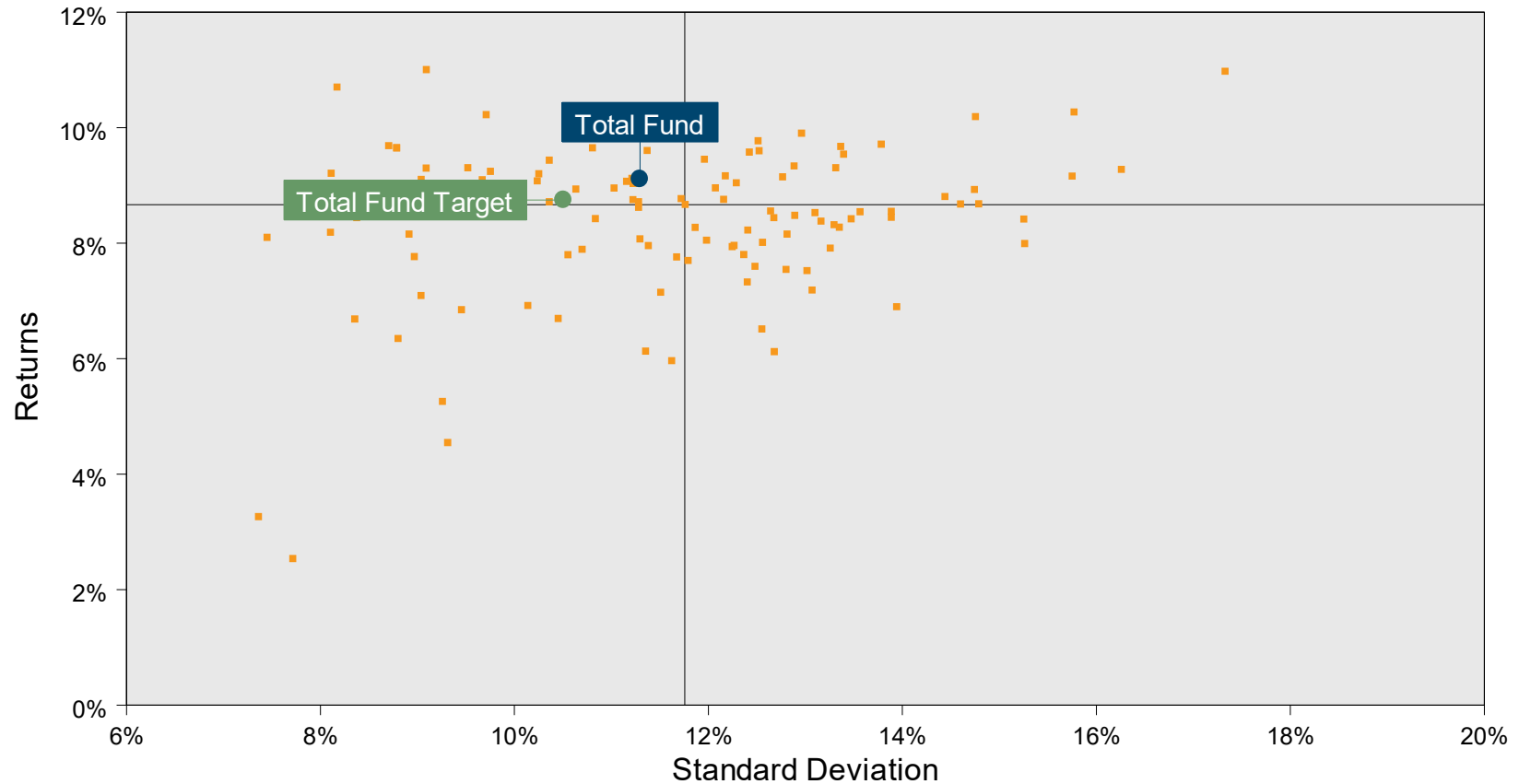
Note: Investment results are shown gross of investment management fees versus corresponding peer group.

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Total Fund Performance – Gross of Investment Management Fees

Five-Year Risk/Return Analysis as of September 30, 2024

Five Year Annualized Risk vs Return



Squares represent membership of the Callan Public Fund Spons - Large (>1B)

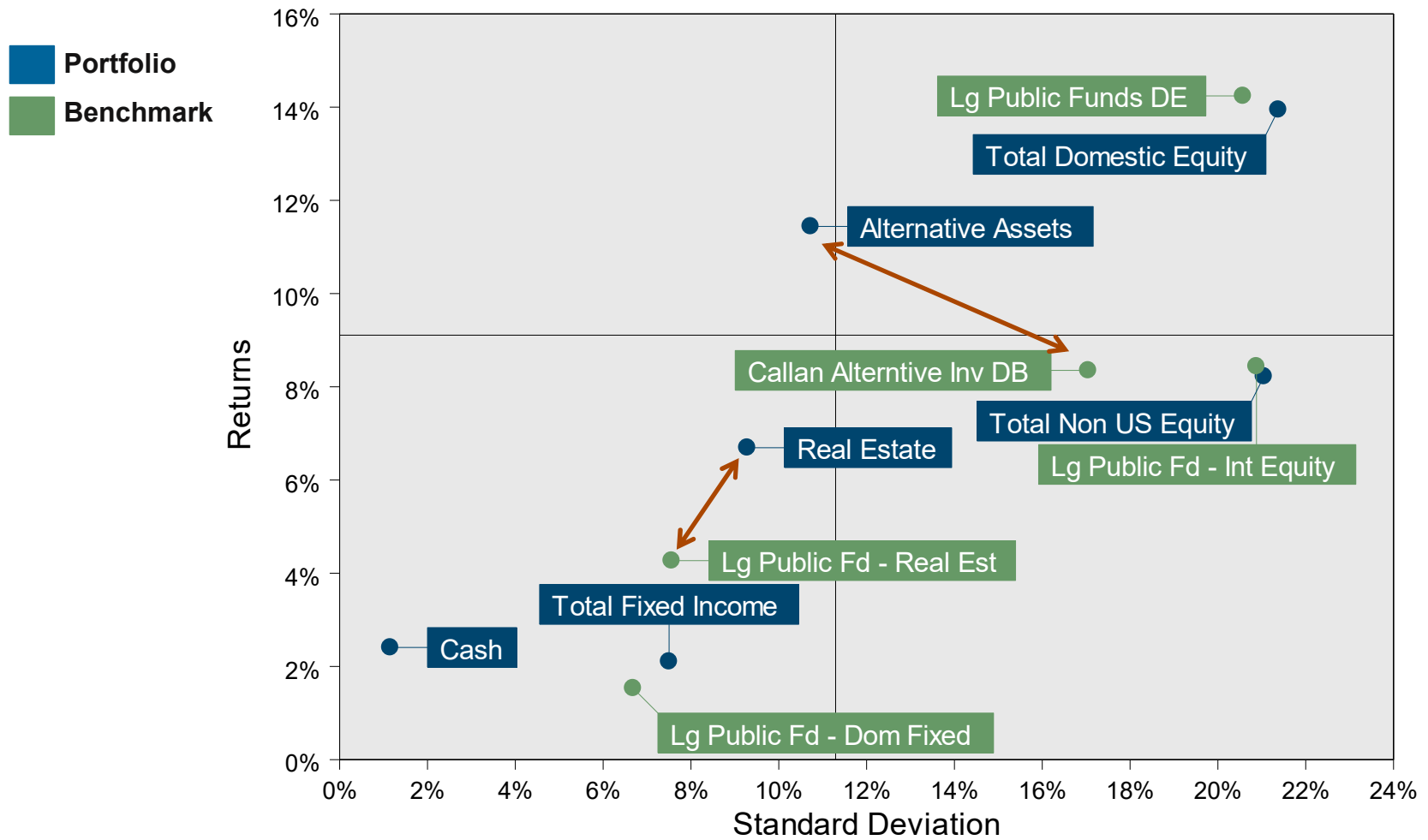
Note: Investment results are shown gross of investment management fees versus corresponding peer group.

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Total Fund Performance – Gross of Investment Management Fees

Asset Class Composites – Five-Year Risk/Return Analysis as of September 30, 2024

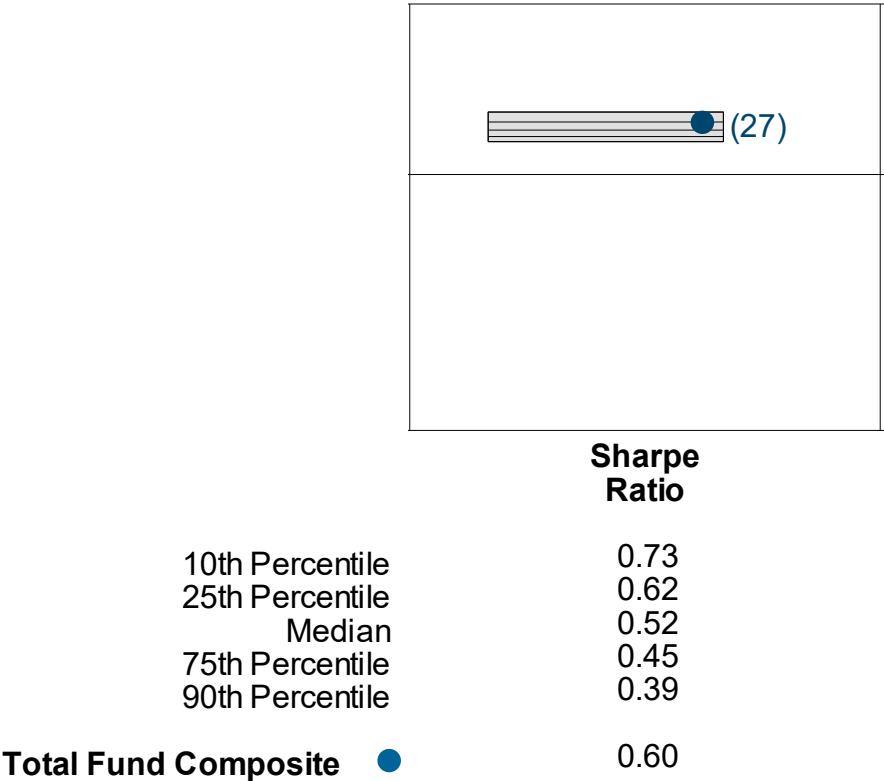
Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



Note: Investment results are shown gross of investment management fees.

Total Fund Performance – Gross of Investment Management Fees

Five-Year Sharpe Ratio, as of September 30, 2024



- Measures absolute risk-adjusted performance, taking into account the risk-free rate and portfolio volatility
- Ranks near the top quartile of the peer group

Note: Investment results are shown gross of investment management fees versus corresponding peer group.

Total Fund Performance – Net of Investment Management Fees

One-Year Attribution Analysis vs. Policy Benchmark, as of September 30, 2024

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	32%	30%	32.05%	35.19%	(0.87%)	0.15%	(0.73%)
Non US Equity	19%	20%	25.02%	25.35%	(0.08%)	(0.09%)	(0.17%)
Fixed Income	19%	25%	12.31%	12.08%	0.05%	0.46%	0.51%
Real Estate	10%	10%	(6.88%)	(9.99%)	0.42%	(0.10%)	0.32%
Alternative Assets	19%	15%	5.26%	20.82%	(3.12%)	(0.07%)	(3.19%)
Cash	1%	0%	5.45%	5.45%	0.00%	(0.18%)	(0.18%)
Total			16.87%	= 20.30%	+ (3.60%)	+ 0.17%	(3.43%)

What helped relative performance?

- Strong relative performance from the real estate and fixed income portfolios
- An underweight to fixed income relative to target
- An overweight domestic equity relative to target

What hurt relative performance?

- Weak relative performance from the alternative assets, domestic equity, and non-US equity portfolios
- A slight underweight to non-US equity relative to target
- An overweight to alternative assets relative to target
- A slight overweight to the real estate and cash relative to target

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

Total Fund Performance – Net of Investment Management Fees

Five-Year Attribution Analysis vs. Policy Benchmark, as of September 30, 2024

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	30%	30%	13.64%	14.81%	(0.29%)	(0.11%)	(0.40%)			
Non US Equity	18%	20%	7.57%	7.59%	(0.02%)	(0.03%)	(0.05%)			
Fixed Income	21%	25%	1.83%	0.70%	0.24%	0.34%	0.57%			
Real Estate	11%	10%	6.02%	2.27%	0.41%	(0.07%)	0.35%			
Alternative Assets	19%	15%	10.73%	13.33%	(0.58%)	0.09%	(0.49%)			
Cash	1%	0%	2.41%	2.41%	0.00%	(0.08%)	(0.08%)			
Total			8.64%	=	8.75%	+	(0.25%)	+	0.14%	(0.11%)

What helped relative performance?

- Strong relative performance from real estate and fixed income portfolios
- An underweight to fixed income relative to target
- An overweight to alternative assets relative to target

What hurt relative performance?

- Weak relative performance from alternative assets, domestic equity, and non-U.S. equity portfolios
- A slight underweight to domestic equity and non-U.S. equity relative to target
- A slight overweight to real estate and cash relative to target

*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

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Appendix

Investment Manager Returns – Net of Investment Management Fees

As of September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net of Fees				
Total Domestic Equity	7.18%	32.05%	8.96%	13.64%
Domestic Equity Benchmark (1)	6.23%	35.19%	10.29%	14.81%
Secondary Domestic Equity Bmk (6)	7.21%	32.61%	8.28%	13.70%
Large Cap Domestic Equity	5.88%	36.41%	11.88%	15.19%
S&P 500 Index	5.89%	36.35%	11.91%	15.98%
Blackrock S&P 500	5.88%	36.41%	11.88%	15.93%
SMid Cap Domestic Equity	8.08%	23.89%	3.54%	10.53%
Russell 2500 Index	8.75%	26.17%	3.47%	10.43%
AllianceBernstein	8.04%	28.53%	2.07%	11.52%
TSW	8.13%	16.62%	6.29%	8.93%
TSW Blended Benchmark (2)	9.63%	26.59%	6.06%	9.99%
Small Cap Domestic Equity	9.74%	28.09%	6.13%	12.40%
Russell 2000 Index	9.27%	26.76%	1.84%	9.39%
Boston Trust	10.14%	23.84%	6.93%	11.40%
Segall Bryant & Hamill	6.47%	25.73%	6.77%	12.74%
Wellington	11.49%	31.96%	5.34%	12.76%
Total Non US Equity	7.25%	25.02%	4.46%	7.59%
Non US Equity Benchmark (3)	8.06%	25.35%	4.14%	7.59%
Core Non US Equity	7.90%	24.83%	5.82%	7.82%
Core Non US Benchmark (4)	8.06%	25.35%	4.14%	7.59%
Aristotle	10.95%	25.61%	4.14%	-
Artisan Partners	5.96%	25.97%	3.48%	6.41%
BlackRock Superfund	7.94%	25.24%	-	-
Causeway Capital	9.33%	24.83%	10.98%	11.91%
Lazard	5.51%	20.99%	1.83%	-
Emerging Markets	10.14%	24.99%	(0.46%)	3.49%
MSCI EM	8.72%	26.05%	0.40%	5.75%
Wellington Emerging Markets	10.14%	24.99%	(0.84%)	3.69%
Non US Small Cap	10.41%	25.48%	(1.58%)	2.92%
Wellington Int'l Small Cap Research	10.41%	25.48%	-	-
MSCI EAFE Small Cap	10.54%	23.48%	(0.36%)	6.40%
Global Equity	4.10%	25.38%	6.30%	11.31%
MSCI ACWI net	6.61%	31.76%	8.09%	12.19%
Walter Scott Global Equity	4.10%	25.38%	6.30%	11.31%
Walter Scott Blended Benchmark (5)	6.61%	31.76%	8.09%	12.19%

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index. Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) The Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns – Net of Investment Management Fees

As of September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	
Net of Fees					
Total Fixed Income	5.41%	12.31%	(0.43%)	1.83%	*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%. (1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007. (2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022. (3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021. (4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield. (5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021. (6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index as of 7/1/2015. (7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 2% and 33.3% ((50% S&P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%) as of 7/1/2022. (8) The Private Equity Benchmark is the Russell 3000 Index + 2% as of 7/1/2022. (9) The Private Debt Benchmark is (50% S&P LSTA Leveraged Loan 100 Index & 50% Bloomberg HY Index) + 1% as of 7/1/2022.. (10) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.
Fixed Income Benchmark (1)	5.20%	12.08%	(1.05%)	0.70%	
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%	
BlackRock SIO Bond Fund	4.19%	11.55%	2.19%	3.22%	
BlackRock Custom Benchmark (2)	1.37%	5.56%	3.51%	2.37%	
Brandywine Asset Mgmt	8.69%	13.44%	(3.16%)	0.24%	
Brandywine Custom Benchmark (3)	7.20%	11.07%	(4.49%)	(2.10%)	
FIAM (Fidelity) Tactical Bond	5.32%	12.67%	0.32%	2.43%	
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%	
Income Research & Management	5.02%	11.55%	(1.43%)	0.81%	
Bloomberg Gov/Credit	5.10%	11.31%	(1.50%)	0.41%	
Loomis Sayles	5.65%	14.41%	0.80%	3.76%	
Loomis Sayles Custom Benchmark (4)	5.23%	13.02%	0.19%	1.91%	
Manulife Strategic Fixed Income	4.98%	12.01%	0.71%	2.24%	
Bloomberg Multiverse	6.97%	12.25%	(2.81%)	(0.63%)	
Mellon US Agg Bond Index	5.20%	11.59%	-	-	
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%	
Total Cash	1.31%	5.45%	3.59%	2.41%	
3-month Treasury Bill	1.37%	5.46%	3.49%	2.32%	
Total Marketable Assets	6.58%	24.11%	5.04%	8.42%	
Total Marketable Index (5)	6.37%	24.60%	4.99%	8.32%	
Total Real Estate (10)	0.17%	(6.88%)	3.75%	6.02%	
Real Estate Benchmark (6)	(0.66%)	(9.99%)	1.02%	2.27%	
Strategic Core Real Estate	0.02%	(9.78%)	2.19%	3.78%	
Tactical Non-Core Real Estate	0.38%	(2.36%)	6.30%	9.95%	
Total Alternative Assets	0.03%	5.26%	5.88%	10.73%	
Alternative Assets Benchmark (7)	3.13%	20.82%	9.84%	13.33%	
Total Private Equity	0.04%	5.12%	5.72%	13.03%	
Private Equity Benchmark (8)	3.72%	25.39%	11.84%	17.60%	
Cambridge Global PE Idx 1 Qtr Lag	0.00%	3.65%	3.43%	13.46%	
Total Private Debt	0.01%	5.69%	6.36%	5.57%	
Private Debt Benchmark (9)	1.82%	11.65%	5.31%	4.92%	
Cambridge Private Credit Idx 1 Qtr Lag	0.00%	6.58%	6.97%	8.13%	
Total Fund Composite	4.78%	16.87%	5.16%	8.63%	
Total Fund Benchmark *	5.18%	20.30%	5.59%	8.75%	

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September 30, 2024

New Hampshire Retirement System

Quarterly Report - Preliminary

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Strong U.S. Economy Refuses to Cooperate

ECONOMY

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

Rate Cut Spurs Rally With More Expected

FIXED INCOME

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

Managers Outperform Leveraged Loans

PRIVATE CREDIT

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

Strong Year for Gains; Still Lag Benchmark

INSTITUTIONAL INVESTORS

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

Funds See Gains and REITs Top Equities

REAL ESTATE/REAL ASSETS

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

High Beta Managers Have Strong Quarter

HEDGE FUNDS/MACs

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

Record High in U.S. And Big Global Gains

EQUITY

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

Fewer Funds but More Fundraising

PRIVATE EQUITY

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

Index Gains Slow in 2Q24; Balances Up

DEFINED CONTRIBUTION

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

Broad Market Quarterly Returns

U.S. Equity Russell 3000



6.2%

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



8.1%

U.S. Fixed Income Bloomberg Agg



5.2%

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



8.5%

Sources: Bloomberg, FTSE Russell, MSCI

Strong U.S. Economy Refuses to Cooperate

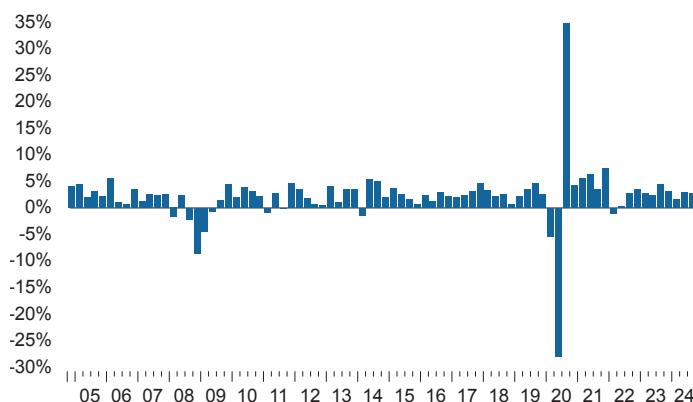
ECONOMY | Jay Kloepfer

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

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

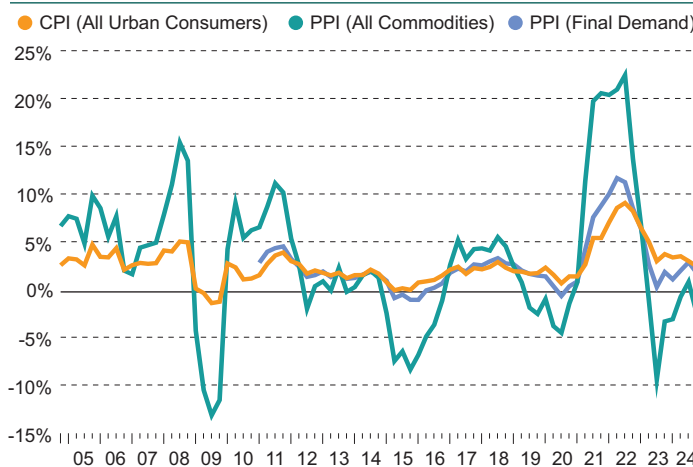
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

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

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

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

The Long-Term View

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

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

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

Recent Quarterly Economic Indicators

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

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

Strong Year for Gains but Still Lag Benchmark

INSTITUTIONAL INVESTORS

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

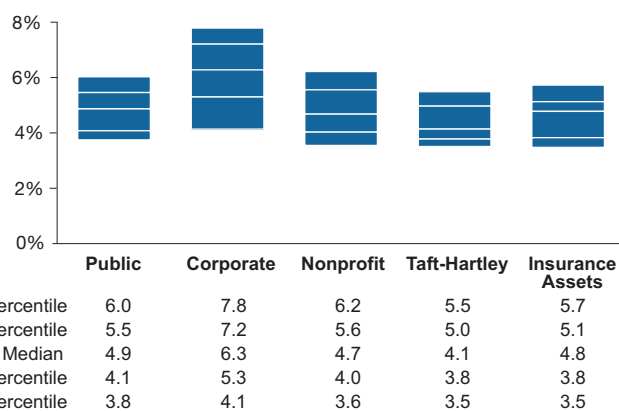
Public defined benefit (DB) plans

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

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

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

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



Source: Callan

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

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

*Returns less than one year are not annualized.

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

Corporate DB plans

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

Defined contribution (DC) plans

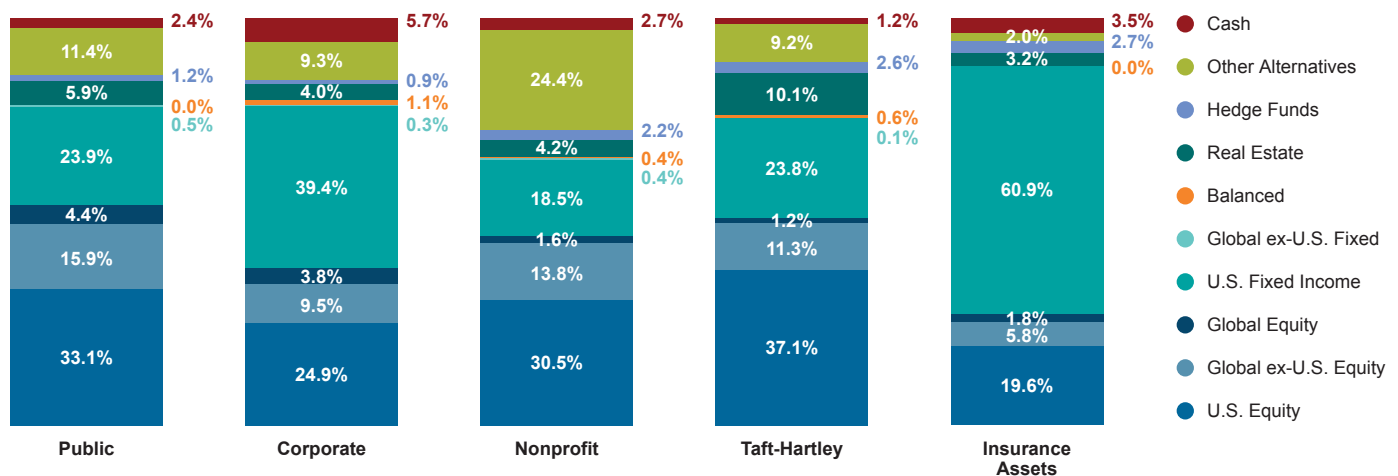
- Roughly 10% have a private real estate or real assets product in the target date fund, according to our survey.
- Fees remain the top issue for DC plans, as they have been for years.

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

Nonprofits

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

Average Asset Allocation, Callan Database Groups



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

Equity

U.S. Equities

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

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

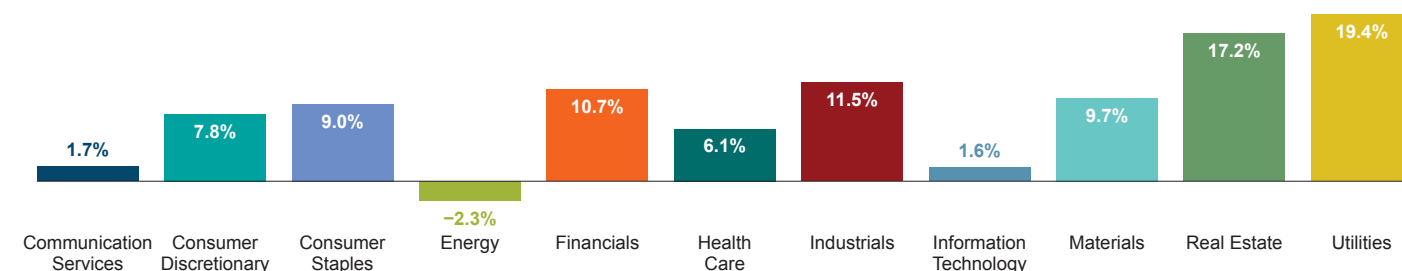
Top performers have broadened out

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

Small cap valuations

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

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



Source: S&P Dow Jones Indices

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

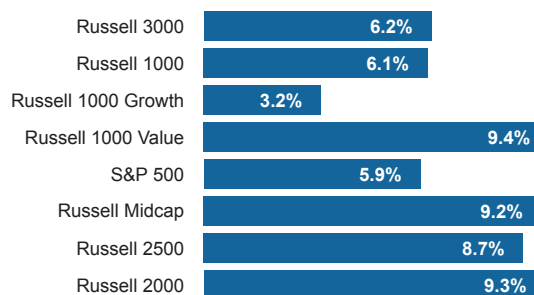
Global Equities

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

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

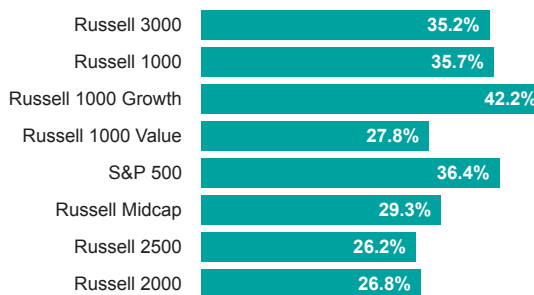
U.S. Equity: Quarterly Returns

(9/30/24)



U.S. Equity: One-Year Returns

(9/30/24)



Sources: FTSE Russell and S&P Dow Jones Indices

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

Emerging markets

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

Growth vs. value

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

U.S. dollar strength

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

Quality growth managers struggle

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

High growth rewarded last 18 months

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

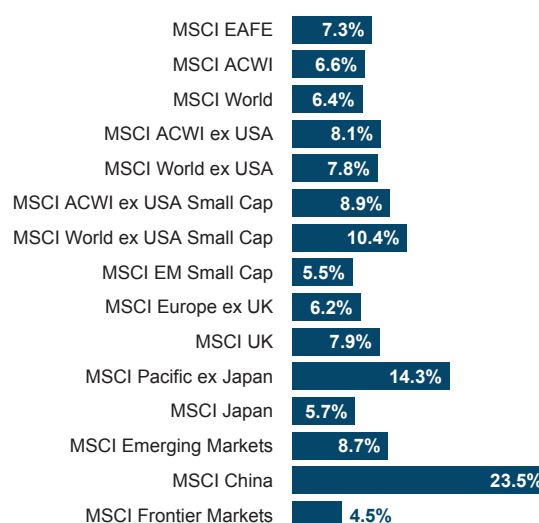
China's stimulus: what and why

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

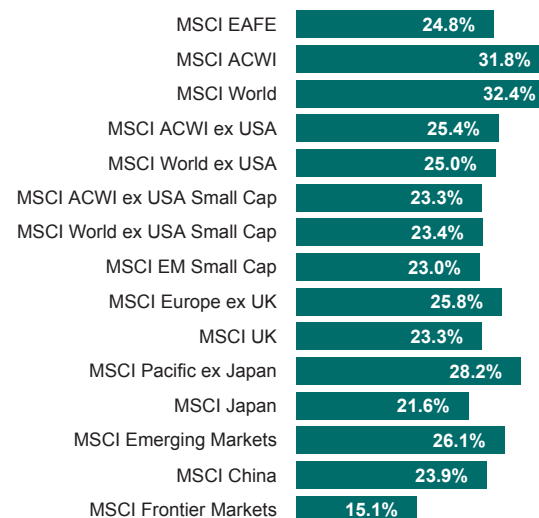
Results

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

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



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



Source: MSCI

Fixed Income

U.S. Fixed Income

Rate cut spurs market rally

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

Performance and drivers

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

Valuations

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

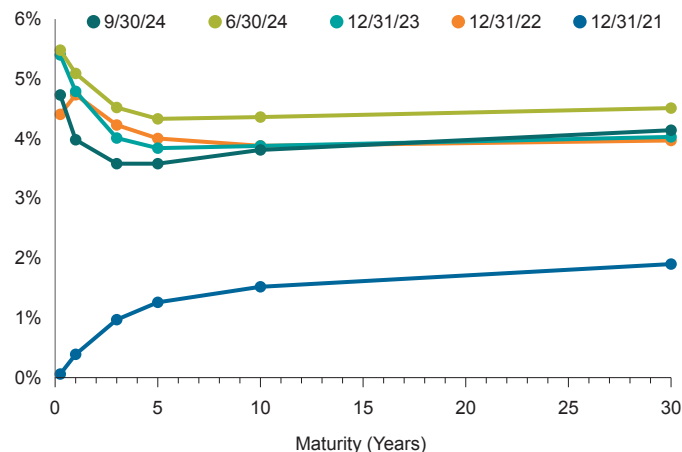
Munis posted gains but underperformed U.S. Treasuries

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

AAA-rated muni yield curve normalized

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

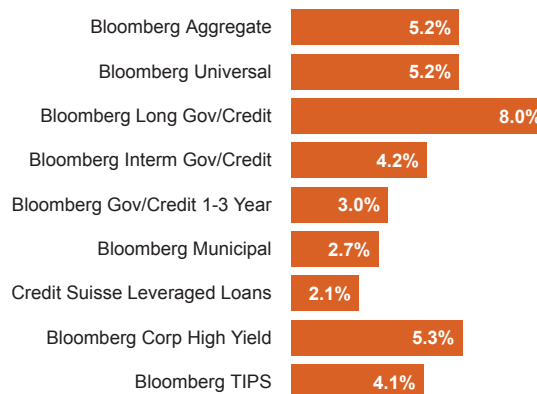
U.S. Treasury Yield Curves



Source: Bloomberg

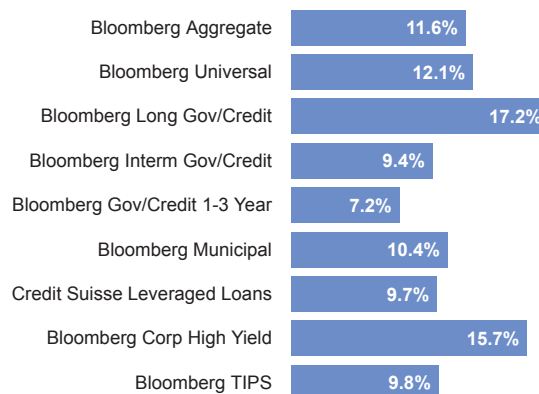
U.S. Fixed Income: Quarterly Returns

(9/30/24)



U.S. Fixed Income: One-Year Returns

(9/30/24)



Sources: Bloomberg and Credit Suisse

Muni valuations vs. U.S. Treasuries remain rich

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

Corporate new debt issuance remains robust

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

Global Fixed Income

Macro environment

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

U.S. dollar weakens

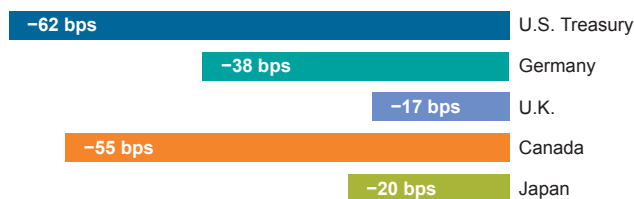
- The U.S. dollar weakened relative to major currencies, reversing the trend from the first half of the year and enhancing returns for unhedged investors.
- Within the U.S. Dollar Index (DXY), Japanese yen saw the largest relative gain, rising 12% vs. the U.S. dollar.

Emerging market debt posts strong quarter

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

Change in 10-Year Global Government Bond Yields

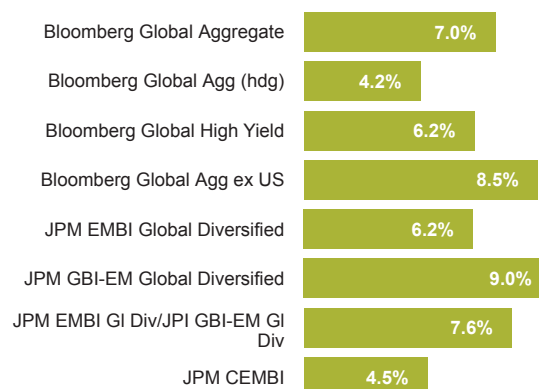
2Q24 to 3Q24



Source: Bloomberg

Global Fixed Income: Quarterly Returns

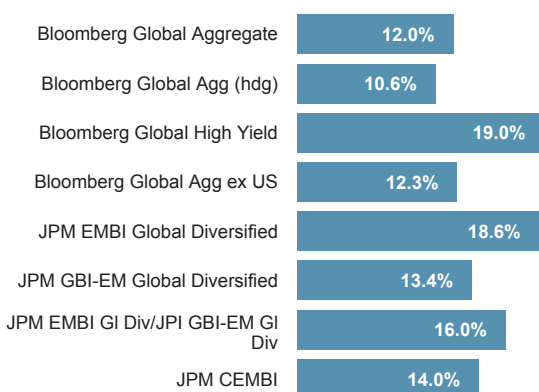
(9/30/24)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns

(9/30/24)



Sources: Bloomberg and JPMorgan Chase

Funds See Gains and REITs Top Equities

REAL ESTATE/REAL ASSETS | Munir Iman

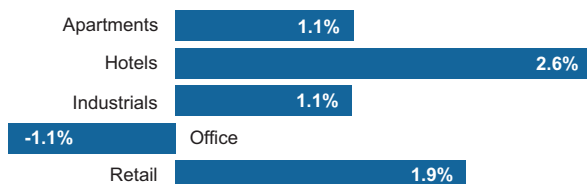
Valuations reflect higher interest rates

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

REITs top equities

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

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



Source: NCREIF

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

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

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

Over \$250 billion in dry powder

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

Pricing, transaction volumes on the rise

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

Fewer Funds but More Fundraising

PRIVATE EQUITY | Ashley Kahn

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

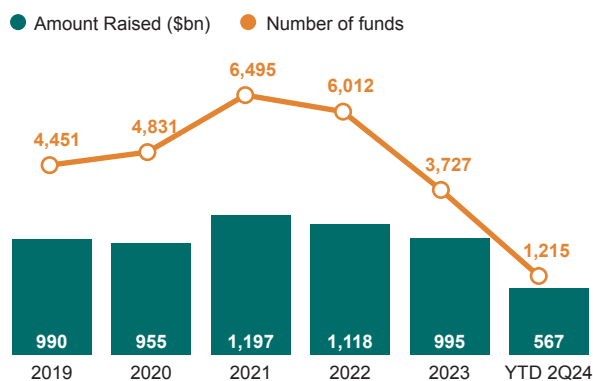
Buyouts ► Buyout activity levels in 2024 are similar to 2023, which represents a return to the pre-pandemic activity levels of 2019. In hindsight, 2021-22 appear to be the exceptional years, characterized by exuberance in deal activity, while 2023-24 are much closer to historical levels.

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

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

Annual Fundraising

(6/30/24)



Source: Pitchbook

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

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

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

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

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

*Most recent data available at time of publication

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

Outperformed Leveraged Loans over 5, 10, and 20 Years

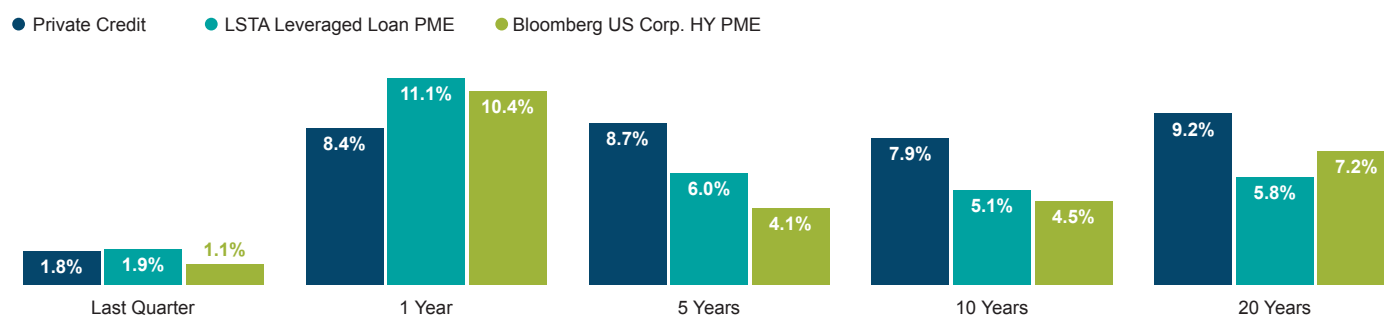
PRIVATE CREDIT | Cos Braswell and Daniel Brown

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

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

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

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



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

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

Source: LSEG/Cambridge

*Most recent data available at time of publication

Higher Beta Hedge Fund Strategies Have a Strong Quarter

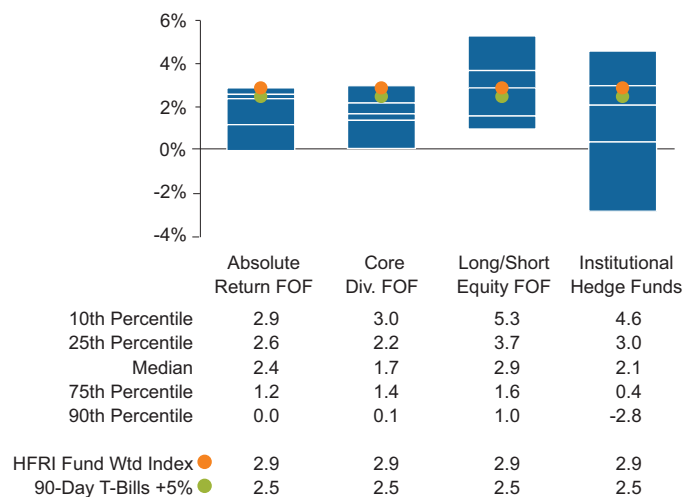
HEDGE FUNDS/MACs | Joe McGuane

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

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

Hedge Fund Style Group Returns

(9/30/24)



Sources: Callan, Credit Suisse, Federal Reserve

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

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

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

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

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

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

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

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

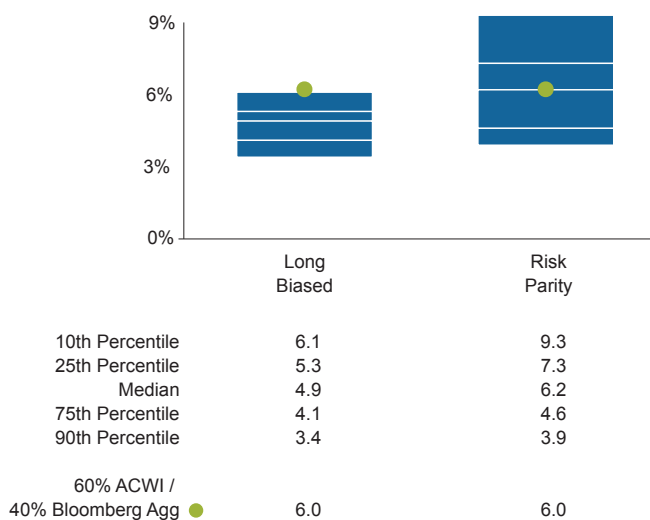
Within Callan's database of liquid alternative solutions, the median Callan MAC Long Biased manager rose 4.9%, as the strong equity rally pushed performance higher. The Callan MAC Risk Parity peer group rose 6.2%, as equities and fixed income positioning drove performance.

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

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

MAC Style Group Returns

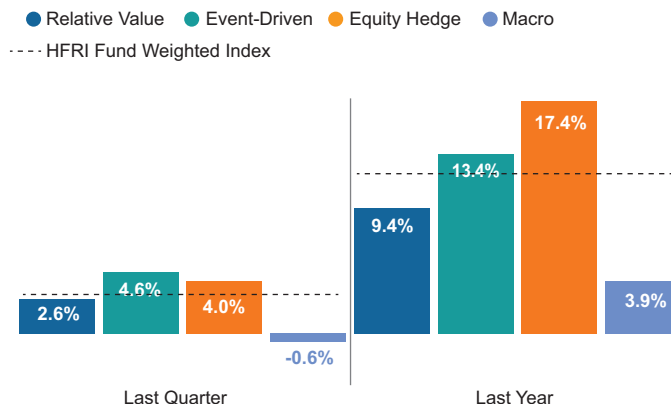
(9/30/24)



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

HFRI Hedge Fund-Weighted Strategy Returns

(9/30/24)



Source: HFRI

Index Gains Slow in 2Q24

DEFINED CONTRIBUTION | [Scotty Lee](#)

Performance: Index gains slow in 2Q24

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

Growth Sources: Balances rise due to investment gains

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

Turnover: Net transfers fall

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

Net Cash Flow Analysis: TDFs remain in top spot

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

Equity Allocation: Exposure rises

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

Asset Allocation: Fixed income exposure falls

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

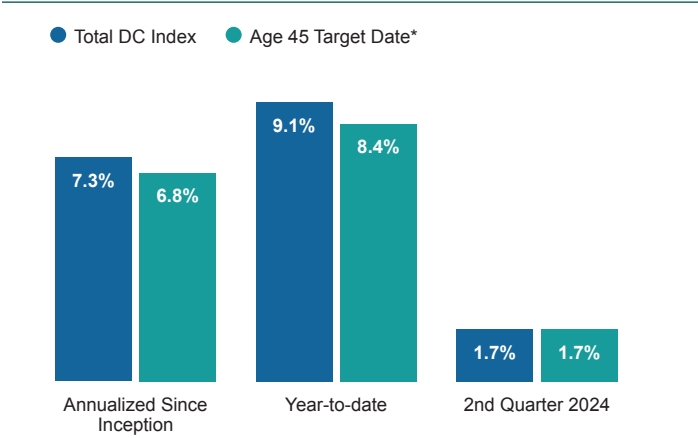
Prevalence of Asset Class: Global equity funds fall

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

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

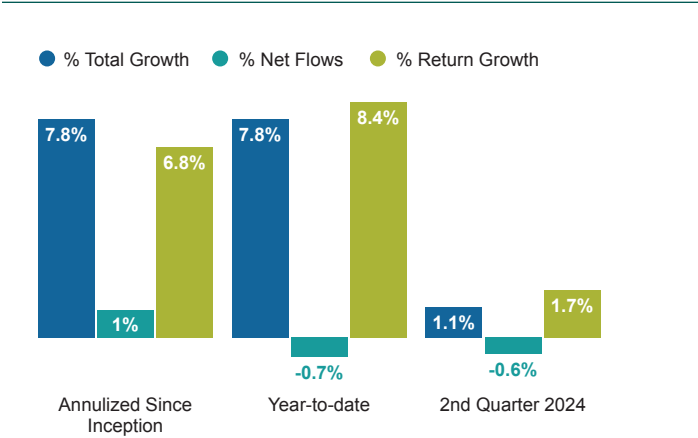
Investment Performance

(6/30/24)



Growth Sources

(6/30/24)



Net Cash Flow Analysis 2Q24)

(Top Two and Bottom Two Asset Gatherers)

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

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

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

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

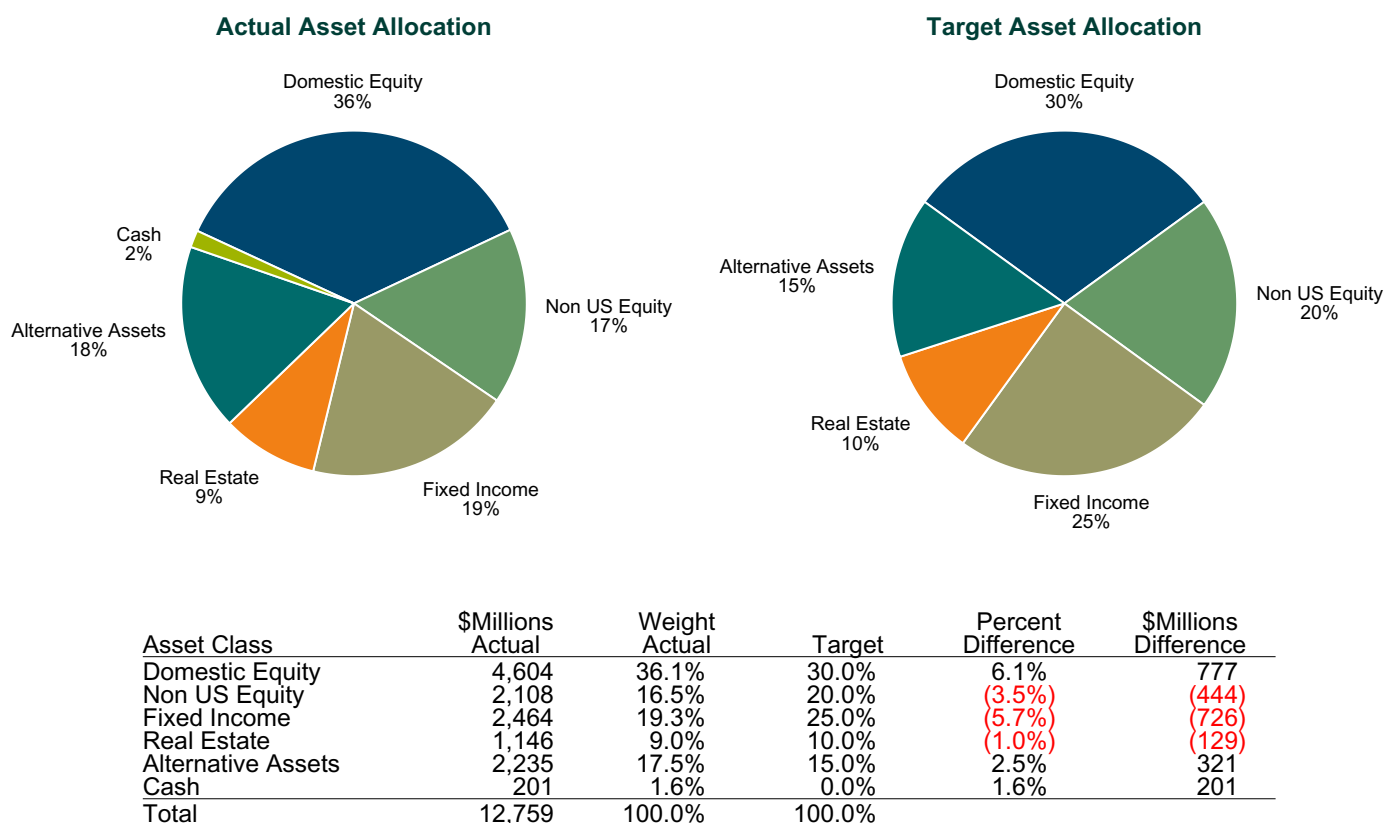
ASSET ALLOCATION AND PERFORMANCE

Asset Allocation and Performance

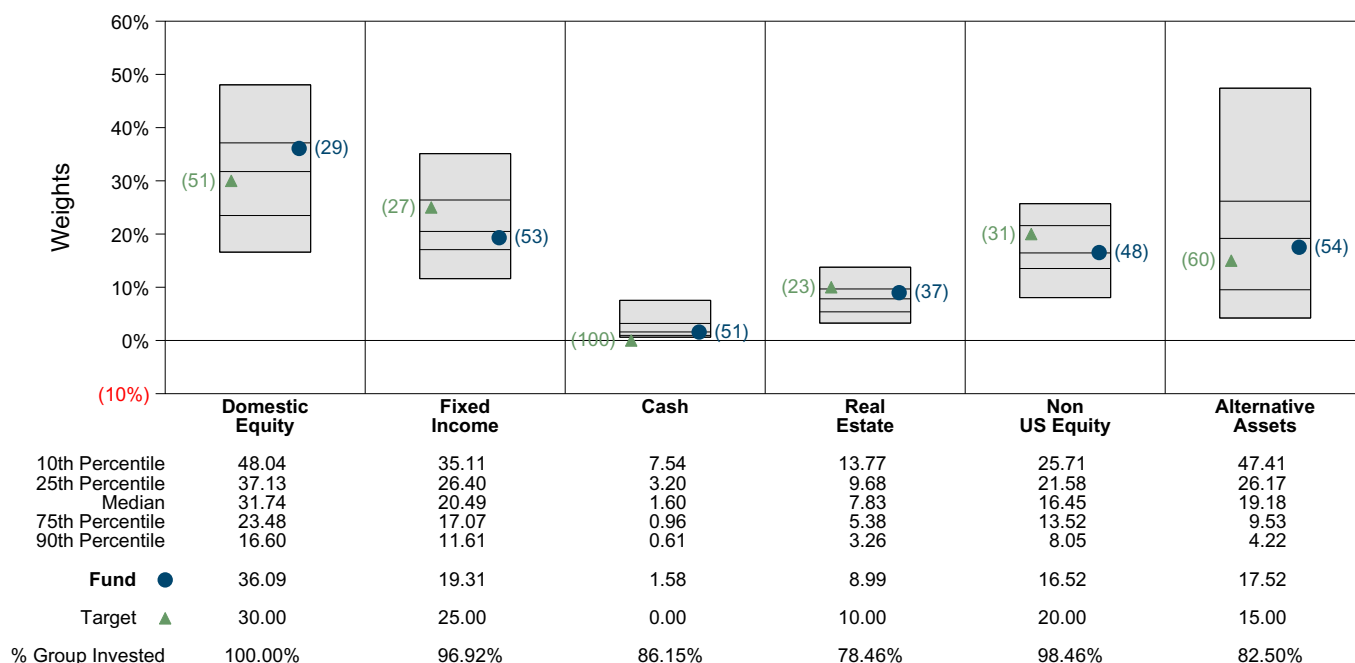
This section begins with an overview of the fund's asset allocation at the broad asset class level. The fund's historical performance is then examined relative to funds with similar objectives. Performance of each asset class is then shown relative to the asset class performance of other funds. This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

Actual vs Target Asset Allocation As of September 30, 2024

The top left chart shows the Fund's asset allocation as of September 30, 2024. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Spons - Large (>1B).



Asset Class Weights vs Callan Public Fund Spons - Large (>1B)



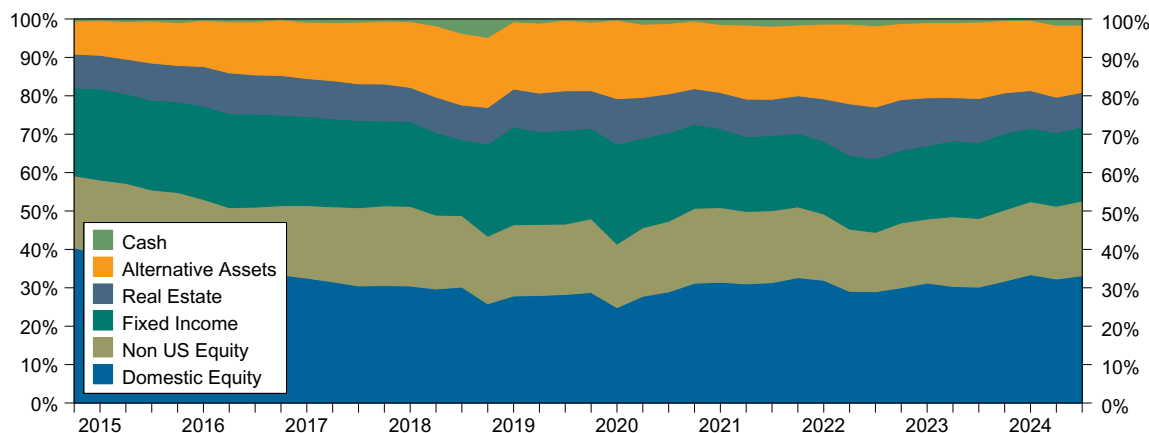
* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

** The United States equity portion of the Walter Scott Global Equity fund is allocated to the Domestic Equity composite.

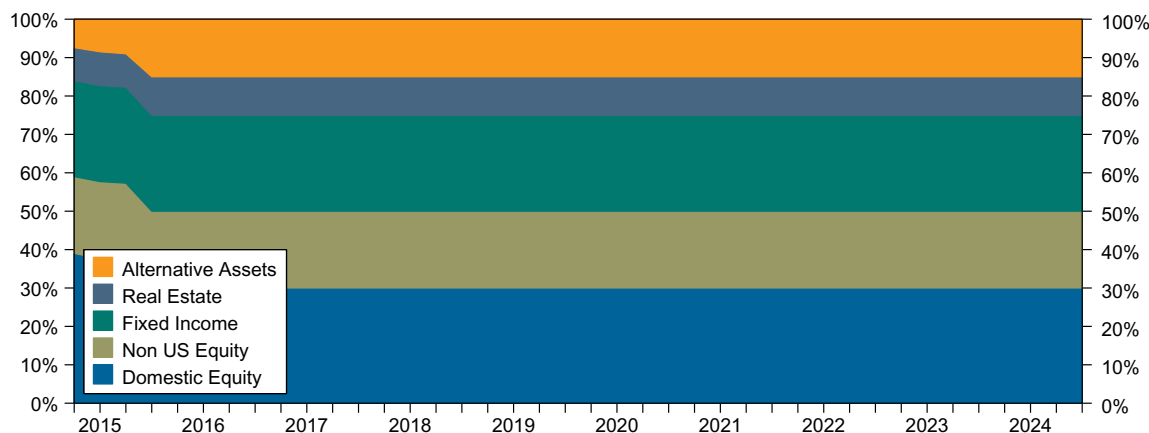
Actual vs Target Historical Asset Allocation

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 - Large (>1B).

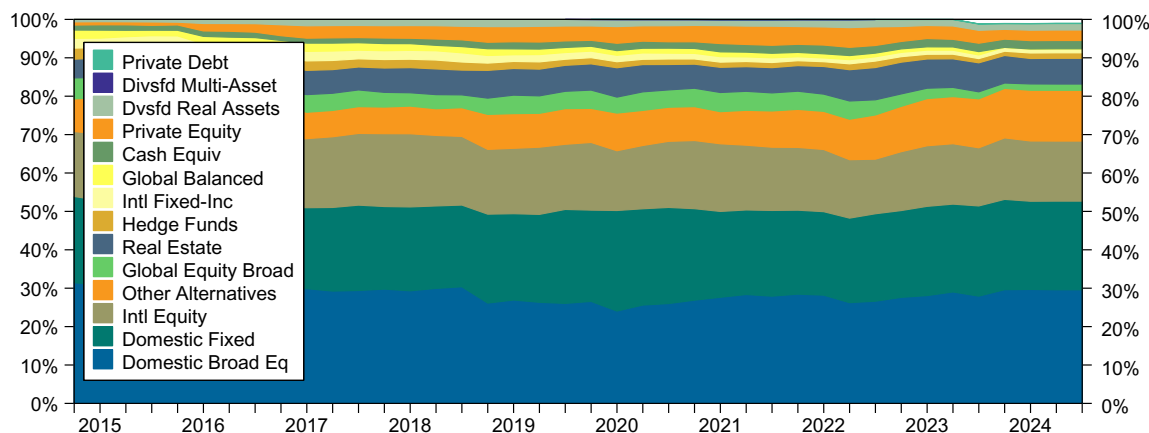
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Callan Public Fund Spons - Large (>1B) Historical Asset Allocation



* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

Total Fund Composite Period Ended September 30, 2024

Total Fund Benchmark

As of 7/1/2022 the total fund benchmark is 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

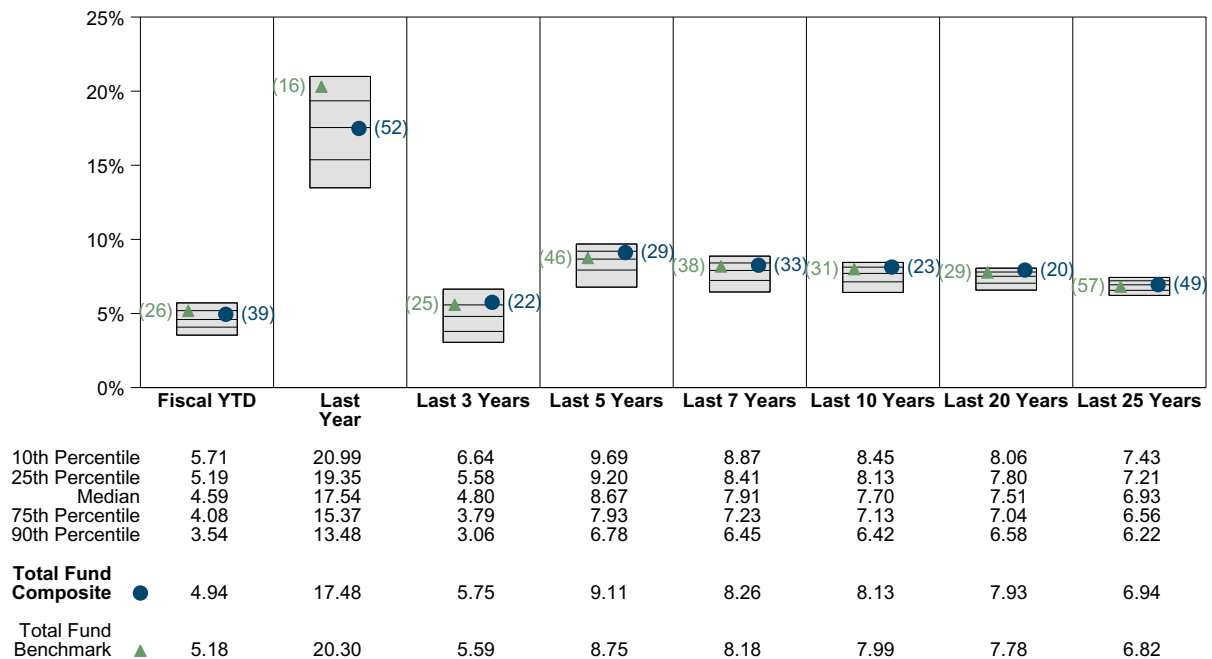
Quarterly Summary and Highlights

- Total Fund Composite's portfolio posted a 4.94% return for the quarter placing it in the 39 percentile of the Callan Public Fund Large DB group for the quarter and in the 52 percentile for the last year.
- Total Fund Composite's portfolio underperformed the Total Fund Benchmark by 0.24% for the quarter and underperformed the Total Fund Benchmark for the year by 2.82%.

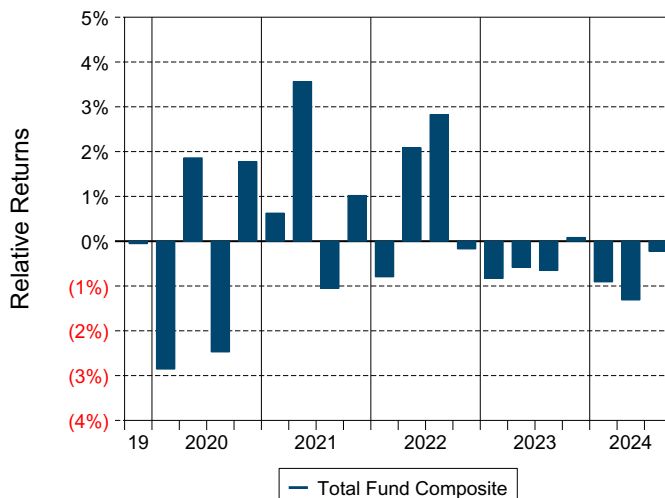
Quarterly Asset Growth

Beginning Market Value	\$12,208,244,488
Net New Investment	\$-51,919,651
Investment Gains/(Losses)	\$602,768,795
Ending Market Value	\$12,759,093,632

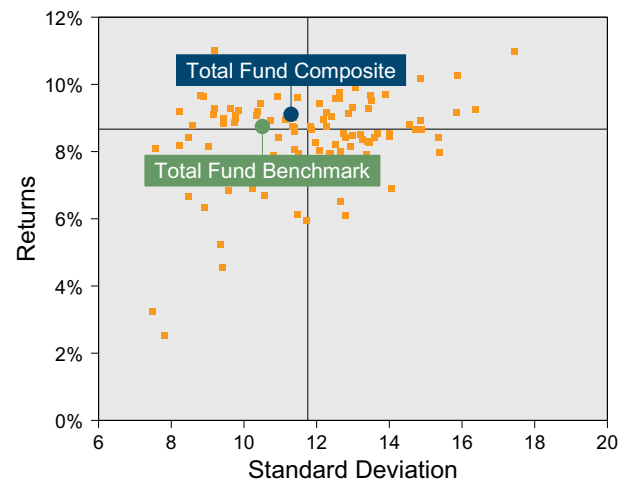
Performance vs Callan Public Fund Large DB (Gross)



Relative Return vs Total Fund Benchmark



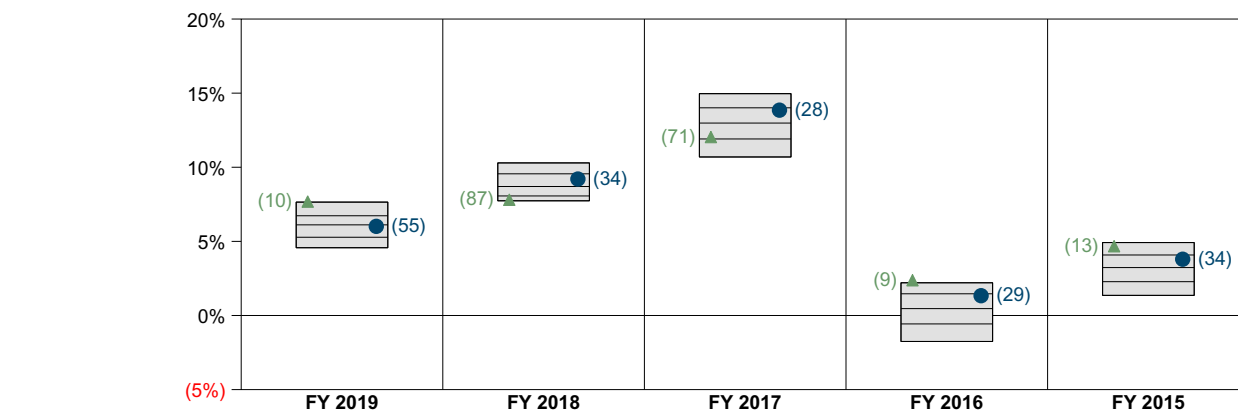
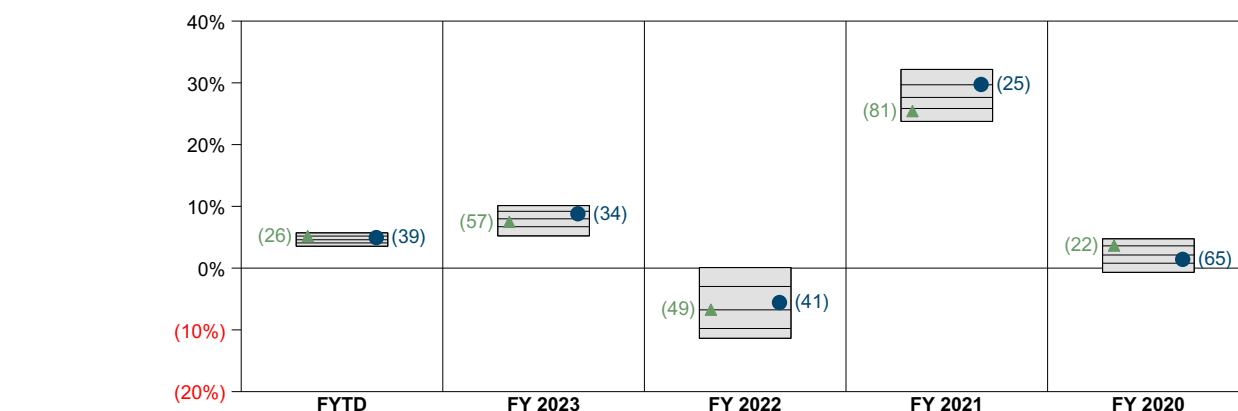
Callan Public Fund Large DB (Gross) Annualized Five Year Risk vs Return



New Hampshire Retirement System Performance vs Callan Public Fund Spons - Large (>1B) Periods Ended September 30, 2024

Return Ranking

The chart below illustrates fund rankings over various periods versus the Callan Public Fund Spons - Large (>1B). The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Public Fund Spons - Large (>1B). The numbers to the right of the bar represent the percentile rankings of the fund being analyzed. The table below the chart details the rates of return plotted in the graph above.



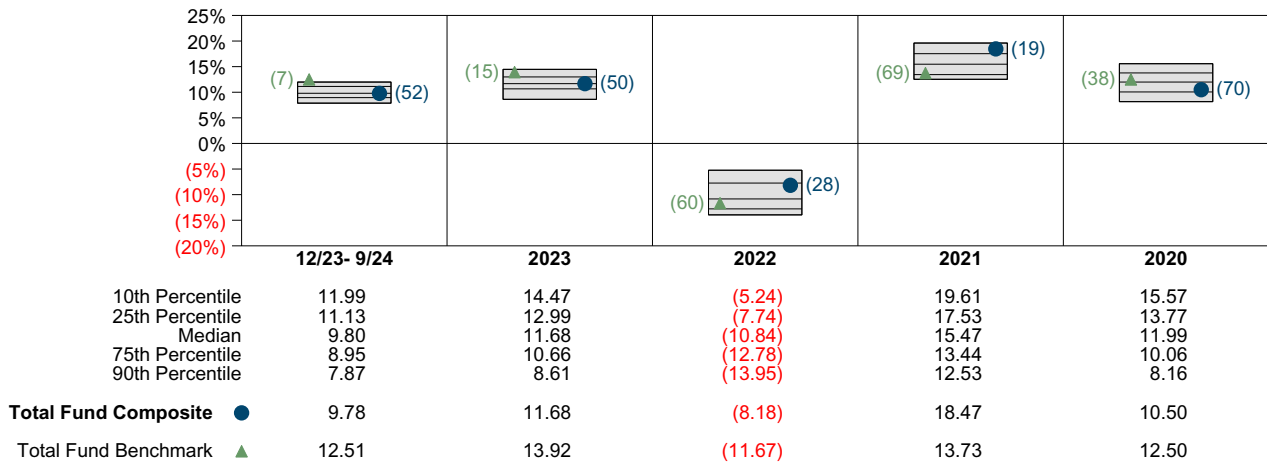
* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

Total Fund Composite Return Analysis Summary

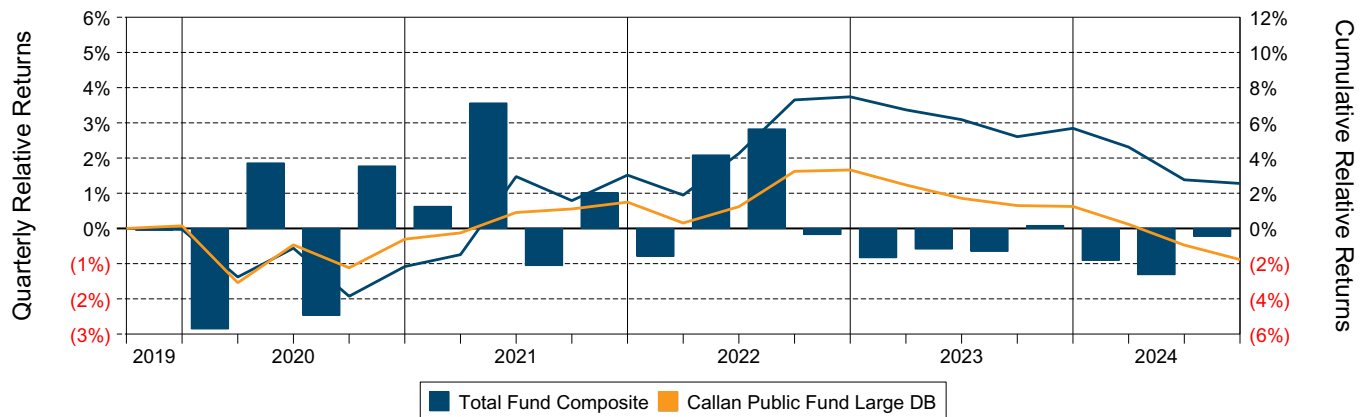
Return Analysis

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

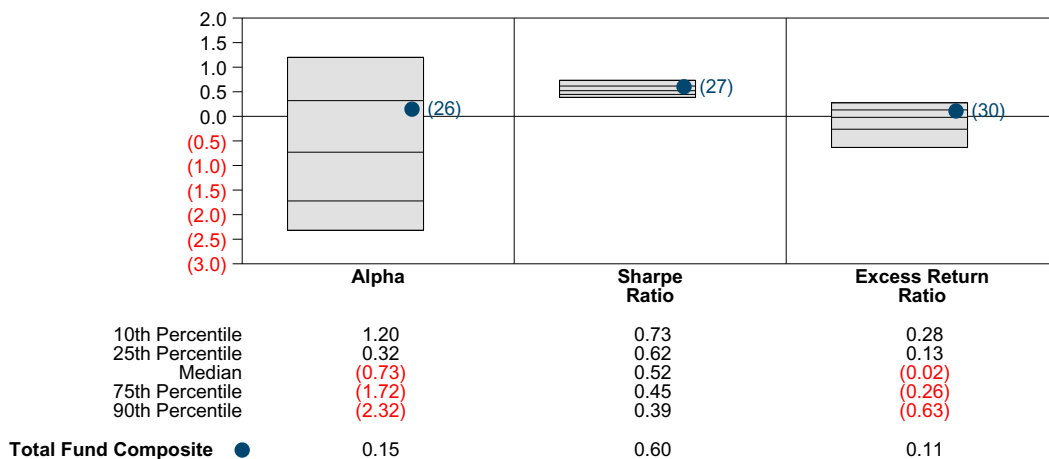
Performance vs Callan Public Fund Large DB (Gross)



Cumulative and Quarterly Relative Returns vs Total Fund Benchmark



Risk Adjusted Return Measures vs Total Fund Benchmark Rankings Against Callan Public Fund Large DB (Gross) Five Years Ended September 30, 2024



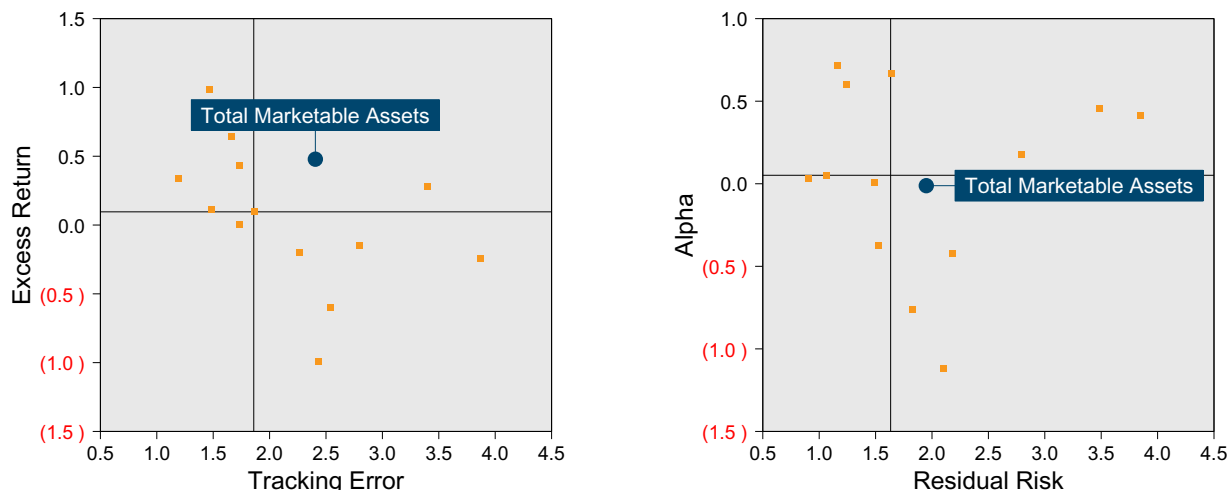
Total Marketable Assets

Total Fund vs Target Risk Analysis

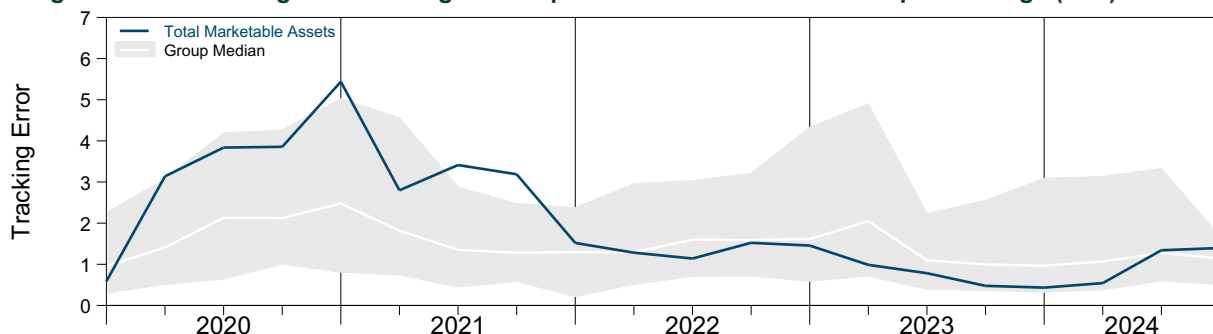
Risk Analysis

The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the target. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns over time compared to the range of tracking error patterns for the peer group. The last two charts show the ranking of the fund's risk statistics versus the peer group.

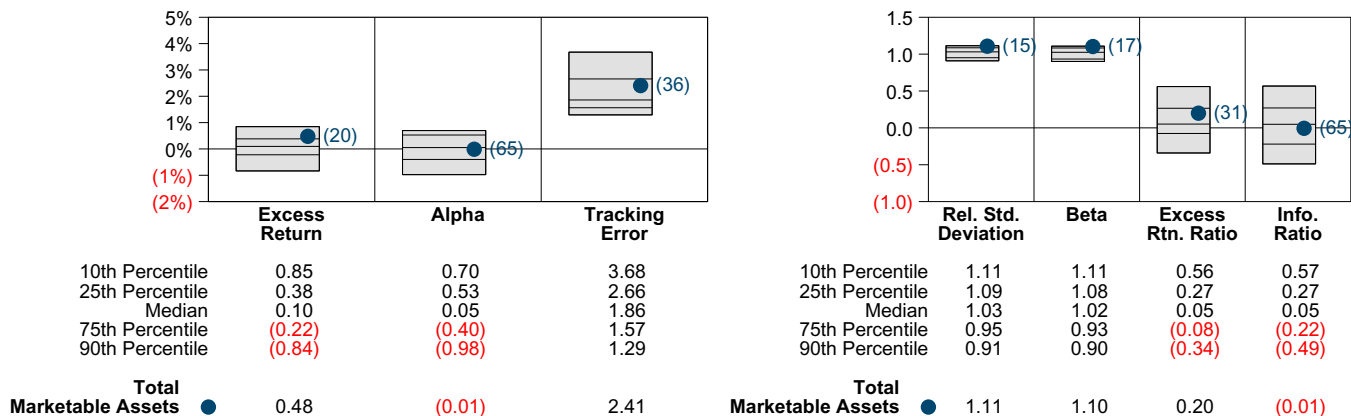
Risk Analysis vs Callan Public Fund Spons - Large (>1B) Five Years Ended September 30, 2024



Rolling 4 Quarter Tracking Error vs Targets Compared to Callan Public Fund Spons - Large (>1B)



Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Spons - Large (>1B) Five Years Ended September 30, 2024



Total Marketable Assets

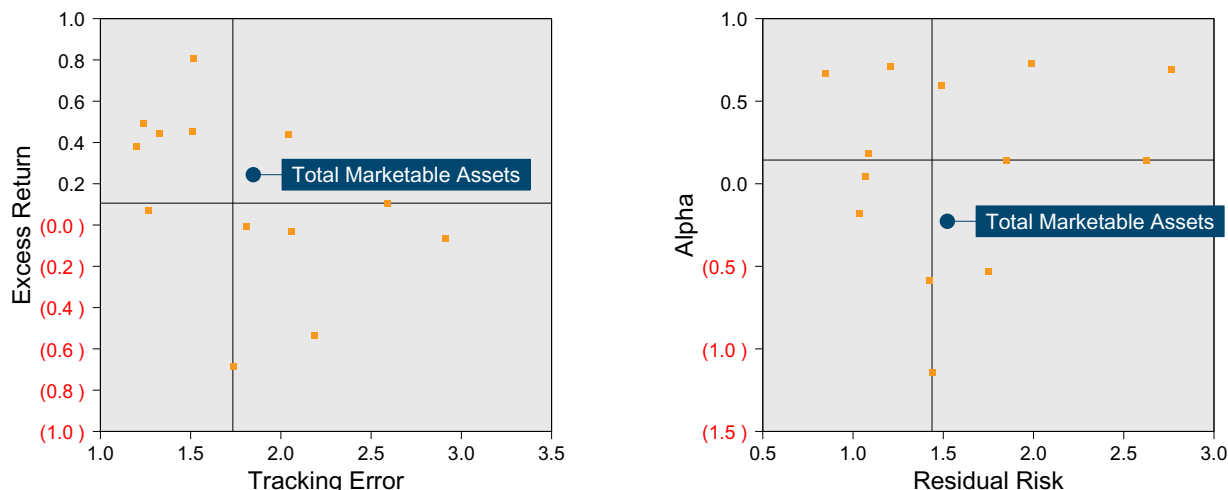
Total Fund vs Target Risk Analysis

Risk Analysis

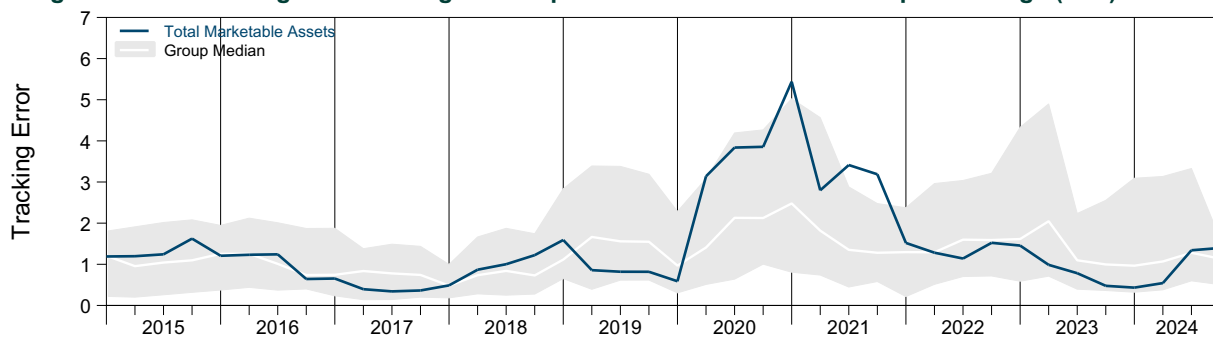
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Risk Analysis vs Callan Public Fund Spons - Large (>1B)

Ten Years Ended September 30, 2024



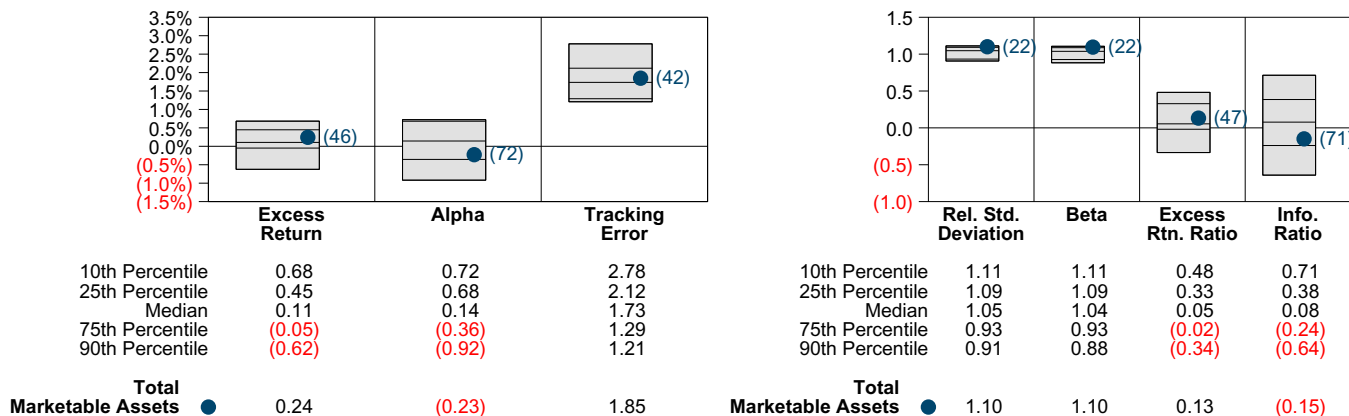
Rolling 4 Quarter Tracking Error vs Targets Compared to Callan Public Fund Spons - Large (>1B)



Risk Statistics Rankings vs Targets

Rankings Against Callan Public Fund Spons - Large (>1B)

Ten Years Ended September 30, 2024



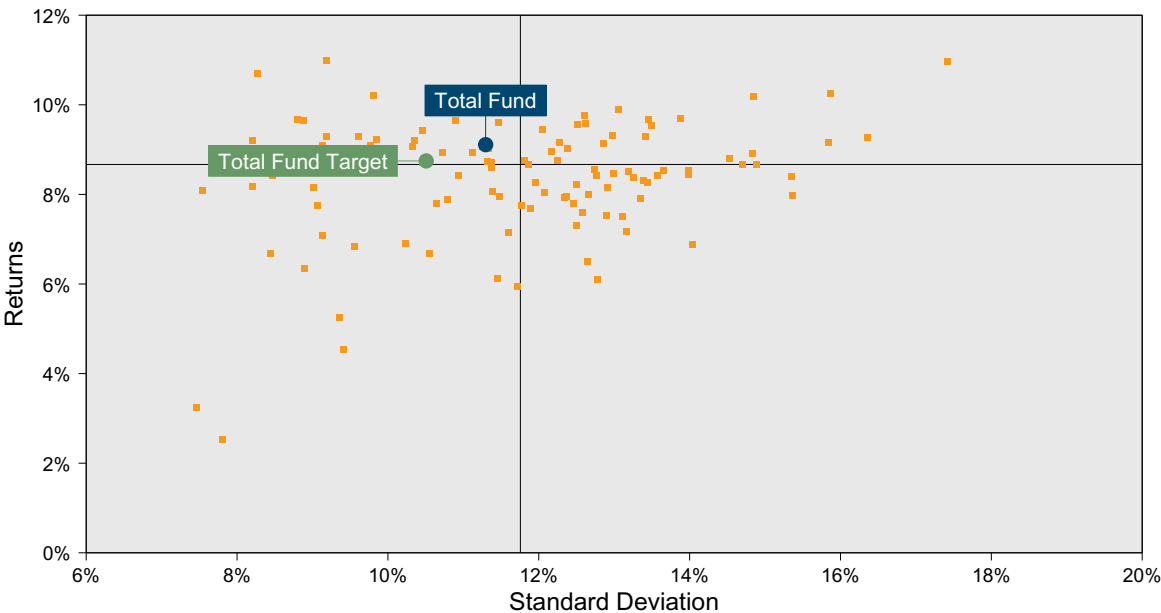
Cumulative Performance Relative to Target

The first chart below illustrates the cumulative performance of the Total Fund relative to the cumulative performance of the Fund's Target Asset Mix. The Target Mix is assumed to be rebalanced each quarter with no transaction costs. The second chart below shows the return and the risk of the Total Fund and the Target Mix, contrasted with the returns and risks of the funds in the Callan Public Fund Spons - Large (>1B).

Cumulative Returns Actual vs Target



Five Year Annualized Risk vs Return



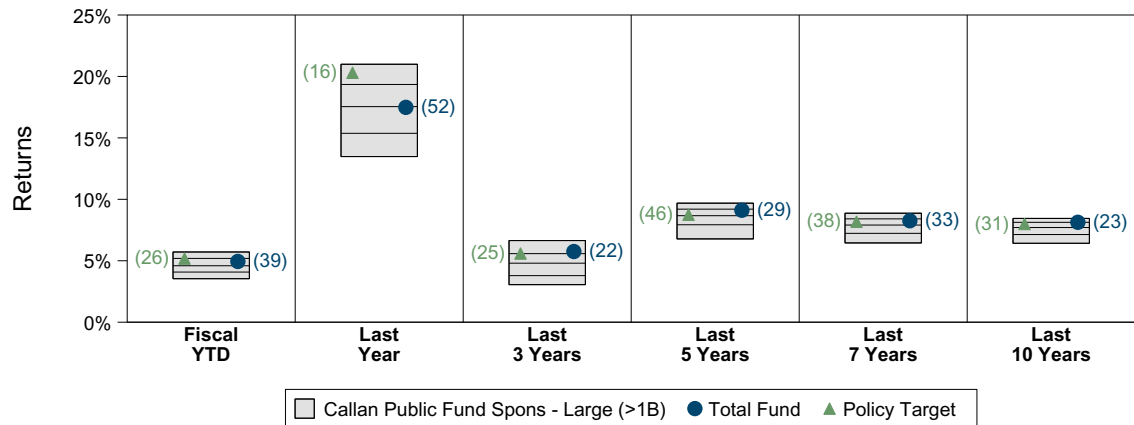
Squares represent membership of the Callan Public Fund Spons - Large (>1B)

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

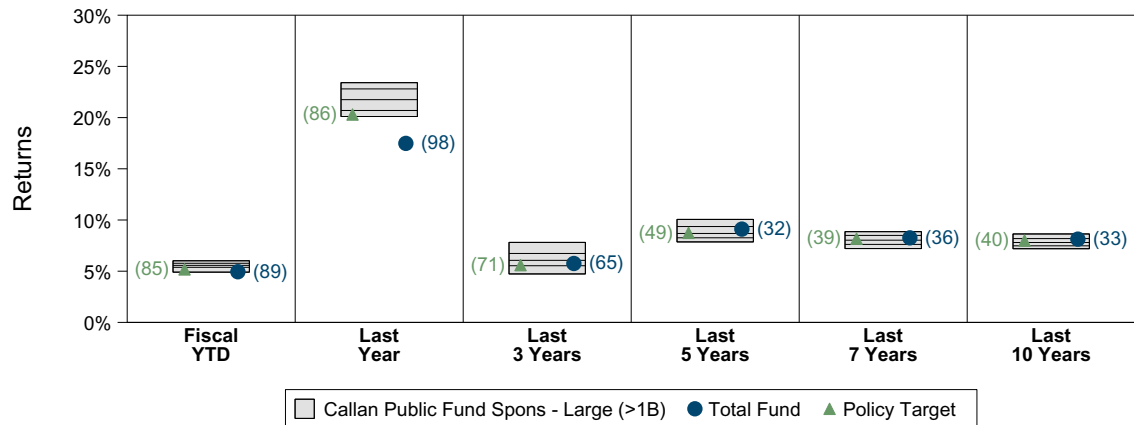
Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Spns - Large (>1B) for periods ended September 30, 2024. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund. The final chart shows the history of the one year ranking of the Total Fund versus the Callan Public Fund Spns - Large (>1B), both on an unadjusted and asset allocation adjusted basis.

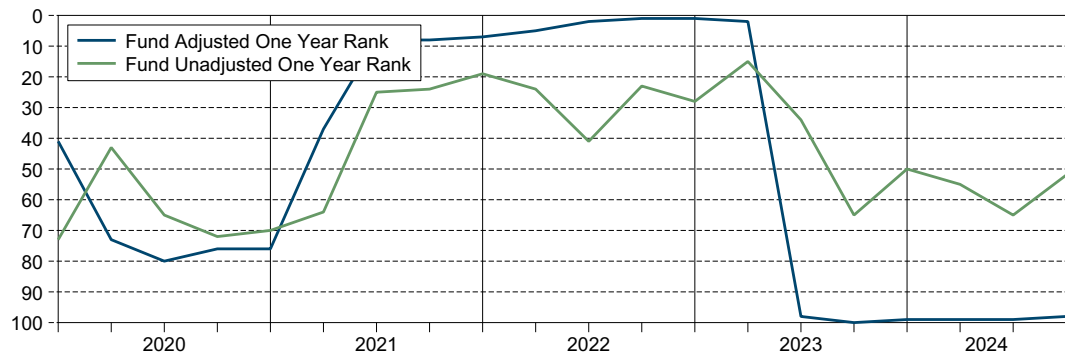
Callan Public Fund Spns - Large (>1B)



Asset Allocation Adjusted Ranking



Rolling One Year Ranking vs Callan Public Fund Spns - Large (>1B)

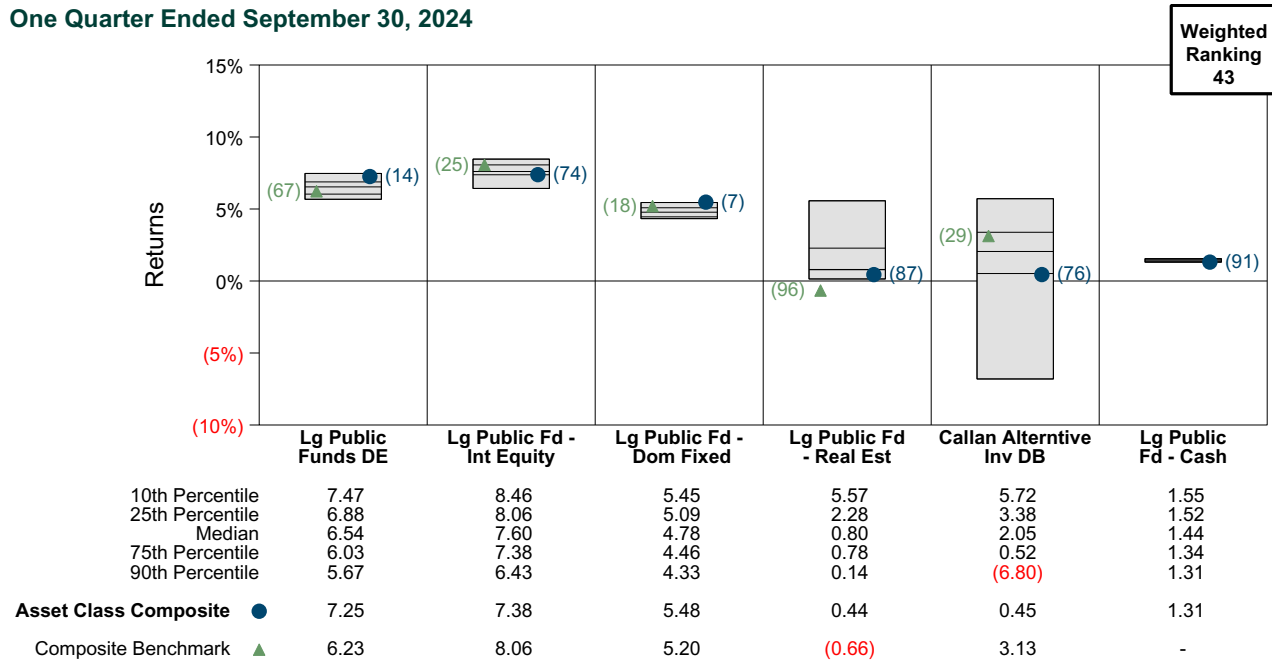


* Current Quarter Target = 30.0% Russell 3000 Index, 25.0% Blmbg Universal, 20.0% MSCI ACWI xUS (Net), 10.0% NCREIF NFI-ODCE Val Wt Nt lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Blmbg HY Corp lagged 3 months+1.0% and 2.5% Mstar LSTA Lev Loan 100 lagged 3 months+1.0%.

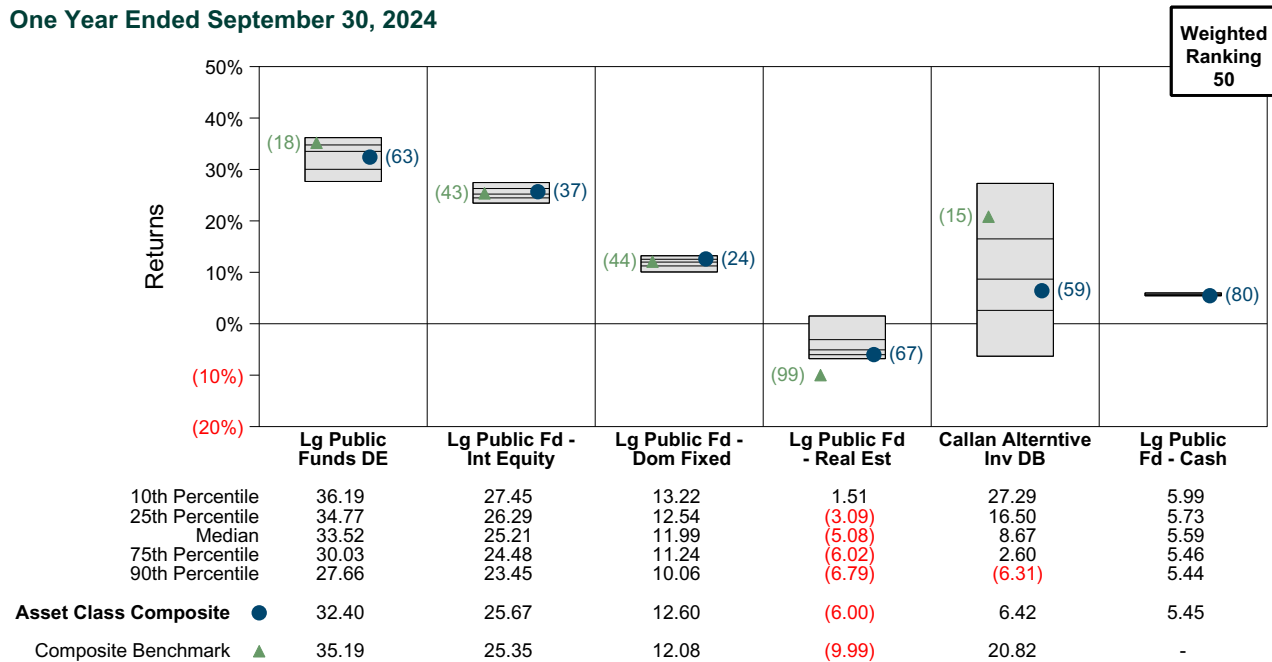
Asset Class Rankings

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 Quarter Ended September 30, 2024



Total Asset Class Performance One Year Ended September 30, 2024

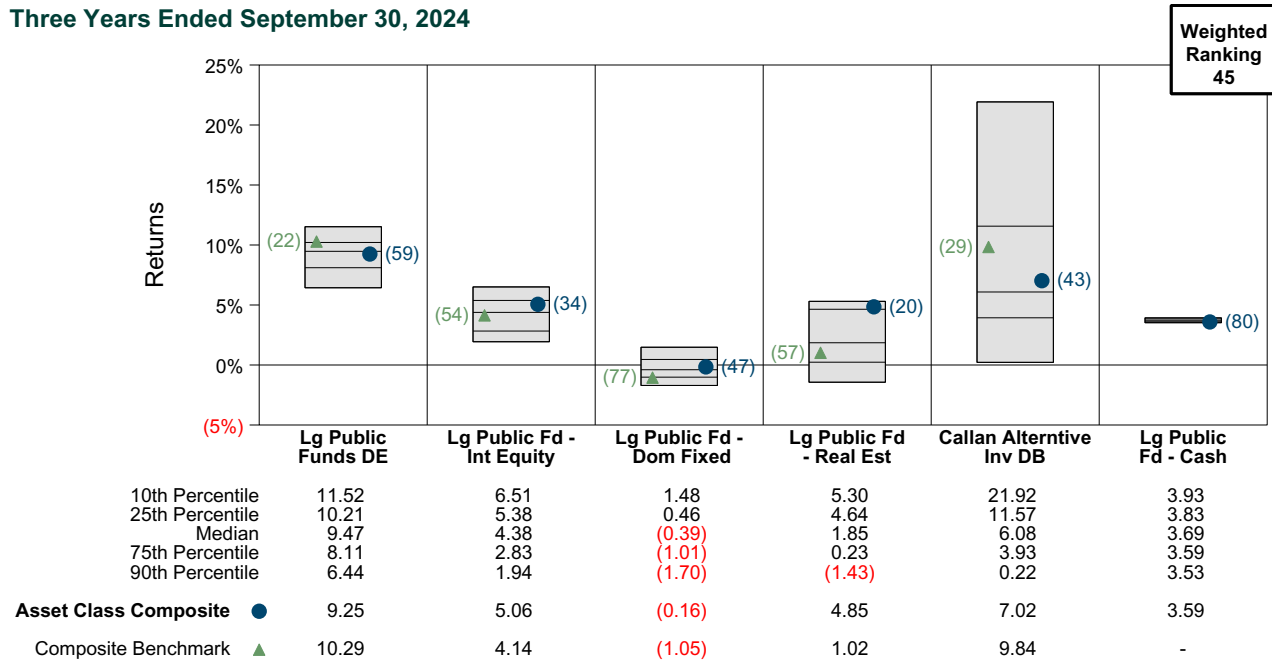


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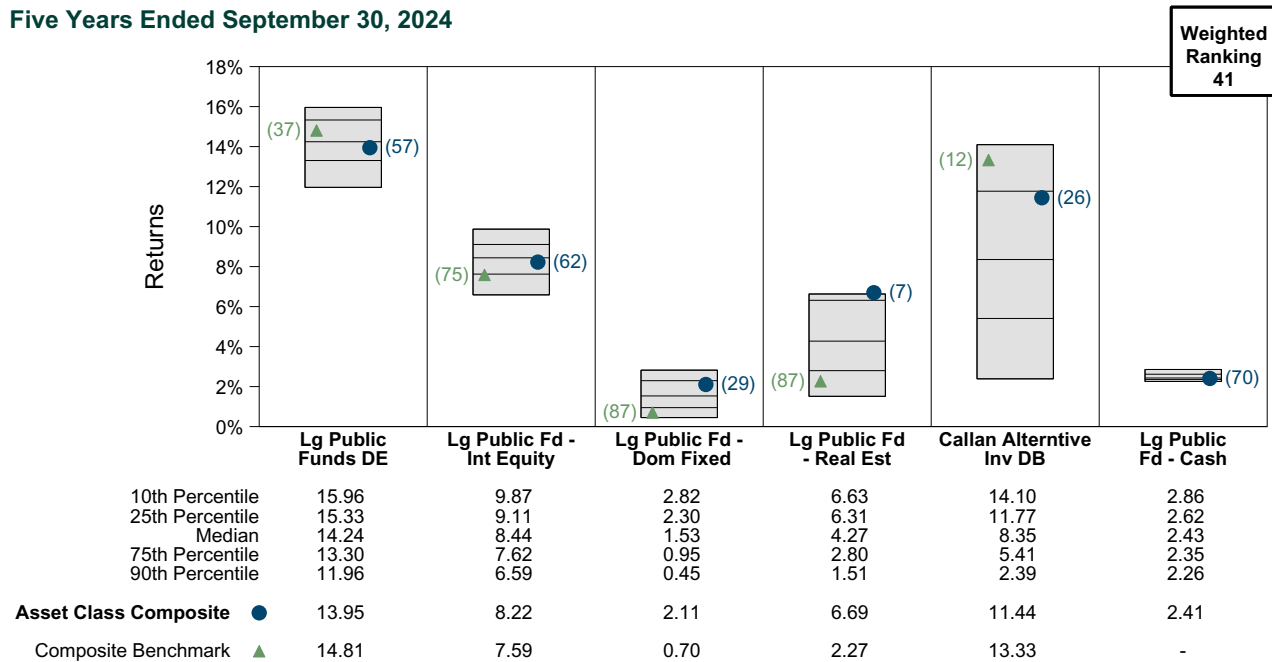
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Total Asset Class Performance Three Years Ended September 30, 2024



Total Asset Class Performance Five Years Ended September 30, 2024

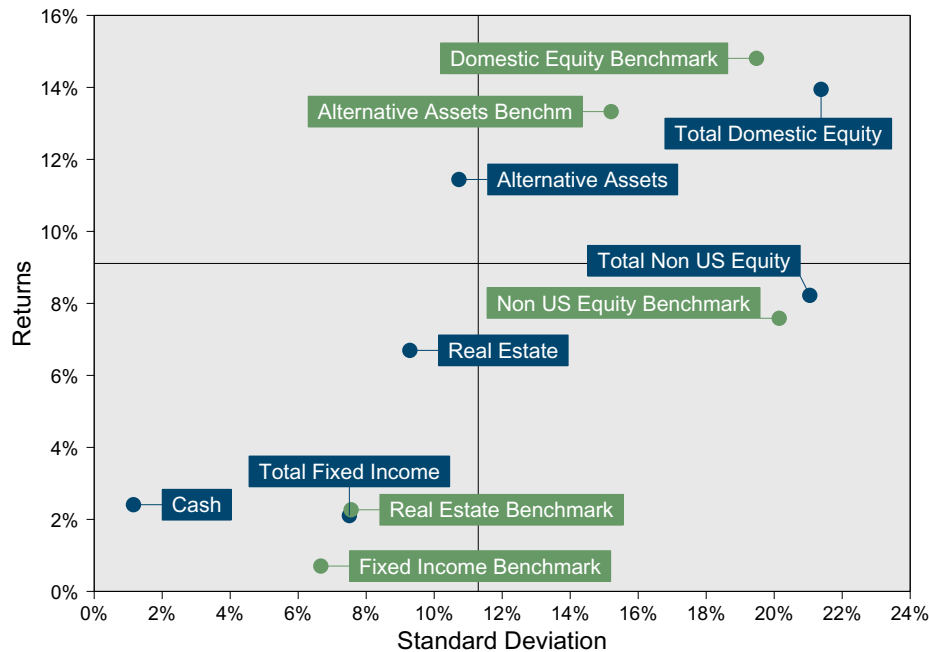


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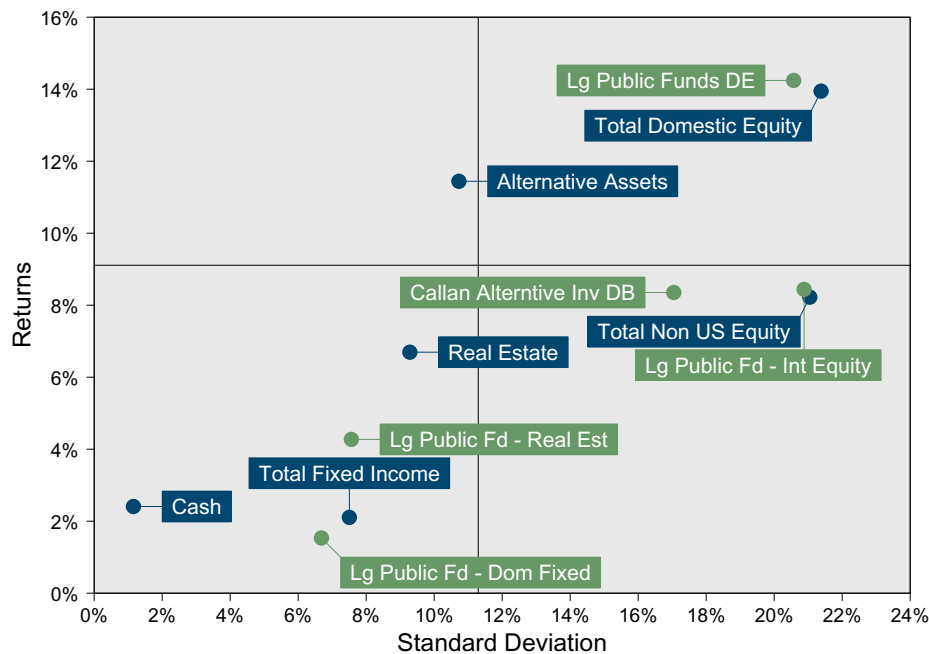
Asset Class Risk and Return

The charts below show the five year annualized risk and return for each asset class component of the Total Fund. The first graph contrasts these values with those of the appropriate index for each asset class. The second chart contrasts them with the risk and return of the median portfolio in each of the appropriate CAI comparative databases. In each case, the crosshairs on the chart represent the return and risk of the Total Fund.

Five Year Annualized Risk vs Return
Asset Classes vs Benchmark Indices



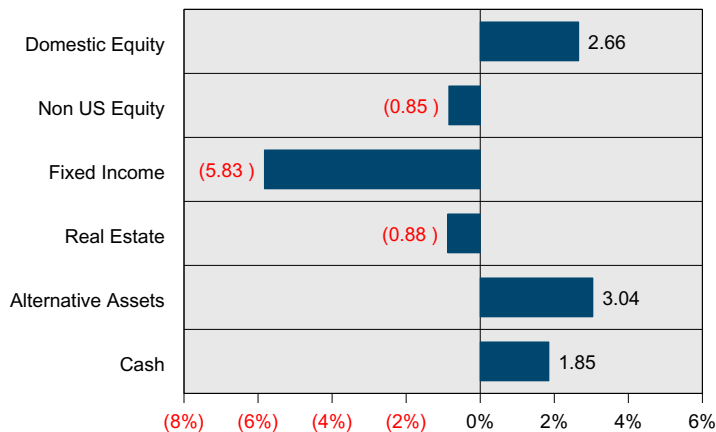
Five Year Annualized Risk vs Return
Asset Classes vs Asset Class Median



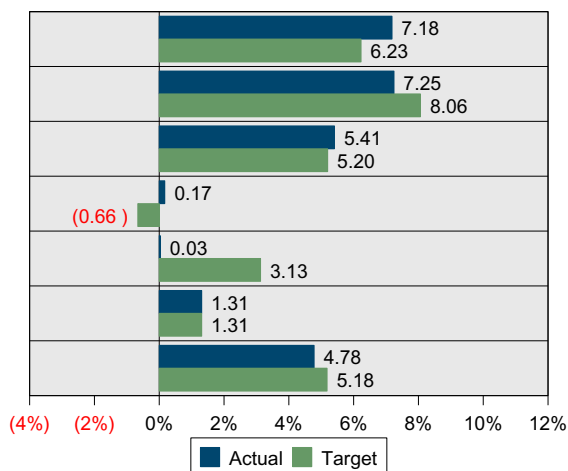
Quarterly Total Fund Relative Attribution - September 30, 2024

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

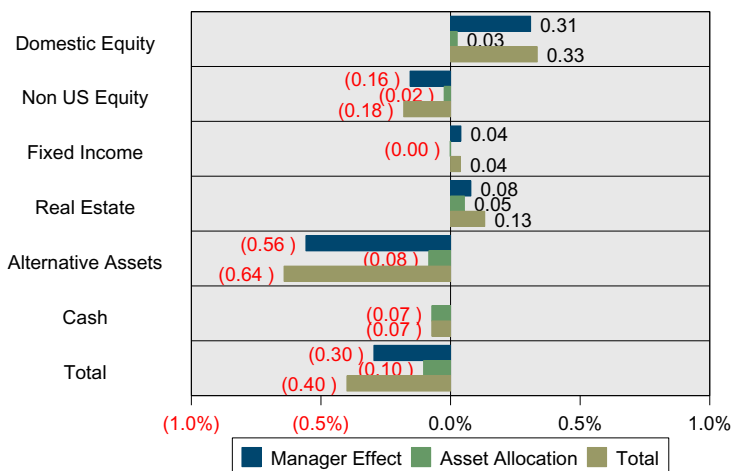
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2024

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	33%	30%	7.18%	6.23%	0.31%	0.03%	0.33%
Non US Equity	19%	20%	7.25%	8.06%	(0.16)%	(0.02)%	(0.18)%
Fixed Income	19%	25%	5.41%	5.20%	0.04%	(0.00)%	0.04%
Real Estate	9%	10%	0.17%	(0.66)%	0.08%	0.05%	0.13%
Alternative Assets	18%	15%	0.03%	3.13%	(0.56)%	(0.08)%	(0.64)%
Cash	2%	0%	1.31%	1.31%	0.00%	(0.07)%	(0.07)%
Total			4.78%	5.18%	(0.30)%	(0.10)%	(0.40)%

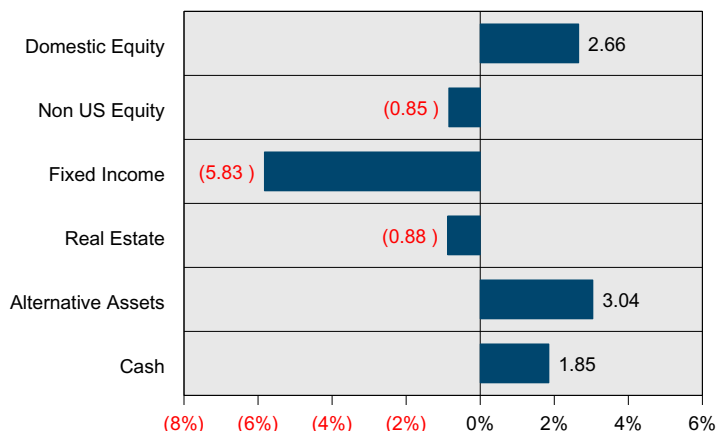
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* Actual returns are net of fees.

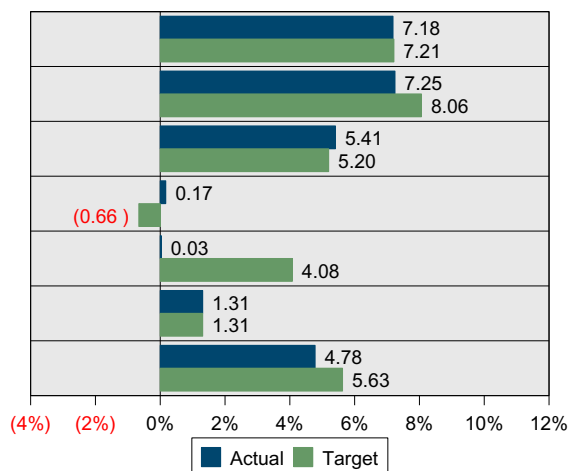
Quarterly Total Fund Relative Attribution - September 30, 2024

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

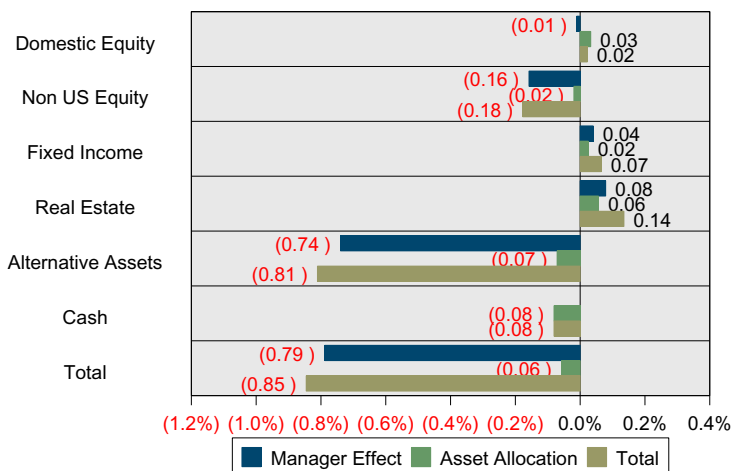
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended September 30, 2024

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	33%	30%	7.18%	7.21%	(0.01%)	0.03%	0.02%
Non US Equity	19%	20%	7.25%	8.06%	(0.16%)	(0.02%)	(0.18%)
Fixed Income	19%	25%	5.41%	5.20%	0.04%	0.02%	0.07%
Real Estate	9%	10%	0.17%	(0.66%)	0.08%	0.06%	0.14%
Alternative Assets	18%	15%	0.03%	4.08%	(0.74%)	(0.07%)	(0.81%)
Cash	2%	0%	1.31%	1.31%	0.00%	(0.08%)	(0.08%)
Total			4.78%	5.63%	(0.79%)	(0.06%)	(0.85%)

* Current Quarter Target = 18% S&P 500 Index, 6% Russell 2500, 6% Russell 2000, 25% Bloomberg Universal,

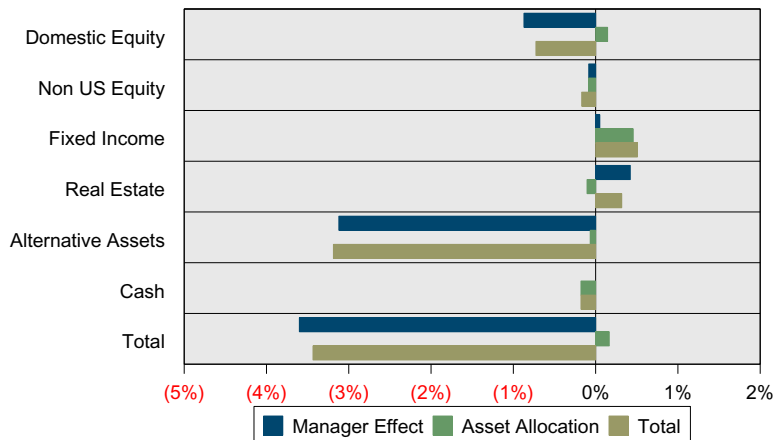
20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net(1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

* Actual returns are net of fees.

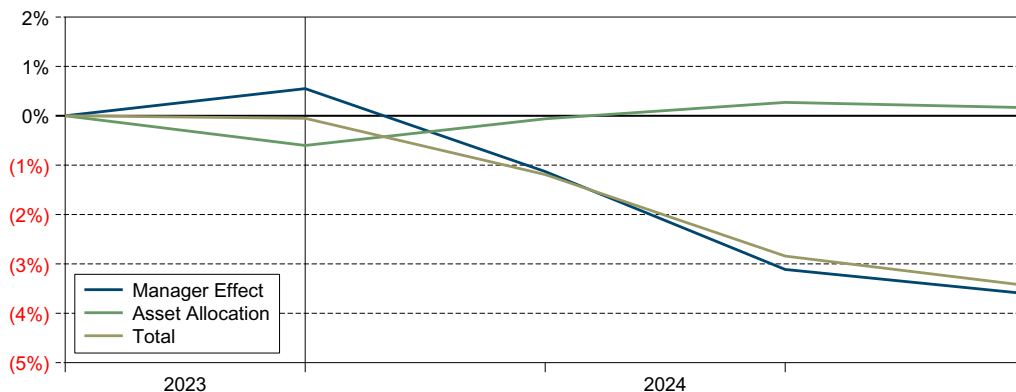
Cumulative Total Fund Relative Attribution - September 30, 2024

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	30%	32.05%	35.19%	(0.87%)	0.15%	(0.73%)
Non US Equity	19%	20%	25.02%	25.35%	(0.08%)	(0.09%)	(0.17%)
Fixed Income	19%	25%	12.31%	12.08%	0.05%	0.46%	0.51%
Real Estate	10%	10%	(6.88%)	(9.99%)	0.42%	(0.10%)	0.32%
Alternative Assets	19%	15%	5.26%	20.82%	(3.12%)	(0.07%)	(3.19%)
Cash	1%	0%	5.45%	5.45%	0.00%	(0.18%)	(0.18%)
Total			16.87%	20.30%	+(3.60%)	+ 0.17%	(3.43%)

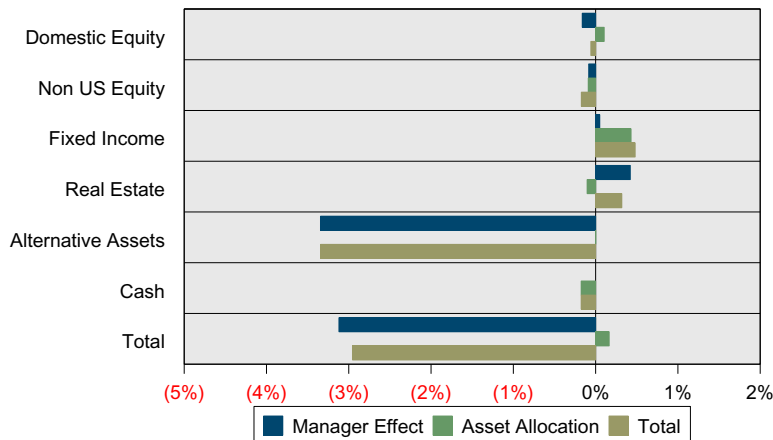
* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

* Actual returns are net of fees.

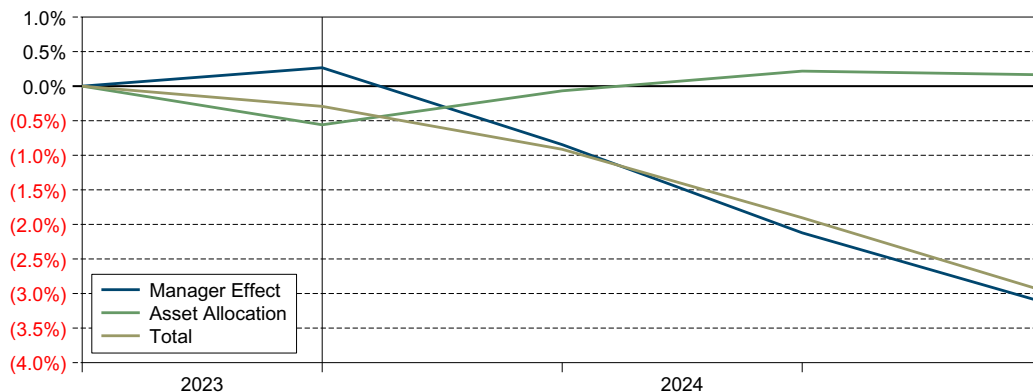
Cumulative Total Fund Relative Attribution - September 30, 2024

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

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

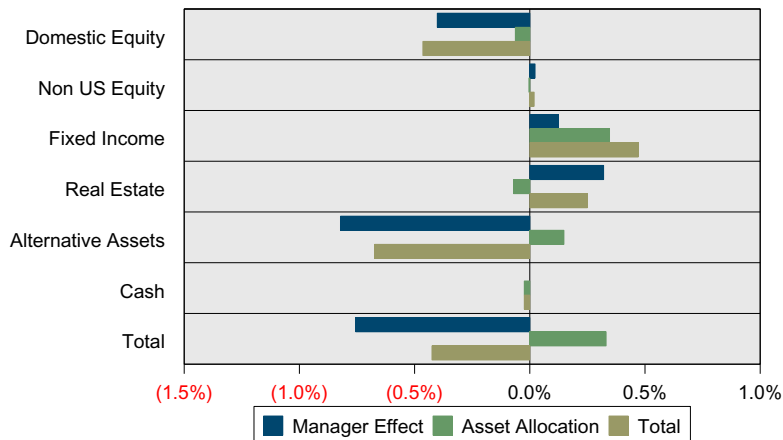
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	30%	32.05%	32.61%	(0.16%)	0.10%	(0.06%)
Non US Equity	19%	20%	25.02%	25.35%	(0.08%)	(0.09%)	(0.17%)
Fixed Income	19%	25%	12.31%	12.08%	0.05%	0.43%	0.48%
Real Estate	10%	10%	(6.88%)	(9.99%)	0.42%	(0.10%)	0.32%
Alternative Assets	19%	15%	5.26%	22.17%	(3.34%)	0.00%	(3.34%)
Cash	1%	0%	5.45%	5.45%	0.00%	(0.18%)	(0.18%)
Total			16.87%	19.82%	+ (3.12%)	+ 0.16%	(2.95%)

* Current Quarter Target = 18% S+P 500 Index, 6% Russell 2500, 6% Russell 2000, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net(1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).
 * Actual returns are net of fees.

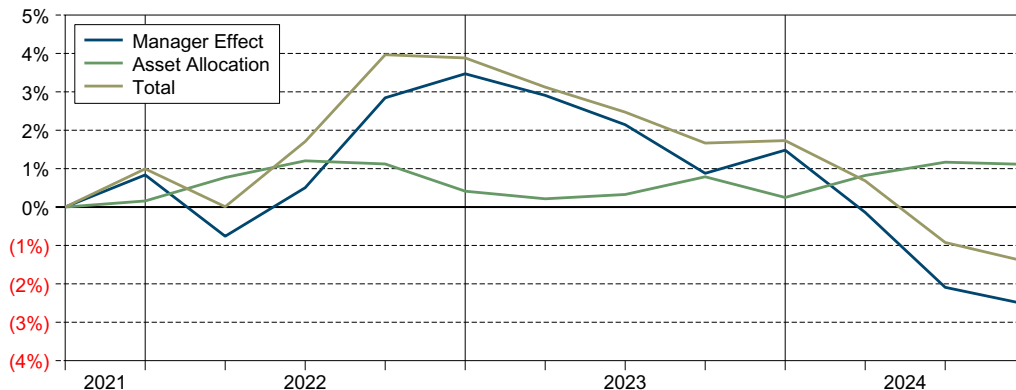
Cumulative Total Fund Relative Attribution - September 30, 2024

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	31%	30%	8.96%	10.29%	(0.40%)	(0.06%)	(0.46%)
Non US Equity	18%	20%	4.43%	4.14%	0.02%	(0.00%)	0.02%
Fixed Income	19%	25%	(0.43%)	(1.05%)	0.12%	0.35%	0.47%
Real Estate	11%	10%	3.75%	1.02%	0.32%	(0.07%)	0.25%
Alternative Assets	19%	15%	5.88%	9.84%	(0.82%)	0.15%	(0.67%)
Cash	1%	0%	3.59%	3.59%	0.00%	(0.02%)	(0.02%)
Total			5.17%	5.59%	(0.76%)	0.33%	(0.42%)

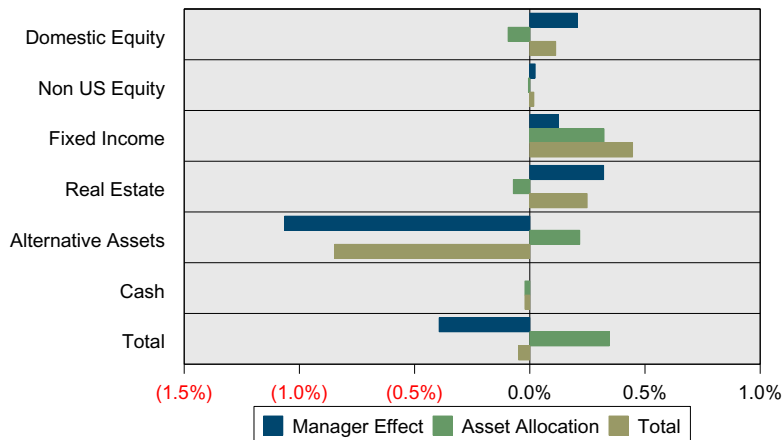
* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

* Actual returns are net of fees.

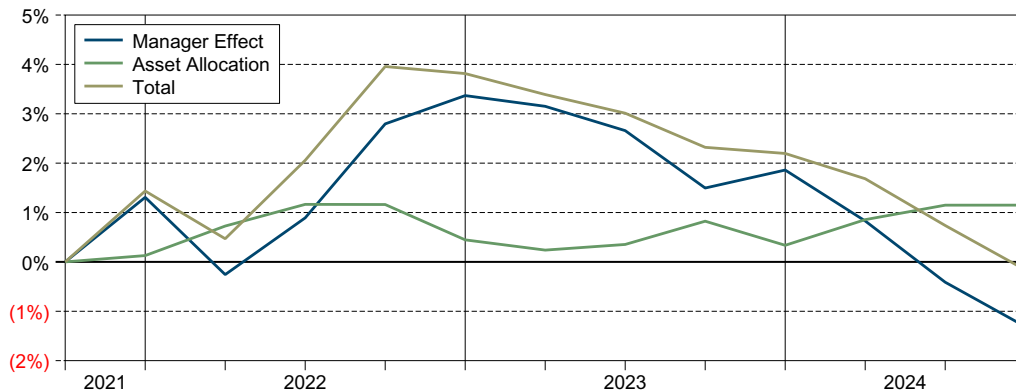
Cumulative Total Fund Relative Attribution - September 30, 2024

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

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

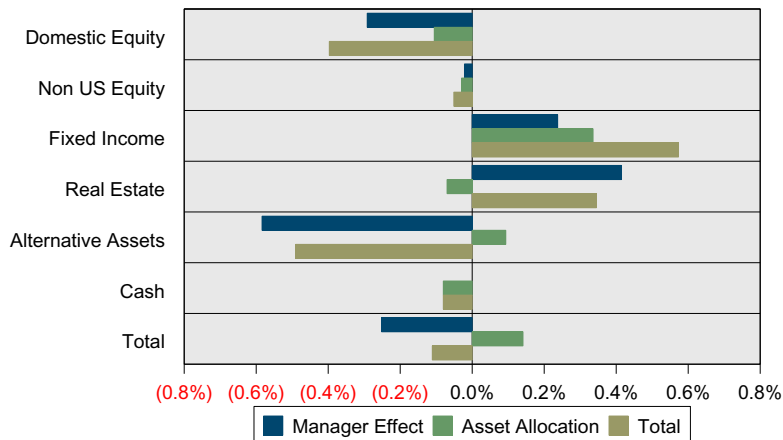
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	31%	30%	8.96%	8.28%	0.21%	(0.09%)	0.11%
Non US Equity	18%	20%	4.43%	4.14%	0.02%	(0.01%)	0.02%
Fixed Income	19%	25%	(0.43%)	(1.05%)	0.12%	0.32%	0.45%
Real Estate	11%	10%	3.75%	1.02%	0.32%	(0.07%)	0.25%
Alternative Assets	19%	15%	5.88%	11.25%	(1.06%)	0.22%	(0.85%)
Cash	1%	0%	3.59%	3.59%	0.00%	(0.02%)	(0.02%)
Total			5.17%	5.22%	(0.39%)	0.35%	(0.05%)

* Current Quarter Target = 18% S+P 500 Index, 6% Russell 2500, 6% Russell 2000, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net(1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).
 * Actual returns are net of fees.

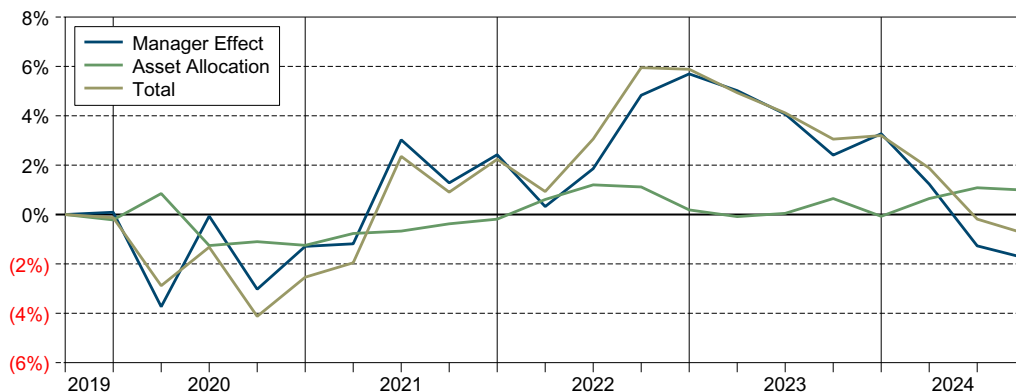
Cumulative Total Fund Relative Attribution - September 30, 2024

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	30%	13.64%	14.81%	(0.29%)	(0.11%)	(0.40%)
Non US Equity	18%	20%	7.57%	7.59%	(0.02%)	(0.03%)	(0.05%)
Fixed Income	21%	25%	1.83%	0.70%	0.24%	0.34%	0.57%
Real Estate	11%	10%	6.02%	2.27%	0.41%	(0.07%)	0.35%
Alternative Assets	19%	15%	10.73%	13.33%	(0.58%)	0.09%	(0.49%)
Cash	1%	0%	2.41%	2.41%	0.00%	(0.08%)	(0.08%)
Total			8.64%	8.75%	(0.25%)	0.14%	(0.11%)

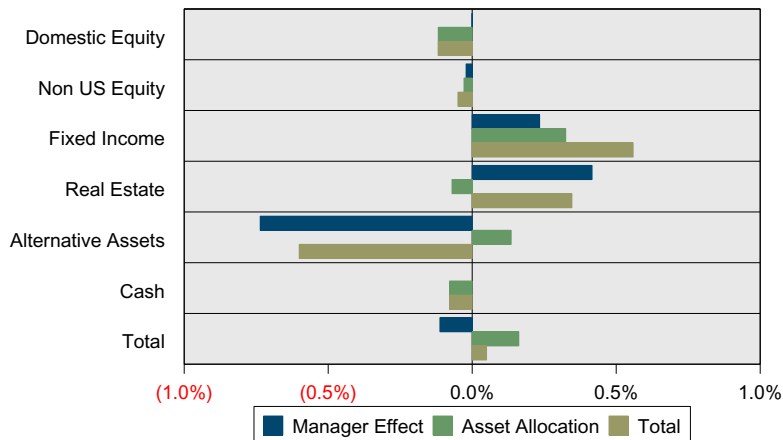
* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

* Actual returns are net of fees.

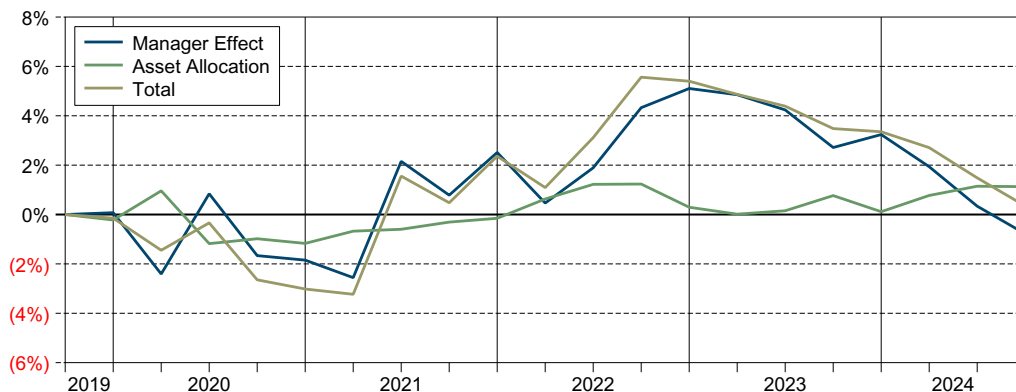
Cumulative Total Fund Relative Attribution - September 30, 2024

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

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

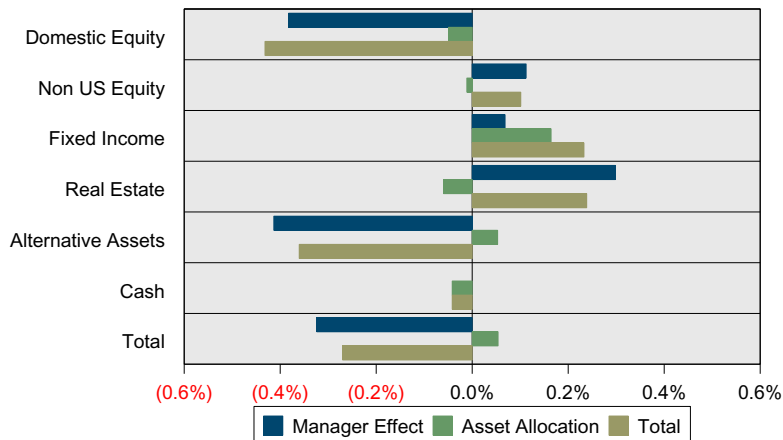
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	30%	13.64%	13.70%	(0.00%)	(0.12%)	(0.12%)
Non US Equity	18%	20%	7.57%	7.59%	(0.02%)	(0.03%)	(0.05%)
Fixed Income	21%	25%	1.83%	0.70%	0.23%	0.32%	0.56%
Real Estate	11%	10%	6.02%	2.27%	0.42%	(0.07%)	0.35%
Alternative Assets	19%	15%	10.73%	14.20%	(0.74%)	0.14%	(0.60%)
Cash	1%	0%	2.41%	2.41%	0.00%	(0.08%)	(0.08%)
Total			8.64%	= 8.59%	+ (0.11%)	+ 0.16%	0.05%

* Current Quarter Target = 18% S+P 500 Index, 6% Russell 2500, 6% Russell 2000, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net(1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).
 * Actual returns are net of fees.

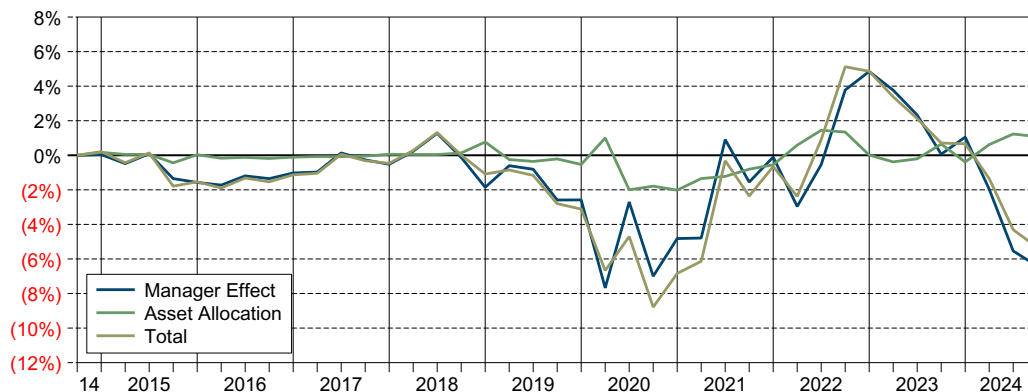
Cumulative Total Fund Relative Attribution - September 30, 2024

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

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten 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	32%	31%	11.56%	12.92%	(0.38%)	(0.05%)	(0.43%)
Non US Equity	19%	20%	5.84%	5.22%	0.11%	(0.01%)	0.10%
Fixed Income	22%	25%	2.52%	2.15%	0.07%	0.16%	0.23%
Real Estate	10%	10%	8.33%	5.51%	0.30%	(0.06%)	0.24%
Alternative Assets	17%	14%	9.00%	11.35%	(0.41%)	0.05%	(0.36%)
Cash	1%	0%	1.73%	1.73%	0.00%	(0.04%)	(0.04%)
Total			7.73%	8.00%	(0.32%)	0.05%	(0.27%)

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

* Actual returns are net of fees.

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	September 30, 2024				June 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$4,227,034,257	33.13%	\$0	\$285,886,867	\$3,941,147,389	32.28%
Large Cap Domestic Equity	\$2,441,030,094	19.13%	\$0	\$135,609,111	\$2,305,420,983	18.88%
Blackrock S&P 500	2,441,030,094	19.13%	0	135,609,111	2,305,420,983	18.88%
SMid Cap Domestic Equity	\$762,151,429	5.97%	\$0	\$57,931,271	\$704,220,158	5.77%
AllianceBernstein	482,465,366	3.78%	0	36,505,869	445,959,496	3.65%
TSW	279,686,063	2.19%	0	21,425,402	258,260,662	2.12%
Small Cap Domestic Equity	\$1,023,852,733	8.02%	\$0	\$92,346,486	\$931,506,248	7.63%
Boston Trust	261,186,224	2.05%	0	24,262,913	236,923,311	1.94%
Segall Bryant & Hamill	278,200,376	2.18%	0	17,398,160	260,802,217	2.14%
Wellington	484,466,133	3.80%	0	50,685,413	433,780,720	3.55%
Total Non US Equity	\$2,485,416,621	19.48%	\$(152,456)	\$170,882,442	\$2,314,686,635	18.96%
Core Non US Equity	\$1,516,566,261	11.89%	\$(152,456)	\$112,654,367	\$1,404,064,350	11.50%
Aristotle	197,464,893	1.55%	0	19,676,907	177,787,986	1.46%
Artisan Partners	432,012,442	3.39%	0	24,950,183	407,062,258	3.33%
BlackRock Superfund	215,311,909	1.69%	0	15,864,231	199,447,677	1.63%
Causeway Capital	492,353,617	3.86%	0	42,578,934	449,774,683	3.68%
Lazard	178,897,125	1.40%	0	9,558,045	169,339,080	1.39%
Emerging Markets	\$198,532,252	1.56%	\$0	\$18,719,190	\$179,813,061	1.47%
Wellington Emerging Markets	198,532,252	1.56%	0	18,719,190	179,813,061	1.47%
Non US Small Cap	\$151,107,247	1.18%	\$0	\$14,486,883	\$136,620,364	1.12%
Wellington Int'l Small Cap Research	151,107,247	1.18%	0	14,486,883	136,620,364	1.12%
Global Equity	\$619,210,861	4.85%	\$0	\$25,022,002	\$594,188,859	4.87%
Walter Scott Global Equity	619,210,861	4.85%	0	25,022,002	594,188,859	4.87%
Total Fixed Income	\$2,464,075,780	19.31%	\$0	\$127,938,217	\$2,336,137,563	19.14%
BlackRock SIO Bond Fund	282,468,468	2.21%	0	11,678,756	270,789,712	2.22%
Brandywine Asset Mgmt	241,475,361	1.89%	0	19,477,818	221,997,543	1.82%
FIAM (Fidelity) Tactical Bond	395,706,696	3.10%	0	20,299,077	375,407,619	3.08%
Income Research & Management	824,351,731	6.46%	0	39,700,360	784,651,371	6.43%
Loomis Sayles	306,275,081	2.40%	0	16,618,917	289,656,164	2.37%
Manulife Strategic Fixed Income	226,664,388	1.78%	0	10,898,964	215,765,425	1.77%
Mellon US Agg Bond Index	187,134,054	1.47%	0	9,264,326	177,869,728	1.46%
Total Cash	\$201,248,714	1.58%	\$1,709,481	\$3,074,990	\$196,464,243	1.61%
Total Marketable Assets	\$9,377,775,372	73.50%	\$1,557,025	\$587,782,517	\$8,788,435,830	71.99%
Total Real Estate	\$1,146,471,318	8.99%	\$12,901,125	\$5,016,645	\$1,128,553,548	9.24%
Strategic Core Real Estate	652,699,773	5.12%	(7,889,712)	863,586	659,725,899	5.40%
Tactical Non-Core Real Estate	493,771,544	3.87%	21,520,720	3,423,176	468,827,648	3.84%
Total Alternative Assets	\$2,234,846,942	17.52%	\$(66,377,801)	\$9,969,633	\$2,291,255,110	18.77%
Private Equity	1,673,128,673	13.11%	(43,697,241)	5,503,643	1,711,322,271	14.02%
Private Debt	561,718,269	4.40%	(22,680,560)	4,465,990	579,932,839	4.75%
Total Fund Composite	\$12,759,093,632	100.00%	\$(51,919,651)	\$602,768,795	\$12,208,244,488	100.00%

-Alternatives market values reflect current custodian valuations, which may not be up to date.

-Includes \$526,276 in legacy assets that are not actively managed and in liquidation following the termination of Fisher

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross of Fees				
Total Domestic Equity	7.25%	32.40%	9.25%	13.95%
Domestic Equity Benchmark (1)	6.23%	35.19%	10.29%	14.81%
Secondary Domestic Equity Bmk (6)	7.21%	32.61%	8.28%	13.70%
Large Cap Domestic Equity	5.88%	36.43%	11.89%	15.21%
S&P 500 Index	5.89%	36.35%	11.91%	15.98%
Blackrock S&P 500	5.88%	36.43%	11.89%	15.95%
SMid Cap Domestic Equity	8.23%	24.57%	4.11%	11.14%
Russell 2500 Index	8.75%	26.17%	3.47%	10.43%
AllianceBernstein	8.19%	29.20%	2.62%	12.12%
TSW	8.30%	17.32%	6.91%	9.57%
TSW Blended Benchmark (2)	9.63%	26.59%	6.06%	9.99%
Small Cap Domestic Equity	9.91%	28.91%	6.83%	13.15%
Russell 2000 Index	9.27%	26.76%	1.84%	9.39%
Boston Trust	10.24%	24.35%	7.41%	11.92%
Segall Bryant & Hamill	6.67%	26.67%	7.61%	13.63%
Wellington	11.68%	32.89%	6.09%	13.58%
Total Non US Equity	7.38%	25.67%	5.06%	8.22%
Non US Equity Benchmark (3)	8.06%	25.35%	4.14%	7.59%
Core Non US Equity	8.02%	25.41%	6.35%	8.39%
Core Non US Benchmark (4)	8.06%	25.35%	4.14%	7.59%
Aristotle	11.07%	26.15%	4.60%	-
Artisan Partners	6.13%	26.75%	4.13%	7.09%
BlackRock Superfund	7.95%	25.29%	-	-
Causeway Capital	9.47%	25.47%	11.56%	12.50%
Lazard	5.64%	21.59%	2.34%	-
Emerging Markets	10.41%	26.24%	0.50%	4.47%
MSCI EM	8.72%	26.05%	0.40%	5.75%
Wellington Emerging Markets	10.41%	26.24%	0.15%	4.73%
Non US Small Cap	10.60%	26.38%	(0.95%)	3.54%
Wellington Int'l Small Cap Research	10.60%	26.38%	-	-
MSCI EAFE Small Cap	10.54%	23.48%	(0.36%)	6.40%
Global Equity	4.21%	25.97%	6.83%	11.89%
MSCI ACWI net	6.61%	31.76%	8.09%	12.19%
Walter Scott Global Equity	4.21%	25.97%	6.83%	11.89%
Walter Scott Blended Benchmark (5)	6.61%	31.76%	8.09%	12.19%

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index. Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Gross of Fees				
Total Fixed Income	5.48%	12.60%	(0.16%)	2.11%
Fixed Income Benchmark (1)	5.20%	12.08%	(1.05%)	0.70%
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
BlackRock SIO Bond Fund	4.31%	12.08%	2.68%	3.71%
BlackRock Custom Benchmark (2)	1.37%	5.56%	3.51%	2.37%
Brandywine Asset Mgmt	8.77%	13.79%	(2.85%)	0.56%
Brandywine Custom Benchmark (3)	7.20%	11.07%	(4.49%)	(2.10%)
FIAM (Fidelity) Tactical Bond	5.41%	13.03%	0.64%	2.76%
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
Income Research & Management	5.06%	11.74%	(1.26%)	0.98%
Bloomberg Gov/Credit	5.10%	11.31%	(1.50%)	0.41%
Loomis Sayles	5.74%	14.78%	1.13%	4.10%
Loomis Sayles Custom Benchmark (4)	5.23%	13.02%	0.19%	1.91%
Manulife Strategic Fixed Income	5.05%	12.32%	1.00%	2.52%
Bloomberg Multiverse	6.97%	12.25%	(2.81%)	(0.63%)
Mellon US Agg Bond Index	5.21%	11.61%	-	-
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
Total Cash	1.31%	5.45%	3.59%	2.41%
3-month Treasury Bill	1.37%	5.46%	3.49%	2.32%
Total Marketable Assets	6.66%	24.51%	5.40%	8.80%
Total Marketable Index (5)	6.37%	24.60%	4.99%	8.32%
Total Real Estate	0.44%	(6.00%)	4.85%	6.69%
Real Estate Benchmark (6)	(0.66%)	(9.99%)	1.02%	2.27%
Strategic Core Real Estate	0.13%	(9.04%)	3.03%	4.29%
Tactical Non-Core Real Estate	0.71%	(1.91%)	7.36%	10.61%
Total Alternative Assets	0.45%	6.42%	7.02%	11.44%
Alternative Assets Benchmark (7)	3.13%	20.82%	9.84%	13.33%
Total Private Equity	0.33%	5.99%	6.57%	13.58%
Private Equity Benchmark (8)	3.72%	25.39%	11.84%	17.60%
Cambridge Global PE Idx 1 Qtr Lag	0.00%	3.65%	3.43%	13.46%
Total Private Debt	0.79%	7.71%	8.36%	6.76%
Private Debt Benchmark (9)	1.82%	11.65%	5.31%	4.92%
Cambridge Private Credit Idx 1 Qtr Lag	0.00%	6.58%	6.97%	8.13%
Total Fund Composite	4.94%	17.48%	5.75%	9.11%
Total Fund Benchmark *	5.18%	20.30%	5.59%	8.75%

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
Gross of Fees				
Total Domestic Equity	12.41%	11.89%	7.85%	11.31% (7/75)
Domestic Equity Benchmark (1)	13.67%	12.92%	8.20%	11.73% (7/75)
Secondary Domestic Equity Bmk (6)	12.08%	11.79%	8.60%	-
Large Cap Domestic Equity	13.57%	12.57%	-	14.47% (9/10)
S&P 500 Index	14.50%	13.38%	8.20%	15.04% (9/10)
Blackrock S&P 500	14.47%	13.36%	-	15.03% (9/10)
SMid Cap Domestic Equity	9.41%	9.71%	-	11.53% (12/10)
Russell 2500 Index	9.02%	9.50%	9.45%	10.93% (12/10)
AllianceBernstein	10.57%	10.74%	-	12.19% (12/10)
TSW	7.60%	8.15%	-	10.49% (12/10)
TSW Blended Benchmark (2)	8.93%	9.43%	9.43%	10.89% (12/10)
Small Cap Domestic Equity	11.85%	12.06%	-	12.78% (11/10)
Russell 2000 Index	7.36%	8.78%	8.27%	10.14% (11/10)
Boston Trust	11.72%	11.84%	-	11.99% (11/10)
Segall Bryant & Hamill	12.58%	11.54%	-	12.47% (11/10)
Wellington	11.56%	12.51%	-	13.88% (11/10)
Total Non US Equity	6.28%	6.51%	5.50%	6.61% (4/88)
Non US Equity Benchmark (3)	5.44%	5.22%	4.74%	5.30% (4/88)
Core Non US Equity	6.13%	6.16%	5.30%	6.47% (4/88)
Core Non US Benchmark (4)	5.44%	5.22%	4.52%	5.15% (4/88)
Aristotle	-	-	-	6.63% (1/21)
Artisan Partners	6.95%	-	-	6.23% (11/14)
BlackRock Superfund	-	-	-	16.24% (3/23)
Causeway Capital	7.87%	6.98%	-	6.98% (10/14)
Lazard	-	-	-	3.77% (1/21)
MSCI EAFE	6.00%	5.71%	4.60%	6.62% (1/21)
Emerging Markets	2.64%	3.84%	-	3.54% (6/11)
MSCI EM	3.65%	4.03%	-	2.52% (6/11)
Wellington Emerging Markets	3.09%	4.61%	-	4.95% (6/11)
Non US Small Cap	(0.19%)	2.28%	-	3.22% (7/11)
MSCI EAFE Small Cap	4.16%	6.21%	6.90%	6.24% (7/11)
Global Equity	12.34%	11.75%	-	9.79% (5/08)
MSCI ACWI net	10.23%	9.39%	-	7.09% (5/08)
Walter Scott Global Equity	12.34%	11.75%	-	10.63% (1/05)
Walter Scott Blended Benchmark (5)	10.23%	9.39%	6.82%	8.17% (1/05)

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index.

Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024				
	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
Gross of Fees				
Total Fixed Income	2.52%	2.81%	5.52%	7.39% (7/75)
Fixed Income Benchmark (1)	1.74%	2.15%	4.34%	-
Bloomberg Aggregate	1.47%	1.84%	4.06%	-
BlackRock SIO Bond Fund	-	-	-	4.14% (1/19)
BlackRock Custom Benchmark (2)	-	-	-	2.39% (1/19)
Brandywine Asset Mgmt	0.41%	1.29%	6.10%	5.99% (11/97)
Brandywine Custom Benchmark (3)	(0.62%)	(0.17%)	2.98%	3.12% (11/97)
FIAM (Fidelity) Tactical Bond	-	-	-	3.94% (2/19)
Bloomberg Aggregate	1.47%	1.84%	4.06%	1.56% (2/19)
Income Research & Management	2.17%	2.48%	4.96%	6.33% (9/87)
Bloomberg Gov/Credit	1.64%	2.00%	4.16%	5.55% (9/87)
Loomis Sayles	4.20%	4.22%	-	7.30% (10/02)
Loomis Sayles Custom Benchmark (4)	2.65%	3.01%	5.04%	5.00% (10/02)
Manulife Strategic Fixed Income	2.85%	-	-	2.81% (3/15)
Bloomberg Multiverse	0.39%	0.74%	3.46%	0.99% (3/15)
Mellon US Agg Bond Index	-	-	-	5.67% (6/23)
Bloomberg Aggregate	1.47%	1.84%	4.06%	5.63% (6/23)
Total Cash	2.29%	1.73%	2.01%	2.61% (4/94)
3-month Treasury Bill	2.22%	1.65%	1.92%	2.51% (4/94)
Total Marketable Assets	7.77%	7.72%	6.77%	9.57% (7/75)
Total Marketable Index (5)	7.67%	7.47%	6.26%	-
Total Real Estate	7.23%	8.68%	9.48%	9.46% (3/83)
Real Estate Benchmark (6)	3.45%	5.51%	7.15%	-
Strategic Core Real Estate	5.58%	7.31%	8.86%	9.03% (4/83)
Tactical Non-Core Real Estate	9.90%	10.92%	-	10.06% (10/04)
Total Alternative Assets	10.67%	9.42%	3.56%	7.34% (3/87)
Alternative Assets Benchmark (7)	12.29%	11.35%	10.31%	-
Total Private Equity	13.33%	11.96%	3.18%	6.56% (12/90)
Private Equity Benchmark (8)	17.08%	15.95%	12.07%	15.72% (12/90)
Cambridge Global PE Idx 1 Qtr Lag	13.88%	12.87%	12.64%	15.05% (12/90)
Total Private Debt	6.39%	6.42%	-	5.53% (6/11)
Private Debt Benchmark (9)	4.65%	5.07%	-	8.74% (6/11)
Cambridge Private Credit Idx 1 Qtr Lag	8.12%	7.49%	9.39%	8.50% (6/11)
Total Fund Composite	8.26%	8.13%	6.94%	9.01% (6/89)
Total Fund Benchmark *	8.18%	7.99%	6.82%	-

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Value Weight Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

Investment Manager Returns

The table below details the rates of return 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.

	12/2023- 9/2024	2023	2022	2021	2020
Gross of Fees					
Total Domestic Equity	18.45%	22.25%	(17.50%)	26.35%	17.06%
Domestic Equity Benchmark (1)	20.63%	25.96%	(19.21%)	25.82%	18.40%
Secondary Domestic Equity Bmk (6)	17.80%	22.81%	(18.58%)	23.83%	19.35%
Large Cap Domestic Equity	22.15%	26.11%	(18.10%)	28.64%	14.60%
S&P 500 Index	22.08%	26.29%	(18.11%)	28.71%	18.40%
Blackrock S&P 500	22.15%	26.11%	(18.10%)	28.64%	18.37%
SMid Cap Domestic Equity	11.92%	16.40%	(18.09%)	25.77%	17.97%
Russell 2500 Index	11.30%	17.42%	(18.37%)	18.18%	19.99%
AllianceBernstein	13.36%	18.79%	(24.13%)	27.09%	26.15%
TSW	9.51%	12.64%	(6.30%)	23.28%	5.09%
TSW Blended Benchmark (2)	11.28%	15.98%	(13.08%)	27.78%	4.88%
Small Cap Domestic Equity	14.76%	17.25%	(15.52%)	21.79%	23.11%
Russell 2000 Index	11.17%	16.93%	(20.44%)	14.82%	19.96%
Boston Trust	12.49%	11.16%	(8.18%)	29.56%	10.66%
Segall Bryant & Hamill	12.96%	15.55%	(12.25%)	24.57%	24.00%
Wellington	17.11%	22.07%	(21.25%)	16.63%	29.55%
Total Non US Equity	13.88%	20.37%	(17.52%)	9.44%	9.72%
Non US Equity Benchmark (3)	14.21%	15.62%	(16.00%)	7.82%	10.65%
Core Non US Equity	14.04%	20.99%	(14.63%)	10.69%	5.11%
Core Non US Benchmark (4)	14.21%	15.62%	(16.00%)	7.82%	10.65%
Artisan Partners	15.62%	16.60%	(18.46%)	10.25%	7.81%
Aristotle	14.35%	19.22%	(20.48%)	17.35%	-
Causeway Capital	14.45%	28.49%	(6.69%)	10.15%	6.88%
Lazard	8.83%	18.77%	(16.36%)	6.26%	-
MSCI EAFE	12.99%	18.24%	(14.45%)	11.26%	7.82%
Emerging Markets	18.24%	10.36%	(21.04%)	(4.98%)	15.78%
MSCI EM	16.86%	9.83%	(20.09%)	(2.54%)	18.31%
Wellington Emerging Markets	18.24%	7.99%	(19.38%)	(5.37%)	17.67%
Non US Small Cap	11.97%	17.20%	(23.55%)	9.57%	(3.66%)
Wellington Int'l Small Cap Research	11.97%	17.20%	(23.55%)	-	-
MSCI EAFE Small Cap	11.11%	13.16%	(21.39%)	10.10%	12.34%
Global Equity	12.62%	24.04%	(19.11%)	19.44%	20.02%
MSCI ACWI net	18.66%	22.20%	(18.36%)	18.54%	16.25%
Walter Scott Global Equity	12.62%	24.04%	(19.11%)	19.44%	20.02%
Walter Scott Blended Benchmark (5)	18.66%	22.20%	(18.36%)	18.54%	16.25%

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index.

Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

The table below details the rates of return 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.

	12/2023- 9/2024	2023	2022	2021	2020
Gross of Fees					
Total Fixed Income	5.00%	7.32%	(11.77%)	(0.27%)	10.41%
Fixed Income Benchmark (1)	4.91%	6.17%	(12.99%)	(1.10%)	7.58%
Bloomberg Aggregate	4.45%	5.53%	(13.01%)	(1.54%)	7.51%
BlackRock SIO Bond Fund	6.08%	7.97%	(5.79%)	2.13%	7.17%
BlackRock Custom Benchmark (2)	4.13%	5.09%	1.32%	0.17%	0.74%
Brandywine Asset Mgmt	0.98%	8.08%	(15.57%)	(4.89%)	12.55%
Brandywine Custom Benchmark (3)	2.50%	5.36%	(18.42%)	(6.98%)	10.11%
FIAM (Fidelity) Tactical Bond	5.41%	7.38%	(10.58%)	1.50%	9.79%
Bloomberg Aggregate	4.45%	5.53%	(13.01%)	(1.54%)	7.51%
Income Research & Management	4.88%	6.41%	(13.74%)	(1.49%)	10.89%
Bloomberg Gov/Credit	4.39%	5.72%	(13.58%)	(1.75%)	8.93%
Loomis Sayles	7.15%	8.85%	(11.24%)	2.54%	13.08%
Loomis Sayles Custom Benchmark (4)	5.69%	8.25%	(12.32%)	0.81%	7.61%
Manulife Strategic Fixed Income	5.47%	7.86%	(9.58%)	0.47%	8.33%
Bloomberg Multiverse	3.81%	6.05%	(16.01%)	(4.51%)	9.02%
Total Cash	3.99%	5.21%	1.58%	0.06%	0.63%
3-month Treasury Bill	4.03%	5.01%	1.46%	0.05%	0.67%
Total Marketable Assets	13.20%	16.99%	(15.62%)	13.49%	13.08%
Total Marketable Index (5)	13.56%	16.46%	(16.01%)	11.63%	13.33%
Total Real Estate	(4.51%)	(9.18%)	22.65%	24.22%	2.91%
Real Estate Benchmark (6)	(8.06%)	(12.88%)	20.96%	13.64%	0.52%
Strategic Core Real Estate	(7.79%)	(13.43%)	27.48%	17.70%	1.62%
Tactical Non-Core Real Estate	0.15%	(1.13%)	13.65%	36.24%	5.48%
Total Alternative Assets	4.62%	7.44%	4.21%	37.25%	5.28%
Alternative Assets Benchmark (7)	22.16%	19.63%	(10.48%)	24.00%	12.87%
Total Private Equity	4.33%	7.38%	2.62%	48.35%	8.46%
Private Equity Benchmark (8)	28.82%	22.76%	(12.74%)	33.31%	19.37%
Cambridge Global PE Idx 1 Qtr Lag	4.03%	4.28%	(3.50%)	50.98%	17.82%
Total Private Debt	5.50%	7.60%	9.06%	12.72%	(0.96%)
Private Debt Benchmark (9)	9.44%	13.14%	(6.59%)	6.66%	1.71%
Cambridge Private Credit Idx 1 Qtr Lag	4.92%	10.62%	2.69%	20.41%	2.96%
Total Fund Composite	9.78%	11.68%	(8.18%)	18.47%	10.50%
Total Fund Benchmark *	12.51%	13.92%	(11.67%)	13.73%	12.50%

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net of Fees				
Total Domestic Equity	7.18%	32.05%	8.96%	13.64%
Domestic Equity Benchmark (1)	6.23%	35.19%	10.29%	14.81%
Secondary Domestic Equity Bmk (6)	7.21%	32.61%	8.28%	13.70%
Large Cap Domestic Equity	5.88%	36.41%	11.88%	15.19%
S&P 500 Index	5.89%	36.35%	11.91%	15.98%
Blackrock S&P 500	5.88%	36.41%	11.88%	15.93%
SMid Cap Domestic Equity	8.08%	23.89%	3.54%	10.53%
Russell 2500 Index	8.75%	26.17%	3.47%	10.43%
AllianceBernstein	8.04%	28.53%	2.07%	11.52%
TSW	8.13%	16.62%	6.29%	8.93%
TSW Blended Benchmark (2)	9.63%	26.59%	6.06%	9.99%
Small Cap Domestic Equity	9.74%	28.09%	6.13%	12.40%
Russell 2000 Index	9.27%	26.76%	1.84%	9.39%
Boston Trust	10.14%	23.84%	6.93%	11.40%
Segall Bryant & Hamill	6.47%	25.73%	6.77%	12.74%
Wellington	11.49%	31.96%	5.34%	12.76%
Total Non US Equity	7.25%	25.02%	4.46%	7.59%
Non US Equity Benchmark (3)	8.06%	25.35%	4.14%	7.59%
Core Non US Equity	7.90%	24.83%	5.82%	7.82%
Core Non US Benchmark (4)	8.06%	25.35%	4.14%	7.59%
Aristotle	10.95%	25.61%	4.14%	-
Artisan Partners	5.96%	25.97%	3.48%	6.41%
BlackRock Superfund	7.94%	25.24%	-	-
Causeway Capital	9.33%	24.83%	10.98%	11.91%
Lazard	5.51%	20.99%	1.83%	-
Emerging Markets	10.14%	24.99%	(0.46%)	3.49%
MSCI EM	8.72%	26.05%	0.40%	5.75%
Wellington Emerging Markets	10.14%	24.99%	(0.84%)	3.69%
Non US Small Cap	10.41%	25.48%	(1.58%)	2.92%
Wellington Int'l Small Cap Research	10.41%	25.48%	-	-
MSCI EAFE Small Cap	10.54%	23.48%	(0.36%)	6.40%
Global Equity	4.10%	25.38%	6.30%	11.31%
MSCI ACWI net	6.61%	31.76%	8.09%	12.19%
Walter Scott Global Equity	4.10%	25.38%	6.30%	11.31%
Walter Scott Blended Benchmark (5)	6.61%	31.76%	8.09%	12.19%

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index.

Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net of Fees				
Total Fixed Income	5.41%	12.31%	(0.43%)	1.83%
Fixed Income Benchmark (1)	5.20%	12.08%	(1.05%)	0.70%
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
BlackRock SIO Bond Fund	4.19%	11.55%	2.19%	3.22%
BlackRock Custom Benchmark (2)	1.37%	5.56%	3.51%	2.37%
Brandywine Asset Mgmt	8.69%	13.44%	(3.16%)	0.24%
Brandywine Custom Benchmark (3)	7.20%	11.07%	(4.49%)	(2.10%)
FIAM (Fidelity) Tactical Bond	5.32%	12.67%	0.32%	2.43%
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
Income Research & Management	5.02%	11.55%	(1.43%)	0.81%
Bloomberg Gov/Credit	5.10%	11.31%	(1.50%)	0.41%
Loomis Sayles	5.65%	14.41%	0.80%	3.76%
Loomis Sayles Custom Benchmark (4)	5.23%	13.02%	0.19%	1.91%
Manulife Strategic Fixed Income	4.98%	12.01%	0.71%	2.24%
Bloomberg Multiverse	6.97%	12.25%	(2.81%)	(0.63%)
Mellon US Agg Bond Index	5.20%	11.59%	-	-
Bloomberg Aggregate	5.20%	11.57%	(1.39%)	0.33%
Total Cash	1.31%	5.45%	3.59%	2.41%
3-month Treasury Bill	1.37%	5.46%	3.49%	2.32%
Total Marketable Assets	6.58%	24.11%	5.04%	8.42%
Total Marketable Index (5)	6.37%	24.60%	4.99%	8.32%
Total Real Estate (10)	0.17%	(6.88%)	3.75%	6.02%
Real Estate Benchmark (6)	(0.66%)	(9.99%)	1.02%	2.27%
Strategic Core Real Estate	0.02%	(9.78%)	2.19%	3.78%
Tactical Non-Core Real Estate	0.38%	(2.36%)	6.30%	9.95%
Total Alternative Assets	0.03%	5.26%	5.88%	10.73%
Alternative Assets Benchmark (7)	3.13%	20.82%	9.84%	13.33%
Total Private Equity	0.04%	5.12%	5.72%	13.03%
Private Equity Benchmark (8)	3.72%	25.39%	11.84%	17.60%
Cambridge Global PE Idx 1 Qtr Lag	0.00%	3.65%	3.43%	13.46%
Total Private Debt	0.01%	5.69%	6.36%	5.57%
Private Debt Benchmark (9)	1.82%	11.65%	5.31%	4.92%
Cambridge Private Credit Idx 1 Qtr Lag	0.00%	6.58%	6.97%	8.13%
Total Fund Composite	4.78%	16.87%	5.16%	8.63%
Total Fund Benchmark *	5.18%	20.30%	5.59%	8.75%

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(10) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
Net of Fees				
Total Domestic Equity	12.09%	11.56%	7.52%	11.14% (7/75)
Domestic Equity Benchmark (1)	13.67%	12.92%	8.20%	11.73% (7/75)
Secondary Domestic Equity Bmk (6)	12.08%	11.79%	8.60%	-
Large Cap Domestic Equity	13.53%	12.51%	-	14.39% (9/10)
S&P 500 Index	14.50%	13.38%	8.20%	15.04% (9/10)
Blackrock S&P 500	14.46%	13.35%	-	15.01% (9/10)
SMid Cap Domestic Equity	8.78%	9.05%	-	10.82% (12/10)
Russell 2500 Index	9.02%	9.50%	9.45%	10.93% (12/10)
AllianceBernstein	9.96%	10.10%	-	11.50% (12/10)
TSW	6.94%	7.46%	-	9.76% (12/10)
TSW Blended Benchmark (2)	8.93%	9.43%	9.43%	10.89% (12/10)
Small Cap Domestic Equity	11.10%	11.29%	-	11.98% (11/10)
Russell 2000 Index	7.36%	8.78%	8.27%	10.14% (11/10)
Boston Trust	11.18%	11.29%	-	11.41% (11/10)
Segall Bryant & Hamill	11.70%	10.63%	-	11.53% (11/10)
Wellington	10.76%	11.70%	-	13.04% (11/10)
Total Non US Equity	5.64%	5.85%	4.91%	6.20% (4/88)
Non US Equity Benchmark (3)	5.44%	5.22%	4.74%	5.30% (4/88)
Core Non US Equity	5.56%	5.58%	4.75%	6.09% (4/88)
Core Non US Benchmark (4)	5.44%	5.22%	4.52%	5.15% (4/88)
Artisan Partners	6.27%	-	-	5.55% (11/14)
Aristotle	-	-	-	6.16% (1/21)
BlackRock Superfund	-	-	-	16.21% (3/23)
Causeway Capital	7.30%	6.41%	-	6.41% (10/14)
Lazard	-	-	-	3.25% (1/21)
Emerging Markets	1.68%	2.85%	-	2.56% (6/11)
MSCI EM	3.65%	4.03%	-	2.52% (6/11)
Wellington Emerging Markets	2.06%	3.57%	-	3.90% (6/11)
Non US Small Cap	(0.78%)	1.63%	-	2.51% (7/11)
MSCI EAFE Small Cap	4.16%	6.21%	6.90%	6.24% (7/11)
Global Equity	11.74%	11.13%	-	9.15% (5/08)
MSCI ACWI net	10.23%	9.39%	-	7.09% (5/08)
Walter Scott Global Equity	11.74%	11.13%	-	9.97% (1/05)
Walter Scott Blended Benchmark (5)	10.23%	9.39%	6.82%	8.17% (1/05)

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index.

Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024				
	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
Net of Fees				
Total Fixed Income	2.23%	2.52%	5.26%	7.25% (7/75)
Fixed Income Benchmark (1)	1.74%	2.15%	4.34%	-
Bloomberg Aggregate	1.47%	1.84%	4.06%	-
BlackRock SIO Bond Fund	-	-	-	3.64% (1/19)
BlackRock Custom Benchmark (2)	-	-	-	2.39% (1/19)
Brandywine Asset Mgmt	0.10%	0.98%	5.78%	5.69% (11/97)
Brandywine Custom Benchmark (3)	(0.62%)	(0.17%)	2.98%	3.12% (11/97)
FIAM (Fidelity) Tactical Bond	-	-	-	3.61% (2/19)
Bloomberg Aggregate	1.47%	1.84%	4.06%	1.56% (2/19)
Income Research & Management	1.99%	2.30%	4.76%	6.19% (9/87)
Bloomberg Gov/Credit	1.64%	2.00%	4.16%	5.55% (9/87)
Loomis Sayles	3.86%	3.88%	-	6.93% (10/02)
Loomis Sayles Custom Benchmark (4)	2.65%	3.01%	5.04%	5.00% (10/02)
Manulife Strategic Fixed Income	2.57%	-	-	2.52% (3/15)
Bloomberg Multiverse	0.39%	0.74%	3.46%	0.99% (3/15)
Mellon US Agg Bond Index	-	-	-	5.65% (6/23)
Bloomberg Aggregate	1.47%	1.84%	4.06%	5.63% (6/23)
Total Cash	2.29%	1.73%	2.01%	2.61% (4/94)
3-month Treasury Bill	2.22%	1.65%	1.92%	2.51% (4/94)
Total Marketable Assets	7.38%	7.32%	6.40%	9.38% (7/75)
Total Marketable Index (5)	7.67%	7.47%	6.26%	-
Total Real Estate (10)	6.75%	8.33%	8.88%	8.93% (3/83)
Real Estate Benchmark (6)	3.45%	5.51%	7.15%	-
Strategic Core Real Estate	5.21%	7.05%	8.30%	8.52% (4/83)
Tactical Non-Core Real Estate	9.43%	10.59%	-	9.21% (10/04)
Total Alternative Assets	10.15%	9.00%	3.27%	7.14% (3/87)
Alternative Assets Benchmark (7)	12.29%	11.35%	10.31%	-
Total Private Equity	12.94%	11.69%	3.06%	6.47% (12/90)
Private Equity Benchmark (8)	17.08%	15.95%	12.07%	15.72% (12/90)
Cambridge Global PE Idx 1 Qtr Lag	13.88%	12.87%	12.64%	15.05% (12/90)
Total Private Debt	5.54%	5.83%	-	5.00% (6/11)
Private Debt Benchmark (9)	4.65%	5.07%	-	8.74% (6/11)
Cambridge Private Credit Idx 1 Qtr Lag	8.12%	7.49%	9.39%	8.50% (6/11)
Total Fund Composite	7.83%	7.72%	6.56%	8.73% (6/89)
Total Fund Benchmark *	8.18%	7.99%	6.82%	-

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(10) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

Investment Manager Returns

The table below details the rates of return 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.

	12/2023- 9/2024	2023	2022	2021	2020
Net of Fees					
Total Domestic Equity	18.22%	21.93%	(17.72%)	26.02%	16.75%
Domestic Equity Benchmark (1)	20.63%	25.96%	(19.21%)	25.82%	18.40%
Secondary Domestic Equity Bmk (6)	17.80%	22.81%	(18.58%)	23.83%	19.35%
Large Cap Domestic Equity	22.14%	26.10%	(18.11%)	28.63%	14.56%
S&P 500 Index	22.08%	26.29%	(18.11%)	28.71%	18.40%
Blackrock S&P 500	22.14%	26.10%	(18.11%)	28.63%	18.36%
SMid Cap Domestic Equity	11.45%	15.77%	(18.54%)	25.09%	17.31%
Russell 2500 Index	11.30%	17.42%	(18.37%)	18.18%	19.99%
AllianceBernstein	12.92%	18.16%	(24.54%)	26.42%	25.47%
TSW	9.02%	12.00%	(6.83%)	22.58%	4.44%
TSW Blended Benchmark (2)	11.28%	15.98%	(13.08%)	27.78%	4.88%
Small Cap Domestic Equity	14.22%	16.47%	(16.09%)	20.97%	22.26%
Russell 2000 Index	11.17%	16.93%	(20.44%)	14.82%	19.96%
Boston Trust	12.16%	10.65%	(8.61%)	28.95%	10.10%
Segall Bryant & Hamill	12.33%	14.64%	(12.96%)	23.58%	23.01%
Wellington	16.50%	21.21%	(21.82%)	15.80%	28.62%
Total Non US Equity	13.44%	19.71%	(18.04%)	8.78%	9.03%
Non US Equity Benchmark (3)	14.21%	15.62%	(16.00%)	7.82%	10.65%
Core Non US Equity	13.65%	20.42%	(15.10%)	10.09%	4.52%
Core Non US Benchmark (4)	14.21%	15.62%	(16.00%)	7.82%	10.65%
Artisan Partners	15.08%	15.87%	(18.97%)	9.57%	7.14%
Aristotle	13.99%	18.69%	(20.84%)	16.84%	-
Causeway Capital	14.02%	27.83%	(7.18%)	9.58%	6.31%
Lazard	8.43%	18.18%	(16.78%)	5.73%	-
Emerging Markets	17.37%	9.28%	(21.78%)	(5.85%)	14.72%
MSCI EM	16.86%	9.83%	(20.09%)	(2.54%)	18.31%
Wellington Emerging Markets	17.37%	6.91%	(20.19%)	(6.31%)	16.51%
Non US Small Cap	11.37%	16.42%	(24.06%)	9.08%	(4.19%)
Wellington Int'l Small Cap Research	11.37%	16.42%	(24.06%)	-	-
MSCI EAFE Small Cap	11.11%	13.16%	(21.39%)	10.10%	12.34%
Global Equity	12.24%	23.40%	(19.54%)	18.82%	19.36%
MSCI ACWI net	18.66%	22.20%	(18.36%)	18.54%	16.25%
Walter Scott Global Equity	12.24%	23.40%	(19.54%)	18.82%	19.36%
Walter Scott Blended Benchmark (5)	18.66%	22.20%	(18.36%)	18.54%	16.25%

(1) The Domestic Equity Benchmark is the Russell 3000 index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index.

Prior to 7/1/2003 the benchmark was the S&P 500.

(2) TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 it was the Russell 2500.

(3) The Non US Equity Index is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 it was the MSCI EAFE Index.

(4) The Core Non US Equity Index is the MSCI ACWI ex US as of 7/1/2007. Prior to 7/1/2007 it was the MSCI EAFE Index.

(5) The Walter Scott Blended Benchmark is the MSCI ACWI Index as 5/1/2008. Prior to 5/1/2008 it was the MSCI EAFE Index.

(6) Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

Investment Manager Returns

The table below details the rates of return 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.

	12/2023- 9/2024	2023	2022	2021	2020
Net of Fees					
Total Fixed Income	4.80%	7.03%	(12.02%)	(0.55%)	10.10%
Fixed Income Benchmark (1)	4.91%	6.17%	(12.99%)	(1.10%)	7.58%
Bloomberg Aggregate	4.45%	5.53%	(13.01%)	(1.54%)	7.51%
BlackRock SIO Bond Fund	5.70%	7.45%	(6.24%)	1.64%	6.66%
BlackRock Custom Benchmark (2)	4.13%	5.09%	1.32%	0.17%	0.74%
Brandywine Asset Mgmt	0.75%	7.73%	(15.84%)	(5.19%)	12.20%
Brandywine Custom Benchmark (3)	2.50%	5.36%	(18.42%)	(6.98%)	10.11%
FIAM (Fidelity) Tactical Bond	5.16%	7.04%	(10.86%)	1.17%	9.44%
Bloomberg Aggregate	4.45%	5.53%	(13.01%)	(1.54%)	7.51%
Income Research & Management	4.75%	6.23%	(13.88%)	(1.65%)	10.70%
Bloomberg Gov/Credit	4.39%	5.72%	(13.58%)	(1.75%)	8.93%
Loomis Sayles	6.89%	8.50%	(11.53%)	2.21%	12.71%
Loomis Sayles Custom Benchmark (4)	5.69%	8.25%	(12.32%)	0.81%	7.61%
Manulife Strategic Fixed Income	5.25%	7.56%	(9.84%)	0.19%	8.03%
Bloomberg Multiverse	3.81%	6.05%	(16.01%)	(4.51%)	9.02%
Total Cash	3.99%	5.21%	1.58%	0.06%	0.63%
3-month Treasury Bill	4.03%	5.01%	1.46%	0.05%	0.67%
Total Marketable Assets	12.93%	16.60%	(15.91%)	13.09%	12.67%
Total Marketable Index (5)	13.56%	16.46%	(16.01%)	11.63%	13.33%
Total Real Estate (10)	(5.23%)	(9.94%)	20.74%	24.22%	2.91%
Real Estate Benchmark (6)	(8.06%)	(12.88%)	20.96%	13.64%	0.52%
Strategic Core Real Estate	(8.26%)	(13.99%)	25.83%	17.70%	1.62%
Tactical Non-Core Real Estate	(0.47%)	(1.79%)	11.73%	36.24%	5.48%
Total Alternative Assets	3.76%	6.31%	2.83%	37.25%	5.28%
Alternative Assets Benchmark (7)	22.16%	19.63%	(10.48%)	24.00%	12.87%
Total Private Equity	3.71%	6.67%	1.46%	48.35%	8.46%
Private Equity Benchmark (8)	28.82%	22.76%	(12.74%)	33.31%	19.37%
Cambridge Global PE Idx 1 Qtr Lag	4.03%	4.28%	(3.50%)	50.98%	17.82%
Total Private Debt	3.92%	5.31%	6.98%	12.72%	(0.96%)
Private Debt Benchmark (9)	9.44%	13.14%	(6.59%)	6.66%	1.71%
Cambridge Private Credit Idx 1 Qtr Lag	4.92%	10.62%	2.69%	20.41%	2.96%
Total Fund Composite	9.35%	11.08%	(8.81%)	18.16%	10.21%
Total Fund Benchmark *	12.51%	13.92%	(11.67%)	13.73%	12.50%

* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.

(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.

(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.

(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.

(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021

(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1%

(1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(8) The Private Equity Benchmark is the Russell 3000 Index + 3% lagged 1 quarter as of 7/1/2022.

(9) The Private Debt Bmk is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

(10) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

	September 30, 2024				June 30, 2024	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Real Estate						
Strategic Core Real Estate	\$652,699,773	56.93%	\$(7,889,712)	\$863,586	\$659,725,899	58.46%
Berkshire MF Income	17,918,061	1.56%	(1,918,826)	0	19,836,887	1.76%
Black Creek Industrial Fund	33,788,323	2.95%	(225,591)	33,157	33,980,757	3.01%
Brookfield Premier Real Estate Partners	56,609,208	4.94%	(3,288,884)	0	59,898,092	5.31%
Carlyle Property Investors	30,601,097	2.67%	(202,098)	30,706	30,772,489	2.73%
Clarion Lion Properties Fund	14,728,997	1.28%	(119,585)	(0)	14,848,582	1.32%
Cortland Growth & Income	23,388,657	2.04%	(149,457)	32,249	23,505,865	2.08%
Dream Industrial Fund	41,994,632	3.66%	(1,996,297)	17,202	43,973,727	3.90%
Greystar Growth And Income	10,281,122	0.90%	(29,197)	21,502	10,288,817	0.91%
Hancock US Real Estate	10,309,363	0.90%	(84,823)	14,084	10,380,102	0.92%
Jamestown Premier Property	23,329,138	2.03%	(21,002)	(0)	23,350,141	2.07%
JP Morgan Strategic Property	49,409,586	4.31%	(1,718,741)	0	51,128,327	4.53%
Kayne Anderson Core Real Estate	48,383,565	4.22%	8,780,287	0	39,603,278	3.51%
Lion Industrial Trust	82,200,491	7.17%	(8,430,743)	(0)	90,631,234	8.03%
MetLife Core Property	55,506,653	4.84%	(2,852,595)	80,243	58,279,004	5.16%
Prime Property Fund LLC	58,404,038	5.09%	(2,114,239)	516,607	60,001,671	5.32%
Smart Markets Fund	48,179,253	4.20%	(2,528,671)	117,836	50,590,088	4.48%
UBS Trumbull Property Fund	6,766,373	0.59%	6,766,373	0	-	-
Tactical Non-Core Real Estate	\$493,771,544	43.07%	\$21,520,720	\$3,423,176	\$468,827,648	41.54%
Almanac Realty Securities (ARS) VII Side	20,057,286	1.75%	(384,897)	174,945	20,267,238	1.80%
Almanac Realty Securities VII LP	10,887,728	0.95%	(587,192)	135,601	11,339,319	1.00%
Almanac Realty Securities VIII LP	16,450,326	1.43%	803,634	119,045	15,527,647	1.38%
Alterra IOS Ventures II	19,186,793	1.67%	(54,213)	54,214	19,186,792	1.70%
Asana Real Estate Partners I	27,019,029	2.36%	409,084	(409,084)	27,019,029	2.39%
Berkshire Bridge Loan II	7,939,999	0.69%	(285,121)	40,479	8,184,641	0.73%
Bozzuto Capital Partners II, LLC	14,618,006	1.28%	(92,919)	(0)	14,710,924	1.30%
Bridge Logistics JV	18,731,700	1.63%	(40,476)	40,476	18,731,700	1.66%
Broadview Real Estate Partners LP	13,482,084	1.18%	275,988	327,074	12,879,022	1.14%
Brockton Capital II	1,079,787	0.09%	0	62,186	1,017,600	0.09%
BRV Partners I	4,113,300	0.36%	(51,312)	103,450	4,061,162	0.36%
Bryanston Retail Opportunity Fund	40,616	0.00%	46	(46)	40,616	0.00%
Buckingham BTR Ventures	1,605,405	0.14%	1,605,405	0	-	-
Buckingham Multifamily Fund I	23,086,236	2.01%	194,881	(194,881)	23,086,236	2.05%
Buckingham Multifamily Fund II	8,900,044	0.78%	261,532	29,968	8,608,544	0.76%
Caprock Partners Industrial Co-Investmen	13,009,335	1.13%	(33,841)	33,841	13,009,335	1.15%
Carroll Fund V Bedrock Sidecar	768,775	0.07%	0	0	768,775	0.07%
Carroll Multifamily Real Estate Fund V	3,781,894	0.33%	0	0	3,781,894	0.34%
Carroll Multifamily Real Estate Fund VI	12,557,169	1.10%	0	0	12,557,169	1.11%
Carroll Multifamily Real Estate Fund VII	4,633,214	0.40%	303,362	0	4,329,852	0.38%
CITIC Capital China Retail Properties In	9,186,639	0.80%	(52,329)	52,329	9,186,639	0.81%
Crossbay Townsend Feeder	1,232,671	0.11%	(604,155)	102,193	1,734,632	0.15%
Fortress Japan Opportunity Fund IV	8,245,706	0.72%	(542,126)	93,601	8,694,231	0.77%
Fortress Japan Opportunity Fund I	290,686	0.03%	(16,859)	49,061	258,484	0.02%
Fortress Japan Opportunity Fund II	752,385	0.07%	(6,247)	6,247	752,385	0.07%
Fortress Japan Residential Co-Investment	24,207,156	2.11%	13,721	(13,722)	24,207,157	2.14%
Gerrity Retail II	15,142,786	1.32%	(52,546)	52,546	15,142,786	1.34%
GID Mainstay Fund	40,901,215	3.57%	2,244,377	0	38,656,838	3.43%
Gramercy Property EUR IV Townsend Feeder	21,287,475	1.86%	(7)	843,364	20,444,118	1.81%
Greenfield Partners	5,961	0.00%	(20,192)	0	26,153	0.00%
Greenfield VII	836,470	0.07%	(50,751)	3,686	883,535	0.08%
H/2 SOF III	5,344,953	0.47%	(286,256)	19,756	5,611,452	0.50%
H2 Special Opportunities II	196,468	0.02%	(2,951)	2,951	196,468	0.02%
Heitman Asia-Pacific Property Fund	7,783,860	0.68%	48,098	23,068	7,712,694	0.68%
HSRE Quad V	14,022,679	1.22%	(2,063,700)	19,356	16,067,023	1.42%
Jadian Real Estate I	30,798,149	2.69%	(891,660)	267,495	31,422,314	2.78%
Jadian RE Fund II	1,136,673	0.10%	1,136,673	0	-	-
Lone Star Fund V	24,476	0.00%	(40,095)	0	64,571	0.01%
Noble SSCIV	14,389,813	1.26%	(1,084,344)	80,594	15,393,563	1.36%
Oaktree Real Estate Opportunities Fund V	14,673,144	1.28%	926,152	48,848	13,698,144	1.21%
Prosperitas Real Estate Partners III	30,572	0.00%	0	(0)	30,572	0.00%
Resmark Townsend M H	3,205,031	0.28%	(398,369)	0	3,603,400	0.32%
Rockpoint Real Estate Fund III, L.P.	177,121	0.02%	0	1	177,120	0.02%
Slate Canadian Real Estate Opportunities	3,848,724	0.34%	0	48,941	3,799,784	0.34%
Slate Canadian Real Estate Opportunities	13,194,610	1.15%	18,732	149,051	13,026,827	1.15%
Unico Core Plus Partners LP	3,709,279	0.32%	(41,806)	41,807	3,709,278	0.33%
VBI Brazil Real Estate Opportunities II	1,983,729	0.17%	(16,346)	16,346	1,983,729	0.18%
Waterton Residential Property Venture XI	1,534,001	0.13%	(5,118)	(55,095)	1,594,214	0.14%
Total Real Estate	\$1,146,471,318	100.00%	\$12,901,125	\$5,016,645	\$1,128,553,548	100.00%

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fees					
Total Strategic Core Real Estate	0.02%	(9.78%)	2.19%	3.78%	7.05%
Berkshire MF Income	0.00%	(15.40%)	(0.77%)	1.51%	-
Black Creek Industrial Fund	0.00%	(5.42%)	7.34%	-	-
Brookfield Premier Real Estate Partners	0.00%	(17.70%)	(1.95%)	1.33%	-
Carlyle Property Investors	0.00%	(3.97%)	6.82%	8.94%	-
Cortland Growth & Income Fund	0.00%	(11.48%)	2.37%	4.36%	-
Greystar Growth And Income Fund LP	0.00%	(26.50%)	(5.37%)	(1.60%)	-
Hancock US Real Estate Fund LP	0.00%	(30.33%)	(6.30%)	(0.29%)	-
Jamestown Premier Property Fund	0.00%	(26.94%)	(26.89%)	(19.37%)	(5.55%)
JP Morgan Strategic Property Fund	0.00%	(18.79%)	(2.83%)	(0.23%)	3.95%
Kayne Anderson Core Real Estate LP	0.00%	(1.72%)	4.85%	5.47%	-
Lion Industrial Trust	0.00%	(4.82%)	13.94%	15.42%	15.15%
MetLife Core Property Fund LP	0.00%	(9.78%)	1.52%	3.40%	-
Prime Property Fund LLC	0.22%	(3.59%)	4.73%	4.72%	7.57%
Smart Markets Fund	0.00%	(5.34%)	3.41%	4.97%	7.08%
Total Tactical Non-Core Real Estate	0.38%	(2.36%)	6.30%	9.95%	10.59%
Almanac Realty Securities VII LP	0.00%	3.57%	4.50%	7.62%	-
Almanac Realty Securities (ARS) VII Side	0.00%	19.87%	13.12%	17.28%	-
Almanac Realty Securities VIII LP	0.00%	3.10%	9.40%	6.93%	-
Asana Real Estate Partners I	0.00%	5.14%	8.22%	8.25%	-
Bozzuto Capital Partners II, LLC	(0.00%)	1.15%	4.88%	5.30%	11.21%
Broadview Real Estate Partners LP	0.00%	16.42%	12.84%	2.43%	-
Brockton Capital II	6.11%	9.80%	(3.80%)	(2.43%)	(0.25%)
BRV Partners I	0.00%	6.61%	8.36%	10.41%	-
Bryanston Retail Opportunity Fund	0.00%	0.86%	4876.25%	1105.26%	278.48%
Buckingham Multifamily Fund I	0.00%	(11.19%)	11.47%	14.45%	-
Caprock Partners Industrial Co-Investment	0.00%	(3.81%)	25.37%	-	-
Carroll Fund V Bedrock Sidecar	0.00%	(24.68%)	(18.52%)	3.99%	-
Carroll Multifamily Real Estate Fund VI	0.00%	(19.37%)	(5.85%)	-	-
CITIC Capital China Retail Properties In	0.00%	(7.23%)	(9.26%)	(3.48%)	(1.88%)
Crossbay Townsend Feeder	4.47%	24.12%	31.48%	-	-
Fortress Japan Opportunity Fund I	12.46%	41.10%	20.38%	4.82%	14.80%
Fortress Japan Residential Co-Investment	(0.00%)	10.71%	23.70%	21.14%	-
Fortress Japan Opportunity Fund II	0.00%	(9.02%)	4.52%	3.80%	15.30%
Fortress Japan Opportunity Fund IV	0.00%	45.80%	31.45%	18.47%	-
Gerrity Retail II	0.00%	(10.02%)	(0.33%)	(1.80%)	-
GID Mainstay Fund	0.00%	(5.69%)	-	-	-
Gramercy Property EUR IV Townsend Feeder	4.13%	(3.02%)	1.75%	8.46%	-
Greenfield VII	0.00%	0.42%	6.93%	10.96%	-
H2 Special Opportunities II	0.00%	17.62%	7.16%	(23.05%)	(8.79%)
H/2 SOF III	0.00%	13.17%	10.83%	3.44%	-
Heitman Asia-Pacific Property Fund	0.00%	(14.21%)	(5.63%)	(1.24%)	-
HSRE Quad V	0.00%	(1.22%)	8.60%	10.29%	-
Jadian Real Estate I	0.00%	16.65%	23.02%	-	-
Lone Star Fund V	0.00%	23.43%	6.10%	8.47%	(0.24%)
Oaktree Real Estate Opportunities Fund V	0.00%	1.53%	1.18%	-	-
Rockpoint Real Estate Fund III, L.P.	0.00%	4.26%	(8.79%)	(4.59%)	(0.74%)
Slate Canadian Real Estate Opportunities	1.29%	(70.35%)	(36.86%)	(26.22%)	-
Slate Canadian Real Estate Opportunities	1.29%	(5.02%)	16.47%	-	-
SLI European Real Estate Club II	0.00%	1.89%	(97.94%)	*****%)	-
Unico Core Plus Partners LP	0.00%	(60.96%)	(41.36%)	(26.43%)	-
VBI Brazil Real Estate Opportunities II	0.00%	(9.06%)	2.12%	(4.74%)	(7.26%)
Waterton Residential Property Venture XI	0.00%	(17.56%)	(5.71%)	(4.18%)	5.02%
Wolff Credit Partners II LP	0.00%	(92.86%)	(53.90%)	(33.49%)	-
Total Real Estate	0.17%	(6.88%)	3.75%	6.02%	8.33%
Real Estate Benchmark*	(0.66%)	(9.99%)	1.02%	2.27%	5.51%

* The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index lagged 1 quarter as of 7/1/2015.

Investment Manager Asset Allocation

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

Asset Distribution Across Investment Managers

Alternatives	September 30, 2024			June 30, 2024		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Private Equity	\$1,673,128,673	74.87%	\$(43,697,241)	\$5,503,643	\$1,711,322,271	74.69%
Actis Energy 4 LP	6,149,818	0.28%	(114,155)	(27)	6,264,000	0.27%
Apollo IX	37,730,608	1.69%	(1,032,494)	(115,334)	38,878,436	1.70%
BlackRock Private Op	380,996,398	17.05%	(24,676,267)	461,521	405,211,144	17.69%
Carlyle Asia Fund V LP	44,641,588	2.00%	(843,824)	126,797	45,358,615	1.98%
Carlyle Asia IV	9,261,152	0.41%	(4,162,570)	(12,737)	13,436,459	0.59%
Carlyle Japan III	2,493,222	0.11%	(5,152,378)	901,963	6,743,637	0.29%
Carlyle Sub-Saharan Africa Fund	14,838,100	0.66%	(3,153,181)	(38,215)	18,029,496	0.79%
CCMP Capital Investors III, L.P.	359,434	0.02%	6,771	(6,771)	359,434	0.02%
Coller International Partners VI, L.P.	1,416,203	0.06%	(424,174)	(0)	1,840,377	0.08%
Coller International Partners VIII LP	64,143,563	2.87%	146,337	1	63,997,225	2.79%
Coller VII	19,143,867	0.86%	(3,342,114)	0	22,485,981	0.98%
Dover Street IX LP	28,496,592	1.28%	(1,133,369)	141,301	29,488,660	1.29%
Dover Street VIII, L.P.	2,911,577	0.13%	(12,416)	12,416	2,911,577	0.13%
Dover Street X LP	44,658,071	2.00%	(149,589)	149,589	44,658,071	1.95%
HarbourVest HIPEP IX	33,955,562	1.52%	2,298,150	75,000	31,582,412	1.38%
HarbourVest HIPEP VII	44,942,651	2.01%	(1,553,927)	93,750	46,402,828	2.03%
HarbourVest HIPEP VIII	48,557,574	2.17%	(2,368,853)	168,603	50,757,824	2.22%
HIG Advantage II	0	0.00%	(10,875,561)	0	10,875,561	0.47%
Industry Ventures Fund VI, LP	276,216	0.01%	(58,872)	58,872	276,216	0.01%
Industry Ventures Partnership Holdings I	33,146,051	1.48%	(57,997)	57,997	33,146,051	1.45%
Industry Ventures PH VI	17,034,316	0.76%	529,737	(4,032)	16,508,612	0.72%
Industry Ventures Partnership Holdings V	40,004,153	1.79%	(51,386)	51,386	40,004,153	1.75%
Industry Ventures Partnership III	24,856,882	1.11%	0	0	24,856,882	1.08%
Industry Ventures Secondary IX	53,140,255	2.38%	(91,019)	91,018	53,140,256	2.32%
Industry Ventures Secondary VII LP	4,523,368	0.20%	15,184	(15,185)	4,523,369	0.20%
Kayne Anderson Energy Fund VII LP	26,595,406	1.19%	(2,240,865)	0	28,836,271	1.26%
Lexington Capital Partners VII	3,415,603	0.15%	(199,433)	0	3,615,036	0.16%
Lexington Capital Partners VIII LP	25,231,674	1.13%	(1,416,612)	0	26,648,286	1.16%
NGP XI	30,173,748	1.35%	(6,680,839)	(204,595)	37,059,182	1.62%
Pine Brook Capital Partners II LP	35,928,761	1.61%	(735,259)	81,472	36,582,548	1.60%
RFE Investment Partners VIII, LP	15,017,090	0.67%	139,233	(139,233)	15,017,090	0.66%
SL Capital European Smaller Funds I	4,700,030	0.21%	(410,559)	202,683	4,907,906	0.21%
Edgewater Growth Capital Partners III	4,754,493	0.21%	0	0	4,754,493	0.21%
Edgewater Growth Capital Partners IV LP	44,233,410	1.98%	1,425,000	0	42,808,410	1.87%
Thoma Bravo Fund XIII LP	72,500,574	3.24%	(2,476,607)	144,220	74,832,961	3.27%
Thoma Bravo XII	58,646,867	2.62%	(99,616)	99,615	58,646,867	2.56%
Thoma Bravo Fund XIV LP	53,425,042	2.39%	(1,464,578)	0	54,889,620	2.40%
Top Tier Venture Velocity Fund 3 LP	17,841,196	0.80%	0	(1)	17,841,197	0.78%
Top Tier Venture Velocity Fund II LP	24,564,979	1.10%	(1,014,937)	(15,277)	25,595,193	1.12%
Top Tier VVF	11,627,365	0.52%	5,439	(5,438)	11,627,364	0.51%
Warburg Pincus Global Growth	59,793,404	2.68%	(1,495,000)	0	61,288,404	2.67%
Warburg Pincus Private Equity XII LP	50,239,202	2.25%	(626,560)	0	50,865,762	2.22%
Total Private Debt	\$561,718,269	25.13%	\$(22,680,560)	\$4,465,990	\$579,932,839	25.31%
Ares SR Dir Lend III	18,091,578	0.81%	18,091,578	0	-	-
Atalaya SOF VIII	49,488,581	2.21%	(1,492,463)	449,991	50,531,053	2.21%
Avenue Special Situations Fund VI (A), L	1,780,180	0.08%	0	0	1,780,180	0.08%
BlueBay DLF II	3,157,794	0.14%	41,529	83,815	3,032,449	0.13%
Bluebay DLF III	34,807,916	1.56%	(2,203,782)	283,055	36,728,643	1.60%
CarVal CVF III	3,839,035	0.17%	(4,322,660)	133,882	8,027,813	0.35%
CarVal Credit Value Fund IV LP	32,349,516	1.45%	(964,745)	964,745	32,349,516	1.41%
CarVal Credit Value Fund V LP	45,041,726	2.02%	(9,552,399)	427,098	54,167,027	2.36%
Clareant European DLF Investor Feeder LP	463	0.00%	(9,136)	0	9,599	0.00%
Clareant European DLF II	21,622,808	0.97%	(2,048,385)	(0)	23,671,193	1.03%
Alcentra European Direct Lending III	30,284,643	1.36%	(2,936,350)	(6,176)	33,227,170	1.45%
Comvest III	1,619,228	0.07%	(5,084)	5,084	1,619,228	0.07%
Comvest IV	24,119,446	1.08%	(1,839,419)	218,281	25,740,584	1.12%
Comvest V	38,341,362	1.72%	(1,965,896)	401,593	39,905,665	1.74%
Crescent Capital Direct Lending Levered	13,786,073	0.62%	(7,619,738)	131,860	21,273,951	0.93%
Crescent Direct Lending Fund	1,078,370	0.05%	(14,900)	14,900	1,078,370	0.05%
Crescent Direct III	32,990,705	1.48%	684,875	250,971	32,054,859	1.40%
Gramercy Distressed Opportunity II	17,620,028	0.79%	(2,089,751)	0	19,709,779	0.86%
Gramercy DOF III	12,957,443	0.58%	(755,232)	0	13,712,675	0.60%
Ironwood Mezzanine Fund III, L.P.	2,841,675	0.13%	(102,429)	21,362	2,922,742	0.13%
Monroe Capital Private Credit Fund III L	21,430,649	0.96%	(3,023,357)	38,597	24,415,409	1.07%
Monroe Private Credit Fund II	7,922,666	0.35%	(492,547)	(216,502)	8,631,715	0.38%
Monroe Private Credit IV	44,349,979	1.98%	(1,125,859)	0	45,475,838	1.98%
Riverstone Credit	4,525,372	0.20%	(9,311,997)	30,187	13,807,182	0.60%
Riverstone Credit II NEPC	6,442,946	0.29%	(147,041)	0	6,589,987	0.29%
Riverstone Credit Partners II LP	15,504,932	0.69%	(571,937)	(81,558)	16,158,427	0.71%
Siguler Guff Distressed Opportunities IV	1,980,489	0.09%	(841,669)	(5,383)	2,827,541	0.12%
Sixth Street TAO	12,992,613	0.58%	9,102,398	113,332	3,776,883	0.16%
Tennenbaum Opportunities Fund VI, LLC	81,276	0.00%	20,446	(20,446)	81,276	0.00%
Total Alternative Assets	\$2,234,846,942	100.00%	\$(66,377,801)	\$9,969,633	\$2,291,255,110	100.00%

Investment Manager Returns

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

Returns for Periods Ended September 30, 2024

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fees					
Total Private Equity	0.04%	5.12%	5.72%	13.03%	11.69%
Actis Energy 4 LP	0.00%	(0.33%)	12.89%	9.40%	-
Apollo IX	0.00%	8.09%	16.77%	19.00%	-
BlackRock Private Op	0.00%	6.38%	1.92%	12.24%	-
Carlyle Asia Fund V LP	0.00%	6.54%	(1.71%)	8.72%	-
Carlyle Asia IV	(0.00%)	16.90%	11.95%	20.84%	12.56%
Carlyle Japan III	14.86%	72.60%	60.26%	30.36%	24.47%
Carlyle Sub-Saharan Africa Fund	0.00%	8.83%	19.20%	11.16%	-
CCMP Capital Investors III, L.P.	0.00%	(38.53%)	(26.72%)	(2.79%)	2.45%
Coller International Partners VI, L.P.	0.00%	(1.76%)	(1.31%)	5.67%	9.51%
Coller International Partners VIII LP	0.00%	8.78%	15.00%	-	-
Coller VII	0.00%	5.05%	7.06%	11.69%	-
Dover Street IX LP	0.00%	(2.48%)	(0.85%)	11.21%	-
Dover Street VIII, L.P.	0.00%	(14.21%)	(11.61%)	0.71%	8.22%
Dover Street X LP	0.00%	0.87%	12.64%	-	-
Edgewater Growth Capital Partners III	0.00%	(7.68%)	3.65%	(2.81%)	2.63%
Edgewater Growth Capital Partners IV LP	0.00%	13.08%	20.42%	17.44%	-
HarbourVest HIPEP IX	0.00%	0.63%	8.45%	-	-
HarbourVest HIPEP VII	0.00%	2.84%	2.79%	14.77%	-
HarbourVest HIPEP VIII	0.06%	3.85%	5.04%	15.34%	-
Industry Ventures Fund VI, LP	0.00%	145.51%	4.62%	21.92%	10.93%
Industry Ventures Partnership Holdings I	0.00%	(7.20%)	3.00%	16.42%	-
Industry Ventures Partnership Holdings V	0.00%	(12.56%)	6.08%	16.14%	-
Industry Ventures Partnership III	0.00%	(9.55%)	(12.28%)	13.41%	14.88%
Industry Ventures Secondary VII LP	(0.00%)	(4.80%)	(11.11%)	8.97%	11.68%
Industry Ventures Secondary IX	0.00%	(1.08%)	4.96%	-	-
Kayne Anderson Energy Fund VII LP	0.00%	26.53%	25.78%	(6.53%)	-
Lexington Capital Partners VII	0.00%	0.33%	1.13%	7.94%	8.32%
Lexington Capital Partners VIII LP	0.00%	(0.20%)	3.08%	10.66%	-
NGP XI	0.00%	1.33%	23.17%	11.16%	-
Pine Brook Capital Partners II LP	0.00%	0.65%	4.46%	3.93%	5.56%
RFE Investment Partners VIII, LP	0.00%	(9.78%)	6.36%	9.15%	10.57%
SL Capital European Smaller Funds I	4.14%	1.35%	0.58%	4.85%	5.49%
Thoma Bravo Fund XIII LP	0.00%	10.34%	8.00%	25.37%	-
Thoma Bravo Fund XIV LP	0.00%	13.67%	7.21%	-	-
Thoma Bravo XII	0.00%	17.67%	13.24%	17.47%	-
Top Tier Venture Velocity Fund 3 LP	(0.00%)	(10.38%)	(13.73%)	6.70%	-
Top Tier Venture Velocity Fund II LP	(0.00%)	(6.09%)	(8.57%)	21.81%	-
Top Tier VVF	0.00%	(8.71%)	(0.15%)	13.56%	-
Warburg Pincus Global Growth	0.00%	9.32%	10.53%	9.89%	-
Warburg Pincus Private Equity XII LP	0.00%	1.66%	3.90%	14.44%	-
Total Private Debt	0.01%	5.69%	6.36%	5.57%	5.83%
Alcentra European Direct Lending III	0.00%	*****%	*****%	15973.26%	1197.70%
Avenue Special Situations Fund VI (A), L	0.00%	(11.36%)	(5.97%)	8.08%	0.39%
BlueBay DLF II	4.13%	(9.00%)	(7.29%)	(1.32%)	-
Bluebay DLF III	0.00%	7.10%	8.27%	7.59%	-
CarVal Credit Value Fund IV LP	0.00%	6.87%	7.51%	7.56%	-
CarVal CVF III	(0.00%)	5.87%	7.84%	6.16%	-
Clareant European DLF II	0.00%	9.70%	6.44%	5.36%	-
Clareant European DLF Investor Feeder LP	0.00%	4.88%	4.72%	6.07%	-
Comvest III	0.00%	(1.55%)	(23.43%)	(12.81%)	-
Comvest IV	0.00%	3.66%	3.40%	5.88%	-
Comvest V	0.00%	7.94%	8.60%	-	-
Crescent Capital Direct Lending Levered	0.00%	12.27%	10.55%	10.09%	-
Crescent Direct Lending Fund	0.00%	25.38%	11.76%	9.76%	8.41%
Gramercy Distressed Opportunity II	0.00%	(18.88%)	(10.28%)	(10.90%)	(6.87%)
Gramercy DOF III	0.00%	(10.79%)	(6.04%)	(5.61%)	-
Ironwood Mezzanine Fund III, L.P.	0.00%	(21.36%)	(2.96%)	(0.01%)	3.35%
Matlin Patterson Global Opportunities II	0.00%	(85.63%)	(57.40%)	(41.06%)	(23.78%)
Monroe Capital Private Credit Fund III L	0.00%	8.28%	8.37%	8.26%	-
Monroe Private Credit Fund II	(0.00%)	0.65%	1.89%	5.54%	-
Riverstone Credit	0.00%	(14.36%)	2.41%	(1.68%)	-
Riverstone Credit II NEPC	(0.03%)	9.15%	12.08%	12.44%	-
Riverstone Credit Partners II LP	0.00%	(6.53%)	12.88%	8.15%	-
Siguler Guff Distressed Opportunities IV	0.00%	(13.62%)	(2.74%)	1.29%	4.71%
Tennenbaum Opportunities Fund VI, LLC	0.00%	15.97%	(7.60%)	8.06%	4.76%
Total Alternative Assets	0.03%	5.26%	5.88%	10.73%	9.00%
Alternative Assets Benchmark*	3.13%	20.82%	9.84%	13.33%	11.35%

* The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1% (1 qtr lag) and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022.

Total Domestic Equity Period Ended September 30, 2024

Domestic Equity Benchmark

The Domestic Equity Benchmark is the Russell 3000 Index as of 7/1/2021. From 7/1/2015 to 6/30/2021 the benchmark was the S&P 500 Index. From 7/1/2003 to 6/30/2015 the benchmark was the Russell 3000 Index. Prior to 7/1/2003 the benchmark was the S&P 500 Index. Secondary Domestic Equity Bmk consists of 60% S&P 500, 20% Russell 2500, and 20% Russell 2000.

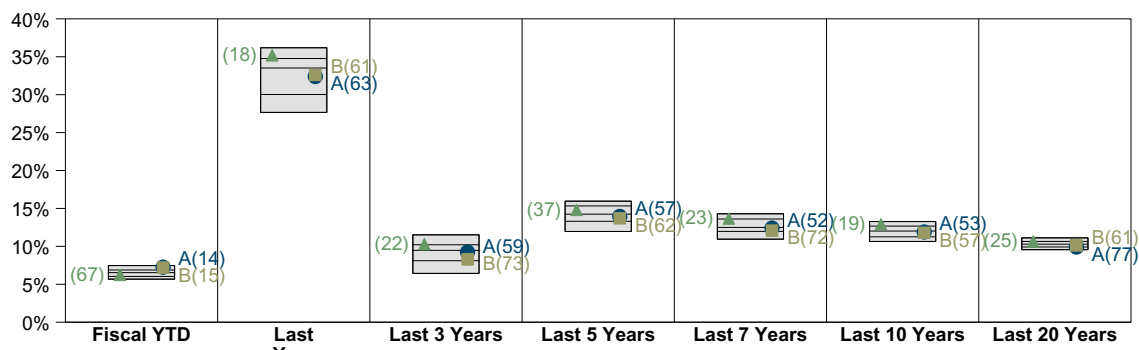
Quarterly Summary and Highlights

- Total Domestic Equity's portfolio posted a 7.25% return for the quarter placing it in the 14 percentile of the Large Public Funds Domestic Equity group for the quarter and in the 63 percentile for the last year.
- Total Domestic Equity's portfolio outperformed the Domestic Equity Benchmark by 1.02% for the quarter and underperformed the Domestic Equity Benchmark for the year by 2.80%.

Quarterly Asset Growth

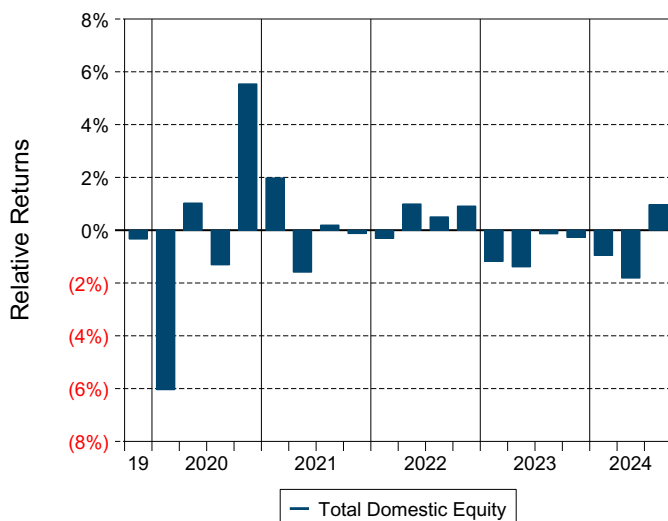
Beginning Market Value	\$3,941,147,389
Net New Investment	\$0
Investment Gains/(Losses)	\$285,886,867
Ending Market Value	\$4,227,034,257

Performance vs Large Public Funds Domestic Equity (Gross)

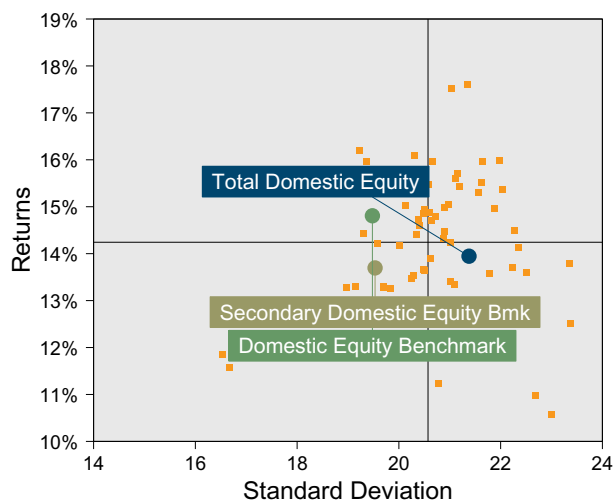


10th Percentile	7.47	36.19	11.52	15.96	14.30	13.27	11.12
25th Percentile	6.88	34.77	10.21	15.33	13.61	12.67	10.65
Median	6.54	33.52	9.47	14.24	12.50	12.02	10.29
75th Percentile	6.03	30.03	8.11	13.30	11.97	11.26	9.92
90th Percentile	5.67	27.66	6.44	11.96	10.94	10.65	9.57
Total Domestic Equity	7.25	32.40	9.25	13.95	12.41	11.89	9.91
Secondary Domestic Equity Bmk	7.21	32.61	8.28	13.70	12.08	11.79	10.12
Domestic Equity Benchmark	6.23	35.19	10.29	14.81	13.67	12.92	10.65

Relative Returns vs Domestic Equity Benchmark



Large Public Funds Domestic Equity (Gross) Annualized Five Year Risk vs Return

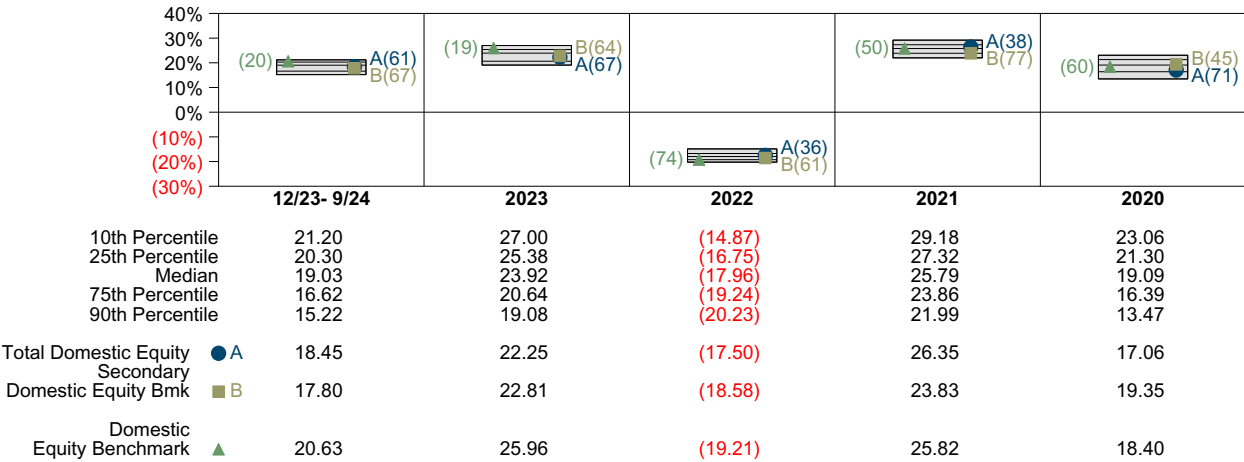


Total Domestic Equity Return Analysis Summary

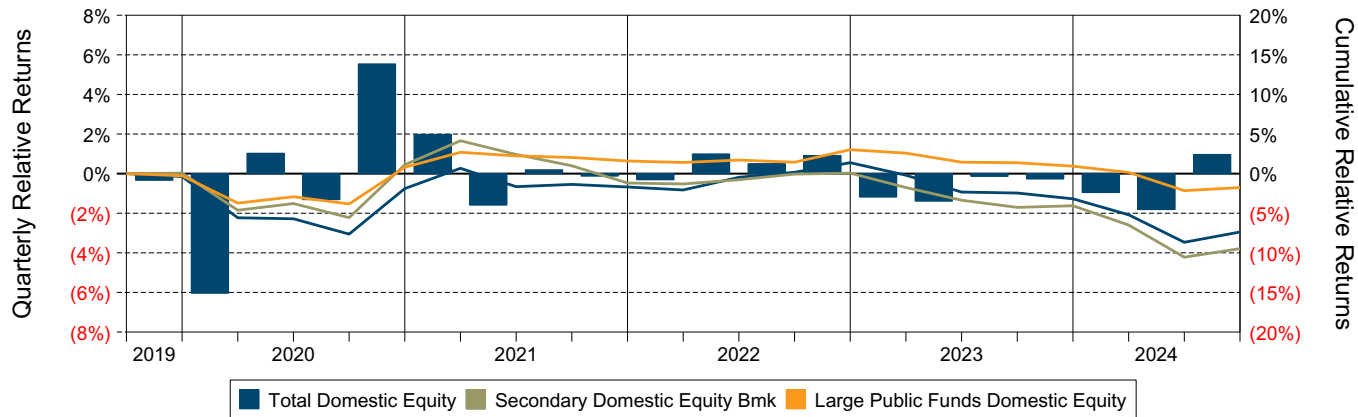
Return Analysis

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

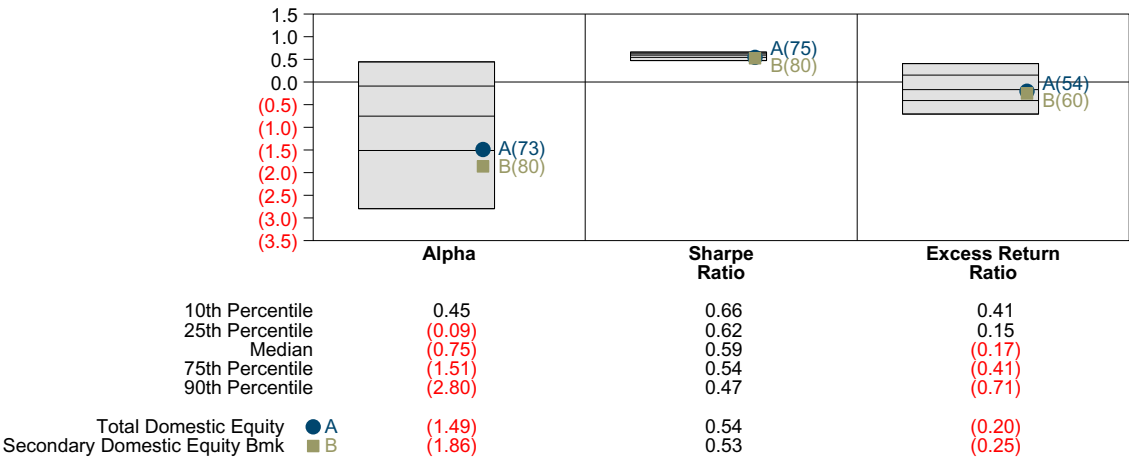
Performance vs Large Public Funds Domestic Equity (Gross)



Cumulative and Quarterly Relative Returns vs Domestic Equity Benchmark



Risk Adjusted Return Measures vs Domestic Equity Benchmark Rankings Against Large Public Funds Domestic Equity (Gross) Five Years Ended September 30, 2024

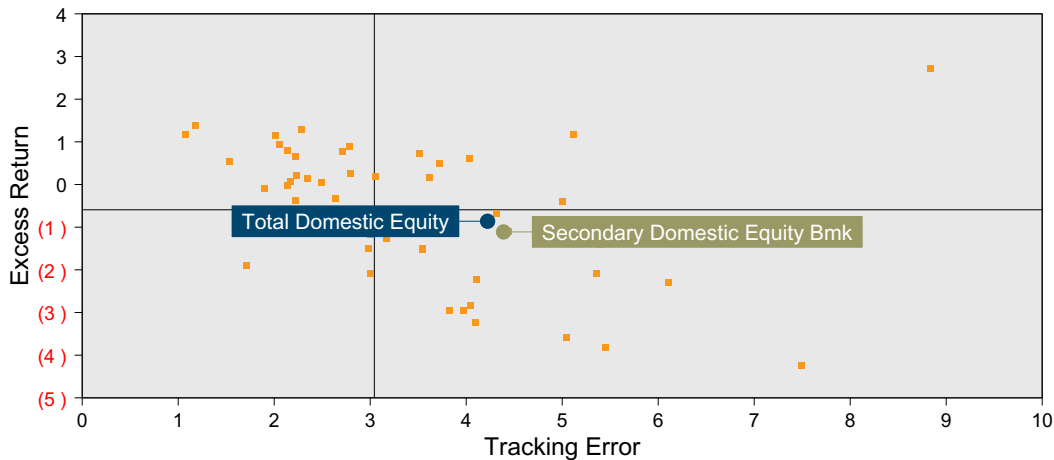


Total Domestic Equity Risk Analysis Summary

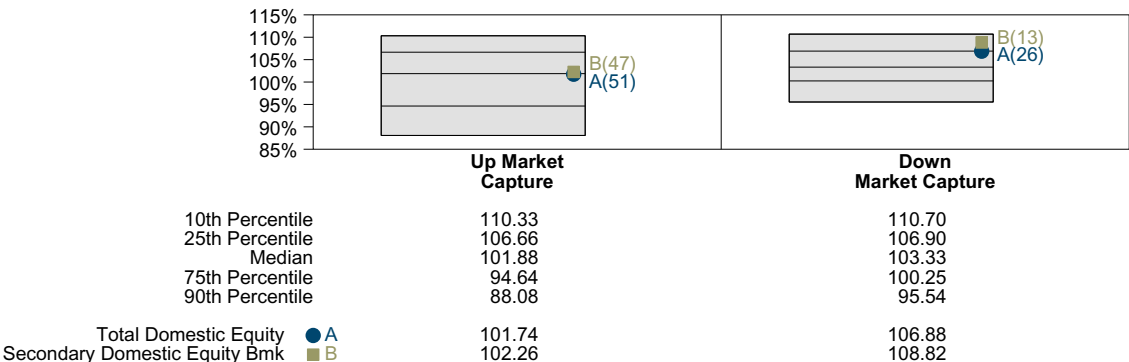
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

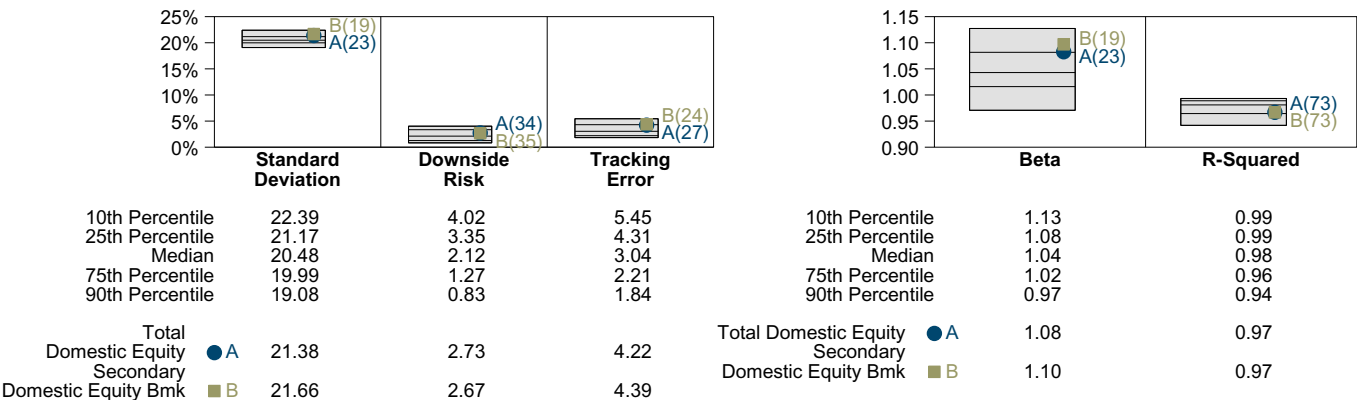
Risk Analysis vs Large Public Funds Domestic Equity (Gross) Five Years Ended September 30, 2024



Market Capture vs Domestic Equity Benchmark Rankings Against Large Public Funds Domestic Equity (Gross) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Domestic Equity Benchmark Rankings Against Large Public Funds Domestic Equity (Gross) Five Years Ended September 30, 2024

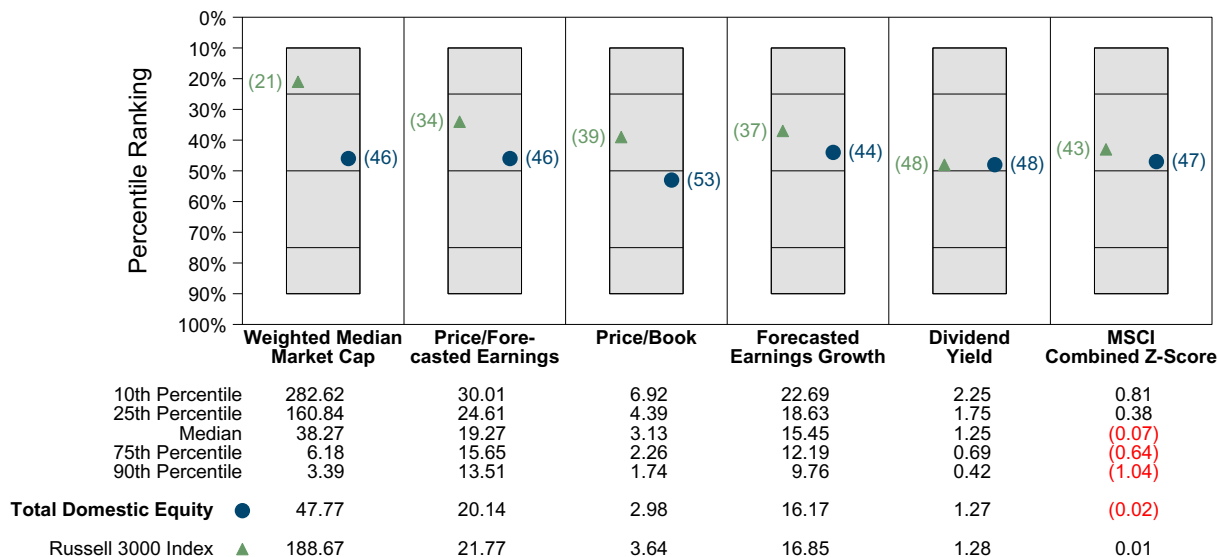


Total Domestic Equity Equity Characteristics Analysis Summary

Portfolio Characteristics

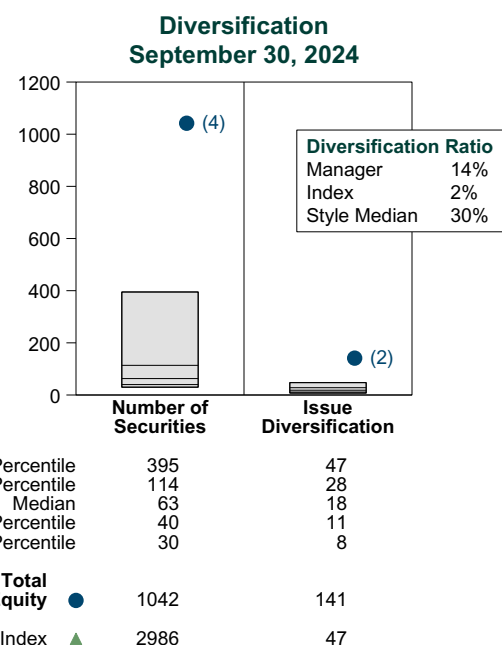
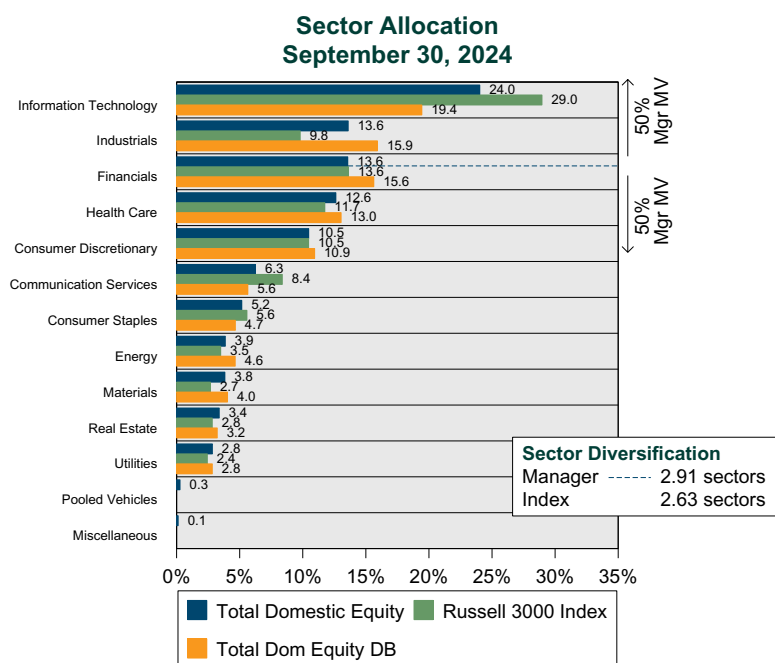
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Total Domestic Equity Database as of September 30, 2024



Sector Weights

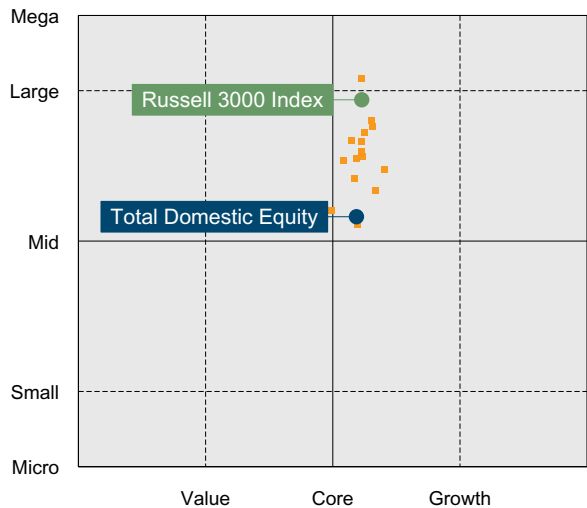
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Current Holdings Based Style Analysis
Total Domestic Equity
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

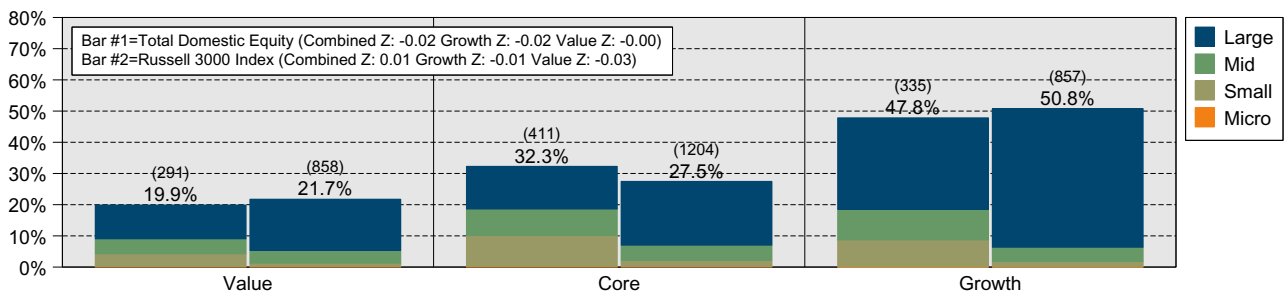
Style Map vs Large Public Funds DE Holdings as of September 30, 2024



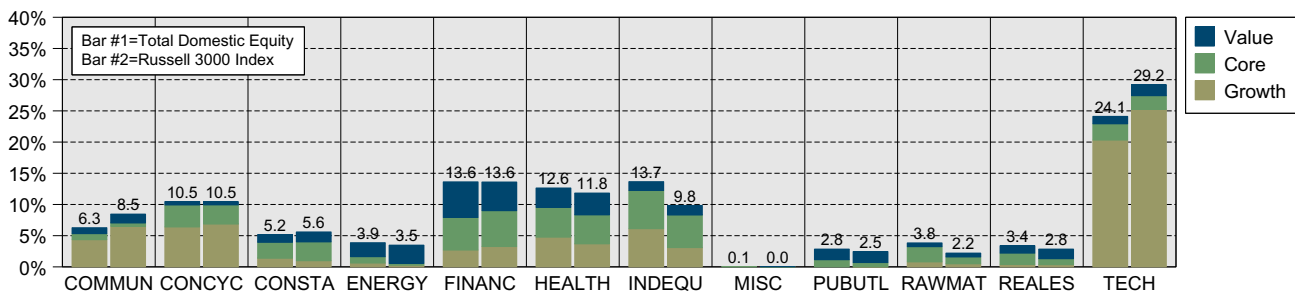
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	10.8% (102) 16.4% (102)	13.7% (95) 20.4% (96)	29.3% (78) 44.4% (93)	53.8% (275) 81.3% (291)
Mid	4.8% (118) 4.1% (154)	8.5% (144) 4.9% (209)	9.8% (131) 4.6% (221)	23.1% (393) 13.6% (584)
Small	4.1% (60) 1.1% (275)	9.9% (161) 2.0% (503)	8.7% (125) 1.7% (390)	22.7% (346) 4.7% (1168)
Micro	0.2% (11) 0.2% (327)	0.2% (11) 0.2% (396)	0.0% (1) 0.1% (153)	0.5% (23) 0.5% (876)
Total	19.9% (291) 21.7% (858)	32.3% (411) 27.5% (1204)	47.8% (335) 50.8% (857)	100.0% (1037) 100.0% (2919)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



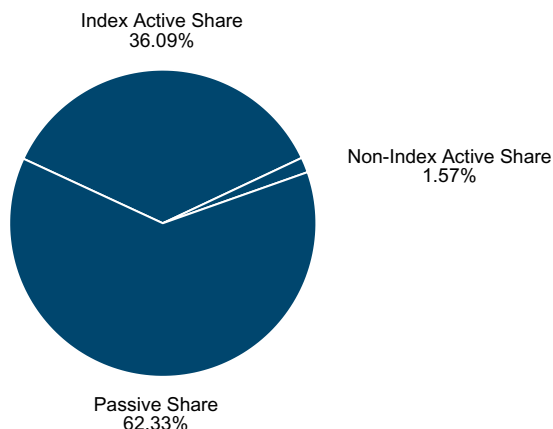
Sector Weights Distribution Holdings as of September 30, 2024



Total Domestic Equity Active Share Analysis as of September 30, 2024 vs. Russell 3000 Index

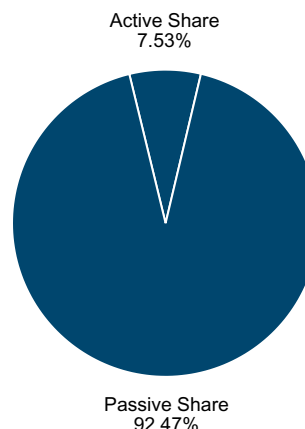
Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



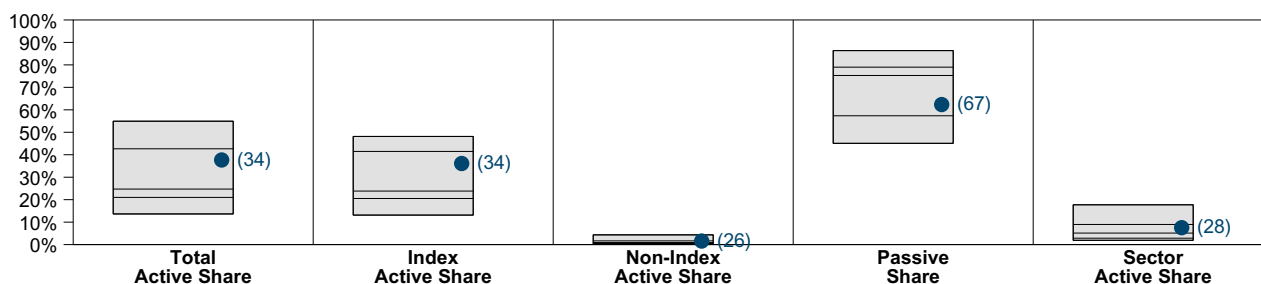
Total Active Share: 37.67%

Sector Exposure Active Share



	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	15.61%	0.88%	16.50%	8.38%	6.25%	2.09%
Consumer Discretionary	36.04%	2.52%	38.55%	10.46%	10.47%	4.00%
Consumer Staples	28.28%	1.66%	29.93%	5.57%	5.17%	1.73%
Energy	41.36%	3.45%	44.82%	3.49%	3.86%	1.57%
Financials	39.69%	0.19%	39.87%	13.62%	13.56%	5.43%
Health Care	39.59%	1.19%	40.78%	11.75%	12.62%	4.78%
Industrials	51.44%	0.97%	52.42%	9.80%	13.60%	5.70%
Information Technology	20.15%	1.41%	21.56%	28.96%	24.03%	7.53%
Materials	60.42%	4.69%	65.10%	2.68%	3.83%	2.01%
Miscellaneous	0.00%	100.00%	100.00%	-	0.13%	0.06%
Pooled Vehicles	0.00%	100.00%	100.00%	-	0.27%	0.14%
Real Estate	52.89%	0.39%	53.29%	2.83%	3.38%	1.57%
Utilities	44.02%	0.00%	44.02%	2.44%	2.84%	1.07%
Total	36.09%	1.57%	37.67%	100.00%	100.00%	37.66%

Active Share vs. Lg Public Funds DE



10th Percentile	54.92	48.15	4.34	86.36	17.72
25th Percentile	42.66	41.48	1.66	78.99	8.96
Median	24.72	23.82	0.92	75.28	5.12
75th Percentile	21.01	20.52	0.50	57.34	2.85
90th Percentile	13.64	13.13	0.25	45.08	1.91

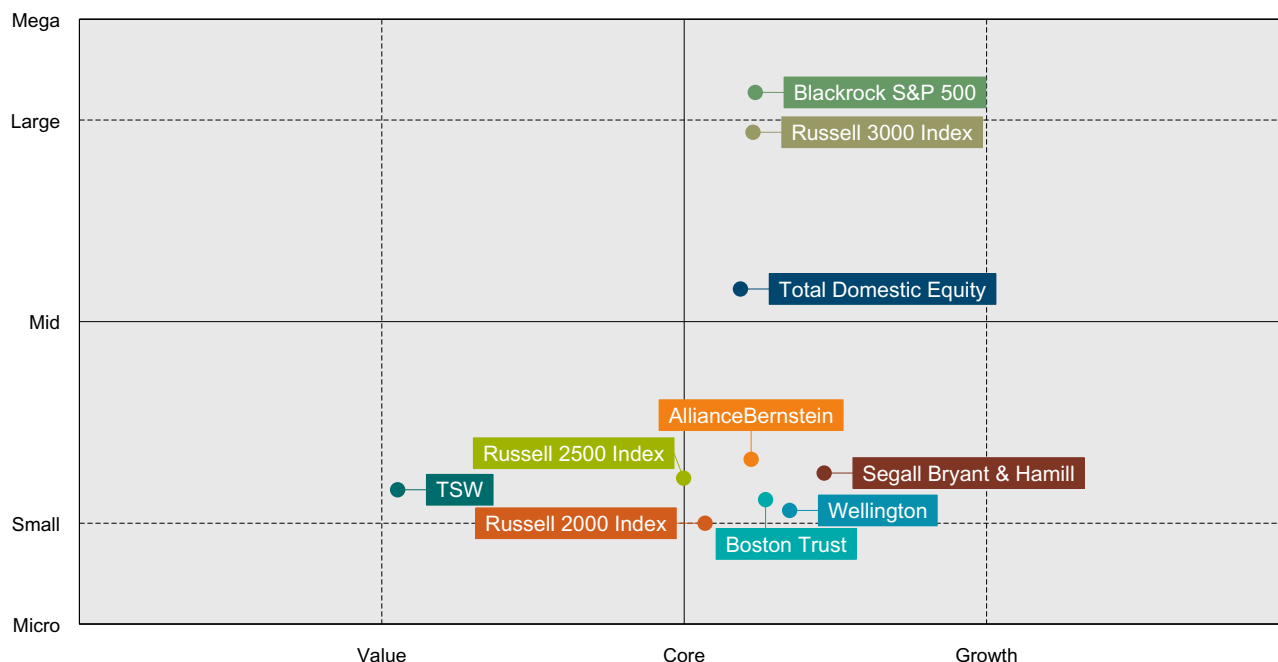
Total Domestic Equity	37.67	36.09	1.57	62.33	7.53

Holdings Based Style Analysis For One Quarter Ended September 30, 2024

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map

Holdings for One Quarter Ended September 30, 2024

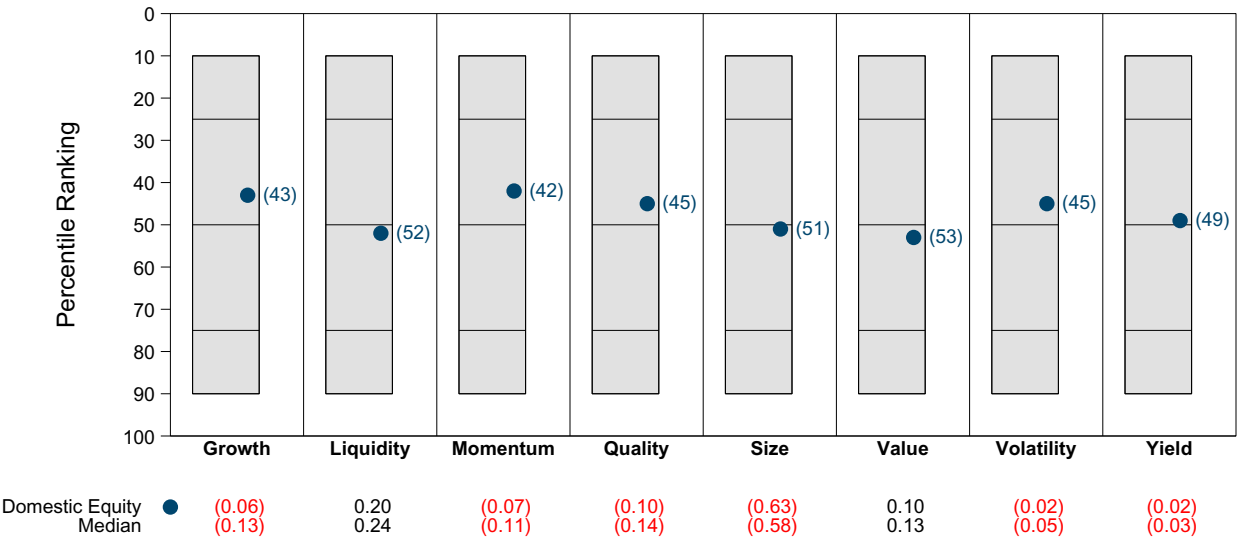


	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
Total Domestic Equity	100.00%	47.77	(0.02)	(0.02)	(0.00)	1042	141.26
Blackrock S&P 500	57.75%	265.24	0.02	(0.01)	(0.03)	502	29.03
Russell 3000 Index	-	188.67	0.01	(0.01)	(0.03)	2986	46.69
AllianceBernstein	11.41%	7.92	0.01	(0.01)	(0.02)	173	63.53
TSW	6.62%	5.60	(1.00)	(0.35)	0.65	85	27.79
Russell 2500 Index	-	6.49	(0.18)	(0.10)	0.08	2476	325.65
Boston Trust	6.18%	4.85	0.05	0.01	(0.04)	70	25.70
Segall Bryant & Hamill	6.58%	6.88	0.21	0.07	(0.14)	82	28.90
Wellington	11.46%	4.03	0.12	0.01	(0.11)	258	58.61
Russell 2000 Index	-	3.05	(0.12)	(0.13)	(0.01)	1976	301.77

Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Total Domestic Equity Database group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

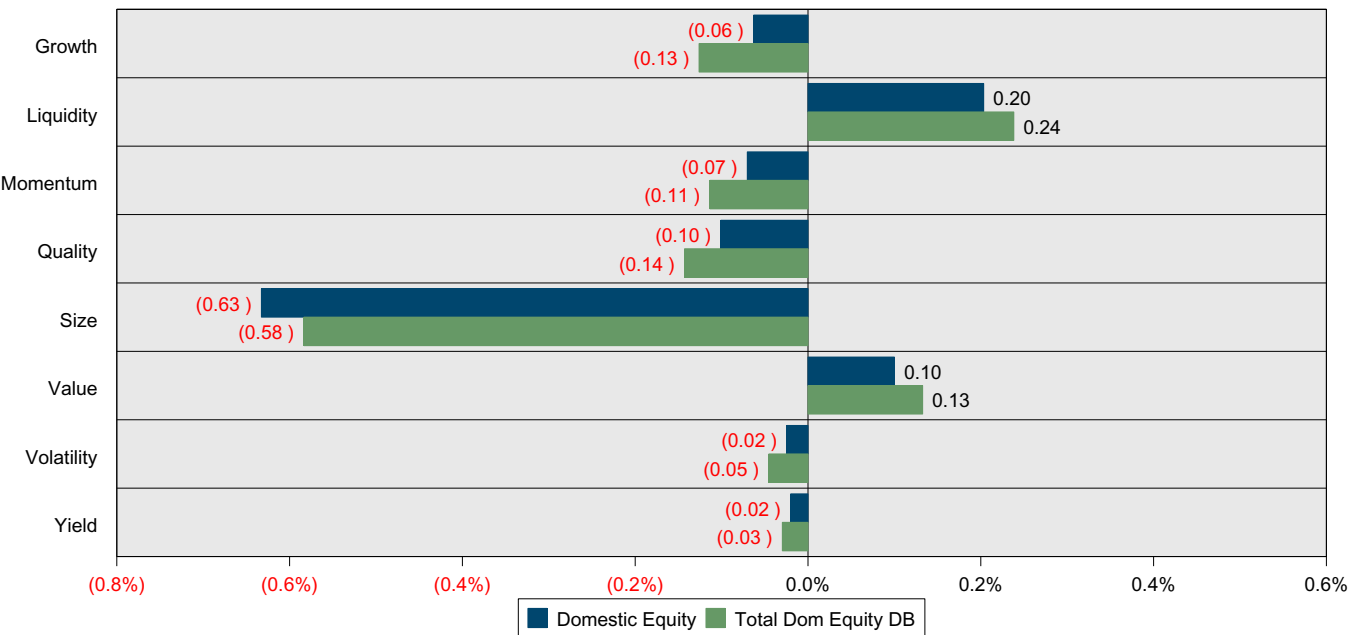
Factor Exposures Relative to Russell 3000 Index, Rankings vs Total Domestic Equity Database
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Total Domestic Equity Database group relative to the Russell 3000 Index.

Factor Exposures Relative to Russell 3000 Index
for Period Ended September 30, 2024



Blackrock S&P 500

Period Ended September 30, 2024

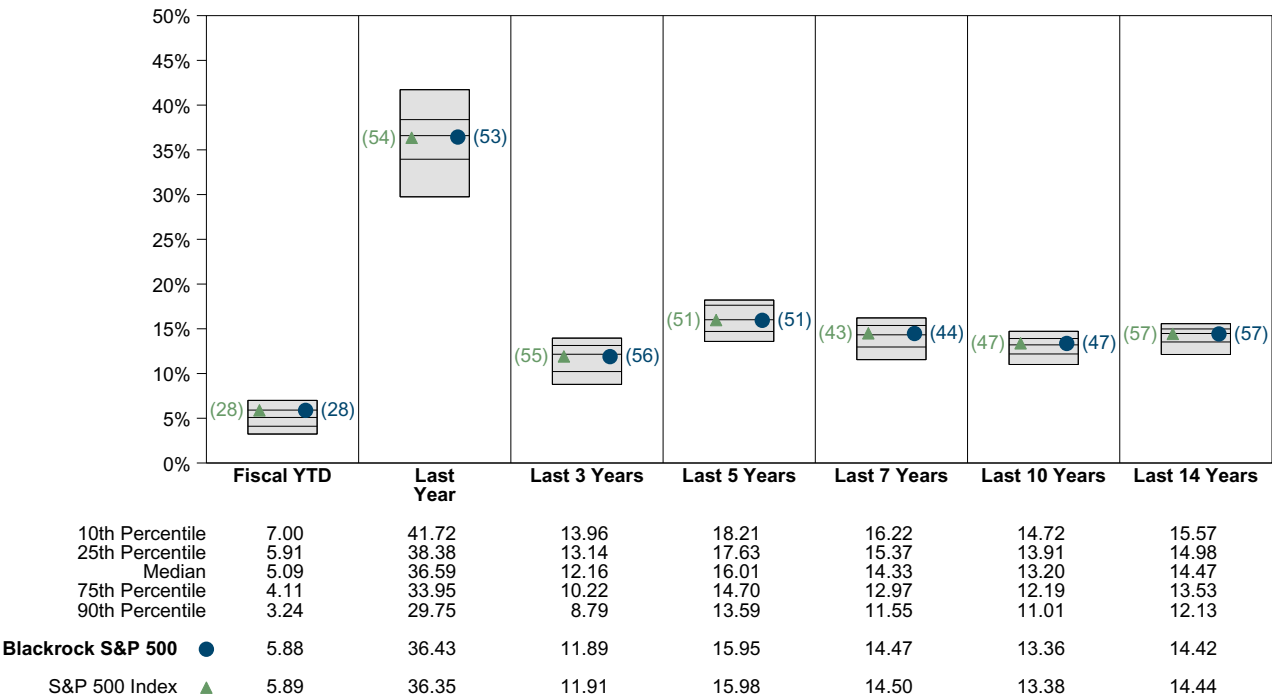
Investment Philosophy

BlackRock index strategies are designed to provide the best possible tracking error versus their respective benchmarks with minimal transaction costs. NHRS inception in the fund was August 2010.

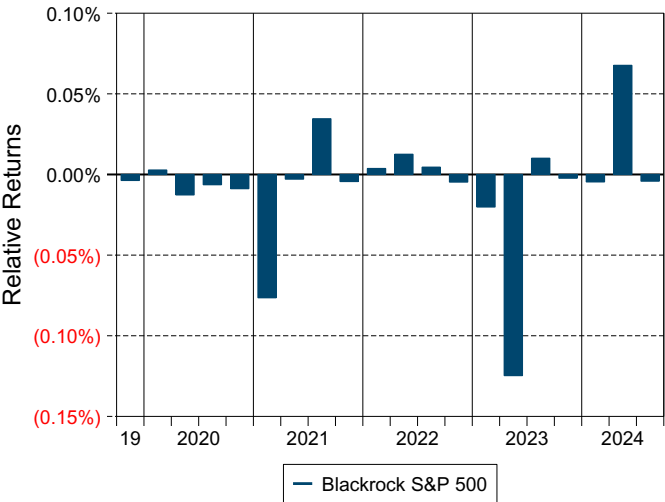
Quarterly Asset Growth

Beginning Market Value	\$2,305,420,983
Net New Investment	\$0
Investment Gains/(Losses)	\$135,609,111
Ending Market Value	\$2,441,030,094

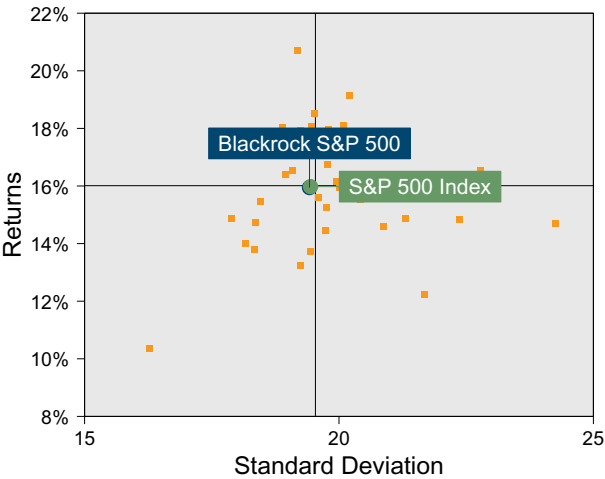
Performance vs Callan Large Cap Core (Gross)



Relative Return vs S&P 500 Index



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

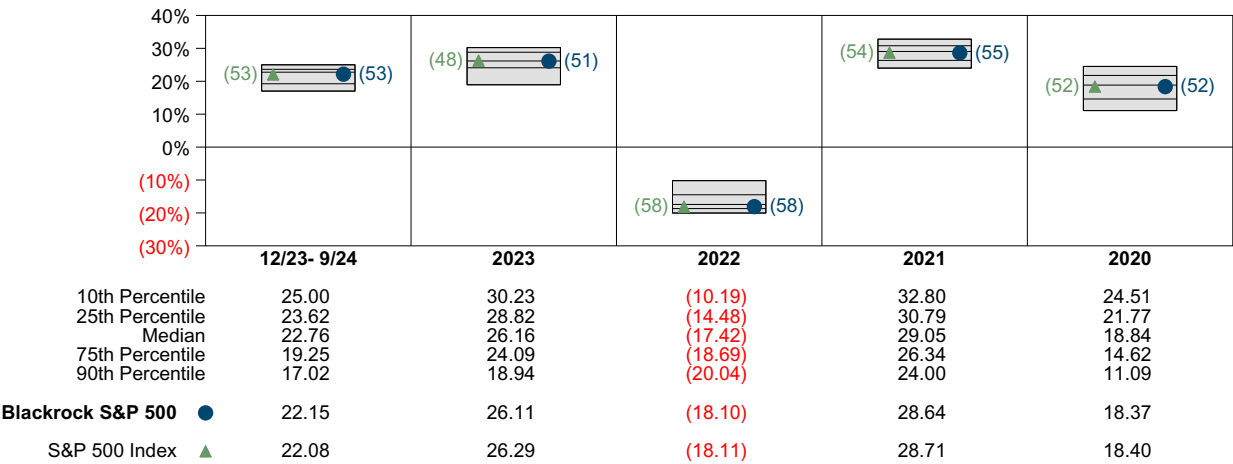


Blackrock S&P 500 Return Analysis Summary

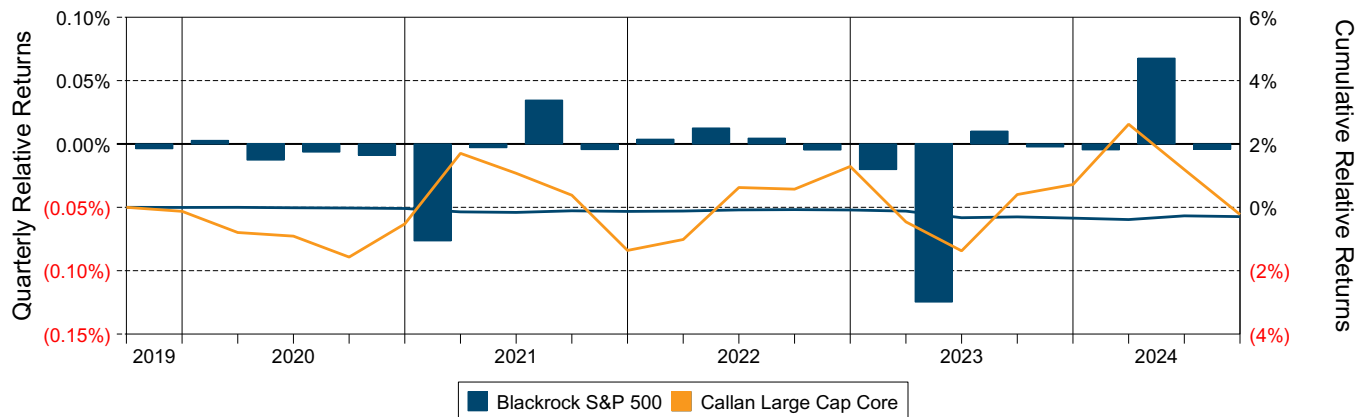
Return Analysis

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

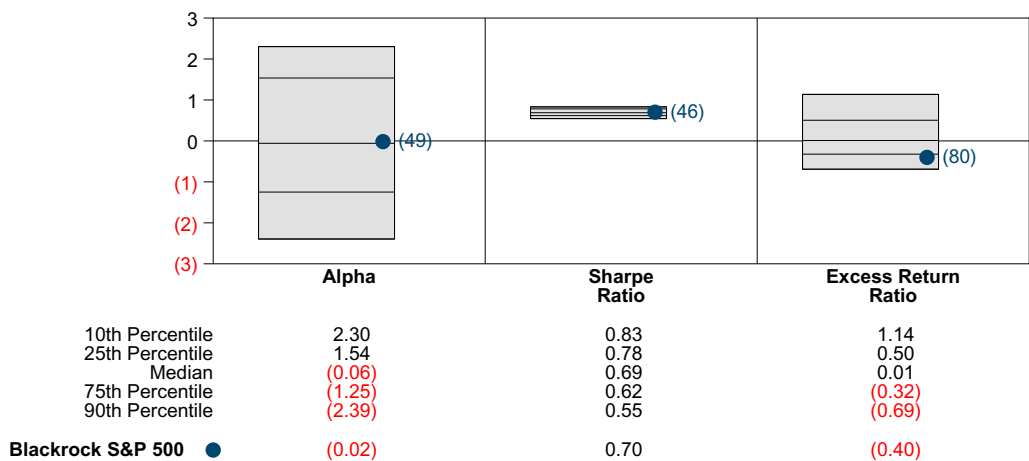
Performance vs Callan Large Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs S&P 500 Index



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

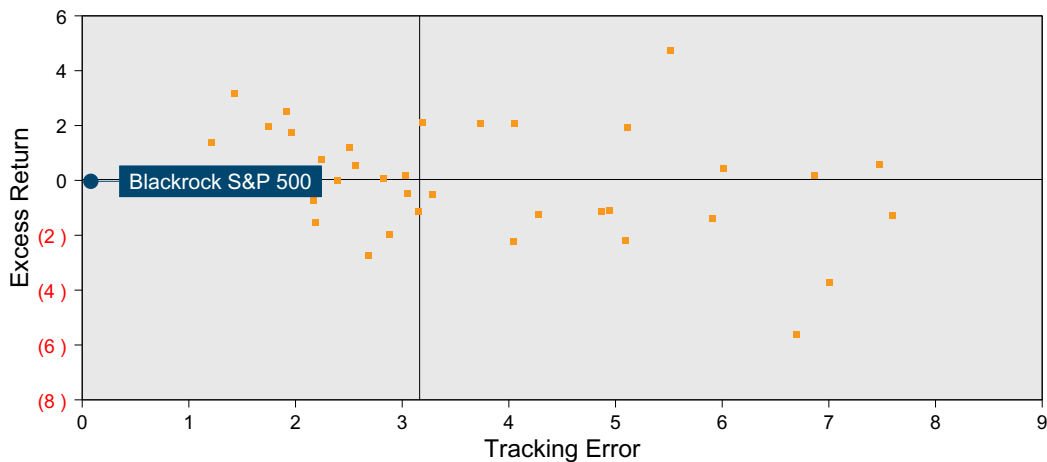


Blackrock S&P 500 Risk Analysis Summary

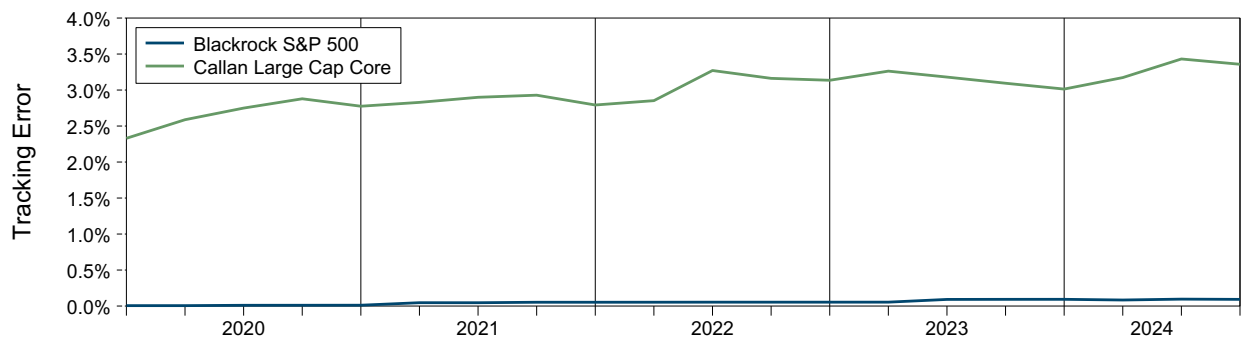
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

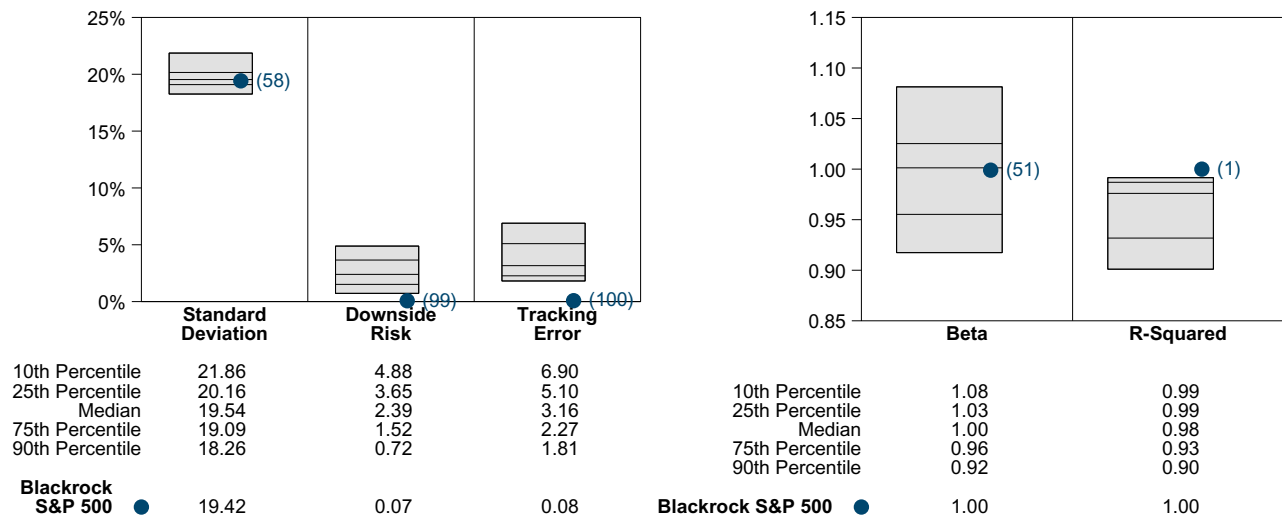
Risk Analysis vs Callan Large Cap Core (Gross) Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs S&P 500 Index



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

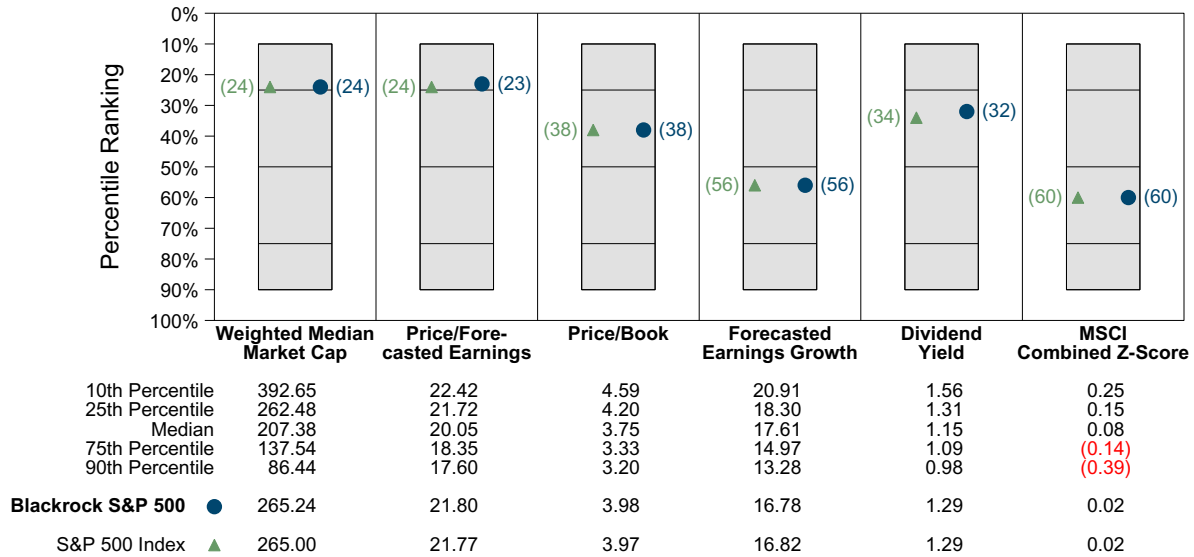


Blackrock S&P 500 Equity Characteristics Analysis Summary

Portfolio Characteristics

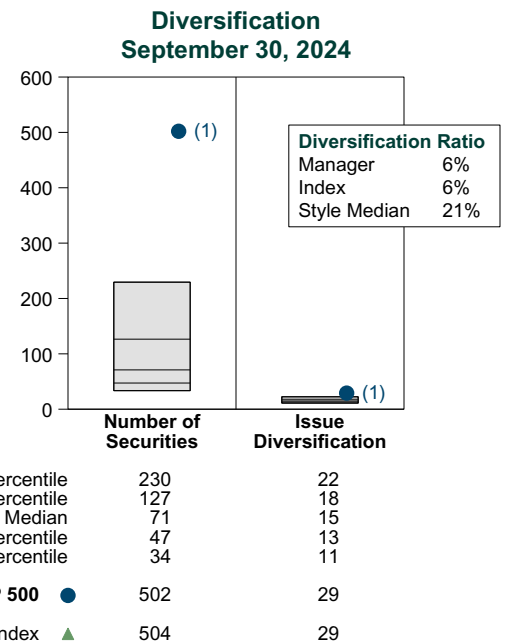
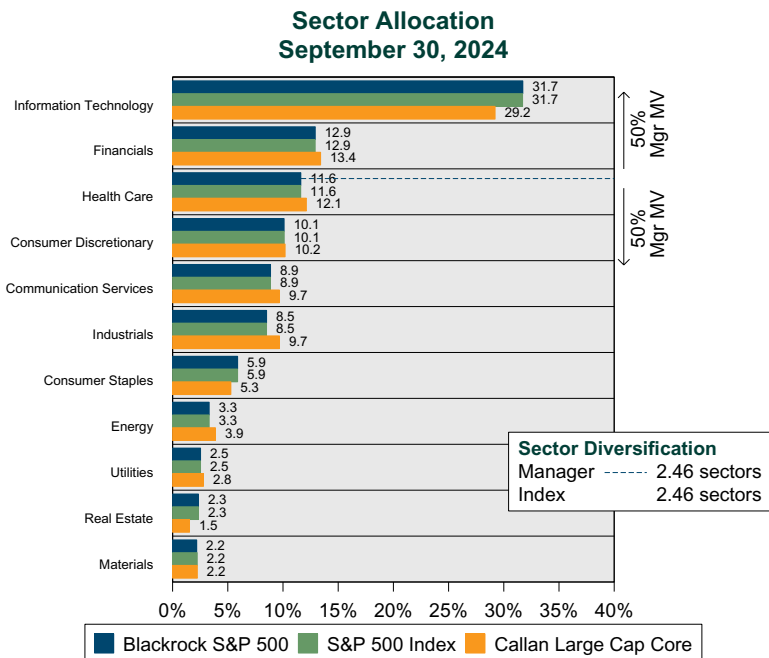
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Core as of September 30, 2024



Sector Weights

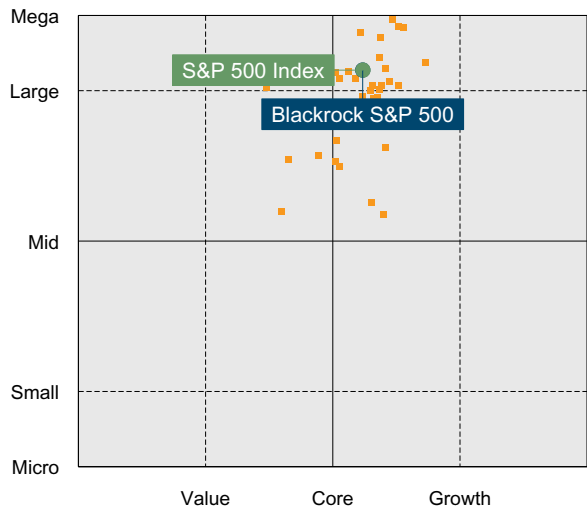
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Current Holdings Based Style Analysis
Blackrock S&P 500
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

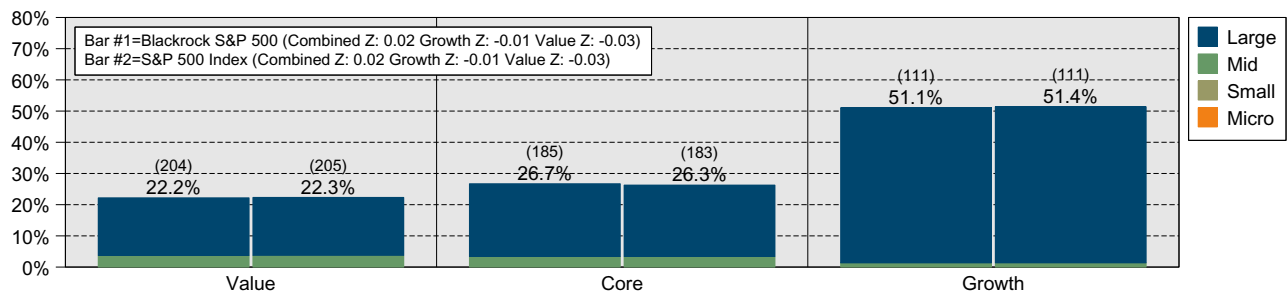
Style Map vs Callan Large Cap Core Holdings as of September 30, 2024



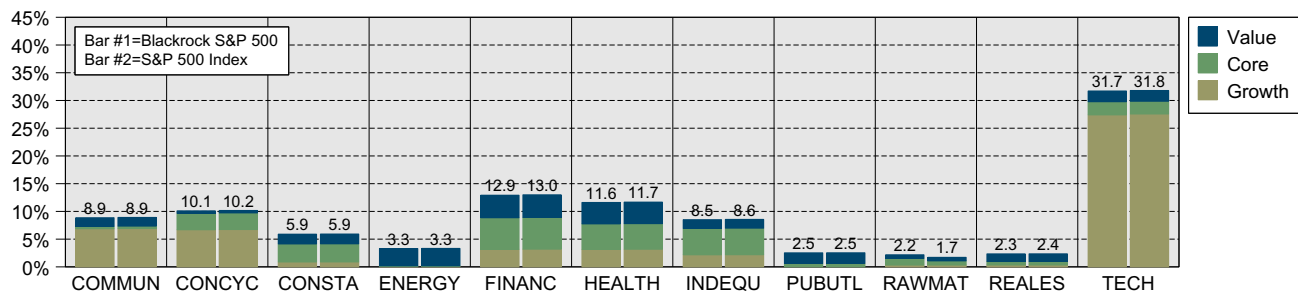
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	18.5% (102) 18.6% (102)	23.3% (95) 22.9% (93)	49.7% (78) 50.0% (78)	91.5% (275) 91.5% (273)
Mid	3.7% (102) 3.8% (103)	3.4% (90) 3.4% (90)	1.3% (33) 1.4% (33)	8.5% (225) 8.5% (226)
Small	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Micro	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Total	22.2% (204) 22.3% (205)	26.7% (185) 26.3% (183)	51.1% (111) 51.4% (111)	100.0% (500) 100.0% (499)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



Sector Weights Distribution Holdings as of September 30, 2024



SMid Cap Domestic Equity Period Ended September 30, 2024

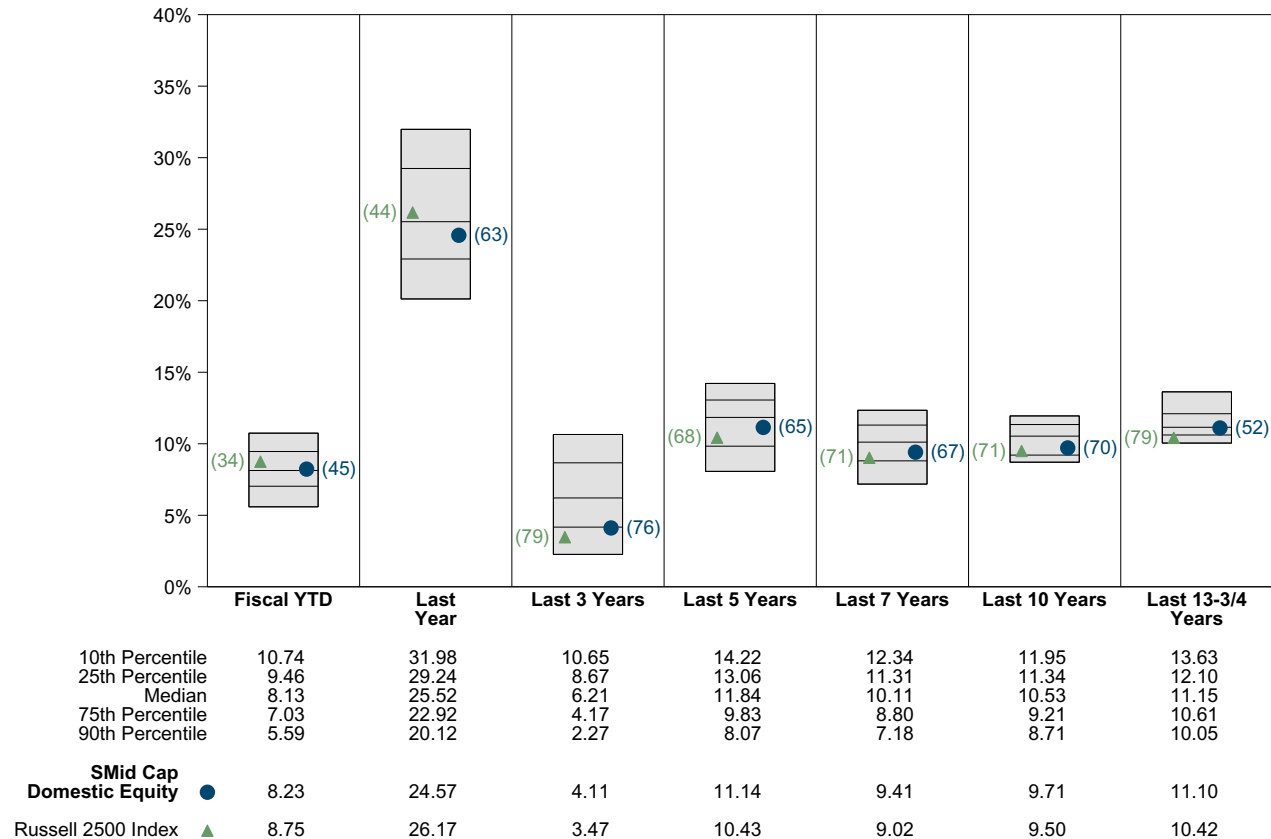
Quarterly Summary and Highlights

- SMid Cap Domestic Equity's portfolio posted a 8.23% return for the quarter placing it in the 45 percentile of the Callan Small/MidCap Core group for the quarter and in the 63 percentile for the last year.
- SMid Cap Domestic Equity's portfolio underperformed the Russell 2500 Index by 0.52% for the quarter and underperformed the Russell 2500 Index for the year by 1.59%.

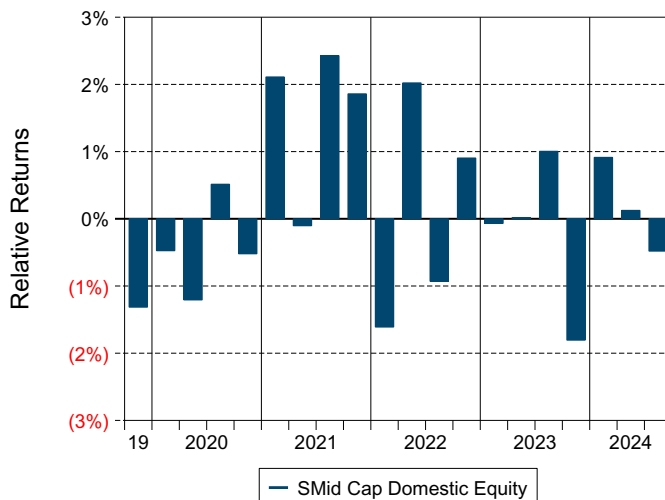
Quarterly Asset Growth

Beginning Market Value	\$704,220,158
Net New Investment	\$0
Investment Gains/(Losses)	\$57,931,271
Ending Market Value	\$762,151,429

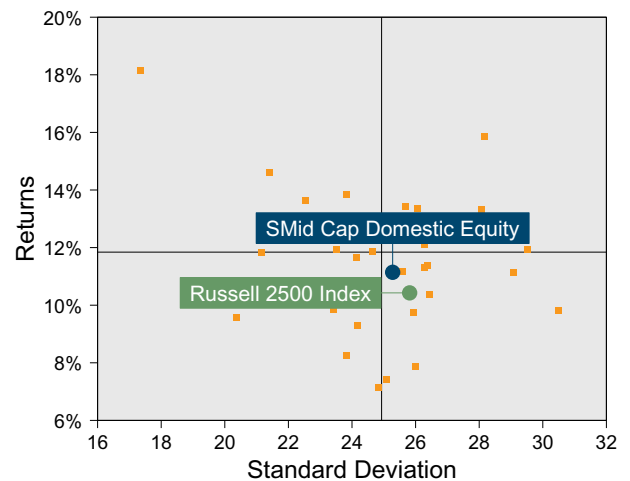
Performance vs Callan Small/MidCap Core (Gross)



Relative Return vs Russell 2500 Index



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

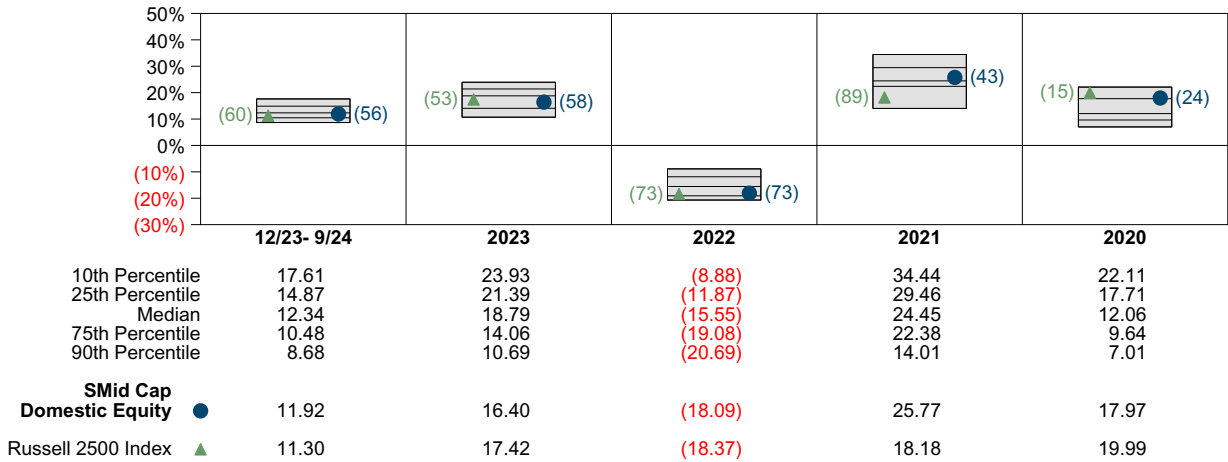


SMid Cap Domestic Equity Return Analysis Summary

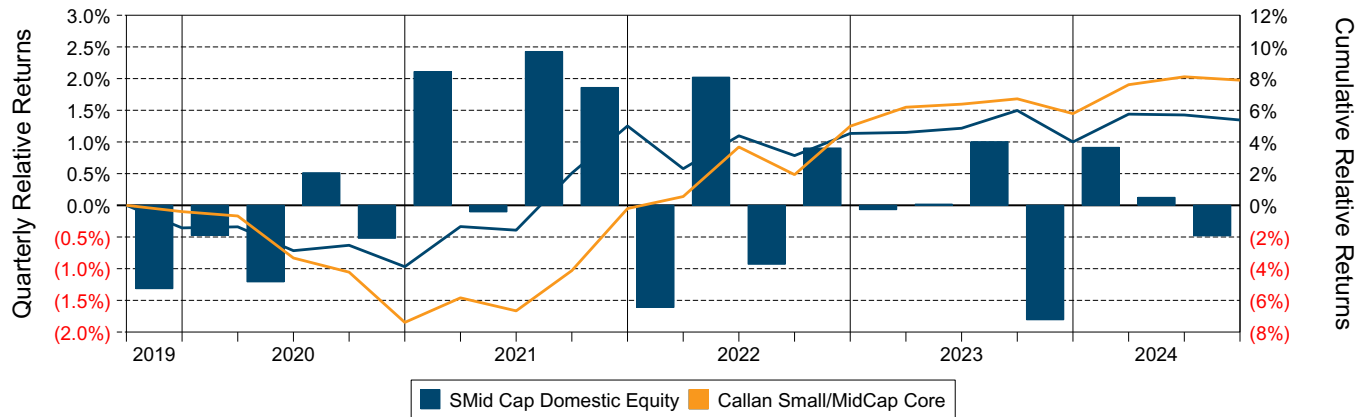
Return Analysis

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

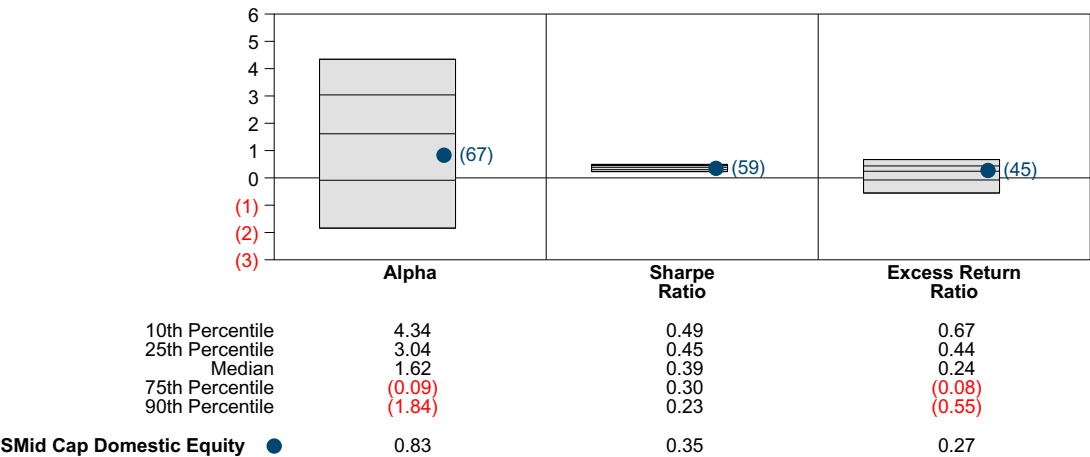
Performance vs Callan Small/MidCap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2500 Index



Risk Adjusted Return Measures vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended September 30, 2024



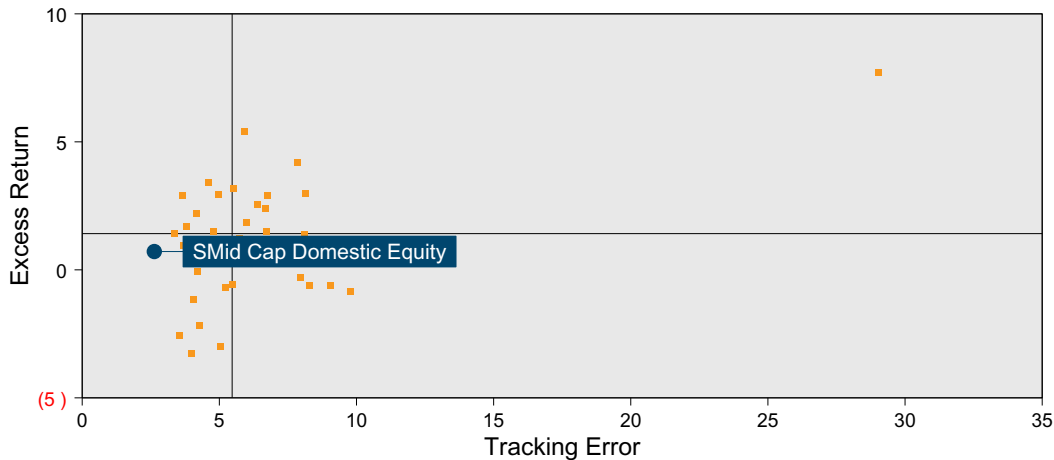
SMid Cap Domestic Equity

Risk Analysis Summary

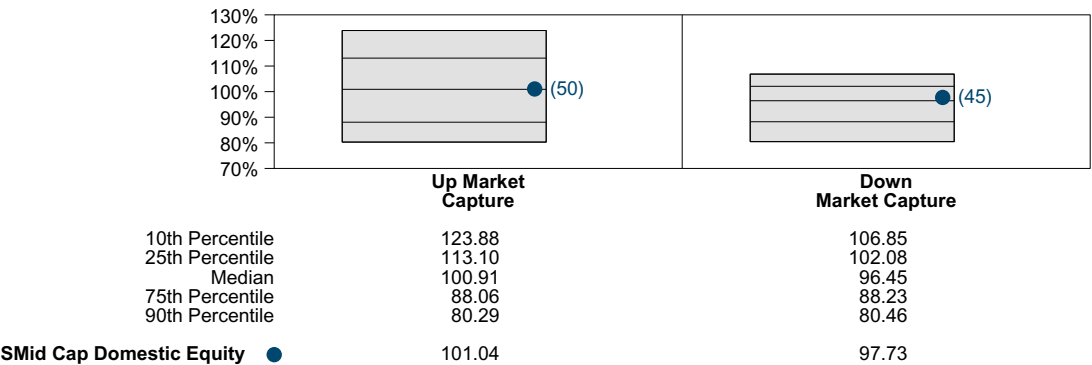
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

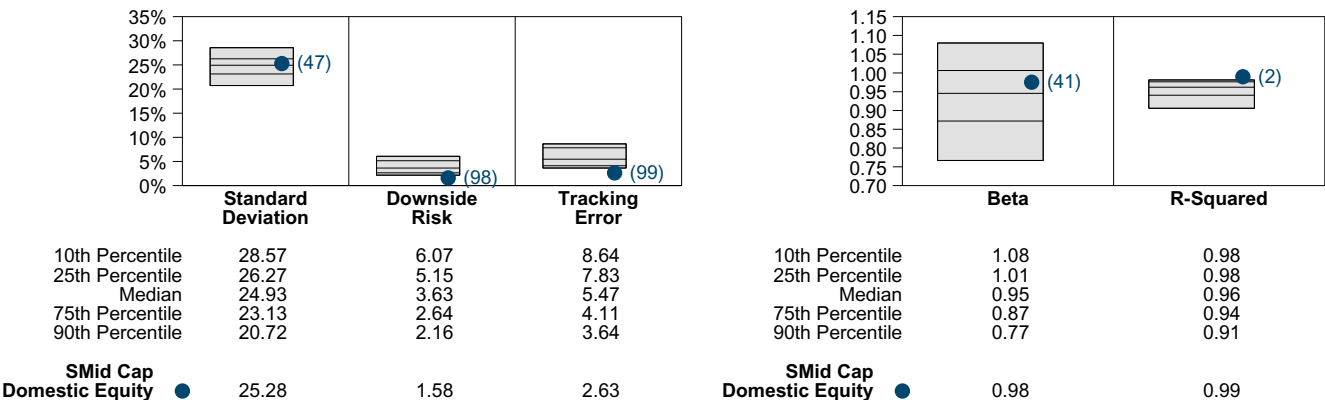
Risk Analysis vs Callan Small/MidCap Core (Gross) Five Years Ended September 30, 2024



Market Capture vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended September 30, 2024

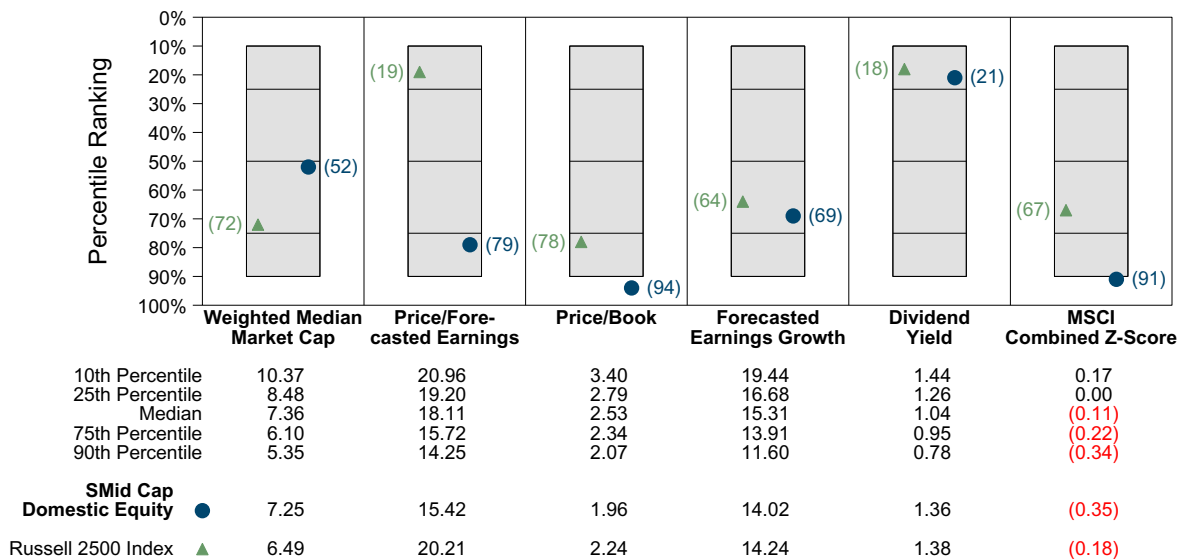


SMid Cap Domestic Equity Equity Characteristics Analysis Summary

Portfolio Characteristics

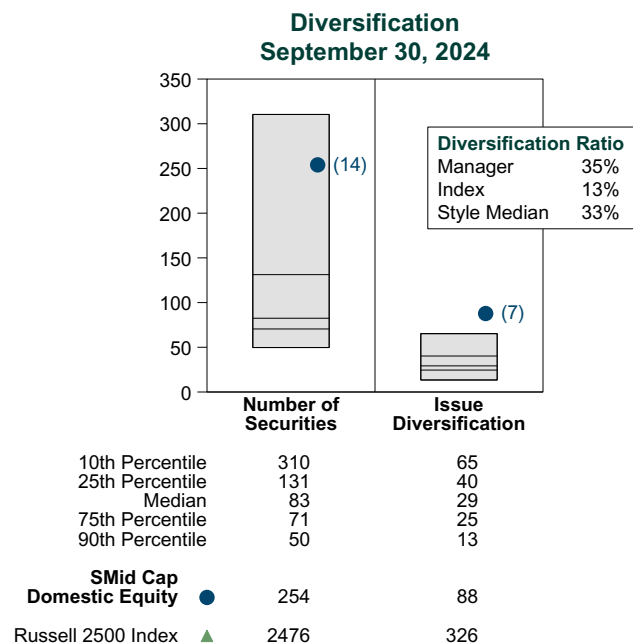
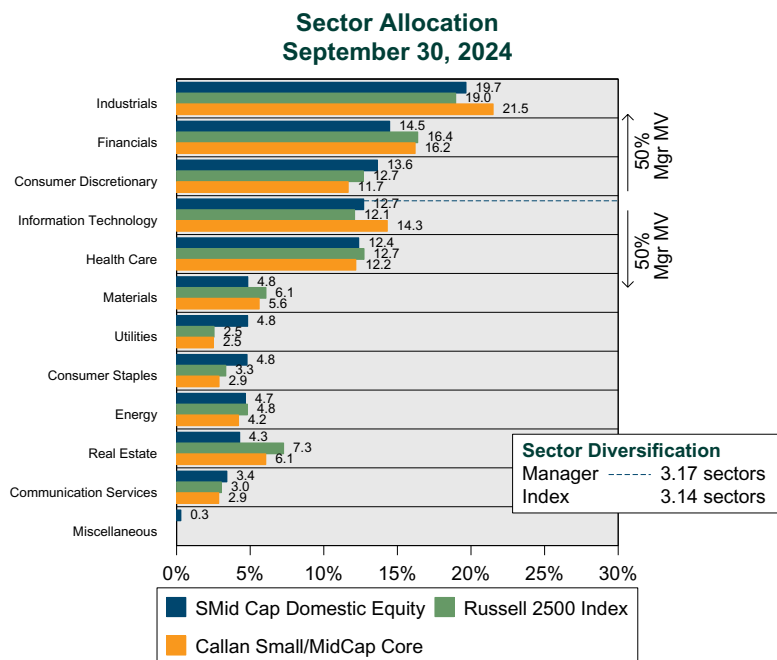
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Core as of September 30, 2024



Sector Weights

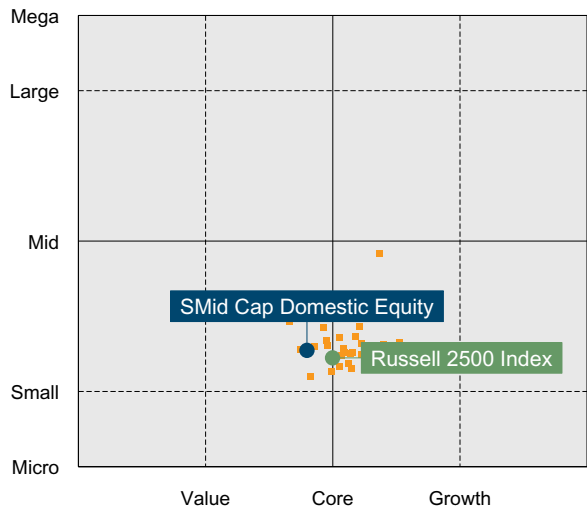
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Current Holdings Based Style Analysis
SMid Cap Domestic Equity
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

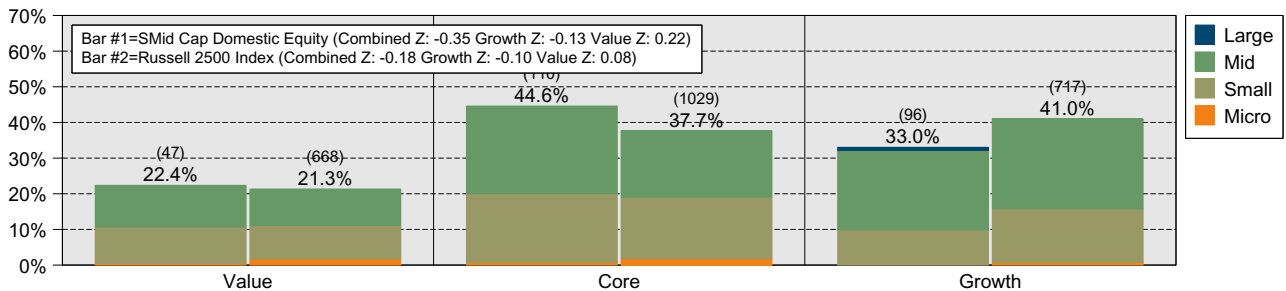
Style Map vs Callan Small/MidCap Core Holdings as of September 30, 2024



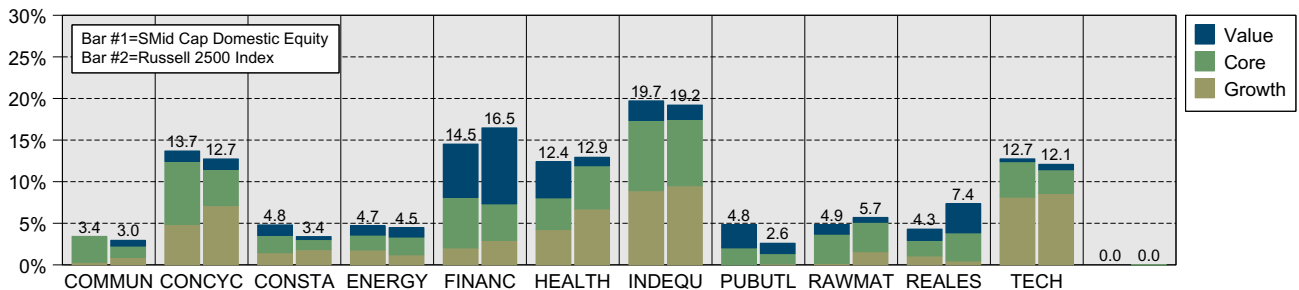
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.9% (3) 0.0% (0)	0.9% (3) 0.0% (0)
Mid	11.7% (22) 10.2% (67)	24.6% (56) 18.6% (133)	22.3% (61) 25.3% (175)	58.6% (139) 54.2% (375)
Small	10.1% (22) 9.4% (274)	19.3% (51) 17.3% (501)	9.9% (32) 14.9% (389)	39.3% (105) 41.7% (1164)
Micro	0.5% (3) 1.7% (327)	0.8% (3) 1.7% (395)	0.0% (0) 0.8% (153)	1.2% (6) 4.2% (875)
Total	22.4% (47) 21.3% (668)	44.6% (110) 37.7% (1029)	33.0% (96) 41.0% (717)	100.0% (253) 100.0% (2414)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



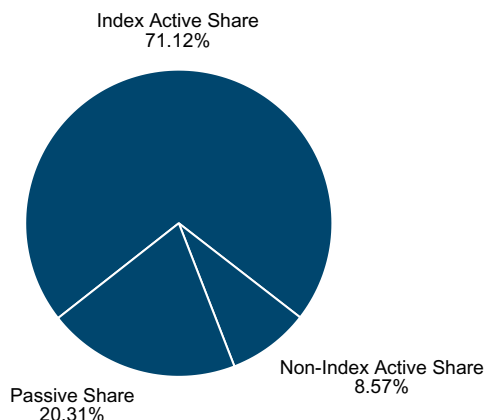
Sector Weights Distribution Holdings as of September 30, 2024



SMid Cap Domestic Equity Active Share Analysis as of September 30, 2024 vs. Russell 2500 Index

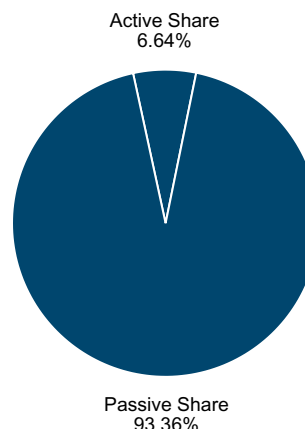
Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



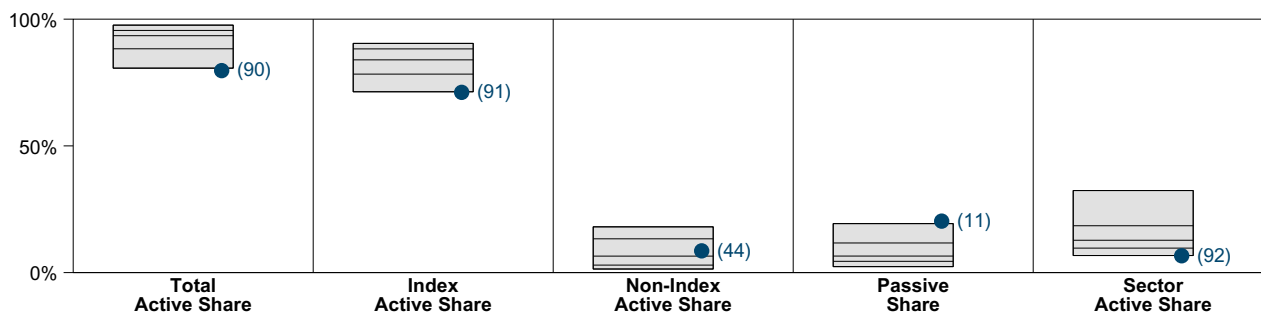
Total Active Share: 79.69%

Sector Exposure Active Share



	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	71.30%	5.66%	76.96%	3.04%	3.42%	2.52%
Consumer Discretionary	66.72%	14.70%	81.42%	12.69%	13.65%	10.78%
Consumer Staples	56.54%	25.88%	82.42%	3.34%	4.79%	3.48%
Energy	69.25%	11.92%	81.18%	4.81%	4.68%	3.84%
Financials	80.25%	3.27%	83.52%	16.38%	14.48%	12.74%
Health Care	66.06%	9.93%	75.99%	12.73%	12.37%	9.58%
Industrials	68.89%	6.16%	75.05%	18.96%	19.66%	14.57%
Information Technology	67.47%	9.07%	76.54%	12.09%	12.71%	9.55%
Materials	86.08%	0.00%	86.08%	6.07%	4.84%	4.59%
Miscellaneous	0.00%	100.00%	100.00%	-	0.29%	0.15%
Real Estate	85.24%	2.67%	87.92%	7.27%	4.29%	4.90%
Utilities	67.27%	5.13%	72.40%	2.55%	4.83%	2.98%
Total	71.12%	8.57%	79.69%	100.00%	100.00%	79.67%

Active Share vs. Callan Small/MidCap Core



10th Percentile	97.64	90.44	18.06	19.32	32.37
25th Percentile	95.55	88.26	13.33	11.69	18.49
Median	93.48	83.94	6.50	6.52	12.76
75th Percentile	88.31	78.31	2.96	4.45	9.66
90th Percentile	80.68	71.35	1.41	2.36	6.73

SMid Cap
Domestic Equity ●

79.69

71.12

8.57

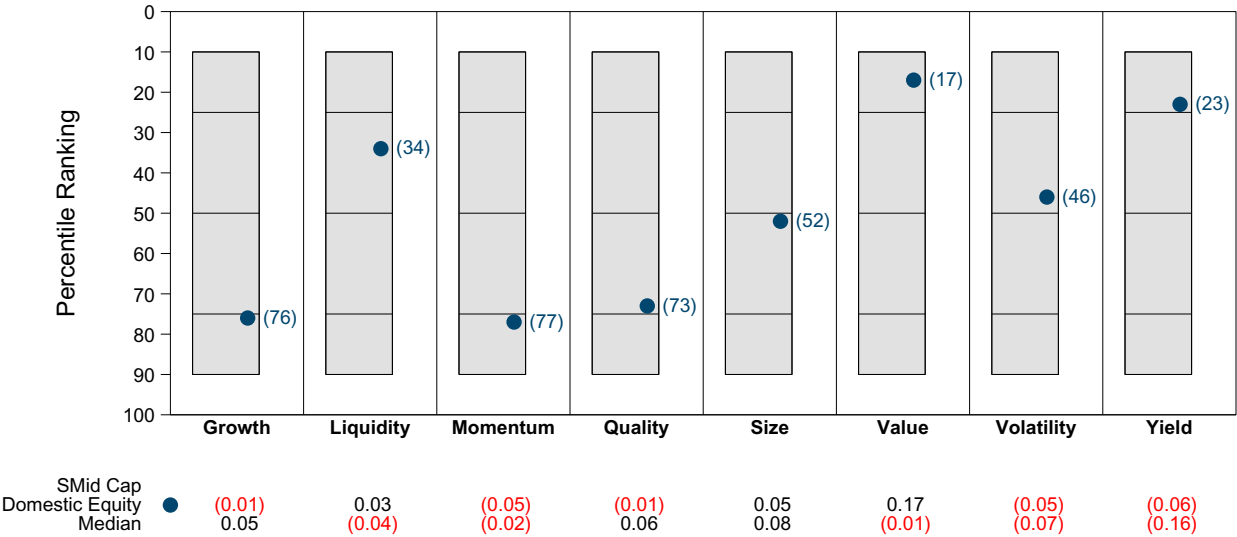
20.31

6.64

Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Small/MidCap Core group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

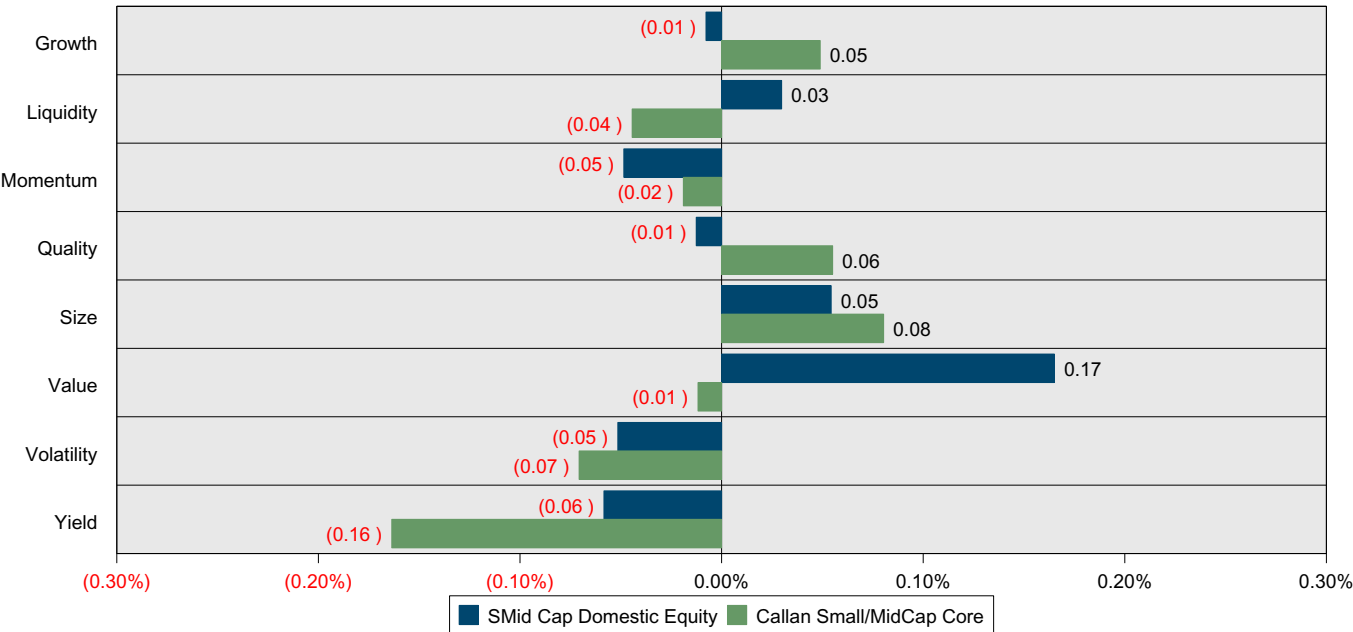
Factor Exposures Relative to Russell 2500 Index, Rankings vs Callan Small/MidCap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Small/MidCap Core group relative to the Russell 2500 Index.

Factor Exposures Relative to Russell 2500 Index
for Period Ended September 30, 2024



AllianceBernstein
Period Ended September 30, 2024

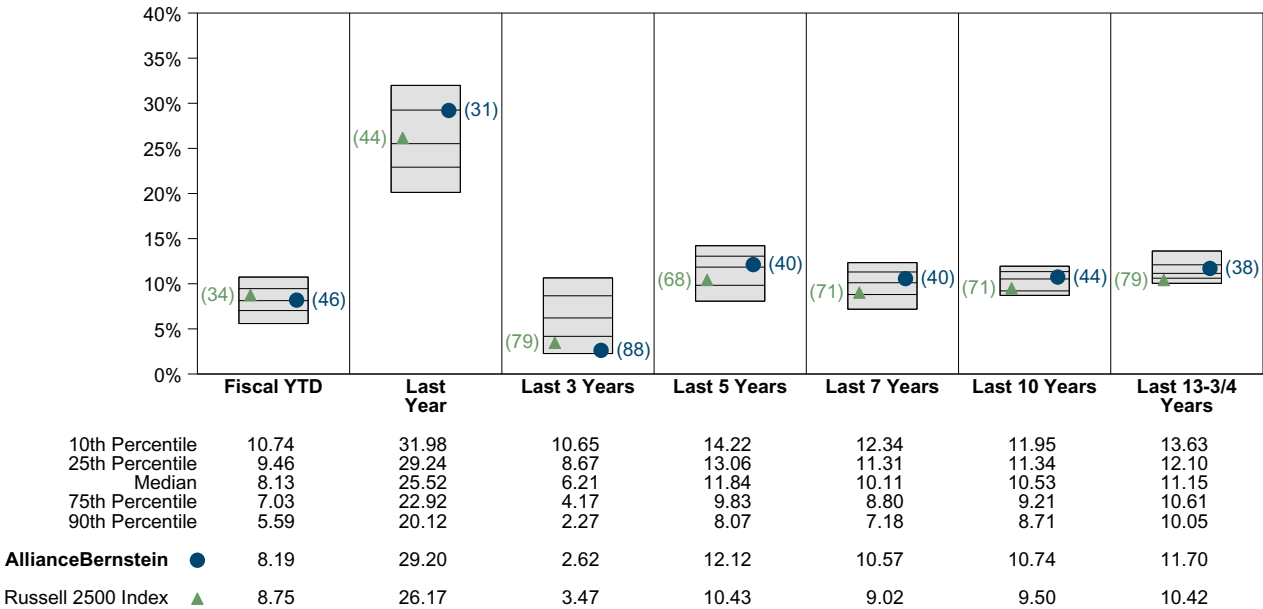
Investment Philosophy

AB's US SMID Cap Style Blend strategy is an active, multi-manager core equity portfolio that holds 150-200 stocks. It aims to deliver alpha by combining a high-conviction growth component (US SMID Cap Growth) with a value component (US SMID Cap Value). Nelson Yu dictates the allocation between the two underlying strategies. Purchase and sale decisions for the growth and value components of the US SMID Style Blend portfolio are made by the respective growth and value teams. NHRS inception in the fund is November 2010.

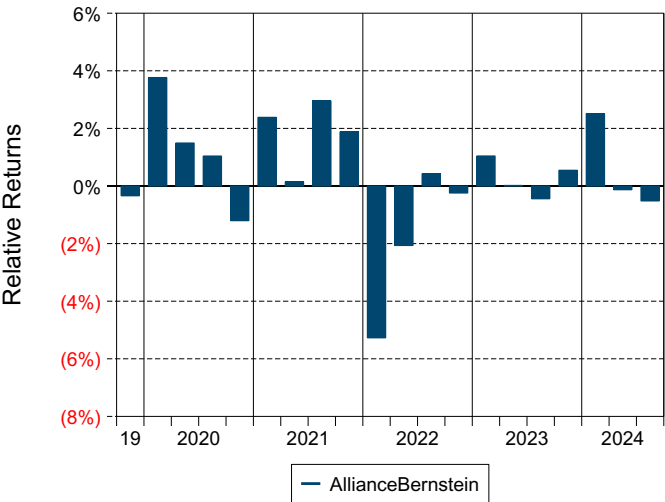
Quarterly Asset Growth

Beginning Market Value	\$445,959,496
Net New Investment	\$0
Investment Gains/(Losses)	\$36,505,869
Ending Market Value	\$482,465,366

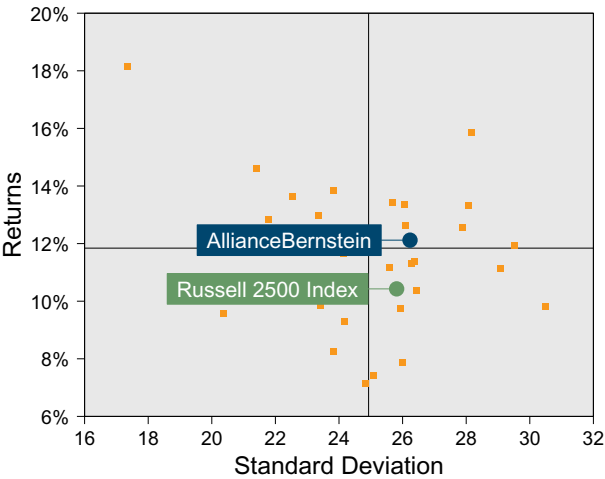
Performance vs Callan Small/MidCap Core (Gross)



Relative Return vs Russell 2500 Index



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

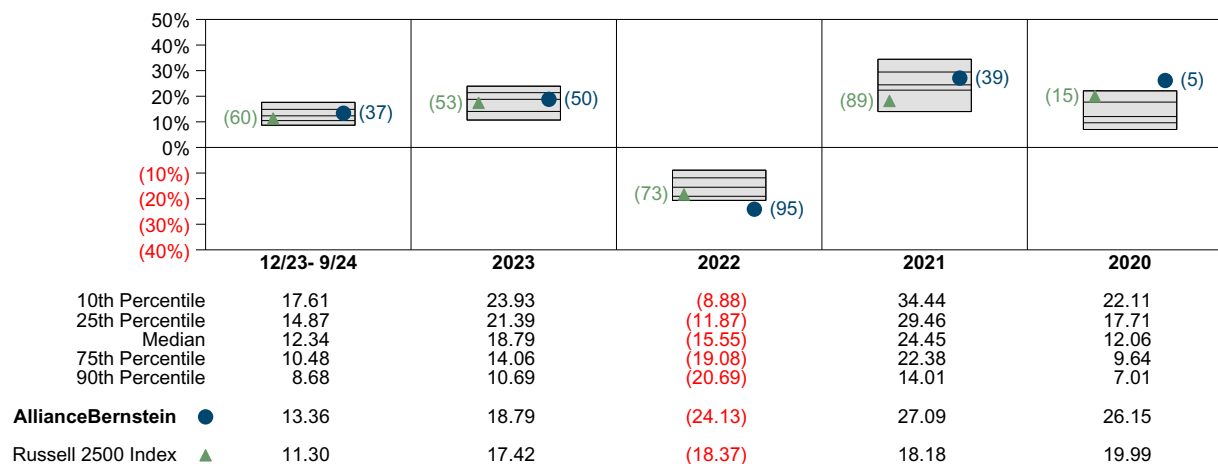


AllianceBernstein Return Analysis Summary

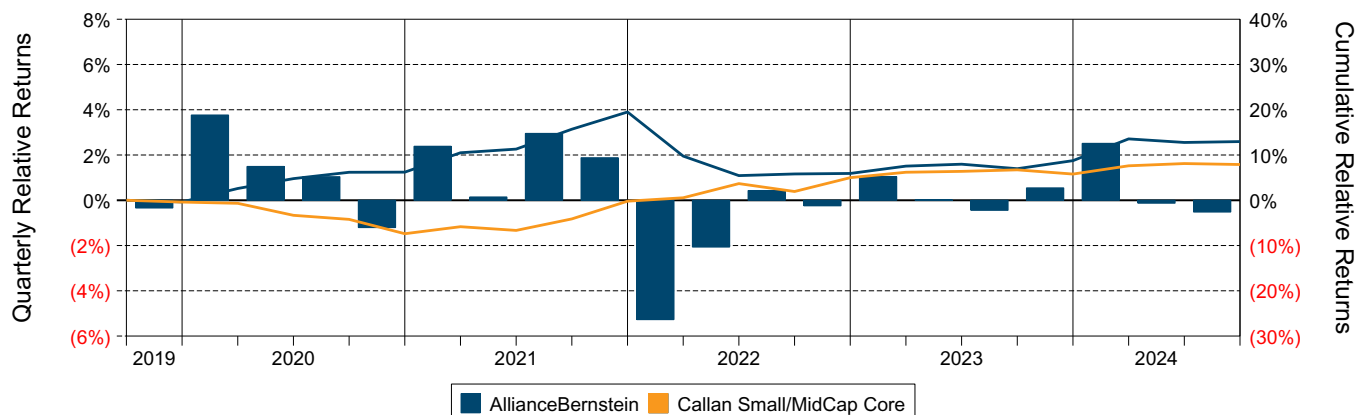
Return Analysis

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.

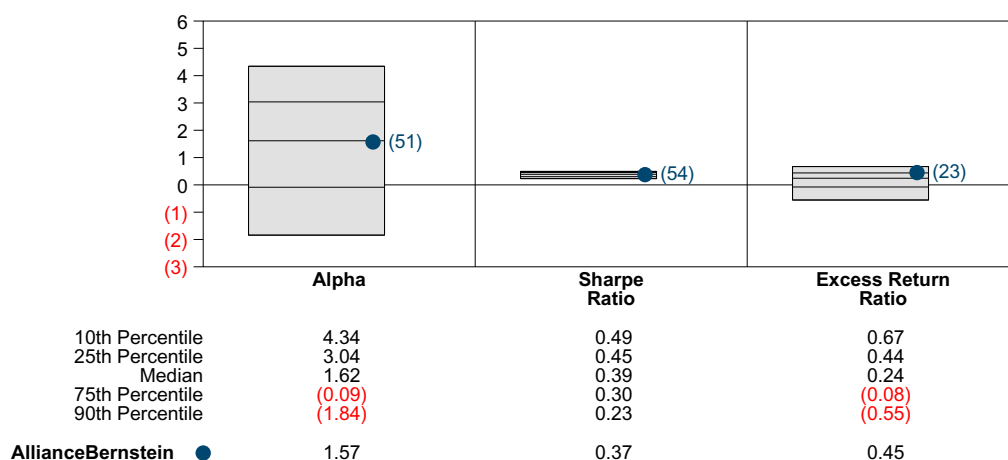
Performance vs Callan Small/MidCap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2500 Index



Risk Adjusted Return Measures vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended September 30, 2024

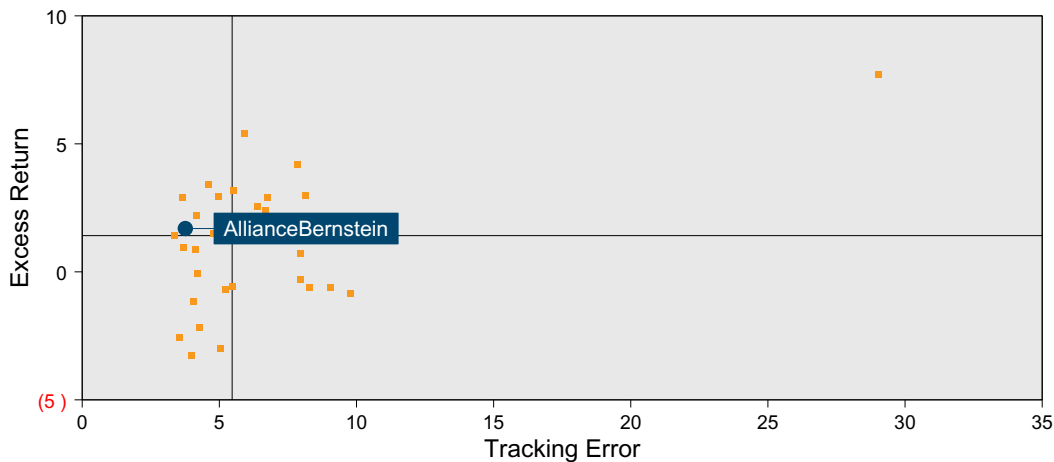


AllianceBernstein
Risk Analysis Summary

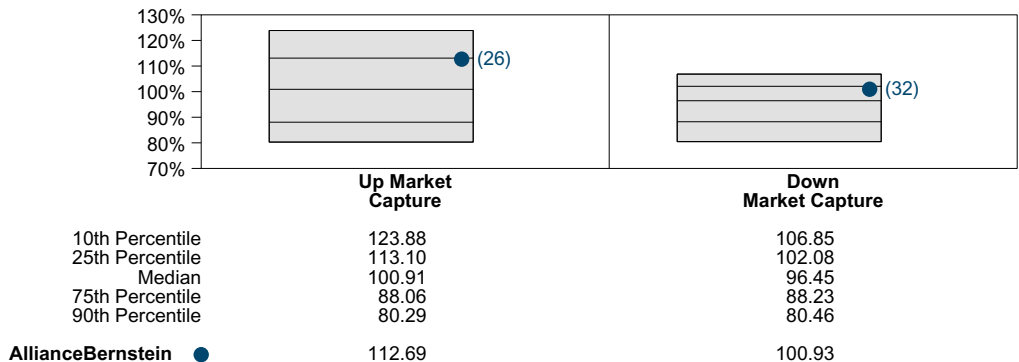
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

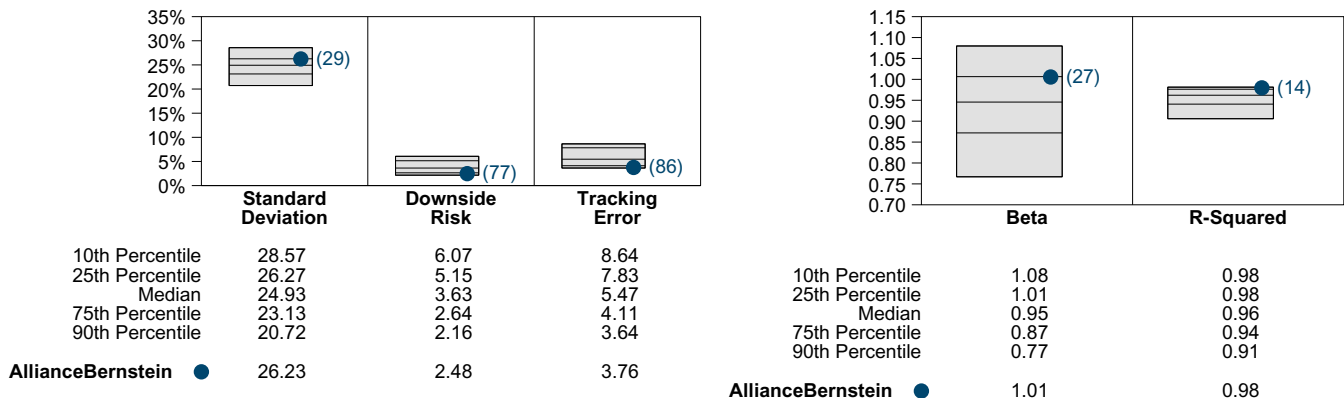
Risk Analysis vs Callan Small/MidCap Core (Gross)
Five Years Ended September 30, 2024



Market Capture vs Russell 2500 Index
Rankings Against Callan Small/MidCap Core (Gross)
Five Years Ended September 30, 2024



Risk Statistics Rankings vs Russell 2500 Index
Rankings Against Callan Small/MidCap Core (Gross)
Five Years Ended September 30, 2024

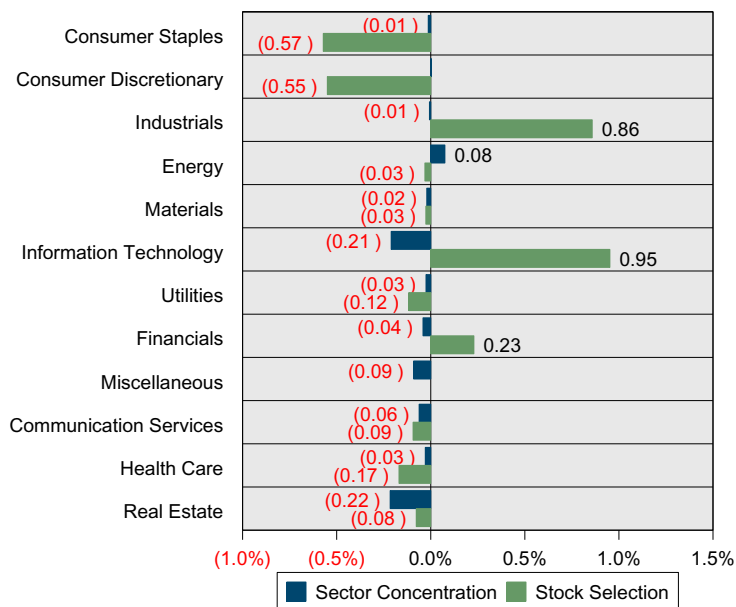


AllianceBernstein vs Russell 2500 Index Quarterly Equity Buy and Hold Attribution

Attribution Ranking and Sector Detail

The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart ranks the excess return and the four attribution factors for the manager vs the factors generated by members of the Callan Small/MidCap Core over the same time period.

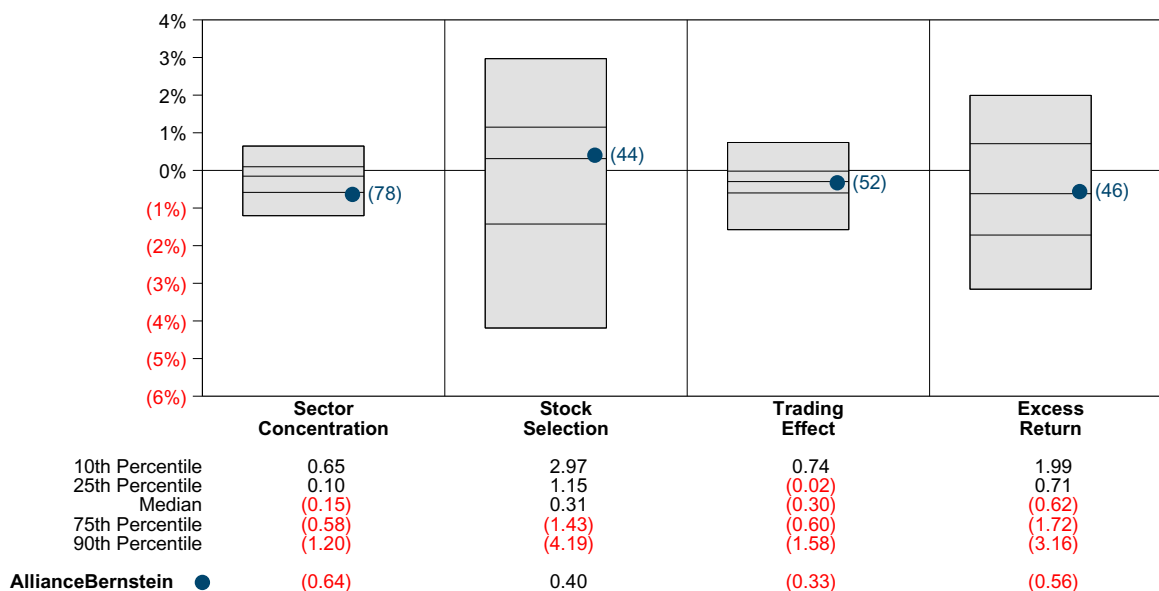
Attribution Effects by Sector vs Russell 2500 Index Quarter ended September 30, 2024



Sector	Sector Concentration	Stock Selection
Consumer Staples	(0.01%)	(0.57%)
Consumer Discretionary	0.00%	(0.55%)
Industrials	(0.01%)	0.86%
Energy	0.08%	(0.03%)
Materials	(0.02%)	(0.03%)
Information Technology	(0.21%)	0.95%
Utilities	(0.03%)	(0.12%)
Financials	(0.04%)	0.23%
Miscellaneous	(0.09%)	0.00%
Communication Services	(0.06%)	(0.09%)
Health Care	(0.03%)	(0.17%)
Real Estate	(0.22%)	(0.08%)
Total	(0.64%)	0.40%

Manager Return	=	Index Return	+	Sector Concentration	+	Stock Selection	+	Trading
8.19%		8.75%		(0.64%)		0.40%		(0.33%)

Equity Attribution Ranking vs Callan Small/MidCap Core Quarter ended September 30, 2024

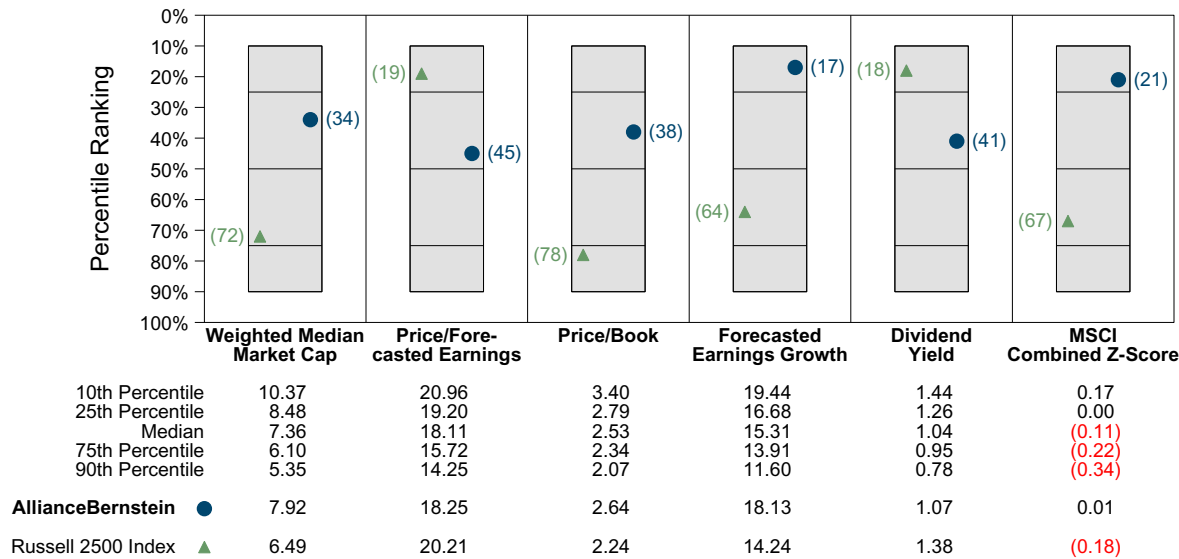


AllianceBernstein Equity Characteristics Analysis Summary

Portfolio Characteristics

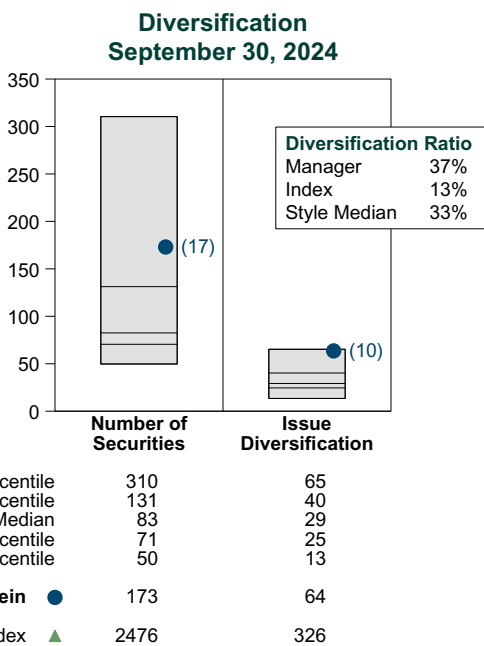
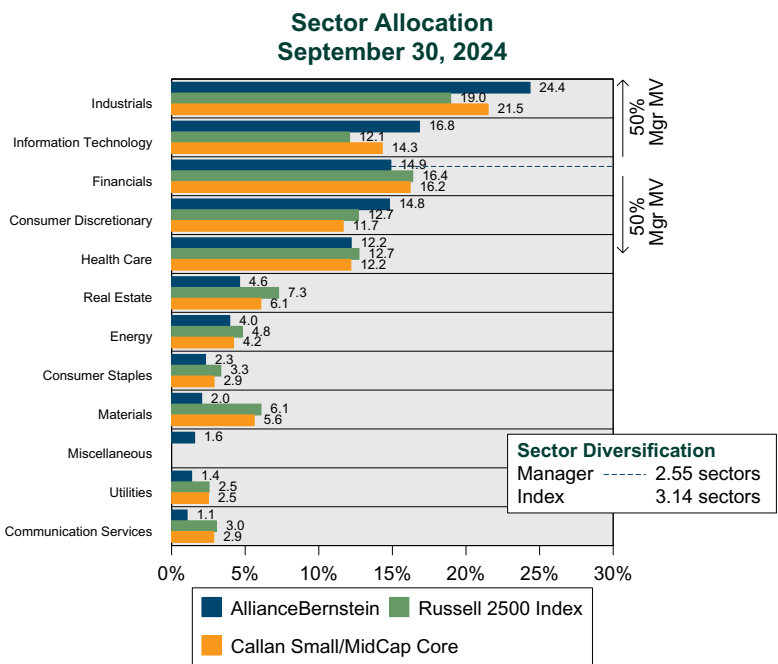
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Core as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

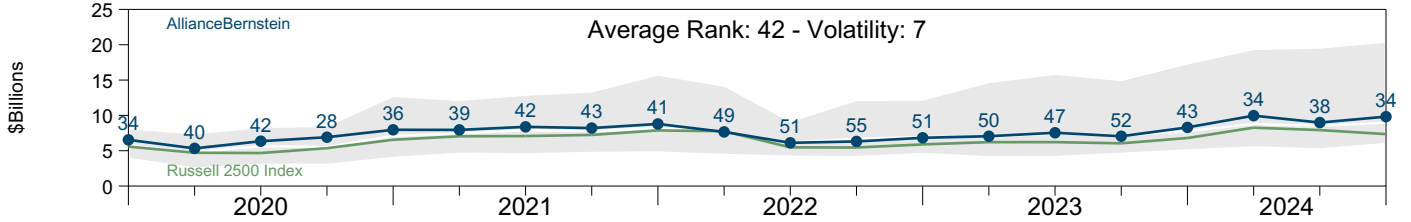


Portfolio Characteristics Analysis

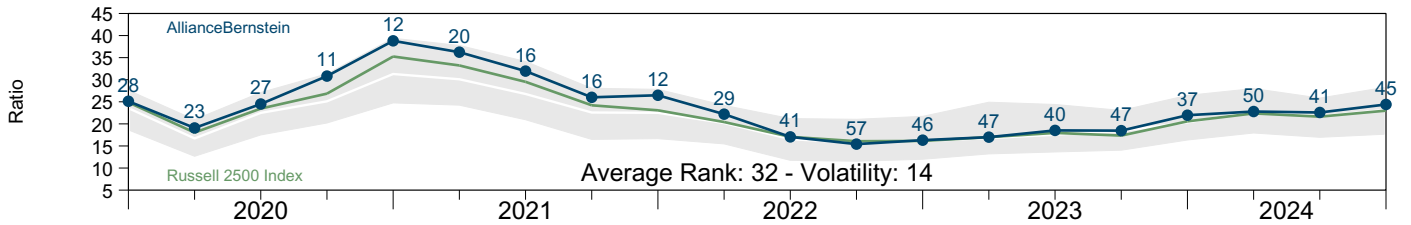
Callan Small/MidCap Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small/MidCap Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 2500 Index is shown for comparison purposes.

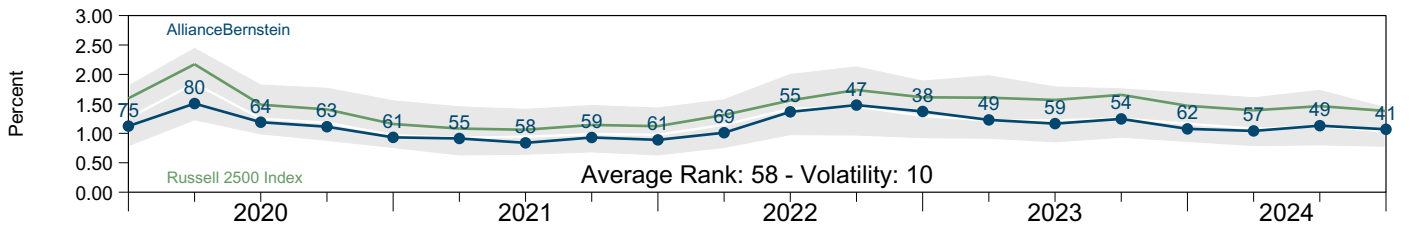
Weighted Average Market Cap



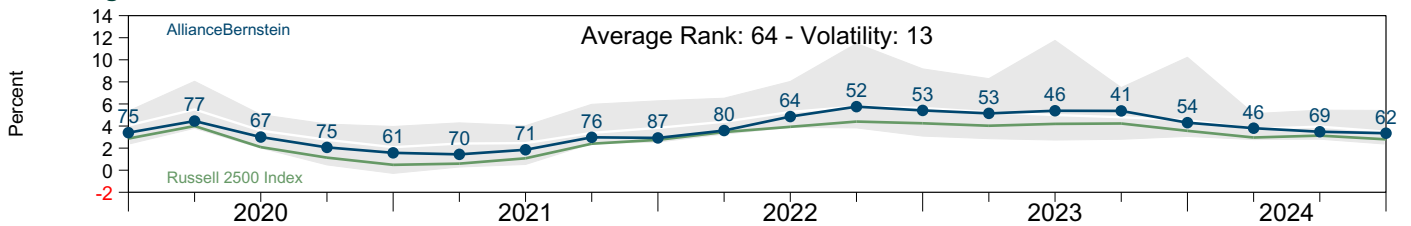
Trailing P/E



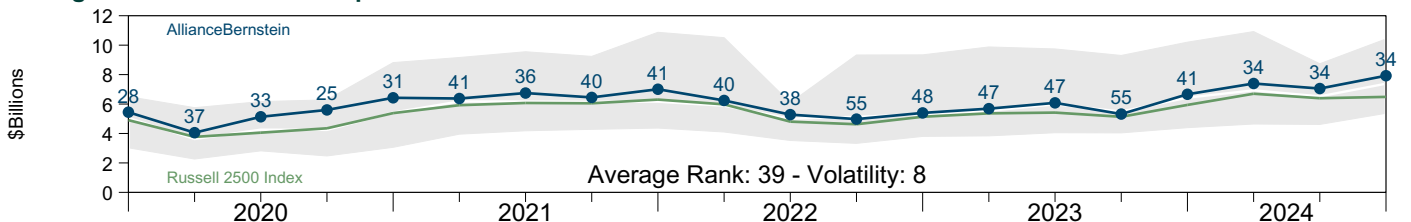
Dividend Yield



Earnings Yield



Weighted Median Market Cap

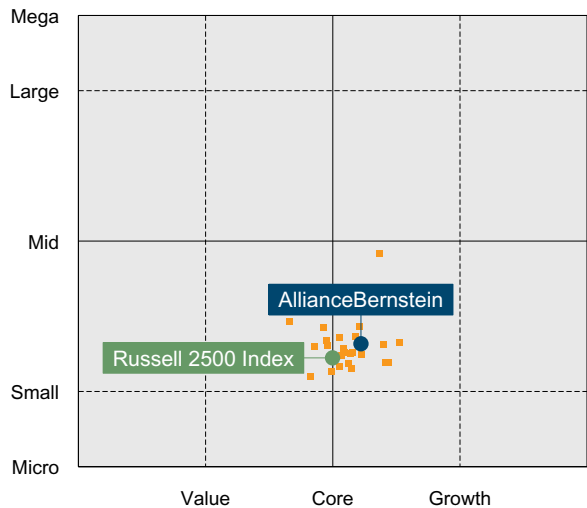


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
AllianceBernstein
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

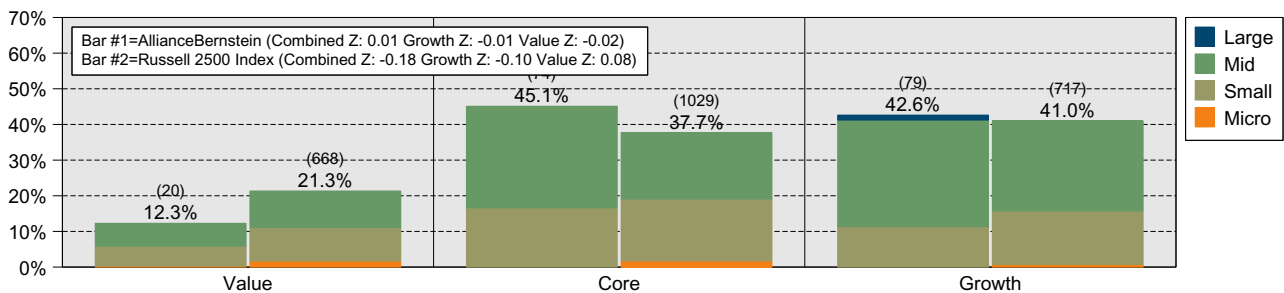
Style Map vs Callan Small/MidCap Core Holdings as of September 30, 2024



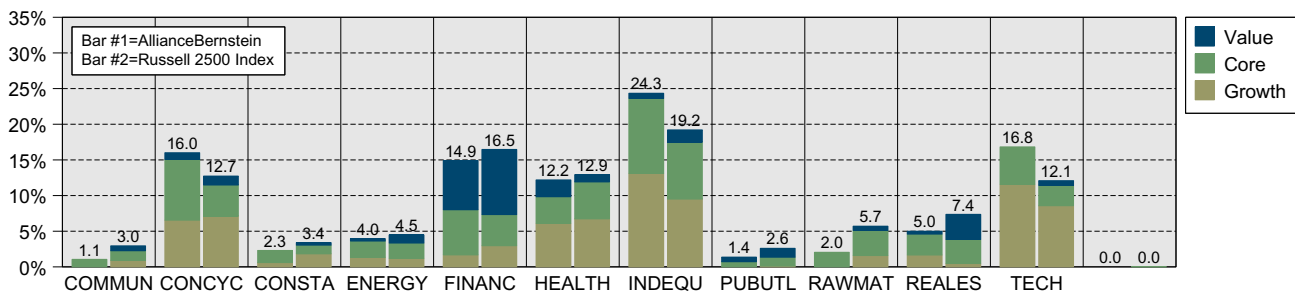
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	1.4% (3) 0.0% (0)	1.4% (3) 0.0% (0)
Mid	6.4% (9) 10.2% (67)	28.5% (44) 18.6% (133)	29.9% (52) 25.3% (175)	64.8% (105) 54.2% (375)
Small	5.6% (10) 9.4% (274)	16.6% (30) 17.3% (501)	11.3% (24) 14.9% (389)	33.5% (64) 41.7% (1164)
Micro	0.3% (1) 1.7% (327)	0.0% (0) 1.7% (395)	0.0% (0) 0.8% (153)	0.3% (1) 4.2% (875)
Total	12.3% (20) 21.3% (668)	45.1% (74) 37.7% (1029)	42.6% (79) 41.0% (717)	100.0% (173) 100.0% (2414)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



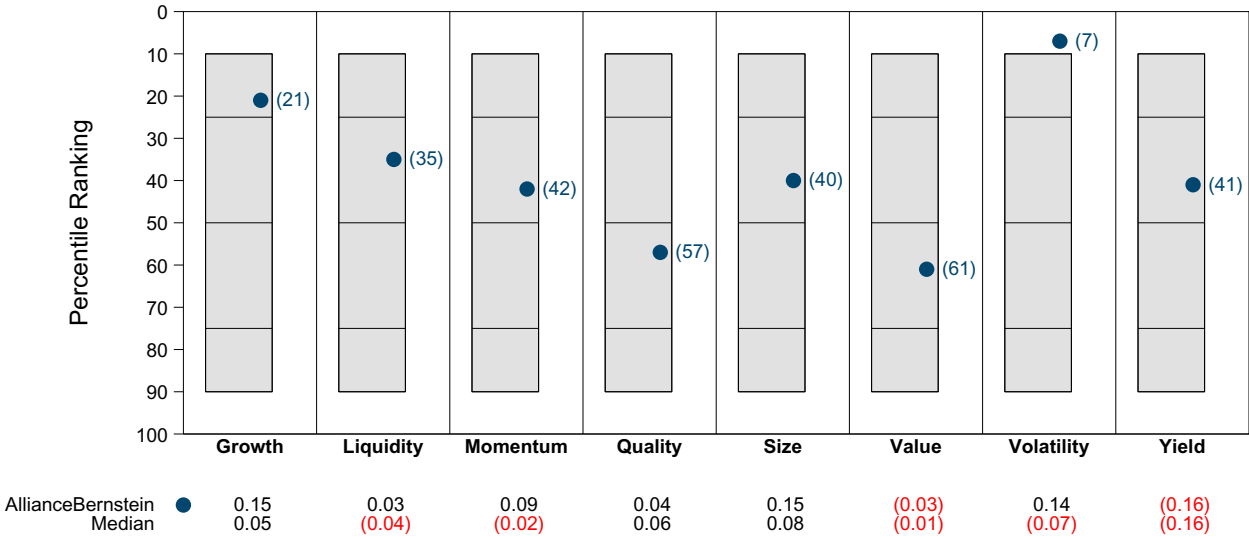
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Small/MidCap Core group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

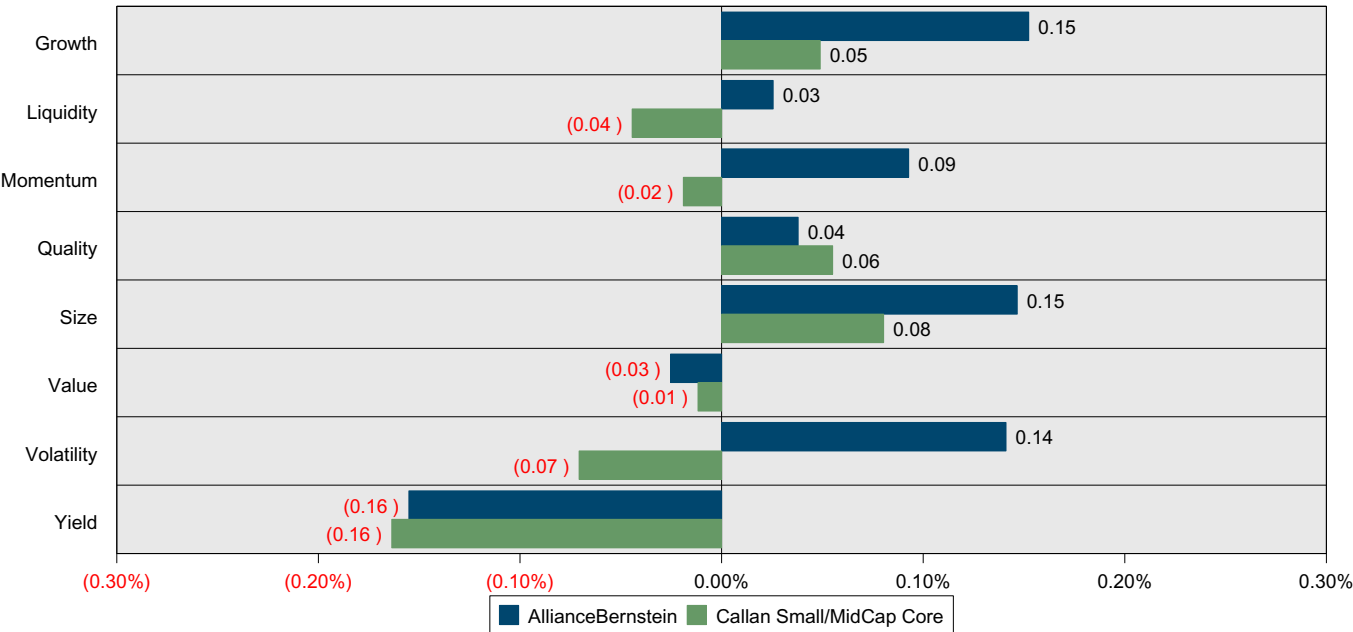
Factor Exposures Relative to Russell 2500 Index, Rankings vs Callan Small/MidCap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Small/MidCap Core group relative to the Russell 2500 Index.

Factor Exposures Relative to Russell 2500 Index
for Period Ended September 30, 2024



TSW
Period Ended September 30, 2024

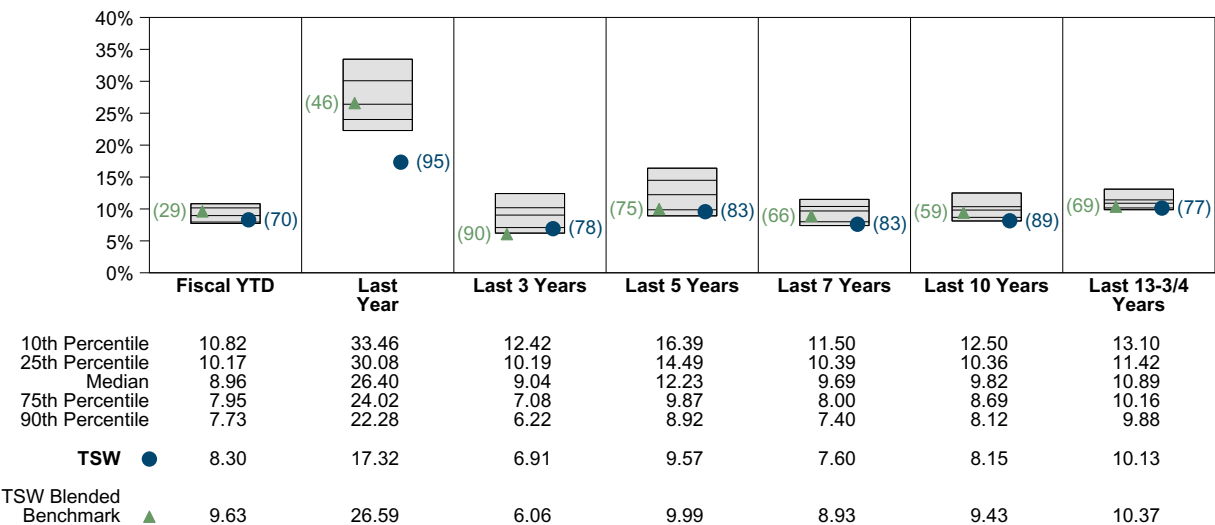
Investment Philosophy

TS&W Small / Mid (SMID) Cap Value Fund takes an investment philosophy based on the concept of fundamental value. Focusing on conducting fundamental research on individual stocks, the team constructs the portfolios using a bottom-up approach that combines a quantitative screen with fundamental analysis. SMID cap value strategy assets are fully invested with cash comprising up to 5% of the portfolio. The portfolio holds approximately 85 security positions that are continually reviewed for their risk/reward potential and re-ranked using a four-factor screen. The strategy typically owns less than 10 days trading volume in each stock and trims positions as necessary to limit liquidity risks. The TSW Blended Benchmark is the Russell 2500 Value Index as of 7/1/2019. Prior to 7/1/2019 the benchmark was the Russell 2500 Index. NHRS inception in the fund is November 2010.

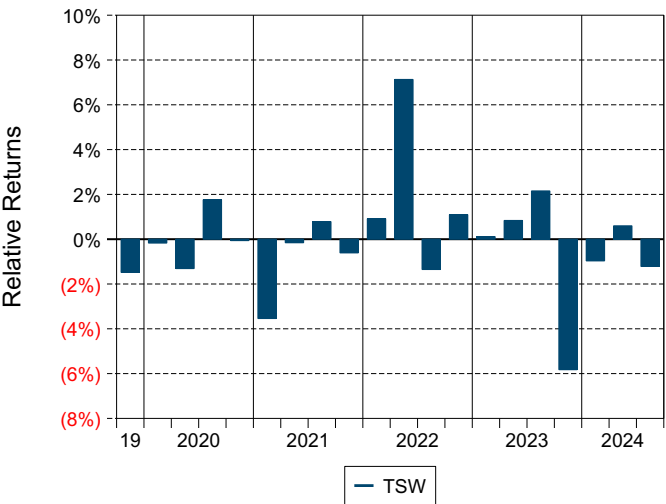
Quarterly Asset Growth

Beginning Market Value	\$258,260,662
Net New Investment	\$0
Investment Gains/(Losses)	\$21,425,402
Ending Market Value	\$279,686,063

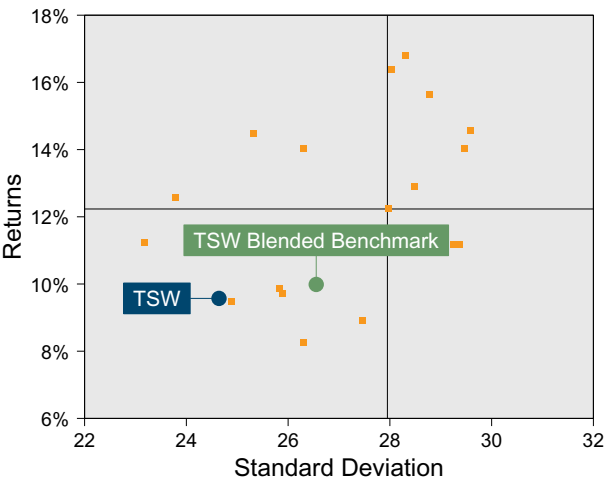
Performance vs Callan Small/MidCap Value (Gross)



Relative Return vs TSW Blended Benchmark



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

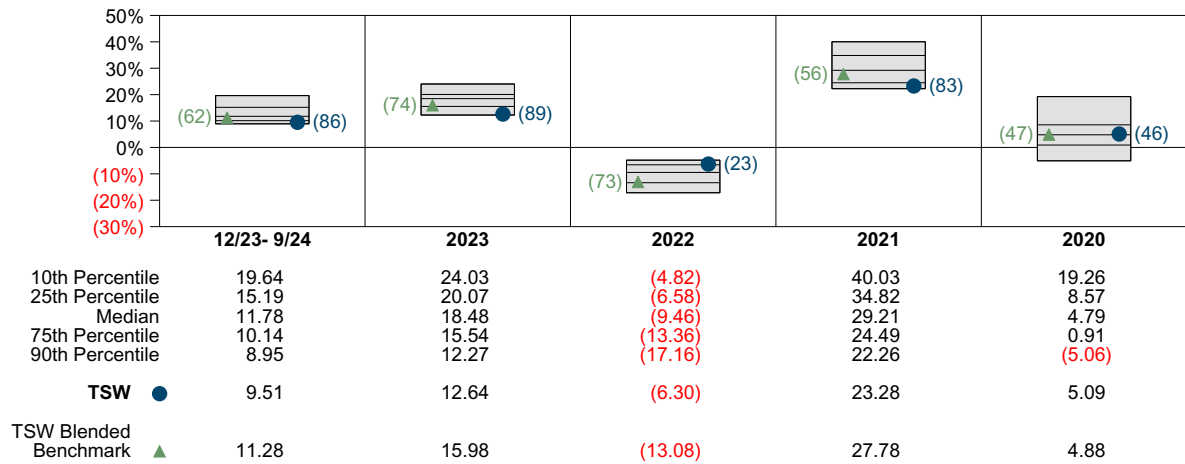


TSW
Return Analysis Summary

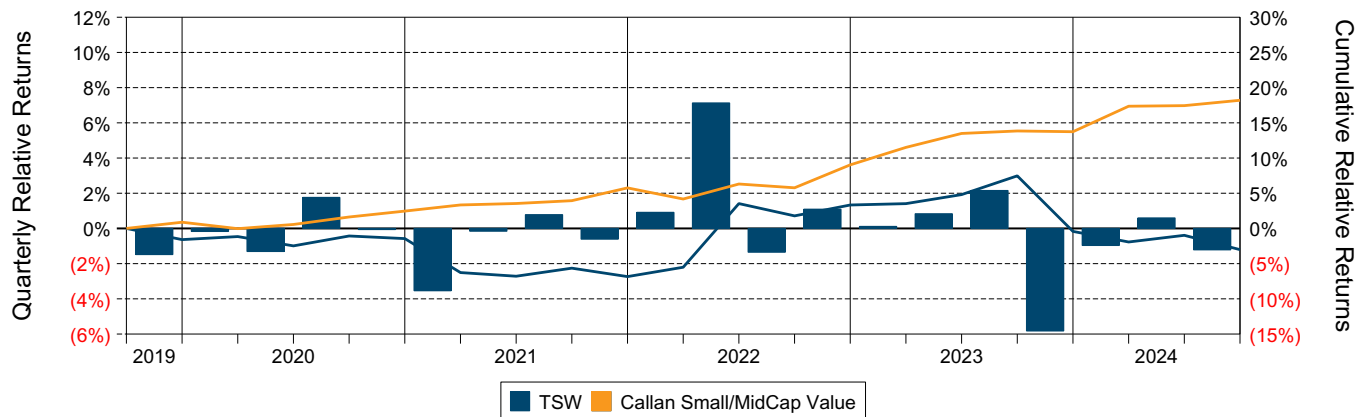
Return Analysis

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.

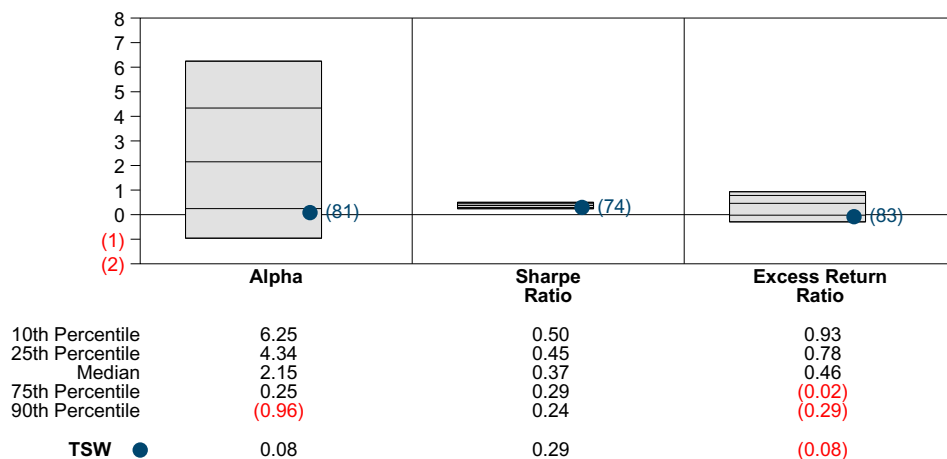
Performance vs Callan Small/MidCap Value (Gross)



Cumulative and Quarterly Relative Returns vs TSW Blended Benchmark



Risk Adjusted Return Measures vs TSW Blended Benchmark
Rankings Against Callan Small/MidCap Value (Gross)
Five Years Ended September 30, 2024

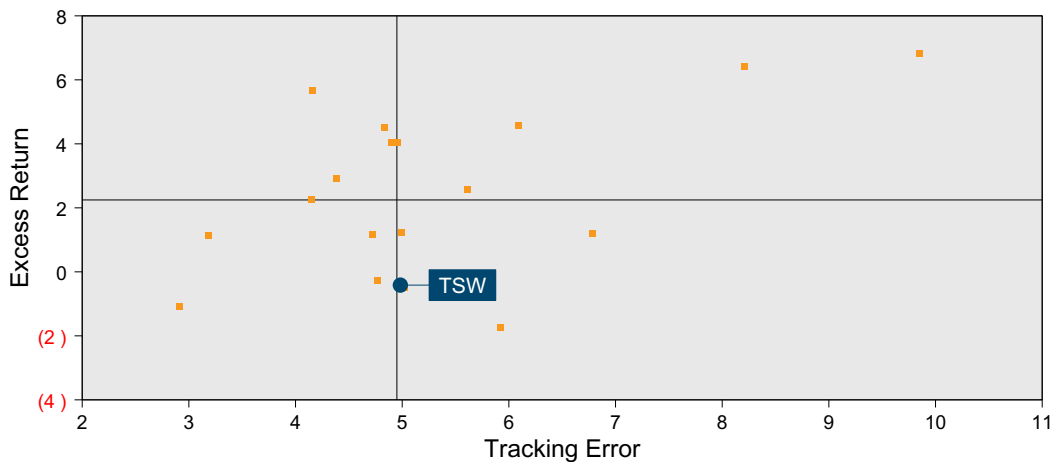


TSW
Risk Analysis Summary

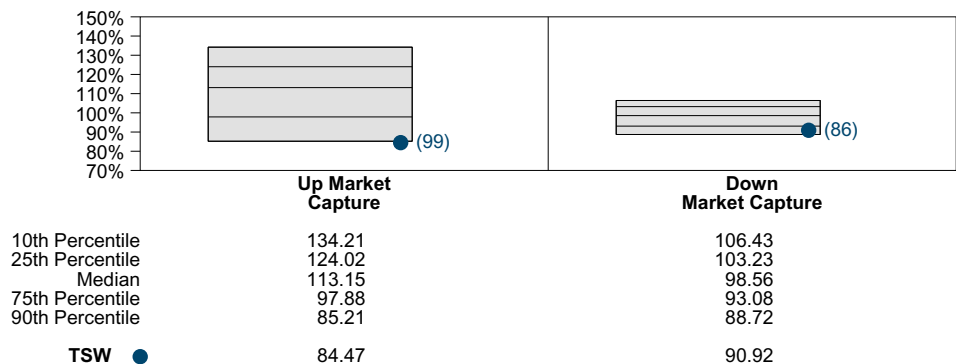
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

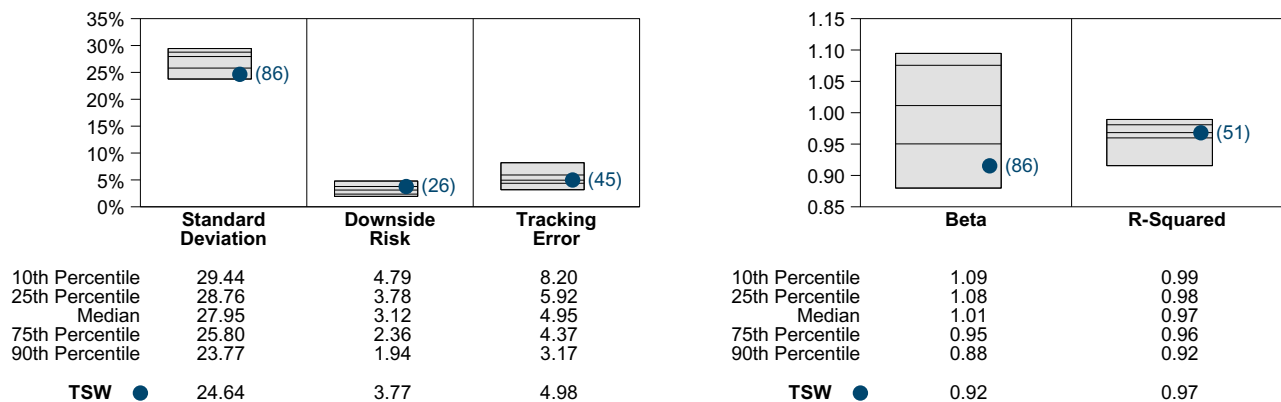
Risk Analysis vs Callan Small/MidCap Value (Gross)
Five Years Ended September 30, 2024



Market Capture vs TSW Blended Benchmark
Rankings Against Callan Small/MidCap Value (Gross)
Five Years Ended September 30, 2024



Risk Statistics Rankings vs TSW Blended Benchmark
Rankings Against Callan Small/MidCap Value (Gross)
Five Years Ended September 30, 2024

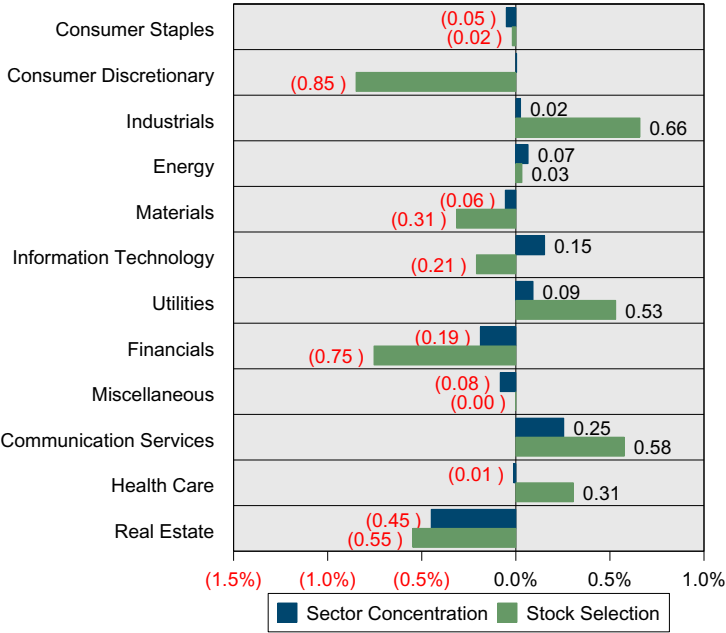


TSW vs TSW Blended Benchmark Quarterly Equity Buy and Hold Attribution

Attribution Ranking and Sector Detail

The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart details the manager return, the index return, and the attribution factors over the same time period.

Attribution Effects by Sector vs TSW Blended Benchmark Quarter ended September 30, 2024



Sector	Sector Concentration	Stock Selection
Consumer Staples	(0.05%)	(0.02%)
Consumer Discretionary	0.00%	(0.85%)
Industrials	0.02%	0.66%
Energy	0.07%	0.03%
Materials	(0.06%)	(0.31%)
Information Technology	0.15%	(0.21%)
Utilities	0.09%	0.53%
Financials	(0.19%)	(0.75%)
Miscellaneous	(0.08%)	(0.00%)
Communication Services	0.25%	0.58%
Health Care	(0.01%)	0.31%
Real Estate	(0.45%)	(0.55%)
Total	(0.25%)	(0.59%)

Manager Return

8.30%

=

Index Return

9.63%

+

Sector Concentration

(0.25%)

+

Stock Selection

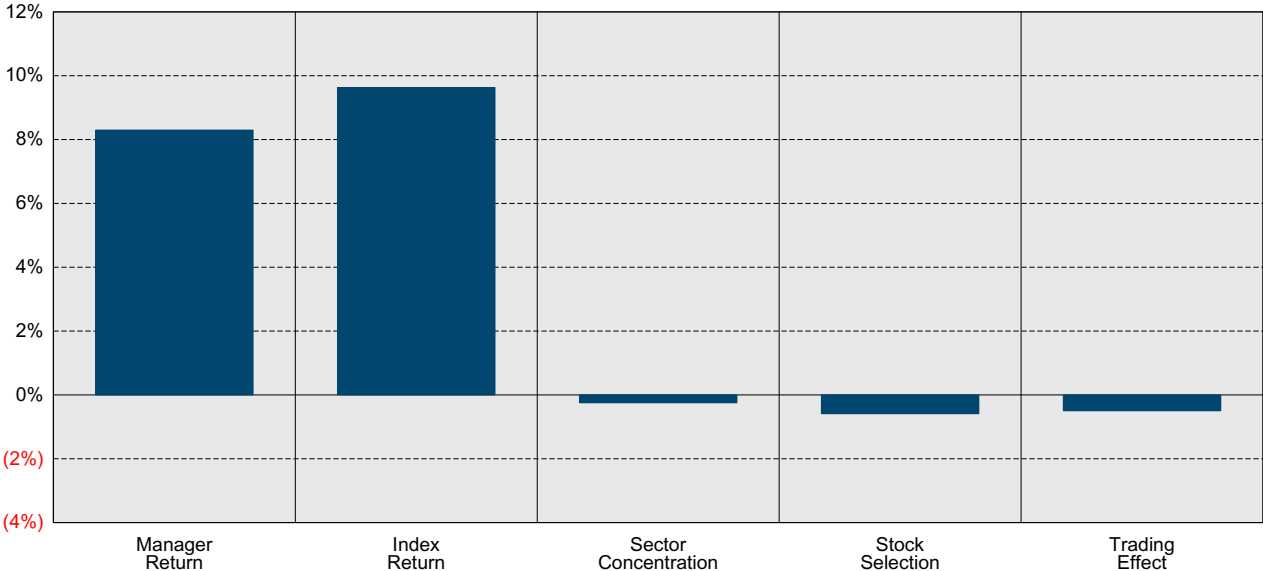
(0.59%)

+

Trading

(0.50%)

Total Fund Attribution Effects vs TSW Blended Benchmark Quarter ended September 30, 2024

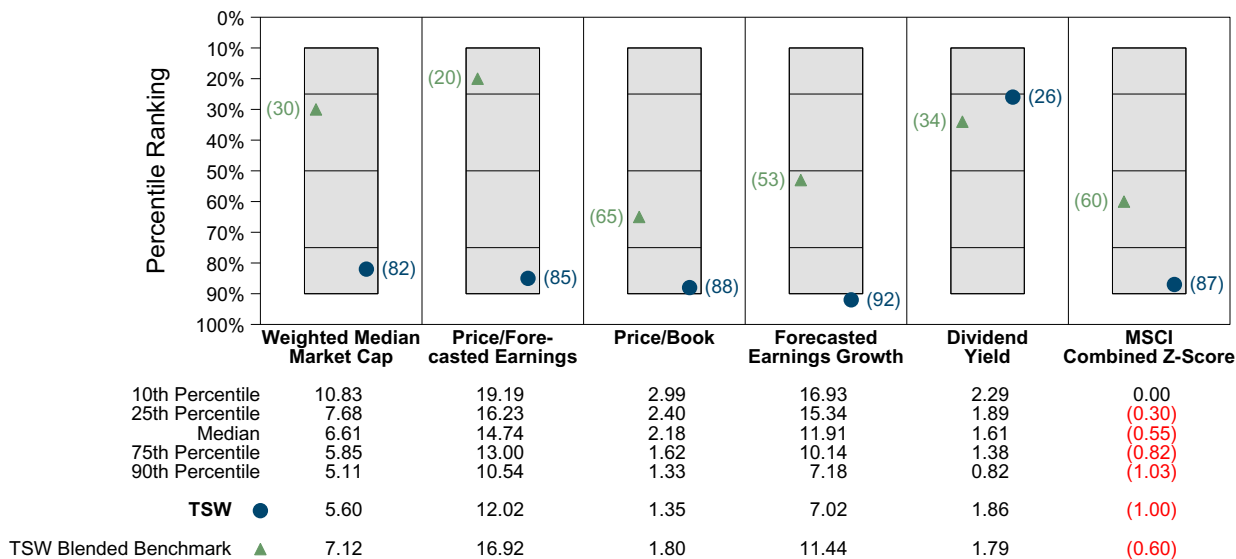


TSW Equity Characteristics Analysis Summary

Portfolio Characteristics

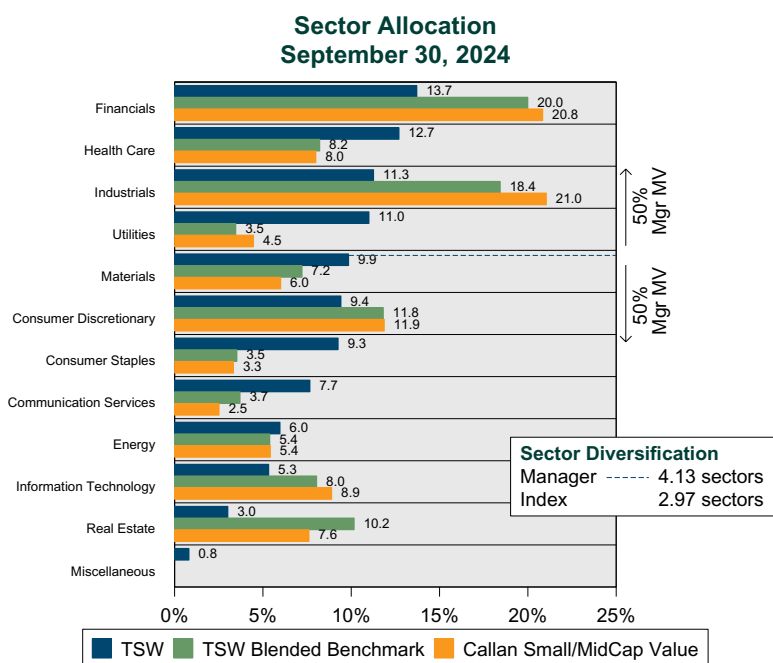
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Value as of September 30, 2024

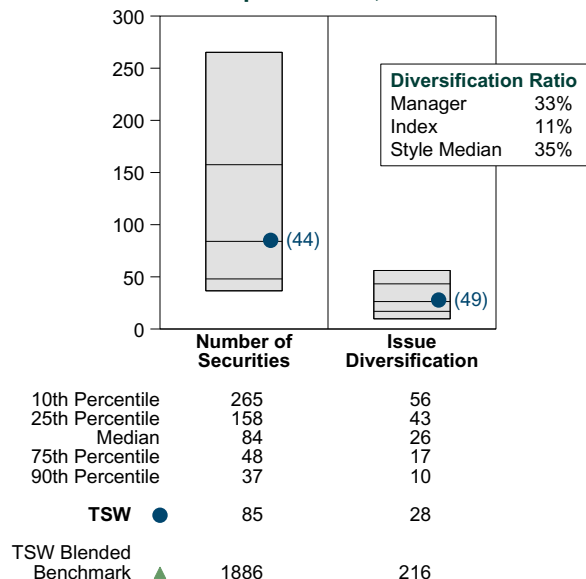


Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Diversification September 30, 2024

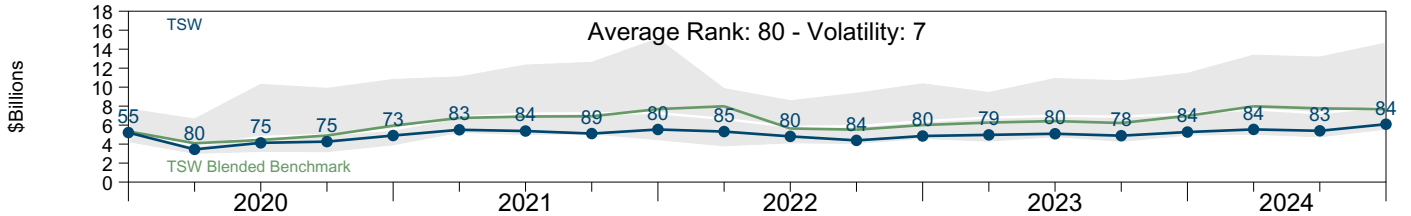


Portfolio Characteristics Analysis

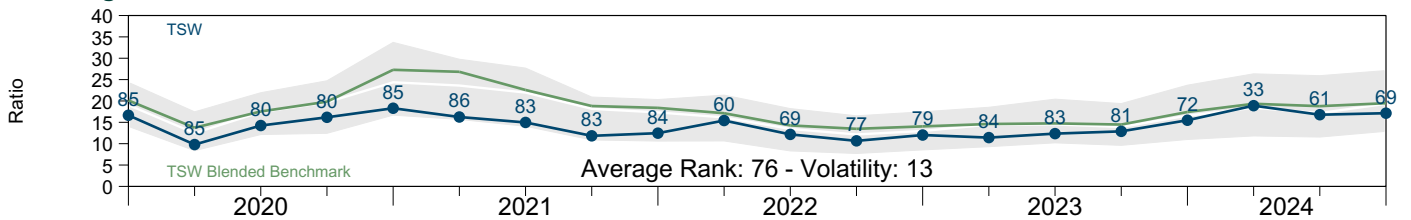
Callan Small/MidCap Value

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small/MidCap Value Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The TSW Blended Benchmark is shown for comparison purposes.

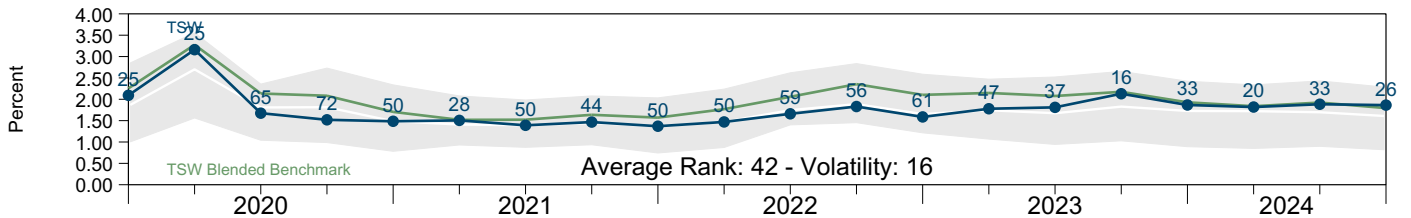
Weighted Average Market Cap



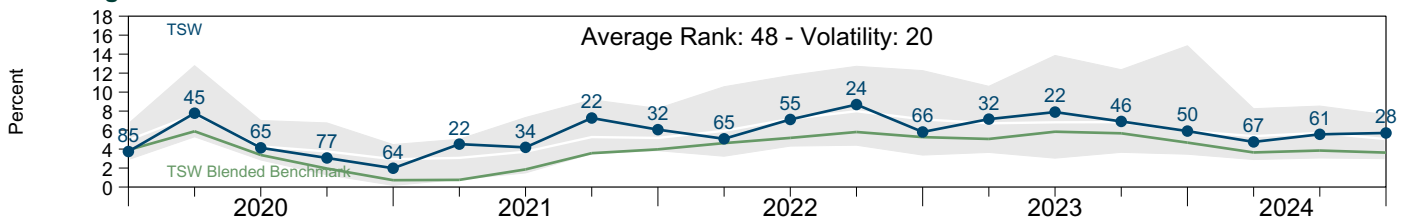
Trailing P/E



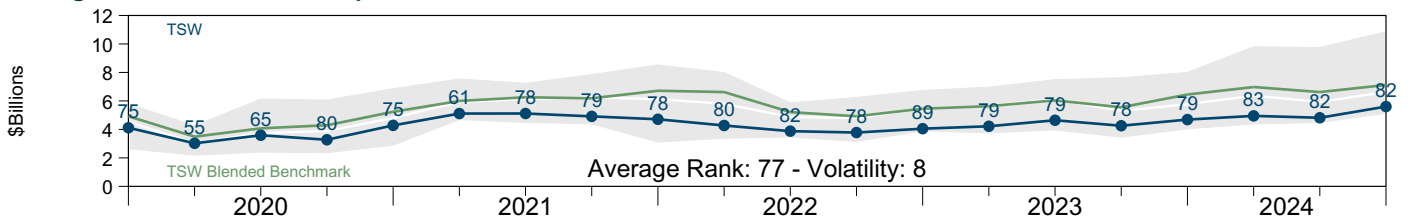
Dividend Yield



Earnings Yield



Weighted Median Market Cap

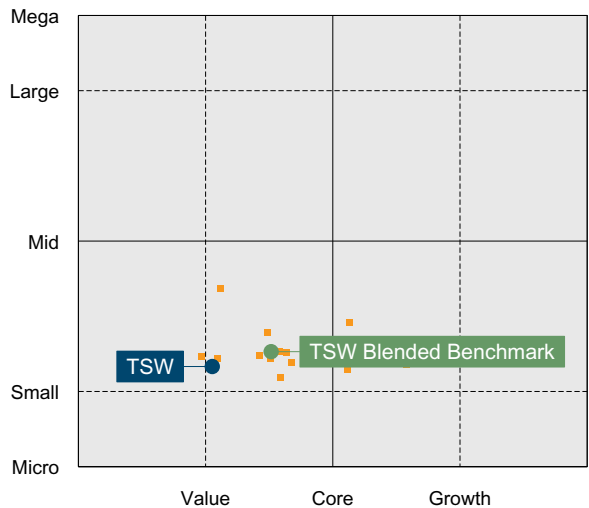


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
TSW
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

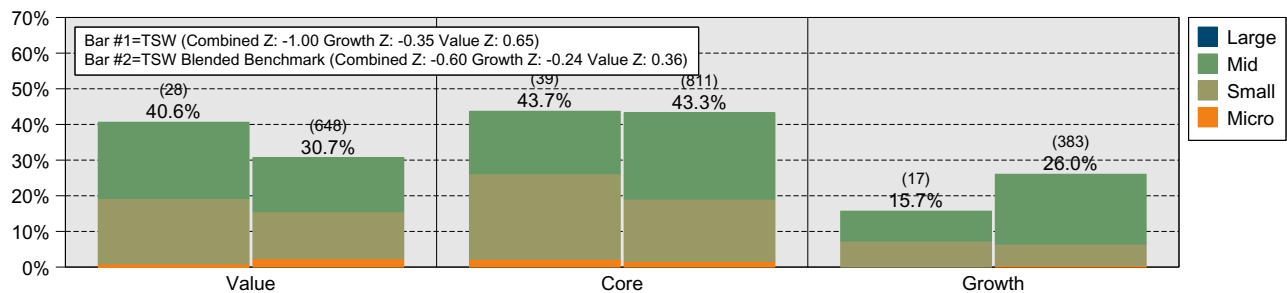
Style Map vs Callan Small/MidCap Value
Holdings as of September 30, 2024



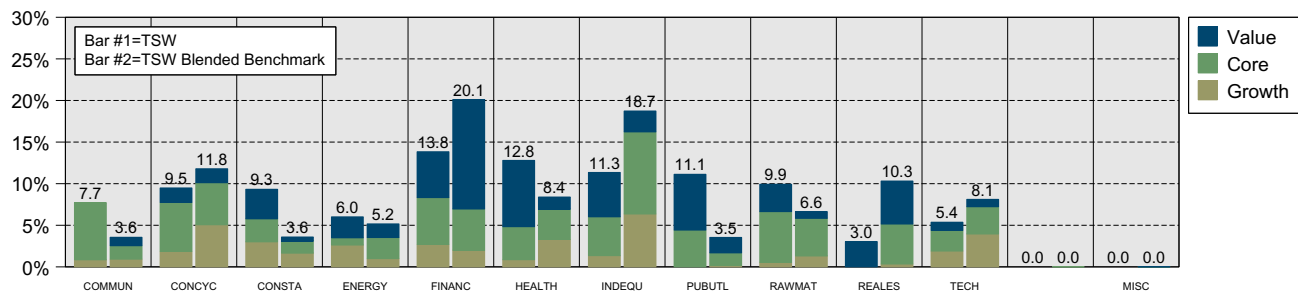
Style Exposure Matrix
Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Mid	21.4% (14) 15.2% (67)	17.5% (14) 24.2% (125)	8.4% (9) 19.6% (111)	47.3% (37) 58.9% (303)
Small	18.4% (12) 13.2% (266)	24.1% (22) 17.5% (386)	7.3% (8) 5.9% (168)	49.7% (42) 36.6% (820)
Micro	0.9% (2) 2.3% (315)	2.1% (3) 1.6% (300)	0.0% (0) 0.5% (104)	3.0% (5) 4.4% (719)
Total	40.6% (28) 30.7% (648)	43.7% (39) 43.3% (811)	15.7% (17) 26.0% (383)	100.0% (84) 100.0% (1842)

Combined Z-Score Style Distribution
Holdings as of September 30, 2024



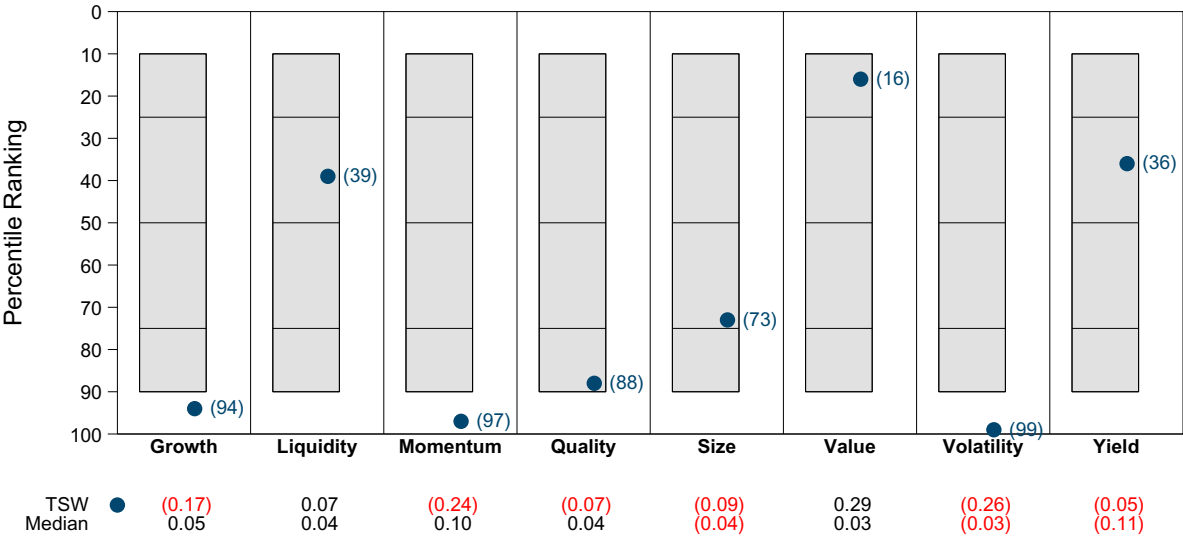
Sector Weights Distribution
Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Small/MidCap Value group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

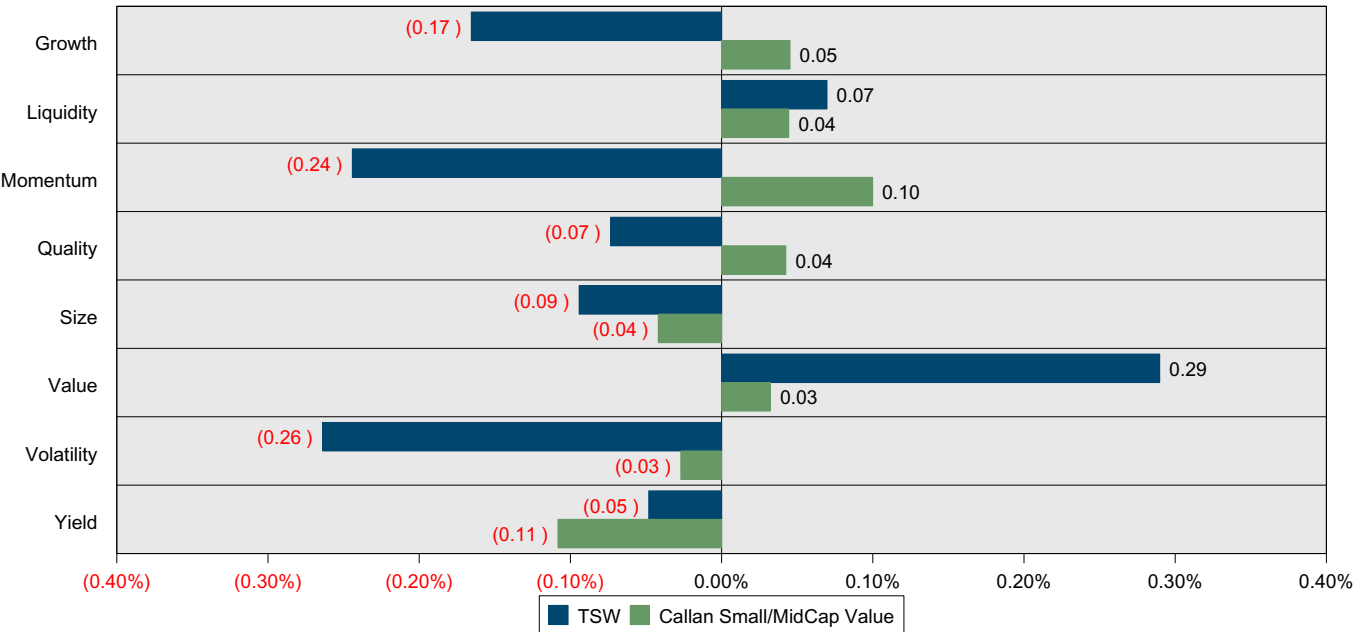
Factor Exposures Relative to TSW Blended Benchmark, Rankings vs Callan Small/MidCap Value
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Small/MidCap Value group relative to the TSW Blended Benchmark.

Factor Exposures Relative to TSW Blended Benchmark
for Period Ended September 30, 2024



Small Cap Domestic Equity Period Ended September 30, 2024

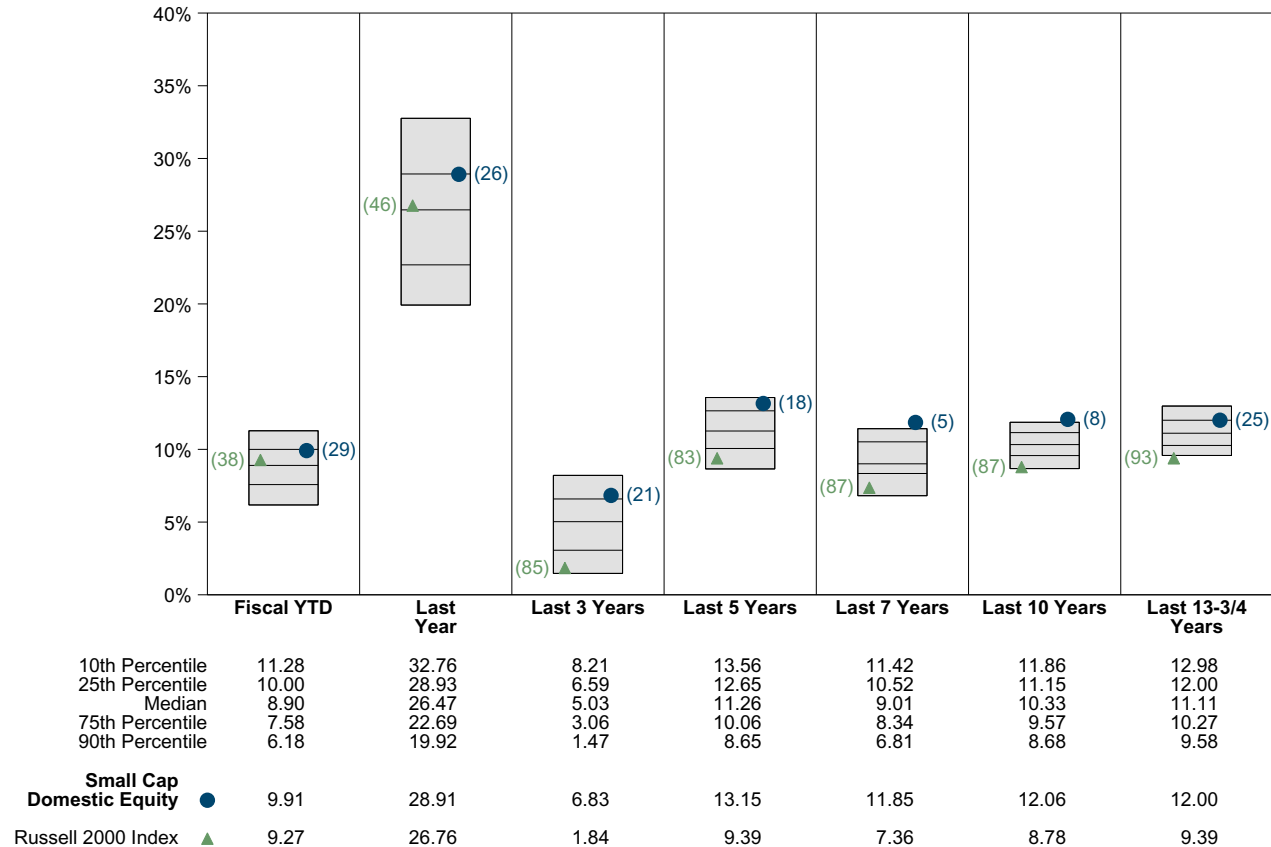
Quarterly Summary and Highlights

- Small Cap Domestic Equity's portfolio posted a 9.91% return for the quarter placing it in the 29 percentile of the Callan Small Cap Core group for the quarter and in the 26 percentile for the last year.
- Small Cap Domestic Equity's portfolio outperformed the Russell 2000 Index by 0.64% for the quarter and outperformed the Russell 2000 Index for the year by 2.15%.

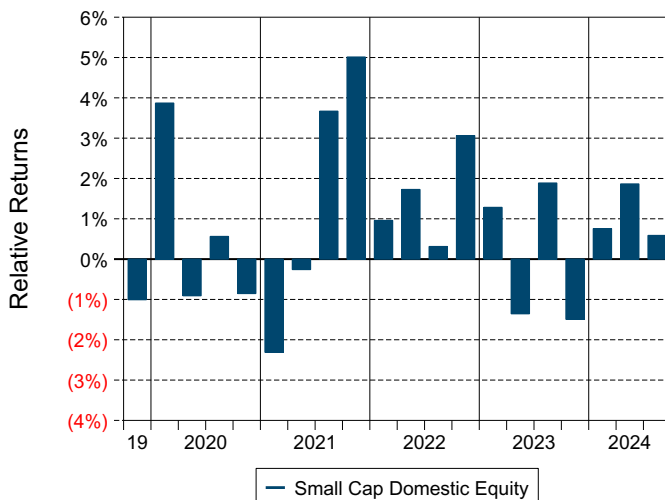
Quarterly Asset Growth

Beginning Market Value	\$931,506,248
Net New Investment	\$0
Investment Gains/(Losses)	\$92,346,486
Ending Market Value	\$1,023,852,733

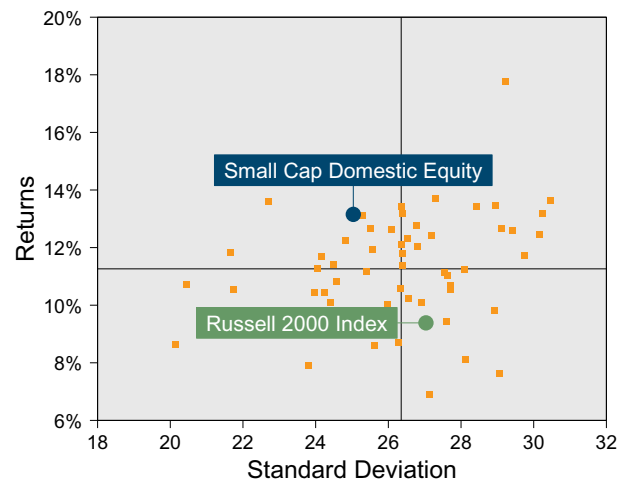
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



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

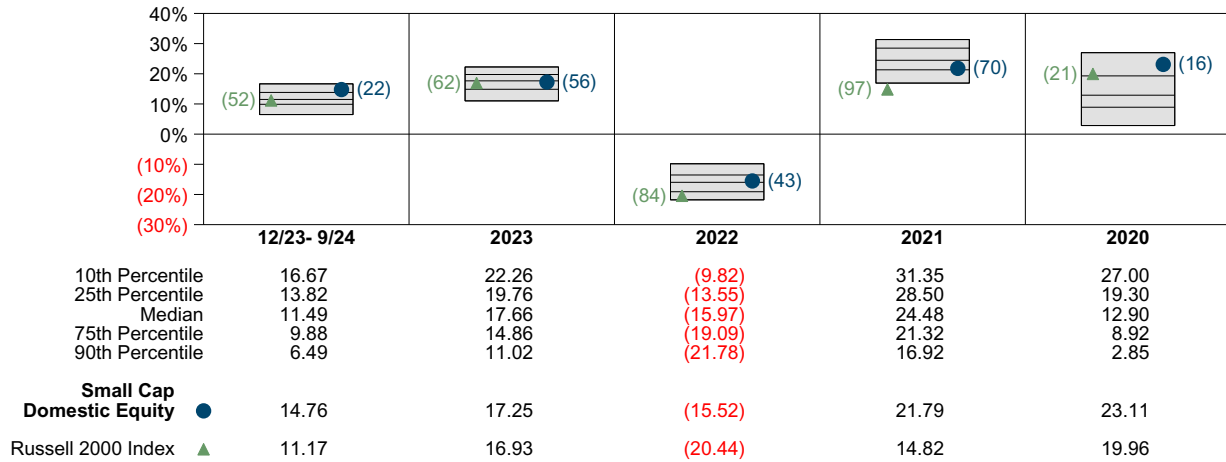


Small Cap Domestic Equity Return Analysis Summary

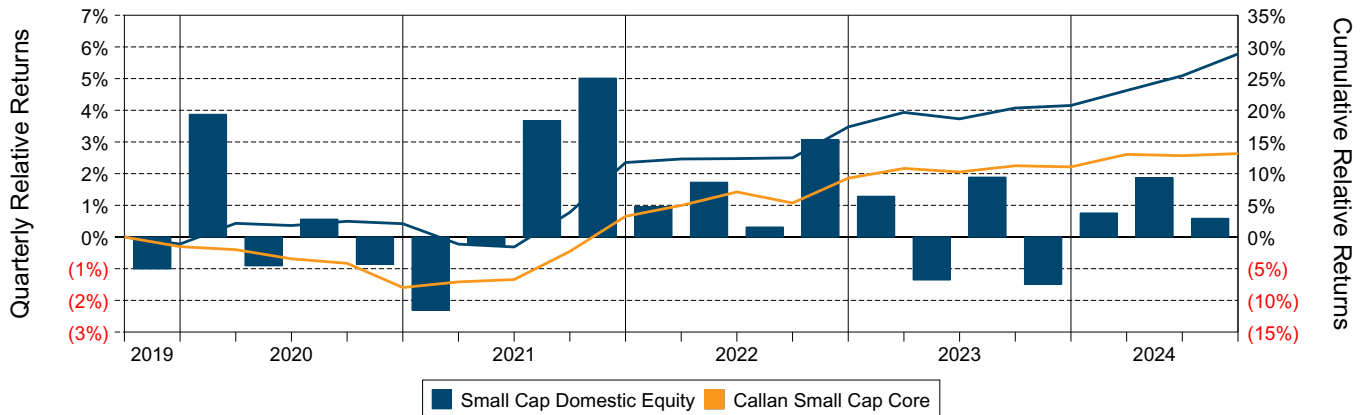
Return Analysis

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

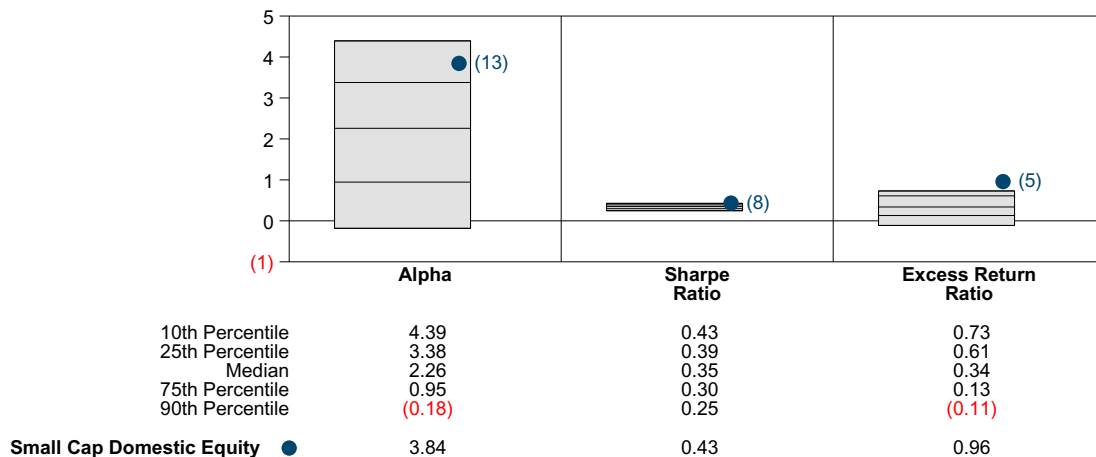
Performance vs Callan Small Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Index



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



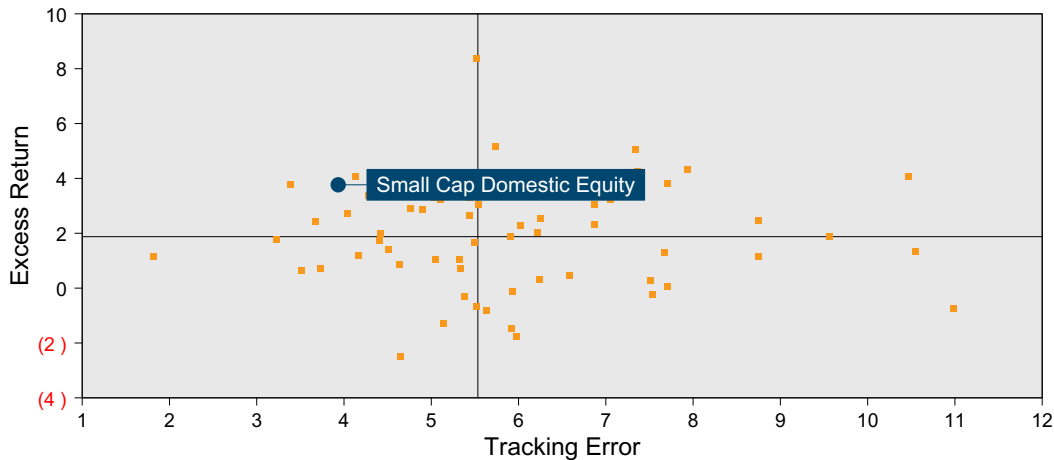
Small Cap Domestic Equity

Risk Analysis Summary

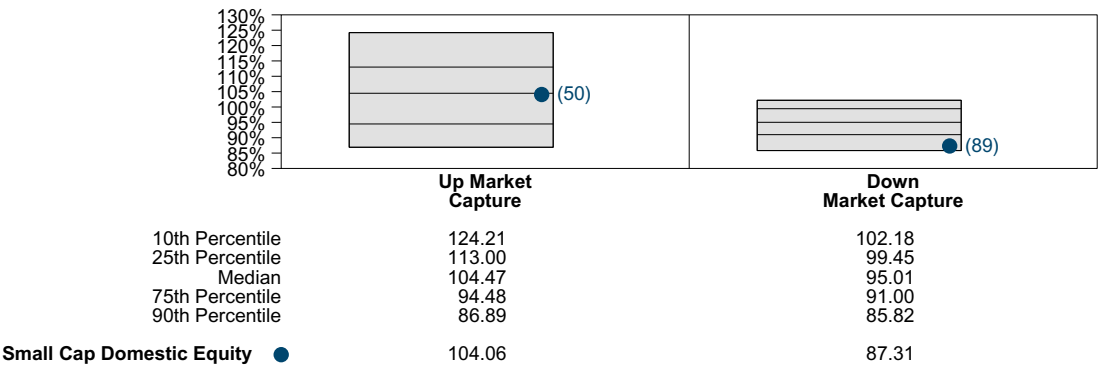
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

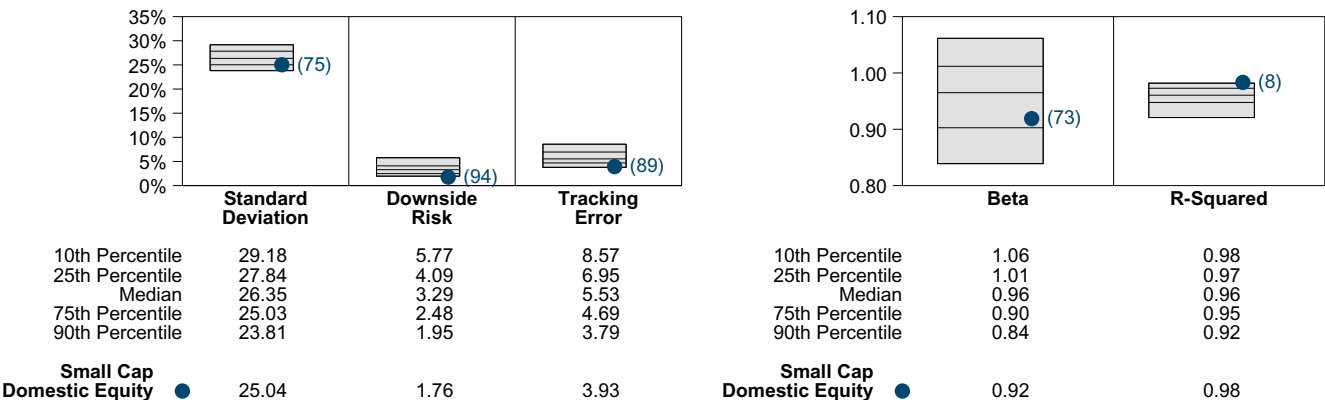
Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



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

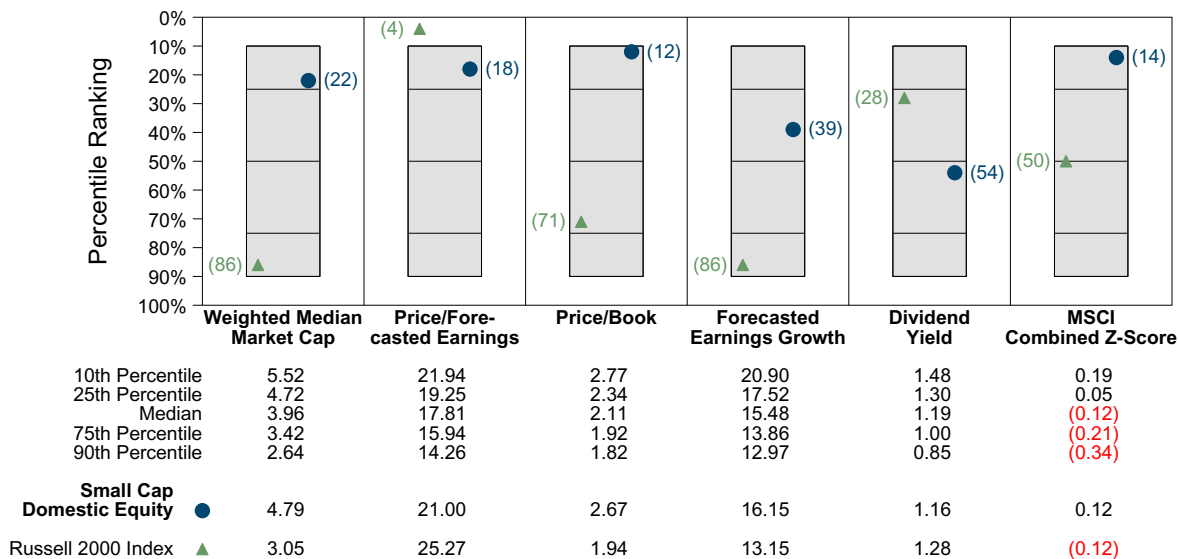


Small Cap Domestic Equity Equity Characteristics Analysis Summary

Portfolio Characteristics

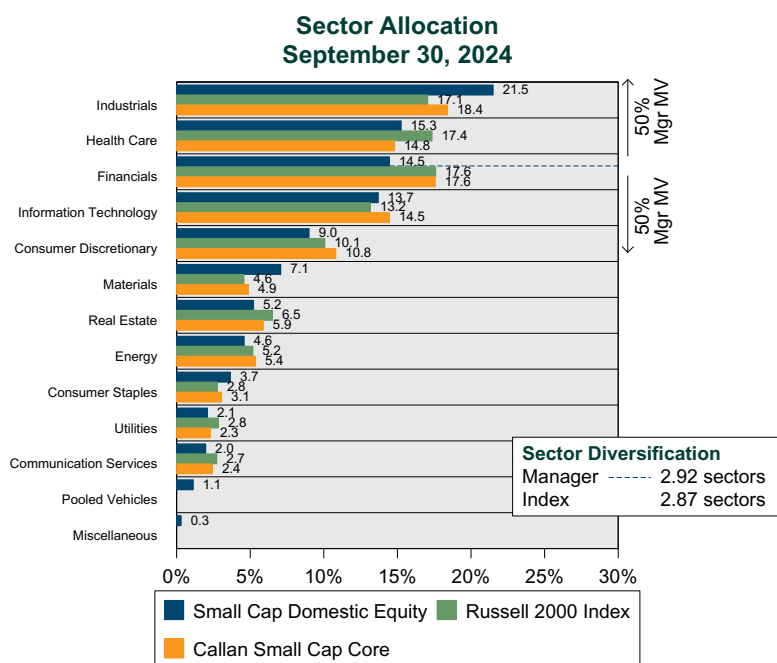
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of September 30, 2024

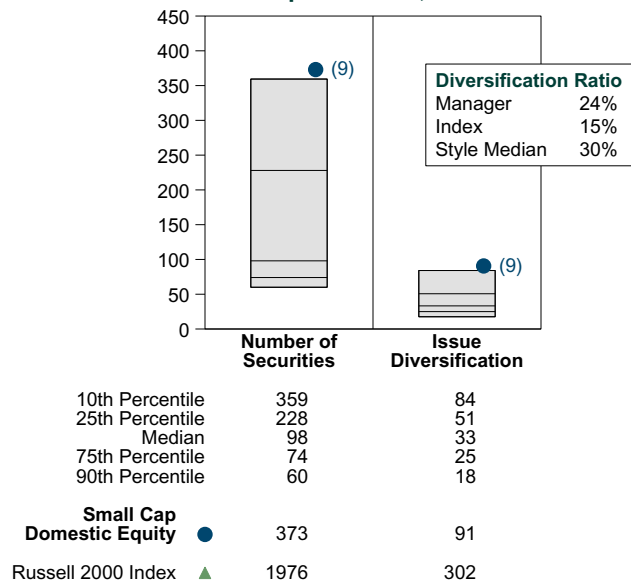


Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



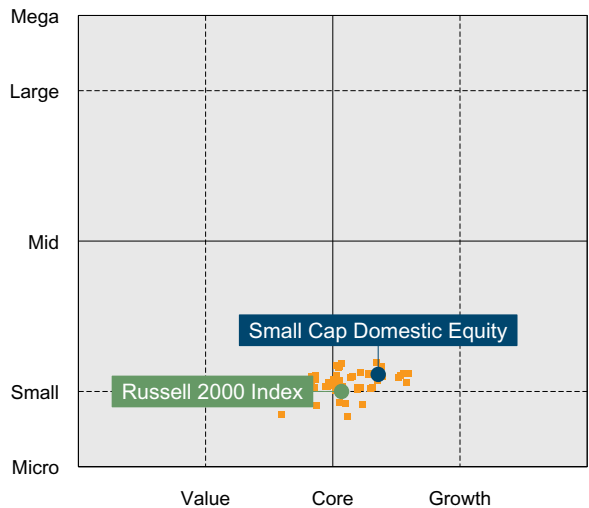
Diversification September 30, 2024



Current Holdings Based Style Analysis
Small Cap Domestic Equity
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

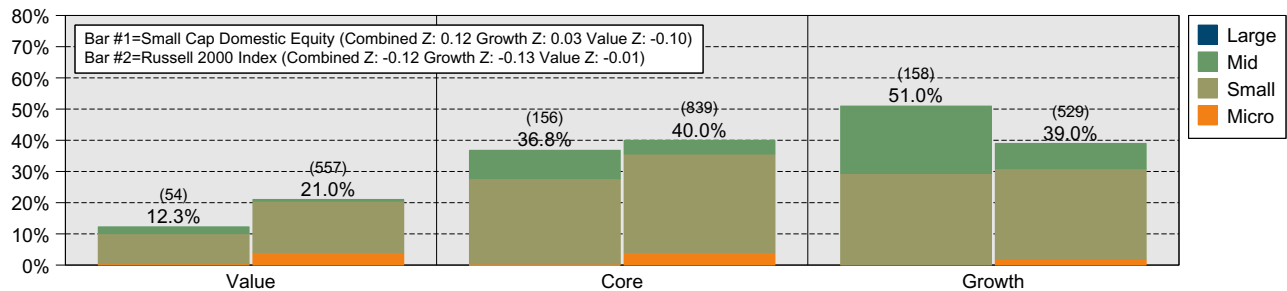
Style Map vs Callan Small Cap Core Holdings as of September 30, 2024



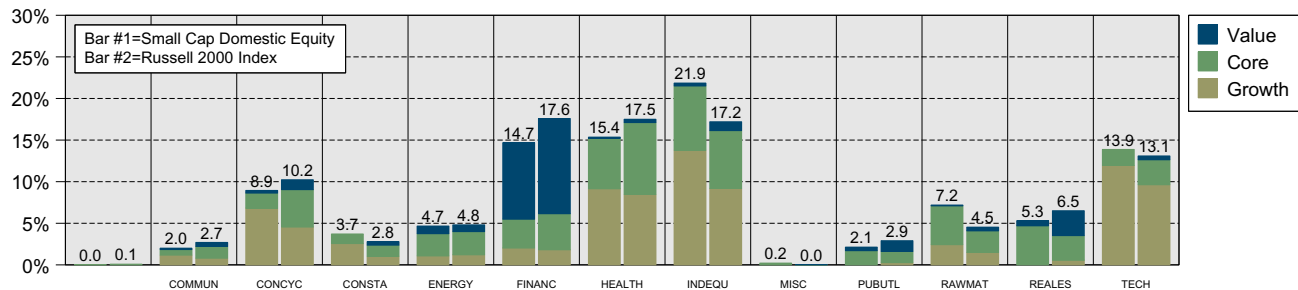
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Mid	2.2% (6) 0.5% (2)	9.1% (26) 4.4% (18)	21.5% (52) 8.1% (30)	32.8% (84) 13.0% (50)
Small	9.6% (40) 16.5% (228)	27.4% (122) 31.5% (427)	29.2% (105) 29.1% (346)	66.2% (267) 77.0% (1001)
Micro	0.4% (8) 4.0% (327)	0.3% (8) 4.1% (394)	0.2% (1) 1.8% (153)	1.0% (17) 10.0% (874)
Total	12.3% (54) 21.0% (557)	36.8% (156) 40.0% (839)	51.0% (158) 39.0% (529)	100.0% (368) 100.0% (1925)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



Sector Weights Distribution Holdings as of September 30, 2024



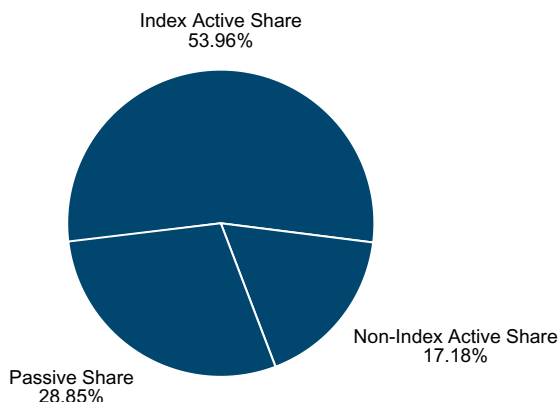
Small Cap Domestic Equity

Active Share Analysis as of September 30, 2024

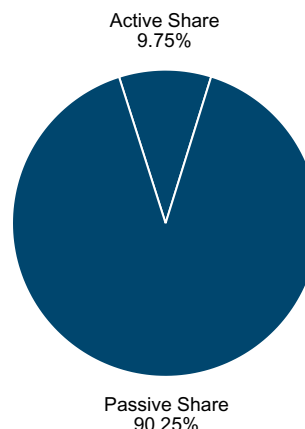
vs. Russell 2000 Index

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



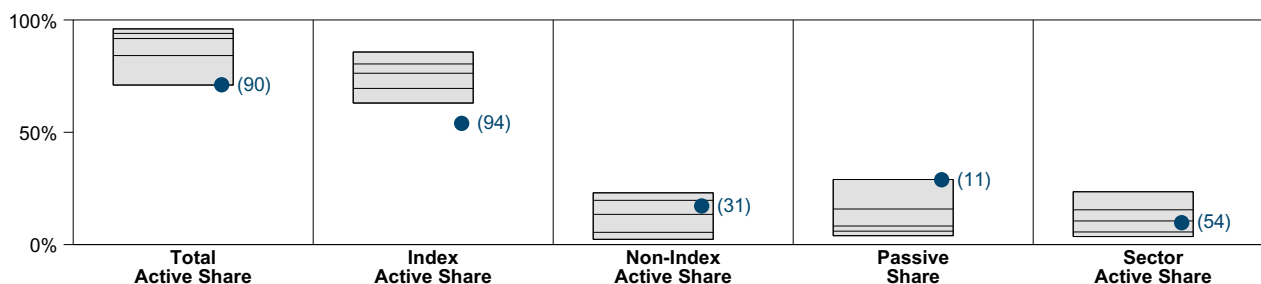
Sector Exposure Active Share



Total Active Share: 71.15%

	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	78.56%	4.39%	82.95%	2.73%	1.98%	1.88%
Consumer Discretionary	54.76%	18.40%	73.16%	10.07%	9.00%	6.85%
Consumer Staples	45.42%	17.77%	63.19%	2.77%	3.66%	2.17%
Energy	56.77%	22.94%	79.71%	5.19%	4.59%	3.88%
Financials	64.72%	10.28%	75.00%	17.60%	14.46%	11.72%
Health Care	55.04%	11.03%	66.06%	17.36%	15.26%	10.66%
Industrials	47.66%	22.66%	70.32%	17.06%	21.51%	13.94%
Information Technology	51.49%	16.97%	68.46%	13.17%	13.70%	9.22%
Materials	39.91%	24.92%	64.84%	4.58%	7.08%	3.89%
Miscellaneous	0.00%	100.00%	100.00%	-	0.31%	0.14%
Pooled Vehicles	0.00%	100.00%	100.00%	-	1.13%	0.57%
Real Estate	63.53%	11.87%	75.40%	6.52%	5.23%	4.29%
Utilities	66.62%	12.77%	79.38%	2.84%	2.10%	1.88%
Total	53.96%	17.18%	71.15%	100.00%	100.00%	71.09%

Active Share vs. Callan Small Cap Core



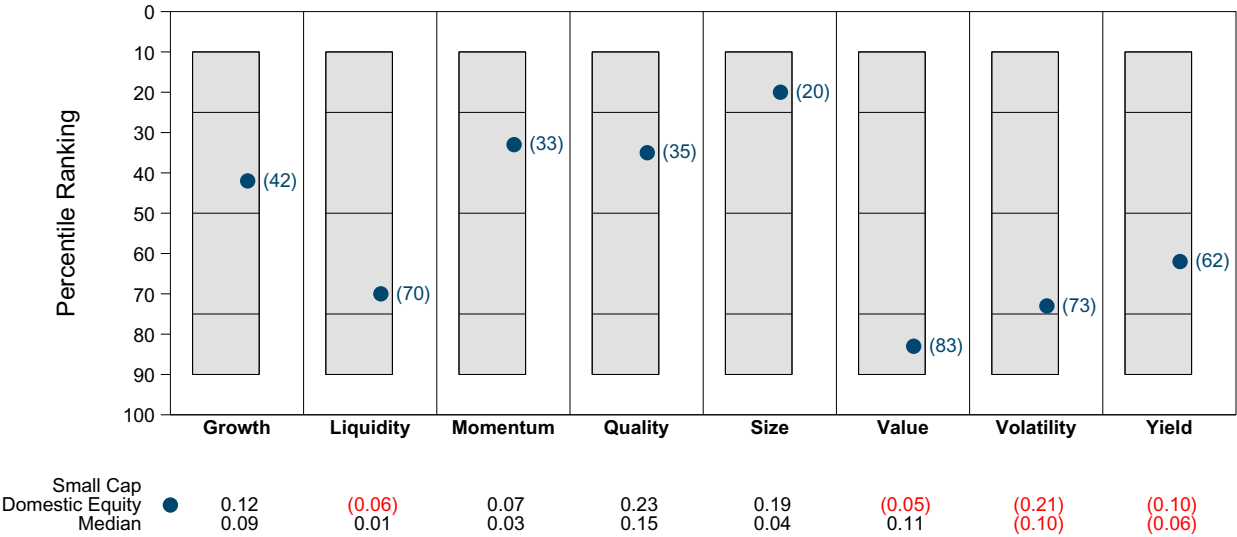
10th Percentile	96.03	85.73	23.05	28.98	23.53
25th Percentile	94.02	80.42	19.70	15.85	15.49
Median	91.72	76.28	13.47	8.28	10.53
75th Percentile	84.15	69.53	5.46	5.98	5.63
90th Percentile	71.02	63.02	2.34	3.97	3.58

Small Cap Domestic Equity ●

Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan Small Cap Core group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

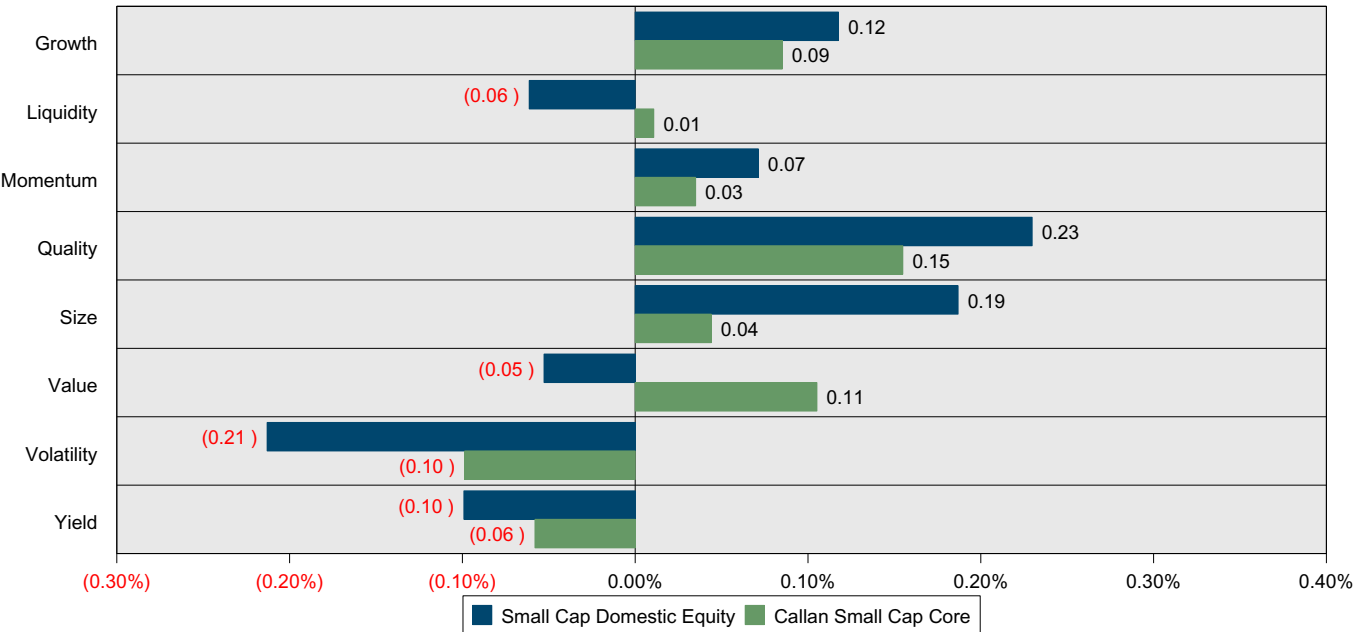
Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan Small Cap Core group relative the the Russell 2000 Index.

Factor Exposures Relative to Russell 2000 Index
for Period Ended September 30, 2024



Boston Trust

Period Ended September 30, 2024

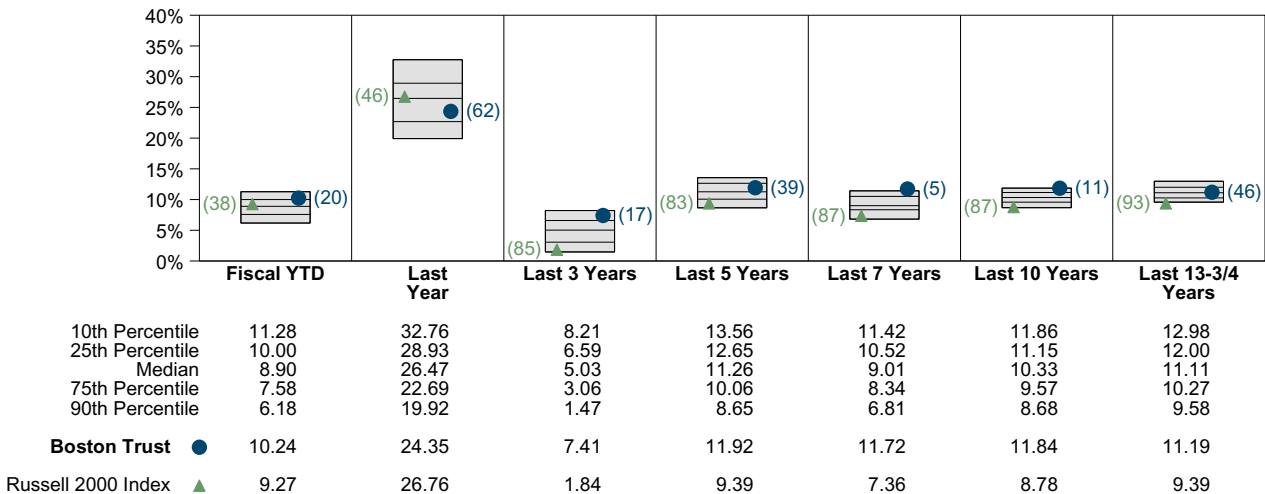
Investment Philosophy

Boston Trust Walden Company is a Boston-based investment firm. The firm’s small cap product is team managed but overseen by lead PM Richard Williams, who is supported by three additional co-portfolio managers (including co-CEO Ken Scott) and team of generalist analysts. In addition to traditional fundamental equity analysts, the firm employs dedicated ESG investment analysts to manage engagement with portfolio companies. The strategy focuses on companies that exhibit quality with attractive valuations. The portfolio emphasizes quality and durability of earnings for target companies. The portfolio typically holds 70-90 holdings with an emphasis on quality earnings, reasonable valuations, and lower exposure to momentum. Risk is managed via sector positioning (typically within +/- 5% of benchmark weights) and individual security underwriting. The portfolio turnover tends to be lower, averaging 20% over the long-term. NHRS inception in the fund is October 2010.

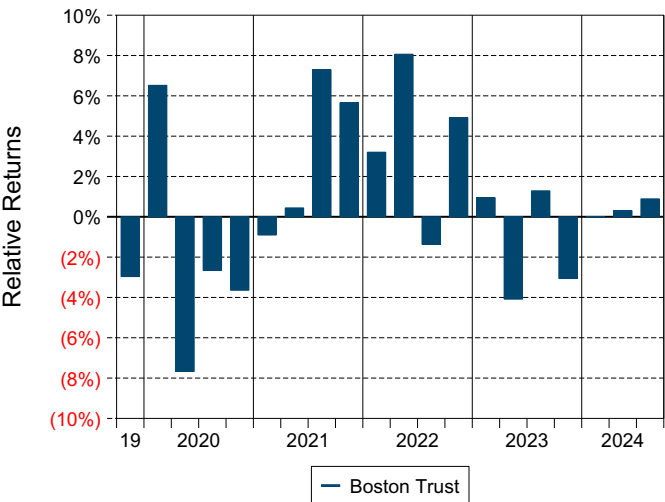
Quarterly Asset Growth

Beginning Market Value	\$236,923,311
Net New Investment	\$0
Investment Gains/(Losses)	\$24,262,913
Ending Market Value	\$261,186,224

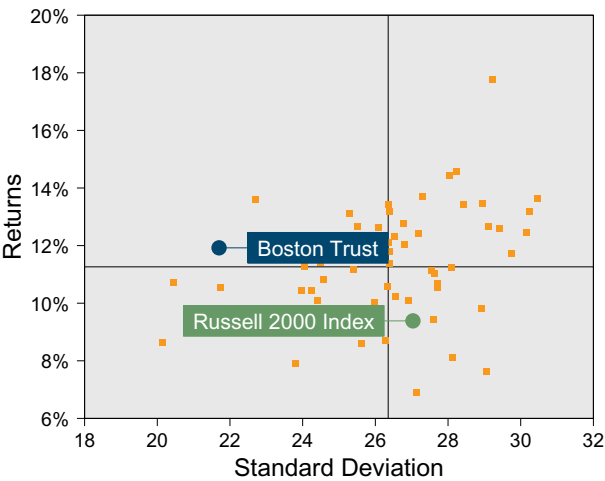
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



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

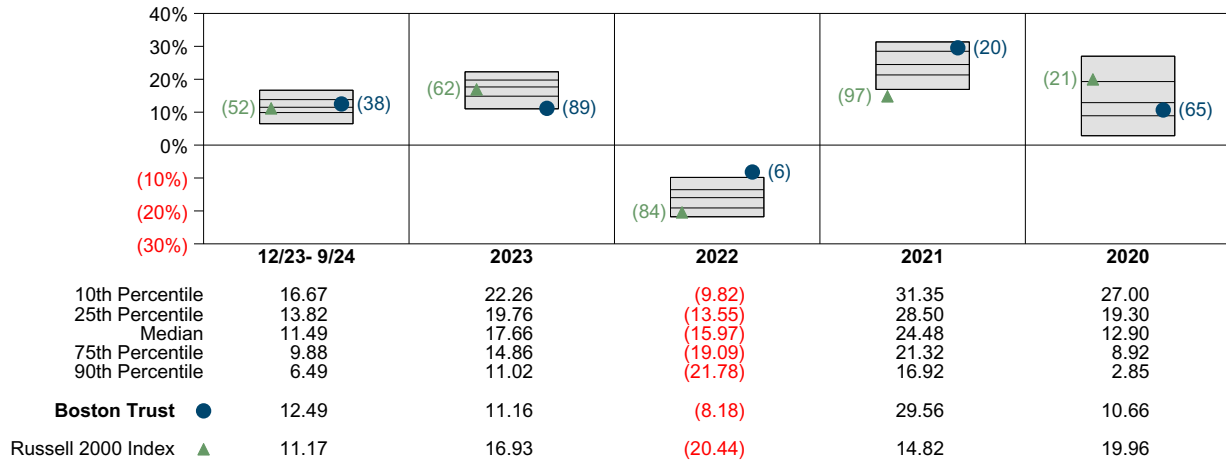


Boston Trust Return Analysis Summary

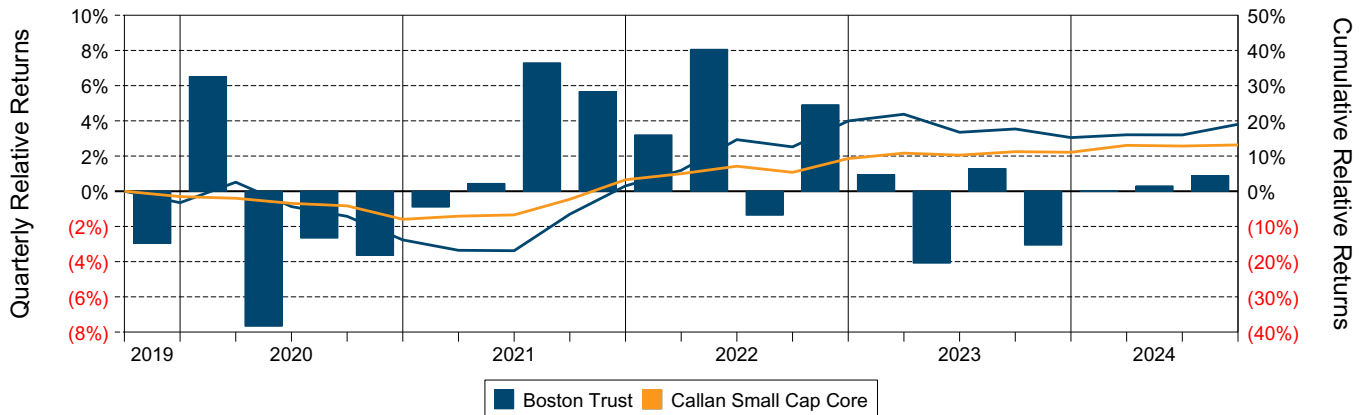
Return Analysis

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

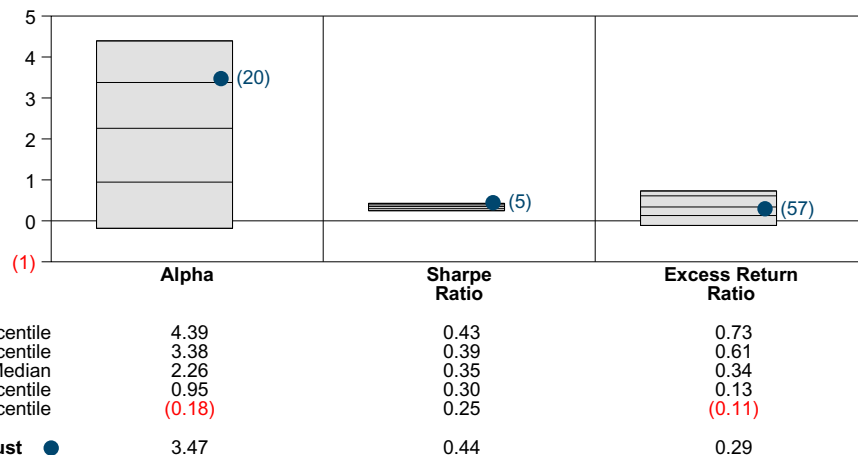
Performance vs Callan Small Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Index



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



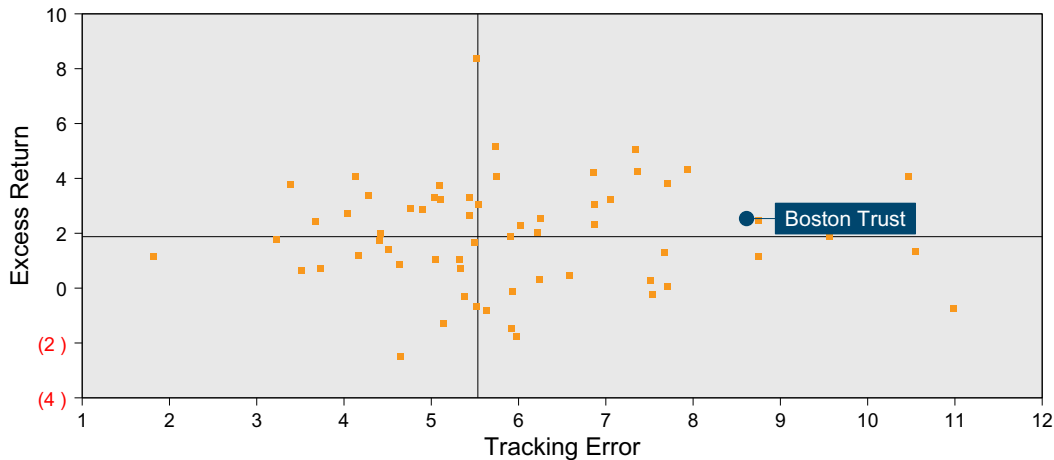
Boston Trust

Risk Analysis Summary

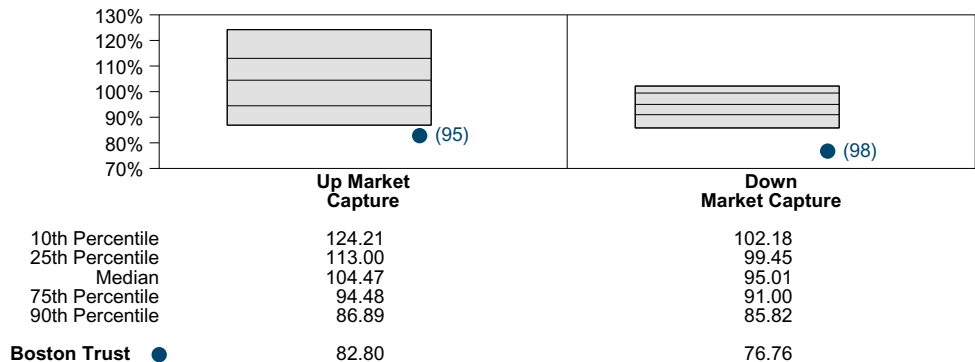
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

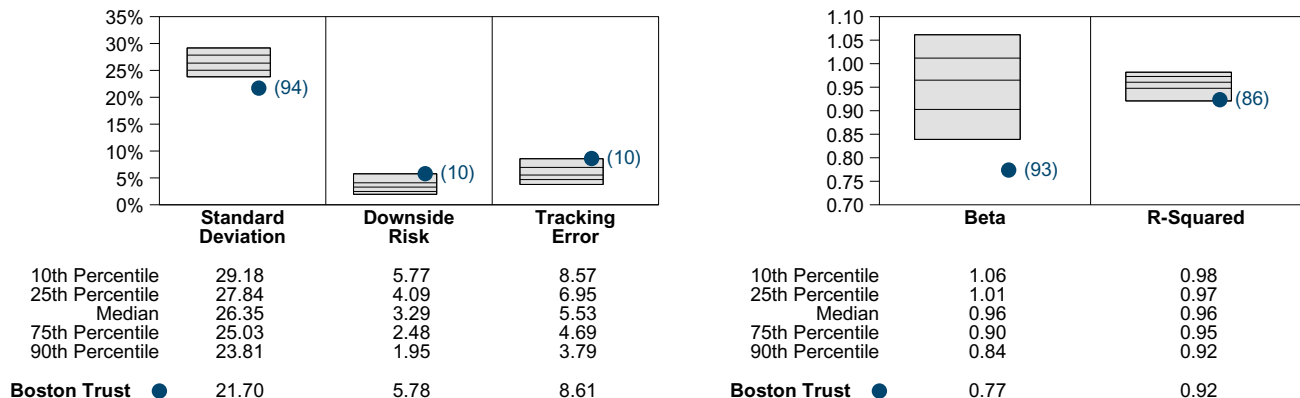
Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



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

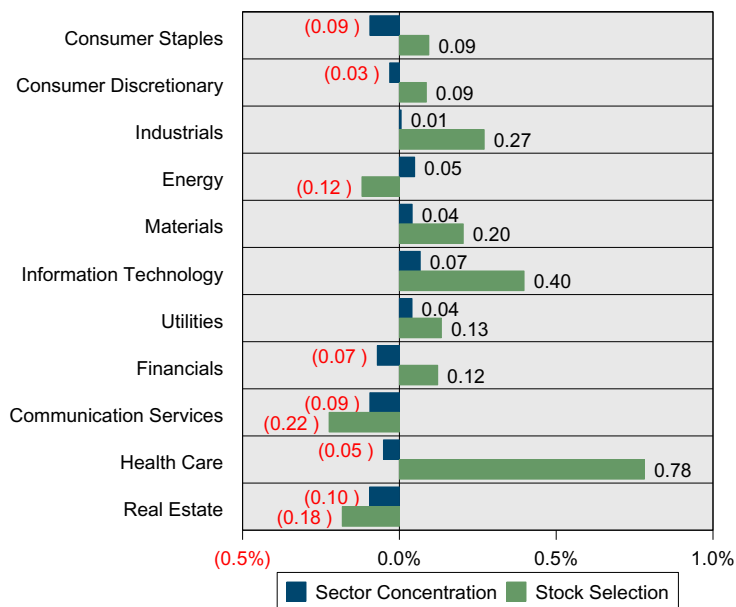


Boston Trust vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

Attribution Ranking and Sector Detail

The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart ranks the excess return and the four attribution factors for the manager vs the factors generated by members of the Callan Small Cap Core over the same time period.

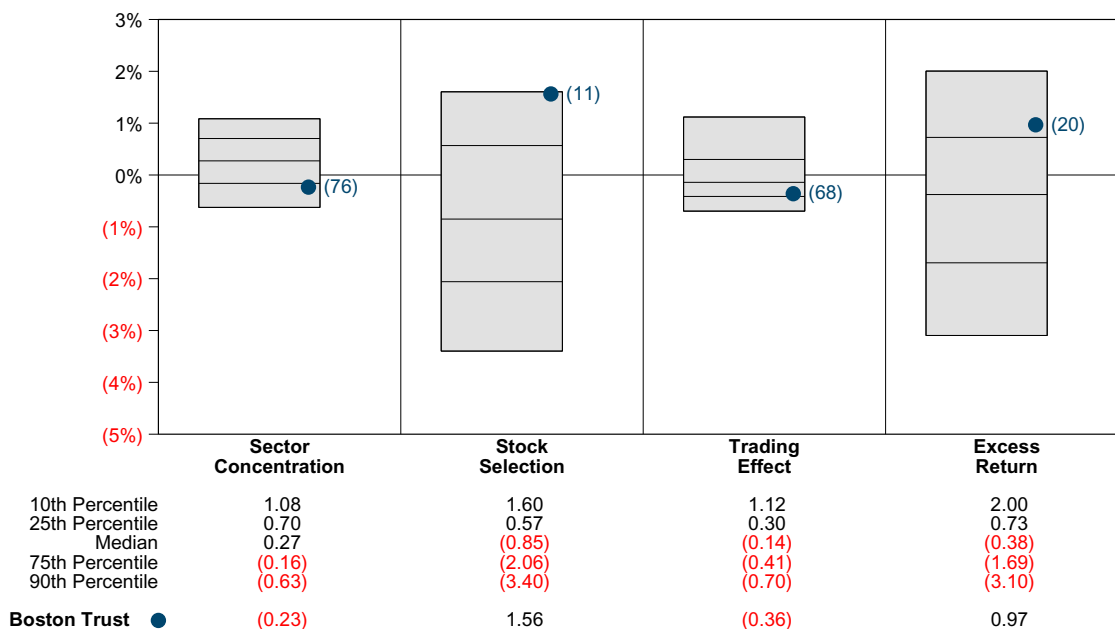
Attribution Effects by Sector vs Russell 2000 Index Quarter ended September 30, 2024



Sector	Sector Concentration	Stock Selection
Consumer Staples	(0.09%)	0.09%
Consumer Discretionary	(0.03%)	0.09%
Industrials	0.01%	0.27%
Energy	0.05%	(0.12%)
Materials	0.04%	0.20%
Information Technology	0.07%	0.40%
Utilities	0.04%	0.13%
Financials	(0.07%)	0.12%
Communication Services	(0.09%)	(0.22%)
Health Care	(0.05%)	0.78%
Real Estate	(0.10%)	(0.18%)
Total	(0.23%)	1.56%

Manager Return	=	Index Return	+	Sector Concentration	+	Stock Selection	+	Trading
10.24%		9.27%		(0.23%)		1.56%		(0.36%)

Equity Attribution Ranking vs Callan Small Cap Core Quarter ended September 30, 2024

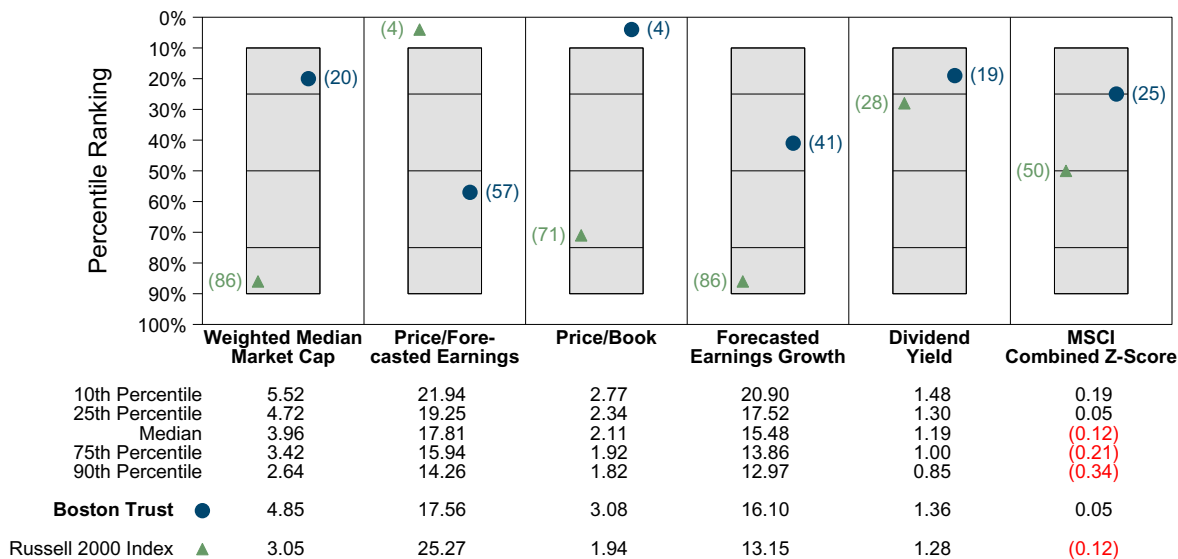


Boston Trust Equity Characteristics Analysis Summary

Portfolio Characteristics

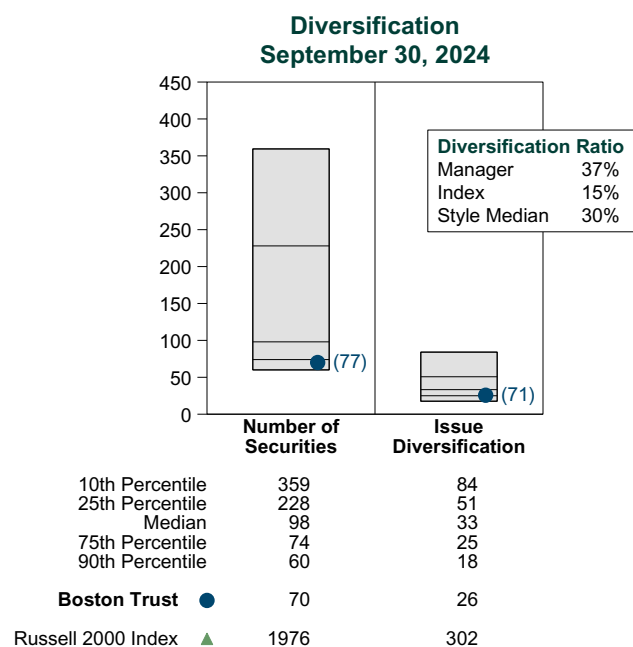
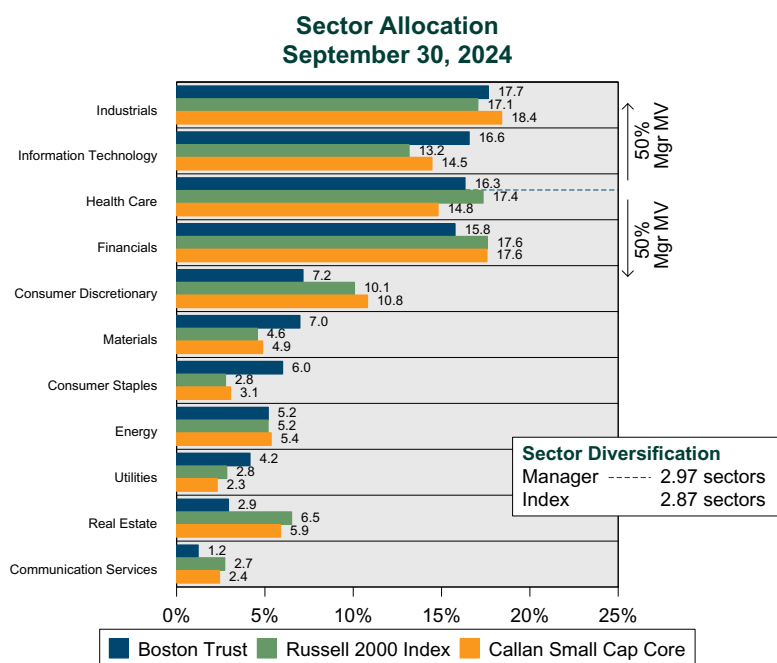
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.

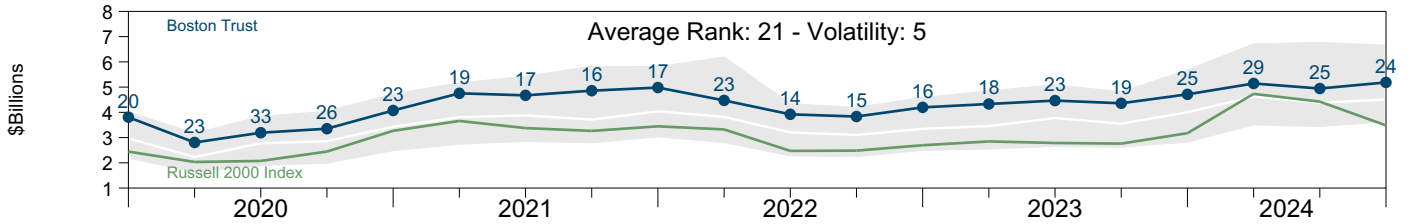


Portfolio Characteristics Analysis

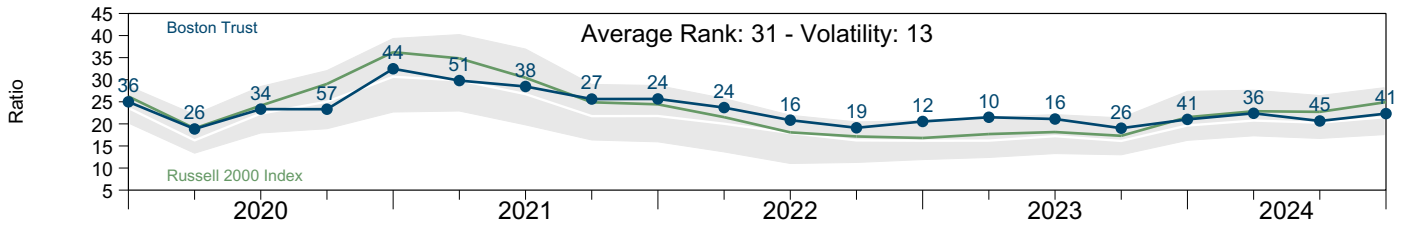
Callan Small Cap Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small Cap Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 2000 Index is shown for comparison purposes.

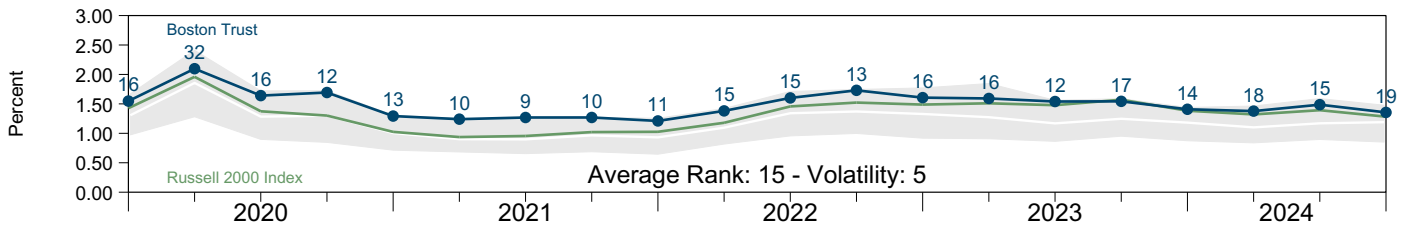
Weighted Average Market Cap



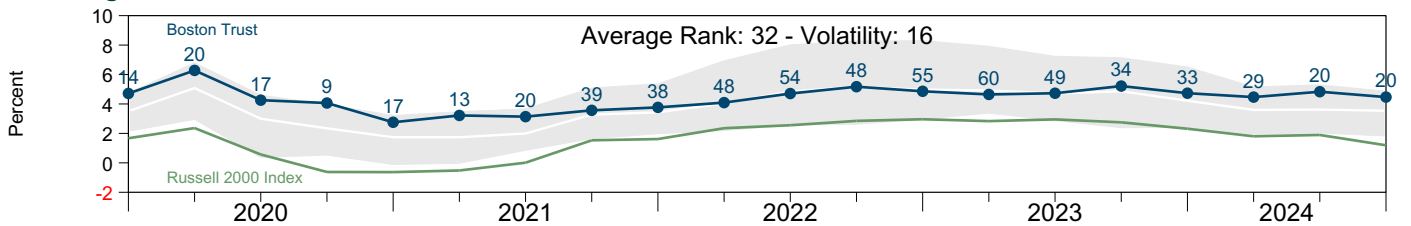
Trailing P/E



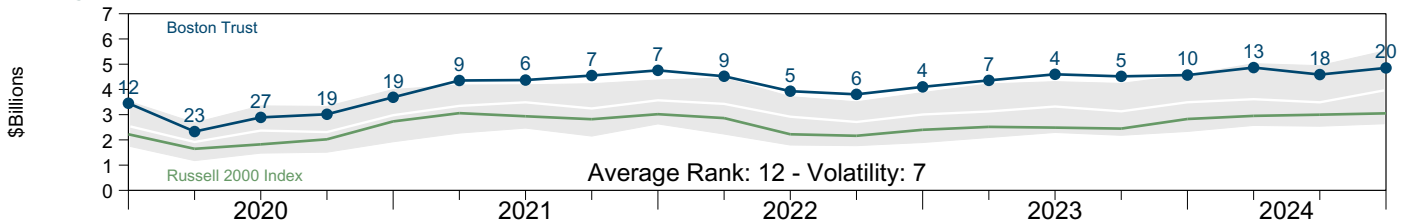
Dividend Yield



Earnings Yield



Weighted Median Market Cap

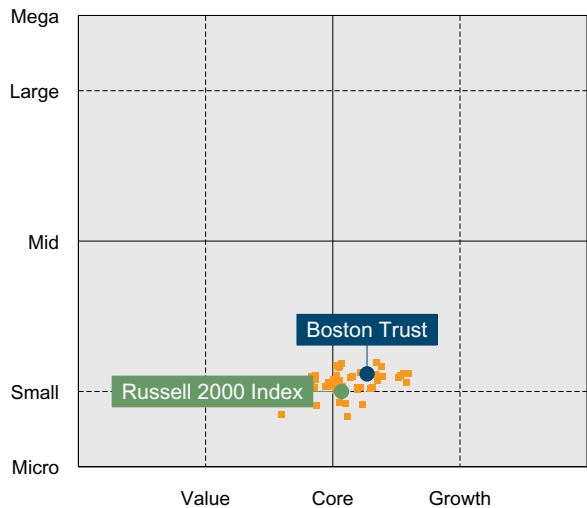


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Boston Trust
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

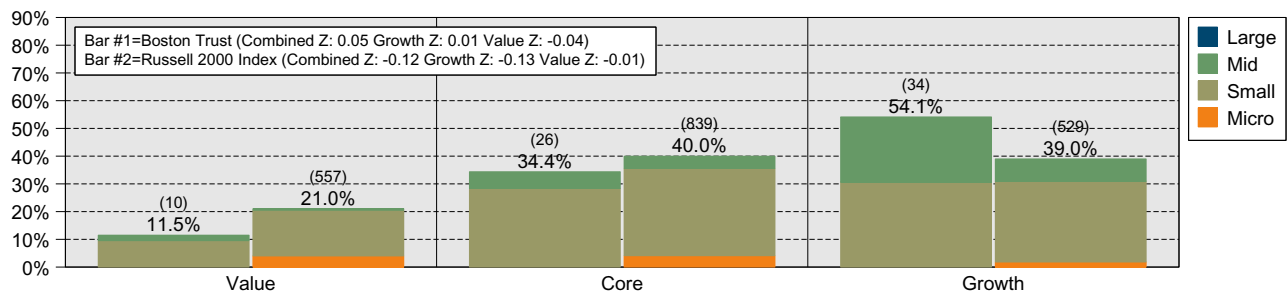
Style Map vs Callan Small Cap Core Holdings as of September 30, 2024



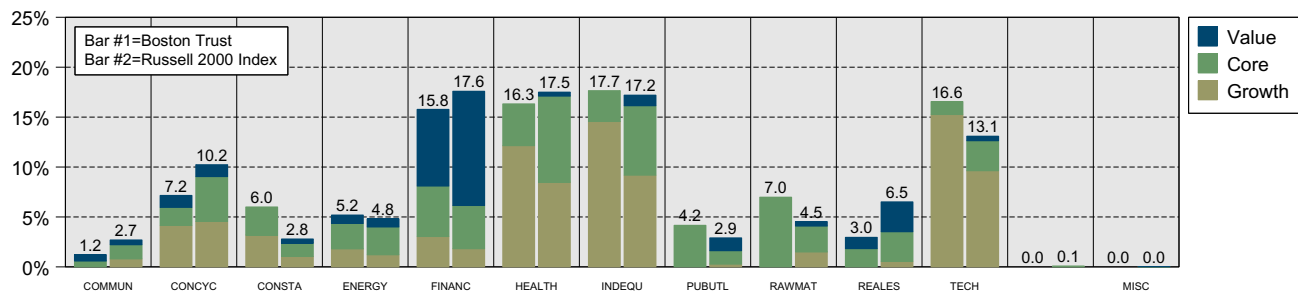
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Mid	2.0% (1) 0.5% (2)	6.0% (4) 4.4% (18)	23.5% (14) 8.1% (30)	31.5% (19) 13.0% (50)
Small	9.5% (9) 16.5% (228)	28.3% (22) 31.5% (427)	30.6% (20) 29.1% (346)	68.5% (51) 77.0% (1001)
Micro	0.0% (0) 4.0% (327)	0.0% (0) 4.1% (394)	0.0% (0) 1.8% (153)	0.0% (0) 10.0% (874)
Total	11.5% (10) 21.0% (557)	34.4% (26) 40.0% (839)	54.1% (34) 39.0% (529)	100.0% (70) 100.0% (1925)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



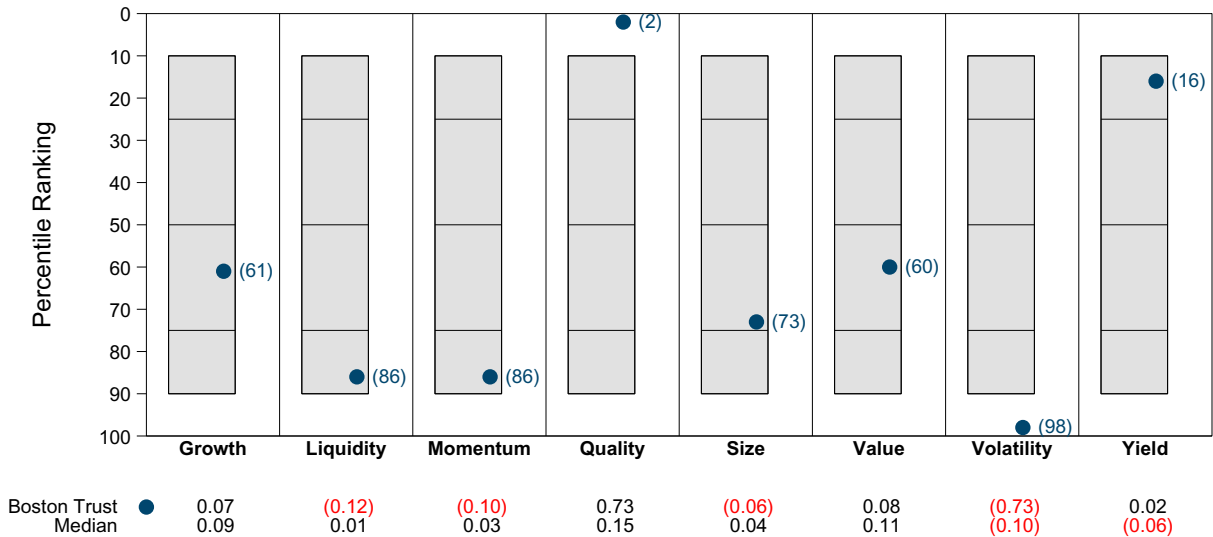
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan Small Cap Core group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

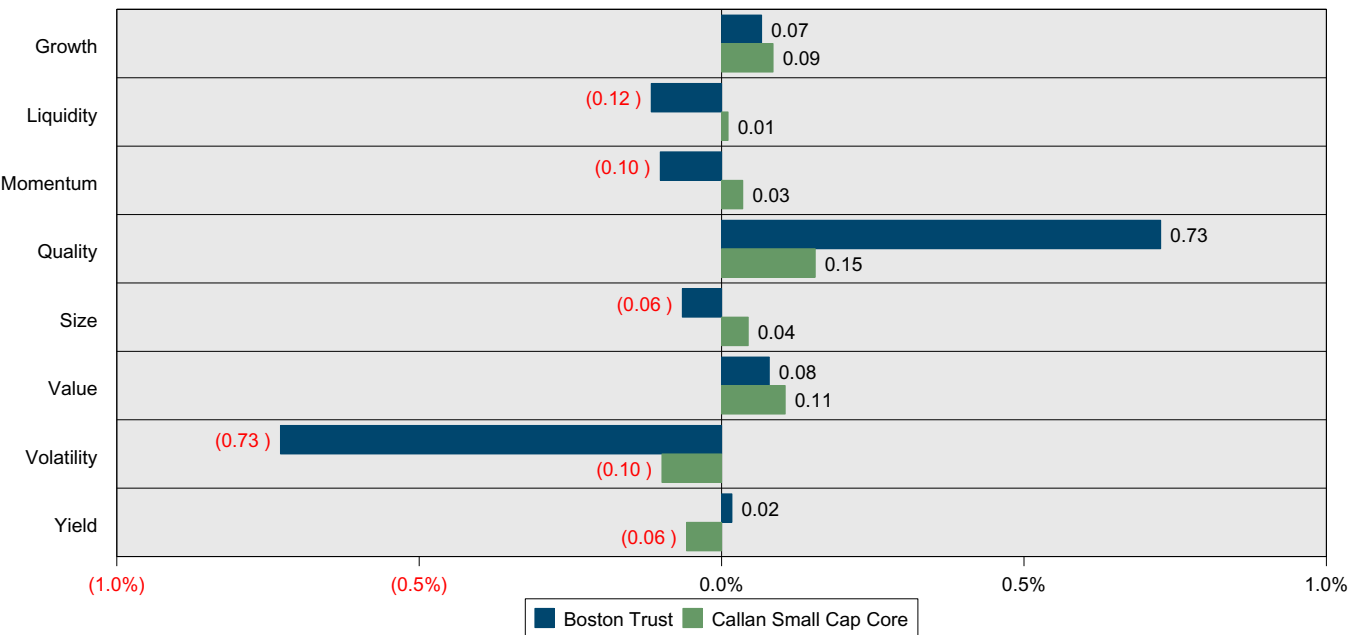
Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan Small Cap Core group relative the the Russell 2000 Index.

Factor Exposures Relative to Russell 2000 Index
for Period Ended September 30, 2024



Segall Bryant & Hamill Period Ended September 30, 2024

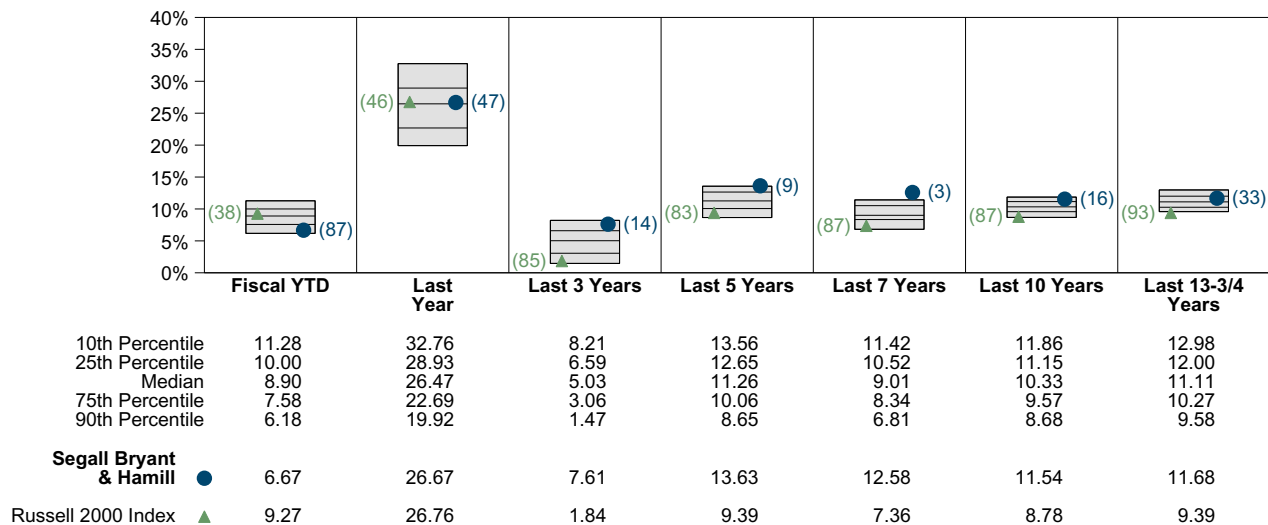
Investment Philosophy

Segall, Bryant, & Hamill (SBH) is an investment firm that is headquartered in Chicago, IL and has office locations in four additional US cities. The firm was recently acquired by CI Financial, a Canadian asset manager, who looks to expand its distribution in the US marketplace by leveraging SBH's platform of equity and fixed income product offerings. The Small Cap Core strategy is managed by portfolio manager, Jeff Paulis, who works with a team of five small cap analysts. The team employs a bottom-up, fundamental process that is anchored on return-on-invested-capital (ROIC) framework. The portfolio has a blend of high ROIC (growth) and improving ROIC (value) companies that culminates into a core strategy. The portfolio typically holds 70-85 securities. The portfolio can be utilized as a standalone mandate or within a multi-manager structure given its style consistency and risk/return profile. NHRS inception in the fund is October 2010.

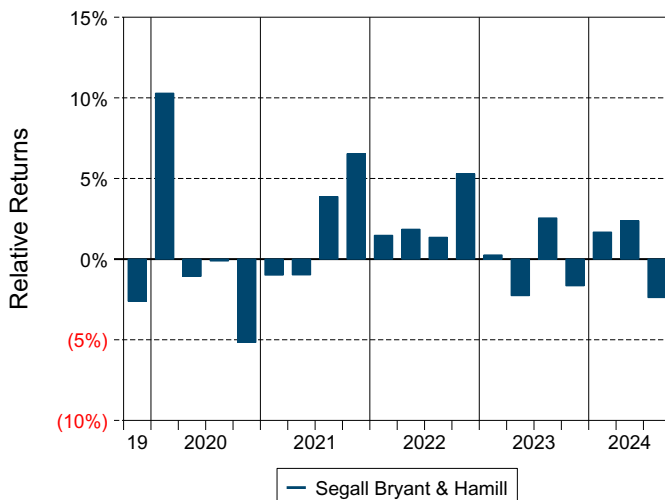
Quarterly Asset Growth

Beginning Market Value	\$260,802,217
Net New Investment	\$0
Investment Gains/(Losses)	\$17,398,160
Ending Market Value	\$278,200,376

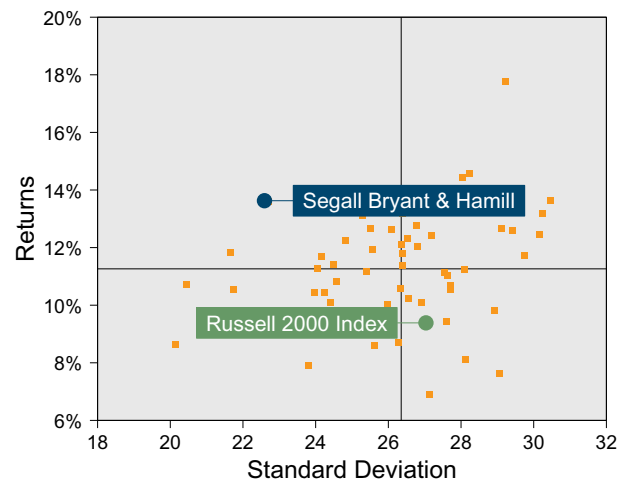
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



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



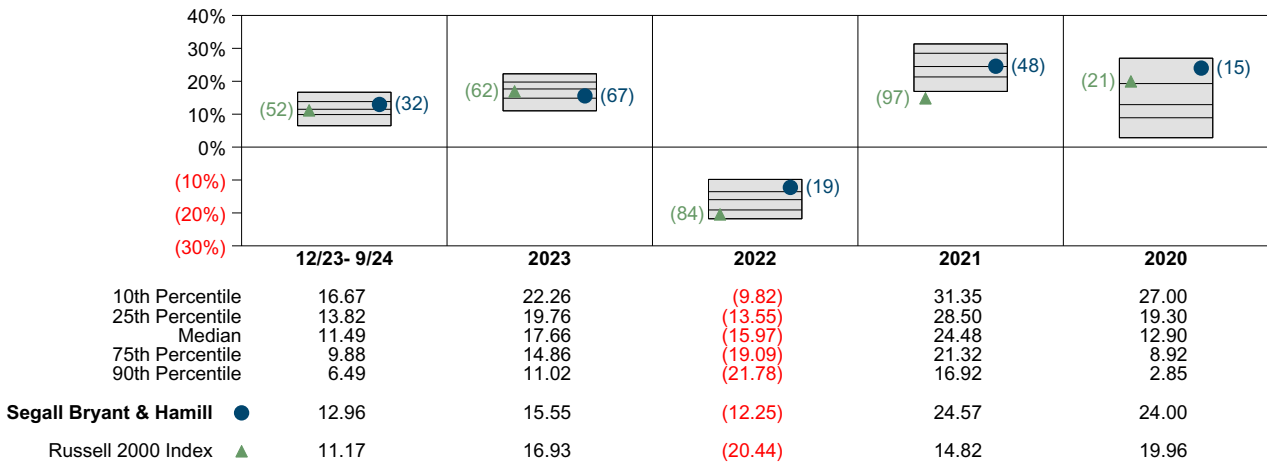
Segall Bryant & Hamill

Return Analysis Summary

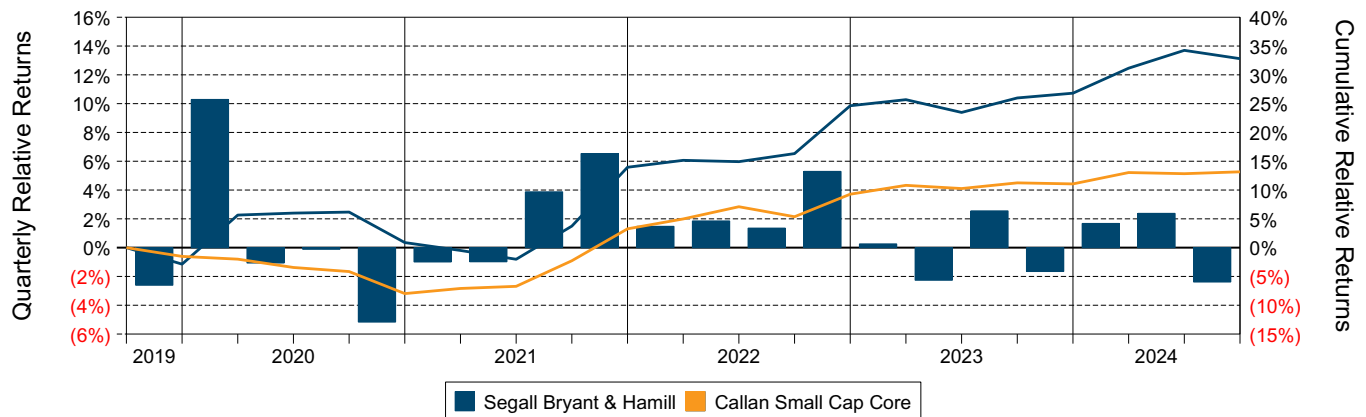
Return Analysis

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

Performance vs Callan Small Cap Core (Gross)



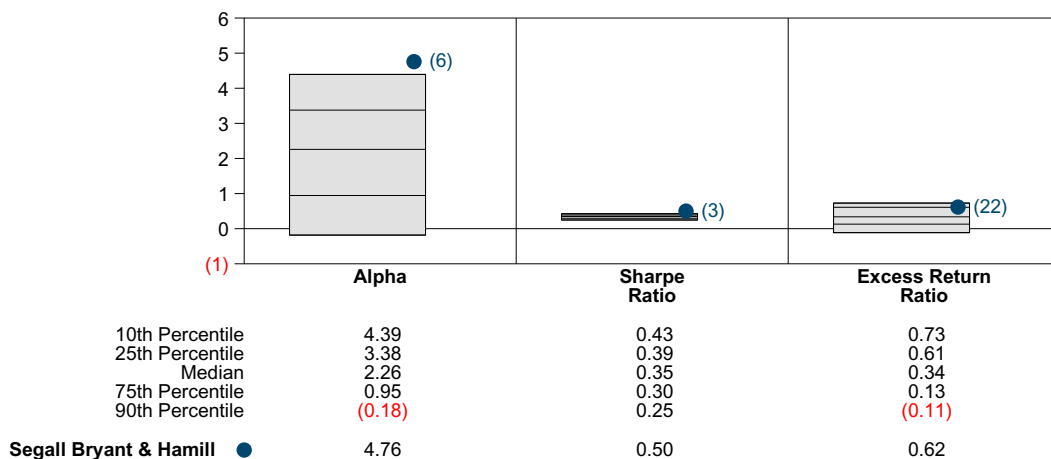
Cumulative and Quarterly Relative Returns vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index

Rankings Against Callan Small Cap Core (Gross)

Five Years Ended September 30, 2024



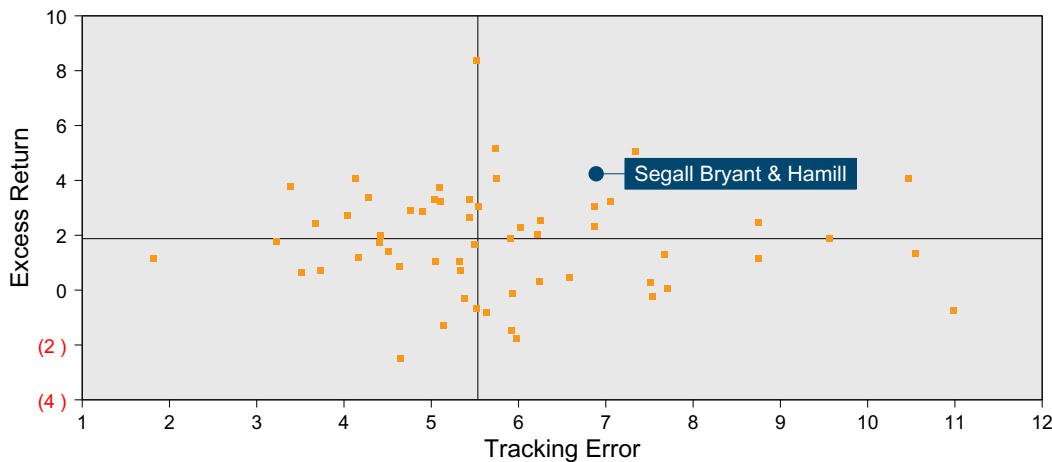
Segall Bryant & Hamill

Risk Analysis Summary

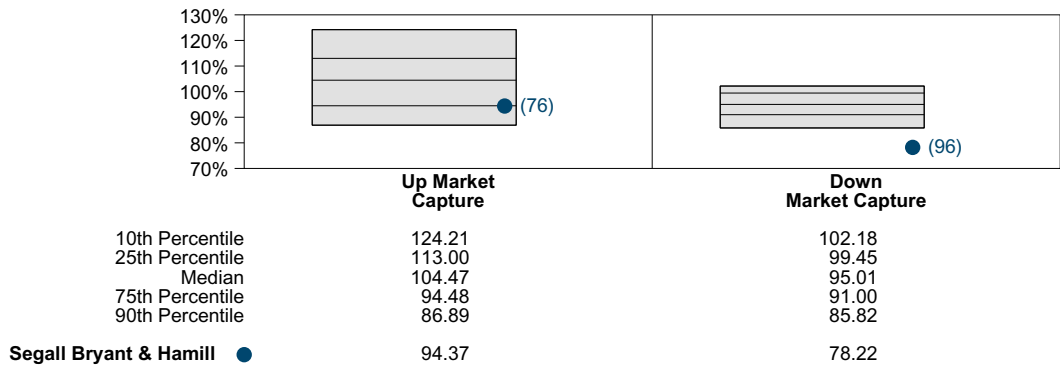
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

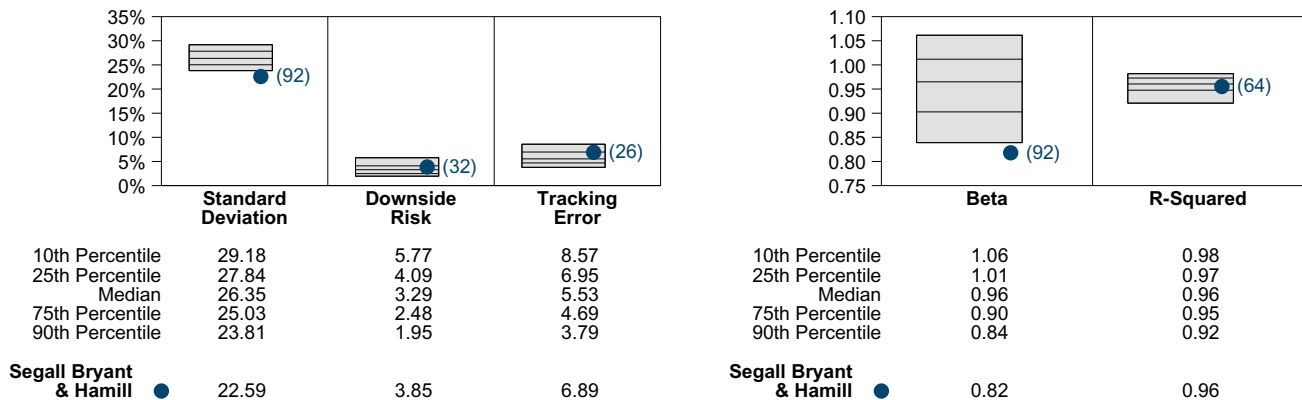
Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



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

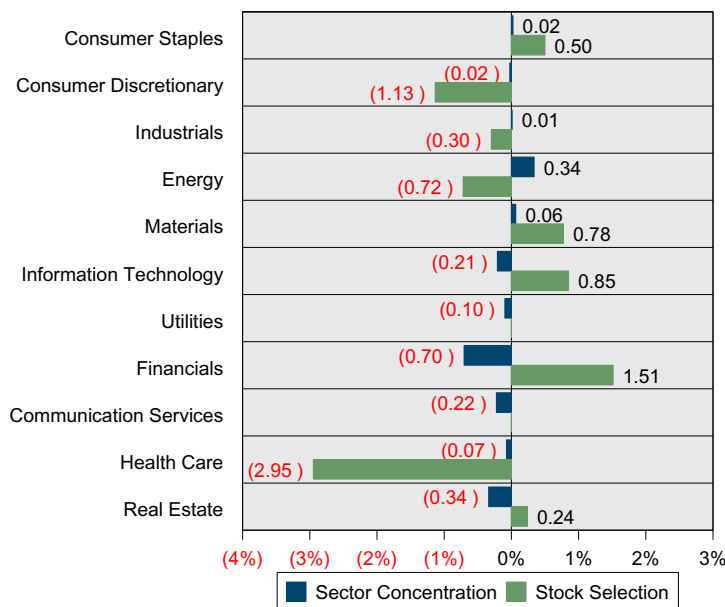


Segall Bryant & Hamill vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

Attribution Ranking and Sector Detail

The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart ranks the excess return and the four attribution factors for the manager vs the factors generated by members of the Callan Small Cap Core over the same time period.

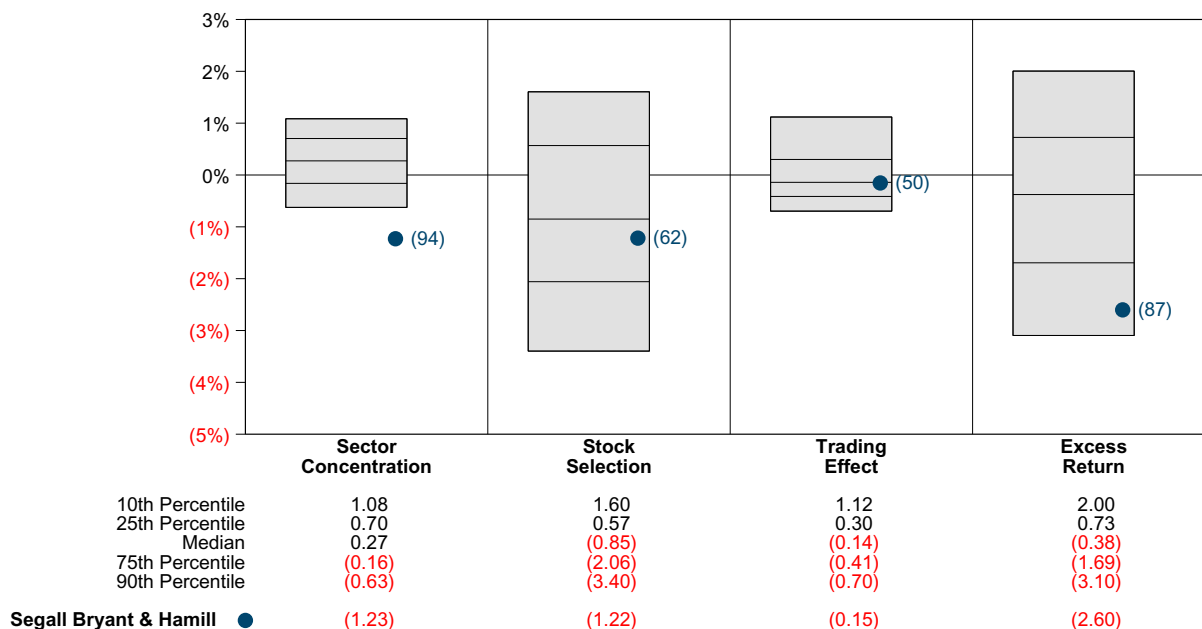
Attribution Effects by Sector vs Russell 2000 Index Quarter ended September 30, 2024



Sector	Sector Concentration	Stock Selection
Consumer Staples	0.02%	0.50%
Consumer Discretionary	(0.02%)	(1.13%)
Industrials	0.01%	(0.30%)
Energy	0.34%	(0.72%)
Materials	0.06%	0.78%
Information Technology	(0.21%)	0.85%
Utilities	(0.10%)	0.00%
Financials	(0.70%)	1.51%
Communication Services	(0.22%)	0.00%
Health Care	(0.07%)	(2.95%)
Real Estate	(0.34%)	0.24%
Total	(1.23%)	(1.22%)

Manager Return	=	Index Return	+	Sector Concentration	+	Stock Selection	+	Trading
6.67%		9.27%		(1.23%)		(1.22%)		(0.15%)

Equity Attribution Ranking vs Callan Small Cap Core Quarter ended September 30, 2024

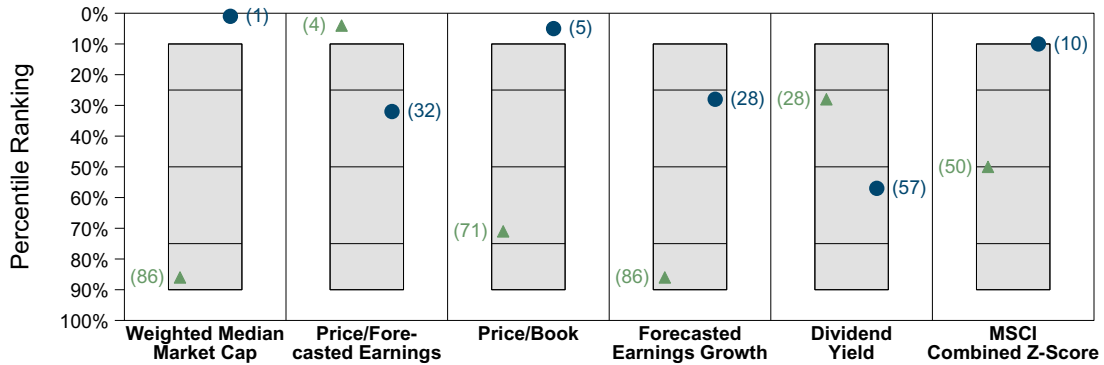


Segall Bryant & Hamill Equity Characteristics Analysis Summary

Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

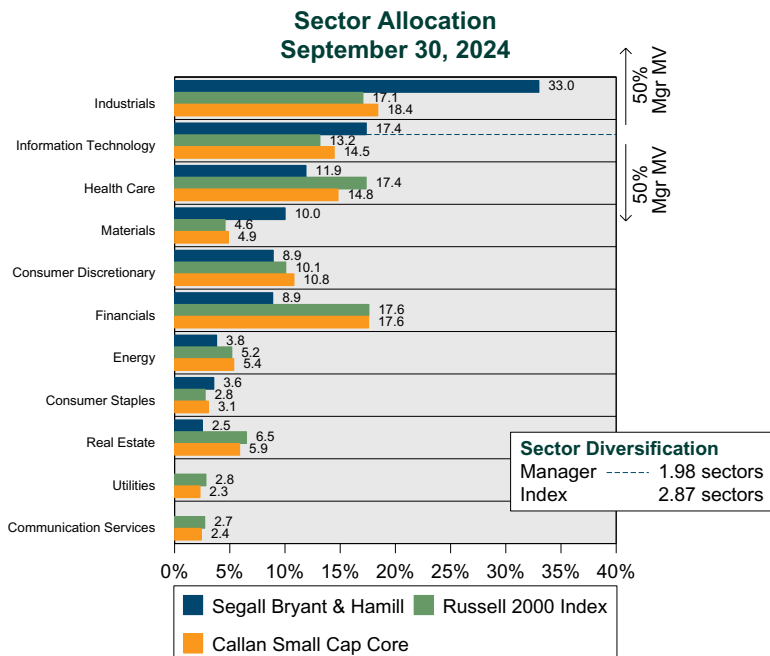
Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of September 30, 2024



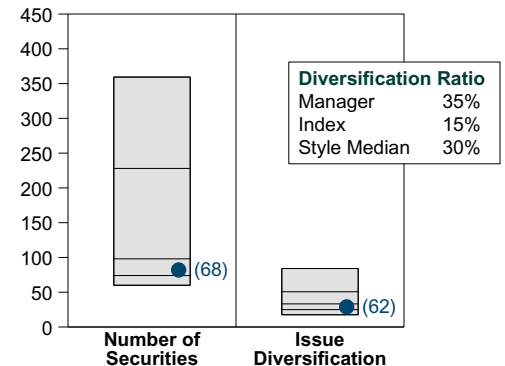
10th Percentile	5.52	21.94	2.77	20.90	1.48	0.19
25th Percentile	4.72	19.25	2.34	17.52	1.30	0.05
Median	3.96	17.81	2.11	15.48	1.19	(0.12)
75th Percentile	3.42	15.94	1.92	13.86	1.00	(0.21)
90th Percentile	2.64	14.26	1.82	12.97	0.85	(0.34)
Segall Bryant & Hamill	6.88	18.71	2.92	17.04	1.11	0.21
Russell 2000 Index	3.05	25.27	1.94	13.15	1.28	(0.12)

Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Diversification September 30, 2024



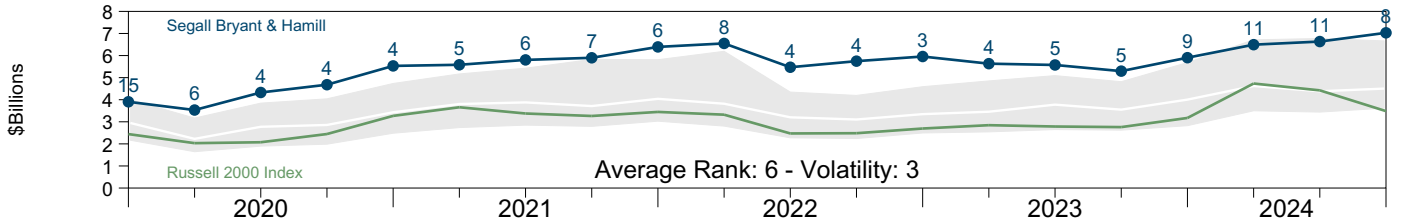
10th Percentile	359	84
25th Percentile	228	51
Median	98	33
75th Percentile	74	25
90th Percentile	60	18
Segall Bryant & Hamill	82	29
Russell 2000 Index	1976	302

Portfolio Characteristics Analysis

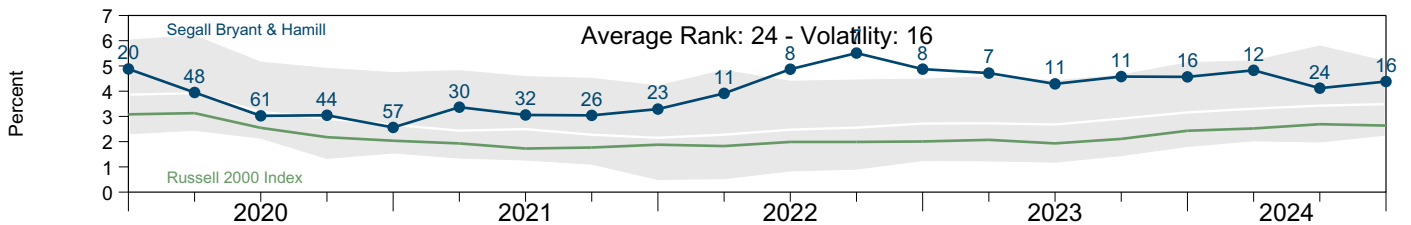
Callan Small Cap Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small Cap Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 2000 Index is shown for comparison purposes.

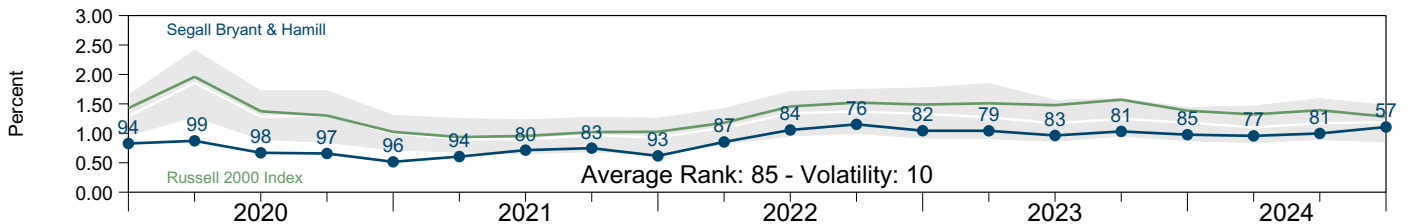
Weighted Average Market Cap



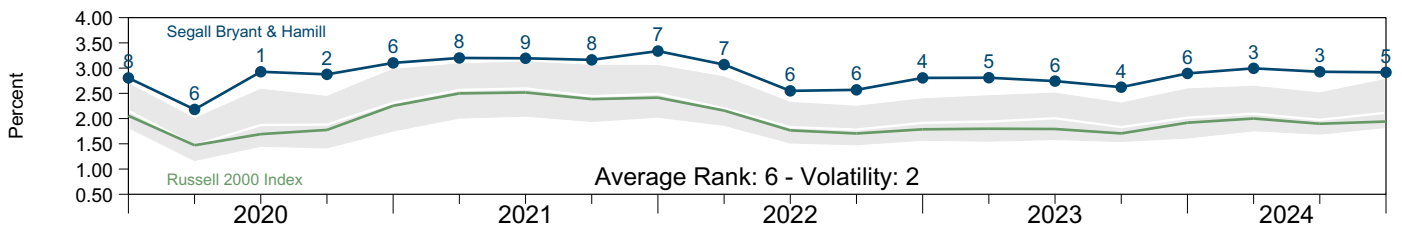
Growth in Dividends



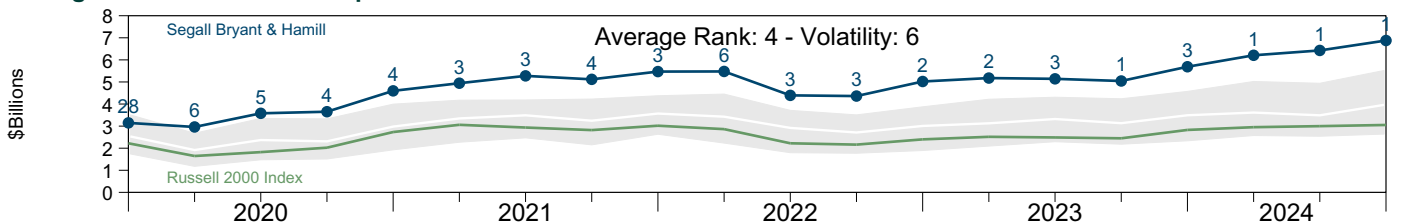
Dividend Yield



Price/Book Value



Weighted Median Market Cap

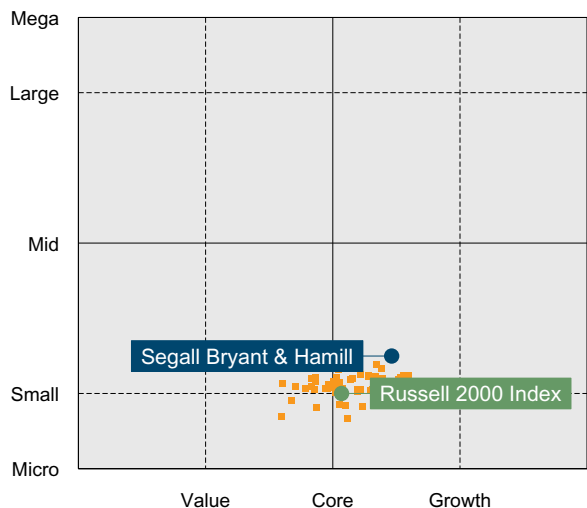


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Segall Bryant & Hamill
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

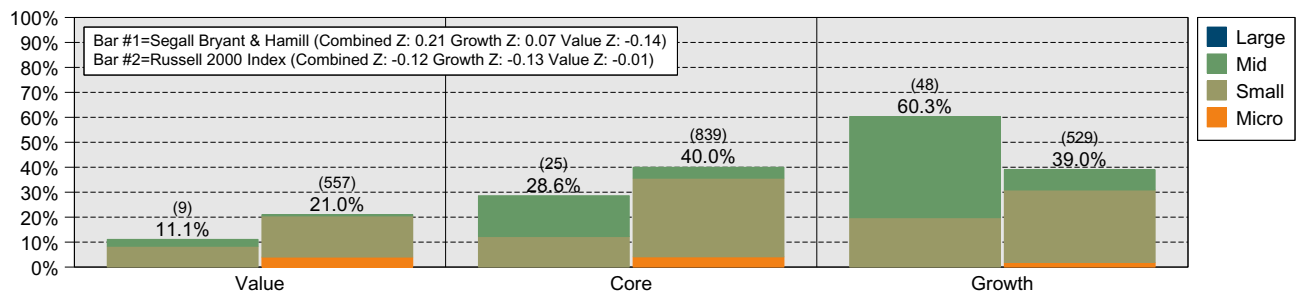
Style Map vs Callan Small Cap Core Holdings as of September 30, 2024



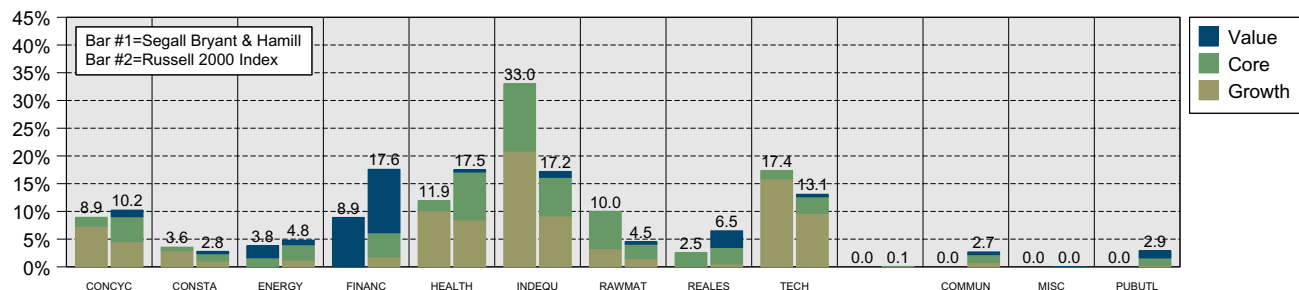
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Mid	2.8% (2) 0.5% (2)	16.4% (12) 4.4% (18)	40.5% (30) 8.1% (30)	59.6% (44) 13.0% (50)
Small	8.3% (7) 16.5% (228)	12.2% (13) 31.5% (427)	19.8% (18) 29.1% (346)	40.4% (38) 77.0% (1001)
Micro	0.0% (0) 4.0% (327)	0.0% (0) 4.1% (394)	0.0% (0) 1.8% (153)	0.0% (0) 10.0% (874)
Total	11.1% (9) 21.0% (557)	28.6% (25) 40.0% (839)	60.3% (48) 39.0% (529)	100.0% (82) 100.0% (1925)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



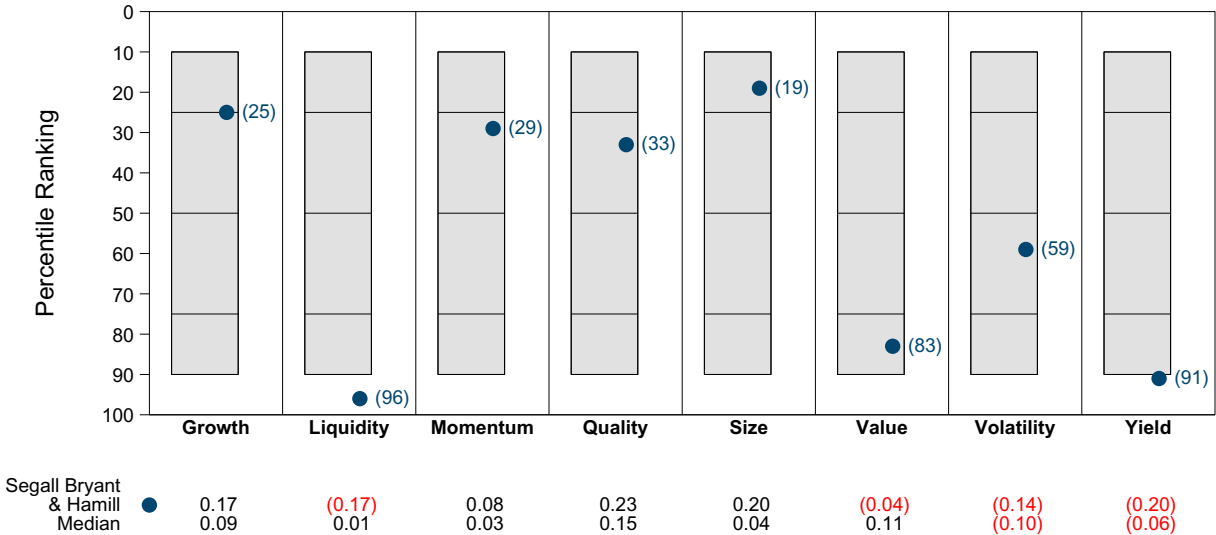
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan Small Cap Core group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

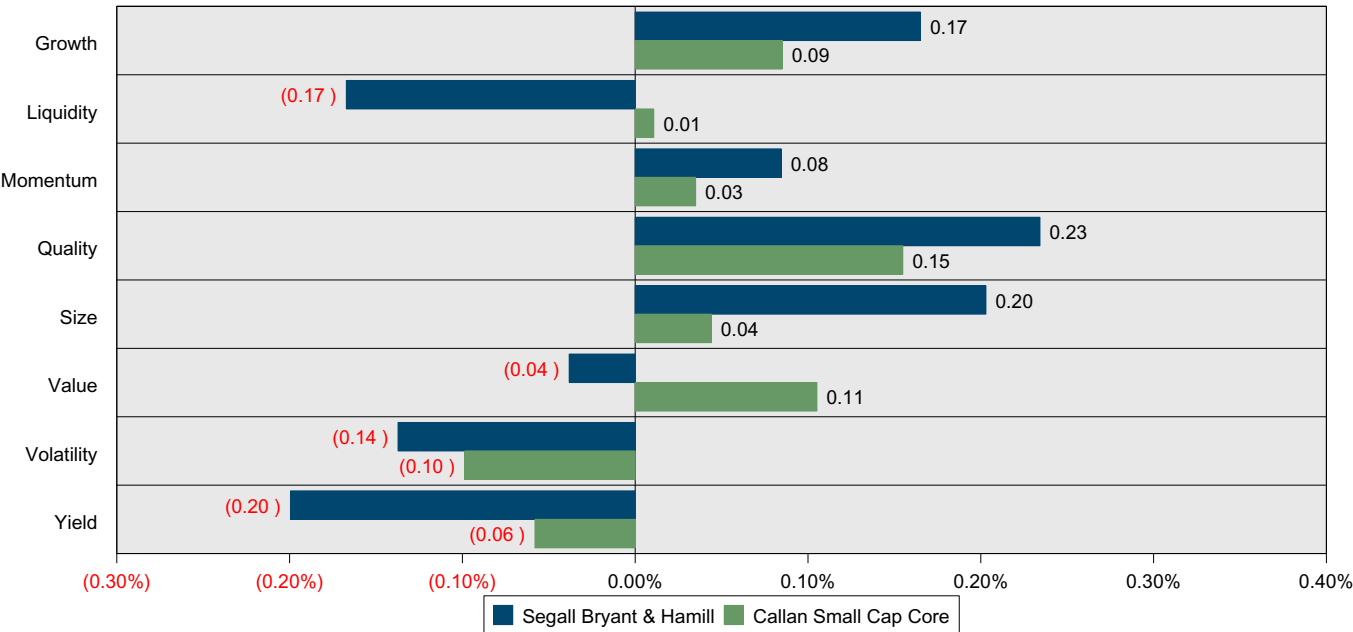
Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan Small Cap Core group relative the the Russell 2000 Index.

Factor Exposures Relative to Russell 2000 Index
for Period Ended September 30, 2024



Wellington Period Ended September 30, 2024

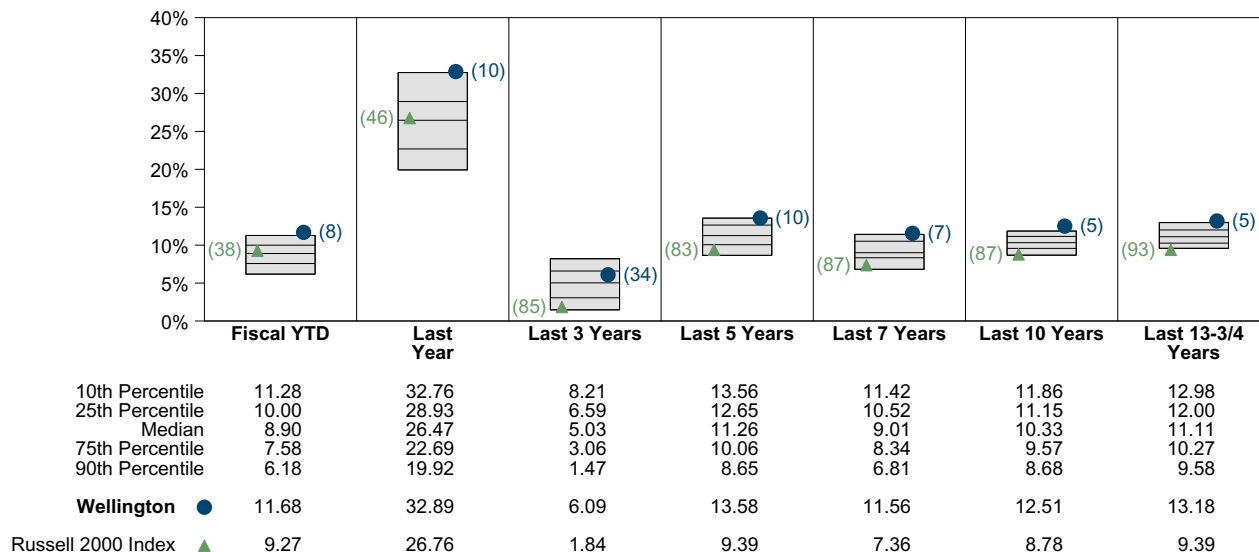
Investment Philosophy

Wellington Management Company is a 100% employee-owned company headquartered in Boston, Massachusetts. The Small Cap 2000 strategy employs a bottom-up fundamental process that relies heavily on Wellington's pool of centralized Global Industry Analysts. The portfolio managers, Mary Pryshlak and Jonathan White, provide strategy oversight from an implementation and risk perspective. The portfolio is diversified from both a stock and sector perspective and aims to neutralize industry and factor exposures. The portfolio has a range between 200-250 holdings with a max position size of 5%. Wellington Small Cap 2000 is appropriate for both standalone, as well as multi-manager structures. NHRS inception in the fund is October 2010.

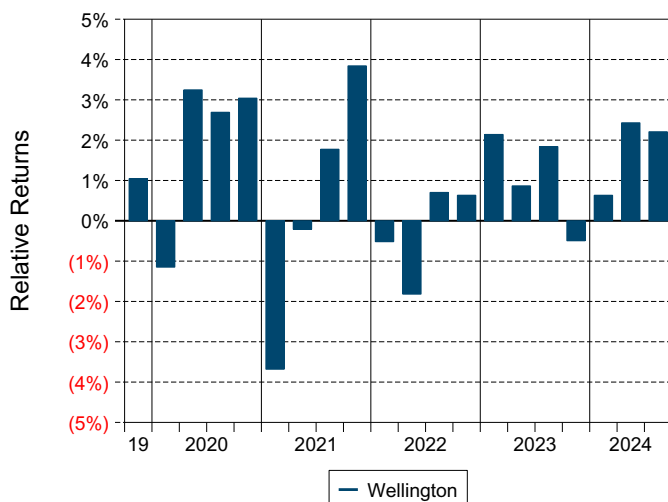
Quarterly Asset Growth

Beginning Market Value	\$433,780,720
Net New Investment	\$0
Investment Gains/(Losses)	\$50,685,413
Ending Market Value	\$484,466,133

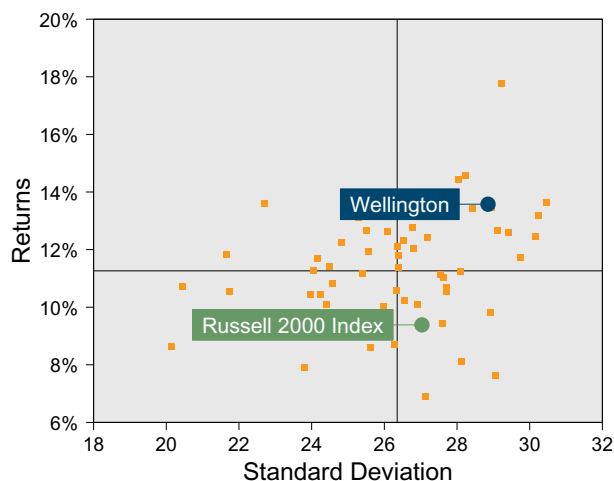
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



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



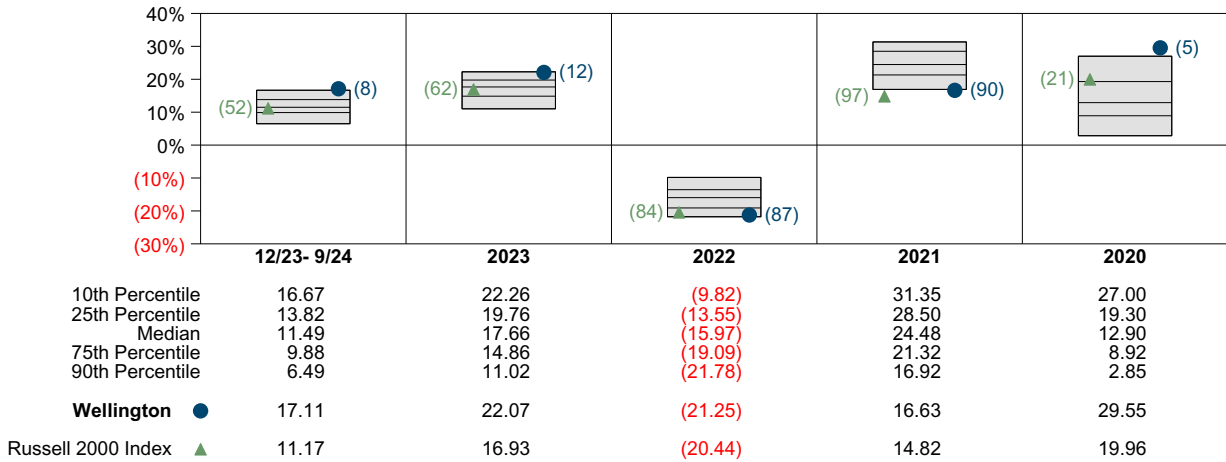
Wellington

Return Analysis Summary

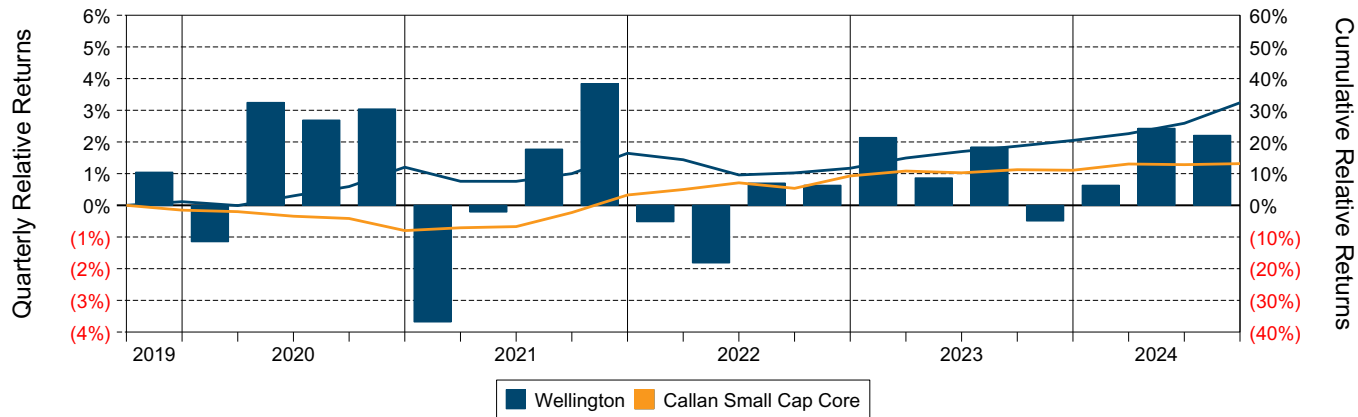
Return Analysis

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

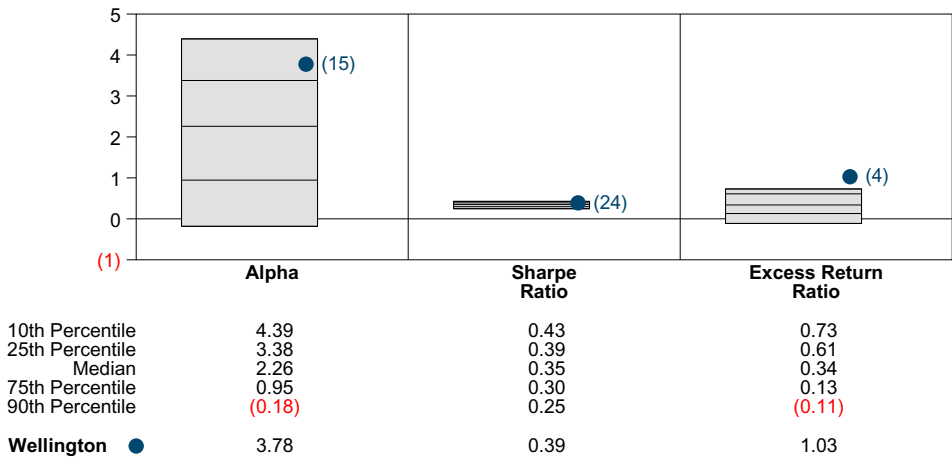
Performance vs Callan Small Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Index



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



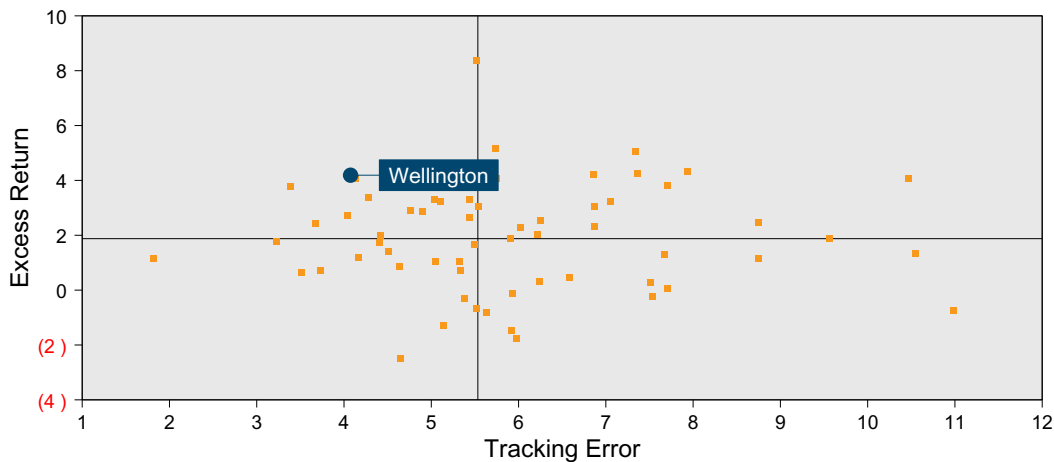
Wellington

Risk Analysis Summary

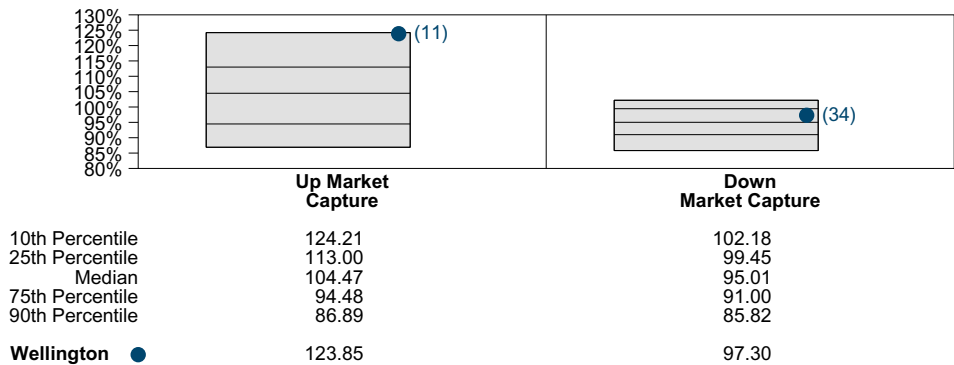
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

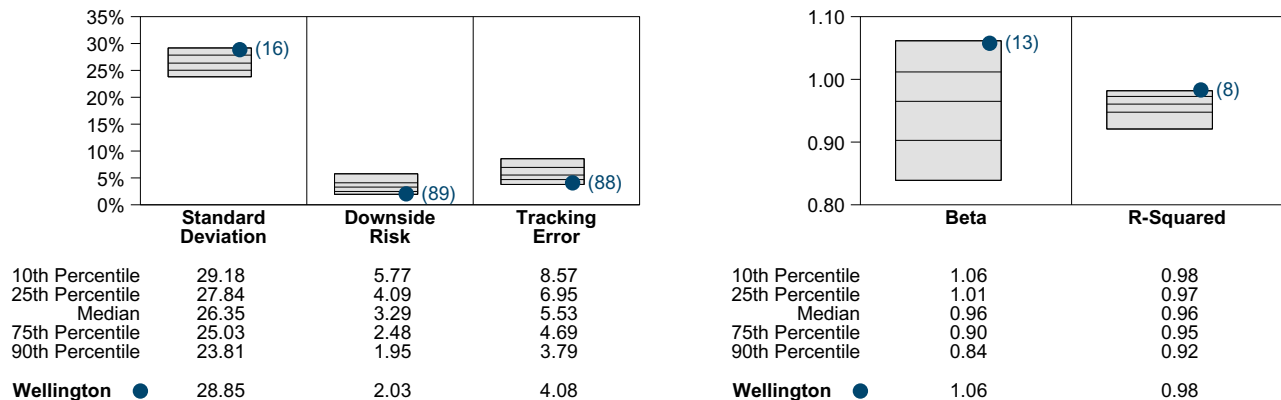
Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended September 30, 2024



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

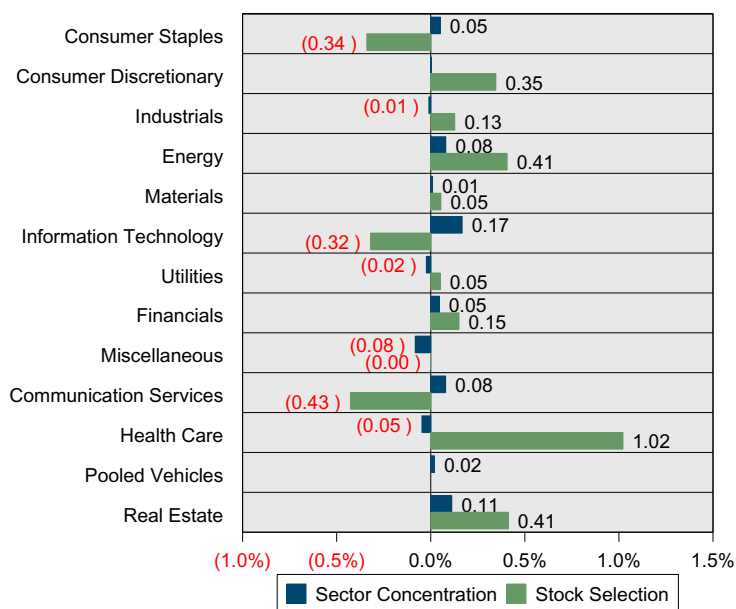


Wellington vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

Attribution Ranking and Sector Detail

The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart ranks the excess return and the four attribution factors for the manager vs the factors generated by members of the Callan Small Cap Core over the same time period.

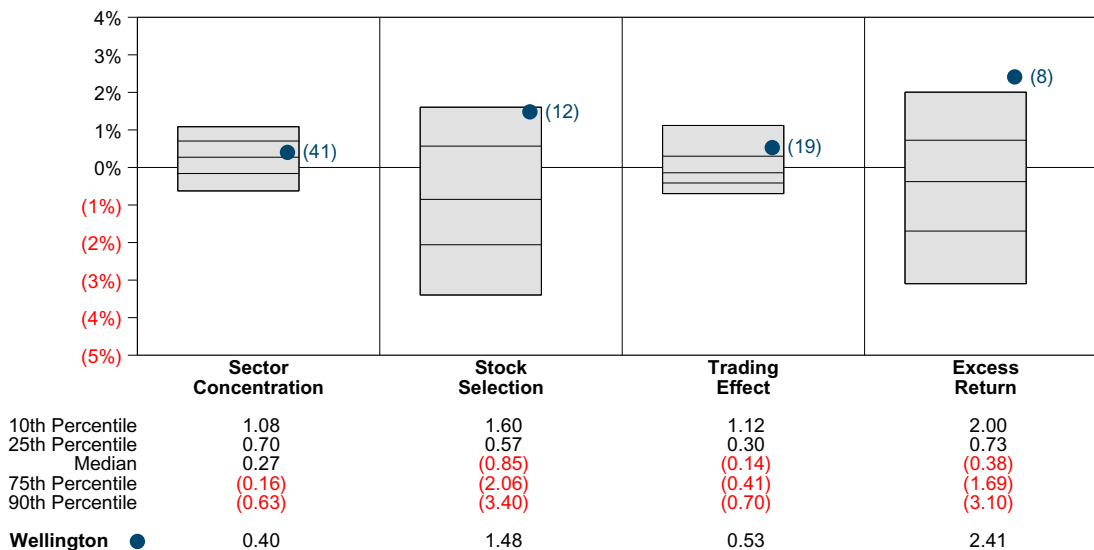
Attribution Effects by Sector vs Russell 2000 Index Quarter ended September 30, 2024



Sector	Sector Concentration	Stock Selection
Consumer Staples	0.05%	(0.34%)
Consumer Discretionary	0.00%	0.35%
Industrials	(0.01%)	0.13%
Energy	0.08%	0.41%
Materials	0.01%	0.05%
Information Technology	0.17%	(0.32%)
Utilities	(0.02%)	0.05%
Financials	0.05%	0.15%
Miscellaneous	(0.08%)	(0.00%)
Communication Services	0.08%	(0.43%)
Health Care	(0.05%)	1.02%
Pooled Vehicles	0.02%	0.00%
Real Estate	0.11%	0.41%
Total	0.40%	1.48%

Manager Return	=	Index Return	+	Sector Concentration	+	Stock Selection	+	Trading
11.68%		9.27%		0.40%		1.48%		0.53%

Equity Attribution Ranking vs Callan Small Cap Core Quarter ended September 30, 2024

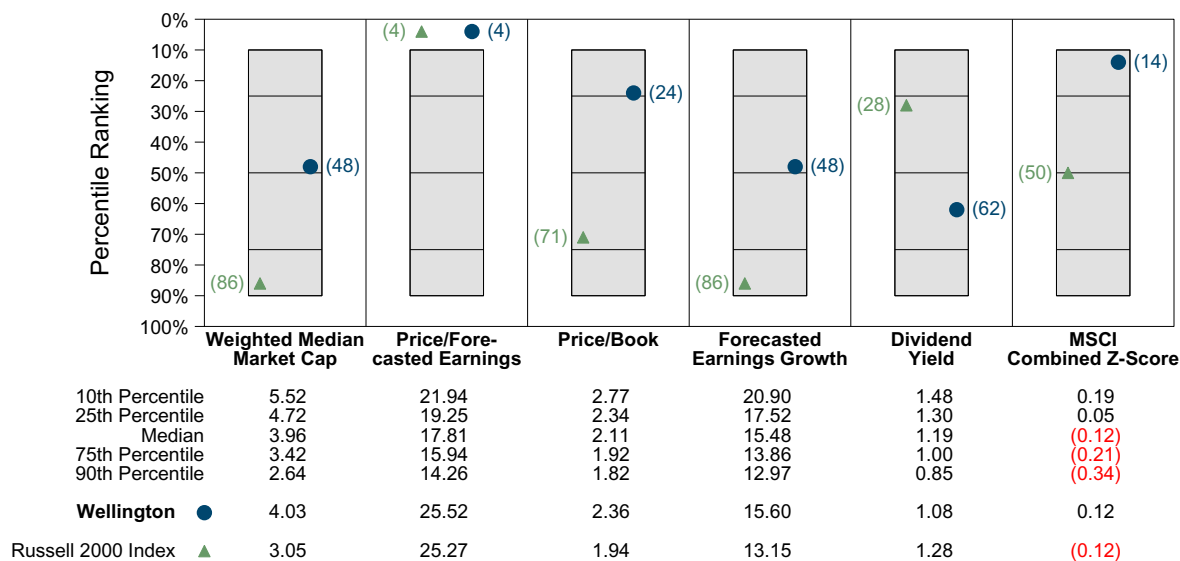


Wellington Equity Characteristics Analysis Summary

Portfolio Characteristics

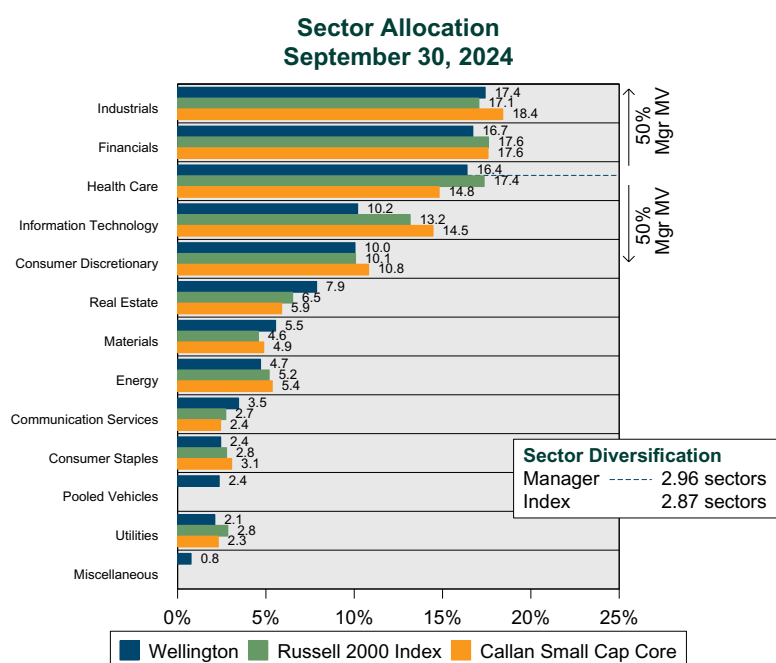
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of September 30, 2024

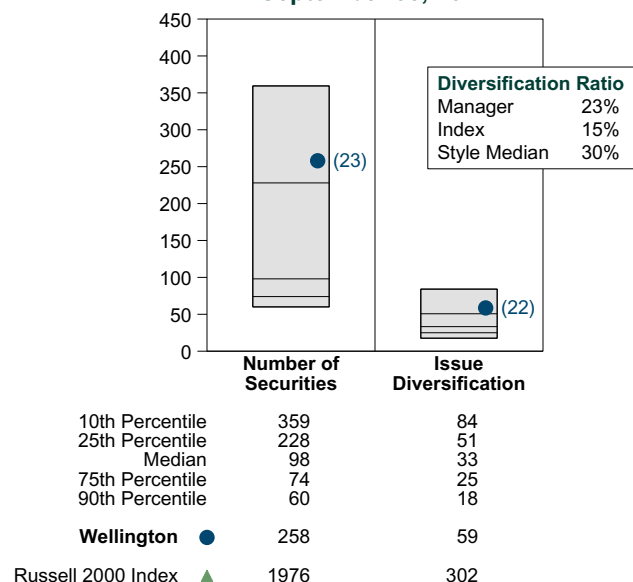


Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration of holdings are also compared to the benchmark and peer group. Issue Diversification represents by count, and Diversification Ratio by percent, the number of holdings that account for half of the portfolio's market value.



Diversification September 30, 2024

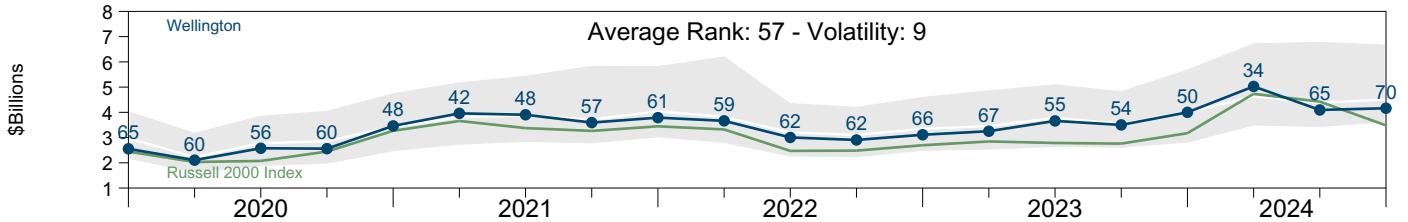


Portfolio Characteristics Analysis

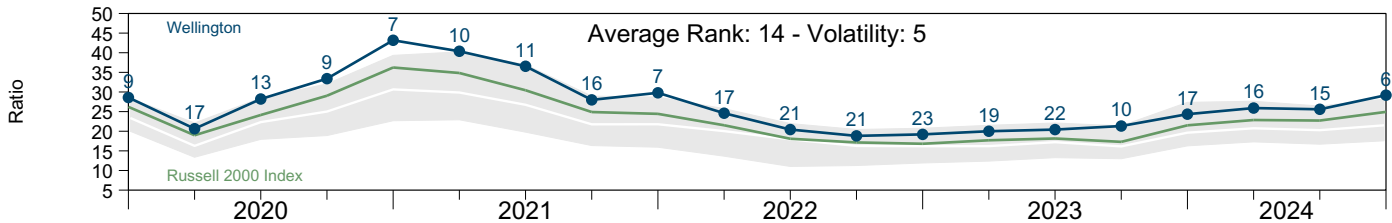
Callan Small Cap Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Small Cap Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The Russell 2000 Index is shown for comparison purposes.

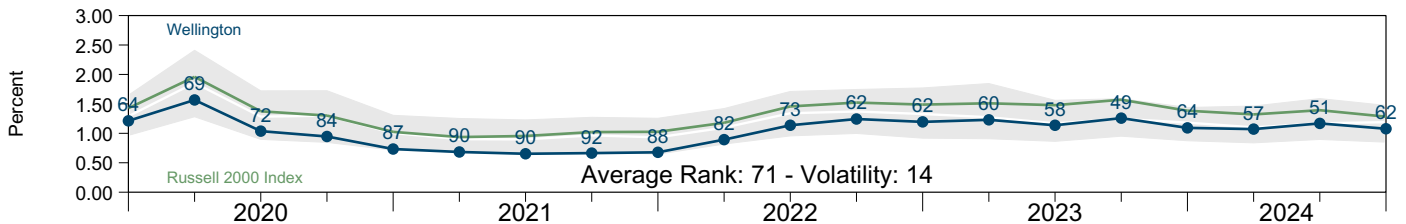
Weighted Average Market Cap



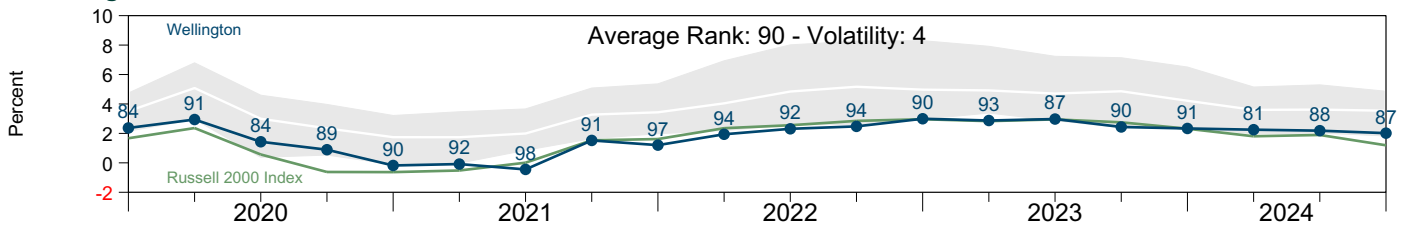
Trailing P/E



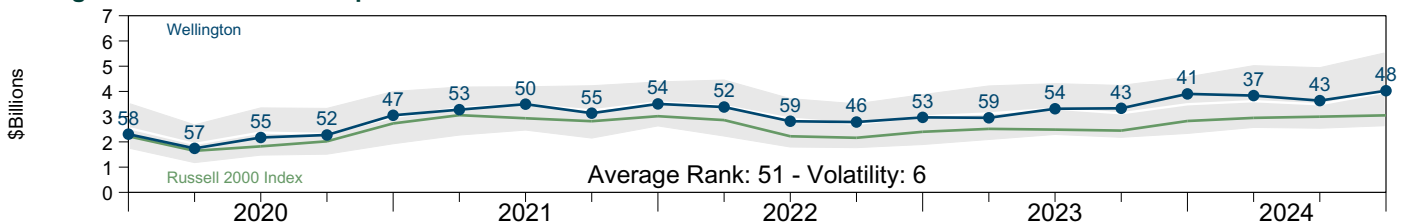
Dividend Yield



Earnings Yield



Weighted Median Market Cap

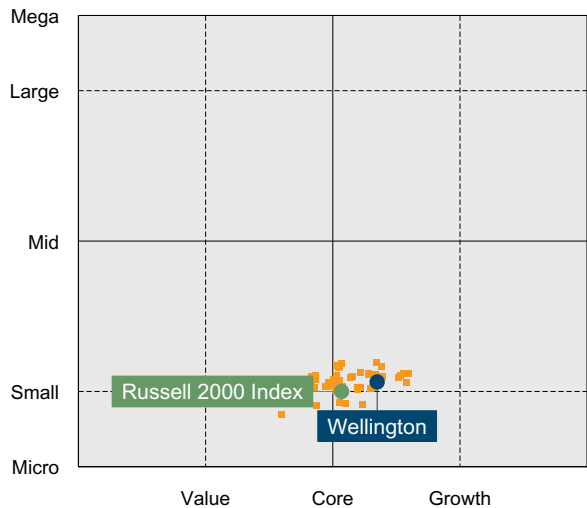


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Current Holdings Based Style Analysis
Wellington
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various market capitalization and style segments of the domestic equity market. The market is segmented quarterly by capitalization and style. The capitalization segments are dictated by capitalization decile breakpoints. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

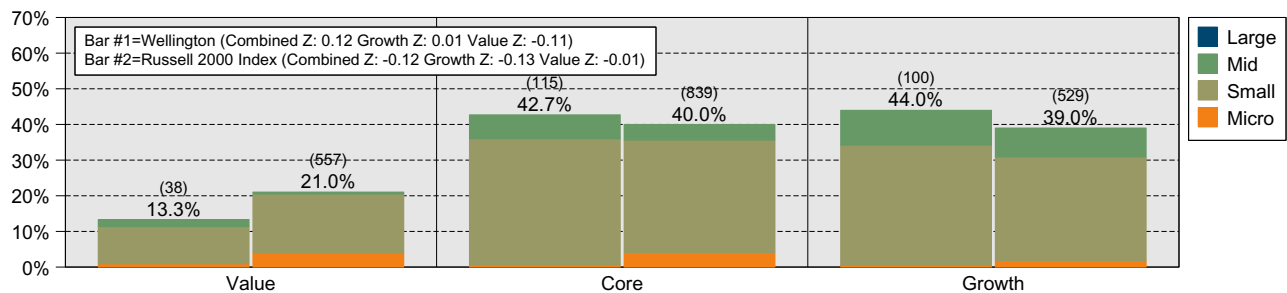
Style Map vs Callan Small Cap Core Holdings as of September 30, 2024



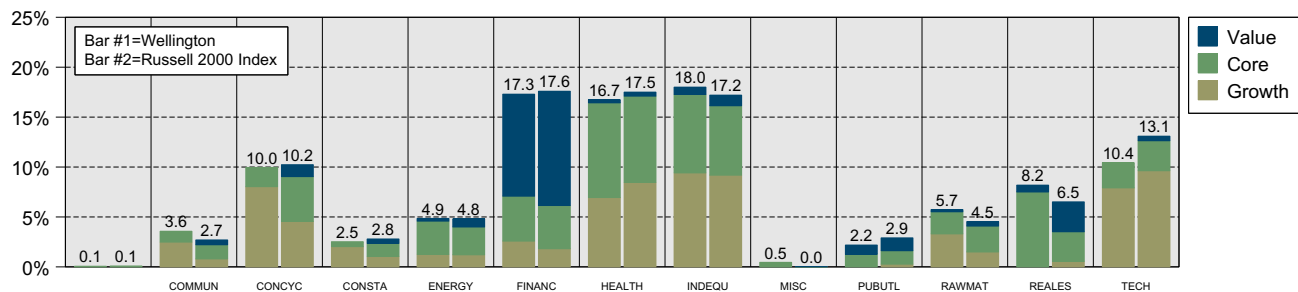
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)
Mid	2.0% (4) 0.5% (2)	6.7% (14) 4.4% (18)	9.8% (19) 8.1% (30)	18.5% (37) 13.0% (50)
Small	10.4% (26) 16.5% (228)	35.3% (93) 31.5% (427)	33.7% (80) 29.1% (346)	79.4% (199) 77.0% (1001)
Micro	0.9% (8) 4.0% (327)	0.7% (8) 4.1% (394)	0.4% (1) 1.8% (153)	2.1% (17) 10.0% (874)
Total	13.3% (38) 21.0% (557)	42.7% (115) 40.0% (839)	44.0% (100) 39.0% (529)	100.0% (253) 100.0% (1925)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



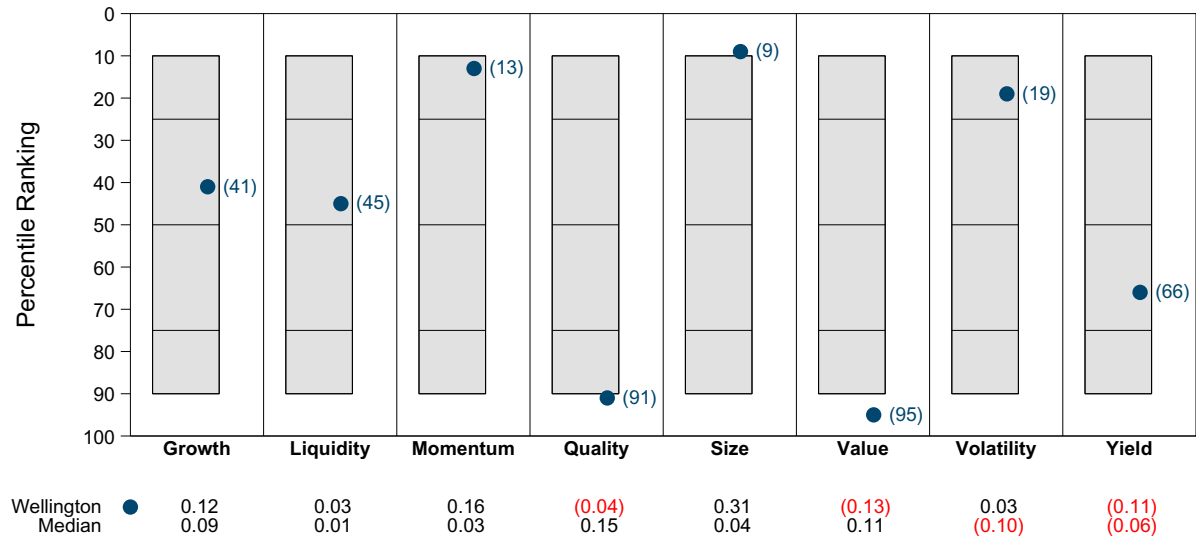
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan Small Cap Core group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

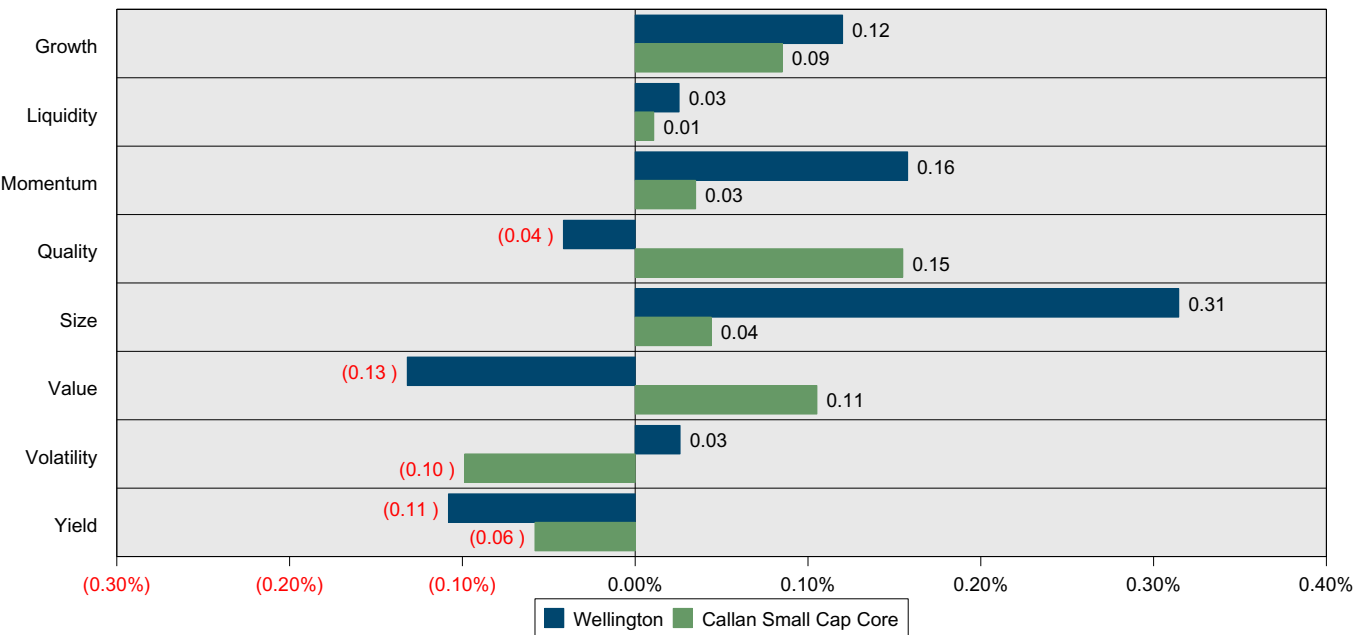
Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan Small Cap Core group relative the the Russell 2000 Index.

Factor Exposures Relative to Russell 2000 Index
for Period Ended September 30, 2024



Total Non US Equity Period Ended September 30, 2024

Non US Equity Benchmark

The Non US Equity Benchmark is the MSCI ACWI ex US Index as of 7/1/2003. Prior to 7/1/2003 the benchmark was the MSCI EAFE Index.

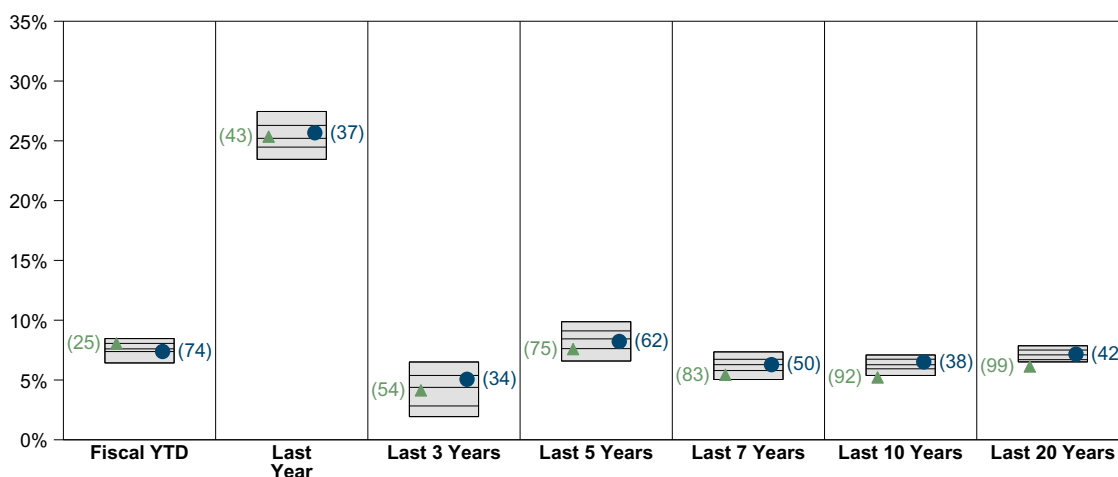
Quarterly Summary and Highlights

- Total Non US Equity's portfolio posted a 7.38% return for the quarter placing it in the 74 percentile of the Large Public Fd - Int Equity group for the quarter and in the 37 percentile for the last year.
- Total Non US Equity's portfolio underperformed the Non US Equity Benchmark by 0.68% for the quarter and outperformed the Non US Equity Benchmark for the year by 0.32%.

Quarterly Asset Growth

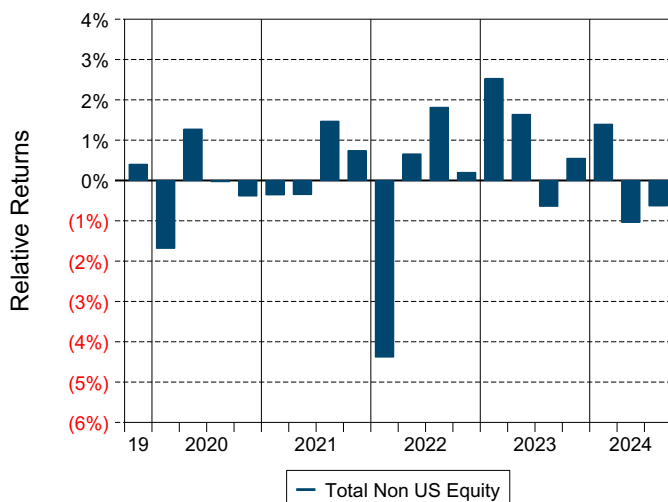
Beginning Market Value	\$2,314,686,635
Net New Investment	\$-152,456
Investment Gains/(Losses)	\$170,882,442
Ending Market Value	\$2,485,416,621

Performance vs Large Public Fd - Int Equity (Gross)

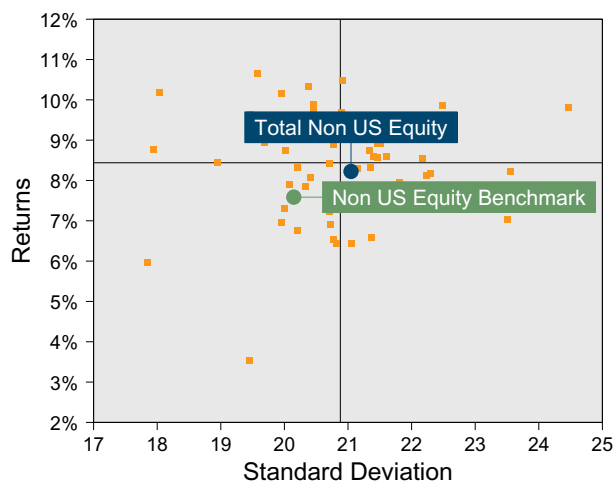


10th Percentile	8.46	27.45	6.51	9.87	7.35	7.09	7.86
25th Percentile	8.06	26.29	5.38	9.11	6.73	6.74	7.51
Median	7.60	25.21	4.38	8.44	6.28	6.28	7.10
75th Percentile	7.38	24.48	2.83	7.62	5.79	5.94	6.70
90th Percentile	6.43	23.45	1.94	6.59	5.04	5.38	6.51
Total Non US Equity	7.38	25.67	5.06	8.22	6.28	6.51	7.16
Non US Equity Benchmark	8.06	25.35	4.14	7.59	5.44	5.22	6.14

Relative Return vs Non US Equity Benchmark



Large Public Fd - Int Equity (Gross) Annualized Five Year Risk vs Return

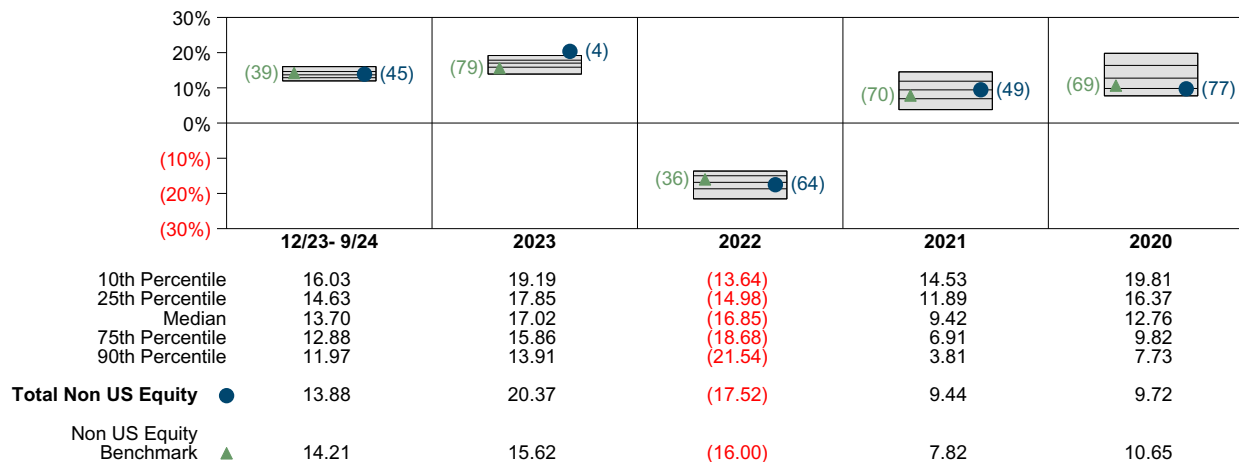


Total Non US Equity Return Analysis Summary

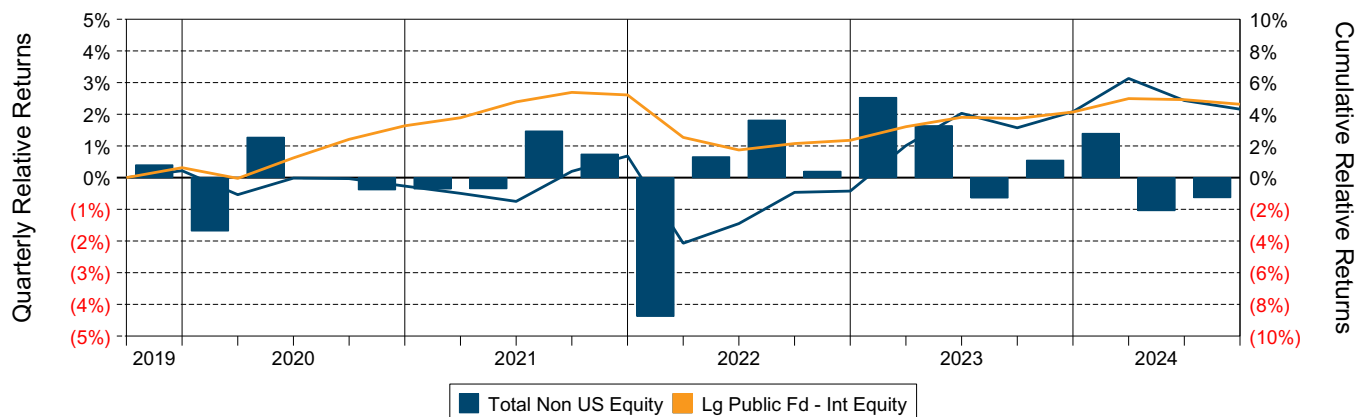
Return Analysis

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

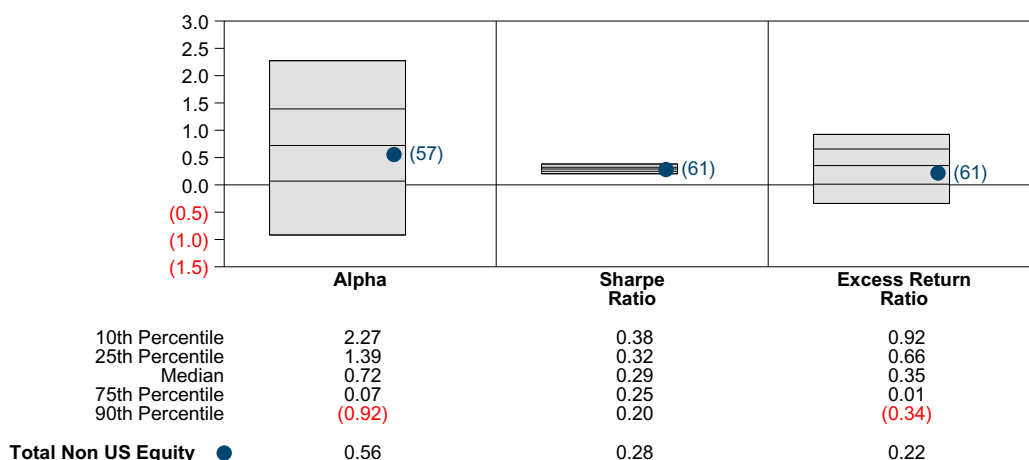
Performance vs Lg Public Fd - Int Equity (Gross)



Cumulative and Quarterly Relative Returns vs Non US Equity Benchmark



Risk Adjusted Return Measures vs Non US Equity Benchmark Rankings Against Lg Public Fd - Int Equity (Gross) Five Years Ended September 30, 2024



Total Non US Equity

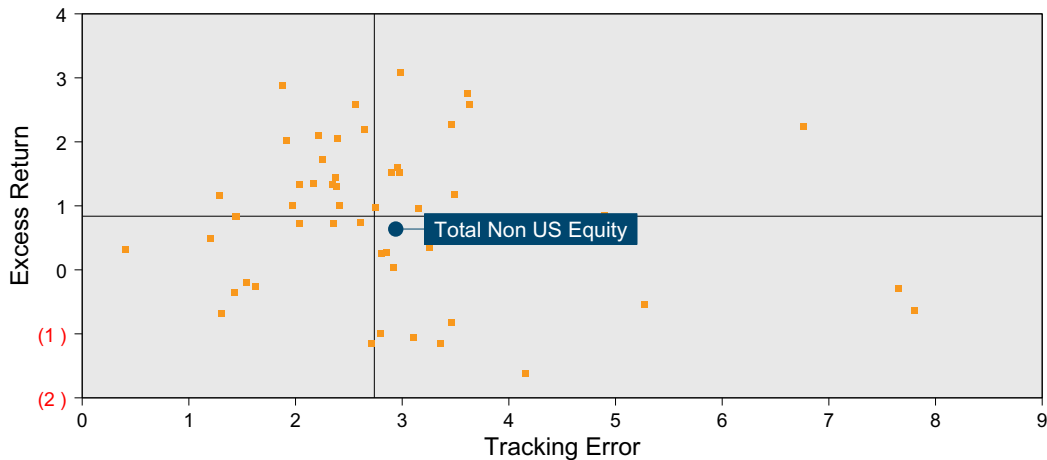
Risk Analysis Summary

Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

Risk Analysis vs Lg Public Fund - International Equity (Gross)

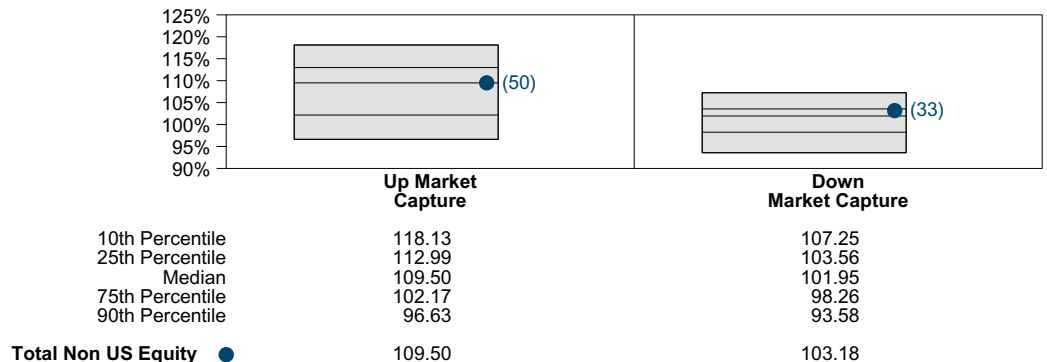
Five Years Ended September 30, 2024



Market Capture vs Non US Equity Benchmark

Rankings Against Lg Public Fund - International Equity (Gross)

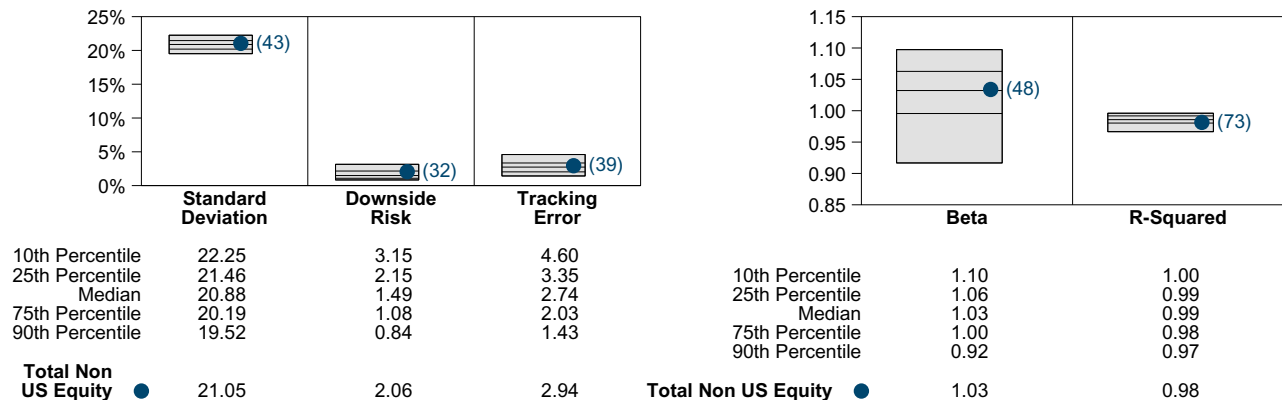
Five Years Ended September 30, 2024



Risk Statistics Rankings vs Non US Equity Benchmark

Rankings Against Lg Public Fund - International Equity (Gross)

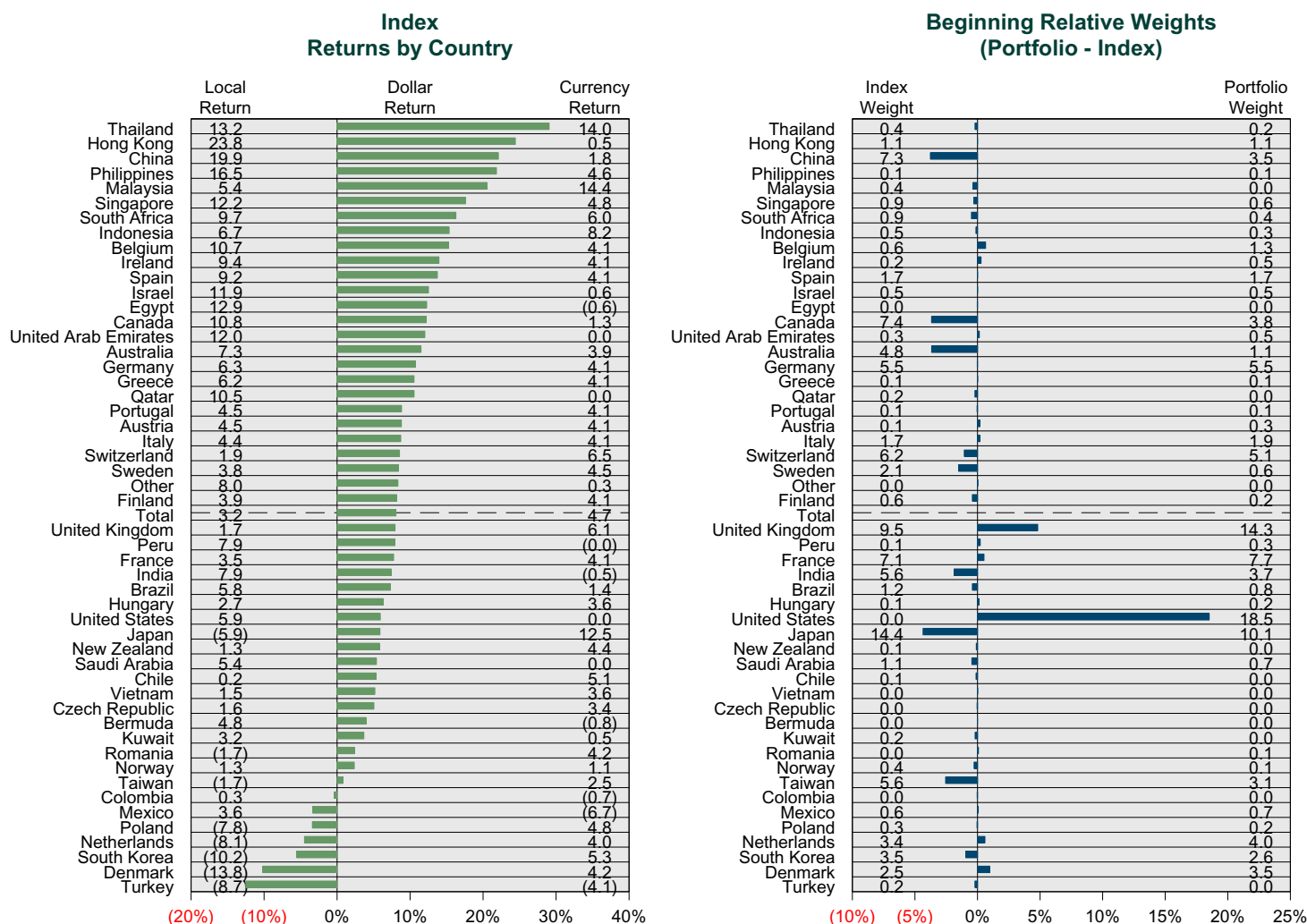
Five Years Ended September 30, 2024



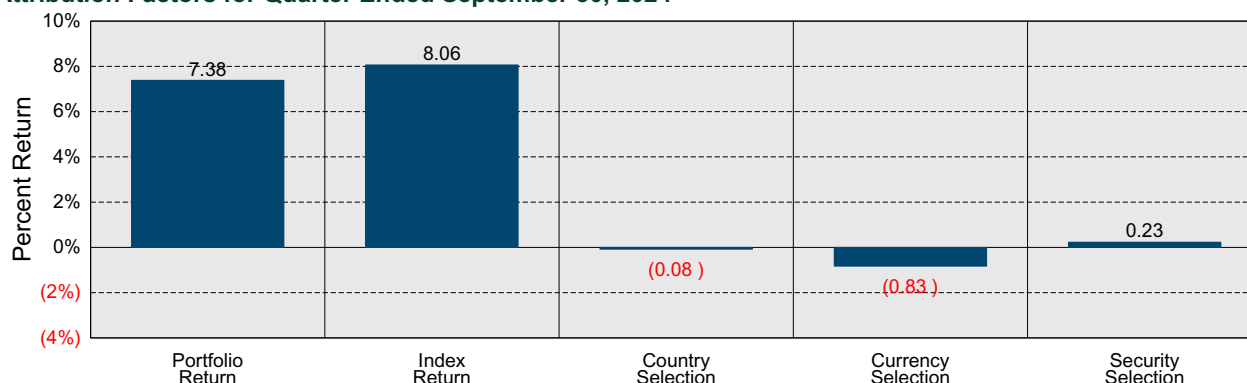
Total Non US Equity vs MSCI ACWI xUS (Net) Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

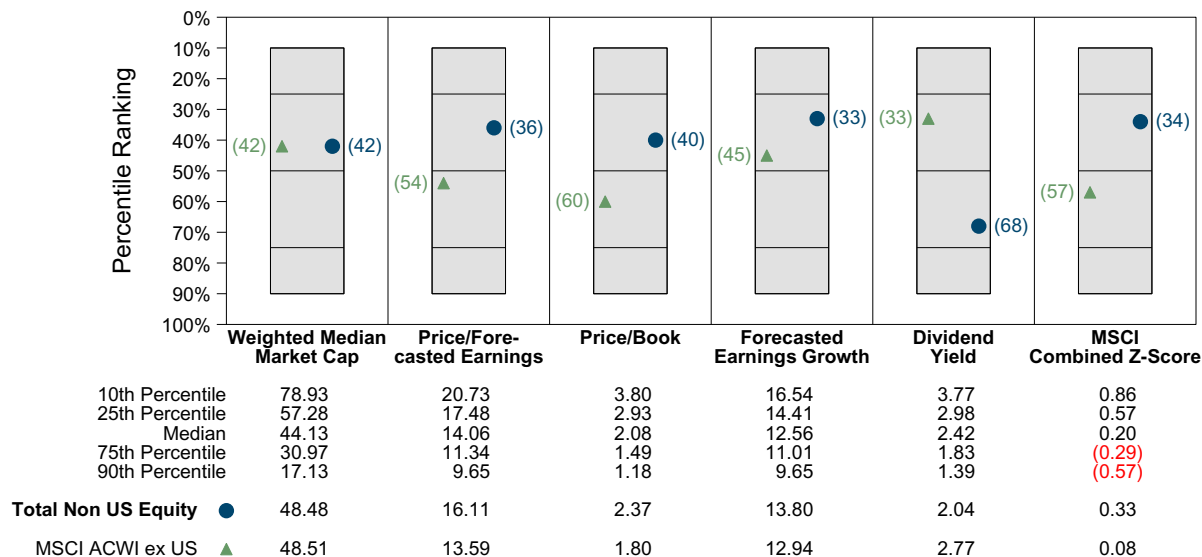


Total Non US Equity Equity Characteristics Analysis Summary

Portfolio Characteristics

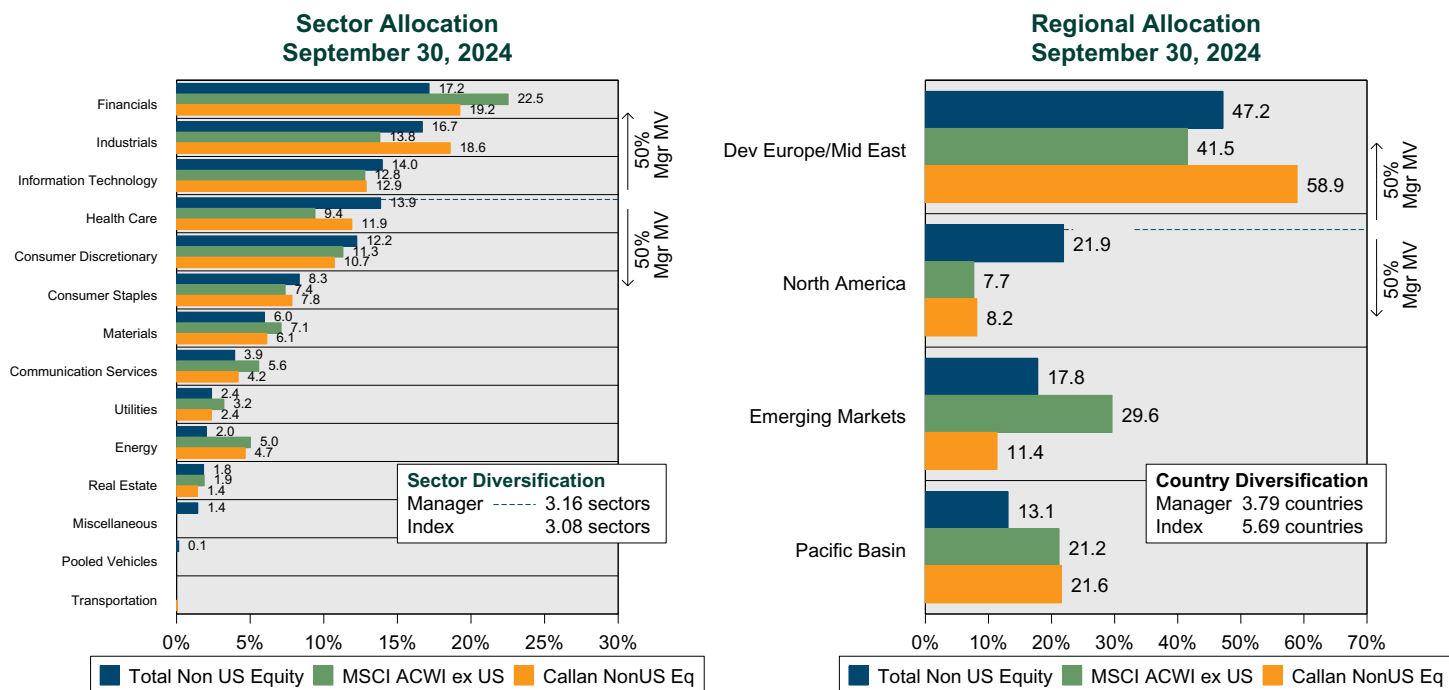
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



Country Allocation

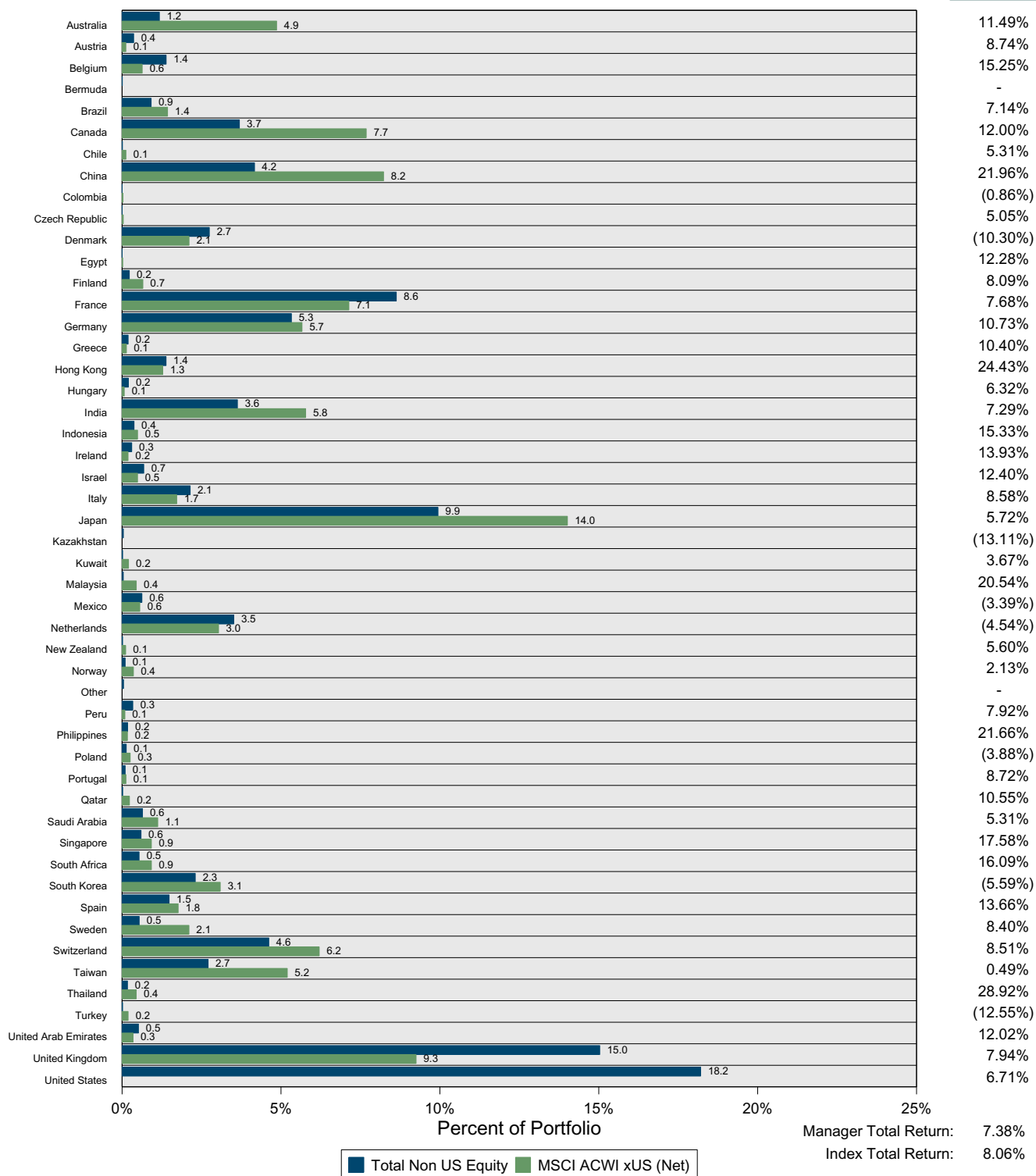
Total Non US Equity VS MSCI ACWI xUS (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of September 30, 2024. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.

Country Weights as of September 30, 2024

Index Rtns



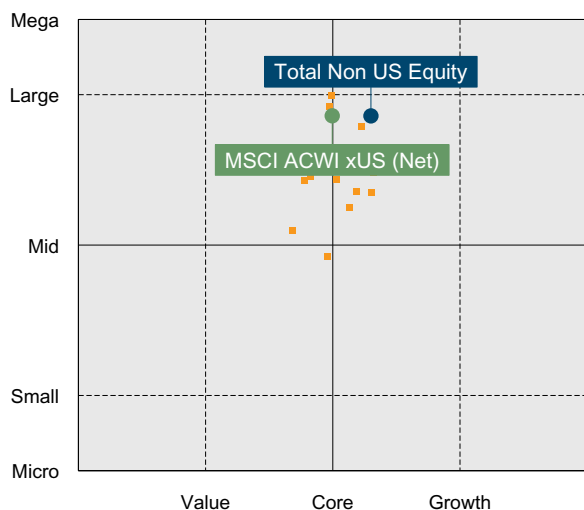
Current Holdings Based Style Analysis

Total Non US Equity

As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

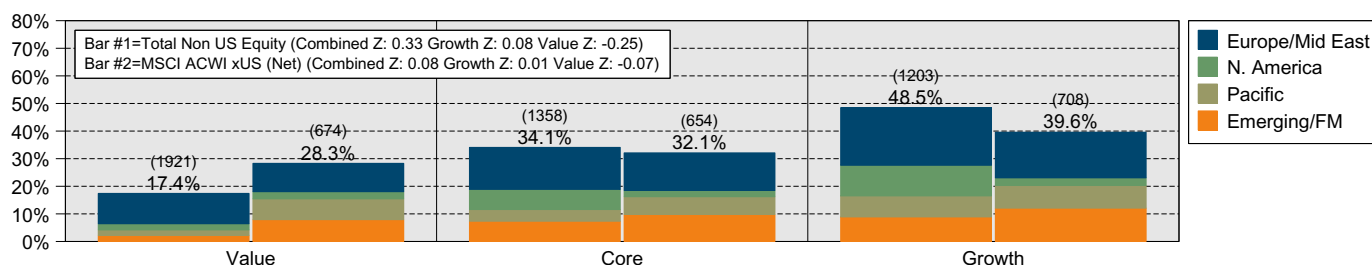
Style Map vs Lg Public Fd - Int Equity
Holdings as of September 30, 2024



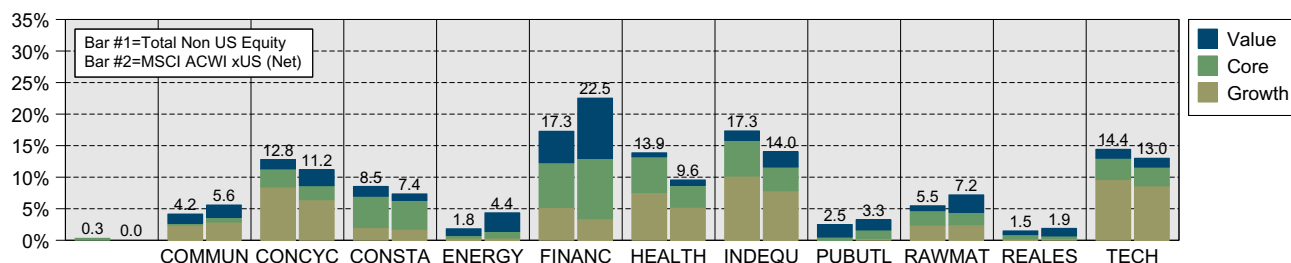
Style Exposure Matrix
Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	11.0% (203) 10.3% (143)	15.2% (244) 13.6% (150)	20.9% (198) 16.5% (131)	47.1% (645) 40.4% (424)
N. America	2.2% (35) 2.6% (26)	7.3% (53) 2.3% (24)	11.1% (62) 2.8% (35)	20.6% (150) 7.7% (85)
Pacific	1.9% (1224) 7.5% (117)	4.2% (625) 6.4% (89)	7.6% (522) 8.2% (97)	13.8% (2371) 22.1% (303)
Emerging/ FM	2.2% (459) 7.9% (388)	7.3% (436) 9.8% (391)	8.9% (421) 12.1% (445)	18.5% (1316) 29.8% (1224)
Total	17.4% (1921) 28.3% (674)	34.1% (1358) 32.1% (654)	48.5% (1203) 39.6% (708)	100.0% (4482) 100.0% (2036)

Combined Z-Score Style Distribution
Holdings as of September 30, 2024



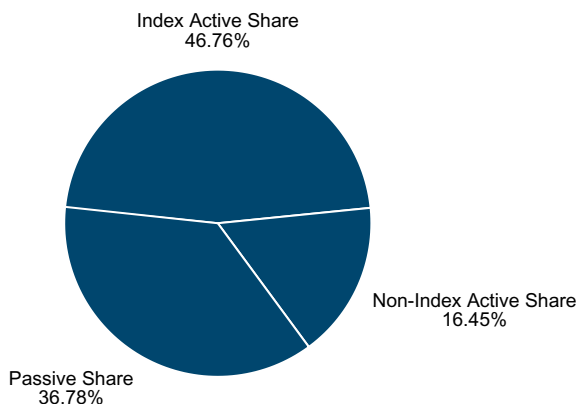
Sector Weights Distribution
Holdings as of September 30, 2024



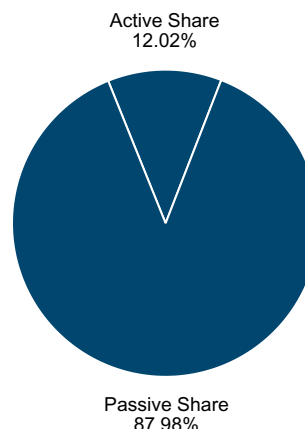
Total Non US Equity Active Share Analysis as of September 30, 2024 vs. MSCI ACWI xUS (Net)

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



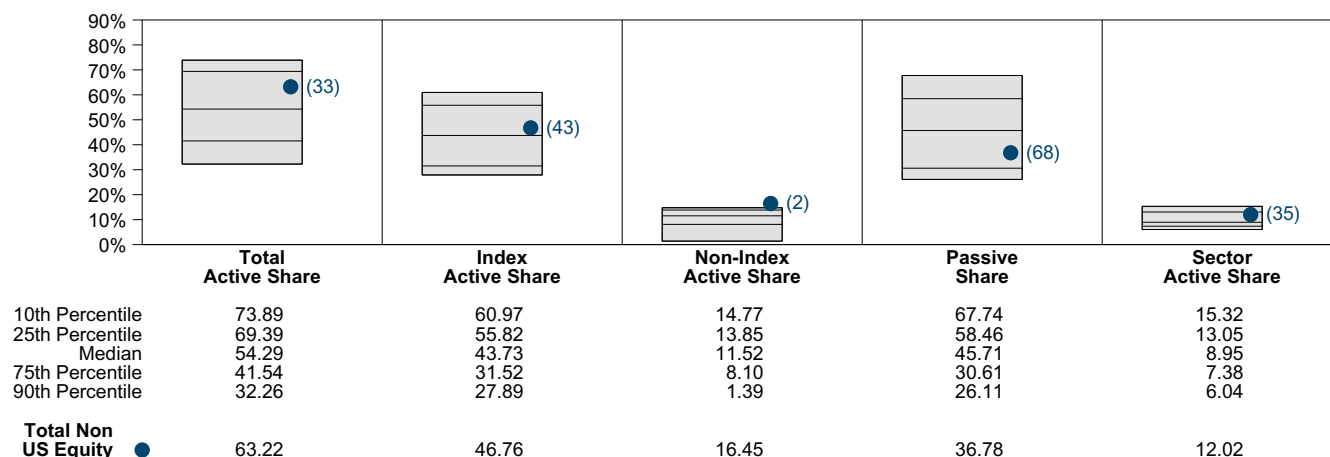
Sector Exposure Active Share



Total Active Share: 63.22%

	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	44.60%	12.42%	57.01%	5.58%	3.95%	2.67%
Consumer Discretionary	44.42%	20.16%	64.58%	11.30%	12.24%	7.59%
Consumer Staples	44.73%	10.99%	55.72%	7.38%	8.34%	4.42%
Energy	44.01%	13.26%	57.27%	5.02%	2.03%	2.34%
Financials	53.59%	10.34%	63.92%	22.52%	17.15%	12.39%
Health Care	31.58%	18.91%	50.49%	9.40%	13.86%	6.09%
Industrials	52.83%	15.45%	68.27%	13.81%	16.70%	10.59%
Information Technology	41.85%	19.42%	61.27%	12.79%	13.98%	8.15%
Materials	56.63%	19.03%	75.66%	7.10%	5.97%	4.93%
Miscellaneous	0.00%	100.00%	100.00%	-	1.44%	0.57%
Pooled Vehicles	0.00%	100.00%	100.00%	-	0.14%	0.07%
Real Estate	48.15%	29.60%	77.76%	1.88%	1.83%	1.44%
Utilities	60.83%	6.40%	67.23%	3.22%	2.38%	1.81%
Total	46.76%	16.45%	63.22%	100.00%	100.00%	63.07%

Active Share vs. Lg Public Fd - Int Equity

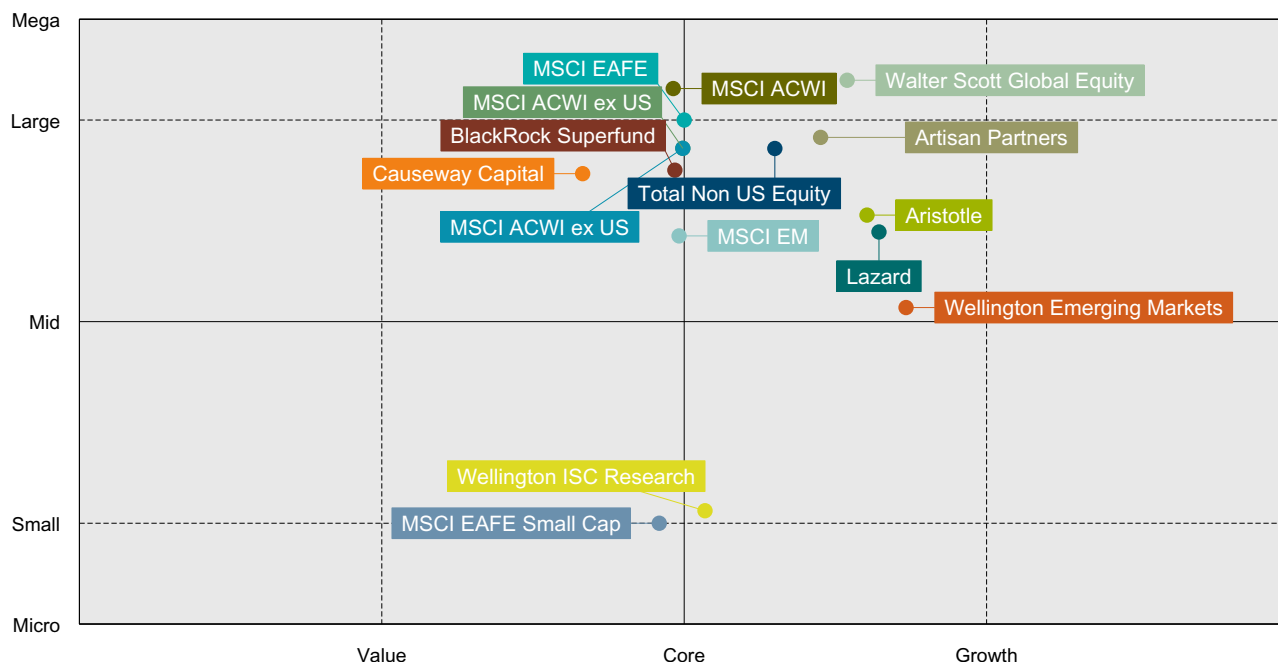


International Holdings Based Style Analysis For One Quarter Ended September 30, 2024

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map

Holdings for One Quarter Ended September 30, 2024

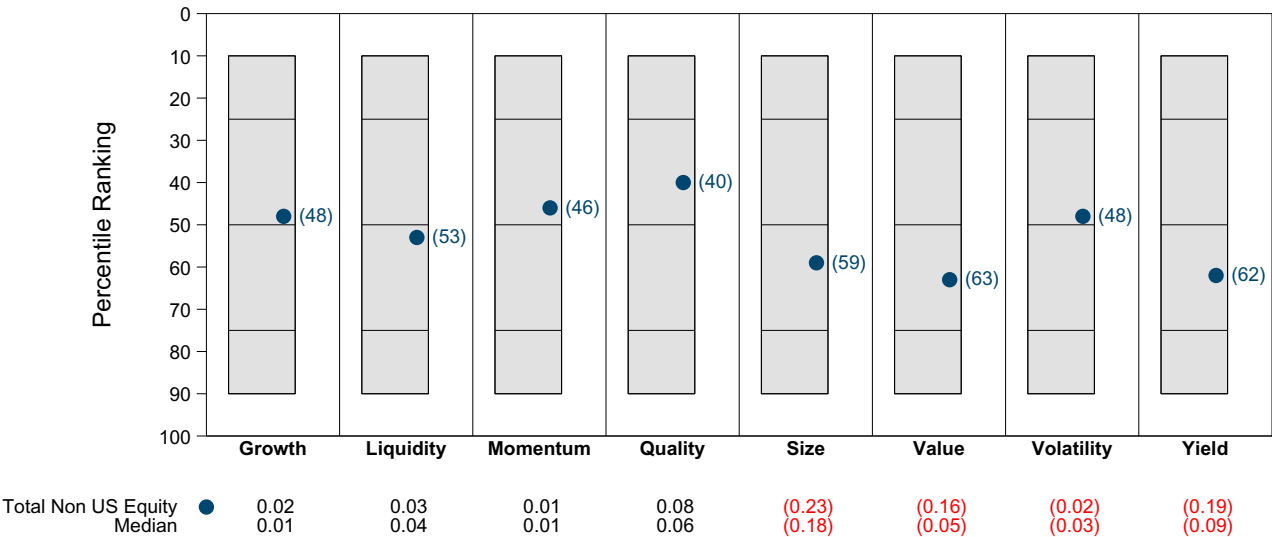


	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
Total Non US Equity	100.00%	48.48	0.33	0.08	(0.25)	4849	73.09
MSCI ACWI ex US	-	48.51	0.08	0.01	(0.07)	2094	149.86
Artisan Partners	17.38%	50.47	0.45	0.26	(0.19)	62	12.84
Causeway Capital	19.81%	43.97	(0.21)	(0.12)	0.09	65	17.99
Lazard	7.20%	33.51	0.61	0.24	(0.37)	67	20.67
Aristotle	7.94%	36.54	0.58	0.21	(0.38)	39	14.55
MSCI EAFE	-	53.58	0.08	0.01	(0.07)	732	84.85
BlackRock Superfund	8.66%	44.59	0.05	0.00	(0.05)	4635	149.66
MSCI ACWI ex US	-	48.51	0.08	0.01	(0.07)	2094	149.86
Wellington Emerging Markets	7.99%	19.96	0.69	0.22	(0.47)	96	27.59
MSCI EM	-	32.81	0.07	0.01	(0.06)	1277	76.94
Wellington ISC Research	6.08%	3.81	0.14	(0.00)	(0.14)	237	53.48
MSCI EAFE Small Cap	-	2.91	0.01	(0.01)	(0.02)	2104	413.84
Walter Scott Global Equity	24.91%	137.02	0.53	0.01	(0.52)	48	15.81
MSCI ACWI	-	119.62	0.05	0.00	(0.05)	2687	113.00

Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

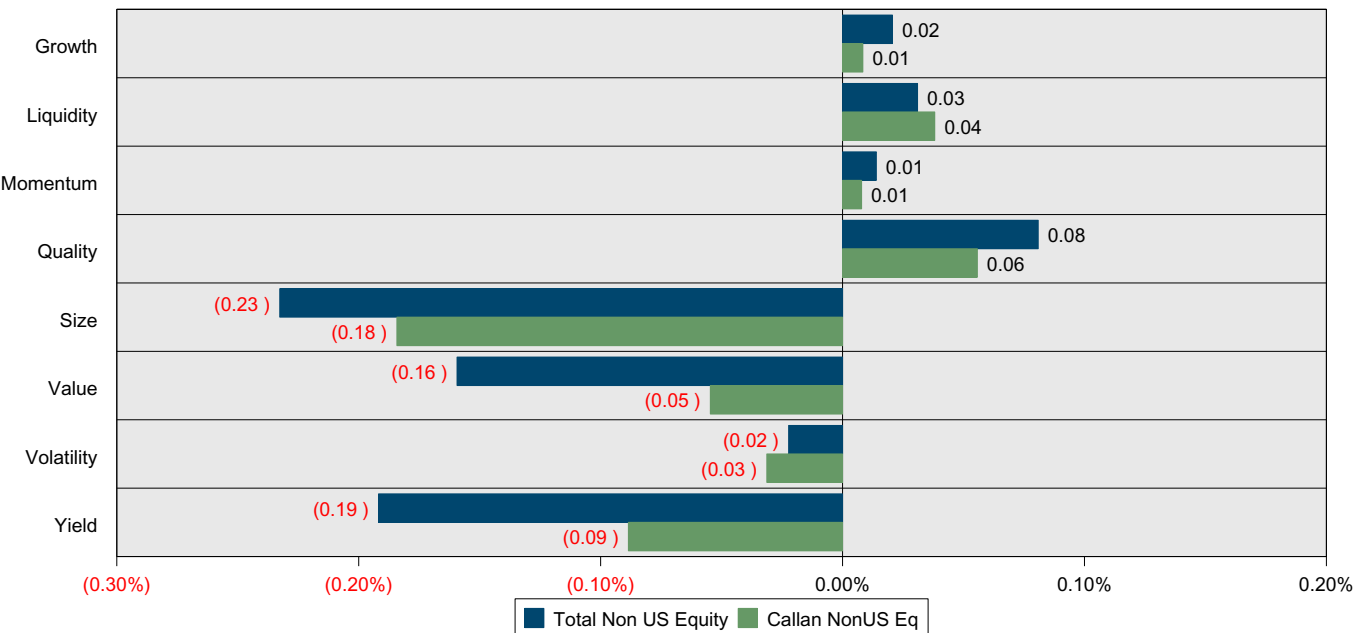
Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative the the MSCI ACWI xUS (Net).

Factor Exposures Relative to MSCI ACWI xUS (Net)
for Period Ended September 30, 2024



Core Non US Equity Period Ended September 30, 2024

Core Non US Equity Benchmark

The Core Non US Equity Benchmark is the MSCI ACWI ex US Index as of 7/1/2007. Prior to 7/1/2007 the benchmark was the MSCI EAFE Index.

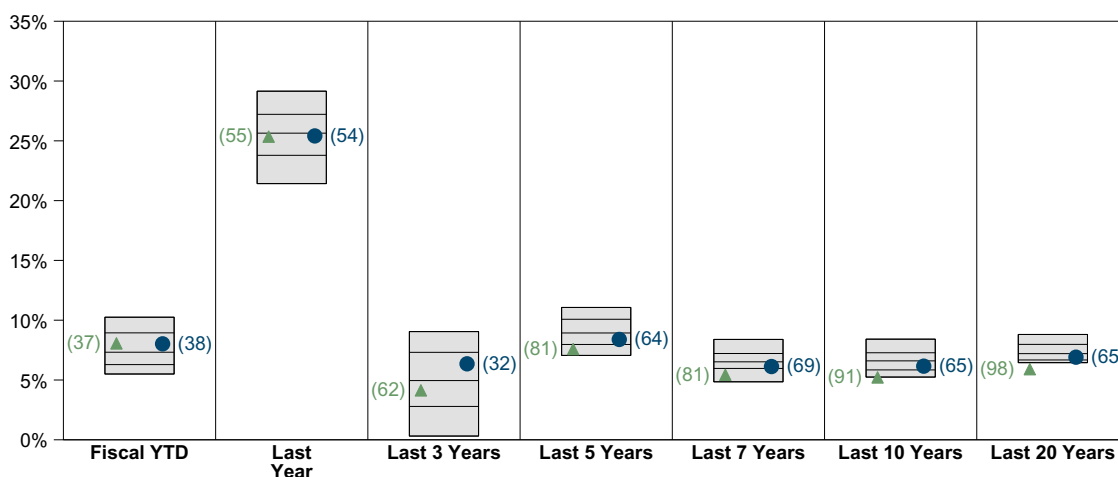
Quarterly Summary and Highlights

- Core Non US Equity's portfolio posted a 8.02% return for the quarter placing it in the 38 percentile of the Callan NonUS Eq group for the quarter and in the 54 percentile for the last year.
- Core Non US Equity's portfolio underperformed the Core Non US Benchmark by 0.04% for the quarter and outperformed the Core Non US Benchmark for the year by 0.06%.

Quarterly Asset Growth

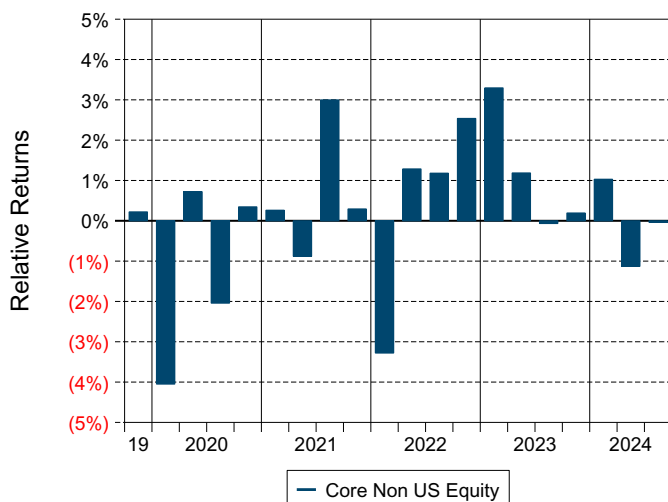
Beginning Market Value	\$1,404,064,350
Net New Investment	\$-152,456
Investment Gains/(Losses)	\$112,654,367
Ending Market Value	\$1,516,566,261

Performance vs Callan NonUS Eq (Gross)

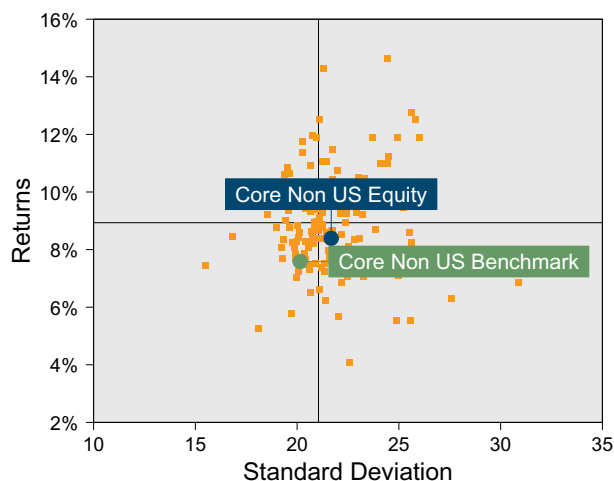


10th Percentile	10.25	29.15	9.05	11.07	8.39	8.41	8.81
25th Percentile	8.94	27.21	7.31	10.08	7.22	7.28	7.98
Median	7.32	25.64	4.95	8.93	6.52	6.60	7.20
75th Percentile	6.29	23.79	2.79	7.97	5.97	5.85	6.68
90th Percentile	5.50	21.42	0.31	7.06	4.85	5.25	6.45
Core Non US Equity	8.02	25.41	6.35	8.39	6.13	6.16	6.91
Core Non US Benchmark	8.06	25.35	4.14	7.59	5.44	5.22	5.91

Relative Return vs Core Non US Benchmark



Callan NonUS Eq (Gross) Annualized Five Year Risk vs Return

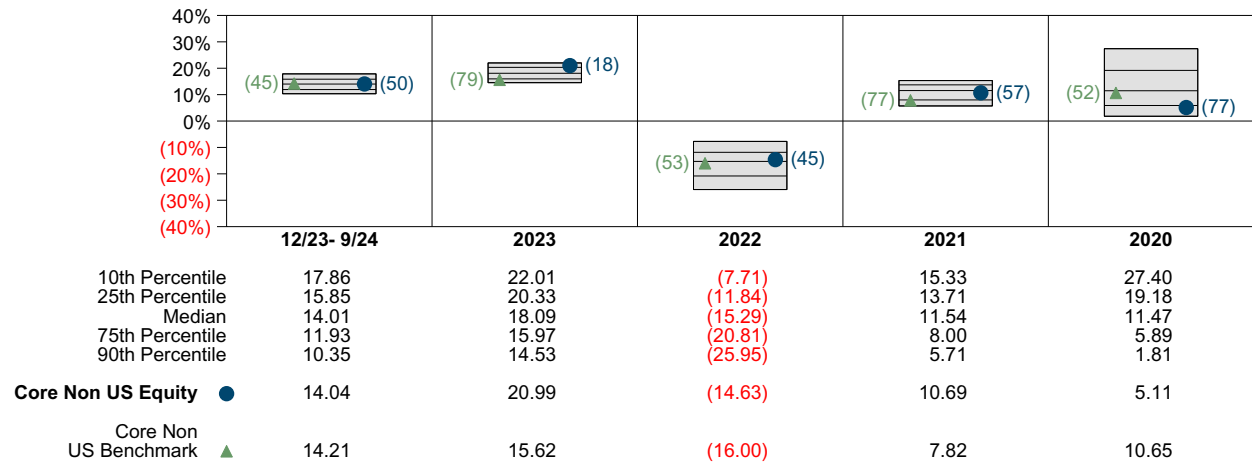


Core Non US Equity Return Analysis Summary

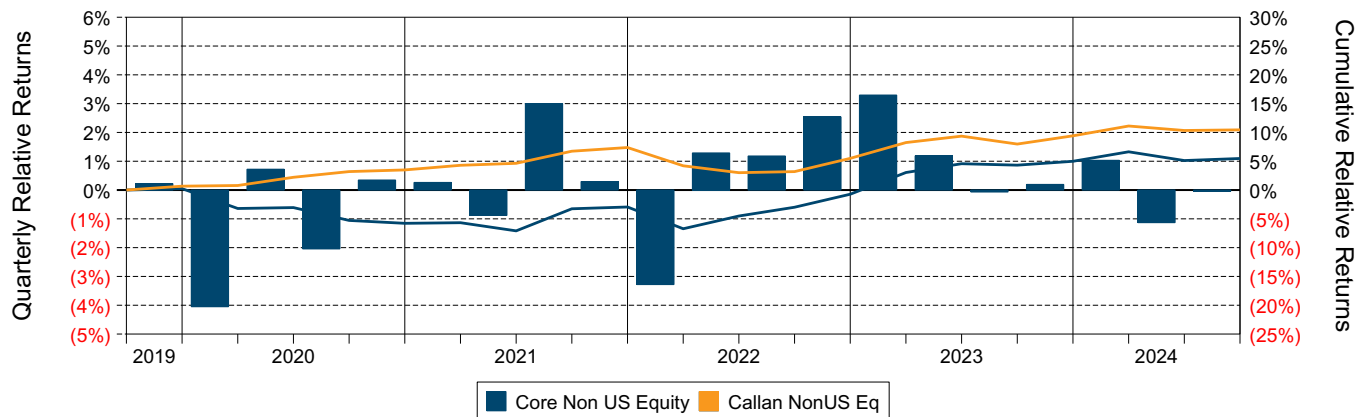
Return Analysis

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

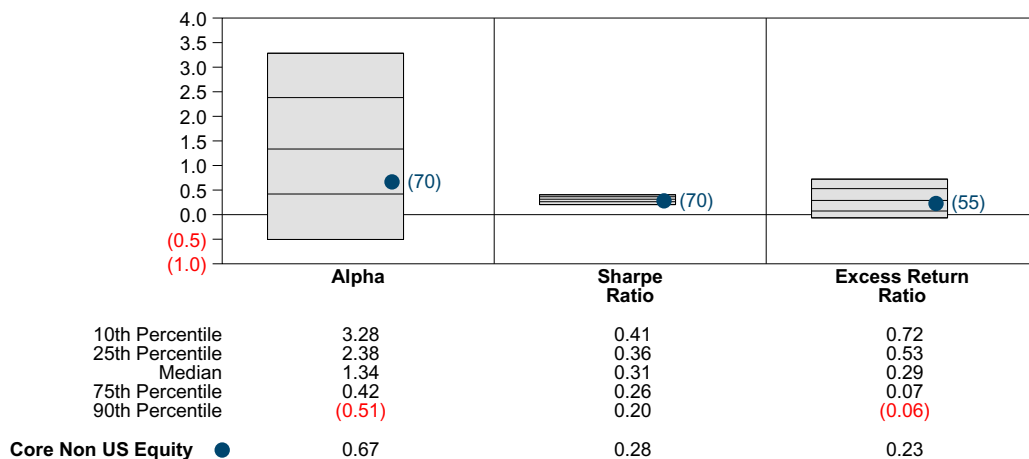
Performance vs Callan NonUS Eq (Gross)



Cumulative and Quarterly Relative Returns vs Core Non US Benchmark



Risk Adjusted Return Measures vs Core Non US Benchmark Rankings Against Callan NonUS Eq (Gross) Five Years Ended September 30, 2024



Core Non US Equity

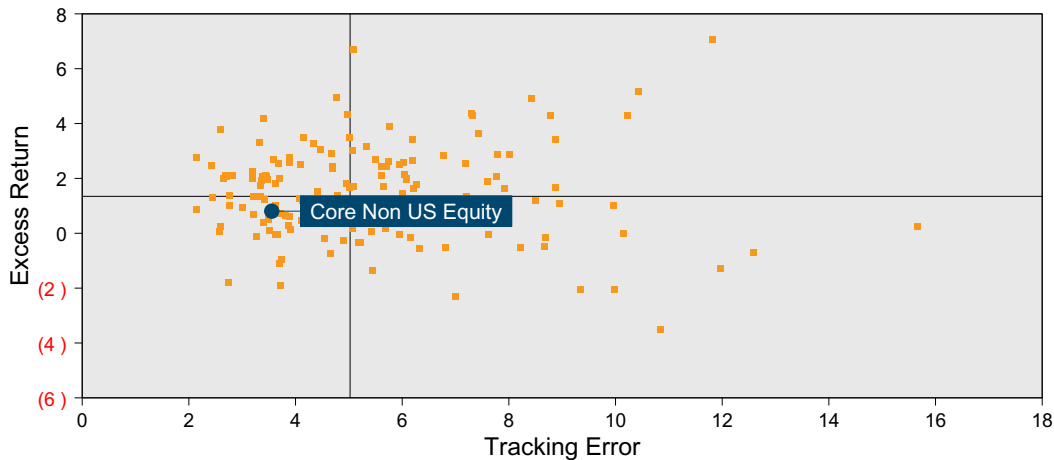
Risk Analysis Summary

Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

Risk Analysis vs Callan Non-US Equity (Gross)

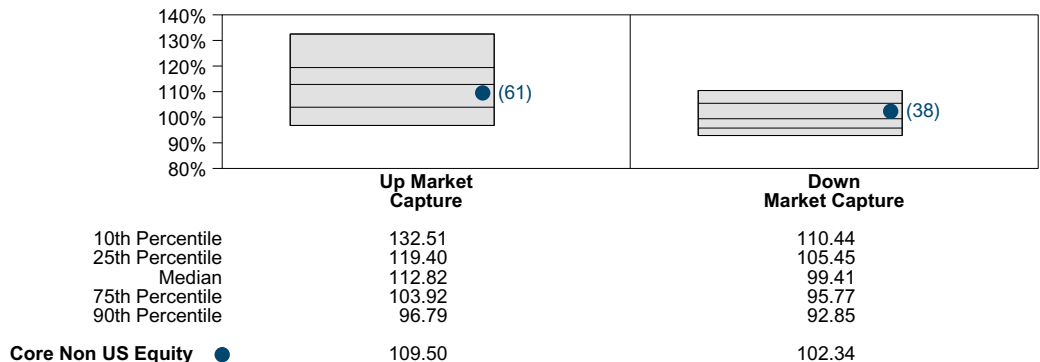
Five Years Ended September 30, 2024



Market Capture vs Core Non US Benchmark

Rankings Against Callan Non-US Equity (Gross)

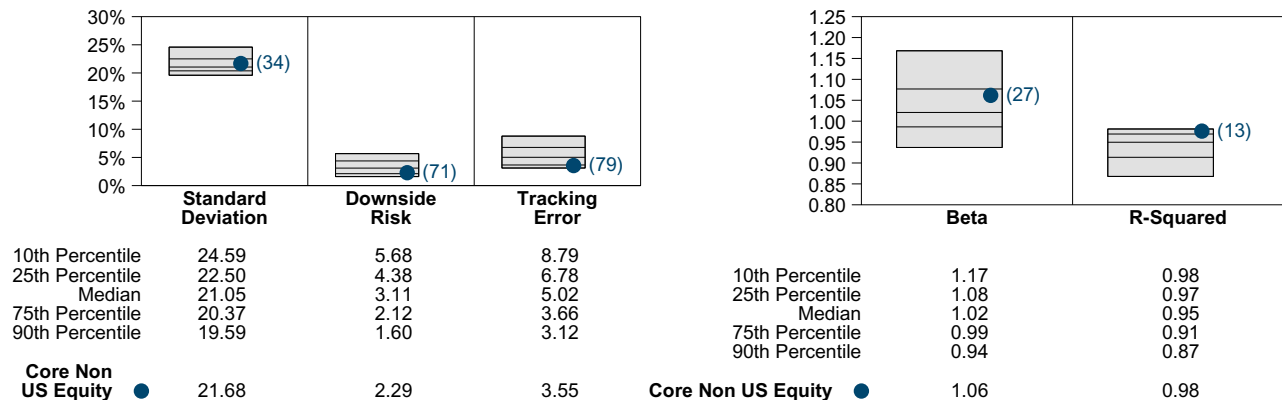
Five Years Ended September 30, 2024



Risk Statistics Rankings vs Core Non US Benchmark

Rankings Against Callan Non-US Equity (Gross)

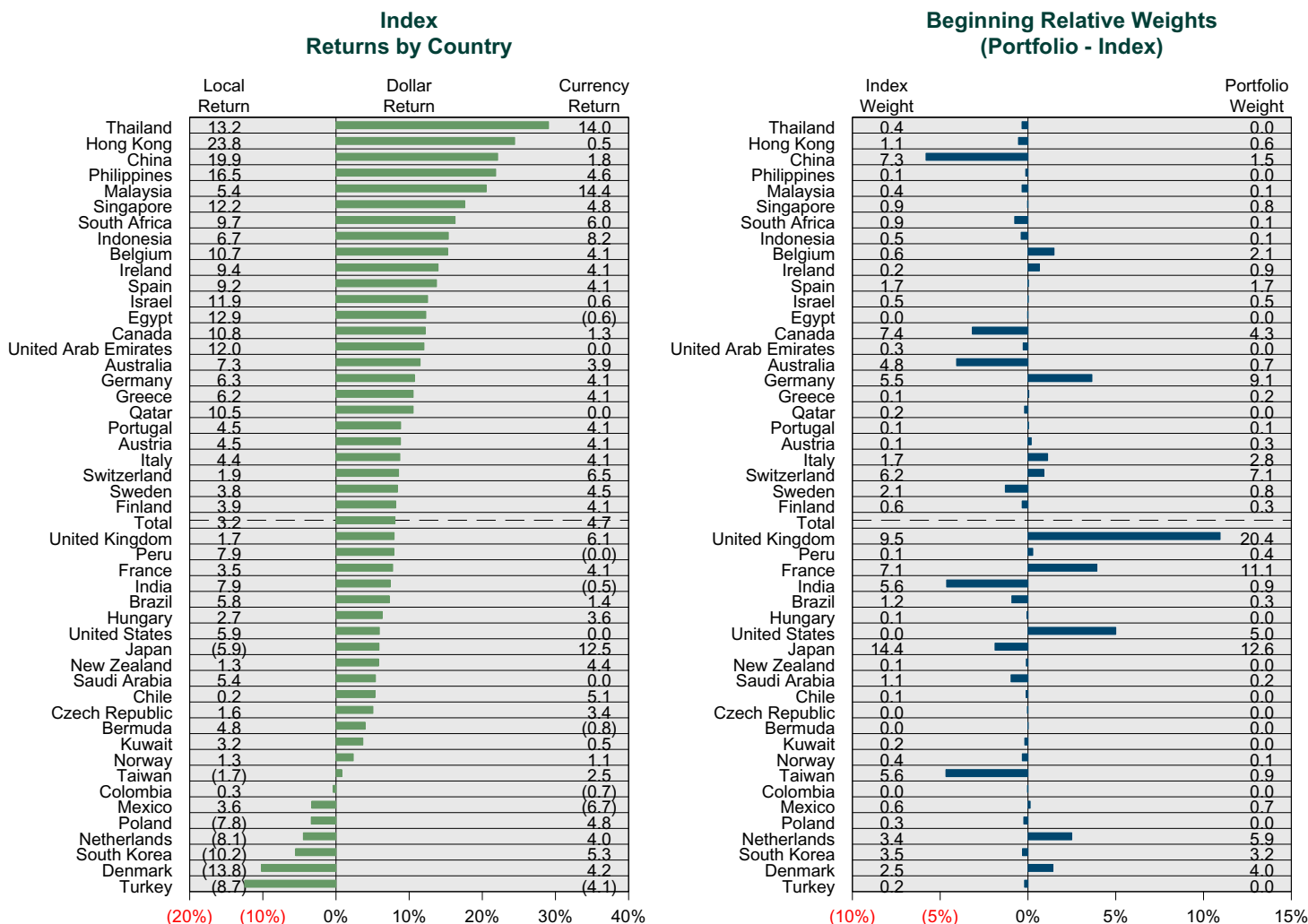
Five Years Ended September 30, 2024



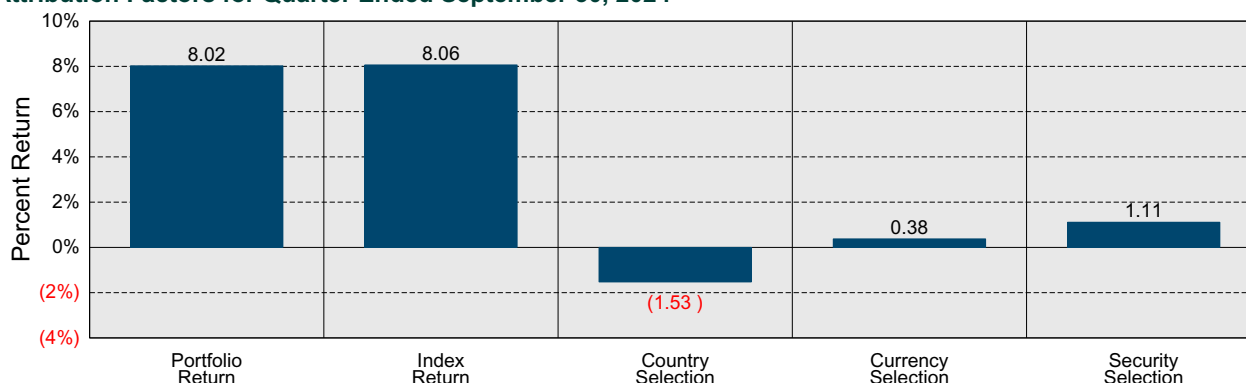
Core Non US Equity vs MSCI ACWI xUS (Net) Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

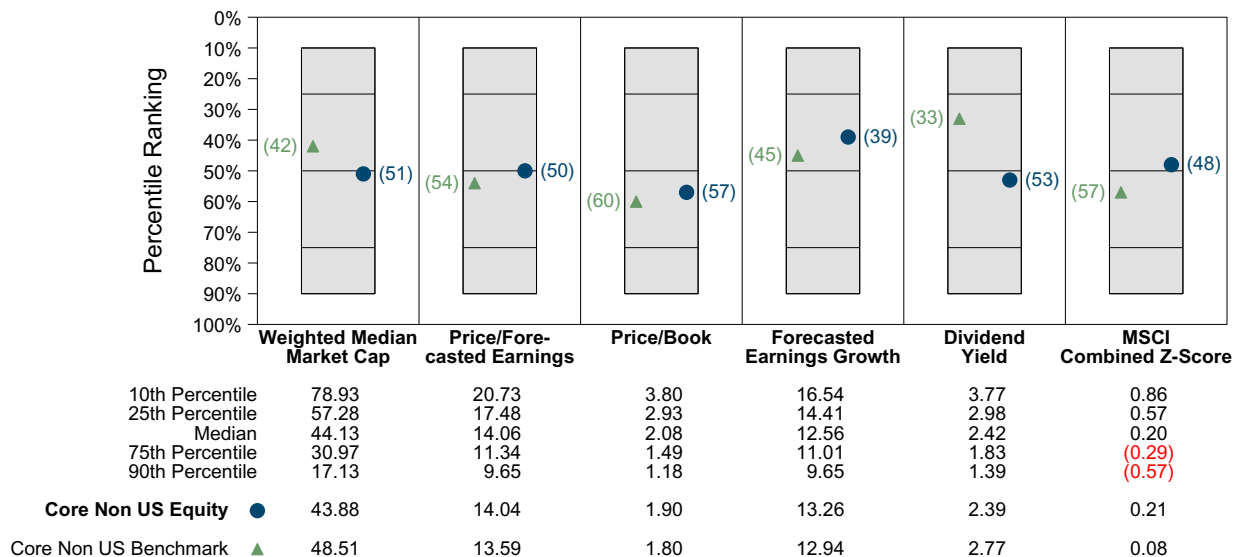


Core Non US Equity Equity Characteristics Analysis Summary

Portfolio Characteristics

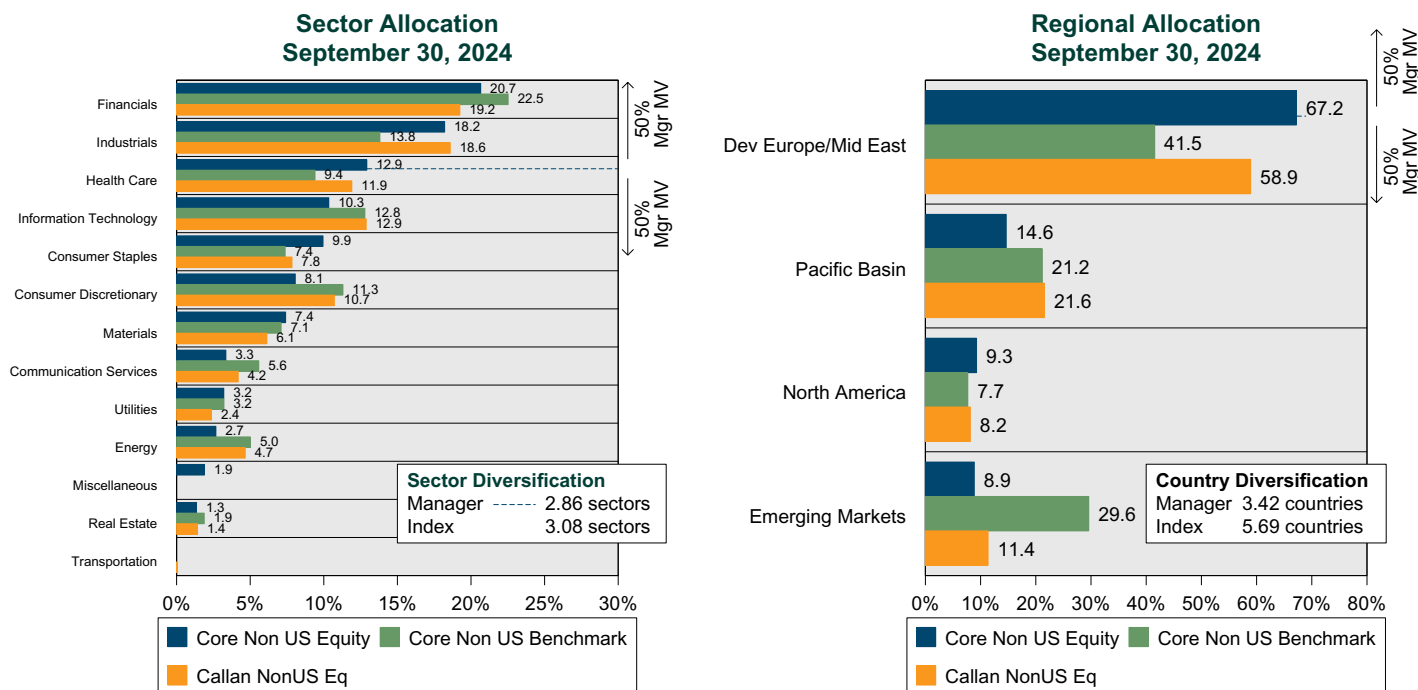
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



Country Allocation

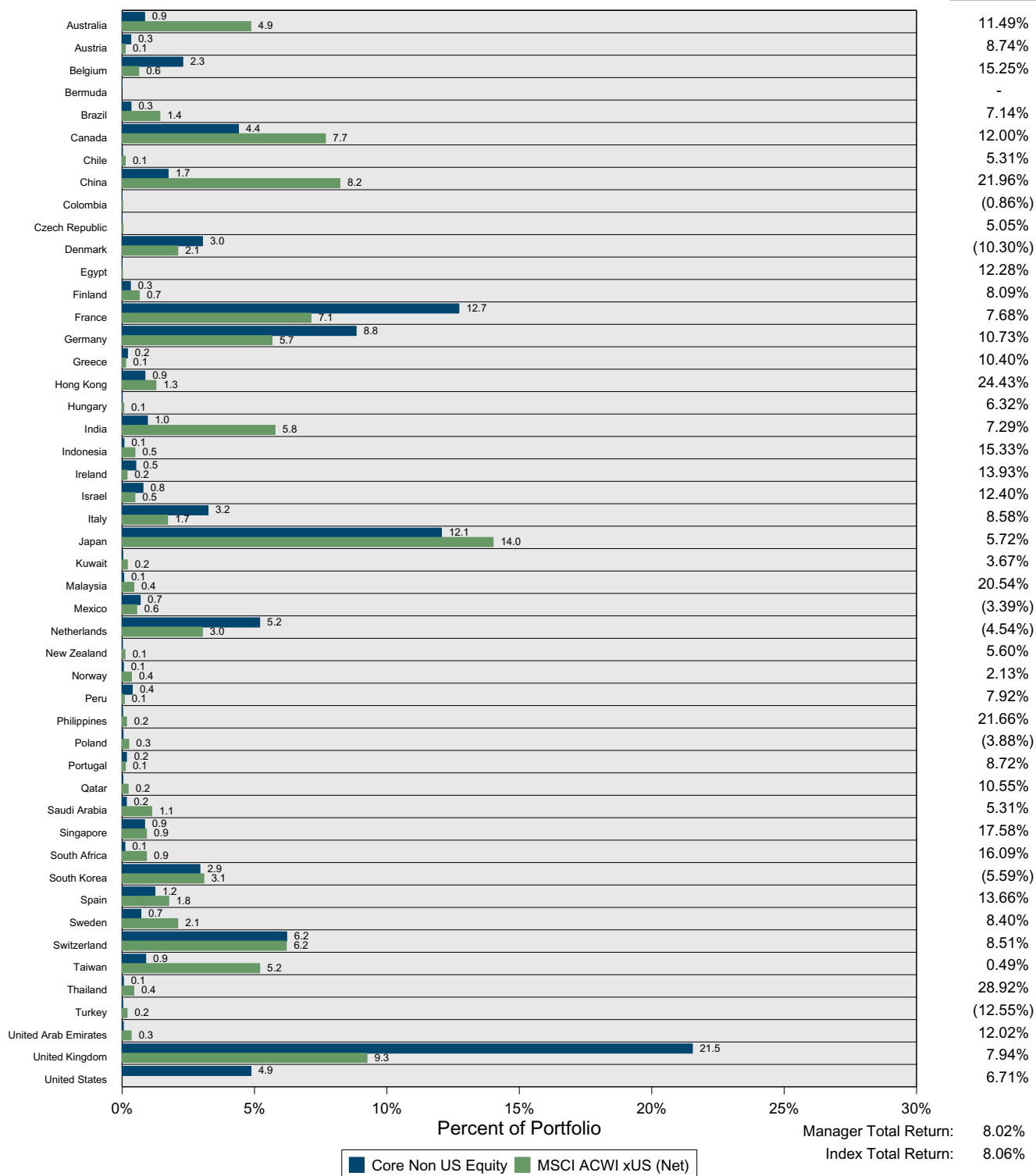
Core Non US Equity VS MSCI ACWI xUS (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of September 30, 2024. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.

Country Weights as of September 30, 2024

Index Rtns



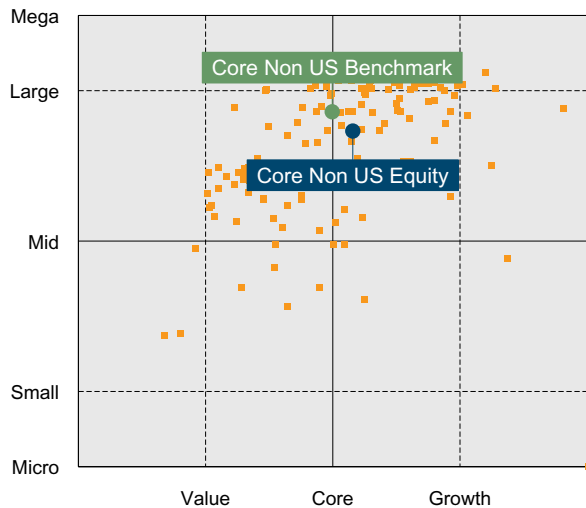
Current Holdings Based Style Analysis

Core Non US Equity

As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

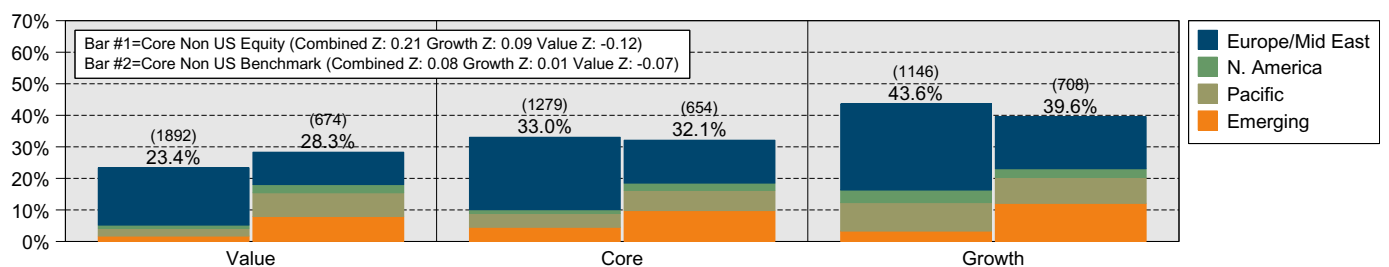
Style Map vs Callan NonUS Eq Holdings as of September 30, 2024



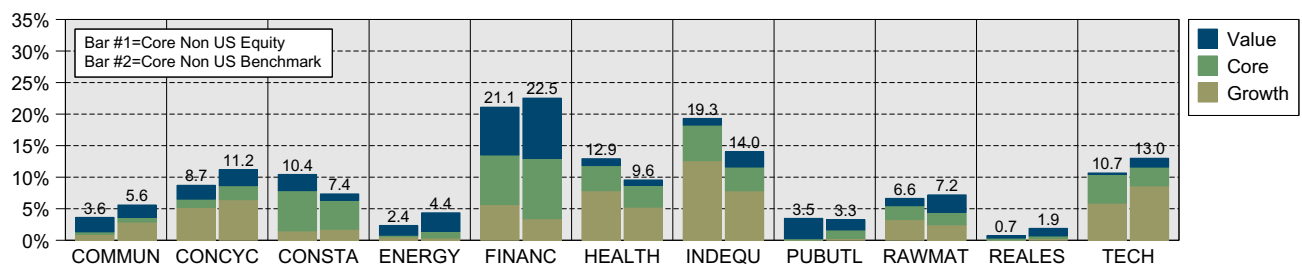
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	18.2% (185) 10.3% (143)	23.0% (219) 13.6% (150)	27.3% (183) 16.5% (131)	68.4% (587) 40.4% (424)
N. America	1.0% (28) 2.6% (26)	1.2% (35) 2.3% (24)	4.0% (45) 2.8% (35)	6.2% (108) 7.7% (85)
Pacific	2.5% (1223) 7.5% (117)	4.4% (620) 6.4% (89)	9.0% (517) 8.2% (97)	15.9% (2360) 22.1% (303)
Emerging	1.7% (456) 7.9% (388)	4.5% (405) 9.8% (391)	3.3% (401) 12.1% (445)	9.5% (1262) 29.8% (1224)
Total	23.4% (1892) 28.3% (674)	33.0% (1279) 32.1% (654)	43.6% (1146) 39.6% (708)	100.0% (4317) 100.0% (2036)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



Sector Weights Distribution Holdings as of September 30, 2024



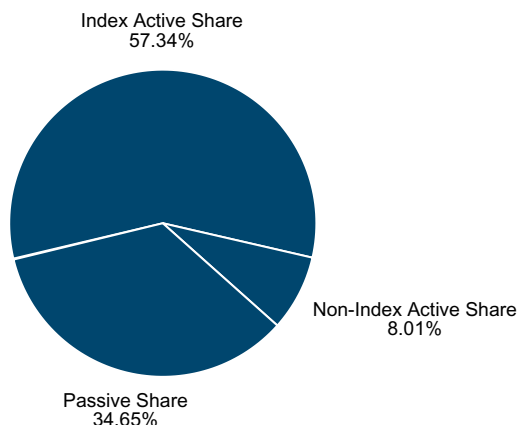
Core Non US Equity

Active Share Analysis as of September 30, 2024

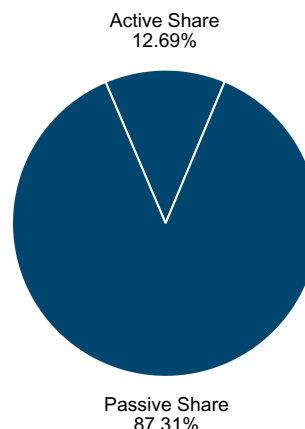
vs. MSCI ACWI xUS (Net)

Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



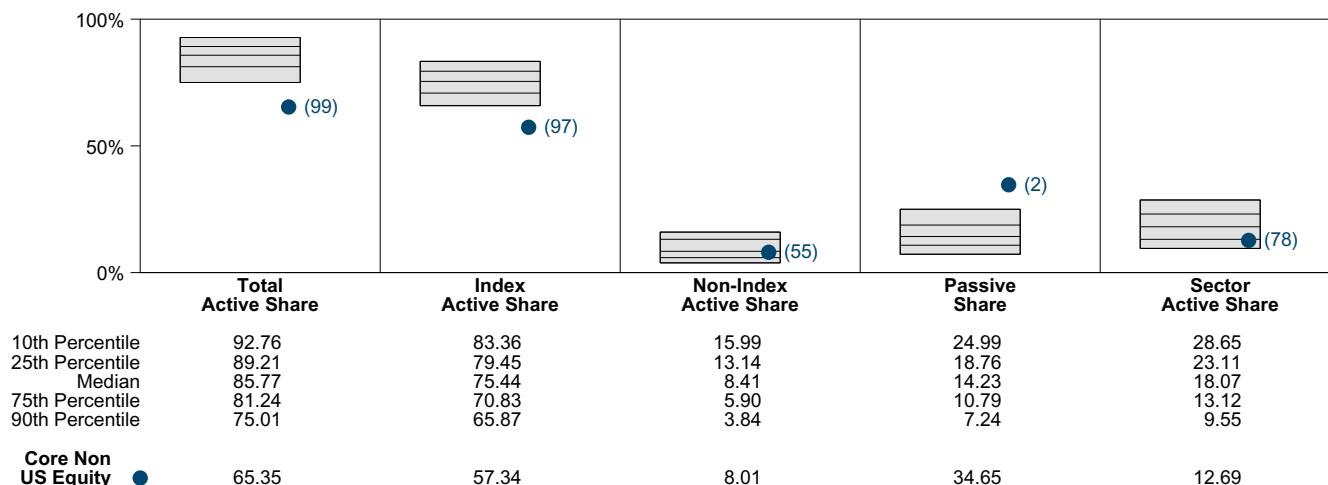
Sector Exposure Active Share



Total Active Share: 65.35%

	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	55.88%	0.52%	56.40%	5.58%	3.35%	2.82%
Consumer Discretionary	55.89%	13.15%	69.04%	11.30%	8.06%	6.85%
Consumer Staples	57.65%	4.03%	61.67%	7.38%	9.95%	5.47%
Energy	53.48%	9.44%	62.92%	5.02%	2.67%	2.51%
Financials	61.33%	5.14%	66.47%	22.52%	20.66%	14.30%
Health Care	38.94%	11.17%	50.11%	9.40%	12.92%	5.92%
Industrials	61.47%	5.01%	66.48%	13.81%	18.21%	10.77%
Information Technology	52.36%	5.87%	58.22%	12.79%	10.34%	6.84%
Materials	63.28%	13.18%	76.46%	7.10%	7.41%	5.54%
Miscellaneous	0.00%	100.00%	100.00%	-	1.89%	0.95%
Real Estate	50.37%	24.95%	75.32%	1.88%	1.35%	1.25%
Utilities	66.38%	0.09%	66.47%	3.22%	3.20%	2.13%
Total	57.34%	8.01%	65.35%	100.00%	100.00%	65.35%

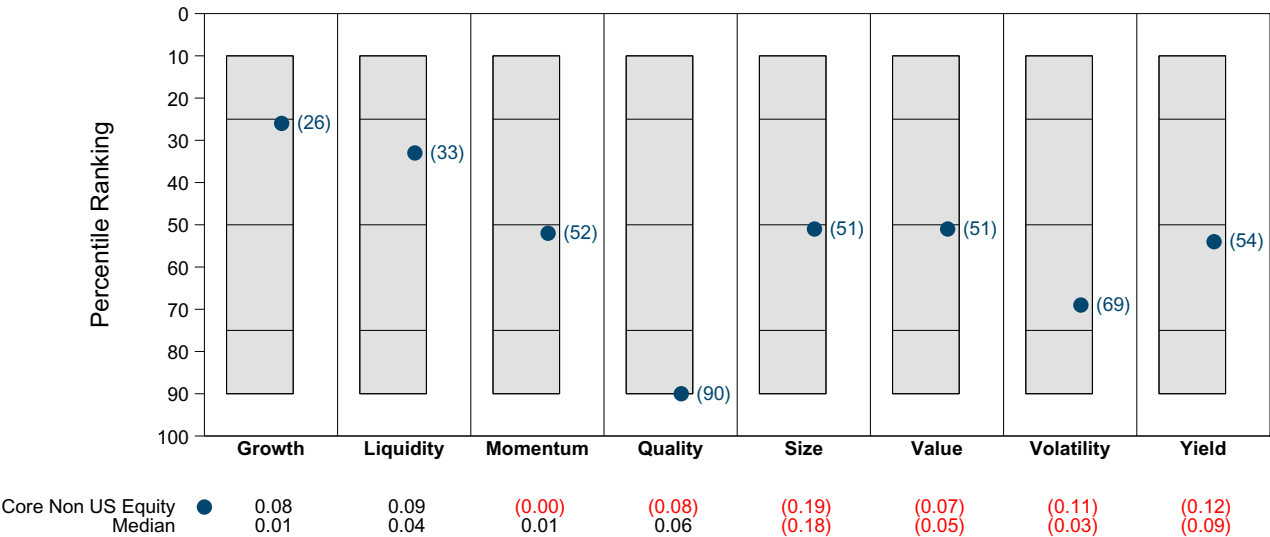
Active Share vs. Callan NonUS Eq



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

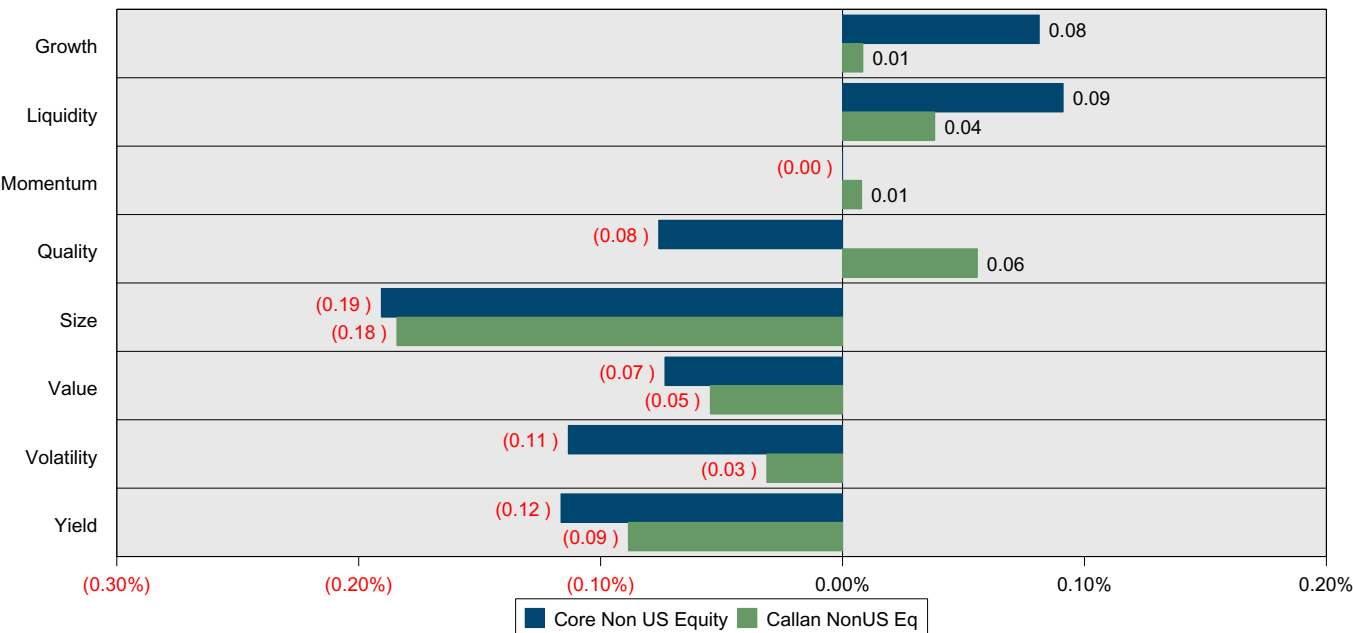
Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative to the MSCI ACWI xUS (Net).

Factor Exposures Relative to MSCI ACWI xUS (Net)
for Period Ended September 30, 2024



Aristotle

Period Ended September 30, 2024

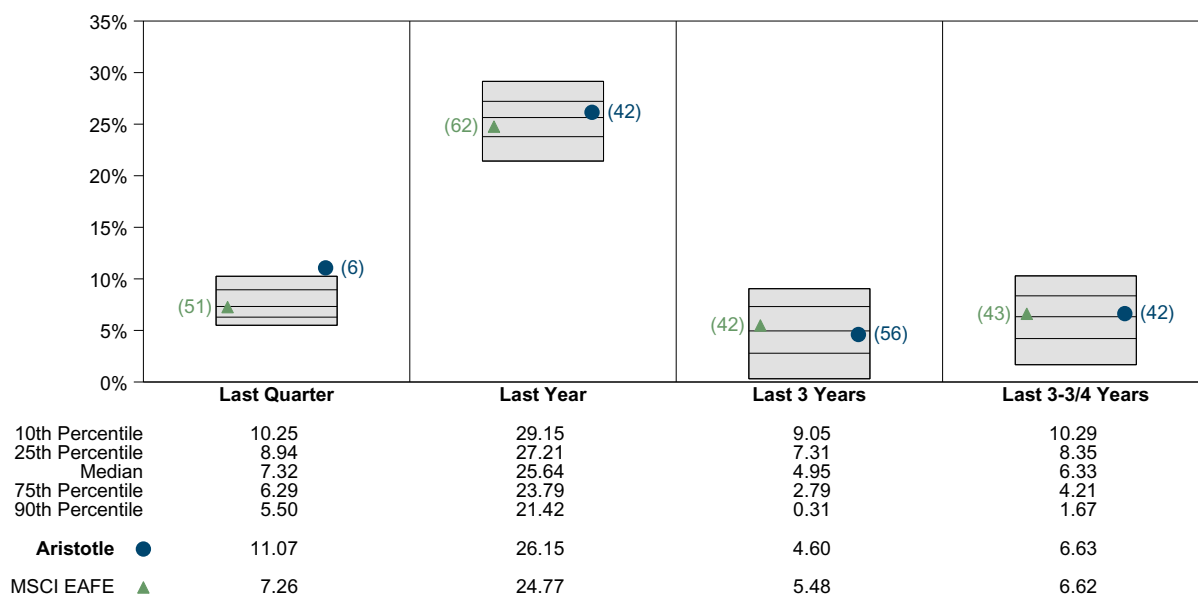
Investment Philosophy

Aristotle Capital's investment philosophy consists of four tenets to capture market inefficiencies: identify high-quality businesses; analyze businesses from a global perspective; identify catalysts and invest with a long-term view; and construct focused portfolios. This leads to a portfolio that is diversified, high conviction, and low turnover with alpha generation driven by security selection. Given this process, characteristics can oscillate between core, value and growth but will have persistent exposure to quality. NHRS inception in the fund is December 2020.

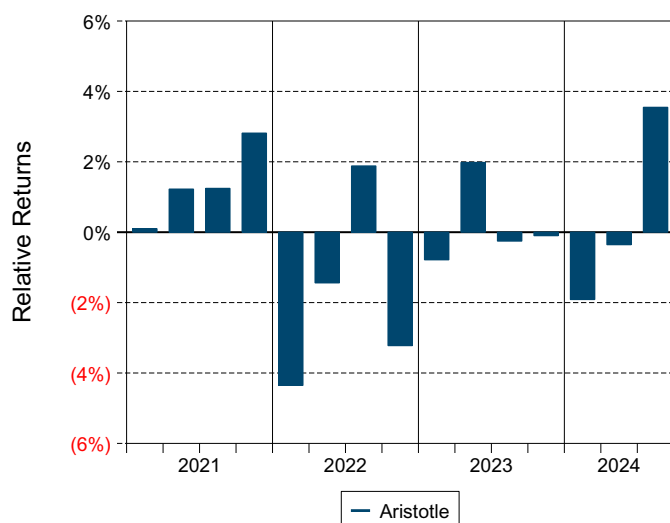
Quarterly Asset Growth

Beginning Market Value	\$177,787,986
Net New Investment	\$0
Investment Gains/(Losses)	\$19,676,907
Ending Market Value	\$197,464,893

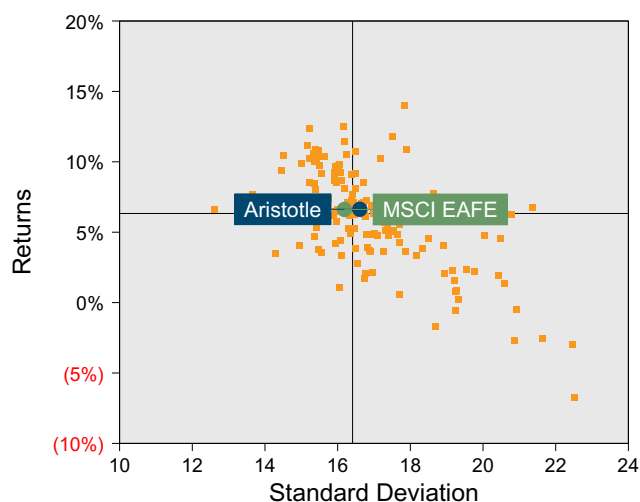
Performance vs Callan NonUS Eq (Gross)



Relative Return vs MSCI EAFE



Callan NonUS Eq (Gross) Annualized Three and Three-Quarter Year Risk vs Return

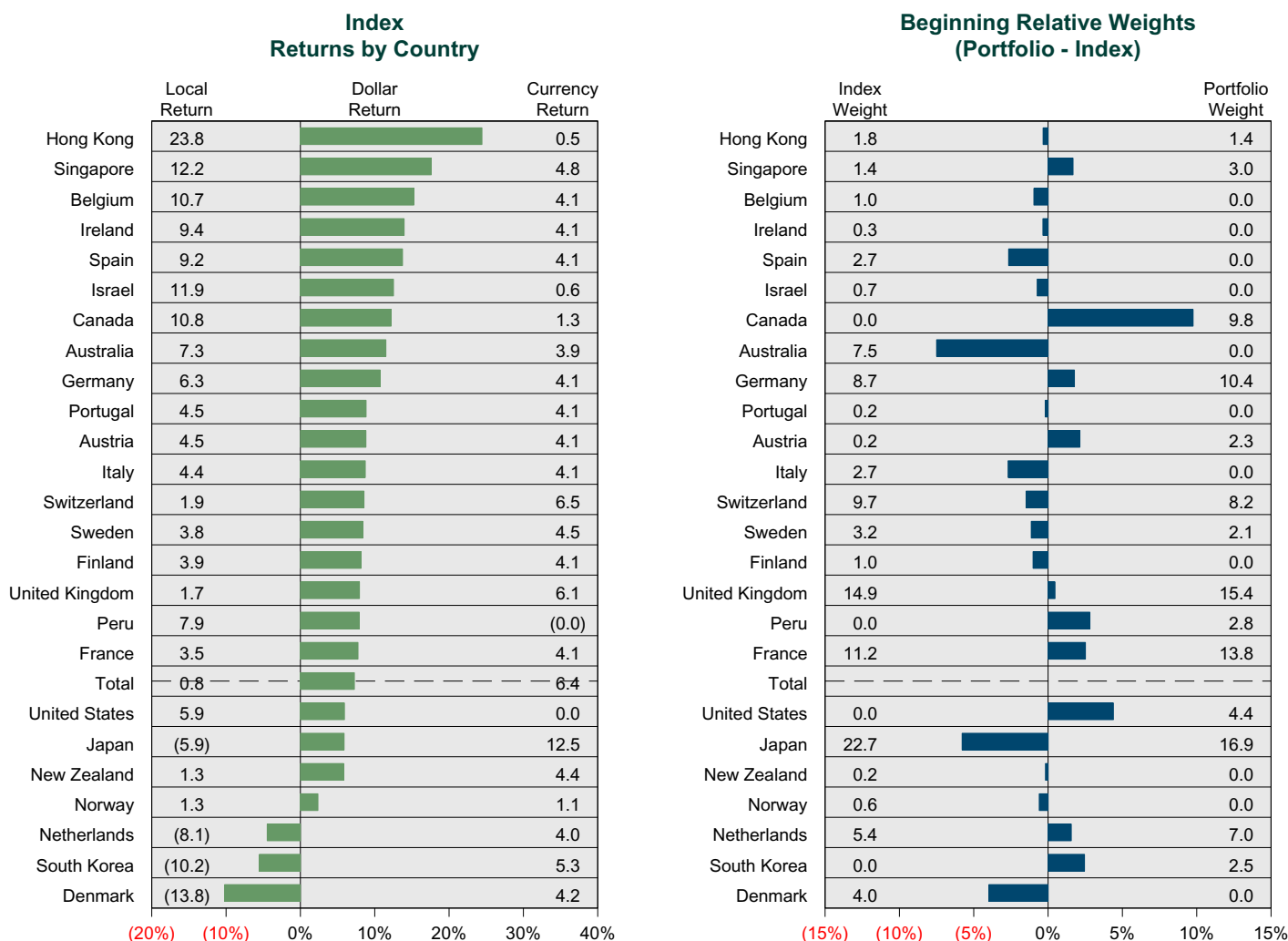


Aristotle vs MSCI EAFE

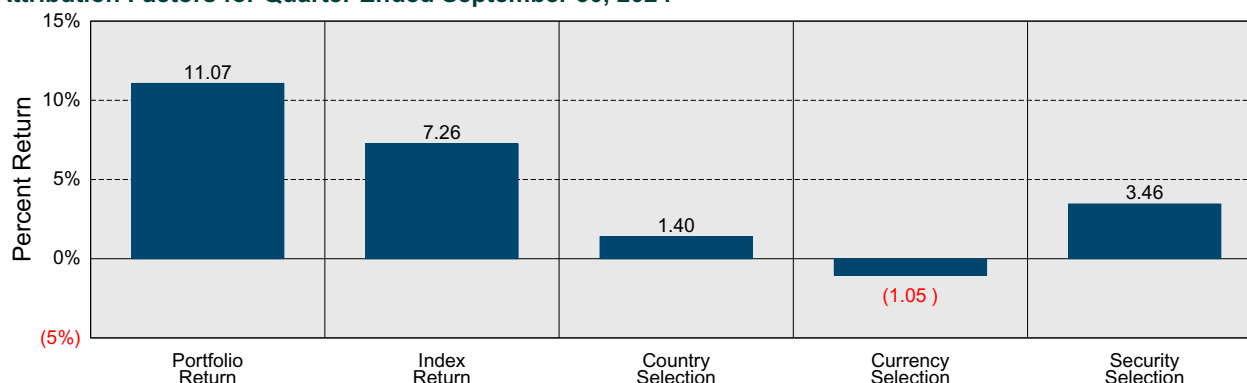
Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

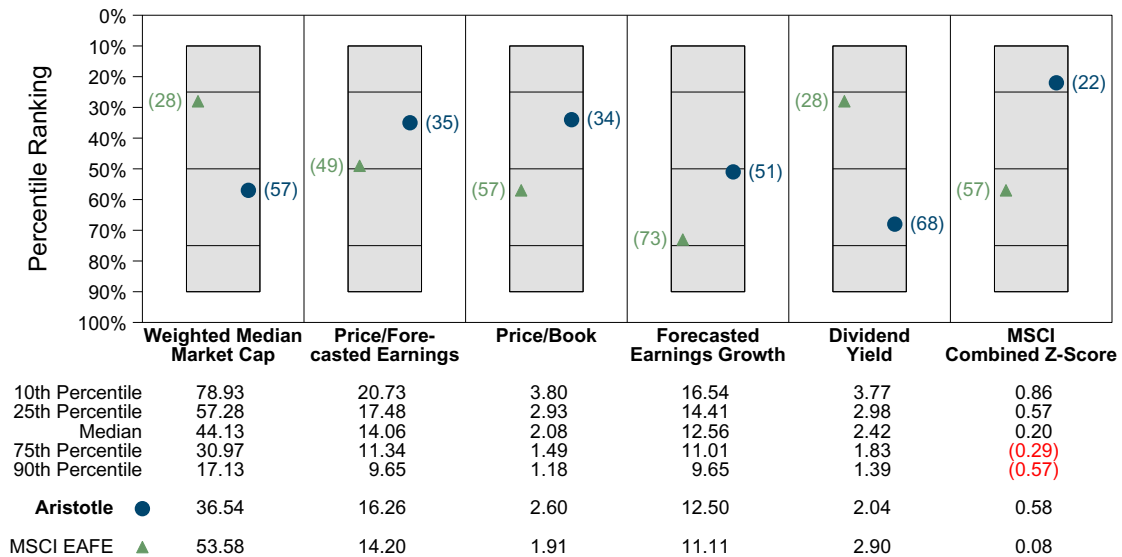


Aristotle Equity Characteristics Analysis Summary

Portfolio Characteristics

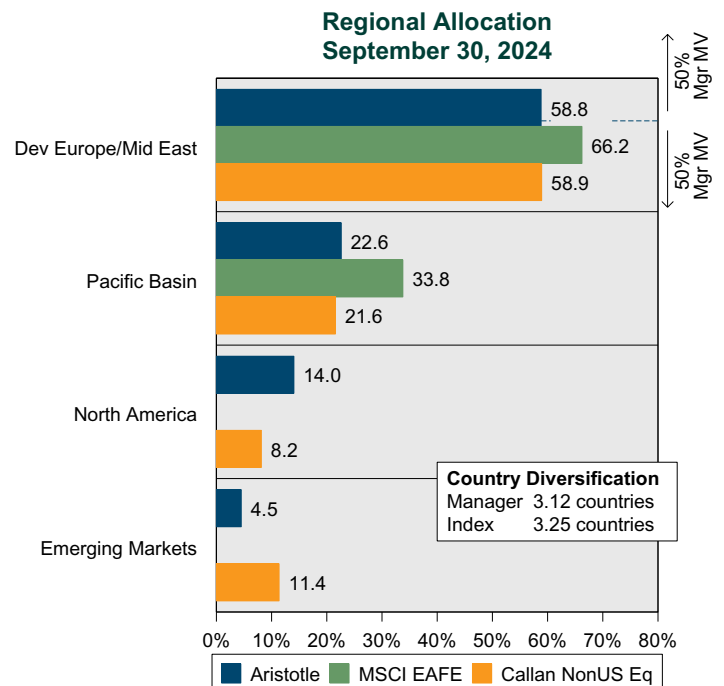
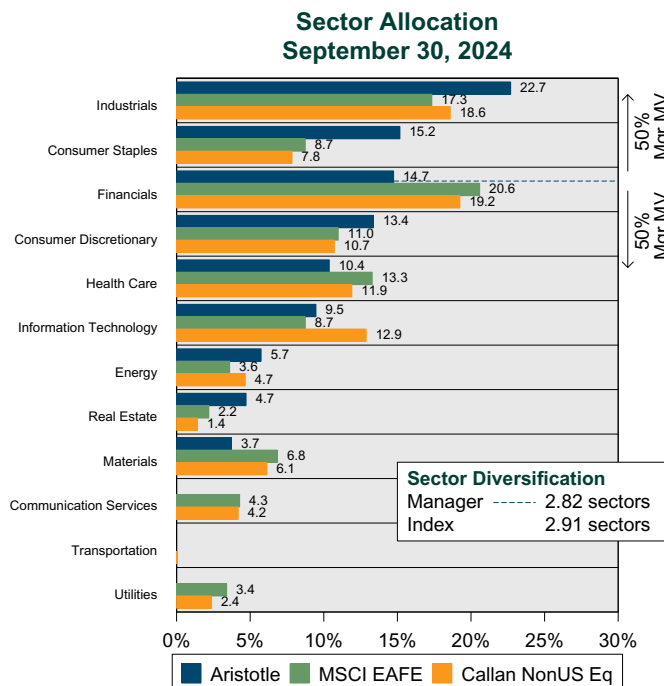
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



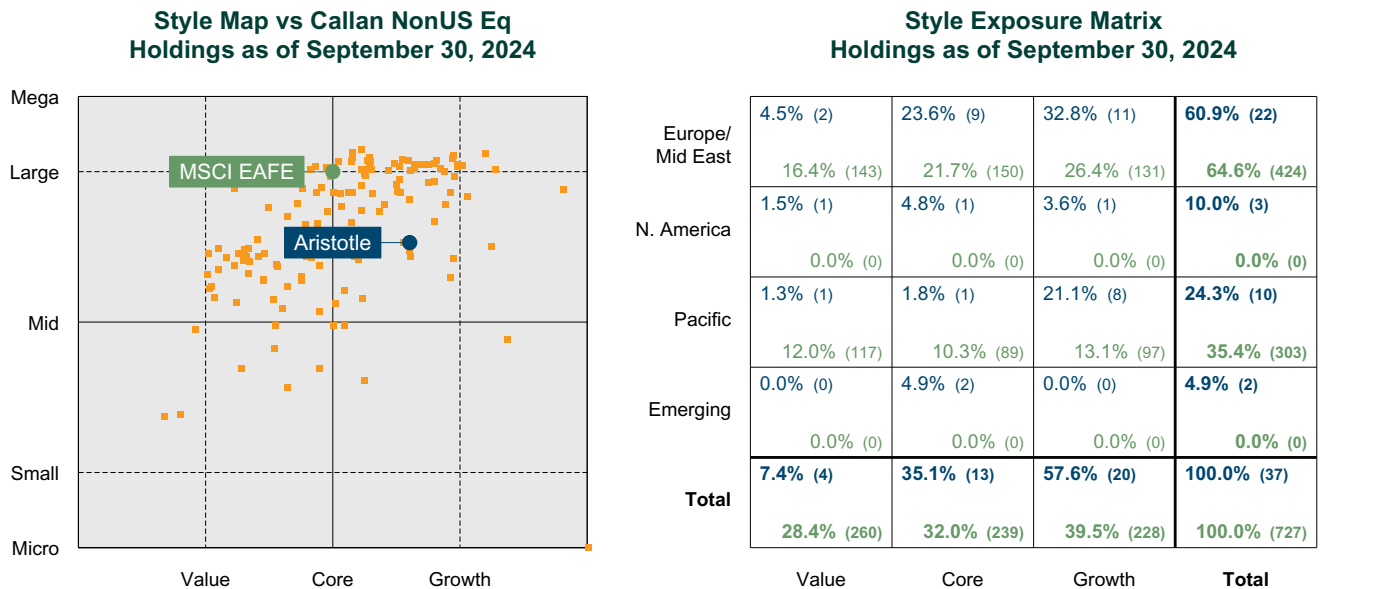
Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

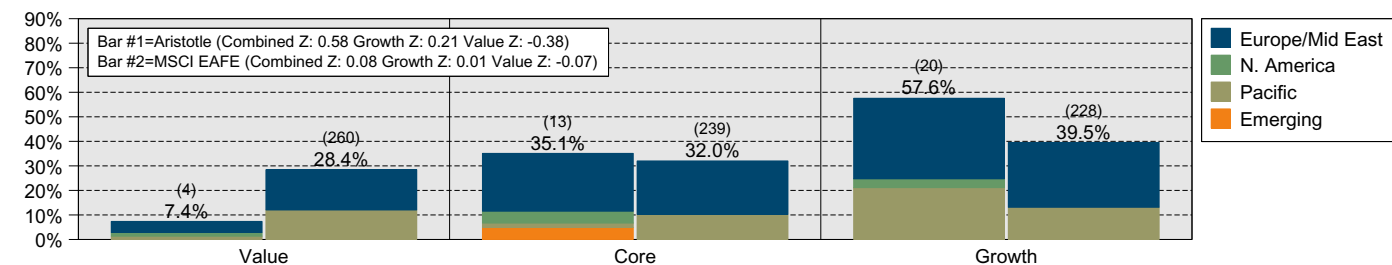


Current Holdings Based Style Analysis
Aristotle
As of September 30, 2024

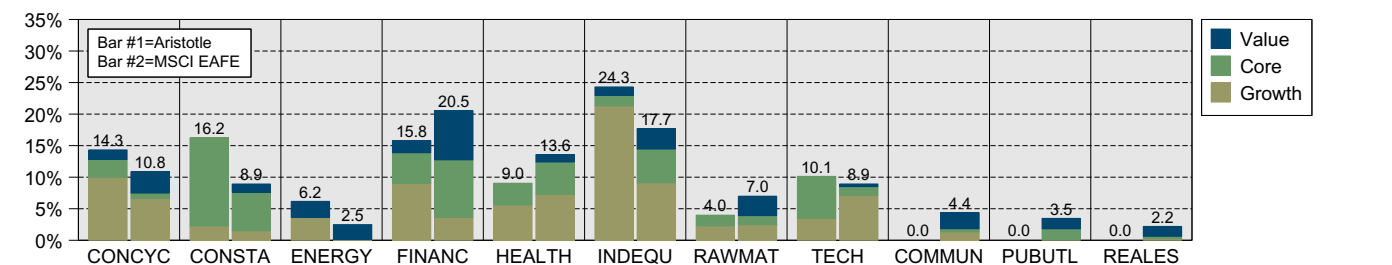
This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



Combined Z-Score Style Distribution
Holdings as of September 30, 2024



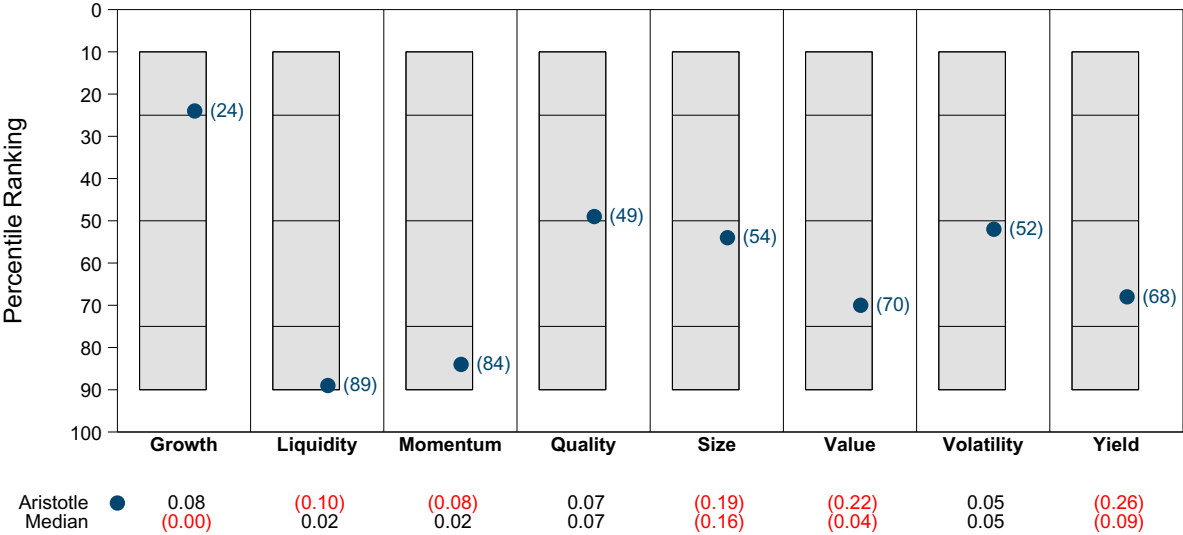
Sector Weights Distribution
Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

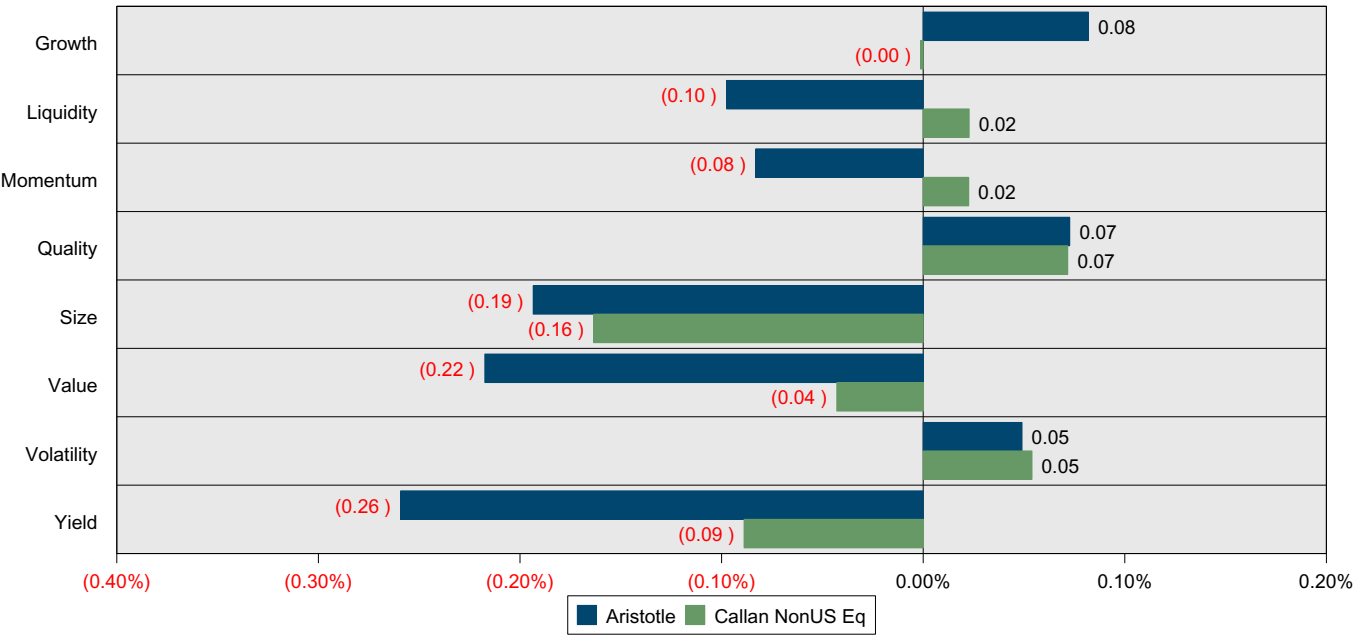
Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative the the MSCI EAFE.

Factor Exposures Relative to MSCI EAFE
for Period Ended September 30, 2024



Artisan Partners

Period Ended September 30, 2024

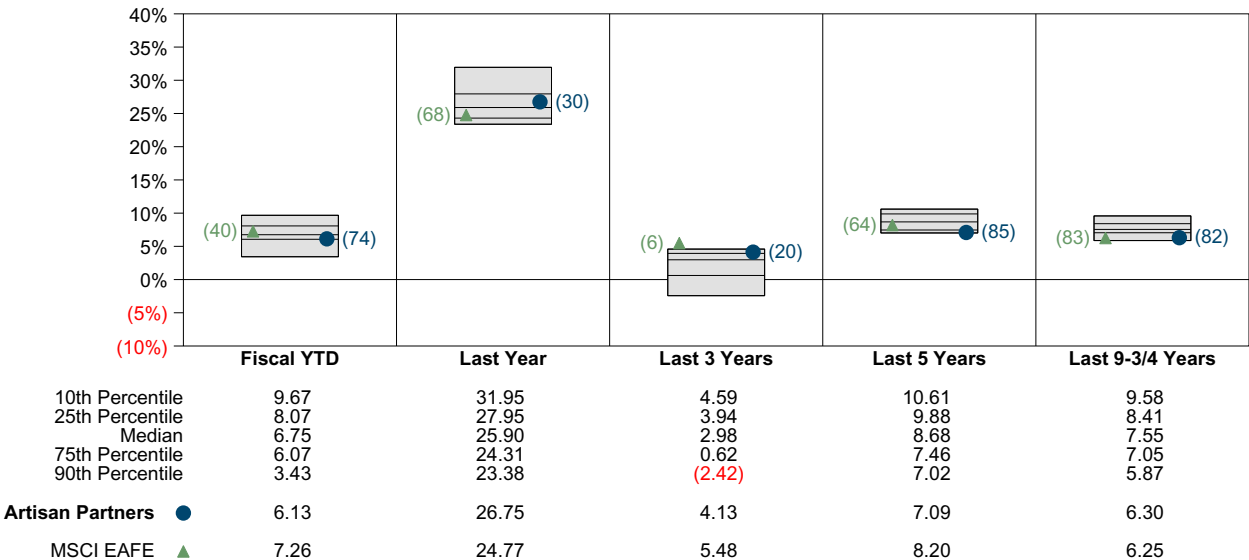
Investment Philosophy

Artisan Partners, founded in 1994, is a publicly traded company with 10 unique investment units headquartered in Milwaukee. The leadership of the strategy has been stable under Portfolio Manager Mark Yockey since its inception in 1996. Yockey is supported by three co-portfolio managers and nine dedicated analysts. The team employs a bottom-up, fundamental process to construct portfolios with growth companies benefiting from secular trends. The strategy typically consists of 50-100 securities with an expected annual turnover of around 40%. The strategy has consistently performed in line with expectations. NHRS inception in the fund is October 2014.

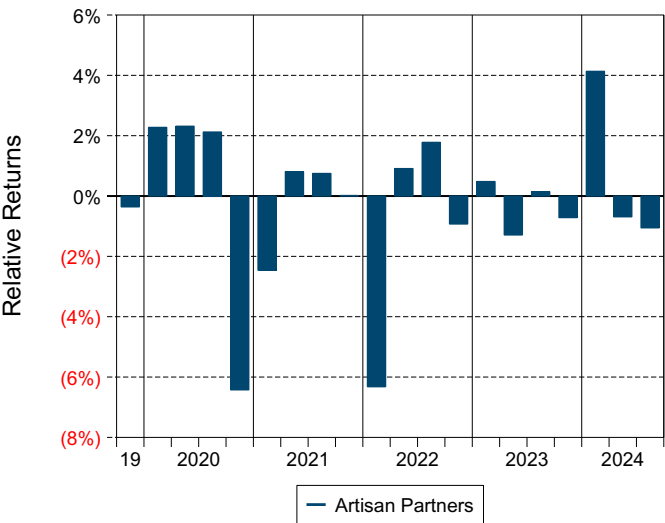
Quarterly Asset Growth

Beginning Market Value	\$407,062,258
Net New Investment	\$0
Investment Gains/(Losses)	\$24,950,183
Ending Market Value	\$432,012,442

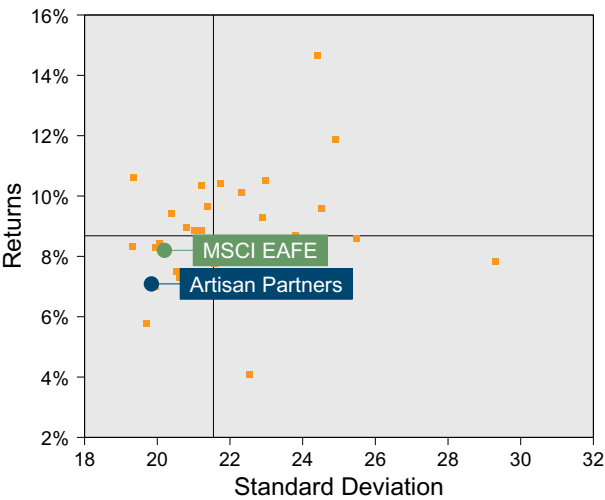
Performance vs Callan NonUS AC Gr Eq (Gross)



Relative Return vs MSCI EAFE



Callan NonUS AC Gr Eq (Gross)
Annualized Five Year Risk vs Return

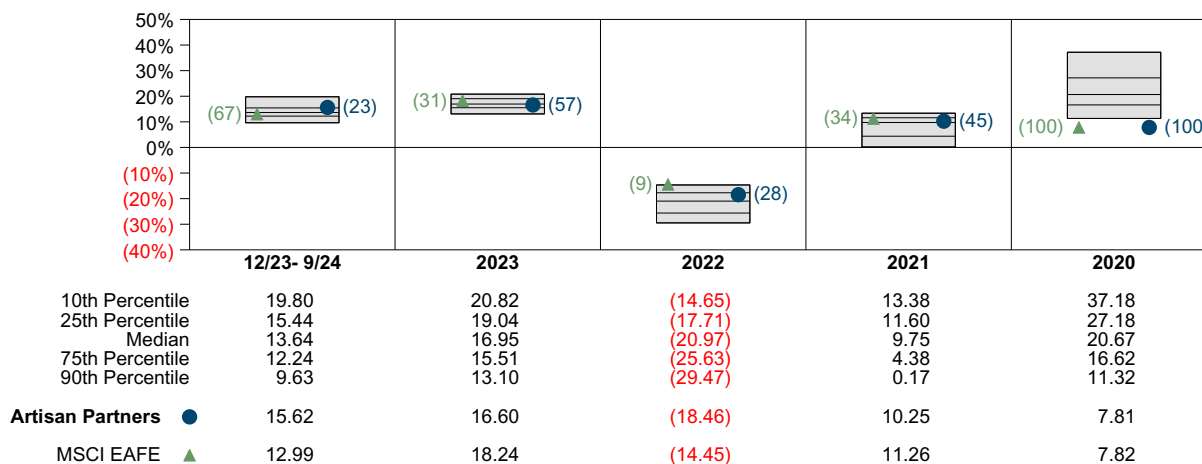


Artisan Partners Return Analysis Summary

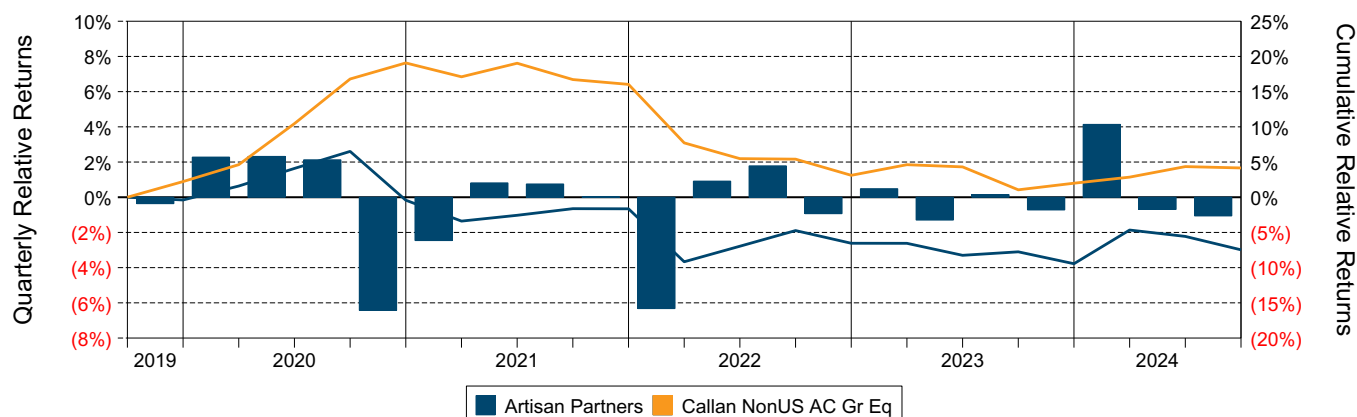
Return Analysis

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.

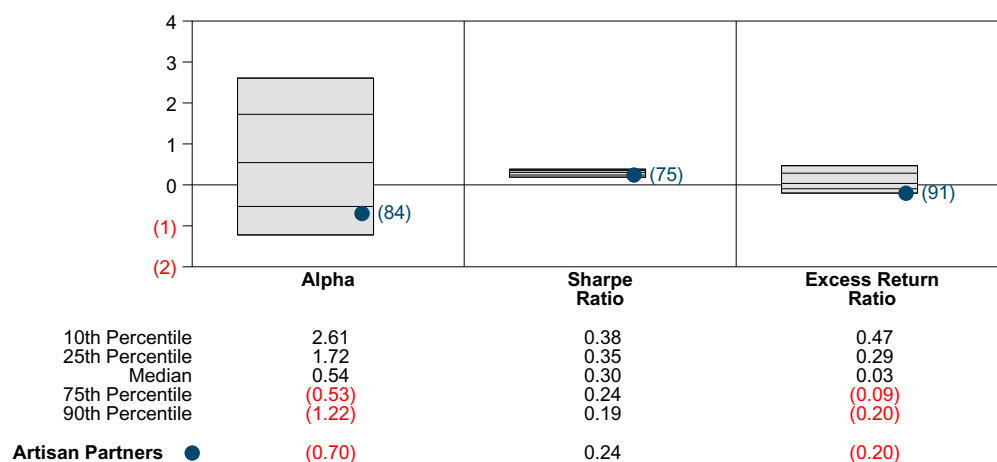
Performance vs Callan NonUS AC Gr Eq (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EAFE



Risk Adjusted Return Measures vs MSCI EAFE Rankings Against Callan NonUS AC Gr Eq (Gross) Five Years Ended September 30, 2024

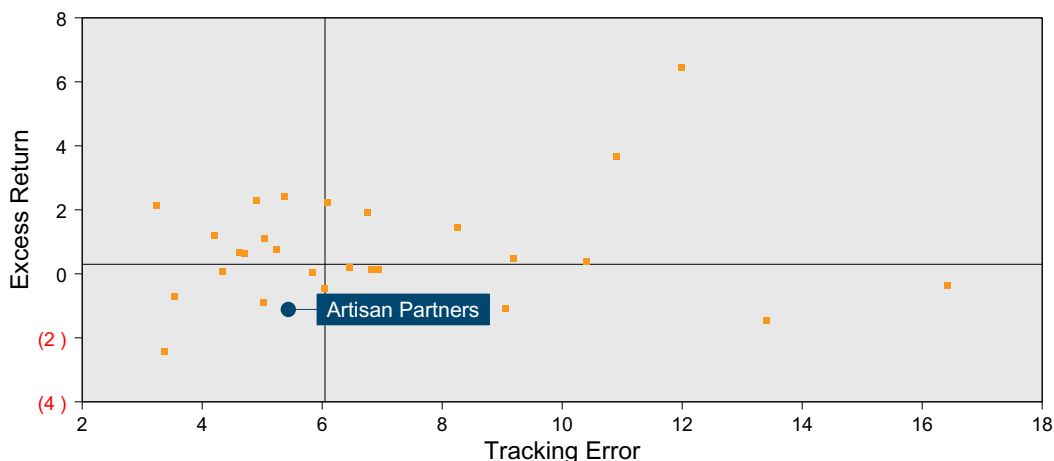


Artisan Partners Risk Analysis Summary

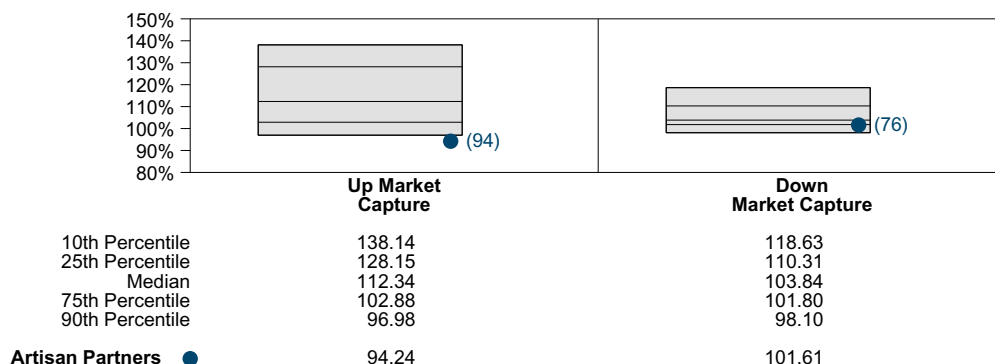
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

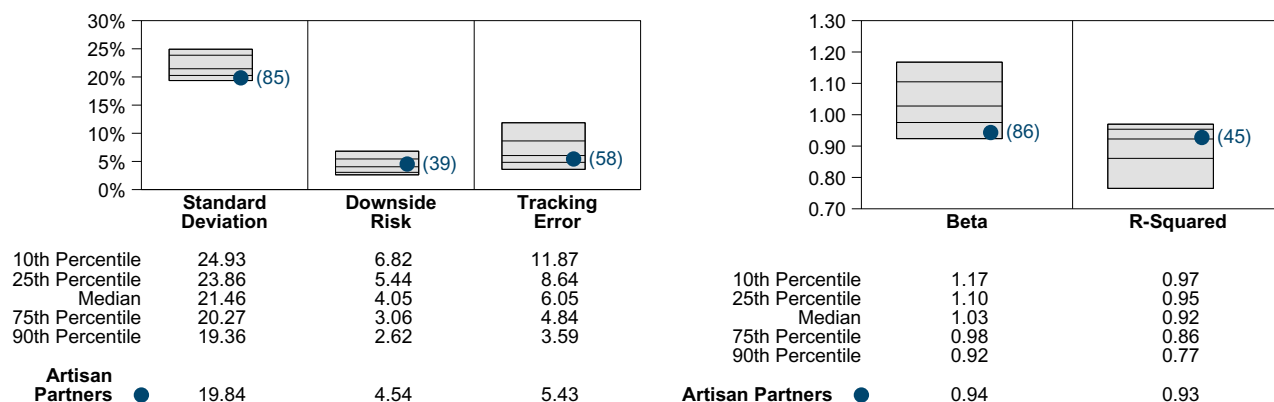
Risk Analysis vs Callan Non-US All Country Growth Equity (Gross) Five Years Ended September 30, 2024



Market Capture vs MSCI EAFE Rankings Against Callan Non-US All Country Growth Equity (Gross) Five Years Ended September 30, 2024



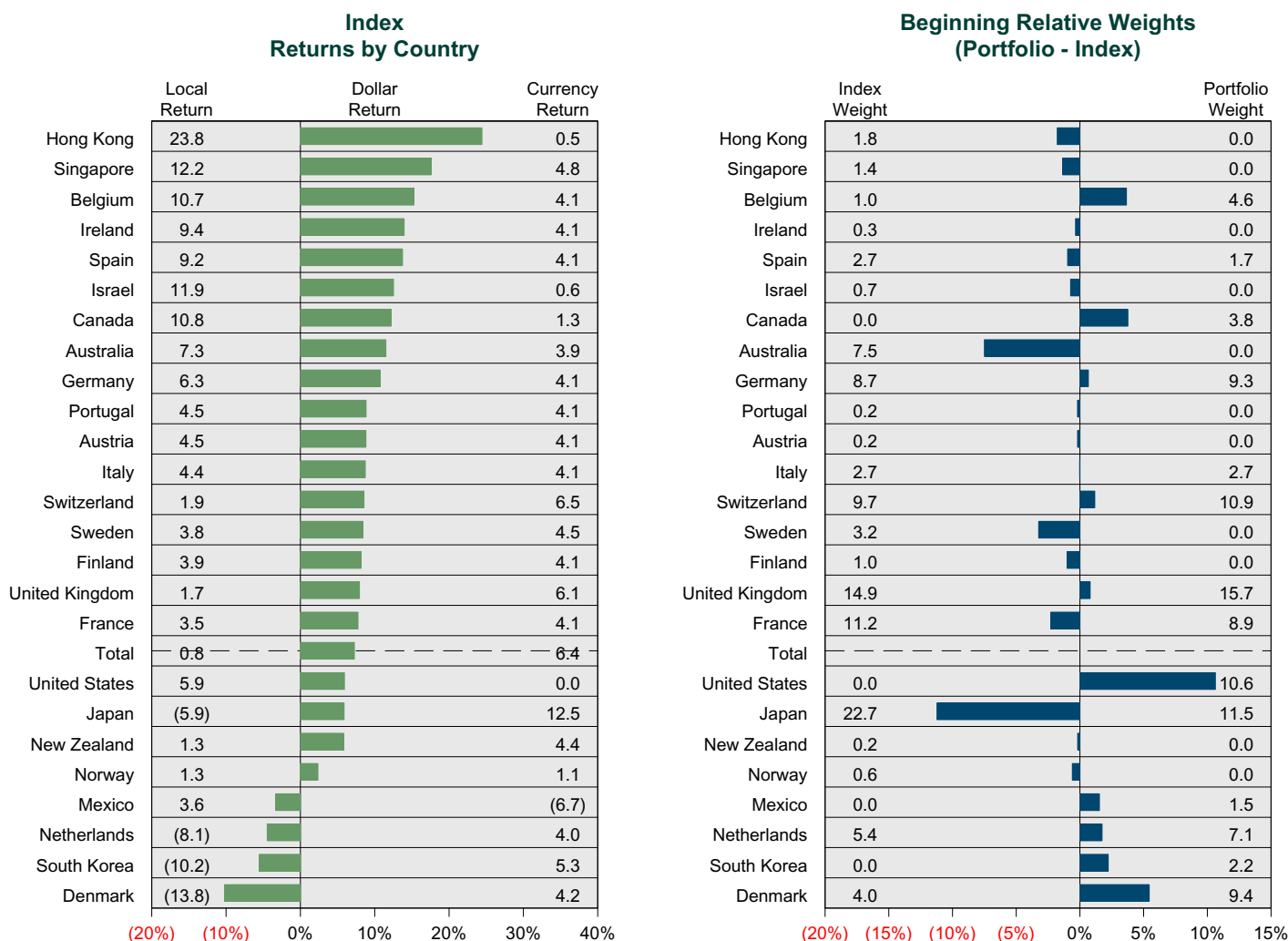
Risk Statistics Rankings vs MSCI EAFE Rankings Against Callan Non-US All Country Growth Equity (Gross) Five Years Ended September 30, 2024



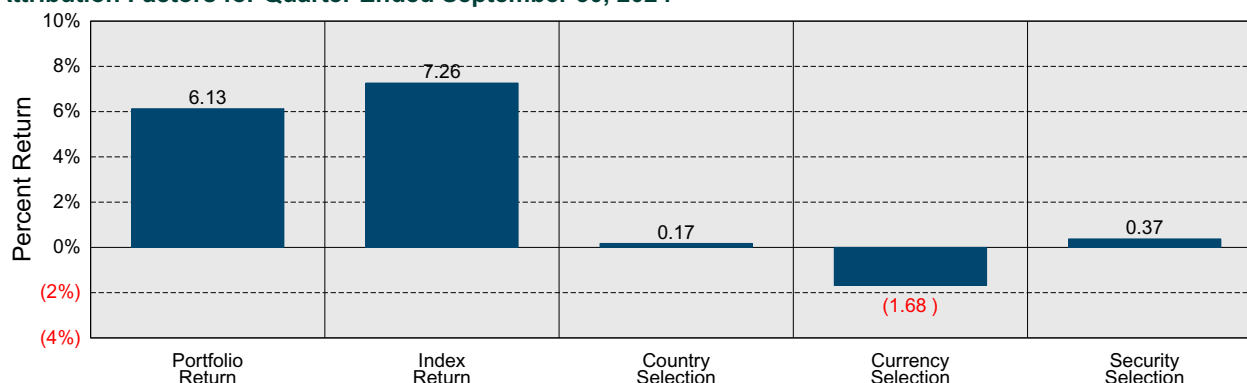
Artisan Partners vs MSCI EAFE Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

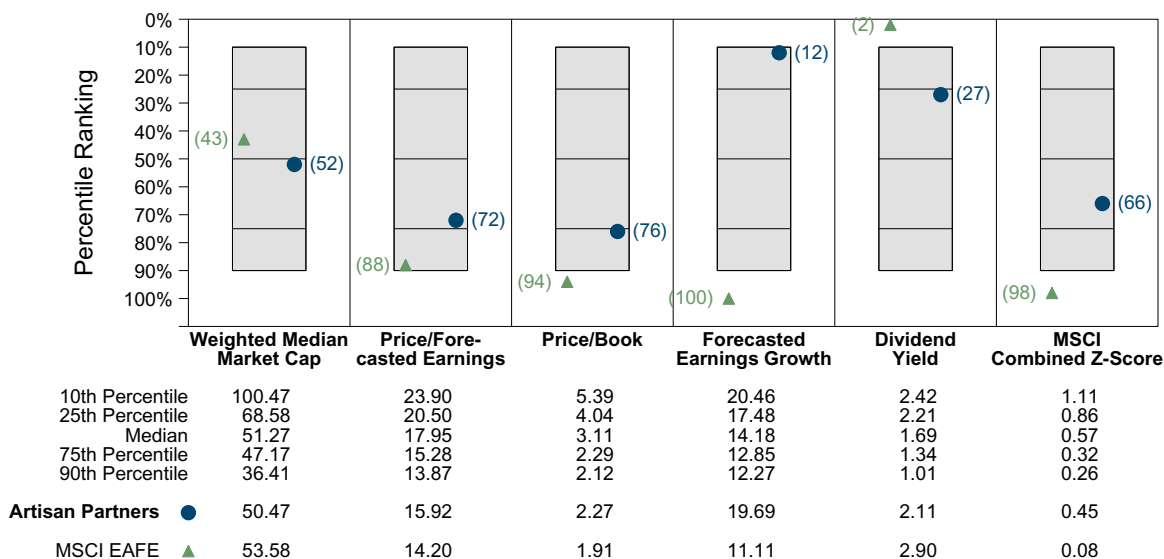


Artisan Partners Equity Characteristics Analysis Summary

Portfolio Characteristics

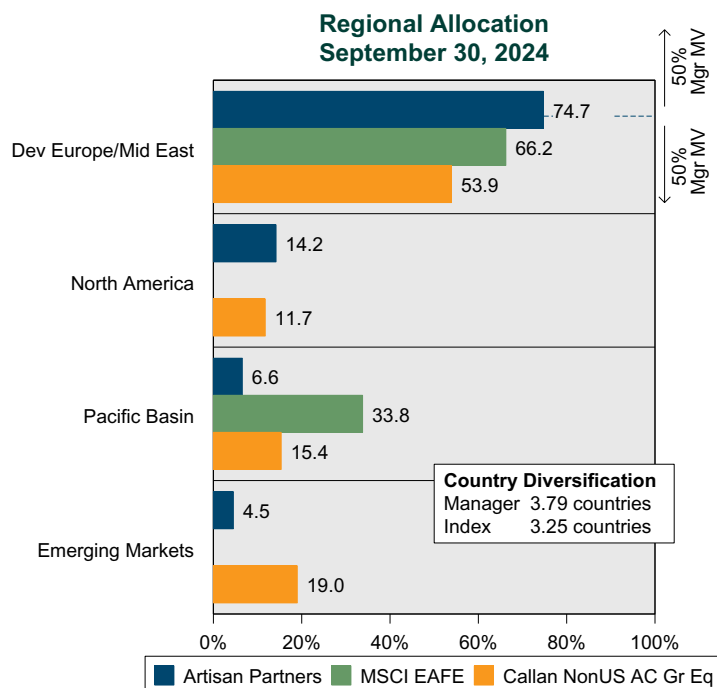
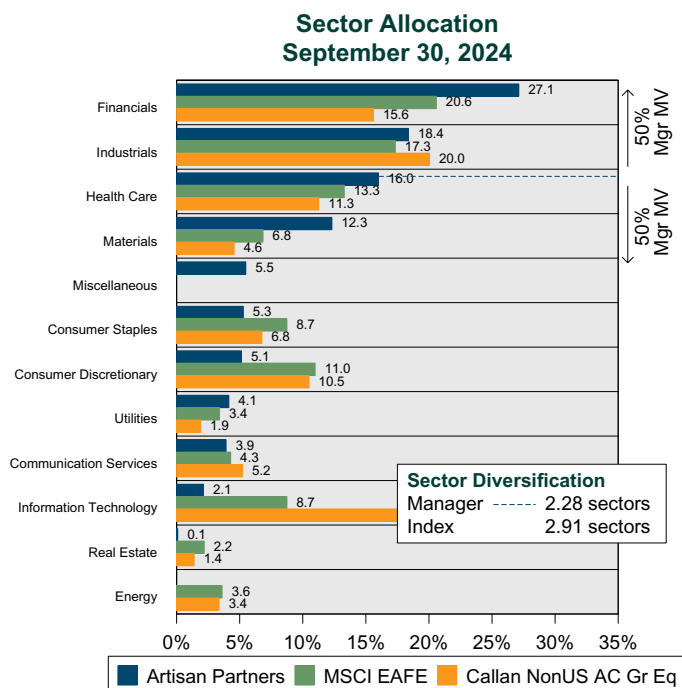
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US All Country Growth Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

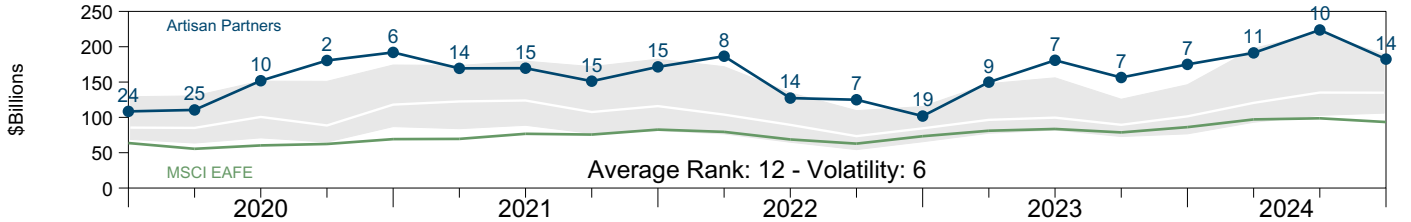


Portfolio Characteristics Analysis

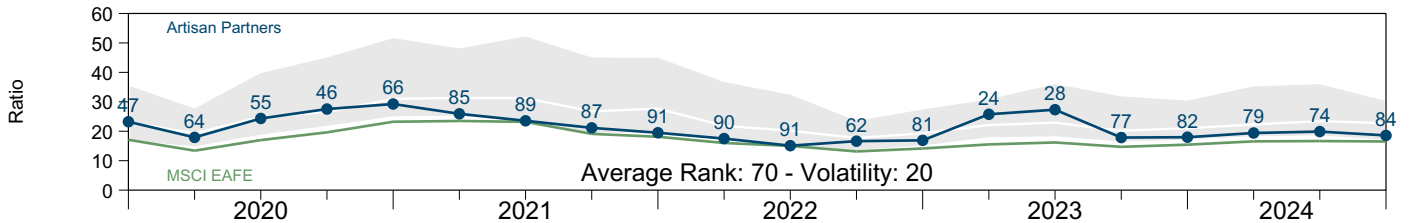
Callan NonUS AC Gr Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan NonUS AC Gr Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EAFE is shown for comparison purposes.

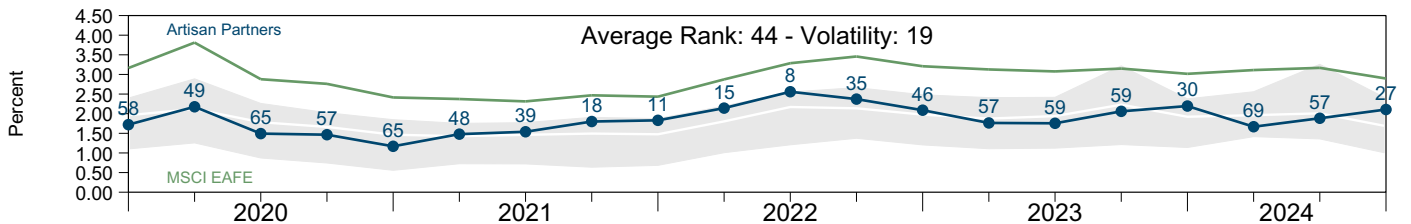
Weighted Average Market Cap



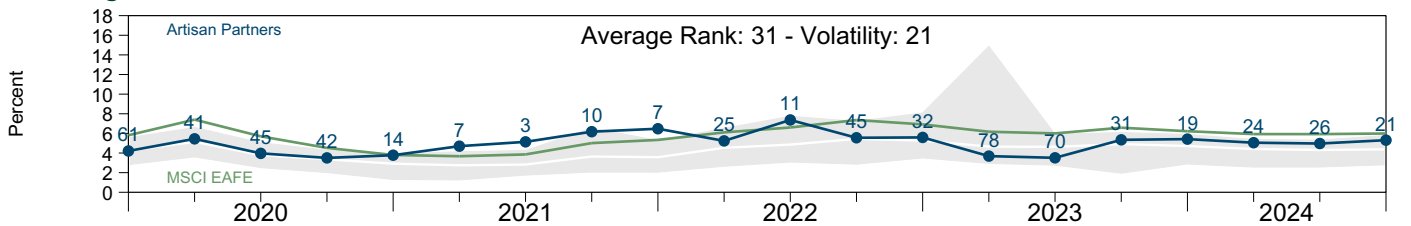
Trailing P/E



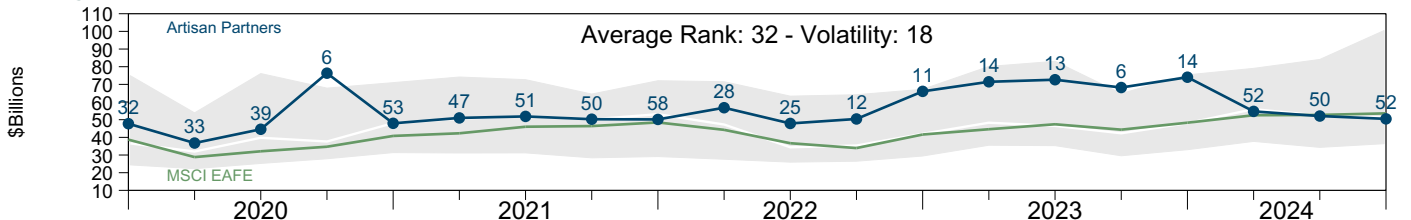
Dividend Yield



Earnings Yield



Weighted Median Market Cap

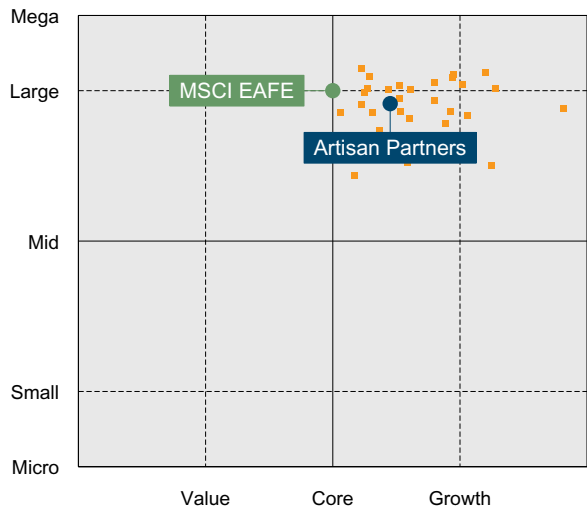


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Artisan Partners
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

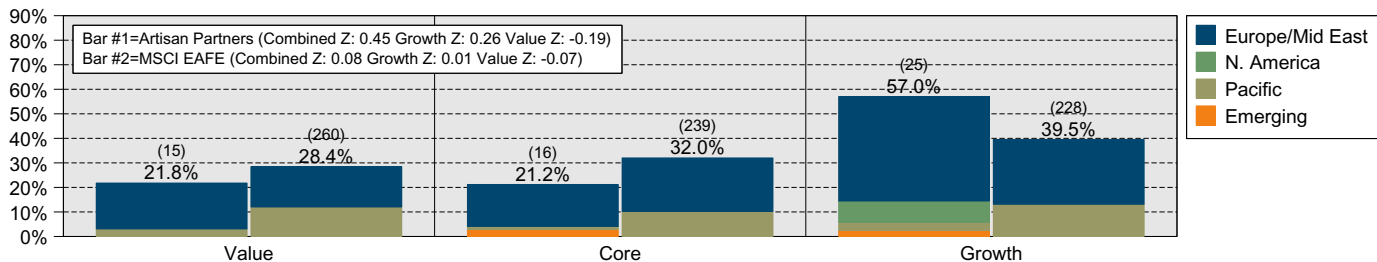
Style Map vs Callan NonUS AC Gr Eq Holdings as of September 30, 2024



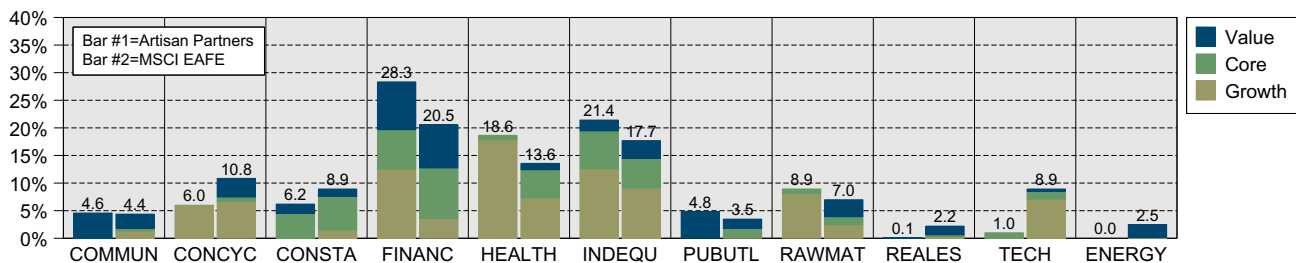
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	18.7% (11) 16.4% (143)	17.1% (10) 21.7% (150)	42.6% (19) 26.4% (131)	78.4% (40) 64.6% (424)
N. America	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	8.7% (2) 0.0% (0)	8.7% (2) 0.0% (0)
Pacific	3.1% (4) 12.0% (117)	1.3% (2) 10.3% (89)	3.3% (2) 13.1% (97)	7.7% (8) 35.4% (303)
Emerging	0.0% (0) 0.0% (0)	2.8% (4) 0.0% (0)	2.5% (2) 0.0% (0)	5.3% (6) 0.0% (0)
Total	21.8% (15) 28.4% (260)	21.2% (16) 32.0% (239)	57.0% (25) 39.5% (228)	100.0% (56) 100.0% (727)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



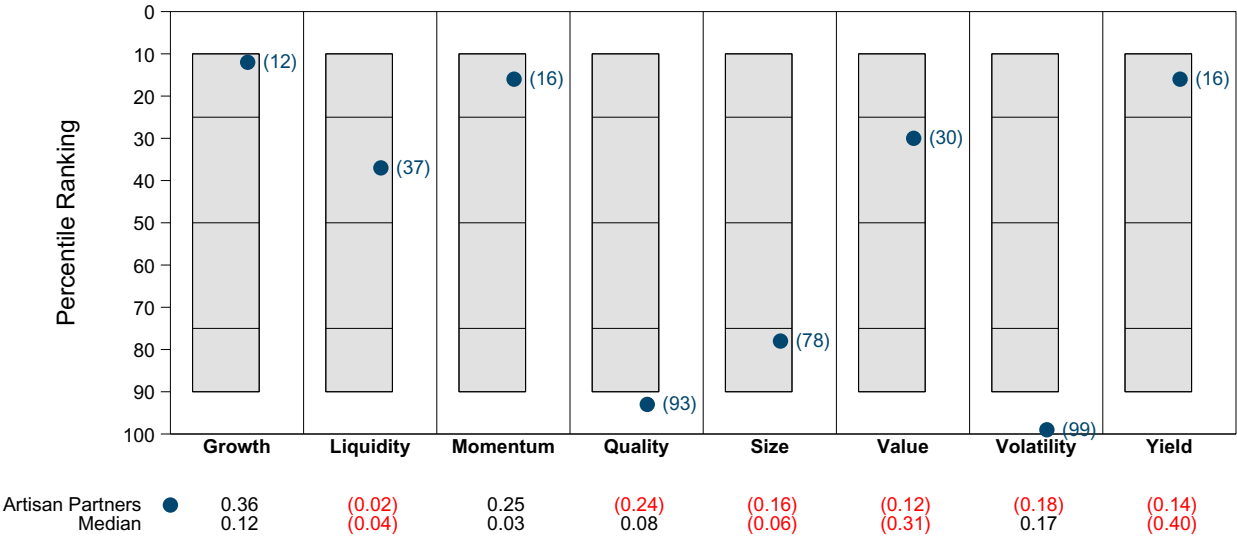
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US All Country Growth Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

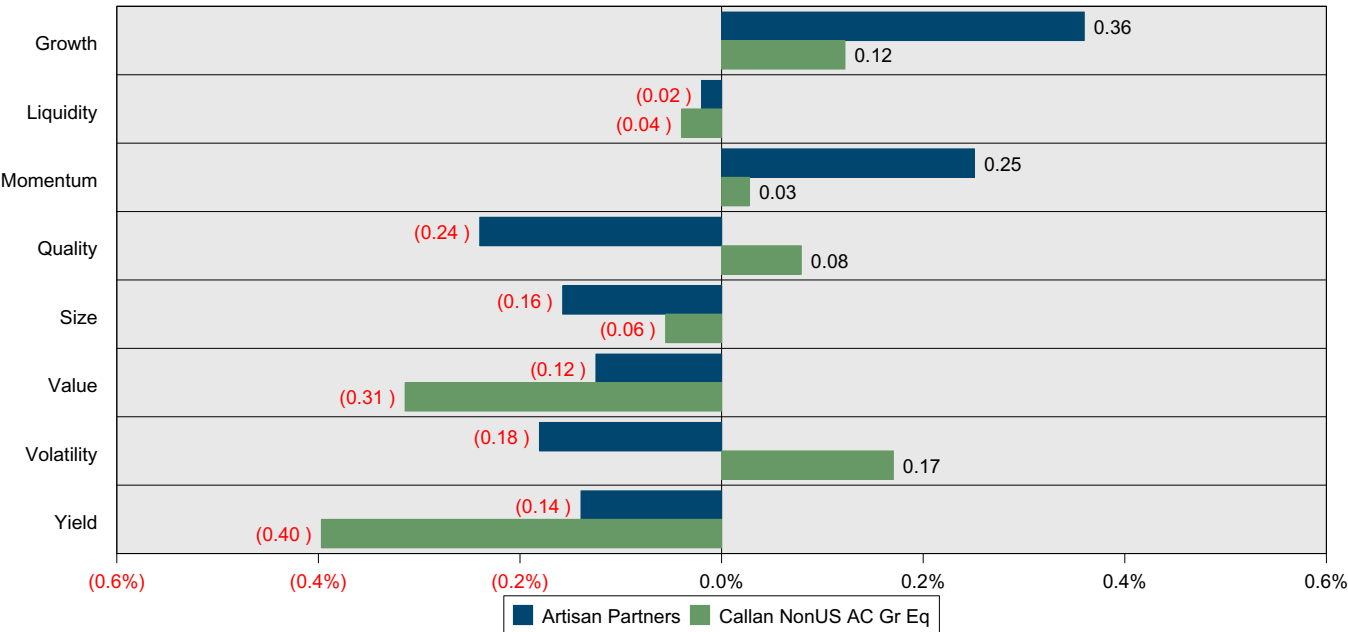
Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US All Country Growth Equity for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US All Country Growth Equity group relative to the MSCI EAFE.

Factor Exposures Relative to MSCI EAFE for Period Ended September 30, 2024



BlackRock Superfund

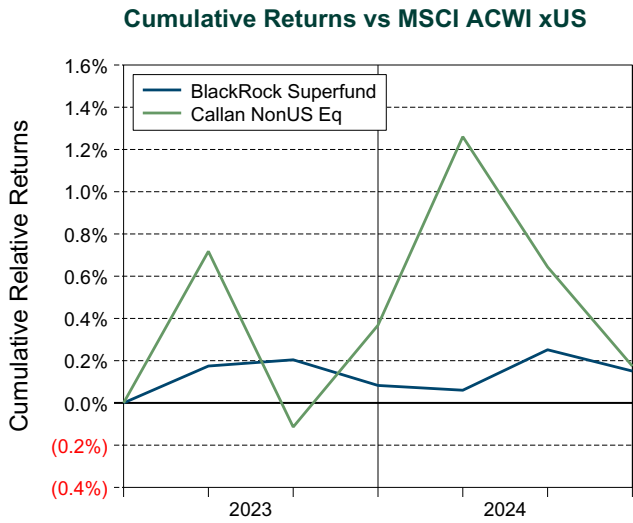
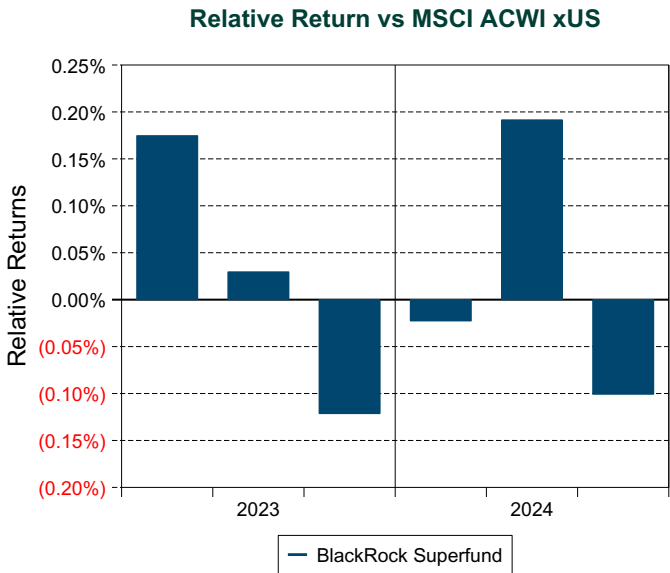
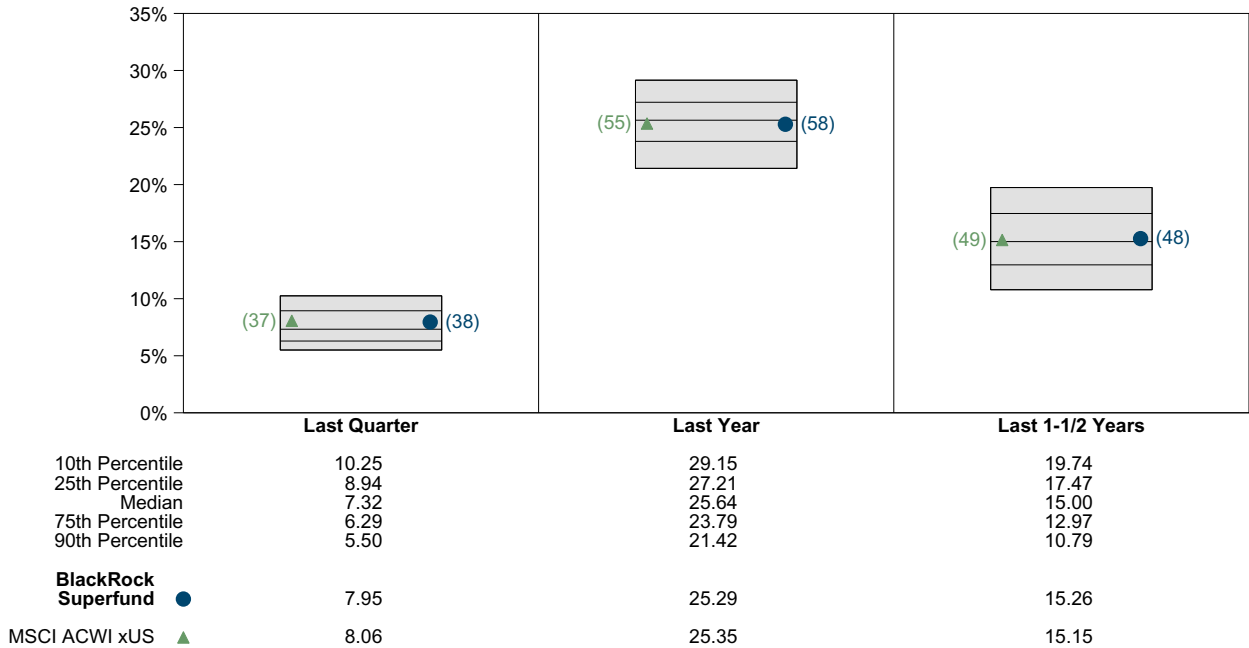
Period Ended September 30, 2024

Investment Philosophy

The BlackRock MSCI ACWI ex U.S. strategy seeks to track the performance of the MSCI ACWI ex U.S. Index. The strategy is managed by BlackRock’s ETF & Index Investments team, which is comprised of over 160 professionals globally. NHRS inception in the fund is October 2014.

Quarterly Asset Growth	
Beginning Market Value	\$199,447,677
Net New Investment	\$0
Investment Gains/(Losses)	\$15,864,231
Ending Market Value	\$215,311,909

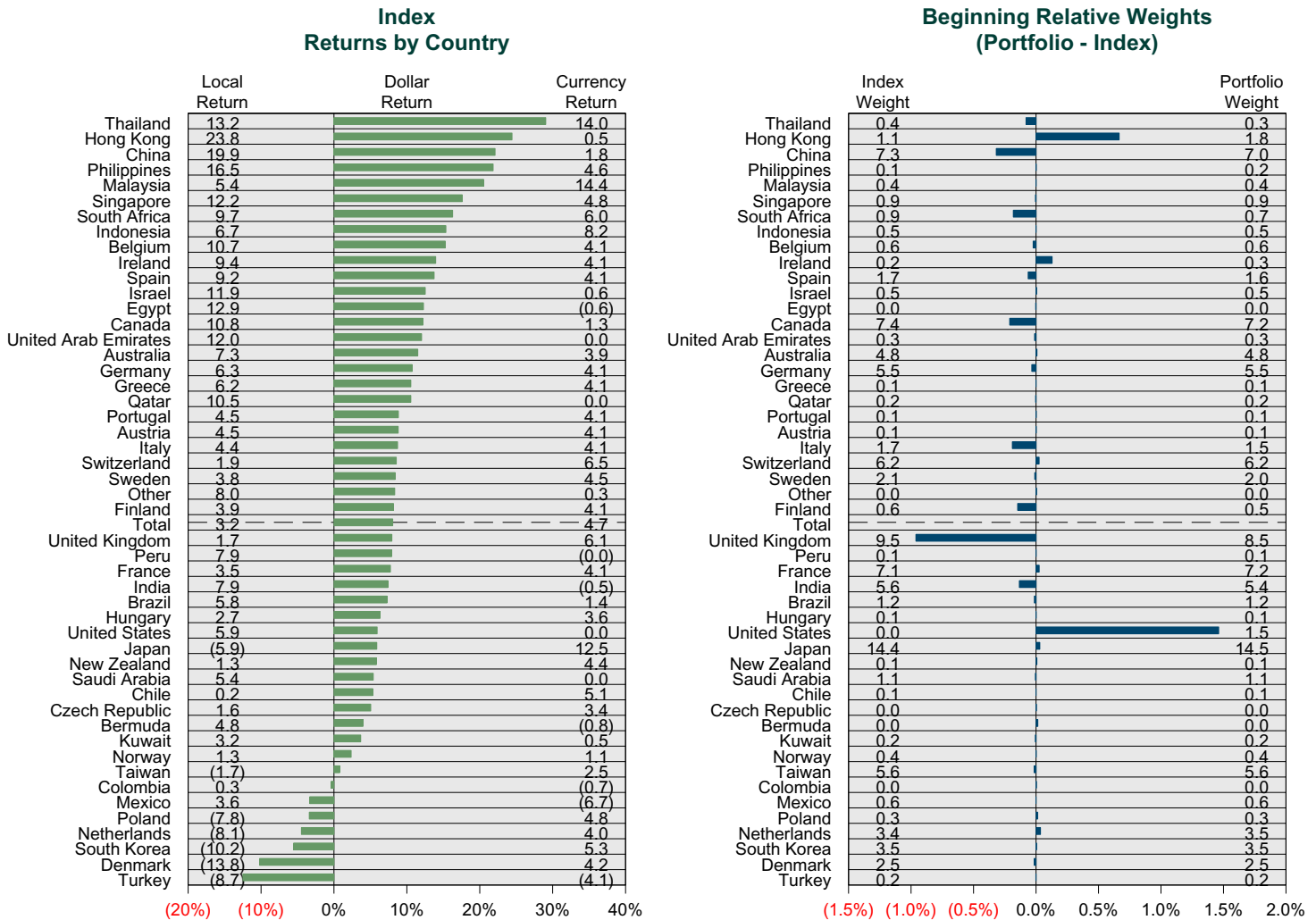
Performance vs Callan NonUS Eq (Gross)



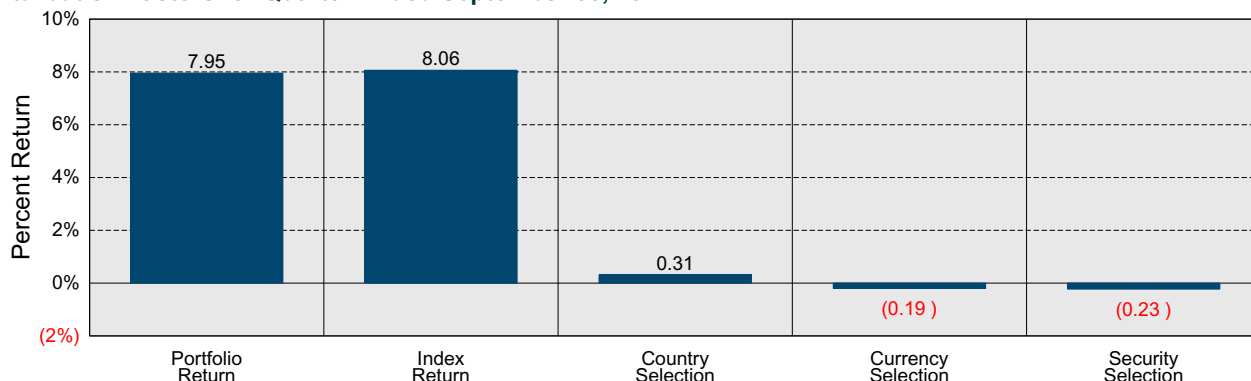
BlackRock Superfund vs MSCI ACWI xUS (Net) Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024



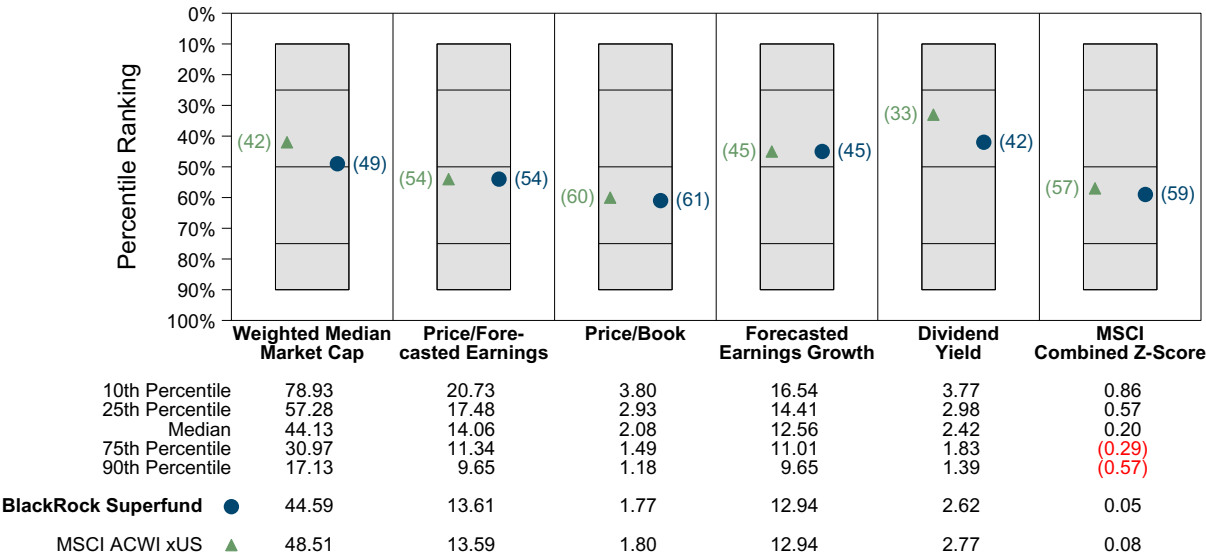
BlackRock Superfund

Equity Characteristics Analysis Summary

Portfolio Characteristics

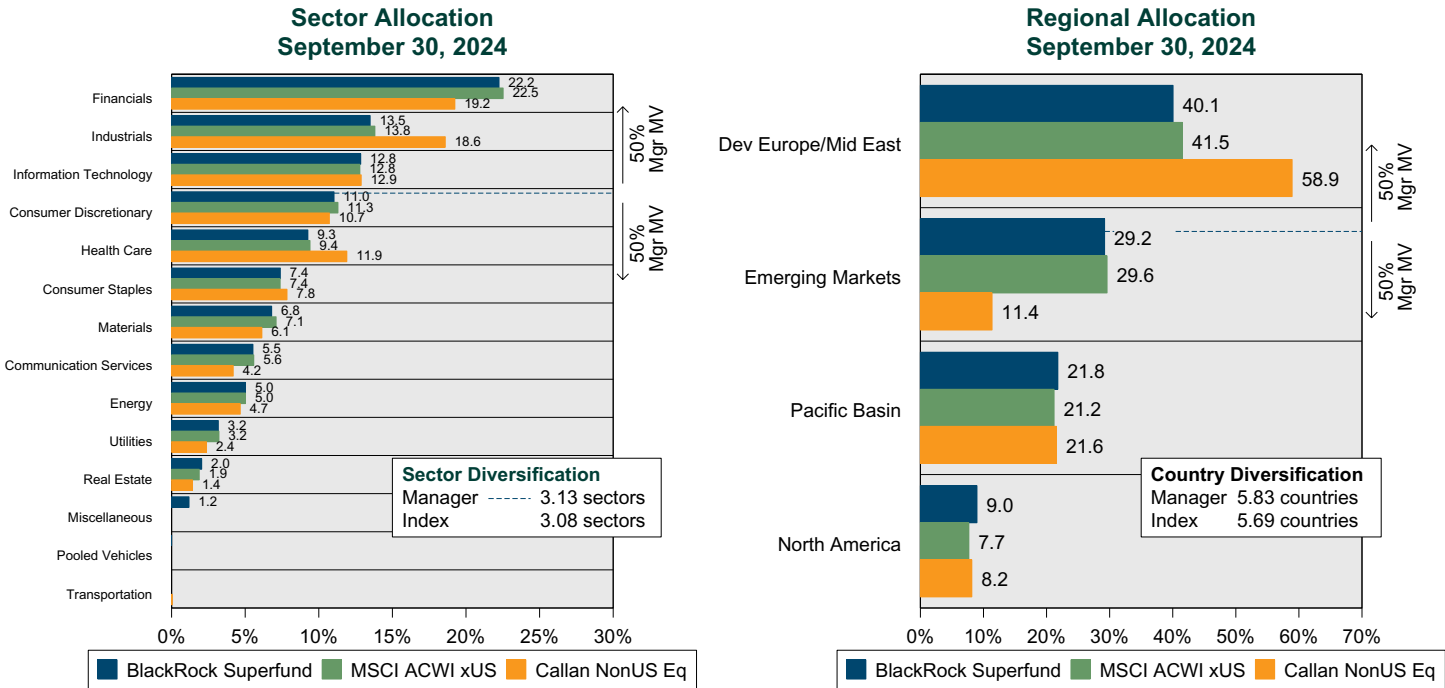
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



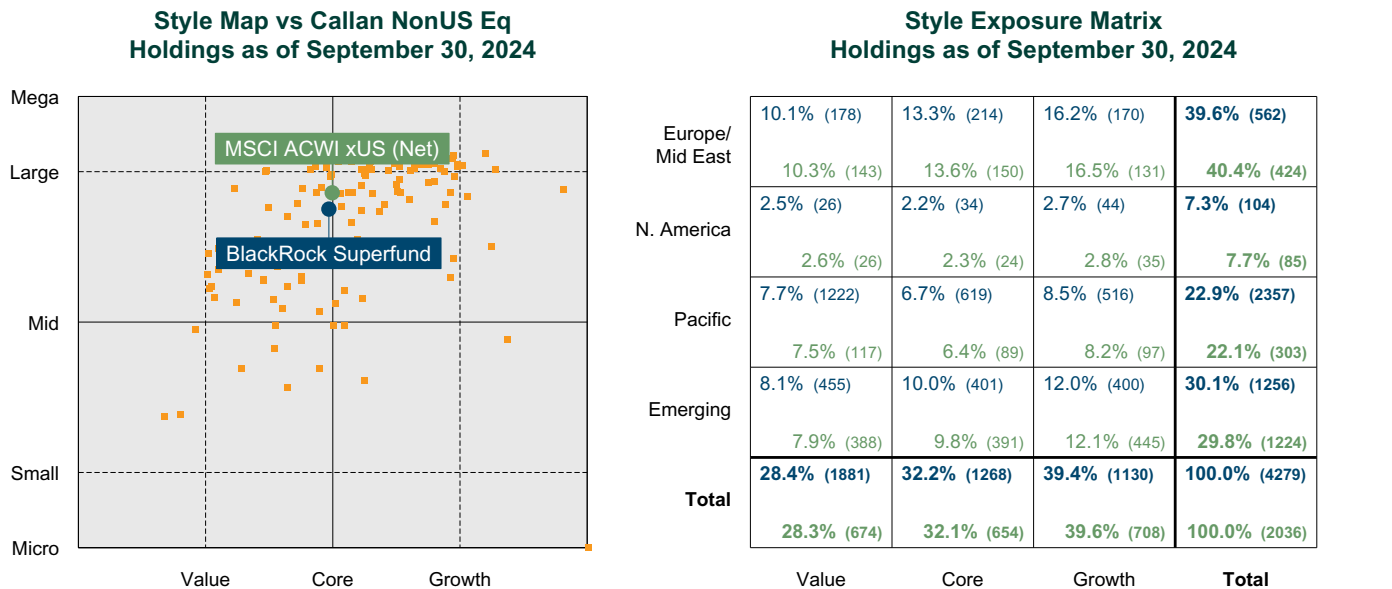
Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

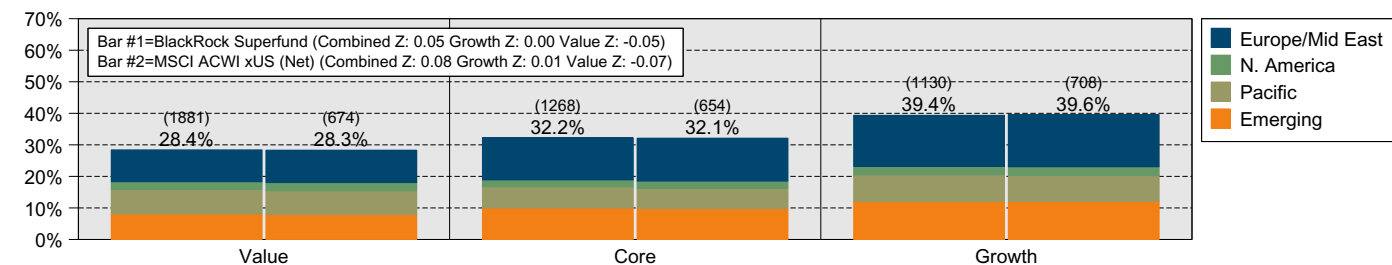


Current Holdings Based Style Analysis
BlackRock Superfund
As of September 30, 2024

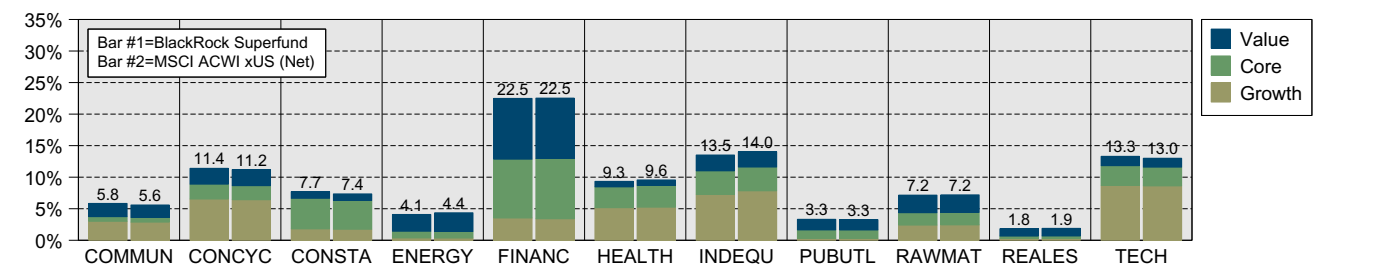
This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



Combined Z-Score Style Distribution Holdings as of September 30, 2024



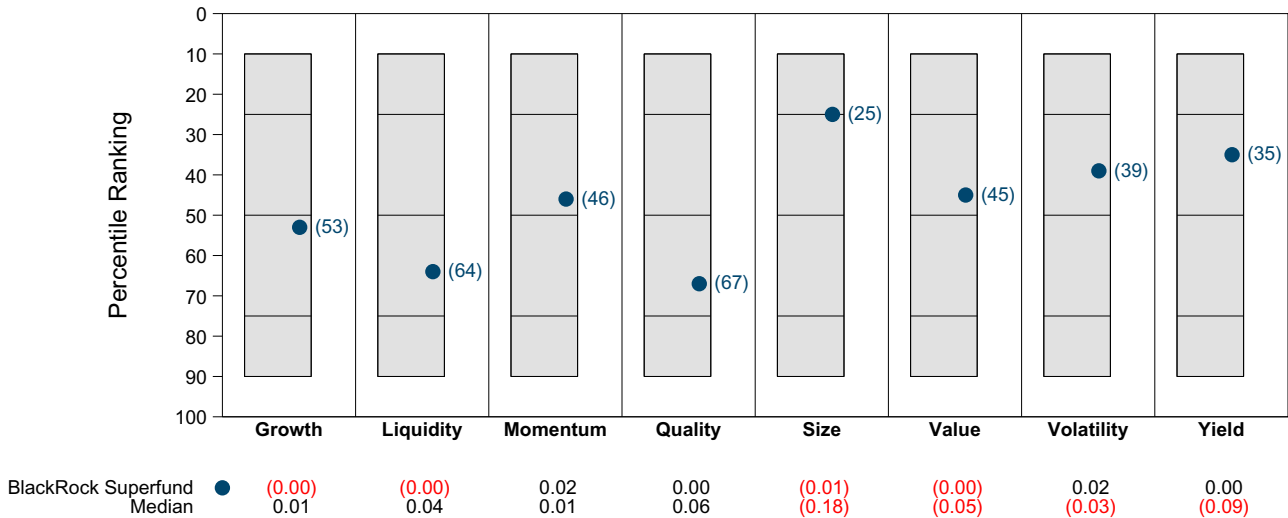
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

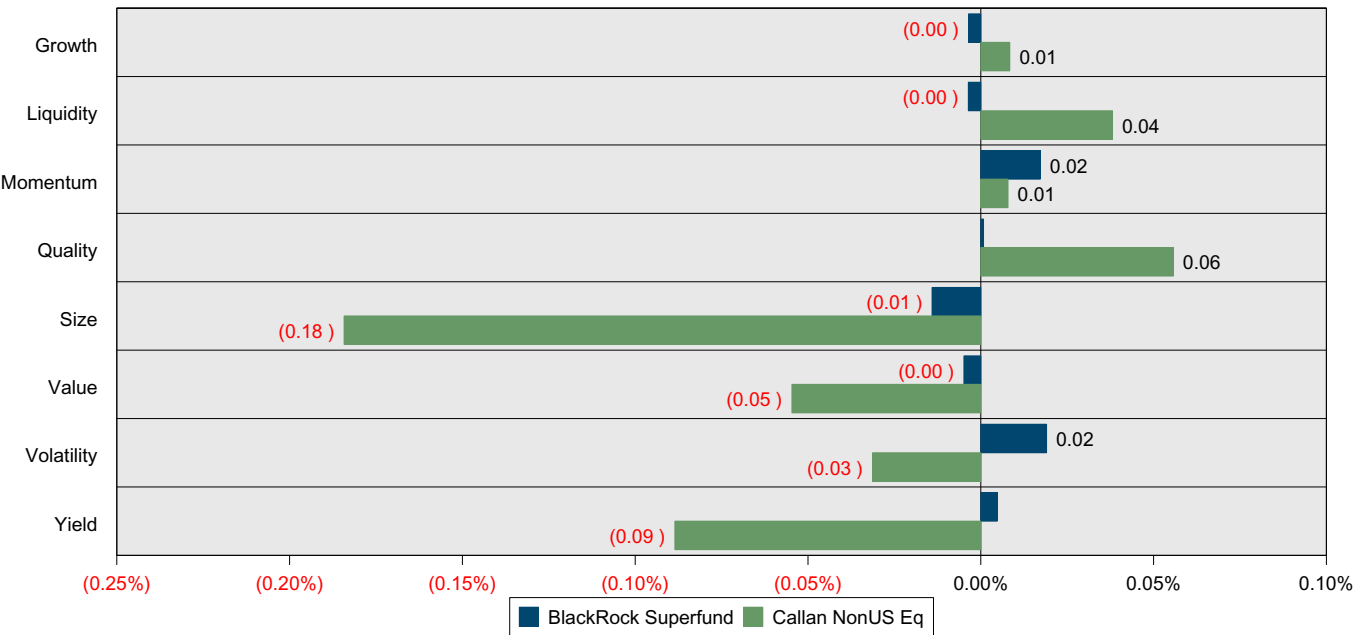
Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative the the MSCI ACWI xUS (Net).

Factor Exposures Relative to MSCI ACWI xUS (Net)
for Period Ended September 30, 2024



Causeway Capital
Period Ended September 30, 2024

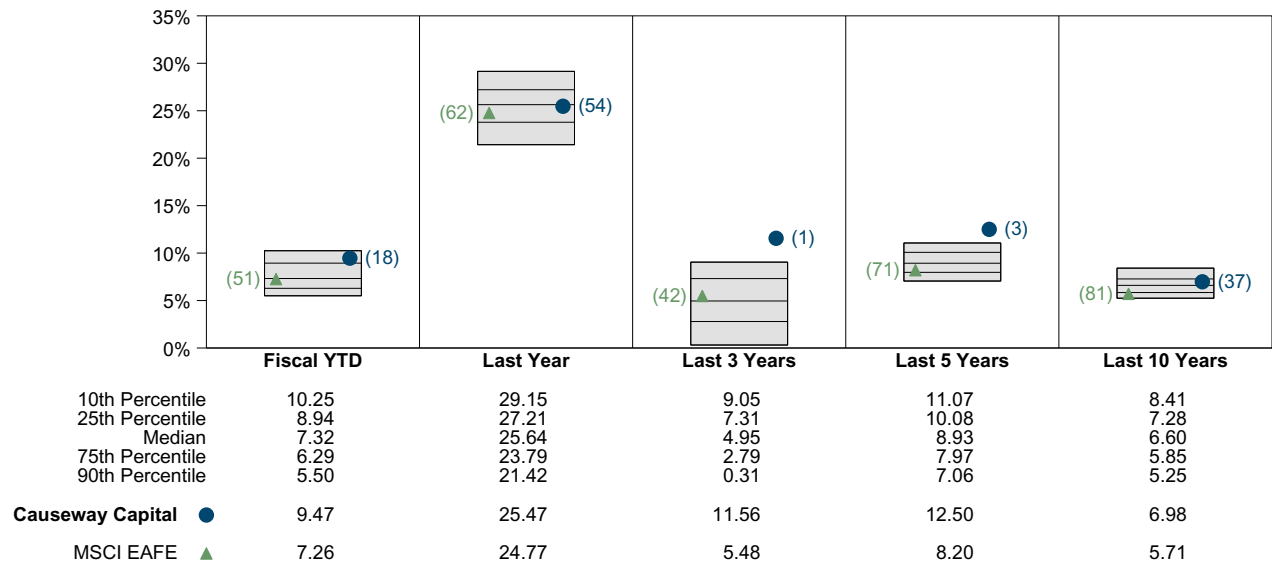
Investment Philosophy

Causeway is an employee-owned firm founded in 2001 that exclusively manages international, global and emerging market equity mandates with a value philosophy. The International Value strategy is a traditional value, EAFE-plus portfolio. The investment team is institutionally focused and manages the strategy with a conventional total-return focus. The portfolio consists of between 50 and 80 holdings with a 5% maximum stock weighting and 25% maximum industry weighting. The strategy is focused on developed markets, with opportunistic exposure to emerging markets generally less than 15% of the portfolio. NHRS inception in the fund is September 2014.

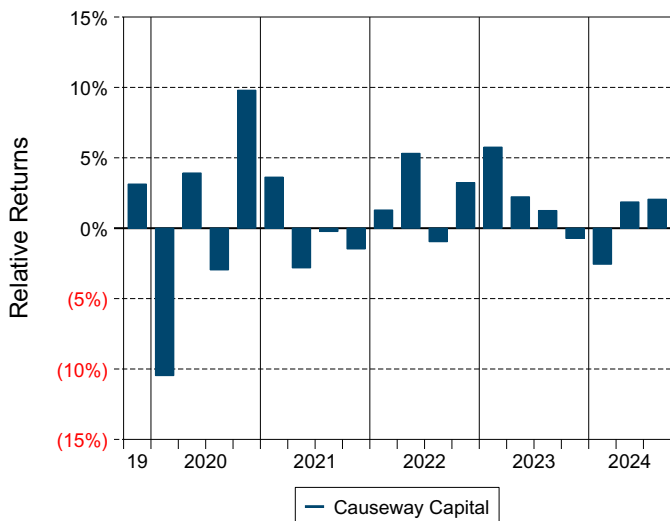
Quarterly Asset Growth

Beginning Market Value	\$449,774,683
Net New Investment	\$0
Investment Gains/(Losses)	\$42,578,934
Ending Market Value	\$492,353,617

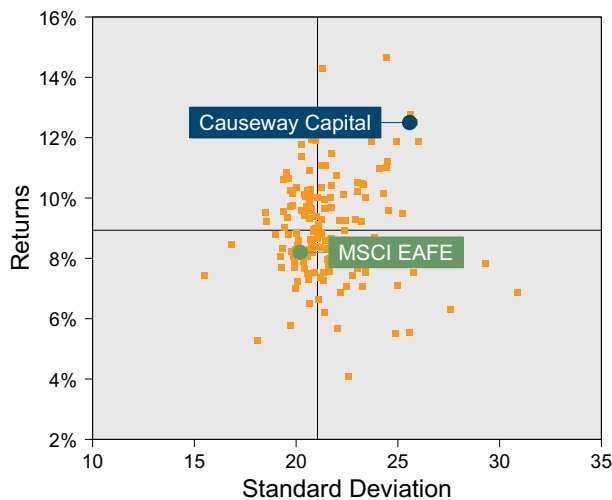
Performance vs Callan NonUS Eq (Gross)



Relative Return vs MSCI EAFE



Callan NonUS Eq (Gross)
Annualized Five Year Risk vs Return

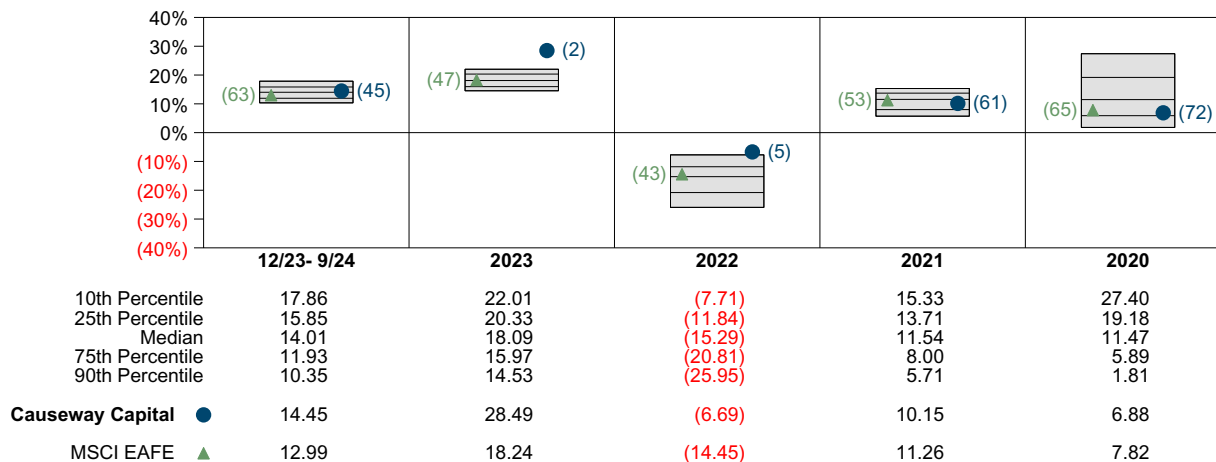


Causeway Capital Return Analysis Summary

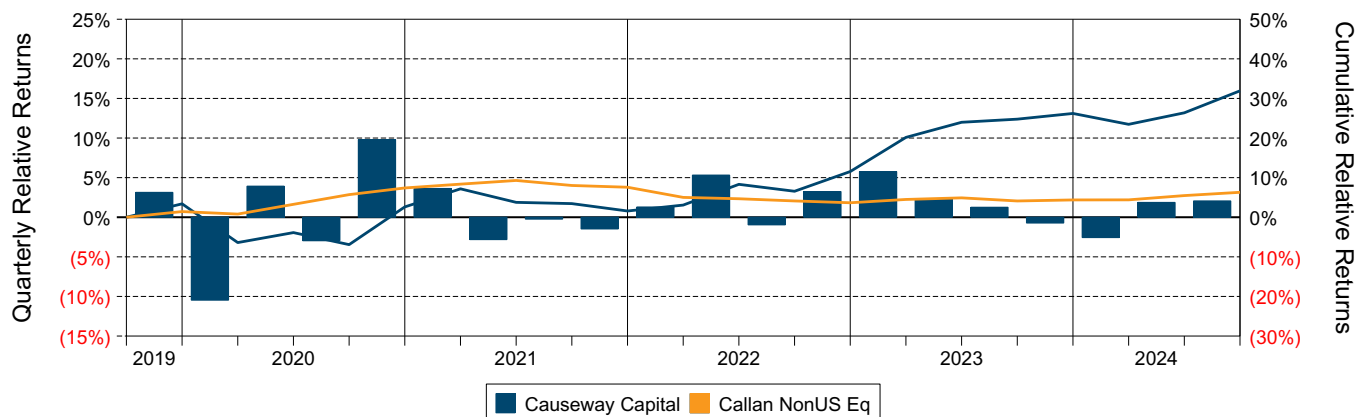
Return Analysis

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.

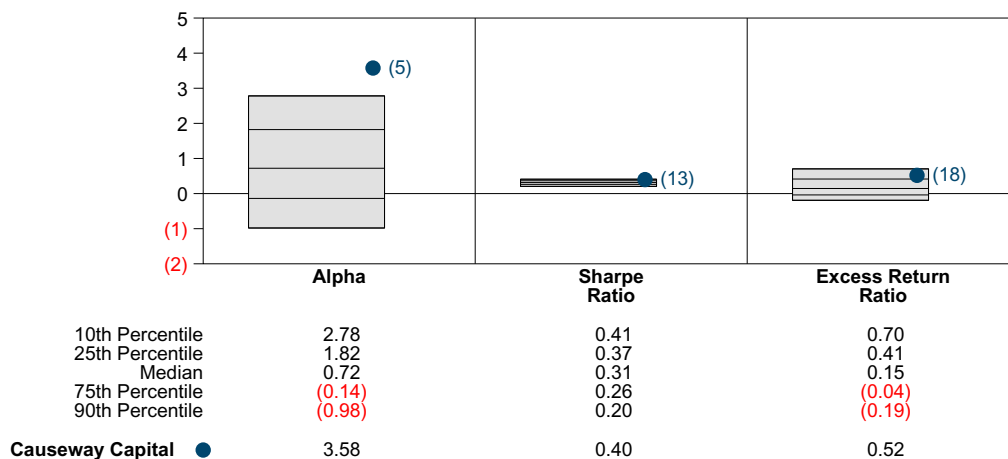
Performance vs Callan NonUS Eq (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EAFE



Risk Adjusted Return Measures vs MSCI EAFE Rankings Against Callan NonUS Eq (Gross) Five Years Ended September 30, 2024



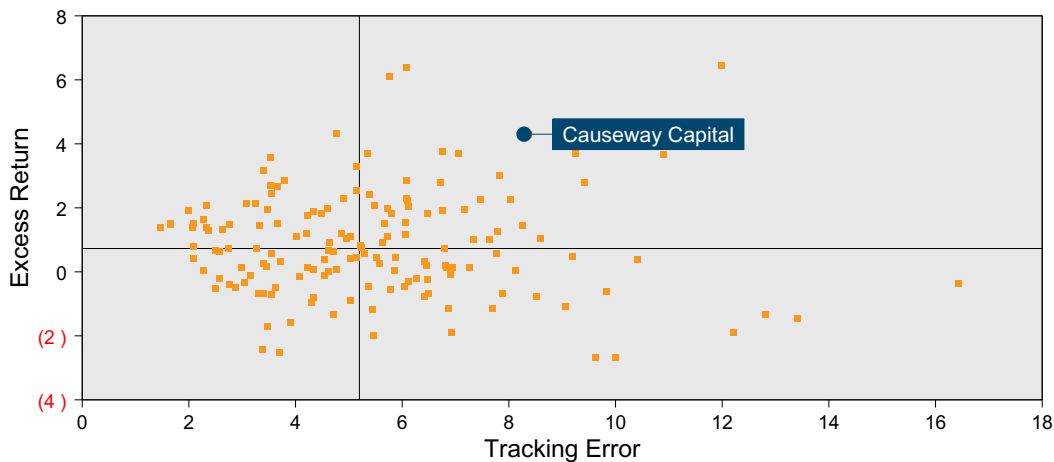
Causeway Capital

Risk Analysis Summary

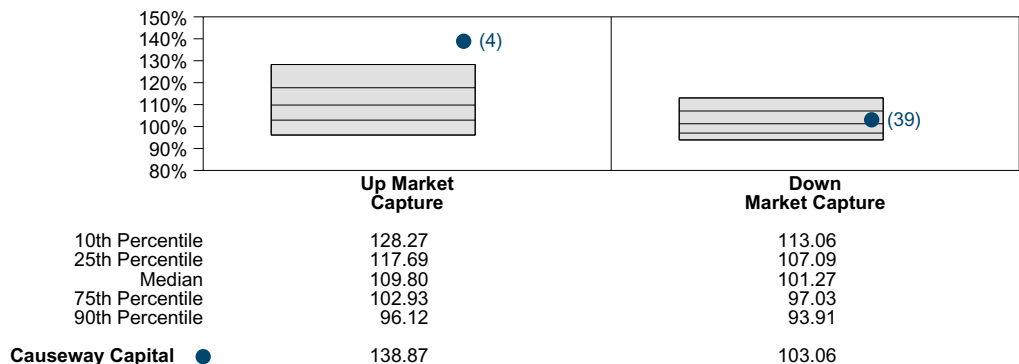
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

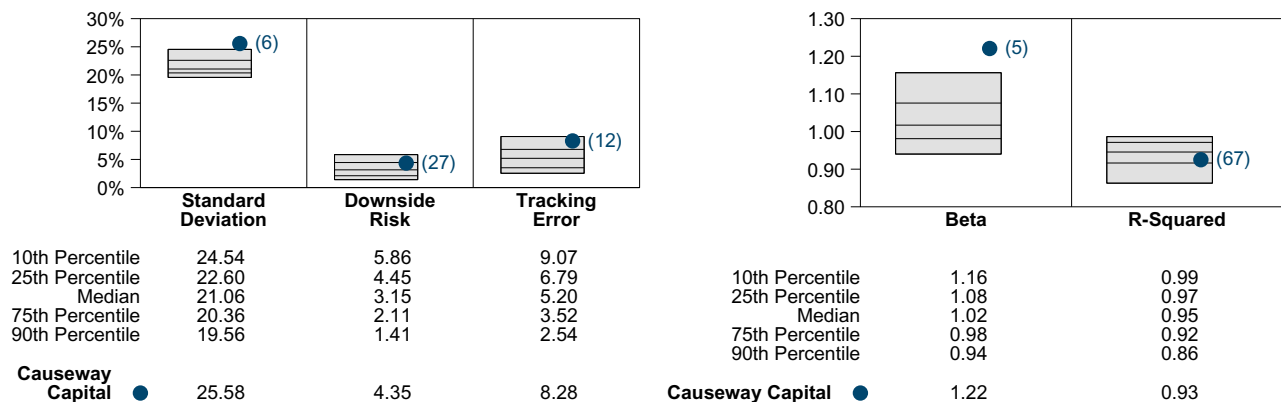
Risk Analysis vs Callan Non-US Equity (Gross) Five Years Ended September 30, 2024



Market Capture vs MSCI EAFE Rankings Against Callan Non-US Equity (Gross) Five Years Ended September 30, 2024



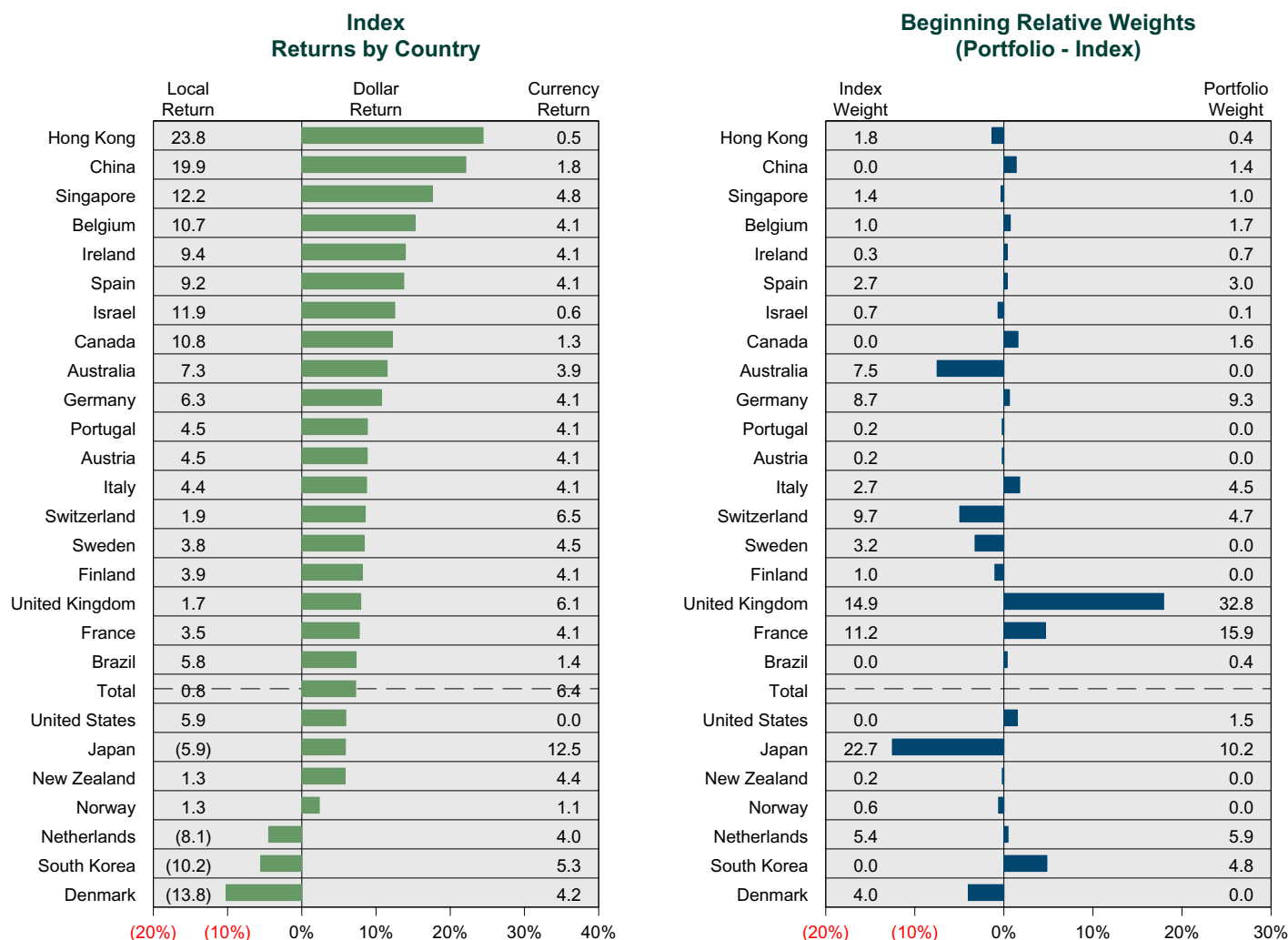
Risk Statistics Rankings vs MSCI EAFE Rankings Against Callan Non-US Equity (Gross) Five Years Ended September 30, 2024



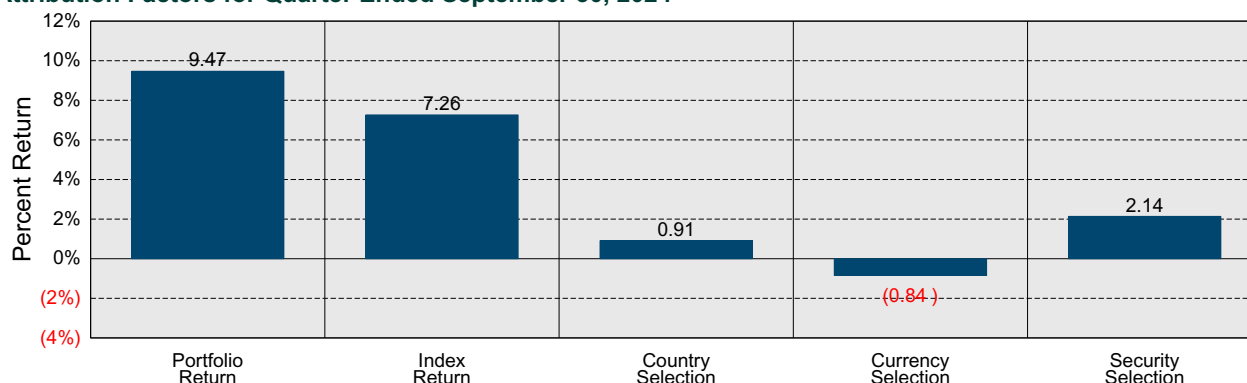
Causeway Capital vs MSCI EAFE Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024



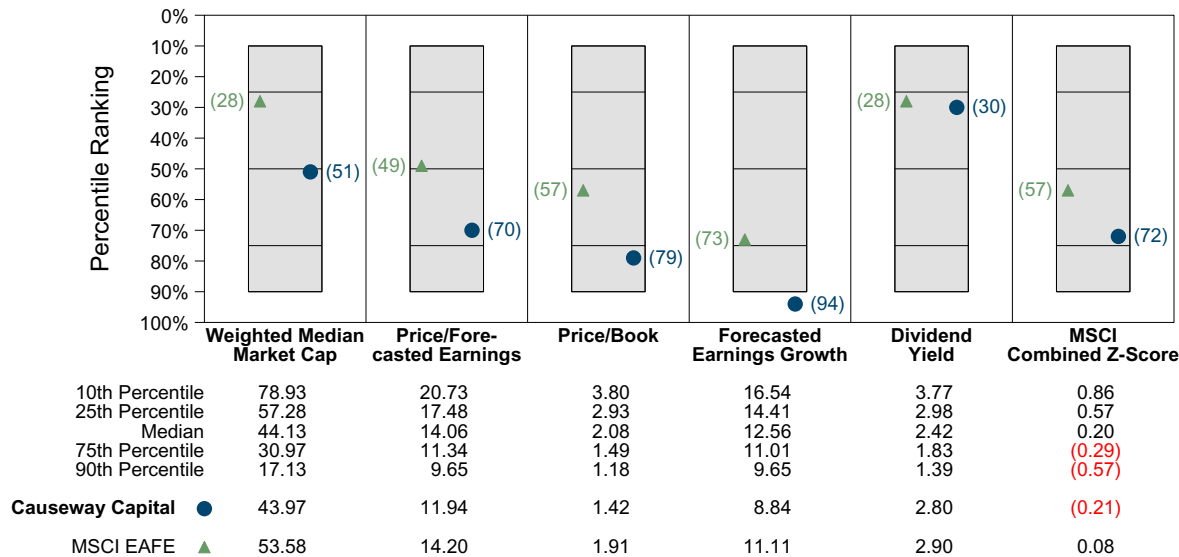
Causeway Capital

Equity Characteristics Analysis Summary

Portfolio Characteristics

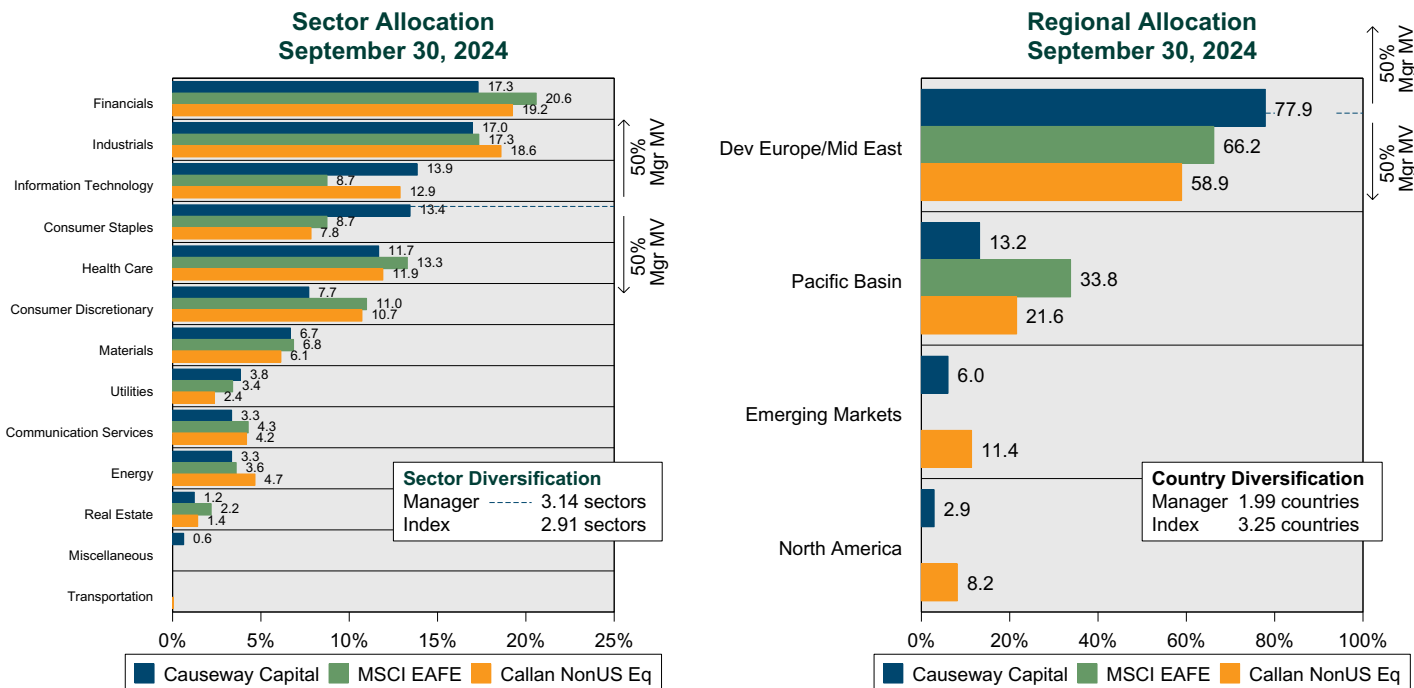
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

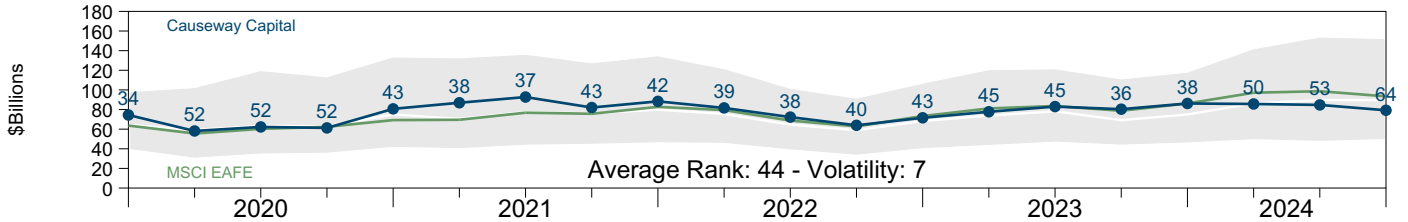


Portfolio Characteristics Analysis

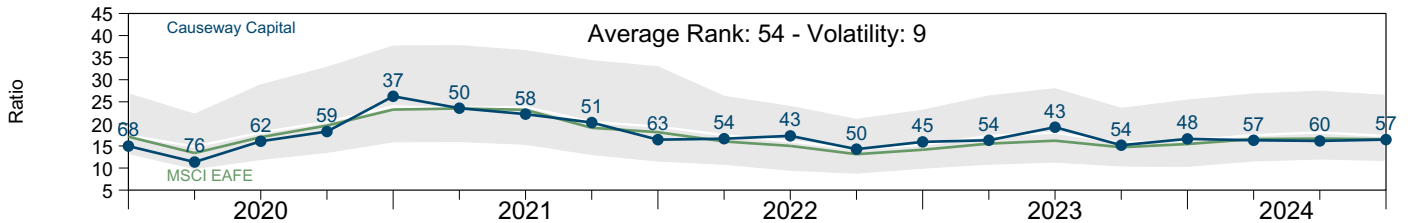
Callan NonUS Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan NonUS Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EAFE is shown for comparison purposes.

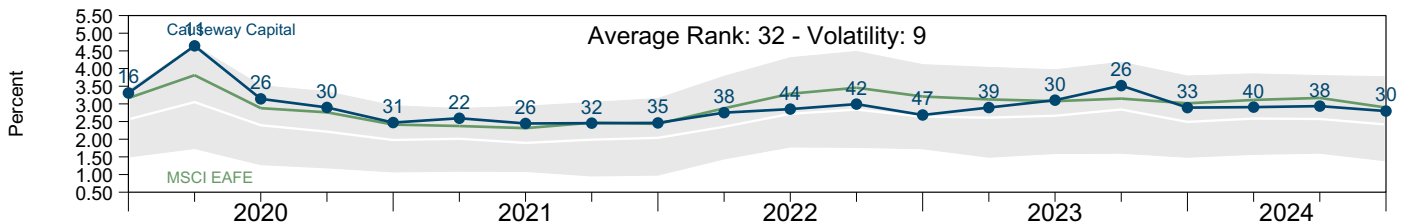
Weighted Average Market Cap



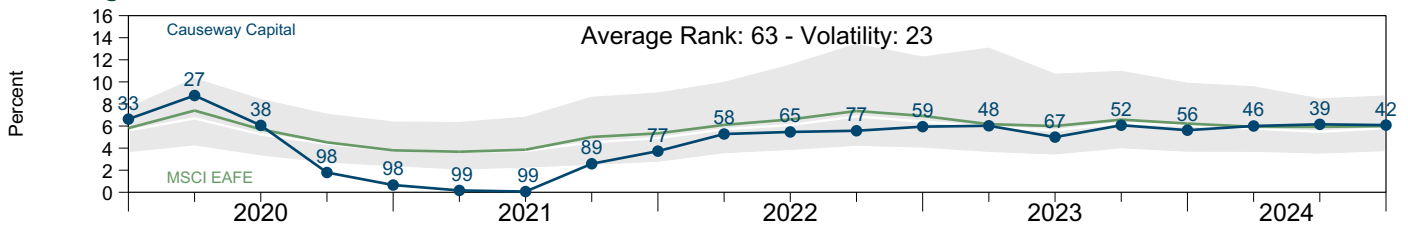
Trailing P/E



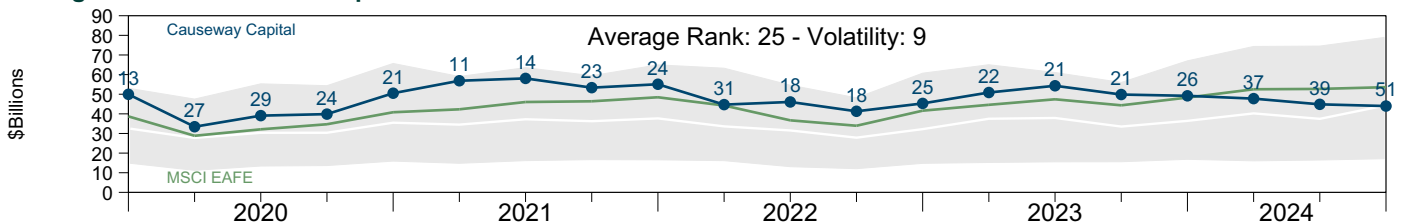
Dividend Yield



Earnings Yield



Weighted Median Market Cap

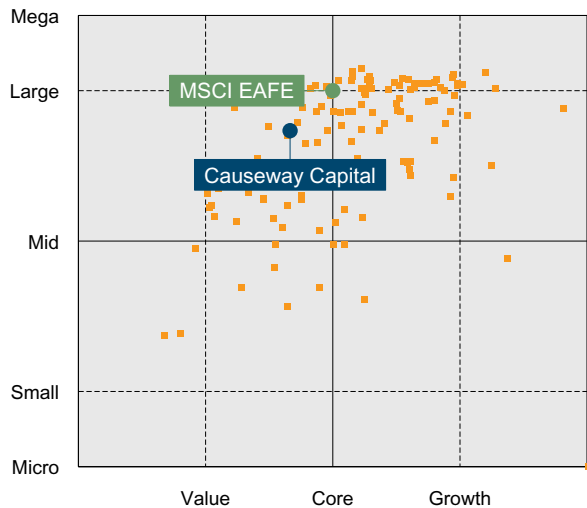


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Causeway Capital
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

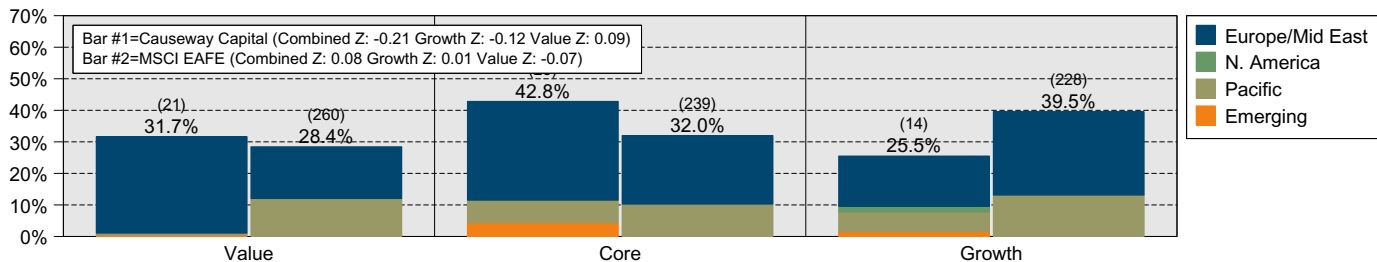
Style Map vs Callan NonUS Eq Holdings as of September 30, 2024



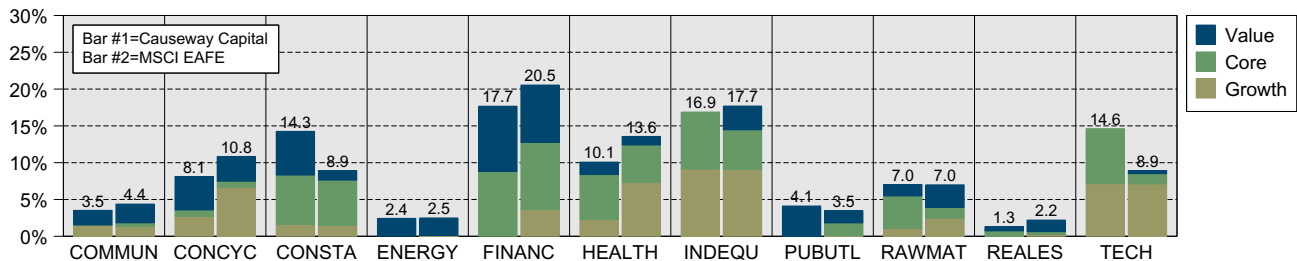
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	30.6% (19) 16.4% (143)	31.3% (17) 21.7% (150)	15.9% (9) 26.4% (131)	77.9% (45) 64.6% (424)
N. America	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	1.8% (1) 0.0% (0)	1.8% (1) 0.0% (0)
Pacific	0.6% (1) 12.0% (117)	7.1% (5) 10.3% (89)	6.3% (3) 13.1% (97)	14.0% (9) 35.4% (303)
Emerging	0.5% (1) 0.0% (0)	4.4% (3) 0.0% (0)	1.5% (1) 0.0% (0)	6.4% (5) 0.0% (0)
Total	31.7% (21) 28.4% (260)	42.8% (25) 32.0% (239)	25.5% (14) 39.5% (228)	100.0% (60) 100.0% (727)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



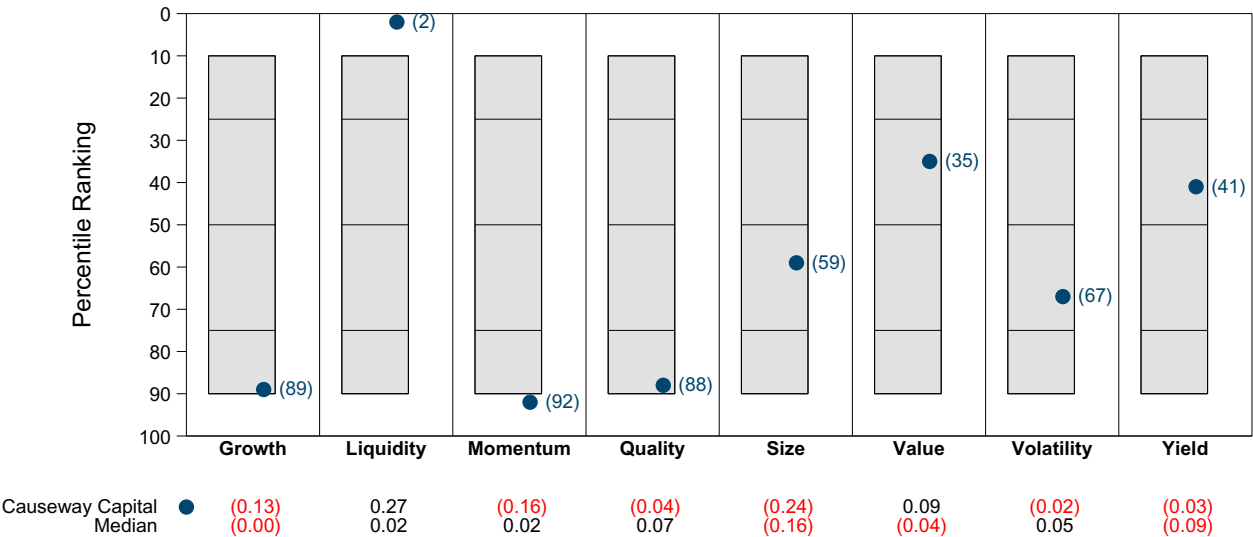
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

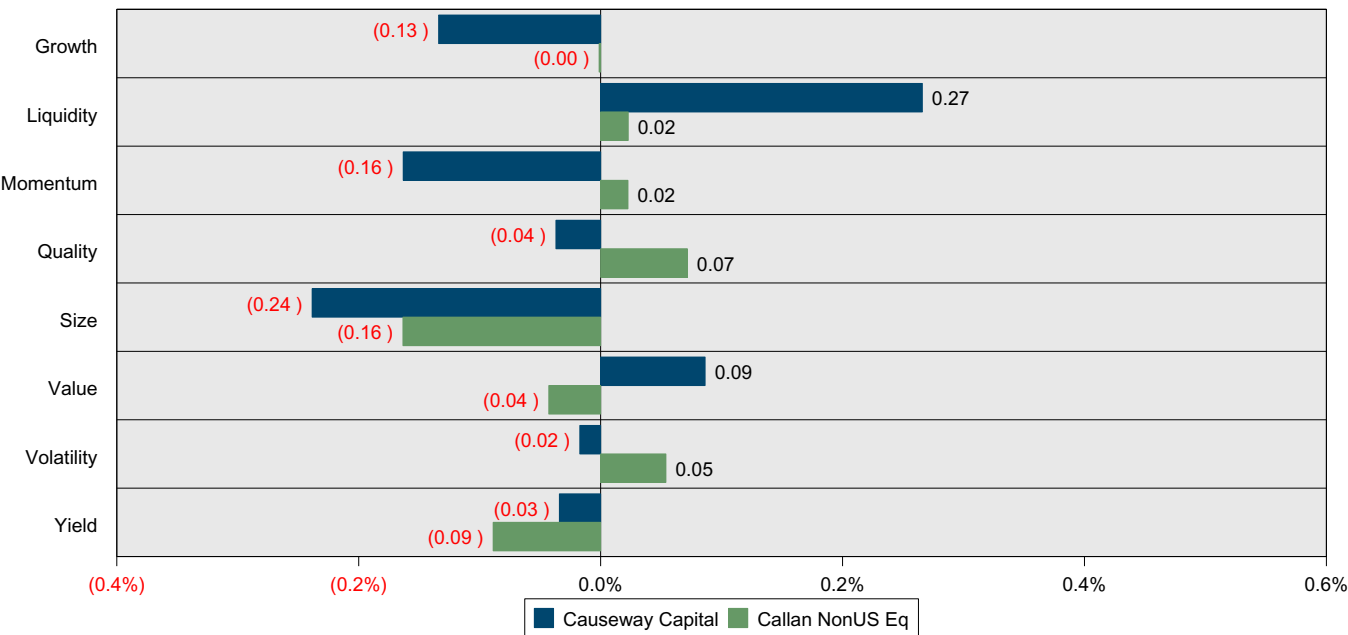
Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative the the MSCI EAFE.

Factor Exposures Relative to MSCI EAFE
for Period Ended September 30, 2024



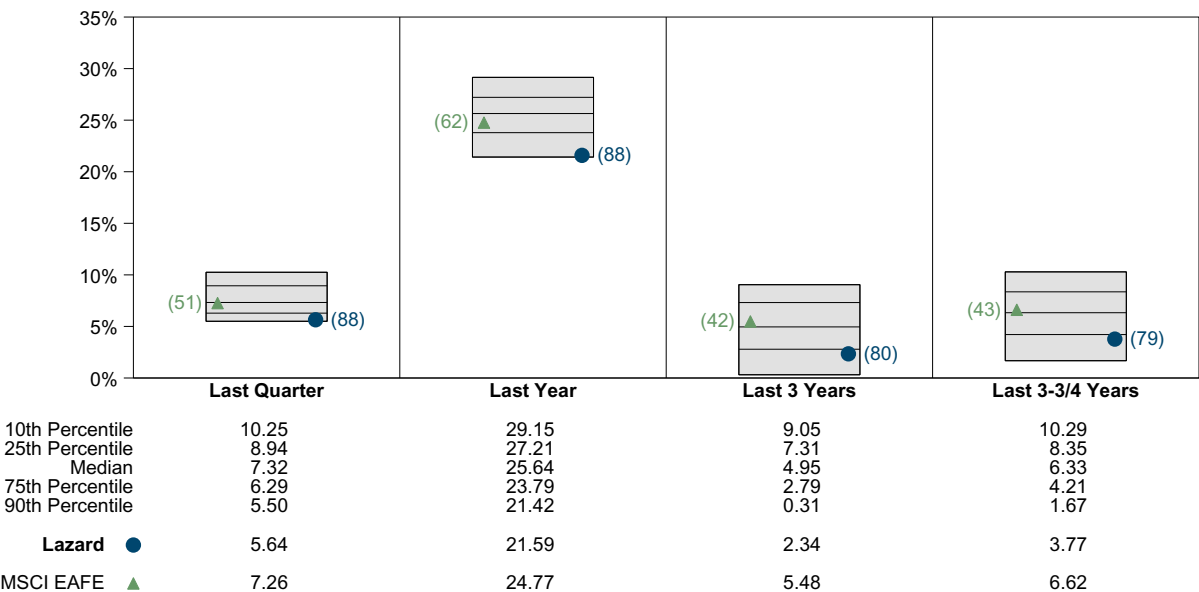
Investment Philosophy

The International Strategic Equity strategy is based on Lazard's "relative value", bottom-up philosophy, typically buying companies with sustainable returns (i.e., ROE) above that of the market. The team consists of five portfolio managers supported by approximately 80 central research analysts. The portfolio usually holds 55 to 70 securities with an expected annual turnover of 30%-50%. Given the investment process, portfolio characteristics can oscillate around core with the focus on quality and can provide a growth tilt at times. NHRS inception in the fund is November 2020.

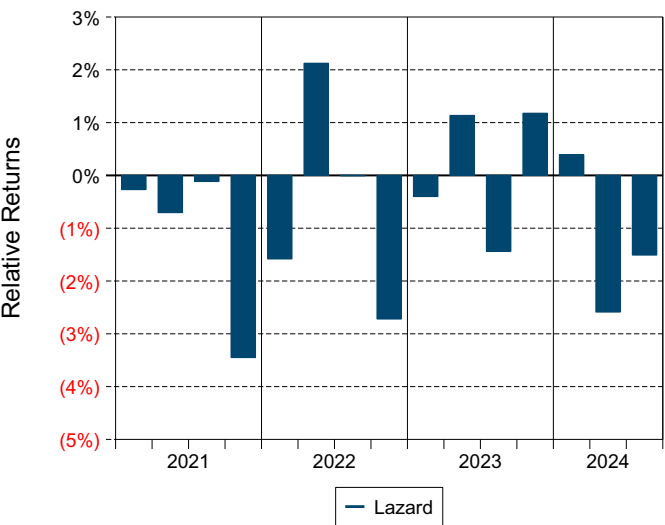
Quarterly Asset Growth

Beginning Market Value	\$169,339,080
Net New Investment	\$0
Investment Gains/(Losses)	\$9,558,045
Ending Market Value	\$178,897,125

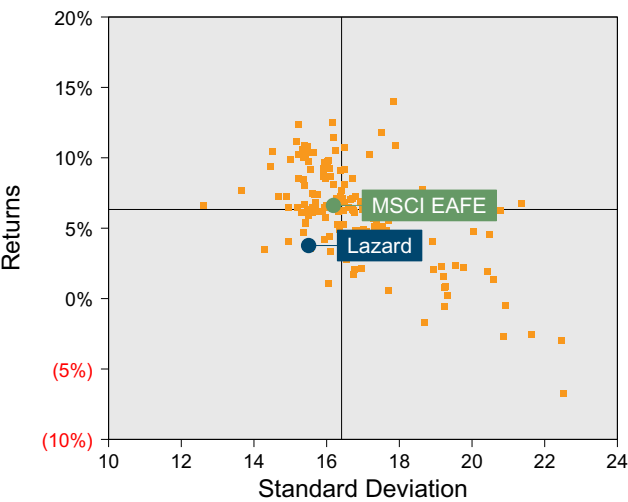
Performance vs Callan NonUS Eq (Gross)



Relative Return vs MSCI EAFE



Callan NonUS Eq (Gross)
Annualized Three and Three-Quarter Year Risk vs Return

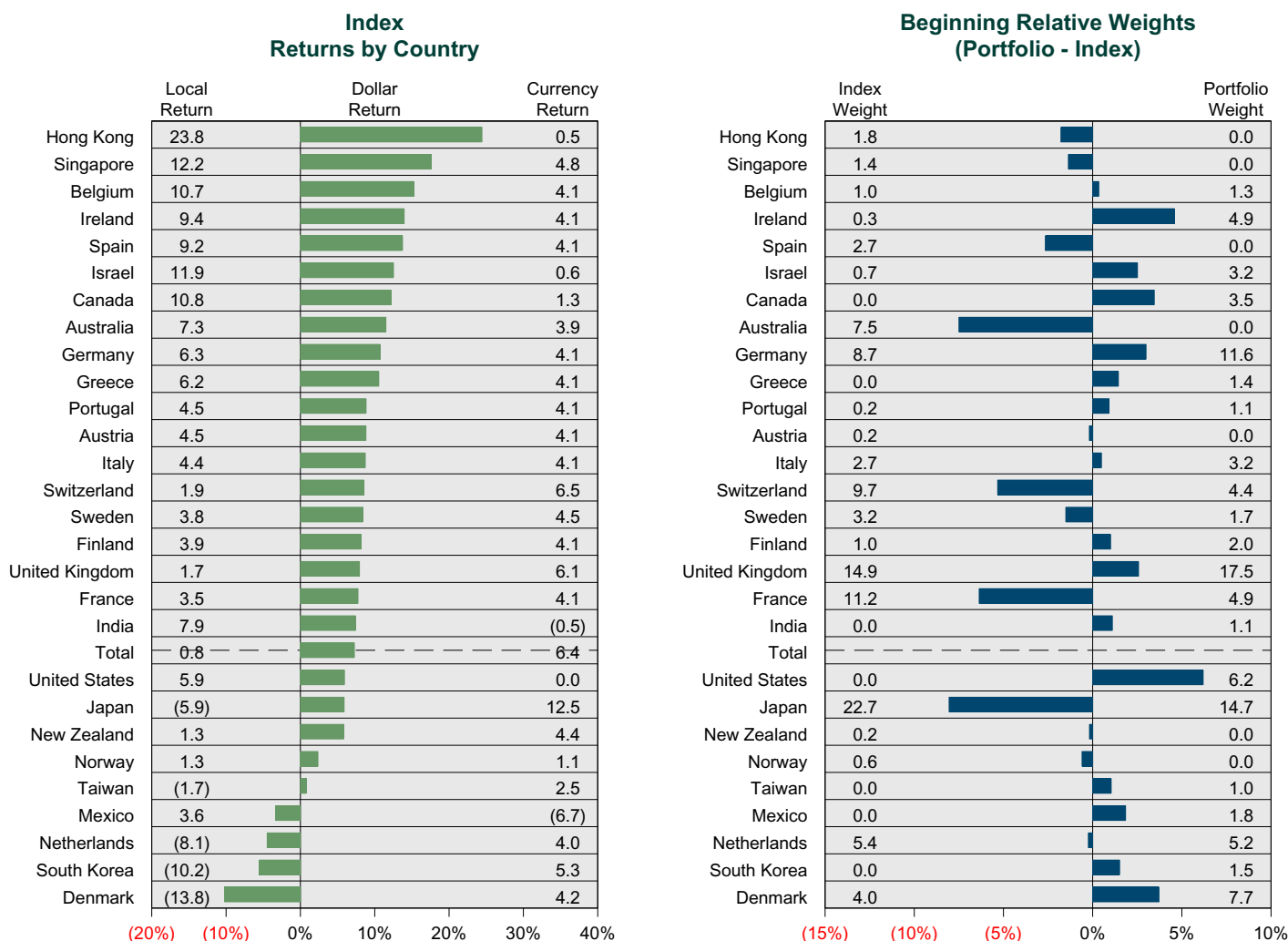


Lazard vs MSCI EAFE

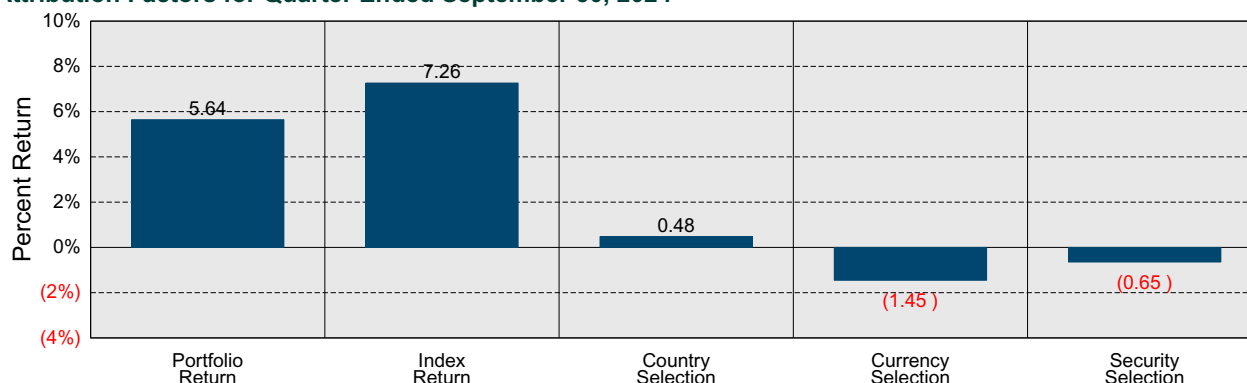
Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024



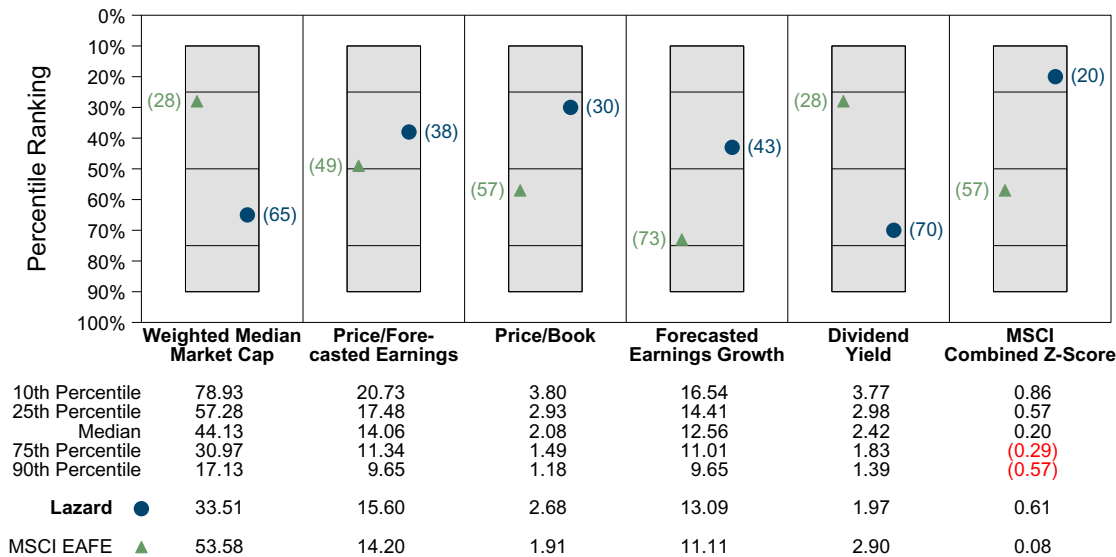
Lazard

Equity Characteristics Analysis Summary

Portfolio Characteristics

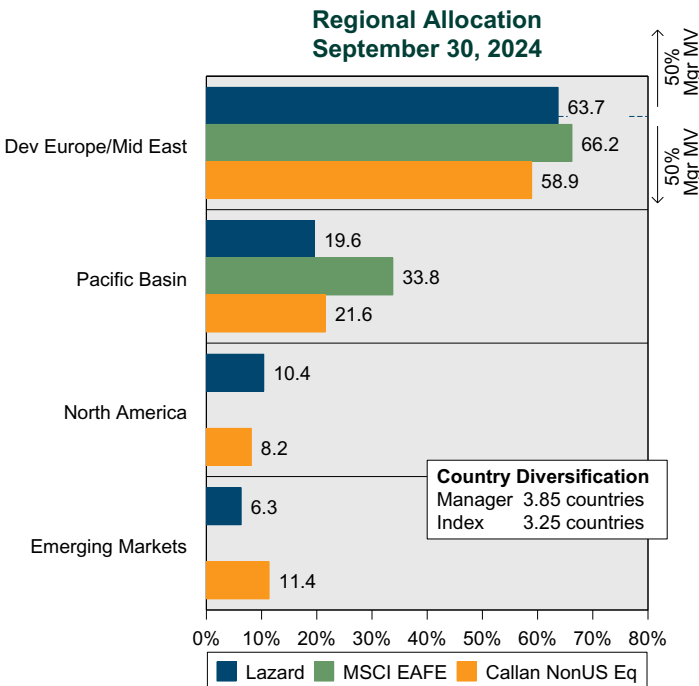
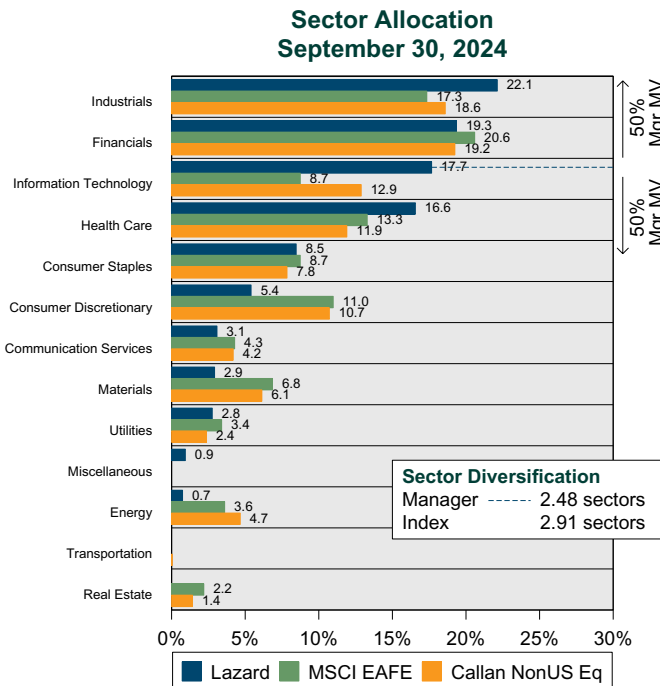
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

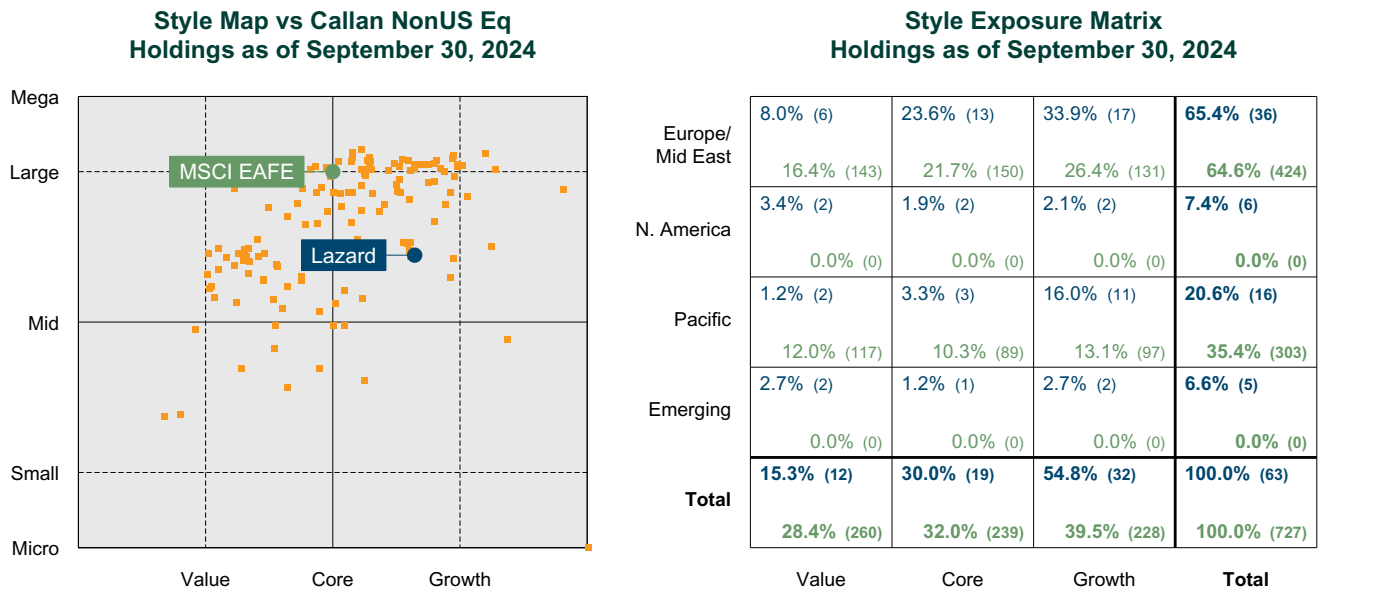


Current Holdings Based Style Analysis

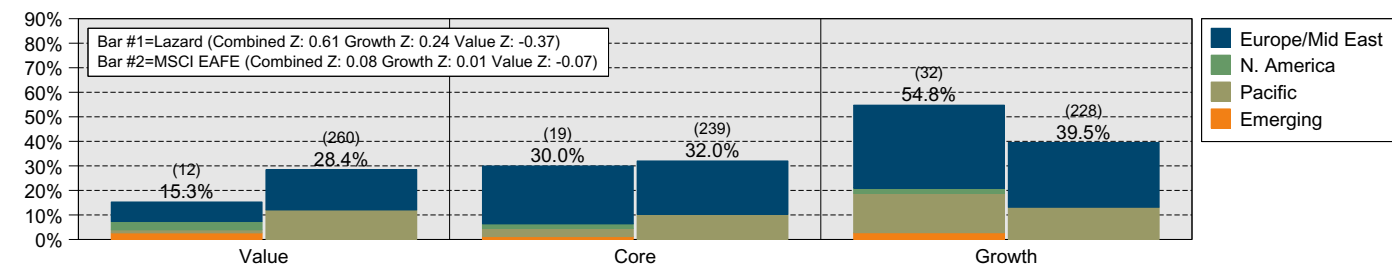
Lazard

As of September 30, 2024

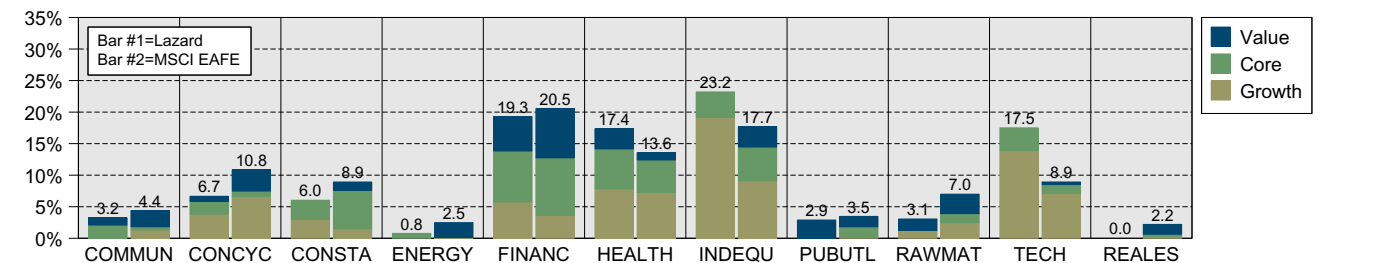
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Combined Z-Score Style Distribution Holdings as of September 30, 2024



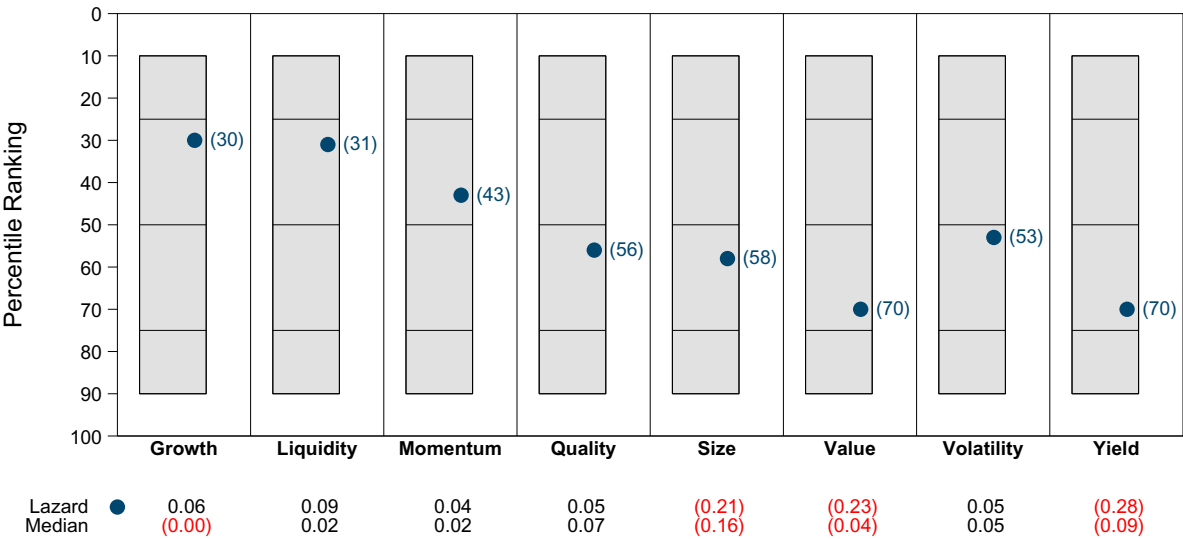
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Non-US Equity group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

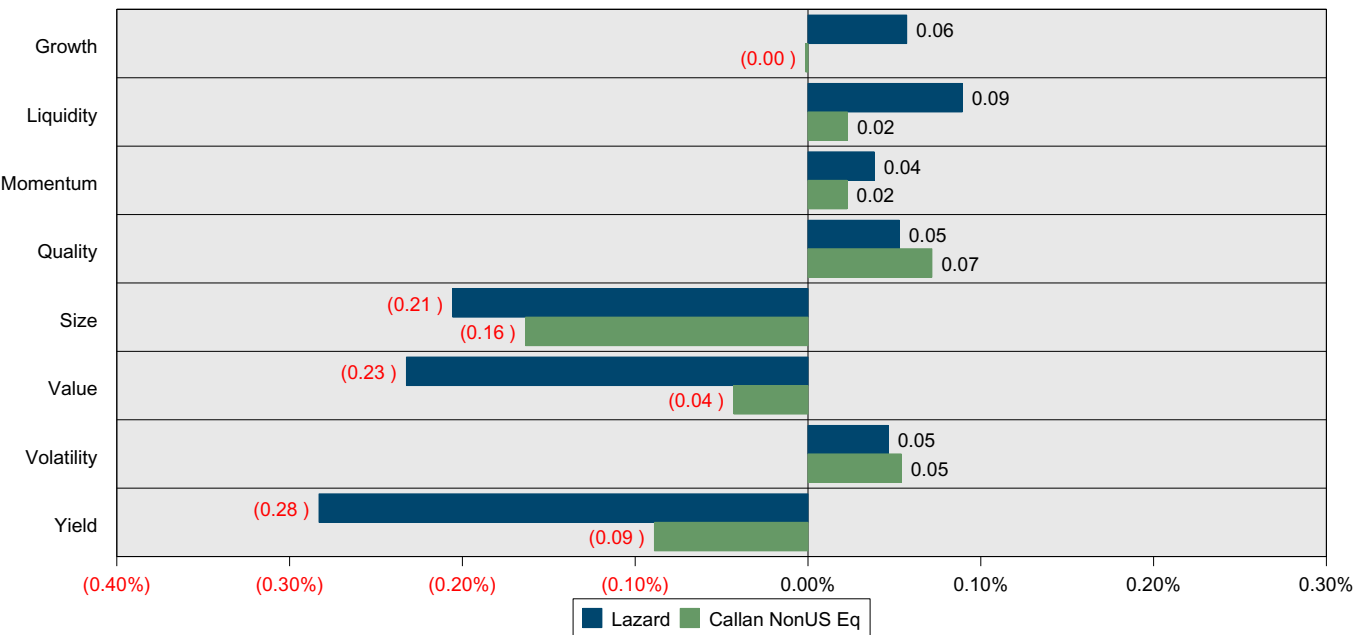
Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Non-US Equity group relative to the MSCI EAFE.

Factor Exposures Relative to MSCI EAFE
for Period Ended September 30, 2024



Emerging Markets

Period Ended September 30, 2024

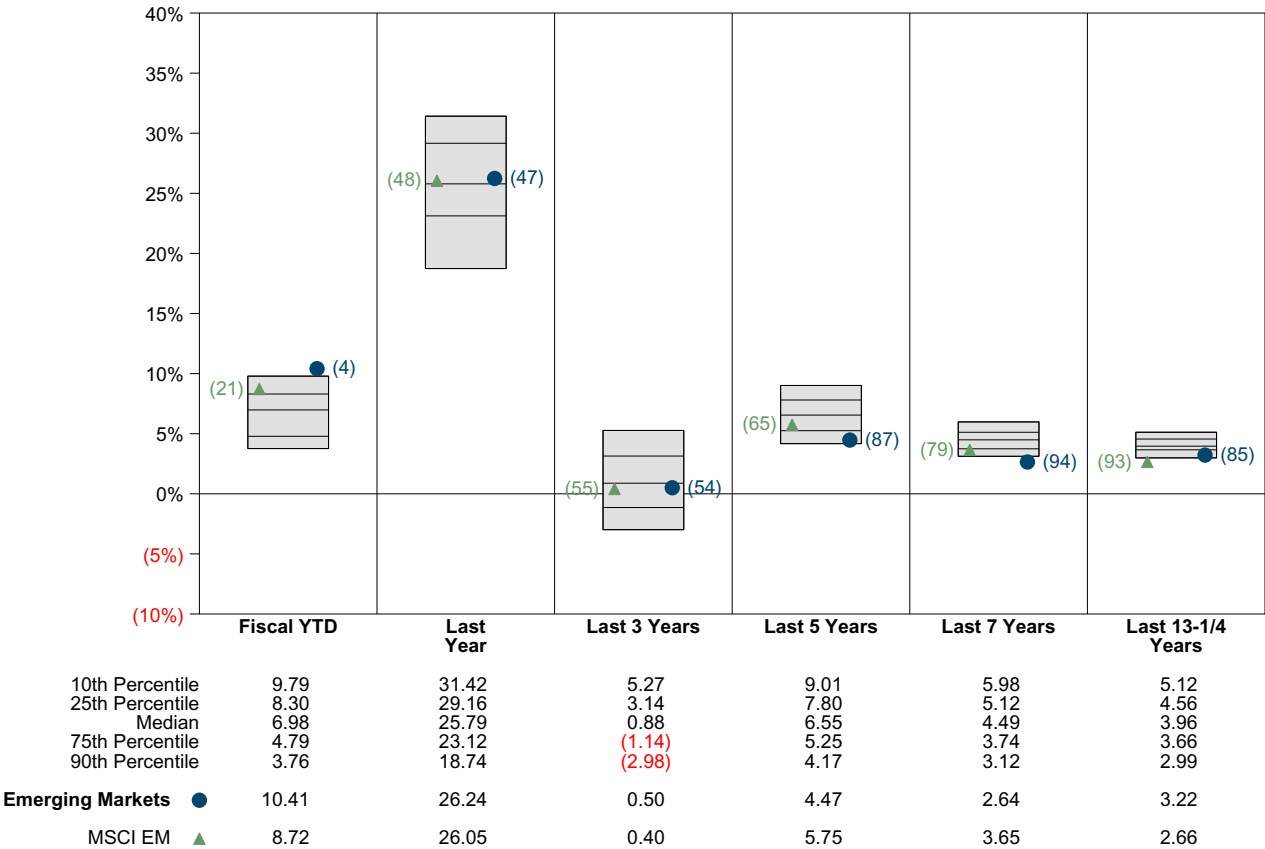
Quarterly Summary and Highlights

- Emerging Markets’s portfolio posted a 10.41% return for the quarter placing it in the 4 percentile of the Callan Emerging Core group for the quarter and in the 47 percentile for the last year.
- Emerging Markets’s portfolio outperformed the MSCI EM by 1.69% for the quarter and outperformed the MSCI EM for the year by 0.19%.

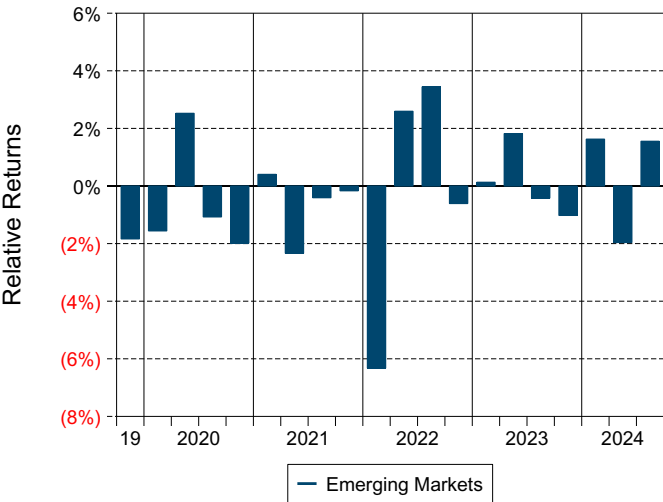
Quarterly Asset Growth

Beginning Market Value	\$179,813,061
Net New Investment	\$0
Investment Gains/(Losses)	\$18,719,190
Ending Market Value	\$198,532,252

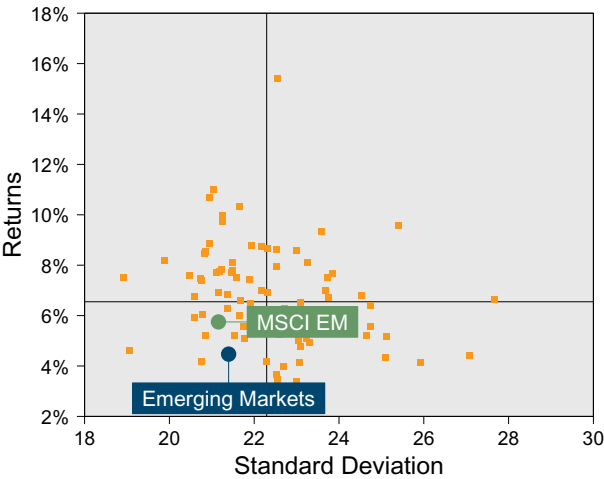
Performance vs Callan Emerging Core (Gross)



Relative Return vs MSCI EM



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

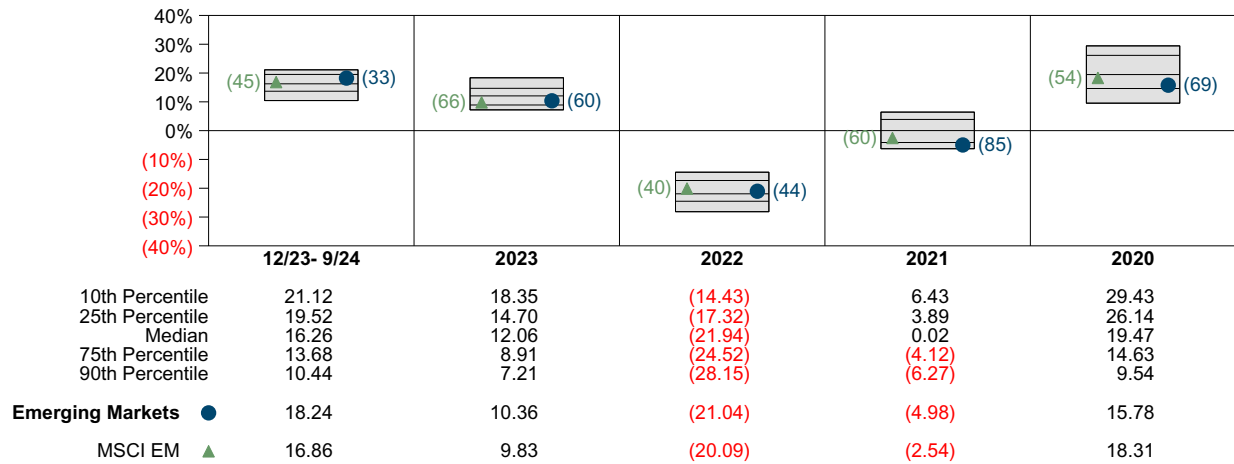


Emerging Markets Return Analysis Summary

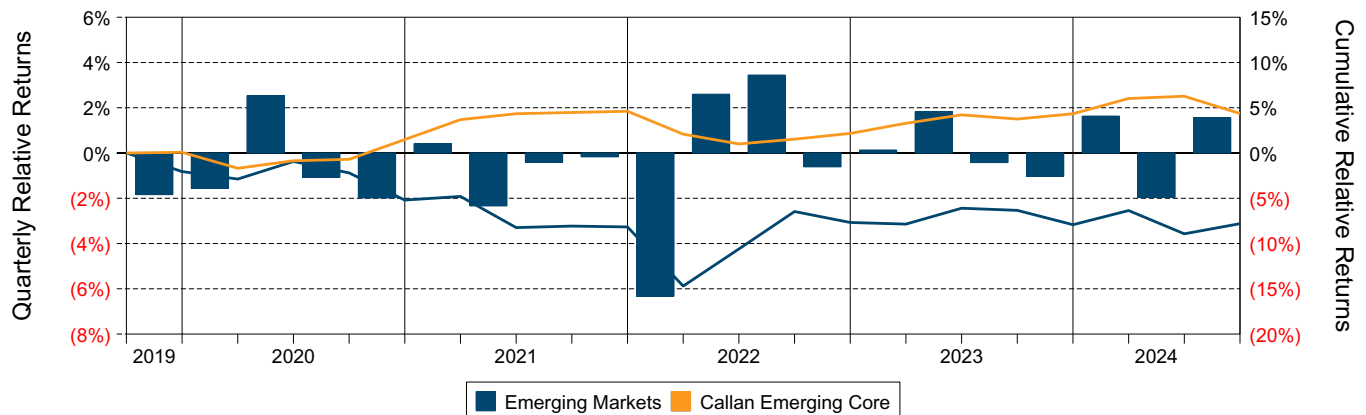
Return Analysis

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

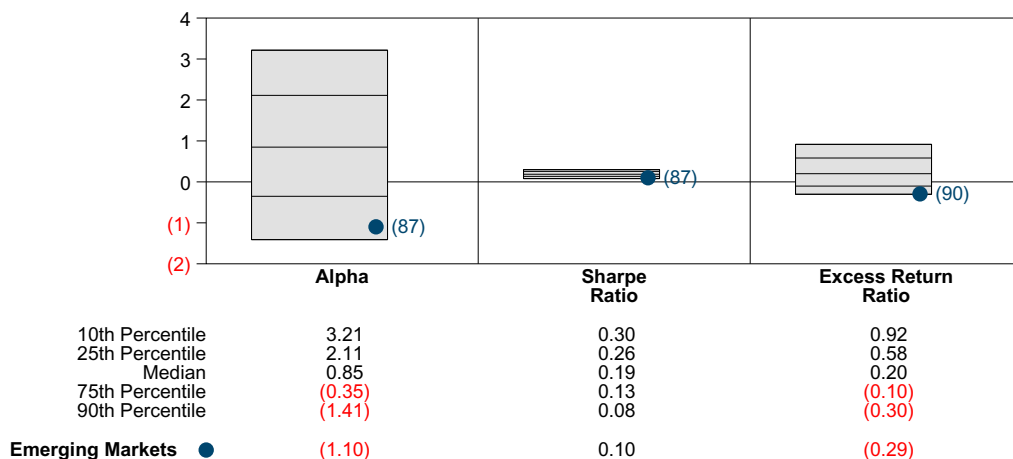
Performance vs Callan Emerging Core (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EM



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

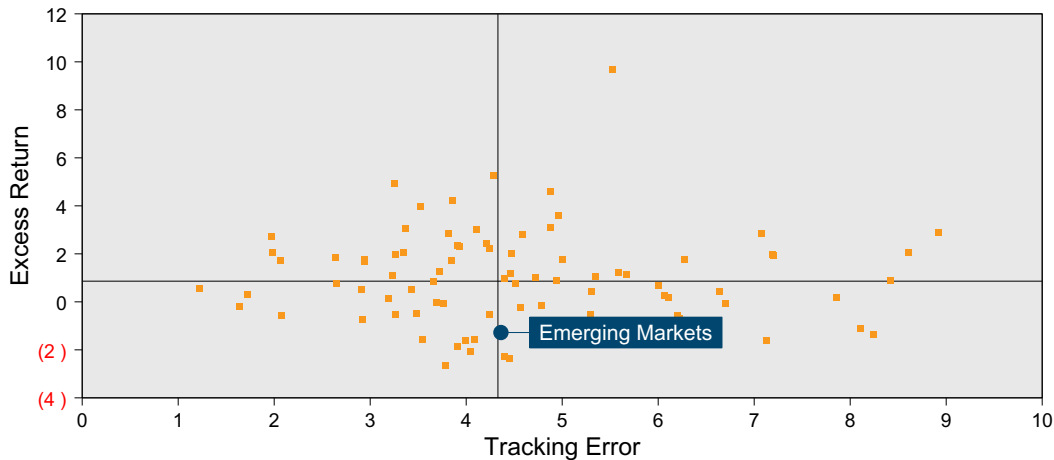


Emerging Markets
Risk Analysis Summary

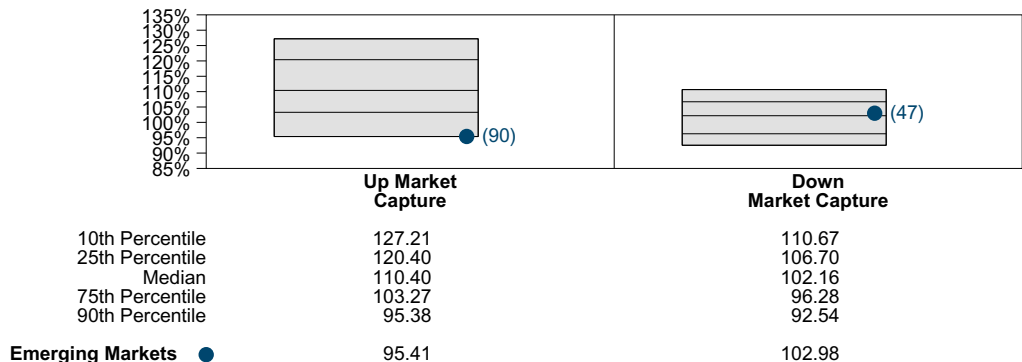
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

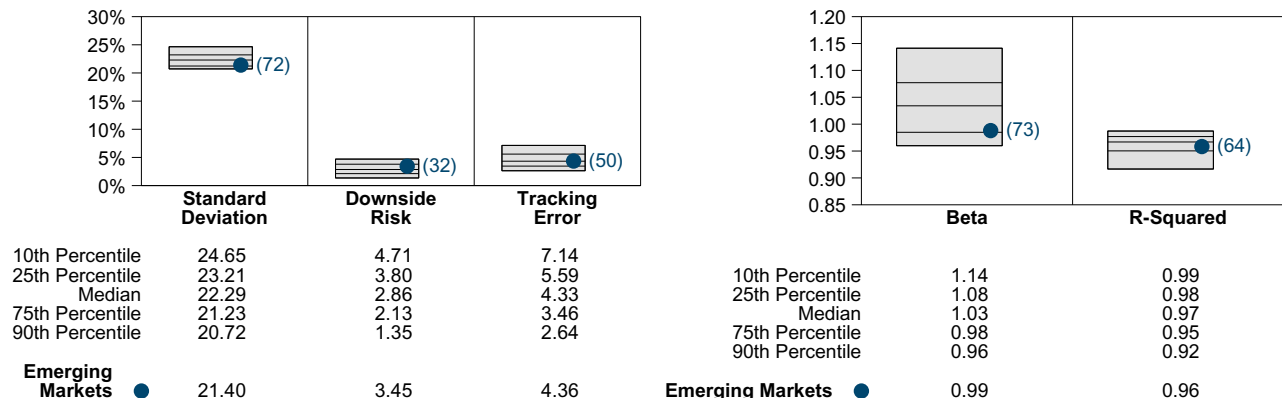
Risk Analysis vs Callan Emerging Core (Gross)
Five Years Ended September 30, 2024



Market Capture vs MSCI EM
Rankings Against Callan Emerging Core (Gross)
Five Years Ended September 30, 2024



Risk Statistics Rankings vs MSCI EM
Rankings Against Callan Emerging Core (Gross)
Five Years Ended September 30, 2024

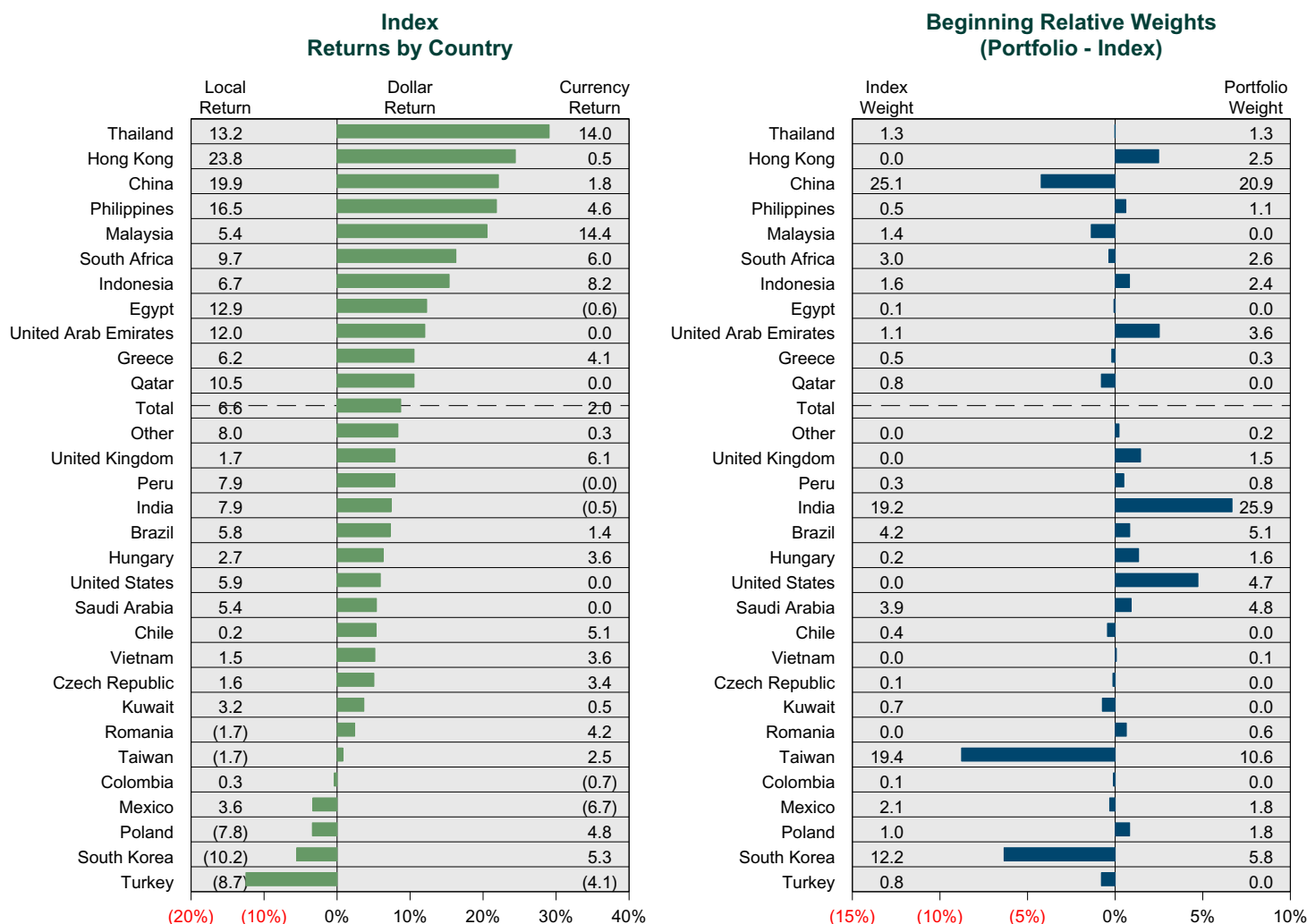


Emerging Markets vs MSCI EM

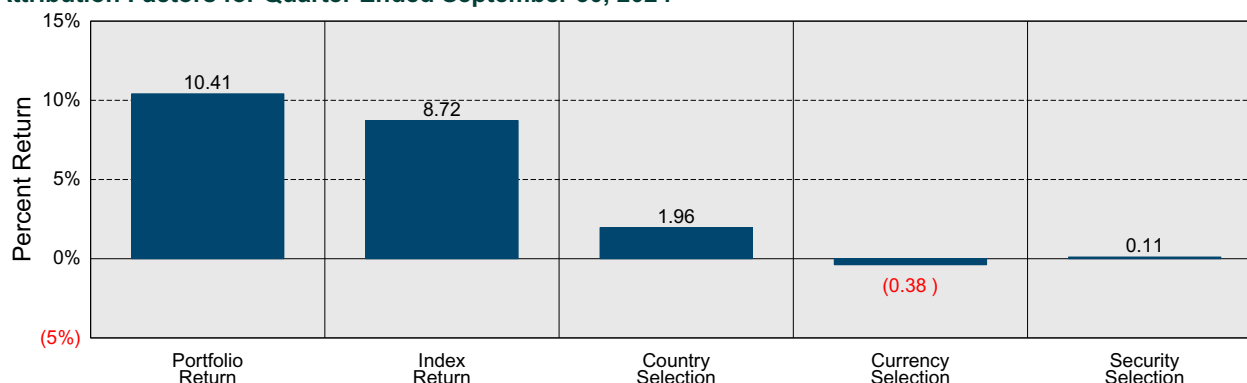
Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

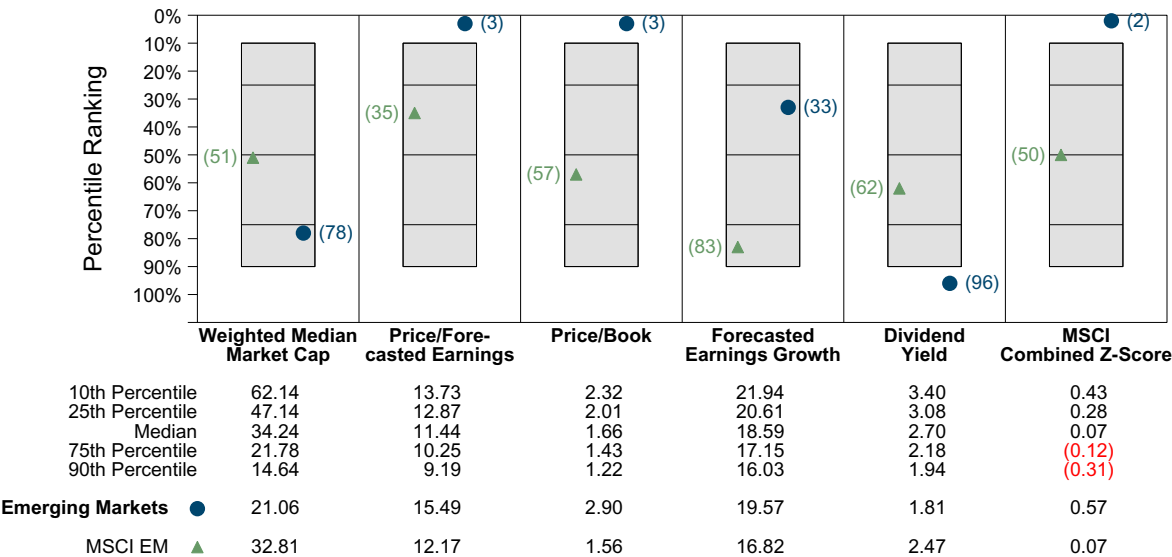


Emerging Markets Equity Characteristics Analysis Summary

Portfolio Characteristics

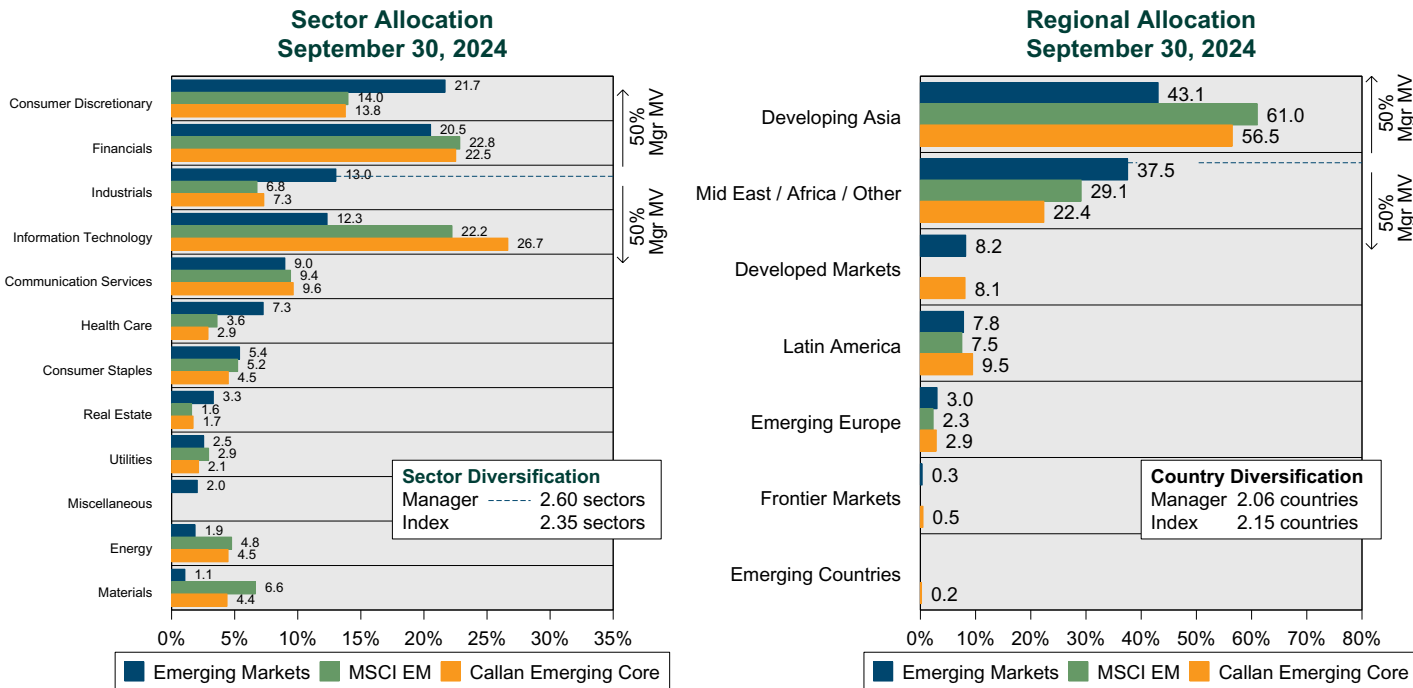
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Emerging Core as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



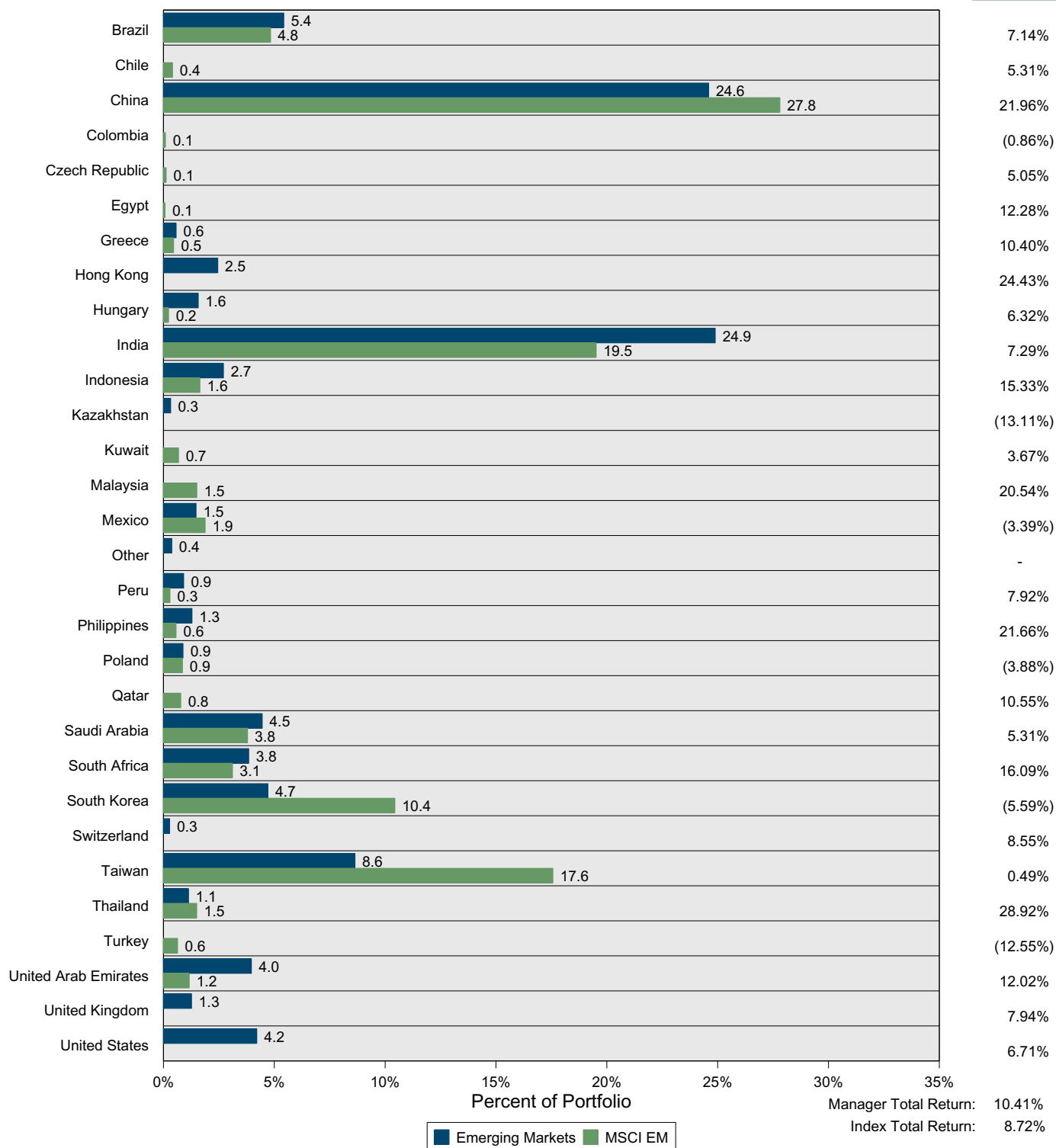
Country Allocation Emerging Markets VS MSCI Emerging Markets (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of September 30, 2024. This chart is useful because large deviations in country allocation relative to the index are often good predictors of tracking error in the subsequent quarter. To the extent that the portfolio allocation is similar to the index, the portfolio should experience more "index-like" performance. In order to illustrate the performance effect on the portfolio and index of these country allocations, the individual index country returns are also shown.

Country Weights as of September 30, 2024

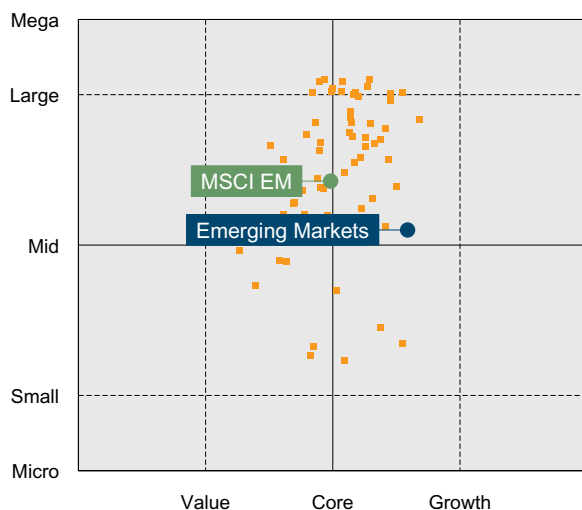
Index Rtns



Current Holdings Based Style Analysis Emerging Markets As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

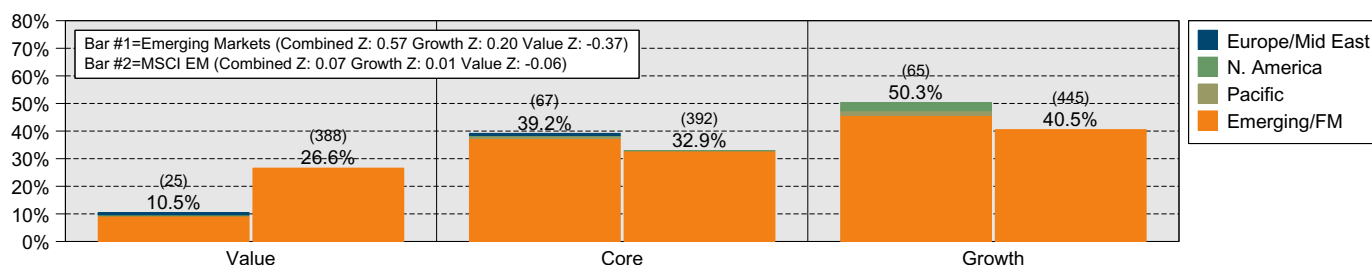
Style Map vs Callan Emerging Core Holdings as of September 30, 2024



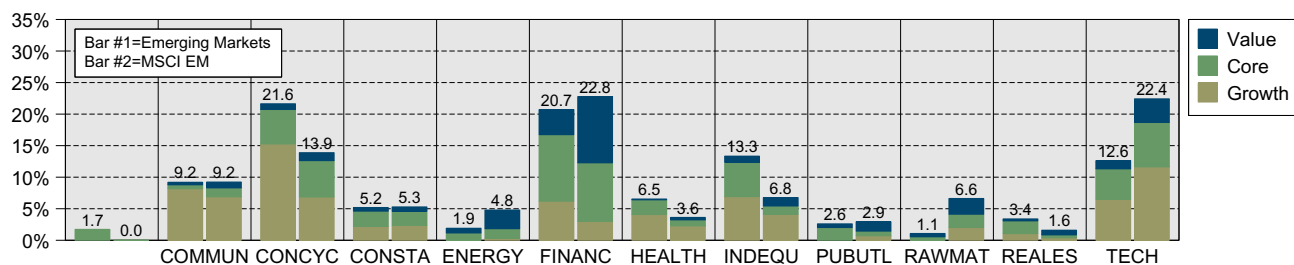
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	0.8% (2) 0.0% (0)	0.8% (1) 0.0% (0)	0.0% (0) 0.0% (0)	1.6% (3) 0.0% (0)
N. America	0.4% (1) 0.0% (0)	0.3% (1) 0.0% (1)	3.0% (4) 0.0% (0)	3.6% (6) 0.0% (1)
Pacific	0.0% (0) 0.0% (0)	0.8% (1) 0.0% (0)	1.7% (3) 0.0% (0)	2.5% (4) 0.0% (0)
Emerging/ FM	9.3% (22) 26.6% (388)	37.3% (64) 32.9% (391)	45.7% (58) 40.5% (445)	92.3% (144) 100.0% (1224)
Total	10.5% (25) 26.6% (388)	39.2% (67) 32.9% (392)	50.3% (65) 40.5% (445)	100.0% (157) 100.0% (1225)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



Sector Weights Distribution Holdings as of September 30, 2024



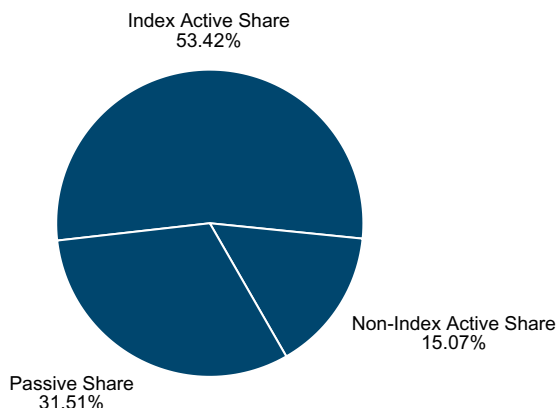
Emerging Markets

Active Share Analysis as of September 30, 2024

vs. MSCI Emerging Markets (Net)

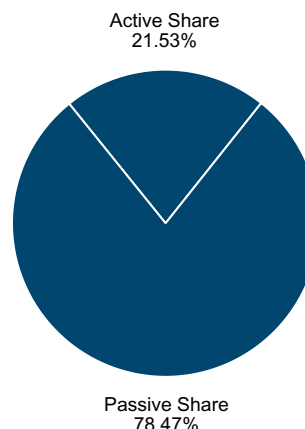
Active Share analysis compares the holdings of a portfolio to an index to measure how aggressively it differs from the index. Active share is measured at the individual stock level ("holdings-level active share") and using sector weights ("sector exposure active share"). Holdings-level active share comes from: 1) Index Active Share - over/under weighting of stocks in the index, and 2) Non-Index Active Share - positions in stocks not in the index. This analysis displays active share by sector and compares the portfolio to a relevant peer group.

Holdings-Level Active Share



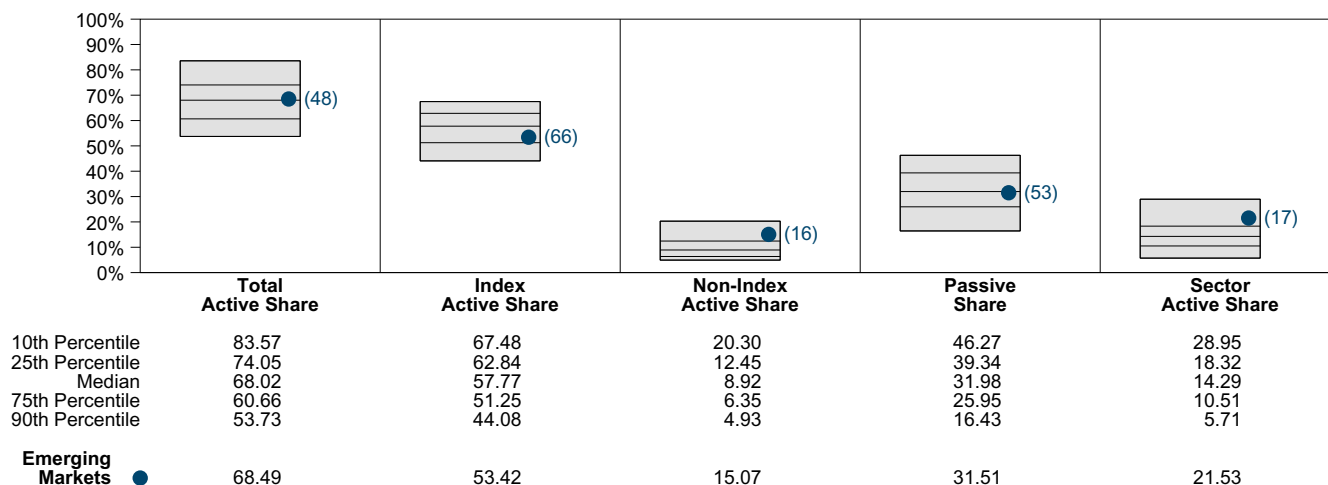
Total Active Share: 68.49%

Sector Exposure Active Share



	Index Active Share Within Sector	Non-Index Active Share Within Sector	Total Active Share Within Sector	Index Weight	Manager Weight	Contribution to Total Portfolio Active Share
Communication Services	38.80%	3.35%	42.16%	9.43%	8.98%	3.77%
Consumer Discretionary	35.44%	15.64%	51.08%	13.98%	21.68%	10.18%
Consumer Staples	67.84%	11.13%	78.97%	5.24%	5.39%	4.21%
Energy	51.66%	0.00%	51.66%	4.75%	1.86%	1.48%
Financials	65.13%	8.38%	73.51%	22.84%	20.53%	15.78%
Health Care	54.46%	31.36%	85.81%	3.60%	7.26%	4.92%
Industrials	63.52%	22.51%	86.03%	6.77%	13.02%	8.78%
Information Technology	36.77%	8.85%	45.62%	22.23%	12.33%	9.87%
Materials	49.79%	50.00%	99.79%	6.64%	1.05%	3.83%
Miscellaneous	0.00%	100.00%	100.00%	-	2.04%	0.18%
Real Estate	58.38%	19.52%	77.90%	1.59%	3.31%	2.10%
Utilities	71.20%	22.21%	93.41%	2.93%	2.55%	2.55%
Total	53.42%	15.07%	68.49%	100.00%	100.00%	67.64%

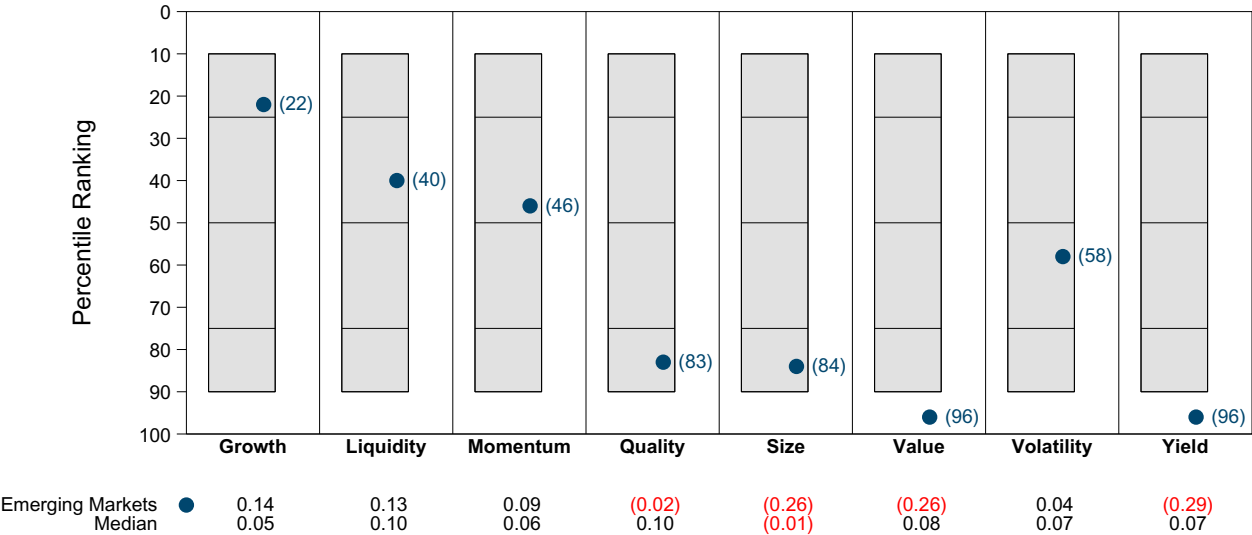
Active Share vs. Callan Emerging Core



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Emerging Core group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

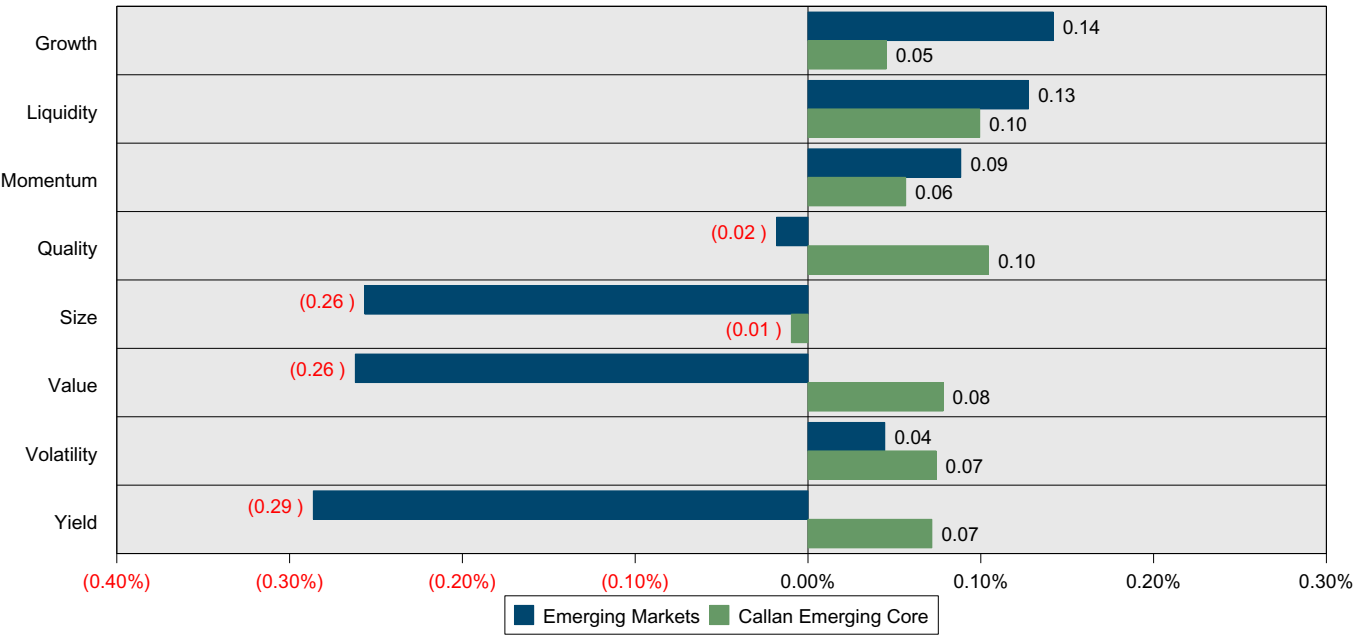
Factor Exposures Relative to MSCI EM, Rankings vs Callan Emerging Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Emerging Core group relative the the MSCI EM.

Factor Exposures Relative to MSCI EM
for Period Ended September 30, 2024



Wellington Emerging Markets Period Ended September 30, 2024

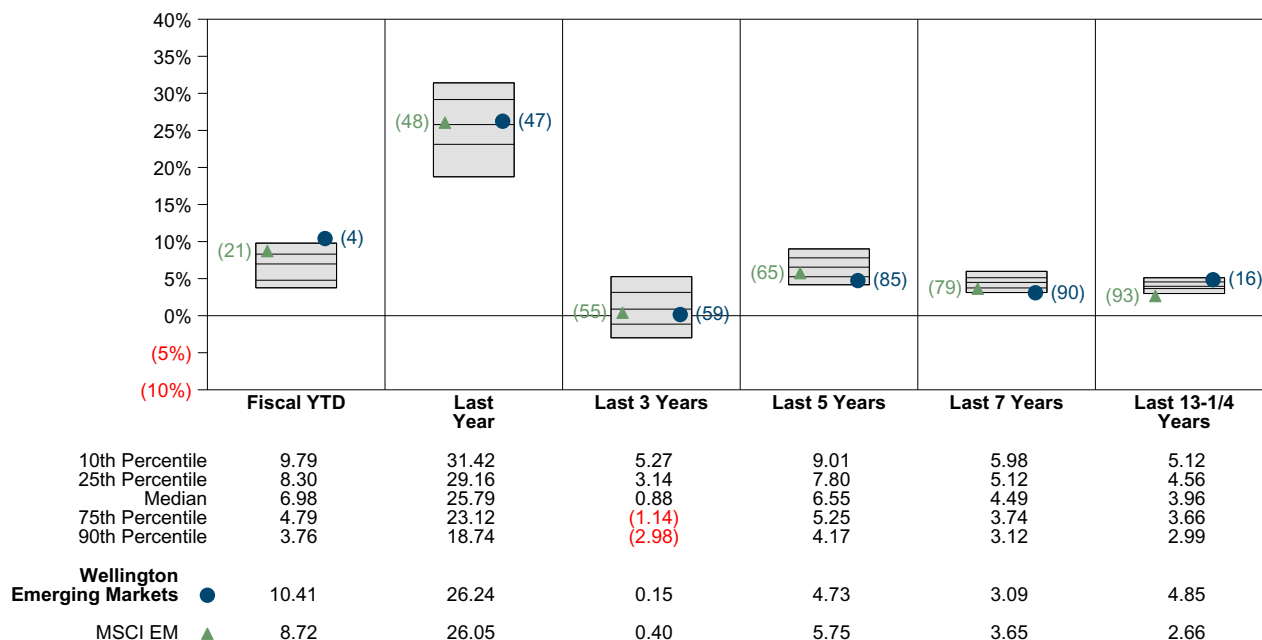
Investment Philosophy

Wellington employs an industry-focused, bottom-up approach to managing equity portfolios. The research portfolio is the reflection of Wellington's global industry analysts expertise. The team seeks to add value through in-depth fundamental research and understanding of their industries. The portfolio is diversified and constructed in a way to ensure stock selection drives performance. NHRS inception in the fund is May 2011.

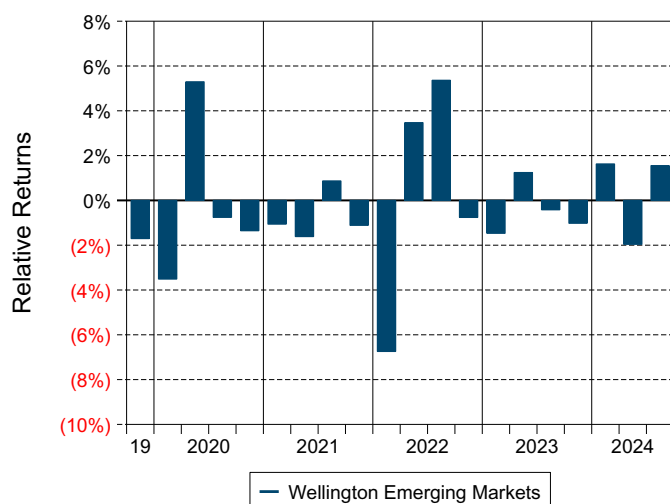
Quarterly Asset Growth

Beginning Market Value	\$179,813,061
Net New Investment	\$0
Investment Gains/(Losses)	\$18,719,190
Ending Market Value	\$198,532,252

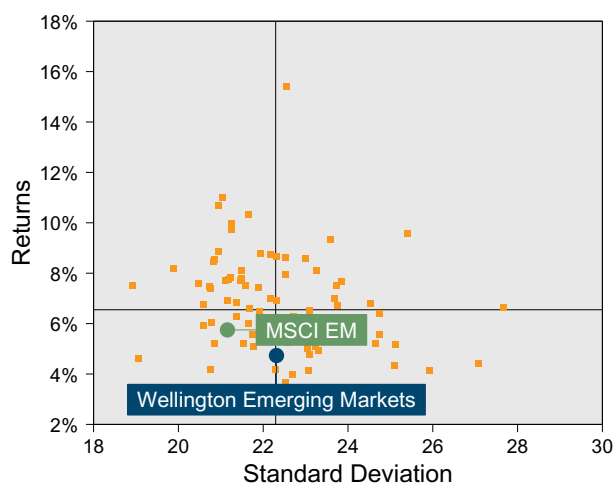
Performance vs Callan Emerging Core (Gross)



Relative Return vs MSCI EM



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

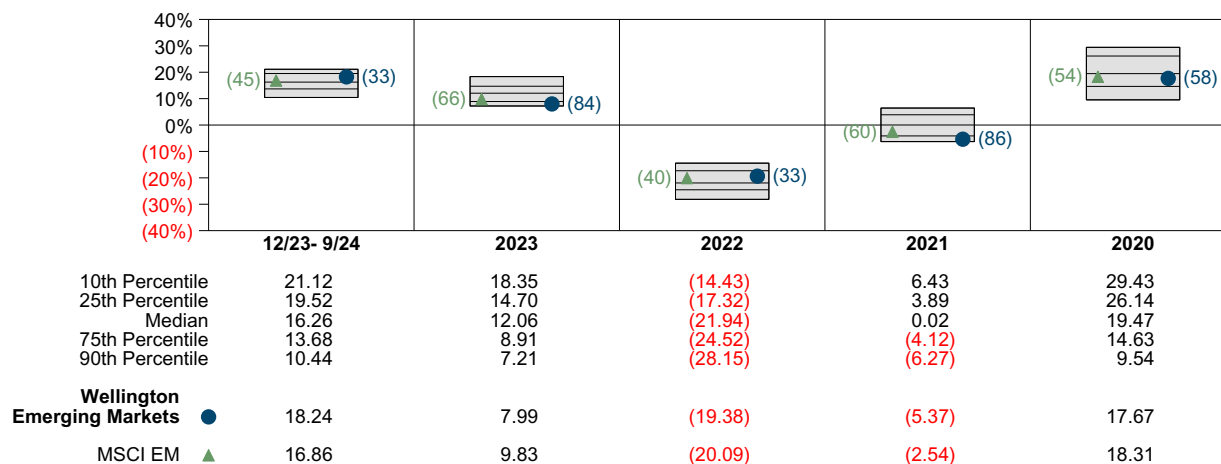


Wellington Emerging Markets Return Analysis Summary

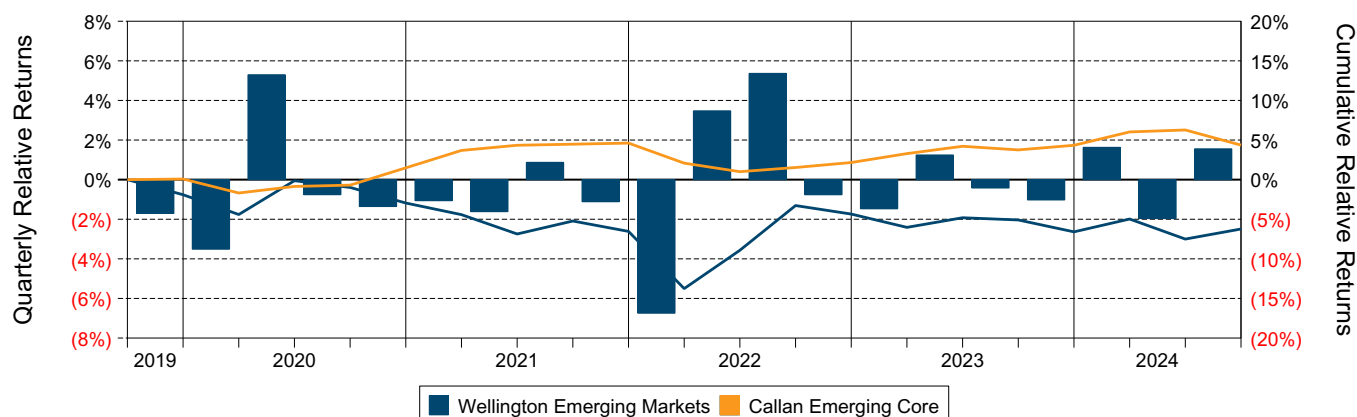
Return Analysis

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.

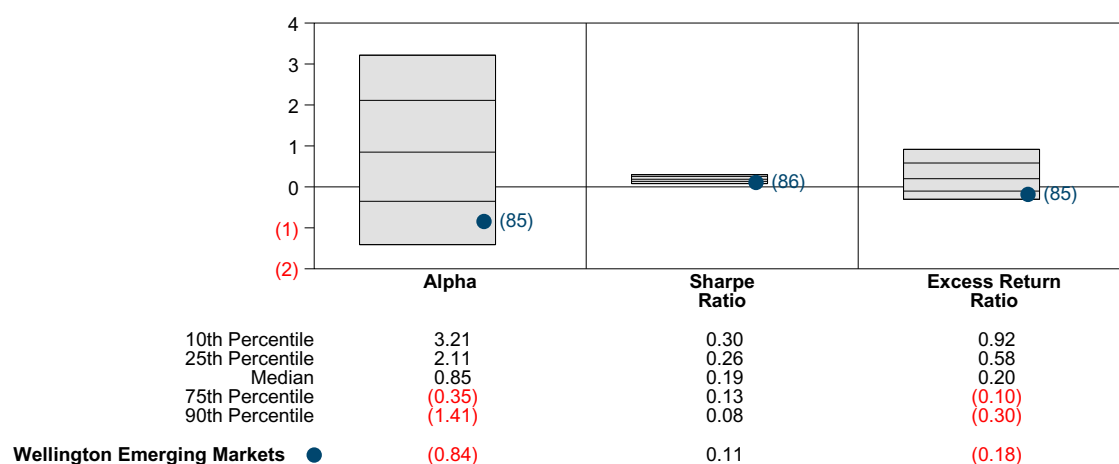
Performance vs Callan Emerging Core (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EM



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

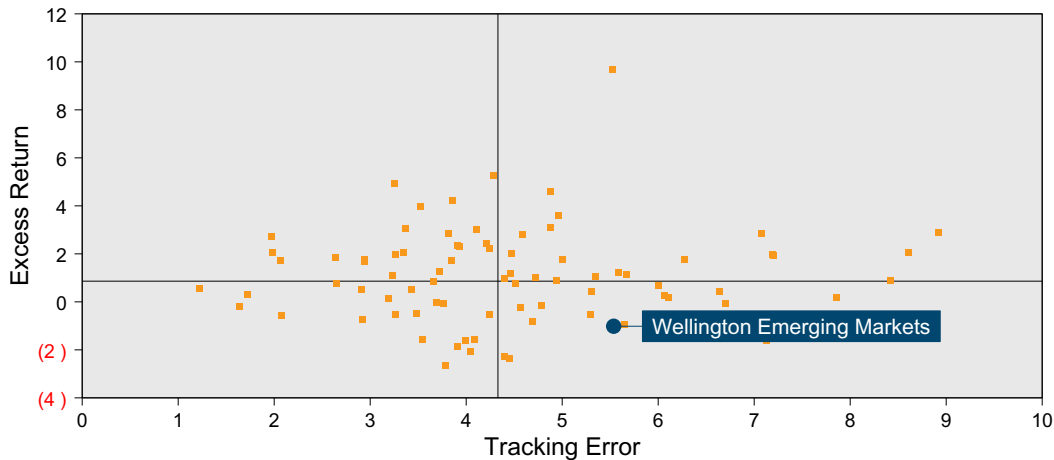


Wellington Emerging Markets
Risk Analysis Summary

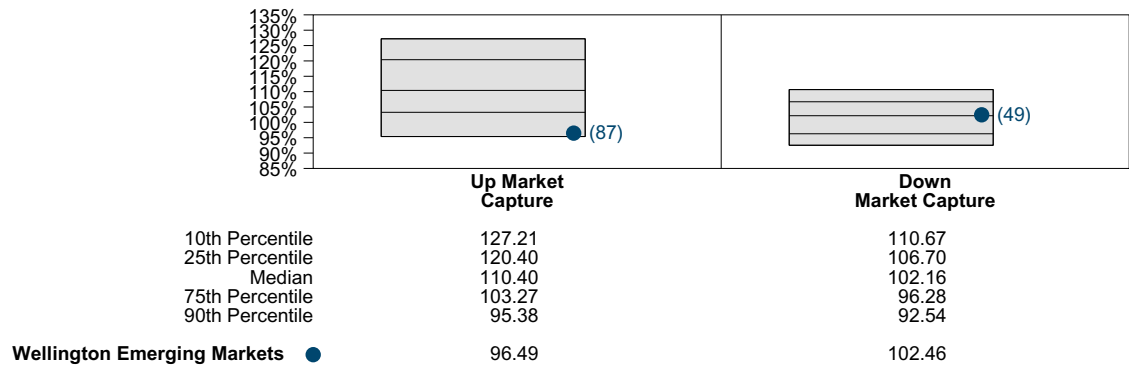
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

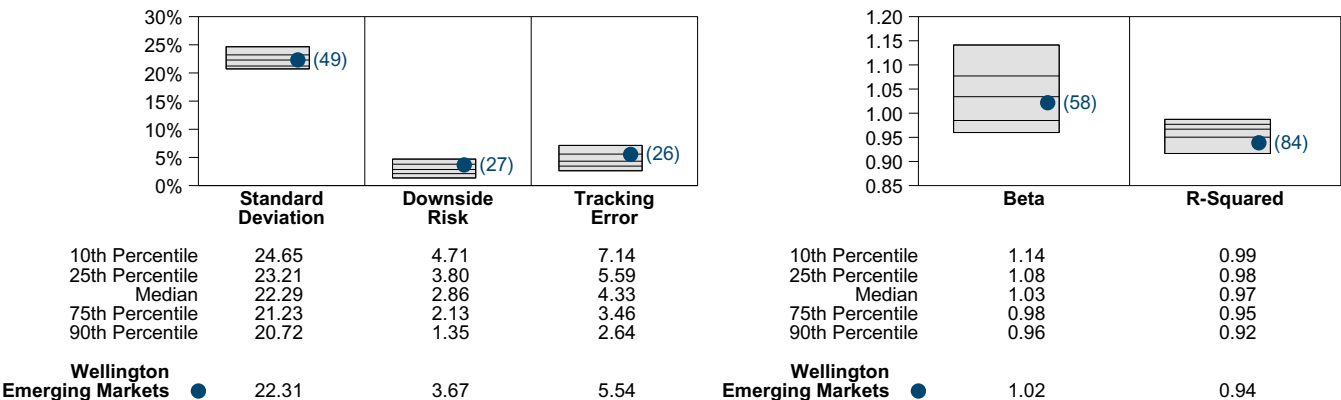
Risk Analysis vs Callan Emerging Core (Gross)
Five Years Ended September 30, 2024



Market Capture vs MSCI EM
Rankings Against Callan Emerging Core (Gross)
Five Years Ended September 30, 2024



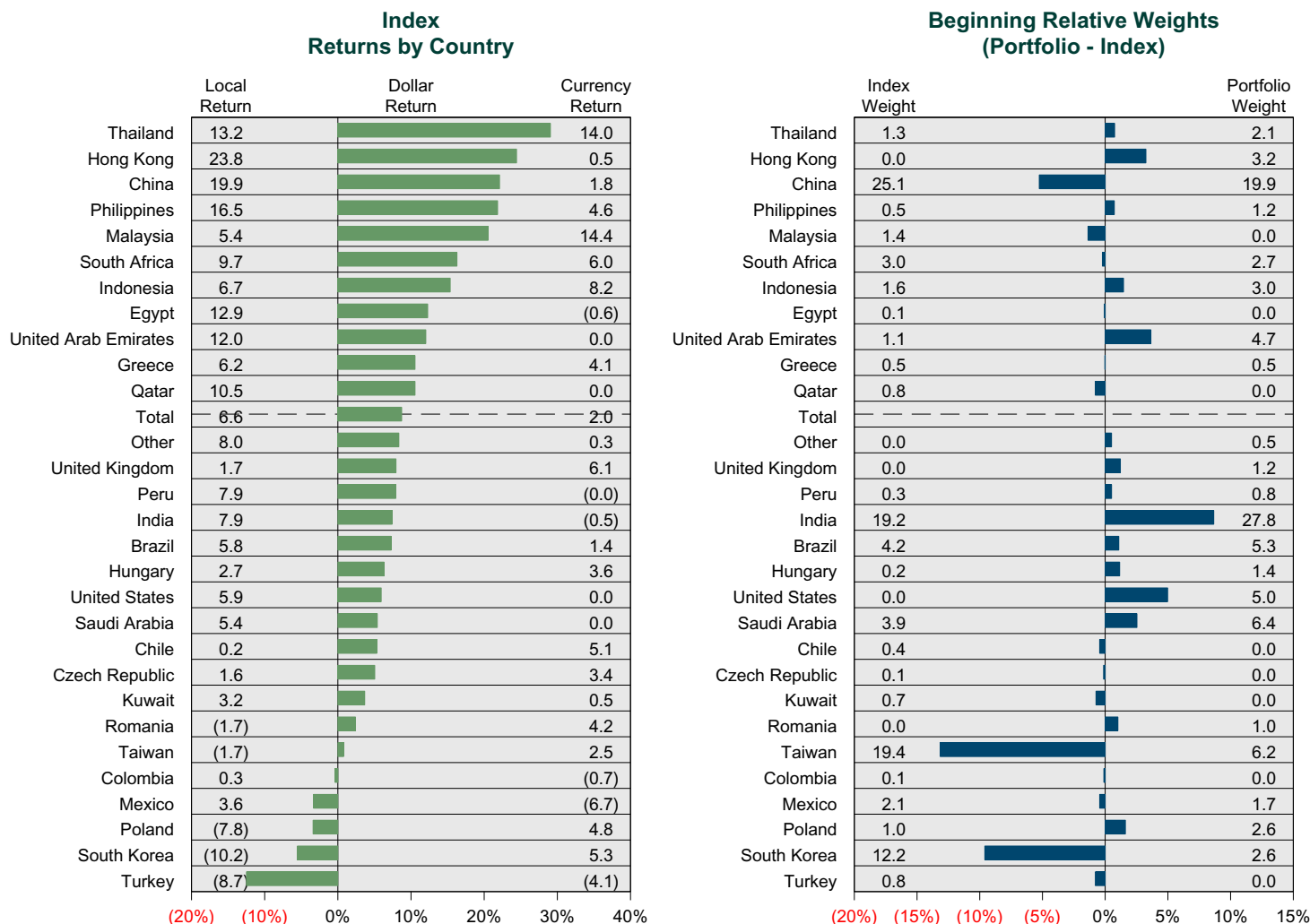
Risk Statistics Rankings vs MSCI EM
Rankings Against Callan Emerging Core (Gross)
Five Years Ended September 30, 2024



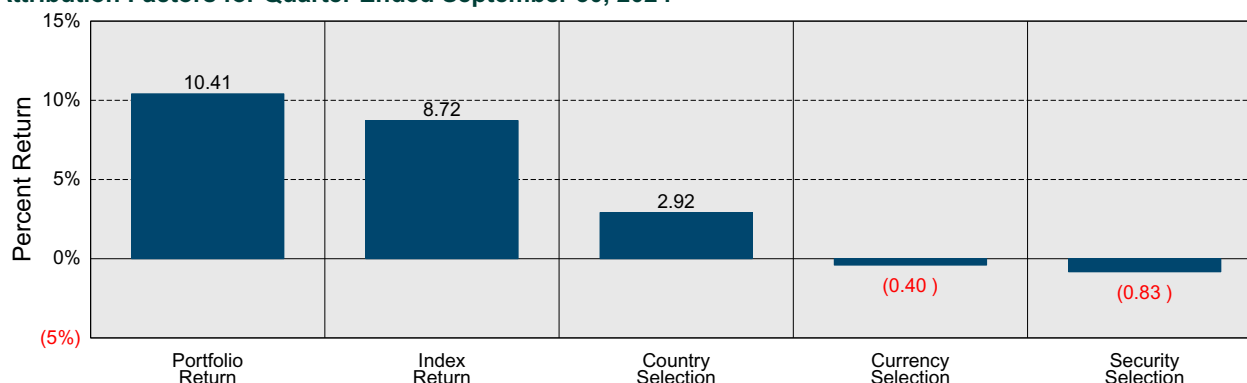
Wellington Emerging Markets vs MSCI EM Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

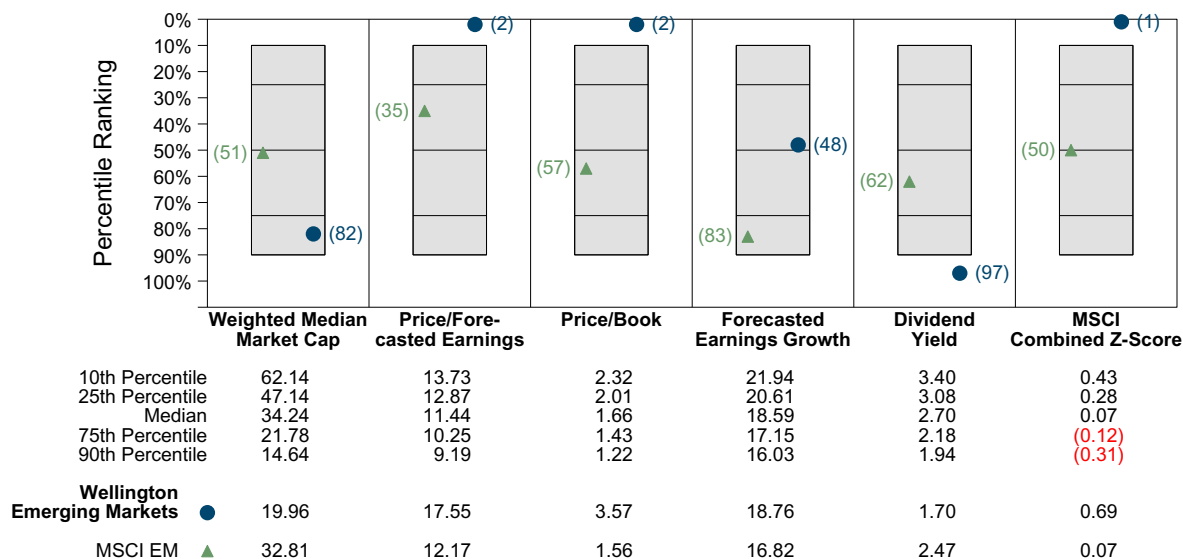


Wellington Emerging Markets Equity Characteristics Analysis Summary

Portfolio Characteristics

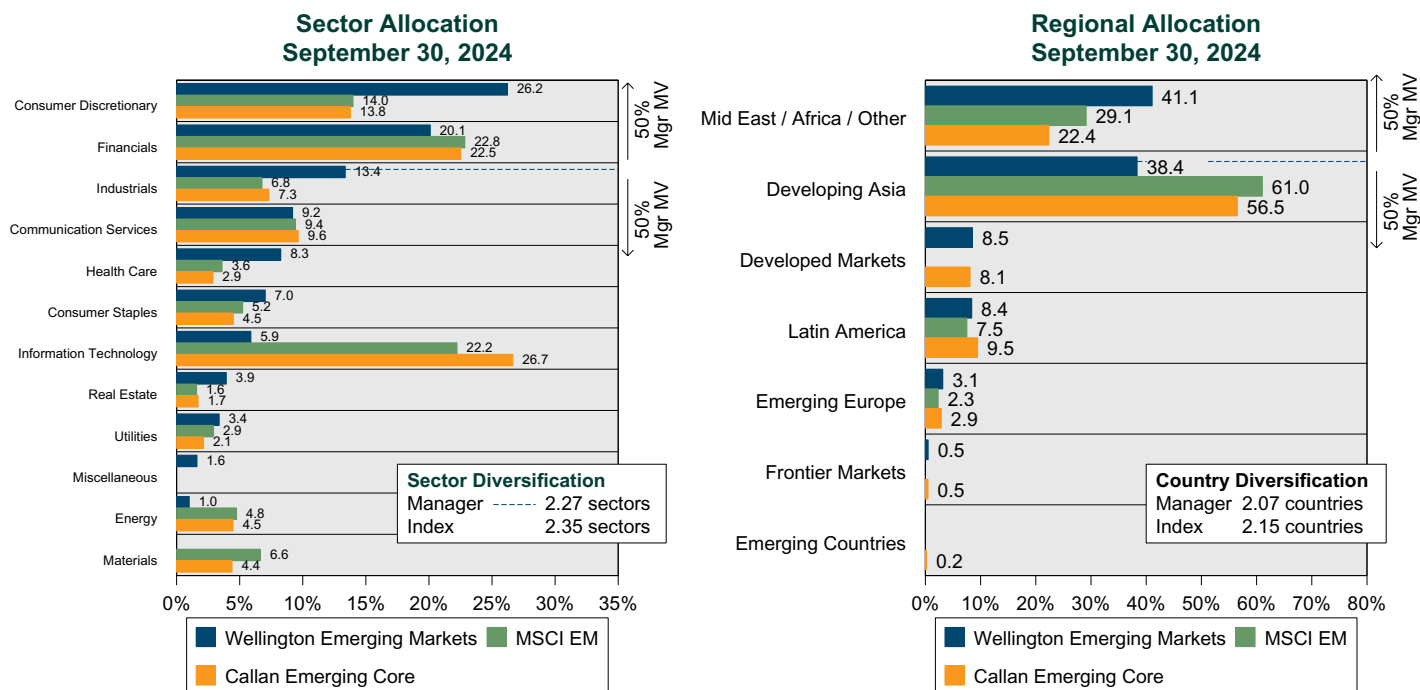
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan Emerging Core as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

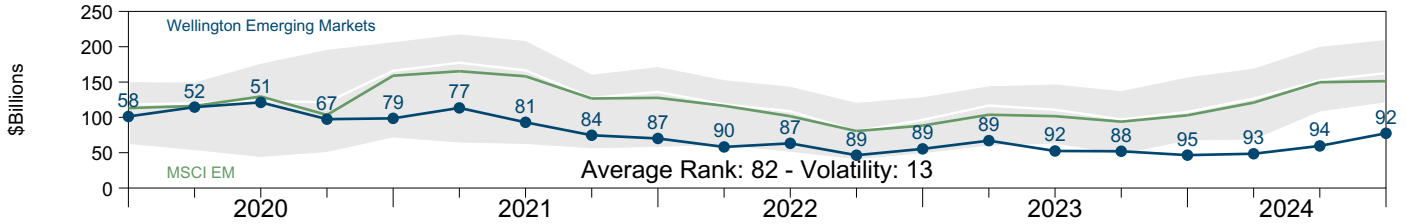


Portfolio Characteristics Analysis

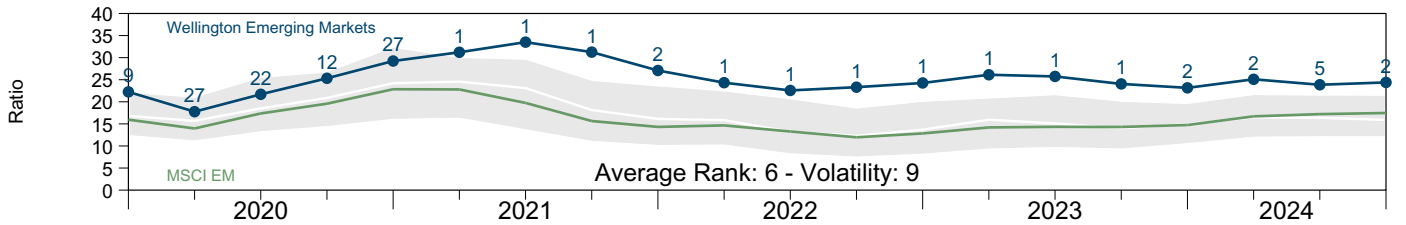
Callan Emerging Core

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Emerging Core Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI EM is shown for comparison purposes.

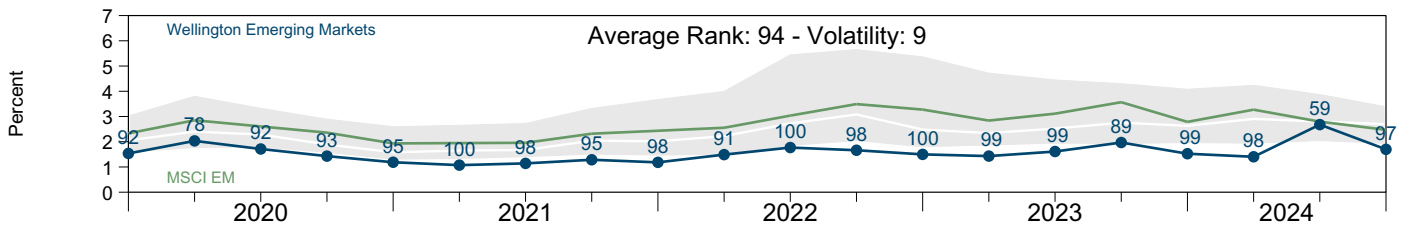
Weighted Average Market Cap



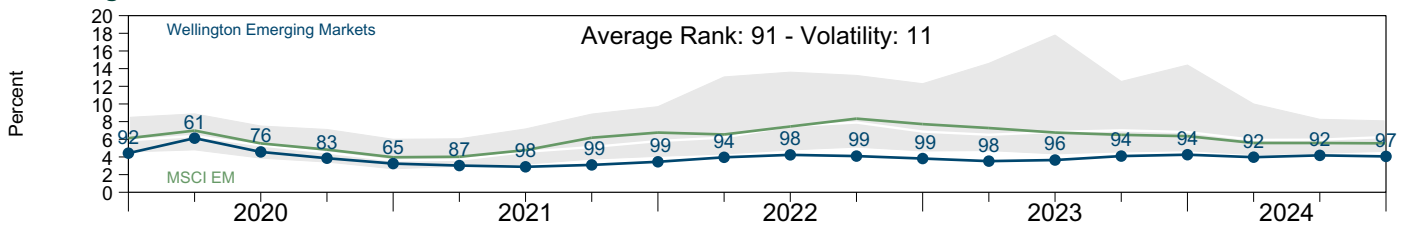
Trailing P/E



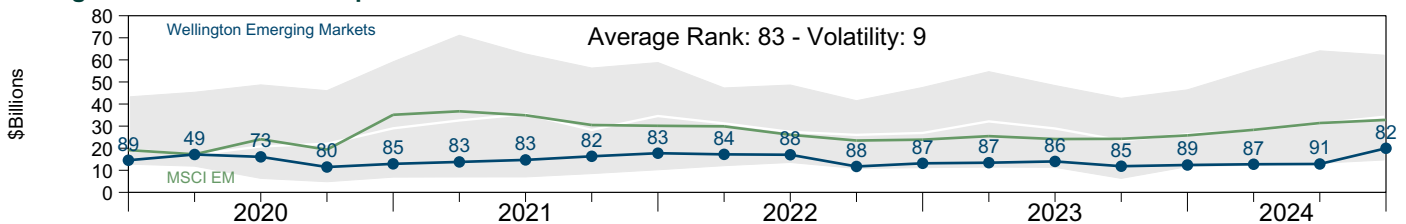
Dividend Yield



Earnings Yield



Weighted Median Market Cap

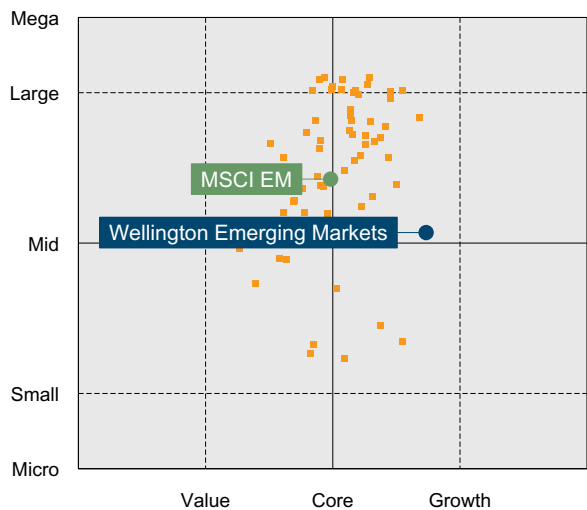


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Wellington Emerging Markets
As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

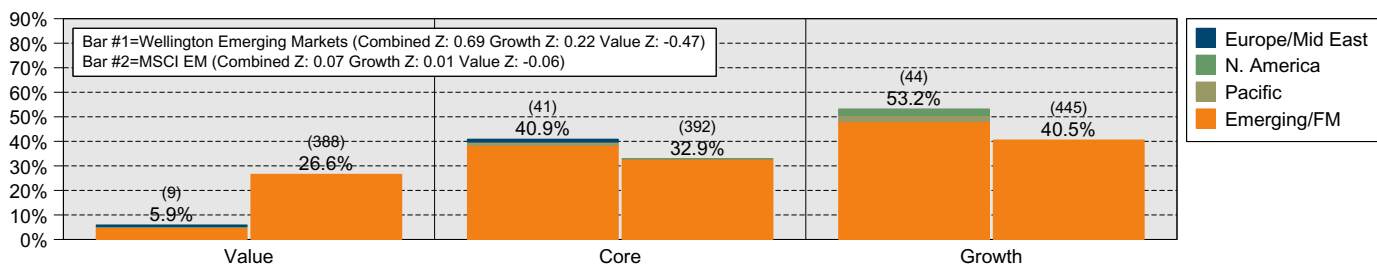
Style Map vs Callan Emerging Core Holdings as of September 30, 2024



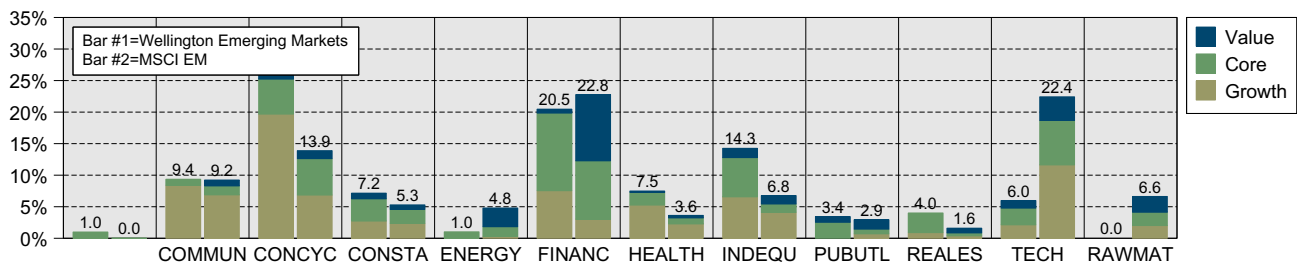
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	0.4% (1) 0.0% (0)	1.2% (1) 0.0% (0)	0.0% (0) 0.0% (0)	1.6% (2) 0.0% (0)
N. America	0.6% (1) 0.0% (0)	0.0% (0) 0.0% (1)	2.6% (2) 0.0% (0)	3.2% (3) 0.0% (1)
Pacific	0.0% (0) 0.0% (0)	1.3% (1) 0.0% (0)	2.6% (3) 0.0% (0)	3.9% (4) 0.0% (0)
Emerging/ FM	4.9% (7) 26.6% (388)	38.4% (39) 32.9% (391)	48.0% (39) 40.5% (445)	91.3% (85) 100.0% (1224)
Total	5.9% (9) 26.6% (388)	40.9% (41) 32.9% (392)	53.2% (44) 40.5% (445)	100.0% (94) 100.0% (1225)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



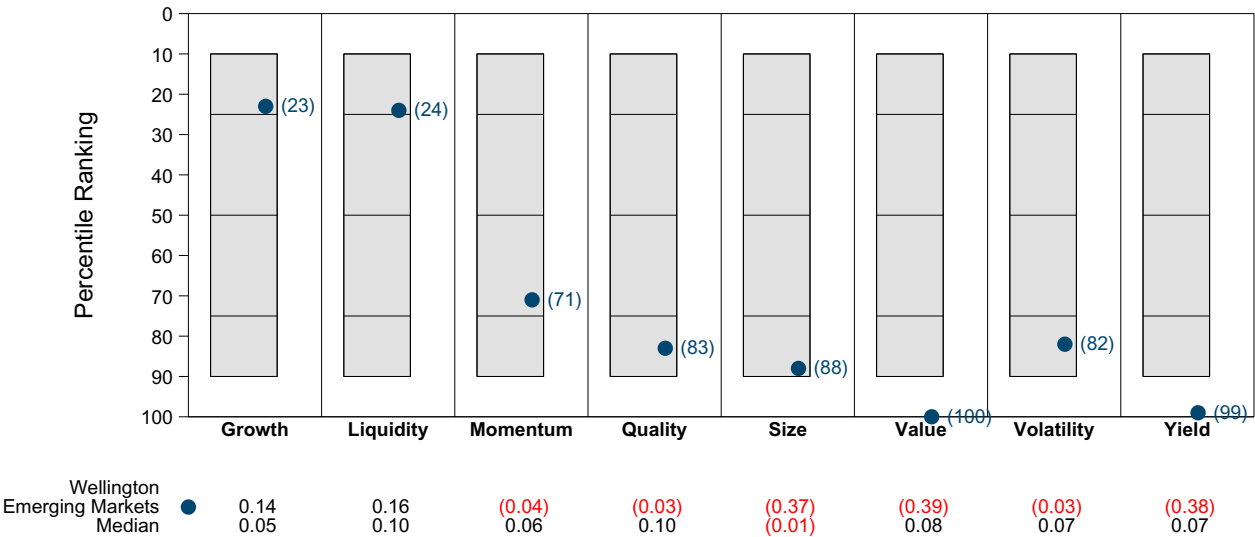
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager's factor exposure with the distribution of exposures for the Callan Emerging Core group. This analysis illustrates whether the manager's factor exposures are consistent with those of other managers employing the same style.

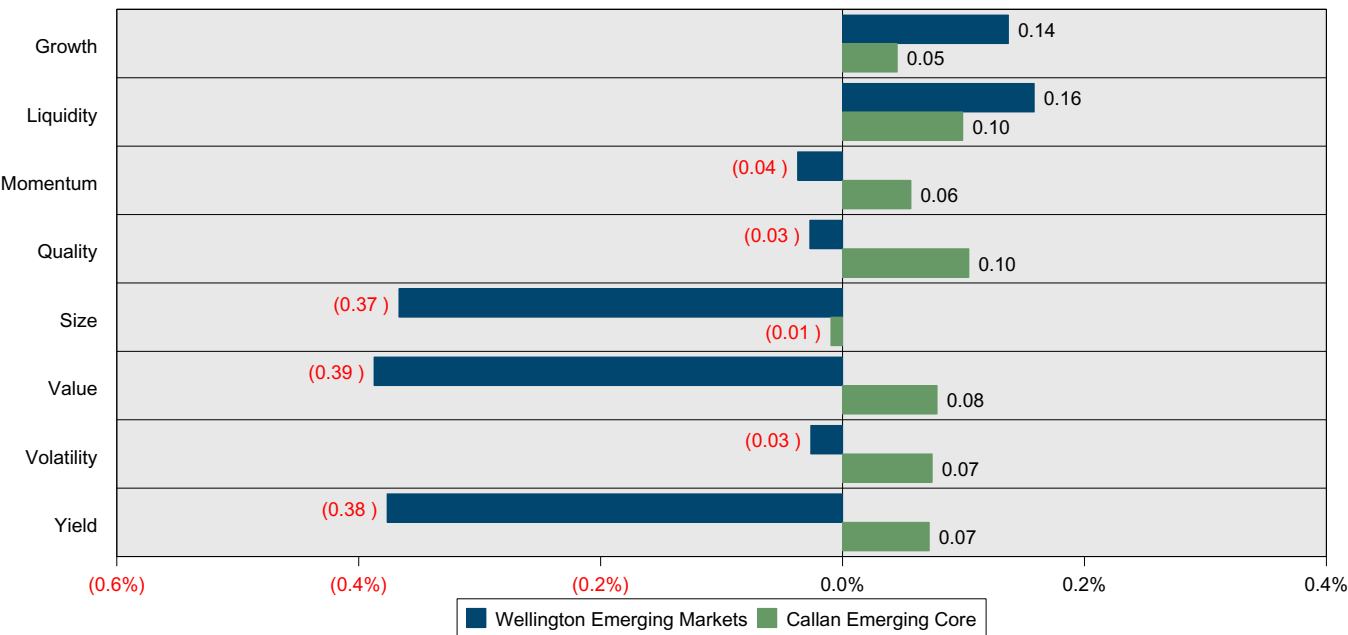
Factor Exposures Relative to MSCI EM, Rankings vs Callan Emerging Core
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager's factor exposures and the median factor for the Callan Emerging Core group relative to the MSCI EM.

Factor Exposures Relative to MSCI EM
for Period Ended September 30, 2024



Wellington Int'l Small Cap Research Period Ended September 30, 2024

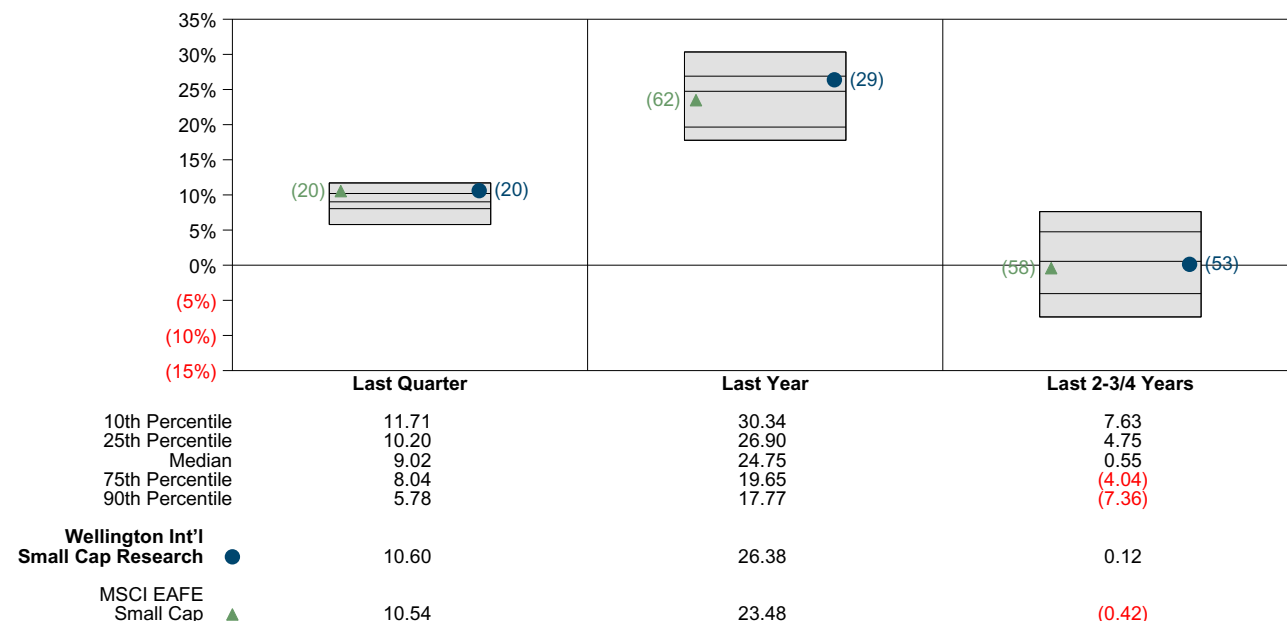
Investment Philosophy

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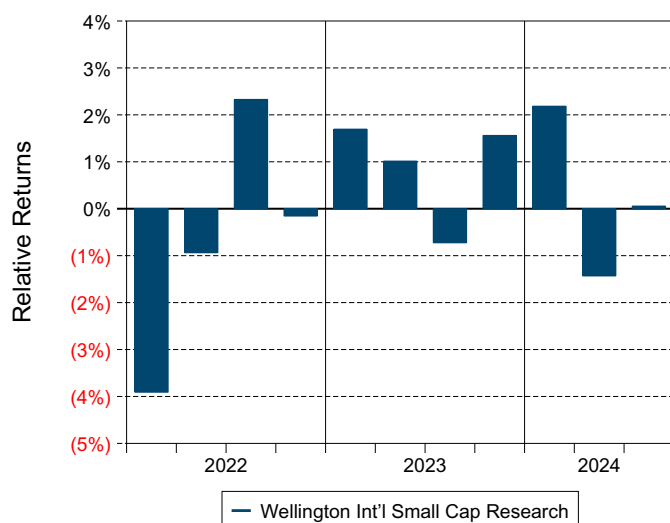
Quarterly Asset Growth

Beginning Market Value	\$136,620,364
Net New Investment	\$0
Investment Gains/(Losses)	\$14,486,883
Ending Market Value	\$151,107,247

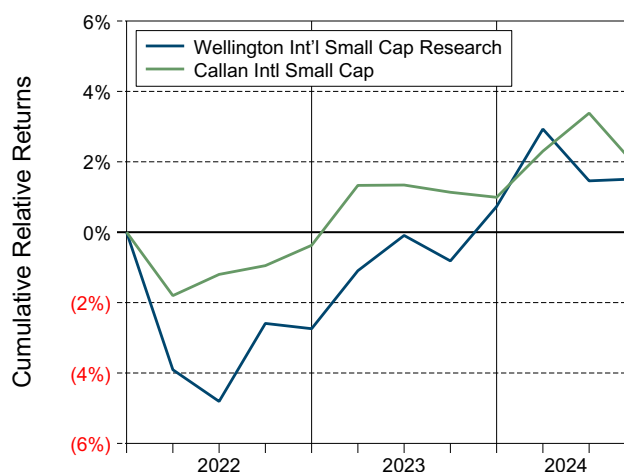
Performance vs Callan Intl Small Cap (Gross)



Relative Return vs MSCI EAFE Small Cap



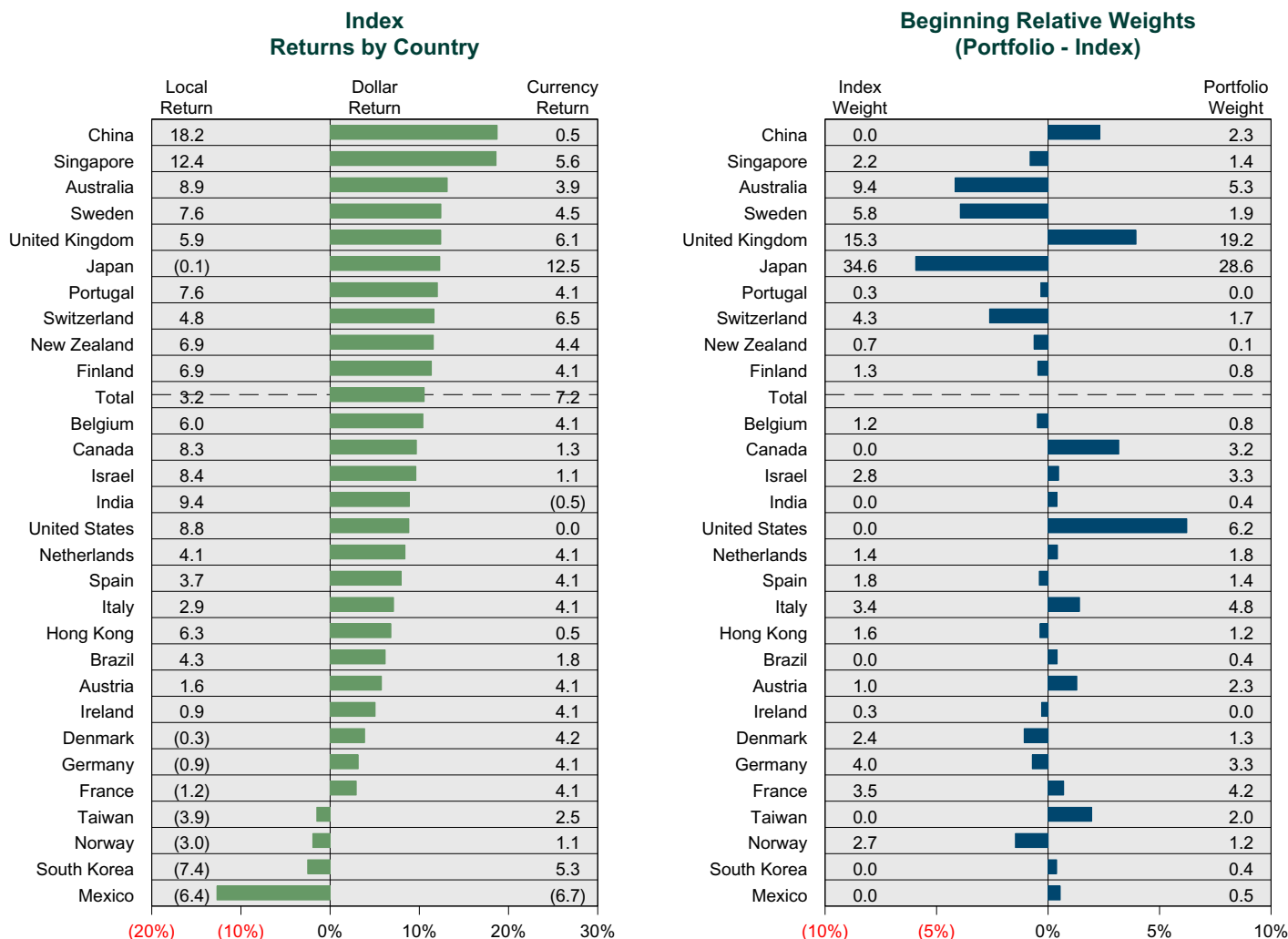
Cumulative Returns vs MSCI EAFE Small Cap



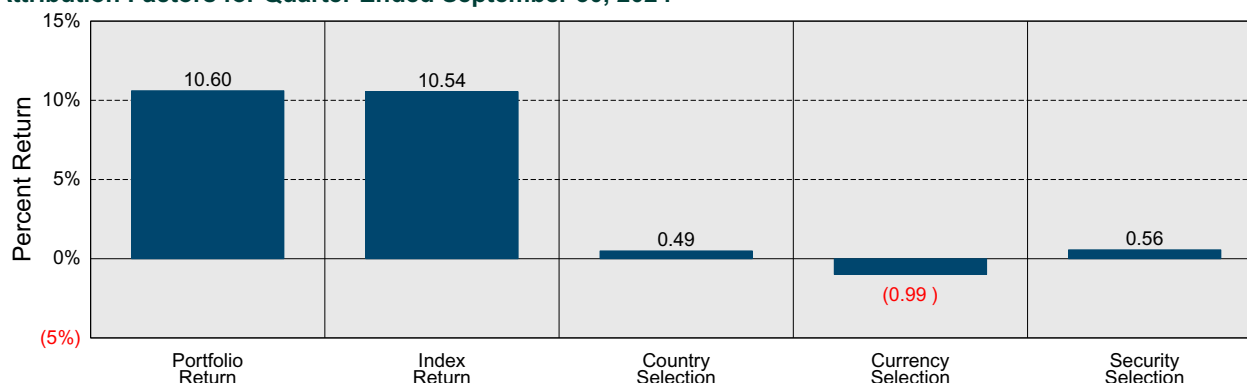
Wellington Int'l Small Cap Research vs MSCI EAFE Small Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024

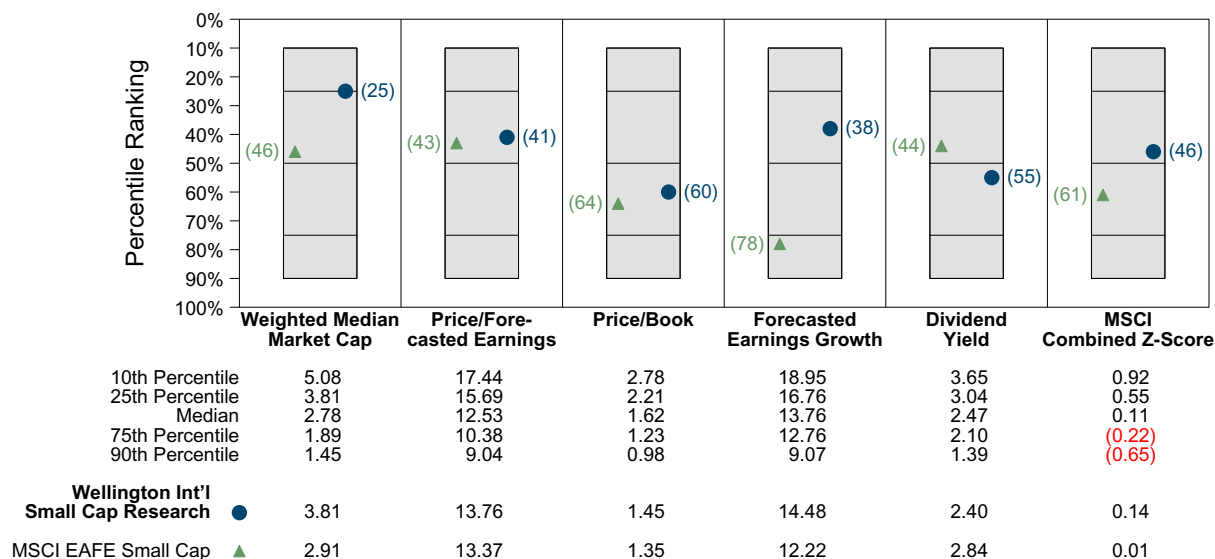


Wellington Int'l Small Cap Research Equity Characteristics Analysis Summary

Portfolio Characteristics

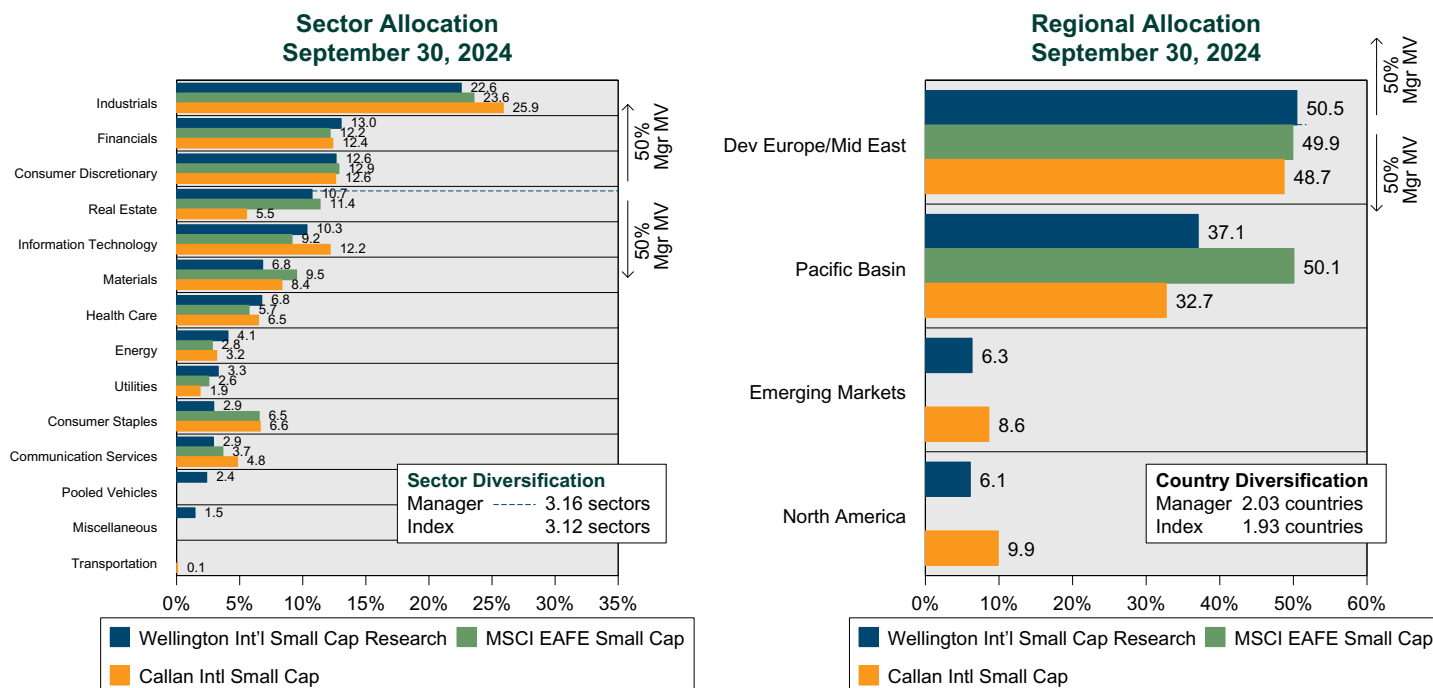
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Portfolio Characteristics Percentile Rankings Rankings Against Callan International Small Cap as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.



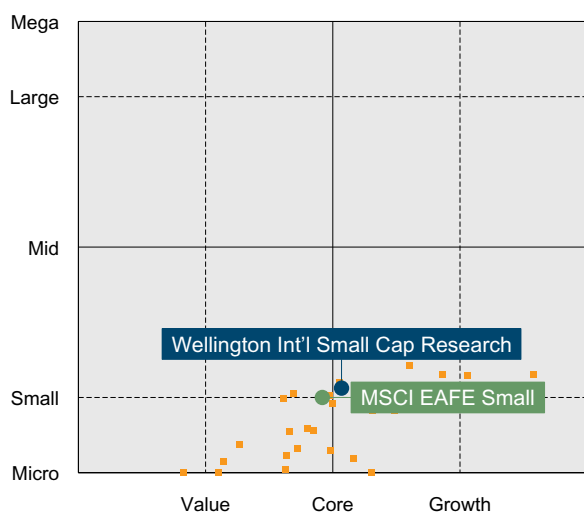
Current Holdings Based Style Analysis

Wellington Int'l Small Cap Research

As of September 30, 2024

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

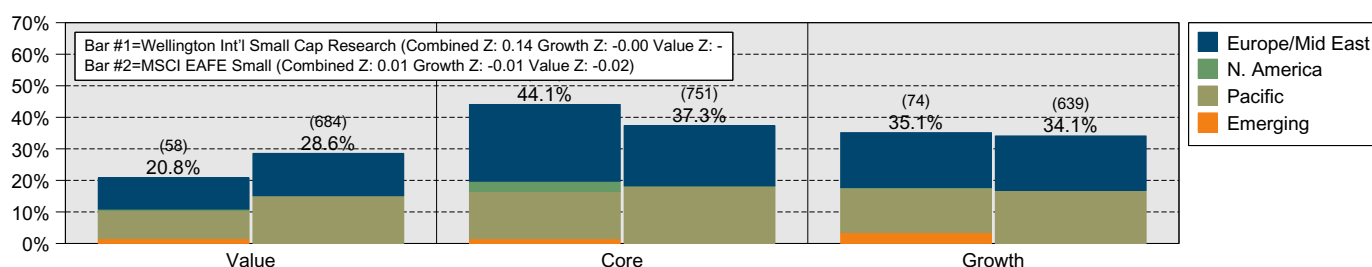
Style Map vs Callan Intl Small Cap Holdings as of September 30, 2024



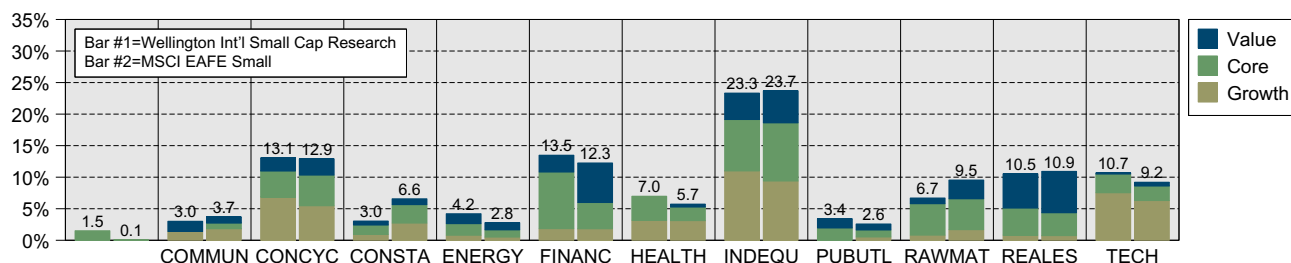
Style Exposure Matrix Holdings as of September 30, 2024

	Value	Core	Growth	Total
Europe/ Mid East	9.9% (24) 13.4% (293)	24.3% (47) 19.1% (349)	17.4% (27) 17.3% (297)	51.6% (98) 49.7% (939)
N. America	0.4% (2) 0.0% (0)	3.2% (7) 0.1% (2)	0.2% (1) 0.0% (0)	3.8% (10) 0.1% (2)
Pacific	8.9% (28) 15.1% (390)	15.0% (42) 18.2% (400)	14.0% (38) 16.8% (342)	38.0% (108) 50.2% (1132)
Emerging	1.6% (4) 0.0% (1)	1.5% (6) 0.0% (0)	3.5% (8) 0.0% (0)	6.6% (18) 0.0% (1)
Total	20.8% (58) 28.6% (684)	44.1% (102) 37.3% (751)	35.1% (74) 34.1% (639)	100.0% (234) 100.0% (2074)

Combined Z-Score Style Distribution Holdings as of September 30, 2024



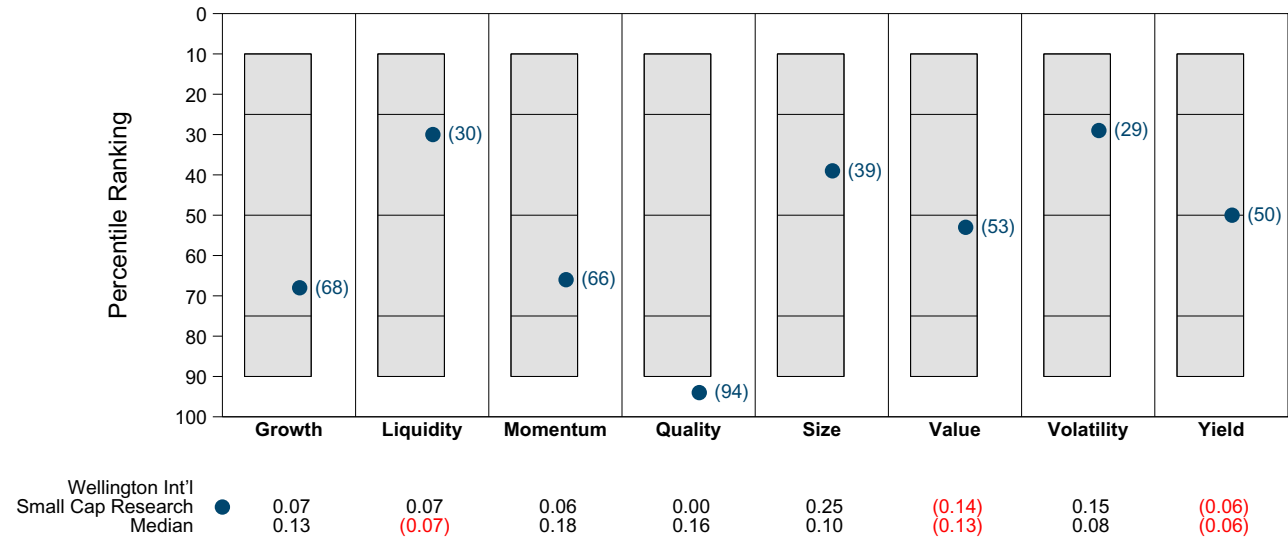
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan International Small Cap group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

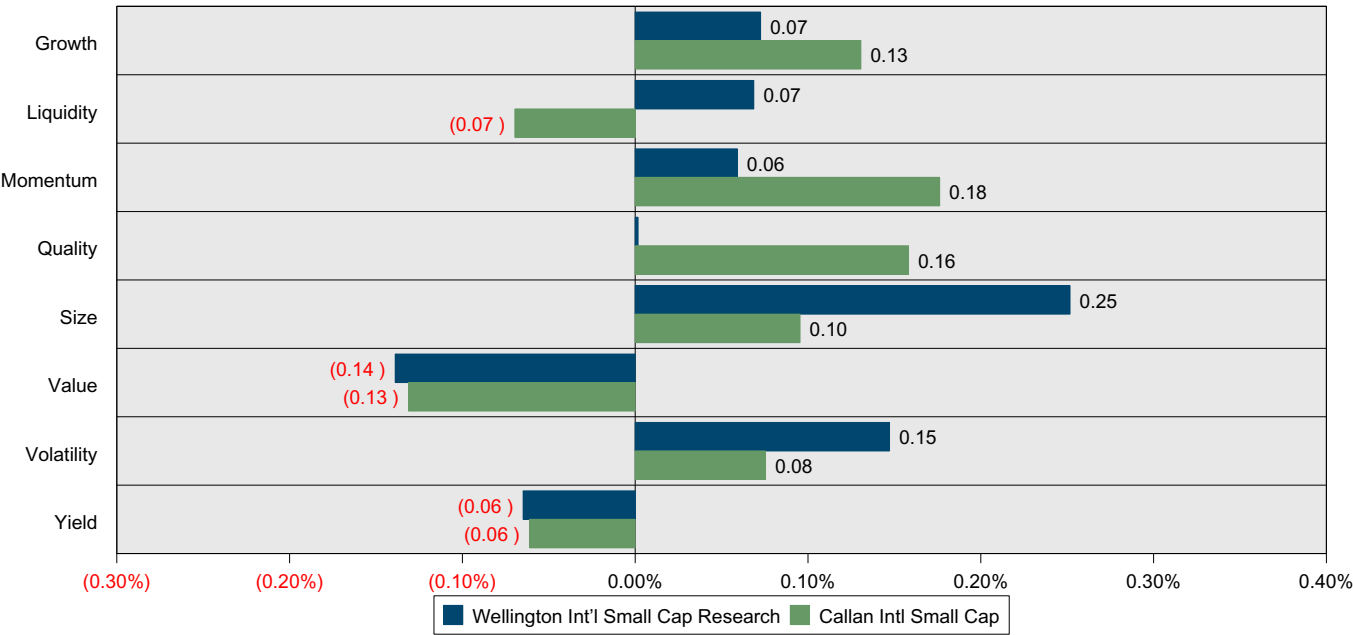
Factor Exposures Relative to MSCI EAFE Small, Rankings vs Callan International Small Cap
for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan International Small Cap group relative the the MSCI EAFE Small.

Factor Exposures Relative to MSCI EAFE Small
for Period Ended September 30, 2024



Walter Scott Global Equity
Period Ended September 30, 2024

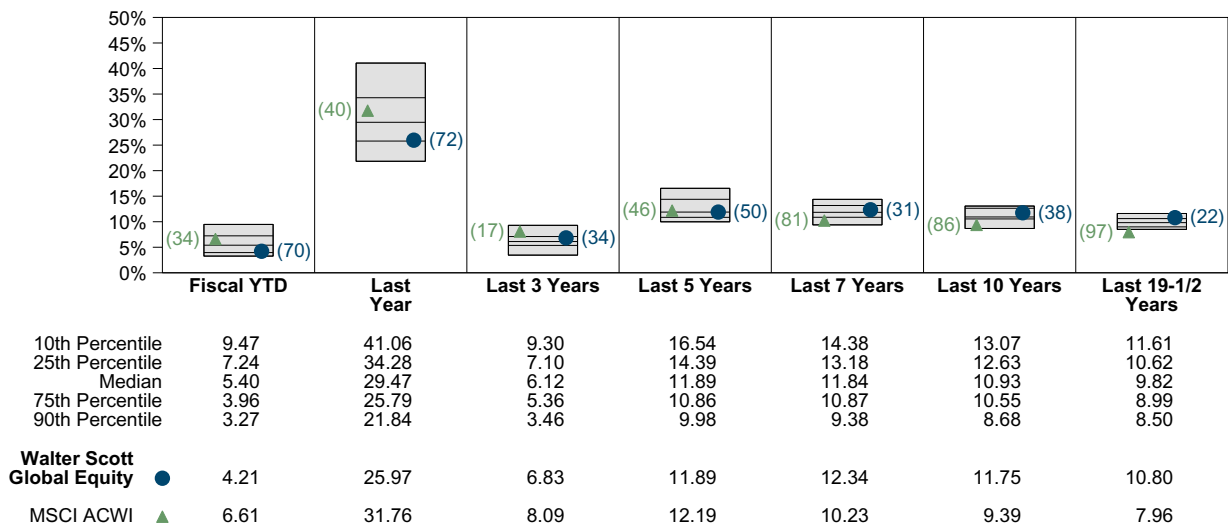
Investment Philosophy

Walter Scott was founded in 1983 and is based in Edinburgh, Scotland. The firm-wide philosophy is centered on the belief that companies with sustainable wealth generation, as defined by 1) cash return on capital employed, 2) return on equity, and 3) growth in earnings per share, will outperform over the long-term. The 24-person investment team of regional experts identifies these opportunities through in-house, bottom-up research. Walter Scott seeks high-quality and competitively-positioned companies that generate strong cash flows and are led by prudent management teams. The Global Equity portfolio holds 40 to 60 stocks with opportunistic exposure to emerging markets. The consistently-applied process is reflected in the strategy's compelling longer-term investment performance. NHRS inception in the fund is December 2004.

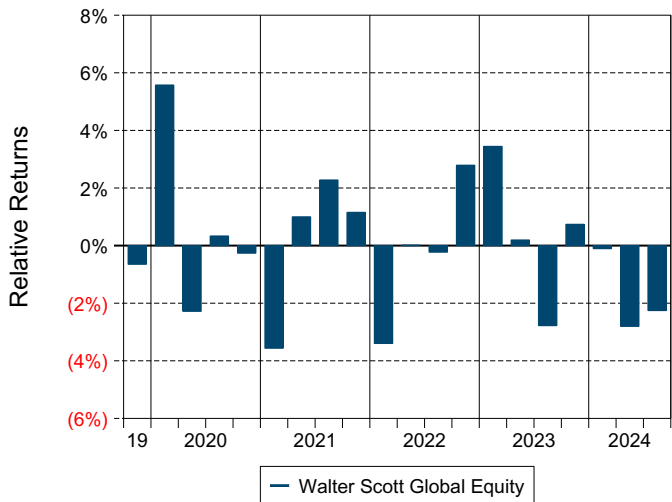
Quarterly Asset Growth

Beginning Market Value	\$594,188,859
Net New Investment	\$0
Investment Gains/(Losses)	\$25,022,002
Ending Market Value	\$619,210,861

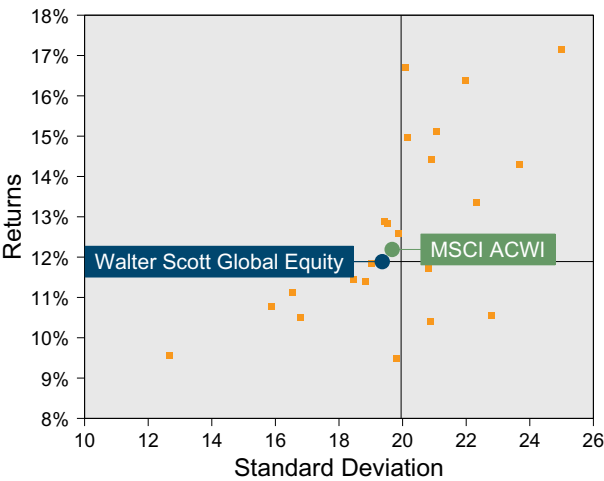
Performance vs Callan Gbl Dev Gr Eq (Gross)



Relative Return vs MSCI ACWI



Callan Gbl Dev Gr Eq (Gross)
Annualized Five Year Risk vs Return

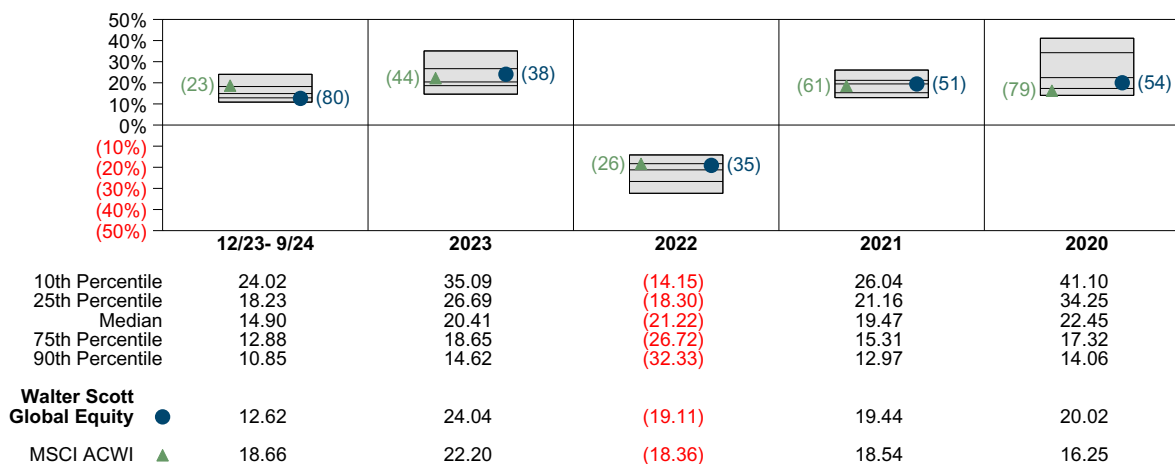


Walter Scott Global Equity Return Analysis Summary

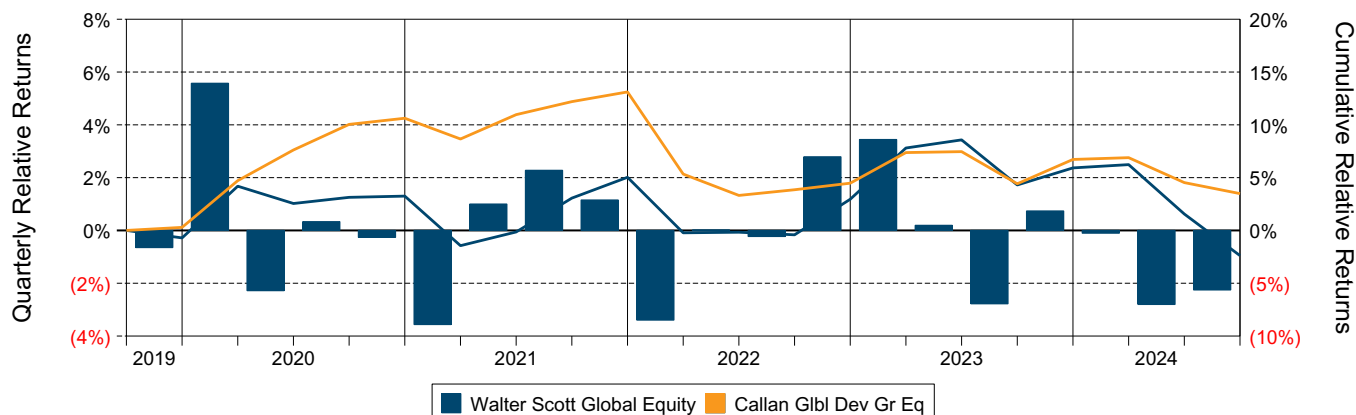
Return Analysis

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.

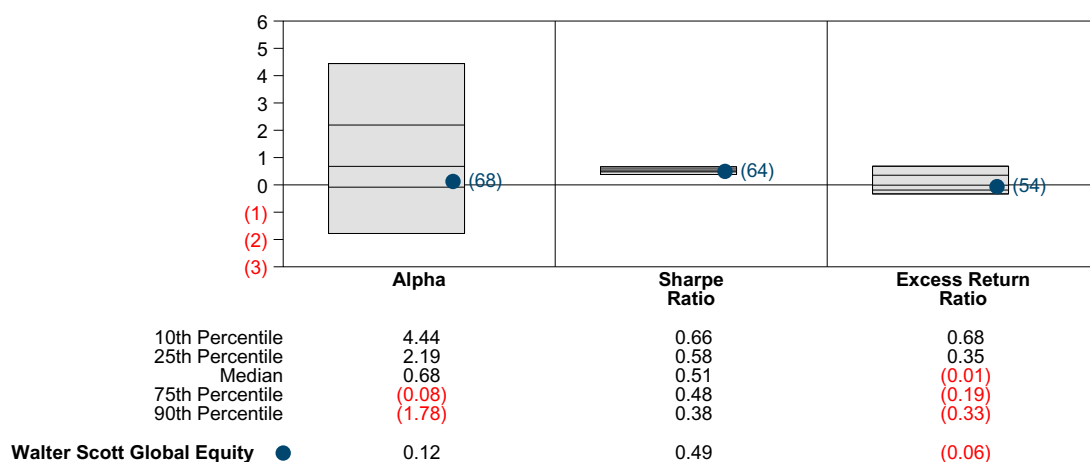
Performance vs Callan Gbl Dev Gr Eq (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI



Risk Adjusted Return Measures vs MSCI ACWI Rankings Against Callan Gbl Dev Gr Eq (Gross) Five Years Ended September 30, 2024

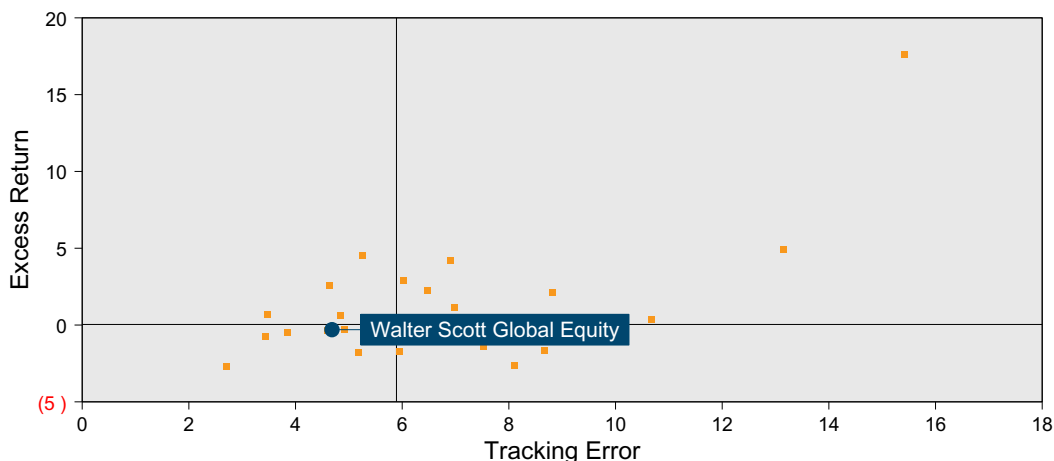


Walter Scott Global Equity Risk Analysis Summary

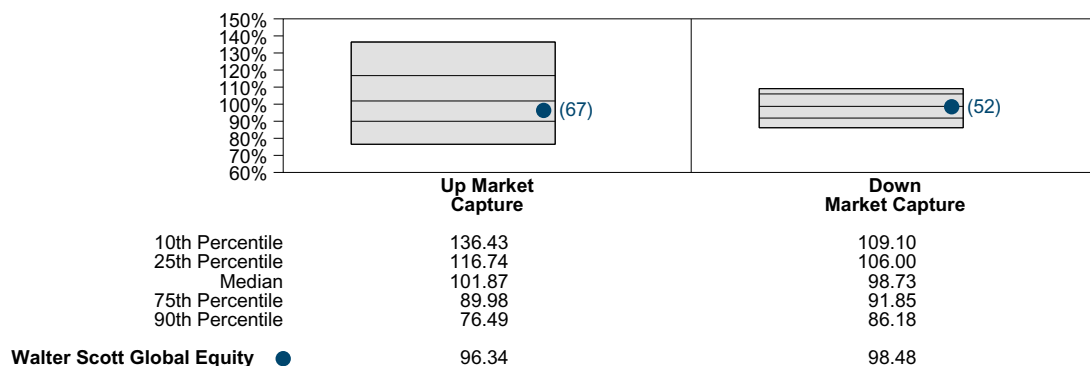
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the manager's risk statistics versus the peer group.

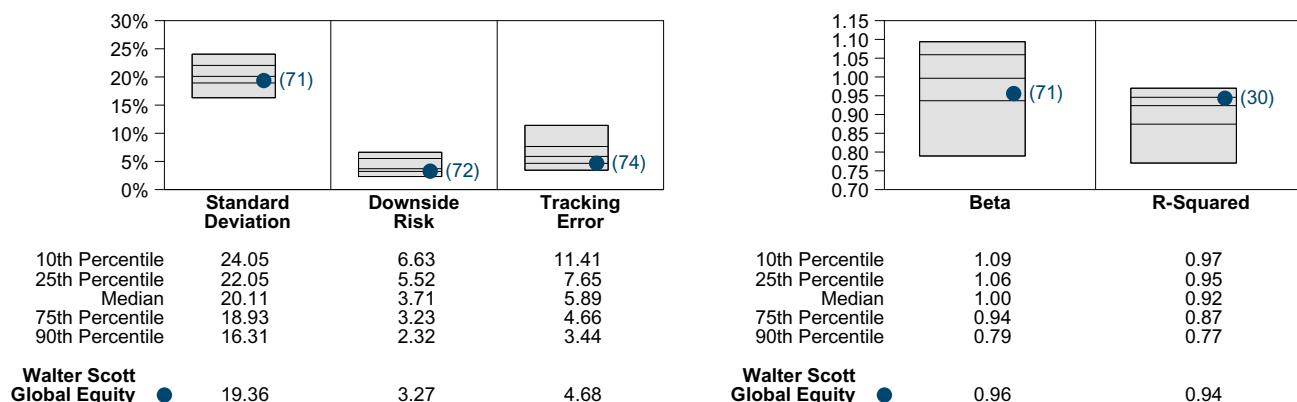
Risk Analysis vs Callan Global Developed Growth Equity (Gross) Five Years Ended September 30, 2024



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



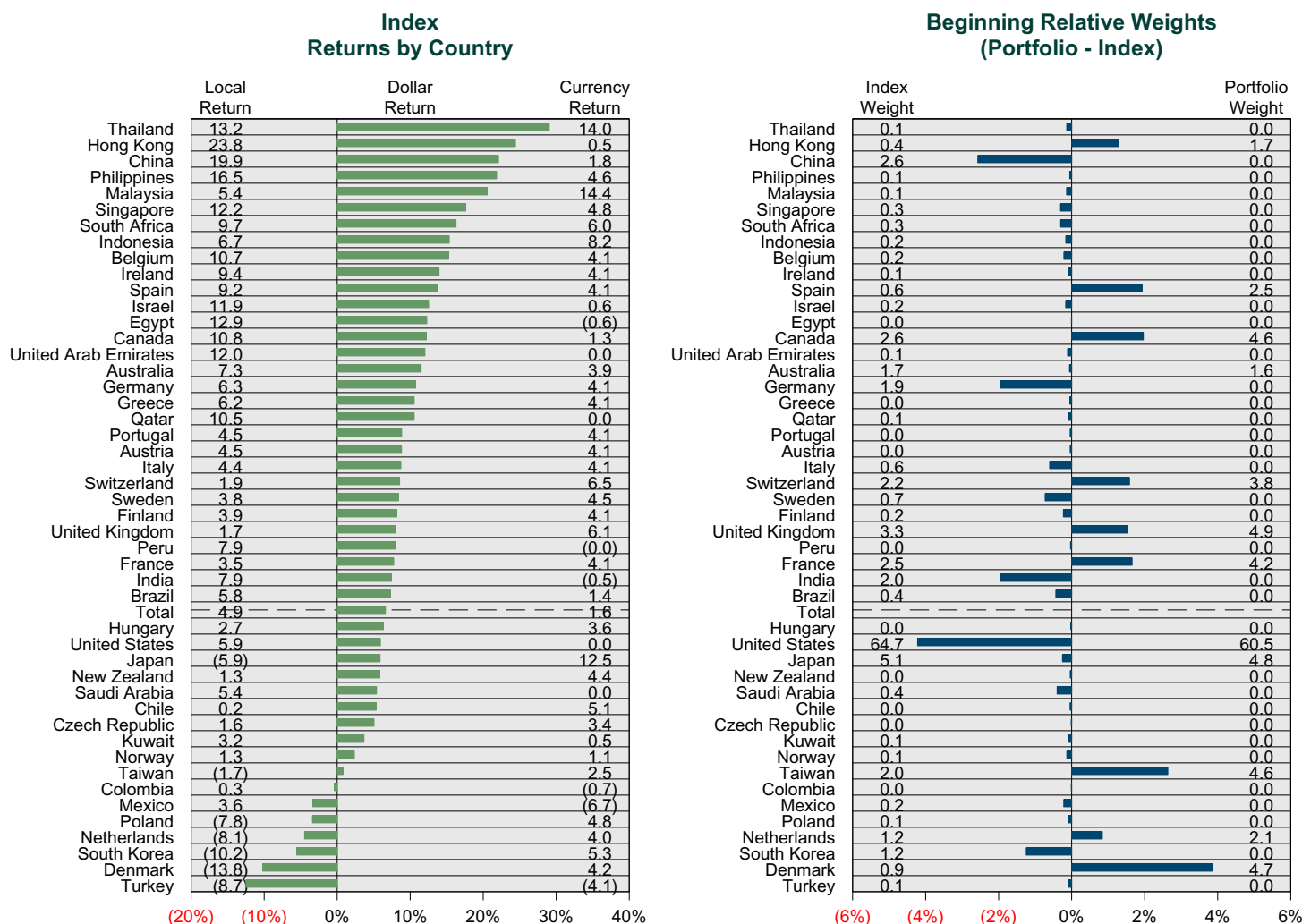
Risk Statistics Rankings vs MSCI ACWI Rankings Against Callan Global Developed Growth Equity (Gross) Five Years Ended September 30, 2024



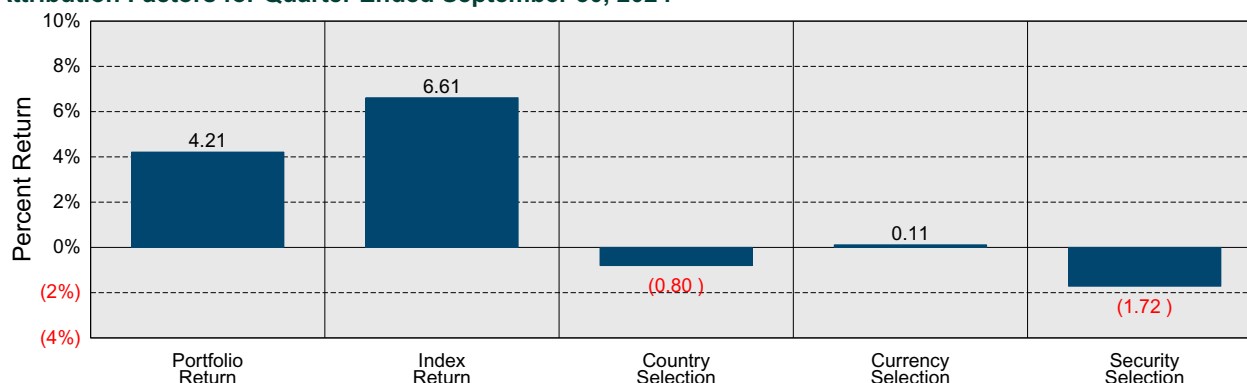
Walter Scott Global Equity vs MSCI ACWI Attribution for Quarter Ended September 30, 2024

International Attribution

The first chart below illustrates the return for each country in the index sorted from high to low. The total return for the index is highlighted with a dotted line. The second chart (countries presented in the same order) illustrates the manager's country allocation decisions relative to the index. To the extent that the manager over-weighted a country that had a higher return than the total return for the index (above the dotted line) it contributes positively to the manager's country (or currency) selection effect. The last chart details the manager return, the index return, and the attribution factors for the quarter.



Attribution Factors for Quarter Ended September 30, 2024



Walter Scott Global Equity

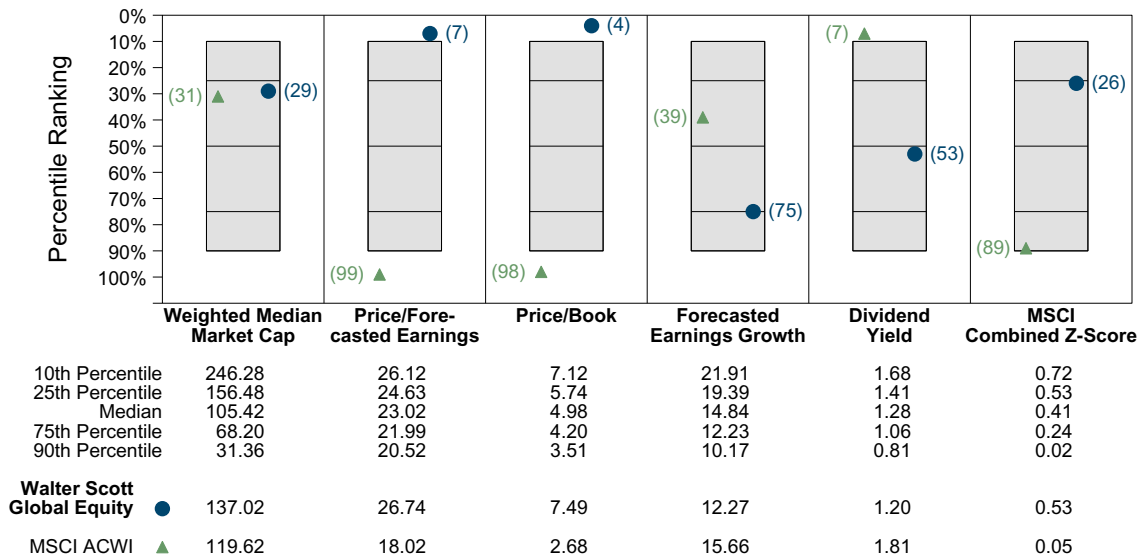
Equity Characteristics Analysis Summary

Portfolio Characteristics

This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

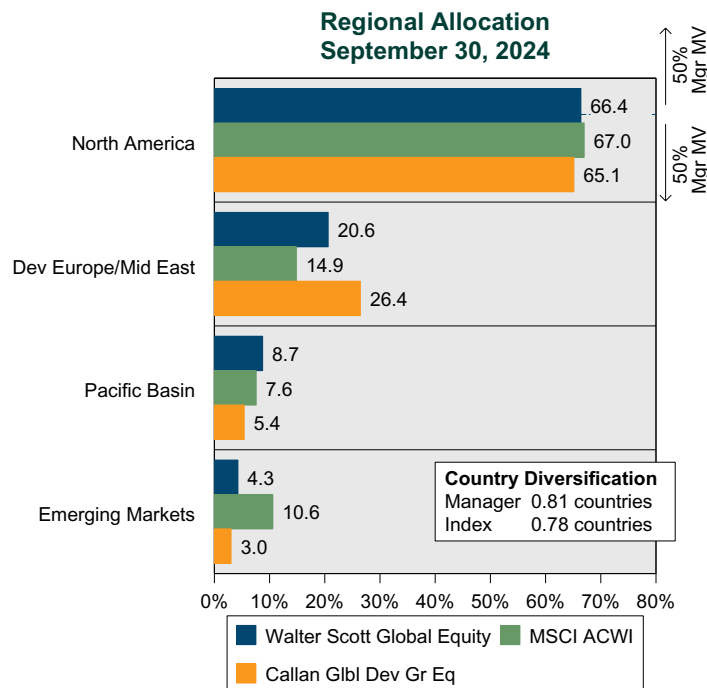
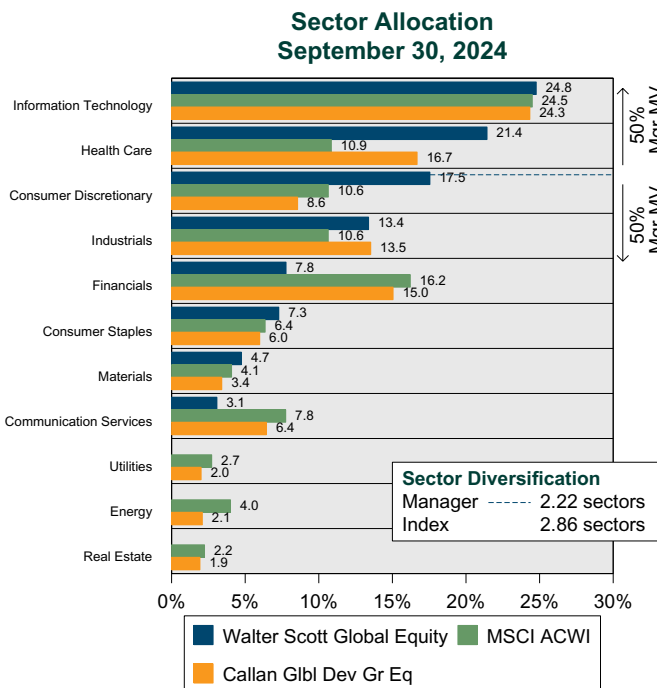
Portfolio Characteristics Percentile Rankings

Rankings Against Callan Global Developed Growth Equity as of September 30, 2024



Sector Weights

The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares the manager's geographical region weights with those of the benchmark as well as the median region weights of the peer group.

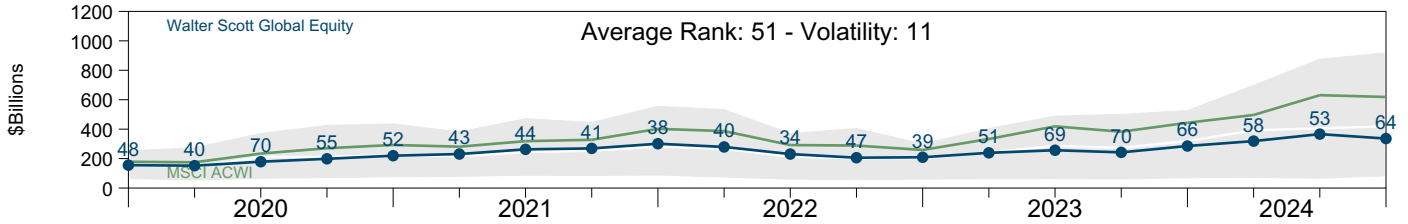


Portfolio Characteristics Analysis

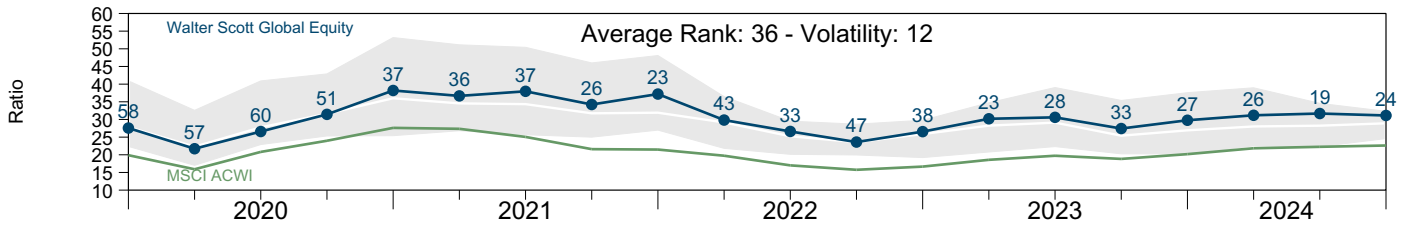
Callan Gbl Dev Gr Eq

The charts below illustrate the behavior of the product over different portfolio characteristics through time. As a backdrop the range (from 10th to 90th percentile) is shown for the Callan Gbl Dev Gr Eq Universe. The ranking of the product in this group is shown above each quarter end dot. The average ranking of the product and, if there are at least 12 data points, the standard deviation of that ranking is also shown on the chart. The MSCI ACWI is shown for comparison purposes.

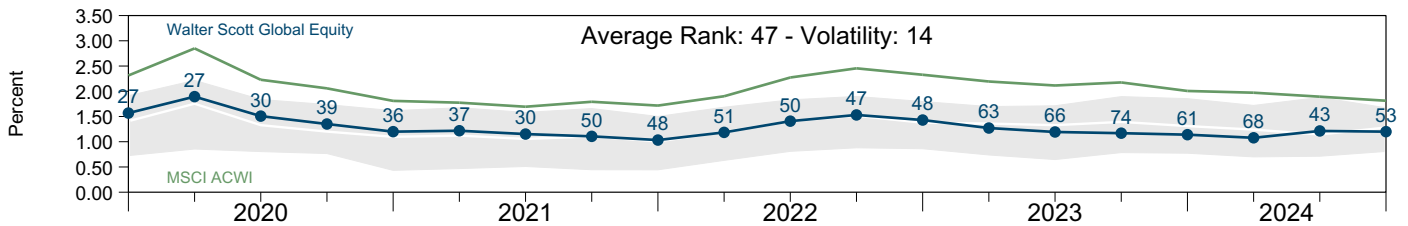
Weighted Average Market Cap



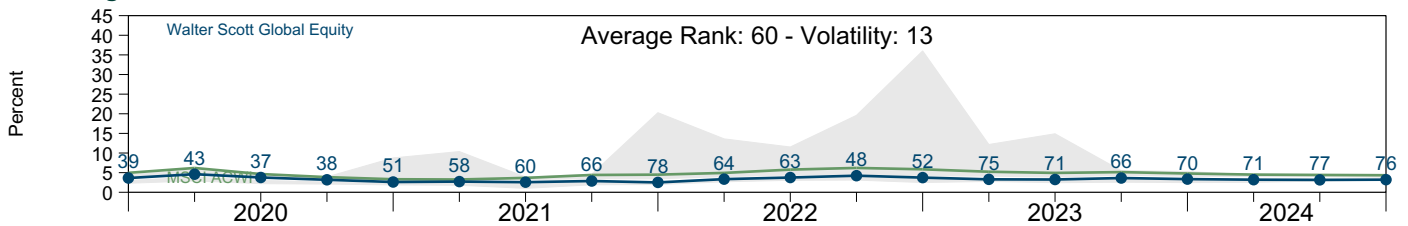
Trailing P/E



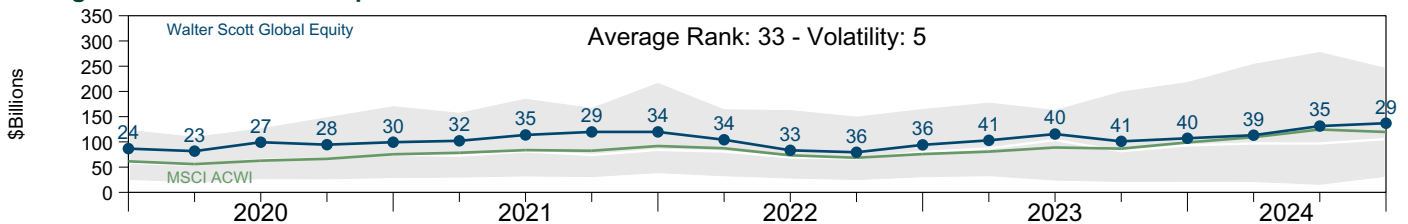
Dividend Yield



Earnings Yield



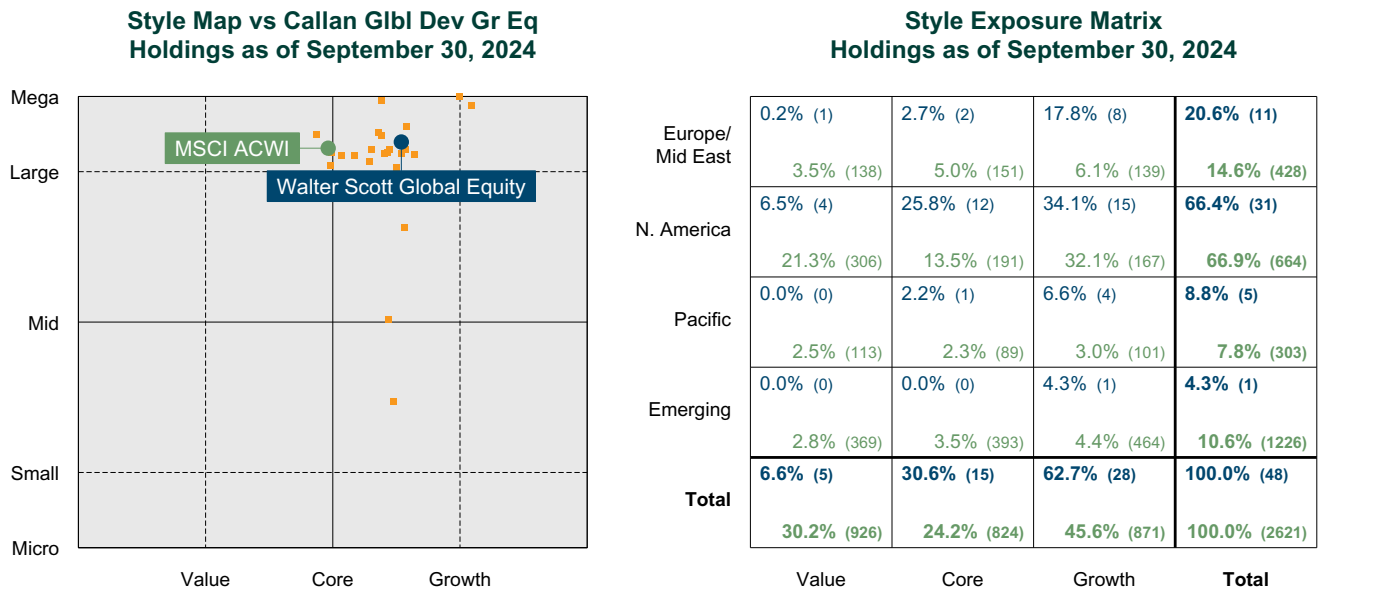
Weighted Median Market Cap



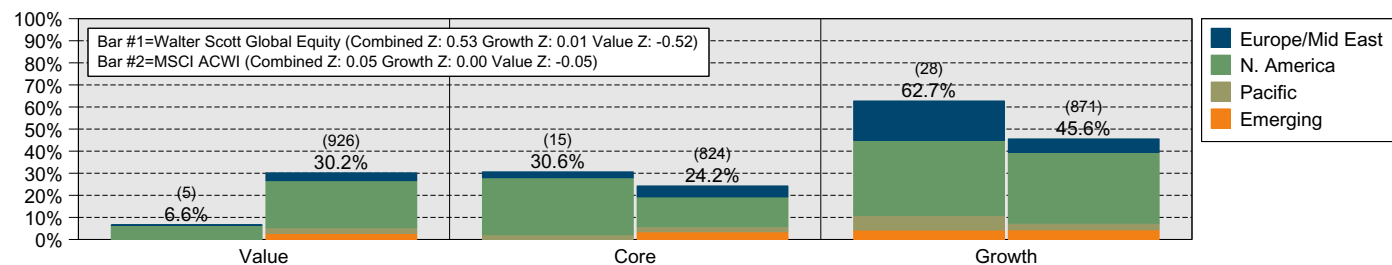
Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

Current Holdings Based Style Analysis
Walter Scott Global Equity
As of September 30, 2024

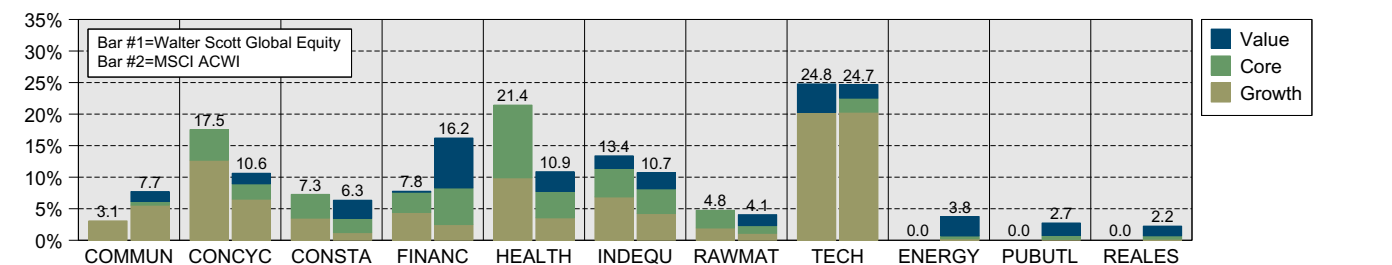
This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.



Combined Z-Score Style Distribution Holdings as of September 30, 2024



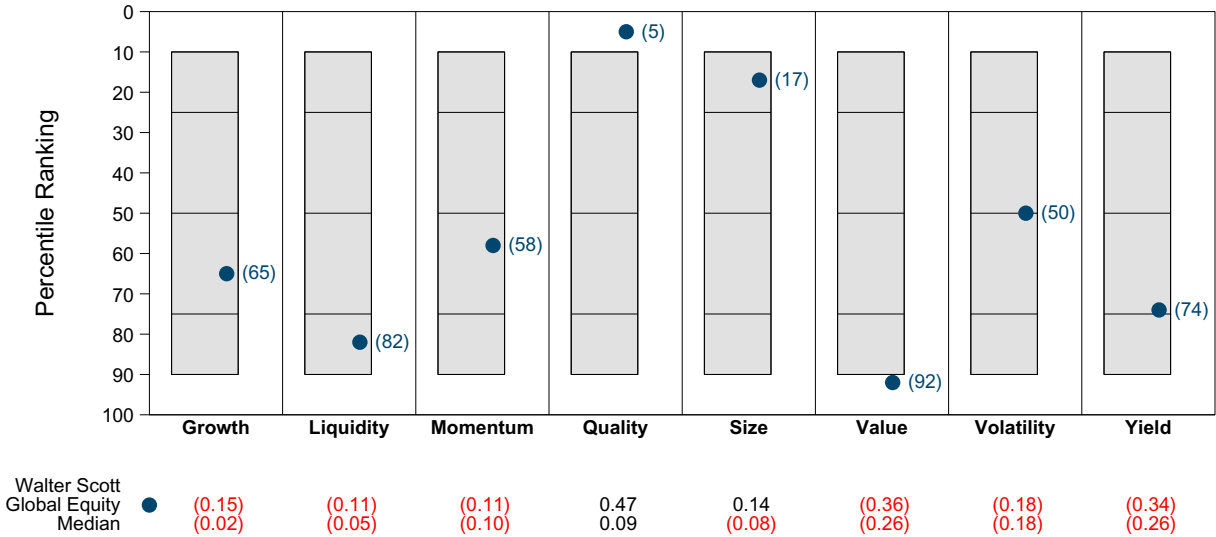
Sector Weights Distribution Holdings as of September 30, 2024



Relative Factor Exposure Rankings

This graph compares the manager’s factor exposure with the distribution of exposures for the Callan Global Developed Growth Equity group. This analysis illustrates whether the manager’s factor exposures are consistent with those of other managers employing the same style.

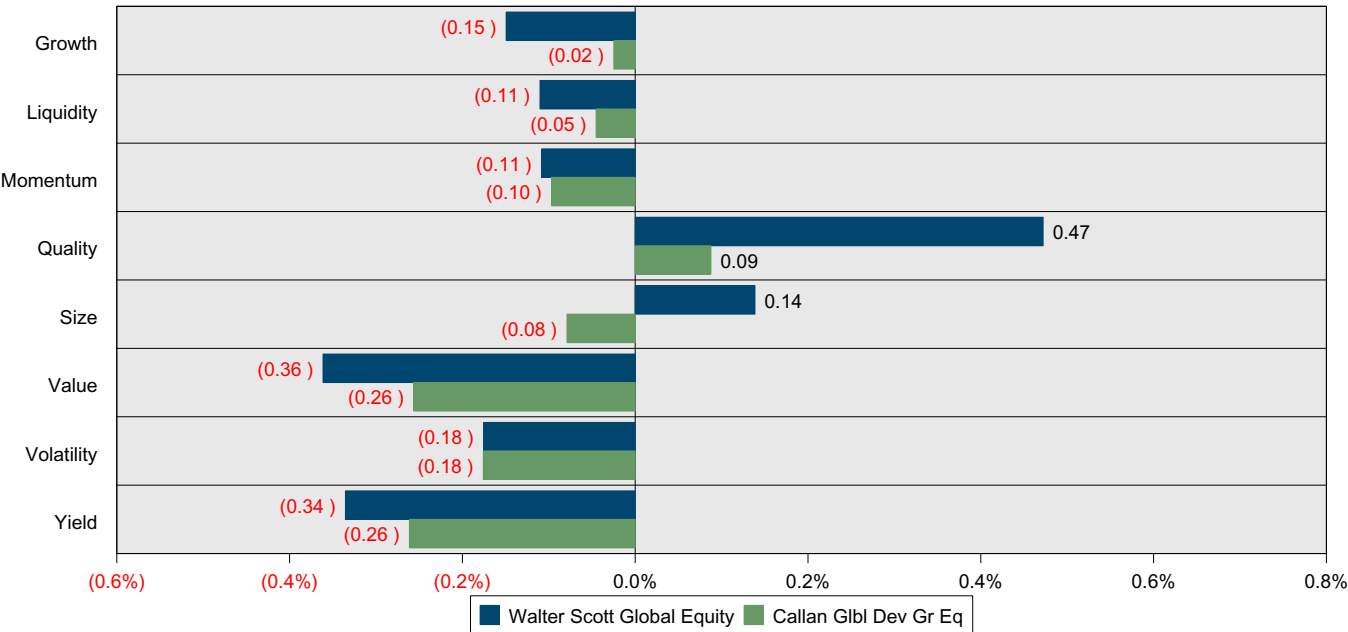
Factor Exposures Relative to MSCI ACWI, Rankings vs Callan Global Developed Growth Equity for Period Ended September 30, 2024



Relative Factor Exposures

This graph compares the manager’s factor exposures and the median factor for the Callan Global Developed Growth Equity group relative to the MSCI ACWI.

Factor Exposures Relative to MSCI ACWI for Period Ended September 30, 2024



Total Fixed Income Period Ended September 30, 2024

Fixed Income Benchmark

The Fixed Income Benchmark is the Bloomberg Universal Bond Index as of 7/1/2007. From 1/1/2005 to 7/1/2007 the benchmark was 85% Bloomberg Universal Bond Index and 15% JP Morgan GBI Broad Index. From 1/1/2000 to 1/1/2005 the benchmark was 83% Bloomberg Universal Bond Index and 17% JP Morgan GBI Broad Index. From 1/1/1996 to 1/1/2000 the benchmark was 80% Bloomberg Universal Bond Index and 20% JP Morgan GBI Broad Index. Prior to 1/1/1996 the benchmark was the Bloomberg Universal Bond Index.

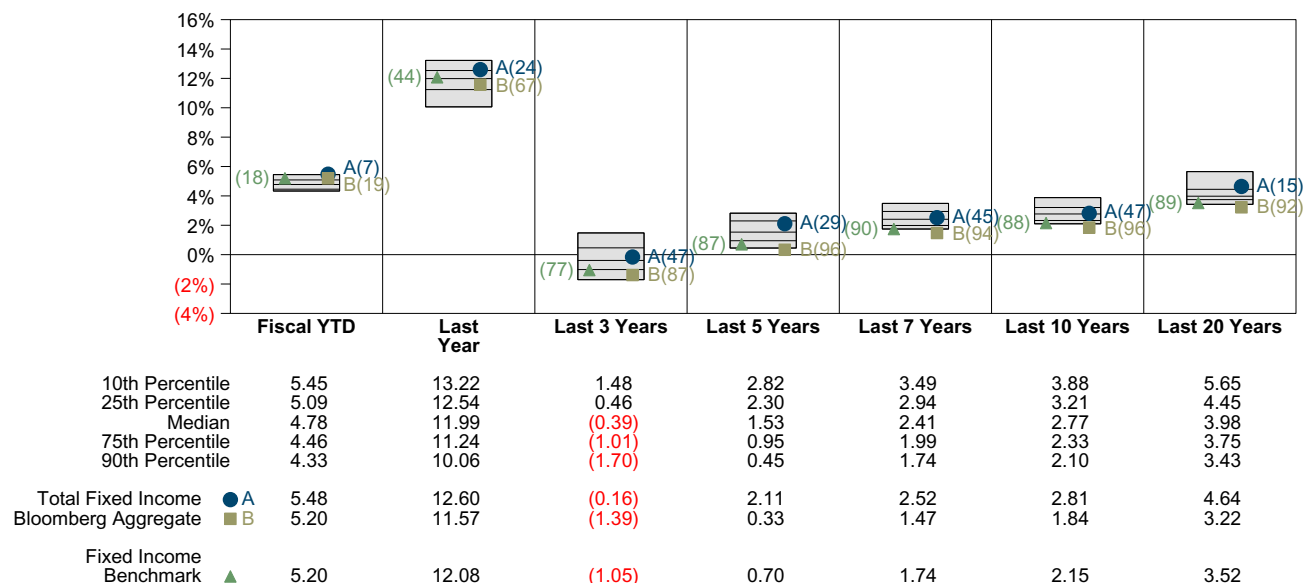
Quarterly Summary and Highlights

- Total Fixed Income's portfolio posted a 5.48% return for the quarter placing it in the 7 percentile of the Large Public Fd - Dom Fixed group for the quarter and in the 24 percentile for the last year.
- Total Fixed Income's portfolio outperformed the Fixed Income Benchmark by 0.28% for the quarter and outperformed the Fixed Income Benchmark for the year by 0.52%.

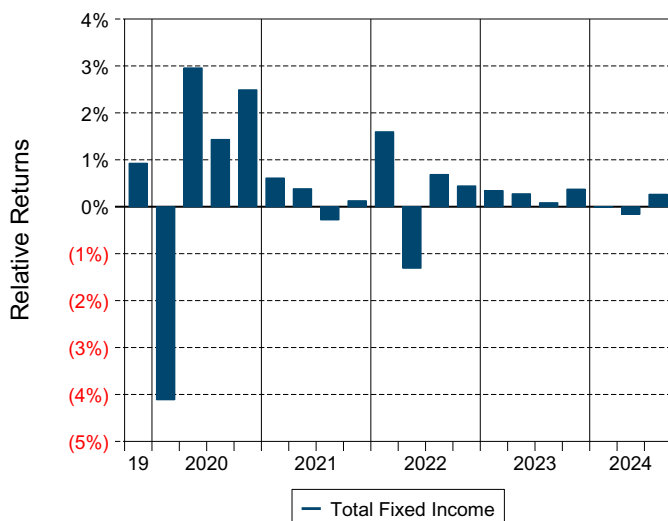
Quarterly Asset Growth

Beginning Market Value	\$2,336,137,563
Net New Investment	\$0
Investment Gains/(Losses)	\$127,938,217
Ending Market Value	\$2,464,075,780

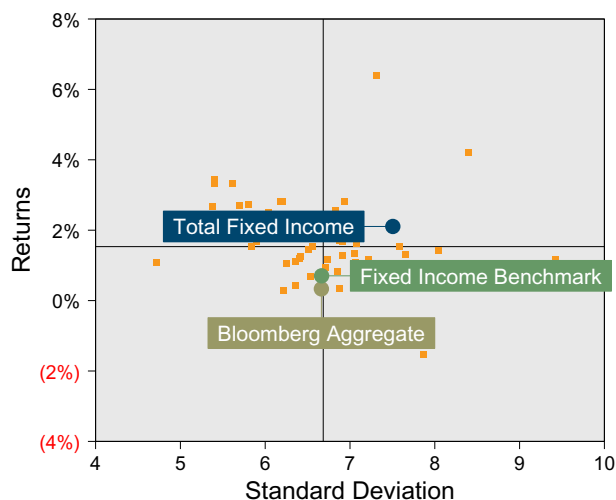
Performance vs Large Public Fd - Dom Fixed (Gross)



Relative Return vs Fixed Income Benchmark



Large Public Fd - Dom Fixed (Gross) Annualized Five Year Risk vs Return

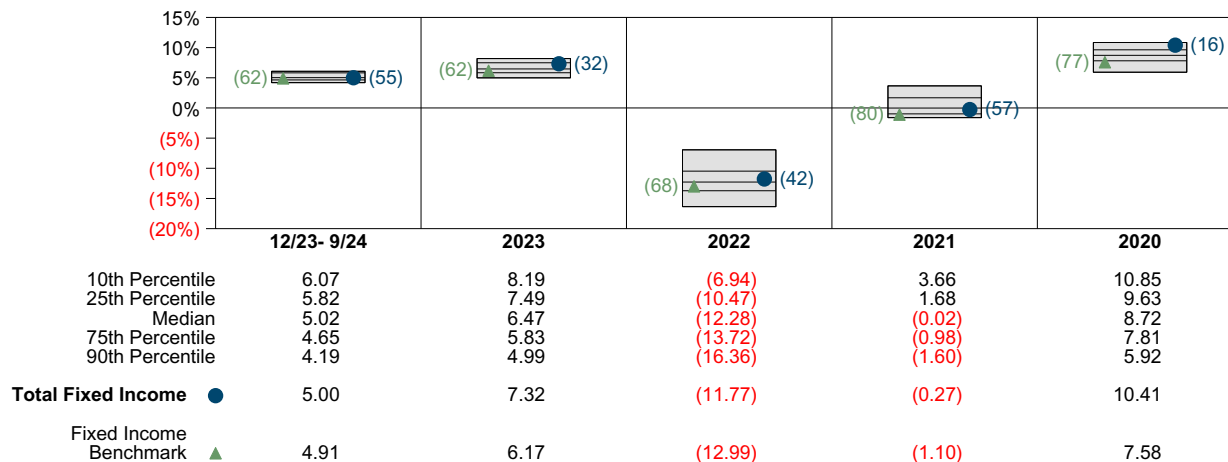


Total Fixed Income Return Analysis Summary

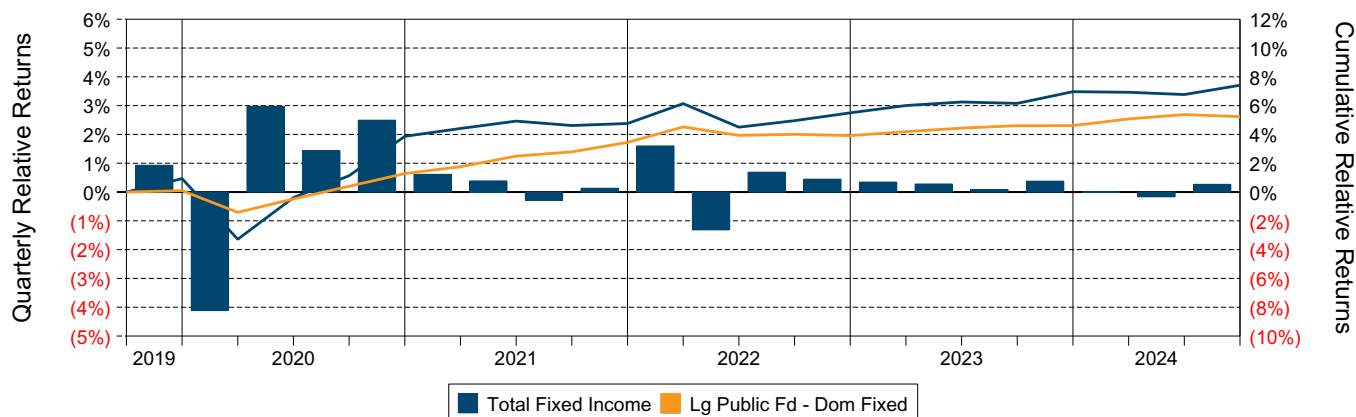
Return Analysis

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

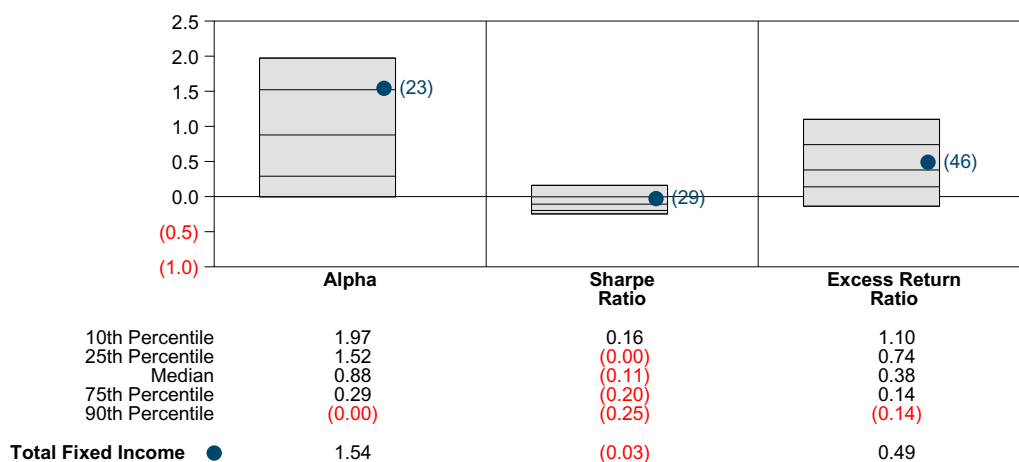
Performance vs Lg Public Fd - Dom Fixed (Gross)



Cumulative and Quarterly Relative Returns vs Fixed Income Benchmark



Risk Adjusted Return Measures vs Fixed Income Benchmark Rankings Against Lg Public Fd - Dom Fixed (Gross) Five Years Ended September 30, 2024

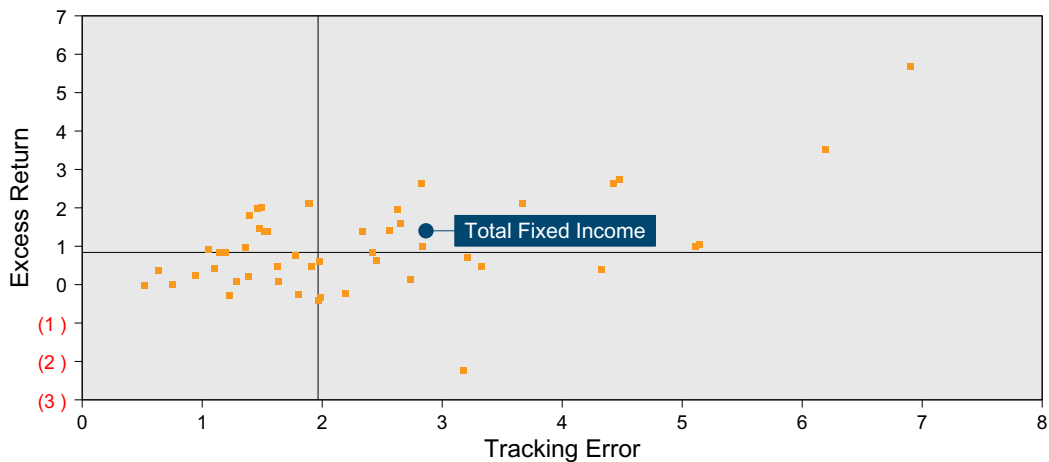


Total Fixed Income Risk Analysis Summary

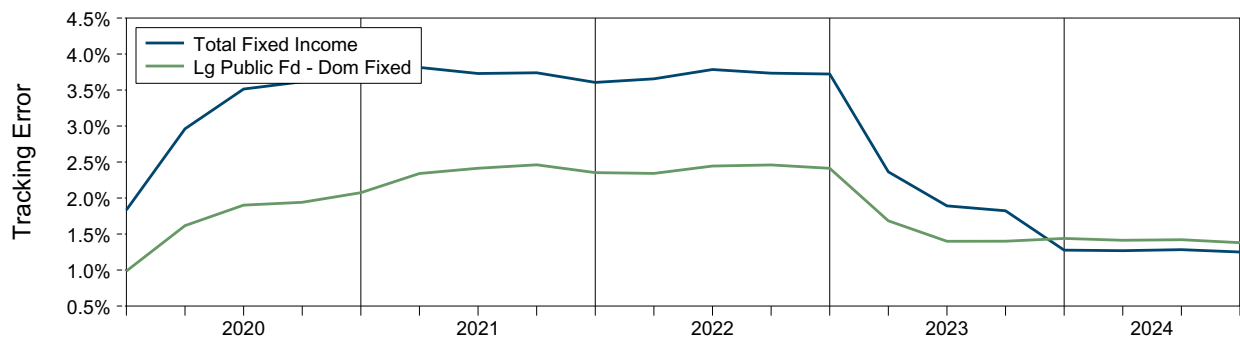
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

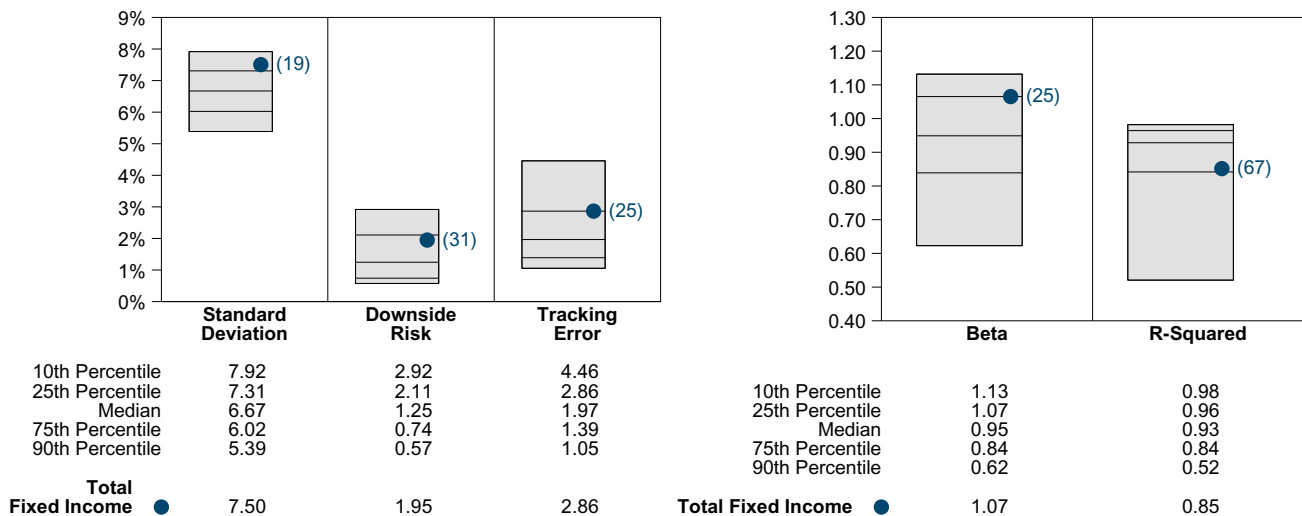
Risk Analysis vs Lg Public Fund - Domestic Fixed (Gross) Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs Fixed Income Benchmark



Risk Statistics Rankings vs Fixed Income Benchmark Rankings Against Lg Public Fund - Domestic Fixed (Gross) Five Years Ended September 30, 2024

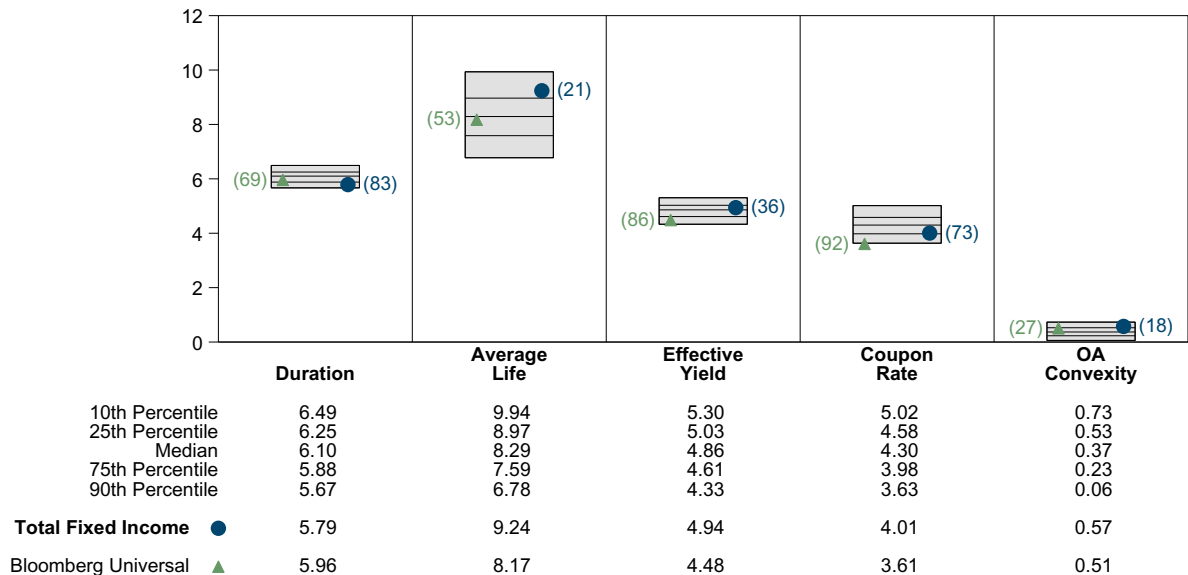


Total Fixed Income Bond Characteristics Analysis Summary

Portfolio Characteristics

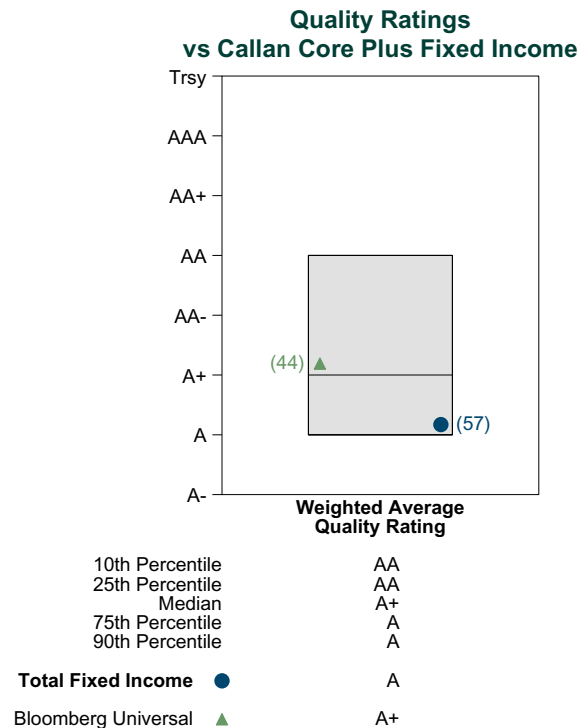
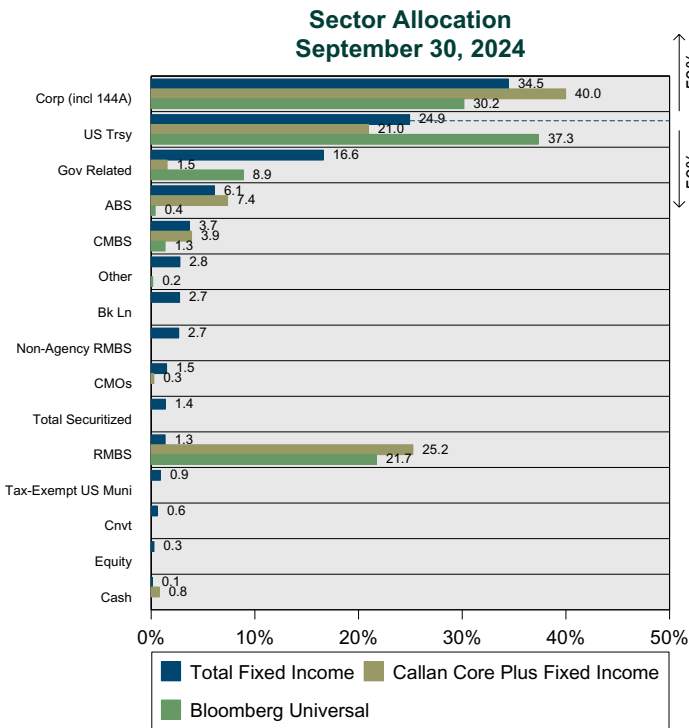
This graph compares the portfolio characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Core Plus Fixed Income as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

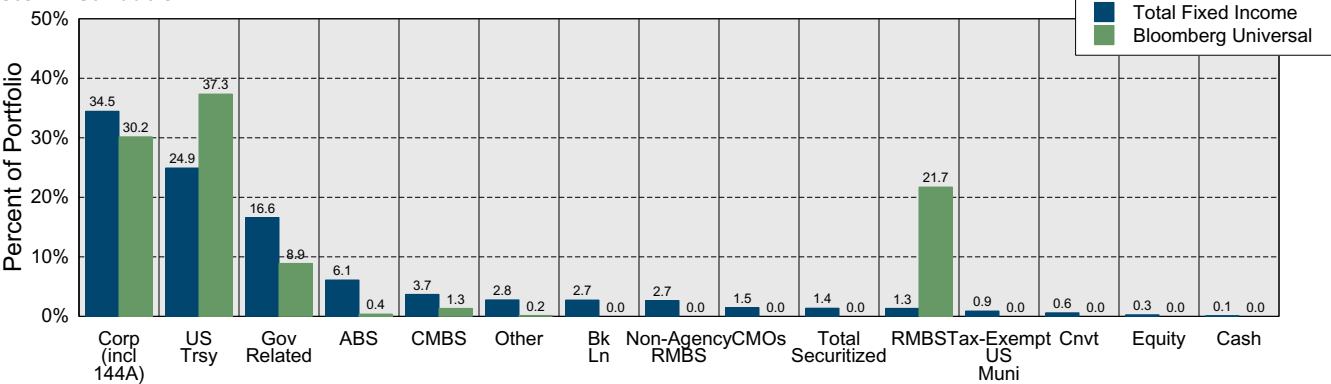


Total Fixed Income
Portfolio Characteristics Summary
As of September 30, 2024

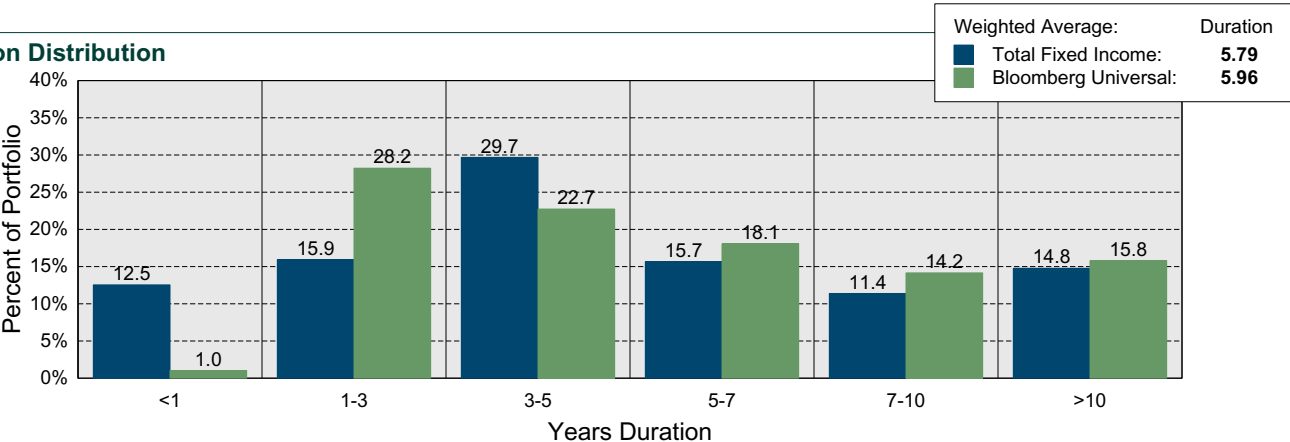
Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

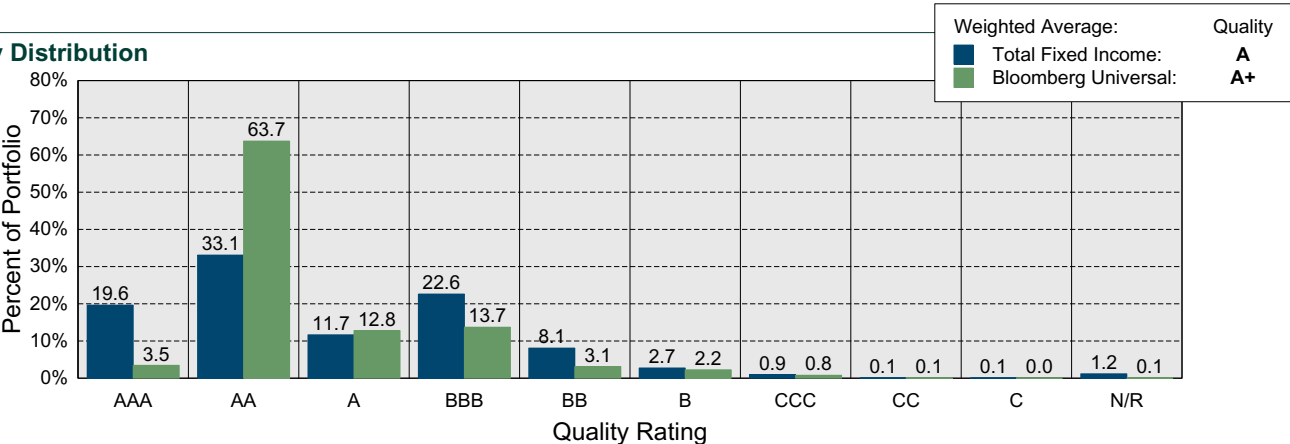
Sector Distribution



Duration Distribution



Quality Distribution



BlackRock SIO Bond Fund Period Ended September 30, 2024

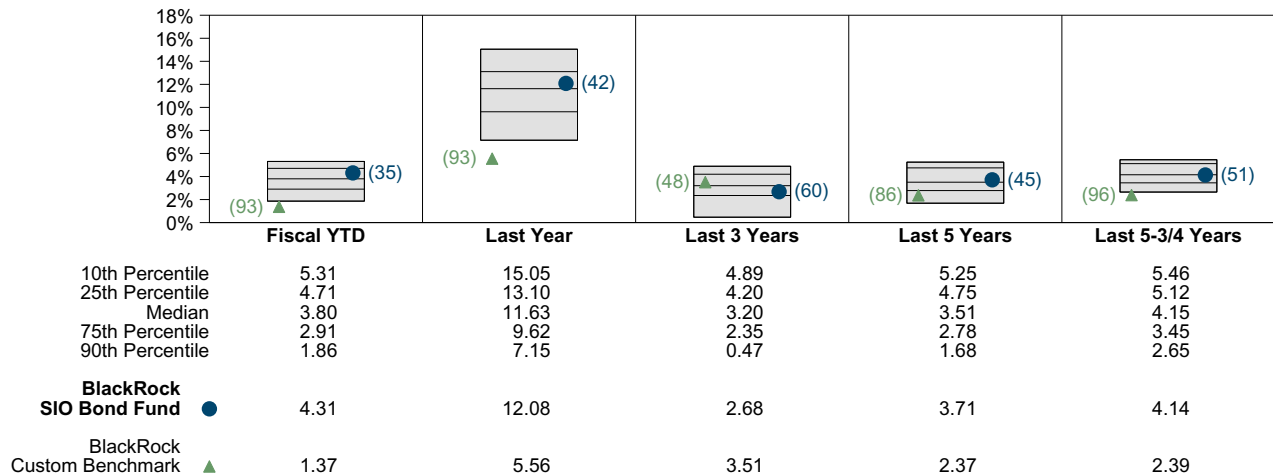
Investment Philosophy

BlackRock Strategic Income Opportunities ("SIO") is managed as an Unconstrained strategy and is not managed to a benchmark. The strategy seeks total return by investing across mainly fixed income sectors and credit qualities utilizing a framework with a typical volatility risk budget of 2-4%, with a maximum risk of 7%. Permissible portfolio duration can range between -2 years to +7 years, though historically has ranged between 0-3 years. At times, the strategy may have small exposures to equities, as well as prevalent use of derivatives to target specific risk profiles. Risk management is an integral part of the strategy and aims to provide downside protection as well as manage volatility. The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022. Prior to 1/1/2022 it was the ICE BofA US Dollar 3-Month Deposit Offered Rate Constant Maturity Index as of 7/1/2020. Prior to 7/1/2020 the benchmark was 3-Month Libor Total Return USD. NHRS inception in the fund is December 2018.

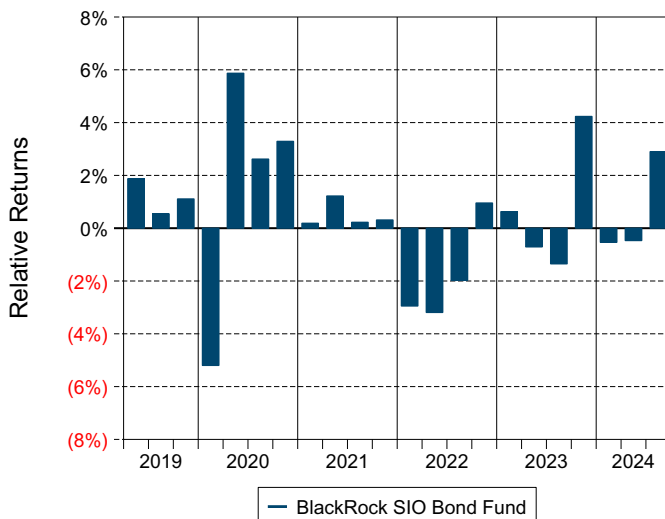
Quarterly Asset Growth

Beginning Market Value	\$270,789,712
Net New Investment	\$0
Investment Gains/(Losses)	\$11,678,756
Ending Market Value	\$282,468,468

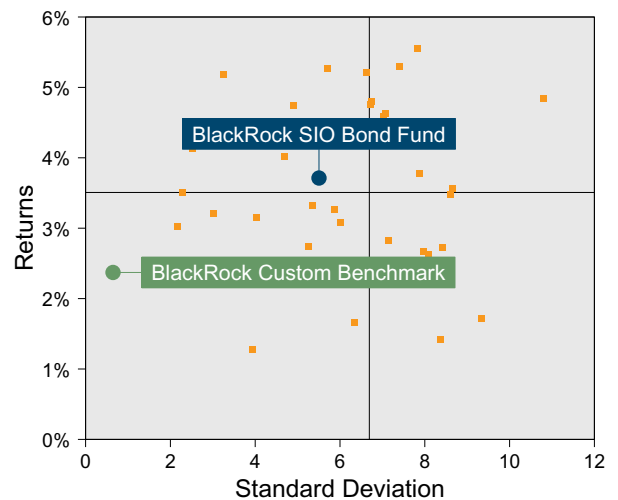
Performance vs Callan Unconstrained FI (Gross)



Relative Returns vs BlackRock Custom Benchmark



Callan Unconstrained FI (Gross) Annualized Five Year Risk vs Return



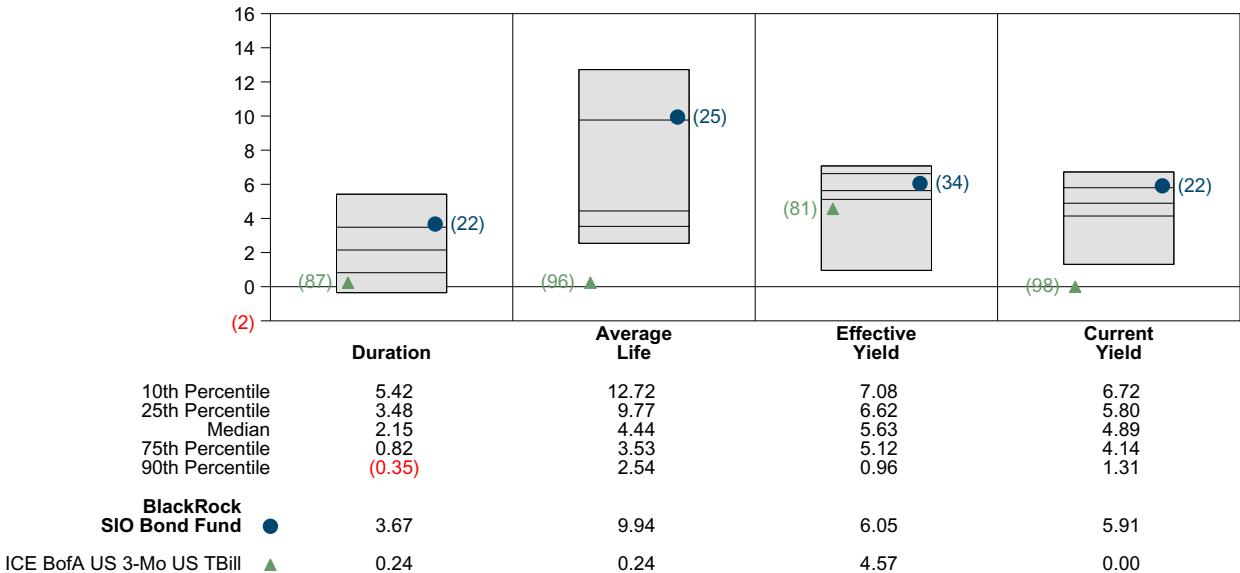
BlackRock SIO Bond Fund

Bond Characteristics Analysis Summary

Portfolio Characteristics

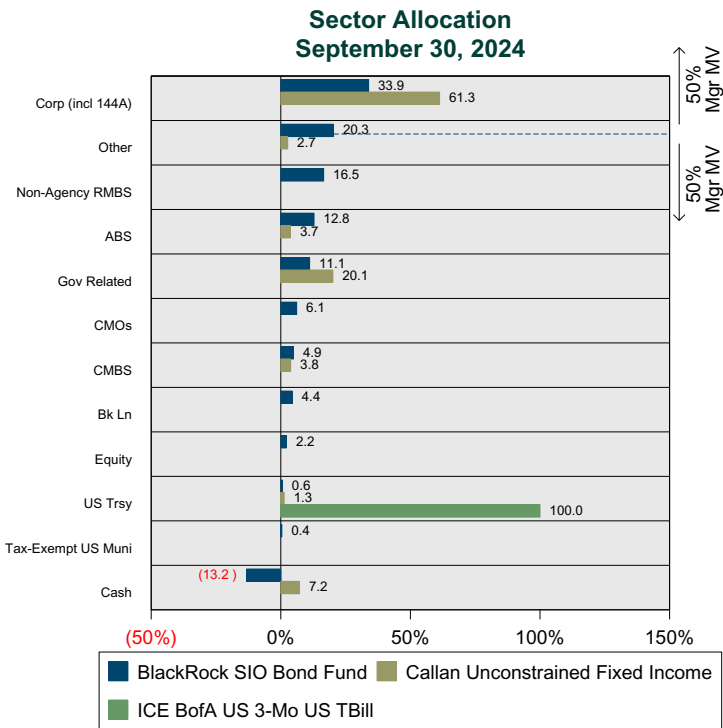
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Unconstrained Fixed Income as of September 30, 2024

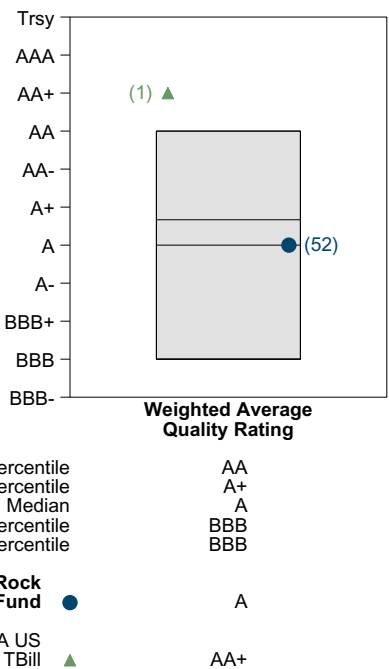


Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.



Quality Ratings vs Callan Unconstrained Fixed Income

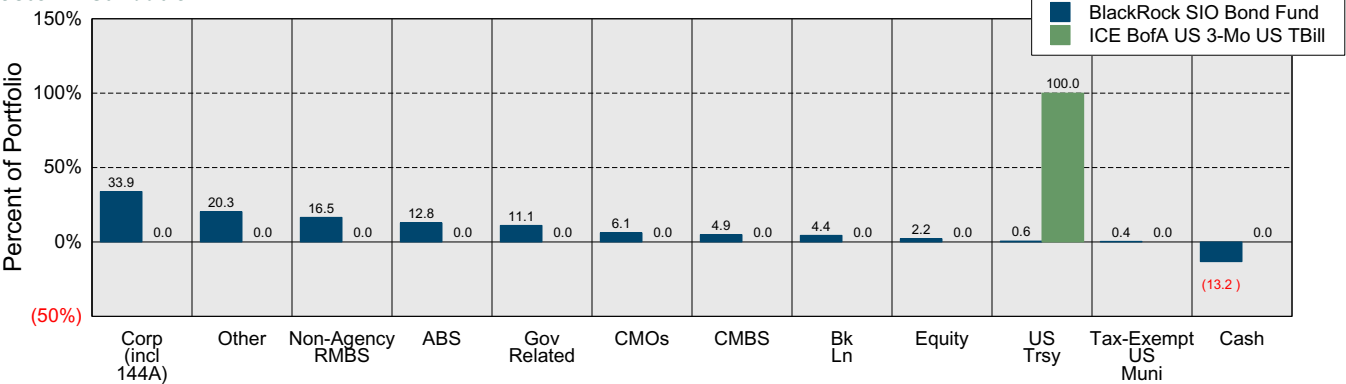


BlackRock SIO Bond Fund
Portfolio Characteristics Summary
As of September 30, 2024

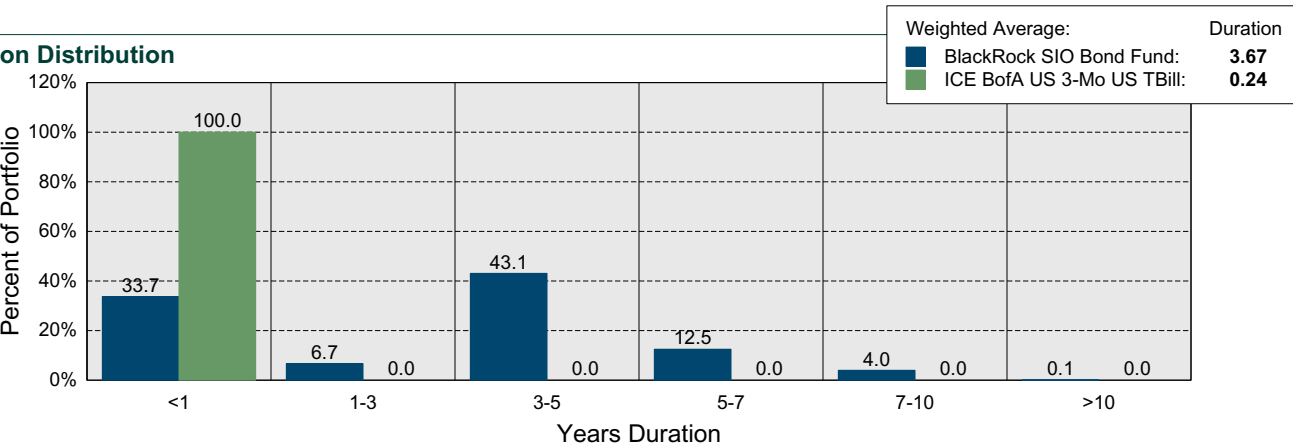
Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

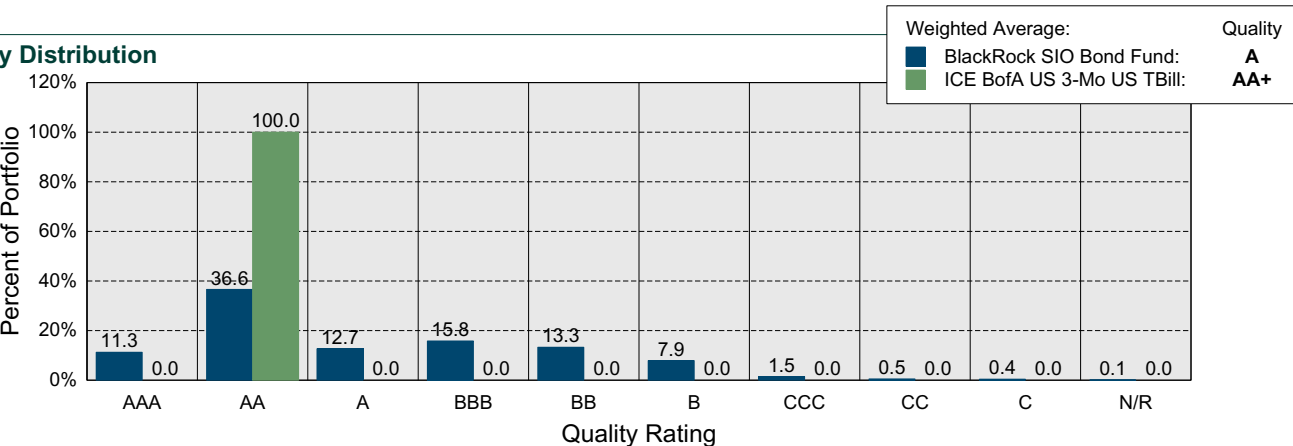
Sector Distribution



Duration Distribution



Quality Distribution



Brandywine Asset Mgmt Period Ended September 30, 2024

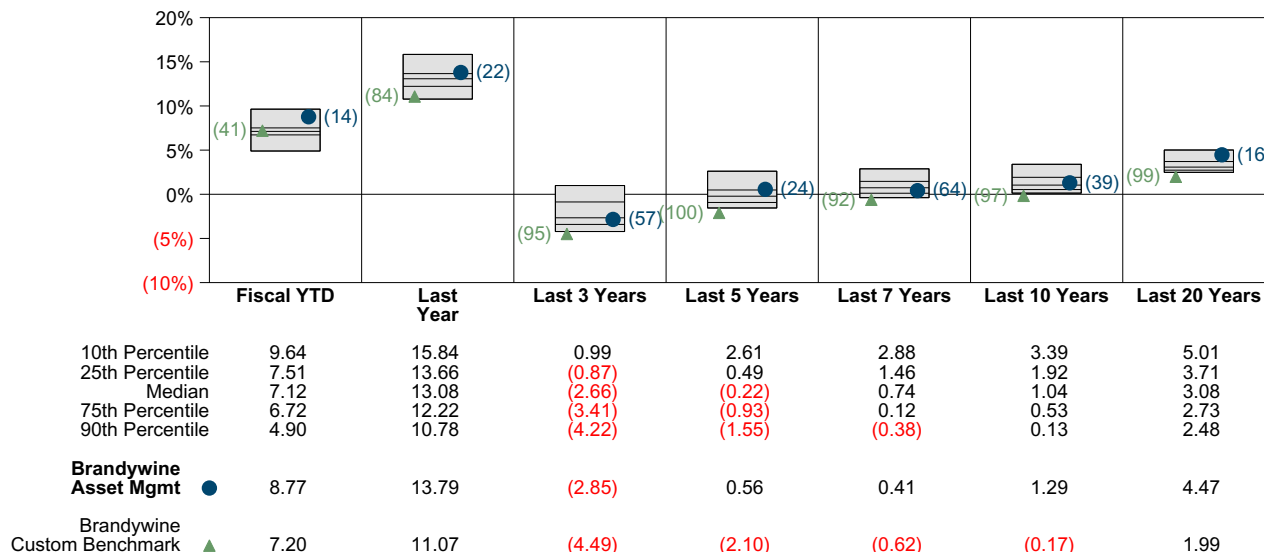
Investment Philosophy

Brandywine's Global Opportunistic Fixed Income strategy ("GOFI") is a value-driven, opportunistic approach. Value is defined as a combination of above-average real interest rates and an under-valued currency. They concentrate investments where existing economic and market conditions can enable that value to be realized in an intermediate-to-long time frame. They capture excess returns through strategic investments in sovereign bond, corporate credit, structured product, and currencies. The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021. Prior to 11/1/2021, the benchmark was the FTSE WGBI Index as of 9/1/2013. Prior to 9/1/2013, it was the JP Morgan GBI Broad Index. NHRS inception in the fund is October 1997.

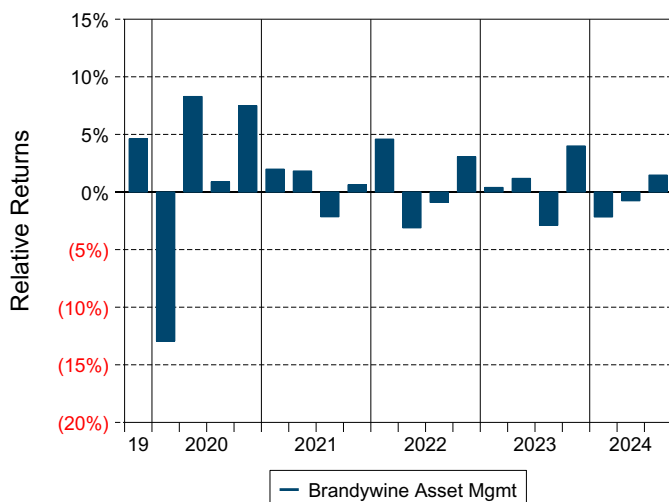
Quarterly Asset Growth

Beginning Market Value	\$221,997,543
Net New Investment	\$0
Investment Gains/(Losses)	\$19,477,818
Ending Market Value	\$241,475,361

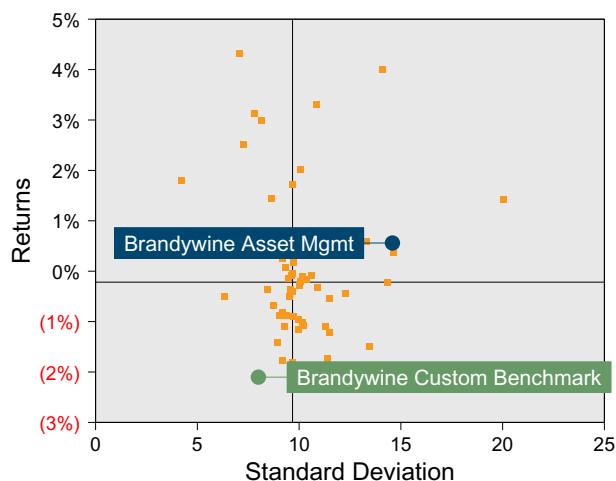
Performance vs Callan Global Fixed Income (Unhedged) (Gross)



Relative Returns vs Brandywine Custom Benchmark



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

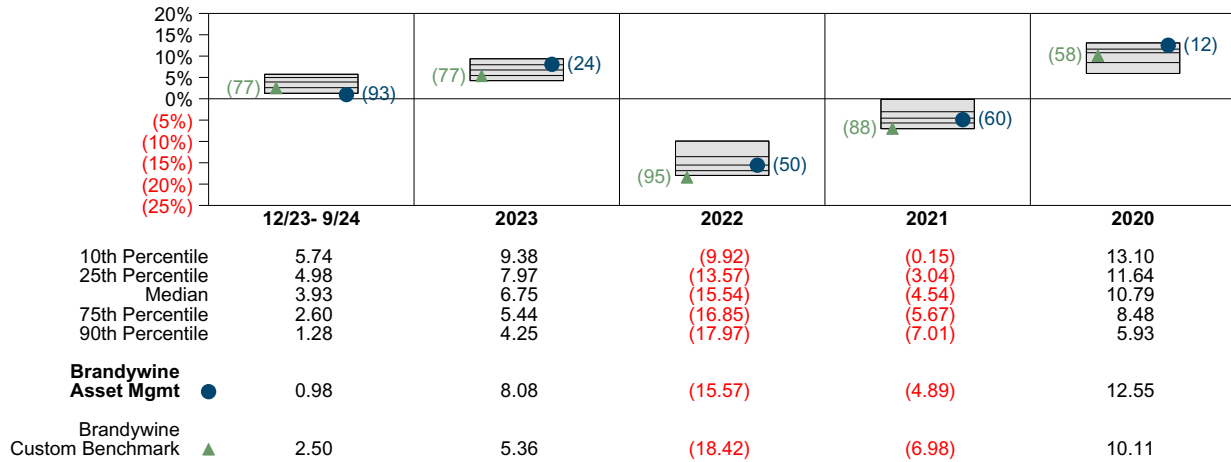


Brandywine Asset Mgmt Return Analysis Summary

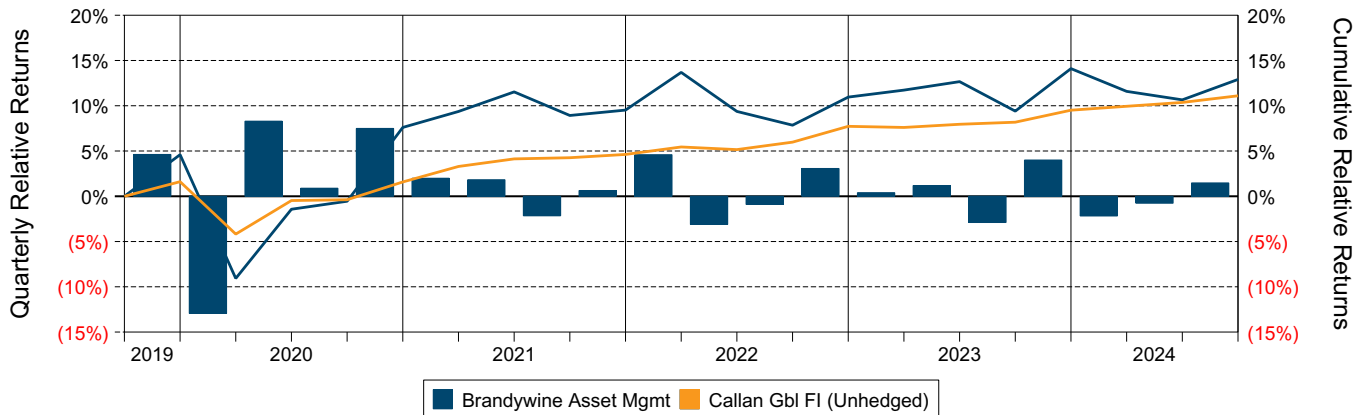
Return Analysis

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 chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

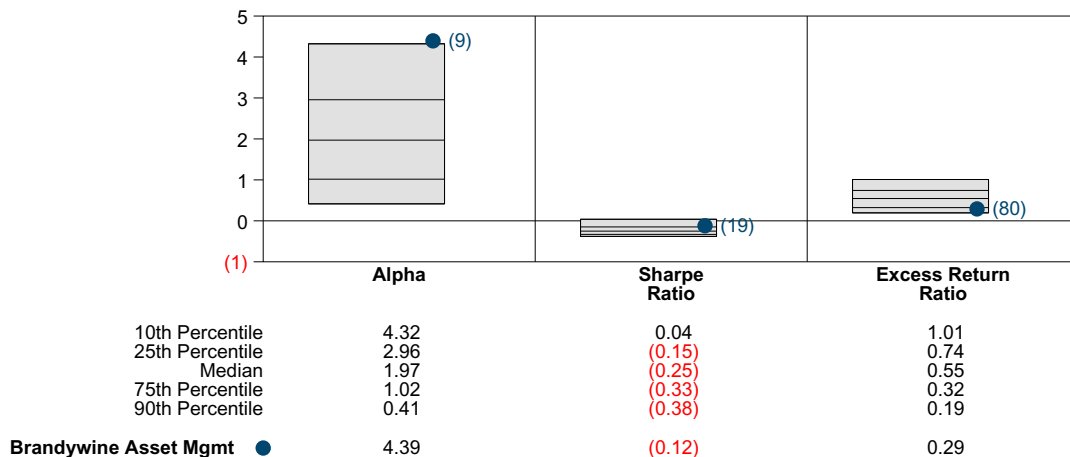
Performance vs Callan Global Fixed Income (Unhedged) (Gross)



Cumulative and Quarterly Relative Returns vs Brandywine Custom Benchmark



Risk Adjusted Return Measures vs Brandywine Custom Benchmark Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended September 30, 2024

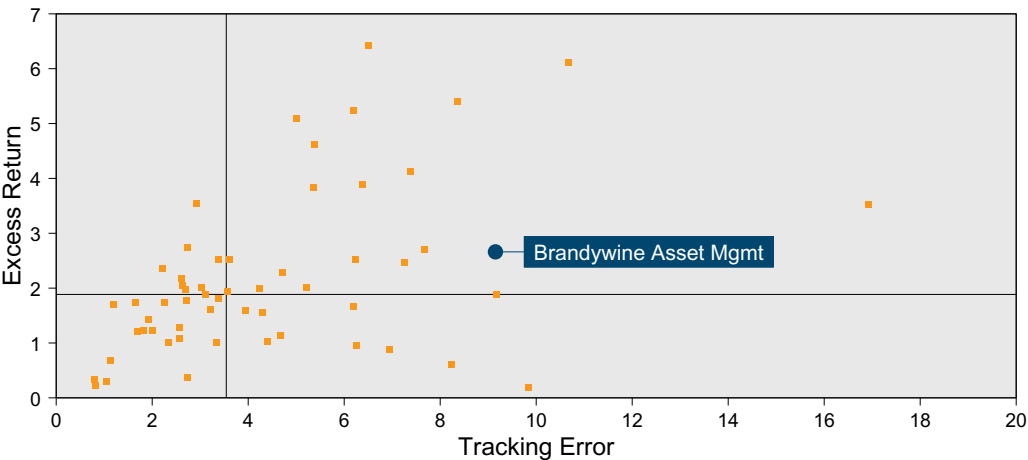


Brandywine Asset Mgmt Risk Analysis Summary

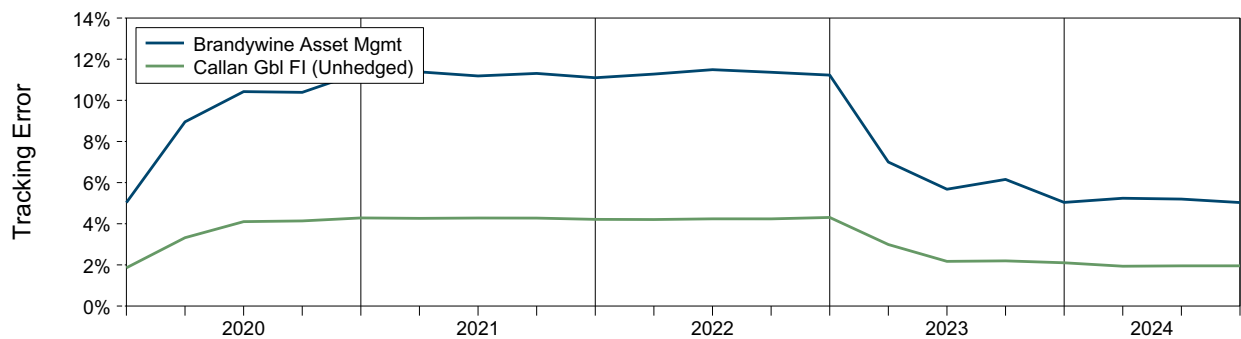
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

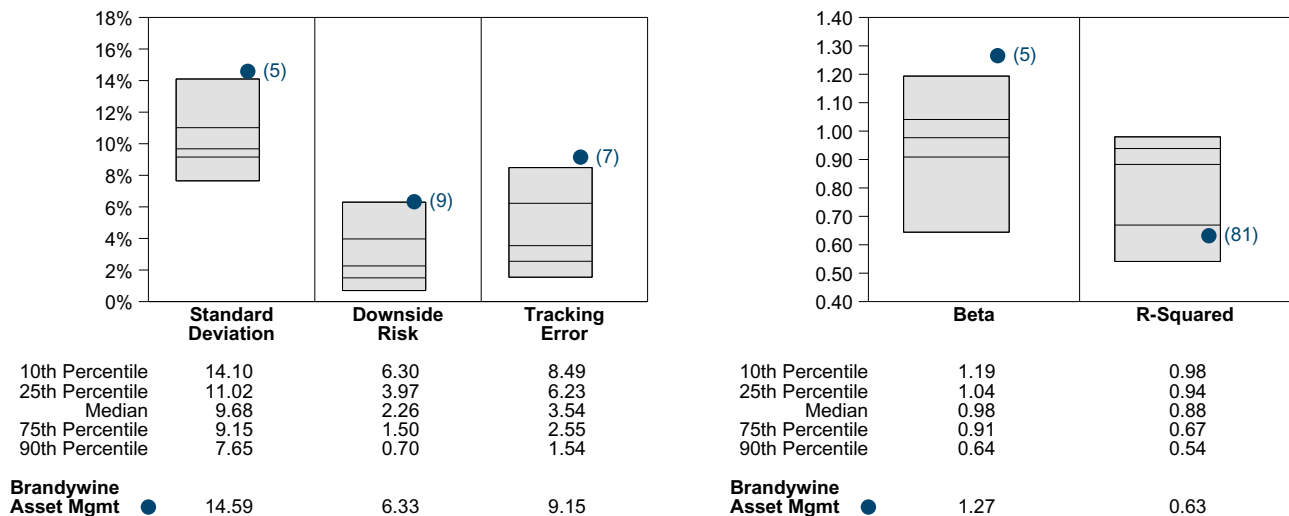
Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs Brandywine Custom Benchmark



Risk Statistics Rankings vs Brandywine Custom Benchmark Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended September 30, 2024



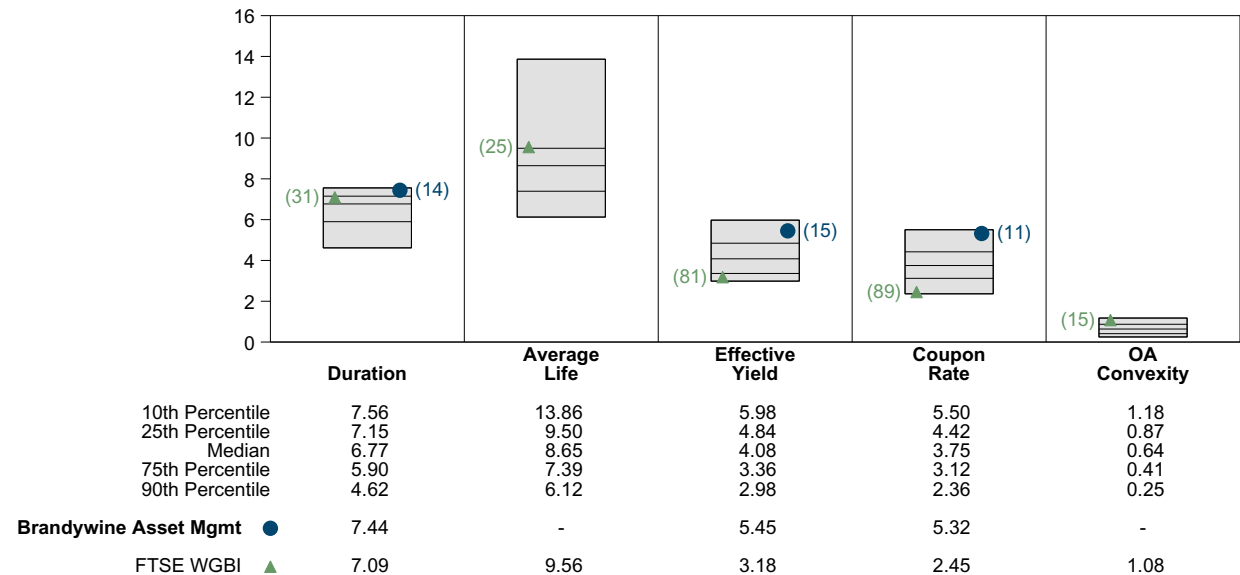
Brandywine Asset Mgmt

Bond Characteristics Analysis Summary

Portfolio Characteristics

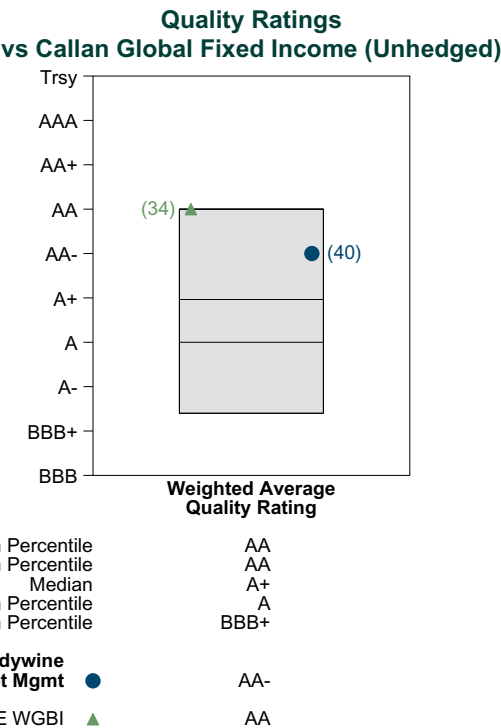
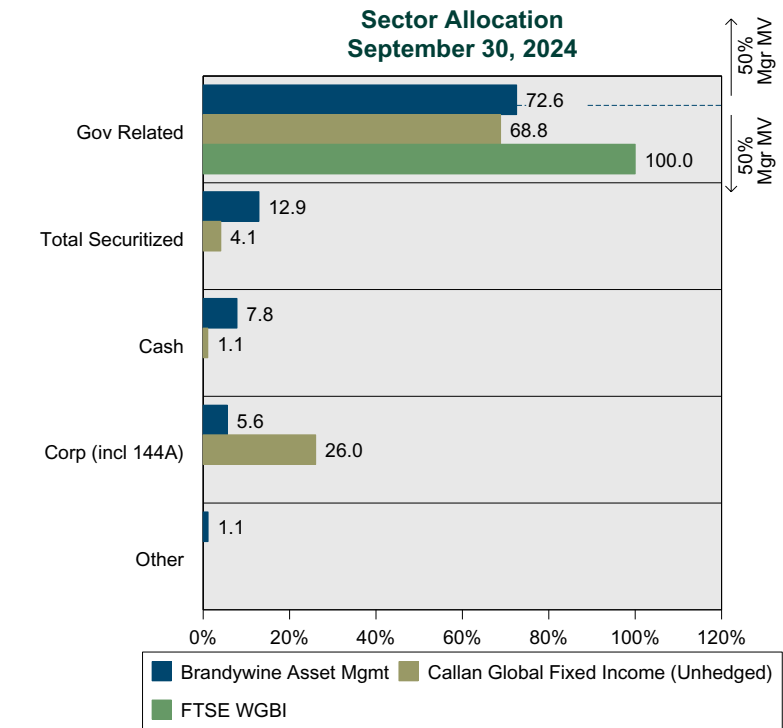
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Global Fixed Income (Unhedged) as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

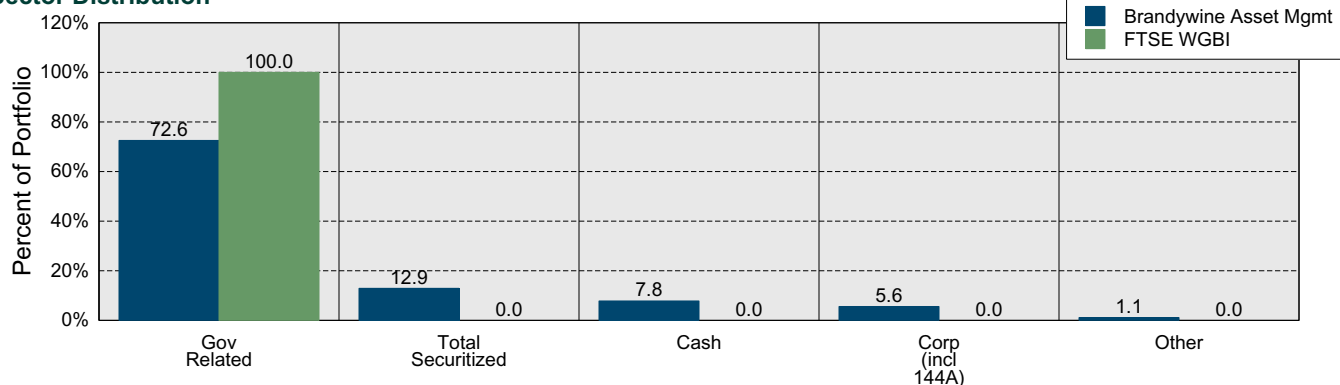


Brandywine Asset Mgmt Portfolio Characteristics Summary As of September 30, 2024

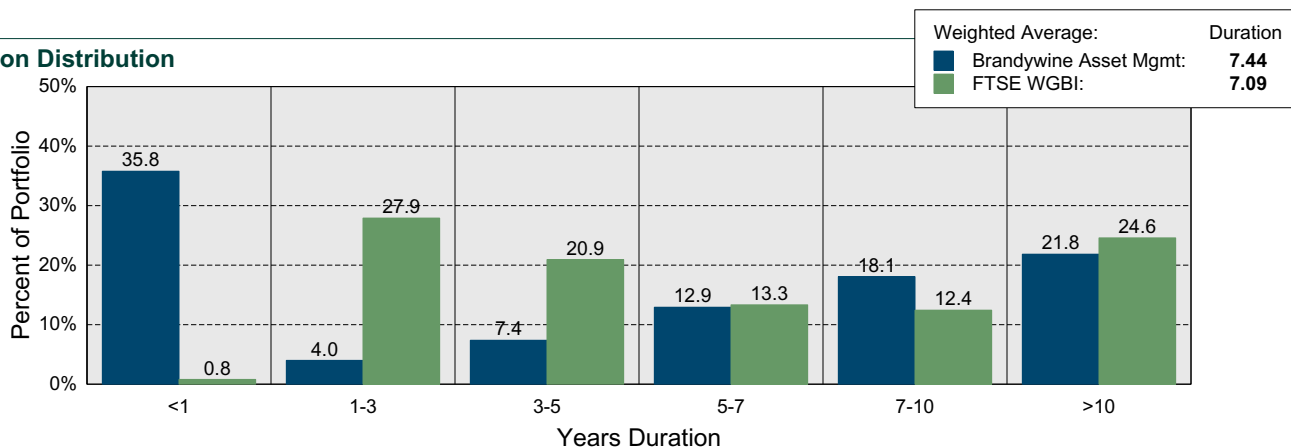
Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

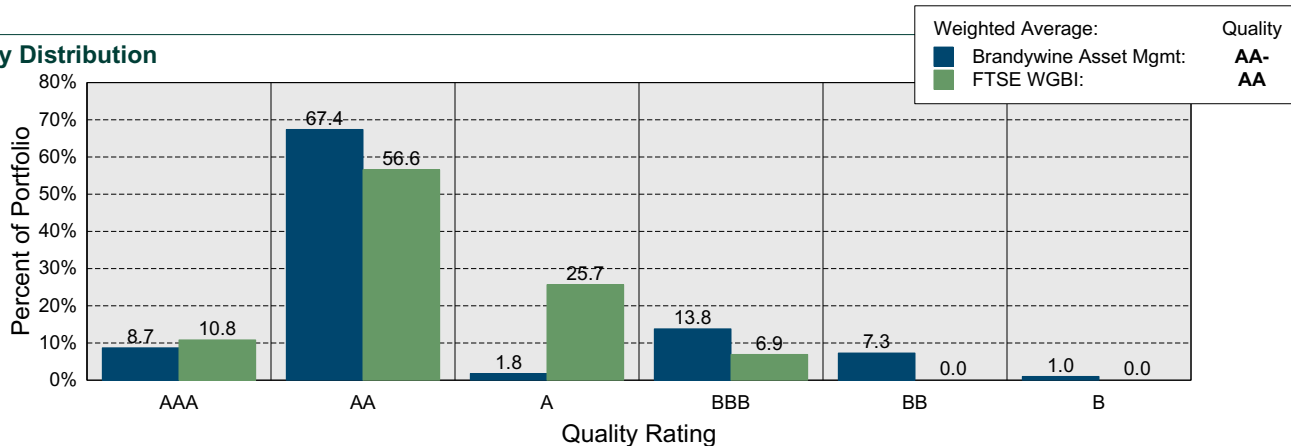
Sector Distribution



Duration Distribution



Quality Distribution



FIAM (Fidelity) Tactical Bond Fund

Period Ended September 30, 2024

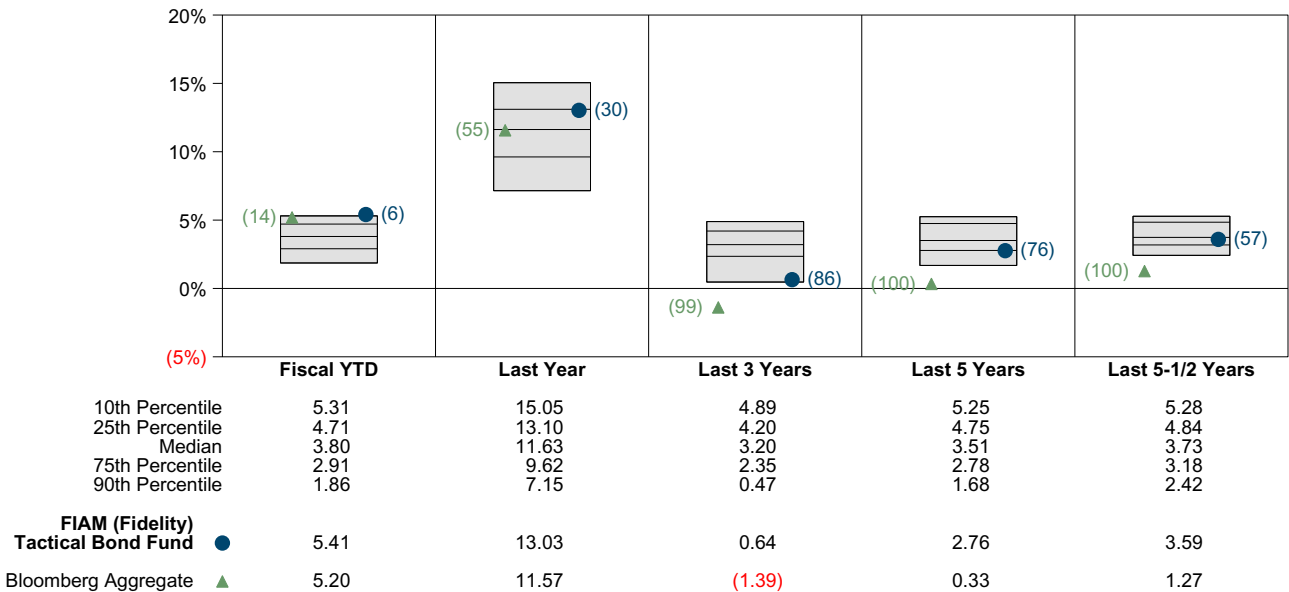
Investment Philosophy

The Fidelity Tactical Bond strategy provides diversified exposure to the fixed income market, investing across sectors including investment grade corporates, securitized, international credit, high yield, and emerging markets debt. The strategy is led by Jeff Moore and Michael Plage, who leverage sector specific teams and the broad research resources of the Fidelity organization. The strategy seeks to outperform the Bloomberg Aggregate Index while targeting 3-6% volatility over a full market cycle. NHRS inception in the fund is January 2019.

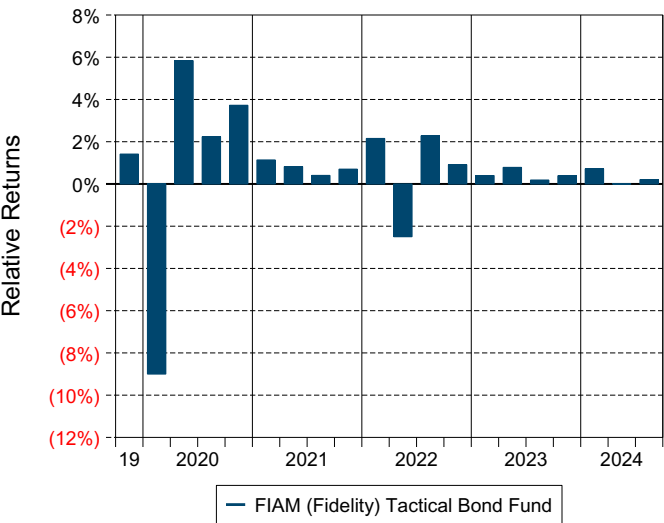
Quarterly Asset Growth

Beginning Market Value	\$375,407,619
Net New Investment	\$0
Investment Gains/(Losses)	\$20,299,077
Ending Market Value	\$395,706,696

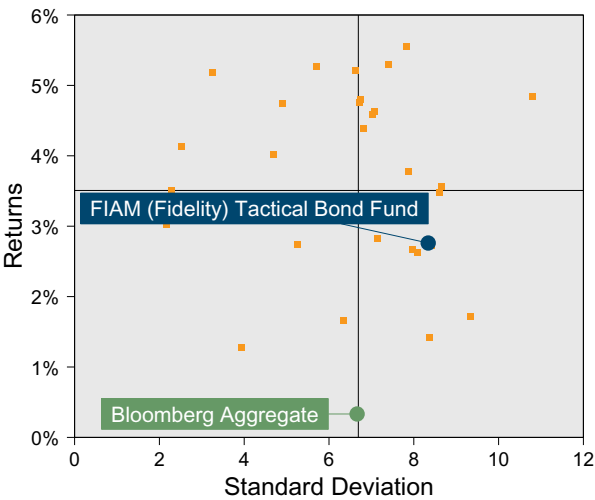
Performance vs Callan Unconstrained FI (Gross)



Relative Return vs Bloomberg Aggregate



Callan Unconstrained FI (Gross) Annualized Five Year Risk vs Return



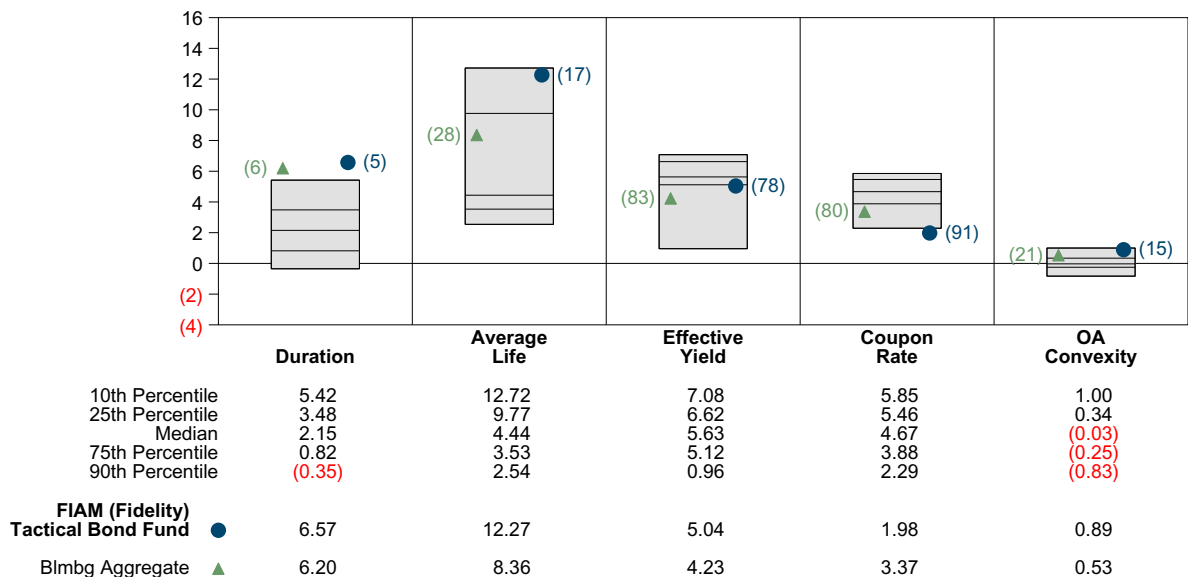
FIAM (Fidelity) Tactical Bond Fund

Bond Characteristics Analysis Summary

Portfolio Characteristics

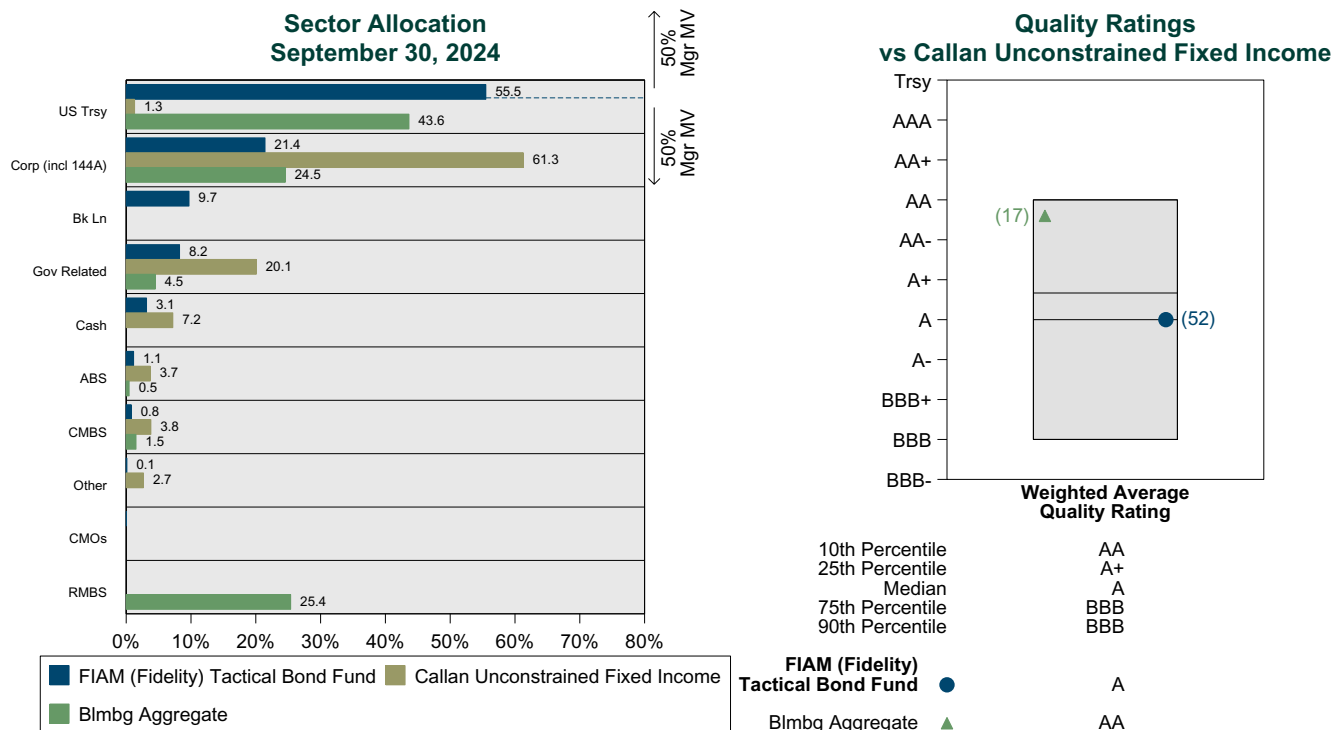
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Unconstrained Fixed Income as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

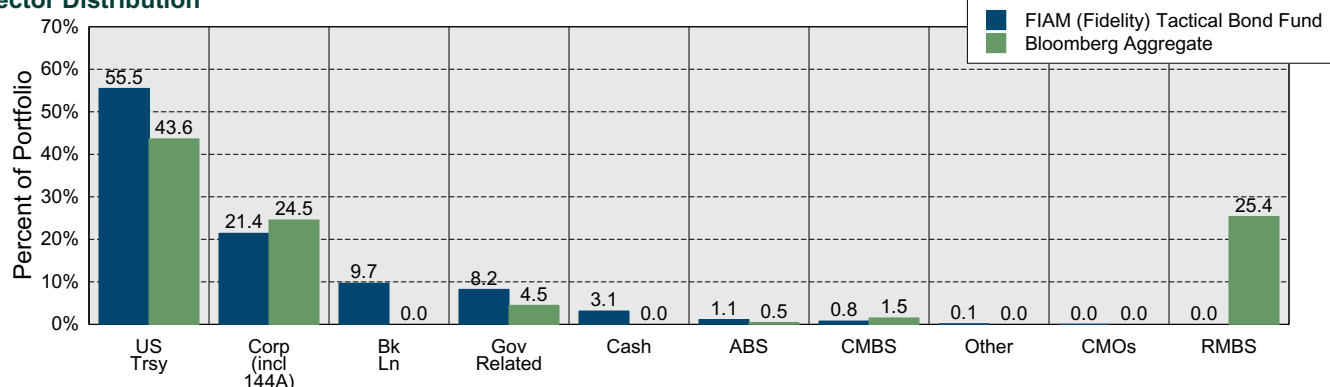


FIAM (Fidelity) Tactical Bond Fund Portfolio Characteristics Summary As of September 30, 2024

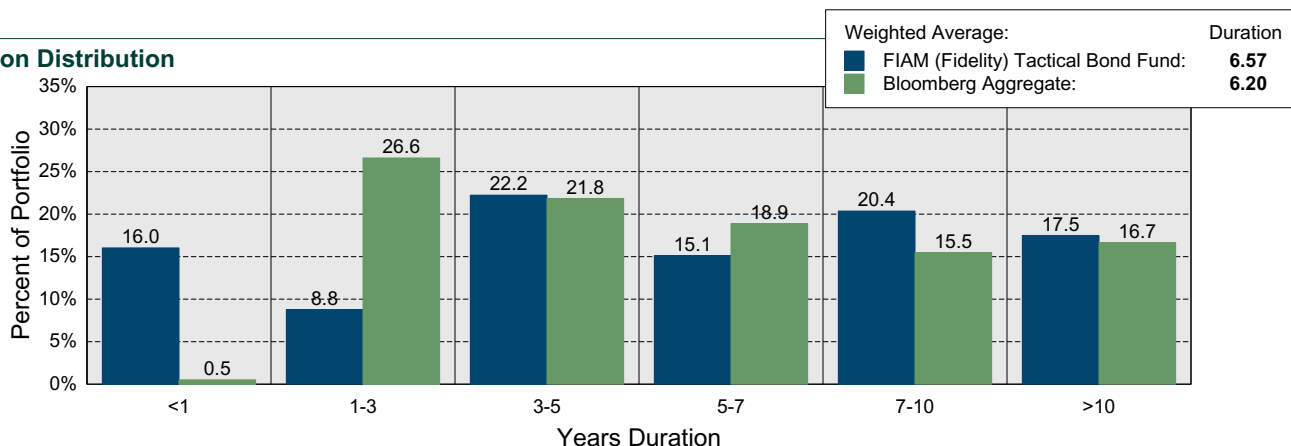
Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

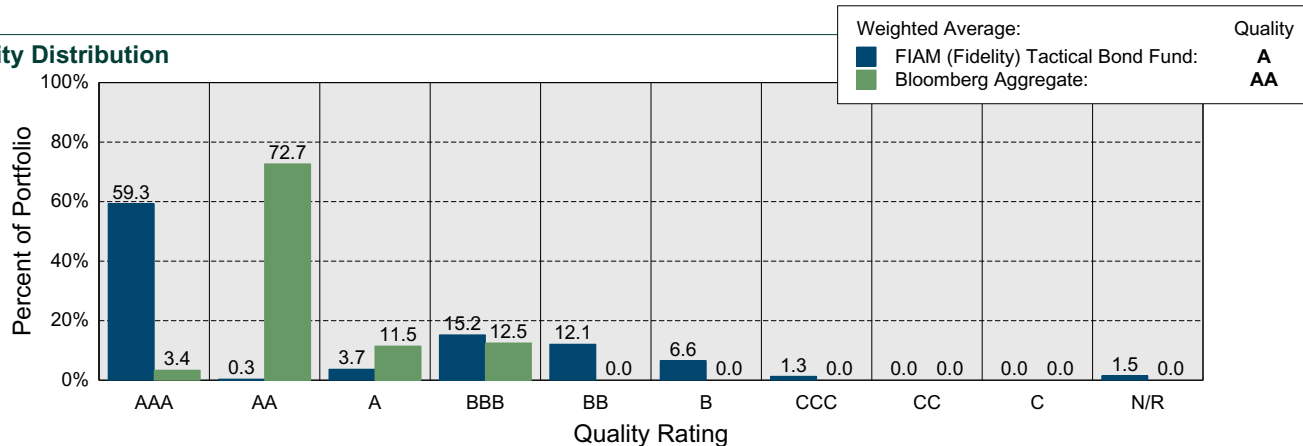
Sector Distribution



Duration Distribution



Quality Distribution



Income Research & Management
Period Ended September 30, 2024

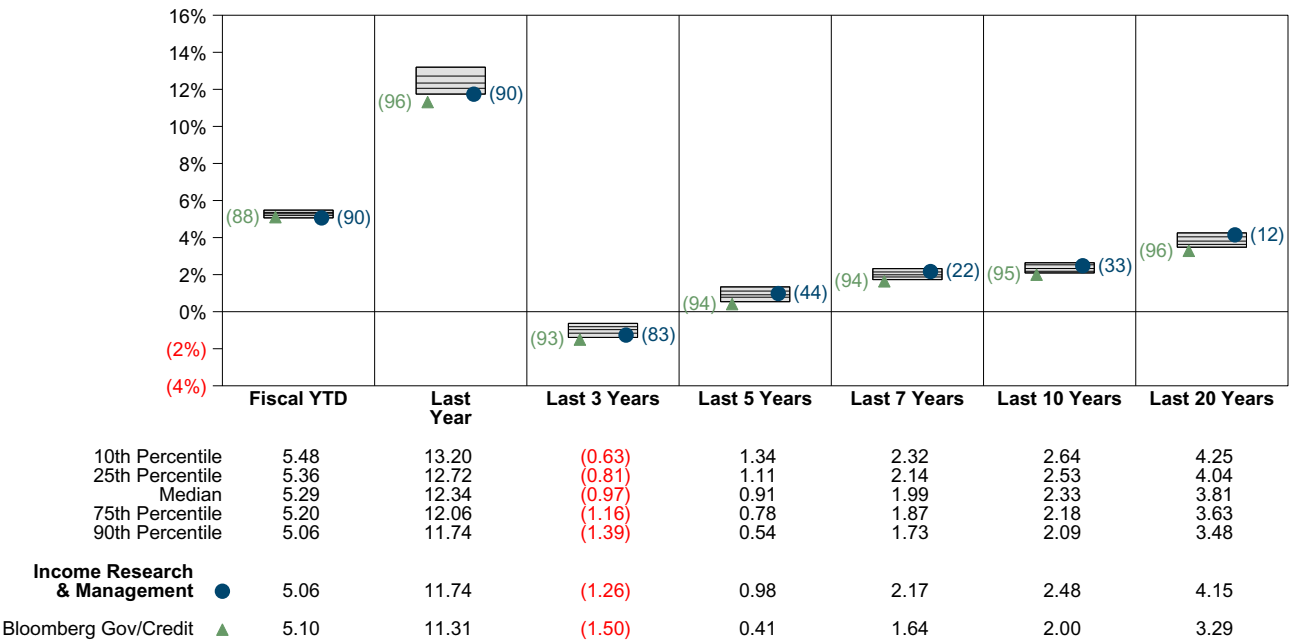
Investment Philosophy

IR+M's bottom-up and duration-neutral investment philosophy is based on their belief that careful security selection and active portfolio-risk management should lead to superior returns over the long term. Their emphasis on fundamental analysis allows them to identify and invest in securities with favorable credit, structure, and price characteristics. NHRS inception in the fund is August 1987.

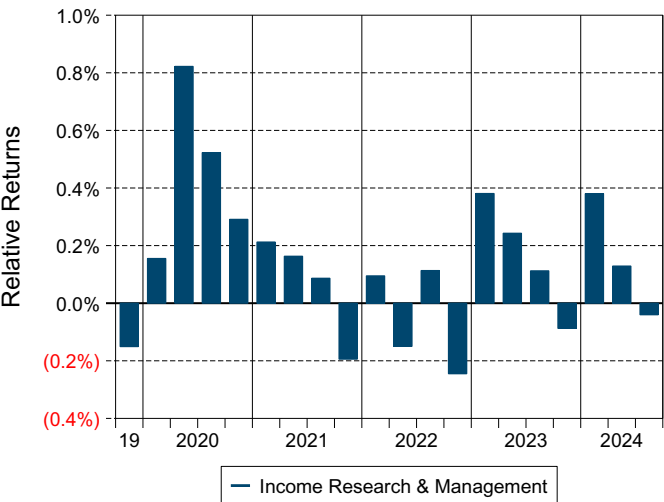
Quarterly Asset Growth

Beginning Market Value	\$784,651,371
Net New Investment	\$0
Investment Gains/(Losses)	\$39,700,360
Ending Market Value	\$824,351,731

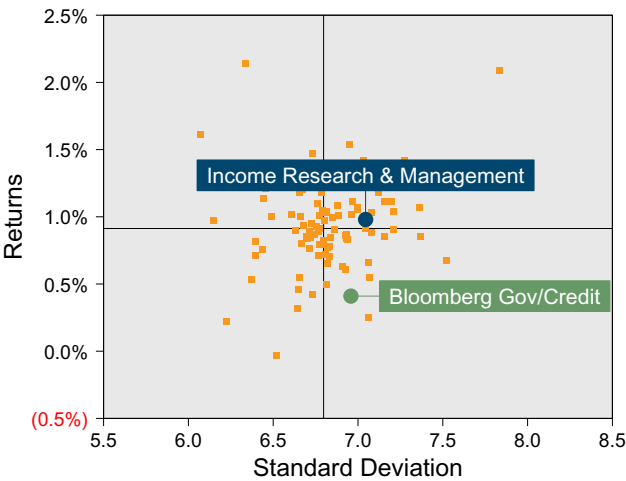
Performance vs Callan Core Bond FI (Gross)



Relative Return vs Bloomberg Gov/Credit



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



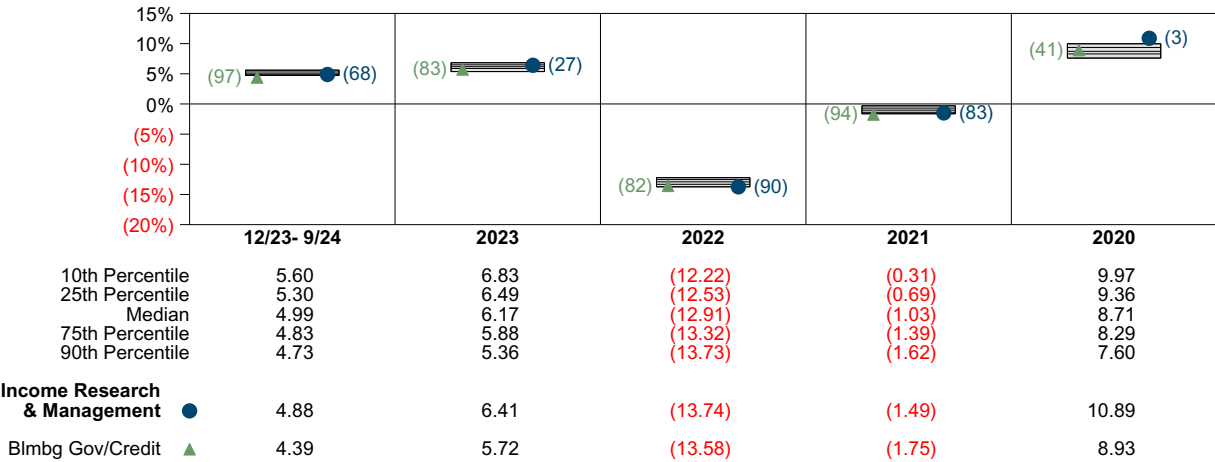
Income Research & Management

Return Analysis Summary

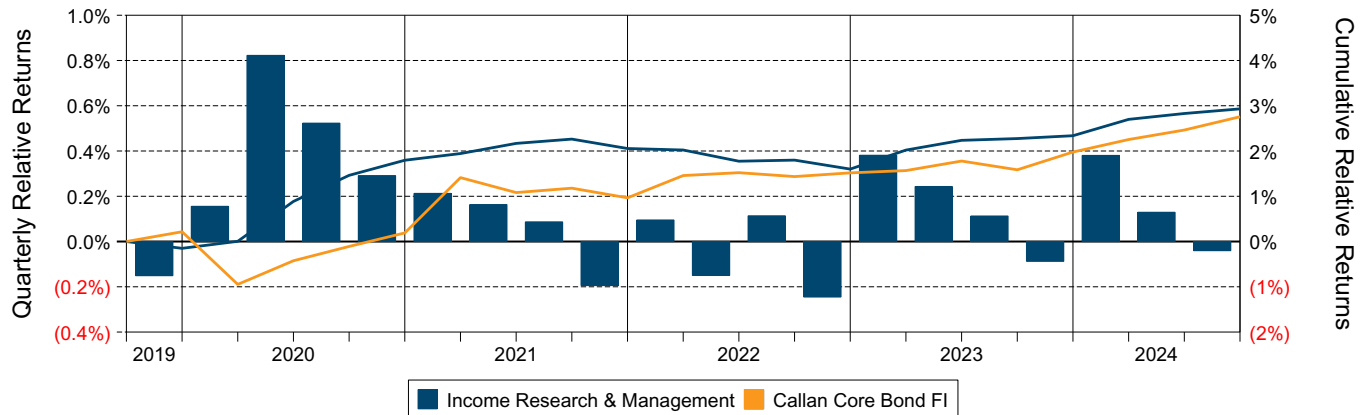
Return Analysis

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 FI (Gross)



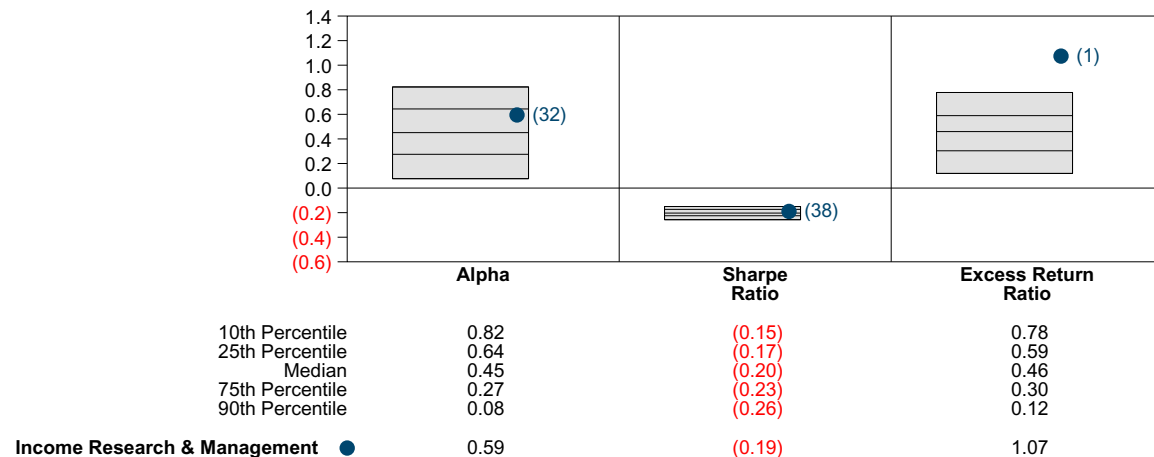
Cumulative and Quarterly Relative Returns vs Blmbg Gov/Credit



Risk Adjusted Return Measures vs Blmbg Gov/Credit

Rankings Against Callan Core Bond FI (Gross)

Five Years Ended September 30, 2024



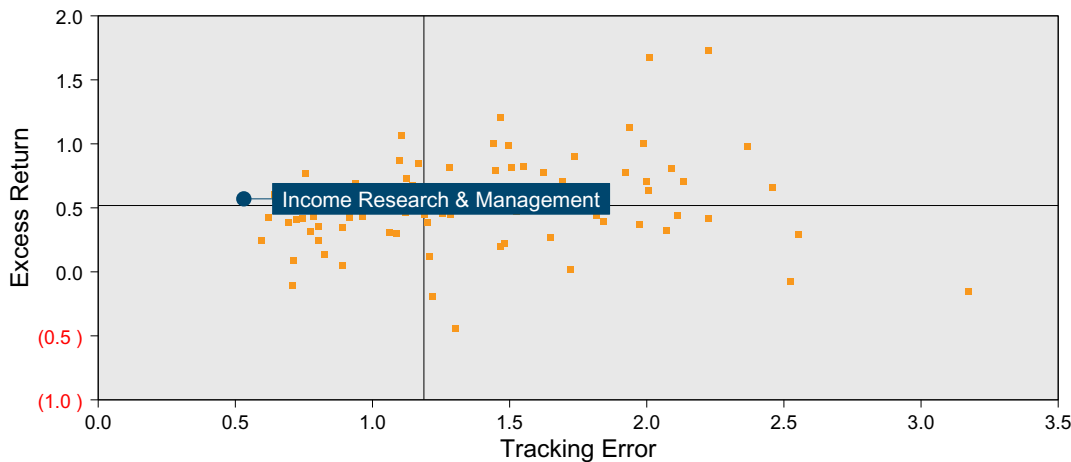
Income Research & Management

Risk Analysis Summary

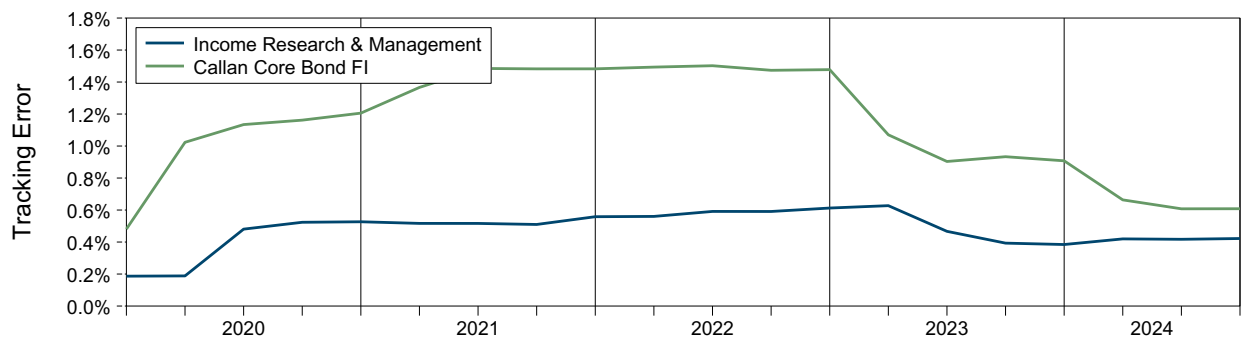
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

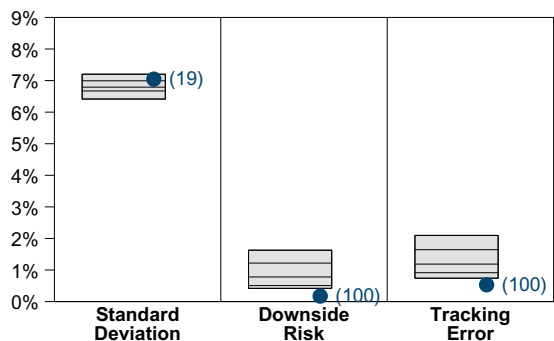
Risk Analysis vs Callan Core Bond Fixed Income (Gross)
Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs Blmbg Gov/Credit

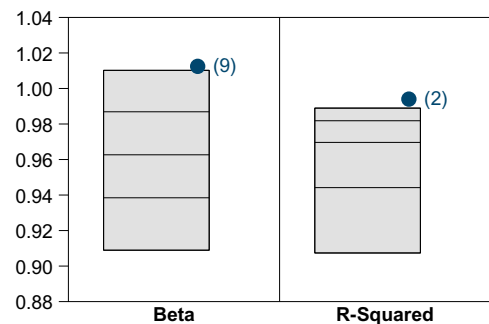


Risk Statistics Rankings vs Blmbg Gov/Credit
Rankings Against Callan Core Bond Fixed Income (Gross)
Five Years Ended September 30, 2024



10th Percentile	7.20	1.63	2.10
25th Percentile	6.99	1.22	1.64
Median	6.79	0.78	1.19
75th Percentile	6.67	0.51	0.91
90th Percentile	6.41	0.42	0.74

Income Research & Management ● 7.04 0.18 0.53



10th Percentile	1.01	0.99
25th Percentile	0.99	0.98
Median	0.96	0.97
75th Percentile	0.94	0.94
90th Percentile	0.91	0.91

Income Research & Management ● 1.01 0.99

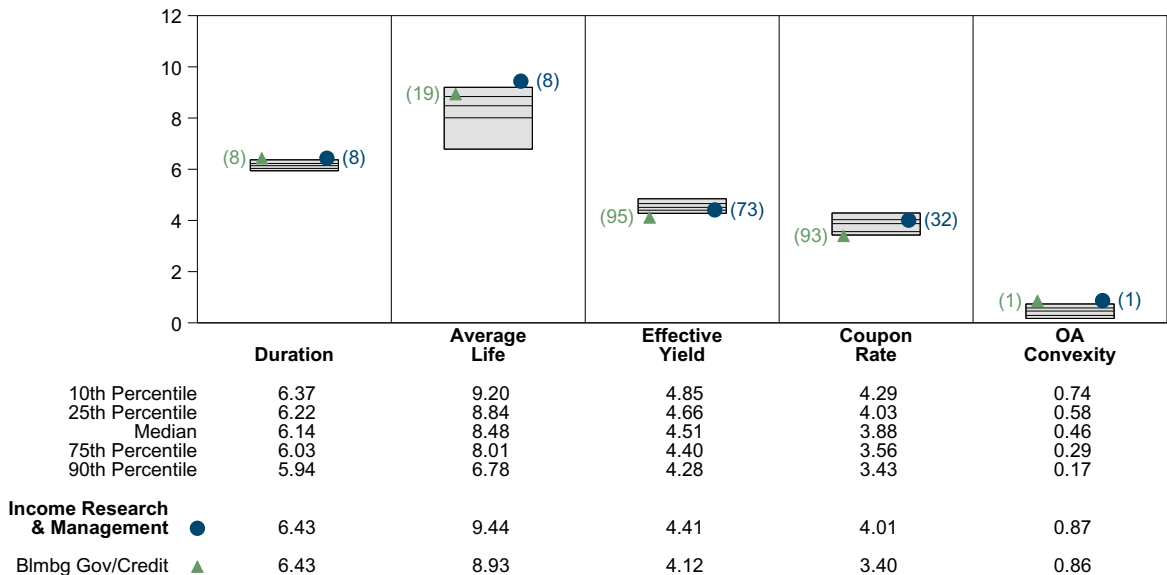
Income Research & Management

Bond Characteristics Analysis Summary

Portfolio Characteristics

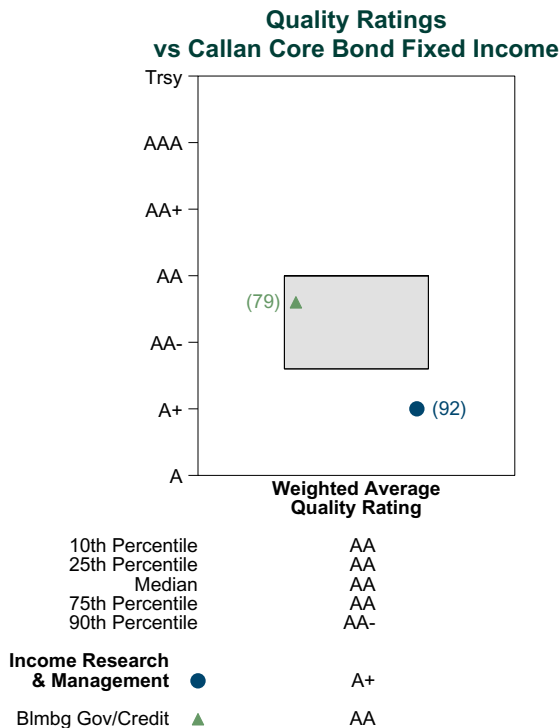
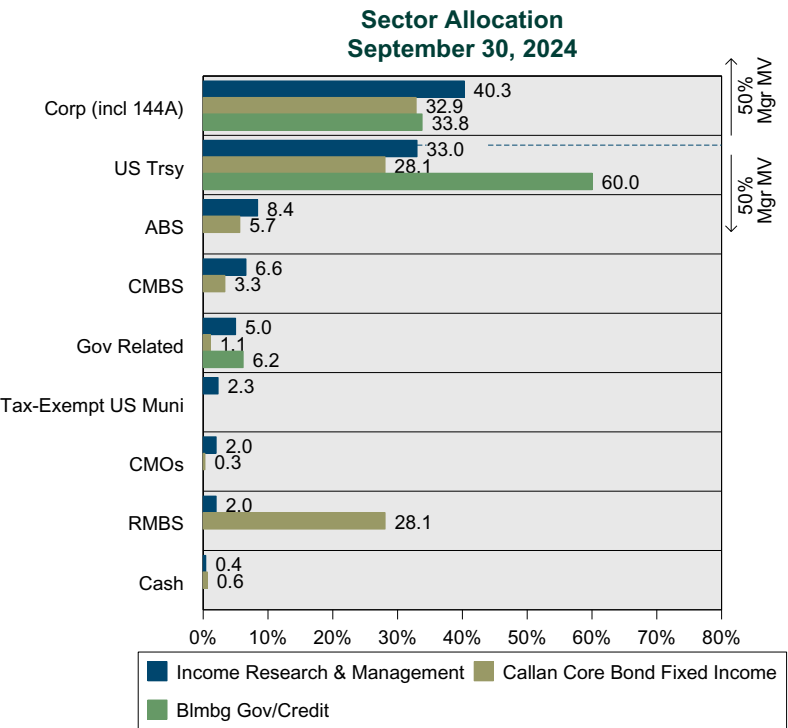
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Core Bond Fixed Income as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

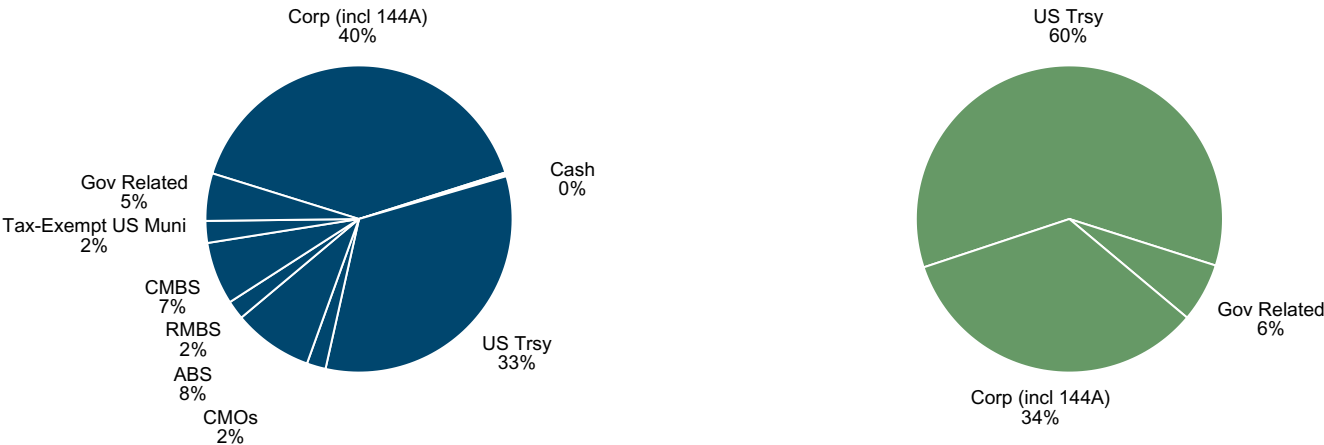


Income Research & Management
Portfolio Characteristics Summary
As of September 30, 2024

Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

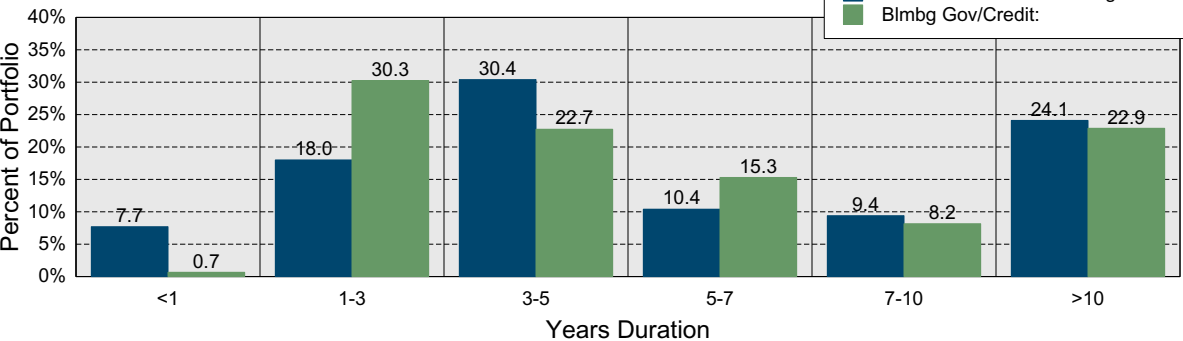
Sector Allocation



Income Research & Management

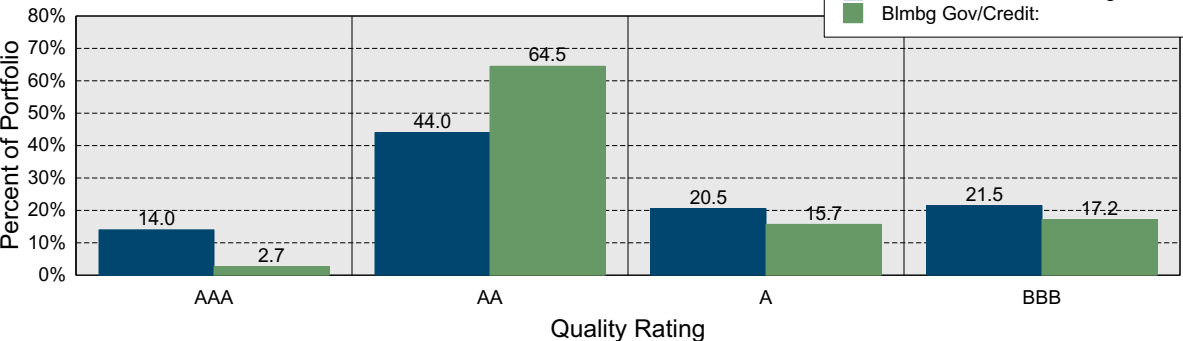
Blmbg Gov/Credit

Duration Distribution



Weighted Average:	Duration
Income Research & Management:	6.43
Blmbg Gov/Credit:	6.43

Quality Distribution



Weighted Average:	Quality
Income Research & Management:	A+
Blmbg Gov/Credit:	AA

Loomis Sayles

Period Ended September 30, 2024

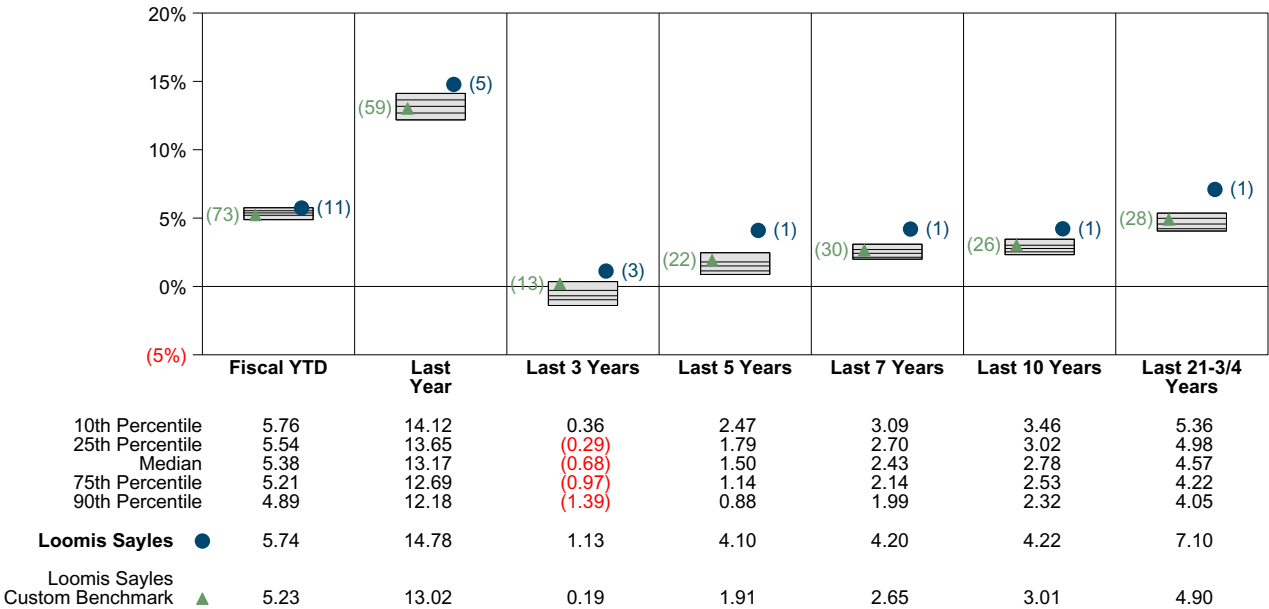
Investment Philosophy

The Multisector Full Discretion ("MSFD") strategy is an opportunistic, multisector fixed income strategy managed by a team of seasoned professionals. The strategy is diversified across all sectors of the bond market. This "go anywhere" approach allows the portfolio management team to pursue mispriced securities with high intrinsic value. The Loomis Sayles Custom Benchmark is 65% Bloomberg Barclays Aggregate Index and 35% Bloomberg Barclays High Yield Corporate Index. NHRS inception in the fund is September 2002.

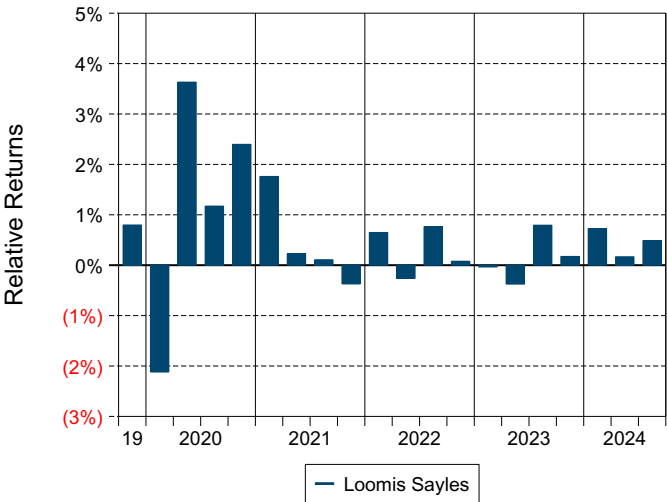
Quarterly Asset Growth

Beginning Market Value	\$289,656,164
Net New Investment	\$0
Investment Gains/(Losses)	\$16,618,917
Ending Market Value	\$306,275,081

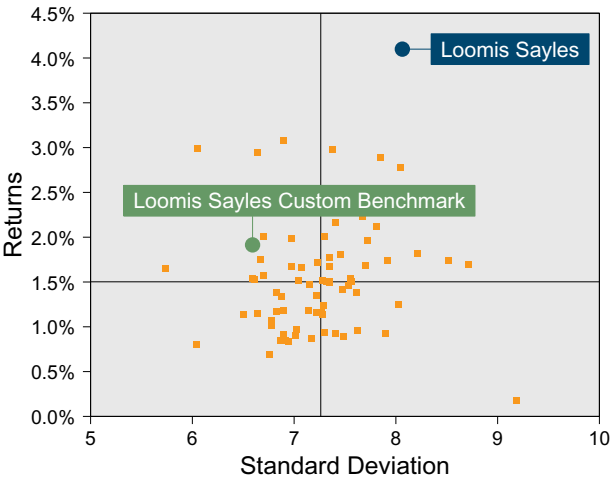
Performance vs Callan Core Plus FI (Gross)



Relative Returns vs Loomis Sayles Custom Benchmark



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



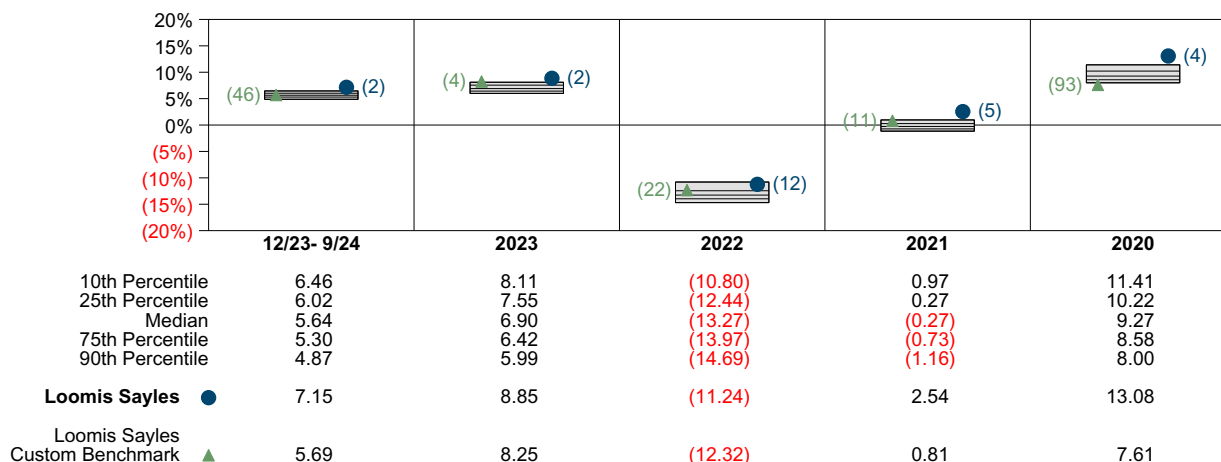
Loomis Sayles

Return Analysis Summary

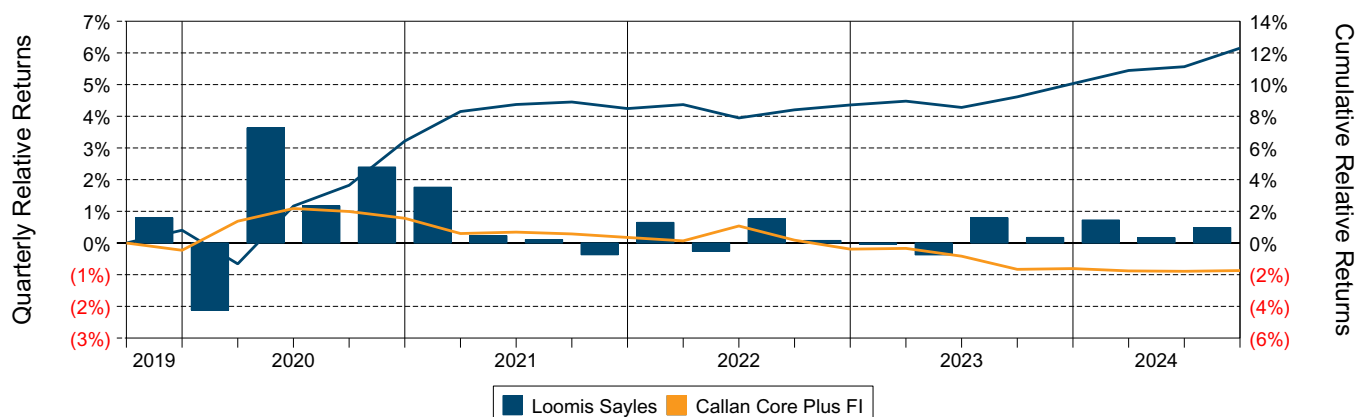
Return Analysis

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.

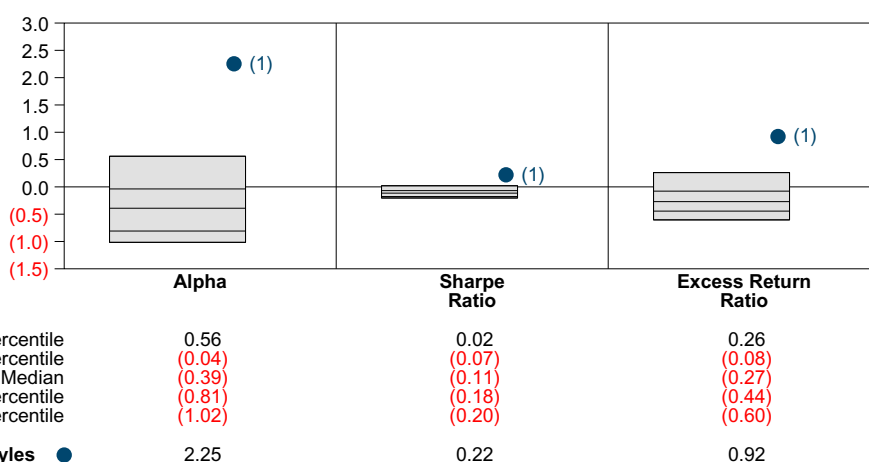
Performance vs Callan Core Plus FI (Gross)



Cumulative and Quarterly Relative Returns vs Loomis Sayles Custom Benchmark



Risk Adjusted Return Measures vs Loomis Sayles Custom Benchmark Rankings Against Callan Core Plus FI (Gross) Five Years Ended September 30, 2024



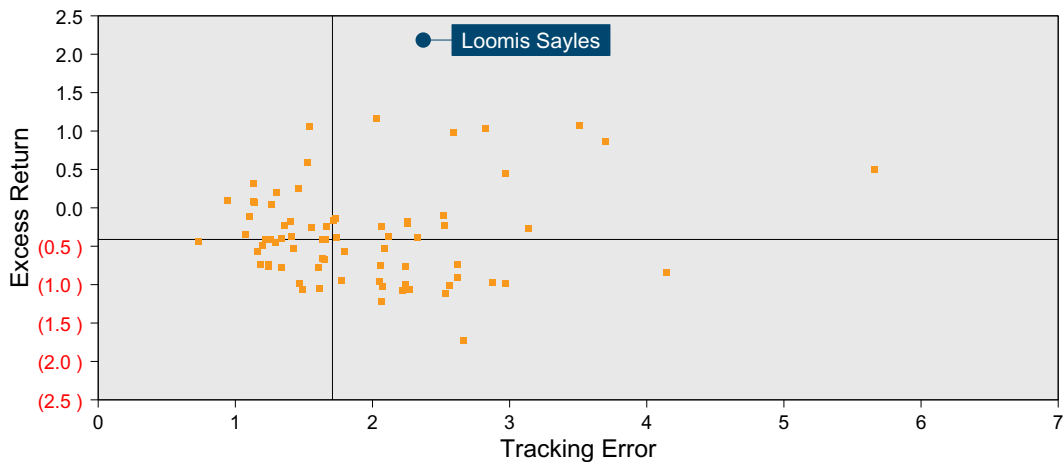
Loomis Sayles

Risk Analysis Summary

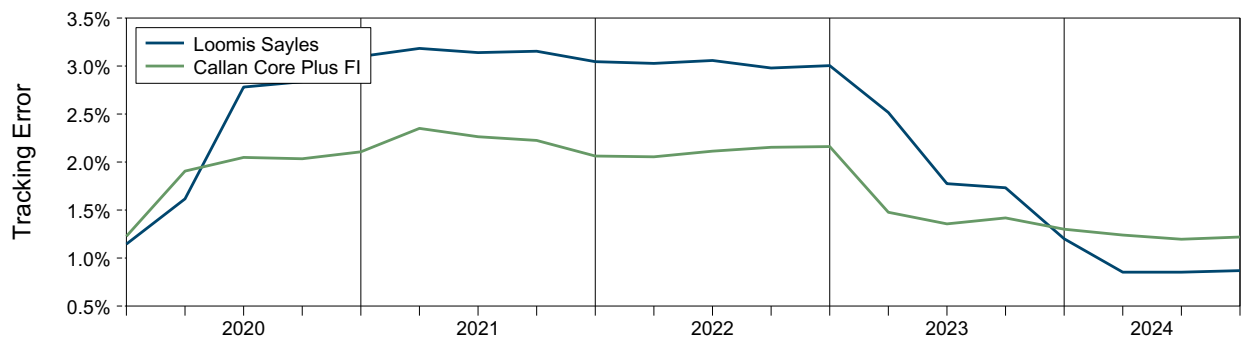
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

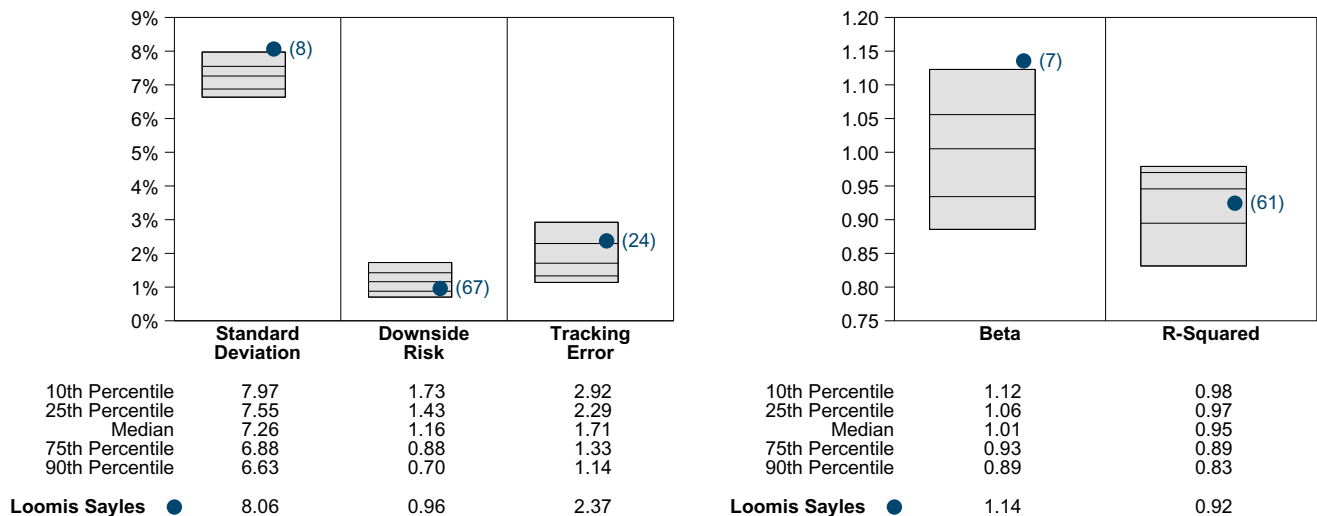
Risk Analysis vs Callan Core Plus Fixed Income (Gross) Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs Loomis Sayles Custom Benchmark



Risk Statistics Rankings vs Loomis Sayles Custom Benchmark Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended September 30, 2024



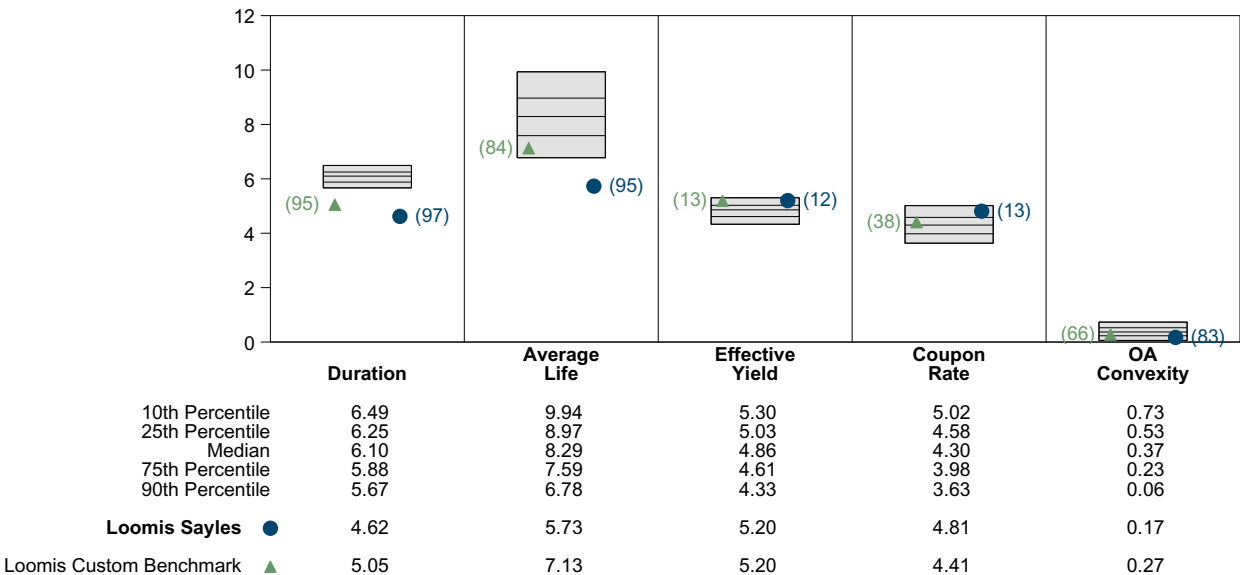
Loomis Sayles

Bond Characteristics Analysis Summary

Portfolio Characteristics

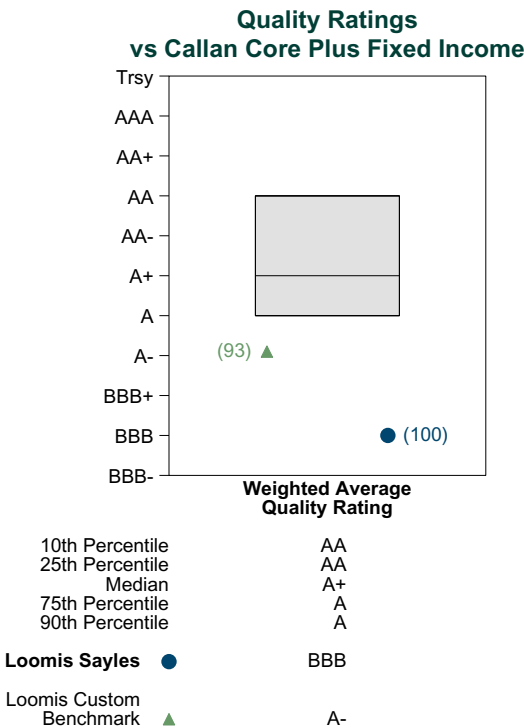
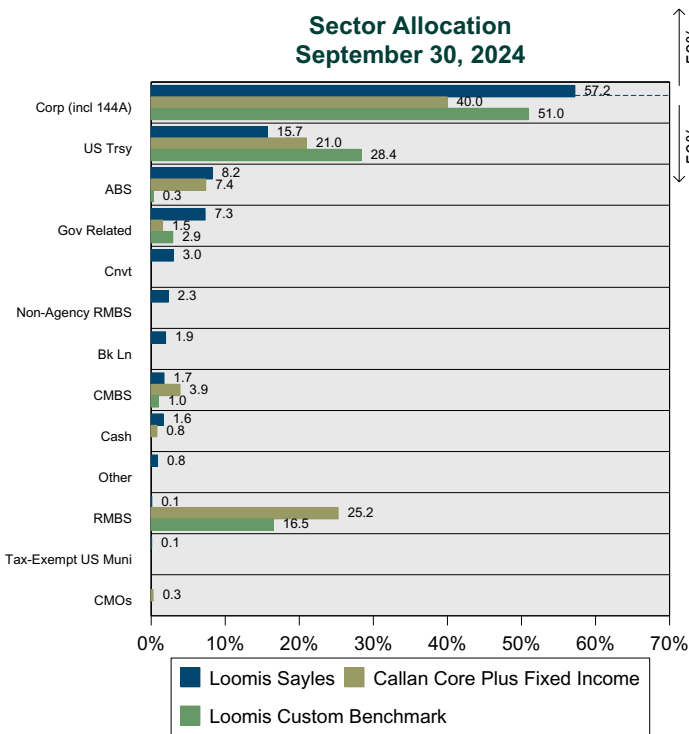
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Core Plus Fixed Income as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

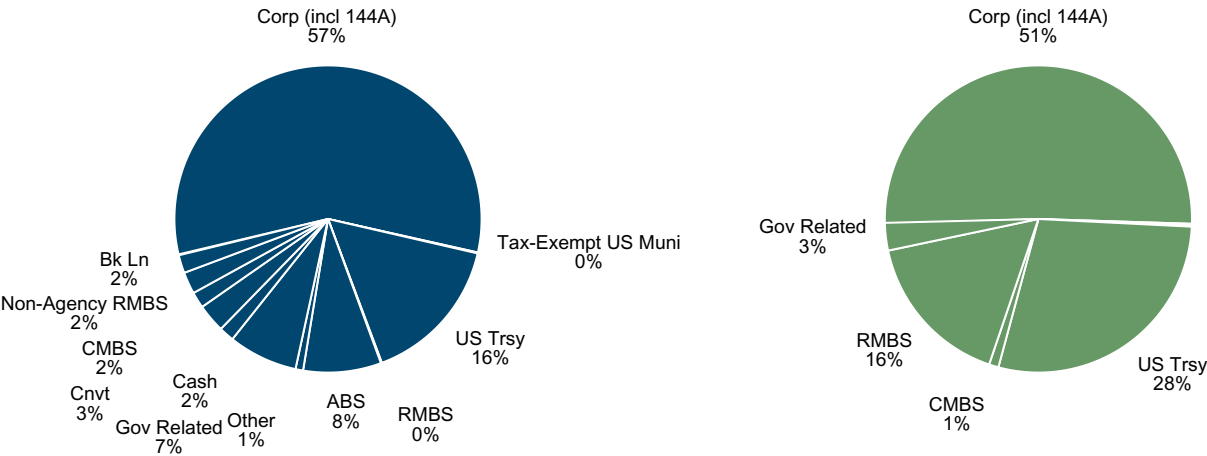


Loomis Sayles
Portfolio Characteristics Summary
As of September 30, 2024

Portfolio Structure Comparison

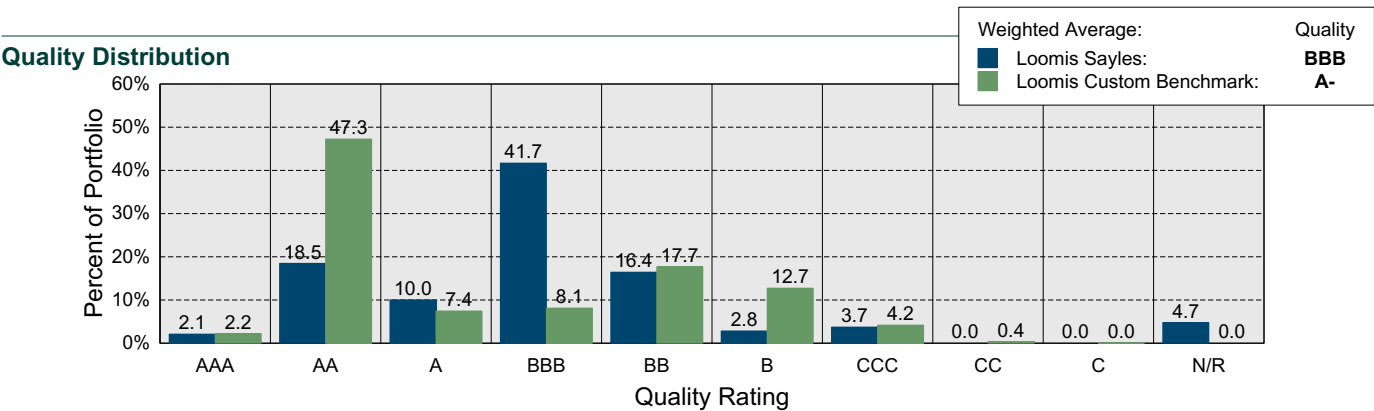
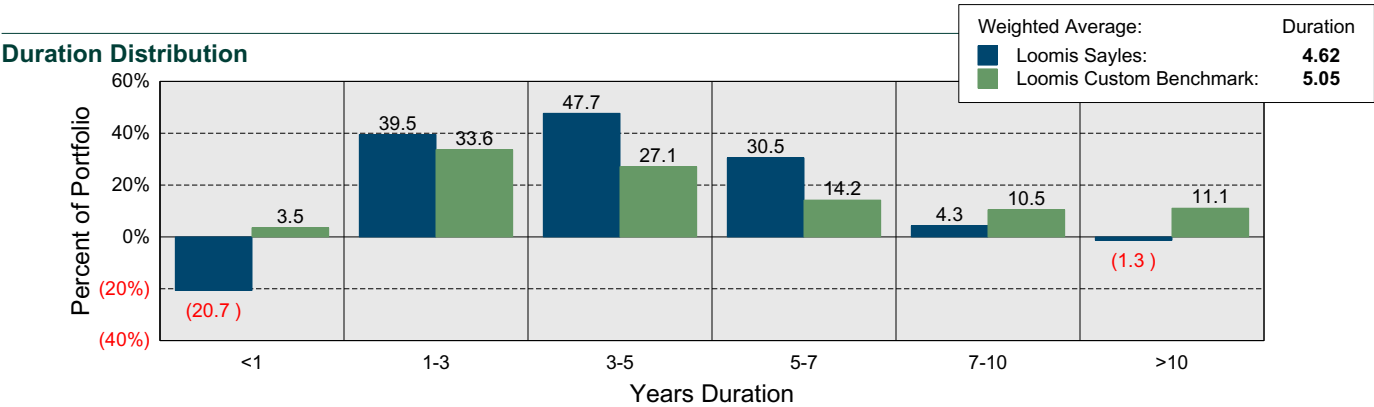
The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

Sector Allocation



Loomis Sayles

Loomis Custom Benchmark



Manulife Strategic Fixed Income Fund Period Ended September 30, 2024

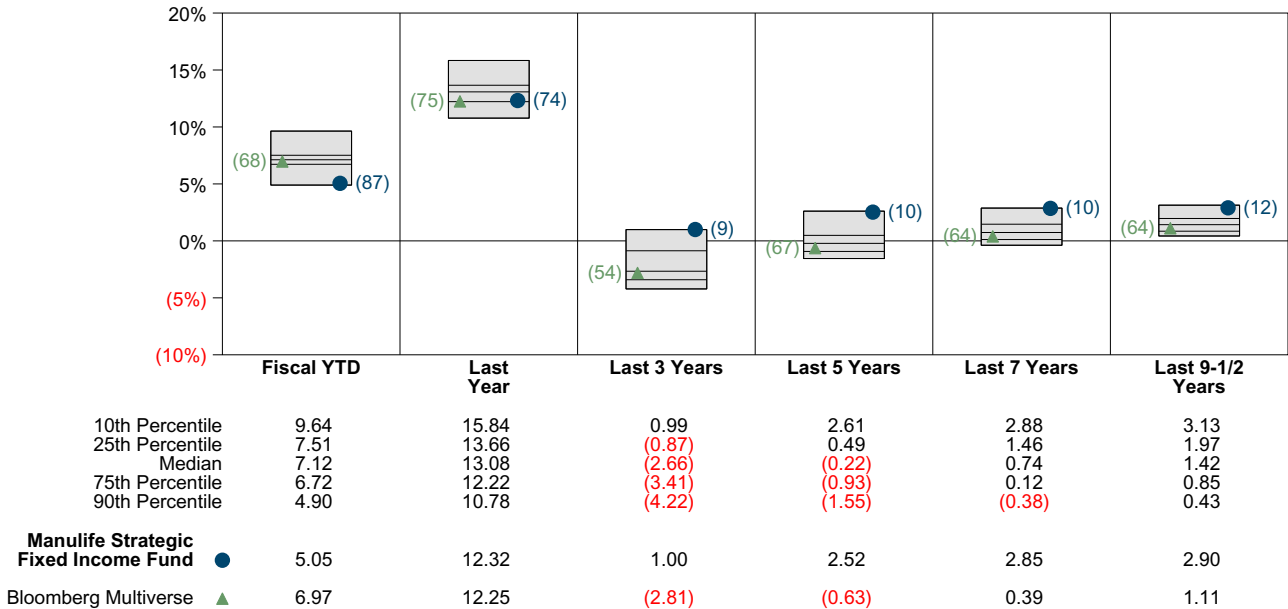
Investment Philosophy

Manulife believes in a combination of global bonds that are actively managed across a variety of credit qualities - from government to high yield - and skillfully executed currency investing. They capitalize on these shifts by using a research driven process to identify attractive sectors as well as mispriced securities within those sectors. Their investment universe consists of high yield bonds, foreign bonds including emerging markets and non-dollar, U.S. government securities and active currency management. NHRS inception in the fund is February 2015.

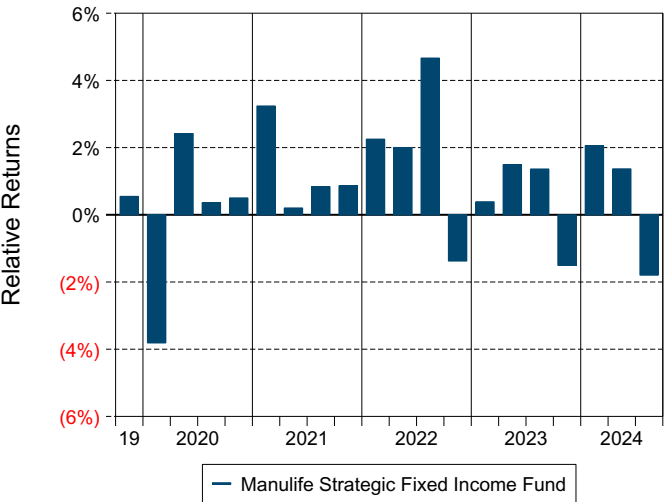
Quarterly Asset Growth

Beginning Market Value	\$215,765,425
Net New Investment	\$0
Investment Gains/(Losses)	\$10,898,964
Ending Market Value	\$226,664,388

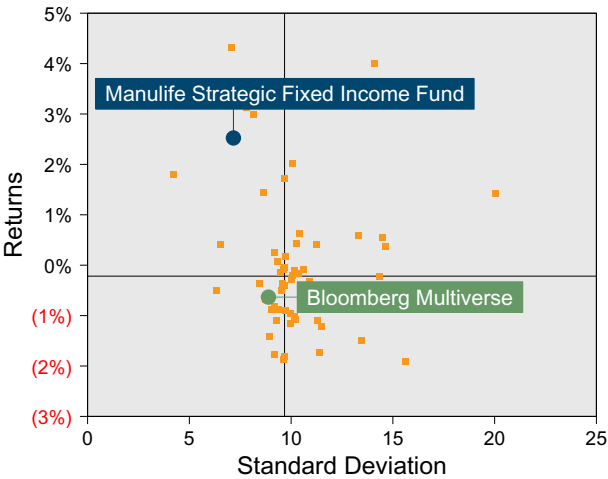
Performance vs Callan Global Fixed Income (Unhedged) (Gross)



Relative Return vs Bloomberg Multiverse



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

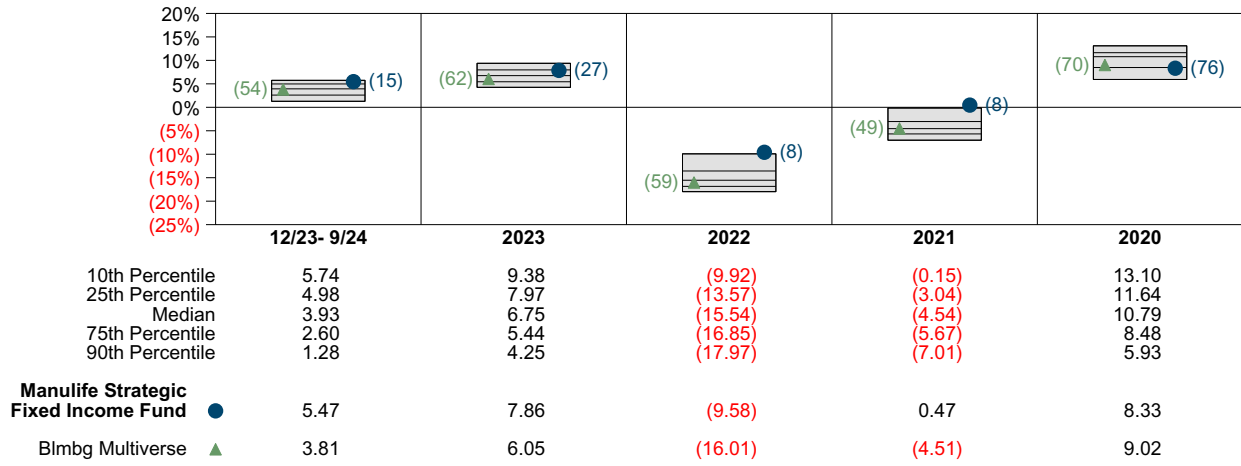


Manulife Strategic Fixed Income Fund
Return Analysis Summary

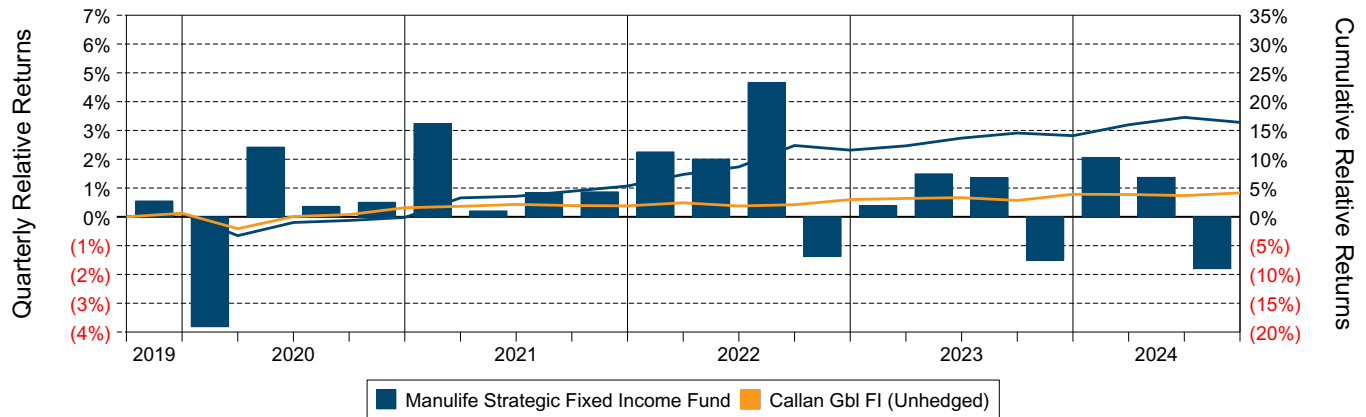
Return Analysis

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.

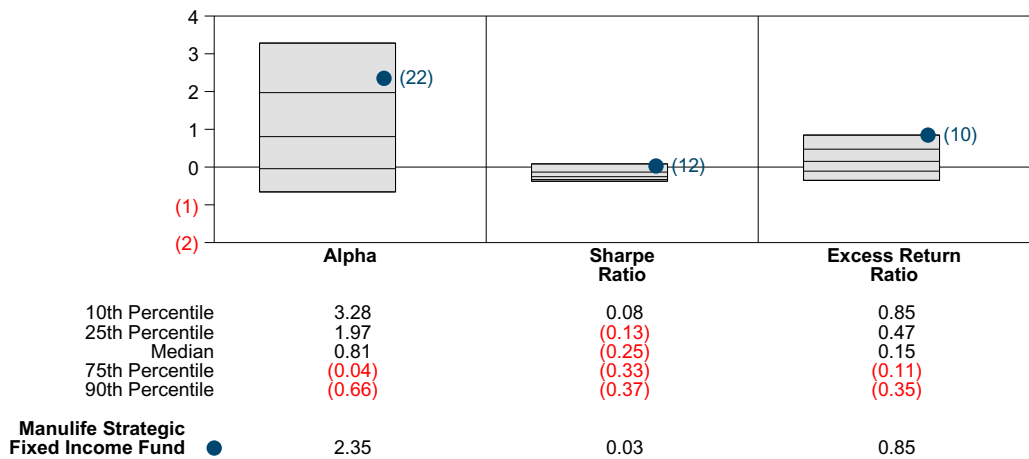
Performance vs Callan Global Fixed Income (Unhedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Multiverse



Risk Adjusted Return Measures vs Blmbg Multiverse
Rankings Against Callan Global Fixed Income (Unhedged) (Gross)
Five Years Ended September 30, 2024



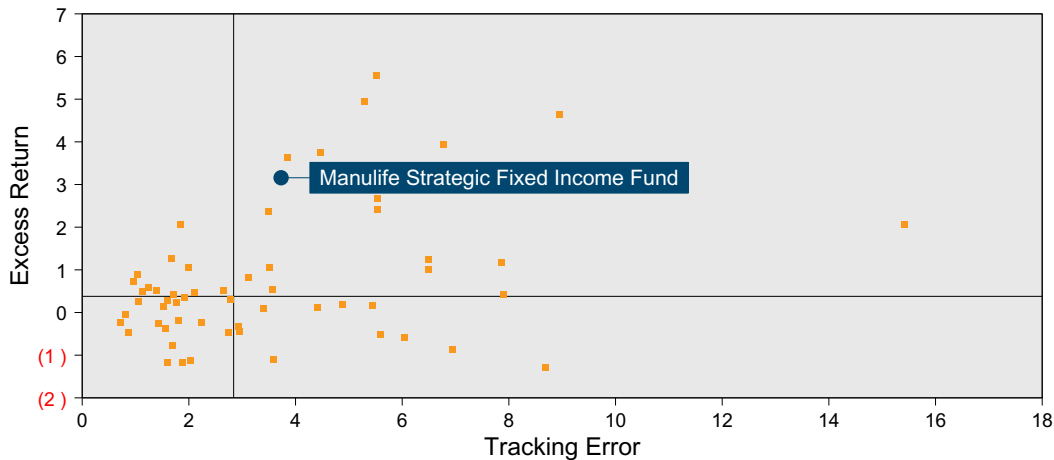
Manulife Strategic Fixed Income Fund

Risk Analysis Summary

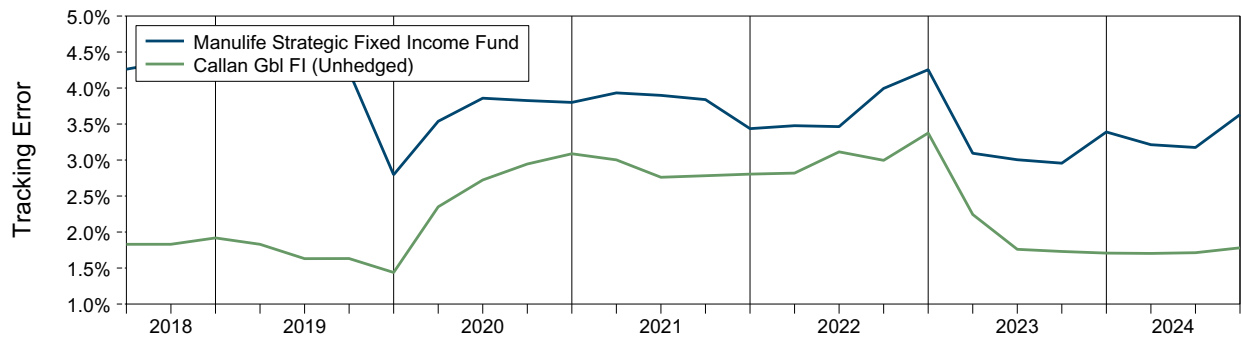
Risk Analysis

The graphs below analyze the risk or variation of a manager's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows tracking error patterns versus the benchmark over time. The last two charts show the ranking of the manager's risk statistics versus the peer group.

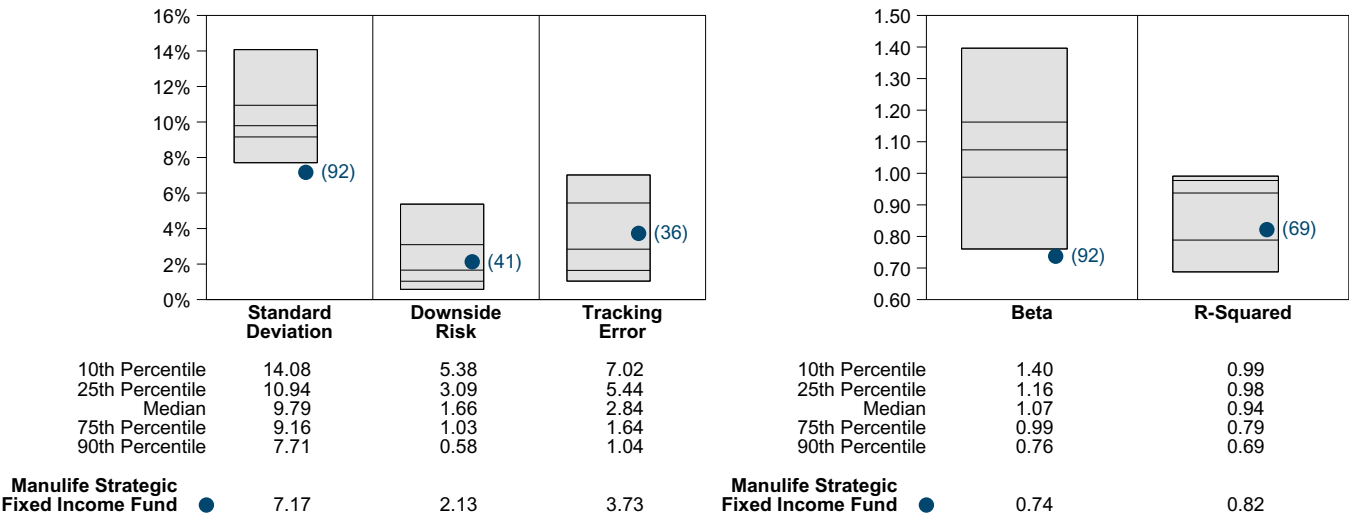
Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended September 30, 2024



Rolling 12 Quarter Tracking Error vs Blmbg Multiverse



Risk Statistics Rankings vs Blmbg Multiverse Rankings Against Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended September 30, 2024



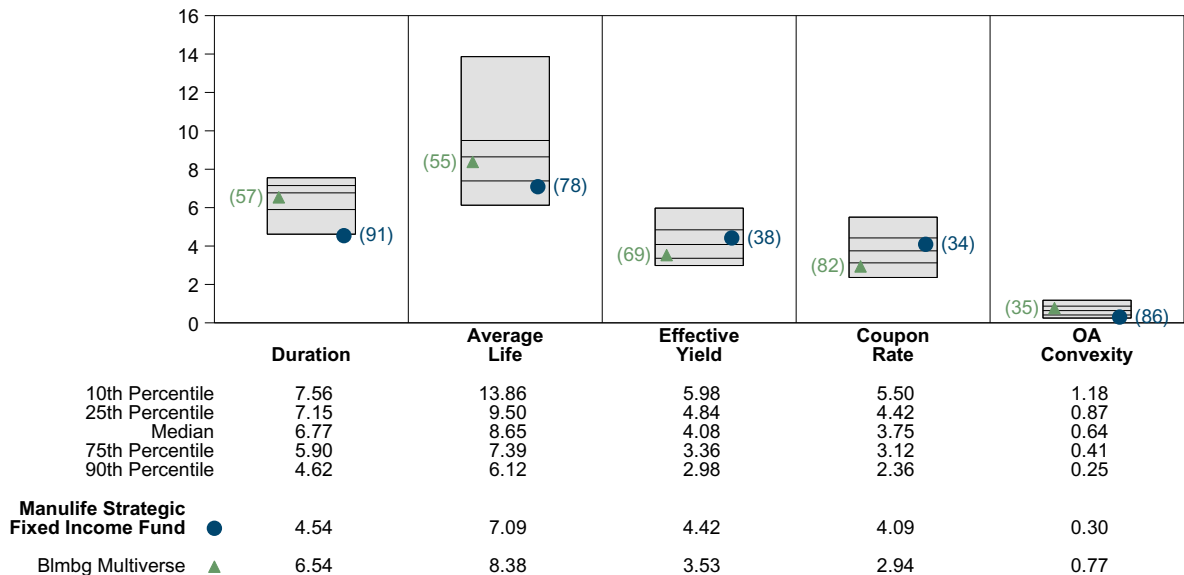
Manulife Strategic Fixed Income Fund

Bond Characteristics Analysis Summary

Portfolio Characteristics

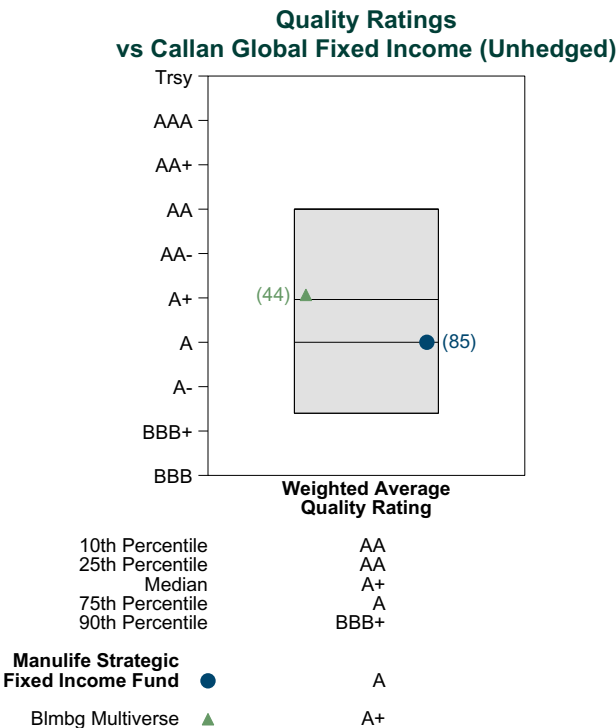
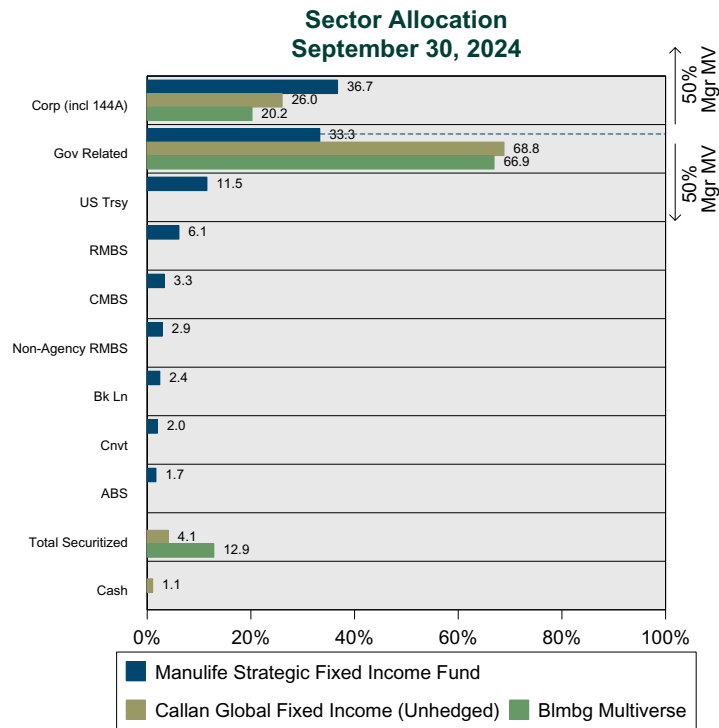
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

Fixed Income Portfolio Characteristics Rankings Against Callan Global Fixed Income (Unhedged) as of September 30, 2024



Sector Allocation and Quality Ratings

The first graph compares the manager's sector allocation with the average allocation across all the members of the manager's style. The second graph compares the manager's weighted average quality rating with the range of quality ratings for the style.

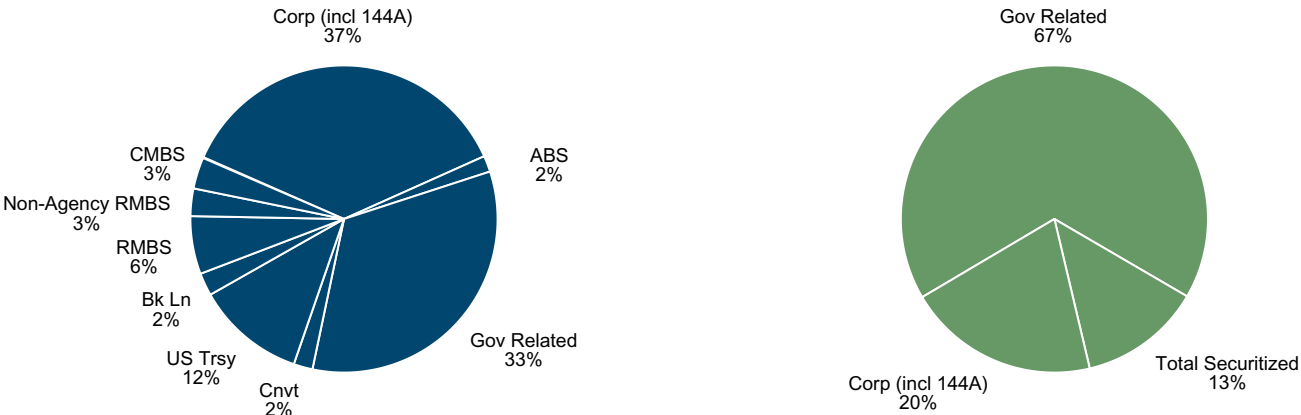


Manulife Strategic Fixed Income Fund Portfolio Characteristics Summary As of September 30, 2024

Portfolio Structure Comparison

The charts below compare the structure of the portfolio to that of the index from the three perspectives that have the greatest influence on return. The first chart compares the two portfolios across sectors. The second chart compares the duration distribution. The last chart compares the distribution across quality ratings.

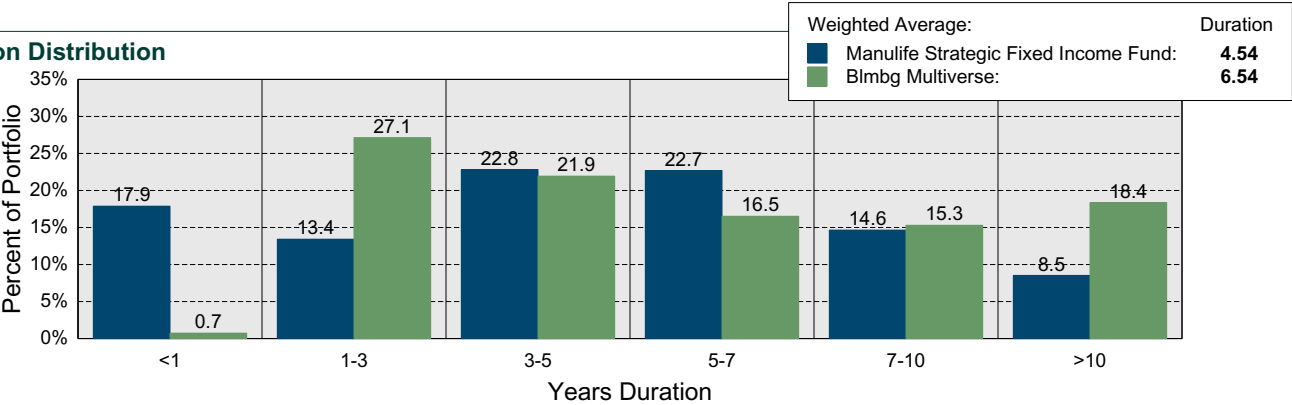
Sector Allocation



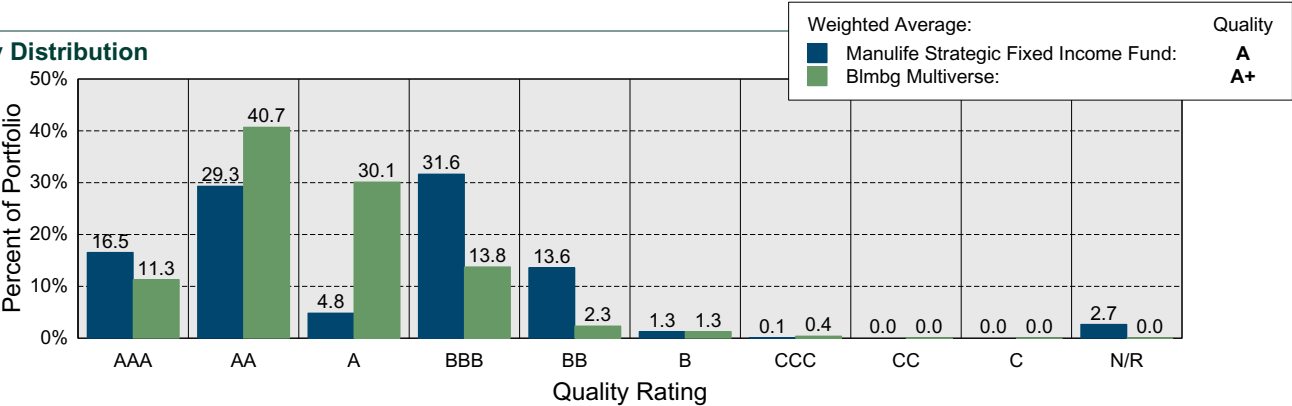
Manulife Strategic Fixed Income Fund

Blmbg Multiverse

Duration Distribution



Quality Distribution



Mellon US Agg Bond Index

Period Ended September 30, 2024

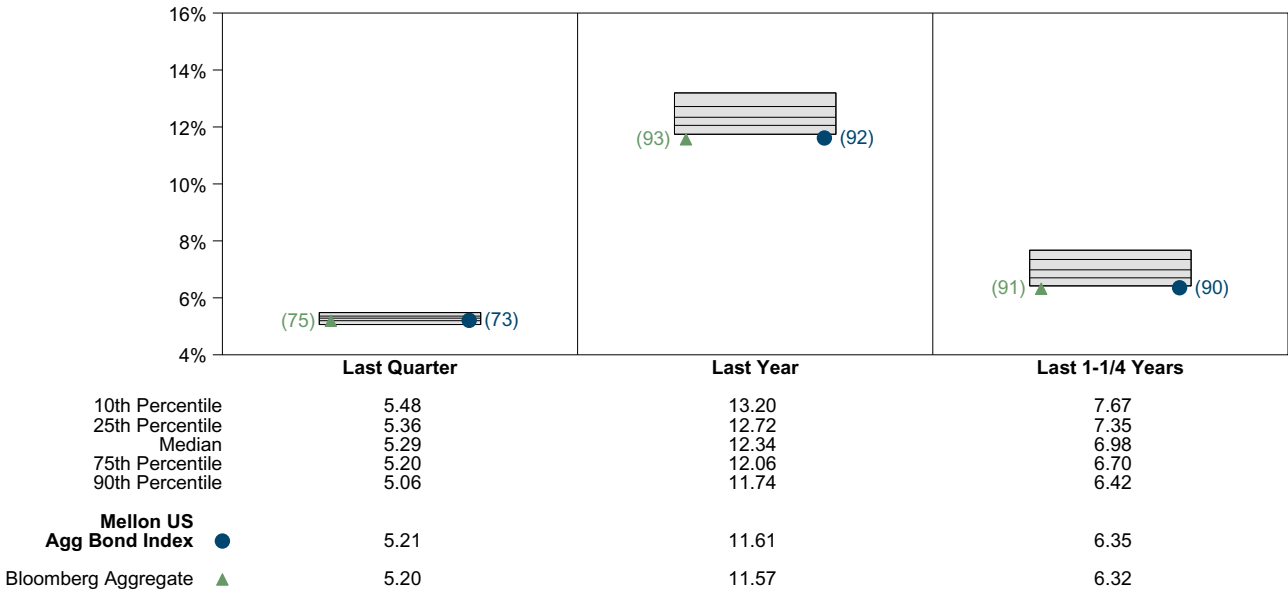
Investment Philosophy

Fixed income indexing offers a cost-effective, sensible investment approach to gaining diversified market exposure and receiving competitive relative returns over the long-term. Mellon Capital's Aggregate Bond Index Strategy employs a stratified sampling approach that has consistently added value with very little tracking error versus the Barclays Capital Aggregate Bond Index. We emphasize low turnover (low transaction costs) and strict risk control in the structuring of our portfolios. NHRS inception in the fund is May 2023.

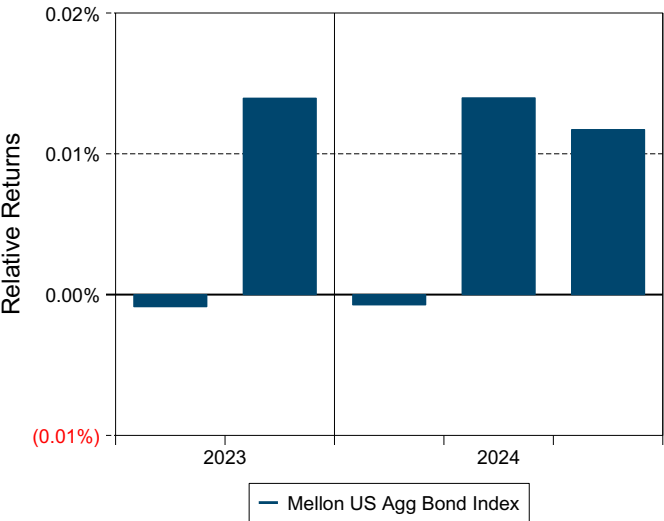
Quarterly Asset Growth

Beginning Market Value	\$177,869,728
Net New Investment	\$0
Investment Gains/(Losses)	\$9,264,326
Ending Market Value	\$187,134,054

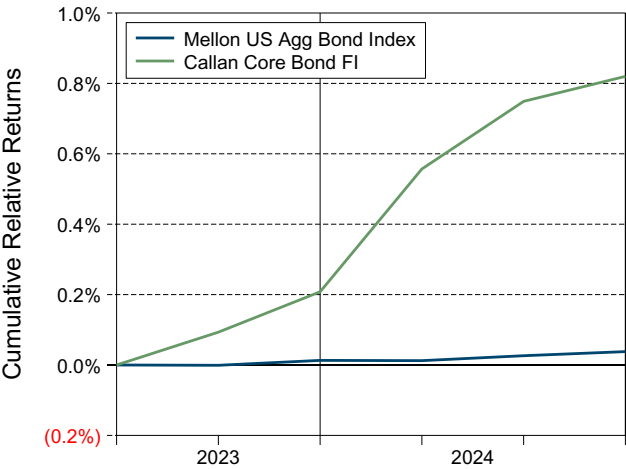
Performance vs Callan Core Bond Fixed Income (Gross)



Relative Return vs Bloomberg Aggregate



Cumulative Returns vs Bloomberg Aggregate



Total Real Estate Period Ended September 30, 2024

Real Estate Benchmark

The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index (lagged 1 quarter) as of 7/1/2015. From 1/1/2008 to 7/1/2015 the benchmark was the NCREIF Property Index + 50 bps (lagged 1 quarter). Prior to 1/1/2008 the benchmark was the NCREIF Property Index (lagged 1 quarter). As of 7/1/2022, Total Real Estate returns include Townsend's discretionary fee.

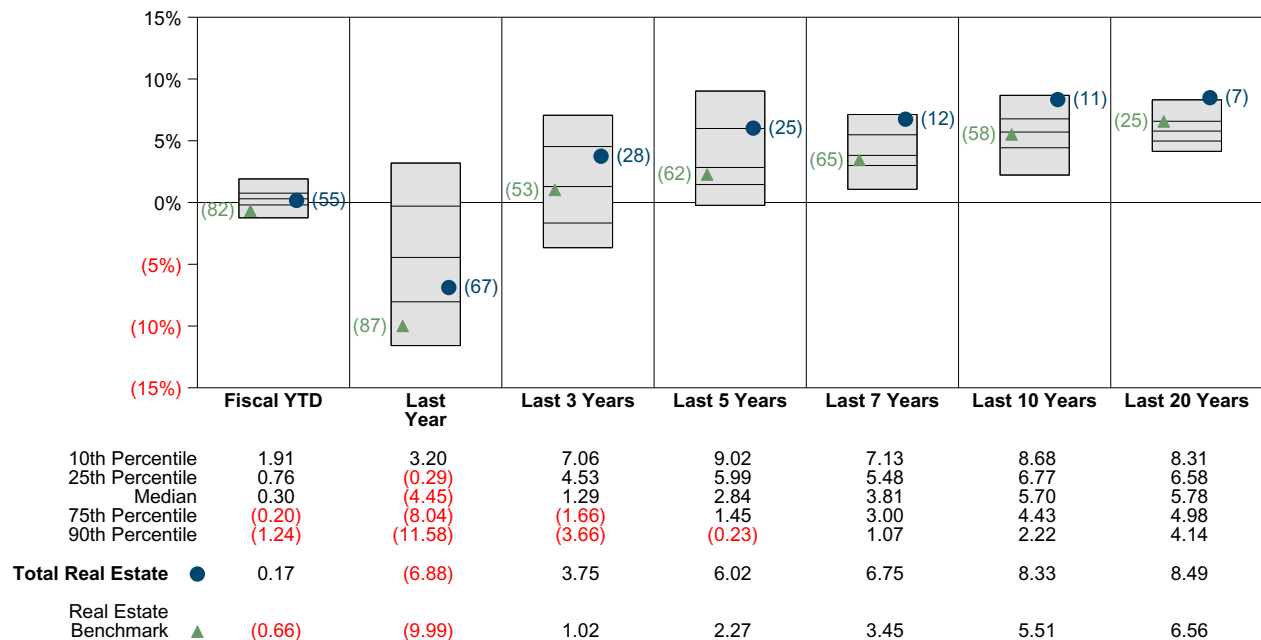
Quarterly Summary and Highlights

- Total Real Estate's portfolio posted a 0.17% return for the quarter placing it in the 55 percentile of the Callan Total Real Estate group for the quarter and in the 67 percentile for the last year.
- Total Real Estate's portfolio outperformed the Real Estate Benchmark by 0.83% for the quarter and outperformed the Real Estate Benchmark for the year by 3.11%.

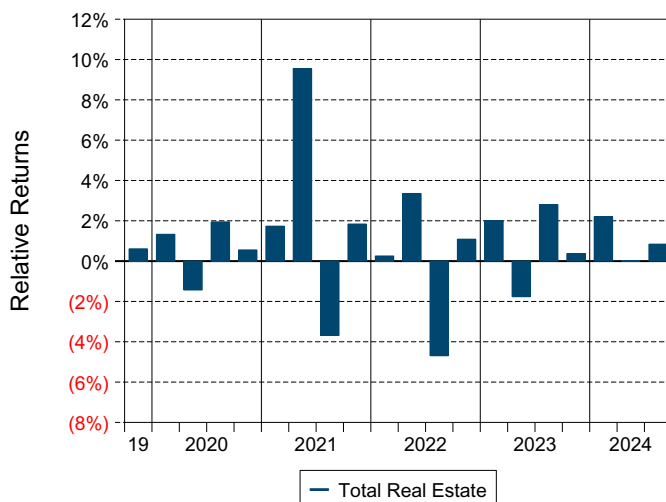
Quarterly Asset Growth

Beginning Market Value	\$1,128,553,548
Net New Investment	\$12,901,125
Investment Gains/(Losses)	\$5,016,645
Ending Market Value	\$1,146,471,318

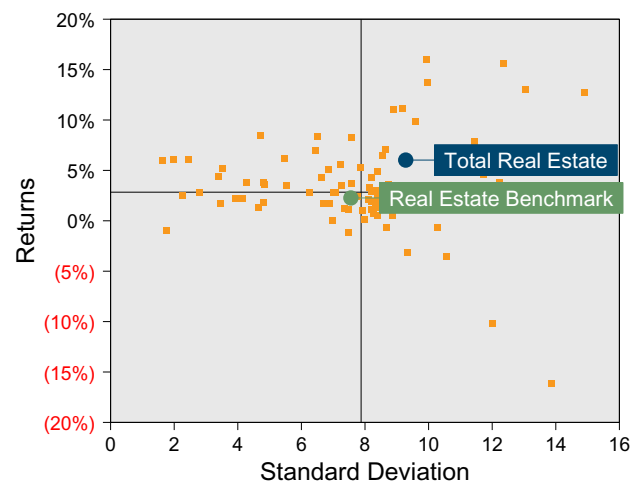
Performance vs Callan Total Real Estate (Net)



Relative Return vs Real Estate Benchmark



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

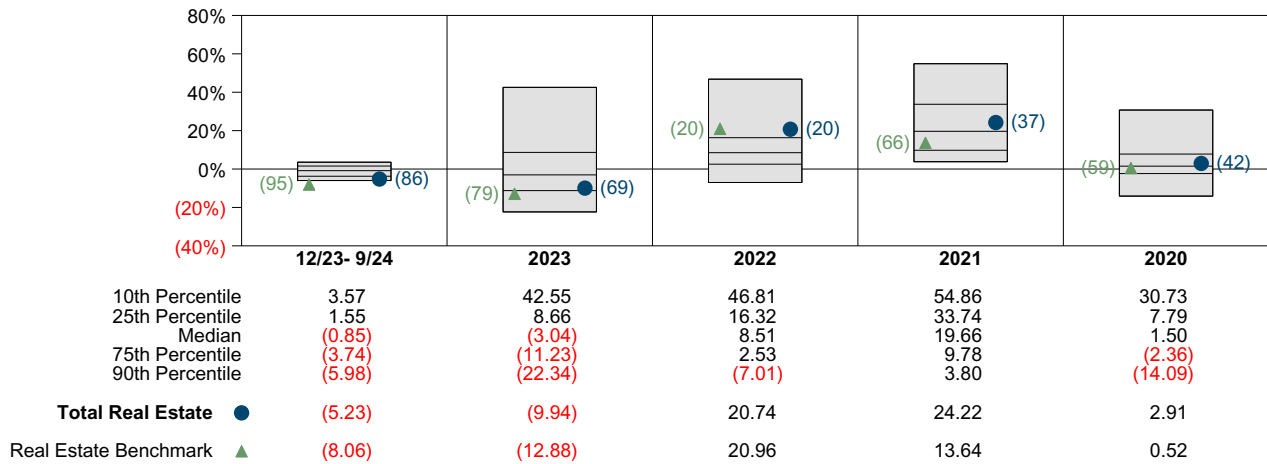


Total Real Estate Return Analysis Summary

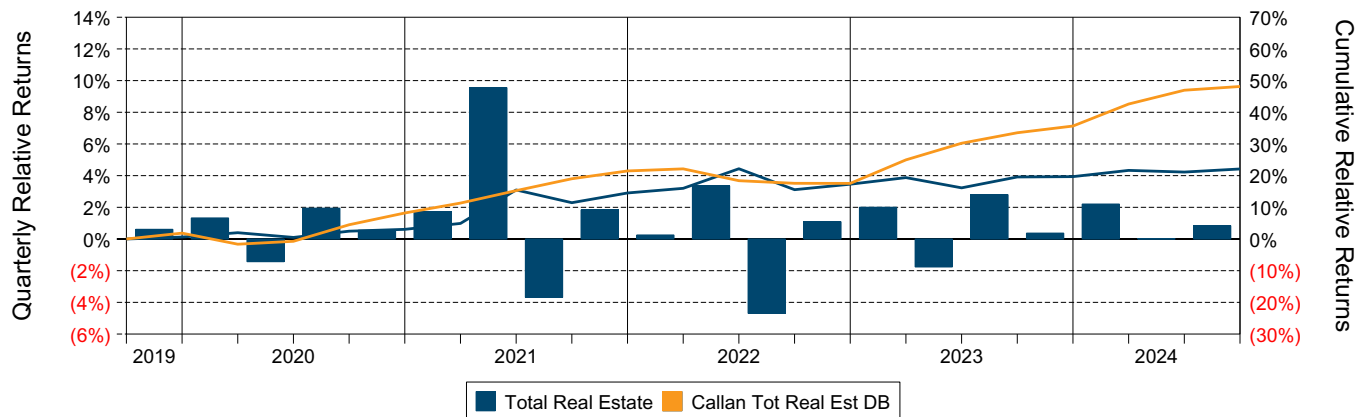
Return Analysis

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

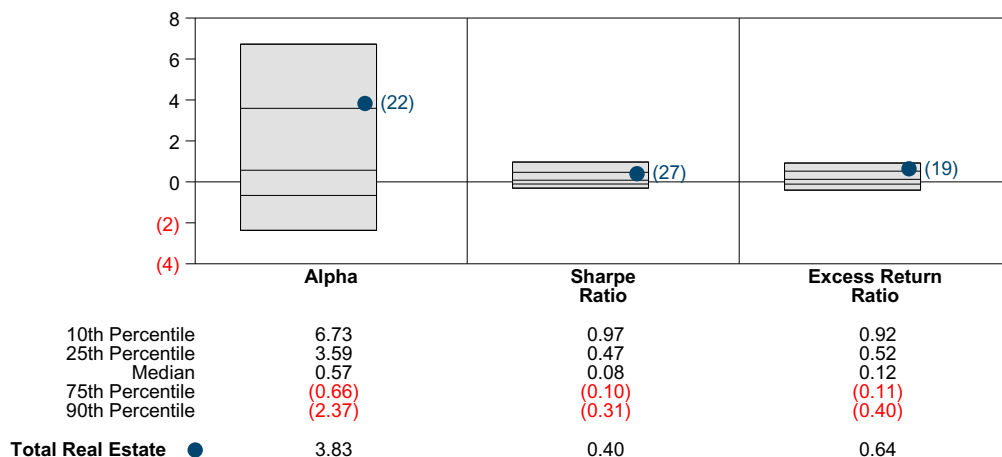
Performance vs Callan Tot Real Est DB (Net)



Cumulative and Quarterly Relative Returns vs Real Estate Benchmark



Risk Adjusted Return Measures vs Real Estate Benchmark Rankings Against Callan Tot Real Est DB (Net) Five Years Ended September 30, 2024



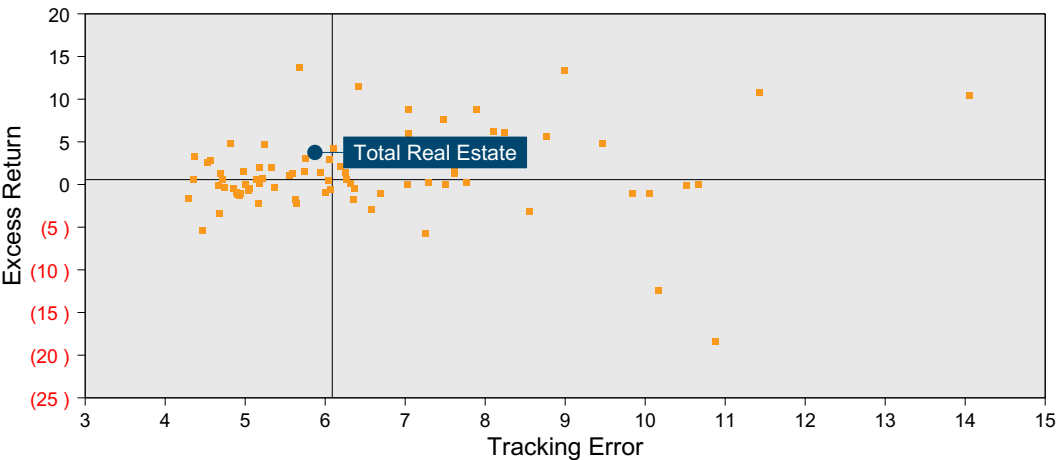
Total Real Estate

Risk Analysis Summary

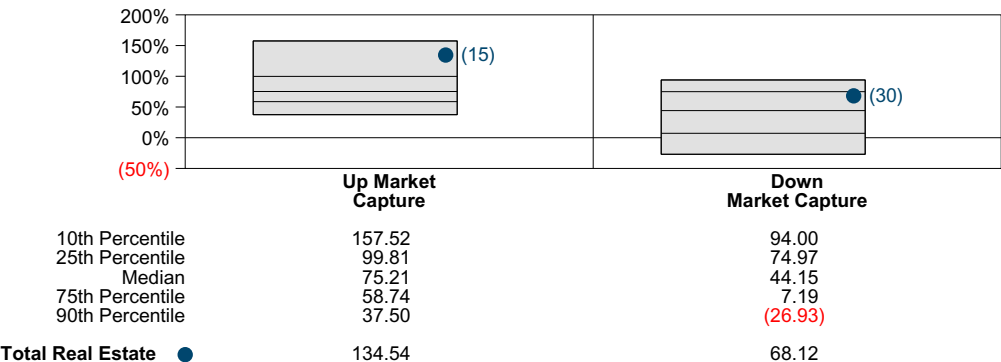
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

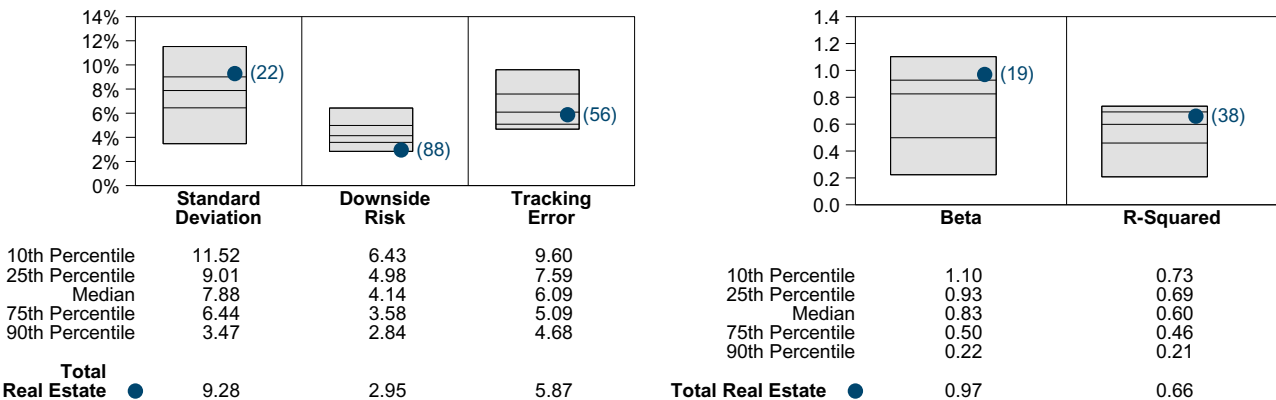
Risk Analysis vs Callan Total Domestic Real Estate DB (Net) Five Years Ended September 30, 2024



Market Capture vs Real Estate Benchmark Rankings Against Callan Total Domestic Real Estate DB (Net) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Total Domestic Real Estate DB (Net) Five Years Ended September 30, 2024



Strategic Core Real Estate Period Ended September 30, 2024

Real Estate Benchmark

The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index (lagged 1 quarter) as of 7/1/2015. From 1/1/2008 to 7/1/2015 the benchmark was the NCREIF Property Index + 50 bps (lagged 1 quarter). Prior to 1/1/2008 the benchmark was the NCREIF Property Index (lagged 1 quarter).

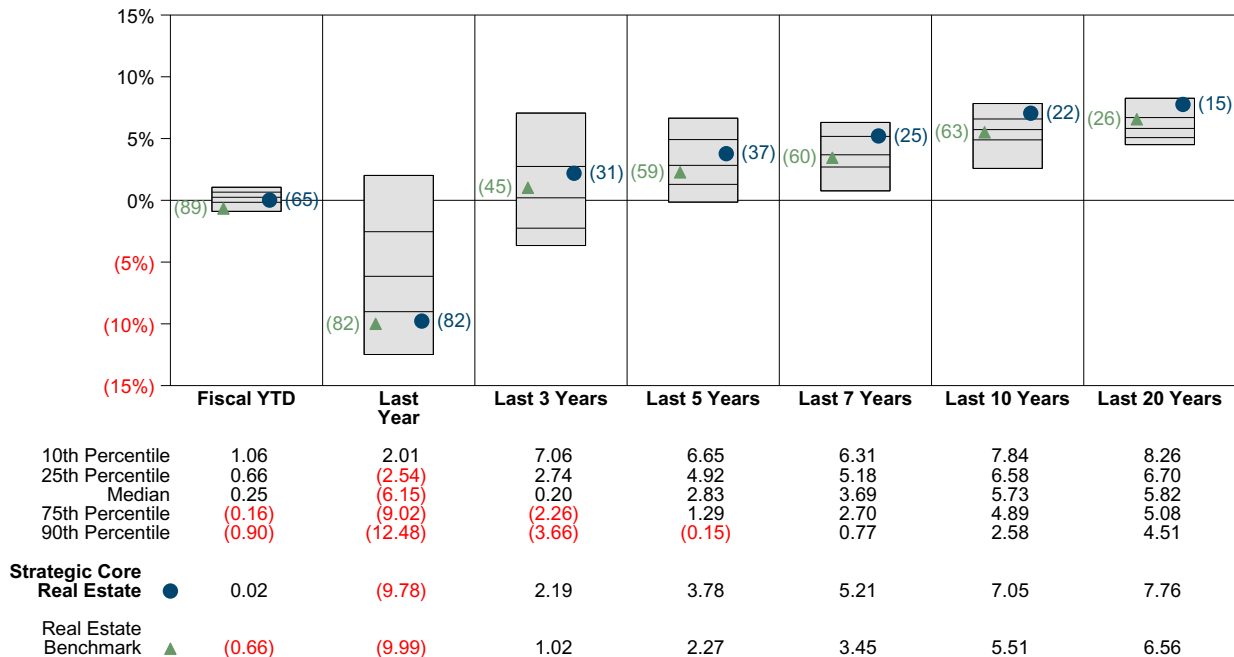
Quarterly Summary and Highlights

- Strategic Core Real Estate's portfolio posted a 0.02% return for the quarter placing it in the 65 percentile of the Callan Real Estate Core group for the quarter and in the 82 percentile for the last year.
- Strategic Core Real Estate's portfolio outperformed the Real Estate Benchmark by 0.68% for the quarter and outperformed the Real Estate Benchmark for the year by 0.22%.

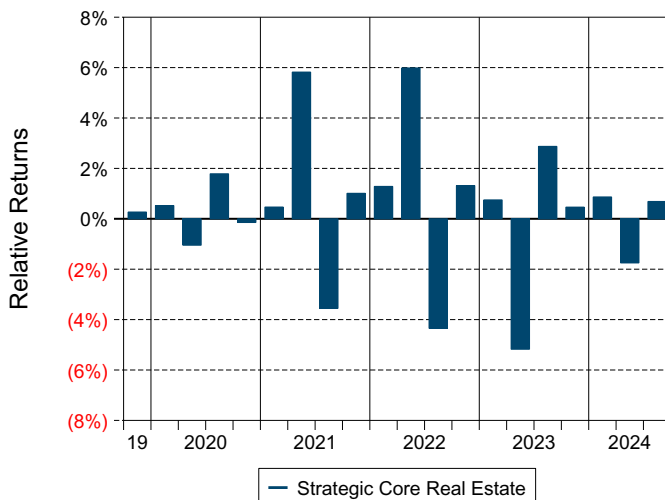
Quarterly Asset Growth

Beginning Market Value	\$659,725,899
Net New Investment	\$-7,889,712
Investment Gains/(Losses)	\$863,586
Ending Market Value	\$652,699,773

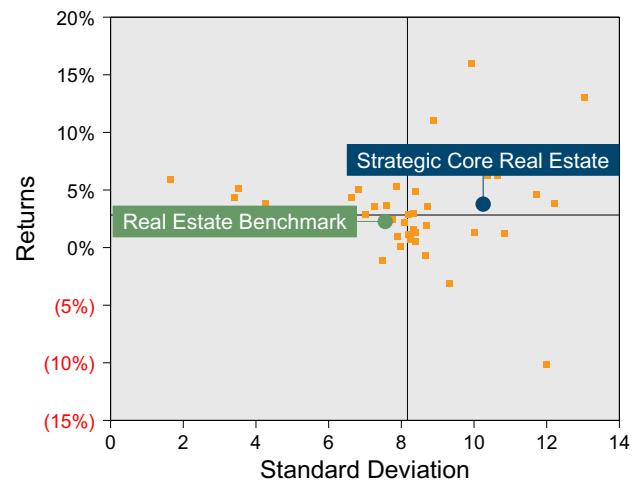
Performance vs Callan Real Estate Core (Net)



Relative Return vs Real Estate Benchmark



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

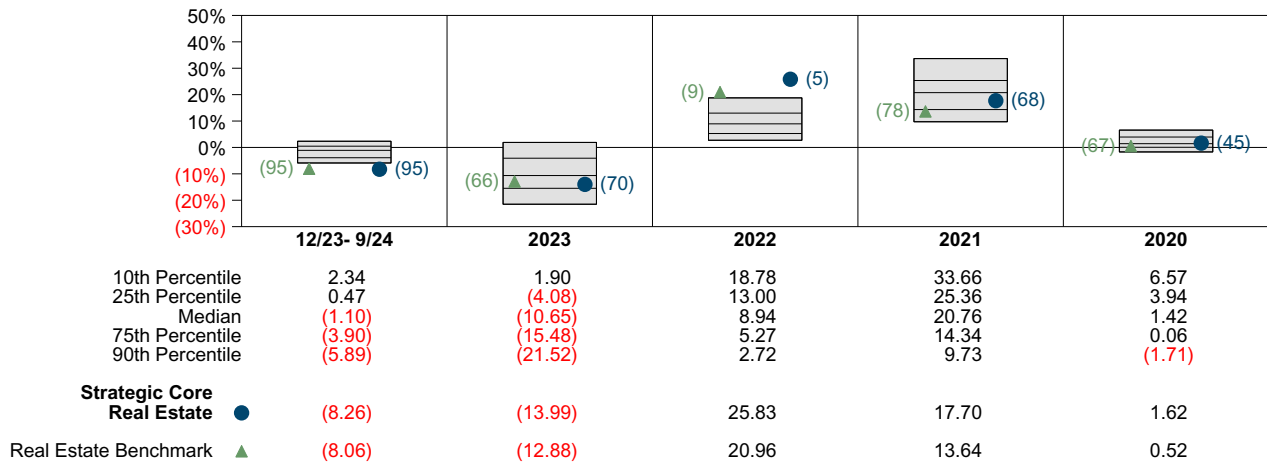


Strategic Core Real Estate Return Analysis Summary

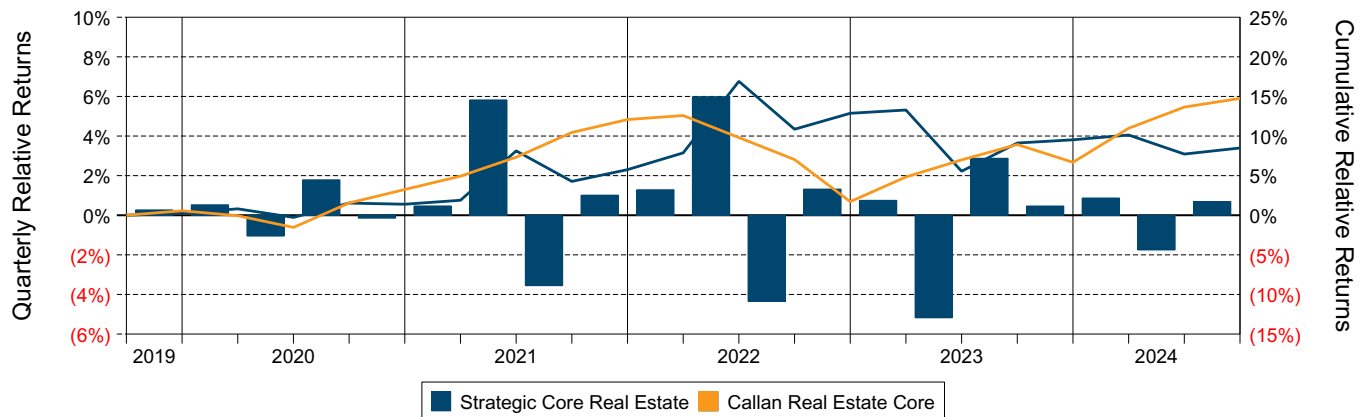
Return Analysis

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

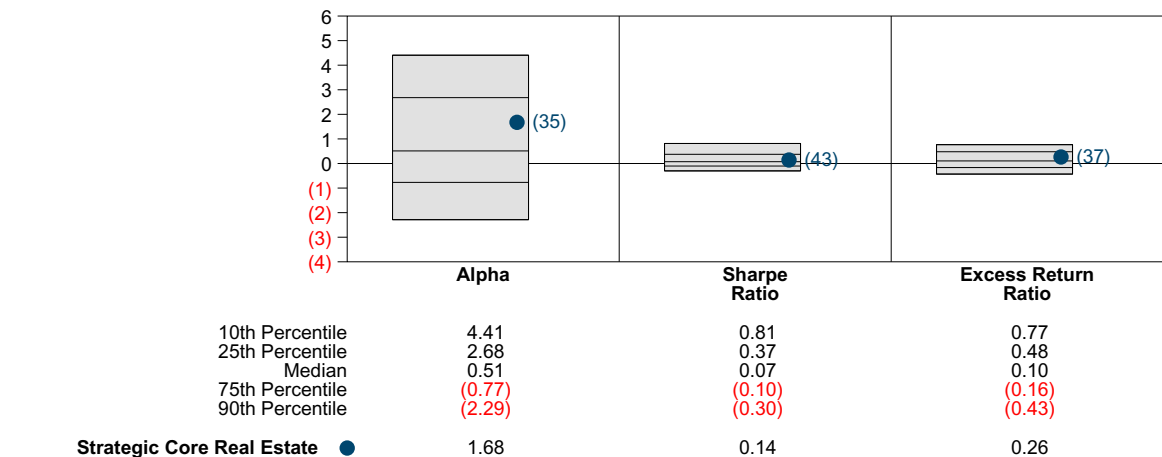
Performance vs Callan Real Estate Core (Net)



Cumulative and Quarterly Relative Returns vs Real Estate Benchmark



Risk Adjusted Return Measures vs Real Estate Benchmark Rankings Against Callan Real Estate Core (Net) Five Years Ended September 30, 2024



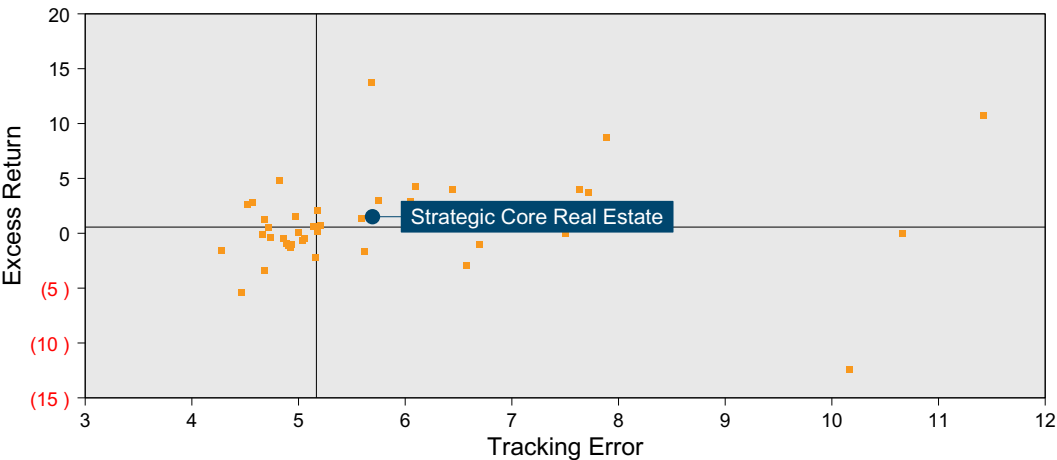
Strategic Core Real Estate

Risk Analysis Summary

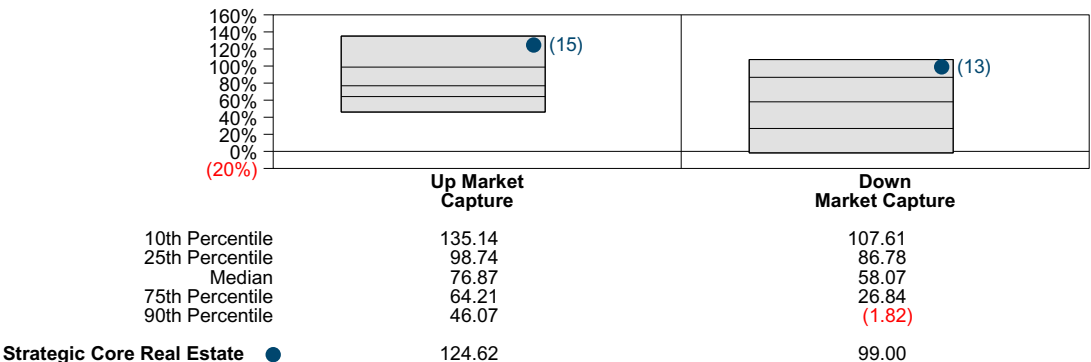
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

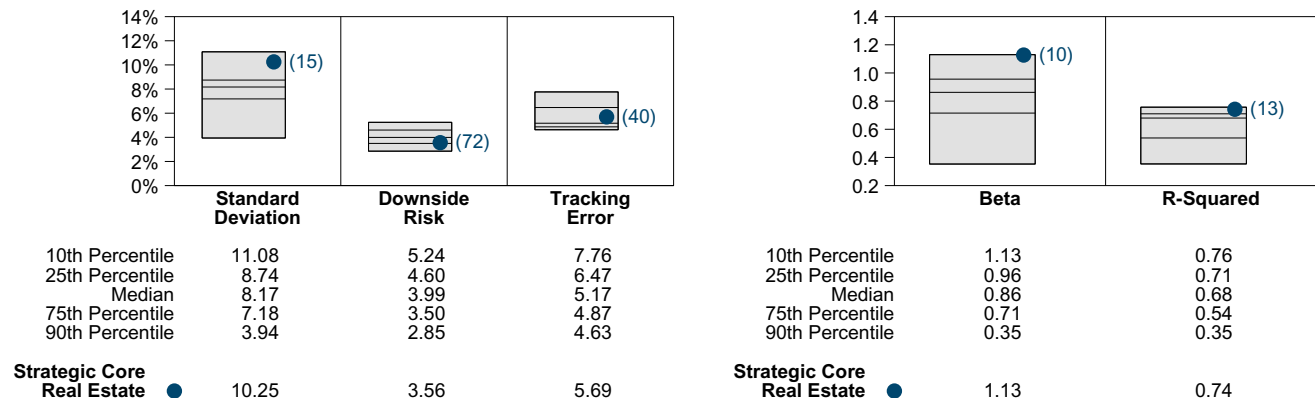
Risk Analysis vs Callan Real Estate Core (Net) Five Years Ended September 30, 2024



Market Capture vs Real Estate Benchmark Rankings Against Callan Real Estate Core (Net) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Real Estate Core (Net) Five Years Ended September 30, 2024



Tactical Non-Core Real Estate Period Ended September 30, 2024

Real Estate Benchmark

The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index (lagged 1 quarter) as of 7/1/2015. From 1/1/2008 to 7/1/2015 the benchmark was the NCREIF Property Index + 50 bps (lagged 1 quarter). Prior to 1/1/2008 the benchmark was the NCREIF Property Index (lagged 1 quarter).

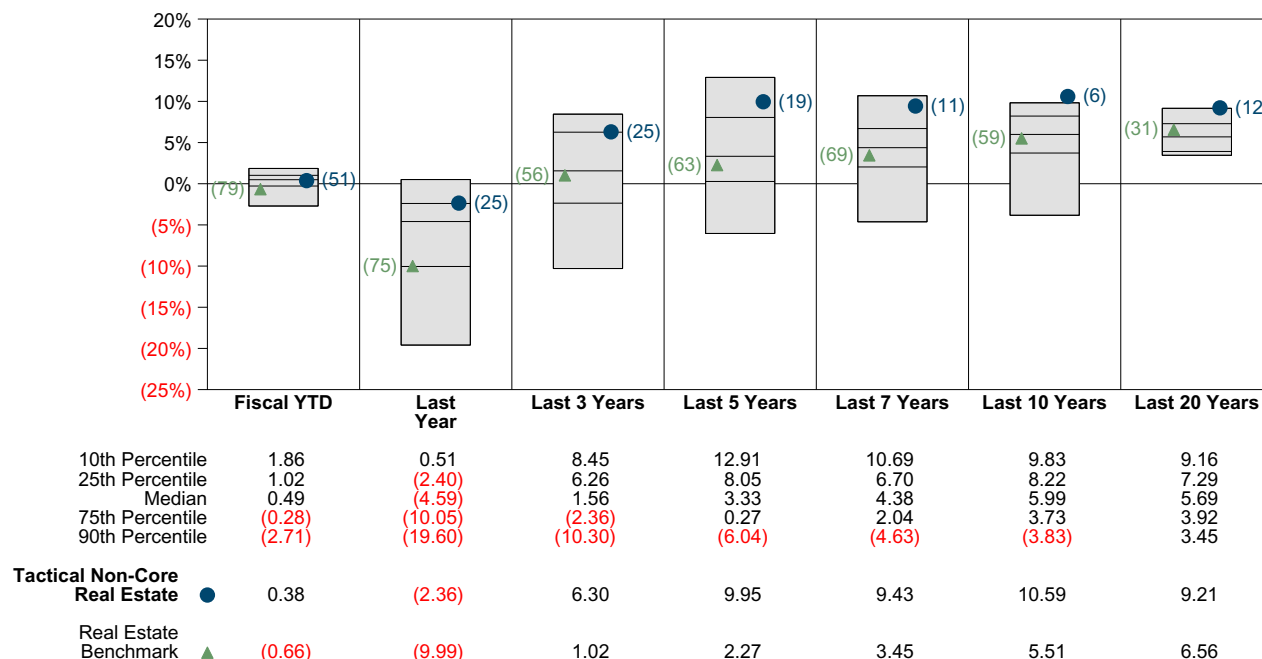
Quarterly Summary and Highlights

- Tactical Non-Core Real Estate's portfolio posted a 0.38% return for the quarter placing it in the 51 percentile of the Callan Real Est Val Add group for the quarter and in the 25 percentile for the last year.
- Tactical Non-Core Real Estate's portfolio outperformed the Real Estate Benchmark by 1.04% for the quarter and outperformed the Real Estate Benchmark for the year by 7.64%.

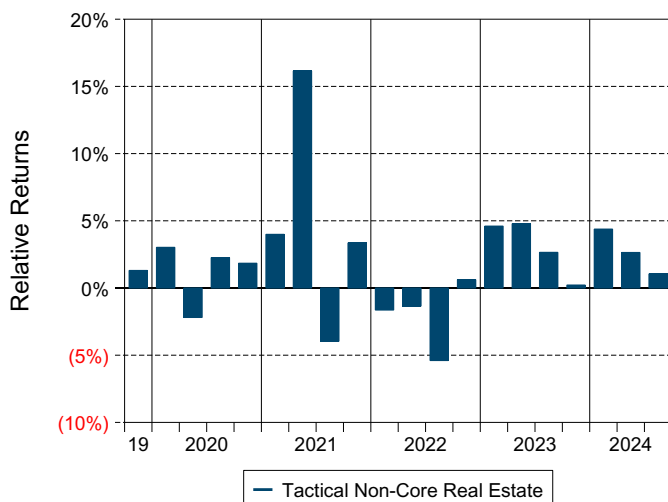
Quarterly Asset Growth

Beginning Market Value	\$468,827,648
Net New Investment	\$21,520,720
Investment Gains/(Losses)	\$3,423,176
Ending Market Value	\$493,771,544

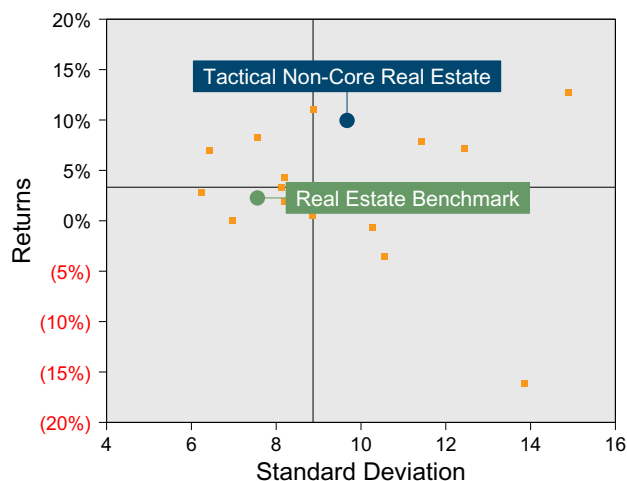
Performance vs Callan Real Est Val Add (Net)



Relative Return vs Real Estate Benchmark



Callan Real Est Val Add (Net) Annualized Five Year Risk vs Return

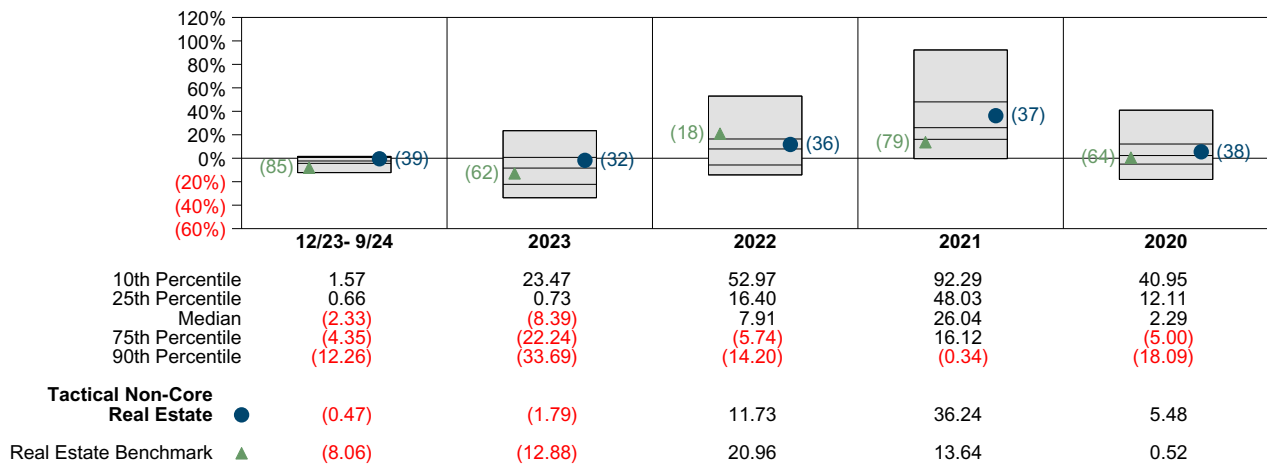


Tactical Non-Core Real Estate Return Analysis Summary

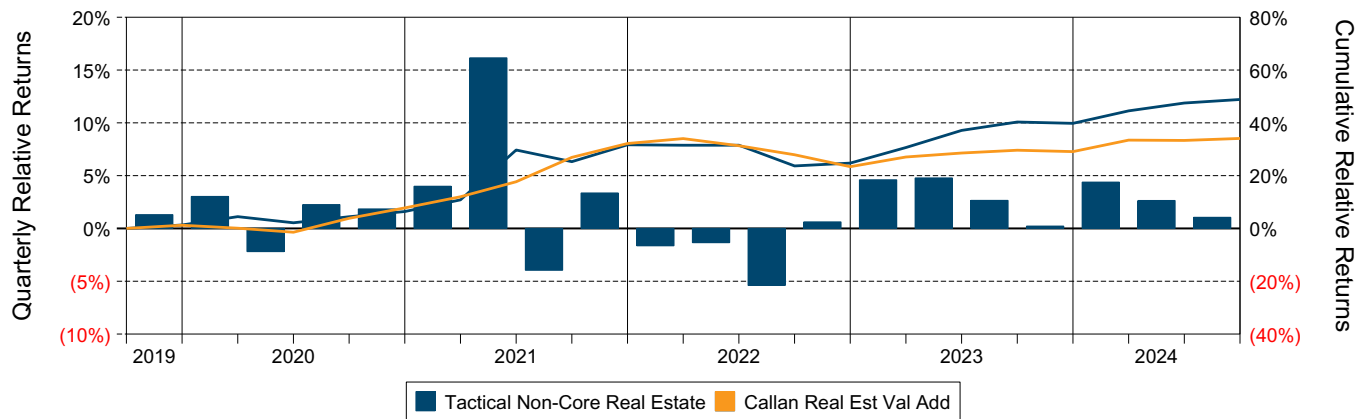
Return Analysis

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

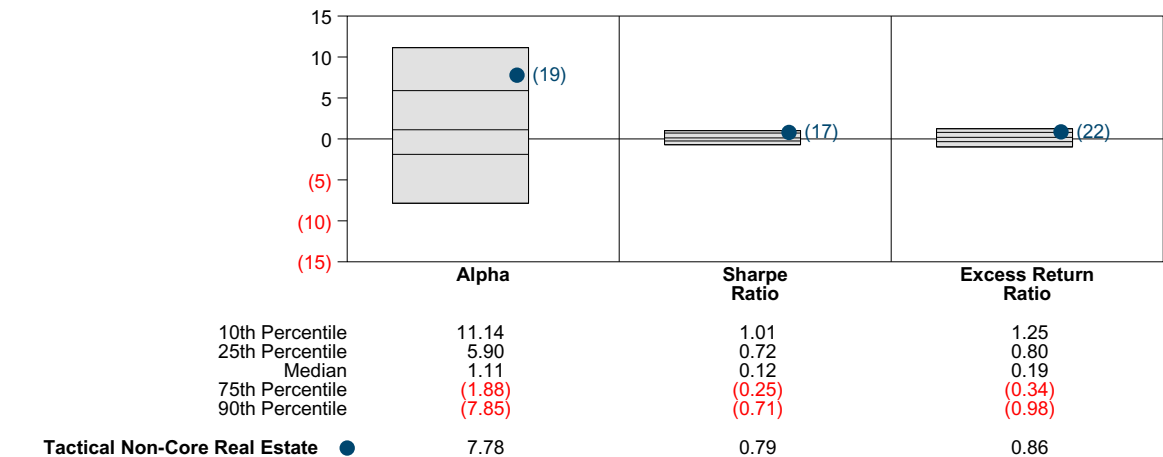
Performance vs Callan Real Est Val Add (Net)



Cumulative and Quarterly Relative Returns vs Real Estate Benchmark



Risk Adjusted Return Measures vs Real Estate Benchmark Rankings Against Callan Real Est Val Add (Net) Five Years Ended September 30, 2024

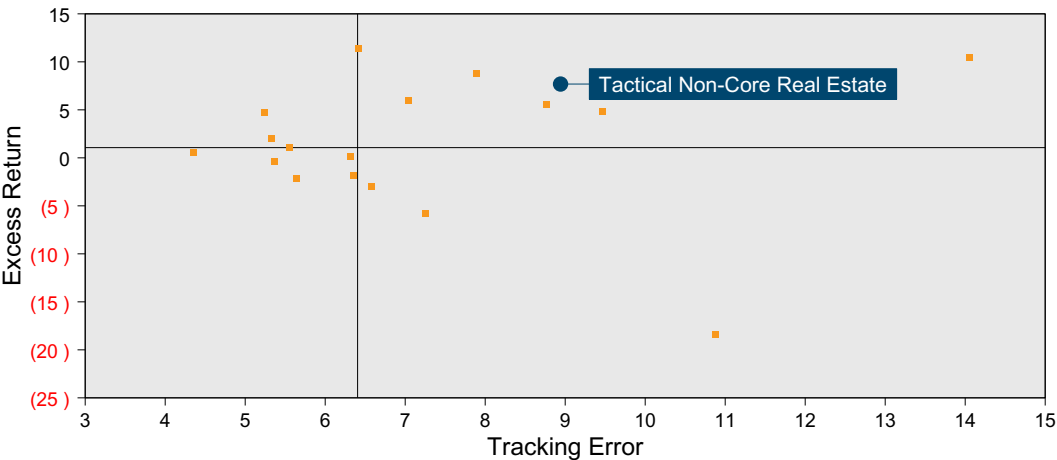


Tactical Non-Core Real Estate Risk Analysis Summary

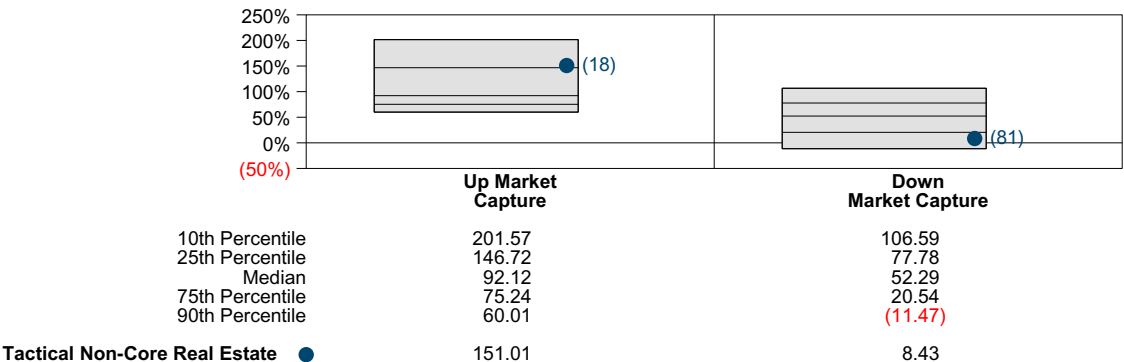
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

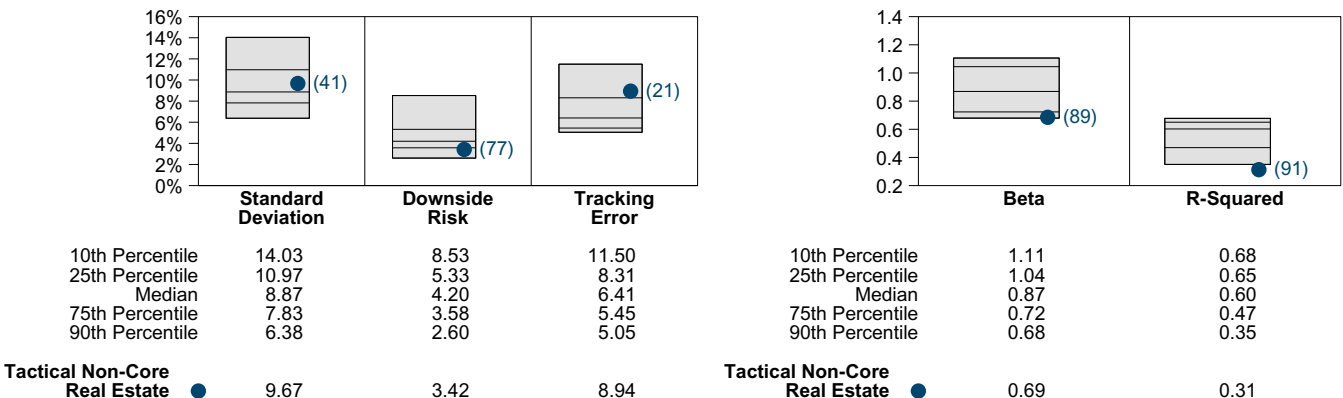
Risk Analysis vs Callan Real Estate Value Added (Net) Five Years Ended September 30, 2024



Market Capture vs Real Estate Benchmark Rankings Against Callan Real Estate Value Added (Net) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Real Estate Value Added (Net) Five Years Ended September 30, 2024



Total Alternative Assets Period Ended September 30, 2024

Alternative Assets Benchmark

The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 3% (1 qtr lag), 16.7% Bloomberg HY Corp +1%(1 qtr lag), and 16.7% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022. From 7/1/2019 to 7/1/2022 the benchmark was 66.7% S&P 500 +3% (1 qtr lag) and 33.3% S&P LSTA Leveraged Loan 100 Index (1 qtr lag). From 7/1/2016 to 7/1/2019 the benchmark was 33.3% S&P 500 + 3% (1 qtr lag), 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag), and 33.3% 6-month USD LIBOR 5%. From 7/1/2015 to 7/1/2016 the benchmark was 33.3% S&P 500 + 3% (1 qtr lag), 33.3% S&P LSTA Leverage Loan 100 Index (1 qtr lag), and 33.3% 1-month USD LIBID + 5%. From 7/1/2013 to 7/1/2015 the benchmark was 100% S&P 500 + 5% (1 qtr lag). From 7/1/2011 to 7/1/2013 the benchmark was the quarter ending weight of Private Equity x S&P 500 + 5% (1 qtr lag) and the quarter ending weight of Absolute Return x CPI + 5% (1 qtr lag). Prior to 7/1/2011 the benchmark was 100% CPI + 5% (1 qtr lag).

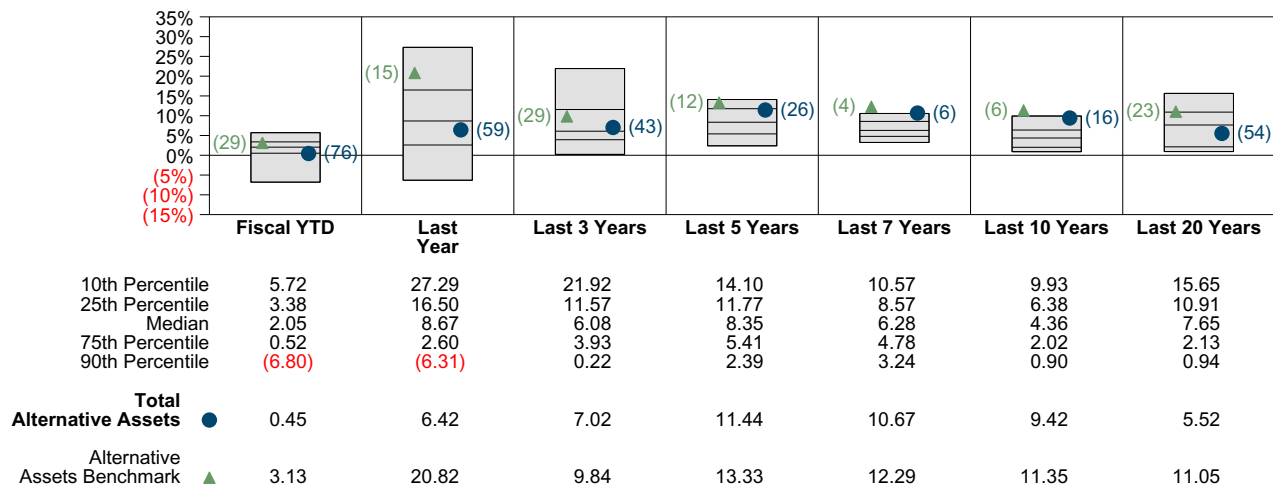
Quarterly Summary and Highlights

- Total Alternative Assets's portfolio posted a 0.45% return for the quarter placing it in the 76 percentile of the Callan Alternative Inv DB group for the quarter and in the 59 percentile for the last year.
- Total Alternative Assets's portfolio underperformed the Alternative Assets Benchmark by 2.68% for the quarter and underperformed the Alternative Assets Benchmark for the year by 14.40%.

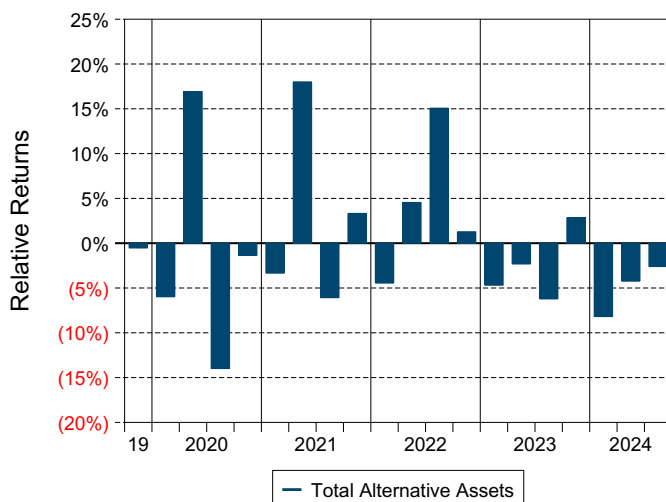
Quarterly Asset Growth

Beginning Market Value	\$2,291,255,110
Net New Investment	\$-66,377,801
Investment Gains/(Losses)	\$9,969,633
Ending Market Value	\$2,234,846,942

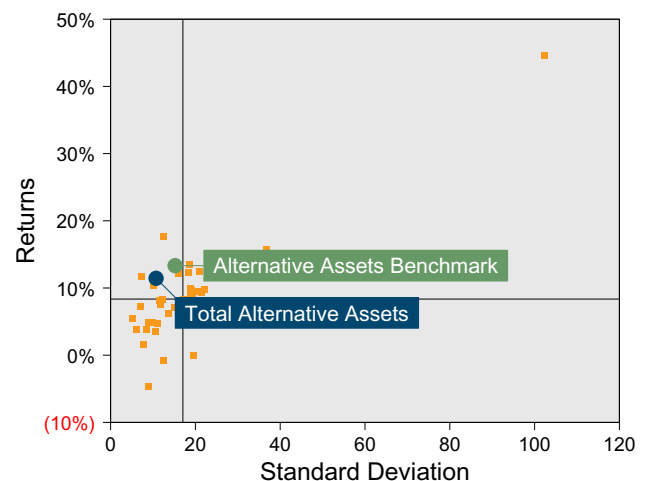
Performance vs Callan Alternative Inv DB (Gross)



Relative Returns vs Alternative Assets Benchmark



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

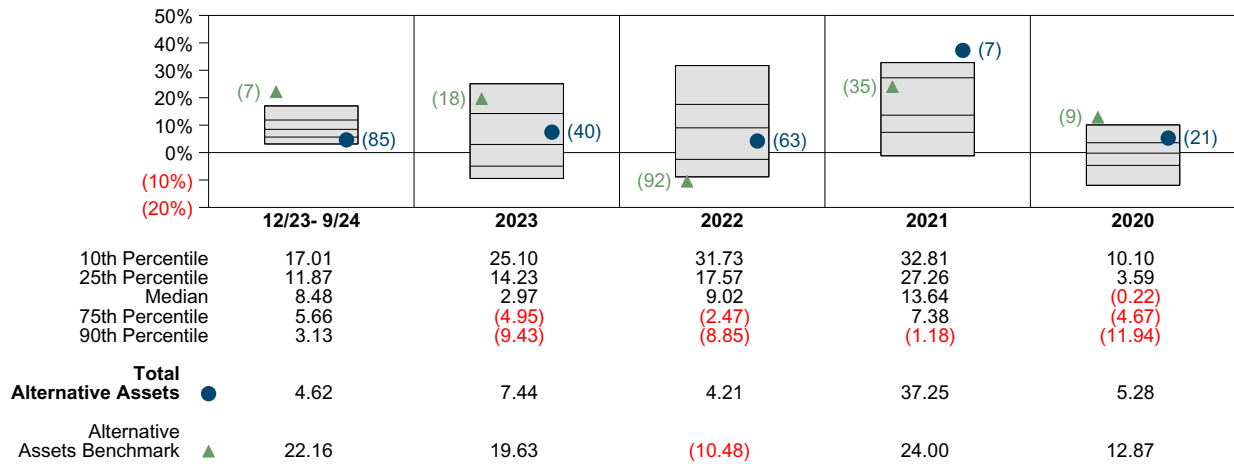


Total Alternative Assets
Return Analysis Summary

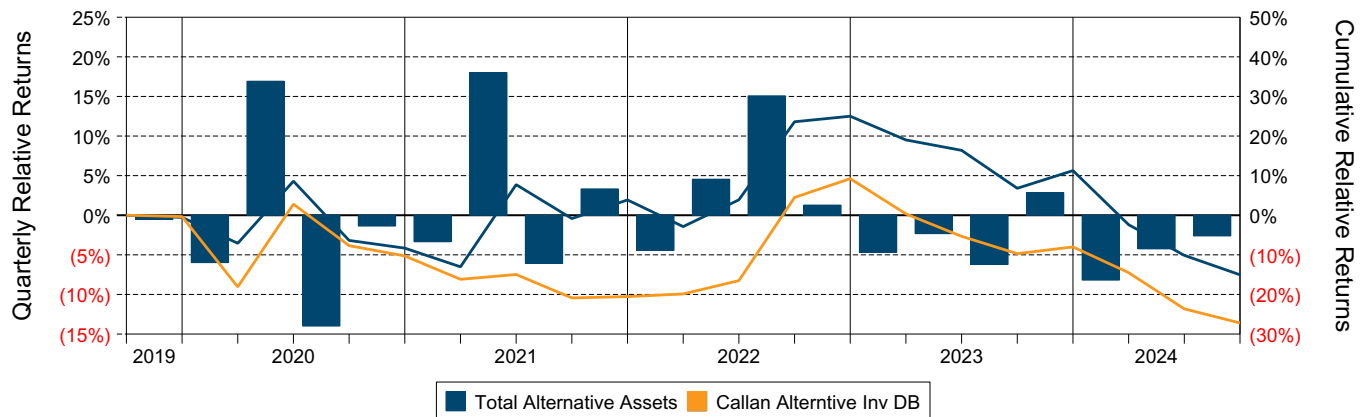
Return Analysis

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

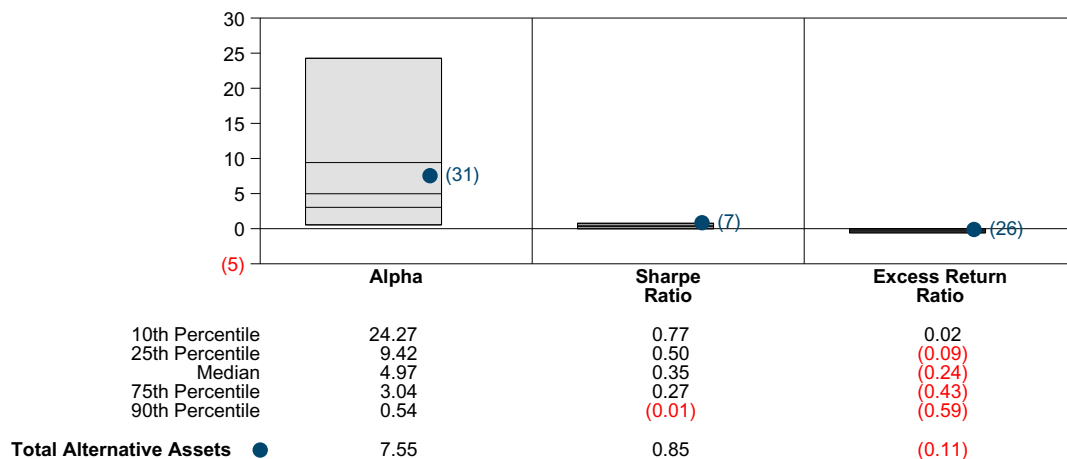
Performance vs Callan Alternative Inv DB (Gross)



Cumulative and Quarterly Relative Returns vs Alternative Assets Benchmark



Risk Adjusted Return Measures vs Alternative Assets Benchmark
Rankings Against Callan Alternative Inv DB (Gross)
Five Years Ended September 30, 2024

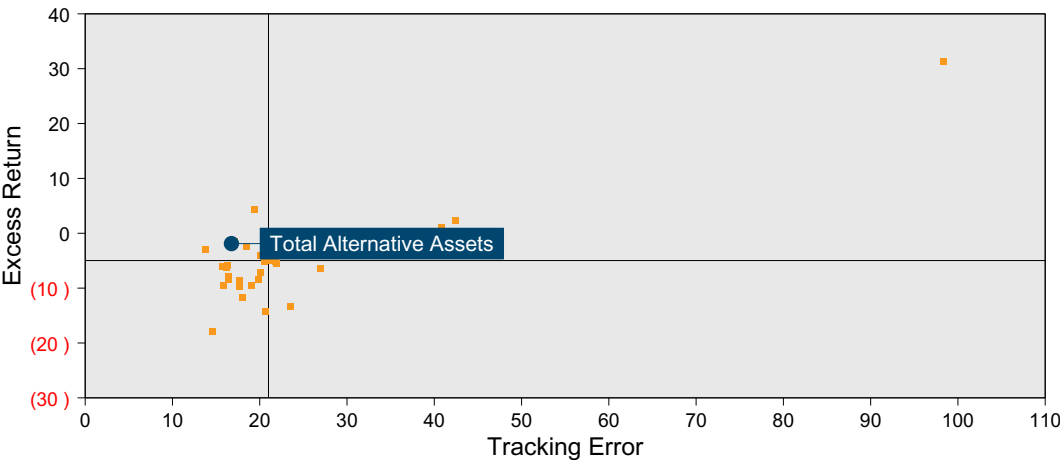


Total Alternative Assets
Risk Analysis Summary

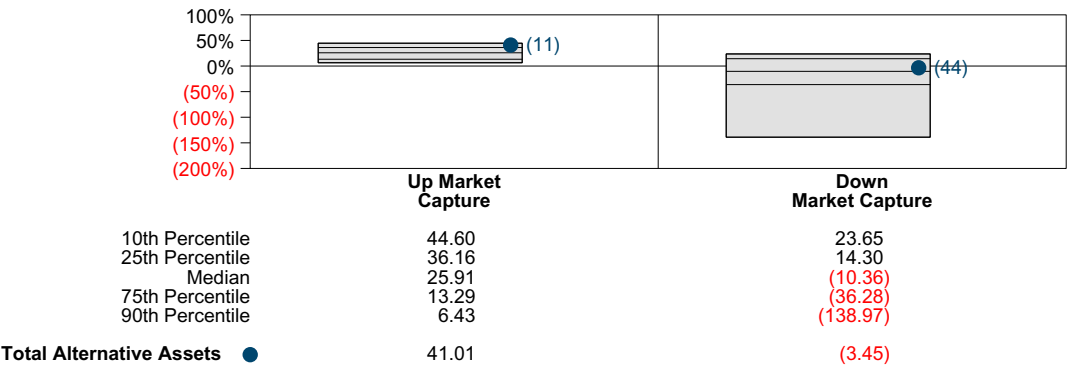
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

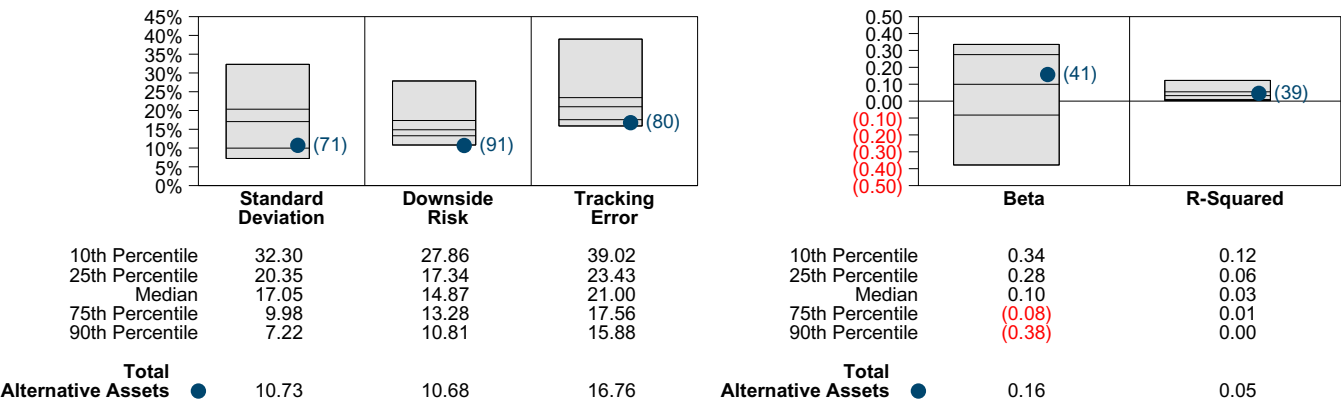
Risk Analysis vs Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Market Capture vs Alternative Assets Benchmark
Rankings Against Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Risk Statistics Rankings vs Alternative Assets Benchmark
Rankings Against Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Private Equity Period Ended September 30, 2024

Private Equity Benchmark

The Private Equity Benchmark is the Russell 3000 + 3% (1 qtr lag) as of 7/1/2022. Prior to 7/1/2022, the benchmark was the S&P 500 + 3% (1 qtr lag). Prior to 7/1/2015 the benchmark was S&P 500 + 5% (1 qtr lag).

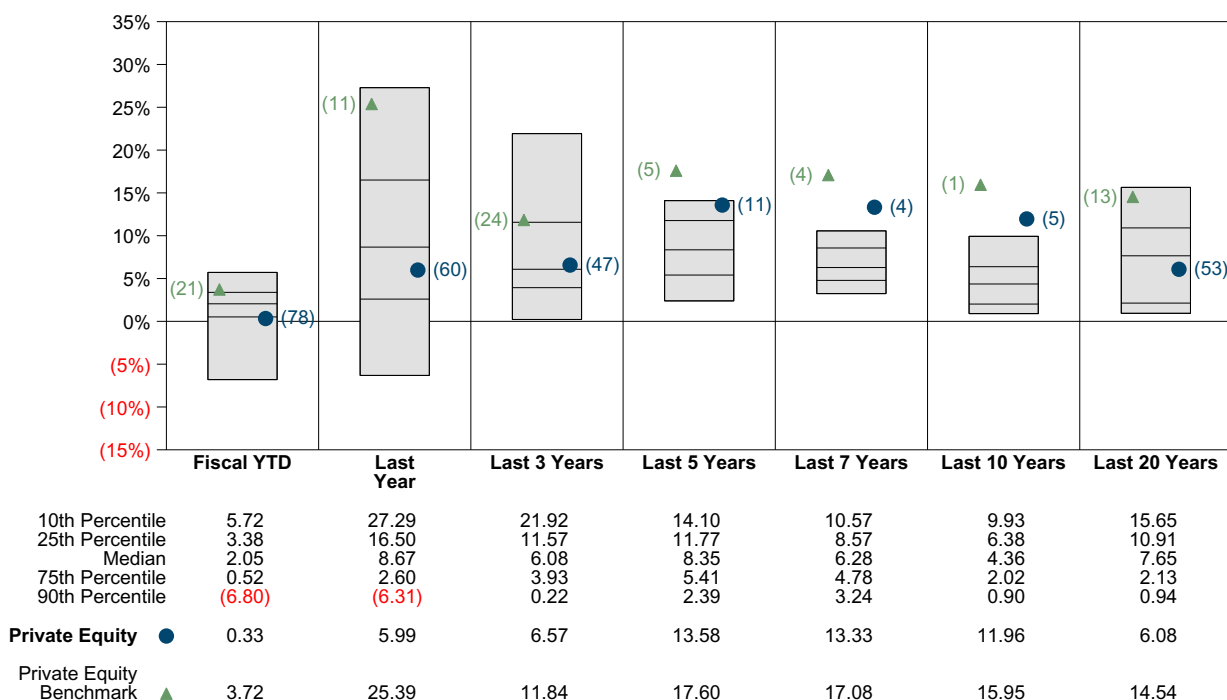
Quarterly Summary and Highlights

- Private Equity's portfolio posted a 0.33% return for the quarter placing it in the 78 percentile of the Callan Alternative Inv DB group for the quarter and in the 60 percentile for the last year.
- Private Equity's portfolio underperformed the Private Equity Benchmark by 3.39% for the quarter and underperformed the Private Equity Benchmark for the year by 19.40%.

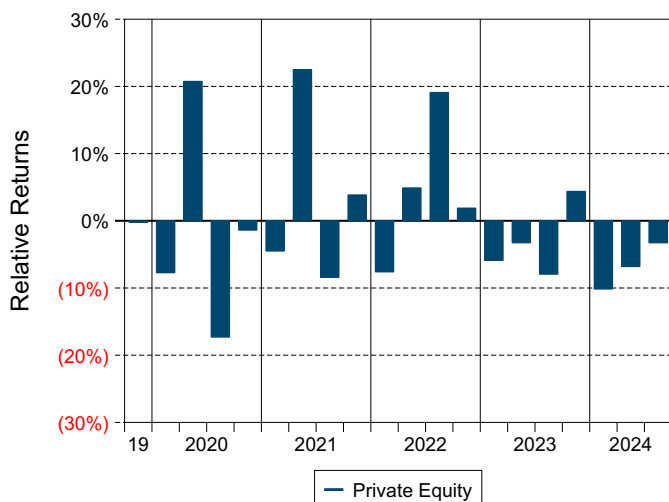
Quarterly Asset Growth

Beginning Market Value	\$1,711,322,271
Net New Investment	\$-43,697,241
Investment Gains/(Losses)	\$5,503,643
Ending Market Value	\$1,673,128,673

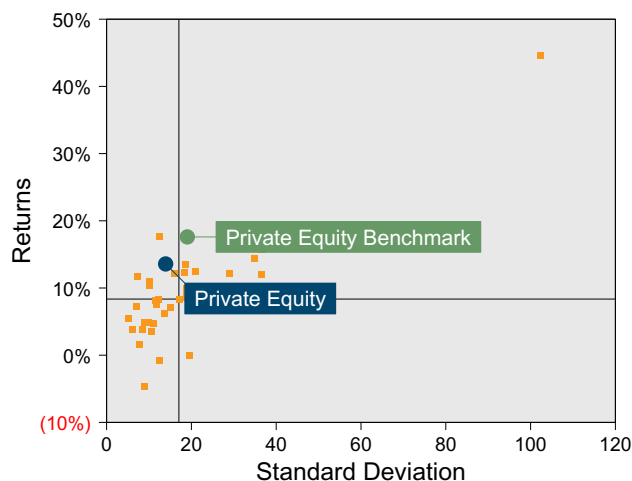
Performance vs Callan Alternative Inv DB (Gross)



Relative Return vs Private Equity Benchmark



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

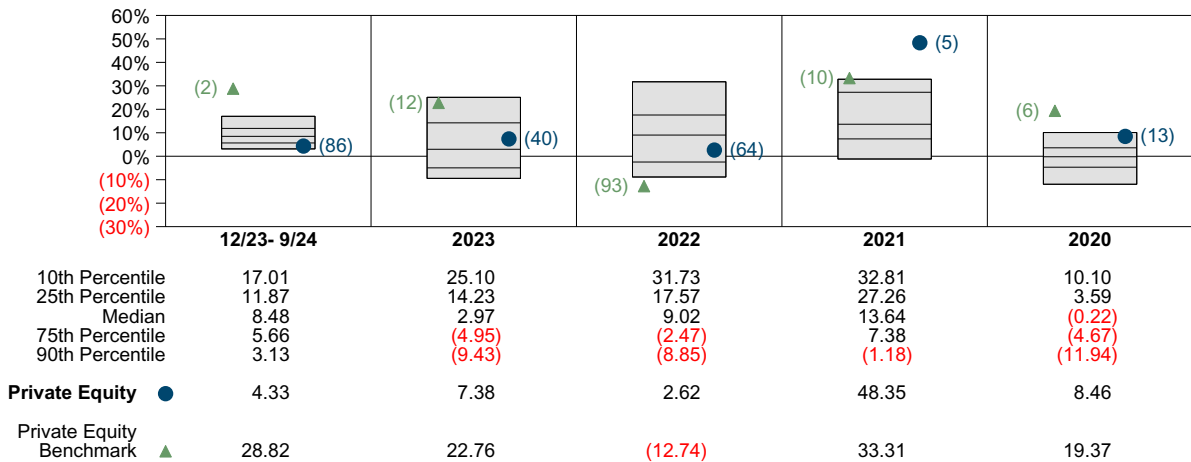


Private Equity Return Analysis Summary

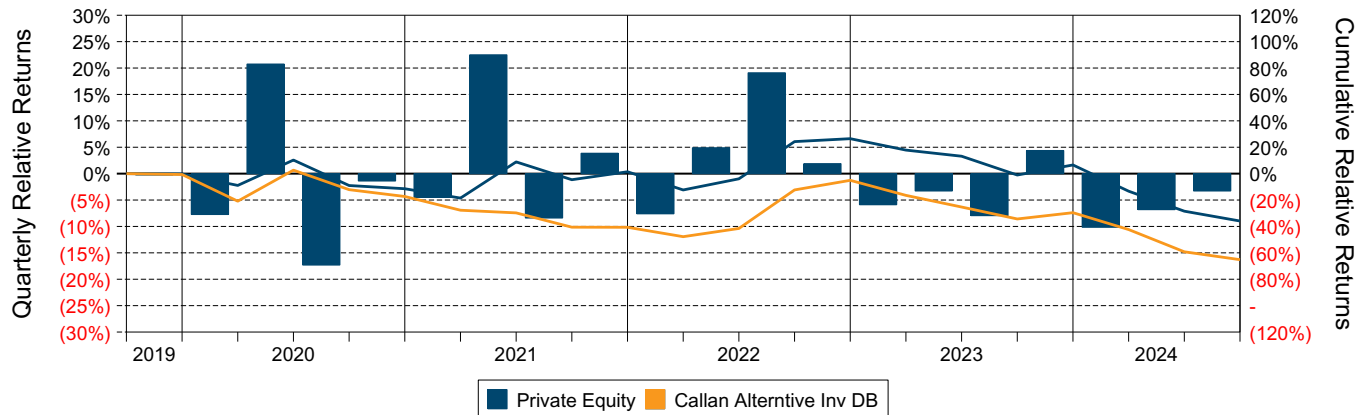
Return Analysis

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

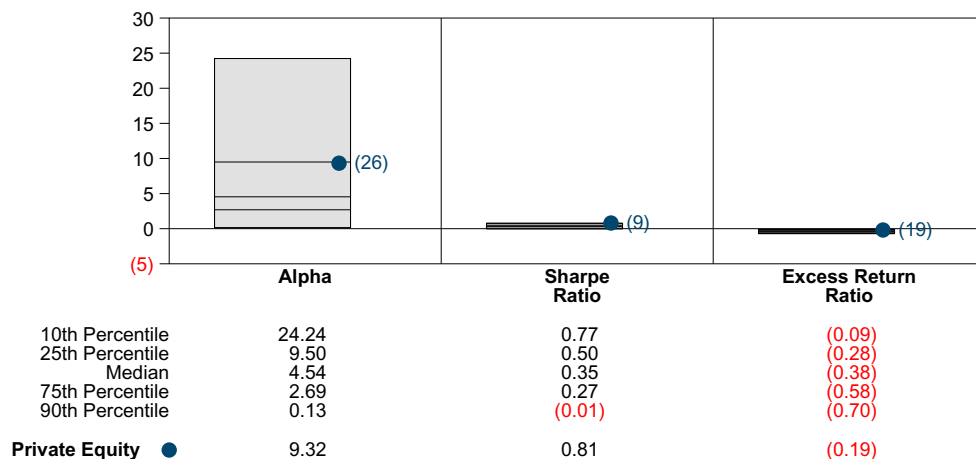
Performance vs Callan Alternative Inv DB (Gross)



Cumulative and Quarterly Relative Returns vs Private Equity Benchmark



Risk Adjusted Return Measures vs Private Equity Benchmark Rankings Against Callan Alternative Inv DB (Gross) Five Years Ended September 30, 2024

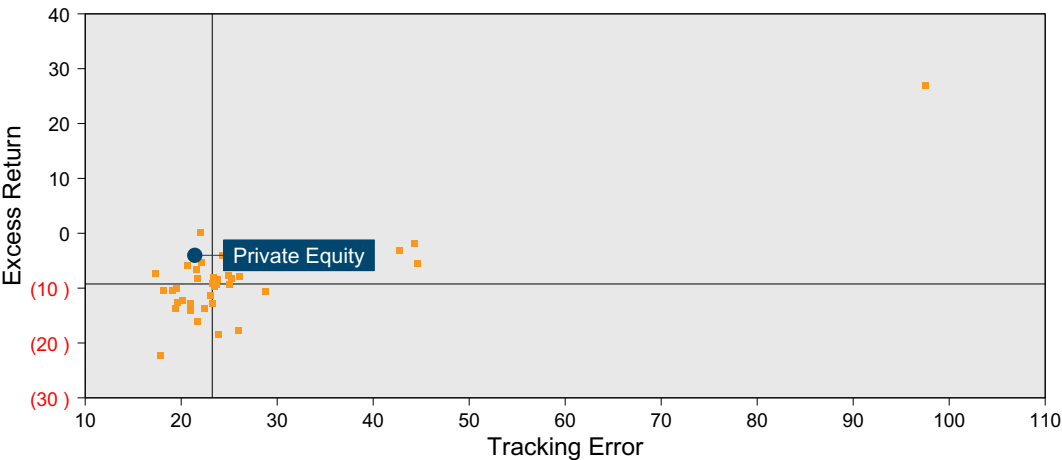


Private Equity
Risk Analysis Summary

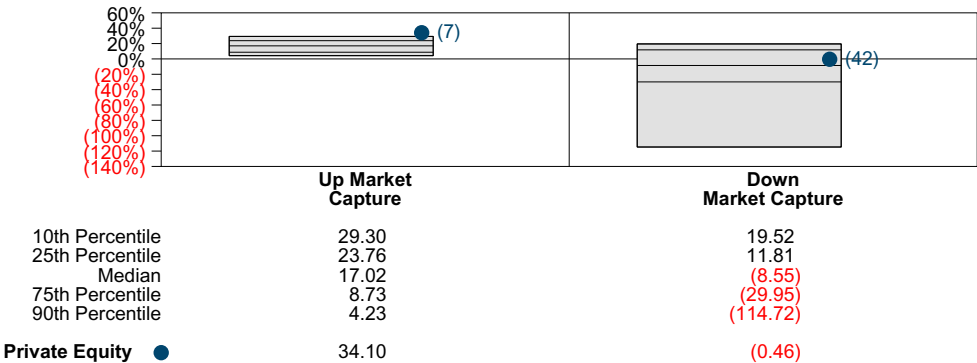
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

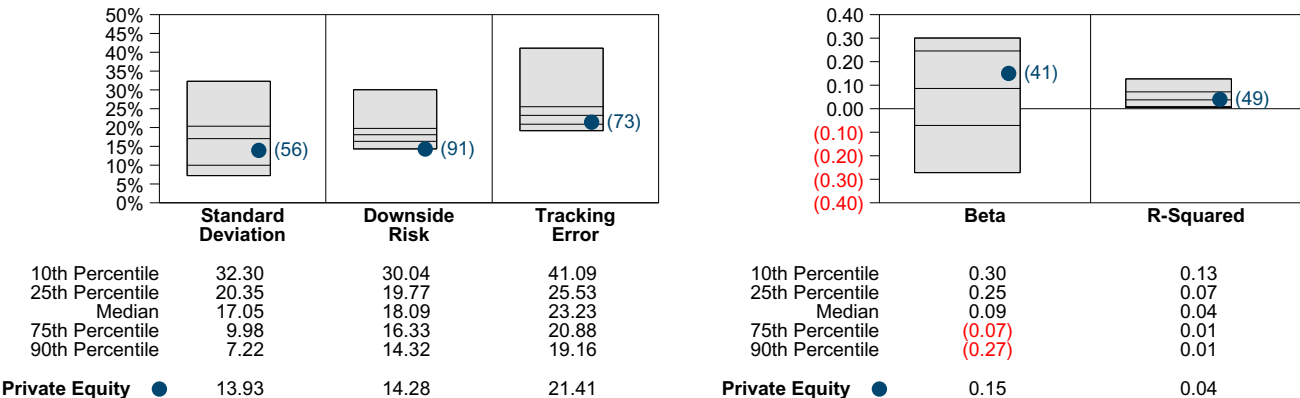
Risk Analysis vs Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Market Capture vs Private Equity Benchmark
Rankings Against Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Risk Statistics Rankings vs Private Equity Benchmark
Rankings Against Callan Alternative Investments DB (Gross)
Five Years Ended September 30, 2024



Private Debt Period Ended September 30, 2024

Private Debt Benchmark

The Private Debt Benchmark is 50% Bloomberg HY Corp +1% (1 qtr lag), and 50% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag) as of 7/1/2022. Prior to 7/1/2015, the benchmark was the S&P LSTA Leverage Loan 100 Index (1 qtr lag) . Prior to 7/1/2015 the benchmark was S&P 500 + 5% (1 qtr lag).

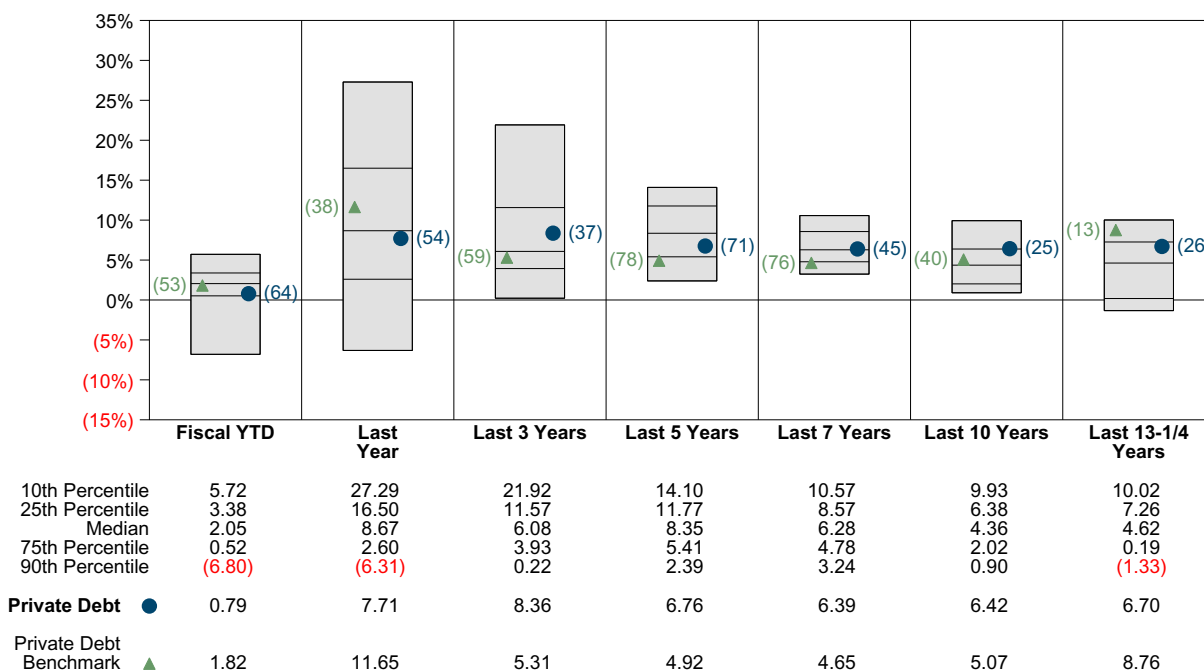
Quarterly Summary and Highlights

- Private Debt's portfolio posted a 0.79% return for the quarter placing it in the 64 percentile of the Callan Alternative Inv DB group for the quarter and in the 54 percentile for the last year.
- Private Debt's portfolio underperformed the Private Debt Benchmark by 1.03% for the quarter and underperformed the Private Debt Benchmark for the year by 3.94%.

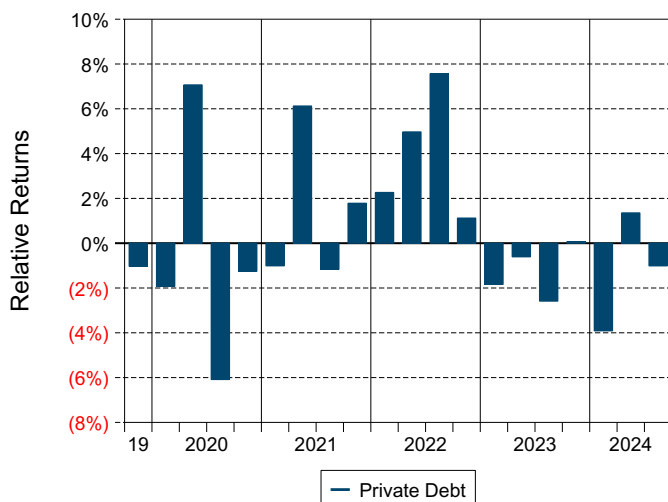
Quarterly Asset Growth

Beginning Market Value	\$579,932,839
Net New Investment	\$-22,680,560
Investment Gains/(Losses)	\$4,465,990
Ending Market Value	\$561,718,269

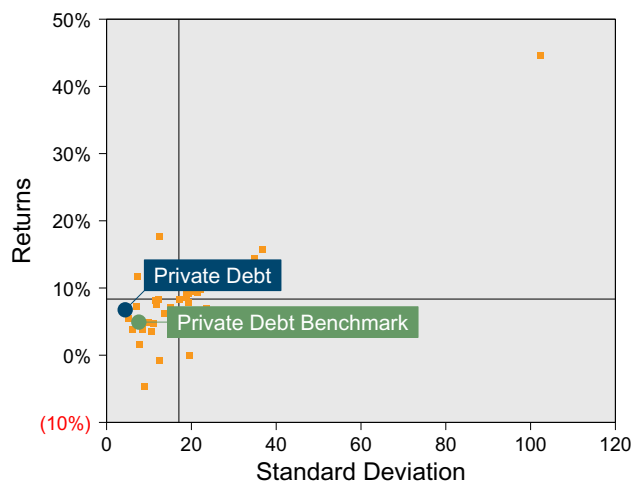
Performance vs Callan Alternative Inv DB (Gross)



Relative Return vs Private Debt Benchmark



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

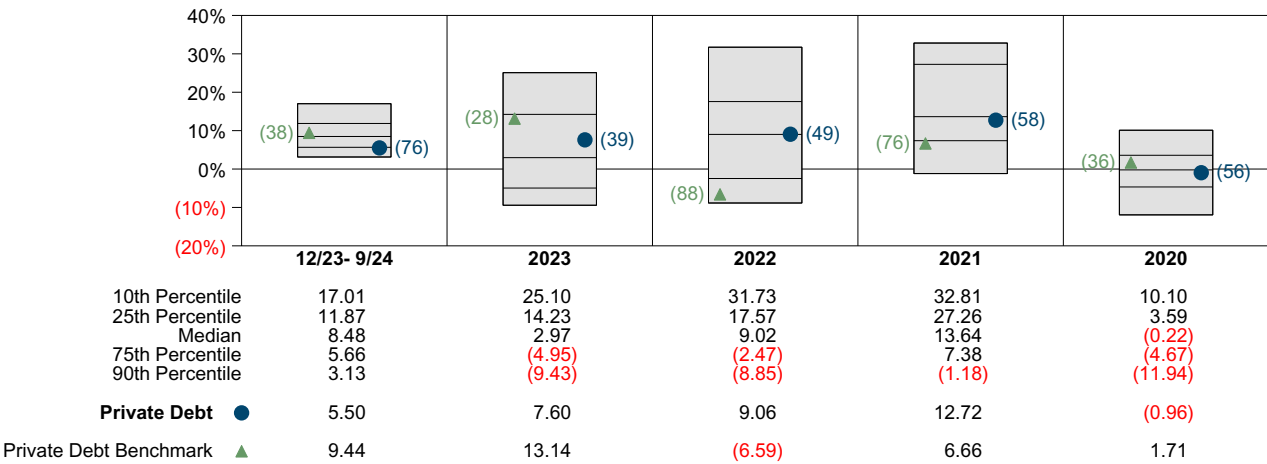


Private Debt Return Analysis Summary

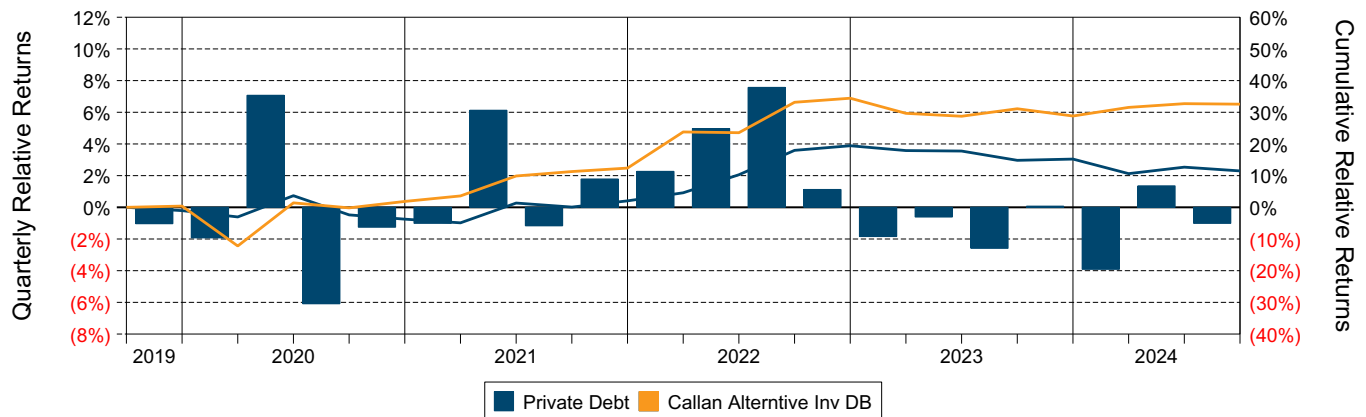
Return Analysis

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

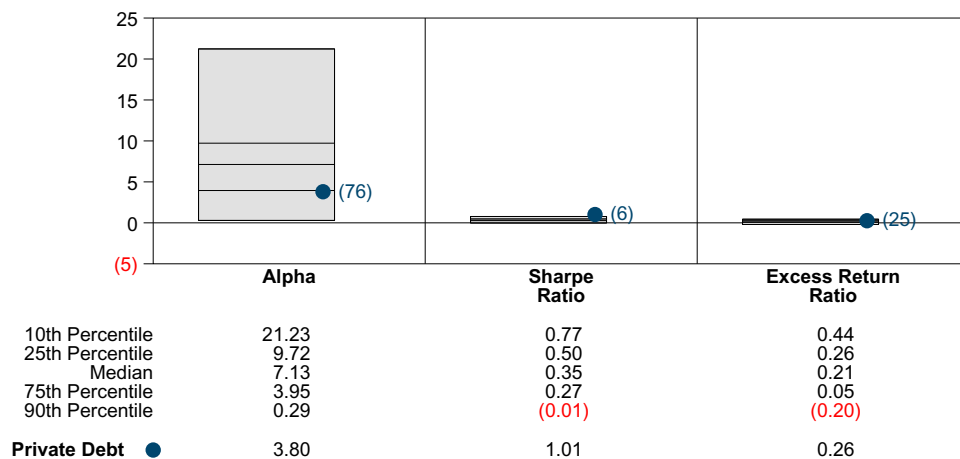
Performance vs Callan Alternative Inv DB (Gross)



Cumulative and Quarterly Relative Returns vs Private Debt Benchmark



Risk Adjusted Return Measures vs Private Debt Benchmark Rankings Against Callan Alternative Inv DB (Gross) Five Years Ended September 30, 2024

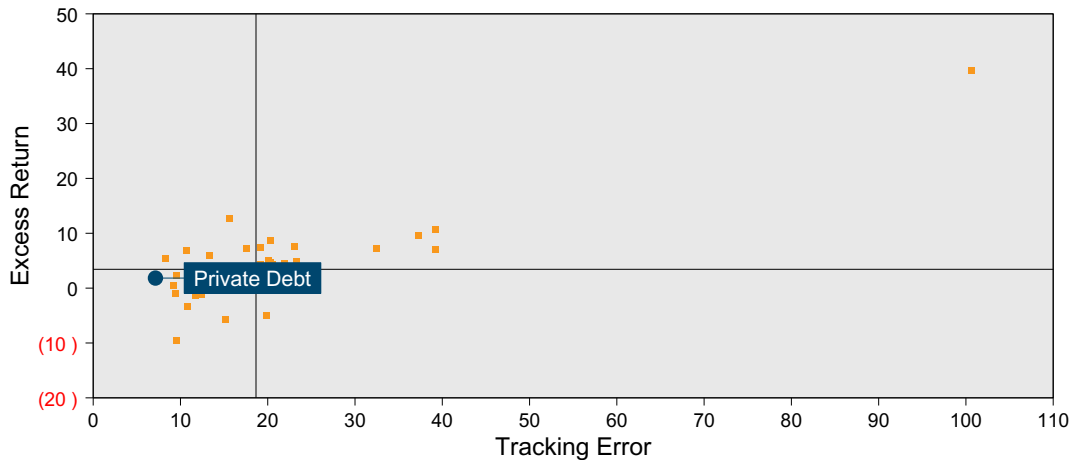


Private Debt Risk Analysis Summary

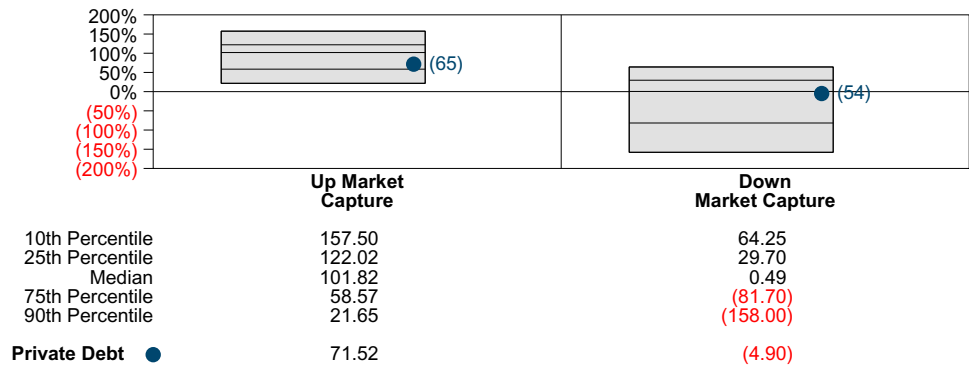
Risk Analysis

The graphs below analyze the risk or variation of the portfolio's return pattern. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the benchmark. The second chart shows Up and Down Market Capture. The last two charts show the ranking of the portfolio's risk statistics versus the peer group.

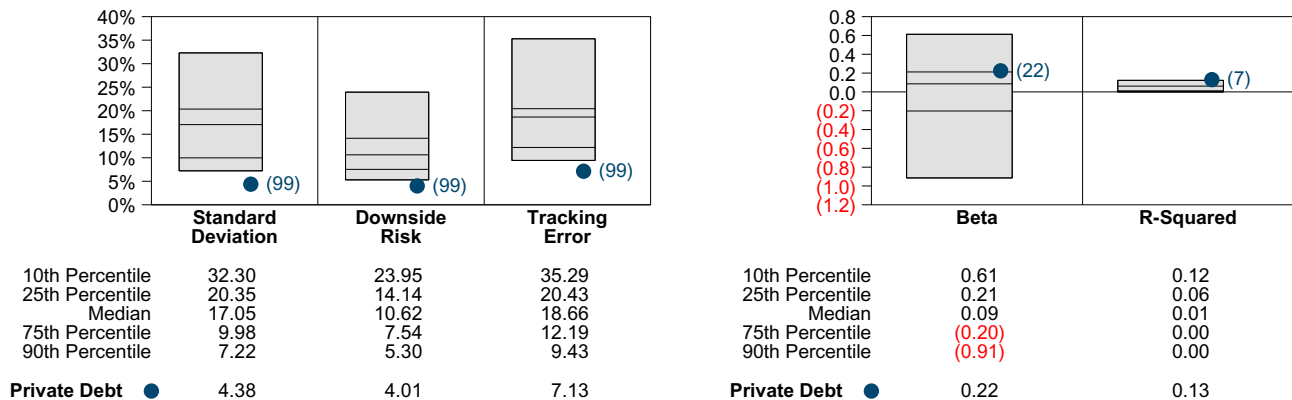
Risk Analysis vs Callan Alternative Investments DB (Gross) Five Years Ended September 30, 2024



Market Capture vs Private Debt Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended September 30, 2024



Risk Statistics Rankings vs Private Debt Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended September 30, 2024



New Hampshire Retirement System Target History

30-Jun-2022 - 30-Sep-2024			
Domestic Broad			
Eq	Russell 3000 Index	30.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Russell 3000 Index+2.00%	10.00%	
Other Alternatives	Bloomberg HY Corporate+1.00%	2.50%	
Other Alternatives	Morningstar LSTA Leveraged Loan 100+1.00%	2.50%	
		100.00%	
30-Jun-2021 - 30-Jun-2022			
Domestic Broad			
Eq	Russell 3000 Index	30.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+3.00%	10.00%	
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%	
		100.00%	
30-Sep-2020 - 30-Jun-2021			
Domestic Broad			
Eq	S&P 500 Index	30.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+3.00%	10.00%	
Other Alternatives	Morningstar LSTA Leveraged Loan 100	5.00%	
		100.00%	
30-Jun-2015 - 30-Sep-2020			
Domestic Broad			
Eq	S&P 500 Index	30.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF NFI-ODCE Value Weight Net	10.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Alternative Asset Benchmark	15.00%	
		100.00%	
31-Mar-2015 - 30-Jun-2015			
Domestic Broad			
Eq	Russell 3000 Index	37.30%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.70%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	9.00%	
		100.00%	
31-Dec-2014 - 31-Mar-2015			
Domestic Broad			
Eq	Russell 3000 Index	37.70%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.80%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	8.50%	
		100.00%	
30-Sep-2014 - 31-Dec-2014			
Domestic Broad			
Eq	Russell 3000 Index	39.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.60%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	7.40%	
		100.00%	
30-Jun-2014 - 30-Sep-2014			
Domestic Broad			
Eq	Russell 3000 Index	39.60%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.90%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	6.50%	
		100.00%	
31-Mar-2014 - 30-Jun-2014			
Domestic Broad			
Eq	Russell 3000 Index	42.20%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.60%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	4.20%	
		100.00%	
31-Dec-2013 - 31-Mar-2014			
Domestic Broad			
Eq	Russell 3000 Index	41.80%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	9.10%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	4.10%	
		100.00%	
30-Sep-2013 - 31-Dec-2013			
Domestic Broad			
Eq	Russell 3000 Index	42.90%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.60%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	3.50%	
		100.00%	
30-Jun-2013 - 30-Sep-2013			
Domestic Broad			
Eq	Russell 3000 Index	42.50%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	9.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	S&P 500 Index+5.00%	3.50%	
		100.00%	
31-Mar-2013 - 30-Jun-2013			
Domestic Broad			
Eq	Russell 3000 Index	43.00%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.60%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Alternative Asset Benchmark	3.40%	
		100.00%	
31-Dec-2012 - 31-Mar-2013			
Domestic Broad			
Eq	Russell 3000 Index	43.60%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.80%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Alternative Asset Benchmark	2.60%	
		100.00%	
30-Sep-2012 - 31-Dec-2012			
Domestic Broad			
Eq	Russell 3000 Index	43.90%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	8.70%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Alternative Asset Benchmark	2.40%	
		100.00%	
30-Jun-2012 - 30-Sep-2012			
Domestic Broad			
Eq	Russell 3000 Index	43.50%	
Domestic Fixed	Bloomberg Universal	25.00%	
Real Estate	NCREIF Property Index+0.50%	9.00%	
Intl Equity	MSCI ACWI xUS (Net)	20.00%	
Other Alternatives	Alternative Asset Benchmark	2.50%	
		100.00%	

New Hampshire Retirement System Target History

31-Mar-2012 - 30-Jun-2012		
Domestic Broad		
Eq	Russell 3000 Index	40.10%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.60%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%
31-Dec-2011 - 31-Mar-2012		
Domestic Broad		
Eq	Russell 3000 Index	39.70%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	8.00%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
		100.00%
30-Sep-2011 - 31-Dec-2011		
Domestic Broad		
Eq	Russell 3000 Index	40.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	7.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.40%
		100.00%
30-Jun-2011 - 30-Sep-2011		
Domestic Broad		
Eq	Russell 3000 Index	42.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	20.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
		100.00%
31-Mar-2011 - 30-Jun-2011		
Domestic Broad		
Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.70%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
31-Dec-2010 - 31-Mar-2011		
Domestic Broad		
Eq	Russell 3000 Index	43.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
30-Sep-2010 - 31-Dec-2010		
Domestic Broad		
Eq	Russell 3000 Index	42.80%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.40%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	1.80%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
30-Jun-2010 - 30-Sep-2010		
Domestic Broad		
Eq	Russell 3000 Index	42.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.00%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.10%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
31-Dec-2009 - 30-Jun-2010		
Domestic Broad		
Eq	Russell 3000 Index	43.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	4.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.00%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
30-Sep-2009 - 31-Dec-2009		
Domestic Broad		
Eq	Russell 3000 Index	42.30%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	5.50%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.20%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
30-Jun-2009 - 30-Sep-2009		
Domestic Broad		
Eq	Russell 3000 Index	41.50%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	6.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.30%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
31-Mar-2009 - 30-Jun-2009		
Domestic Broad		
Eq	Russell 3000 Index	38.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	2.70%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
31-Dec-2008 - 31-Mar-2009		
Domestic Broad		
Eq	Russell 3000 Index	37.20%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index+0.50%	9.70%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Alternative Asset Benchmark	3.10%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%
30-Sep-2008 - 31-Dec-2008		
Domestic Broad		
Eq	Russell 3000 Index	38.90%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	8.20%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.90%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%

New Hampshire Retirement System Target History

30-Jun-2008 - 30-Sep-2008

Domestic Broad		
Eq	Russell 3000 Index	40.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	7.30%
Intl Equity	MSCI ACWI xUS (Net)	15.00%
Other Alternatives	Consumer Price Index (W) + 5%	2.70%
Global Equity		
Broad	MSCI ACWI (Net)	5.00%
		100.00%

30-Jun-2007 - 30-Jun-2008

Domestic Broad		
Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	30.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
		100.00%

30-Nov-2006 - 30-Jun-2007

Domestic Broad		
Eq	Russell 3000 Index	44.00%
Domestic Fixed	Bloomberg Universal	26.00%
Real Estate	NCREIF Property Index	5.00%
Intl Equity	MSCI ACWI xUS (Net)	16.00%
Other Alternatives	Consumer Price Index (W) + 5%	5.00%
Global Fixed-Inc	Brandywine Blended Benchmark	4.00%
		100.00%

30-Jun-2003 - 30-Nov-2006

Domestic Broad		
Eq	Russell 3000 Index	47.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI ACWI xUS (Net)	12.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Oct-1997 - 30-Jun-2003

Domestic Broad		
Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	Brandywine Blended Benchmark	3.00%
		100.00%

31-Mar-1990 - 31-Oct-1997

Domestic Broad		
Eq	S&P 500 Index	50.00%
Domestic Fixed	Bloomberg Universal	18.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		100.00%

30-Jun-1975 - 31-Mar-1990

Domestic Broad		
Eq	S&P 500 Index	50.00%
Real Estate	NCREIF Property Index	10.00%
Intl Equity	MSCI EAFE (Net)	9.00%
Other Alternatives	Consumer Price Index (W) + 5%	10.00%
Global Fixed-Inc	JPM GBI Global Unhedged USD	3.00%
		82.00%

Risk/Reward Statistics

The risk statistics used in this report examine performance characteristics of a manager or a portfolio relative to a benchmark (market indicator) which assumes to represent overall movements in the asset class being considered. The main unit of analysis is the excess return, which is the portfolio return minus the return on a risk free asset (3 month T-Bill).

Alpha measures a portfolio's return in excess of the market return adjusted for risk. It is a measure of the manager's contribution to performance with reference to security selection. A positive alpha indicates that a portfolio was positively rewarded for the residual risk which was taken for that level of market exposure.

Beta measures the sensitivity of rates of portfolio returns to movements in the market index. A portfolio's beta measures the expected change in return per 1% change in the return on the market. If a beta of a portfolio is 1.5, a 1 percent increase in the return on the market will result, on average, in a 1.5 percent increase in the return on the portfolio. The converse would also be true.

Downside Risk stems from the desire to differentiate between "good risk" (upside volatility) and "bad risk" (downside volatility). Whereas standard deviation punishes both upside and downside volatility, downside risk measures only the standard deviation of returns below the target. Returns above the target are assigned a deviation of zero. Both the frequency and magnitude of underperformance affect the amount of downside risk.

Excess Return Ratio is a measure of risk adjusted relative return. This ratio captures the amount of active management performance (value added relative to an index) per unit of active management risk (tracking error against the index.) It is calculated by dividing the manager's annualized cumulative excess return relative to the index by the standard deviation of the individual quarterly excess returns. The Excess Return Ratio can be interpreted as the manager's active risk/reward tradeoff for diverging from the index when the index is mandated to be the "riskless" market position.

Information Ratio measures the manager's market risk-adjusted excess return per unit of residual risk relative to a benchmark. It is computed by dividing alpha by the residual risk over a given time period. Assuming all other factors being equal, managers with lower residual risk achieve higher values in the information ratio. Managers with higher information ratios will add value relative to the benchmark more reliably and consistently.

R-Squared indicates the extent to which the variability of the portfolio returns are explained by market action. It can also be thought of as measuring the diversification relative to the appropriate benchmark. An r-squared value of .75 indicates that 75% of the fluctuation in a portfolio return is explained by market action. An r-squared of 1.0 indicates that a portfolio's returns are entirely related to the market and it is not influenced by other factors. An r-squared of zero indicates that no relationship exists between the portfolio's return and the market.

Relative Standard Deviation is a simple measure of a manager's risk (volatility) relative to a benchmark. It is calculated by dividing the manager's standard deviation of returns by the benchmark's standard deviation of returns. A relative standard deviation of 1.20, for example, means the manager has exhibited 20% more risk than the benchmark over that time period. A ratio of .80 would imply 20% less risk. This ratio is especially useful when analyzing the risk of investment grade fixed-income products where actual historical durations are not available. By using this relative risk measure over rolling time periods one can illustrate the "implied" historical duration patterns of the portfolio versus the benchmark.

Residual Portfolio Risk is the unsystematic risk of a fund, the portion of the total risk unique to the fund (manager) itself and not related to the overall market. This reflects the "bets" which the manager places in that particular asset market. These bets may reflect emphasis in particular sectors, maturities (for bonds), or other issue specific factors which the manager considers a good investment opportunity. Diversification of the portfolio will reduce or eliminate the residual risk of that portfolio.

Risk/Reward Statistics

Rising Declining Periods refer to the sub-asset class cycles vis-a-vis the broader asset class. This is determined by evaluating the cumulative relative sub-asset class index performance to that of the broader asset class index. For example, to determine the Growth Style cycle, the S&P 500 Growth Index (sub-asset class) performance is compared to that of the S&P 500 Index (broader asset class).

Sharpe Ratio is a commonly used measure of risk-adjusted return. It is calculated by subtracting the "risk-free" return (usually 3 Month Treasury Bill) from the portfolio return and dividing the resulting "excess return" by the portfolio's risk level (standard deviation). The result is a measure of return gained per unit of risk taken.

Sortino Ratio is a downside risk-adjusted measure of value-added. It measures excess return over a benchmark divided by downside risk. The natural appeal is that it identifies value-added per unit of truly bad risk. The danger of interpretation, however, lies in these two areas: (1) the statistical significance of the denominator, and (2) its reliance on the persistence of skewness in return distributions.

Standard Deviation is a statistical measure of portfolio risk. It reflects the average deviation of the observations from their sample mean. Standard deviation is used as an estimate of risk since it measures how wide the range of returns typically is. The wider the typical range of returns, the higher the standard deviation of returns, and the higher the portfolio risk. If returns are normally distributed (ie. has a bell shaped curve distribution) then approximately 2/3 of the returns would occur within plus or minus one standard deviation from the sample mean.

Total Portfolio Risk is a measure of the volatility of the quarterly excess returns of an asset. Total risk is composed of two measures of risk: market (non-diversifiable or systematic) risk and residual (diversifiable or unsystematic) risk. The purpose of portfolio diversification is to reduce the residual risk of the portfolio.

Tracking Error is a statistical measure of a portfolio's risk relative to an index. It reflects the standard deviation of a portfolio's individual quarterly or monthly returns from the index's returns. Typically, the lower the Tracking Error, the more "index-like" the portfolio.

Treynor Ratio represents the portfolio's average excess return over a specified period divided by the beta relative to its benchmark over that same period. This measure reflects the reward over the risk-free rate relative to the systematic risk assumed.

Note: Alpha, Total Risk, and Residual Risk are annualized.

Domestic Equity and Fixed Income Style Groups

Period Ended September 30, 2024

Domestic Equity Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Large Cap Core	31	36	9,910.1	2,216.7	327.0
Callan Small/MidCap Core	33	34	1,170.4	667.9	33.9
Callan Small/MidCap Value	18	19	2,747.0	1,033.1	49.4
Callan Small Cap Core	56	61	2,256.3	904.4	124.1

Domestic Fixed Income Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Unconstrained Fixed Income	31	34	2,868.0	1,503.9	94.6
Callan Core Bond Fixed Income	79	94	10,459.6	2,855.3	972.7
Callan Core Plus Fixed Income	62	73	12,726.9	4,396.4	903.6

Domestic Miscellaneous Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Total Domestic Real Estate DB	113	268	4,525.4	1,907.8	461.6
Callan Real Estate Core	46	71	7,161.1	4,265.8	365.2
Callan Real Estate Value Added	36	56	2,888.8	2,048.6	57.8
Callan Alternative Investments DB	106	164	1,857.7	365.3	118.9

International Equity and Fixed Income Style Groups
Period Ended September 30, 2024

International Equity Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Non-US Equity	95	158	5,759.3	2,040.7	840.9
Callan Non-US All Country Growth Equity	26	31	7,866.6	3,586.6	204.5
Callan Emerging Core	56	86	3,986.9	1,625.6	311.0
Callan International Small Cap	32	33	2,084.1	1,008.2	64.6
Callan Global Developed Growth Equity	24	27	7,990.6	2,595.4	183.8

International Fixed Income Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Global Fixed Income (Unhedged)	31	53	2,295.0	1,131.4	112.5

Fund Sponsor Database Statistics

Period Ended September 30, 2024

Fund Sponsor Database	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Public Fund Spons - Large (>1B)	146	146	21,462.5	6,197.2	2,575.5
Lg Public Fund - Domestic Equity	146	146	21,462.5	6,197.2	2,575.5
Lg Public Fund - International Equity	146	146	21,462.5	6,197.2	2,575.5

Fund Sponsor Database	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Lg Public Fund - Domestic Fixed	146	146	21,462.5	6,197.2	2,575.5

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