

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

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

**Agenda  
Tuesday, April 9, 2024**

- 12:30 pm     Call to Order
- 12:30 pm     Approve Minutes [Tab 1]
- February 13, 2024 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 *(Action Expected)*
  - Proxy Voting Recommendation *(Action Expected)*
- 12:45 pm     Educational Session: Brookfield Introduction to Infrastructure Investing [Tab 3]
- 1:45 pm     Adjournment

Informational Materials [Tab 4]

- Callan Monthly Review – February 2024
- Asset Allocation Update
- Private Debt & Equity Summary
- Public Market Manager Review Summary for the Period Ending September 30, 2023
- Public Market Manager Review Summary for the Period Ending December 31, 2023
- Callan Quarterly Review for the Period Ending December 31, 2023
- Callan Quarterly Private Markets Review for the Period Ending December 31, 2023
- Quarterly Real Estate Report for the Period Ending December 31, 2023

**Next Meeting: Tuesday, June 11, 2024**

**NOTE:** The draft of these minutes from the February 13, 2024, Independent Investment Committee meeting is subject to approval and execution at a subsequent meeting.

**Independent Investment Committee Meeting  
February 13, 2024  
DRAFT Public Minutes**

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

*Committee Members:*

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

*Staff:*

- Jan Goodwin, *Executive Director*
- Raynald Leveque, *Chief Investment Officer*
- Gregory Richard, CFA, CAIA, *Senior Investment Officer*
- Jonathan Diaz, *Investment Officer*
- Jesse Pasierb, *Investment Operations Analyst (by video conference)*
- Eileen Demers, *Consultant, Robert Half (by video conference)*
- Tim Crutchfield, *Deputy Director, and Chief Legal Counsel (by video conference)*
- Heather Hoffacker, *Internal Auditor (by video conference)*
- Marty Karlon, *Director of Communications (by video conference)*

*Guests:*

- Rahul Vinnakota, *Managing Director, H.I.G. Capital LLC*
- Benjam Charon, *Managing Director, H.I.G. Capital LLC*
- Dyice Ellis-Beckham, *Managing Director, H.I.G. Capital LLC*
- Pete Keliuotis, CFA, *Executive Vice President, Callan LLC*
- David Smith, CFA, CTP, *Senior Vice President, Callan, LLC*
- Britt Murdoch, *Vice President, Callan LLC (by video conference)*
- Vinod Pakianathan, *Managing Director, Abel Noser LLC*
- Brian Greene, *Senior Vice President, Abel Noser LLC*

Chair Kelliher called the meeting to order at 12:30 PM.

On a motion by Ms. Clinton, seconded by Mr. Provost, the Independent Investment Committee (Committee) unanimously approved the public minutes of the January 9, 2024, Committee meeting as presented.

Mr. Leveque reviewed investment returns through recent periods and referred to the Callan Monthly Review for the period ending December 31, 2023. He shared an update on holdings within the NHRS portfolio. He confirmed that all allocations are in line with their approved ranges. Mr. Leveque updated the Committee on total plan liquidity, Russian holdings, and the Work Plan.

Next, Mr. Leveque, Mr. Richard and Mr. Smith provided an overview of H.I.G. Capital Partners LLC (HIG). They discussed the opportunity to invest in H.I.G. Advantage Buyout Fund II and H.I.G. Capital Co-Investment Separately Managed Account (SMA) provided NHRS Investment Staff's recommendation. Following this, the Committee heard from representatives of HIG.

Ms. Ellis-Beckham and Mr. Charon introduced HIG to the committee. Mr. Vinnakota gave an overview of HIG and its organizational structure. He detailed HIG's investment philosophy and process. He discussed case studies and the performance of investments in H.I.G Advantage Fund I and closed by discussing Fund II key terms.

The Committee discussed the presentation made by HIG and the opportunity to invest in Advantage Fund II. On a motion by Mr. Provost, seconded by Ms. Clinton, the Committee unanimously voted to commit \$50 million to H.I.G. Advantage Fund II and \$50 million to an SMA to co-invest alongside Fund II, subject to contract and legal review.

Next, Callan representatives presented the Calendar Year 2024 Pacing Plan. They discussed the expected pacing schedule of the private equity and private credit portfolio and outlined their modeled assumptions for an allocation target change of 5% to 10% for private credit. The pacing model projects that the System will remain net cash flow positive. They closed with a ten-year projection of the total additional partnerships needed to meet target allocation goals. After the committee's deliberation, Mr. Leveque articulated NHRS's objective of focusing allocations on a reduced number of strategic partnerships, each with larger investment sizes, in order to meet new allocation targets and to account for increases to NHRS assets under management.

On a motion by Ms. Clinton, seconded by Mr. Provost, the Committee unanimously voted to approve the Private Credit & Private Equity Pacing Plan for Calendar Year 2024.

Following Callan's presentation, the Committee heard from Abel Noser.

Mr. Greene provided an overview of the trading cost analysis services Abel Noser performs for the System. Mr. Pakianathan reviewed an analysis of the one-year period ending December 31, 2023. He noted that the System's active U.S. equity managers, active non-U.S. equity managers and passive U.S. equity manager achieved favorable trading costs relative to their peer universes.

On a motion by Mr. Provost, seconded by Ms. Kelliher, the Committee unanimously voted to appoint Ms. Christine Clinton as Chair of the Independent Investment Committee, effective February 13, 2024.

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

The meeting adjourned at 2:30PM.

The table below details the rates of return for the fund’s asset classes over various time periods ended February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Domestic Equity</b>	<b>32.82%</b>	<b>5.24%</b>	<b>12.15%</b>	<b>13.44%</b>	<b>5.19%</b>	<b>22.07%</b>	<b>8.27%</b>	<b>12.09%</b>	<b>10.70%</b>
<i>Domestic Equity Benchmark(1)</i>		5.41%	12.23%	15.56%	6.58%	28.60%	10.29%	13.76%	12.12%
<i>Excess Return</i>		-0.17%	-0.08%	-2.12%	-1.39%	-6.53%	-2.02%	-1.67%	-1.42%
<b>Total Non US Equity</b>	<b>18.76%</b>	<b>2.70%</b>	<b>8.00%</b>	<b>8.22%</b>	<b>2.85%</b>	<b>16.49%</b>	<b>2.63%</b>	<b>6.01%</b>	<b>4.61%</b>
<i>Non US Equity Benchmark(2)</i>		2.53%	6.61%	7.21%	1.51%	12.51%	1.32%	5.44%	3.96%
<i>Excess Return</i>		0.17%	1.38%	1.01%	1.33%	3.98%	1.32%	0.57%	0.65%
<b>Total Fixed Income</b>	<b>19.34%</b>	<b>-1.07%</b>	<b>2.61%</b>	<b>2.66%</b>	<b>-1.38%</b>	<b>4.53%</b>	<b>-2.05%</b>	<b>1.75%</b>	<b>2.15%</b>
<i>Bloomberg Capital Universe Bond Index</i>		-1.20%	2.30%	2.27%	-1.44%	4.06%	-2.81%	0.85%	1.72%
<i>Excess Return</i>		0.13%	0.30%	0.39%	0.05%	0.47%	0.76%	0.90%	0.42%
<b>Total Cash</b>	<b>0.34%</b>	<b>0.42%</b>	<b>1.35%</b>	<b>3.67%</b>	<b>0.88%</b>	<b>5.35%</b>	<b>2.54%</b>	<b>2.06%</b>	<b>1.42%</b>
<i>3-Month Treasury Bill</i>		0.41%	1.31%	3.56%	0.84%	5.22%	2.43%	1.97%	1.33%
<i>Excess Return</i>		0.01%	0.04%	0.11%	0.04%	0.13%	0.11%	0.09%	0.09%
<b>Total Real Estate (Q3)*</b>	<b>10.21%</b>	<b>-0.07%</b>	<b>-1.99%</b>	<b>-2.17%</b>	<b>-0.27%</b>	<b>-10.22%</b>	<b>10.45%</b>	<b>8.26%</b>	<b>10.17%</b>
<i>Real Estate Benchmark(3)</i>		-1.69%	-4.04%	-8.12%	-3.36%	-12.78%	4.73%	3.80%	6.74%
<i>Excess Return</i>		1.63%	2.05%	5.95%	3.09%	2.56%	5.72%	4.46%	3.43%
<b>Total Private Equity (Q3)*</b>	<b>13.74%</b>	<b>-0.01%</b>	<b>1.31%</b>	<b>1.30%</b>	<b>-0.03%</b>	<b>6.65%</b>	<b>17.10%</b>	<b>13.28%</b>	<b>12.23%</b>
<i>Private Equity Benchmark(4)</i>		9.39%	1.94%	13.03%	6.73%	14.91%	12.02%	15.44%	15.19%
<i>Excess Return</i>		-9.40%	-0.64%	-11.73%	-6.76%	-8.26%	5.08%	-2.16%	-2.96%
<b>Total Private Debt (Q3)*</b>	<b>4.79%</b>	<b>0.00%</b>	<b>1.68%</b>	<b>1.67%</b>	<b>-0.01%</b>	<b>5.32%</b>	<b>8.30%</b>	<b>5.40%</b>	<b>6.53%</b>
<i>Private Debt Benchmark(5)</i>		2.94%	2.32%	7.39%	2.43%	11.23%	4.12%	4.24%	5.66%
<i>Excess Return</i>		-2.94%	-0.64%	-5.72%	-2.44%	-5.91%	4.18%	1.16%	0.87%
<b>Total Fund Composite</b>	<b>100.00%</b>	<b>1.95%</b>	<b>5.79%</b>	<b>6.21%</b>	<b>1.87%</b>	<b>10.26%</b>	<b>6.35%</b>	<b>8.08%</b>	<b>7.32%</b>
<i>Total Fund Benchmark(6)</i>		2.75%	5.47%	7.61%	2.37%	12.60%	4.89%	7.98%	7.41%
<i>Excess Return</i>		-0.80%	0.32%	-1.40%	-0.50%	-2.34%	1.46%	0.10%	-0.09%

(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.

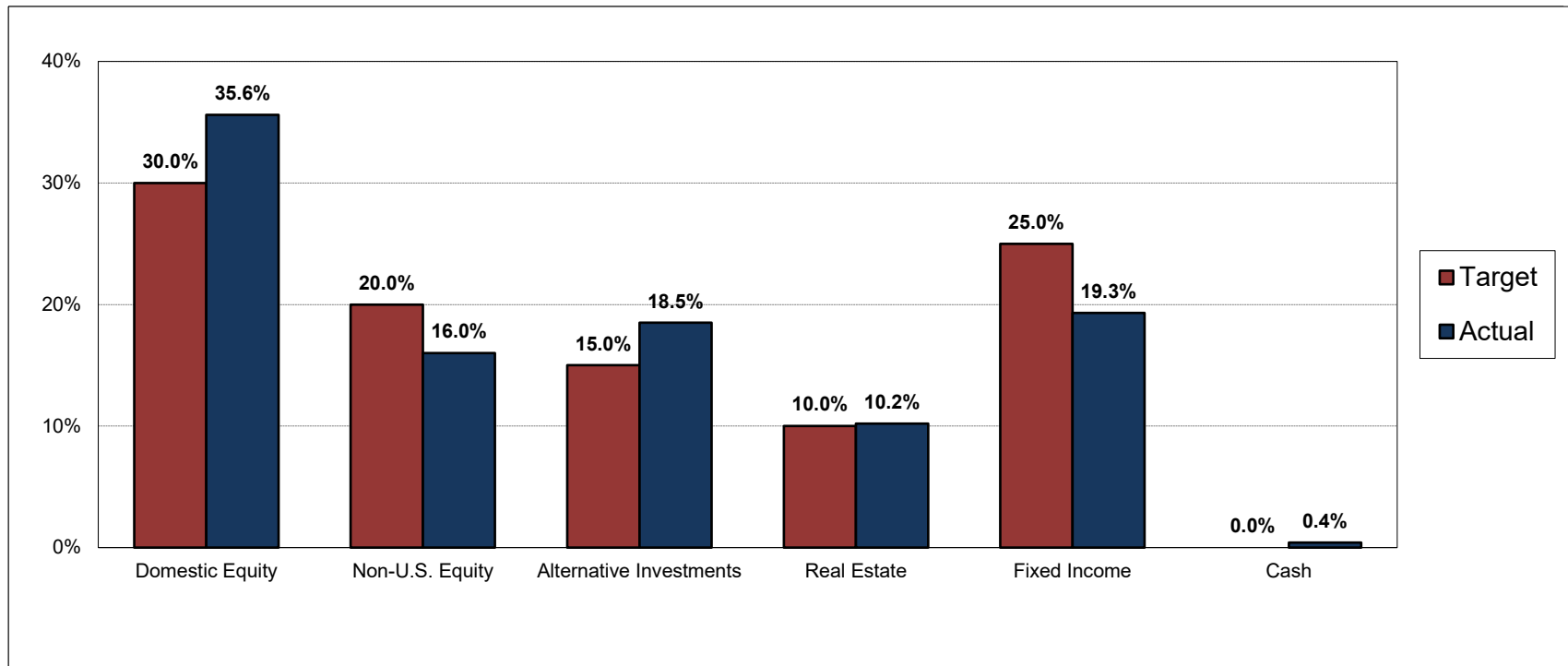
(5) The Private Debt Benchmark is (50% MStar LSTA Leveraged Loan 100 Idx + 50% Bloomberg High Yield Index) + 1% lagged 1 quarter as of 7/1/2022.

(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 2/29/24, the Total Fund has returned 6.60% versus the Total Fund Custom Benchmark return of 6.60%.

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

## Class Targets vs. Actual Allocation as of February 29, 2024 (Preliminary)



Source: NHRS

# Asset Class Allocations Relative to Policy Targets and Ranges



**As of February 29, 2024 (preliminary)**

Asset Class	Range	Allocation			Objective	Comments
		Target	Actual	Variance		
Domestic Equity	20 - 40%	30.0%	35.6%	5.6%	<b>Monitor</b>	No immediate action needed.
Non-U.S. Equity	15 - 25%	20.0%	16.0%	-4.0%	<b>Monitor</b>	Below target allocation but within approved allocation range. Continue to Monitor.
Alternative Investments (AI) <sup>1</sup>	5 - 25%	15.0%	18.5%	3.5%	<b>Monitor</b>	No immediate action needed.
Real Estate (RE) <sup>1</sup>	5 - 20%	10.0%	10.2%	0.2%	<b>Monitor</b>	No immediate action needed.
Fixed Income	20 - 30%	25.0%	19.3%	-5.7%	<b>Monitor</b>	Below target allocation and slightly below allocation range when cash is included. To be addressed as part of SAA implementation plan
Cash	NA	0.0%	0.4%	0.4%	<b>No Action</b>	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls, and other plan needs.
		100.0%	100.0%	0.0%		

<sup>1</sup>As reported on the February 29, 2024 Callan Monthly Review

Source: NHRS



# NHRS

New Hampshire Retirement System

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To: Investment Committee  
From: Raynald Leveque, Chief Investment Officer  
Date: April 9, 2024  
Re: **Work Plan / Recap of February Investment Committee Meeting**  
Item: Action:  Discussion:  Informational:

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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 February 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.
- The Committee heard a presentation from private equity manager H.I.G. Capital and unanimously voted to commit \$50 million to the H.I.G. Advantage Buyout Fund II and \$50 million to an H.I.G. Capital Co-Investment Separately Managed Account.
- The Committee received a presentation from representatives of Callan and unanimously approved the Calendar Year 2024 Alternative Investments Pacing Plan.
- The Committee was presented with a review of 2023 Trading Cost Analysis by representatives of Abel Noser.
- The committee elected Christine Clinton to IIC Chairperson following the appointment of sitting IIC Chair Maureen Kelliher to Chairperson of the Board of Trustees.

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





To: Investment Committee  
From: Raynald Leveque, Chief Investment Officer  
Date: April 9, 2024  
Re: **Six-Month Investment Work Plan**  
Item: Action:  Discussion:  Informational:

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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**.

#### **4<sup>th</sup> Quarter FY 2024: April – June 2024**

##### **Investment Program**

- June – Strategic Asset Allocation Update (Implementation Plan)
- **June – Funston Review of Investment Strategic Plan**
- Discuss macroeconomic investment themes that may impact the portfolio  
**April – Brookfield Educational presentation on Private Infrastructure Investment**

##### **Marketable Investments**

- Schedule presentations of current investment managers  
June – BlackRock, U.S. Equity, S&P 500 Index Contract Renewal (*no presentation*)
- Monitor and execute structure of marketable assets portfolio

##### **Alternative Investments**

- Continue implementation of 2024 Private Debt & Equity Strategic Plan  
June - Callan, semi-annual update on the Private Debt & Equity program
- Review Private Debt & Equity investments

##### **Real Estate**

- Continue implementation of 2024 Real Estate Investment Plan  
June - Townsend, semi-annual update on the 2024 Real Estate Investment Plan

##### **Vendors**

- **June – ISS, Class Action Services Contract Renewal (*no presentation*)**

**1st Quarter FY 2025: July – September 2024**

**Investment Program**

- Discuss macroeconomic investment themes that may impact the portfolio

**Marketable Investments**

- Schedule presentations of current investment managers
  - August – Artisan Partners, Non-U.S. Equity Contract Renewal**
  - August – Causeway Capital Management, Non-U.S. Equity Contract Renewal**
- Monitor and execute structure of marketable assets portfolio

**Alternative Investments**

- Continue implementation of 2024 Private Debt & Equity Strategic Plan

**Real Estate**

- Continue implementation of 2024 Real Estate Investment Plan

## **Completed Items – Fiscal Year 2024**

### **1st Quarter FY 2024: July – September 2023**

#### **Investment Program**

- Discuss macroeconomic investment themes that may impact the portfolio  
July – J.P. Morgan and BlackRock presented

#### **Marketable Investments**

- Schedule presentations of current investment managers  
September – IR+M, Fixed Income contract renewal, unanimous five-year renewal vote in October
- Monitor and execute structure of marketable assets portfolio  
September - Callan, Marketable Investments fiscal year portfolio review

#### **Alternative Investments**

- Continue implementation of 2023 Private Debt & Equity Strategic Plan  
August – Ares, Pathfinder II, Private Debt, unanimous approval of \$50 million commitment  
September – Ares, Pathfinder II, additional commitment of \$25 million

#### **Real Estate**

- Continue implementation of 2023 Real Estate Investment Plan

### **2nd Quarter FY 2024: October – December 2023**

#### **Investment Program**

- October - 2024 Investment Committee meeting schedule, unanimous approval
- November - Annual Review of Investment Manual
- November - FY 2023 Comprehensive Annual Investment Report, unanimous approval of Draft CAIR for submission to Board in December subject to inclusion of investment section from the Annual Comprehensive Financial Report
- November – NHRS Strategic Asset Allocation Review

#### **Marketable Investments**

- Schedule presentations of current investment managers  
October - Wellington, Non-U.S. Equity Contract Renewal unanimous five-year renewal vote in November.
- Monitor marketable assets portfolio.

#### **Alternative Investments**

- Continue implementation of the 2023 Private Debt & Equity Investment Plan

#### **Real Estate**

- Continue implementation of the 2023 Real Estate Investment Plan  
The Townsend Group contract renewal date is December 31, 2023, unanimous two-year renewal vote in December

## **Vendors**

- Service Provider Contract Renewals  
Abel Noser contract renewal date is December 31, 2023, unanimous two-year renewal vote in December

## **3<sup>rd</sup> Quarter FY 2024: January – March 2024**

### **Investment Program**

- Discuss macroeconomic investment themes that may impact the portfolio  
February – Investments Strategic Plan Presentation  
March – Callan Capital Markets Assumptions

### **Marketable Investments**

- Schedule presentations of current investment managers
- Monitor marketable assets portfolio

### **Alternative Investments**

- Review 2023 Private Debt & Equity Strategic plan and Performance  
January – Callan, review of existing commitments
- Approve 2024 Private debt & Equity Work Plan  
February – Callan, proposed 2024 Strategic Plan, **unanimous approval in February**  
**February – H.I.G Capital, Advantage Buyout Fund II, Private Equity, unanimous approval of \$50 million to the primary fund and \$50 million to the co-investment vehicle**

### **Real Estate**

- Continue implementation of Fiscal Year 2024 Real Estate Investment Plan  
January – Townsend, review of the FY 2024 Investment Plan and approve proposed CY 2024 plan, unanimous approval in January

## **Vendors**

- February – Abel Noser, trading cost analysis



To: Independent Investment Committee  
From: Raynald Leveque, Chief Investment Officer  
Date: April 9, 2024  
Re: **Institutional Proxy Voting Policy Recommendation**  
Item: Action:  Discussion:  Informational:

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Attached is a red-lined version of the System's Proxy Voting Policy (Policy), which has been updated to reflect a change proposed by the NHRS regarding Social and Environmental Issues. The Board most recently updated and approved the Policy in April 2023.

NHRS has worked with Institutional Shareholder Services (ISS) to review and update the System's Policy to ensure that current industry practices clearly and accurately reflect the intended Policy. As such, the Policy guidelines have been updated to ensure that social issue proposals are considered based on their potential impact on the long-term economic interest of a company.

The change to the Policy is reflected on the following page:

- Page 32 - 33: relative to Social and Environmental Issues.

The revised Policy will be adopted based on the Committee's review and approval of the change, provided the Board grants conditional approval.

# New Hampshire Retirement System Proxy Voting Policy

## INTRODUCTION

A proxy is a written power of attorney given by a shareholder of a corporation, authorizing a specific vote on the shareholder's behalf at corporate meetings. A proxy will normally pertain to election of members of the corporation's board of directors, or to various resolutions submitted for shareholder approval. The System's Proxy Voting Policy has been established to protect the System's long-term investment interests and to promote responsible corporate policies and activities which enhance a corporation's financial prospects.

## U.S. PROXY VOTING GUIDELINES

### I. OPERATIONAL ITEMS

#### **Adjourn Meeting**

Generally vote **against** proposals to provide management with the authority to adjourn an annual or special meeting absent compelling reasons to support the proposal.

Vote **for** adjournment proposals that relate specifically to soliciting votes for a merger or transaction if supporting that merger or transaction. Vote **against** such proposals if the wording is too vague or if the proposal includes "other business."

#### **Amend Quorum Requirements**

Proposals to amend quorum requirements for shareholder meetings are evaluated based on several factors which include: market norms, the company's reasons for the change, and the company's ownership structure.

#### **Amend Minor Bylaws**

Generally, vote **for** proposals to make bylaw or charter changes that are of a housekeeping nature (updates or corrections) unless the proposed changes are believed to be detrimental to shareholder value.

#### **Change Company Name**

Generally, vote **for** proposals to change company name unless the reasons behind the change and necessity of the change have not been clearly provided by the company.

#### **Change Date, Time, or Location of Annual Meeting**

Generally, vote **for** management proposals to rotate the time or place of annual meetings unless the proposed change is unreasonable and motivation is unclear.

Generally, vote **against** shareholder proposals to rotate the time or place of annual meetings unless the current scheduling or location is unreasonable and change is determined to be in the best interests of the company and its shareholders.

### **Ratifying Auditors**

Generally, vote **for** proposals to ratify auditors unless:

- More than 20 percent of total fees paid to the auditors are attributable to nonaudit, but not including, SEC-related work. Nonaudit fees should be calculated by adding financial information systems design and implementation fees and all other fees.
- An auditor has a financial interest in or association with the company, and is therefore not independent
- There is reason to believe that the independent auditor has rendered an opinion which is neither accurate nor indicative of the company's financial position
- Poor accounting practices are identified that rise to a serious level of concern, such as: fraud; misapplication of GAAP; and material weaknesses identified in Section 404 disclosures

Vote **for** shareholder proposals that request the company rotate its auditors, taking into account the length of rotation specified in the proposal.

Vote **for** shareholder proposals that request the board adopt a policy stating that the company's independent accountants will only provide audit services to the company and no other services.

Vote **for** shareholder proposals requesting the company submit the ratification of its auditors to a shareholder vote.

### **Transact Other Business**

Vote against management proposals asking for authority to vote at the meeting for "other business" not already described in the proxy statement.

## **II. THE BOARD OF DIRECTORS**

### **Voting on Director Nominees in Uncontested Elections**

Votes on management proposals to elect director nominees are evaluated by taking the following factors into account: composition of the board and key board committees, attendance at board meetings, corporate governance provisions and takeover activity, long-term company performance relative to a market index, directors' investment in the company, whether the chairman is also serving as CEO, and whether a retired CEO sits on the board.

However, there are some actions by directors that should result in votes being withheld. These instances include directors who:

- Attend less than 75 percent of the board and committee meetings without a valid excuse
- In cases of chronic poor attendance without reasonable justification, in addition to voting against the director(s) with poor attendance, generally vote against or withhold from appropriate members of the nominating/governance committees or the full board
- Implement or renew a dead-hand or modified dead-hand poison pill
- Adopts a long-term poison pill without shareholder approval. When it comes to the adoption of short-term poison pill, the nomination of directors will be assessed on a case-by-case basis.
- Ignore a shareholder proposal that is approved by a majority of the votes cast
- Are incumbent board members and the board implements an advisory vote on executive compensation on a less frequent basis than the frequency that received the majority of votes cast at the most recent shareholder meeting at which shareholders voted on the say-on-pay frequency
- Failed to act on takeover offers where the majority of the shareholders tendered their shares
- Are inside directors or affiliated outsiders and sit on the audit, compensation, or nominating committees
- Are inside directors or affiliated outsiders and the full board serves as the audit, compensation, or nominating committee or the company does not have one of these committees
- Are audit committee members and the non-audit fees paid to the auditor are more than 20 percent of total fees paid to the auditors
- Are audit committee members and the company receives an adverse opinion on the company's financial statements from its auditor
- Are audit committee members and poor accounting practices are identified that rise to a level of serious concern, such as: fraud; misapplication of GAAP; and material weaknesses identified in Section 404 disclosures
- Are audit committee members and the audit committee entered into an inappropriate indemnification agreement with its auditor
- Are inside directors or affiliated outside directors and the full board is less than majority independent
- Sit on more than two outside public company boards (i.e. more than three boards in total, including the board seat of the company for which the vote is being cast), or sit on more than one outside public company board if they are CEOs of public companies (i.e. more than two boards in total, including the seat for which the vote is being cast)
- Are on the compensation committee and potentially the full board when there is a recurring or egregious negative correlation between chief executive pay and company performance



- Are on the compensation committee and potentially the full board when the company has recurring or egregious problematic pay practices
- Are on the compensation committee and potentially the full board when the company exhibits a significant level of poor communication and responsiveness to shareholders
- Have failed to address the issue(s) that resulted in any of the directors receiving more than 50% withhold votes out of those cast at the previous board election
- Are incumbent board members and the board had material failures of governance, stewardship, risk oversight, or fiduciary responsibilities at the company

In addition, directors who enacted egregious corporate governance policies or failed to replace management as appropriate would be subject to recommendations to **withhold** votes.

If the board lacks accountability and oversight coupled with sustained poor performance relative to peers, any or all appropriate nominees may be held accountable.

If the board is classified and a continuing director responsible for a problematic governance issue at the board/committee level that would warrant a **withhold/against** vote recommendation is not up for election, any or all appropriate nominees may be held accountable.

Exception may be made for new nominees.

### **Term Limits**

Generally, vote **against** term limits unless it is determined that the lack of new perspectives, resulting from insufficient turnover, may be unfavorable to long-term investment interests.

### **Board Size**

Generally, vote **for** management proposals to determine board size.

### **Classification/Declassification of the Board**

Vote **against** management proposals to classify the board.

Vote **for** shareholder proposals to repeal a classified board.

### **Cumulative Voting**

Vote **against** proposals to eliminate cumulative voting.

Vote **for** proposals to restore or permit cumulative voting in those cases where shareholders have access to the board through their own nominations.

### **Director and Officer Indemnification and Liability Protection**

Vote **for** indemnification proposals that only cover legal expenses when the officer acted in good faith in what he/she believed was the company's interest.

Vote **against** proposals that totally eliminate officers' liability.

A certain level of protection is desirable so as to attract and keep qualified candidates as directors and officers. This protection, however, must not go so far as to excuse officers from being accountable for their actions or for becoming negligent in their duties. The protection should only be effective when officers act in good faith, for the best interests of the company. Specifically, officers should be liable for:

- a) breach of loyalty;
- b) acts or omissions not in good faith or involving intentional misconduct or knowing violations of the law;
- c) unlawful purchases or redemptions of stock;
- d) payments of unlawful dividends; or
- e) receipt of improper personal benefits.

### **Establish/Amend Nominee Qualifications**

Generally, vote **for** management proposals to establish or amend director qualifications unless the proposed criteria are unreasonable and would have a demonstrable effect in precluding dissident nominees from joining the board.

Vote **against** shareholder proposals requiring two candidates per board seat.

### **Filling Vacancies/Removal of Directors**

Vote **against** management proposals to allow for a director's removal from the board only for cause. Directors should be elected or removed by a simple majority vote of shareholders.

Vote **against** management proposals which provide that only continuing directors may fill vacancies on the board.

Vote **for** proposals which allow shareholders to fill vacancies on the board.

Vote **for** proposals to restore shareholder ability to remove directors with or without cause.

### **Independent Chairman (Separate Chairman/CEO)**

Vote **for** shareholder proposals to separate the position of chairman of the board and CEO. The combination of the two positions creates an inherent conflict of interests.

### **Majority Vote Proposals**

Vote **for** reasonably crafted proposals calling for directors to be elected with an affirmative majority of votes cast and/or the elimination of the plurality standard for electing directors (including binding resolutions requesting that the board amend the company's bylaws), provided the proposal includes a carve-out for a plurality voting standard when there are more director nominees than board seats (e.g. contested elections).

## **Majority of Independent Directors/Establishment of Committees**

Generally, vote **for** shareholder proposals asking that boards be comprised of a majority of independent directors, unless it has been determined that the current board composition satisfies our independence threshold.

Vote **for** shareholder proposals asking that board audit, compensation, and/or nominating committees be comprised exclusively of independent directors.

## **Proxy Access to Nominate Directors**

Management and shareholder proposals to enact provisions that give shareholders access to the proxy to nominate directors that are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Company-specific factors; and
- Proposal-specific factors, including:
  - The ownership thresholds proposed in the resolution (i.e. percentage and duration);
  - The maximum proportion of directors that shareholders may nominate each year; and
  - The method of determining which nominations should appear on the ballot if multiple shareholders submit nominations

## **Open Access**

Vote **for** any and all equal access proposals.

Equal access proposals generally relate to three major topics:

- a) discussion of management nominees for the board of directors;
- b) discussion of other management proposals;
- c) discussion of shareholders' own proposals or nominees.

Shareholders should have the freedom to obtain information and discuss all of these topics. Only with sufficient information will they be able to vote their proxies wisely and maximize the value of their stock.

Management will often oppose these equal access proposals, seeing them as an infringement of its rights. Management will argue that the added cost and length of proxy statements is inefficient. The marginal cost of longer proxies, however, will be minimal, and the cost will be borne by the stockholders anyway.

## **Stock Ownership Requirements**

Vote **for** shareholder proposals requiring directors to own company stock in order to qualify as a director, or to remain on the board.

Shareholder proposals asking that the company adopt a holding or retention period for its executives (for holding stock after the vesting or exercise of equity awards) shall be evaluated by taking into account any stock ownership requirements or holding period/retention ratio already in place and the actual ownership level of executives.

### **Plurality Vote Requirement for Director Nominees**

Vote **for** proposals to elect director nominees by the affirmative vote of the majority of votes cast at an annual meeting of shareholders.

## **III. PROXY CONTESTS**

### **Voting for Director Nominees in Contested Elections**

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;
- Strategy of the incumbents versus the dissidents;
- Independence of directors;
- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

### **Reimbursing Proxy Solicitation Expenses**

Generally, vote **for** proposals to reimburse all appropriate proxy solicitation expenses when voting in conjunction with support of a dissident slate. We will also generally support shareholder proposals calling for the reimbursement of reasonable costs associated with nominating one or more candidates in a contested election where the following apply:

- The election of fewer than 50% of the directors to be elected is contested in the election;
- One or more of the dissident's candidates is elected;
- Shareholders are not permitted to cumulate their votes for directors; and
- The election occurred, and the expenses were incurred, after the adoption of this bylaw.

## **IV. ANTI - TAKEOVER MECHANISMS**

### **Confidential Voting**

Vote **for** a confidential voting policy.

Confidential voting would minimize the ability of management to influence proxy votes. It would allow shareholders the freedom to vote solely in their best interests, not considering actual or perceived pressure from management.

In order to maintain and monitor fiduciary responsibility, fiduciaries should still make their records available to clients after the confidential vote. Therefore, fiduciaries can still be held accountable for their votes.

### **Advance Notice Requirements for Shareholder Proposals/Nominations**

Generally, vote **for** advance notice resolutions provided that the proposals seek to allow shareholders to submit proposals as close to the meeting date as reasonably possible and within the broadest window possible. A reasonable deadline for shareholder notice of a proposal/ nominations must not be more than 60 days prior to a meeting, with a submittal window of at least 30 days prior to the deadline.

### **Amend Bylaws without Shareholder Consent**

Vote **against** proposals giving the board exclusive authority to amend the bylaws.

Vote **for** proposals giving the board the ability to amend the bylaws in addition to shareholders.

### **Poison Pills**

Vote **for** shareholder resolutions requiring that poison pills must be submitted for shareholder approval before going into effect.

Generally, vote **against** management proposals to approve or renew a poison pill unless the following factors are present:

- 1) 20 percent or higher flip-in
- 2) Two- to three-year sunset provision
- 3) No dead-hand or no-hand provision
- 4) Shareholder redemption feature: If the board refuses to redeem the pill 90 days after an offer is announced, ten percent of the shares may call a special meeting or seek a written consent to vote on rescinding the pill.

### **Shareholder Ability to Act by Written Consent**

Vote **against** management proposals to restrict or prohibit shareholders' ability to take action by written consent.

Vote **for** shareholder proposals to allow or make easier shareholder action by written consent.

## Shareholder Ability to Call Special Meetings

Vote **against** management proposals to restrict or prohibit shareholders' ability to call special meetings.

Vote **for** shareholder proposals to allow or make easier shareholders' ability to call special meetings.

## Supermajority Vote Requirements

Vote **against** management proposals to require a supermajority vote to amend any bylaw or charter provision.

Vote **for** shareholder proposals to lower supermajority vote requirements to amend any bylaw or charter provision. However, at companies with shareholder(s) who have significant ownership levels, proposals to lower supermajority vote requirements should be analyzed on a case-by-case basis, taking into account the following:

- Ownership structure;
- Quorum requirements; and
- Vote requirements

## Exclusive Venue

Management proposals seeking shareholder approval to limit shareholder litigation to the company's jurisdiction of incorporation are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Whether the company has been materially harmed by shareholder litigation outside its jurisdiction of incorporation, based on disclosure in the company's proxy statement; and
- Whether the company has the following good governance features:
  - An annually elected board;
  - A majority vote standard in contested director elections; and
  - The absence of a poison pill, unless the pill was approved by shareholders.

Vote **for** shareholder proposals to remove or adjust exclusive venue proposals, unless:

- The company has sufficiently proven that it has been materially harmed by shareholder litigation outside its jurisdiction of incorporation; and
- The company has the following good governance features:
  - An annually elected board;
  - A majority vote standard in contested director elections; and
  - The absence of a poison pill, unless the pill was approved by shareholders.

## **V. MERGERS AND CORPORATE RESTRUCTURINGS**

### **Appraisal Rights**

Vote **for** shareholder proposals to provide rights of appraisal to dissenting shareholders.

### **Asset Purchases**

Votes on asset purchase proposals are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Purchase price
- Fairness opinion
- Financial and strategic benefits
- How the deal was negotiated
- Conflicts of interest
- Other alternatives for the business
- Noncompletion risk

### **Asset Sales**

Votes on asset sales are evaluated based on the long-term investment interests of the System, and are examined by considering the following factors:

- Impact on the balance sheet/working capital
- Potential elimination of diseconomies
- Anticipated financial and operating benefits
- Anticipated use of funds
- Value received for the asset
- Fairness opinion
- How the deal was negotiated
- Conflicts of interest

### **Bundled Proposals**

Vote **against** bundled proxy proposals.

### **Conversion of Securities**

Votes on proposals regarding conversion of securities are determined based on the long-term economic interest of the System. When evaluating these proposals the investor should

review the dilution to existing shareholders, the conversion price relative to market value, financial issues, control issues, termination penalties, and conflicts of interest.

Vote **for** the conversion if it is expected that the company will be subject to onerous penalties or will be forced to file for bankruptcy if the transaction is not approved.

### **Corporate Reorganization/Debt Restructuring/Prepackaged Bankruptcy Plans/Reverse Leveraged Buyouts/Wrap Plans**

Votes on proposals to increase common and/or preferred shares and to issue shares as part of a debt restructuring plan are determined based on the long-term investment interest of the System, by taking into consideration the following:

- Dilution to existing shareholders' position
- Terms of the offer
- Financial issues
- Management's efforts to pursue other alternatives
- Control issues
- Conflicts of interest

Vote **for** the debt restructuring if it is expected that the company will file for bankruptcy if the transaction is not approved.

### **Formation of Holding Company**

Votes on proposals regarding the formation of a holding company should be determined based on the long-term economic interests of the System, taking into consideration the following:

- The reasons for the change
- Any financial or tax benefits
- Regulatory benefits
- Increases in capital structure
- Changes to the articles of incorporation or bylaws of the company

Absent compelling financial reasons to recommend the transaction, vote **against** the formation of a holding company if the transaction would include either of the following:

- Increases in common or preferred stock in excess of the allowable maximum as calculated by the ISS Capital Structure model
- Adverse changes in shareholder rights

### **Going Private Transactions (LBOs and Minority Squeeze Outs)**

Going private transactions are evaluated based on the long-term economic interest of the System, by taking into account the following: offer price/premium, fairness opinion, how the



deal was negotiated, conflicts of interest, other alternatives/offers considered, and noncompletion risk.

## **Joint Ventures**

Proposals seeking to form joint ventures are determined based on the long-term investment interests of the System, by taking into account the following: percentage of assets/business contributed, percentage ownership, financial and strategic benefits, governance structure, conflicts of interest, other alternatives, and noncompletion risk.

## **Liquidations**

Proposals on liquidations are considered based on the long-term investment interests of the System, by taking into account the following: management's efforts to pursue other alternatives, appraisal value of assets, and the compensation plan for executives managing the liquidation.

Vote **for** the liquidation if the company will file for bankruptcy if the proposal is not approved.

## **Mergers and Acquisitions/ Issuance of Shares to Facilitate Merger or Acquisition**

Proposals to merge one company with another, or for one company to acquire another are determined based on the long-term economic interest of the System. When evaluating the proposals, shareholders should weigh the cost to the company, market reaction, strategic rationale, the immediate and long-term benefits to shareholders, conflict of interests, and the resulting corporate governance changes.

## **Private Placements/Warrants/Convertible Debentures**

Votes on proposals regarding private placements should be determined based on the long-term investment interests of the System. When evaluating these proposals the investor should review: dilution to existing shareholders' position, terms of the offer, financial issues, management's efforts to pursue other alternatives, control issues, conflicts of interest, and market reaction.

Vote **for** the private placement if it is expected that the company will file for bankruptcy if the transaction is not approved.

## **Spinoffs**

Votes on spinoffs should be considered based on the long-term investment interests of the System, taking the following factors into account:

- Tax and regulatory advantages
- Planned use of the sale proceeds
- Valuation of spinoff
- Fairness opinion
- Benefits to the parent company
- Conflicts of interest

- Managerial incentives
- Corporate governance changes
- Changes in the capital structure

### **Value Maximization Proposals**

Shareholder proposals seeking to maximize shareholder value by hiring a financial advisor to explore strategic alternatives, selling the company or liquidating the company and distributing the proceeds to shareholders should be evaluated based on the following factors: prolonged poor performance with no turnaround in sight, signs of entrenched board and management, strategic plan in place for improving value, likelihood of receiving reasonable value in a sale or dissolution, and whether company is actively exploring its strategic options, including retaining a financial advisor.

## **VI. STATE OF INCORPORATION**

### **Control Share Acquisition Provisions**

Vote **for** proposals to opt out of control share acquisition statutes unless doing so would enable the completion of a takeover that would be detrimental to shareholders.

Vote **against** proposals to amend the charter to include control share acquisition provisions.

Vote **for** proposals to restore voting rights to the control shares.

### **Control Share Cashout Provisions**

Vote **for** proposals to opt out of control share cashout statutes.

### **Disgorgement Provisions**

Vote **for** proposals to opt out of state disgorgement provisions, if maximizing shareholder value.

### **Fair Price Provisions**

Vote **for** management proposals to adopt a fair price provision, as long as the shareholder vote requirement embedded in the provision is no more than a majority of the disinterested shares.

Vote **against** all other management fair price proposals.

Vote **for** shareholder proposals to lower the shareholder vote requirement embedded in existing fair price provisions.

Generally, vote **against** fair price provisions with shareholder vote requirements greater than a majority of disinterested shares.

## **Freeze Out Provisions**

Vote **for** proposals to opt out of state freeze out provisions, if maximizing shareholder value.

## **Greenmail**

Vote **for** proposals to restrict the company's ability to pay greenmail.

## **Reincorporation Proposals**

Proposals to change a corporation's state of incorporation should be examined based on the long-term economic interest of the System, giving consideration to both financial and corporate governance concerns including the following:

- Reasons for reincorporation;
- Comparison of company's governance practices and provisions prior to and following the reincorporation; and
- Comparison of corporation laws of original state and destination state

Vote **against** proposals that seek to reincorporate the company outside of the jurisdiction of the United States.

## **Stakeholder Provisions**

Vote **against** proposals that ask the board to consider nonshareholder constituencies or other nonfinancial effects when evaluating a merger or business combination.

## **VII. CAPITAL STRUCTURE**

### **Adjustments to Par Value of Common Stock**

Vote **for** management proposals to reduce the par value of common stock, if it will not adversely affect shareholder rights.

### **Common Stock Authorization**

Votes on proposals to increase the number of shares of common stock authorized for issuance are determined based on the long-term economic interest of the System, using a model developed by ISS.

Vote **against** proposals at companies with dual-class capital structures to increase the number of authorized shares of the class of stock that has superior voting rights.

Vote **for** proposals to approve increases beyond the allowable increase when a company's shares are in danger of being delisted or if a company's ability to continue to operate as a going concern is uncertain.

### **Dual-Class Stock**

Proposals to recapitalize a company into dual classes of voting stock must be examined based on the long-term economic interest of the System.

Vote **against** the creation of stock with supervoting privileges.

Vote **against** proposals that introduce nonvoting shares or exchange voting shares for nonvoting shares.

Vote **for** shareholder proposals asking that a company report to shareholders on the financial impact of its dual class voting structure.

Vote **for** shareholder proposals asking that a company submit its dual class voting structure for shareholder ratification.

### **Issue Stock for Use with Rights Plan**

Vote **against** proposals that increase authorized common stock for the explicit purpose of implementing a shareholder rights plan (poison pill).

### **Preemptive Rights**

Vote **against** proposals requesting the issuance of shares with or without preemptive rights which are excessive under local market best practice standards.

### **Preferred Stock**

Vote **against** proposals authorizing the creation of new classes of preferred stock with unspecified voting, conversion, dividend distribution, and other rights ("blank check" preferred stock).

Vote **for** proposals to create "declawed" blank check preferred stock (stock that cannot be used as a takeover defense).

Vote **for** proposals to authorize preferred stock in cases where the company specifies the voting, dividend, conversion, and other rights of such stock and the terms of the preferred stock appear reasonable.

Vote **against** proposals to increase the number of blank check preferred stock authorized for issuance when no shares have been issued or reserved for a specific purpose.

Votes on proposals to increase the number of blank check preferred shares are determined after analyzing the number of preferred shares available for issue given a company's industry and performance in terms of shareholder returns.

### **Recapitalization**

Votes on recapitalizations (reclassifications of securities) are considered based on long-term investment interests of the System, taking into account the following: more simplified capital structure, enhanced liquidity, fairness of conversion terms, impact on voting power and dividends, reasons for the reclassification, conflicts of interest, and other alternatives considered.

### **Reverse Stock Splits**

Generally, vote **for** management proposals to implement a reverse stock split provided that the number of authorized shares will be proportionally reduced or the effective increase in authorized shares is equal to or less than the allowable increase calculated in accordance with stock authorization model developed by ISS. In the event that a proportional reduction of authorized shares is not reciprocated, we will only support such proposals if:

- A stock exchange has provided notice to the company of a potential delisting;
- There is substantial doubt about the company's ability to continue as a going concern without additional financing; or
- The company's rationale or other factors as applicable merit support.

### **Share Repurchase Programs**

Proposals to repurchase shares should be considered based on the long-term economic interest of the System. For example, if this is done because management believes the stock is undervalued then the measure should be approved. If the purchase is proposed as an antitakeover device, then it ought to be opposed. We generally vote **for** management proposals to institute open market share repurchase plans in which all shareholders may participate on equal terms.

### **Stock Distributions: Splits and Dividends**

Vote **for** management proposals to increase the common share authorization for a stock split or share dividend, provided that the increase in authorized shares would not result in an excessive number of shares available for issuance as determined using a model developed by ISS.

Generally, vote **for** proposals to approve stock splits or share dividends unless it is determined that such authorities are detrimental to the long-term economic interest of the System.

### **Tracking Stock**

Vote case-by-case on the creation of tracking stock, weighing the strategic value of the transaction against such factors as:

- Adverse governance changes;
- Excessive increases in authorized capital stock;
- Unfair method of distribution;
- Diminution of voting rights;
- Adverse conversion features;
- Negative impact on stock option plans; and
- Alternatives such as spin-off.

## **VIII. EXECUTIVE COMPENSATION**

Vote for resolutions intended to improve the transparency of executive compensation by:

- Requiring a company to place a dollar value on all forms of compensation paid to a company's top-five executives and to include such monetarized disclosure in the summary compensation tables filed by the company with the SEC.
- Requiring a company to disclose to shareholders that compensation paid to a company's top-five executives that are not tax-deductible for federal income tax purposes, and to state the monetary value of the costs of such non-deductibility to the company.
- Requiring a company to disclose to shareholders those gains realized by a company's top-five executives in their exercise of stock options (or in the vesting of restricted shares for restricted share grants) and to report what fraction, if any, is attributable to company outperformance of its industry peers.
- Requiring a company to periodically disclose to shareholders equity investments received as compensation and unloaded by any of the company's top-five executives.

Vote **for** resolutions intended to improve the linkage of executive pay-for-performance by:

- Indexing the exercise price of a company's stock option grants to industry sector or broad market stock movements, or by linking the exercise price to changes in the stock price of firms among the company's industry peer group.
- Establishing executive bonus plans that would discount those improvements in a company's financial performance attributable to industry sector or broad market movements.
- Establishing executive bonus plans that would not utilize metrics based on a company's absolute increases in earnings, sales, or revenues, but rather based on the company's performance relative to its industry peer group.
- Prohibiting a company's top-five executives from unwinding equity-based incentive compensation received from the company.
- Prohibiting a company's top-five executives from hedging or employing any measure intended to eliminate their exposure to a decline in the company stock price.
- Requiring a company's top-five executives to publicly disclose, not less than ten days in advance, their intention to sell company stock, including the number of shares to be sold.
- Requiring "clawback" provisions in executive compensation arrangements that would result in a return to the company of executive over-payments based on performance metrics that are subsequently depressed upon a company's restatement of earnings.
- Requiring equity-based executive compensation arrangements to be "dividend neutral" – i.e., neither encouraging nor discouraging the payment of stock dividends to shareholders.
- Requiring executive stock option plans to adjust downward the exercise price of such options to reflect dividend payments made on company stock during the executive's holding period.
- Curtailing Supplemental Executive Retirement Plans (SERPs) for the top-five executives in the event a company terminates, "freezes", or otherwise curtails a defined benefit plan covering its rank-and-file employees.

- Reducing benefits provided under severance arrangements for a company's chief executive officer (CEO).
- Limiting the ratio of the sum of the compensation paid to a company's top-five executives to 8% of the company's aggregate earnings.

### **Advisory Votes on Executive Compensation (Say-on-Pay) Management Proposals**

Generally, evaluate executive pay and practices based on the overall executive compensation structure's ability to effectively motivate participants to focus on long-term shareholder value and returns, while adhering to market law, disclosure and best practice standards.

Vote **against** management say on pay (MSOP) proposals, **against/withhold** on compensation committee members (or, in rare cases where the full board is deemed responsible, all directors including the CEO), and/or **against** an equity-based incentive plan proposal if:

- There is a misalignment between CEO pay and company performance (pay for performance);
- The company maintains problematic pay practices;
- The board exhibits poor communication and responsiveness to shareholders.

### **Frequency of Advisory Vote on Executive Compensation (Management "Say on Pay")**

Vote **for** annual advisory votes on compensation, which provide the most consistent and clear communication channel for shareholder concerns about companies' executive pay programs.

### **Advisory Vote on Golden Parachutes in an Acquisition, Merger, Consolidation, or Proposed Sale**

We will evaluate these proposals based on our existing policies related to severance packages and problematic pay practices.

### **Equity-Based and Other Incentive Plans**

Proposals concerning director compensation are determined based on compensation methodology developed by ISS.

Vote **against** awarding stock option plans as compensation for directors.

### **Stock Plans in Lieu of Cash**

Votes **for** plans which provide directors with the choice of taking all or a portion of their cash compensation in the form of stock or which provide a dollar-for-dollar cash for stock exchange.

### **Director Retirement Plans**

Vote **against** retirement plans for non-employee directors.

Vote **for** shareholder proposals to eliminate retirement plans for non-employee directors.

## **Management Proposals Seeking Approval to Reprice Options**

Vote **against** management proposals seeking approval to reprice options.

## **Shareholder Proposals Regarding Executive and Director Pay**

Vote **for** shareholder proposals seeking additional disclosure of executive and director pay information, provided the information requested is relevant to shareholders' needs, would not put the company at a competitive disadvantage relative to its industry, and is not unduly burdensome to the company.

Vote **against** shareholder proposals seeking to set absolute levels on compensation or otherwise dictate the amount or form of compensation.

Vote **against** shareholder proposals requiring director fees be paid in stock only.

Vote **for** shareholder proposals to put option repricings to a shareholder vote.

All other shareholder proposals regarding executive and director pay are evaluated by taking into account company performance, pay level versus peers, pay level versus industry, and long term corporate outlook.

## **Qualified Employee Stock Purchase Plans**

Vote **for** proposals to approve qualified employee stock purchase plans where all of the following are aligned with local market best practice standards:

- Purchase price;
- Offering period; and
- The number of shares.

## **Nonqualified Employee Stock Purchase Plans**

Vote **for** proposal to approve nonqualified employee stock purchase plans where all of the following are aligned with local market best practice standards:

- Broad-based participation;
- Limits on employee contribution;
- Company matching contribution;
- No discount on the stock price on the date of purchase (since there is a company matching contribution).

In the event of excessive company matching contributions, we will evaluate the cost of plan against an allowable cap developed by ISS.



## **Employee Stock Ownership Plans (ESOPs)**

Vote **for** proposals to implement an ESOP or increase authorized shares for existing ESOPs, unless the number of shares allocated to the ESOP is excessive (more than five percent of outstanding shares.)

## **401(k) Employee Benefit Plans**

Vote **for** proposals to implement a 401(k) savings plan for employees.

## **Performance-Based Awards**

Generally vote **for** shareholder proposals advocating the use of performance-based awards like indexed, premium-priced, and performance-vested options or performance-based shares, unless:

- The proposal is overly restrictive (e.g., it mandates that awards to all employees must be performance-based or all awards to top executives must be a particular type, such as indexed options)
- The company demonstrates that it is using a substantial portion of performance-based awards for its top executives

## **Pay-for-Superior-Performance Standard**

Generally vote **for** shareholder proposals requesting to establish a pay-for-superior-performance standard whereby the company discloses defined financial performance criteria and a detail list of comparative peer group to allow shareholders to sufficiently determine the pay and performance correlation established in the plan. In addition, establish that no award should be paid out unless the company performance exceeds its peer's median or mean performance on the selected financial and stock price performance criteria.

## **Golden Parachutes and Executive Severance Agreements**

Vote **for** shareholder proposals to require golden parachutes or executive severance agreements to be submitted for shareholder ratification, unless the proposal requires shareholder approval prior to entering into employment contracts.

Proposals to ratify or cancel golden parachutes are determined based on several qualifying factors. An acceptable parachute should include the following:

- The triggering mechanism should be beyond the control of management
- The amount should not exceed three times base amount (defined as the average annual taxable W-2 compensation during the five years prior to the year in which the change of control occurs)
- Change-in-control payments should be double-triggered, i.e., (1) after a change in control has taken place, and (2) termination of the executive as a result of a “change in control”, meaning a change in the company ownership structure
- The agreements do not contain problematic features (e.g. excessive cash severance; excessive golden parachute payments)

## **Pension Plan Income Accounting**

Vote **for** shareholder proposals to exclude pension plan income in the calculation of earnings used in determining executive bonuses/compensation.

## **Supplemental Executive Retirement Plans (SERPs)**

Vote **for** shareholder proposals requesting to put extraordinary benefits contained in SERP agreements to a shareholder vote unless the company's executive pension plans do not contain excessive benefits beyond what is offered under employee-wide plans.

In addition, generally vote **for** shareholder proposals urging the board to limit the executive benefits provided under the company's supplemental executive retirement plan (SERP) by limiting covered compensation to a senior executive's annual salary and excluding of all incentive or bonus pay from the plan's definition of covered compensation used to establish such benefits.

## **Advisory Vote on Executive Compensation (Say-on-Pay)**

Generally vote **for** shareholder proposals asking the board to propose an advisory resolution seeking to ratify the compensation of the company's named executive officers (NEOs) on an annual basis. The proposal submitted to shareholders should make it clear that the vote is non-binding and would not have an impact on compensation paid or awarded to any NEO.

## **Disclosure of Board or Company's Utilization of Compensation Consultants**

Generally vote **for** shareholder proposals seeking disclosure regarding the Company, Board, or Board committee's use of compensation consultants, such as company name, business relationship(s) and fees paid.

## **IX. SOCIAL AND ENVIRONMENTAL ISSUES**

Social issue proposals will be considered based on their potential impact on the long-term economic interests of the System. Generally, we will **abstain** absent clear effect of proposal on share value.

# **NON-U.S. PROXY VOTING GUIDELINES**

## **I. OPERATIONAL ITEMS**

### **Allocation of Income**

Vote **for** approve of the allocation of income, unless:

- The dividend payout ratio has been consistently below 30 percent without adequate explanation; or
- The payout is excessive given the company's financial position.

### **Amend Minor Bylaws/Articles of Association**

Generally, vote **for** proposals to make bylaw or charter changes that are of a housekeeping nature (updates or corrections) unless the proposed changes are believed to be detrimental to shareholder value or in absence of adequate information to evaluate the proposal per local market best practice standards.

### **Amend Quorum Requirements**

Proposals to amend quorum requirements for shareholder meetings are evaluated based on several factors which include: market norms, the company's reasons for the change, and the company's ownership structure.

### **Change in Company Fiscal Term**

Vote **for** proposals to change a company's fiscal term unless the company's motivation for the change is to postpone its annual general meeting.

### **Financial Statements/Director and Auditor Reports**

Vote **for** proposals to approve financial statements and director and auditor reports, unless:

- There are concerns about the accounts presented or audit procedures used; or
- The company is not responsive to shareholder questions about specific items that should be publicly disclosed.

### **General Meeting Formalities**

In some markets, shareholders are routinely asked to approve:

- the opening of the shareholder meeting
- acknowledge proper convening of meeting
- that the meeting has been convened under local regulatory requirements
- the presence of quorum
- the agenda for the shareholder meeting
- the election of the chair of the meeting
- the appointment of shareholders to co-sign the minutes of the meeting

- regulatory filings
- the designation of inspector or shareholder representative(s) of minutes of meeting
- the designation of two shareholders to approve and sign minutes of meeting
- the allowance of questions
- the publication of minutes
- the closing of the shareholder meeting
- authorize board to ratify and execute approved resolutions
- prepare and approve list of shareholders

As these are typically formalities associated with the convening of general shareholder meetings, generally vote **for** these and similar routine management proposals.

### **Lower Disclosure Threshold for Stock Ownership**

Vote **against** proposals to lower the stock ownership disclosure threshold below 5 percent unless specific reasons exist to implement a lower threshold.

### **Stock (Scrip) Dividend Alternative**

Generally, vote **for** stock (scrip) dividend proposals.

Vote **against** proposals that do not allow for a cash option unless management demonstrates that the cash option is detrimental to shareholder value.

### **Transact Other Business**

Vote **against** other business when it appears as a voting item.

## **II. AUDITORS**

### **Appointment of Auditors and Auditor Fees**

Vote **for** the reelection of auditors and proposals authorizing the board to fix auditor fees, unless:

- There are serious concerns about the accounts presented or the audit procedures used;
- The auditors are being changed without explanation;
- The name(s) of the proposed auditors has not been published;
- The auditors are being changed without explanation;
- For widely-held companies, excessive fees for non-audit services as determined by local market best practice standards; or
- The lead audit partner(s) has been linked with a significant auditing controversy.

Vote **against** the appointment of external auditors if they have previously served the company in an executive capacity or can otherwise be considered affiliated with the company.

### **Appointment of Internal Statutory Auditors**

Vote **for** the appointment or reelection of statutory auditors, unless:

- There are serious concerns about the statutory reports presented or the audit procedures used;
- Questions exist concerning any of the statutory auditors being appointed; or
- The auditors have previously served the company in an executive capacity or can otherwise be considered affiliated with the company.

### **Auditor Indemnification and Liability Provisions**

Vote **against** proposals to indemnify auditors.

## **III. THE BOARD OF DIRECTORS**

### **Voting on Director Nominees in Uncontested Elections (Non-U.S.)**

Votes on management nominees in the election of directors are evaluated by observing relevant market listing rules and regulations, coupled with local market best practice standards. We will typically not support nominees if:

- Adequate disclosure has not been provided in a timely manner;
- There are clear concerns over questionable finances or restatements;
- There have been questionable transactions with conflicts of interest;
- There are any records of abuses against minority shareholder interests; or
- The board fails to meet minimum corporate governance standards.

Vote **for** individual nominees unless there are specific concerns about the individual, such as criminal wrongdoing or breach of fiduciary responsibilities.

Vote **against** individual directors if repeated absences at board meetings have not been explained (in countries where this information is disclosed).

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;

- Strategy of the incumbents versus the dissidents;
- Independence of directors;
- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

Vote **for** employee and/or labor representatives if they sit on either the audit or compensation committee *and* are required by law to be on those committees. Vote **against** employee and/or labor representatives if they sit on either the audit or compensation committee, if they are not required to be on those committees.

Under extraordinary circumstances, vote **against** or **withhold** from directors individually, on a committee, or the entire board, due to:

- Material failures of governance, stewardship, or fiduciary responsibilities at the company; or
- Failure to replace management as appropriate; or
- Egregious actions related to the director(s)' service on other boards that raise substantial doubt about his or her ability to effectively oversee management and serve the best interests of shareholders at any company.

## **Board Structure**

Generally, vote **for** management proposals to determine board size.

## **Director and Officer Indemnification and Liability Provisions**

Votes on proposals seeking indemnification and liability protection for directors and officers are examined based on the indemnification and liability protections applicable in each respective market, provided that they are within reason. We will generally only support those proposals that provide directors and officers protection if they have acted in good faith on company business and were found innocent of any civil or criminal charges for duties performed on behalf of the company.

## **Discharge of Directors**

Generally vote **for** the discharge of directors, including members of the management board and/or supervisory board, unless there is reliable information about significant and compelling controversies that the board is not fulfilling its fiduciary duties warranted by:

- A lack of oversight or actions by board members which invoke shareholder distrust related to malfeasance or poor supervision, such as operating in private or company interest rather than in shareholder interest; or
- Any legal issues (e.g. civil/criminal) aiming to hold the board responsible for breach of trust in the past or related to currently alleged actions yet to be confirmed (and not only the fiscal year in question), such as price fixing, insider trading, bribery, fraud, and other illegal actions; or

- Other egregious governance issues where shareholders will bring legal action against the company or its directors.

#### **IV. PROXY CONTESTS**

##### **Voting for Director Nominees in Contested Elections**

Votes in a contested election of directors are evaluated based on the long-term economic interest of the System, and must be examined by taking the following factors into account:

- Past performance relative to its peers;
- Market in which fund invests;
- Measures taken by the board to address the issues;
- Past shareholder activism, board activity, and votes on related proposals;
- Strategy of the incumbents versus the dissidents;
- Independence of directors;
- Experience and skills of director candidates;
- Governance profile of the company;
- Evidence of management entrenchment.

#### **V. ANTI - TAKEOVER MECHANISMS**

##### **Anti-takeover/Entrenchment Devices**

Generally vote **against** all antitakeover proposals, unless they are structured in such a way that they give shareholders the ultimate decision on any proposal or offer.

##### **Depository Receipts and Priority Shares**

Generally vote **against** the introduction of depository receipts and priority shares.

##### **Issuance of Free Warrants**

Generally vote **against** the issuance of free warrants.

##### **Mandatory Takeover Bid Waivers**

Generally, vote **for** proposals to waive mandatory takeover bid requirements provided that the event prompting the takeover bid is a repurchase by the company of its own shares. During a buyback of shares, the relative stake of a large shareholder increases even though the number of shares held by the large shareholder has not changed. In certain markets, the mandatory bid rules require a large shareholder to make a takeover offer if its stake in the company is increased on a relative basis as a result of a share repurchase by the company. Companies in such markets may seek a waiver from the takeover bid requirement applicable to their large shareholder.

## **Renew Partial Takeover Provision**

Generally vote **for** the adoption of this proposal as this article provides protection for minority shareholders by giving them ultimate decision-making authority based on their own interests.

## **VI. MERGERS AND CORPORATE RESTRUCTURINGS**

### **Control and Profit Transfer Agreements**

Generally vote **for** management proposals to approve control and profit transfer agreements between a parent and its subsidiaries.

### **Expansion of Business Activities**

Vote **for** resolutions to expand business activities unless the new business takes the company into risky areas.

### **Mergers and Acquisitions/ Issuance of Shares to Facilitate Merger or Acquisition**

Proposals to merge one company with another, or for one company to acquire another are determined based on the long-term economic interest of the System. When evaluating the proposals, shareholders should weigh the cost to the company, market reaction, strategic rationale, the immediate and long-term benefits to shareholders, conflict of interests, whether the transaction is contested, and the resulting corporate governance changes.

Vote **against** if the companies do not provide sufficient information upon request to make an informed voting decision.

### **Related-Party Transactions**

Evaluate resolutions that seek shareholder approval on related party transactions (RPTs), considering factors including, but not limited to, the following:

- the parties on either side of the transaction;
- the nature of the asset to be transferred/service to be provided;
- the pricing of the transaction (and any associated professional valuation);
- the views of independent directors (where provided);
- the views of an independent financial adviser (where appointed);
- whether any entities party to the transaction (including advisers) are conflicted; and
- the stated rationale for the transaction, including discussions of timing.

If there is a transaction that NHRS deemed problematic and that was not put to a shareholder vote, we may recommend against the election of the director involved in the related-party transaction or the full board.



## **Reorganizations/Restructurings**

Proposals to approve reorganizations and restructurings are evaluated based on the long-term economic interest of the System. When evaluating such proposals, shareholders should consider if there are clear conflicts of interest among the various parties, if shareholder rights' are being negatively affected, or if certain groups or shareholders appear to be getting a better deal at the expense of general shareholders.

## **VII. COUNTRY OF INCORPORATION**

### **Reincorporation Proposals**

Proposals to change a corporation's country of incorporation should be examined based on the long-term economic interest of the System, giving consideration to both financial and corporate governance concerns including the following:

- Reasons for reincorporation;
- Comparison of company's governance practices and provisions prior to and following the reincorporation; and
- Comparison of corporation laws of original country and destination country

## **VIII. CAPITAL STRUCTURE**

### **Adjust Par Value of Common Stock**

Vote **for** management proposals to reduce par value of common stock.

### **Capitalization of Reserves for Bonus Issues/Increase in Par Value**

Vote **for** requests to capitalize reserves for bonus issues of shares or to increase par value.

### **Debt Issuance Requests**

Votes on non-convertible debt issuance requests with or without preemptive rights are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company's debt ratio, and further compare the level with similar peers in the industry.

Vote **for** the creation/issuance of convertible debt instruments as long as the maximum number of common shares that could be issued upon conversion meets recommended guidelines on equity issuance requests.

Vote **for** proposals to restructure existing debt arrangements unless the terms of the restructuring would adversely affect the rights of shareholders.

## **Increases in Authorized Capital**

Vote **for** non-specific proposals to increase authorized capital in line with local market best practice standards.

Vote **against** proposals to adopt unlimited capital authorizations.

## **Increase in Borrowing Powers**

Votes on proposals to approve increases in a company's borrowing powers are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company's debt ratio, and further compare the level with similar peers in the industry.

## **Pledging of Assets for Debt**

Votes on proposals to approve the pledging of assets for debt are evaluated based on their individual merits, demonstrated need, and long-term investment interests of the company. We will examine the potential impact the proposed authority may have on the company's debt ratio, and further compare the level with similar peers in the industry.

## **Preferred Stock**

Vote **for** the creation of a new class of preferred stock or for issuances of preferred stock up to 50 percent of issued capital unless the terms of the preferred stock would adversely affect the rights of existing shareholders.

Vote **for** the creation/issuance of convertible preferred stock as long as the maximum number of common shares that could be issued upon conversion meets ISS guidelines on equity issuance requests.

Vote **against** the creation of a new class of preference shares that would carry superior voting rights to the common shares.

Vote **against** the creation of blank check preferred stock unless the board clearly states that the authorization will not be used to thwart a takeover bid.

Votes on proposals to increase blank check preferred authorizations are evaluated based on the rationale for requested increase, the ability for the company to use the blank check preferred stock as a takeover defense, and whether the company has historically issued such stock for legitimate financing purposes.

## **Preemptive Rights**

Vote **against** proposals requesting the issuance of shares with or without preemptive rights which are excessive under local market best practice standards.

## **Reduction of Capital**

Vote **for** proposals to reduce capital for routine accounting purposes unless the terms are unfavorable to shareholders.

Generally, vote **for** proposals to reduce capital in connection with corporate restructuring, as opposition could lead to insolvency, which is not in the long-term economic interests of shareholders. Evaluation of this type of proposal should take a realistic approach to the company's situation and the future prospects for shareholders.

### **Reissuance of Repurchased Shares**

Vote **for** requests to reissue any repurchased shares unless there is clear evidence of abuse of this authority in the past.

### **Share Repurchase Programs**

Generally vote **for** share repurchase programs/market repurchase authorities, provided that the proposal meets local market best practice standards regarding:

- Maximum volume;
- Duration.

For markets that either generally do not specify the maximum duration of the authority or seek an excessive duration that is allowable under market specific legislation, we will assess the company's historic practice. If there is evidence that a company has sought shareholder approval for the authority to repurchase shares on an annual basis, we will support the proposed authority.

In addition, vote **against** any proposal where:

- The repurchase can be used for takeover defenses;
- There is clear evidence of abuse;
- There is no safeguard against selective buybacks;
- Pricing provisions and safeguards are deemed to be unreasonable in light of market practice.

We may support share repurchase plans with excessive volume under exceptional circumstances, such as one-off company specific events (e.g. capital restructuring). Such proposals will be assessed based on merits, which should be clearly disclosed in the annual report.

## **IX. EXECUTIVE COMPENSATION**

### **Executive Compensation Plans**

All compensation proposals will be reviewed based on local market best practice standards.

## Director Remuneration and Compensation

Vote **for** proposals to award cash fees to non-executive directors unless the amounts are excessive relative to other companies in the country or industry.

Votes on non-executive director compensation proposals that include both cash and share-based components are determined based on whether the terms of the proposed compensation can effectively motivate participants to focus on long-term shareholder value and returns, while adhering to local market law, disclosure and best practice standards. However, we will typically vote **against** awarding stock option plans as compensation for non-executive directors.

Votes on proposals that bundle compensation for both non-executive and executive directors into a single resolution are determined based on whether the terms of the proposed compensation can effectively motivate participants to focus on long-term shareholder value and returns, while adhering to local market law, disclosure and best practice standards. However, we will typically vote **against** awarding stock option plans as compensation for non-executive directors.

Vote **against** proposals to introduce retirement benefits for non-executive directors.

## Director and Statutory Auditor Retirement Plans

Vote **against** retirement plans for nonemployee directors and statutory auditors.

Vote **for** shareholder proposals to eliminate retirement plans for nonemployee directors and statutory auditors.

## Remuneration Report

Management proposals seeking ratification of a company's remuneration policy are evaluated by considering a combination of local market law and best practice standards. We will typically oppose a company's remuneration policy if the proposed compensation policy/report was not made available to shareholders in a timely manner, or if the level of disclosure of the proposed compensation policy is below what local market best practice standards dictate.

## X. SOCIAL AND ENVIRONMENTAL ISSUES

Social issue proposals will be considered based on their potential impact on the long-term economic interests of the company. Generally, we will **abstain** absent clear effect of proposal on share value.

Vote **against** on proposals permitting companies to make political contributions. Businesses are affected by legislation at the federal, state, and local level; barring political contributions can put the company at a competitive disadvantage. (Predominantly seen in the U.K.).

Vote **abstain** on Black Economic Empowerment (BEE) transactions on a case-by-case basis. Factors considered include the overall dilutive impact, the structure of the transaction and the identity of the company's chosen BEE partners. Proposals which are genuinely

broad-based are more appealing than those which stand to benefit a narrow group of investors, as are those which have a long-term timeframe. (South Africa specific).

Vote **abstain** on proposals restricting a company from making charitable contributions. Charitable contributions are generally useful for assisting worthwhile causes and for creating goodwill in the community. In the absence of bad faith, self-dealing, or gross negligence, management should determine which, and if, contributions are in the best interests of the company. (Predominantly seen in Turkey, Egypt, Sri Lanka, Oman markets).

# Brookfield Biographies

## **Rene Lubianski**

### **Managing Partner, Infrastructure**

Rene Lubianski is a Managing Partner in Brookfield's Infrastructure Group. In this role, Mr. Lubianski is responsible for corporate development, capital raising, co-investments, investor relations and other strategic initiatives for Brookfield's infrastructure funds. Prior to joining Brookfield in 2010, Mr. Lubianski worked at a global investment bank in its financial advisory group, focused on infrastructure investments. Mr. Lubianski holds a Bachelor of Commerce degree from McMaster University and the Chartered Financial Analyst designation.

## **Cara O'Brien**

### **Vice President, Private Funds Group - Client Relationship Management**

Cara O'Brien is responsible for developing and managing institutional client relationships across Brookfield's private funds throughout the Northeast. Prior to joining Brookfield in 2021, Ms. O'Brien worked at Goldman Sachs Asset Management focused on the distribution of alternative investment solutions with financial intermediaries. Ms. O'Brien holds a Bachelor of Science degree in Finance with a concentration in Value Investing from the Gabelli School of Business at Fordham University.

# Introduction to Infrastructure Investing



NEW HAMPSHIRE RETIREMENT SYSTEM

APRIL 9, 2024

*Please see Notice to Recipients on last two pages  
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**Brookfield**

This presentation is being provided as a high-level overview of Brookfield's views on infrastructure and Brookfield's private infrastructure funds and is for discussion purposes only. It is not intended to provide an overview of the terms applicable to any products sponsored by Brookfield Asset Management Inc. and its affiliates (together, "Brookfield"). Certain of the information provided herein has been prepared based on Brookfield's internal research and certain information is based on various assumptions made by Brookfield, any of which may prove to be incorrect. Brookfield may have not verified (and disclaims any obligation to verify) the accuracy or completeness of any information included herein including information that has been provided by third parties and you cannot rely on Brookfield as having verified such information.

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# Agenda

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## Why Invest in Infrastructure?

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Networks and systems that provide essential services, facilitate economic activity and tend to involve the movement or storage of goods, water, energy, people or data



## Key Characteristics of Infrastructure

- ✓ High barriers to entry
- ✓ Low demand elasticity / volatility
- ✓ Long operational life
- ✓ Typically stable, predictable cash flows
- ✓ Capital intensive and difficult to replicate
- ✓ High operating margins
- ✓ Generally inflation-linked revenues



## Transport

- Rail and mass transit
- Ports, container and bulk terminals
- Toll roads, bridges & tunnels
- Airports



## Renewable Power

- Hydro
- Wind
- Solar
- Distributed generation
- Storage



## Midstream

- Transmission pipelines
- Natural gas storage
- Natural gas processing plants



## Utilities

- Electricity, natural gas connections and transmission
- Residential Infrastructure (such as smart meters)
- Water & wastewater
- District energy



## Data

- Communication towers
- Fiber networks
- Data centers
- Distributed antenna systems (DAS)

Brookfield believes that investing in a diversified, high-quality infrastructure portfolio can provide several benefits including:



## Inflation Protection

Indexed and embedded growing cash flows that provide natural hedge to rising liabilities



## Long Duration

Long operational life of underlying assets



## Diversification

Low correlation of infrastructure to other major asset classes



## Attractive Cash Yield

Significant percentage of returns from cash distributions vs. appreciation



## Lower Volatility<sup>2</sup>

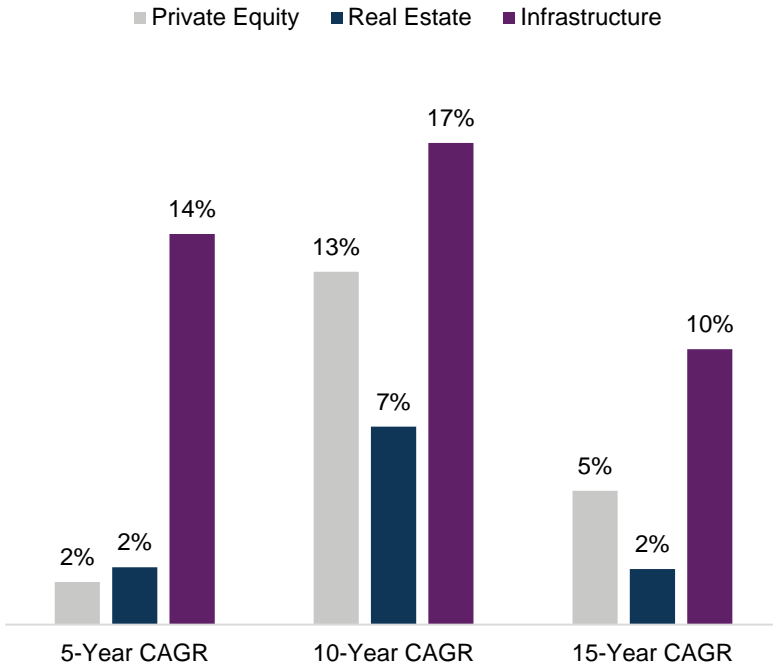
Regulated / contracted cash flows from mature operating assets



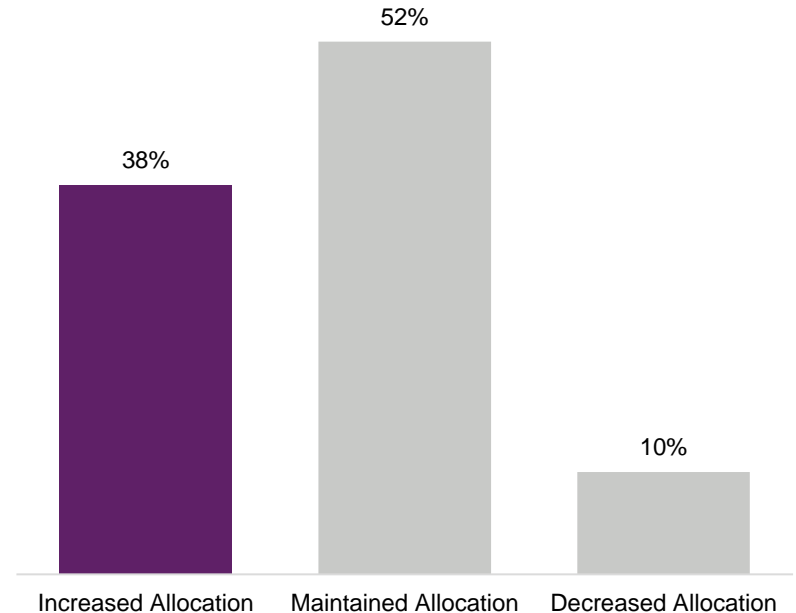
## Sustainability

Low risk of obsolesces over the long-term

## Annual Amount Fundraised Asset Class<sup>2</sup>



## % of Pension Funds Increasing, Maintaining or Decreasing Allocations to Infrastructure<sup>3</sup>

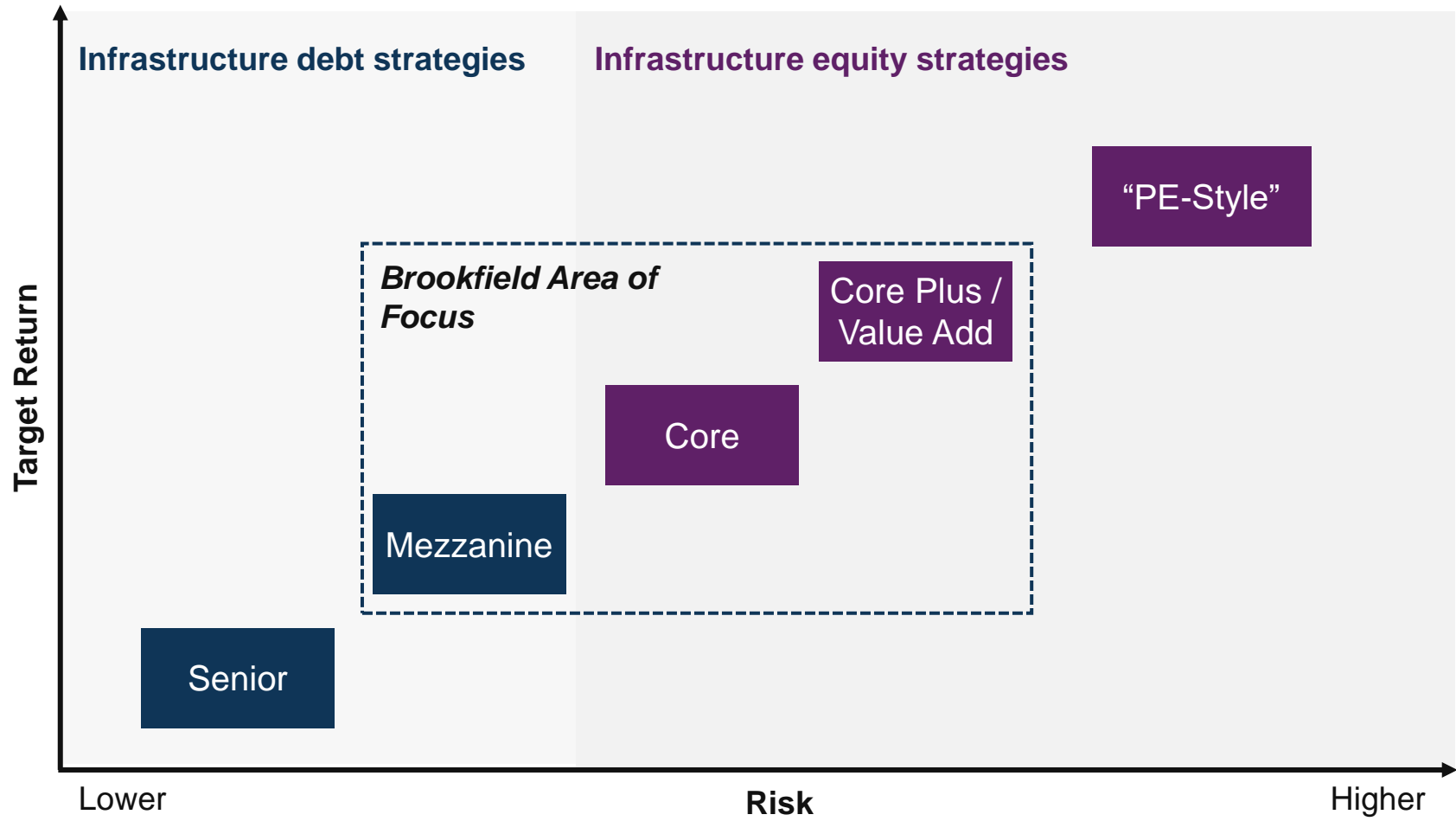


## Evolving Investor Universe

- Nearly half of all institutional investors are under-allocated to Infrastructure, suggesting more capital could flow into the space over time<sup>3</sup>
- As of June 2023, pension funds accounted for roughly one third of invested capital in infrastructure and are broadly looking to increase their exposure to the asset class<sup>2</sup>

# Differentiating Between Investment Strategies<sup>1</sup>

Investors have the ability to participate across the risk / return spectrum

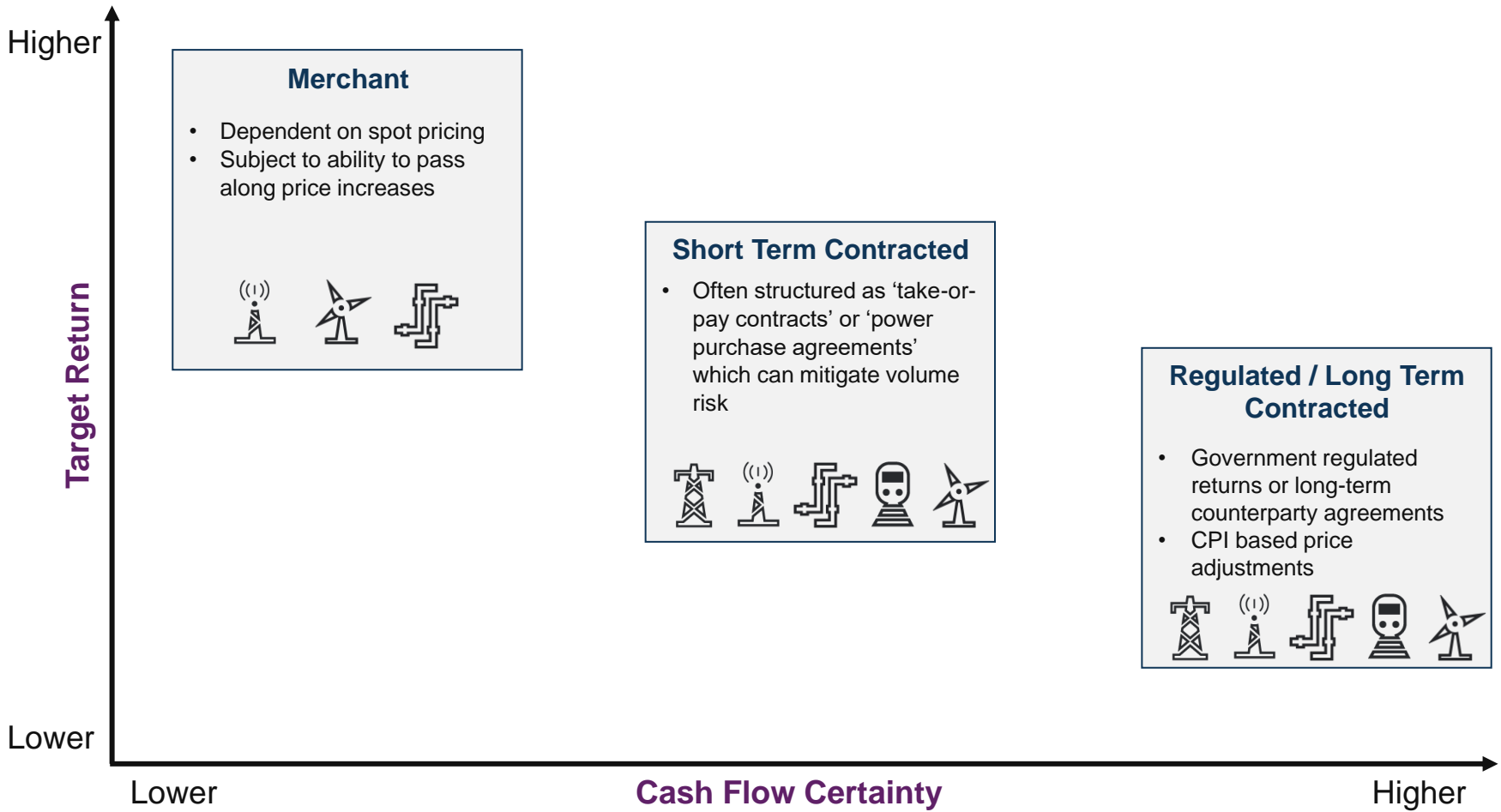




Type	Infrastructure Fund Strategy		
	Debt	Core	Core Plus / Value Add
<b>Description</b>	<ul style="list-style-type: none"> <li>Debt investments in infrastructure assets with varying seniority in the capital structure</li> </ul>	<ul style="list-style-type: none"> <li>Buy-and-hold equity investments in essential infrastructure assets</li> </ul>	<ul style="list-style-type: none"> <li>Equity positions in infrastructure assets adding value through asset management</li> </ul>
<b>Potential Benefits to an Investor</b>	<ul style="list-style-type: none"> <li>✓ Duration</li> <li>✓ Low volatility</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cash flow yield</li> <li>✓ Inflation protection</li> <li>✓ Low volatility</li> </ul>	<ul style="list-style-type: none"> <li>✓ Cash flow yield</li> <li>✓ Inflation protection</li> <li>✓ Capital appreciation</li> </ul>
<b>Brookfield Target Gross IRR</b>	<b>9%</b>	<b>9%</b>	<b>13%+</b>



# Revenue Model Drives Infrastructure Returns<sup>1</sup>



For illustrative purposes only.

The characteristics of Infrastructure assets mitigate many key investment risks while others are more pronounced

## **Inflation**

Assets often have contractual inflation indexation mechanisms

## **Regulatory/Political**

Relationship with regulatory bodies as responsible stewards of critical infrastructure

## **Counterparty**

Counterparties are often high-quality and investment grade

## **Foreign Exchange**

Hedges utilized where appropriate and tailored at the asset level

## **Re-Contracting**

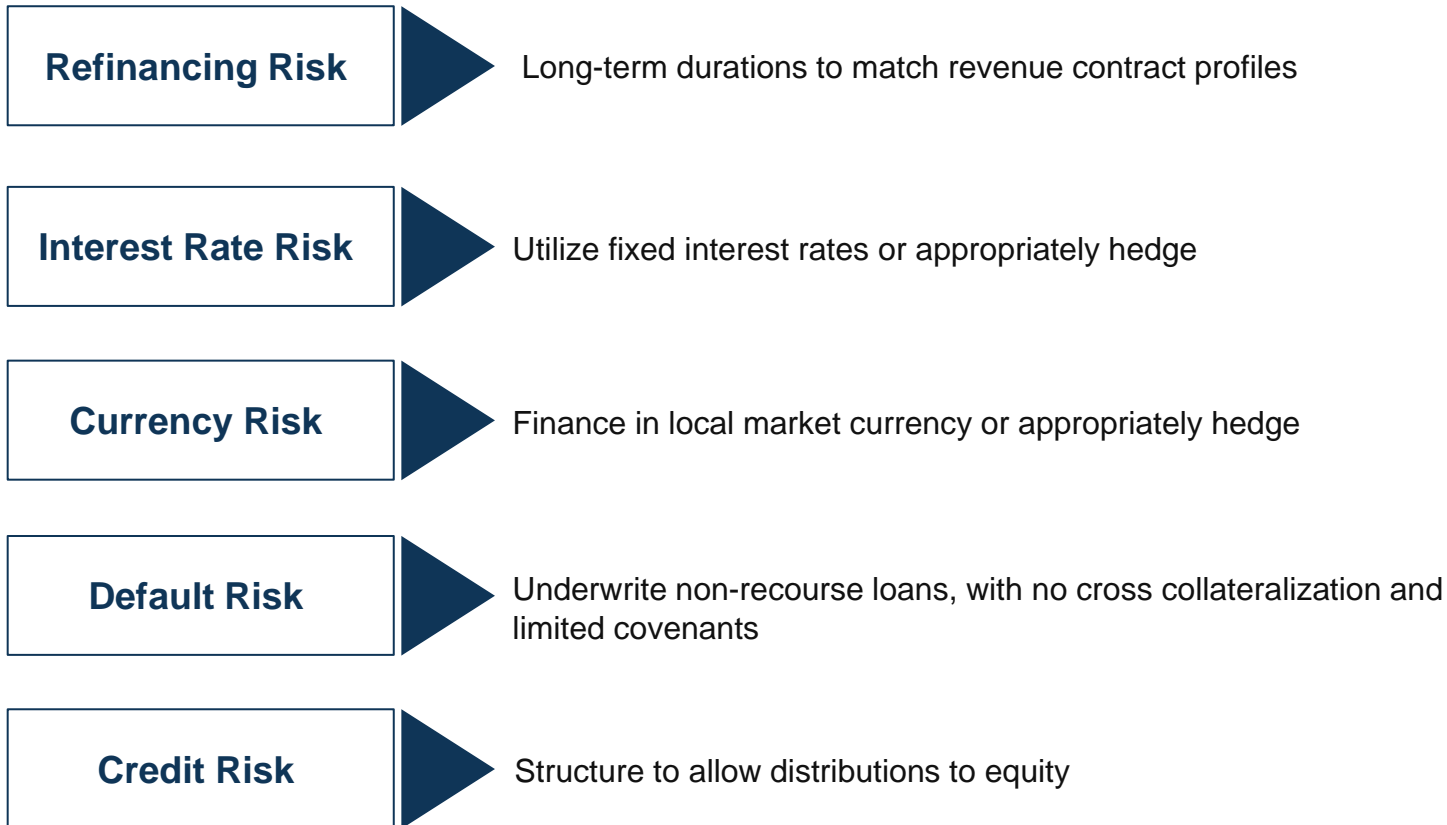
Long-term contracts and essential nature of services reduce re-contracting risk

## **Financing**

Conservative financing strategy with long term durations that align with asset cash flows







The debt financing strategy can have a material impact on the risk profile of an infrastructure investment

## Brookfield Approach



# Comparing Infrastructure Private Funds vs. Public Equities<sup>1</sup>

While the underlying assets have the same characteristics, there are important portfolio implications to consider when investing in infrastructure private funds or public equities

	Private	Public
<b>Liquidity</b>	 <p><u>Lower</u> Capital is typically committed over a multi-year period, with the exception of open-ended funds which allow for greater liquidity</p>	 <p><u>Higher</u> The majority of public infrastructure investments allow for daily liquidity</p>
<b>Volatility</b>	 <p><u>Lower</u> Volatility is muted due to quarterly, appraisal-based investment returns</p>	 <p><u>Higher</u> Due to the publicly listed nature of securities, volatility fluctuates with broader market movement</p>
<b>Pure Play Exposure</b>	 <p><u>Higher</u> Private Funds allow for direct exposure to pure play infrastructure assets</p>	 <p><u>Lower</u> Publicly traded companies generally have a broader focus with ancillary revenue streams</p>



# Infrastructure Opportunity Set

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We believe private capital is an essential element in addressing the global infrastructure funding gap

- Historically, governments and utility companies provided most infrastructure investment
- Governments world-wide are facing severe budget deficits and increased debt burden
  - **Developed Markets:** trend of under-investment in infrastructure over many decades
  - **Emerging Economies:** targeting fundamental economic infrastructure



Investment in infrastructure needed in the United States by 2040<sup>2</sup>



Investment needed for European Union investment by 2040<sup>2</sup>



Global infrastructure investment required by 2040<sup>2</sup>

Opportunity set driven by three main global investment themes

The “Three D’s”		
<h2>Digitalization</h2> <p>Build out of data infrastructure as a result of exponential increases in data consumption</p>	<h2>Decarbonization</h2> <p>Utility or residential energy infrastructure investments to reduce or eliminate emissions</p>	<h2>Deglobalization</h2> <p>Re-shoring of essential and strategic manufacturing processes and supply chains</p>



Data



Renewable Power



Renewable Power



Midstream



Transport



Data



Midstream



Renewable Power





## Conclusion





- ✓ Pension funds are allocating more capital to Infrastructure
- ✓ Infrastructure provides an attractive risk / return trade-off
- ✓ The “Three Ds” are driving investment opportunity across target sectors



# Appendix I: Brookfield Overview



# A Leading Global Alternative Asset Manager

Brookfield

Asset owner with significant global operating experience that seeks to acquire attractive assets and businesses

**\$900B+**

ASSETS UNDER MANAGEMENT<sup>1</sup>

**~240,000**

OPERATING EMPLOYEES<sup>2</sup>

**1,300+**

INVESTMENT PROFESSIONALS<sup>2</sup>



Renewable Power  
& Transition<sup>1</sup>

**\$102B**



Infrastructure<sup>1</sup>

**\$191B**



Private Equity<sup>1</sup>

**\$130B**



Real Estate<sup>1</sup>

**\$276B**



Credit & Insurance  
Solutions<sup>1</sup>

**\$217B**

We are one of the world's largest investors, owners and operators of critical infrastructure assets

**\$285B**

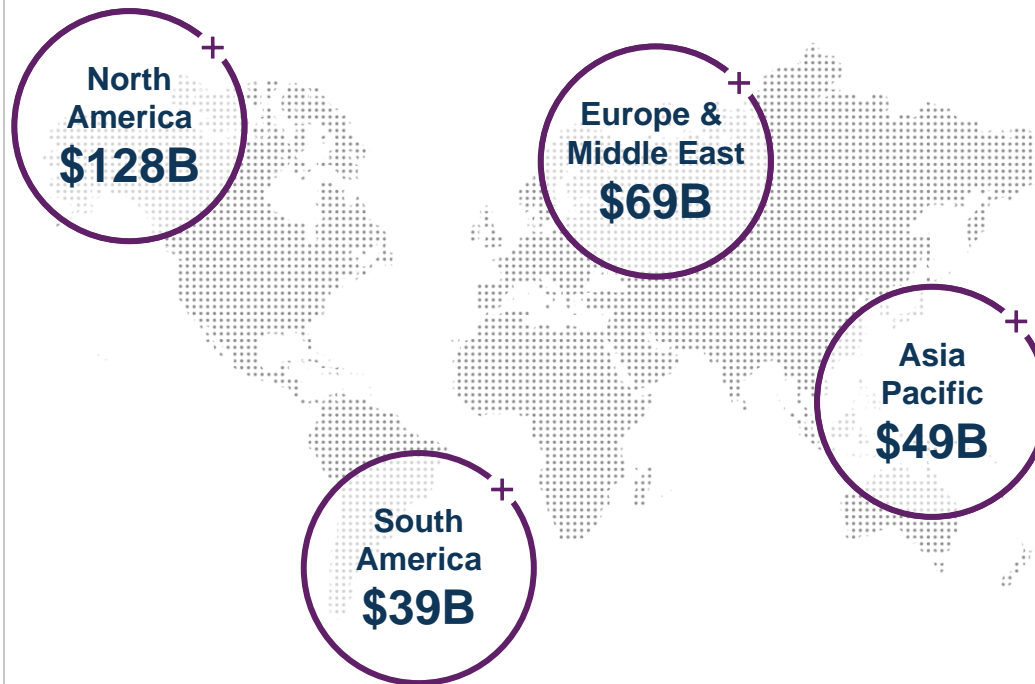
Total  
Business AUM<sup>1</sup>

**240**

Investment  
Professionals<sup>2</sup>

**~73,000**

Operating  
Employees<sup>2</sup>



## Key Sectors



Renewable  
Power  
**\$102B**



Utilities  
**\$60B**



Data  
**\$47B**



Transport  
**\$45B**



Midstream  
**\$24B**

Brookfield has a successful operating history in New Hampshire

## U.S. Hydro Facilities



- 45 MW of power generated through eight facilities along the Androscoggin river
- 1 MW of distributed generational solar

## North American Short Line Rail – Genesee & Wyoming



- G&W owns or leases 116 locally managed freight railroads worldwide
- 92 miles of rail that pass-through New Hampshire via two railroads – New England Central Railroad and St. Lawrence & Atlantic Railroad

## North American Residential Decarbonization



- HomeServe is a leading provider of residential energy infrastructure providing policy coverage in New Hampshire
- Service Expert location for servicing our customers

Access Point	Benefits	Considerations	Ways to Partner with Brookfield
<b>Equity</b>			
Closed-ended Unlisted Private Funds	<ul style="list-style-type: none"> <li>Typically same advantages as direct investing but potential for more diversification</li> <li>Rely on expertise of manager</li> </ul>	<ul style="list-style-type: none"> <li>Value captured shared with manager (Fees)</li> <li>Less control</li> <li>No formal liquidity mechanisms in closed-ended funds</li> </ul>	Brookfield Infrastructure Fund (BIF) Brookfield Global Transition Fund (BGTF)
Open-ended Unlisted Private Funds	<ul style="list-style-type: none"> <li>Typically same advantages as direct investing but potential for more diversification</li> <li>Rely on expertise of manager</li> </ul>	<ul style="list-style-type: none"> <li>Value captured shared with manager (Fees)</li> <li>Less control</li> <li>Quarterly liquidity mechanism</li> </ul>	Brookfield Super-Core Infrastructure Fund (BSIP)
Listed Partnerships and Funds	<ul style="list-style-type: none"> <li>Liquidity</li> <li>Diversification</li> <li>No J-curve</li> </ul>	<ul style="list-style-type: none"> <li>Higher volatility</li> <li>Positive correlation to market</li> <li>No control</li> </ul>	Brookfield Infrastructure Partners (BIP) Brookfield Renewable Partners (BEP)
Listed Securities	<ul style="list-style-type: none"> <li>Liquidity</li> <li>Diversification</li> <li>Smaller investment size</li> <li>Lower fees</li> </ul>	<ul style="list-style-type: none"> <li>Higher volatility</li> <li>Positive correlation to market</li> <li>Fewer pure play investments</li> </ul>	Public Securities Group (PSG)
<b>Debt</b>			
Unlisted or Private Debt Funds (closed-end or open-end funds)	<ul style="list-style-type: none"> <li>Similar to those of a private equity fund, but emphasis on yield and security to asset</li> </ul>	<ul style="list-style-type: none"> <li>Similar to those of a private equity fund, but typically lower returns than equity</li> </ul>	Brookfield Infrastructure Debt (BID)
<b>Equity/Debt</b>			
Direct Investing & Co-investing	<ul style="list-style-type: none"> <li>Ability to manage and influence strategy and operations</li> <li>Ability to realize synergies and efficiencies via platform integration</li> </ul>	<ul style="list-style-type: none"> <li>Large team and expertise required</li> <li>Ability to mobilize and underwrite quickly</li> <li>Requires streamlined approval process</li> </ul>	Consortium investments Fund co-investments

Please refer to the endnotes at the end of the presentation.





## Appendix II: Sector Opportunity Detail

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Critical transport assets such as roads, ports, rail and airports require capital to de-bottleneck and add capacity to their networks to be able to meet the global increase in demand for goods and commodities

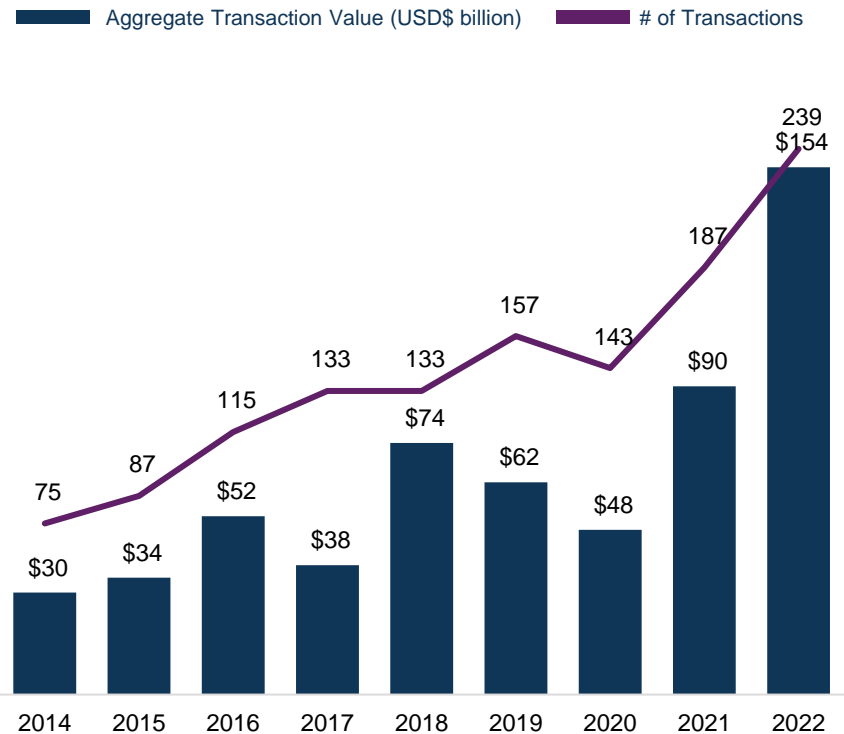
## Asset Highlights

- ✓ Minimum volume guarantees
- ✓ Inflation-linked contractual protection
- ✓ Critical locations

## Drivers of Investment

- **Supply Chain Resiliency:** Structural weaknesses in supply chains have been uncovered
- **E-commerce:** Consumer demands creating a fundamental shift impacting supply chain structures
- **Decarbonization:** Investments in green technologies are required to hit emission reduction targets
- **Changing Mobility Patterns:** Evolution in the way people travel and work

## Global Transport M&A Transactions<sup>2</sup>





Over \$100 trillion of total investment by 2050 will be required to transition energy systems, with additional private capital needed to decarbonize other sectors of the global economy<sup>3</sup>

## ↑ Global carbon reduction targets are increasing

To reach global carbon reduction targets, electricity generation would need to expand 3x by 2050, with renewables providing 90%<sup>2</sup>

## ↑ Private sector is filling the funding gap

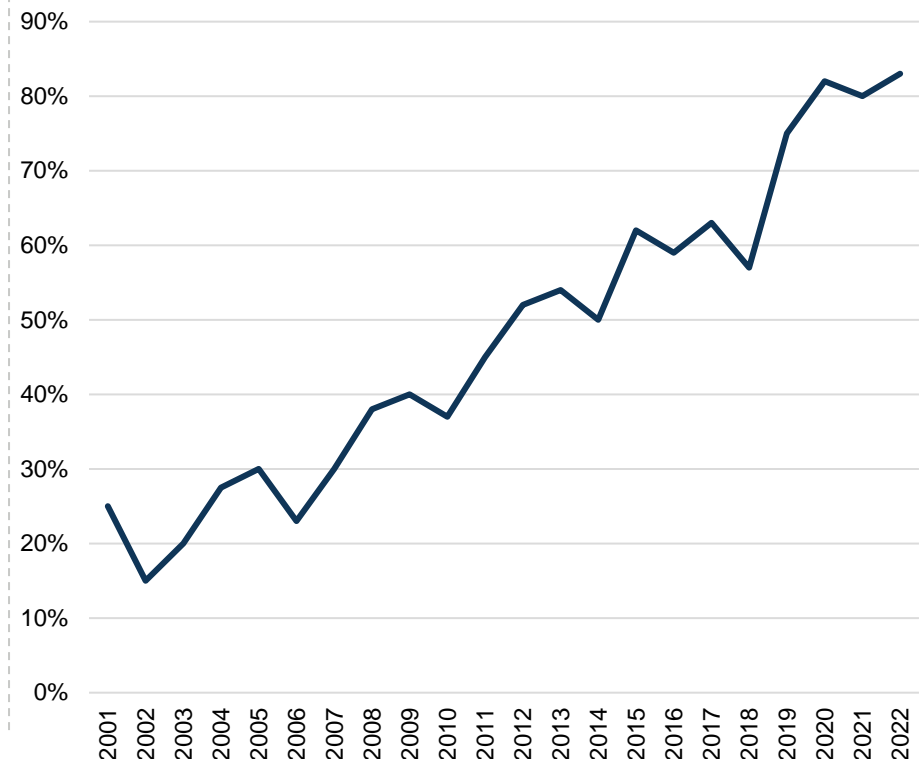
Historically, 75% of the investment in renewables comes from the private sector<sup>3</sup>

## ↓ Renewable generation cost is coming down

In 2021, 73% of the total new renewable power generation capacity added globally, had electricity costs lower than the cheapest source of new fossil fuel fired capacity<sup>3</sup>

## Renewable Share of Energy Capacity Coming Online<sup>3</sup>

Global - New Renewable Capacity (GW/yr) / Total Capacity (GW/yr)



AI requires **3x<sup>2</sup>** more computing power and will require incremental infrastructure to process, transmit, and store the data

## Fiber Networks



Once-in-a-100-year investment cycle to upgrade copper networks

## Wireless Infrastructure



Infrastructure build out required to support 5G, IoT and AI

## Data Centers



6,000+ MW<sup>3</sup> of incremental capacity required in the next three years alone

Within the U.S., many utility operators are publicly owned and federal-, state-, or municipal-run.

## **Incumbent utility operators require capital to replace legacy assets**

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- 70% of electricity transmission and distribution systems are well into the second half of their lifespans<sup>2</sup>

## **Broader investment opportunity to decarbonize the home**

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- Demand for energy efficient residential heating and cooling equipment
- Trend is being driven by both consumer demand and government incentives

## **Unregulated revenue models are becoming increasingly important**

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- Utilities are contracting directly with customers to support their operations

Significant opportunity to invest in critical operating assets as we move away from the traditional fossil-fuel based energy economy

## Critical Transitional Energy Source



- Natural gas is a key element of the global energy stack representing a quarter of worldwide electricity generation<sup>2</sup>
- LNG helps to provide energy security

## Attractive Asset Characteristics



- Significant scarcity value and capital requirement
- Attractive cash yield return derived solely from contracted revenue
- Large global investment grade counterparties

## Favorable Market Dynamics



- ESG tailwinds creating value entry points
- Oil majors selling core assets
- Upside opportunity from transition to renewables



# Endnotes



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2. Relative to unregulated or uncontracted assets.

Slide 8-14

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2. Source: Preqin Fundraising Database
3. Source: Infrastructure Investor's Investor Report H1 2023, based on responses collected January to June 2023 based on database of over 2,900 investor profiles.

Page 16-17

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2. Source: <https://outlook.github.org/> and represents trends from 2016 to 2040 per the "Global Infrastructure Outlook" report published by Oxford Economic. Data sourced as of August 2023.

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2. As of December 31, 2023. Totals are rounded. Investment professionals include Brookfield infrastructure, renewable power and transition personnel involved in the capital allocation process, including investment analysis and transaction execution, portfolio management and other personnel. Operating employees include personnel working at Brookfield's infrastructure, renewable power and transition related operating businesses and portfolio companies. Management fees earned by Brookfield are not generally used to compensate such operating employees but rather operating employee compensation is typically a company or fund expense.

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2. Source: Infralogic Database June (March 2024)

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2. Source: IRENA. World Energy Transitions Outlook (2022)
3. Source: IRENA. World Energy Transitions Outlook (2023)

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2. Source: Infralogic Data Centre Report (2022)
3. Source: Structure Research

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2. Source: International Energy Association Natural Gas Overview



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February 29, 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 February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Domestic Equity</b>	<b>32.82%</b>	<b>5.24%</b>	<b>12.15%</b>	<b>13.44%</b>	<b>5.19%</b>	<b>22.07%</b>	<b>8.27%</b>	<b>12.09%</b>	<b>10.70%</b>
<i>Domestic Equity Benchmark(1)</i>		5.41%	12.23%	15.56%	6.58%	28.60%	10.29%	13.76%	12.12%
<i>Excess Return</i>		-0.17%	-0.08%	-2.12%	-1.39%	-6.53%	-2.02%	-1.67%	-1.42%
<b>Total Non US Equity</b>	<b>18.76%</b>	<b>2.70%</b>	<b>8.00%</b>	<b>8.22%</b>	<b>2.85%</b>	<b>16.49%</b>	<b>2.63%</b>	<b>6.01%</b>	<b>4.61%</b>
<i>Non US Equity Benchmark(2)</i>		2.53%	6.61%	7.21%	1.51%	12.51%	1.32%	5.44%	3.96%
<i>Excess Return</i>		0.17%	1.38%	1.01%	1.33%	3.98%	1.32%	0.57%	0.65%
<b>Total Fixed Income</b>	<b>19.34%</b>	<b>-1.07%</b>	<b>2.61%</b>	<b>2.66%</b>	<b>-1.38%</b>	<b>4.53%</b>	<b>-2.05%</b>	<b>1.75%</b>	<b>2.15%</b>
<i>Bloomberg Capital Universe Bond Index</i>		-1.20%	2.30%	2.27%	-1.44%	4.06%	-2.81%	0.85%	1.72%
<i>Excess Return</i>		0.13%	0.30%	0.39%	0.05%	0.47%	0.76%	0.90%	0.42%
<b>Total Cash</b>	<b>0.34%</b>	<b>0.42%</b>	<b>1.35%</b>	<b>3.67%</b>	<b>0.88%</b>	<b>5.35%</b>	<b>2.54%</b>	<b>2.06%</b>	<b>1.42%</b>
<i>3-Month Treasury Bill</i>		0.41%	1.31%	3.56%	0.84%	5.22%	2.43%	1.97%	1.33%
<i>Excess Return</i>		0.01%	0.04%	0.11%	0.04%	0.13%	0.11%	0.09%	0.09%
<b>Total Real Estate (Q3)*</b>	<b>10.21%</b>	<b>-0.07%</b>	<b>-1.99%</b>	<b>-2.17%</b>	<b>-0.27%</b>	<b>-10.22%</b>	<b>10.45%</b>	<b>8.26%</b>	<b>10.17%</b>
<i>Real Estate Benchmark(3)</i>		-1.69%	-4.04%	-8.12%	-3.36%	-12.78%	4.73%	3.80%	6.74%
<i>Excess Return</i>		1.63%	2.05%	5.95%	3.09%	2.56%	5.72%	4.46%	3.43%
<b>Total Private Equity (Q3)*</b>	<b>13.74%</b>	<b>-0.01%</b>	<b>1.31%</b>	<b>1.30%</b>	<b>-0.03%</b>	<b>6.65%</b>	<b>17.10%</b>	<b>13.28%</b>	<b>12.23%</b>
<i>Private Equity Benchmark(4)</i>		9.39%	1.94%	13.03%	6.73%	14.91%	12.02%	15.44%	15.19%
<i>Excess Return</i>		-9.40%	-0.64%	-11.73%	-6.76%	-8.26%	5.08%	-2.16%	-2.96%
<b>Total Private Debt (Q3)*</b>	<b>4.79%</b>	<b>0.00%</b>	<b>1.68%</b>	<b>1.67%</b>	<b>-0.01%</b>	<b>5.32%</b>	<b>8.30%</b>	<b>5.40%</b>	<b>6.53%</b>
<i>Private Debt Benchmark(5)</i>		2.94%	2.32%	7.39%	2.43%	11.23%	4.12%	4.24%	5.66%
<i>Excess Return</i>		-2.94%	-0.64%	-5.72%	-2.44%	-5.91%	4.18%	1.16%	0.87%
<b>Total Fund Composite</b>	<b>100.00%</b>	<b>1.95%</b>	<b>5.79%</b>	<b>6.21%</b>	<b>1.87%</b>	<b>10.26%</b>	<b>6.35%</b>	<b>8.08%</b>	<b>7.32%</b>
<i>Total Fund Benchmark(6)</i>		2.75%	5.47%	7.61%	2.37%	12.60%	4.89%	7.98%	7.41%
<i>Excess Return</i>		-0.80%	0.32%	-1.40%	-0.50%	-2.34%	1.46%	0.10%	-0.09%

(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 2/29/24, the Total Fund has returned 6.60% versus the Total Fund Custom Benchmark return of 6.60%.

\*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 February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Domestic Equity</b>	<b>32.82%</b>	<b>5.24%</b>	<b>12.15%</b>	<b>13.44%</b>	<b>5.19%</b>	<b>22.07%</b>	<b>8.27%</b>	<b>12.09%</b>	<b>10.70%</b>
Domestic Equity Benchmark(1)		5.41%	12.23%	15.56%	6.58%	28.60%	10.29%	13.76%	12.12%
Excess Return		-0.17%	-0.08%	-2.12%	-1.39%	-6.53%	-2.02%	-1.67%	-1.42%
<b>Large Cap Domestic Equity</b>	<b>19.34%</b>	<b>5.34%</b>	<b>11.97%</b>	<b>15.71%</b>	<b>7.11%</b>	<b>30.23%</b>	<b>11.83%</b>	<b>13.74%</b>	<b>11.79%</b>
S&P 500 Index		5.34%	11.98%	15.72%	7.11%	30.45%	11.91%	14.76%	12.70%
Excess Return		0.00%	-0.01%	0.00%	0.00%	-0.22%	-0.08%	-1.02%	-0.90%
<b>BlackRock S&amp;P 500</b>	<b>19.34%</b>	<b>5.34%</b>	<b>11.97%</b>	<b>15.71%</b>	<b>7.11%</b>	<b>30.23%</b>	<b>11.83%</b>	<b>14.71%</b>	<b>12.66%</b>
S&P 500 Index		5.34%	11.98%	15.72%	7.11%	30.45%	11.91%	14.76%	12.70%
Excess Return		0.00%	-0.01%	0.00%	0.00%	-0.22%	-0.08%	-0.06%	-0.04%
<b>Smid Cap Domestic Equity</b>	<b>5.87%</b>	<b>5.53%</b>	<b>12.73%</b>	<b>10.18%</b>	<b>3.21%</b>	<b>11.57%</b>	<b>3.60%</b>	<b>8.83%</b>	<b>8.02%</b>
Russell 2500 Index		5.44%	13.69%	10.83%	2.68%	12.25%	2.15%	8.84%	8.36%
Excess Return		0.09%	-0.96%	-0.65%	0.52%	-0.68%	1.45%	-0.01%	-0.35%
<b>AllianceBernstein</b>	<b>3.74%</b>	<b>7.19%</b>	<b>15.63%</b>	<b>13.34%</b>	<b>5.18%</b>	<b>14.61%</b>	<b>2.29%</b>	<b>9.58%</b>	<b>8.98%</b>
Russell 2500 Index		5.44%	13.69%	10.83%	2.68%	12.25%	2.15%	8.84%	8.36%
Excess Return		1.75%	1.94%	2.51%	2.50%	2.36%	0.14%	0.74%	0.62%
<b>TSW</b>	<b>2.13%</b>	<b>2.74%</b>	<b>7.98%</b>	<b>5.04%</b>	<b>-0.09%</b>	<b>6.61%</b>	<b>6.08%</b>	<b>7.58%</b>	<b>6.52%</b>
TSW Blended Benchmark (2)		4.01%	11.70%	10.79%	1.09%	9.70%	5.37%	8.38%	8.13%
Excess Return		-1.27%	-3.72%	-5.75%	-1.18%	-3.09%	0.72%	-0.79%	-1.61%
<b>Small Cap Domestic Equity</b>	<b>7.61%</b>	<b>4.77%</b>	<b>12.17%</b>	<b>10.43%</b>	<b>2.05%</b>	<b>11.27%</b>	<b>3.45%</b>	<b>10.58%</b>	<b>9.53%</b>
Russell 2000 Index		5.65%	13.95%	9.85%	1.54%	10.05%	-0.94%	6.89%	7.13%
Excess Return		-0.88%	-1.78%	0.58%	0.51%	1.22%	4.39%	3.69%	2.40%
<b>Boston Trust</b>	<b>1.97%</b>	<b>3.90%</b>	<b>10.21%</b>	<b>7.54%</b>	<b>1.48%</b>	<b>5.65%</b>	<b>6.96%</b>	<b>10.52%</b>	<b>9.53%</b>
Russell 2000 Index		5.65%	13.95%	9.85%	1.54%	10.05%	-0.94%	6.89%	7.13%
Excess Return		-1.75%	-3.74%	-2.31%	-0.07%	-4.40%	7.90%	3.63%	2.40%
<b>Segall Bryant &amp; Hamill</b>	<b>2.12%</b>	<b>4.76%</b>	<b>12.37%</b>	<b>12.00%</b>	<b>3.06%</b>	<b>12.36%</b>	<b>5.06%</b>	<b>11.28%</b>	<b>9.27%</b>
Russell 2000 Index		5.65%	13.95%	9.85%	1.54%	10.05%	-0.94%	6.89%	7.13%
Excess Return		-0.89%	-1.59%	2.15%	1.51%	2.31%	6.00%	4.38%	2.14%
<b>Wellington</b>	<b>3.52%</b>	<b>5.27%</b>	<b>13.18%</b>	<b>11.17%</b>	<b>1.77%</b>	<b>13.99%</b>	<b>0.81%</b>	<b>10.21%</b>	<b>9.70%</b>
Russell 2000 Index		5.65%	13.95%	9.85%	1.54%	10.05%	-0.94%	6.89%	7.13%
Excess Return		-0.38%	-0.77%	1.32%	0.23%	3.94%	1.75%	3.31%	2.57%

(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 February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Non US Equity</b>	<b>18.76%</b>	<b>2.70%</b>	<b>8.00%</b>	<b>8.22%</b>	<b>2.85%</b>	<b>16.49%</b>	<b>2.63%</b>	<b>6.01%</b>	<b>4.61%</b>
Non US Equity Benchmark (1)		2.53%	6.61%	7.21%	1.51%	12.51%	1.32%	5.44%	3.96%
Excess Return		0.17%	1.38%	1.01%	1.33%	3.98%	1.32%	0.57%	0.65%
<b>Core Non US Equity</b>	<b>11.34%</b>	<b>2.34%</b>	<b>6.90%</b>	<b>7.65%</b>	<b>2.04%</b>	<b>14.65%</b>	<b>4.26%</b>	<b>6.08%</b>	<b>3.97%</b>
Core Non US Benchmark (2)		2.53%	6.61%	7.21%	1.51%	12.51%	1.32%	5.44%	3.96%
Excess Return		-0.19%	0.29%	0.44%	0.52%	2.14%	2.94%	0.64%	0.01%
<b>Aristotle</b>	<b>1.46%</b>	<b>0.94%</b>	<b>6.43%</b>	<b>6.53%</b>	<b>1.19%</b>	<b>14.62%</b>	<b>3.39%</b>	-	-
MSCI EAFE		1.83%	7.86%	8.44%	2.42%	14.41%	4.45%	-	-
Excess Return		-0.89%	-1.43%	-1.91%	-1.23%	0.21%	-1.06%	-	-
<b>Artisan Partners</b>	<b>3.29%</b>	<b>3.99%</b>	<b>9.61%</b>	<b>10.50%</b>	<b>5.30%</b>	<b>15.26%</b>	<b>2.93%</b>	<b>6.53%</b>	-
MSCI EAFE		1.83%	7.86%	8.44%	2.42%	14.41%	4.45%	6.77%	-
Excess Return		2.16%	1.76%	2.06%	2.88%	0.85%	-1.52%	-0.24%	-
<b>BlackRock SuperFund</b>	<b>1.60%</b>	<b>2.53%</b>	<b>6.53%</b>	<b>7.13%</b>	<b>1.54%</b>	<b>12.73%</b>	-	-	-
MSCI ACWI Ex-US		2.53%	6.61%	7.21%	1.51%	12.51%	-	-	-
Excess Return		0.00%	-0.08%	-0.08%	0.03%	0.22%	-	-	-
<b>Causeway Capital</b>	<b>3.57%</b>	<b>0.79%</b>	<b>3.99%</b>	<b>5.25%</b>	<b>-0.85%</b>	<b>14.13%</b>	<b>7.34%</b>	<b>8.12%</b>	-
MSCI EAFE		1.83%	7.86%	8.44%	2.42%	14.41%	4.45%	6.77%	-
Excess Return		-1.04%	-3.87%	-3.19%	-3.27%	-0.28%	2.89%	1.35%	-
<b>Lazard</b>	<b>1.42%</b>	<b>3.80%</b>	<b>9.31%</b>	<b>9.17%</b>	<b>3.65%</b>	<b>16.89%</b>	<b>2.41%</b>	-	-
MSCI EAFE		1.83%	7.86%	8.44%	2.42%	14.41%	4.45%	-	-
Excess Return		1.97%	1.45%	0.73%	1.24%	2.48%	-2.03%	-	-
<b>Emerging Markets</b>	<b>1.43%</b>	<b>4.48%</b>	<b>5.35%</b>	<b>4.53%</b>	<b>1.80%</b>	<b>10.37%</b>	<b>-7.91%</b>	<b>0.60%</b>	<b>2.10%</b>
MSCI EM		4.76%	3.80%	4.60%	-0.11%	8.73%	-6.30%	1.89%	3.01%
Excess Return		-0.28%	1.55%	-0.06%	1.90%	1.64%	-1.61%	-1.29%	-0.91%
<b>Wellington Emerging Markets</b>	<b>1.43%</b>	<b>4.48%</b>	<b>5.35%</b>	<b>4.53%</b>	<b>1.80%</b>	<b>9.93%</b>	<b>-7.82%</b>	<b>0.87%</b>	<b>2.70%</b>
MSCI EM		4.76%	3.80%	4.60%	-0.11%	8.73%	-6.30%	1.89%	3.01%
Excess Return		-0.28%	1.55%	-0.06%	1.90%	1.20%	-1.52%	-1.02%	-0.31%
<b>Non US Small Cap</b>	<b>1.12%</b>	<b>1.78%</b>	<b>7.40%</b>	<b>7.34%</b>	<b>-0.36%</b>	<b>9.92%</b>	<b>-2.10%</b>	<b>-0.10%</b>	<b>-0.51%</b>
MSCI EAFE Small Cap		0.38%	5.92%	5.87%	-1.27%	6.26%	-1.85%	4.21%	4.27%
Excess Return		1.40%	1.48%	1.47%	0.91%	3.65%	-0.25%	-4.31%	-4.78%
<b>Wellington Int'l Small Cap Research</b>	<b>1.12%</b>	<b>1.78%</b>	<b>7.40%</b>	<b>7.34%</b>	<b>-0.36%</b>	<b>9.92%</b>	-	-	-
MSCI EAFE Small Cap		0.38%	5.92%	5.87%	-1.27%	6.26%	-	-	-
Excess Return		1.40%	1.48%	1.47%	0.91%	3.65%	-	-	-
<b>Global Equity</b>	<b>4.87%</b>	<b>3.27%</b>	<b>11.63%</b>	<b>10.96%</b>	<b>5.91%</b>	<b>25.01%</b>	<b>8.30%</b>	<b>11.70%</b>	<b>10.77%</b>
MSCI ACWI net		4.29%	9.94%	12.51%	4.90%	23.15%	6.79%	10.51%	8.37%
Excess Return		-1.02%	1.69%	-1.56%	1.00%	1.86%	1.51%	1.19%	2.40%
<b>Walter Scott Global Equity</b>	<b>4.87%</b>	<b>3.27%</b>	<b>11.63%</b>	<b>10.96%</b>	<b>5.91%</b>	<b>25.01%</b>	<b>8.30%</b>	<b>11.70%</b>	<b>10.77%</b>
Walter Scott Blended Benchmark (3)		4.29%	9.94%	12.51%	4.90%	23.15%	6.79%	10.51%	8.37%
Excess Return		-1.02%	1.69%	-1.56%	1.00%	1.87%	1.51%	1.19%	2.40%

(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 February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Fixed Income</b>	<b>19.34%</b>	<b>-1.07%</b>	<b>2.61%</b>	<b>2.66%</b>	<b>-1.38%</b>	<b>4.53%</b>	<b>-2.05%</b>	<b>1.75%</b>	<b>2.15%</b>
<i>Fixed Income Benchmark (1)</i>		-1.20%	2.30%	2.27%	-1.44%	4.06%	-2.81%	0.85%	1.72%
<i>Excess Return</i>		0.13%	0.30%	0.39%	0.05%	0.47%	0.76%	0.90%	0.42%
<b>BlackRock SIO Bond Fund</b>	<b>2.22%</b>	<b>-0.46%</b>	<b>2.79%</b>	<b>5.15%</b>	<b>-0.19%</b>	<b>6.25%</b>	<b>0.63%</b>	<b>2.90%</b>	<b>-</b>
<i>BlackRock Custom Benchmark (2)</i>		0.43%	1.36%	3.65%	0.92%	5.38%	2.61%	2.10%	-
<i>Excess Return</i>		-0.89%	1.43%	1.51%	-1.11%	0.87%	-1.98%	0.80%	-
<b>Brandywine Asset Mgmt</b>	<b>1.90%</b>	<b>-2.19%</b>	<b>1.95%</b>	<b>-0.75%</b>	<b>-4.87%</b>	<b>3.10%</b>	<b>-5.81%</b>	<b>-0.39%</b>	<b>0.83%</b>
<i>Brandywine Custom Benchmark (3)</i>		-1.45%	1.19%	0.29%	-3.08%	2.40%	-7.00%	-2.10%	-0.90%
<i>Excess Return</i>		-0.74%	0.76%	-1.05%	-1.80%	0.69%	1.19%	1.70%	1.73%
<b>FIAM (Fidelity) Tactical Bond</b>	<b>3.10%</b>	<b>-0.89%</b>	<b>2.98%</b>	<b>2.63%</b>	<b>-1.12%</b>	<b>3.89%</b>	<b>-1.01%</b>	<b>2.64%</b>	<b>-</b>
<i>Bloomberg Aggregate</i>		-1.41%	2.08%	1.63%	-1.68%	3.33%	-3.16%	0.56%	-
<i>Excess Return</i>		0.52%	0.90%	1.00%	0.56%	0.56%	2.16%	2.08%	-
<b>Income Research &amp; Management</b>	<b>6.48%</b>	<b>-1.21%</b>	<b>2.40%</b>	<b>2.06%</b>	<b>-1.27%</b>	<b>3.79%</b>	<b>-2.89%</b>	<b>1.29%</b>	<b>1.93%</b>
<i>Bloomberg Gov/Credit</i>		-1.36%	2.04%	1.80%	-1.59%	3.69%	-3.14%	0.87%	1.60%
<i>Excess Return</i>		0.14%	0.36%	0.27%	0.32%	0.10%	0.25%	0.42%	0.33%
<b>Loomis Sayles</b>	<b>2.38%</b>	<b>-0.72%</b>	<b>3.51%</b>	<b>5.24%</b>	<b>-0.43%</b>	<b>6.81%</b>	<b>-0.70%</b>	<b>3.36%</b>	<b>3.34%</b>
<i>Loomis Sayles Custom Benchmark (4)</i>		-0.82%	2.76%	3.81%	-0.99%	5.98%	-1.40%	1.88%	2.50%
<i>Excess Return</i>		0.09%	0.75%	1.43%	0.56%	0.84%	0.71%	1.48%	0.84%
<b>Manulife Strategic Fixed Income</b>	<b>1.78%</b>	<b>-0.58%</b>	<b>2.47%</b>	<b>3.19%</b>	<b>-0.84%</b>	<b>5.89%</b>	<b>-0.91%</b>	<b>2.28%</b>	<b>-</b>
<i>Bloomberg Multiverse</i>		-1.18%	1.54%	1.77%	-2.50%	3.45%	-5.26%	-0.87%	-
<i>Excess Return</i>		0.60%	0.93%	1.42%	1.67%	2.44%	4.35%	3.15%	-
<b>Mellon US Agg Bond Index</b>	<b>1.47%</b>	<b>-1.42%</b>	<b>2.08%</b>	<b>1.62%</b>	<b>-1.69%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<i>Bloomberg Aggregate Bond Index</i>		-1.41%	2.08%	1.63%	-1.68%	-	-	-	-
<i>Excess Return</i>		0.00%	0.00%	0.00%	-0.01%	-	-	-	-
<b>Total Cash</b>	<b>0.34%</b>	<b>0.42%</b>	<b>1.35%</b>	<b>3.67%</b>	<b>0.88%</b>	<b>5.35%</b>	<b>2.54%</b>	<b>2.06%</b>	<b>1.42%</b>
<i>3-month Treasury Bill</i>		0.41%	1.31%	3.56%	0.84%	5.22%	2.43%	1.97%	1.33%
<i>Excess Return</i>		0.01%	0.04%	0.11%	0.04%	0.13%	0.11%	0.09%	0.09%
<b>Total Marketable Assets</b>	<b>71.26%</b>	<b>2.77%</b>	<b>8.25%</b>	<b>8.91%</b>	<b>2.69%</b>	<b>15.19%</b>	<b>3.77%</b>	<b>7.34%</b>	<b>6.53%</b>
<i>Total Marketable Index (5)</i>		2.44%	7.39%	8.87%	2.54%	15.83%	3.62%	7.42%	6.71%
<i>Excess Return</i>		0.32%	0.86%	0.04%	0.15%	-0.63%	0.15%	-0.08%	-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 February 29, 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 February 29, 2024									
Composite	Total Fund Weighting As of 2/29/2024	Last Month	Last 3 Months	FYTD	CYTD	LTM	3-YR	5-YR	10-YR
<b>Total Real Estate (Q3)* (5)</b>	<b>10.21%</b>	<b>-0.07%</b>	<b>-1.99%</b>	<b>-2.17%</b>	<b>-0.27%</b>	<b>-10.22%</b>	<b>10.45%</b>	<b>8.26%</b>	<b>10.17%</b>
<i>Real Estate Benchmark (1)</i>		-1.69%	-4.04%	-8.12%	-3.36%	-12.78%	4.73%	3.80%	6.74%
<i>Excess Return</i>		1.63%	2.05%	5.95%	3.09%	2.56%	5.72%	4.46%	3.43%
<b>Strategic Core Real Estate (Q3)*</b>	<b>6.33%</b>	<b>-0.06%</b>	<b>-1.82%</b>	<b>-2.02%</b>	<b>-0.28%</b>	<b>-14.20%</b>	<b>8.30%</b>	<b>6.62%</b>	<b>8.76%</b>
<i>Real Estate Benchmark (1)</i>		-1.69%	-4.04%	-8.12%	-3.36%	-12.78%	4.73%	3.80%	6.74%
<i>Excess Return</i>		1.64%	2.23%	6.10%	3.08%	-1.42%	3.56%	2.82%	2.02%
<b>Tactical Non-Core Real Estate (Q3)*</b>	<b>3.88%</b>	<b>-0.09%</b>	<b>-2.28%</b>	<b>-2.43%</b>	<b>-0.24%</b>	<b>-2.23%</b>	<b>14.28%</b>	<b>11.24%</b>	<b>12.63%</b>
<i>Real Estate Benchmark (1)</i>		-1.69%	-4.04%	-8.12%	-3.36%	-12.78%	4.73%	3.80%	6.74%
<i>Excess Return</i>		1.60%	1.77%	5.69%	3.12%	10.55%	9.55%	7.44%	5.89%
<b>Total Alternative Assets (Q3)*</b>	<b>18.53%</b>	<b>-0.01%</b>	<b>1.40%</b>	<b>1.39%</b>	<b>-0.03%</b>	<b>6.30%</b>	<b>14.49%</b>	<b>10.83%</b>	<b>9.40%</b>
<i>Alternative Assets Benchmark (2)</i>		7.24%	2.12%	11.21%	5.32%	13.78%	9.48%	11.51%	11.01%
<i>Excess Return</i>		-7.25%	-0.72%	-9.82%	-5.35%	-7.48%	5.01%	-0.67%	-1.61%
<b>Total Private Equity (Q3)*</b>	<b>13.74%</b>	<b>-0.01%</b>	<b>1.31%</b>	<b>1.30%</b>	<b>-0.03%</b>	<b>6.65%</b>	<b>17.10%</b>	<b>13.28%</b>	<b>12.23%</b>
<i>Private Equity Benchmark (3)</i>		9.39%	1.94%	13.03%	6.73%	14.91%	12.02%	15.44%	15.19%
<i>Excess Return</i>		-9.40%	-0.64%	-11.73%	-6.76%	-8.26%	5.08%	-2.16%	-2.96%
<b>Total Private Debt (Q3)*</b>	<b>4.79%</b>	<b>0.00%</b>	<b>1.68%</b>	<b>1.67%</b>	<b>-0.01%</b>	<b>5.32%</b>	<b>8.30%</b>	<b>5.40%</b>	<b>6.53%</b>
<i>Private Debt Benchmark (4)</i>		2.94%	2.32%	7.39%	2.43%	11.23%	4.12%	4.24%	5.66%
<i>Excess Return</i>		-2.94%	-0.64%	-5.72%	-2.44%	-5.91%	4.18%	1.16%	0.87%

(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 February 29, 2024, with the distribution as of January 31, 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

	February 29, 2024		Net New Inv.	Inv. Return	January 31, 2024	
	Market Value	Weight			Market Value	Weight
<b>Total Domestic Equity</b>	<b>\$3,930,411,767</b>	<b>32.82%</b>	<b>\$0</b>	<b>\$196,426,495</b>	<b>\$3,733,985,272</b>	<b>31.75%</b>
<b>Large Cap Domestic Equity</b>	<b>\$2,315,522,712</b>	<b>19.34%</b>	<b>\$0</b>	<b>\$117,345,463</b>	<b>\$2,198,177,249</b>	<b>18.69%</b>
Blackrock S&P 500	2,315,522,712	19.34%	0	117,345,463	2,198,177,249	18.69%
<b>SMid Cap Domestic Equity</b>	<b>\$703,465,825</b>	<b>5.87%</b>	<b>\$0</b>	<b>\$37,139,109</b>	<b>\$666,326,715</b>	<b>5.67%</b>
AllianceBernstein	448,043,735	3.74%	0	30,217,998	417,825,737	3.55%
TSW	255,422,090	2.13%	0	6,921,112	248,500,978	2.11%
<b>Small Cap Domestic Equity</b>	<b>\$911,423,230</b>	<b>7.61%</b>	<b>\$0</b>	<b>\$41,941,923</b>	<b>\$869,481,307</b>	<b>7.39%</b>
Boston Trust	235,791,262	1.97%	0	8,932,148	226,859,114	1.93%
Segall Bryant & Hamill	254,134,584	2.12%	0	11,686,629	242,447,954	2.06%
Wellington	421,497,385	3.52%	0	21,323,146	400,174,239	3.40%
<b>Total Non US Equity</b>	<b>\$2,246,716,756</b>	<b>18.76%</b>	<b>\$0</b>	<b>\$60,074,027</b>	<b>\$2,186,642,729</b>	<b>18.59%</b>
<b>Core Non US Equity (1)</b>	<b>\$1,358,092,557</b>	<b>11.34%</b>	<b>\$0</b>	<b>\$31,503,011</b>	<b>\$1,326,589,546</b>	<b>11.28%</b>
Aristotle	174,856,509	1.46%	0	1,686,458	173,170,050	1.47%
Artisan Partners	393,865,319	3.29%	0	15,282,554	378,582,765	3.22%
BlackRock Superfund	191,299,792	1.60%	0	4,719,465	186,580,326	1.59%
Causeway Capital	426,877,974	3.57%	0	3,515,383	423,362,591	3.60%
Lazard	170,523,352	1.42%	0	6,301,689	164,221,662	1.40%
<b>Emerging Markets</b>	<b>\$171,203,191</b>	<b>1.43%</b>	<b>\$0</b>	<b>\$7,461,816</b>	<b>\$163,741,375</b>	<b>1.39%</b>
Wellington Emerging Markets	171,203,191	1.43%	0	7,461,816	163,741,375	1.39%
<b>Non US Small Cap</b>	<b>\$134,627,409</b>	<b>1.12%</b>	<b>\$0</b>	<b>\$2,424,035</b>	<b>\$132,203,374</b>	<b>1.12%</b>
Wellington Int'l Small Cap Research	134,627,409	1.12%	0	2,424,035	132,203,374	1.12%
<b>Global Equity</b>	<b>\$582,793,598</b>	<b>4.87%</b>	<b>\$0</b>	<b>\$18,685,165</b>	<b>\$564,108,434</b>	<b>4.80%</b>
Walter Scott Global Equity	582,793,598	4.87%	0	18,685,165	564,108,434	4.80%
<b>Total Fixed Income</b>	<b>\$2,315,274,484</b>	<b>19.34%</b>	<b>\$0</b>	<b>\$(24,584,418)</b>	<b>\$2,339,858,902</b>	<b>19.90%</b>
BlackRock SIO Bond Fund	265,976,126	2.22%	0	(1,139,052)	267,115,179	2.27%
Brandywine Asset Mgmt	227,598,397	1.90%	0	(5,029,051)	232,627,448	1.98%
FIAM (Fidelity) Tactical Bond	371,397,925	3.10%	0	(3,257,877)	374,655,802	3.19%
Income Research & Management	776,231,664	6.48%	0	(9,436,011)	785,667,675	6.68%
Loomis Sayles	284,762,172	2.38%	0	(2,002,756)	286,764,928	2.44%
Manulife Strategic Fixed Income	213,210,980	1.78%	0	(1,192,074)	214,403,054	1.82%
Mellon US Agg Bond Index	176,097,220	1.47%	0	(2,527,597)	178,624,817	1.52%
<b>Total Cash</b>	<b>\$40,742,720</b>	<b>0.34%</b>	<b>\$(5,553,681)</b>	<b>\$205,559</b>	<b>\$46,090,841</b>	<b>0.39%</b>
<b>Total Marketable Assets</b>	<b>\$8,533,145,727</b>	<b>71.26%</b>	<b>\$(5,553,681)</b>	<b>\$232,121,663</b>	<b>\$8,306,577,744</b>	<b>70.63%</b>
<b>Total Real Estate</b>	<b>\$1,222,609,183</b>	<b>10.21%</b>	<b>\$(3,860,171)</b>	<b>\$(418,851)</b>	<b>\$1,226,888,206</b>	<b>10.43%</b>
Strategic Core Real Estate	758,015,461	6.33%	(1,549,235)	(0)	759,564,696	6.46%
Tactical Non-Core Real Estate	464,593,721	3.88%	(2,310,936)	(418,851)	467,323,508	3.97%
<b>Total Alternative Assets</b>	<b>\$2,218,170,645</b>	<b>18.53%</b>	<b>\$(8,995,531)</b>	<b>\$(150,193)</b>	<b>\$2,227,316,369</b>	<b>18.94%</b>
Private Equity	1,645,059,059	13.74%	(13,053,452)	(138,169)	1,658,250,680	14.10%
Private Debt	573,111,586	4.79%	4,057,921	(12,024)	569,065,689	4.84%
<b>Total Fund Composite</b>	<b>\$11,973,925,556</b>	<b>100.0%</b>	<b>\$(18,409,382)</b>	<b>\$231,552,619</b>	<b>\$11,760,782,319</b>	<b>100.0%</b>

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

(1) Includes \$669,612 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 - 29-Feb-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			
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%	

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%	

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% (1 qtr 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		
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%

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%

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%.

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Past performance is no guarantee of future results.

# NHRS Asset Allocation Update

NHRS Investment Team  
Independent Investment Committee Meeting

April 9, 2024

# Summary

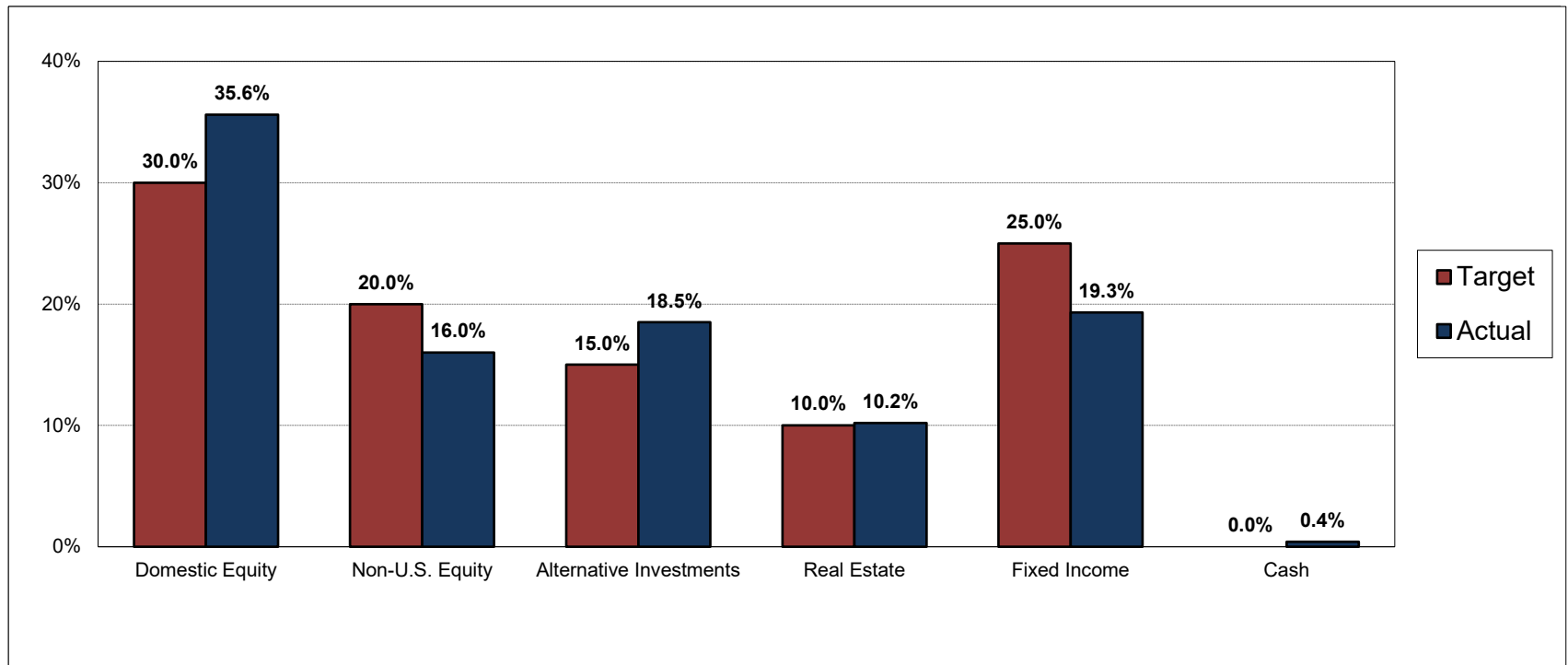
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- At February 29, 2024 the preliminary Total Fund value was approximately \$11.9 billion.
- Current Asset Allocation Targets and Ranges were approved\* by the Board of Trustees on September 11, 2012 (Targets) and May 14, 2019 (Ranges), respectively.  
*\*The new Target Asset Allocation approved by the Board in December 2023 will be effective beginning in the new fiscal year (7/1/24)*
- 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.
- Current status of Targets vs. Actual is illustrated on page 2.
- All asset classes are within approved allocation ranges\* (page 3) as of February 29, 2024.  
*\*Fixed Income is slightly below the target allocation when cash is added. To be addressed as part of the implementation of the new Target Asset Allocation.*
- Total Fund allocation is above and below the target of 70% Equity-like and 30% Fixed Income investments, respectively as of February 29<sup>th</sup> (page 4).



## Class Targets vs. Actual Allocation as of February 29, 2024 (Preliminary)



Source: NHRS

# Asset Class Allocations Relative to Policy Targets and Ranges



**As of February 29, 2024 (preliminary)**

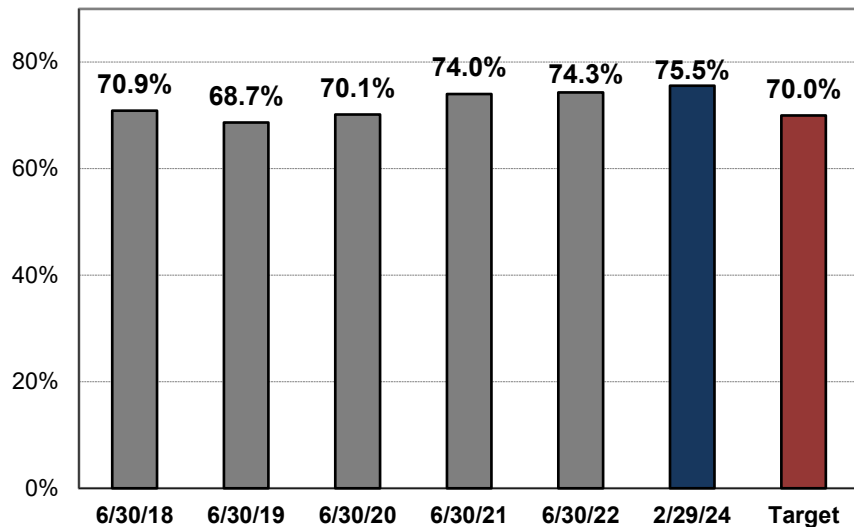
Asset Class	Range	Allocation			Objective	Comments
		Target	Actual	Variance		
Domestic Equity	20 - 40%	30.0%	35.6%	5.6%	<b>Monitor</b>	No immediate action needed.
Non-U.S. Equity	15 - 25%	20.0%	16.0%	-4.0%	<b>Monitor</b>	Below target allocation but within approved allocation range. Continue to Monitor.
Alternative Investments (AI) <sup>1</sup>	5 - 25%	15.0%	18.5%	3.5%	<b>Monitor</b>	No immediate action needed.
Real Estate (RE) <sup>1</sup>	5 - 20%	10.0%	10.2%	0.2%	<b>Monitor</b>	No immediate action needed.
Fixed Income	20 - 30%	25.0%	19.3%	-5.7%	<b>Monitor</b>	Below target allocation and slightly below allocation range when cash is included. To be addressed as part of SAA implementation plan
Cash	NA	0.0%	0.4%	0.4%	<b>No Action</b>	Minimal cash balance to provide liquidity, as needed, for annuities, capital calls, and other plan needs.
		100.0%	100.0%	0.0%		

<sup>1</sup>As reported on the February 29, 2024 Callan Monthly Review

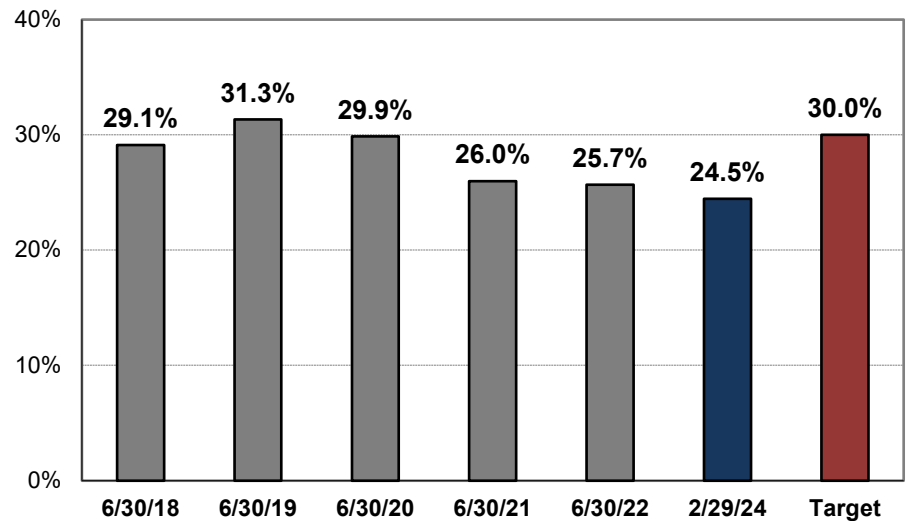
Source: NHRS

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

**Equity-like Investments**



**Fixed Income**



Source: NHRS

## Private Debt & Equity Summary: As of February 29, 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
<b>September 2013</b>	<b>Industry Ventures Fund VII *</b>	<b>\$ 20,000,000</b>	<b>Secondaries</b>
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
<b>April 2014</b>	<b>Lexington Capital Partners VIII *</b>	<b>\$ 50,000,000</b>	<b>Secondaries</b>
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	Multisector
<b>April 2015</b>	<b>Coller International Partners VII</b>	<b>\$ 50,000,000</b>	<b>Secondaries</b>
<b>August 2015</b>	<b>Gramercy Distressed Opportunity Fund III *</b>	<b>\$ 50,000,000</b>	<b>Distressed</b>
<b>August 2015</b>	<b>Monroe Capital Private Credit Fund II *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
August 2015	BlueBay Direct Lending Fund II *	\$ 50,000,000 **	Direct Lending
<b>September 2015</b>	<b>Industry Ventures Partnership Holdings Fund IV *</b>	<b>\$ 20,000,000</b>	<b>Venture Capital</b>
September 2015	Warburg Pincus XII	\$ 64,000,000 ***	Growth
<b>November 2015</b>	<b>HarbourVest Dover Street IX *</b>	<b>\$ 50,000,000</b>	<b>Secondaries</b>
November 2015	Kayne Anderson Energy Fund VII *	\$ 50,000,000	Energy
<b>February 2016</b>	<b>Alcentra European Direct Lending Fund II *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
February 2016	Riverstone Credit Partners *	\$ 50,000,000	Energy
March 2016	Thoma Bravo Fund XII	\$ 46,000,000 ***	Buyout
<b>October 2016</b>	<b>Comvest Capital IV *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
<b>December 2016</b>	<b>HarbourVest HIPEP VIII *</b>	<b>\$ 50,000,000</b>	<b>Buyout</b>
January 2017	Actis Energy 4	\$ 50,000,000	Energy
<b>February 2017</b>	<b>Edgewater Growth Capital Partners Fund IV *</b>	<b>\$ 50,000,000</b>	<b>Buyout</b>
<b>February 2017</b>	<b>Top Tier Venture Velocity Fund 2 *</b>	<b>\$ 25,000,000</b>	<b>Secondaries</b>
April 2017	Apollo Investment Fund IX	\$ 40,000,000 ***	Buyout
<b>June 2017</b>	<b>Crescent Direct Lending Levered Fund II *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
<b>September 2017</b>	<b>Carlyle Asia V *</b>	<b>\$ 50,000,000</b>	<b>Growth</b>
<b>September 2017</b>	<b>CarVal Investors Credit Value Fund IV *</b>	<b>\$ 50,000,000</b>	<b>Multisector</b>
<b>October 2017</b>	<b>BlackRock Private Opportunities Fund - 2018 Series</b>	<b>\$ 150,000,000</b>	<b>Co-Investments</b>
<b>November 2017</b>	<b>Riverstone Credit Partners II *</b>	<b>\$ 50,000,000</b>	<b>Energy</b>
<b>February 2018</b>	<b>Industry Ventures Partnership Holdings Fund V *</b>	<b>\$ 25,000,000</b>	<b>Venture Capital</b>
<b>March 2018</b>	<b>BlueBay Direct Lending Fund III *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
<b>April 2018</b>	<b>Monroe Capital Private Credit Fund III *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
<b>September 2018</b>	<b>Alcentra European Direct Lending Fund III *</b>	<b>\$ 50,000,000</b>	<b>Direct Lending</b>
<b>September 2018</b>	<b>Thoma Bravo Fund XIII</b>	<b>\$ 50,000,000</b>	<b>Buyout</b>
<b>September 2018</b>	<b>Warburg Pincus Global Growth</b>	<b>\$ 50,000,000</b>	<b>Growth</b>
<b>April 2019</b>	<b>HarbourVest Dover Street X *</b>	<b>\$ 50,000,000</b>	<b>Secondaries</b>
<b>April 2019</b>	<b>Top Tier Venture Velocity Fund 3 *</b>	<b>\$ 25,000,000</b>	<b>Secondaries</b>

## Private Debt & Equity Summary: As of February 29, 2024

<u>IIC Approval</u>	<u>Investment Name</u>	<u>Amount</u>	<u>Strategy</u>
March 2020	<b>Coller International Partners VIII</b>	\$ 75,000,000	<b>Secondaries</b>
March 2020	<b>HarbourVest HIPEP IX *</b>	\$ 75,000,000	<b>Buyout</b>
April 2020	<b>Comvest Capital V *</b>	\$ 50,000,000	<b>Direct Lending</b>
September 2020	<b>Thoma Bravo Fund XIV</b>	\$ 50,000,000 ***	<b>Buyout</b>
October 2020	<b>CarVal Investors Credit Value Fund V *</b>	\$ 50,000,000	<b>Multisector</b>
October 2020	<b>Industry Ventures Fund IX *</b>	\$ 50,000,000	<b>Secondaries</b>
November 2020	<b>BlackRock Private Opportunities Fund - 2021 Series</b>	\$ 150,000,000	<b>Co-Investments</b>
December 2020	<b>Monroe Capital Private Credit Fund IV *</b>	\$ 50,000,000	<b>Direct Lending</b>
February 2021	<b>Crescent Direct Lending Levered Fund III *</b>	\$ 50,000,000	<b>Direct Lending</b>
June 2021	<b>Industry Ventures Partnership Holdings Fund VI *</b>	\$ 25,000,000	<b>Venture Capital</b>
September 2021	<b>Top Tier Venture Velocity Fund 4 *</b>	\$ 25,000,000	<b>Secondaries</b>
November 2021	<b>Atalaya Special Opportunities Fund VIII</b>	\$ 50,000,000	<b>Specialty Finance</b>
February 2022	<b>Clearlake Capital Partners VII</b>	\$ 50,000,000	<b>Buyout</b>
February 2022	<b>Thoma Bravo Fund XV</b>	\$ 50,000,000	<b>Buyout</b>
March 2022	<b>Comvest Capital VI *</b>	\$ 50,000,000	<b>Direct Lending</b>
March 2022	<b>Warburg Pincus 14</b>	\$ 50,000,000	<b>Growth</b>
May 2022	<b>HarbourVest Dover Street XI *</b>	\$ 50,000,000	<b>Secondaries</b>
May 2023	<b>American Industrial Partners VIII</b>	\$ 50,000,000	<b>Buyout</b>
May 2023	<b>Apollo X</b>	\$ 40,000,000	<b>Buyout</b>
May 2023	<b>Apollo X Co-Investment</b>	\$ 40,000,000	<b>Buyout</b>
Aug / Sept 2023	<b>Ares Pathfinder II</b>	\$ 75,000,000	<b>Specialty Finance</b>
October 2023	<b>Strategic Value Partners Capital Solutions II</b>	\$ 50,000,000	<b>Multisector</b>
December 2023	<b>Sixth Street Partners TAO Global</b>	\$ 75,000,000	<b>Multisector</b>
February 2024	<b>H.I.G. Capital Advantage Buyout Fund II</b>	\$ 50,000,000	<b>Buyout</b>
February 2024	<b>H.I.G. Capital Advantage Buyout Fund II Co-Investment</b>	\$ 50,000,000	<b>Buyout</b>
		<b>\$ 4,082,500,000</b>	

**Red indicates Private Equity (\$2,612.5m or 64% of commitments)**

**Green indicates Private Debt (\$1,470.0m or 36% 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: Investment Committee  
From: Raynald Leveque, Chief Investment Officer  
Date: April 9, 2024  
Re: **Summary of Quarterly Public Market Manager Discussions: Q3 2023**  
Item: Action:  Discussion:  Informational:

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Portfolio review calls or meetings are held with active NHRS public market investment managers on a quarterly basis. Managers are asked to provide firm-level updates; a review of portfolio performance; an update on portfolio positioning; an overview of their ESG practices; and their market outlook, as applicable.

Portfolio review discussions for the quarter-ended September 30, 2023 were held during the quarter-ended December 31, 2023 with the following managers:

Domestic Equity:

- AB (SMid Cap)
- Boston Trust Walden Company (Small Cap)
- Segall Bryant & Hamill (Small Cap)
- Thompson, Siegel & Walmsley (SMid Cap)
- Wellington (Small Cap)

Non-U.S. Equity:

- Aristotle (Core)
- Artisan (Core)
- Causeway Capital Management (Core)
- Lazard (Core)
- Walter Scott (Global)
- Wellington (Emerging Markets)
- Wellington (International Small Cap)

Fixed Income:

- BlackRock SIO (Unconstrained)
- Brandywine (Global)
- Fidelity (Multisector)
- IR+M (Core)
- Loomis Sayles (Multisector)
- Manulife Asset Management (Multisector)

Quarterly portfolio reviews will be conducted with the active public market managers in subsequent quarters, and results will be summarized for the Committee. During a quarter in which a manager presents to the Committee, that presentation will substitute for the quarterly staff review discussion. While reviews are conducted on a quarterly basis, a manager is judged on their ability to add value over full market cycles.



# NHRS

New Hampshire Retirement System

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To: Investment Committee  
From: Raynald Leveque, Chief Investment Officer  
Date: April 9, 2024  
Re: **Summary of Quarterly Public Market Manager Discussions: Q4 2023**  
Item: Action:  Discussion:  Informational:

---

Portfolio review calls or meetings are held with active NHRS public market investment managers on a quarterly basis. Managers are asked to provide firm-level updates; a review of portfolio performance; an update on portfolio positioning; an overview of their ESG practices; and their market outlook, as applicable.

Portfolio review discussions for the quarter-ended December 31, 2023, were held during the quarter-ended March 31, 2024, with the following managers:

Domestic Equity:

- AB (SMid Cap)
- Boston Trust Walden Company (Small Cap)
- Segall Bryant & Hamill (Small Cap)
- Thompson, Siegel & Walmsley (SMid Cap)
- Wellington (Small Cap)

Non-U.S. Equity:

- Aristotle (Core)
- Artisan (Core)
- Causeway Capital Management (Core)
- Lazard (Core)
- Walter Scott (Global)
- Wellington (Emerging Markets)
- Wellington (International Small Cap)

Fixed Income:

- BlackRock SIO (Unconstrained)
- Brandywine (Global)
- IR+M (Core)
- Loomis Sayles (Multisector)
- Manulife Asset Management (Multisector)

One fixed income portfolio review discussion was rescheduled for April 2024, due to a scheduling conflict:

- Fidelity (Multisector)

Quarterly portfolio reviews will be conducted with the active public market managers in subsequent quarters, and results will be summarized for the Committee. During a quarter in which a manager presents to the Committee, that presentation will substitute for the quarterly staff review discussion. While reviews are conducted on a quarterly basis, a manager is judged on their ability to add value over full market cycles.

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



February 26, 2024

**New Hampshire Retirement  
System – Defined Benefit Plan**

Fourth Quarter 2023

Executive Summary

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**Angel G. Haddad**

Senior Vice President, Fund Sponsor Consulting

**Britton M. Murdoch**

Vice President, Fund Sponsor Consulting

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# Equity Markets Surge in 4Q, Following Decline in 3Q

Stocks have recovered losses of 2022, bonds still have ground to make up

## S&P 500 surged 11.7% in 4Q23

- Loss through first three quarters of 2022 was 23.9%; the rebound in the following five quarters brought the index back to a positive return of 1.7% over the past two years.

## Fixed income recovered in 4Q

- The Bloomberg Aggregate surged 6.8% after suffering a sharp loss of 3.2% in 3Q.
- The Aggregate was on track for another negative year through 3Q; softening Fed language on rates in 4Q turned the market around.
- CPI-U: declined in 4Q compared to 3Q but is still up 3.4% year-over-year, and the index is 10% higher than it was at the start of 2022

## Economy defied recession fears

- GDP growth came in at 2.1% in 1Q, 2.2% in 2Q, 4.9% in 3Q, and a very healthy 3.3% in 4Q.

### Returns for Periods ended 12/31/23

	Quarter	1 Year	2 Years	5 Years	10 Years	25 Years
<b>U.S. Equity</b>						
Russell 3000	12.07	25.96	0.88	15.16	11.48	7.74
S&P 500	11.69	26.29	1.69	15.69	12.03	7.56
Russell 2000	14.03	16.93	-3.55	9.97	7.16	7.91
<b>Global ex-U.S. Equity</b>						
MSCI World ex USA	10.51	17.94	0.54	8.45	4.32	4.62
MSCI Emerging Markets	7.86	9.83	-6.32	3.69	2.66	--
MSCI ACWI ex USA Small Cap	10.12	15.66	-3.79	7.89	4.88	7.28
<b>Fixed Income</b>						
Bloomberg Aggregate	6.82	5.53	-4.19	1.10	1.81	3.85
90-day T-Bill	1.37	5.01	3.22	1.88	1.25	1.90
Bloomberg Long Gov/Credit	13.24	7.13	-11.62	1.12	3.22	5.21
Bloomberg Global Agg ex-US	9.21	5.72	-7.29	-1.56	-0.79	2.25
<b>Real Estate</b>						
NCREIF Property Index	-3.02	-7.94	-1.44	4.33	6.80	8.03
FTSE Nareit Equity	16.22	13.73	-7.25	7.39	7.65	9.27
<b>Alternatives</b>						
HFRI Fund Weighted	3.64	7.57	1.55	7.01	4.54	6.31
Cambridge Private Equity*	-0.42	4.17	0.19	14.59	14.27	13.87
Bloomberg Commodity	-4.63	-7.91	3.40	7.23	-1.11	2.83
Gold Spot Price	11.02	13.45	6.44	10.09	5.59	8.19
<b>Inflation - CPI-U</b>	-0.34	3.35	4.89	4.07	2.79	2.54

\*Cambridge PE data as of 9/30/23.

Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

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## 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 20.3% of total assets. The fixed income allocation was slightly below the policy range by 0.1%, partially balanced by a 0.4% allocation to cash equivalent instruments. The Fund had an overweight to domestic equity, alternatives and real estate relative to target, and underweight positions to international equity and fixed income.

#### Investment Performance

- The Fund had a gross return of 7.02% over the second quarter of Fiscal Year 2024, outperforming the market benchmark return of 6.93% and ranking in the 57<sup>th</sup> percentile of its peers. On a net-of-fees basis, the Fund returned 6.88%
  - The Alternative Assets and Fixed Income portfolios had positive impacts on relative performance
  - By contrast, the Real Estate and U.S. Equity portfolios detracted from performance. This is a reflection of more modest valuations within real estate as well as underperformance from small/mid cap equity manager TSW over the quarter
- Overall, performance is competitive relative to both benchmarks over longer periods measured, including the most recent fiscal year. The Fund outperformed the peer group median over the long term, ranking in the top 24% of peers for the trailing 10-year period, and in the top 34% 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 within the top 38% of peers

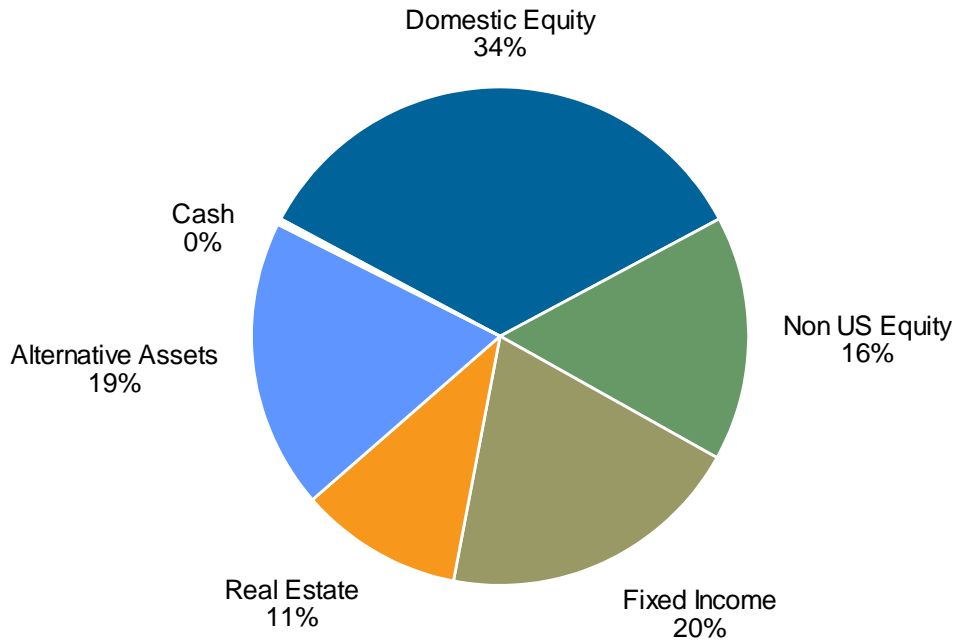
#### Other Developments

- Murali Srikantaiah, Partner and PM of Wellington Emerging Markets Local Equity ("EMLE"), will be withdrawing from the Wellington partnership on June 30, 2024. Bo Meunier, a partner of the firm and current PM of Emerging Markets Equity ("EME") and dedicated China equity strategies, will assume Co-PM responsibilities of EMLE on January 1, 2024. David Reed will be named Meunier's backup portfolio manager. Meunier will be supported by the dedicated EME team, whose existing research will effectively translate to both EME and EMLE portfolios. Meunier is relocating from Hong Kong to London to manage the broader Emerging Markets team better. There are no plans for resource expansion.

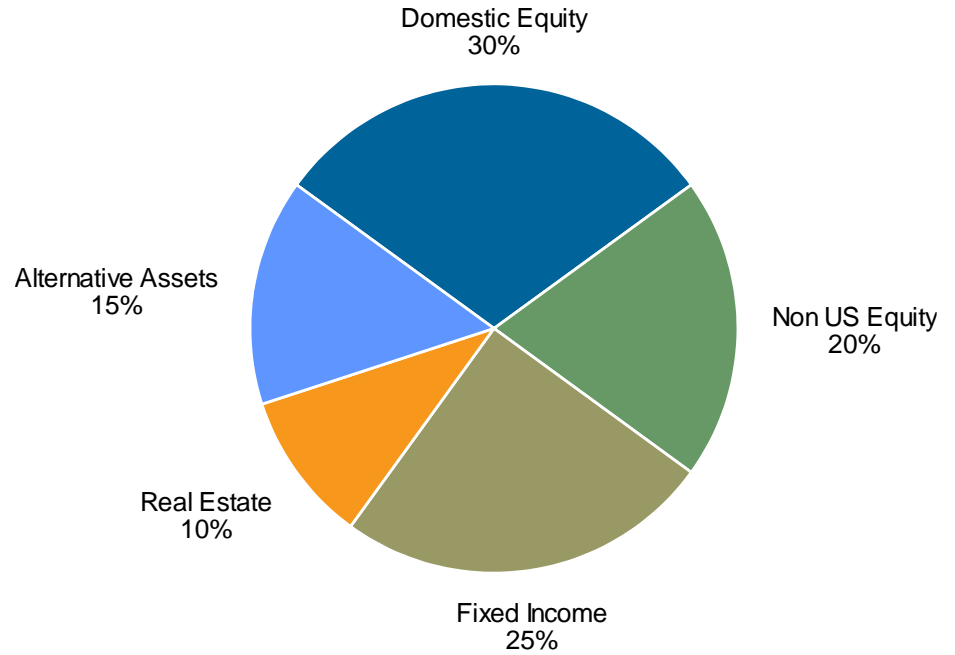
# Total Fund

Actual Asset Allocation vs. Target, as of December 31, 2023

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	4,048,532	34.4%	30.0%	4.4%	517,377
Non US Equity	1,869,115	15.9%	20.0%	(4.1%)	(484,988)
Fixed Income	2,346,688	19.9%	25.0%	(5.1%)	(595,941)
Real Estate	1,242,240	10.6%	10.0%	0.6%	65,188
Alternative Assets	2,217,599	18.8%	15.0%	3.8%	452,022
Cash	46,343	0.4%	0.0%	0.4%	46,343
<b>Total</b>	<b>11,770,517</b>	<b>100.0%</b>	<b>100.0%</b>		

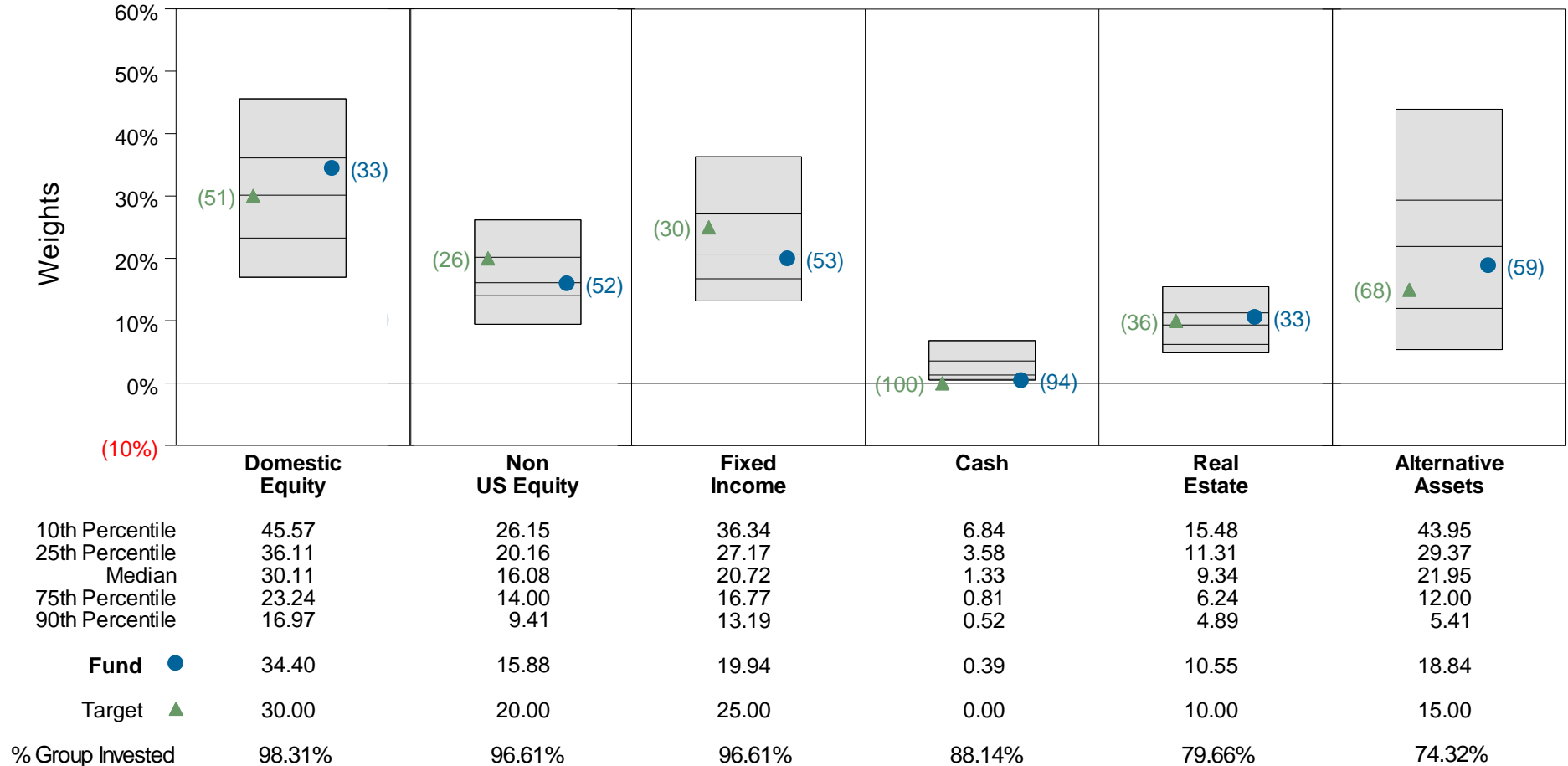
\*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.

\*\*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 December 31, 2023

## 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

	December 31, 2023			September 30, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Total Domestic Equity</b>	<b>\$3,734,991,813</b>	<b>31.73%</b>	<b>\$0</b>	<b>\$393,347,127</b>	<b>\$3,341,644,686</b>	<b>30.18%</b>
<b>Large Cap Domestic Equity</b>	<b>\$2,161,866,634</b>	<b>18.37%</b>	<b>\$0</b>	<b>\$226,253,568</b>	<b>\$1,935,613,066</b>	<b>17.48%</b>
Blackrock S&P 500	2,161,866,634	18.37%	0	226,253,568	1,935,613,066	17.48%
<b>SMid Cap Domestic Equity</b>	<b>\$680,984,900</b>	<b>5.79%</b>	<b>\$0</b>	<b>\$69,181,233</b>	<b>\$611,803,668</b>	<b>5.53%</b>
AllianceBernstein	425,590,996	3.62%	0	52,173,335	373,417,661	3.37%
TSW	255,393,904	2.17%	0	17,007,898	238,386,007	2.15%
<b>Small Cap Domestic Equity</b>	<b>\$892,140,279</b>	<b>7.58%</b>	<b>\$0</b>	<b>\$97,912,326</b>	<b>\$794,227,953</b>	<b>7.17%</b>
Boston Trust	232,180,382	1.97%	0	22,141,414	210,038,968	1.90%
Segall Bryant & Hamill	246,291,763	2.09%	0	26,674,065	219,617,698	1.98%
Wellington	413,668,134	3.51%	0	49,096,848	364,571,287	3.29%
<b>Total Non US Equity *</b>	<b>\$2,182,655,605</b>	<b>18.54%</b>	<b>\$(25)</b>	<b>\$204,821,466</b>	<b>\$1,977,834,164</b>	<b>17.86%</b>
<b>Core Non US Equity *</b>	<b>\$1,329,966,023</b>	<b>11.30%</b>	<b>\$(25)</b>	<b>\$120,529,649</b>	<b>\$1,209,436,400</b>	<b>10.92%</b>
Aristotle	172,677,350	1.47%	0	16,143,540	156,533,810	1.41%
Artisan Partners	373,664,128	3.17%	0	32,825,405	340,838,723	3.08%
BlackRock Superfund	188,391,200	1.60%	0	16,535,232	171,855,968	1.55%
Causeway Capital	430,172,433	3.65%	0	37,765,755	392,406,678	3.54%
Lazard	164,377,378	1.40%	0	17,244,880	147,132,498	1.33%
<b>Emerging Markets</b>	<b>\$167,904,443</b>	<b>1.43%</b>	<b>\$0</b>	<b>\$10,635,694</b>	<b>\$157,268,749</b>	<b>1.42%</b>
Wellington Emerging Markets	167,904,443	1.43%	0	10,635,694	157,268,749	1.42%
<b>Non US Small Cap</b>	<b>\$134,953,584</b>	<b>1.15%</b>	<b>\$0</b>	<b>\$15,388,523</b>	<b>\$119,565,062</b>	<b>1.08%</b>
Wellington Int'l Small Cap Research	134,953,584	1.15%	0	15,388,523	119,565,062	1.08%
<b>Global Equity</b>	<b>\$549,831,555</b>	<b>4.67%</b>	<b>\$0</b>	<b>\$58,267,601</b>	<b>\$491,563,953</b>	<b>4.44%</b>
Walter Scott Global Equity	549,831,555	4.67%	0	58,267,601	491,563,953	4.44%

\*Includes \$683,533 in legacy assets that are not actively managed and in liquidation following the termination of Fisher

# Total Fund

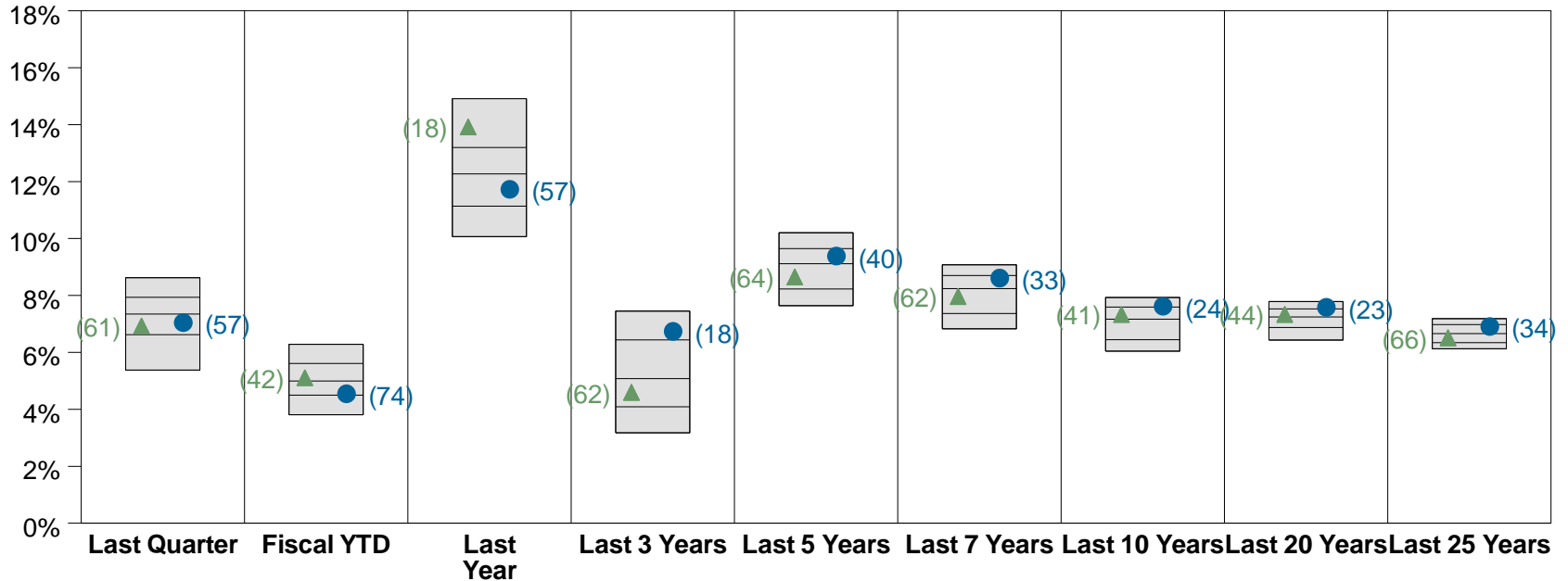
## Market Values

	December 31, 2023			September 30, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Total Fixed Income</b>	<b>\$2,346,687,743</b>	<b>19.94%</b>	<b>\$0</b>	<b>\$158,304,313</b>	<b>\$2,188,383,430</b>	<b>19.77%</b>
BlackRock SIO Bond Fund	266,277,704	2.26%	0	14,260,902	252,016,802	2.28%
Brandywine Asset Mgmt	239,132,976	2.03%	0	26,920,089	212,212,886	1.92%
FIAM (Fidelity) Tactical Bond	375,407,619	3.19%	0	25,311,195	350,096,425	3.16%
Income Research & Management	785,987,790	6.68%	0	48,238,625	737,749,165	6.66%
Loomis Sayles	285,847,793	2.43%	0	19,008,605	266,839,188	2.41%
Manulife Strategic Fixed Income	214,913,943	1.83%	0	13,112,816	201,801,127	1.82%
Mellon US Agg Bond Index	179,119,918	1.52%	0	11,452,082	167,667,836	1.51%
<b>Total Cash</b>	<b>\$46,342,766</b>	<b>0.39%</b>	<b>\$(42,933,955)</b>	<b>\$1,165,405</b>	<b>\$88,111,316</b>	<b>0.80%</b>
<b>Total Marketable Assets</b>	<b>\$8,310,677,927</b>	<b>70.61%</b>	<b>\$(42,933,980)</b>	<b>\$757,638,311</b>	<b>\$7,595,973,596</b>	<b>68.61%</b>
<b>Total Real Estate</b>	<b>\$1,242,239,728</b>	<b>10.55%</b>	<b>\$(7,848,330)</b>	<b>\$(19,679,630)</b>	<b>\$1,269,767,688</b>	<b>11.47%</b>
Strategic Core Real Estate	771,525,310	6.55%	(10,853,385)	(10,620,024)	792,998,719	7.16%
Tactical Non-Core Real Estate	470,714,417	4.00%	3,798,660	(9,853,211)	476,768,969	4.31%
<b>Total Alternative Assets</b>	<b>\$2,217,599,162</b>	<b>18.84%</b>	<b>\$(25,646,114)</b>	<b>\$37,563,815</b>	<b>\$2,205,681,460</b>	<b>19.92%</b>
Private Equity	1,655,749,890	14.07%	(18,333,867)	26,054,796	1,648,028,961	14.89%
Private Debt	561,849,272	4.77%	(7,312,247)	11,509,019	557,652,500	5.04%
<b>Total Fund Composite</b>	<b>\$11,770,516,817</b>	<b>100.00%</b>	<b>\$(76,428,424)</b>	<b>\$775,522,497</b>	<b>\$11,071,422,744</b>	<b>100.00%</b>

# Total Fund Performance – Gross of Investment Management Fees

Performance vs. Large Public DB Plan (>\$1B) Peers, as of December 31, 2023

## Performance vs Callan Public Fund Large DB (Gross)



	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years	Last 25 Years
10th Percentile	8.63	6.29	14.91	7.45	10.20	9.08	7.93	7.79	7.19
25th Percentile	7.94	5.61	13.20	6.44	9.65	8.70	7.59	7.53	6.98
Median	7.34	5.00	12.27	5.08	9.12	8.24	7.17	7.25	6.66
75th Percentile	6.62	4.50	11.14	4.09	8.23	7.37	6.45	6.87	6.34
90th Percentile	5.38	3.81	10.07	3.18	7.64	6.83	6.05	6.43	6.13
<b>Total Fund Composite</b> ●	7.02	4.51	11.70	6.71	9.35	8.58	7.59	7.56	6.88
Total Fund Benchmark ▲	6.93	5.11	13.92	4.60	8.65	7.97	7.34	7.34	6.52

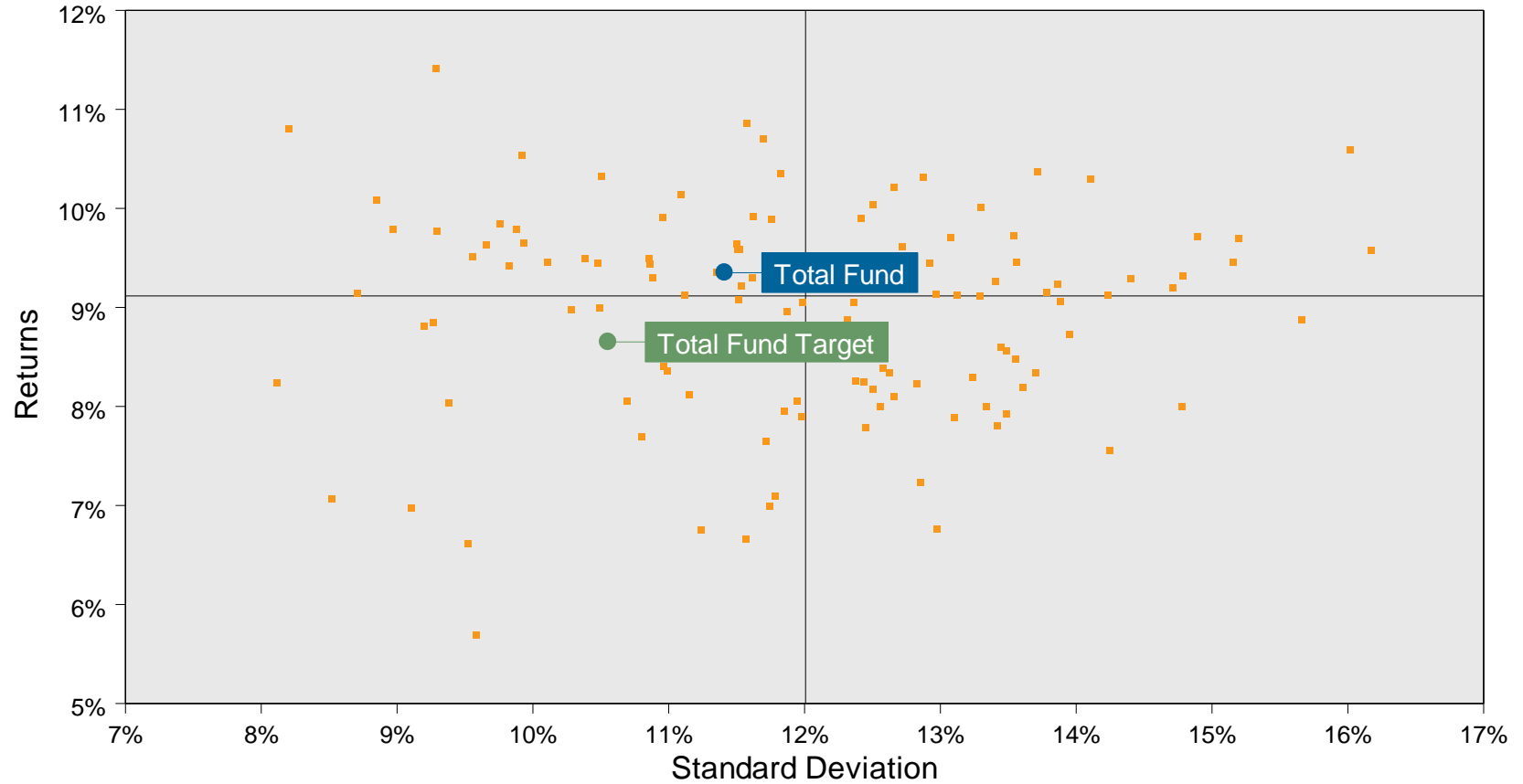
Note: Investment results are shown gross of investment management fees versus corresponding peer group.

\*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 December 31, 2023

## 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.

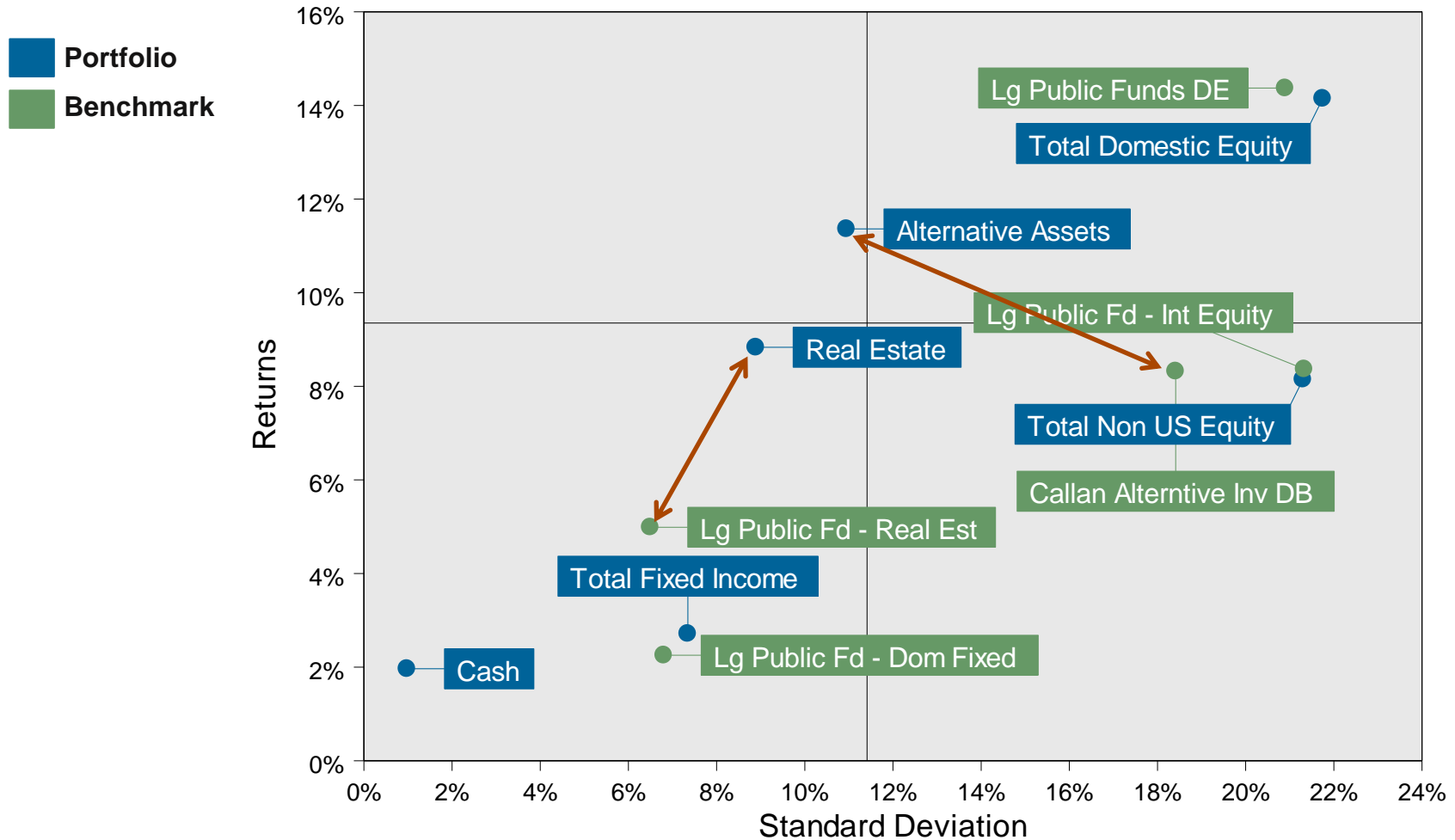
\*Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net lagged 3 months, 10% Russell 3000 Index lagged 3 months+2.0%, 2.5% Bloomberg HY Corp lagged 3 months+1.0%, and 2.5% S&P/LSTA Lev Loan 100 lagged 3 months+1.0%.



# Total Fund Performance – Gross of Investment Management Fees

Asset Class Composites – Five-Year Risk/Return Analysis as of December 31, 2023

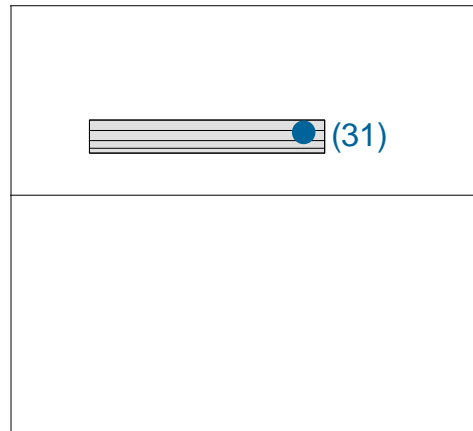
## Five Year Annualized Risk vs Return Asset Classes vs Asset Class Median



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

# Total Fund Performance – Gross of Investment Management Fees

Five-Year Sharpe Ratio, as of December 31, 2023



**Sharpe  
Ratio**

10th Percentile	0.80
25th Percentile	0.69
Median	0.58
75th Percentile	0.50
90th Percentile	0.45

**Total Fund Composite** ● 0.65

- 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 December 31, 2023

## 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	30%	30%	21.93%	25.96%	(1.10%)	(0.06%)	(1.16%)
Non US Equity	18%	20%	19.60%	15.62%	0.67%	(0.09%)	0.58%
Fixed Income	19%	25%	7.03%	6.17%	0.18%	0.42%	0.60%
Real Estate	12%	10%	(9.94%)	(12.88%)	0.46%	(0.67%)	(0.20%)
Alternative Assets	19%	15%	6.31%	19.58%	(2.79%)	0.25%	(2.54%)
Cash	1%	0%	5.21%	5.21%	0.00%	(0.08%)	(0.08%)
<b>Total</b>			<b>11.11%</b>	<b>= 13.92%</b>	<b>+ (2.57%)</b>	<b>+ (0.24%)</b>	<b>(2.81%)</b>

### What helped relative performance?

- Strong relative performance from the non-U.S. equity, 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 the alternative assets and domestic equity portfolios
- An overweight to the real estate relative to target
- An underweight to international equity relative to target
- A slight overweight to cash and a slight underweight to domestic equity 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 December 31, 2023

## 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%	13.84%	14.79%	(0.22%)	(0.19%)	(0.41%)
Non US Equity	18%	20%	7.49%	7.08%	0.06%	(0.04%)	0.03%
Fixed Income	21%	25%	2.43%	1.44%	0.20%	0.24%	0.43%
Real Estate	11%	10%	8.31%	4.72%	0.39%	(0.08%)	0.31%
Alternative Assets	19%	15%	10.83%	10.03%	0.02%	(0.01%)	0.00%
Cash	1%	0%	1.97%	1.97%	0.00%	(0.09%)	(0.09%)
<b>Total</b>			<b>8.91%</b>	<b>= 8.65%</b>	<b>+ 0.44%</b>	<b>+ (0.18%)</b>	<b>0.26%</b>

### What helped relative performance?

- Strong relative performance from real estate, fixed income, and non-U.S. equity portfolios
- An underweight to fixed income relative to target

### What hurt relative performance?

- Weak relative performance from domestic equity portfolio
- 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%.

Callan

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**Appendix**

# Investment Manager Returns – Net of Investment Management Fees

As of December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
<b>Net of Fees</b>					
<b>Total Domestic Equity</b>	<b>11.70%</b>	<b>7.84%</b>	<b>21.93%</b>	<b>8.13%</b>	<b>13.84%</b>
Domestic Equity Benchmark (1)	12.07%	8.43%	25.96%	8.59%	14.79%
Secondary Domestic Equity Bmk (6)	12.57%	8.15%	22.81%	7.38%	13.88%
<b>Large Cap Domestic Equity</b>	<b>11.69%</b>	<b>8.04%</b>	<b>26.10%</b>	<b>9.92%</b>	<b>14.71%</b>
S&P 500 Index	11.69%	8.04%	26.29%	10.00%	15.69%
Blackrock S&P 500	11.69%	8.04%	26.10%	9.92%	15.63%
<b>SMid Cap Domestic Equity</b>	<b>11.16%</b>	<b>6.75%</b>	<b>15.77%</b>	<b>5.66%</b>	<b>11.46%</b>
Russell 2500 Index	13.35%	7.93%	17.42%	4.24%	11.67%
AllianceBernstein	13.82%	7.75%	18.16%	4.07%	12.16%
TSW	6.98%	5.13%	12.00%	8.55%	10.35%
TSW Blended Benchmark (2)	13.76%	9.59%	15.98%	8.81%	11.55%
<b>Small Cap Domestic Equity</b>	<b>12.14%</b>	<b>8.21%</b>	<b>16.47%</b>	<b>5.74%</b>	<b>13.64%</b>
Russell 2000 Index	14.03%	8.18%	16.93%	2.22%	9.97%
Boston Trust	10.41%	5.97%	10.65%	9.25%	13.44%
Segall Bryant & Hamill	11.93%	8.67%	14.64%	7.24%	14.12%
Wellington	13.27%	9.23%	21.21%	3.15%	13.47%
<b>Total Non US Equity</b>	<b>10.21%</b>	<b>5.23%</b>	<b>19.60%</b>	<b>2.16%</b>	<b>7.49%</b>
Non US Equity Benchmark (3)	9.75%	5.61%	15.62%	1.55%	7.08%
<b>Core Non US Equity</b>	<b>9.84%</b>	<b>5.50%</b>	<b>20.35%</b>	<b>4.00%</b>	<b>7.80%</b>
Core Non US Benchmark (4)	9.75%	5.61%	15.62%	1.55%	7.08%
Aristotle	10.19%	5.28%	18.69%	3.15%	-
Artisan Partners	9.46%	4.94%	15.87%	0.95%	7.44%
BlackRock Superfund	9.61%	5.50%	-	-	-
Causeway Capital	9.48%	6.15%	27.83%	9.14%	10.82%
Lazard	11.58%	5.32%	18.18%	1.31%	-
<b>Emerging Markets</b>	<b>6.50%</b>	<b>2.69%</b>	<b>9.28%</b>	<b>(6.98%)</b>	<b>1.84%</b>
MSCI EM	7.86%	4.71%	9.83%	(5.08%)	3.69%
Wellington Emerging Markets	6.50%	2.69%	6.91%	(7.19%)	2.00%
<b>Non US Small Cap</b>	<b>12.67%</b>	<b>7.73%</b>	<b>16.42%</b>	<b>(1.20%)</b>	<b>1.75%</b>
Wellington Int'l Small Cap Research	12.67%	7.73%	16.42%	-	-
MSCI EAFE Small Cap	11.14%	7.24%	13.16%	(0.69%)	6.58%
<b>Global Equity</b>	<b>11.71%</b>	<b>4.77%</b>	<b>23.40%</b>	<b>5.67%</b>	<b>12.98%</b>
MSCI ACWI net	11.03%	7.26%	22.20%	5.75%	11.72%
Walter Scott Global Equity	11.71%	4.77%	23.40%	5.67%	12.98%
Walter Scott Blended Benchmark (5)	11.03%	7.26%	22.20%	5.75%	11.72%

(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 December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	
<b>Net of Fees</b>						
<b>Total Fixed Income</b>	<b>7.16%</b>	<b>4.10%</b>	<b>7.03%</b>	<b>(2.16%)</b>	<b>2.43%</b>	<p>*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&amp;P/LSTA Lev Loan 100 lagged 3 months+1.0%.</p> <p>(1) The Fixed Income Benchmark is the Bloomberg Capital Universal Bond Index as of 7/1/2007.</p> <p>(2) The BlackRock Custom Benchmark is 3 Month SOFR compounded in arrears as of 1/1/2022.</p> <p>(3) The Brandywine Blended Benchmark is the FTSE WGBI Ex-China Index as of 11/1/2021.</p> <p>(4) The Loomis Sayles Custom Benchmark is 65% Bloomberg Aggregate and 35% Bloomberg High Yield.</p> <p>(5) Marketable Assets Index is 40% Russell 3000, 26.7% MSCI ACWI ex US, and 33.3% Bloomberg Universal as of 7/1/2021.</p> <p>(6) The Real Estate Benchmark is the NCREIF NFI-ODCE Value Weight Net Index as of 7/1/2015.</p> <p>(7) The Alternative Assets Benchmark is 66.7% Russell 3000 Index + 2% and 33.3% ((50% S&amp;P LSTA Leveraged Loan 100 Index + 50% Bloomberg High Yield Index) + 1%) as of 7/1/2022.</p> <p>(8) The Private Equity Benchmark is the Russell 3000 Index + 2% as of 7/1/2022.</p> <p>(9) The Private Debt Benchmark is (50% S&amp;P LSTA Leveraged Loan 100 Index &amp; 50% Bloomberg HY Index) + 1% as of 7/1/2022..</p> <p>(10) Total Real Estate returns includes Townsend discretionary fee as of 7/1/2022.</p>
Fixed Income Benchmark (1)	6.83%	3.76%	6.17%	(2.97%)	1.44%	
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%	
BlackRock SIO Bond Fund	5.53%	5.36%	7.45%	0.79%	3.05%	
BlackRock Custom Benchmark (2)	1.37%	2.71%	5.09%	2.17%	1.92%	
Brandywine Asset Mgmt	12.59%	4.33%	7.73%	(4.92%)	1.09%	
Brandywine Custom Benchmark (3)	8.36%	3.48%	5.36%	(7.19%)	(1.39%)	
FIAM (Fidelity) Tactical Bond	7.14%	3.79%	7.04%	(1.17%)	-	
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%	
Income Research & Management	6.49%	3.38%	6.23%	(3.46%)	1.79%	
Bloomberg Gov/Credit	6.63%	3.44%	5.72%	(3.53%)	1.41%	
Loomis Sayles	7.04%	5.69%	8.50%	(0.63%)	4.18%	
Loomis Sayles Custom Benchmark (4)	6.94%	4.85%	8.25%	(1.46%)	2.65%	
Manulife Strategic Fixed Income	6.42%	4.06%	7.56%	(0.96%)	3.03%	
Bloomberg Multiverse	8.13%	4.38%	6.05%	(5.26%)	(0.13%)	
Mellon US Agg Bond Index	6.83%	3.37%	-	-	-	
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%	
<b>Total Cash</b>	<b>1.40%</b>	<b>2.76%</b>	<b>5.21%</b>	<b>2.26%</b>	<b>1.97%</b>	
3-month Treasury Bill	1.37%	2.70%	5.01%	2.15%	1.88%	
<b>Total Marketable Assets</b>	<b>9.89%</b>	<b>6.05%</b>	<b>16.61%</b>	<b>3.51%</b>	<b>8.48%</b>	
Total Marketable Index (5)	9.72%	6.17%	16.46%	2.97%	8.47%	
<b>Total Real Estate (10)</b>	<b>(1.74%)</b>	<b>(1.91%)</b>	<b>(9.94%)</b>	<b>10.54%</b>	<b>8.31%</b>	
Real Estate Benchmark (6)	(2.10%)	(4.92%)	(12.88%)	6.19%	4.72%	
Strategic Core Real Estate	(1.65%)	(1.74%)	(13.99%)	8.40%	6.69%	
Tactical Non-Core Real Estate	(1.89%)	(2.20%)	(1.79%)	14.35%	11.28%	
<b>Total Alternative Assets</b>	<b>1.44%</b>	<b>1.42%</b>	<b>6.31%</b>	<b>14.48%</b>	<b>10.83%</b>	
Alternative Assets Benchmark (7)	(1.12%)	5.59%	19.58%	9.86%	10.03%	
Total Private Equity	1.35%	1.33%	6.67%	17.09%	13.28%	
Private Equity Benchmark (8)	(2.66%)	5.90%	22.76%	12.61%	12.97%	
Cambridge Global PE Idx 1 Qtr Lag	0.00%	1.61%	4.72%	15.12%	14.51%	
Total Private Debt	1.71%	1.68%	5.31%	8.29%	5.40%	
Private Debt Benchmark (9)	2.02%	4.85%	13.14%	4.07%	3.47%	
Cambridge Private Credit Idx 1 Qtr Lag	0.00%	1.96%	8.65%	10.26%	7.23%	
<b>Total Fund Composite</b>	<b>6.88%</b>	<b>4.26%</b>	<b>11.11%</b>	<b>6.18%</b>	<b>8.91%</b>	
Total Fund Benchmark *	6.93%	5.11%	13.92%	4.60%	8.65%	

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December 31, 2023

## **New Hampshire Retirement System**



**Investment Measurement Service  
Quarterly Review**

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## Economy Becomes Even More Surprising

### ECONOMY

**2** Last year was supposed to feature the recession caused by the Fed's dedication to fighting inflation; instead, the economy grew 2.5% for the year. While the rate of overall growth slowed in 4Q, the economy seemed to get stronger by the quarter in 2023.

## Broad Rally for Bonds Across the World

### FIXED INCOME

**8** Driven by falling rates and strong risk-on sentiment, the Agg returned 6.8%, the highest quarterly return since 2Q89. The 10-year U.S. Treasury yield closed the year at 3.88%. Global bonds saw broad-based gains across countries and developed markets topped the U.S.

## Net IRR of Nearly 9% Over Three Years

### PRIVATE CREDIT

**12** Given its high returns, private credit remained in high demand across Callan's investor base. Private credit assets under management stood at over \$1.5 trillion at the end of 2023, with Preqin forecasting the asset class will grow to over \$2.5 trillion by 2028.

## Increases in 2023 but Inflation Tops Worries

### INSTITUTIONAL INVESTORS

**4** Robust equity returns led all institutional investor types to show gains for 2023, a stark reversal from the double-digit losses of 2022. But over the last year, all investors lagged a 60% stocks/40% bonds benchmark by a significant amount, likely due to those same equity gains.

## Private RE Falls but REITs Outpace Stocks

### REAL ESTATE/REAL ASSETS

**10** The NCREIF Property Index fell 3.0% during 4Q23. The NCREIF Open-End Diversified Core Equity (ODCE) Index fell 4.8% during 4Q. The FTSE EPRA Nareit Developed REIT Index rose 15.6% during 4Q23. The FTSE Nareit Equity REITs Index increased 16.2%.

## Gains Spurred by Stocks and Bonds

### HEDGE FUNDS/MACs

**13** Most hedge fund managers showed gains in 4Q23. Equity hedge strategies were the best performing. Relative value strategies generated positive performance as well, while event-driven strategies also ended on a strong note. Multi-asset class (MAC) strategies also gained.

## Dovish Policy Drives Widespread Gains

### EQUITY

**6** U.S. equity markets rebounded in the last two months of the year as the impact of possible rate cuts in 2024 started to get priced in. Dovish signaling from central banks and dropping yields led to a broad market rally in 4Q23 for global ex-U.S. markets as well.

## Big Slowdown After Frenzy of 2021

### PRIVATE EQUITY

**11** Both new investment activity and exit activity slowed markedly in 2023. Public equity's strong recovery in 2023 has left private equity in its wake. Private equity only saw about a fifth of the gains of the public markets over the last year, on a PME basis.

## 2.9% Drop After Three Quarters of Gains

### DEFINED CONTRIBUTION

**15** Despite the loss, the Callan DC Index™ saw a trailing one-year gain of 13.8%. The Age 45 Target Date Fund (analogous to the 2045 vintage) fell 3.6%. Balances within the DC Index fell by 3.2% after a 4.3% increase in the previous quarter, driven by investment losses.

## Broad Market Quarterly Returns

U.S. Equity  
Russell 3000



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



U.S. Fixed Income  
Bloomberg Agg



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



Sources: Bloomberg, FTSE Russell, MSCI

# The Economy Is More Surprising by the Quarter

ECONOMY | Jay Kloepfer

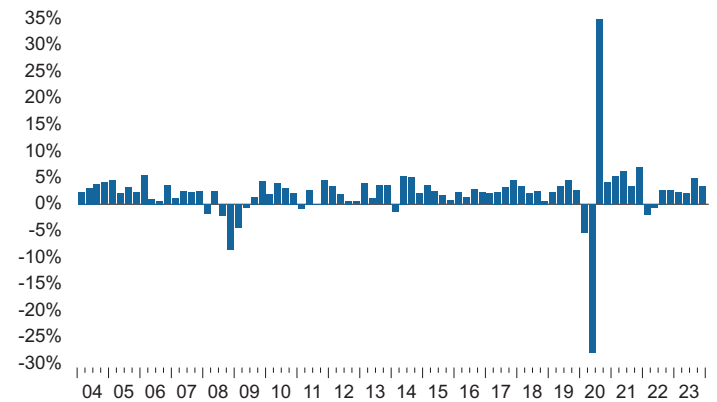
The U.S. economy grew by 3.3% in 4Q23, once again surprising to the upside. If you asked anyone who has to indulge in the hubris of forecasting the economy, all of 2023 has been a surprise. Last year was supposed to feature the recession caused by the Fed's dedication to fighting inflation by raising interest rates; instead, the economy grew 2.5% for the year, up from the 1.9% rate in 2022. The job market has generated 5.4 million new jobs since the end of 2019, before the start of the pandemic. Real wages and real income growth turned positive in mid-2023 as inflation subsided but demand for workers remained. Workers feel confident in the tight labor market, and this confidence is driving consumer spending. Consumption expenditures accounted for half of GDP growth in 3Q and almost 60% in 4Q. The economy seemed to get stronger by the quarter in 2023.

So why no recession? Underneath the mayhem that defined both 2022 and 2023—geopolitical uncertainty, spiking inflation, rising interest rates, and the volatility in the equity market—the U.S. and global economies remain in remarkably good shape. The U.S. economy weathered the rate hikes in 2022 and 2023 particularly well. The first reason is stimulus and lots of it, around the globe, which translated into pent-up demand. Second, the very tight labor market in the U.S. gives workers and their families confidence to spend. Third, despite the housing market taking a big hit as mortgage rates shot up, housing has not dragged down the economy as in rate hike episodes of yore. In addition, we do not have a mortgage crisis similar to the one that struck in 2008-09 and nearly took down the banking system.

However, we do have a commercial real estate tsunami working through offices in central business districts and retail trade, which will reshape the physical as well as business landscape of many communities in the U.S. Finally, we do have a housing shortage around the U.S. that may have long-term generational consequences for homeownership, wealth creation, and financial security for younger people.

## Quarterly Real GDP Growth

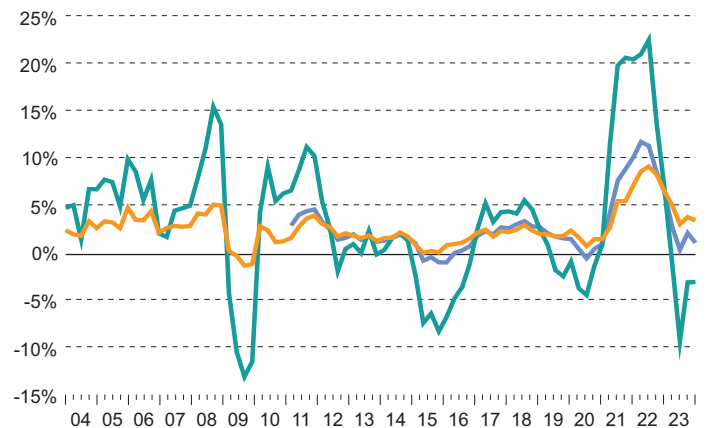
(20 Years)



Source: Bureau of Economic Analysis

## Inflation Year-Over-Year

● CPI (All Urban Consumers) ● PPI (All Commodities) ● PPI (Final Demand)



Source: Bureau of Labor Statistics

Inflation shot up to 9% in mid 2022, but the rate of price increases began to ebb in the second half of 2022 and declined steadily to 3% by the end of 3Q23. Unfortunately, headline inflation ticked back up to 3.5% by the end of the year, so we are not out of the inflation woods yet. Even as the rate of price increases comes down, prices are now “permanently” higher unless we see deflation. The level of the CPI-U index is up 10% since the start of 2022.

One key factor keeping inflation from falling back toward the Federal Reserve's goal of 2% is the labor market. We ended 2023 with labor markets not only tight but tightening. Initial unemployment claims (measured on a weekly basis)—one of our few leading indicators—began climbing in 2Q, and by early spring weekly claims had surpassed the average set in 2019 of 218,000. As claims rose to 250,000 by August, the data appeared to show that interest rate hikes were finally starting to bite. Then initial claims fell back sharply and we ended the year at 203,000. Continuing unemployment claims also began to rise from a very low level starting in 4Q22 and ended the year about 9% higher than the pre-pandemic level. So initial claims show workers holding onto jobs, but the continuing claims show workers have a bit more trouble finding jobs once laid off. However, the unemployment rate remains low at 3.7%. The tightness in the labor market is inconsistent with the Fed's goal of achieving its 2% inflation target. As continuing claims rose in 2023, bond markets read the data as the first sign of easing in the labor market, but the robust end-of-the-year GDP report, the lower initial claims, and the strong December job market report suggest labor market tightness is not yet easing.

The remarkable GDP growth is fueling continued demand for workers, and with inflation falling while wages are rising, workers saw real incomes (wages and salaries net of inflation) grow in each of the last three quarters of 2023, with a sharp gain of 2.5% in real disposable (after-tax) income in 4Q. Average hourly earnings growth slowed from 5% (annual growth) in 2022 to 4% by December 2023, but as inflation fell real wage growth finally turned positive starting in May, and this real growth carried through December (wage growth is exceeding inflation).

The upshot: it may take longer than many believed to unravel the current growth momentum in the U.S. economy. The Fed had stated

### The Long-Term View

Index	4Q23	Periods Ended 12/31/23			
		1 Yr	5 Yrs	10 Yrs	25 Yrs
<b>U.S. Equity</b>					
Russell 3000	12.1	26.0	15.2	11.5	7.7
S&P 500	11.7	26.3	15.7	12.0	7.6
Russell 2000	14.0	16.9	10.0	7.2	7.9
<b>Global ex-U.S. Equity</b>					
MSCI EAFE	10.4	18.2	8.2	4.3	4.4
MSCI ACWI ex USA	9.8	15.6	7.1	3.8	--
MSCI Emerging Markets	7.9	9.8	3.7	2.7	--
MSCI ACWI ex USA Small Cap	10.1	15.7	7.9	4.9	7.3
<b>Fixed Income</b>					
Bloomberg Agg	6.8	5.5	1.1	1.8	3.9
90-Day T-Bill	1.4	5.0	1.9	1.3	1.9
Bloomberg Long G/C	13.2	7.1	1.1	3.2	5.2
Bloomberg GI Agg ex US	9.2	5.7	-1.6	-0.8	2.2
<b>Real Estate</b>					
NCREIF Property	-3.0	-7.9	4.3	6.8	8.0
FTSE Nareit Equity	16.2	13.7	7.4	7.6	9.3
<b>Alternatives</b>					
HFRI Fund Weighted	4.2	8.1	7.1	4.6	6.3
Cambridge PE*	-0.4	4.2	14.6	14.3	13.9
Bloomberg Commodity	-4.6	-7.9	7.2	-1.1	2.8
Gold Spot Price	11.0	13.4	10.1	5.6	8.2
<b>Inflation – CPI-U</b>	-0.3	3.4	4.1	2.8	2.5

\*Data for most recent period lags. Data as of 3Q23.

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

earlier in 2023 a belief that rates would remain elevated, based on its economic expectation of “stronger for longer.” After the Fed reversed course in the November and December FOMC meetings, signaling rate cuts were likely in 2024, the economy reverted to stronger for longer on its own.

### Recent Quarterly Economic Indicators

	4Q23	3Q23	2Q23	1Q23	4Q22	3Q22
Employment Cost: Total Compensation Growth	4.2%	4.3%	4.5%	4.8%	5.1%	5.0%
Nonfarm Business: Productivity Growth	3.2%	4.9%	3.6%	-0.8%	1.6%	0.4%
GDP Growth	3.3%	4.9%	2.1%	2.2%	2.6%	2.7%
Manufacturing Capacity Utilization	77.1%	77.7%	78.0%	78.2%	78.5%	79.4%
Consumer Sentiment Index (1966=100)	64.9	69.6	62.3	64.6	58.8	56.1

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

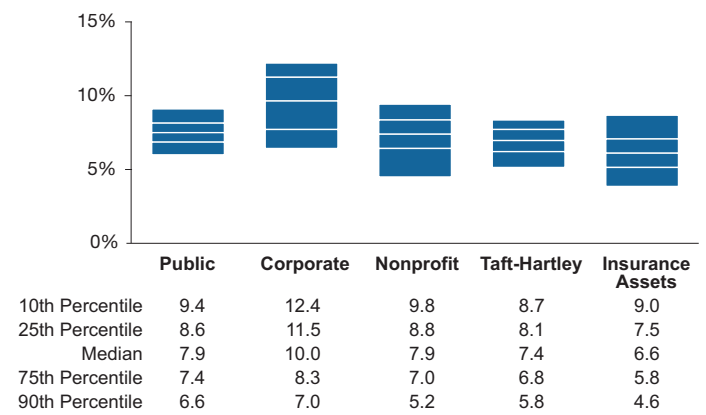
# Gains in 2023 but Inflation Tops Worries

## INSTITUTIONAL INVESTORS

- The 2023 equity market was up 24%, led by seven securities nicknamed “The Magnificent Seven.”
- Other 493 securities gained 12% in 2023.
- These robust equity returns led all institutional investor types to show gains for 2023, a stark reversal from the double-digit losses of 2022.
- Nonprofits showed the best returns, while corporate defined benefit (DB) plans and Taft-Hartley plans brought up the rear.
- But over the last year, all investors lagged a 60%/40% stocks/40% bonds benchmark by a significant amount.
- Remarkable U.S. equity gains likely played a big role in that gap.
- As has been the case for years, institutional investors continued to show 20-year returns close to but still below the 60%/40% benchmark.

- *Recession:* There is no shortage of worries that could cause one: interest rate hikes, global armed conflicts, U.S.-China conflict, the U.S. presidential election ....
- *Equity valuations:* The Magnificent Seven and index concentration worried some clients, while stock prices in light of higher interest rates were also a concern.

Quarterly Returns, Callan Database Groups (12/31/23)



Source: Callan

### All Investor Types

- The major macroeconomic issues investors are discussing include:
  - *Interest rates:* As has been true for much of the past year, worries about inflation and the future direction of interest rates were pervasive.

### Callan Database Median and Index Returns\* for Periods Ended 12/31/23

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	7.9	13.0	4.3	9.0	6.9	7.2
Corporate Database	10.0	11.8	-0.1	6.6	5.7	6.6
Nonprofit Database	7.9	13.5	4.3	8.7	6.5	7.0
Taft-Hartley Database	7.4	11.9	4.5	8.6	6.9	6.8
Insurance Assets Database	6.6	9.7	1.5	5.1	4.1	4.9
All Institutional Investors	8.1	12.6	3.7	8.3	6.5	6.9
Large (>\$1 billion)	7.5	11.7	4.6	8.6	6.9	7.2
Medium (\$100mm - \$1bn)	8.2	12.8	3.8	8.4	6.5	7.0
Small (<\$100 million)	8.3	13.1	3.4	8.2	6.2	6.5
60% S&P 500/40% Bloomberg Agg	9.7	17.7	4.7	10.1	8.1	7.4

\*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.



**Public DB Plans**

- The average or median discount rate, according to the most recent NASRA survey, remains at 7.00%.
- A 7.00% return expectation can be hit with almost 50% in fixed income.
- Plans have increased their exposure to both fixed income and/or alternatives.
- Given this rate, investors are weighing how or whether to adjust allocations based on Callan’s 2024-2033 Capital Markets Assumptions.
- The rise in fixed income expectations in particular has made estimated return-on-asset assumptions much easier to hit.
- But if plans increase their discount rates, the higher funded status could lead to increased pressure to improve benefits.

**Corporate DB Plans**

- Liabilities decreased as rates rose.
- Interest rate hedging continues to work.
- Plans that were hedged were insulated from changes to interest rates in 2023.
- Some plans focused on total return “won” for a second year in a row as rising rates decreased the liability, resulting in an increased funded ratio.
- As closed plans’ liabilities shorten, interest in intermediate fixed income continues.

- Many plans’ improved funded status has led some to further implement de-risking glidepaths.
- Higher fixed income assumptions have led clients to weigh changing allocations to the asset class, but in different ways. Some are looking at long duration bonds, others at whether to add to their fixed income allocations or stay pat.

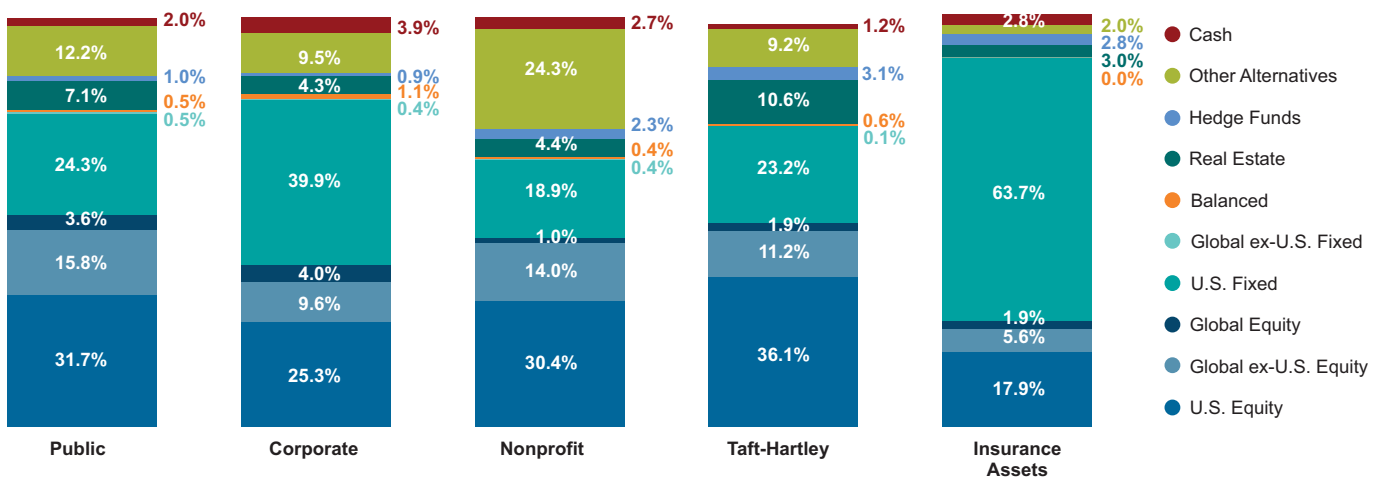
**Nonprofits**

- These investors are still focused on total return.
- Interest in private credit remains strong.
- Inflation concerns continue to affect real returns.
- Strong economies can lead to strong fundraising efforts, which can help dampen return volatility.

**Defined Contribution (DC) Plans**

- These are the significant new issues:
  - SECURE 2.0 and its postponement
  - Retirement income and how the maturing demographics of participants, higher rates, and rollovers can affect the different types of retirement income solutions plans can choose.
- The gap in returns between money market and stable value funds was a new source of concern for some plans.

**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

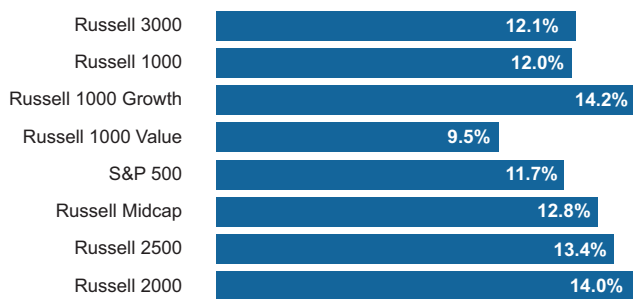
# Equity

## U.S. Equities

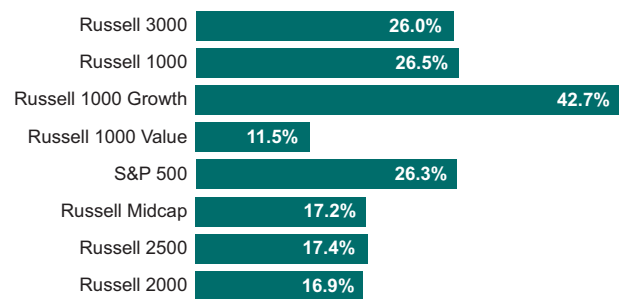
### End-of-the-year rally

- U.S. equity markets rebounded in the last two months of the year as the impact of possible rate cuts in 2024 started to get priced in.
- The S&P 500 Index approached a record high as the year closed. Of note, 2023 was the first year since 2012 that the S&P failed to reach a high-water mark. That said, the index was up an impressive 11.7% in 4Q and 26.3% for the year.
- The tech sector was the clear winner for the quarter and the year (+17.2%; +57.8%) while Energy (-6.9%; -1.3%) was the only sector to register both a 4Q and 2023 decline.
- 2023 saw the narrowest breadth of leadership (“the Magnificent Seven”) since 1987, with just 27% of stocks outperforming the S&P 500. Historically, such concentrated leadership has not been the sign of a healthy market.
- Fourth quarter and 2023 returns for the bunch were impressive: Alphabet: +6.8%, +58.8%; Amazon: +19.5%, +80.9%; Apple: +12.6%, +49.0%; Meta: +17.9%, +194.1%; Microsoft: +19.3%, +58.2%; NVIDIA: +13.9%, +239.0%; Tesla: -0.7%, +101.7%.
- The index would have been up only about 10% for the year without these stocks, and the equal-weighted S&P 500 returned 11.9% in 4Q and 13.9% in 2023.
- However, gains started broadening out in the last two months of the year with the equal-weighted S&P index outperforming the capitalization-weighted version.
- Smaller cap stocks also outperformed their large cap counterparts in 4Q23, further proof of the broadening out of returns.
- For the full year, large cap stocks outperformed small cap stocks by almost 10 percentage points.
- Growth vs. value performance was mixed across market capitalization during the quarter. Within large cap, growth outperformed value, while the opposite was true within small cap.

### U.S. Equity: Quarterly Returns (12/31/23)

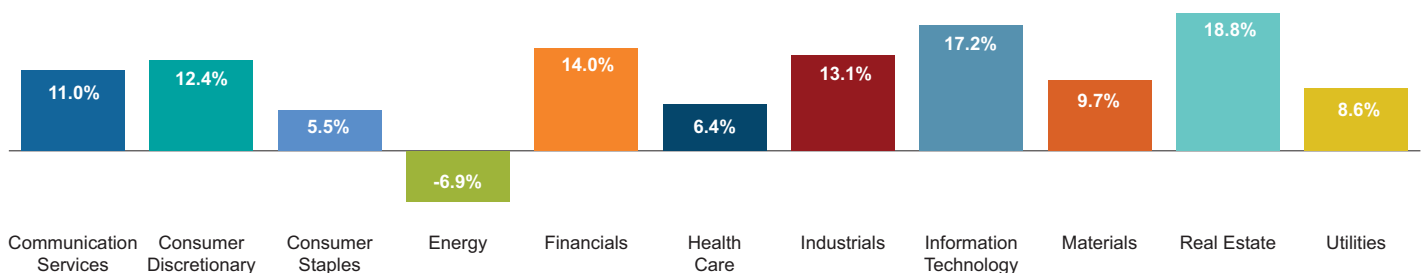


### U.S. Equity: One-Year Returns (12/31/23)



Sources: FTSE Russell and S&P Dow Jones Indices

### Quarterly Performance of Industry Sectors (12/31/23)



Source: S&P Dow Jones Indices

## Global Equities: Global markets in the black for 4Q

### Broad market

- Dovish signaling from central banks and dropping yields led to a broad market rally in 4Q23.
- Global ex-U.S. small caps reclaimed some of their lagging performance in 4Q but ended the year as the worst-performing broad-based index, albeit up over 12%. Elevated borrowing costs and the persistent risk of a recession have kept investors away.
- Japan's low rates have benefited exporters, and the threat of being delisted spurred a stock buy-back spree. Coupled with an increased focus on governance, this spurred Japan to a multi-decade high.

### Emerging markets

- Emerging markets underperformed developed markets.
- India's rally couldn't overcome China's weakness, whose economic growth was near the government's target, but investor concerns around stimulus and a surprisingly sluggish reopening drove stocks lower.

### Growth vs. value

- Energy, a volatile area in the market, pulled back value's rally after having a strong 3Q. Global ex-U.S. growth rallied on lowering yields but couldn't overcome earlier underperformance and ended the year behind its value peers in both emerging and developed markets.

### U.S. dollar vs. other currencies

- The U.S. dollar weakened in 4Q as investors believed that U.S. interest rates would fall faster than much of the developed world.

### China: Danger or opportunity?

#### Long-term growth potential

- China has the second-largest GDP and the world's largest population of consumers.

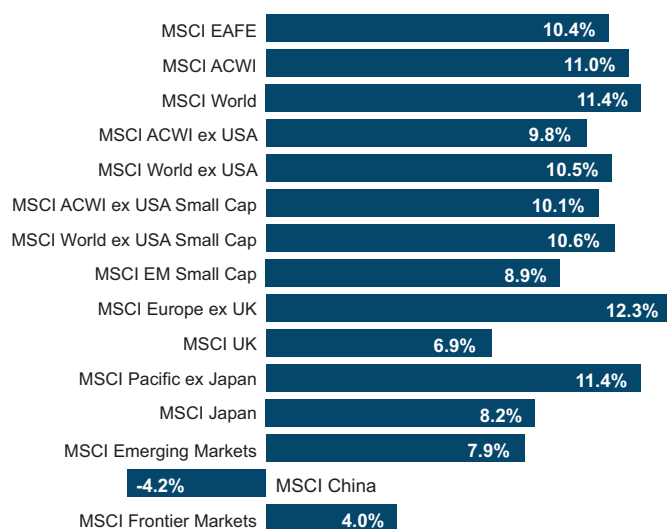
#### Valuation

- Valuations remain attractive on a forward P/E basis.

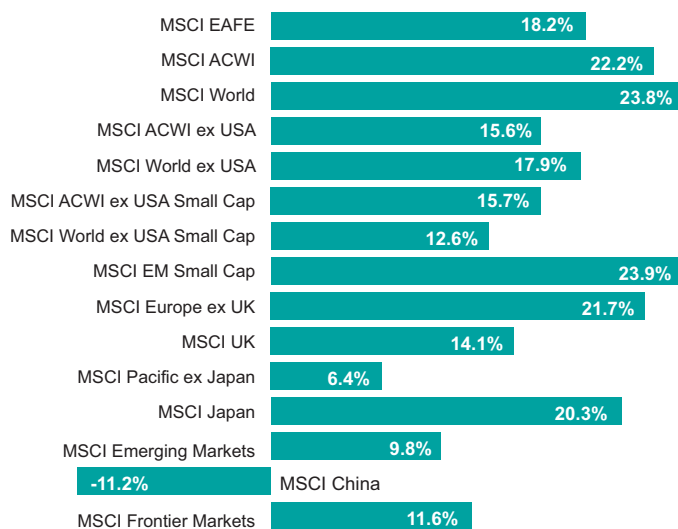
### Structural challenges

- Inbound foreign direct investment (FDI) for China went negative for the first time as local markets remained weak and geopolitical tensions persisted.
- China is run by an authoritarian regime that may act against investors' best interests.

### Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 12/31/23)



### Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 12/31/23)



Source: MSCI

# Fixed Income

## U.S. Fixed Income

### Strong returns at end of year

- Driven by falling rates and strong risk-on sentiment, the Agg returned 6.8%, the highest quarterly return since 2Q89 (when the 90-day T-bill was over 8% and inflation hit 14% earlier in the decade)!
- 10-year U.S. Treasury yield closed the year at 3.88%
- A round trip from December 2022, masking significant volatility during the year
- High was 4.98% in October and low was 3.30% in April
- Corporates and mortgages outperformed Treasuries for the quarter and year.
- High yield corporates soared as defaults remained low and the economy resilient.

### U.S. Treasury yield curve remained inverted, but less so

- 106 bps as of 6/30; 44 bps as of 9/30; 35 bps as of 12/31

### Fed kept Fed Funds rate on hold and softened language

- Pivoted from “higher for longer” to projected rate cuts in 2024
- Inflation over past six months below Fed’s 2% target
- Core PCE Price Index was 1.9% annualized in November.
- Markets expect six rate cuts in 2024 versus three in the Fed’s Summary of Economic Projections.

### Valuations

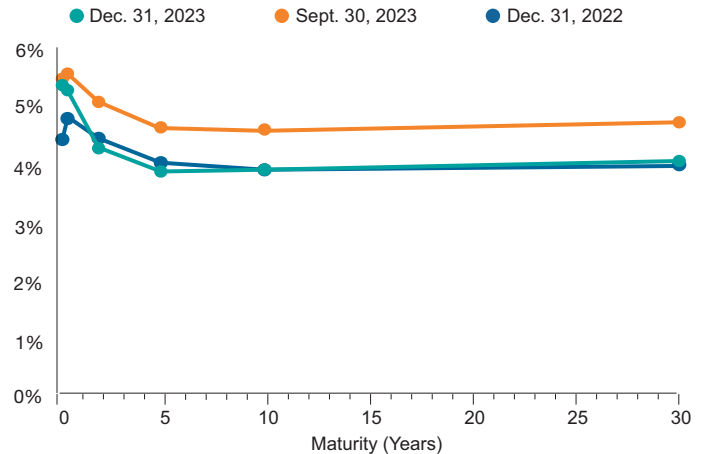
- Investment grade and high yield corporate spreads now below 10-year averages

## Municipal Bonds

### Gains in 4Q and a superb November

- November was the best month since August 1982.
- Helped by falling yields, muted issuance, and strong demand
- Reversed the -1.4% year-to-date return as of 9/30

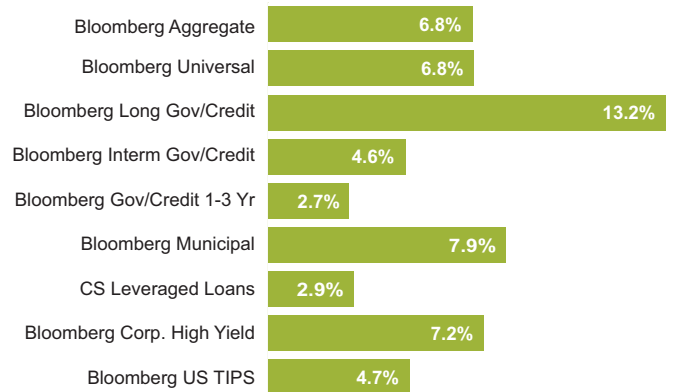
## U.S. Treasury Yield Curves



Source: Bloomberg

## U.S. Fixed Income: Quarterly Returns

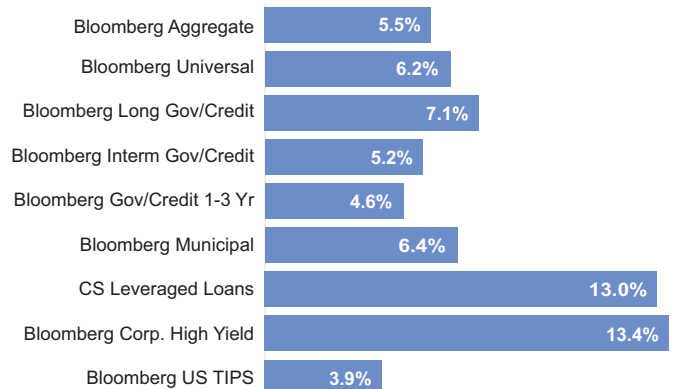
(12/31/23)



Sources: Bloomberg and Credit Suisse

## U.S. Fixed Income: One-Year Returns

(12/31/23)



## FIXED INCOME (Continued)

### BBBs performed best for quarter and year

- AAA: +8.4%; +5.8%
- AA: +7.6%; +5.9%
- A: +8.0%; +7.3%
- BBB: +9.2%; +8.9%

### Valuations

- Credit spreads close to historical averages
- Mortgage spreads widened on interest rate volatility and slowing prepayments.

### Valuations vs. U.S. Treasuries richened

- 10-year AAA Muni/10-year U.S. Treasury yield ratio 59%, down from 75% as of 9/30
- Well below 10-year median of 87%
- After-tax yields remain attractive at 5.4% (source: Morgan Stanley).

### Fundamentals for state, local governments remain sound

- Upgrades exceeded downgrades in 2023.

### Global Fixed Income

#### Falling rates bolstered 4Q returns globally

- Central banks seen as moving closer to cutting rates as inflation moderated
- Gains were broad-based across countries with the U.S. lagging other developed markets in unhedged terms.
- Emerging markets also posted strong results with gains across most countries.

#### U.S. dollar weakened

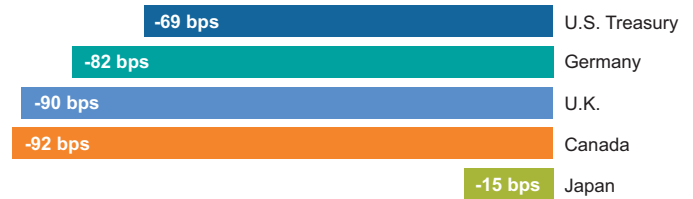
- Major currencies rose compared to the dollar in 4Q.

#### Emerging markets also posted strong results

- Gains across most countries

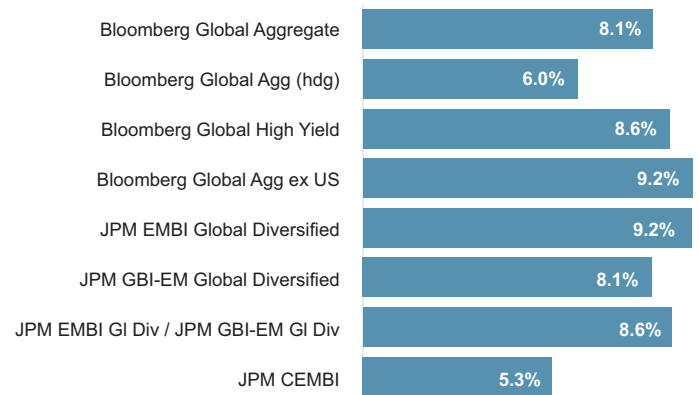
### Change in 10-Year Global Government Bond Yields

3Q23 to 4Q23



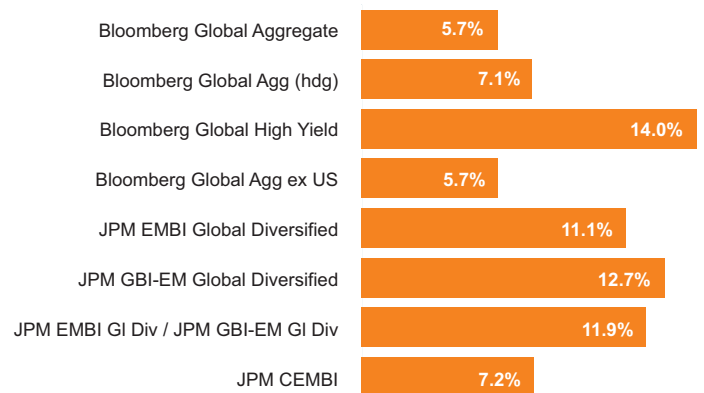
Source: Bloomberg

### Global Fixed Income: Quarterly Returns (12/31/23)



Sources: Bloomberg and JPMorgan Chase

### Global Fixed Income: One-Year Returns (12/31/23)



Sources: Bloomberg and JPMorgan Chase

# Private RE Falls but REITs Outpace Stocks

REAL ESTATE/REAL ASSETS | Munir Iman

## Private RE valuations reflect higher rates

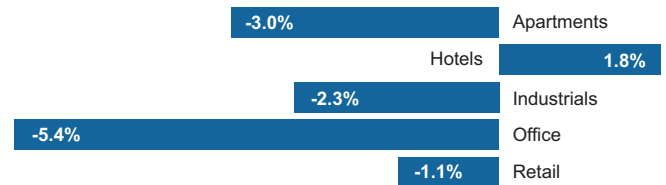
- The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 3.0% during 4Q23. The income return was 1.1% while the appreciation return was –4.1%.
- Hotels, which represent a small portion of the index, led property sector performance with a gain of 1.8%.
- Office finished last with a loss of 5.4%.
- Regionally, the South led with a loss of 1.9%, while the West was the worst performer with a drop of 3.7%.
- The NCREIF Open-End Diversified Core Equity (ODCE) Index, representing equity ownership positions in U.S. core real estate, fell 4.8% during 4Q, with an income return of 1.0% and an appreciation return of -5.8%.

## REITs outperform equities

- The FTSE EPRA Nareit Developed REIT Index, a measure of global real estate securities, rose 15.6% during 4Q23.
- U.S. REITs, as measured by the FTSE Nareit Equity REITs Index, increased 16.2%.
- The FTSE EPRA Nareit Asia Index (USD), representing the Asia/Pacific region, gained 8.6%.
- European REITs, as measured by the FTSE EPRA Nareit Europe Index (USD), jumped 26.8%.
- U.S. REITs outperformed the S&P 500 (11.7%). They also topped Asia REITs but underperformed Europe.

## Sector Quarterly Returns by Property Type

(12/31/23)



Source: NCREIF

- The outperformance in the U.S. was driven by dampening inflation, coupled with a more dovish Federal Reserve sentiment sparking a rally to close the year.
- The office sector outperformed, coming off its lows.
- Gaming, residential, health care, and data center lagged, impacted by interest rate challenges and prior strong performances.
- The FTSE EPRA Nareit Developed Asia Index (USD) rose 8.6% during the quarter. China's economic outlook remains uncertain, exacerbated by geopolitical tensions and underwhelming stimulus.
- The FTSE EPRA Nareit Developed Europe Index (USD) increased by 26.8% during the quarter.
- Europe was the top-performing region, driven by meaningful currency tailwinds. Expectations of a dovish central bank were driven by weakening economic data.

## Callan Database Median and Index Returns\* for Periods Ended 12/31/23

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
<b>Real Estate ODCE Style</b>	<b>-0.4</b>	<b>-10.0</b>	<b>-10.0</b>	<b>4.9</b>	<b>4.7</b>	<b>7.0</b>	<b>5.2</b>
NFI-ODCE (value-weighted, net)	-5.0	-12.7	-12.7	4.0	3.3	6.3	5.1
NCREIF Property	-3.0	-7.9	-7.9	4.6	4.3	6.8	6.4
NCREIF Farmland	2.3	5.0	5.0	7.4	6.0	7.3	9.4
NCREIF Timberland	4.3	9.5	9.5	10.5	6.6	5.8	4.7
<b>Public Real Estate</b>							
<b>Global Real Estate Style</b>	<b>15.4</b>	<b>12.2</b>	<b>12.2</b>	<b>2.6</b>	<b>5.6</b>	<b>6.0</b>	<b>9.3</b>
FTSE EPRA Nareit Developed	11.3	2.2	2.2	3.5	5.9	6.0	8.6
<b>Global ex-U.S. Real Estate Style</b>	<b>15.4</b>	<b>9.0</b>	<b>9.0</b>	<b>-3.7</b>	<b>3.2</b>	<b>4.8</b>	<b>8.6</b>
FTSE EPRA Nareit Dev ex US	14.9	6.3	6.3	-4.5	-0.5	1.0	5.6
<b>U.S. REIT Style</b>	<b>16.5</b>	<b>14.0</b>	<b>14.0</b>	<b>6.8</b>	<b>8.8</b>	<b>8.6</b>	<b>11.6</b>
FTSE EPRA Nareit Equity REITs	16.2	13.7	13.7	7.2	7.4	7.6	10.5

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

# Big Slowdown After Frenzy of 2021

PRIVATE EQUITY | Ashley Kahn

Both new investment activity and exit activity slowed markedly in 2023, following rising interest rates, declines in the public markets, and continued price uncertainty.

**Fundraising** ► Fundraising declined back closer to historical levels in 2022 after its frenzied peak in 2021. So far, 2023 has been another down year, with LPs being more selective with their commitments.

**Buyouts** ► There was a significant decline in deal activity this year after the highs of 2021-2022, caused by high interest rates, a wide bid-ask spread, and lingering effects from the slowdown in the public markets. There was also greater difficulty in obtaining financing this year, particularly for mega buyout deals, which has brought down leverage ratios across the industry.

Buyout valuations are finally starting to normalize in 2023 after their peak in 2021. Buyout valuations are sensitive to changes in interest rates—as the cost of borrowing rises, it is harder to justify high valuations.

**Venture Capital and Growth Equity** ► There was a substantial decline in venture capital and growth equity activity in 2023, following the crazed highs of 2021 and early 2022. Valuations, likewise, have reverted back to historical levels, particularly at the late stage.

## Private Equity Performance (%) (Pooled Horizon IRRs through 9/30/23\*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	-2.4	-8.9	14.8	17.2	17.2	13.4	12.5	20.4
Growth Equity	-0.6	0.8	12.3	14.8	14.3	13.1	13.8	14.3
All Buyouts	0.1	10.2	16.8	15.0	14.6	12.4	14.6	12.8
Mezzanine	1.8	13.0	13.5	11.0	11.1	10.7	11.1	9.9
Credit Opportunities	1.2	8.2	11.1	7.1	7.5	10.1	9.3	9.6
Control Distressed	0.4	5.6	19.4	13.6	11.7	11.5	11.6	11.4
<b>All Private Equity</b>	<b>-0.4</b>	<b>4.2</b>	<b>15.4</b>	<b>14.8</b>	<b>14.3</b>	<b>12.5</b>	<b>13.6</b>	<b>13.0</b>
S&P 500	11.7	26.3	10.0	15.7	12.0	14.0	9.7	7.6
Russell 3000	12.1	26.0	8.5	15.2	11.5	13.8	9.7	7.7

Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices  
\*Most recent data available at time of publication

**Exits** ► Exits have declined dramatically after hitting all-time records in 2021. Only 8% of total private equity AUM generated liquidity in 2023 (the lowest level ever)—lower even than the depths of the Global Financial Crisis.

With the IPO window still closed and increasing antitrust sentiment, it is unclear whether exit activity will rebound in 2024. IPO exits in 2023 were at just 15% of pre-pandemic levels.

**Returns** ► Public equity's strong recovery in 2023 (led by the "Magnificent 7" technology stocks) has left private equity in its wake. Private equity only saw about a fifth of the gains of the public markets over the last year, on a PME basis.

## Funds Closed 1/1/23 to 12/31/23

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	1,584	199,090	21%
Growth Equity	139	103,324	11%
Buyouts	515	471,684	50%
Mezzanine Debt	24	36,050	4%
Distressed/Special Credit	42	46,018	5%
Energy	6	3,296	0%
Secondary and Other	137	74,616	8%
Fund-of-funds	25	5,567	1%
<b>Totals</b>	<b>1,472</b>	<b>552,402</b>	<b>100%</b>

Source: PitchBook (Figures may not total due to rounding.)

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.

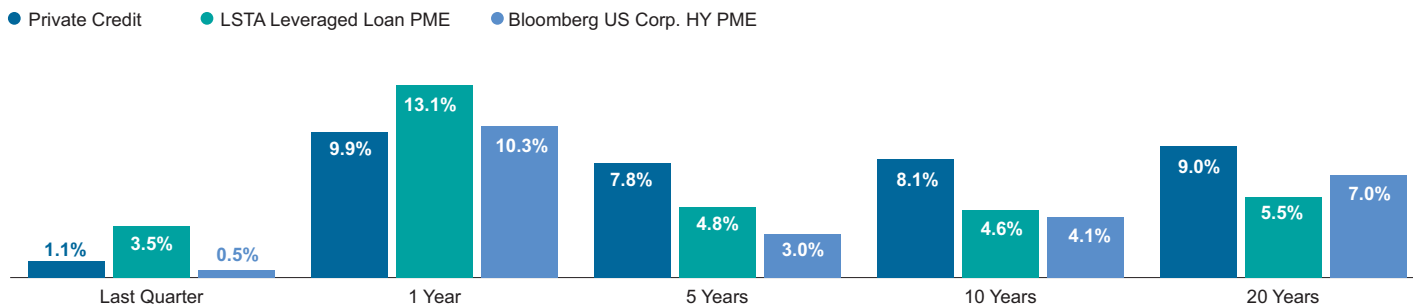


# Net IRR of Nearly 9% Over Three Years

PRIVATE CREDIT | Catherine Beard

- Private credit performance varies across sub-asset class and underlying return drivers. Over the past three years the asset class has generated a net IRR of nearly 9%. Higher-risk strategies have performed better than lower-risk strategies.
- Private credit remained in high demand across Callan’s investor base, and a number of large defined benefit plans are looking to increase their existing private credit allocations from 2%–3% to 5%–10%.
- While we always work to build out diversified client portfolios, we think there is particularly interesting relative value in upper middle market sponsor-backed lending and asset-based lending.
- We are seeing an uptick in stress for some individual names in direct lending portfolios due to a combination of input cost inflation and increased interest expense.
- Private credit AUM stood at over \$1.5 trillion at the end of 2023, with Preqin forecasting the asset class will grow to over \$2.5 trillion by 2028 at a 11.13% CAGR from 2023 to 2028.
- Direct lending is expected to grow steadily through 2028 as investors increase their private credit allocations. Distressed exposure will grow a bit more slowly with other strategies such as opportunistic, special situations, and other niche diversifiers growing more quickly.

## Private Credit Performance (%) (Pooled Horizon IRRs through 9/30/23\*)



## Private Credit Performance (%) (Pooled Horizon IRRs by Strategy through 9/30/23\*)

Strategy	Quarter	1 Year	5 Years	10 Years	20 Years
Senior Debt	0.1	11.4	5.9	6.6	6.8
Mezzanine	1.8	13.0	11.0	11.1	10.5
Credit Opportunities	1.2	8.2	7.1	7.6	8.9

Source: LSEG/Cambridge

\*Most recent data available at time of publication



# Gains in 4Q23 Spurred by Rising Stocks and Bonds

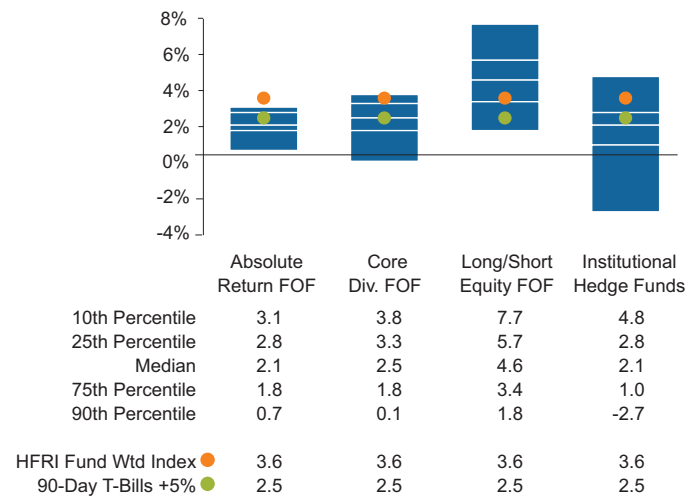
HEDGE FUNDS/MACs | Joe McGuane

Equity markets ended the final quarter of 2023 with double-digit gains and, by the time the year ended, recouped all of 2022's losses. This surge was marked by rising expectations that the Federal Reserve was done hiking interest rates and would begin easing monetary policy in the new year. The yield on the U.S. 10-year Treasury declined sharply to end December at 3.9%, the same level where it began the year. Credit in general had a positive quarter, driven by lower rates and tighter spreads. Investment grade outperformed high yield, as both indices ended the quarter positive.

Hedge funds ended the year on a strong note. Equity hedge strategies were the best performing, as those with higher net long exposure performed better, along with strategies focused on health care and technology, media, and telecommunications (TMT). Relative value strategies generated positive performance during the quarter, driven by fundamental and systematic equity relative value strategies. Event-driven strategies

## Hedge Fund Style Group Returns

(12/31/23)



Sources: Callan, Credit Suisse, Federal Reserve

## Callan Peer Group Median and Index Returns\* for Periods Ended 12/31/23

Hedge Fund Universe	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	2.1	7.5	7.5	5.6	7.1	5.8
Callan Fund-of-Funds Peer Group	2.9	6.9	6.9	4.0	5.6	4.2
Callan Absolute Return FOF Style	2.1	5.7	5.7	5.5	5.3	4.3
Callan Core Diversified FOF Style	2.5	6.8	6.8	3.7	5.7	3.6
Callan Long/Short Equity FOF Style	4.6	9.0	9.0	-0.2	6.1	5.2
HFRI Fund Weighted Index	3.6	7.6	7.6	4.3	7.0	4.5
HFRI Fixed Convertible Arbitrage	1.4	4.8	4.8	3.8	6.8	4.8
HFRI Distressed/Restructuring	3.2	6.7	6.7	5.7	6.3	4.0
HFRI Emerging Markets	4.2	8.1	8.1	0.1	4.8	3.1
HFRI Equity Market Neutral	1.4	5.6	5.6	4.6	3.2	2.9
HFRI Event-Driven	5.4	10.4	10.4	5.7	6.8	4.6
HFRI Relative Value	2.6	7.0	7.0	4.6	4.9	4.0
HFRI Macro	-1.1	-0.6	-0.6	5.3	5.5	3.1
HFRI Equity Hedge	5.6	10.5	10.5	3.5	8.3	5.2
HFRI Multi-Strategy	4.6	9.8	9.8	1.8	4.5	2.9
HFRI Merger Arbitrage	4.3	5.8	5.8	6.4	6.2	4.7
90-Day T-Bill + 5%	2.5	10.0	10.0	7.2	6.9	6.3

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

also ended on a strong note, as interest rate volatility provided trading opportunities when credit spreads tightened going into year-end. Macro strategies ended the quarter slightly negative, as losses from short positions in U.S. equities and developed market rates were offset by long technology equities and long front-end rates positions.

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 rose 2.1%. Within this style group of 50 peers, the average hedged credit manager gained 2.6%, driven by actively trading around interest rate volatility. The median Callan Institutional hedged rates manager rose 2.3%, largely driven by relative value fixed income trades. Meanwhile, the average hedged equity manager added 2.2%, as sector-focused managers were able to profit from the broad market rally.

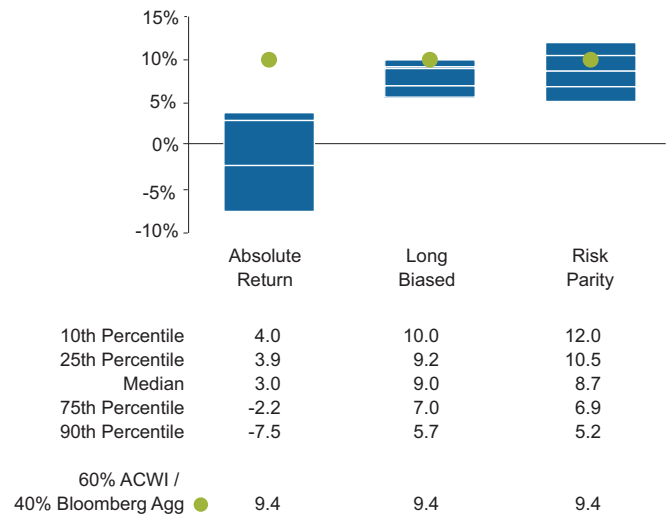
Within the HFRI indices, the best-performing strategy last quarter was equity hedge (5.6%), as health care-, financial-, and technology-focused strategies drove performance during the final quarter of the year. Macro strategies fell 1.1%, as short equity positions offset gains from front end interest rate trading.

Across the Callan Hedge FOF database, the median Callan Long-Short Equity FOF gained 4.6%, as sector-focused strategies drove performance during the quarter. The median Callan Core Diversified FOF rose 2.5%, boosted by equity and event-driven strategies. The Callan Absolute Return FOF ended 2.1% higher, as lower equity beta strategies were behind this move higher.

Within Callan's database of liquid alternative solutions, the Callan MAC Long Biased manager rose 9.0%, as the broad-based equity rally moved performance higher. The Callan MAC Risk Parity peer group rose 8.7%, as equities and fixed income drove performance. The Callan MAC Absolute Return peer group rose, as broad markets had a strong end of the year.

## MAC Style Group Returns

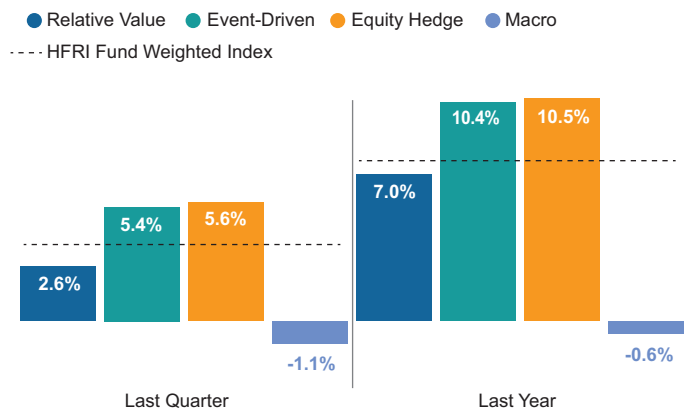
(12/31/23)



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

## HFRI Hedge Fund-Weighted Strategy Returns

(12/31/23)



Source: HFRI

# Index Drops by 2.9% After Three Quarters of Gains

DEFINED CONTRIBUTION | [Scotty Lee](#)

## Performance: Index Dips after Third Straight Quarterly Gain

- The Callan DC Index™ lost 2.9% in 3Q23, which brought the Index’s trailing one-year gain to 13.8%. The Age 45 Target Date Fund (analogous to the 2045 vintage) had a lower quarterly return (-3.6%).

## Growth sources: Investment Losses Lead to Fall in Balances

- Balances within the DC Index fell by 3.2% after a 4.3% increase in the previous quarter. Investment losses (-2.9%) were the primary driver.

## Turnover: Net Transfers Decrease

- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index decreased to 0.26% from the previous quarter’s measure of 0.33%. Despite the decrease, the Index’s historical average (0.55%) remained steady.

## Net cash flow analysis: Stable Value Declines Sharply

- Automatic features and their appeal to “do-it-for-me” investors typically result in target date funds (TDFs) receiving the largest net inflows in the DC Index, which was the case in 3Q23 as the asset allocation funds garnered 87.2% of quarterly net flows. Stable value (-56.2%) saw relatively large outflows for the fourth straight quarter.

## Equity allocation: Exposure Declines

- The Index’s overall allocation to equity (71.5%) fell slightly from the previous quarter’s level (71.8%). The current equity allocation continues to sit above the Index’s historical average (68.4%).

## Asset allocation: Fixed Income, TDFs See Gains

- U.S. fixed income (5.5%) and target date funds (34.1%) were among the asset classes with the largest percentage increases in allocation, while U.S small/mid cap equity (7.4%) had the largest decrease in allocation from the previous quarter due to net outflows.

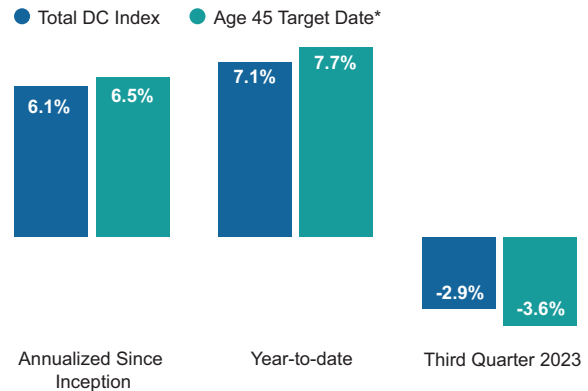
## Prevalence: Money Market Up, Stable Value Down

- The prevalence of money market funds (54.1%) rose by 1.5% accompanied by a decrease in the prevalence of stable value funds (70.1%) by 0.8%.

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

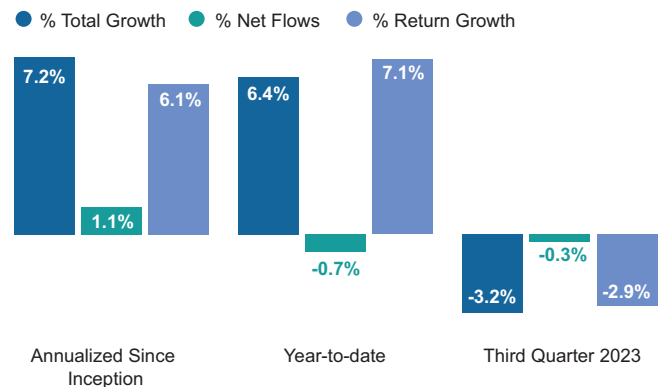
## Investment Performance

(9/30/23)



## Growth Sources

(9/30/23)



## Net Cash Flow Analysis (3Q23)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	87.2%
Global ex-U.S. Equity	5.3%
U.S. Small/Mid Cap	-13.3%
Stable Value	-56.2%
<b>Total Turnover**</b>	<b>0.3%</b>

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.

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## ASSET ALLOCATION AND PERFORMANCE

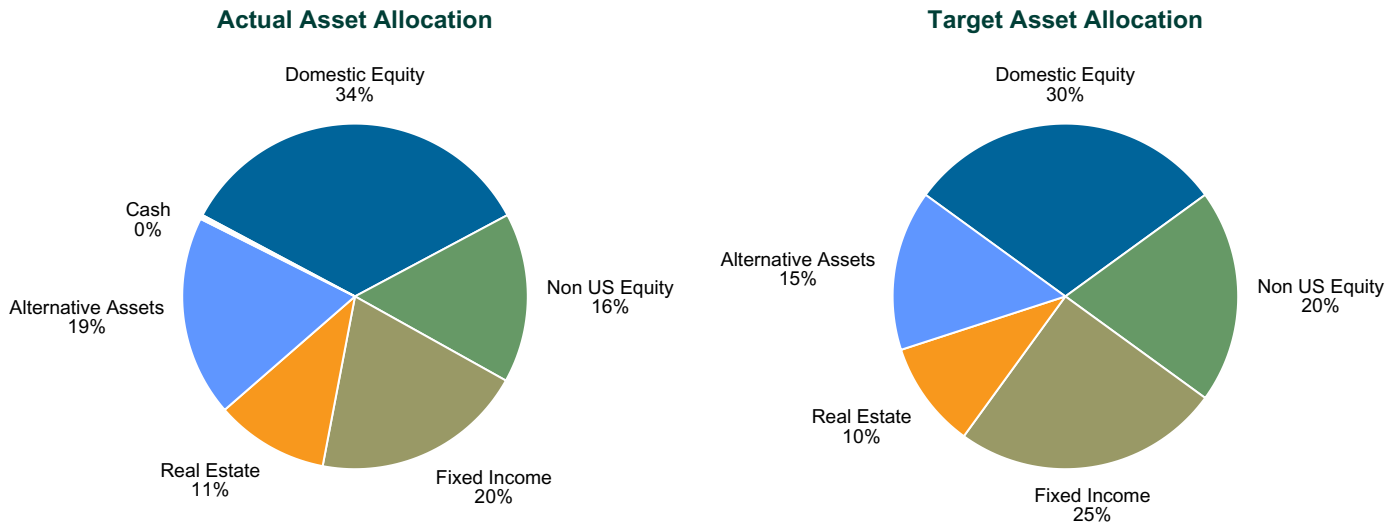
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### **Asset Allocation and Performance**

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.

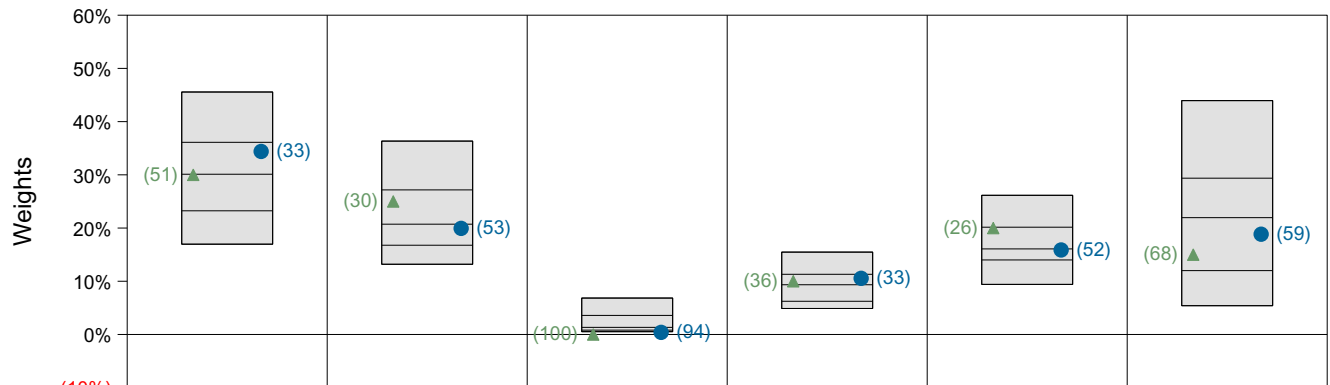
## Actual vs Target Asset Allocation As of December 31, 2023

The top left chart shows the Fund's asset allocation as of December 31, 2023. 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	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	4,048,532	34.4%	30.0%	4.4%	517,377
Non US Equity	1,869,115	15.9%	20.0%	(4.1%)	(484,988)
Fixed Income	2,346,688	19.9%	25.0%	(5.1%)	(595,941)
Real Estate	1,242,240	10.6%	10.0%	0.6%	65,188
Alternative Assets	2,217,599	18.8%	15.0%	3.8%	452,022
Cash	46,343	0.4%	0.0%	0.4%	46,343
<b>Total</b>	<b>11,770,517</b>	<b>100.0%</b>	<b>100.0%</b>		

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



	Domestic Equity	Fixed Income	Cash	Real Estate	Non US Equity	Alternative Assets
10th Percentile	45.57	36.34	6.84	15.48	26.15	43.95
25th Percentile	36.11	27.17	3.58	11.31	20.16	29.37
Median	30.11	20.72	1.33	9.34	16.08	21.95
75th Percentile	23.24	16.77	0.81	6.24	14.00	12.00
90th Percentile	16.97	13.19	0.52	4.89	9.41	5.41
<b>Fund</b> ●	34.40	19.94	0.39	10.55	15.88	18.84
<b>Target</b> ▲	30.00	25.00	0.00	10.00	20.00	15.00
% Group Invested	98.31%	96.61%	88.14%	79.66%	96.61%	74.32%

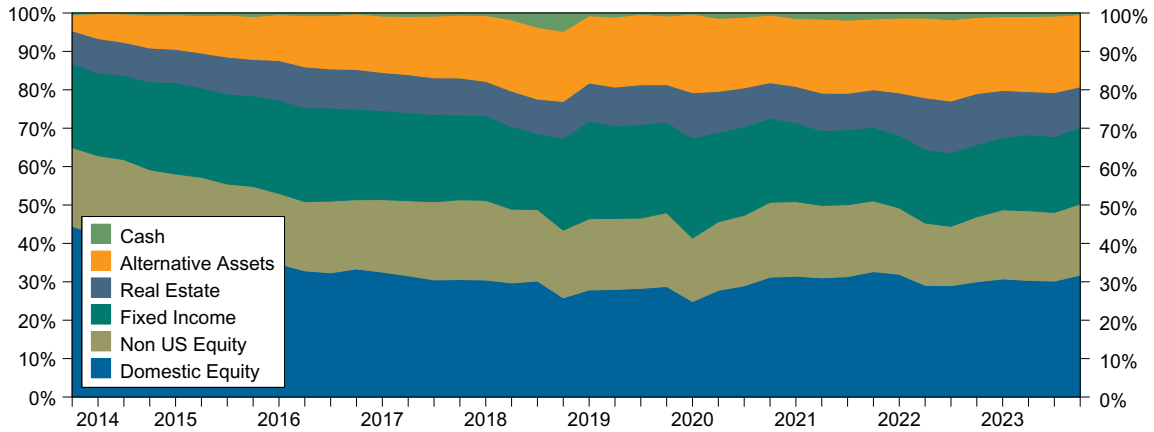
\* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

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

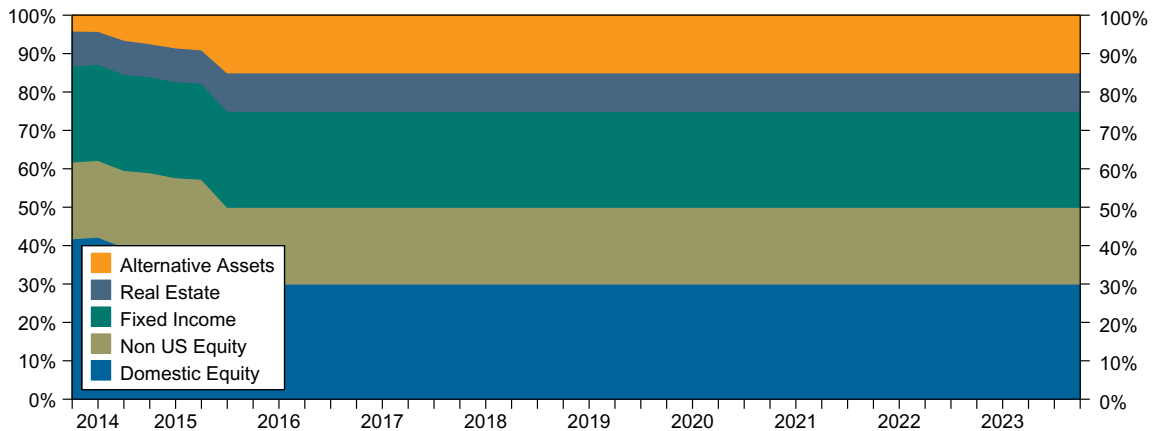
## Actual vs Target Historical Asset Allocation

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).

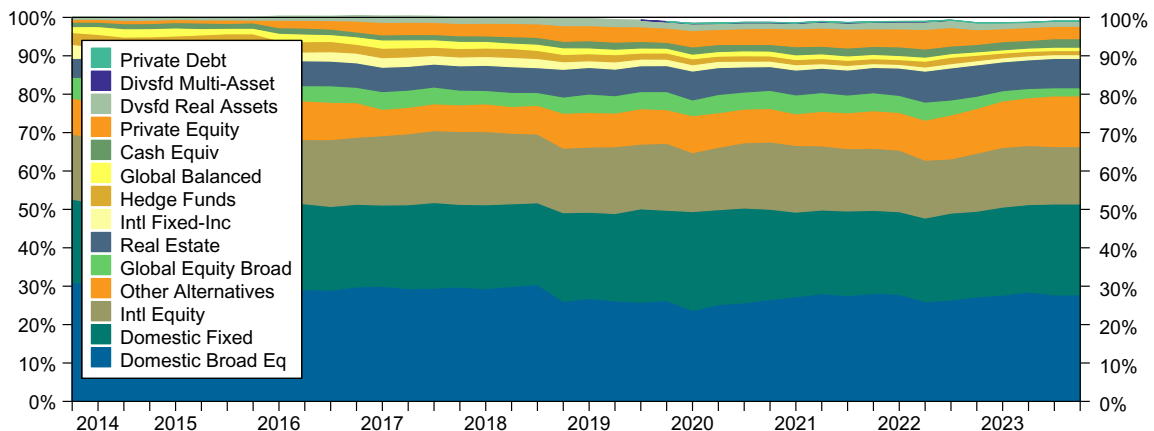
### Actual Historical Asset Allocation



### 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 December 31, 2023

## 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).

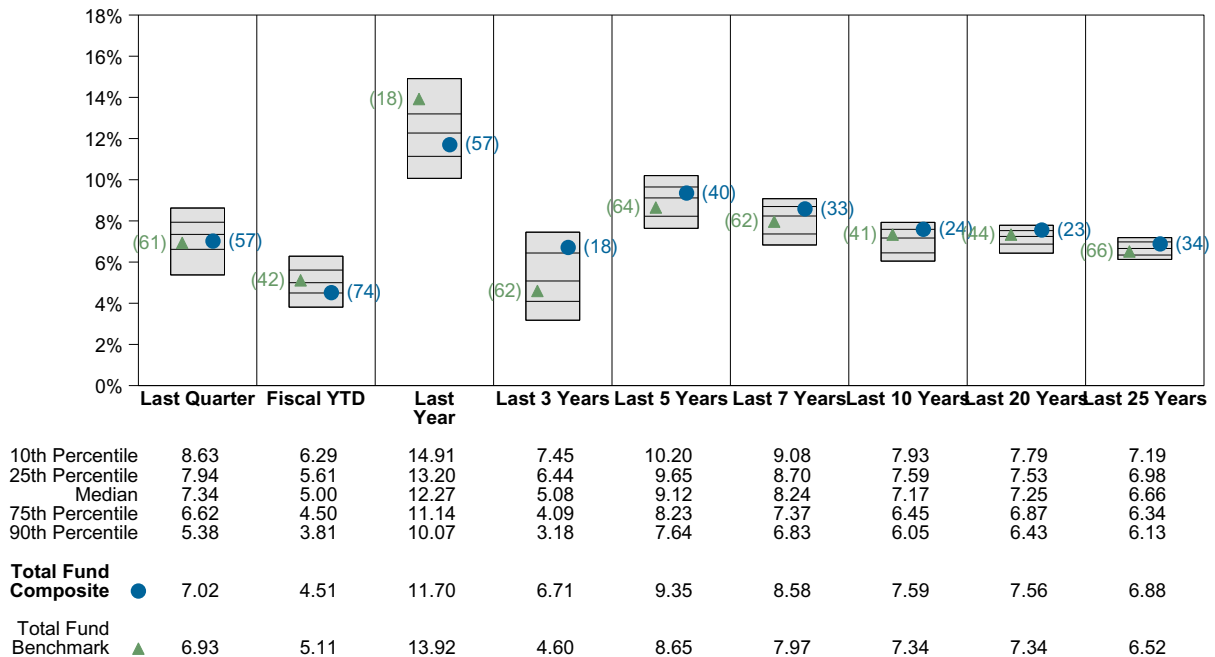
## Quarterly Summary and Highlights

- Total Fund Composite's portfolio posted a 7.02% return for the quarter placing it in the 57 percentile of the Callan Public Fund Large DB group for the quarter and in the 57 percentile for the last year.
- Total Fund Composite's portfolio outperformed the Total Fund Benchmark by 0.09% for the quarter and underperformed the Total Fund Benchmark for the year by 2.22%.

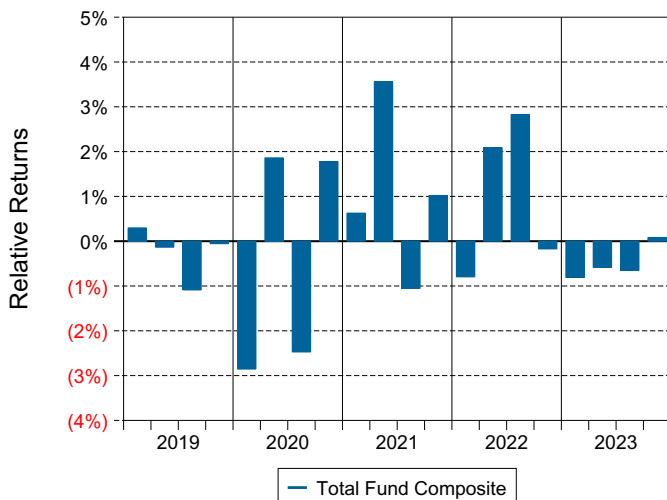
## Quarterly Asset Growth

Beginning Market Value	\$11,071,422,744
Net New Investment	\$-76,428,424
Investment Gains/(Losses)	\$775,522,497
Ending Market Value	\$11,770,516,817

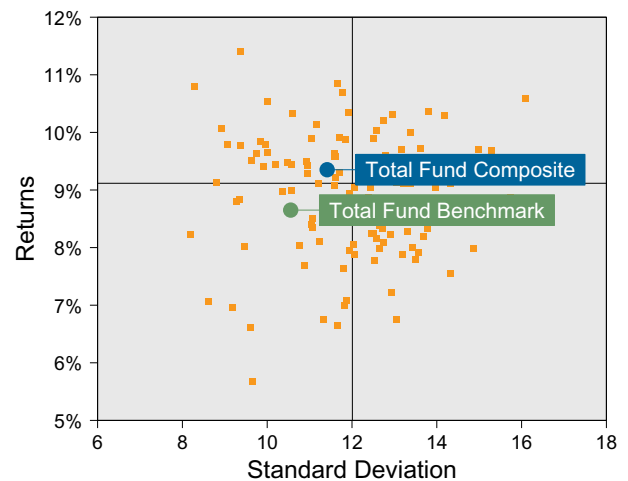
## Performance vs Callan Public Fund Large DB (Gross)



## Relative Return vs Total Fund Benchmark



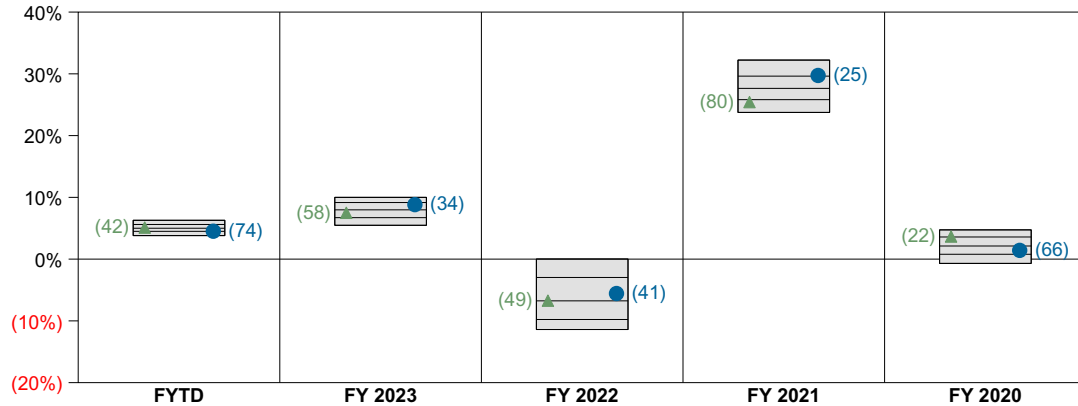
## Callan Public Fund Large DB (Gross) Annualized Five Year Risk vs Return



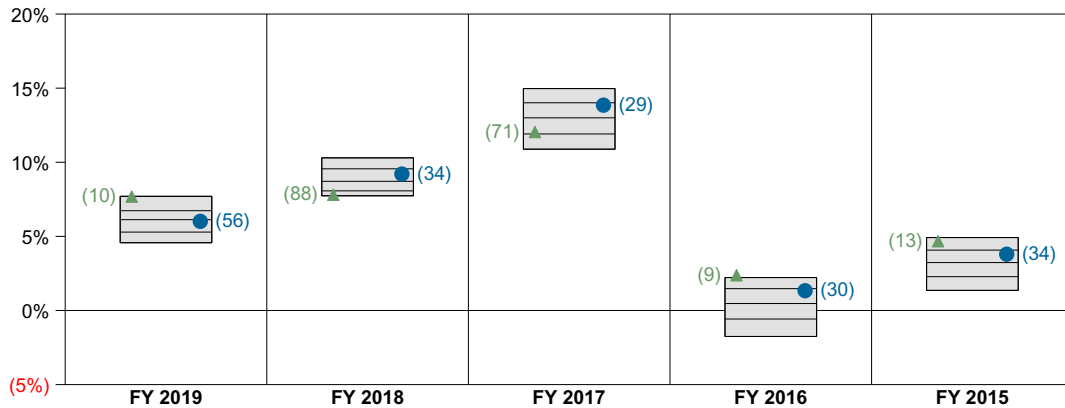
# New Hampshire Retirement System Performance vs Callan Public Fund Spons - Large (>1B) Periods Ended December 31, 2023

## 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.



10th Percentile	6.29	10.00	0.01	32.23	4.74
25th Percentile	5.61	9.16	(2.97)	29.63	3.58
Median	5.00	7.98	(6.76)	27.65	2.13
75th Percentile	4.50	6.72	(9.78)	25.82	0.79
90th Percentile	3.81	5.47	(11.40)	23.75	(0.69)
<b>Total Fund Composite</b>	● 4.51	8.82	(5.57)	29.74	1.41
<b>Total Fund Benchmark</b>	▲ 5.11	7.50	(6.72)	25.43	3.67



10th Percentile	7.70	10.30	14.97	2.22	4.92
25th Percentile	6.73	9.56	14.01	1.47	4.07
Median	6.13	8.71	13.00	0.47	3.23
75th Percentile	5.29	8.07	11.91	(0.58)	2.28
90th Percentile	4.57	7.74	10.88	(1.75)	1.36
<b>Total Fund Composite</b>	● 6.01	9.21	13.85	1.33	3.80
<b>Total Fund Benchmark</b>	▲ 7.69	7.81	12.04	2.38	4.67

\* 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).

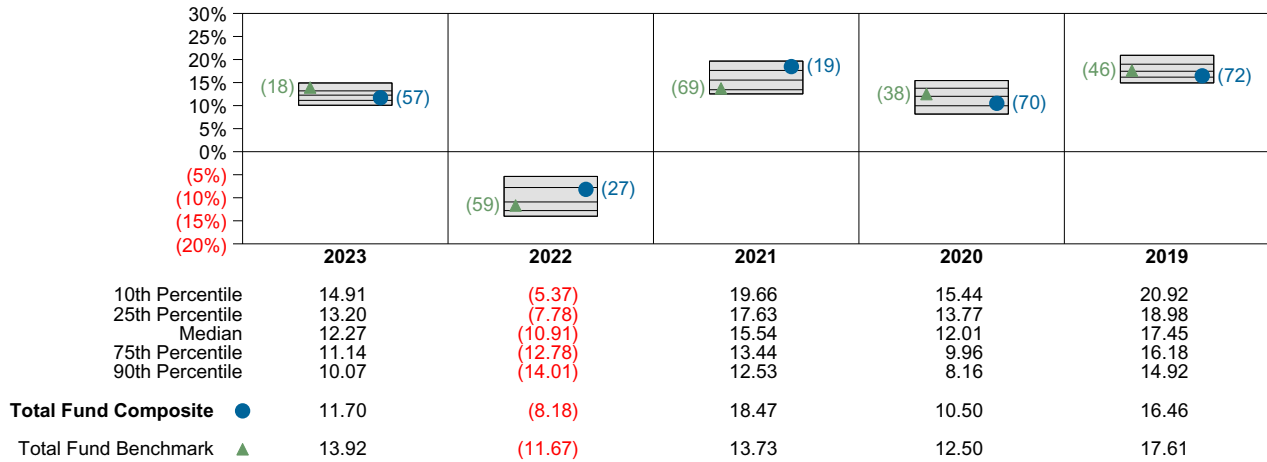


# Total Fund Composite Return Analysis Summary

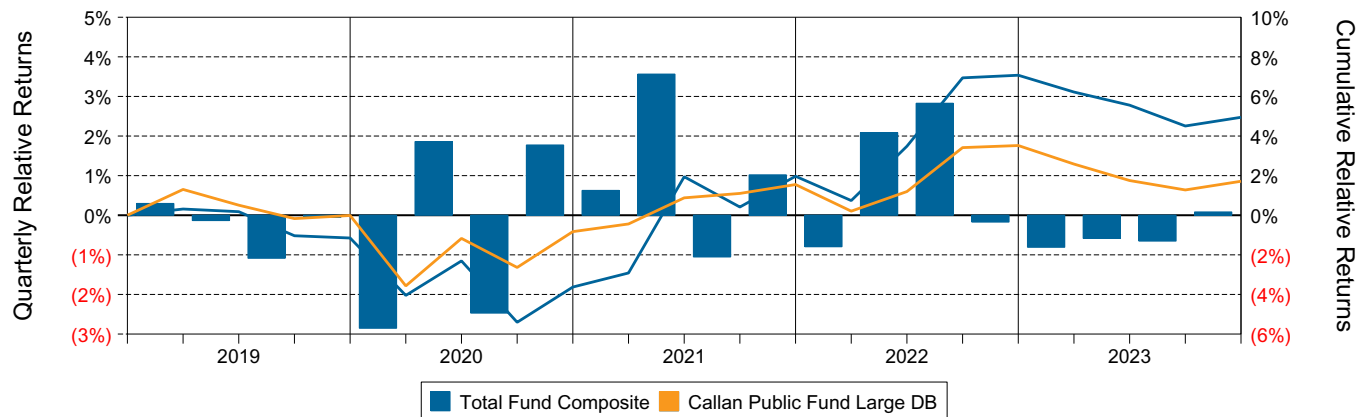
## Return Analysis

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.

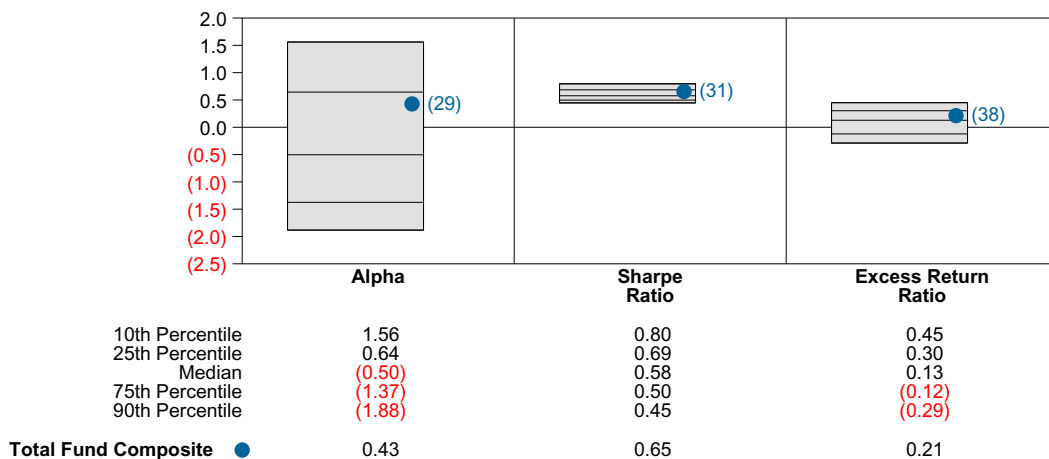
### Performance vs Callan Public Fund Large DB (Gross)



### 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 December 31, 2023



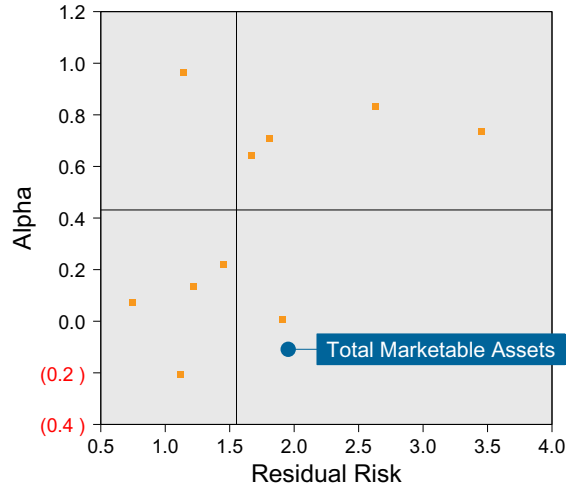
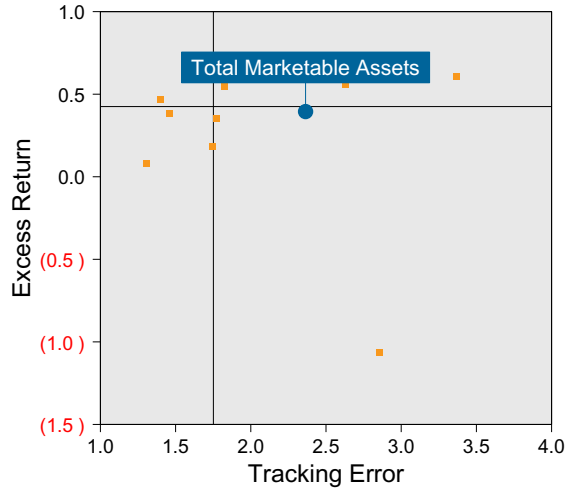
# Total Marketable Assets

## Total Fund vs Target Risk Analysis

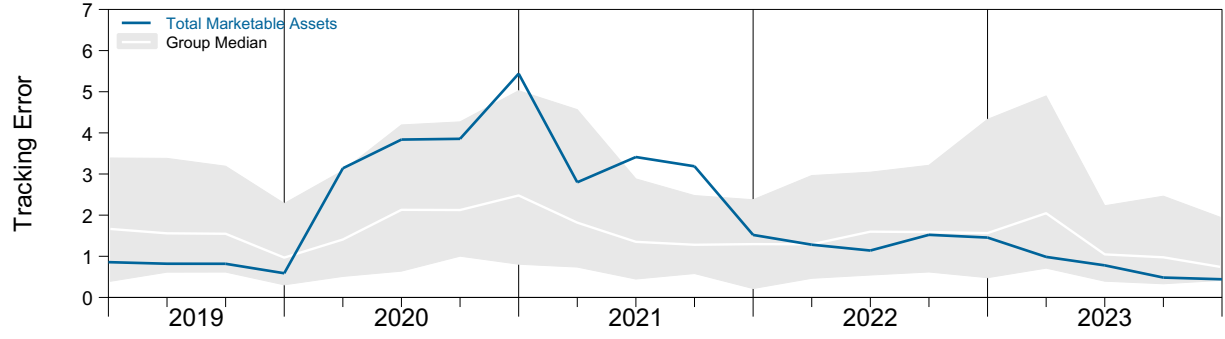
### Risk Analysis

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.

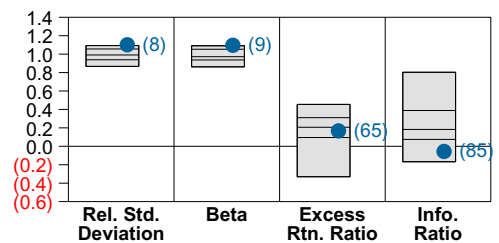
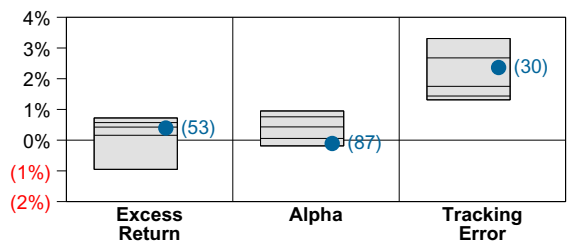
### Risk Analysis vs Callan Public Fund Spns - Large (>1B) Five Years Ended December 31, 2023



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



### Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Spns - Large (>1B) Five Years Ended December 31, 2023



10th Percentile	0.72
25th Percentile	0.57
Median	0.43
75th Percentile	0.16
90th Percentile	(0.95)

10th Percentile	0.95
25th Percentile	0.76
Median	0.43
75th Percentile	0.06
90th Percentile	(0.19)

10th Percentile	3.31
25th Percentile	2.68
Median	1.75
75th Percentile	1.44
90th Percentile	1.31

10th Percentile	1.09
25th Percentile	1.06
Median	0.99
75th Percentile	0.94
90th Percentile	0.87

10th Percentile	1.09
25th Percentile	1.05
Median	0.97
75th Percentile	0.94
90th Percentile	0.86

10th Percentile	0.45
25th Percentile	0.31
Median	0.21
75th Percentile	0.10
90th Percentile	(0.33)

10th Percentile	0.80
25th Percentile	0.39
Median	0.18
75th Percentile	0.07
90th Percentile	(0.17)

<b>Total Marketable Assets</b>	●	0.39	(0.11)	2.36
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<b>Total Marketable Assets</b>	●	1.10	1.10	0.17	(0.06)
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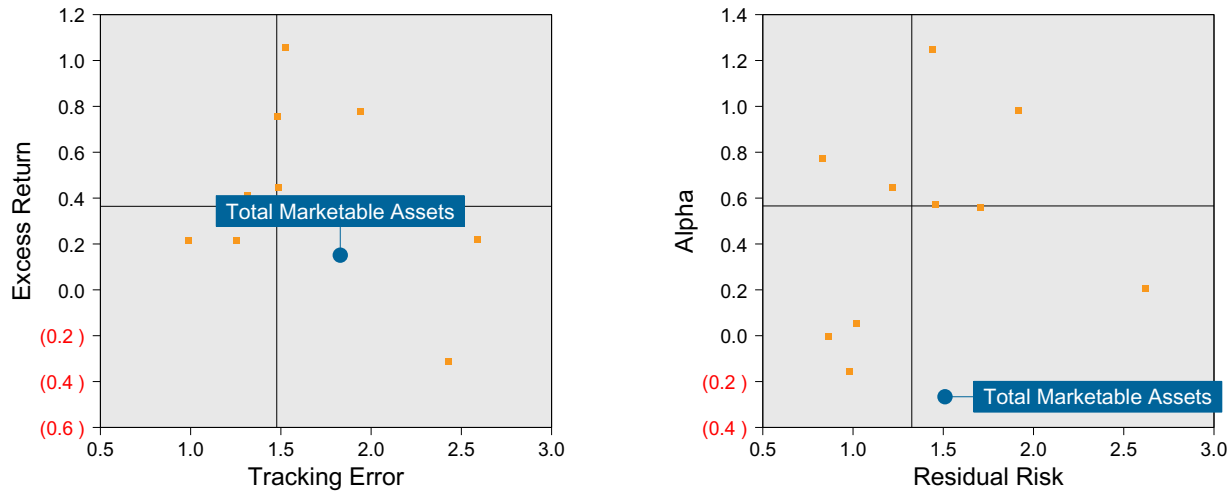
# Total Marketable Assets

## Total Fund vs Target Risk Analysis

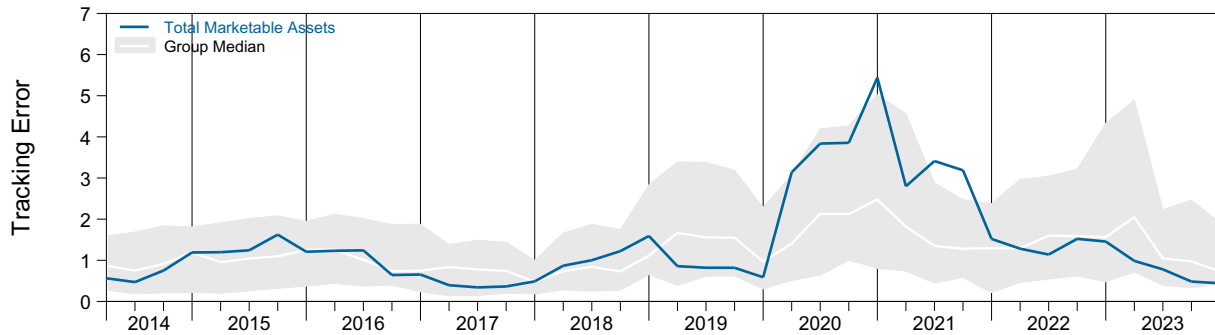
### Risk Analysis

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.

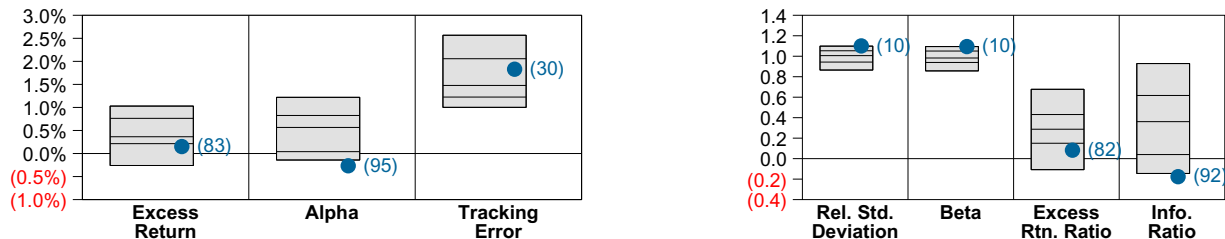
### Risk Analysis vs Callan Public Fund Spns - Large (>1B) Ten Years Ended December 31, 2023



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



### Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Spns - Large (>1B) Ten Years Ended December 31, 2023



10th Percentile  
25th Percentile  
Median  
75th Percentile  
90th Percentile

1.03  
0.76  
0.36  
0.21  
(0.26)

1.22  
0.83  
0.57  
0.04  
(0.14)

2.57  
2.06  
1.48  
1.23  
1.00

1.10  
1.05  
1.01  
0.94  
0.87

1.09  
1.05  
0.98  
0.94  
0.86

0.68  
0.43  
0.29  
0.15  
(0.11)

0.93  
0.62  
0.36  
0.04  
(0.14)

**Total Marketable Assets** ●

0.15

(0.27)

1.83

**Total Marketable Assets** ●

1.10

1.09

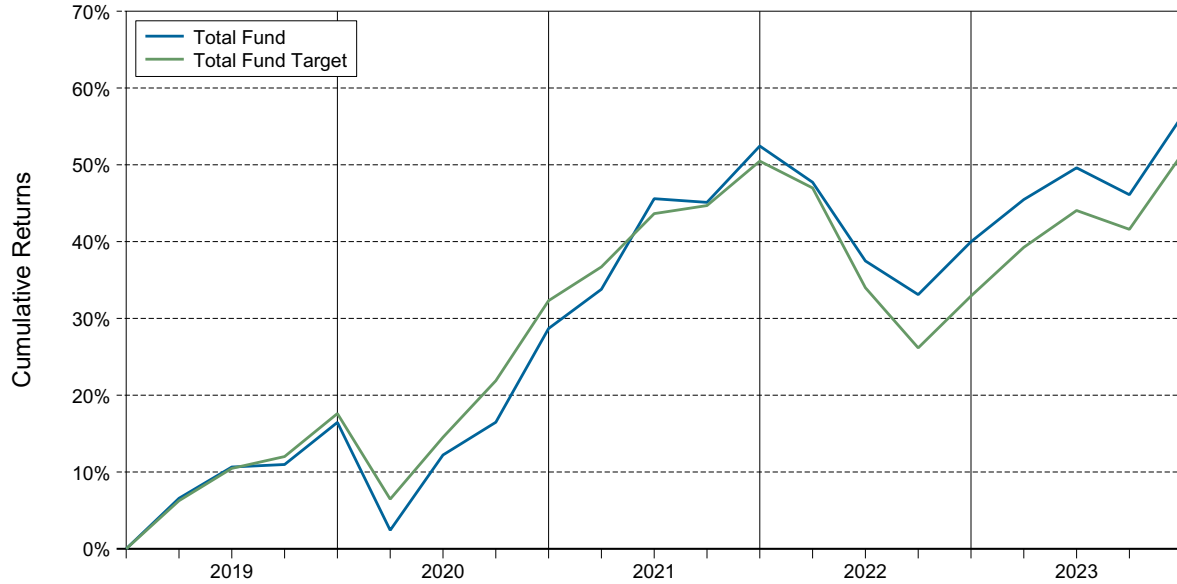
0.08

(0.18)

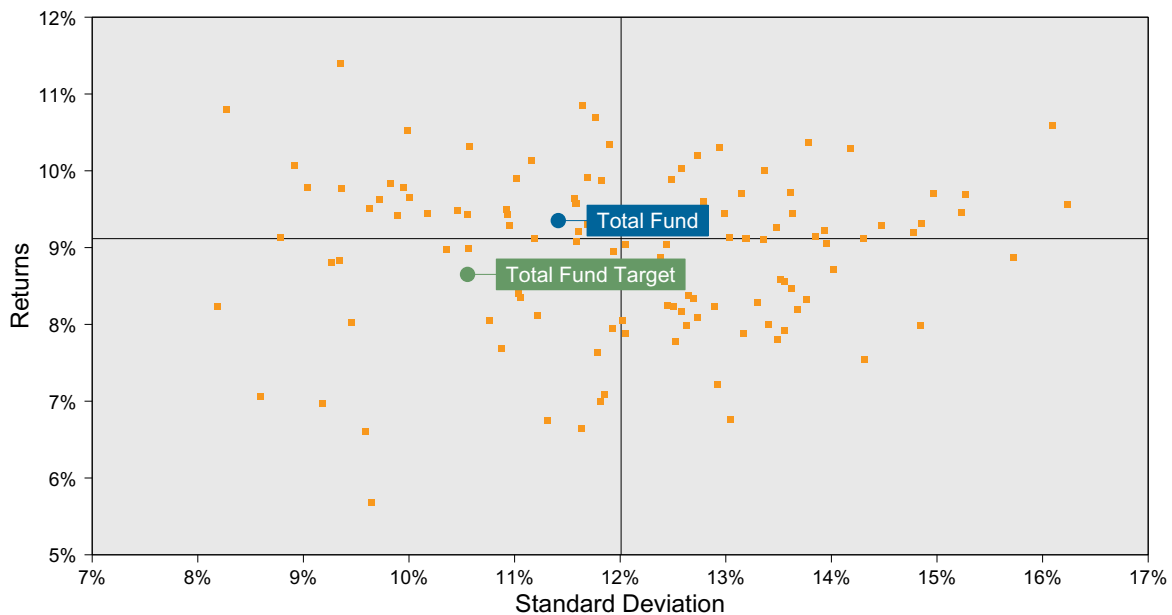
## Cumulative Performance Relative to Target

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



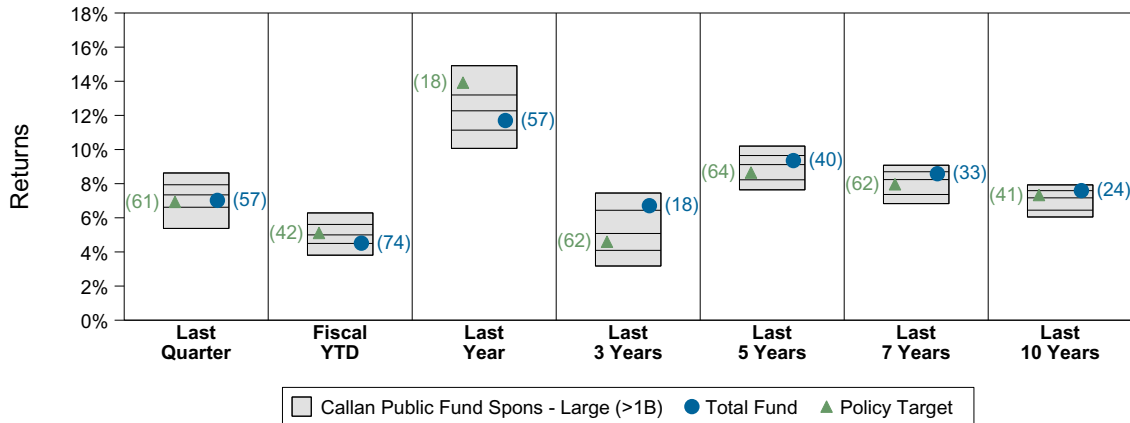
Squares represent membership of the Callan Public Fund Spons - Large (>1B)

\* 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).

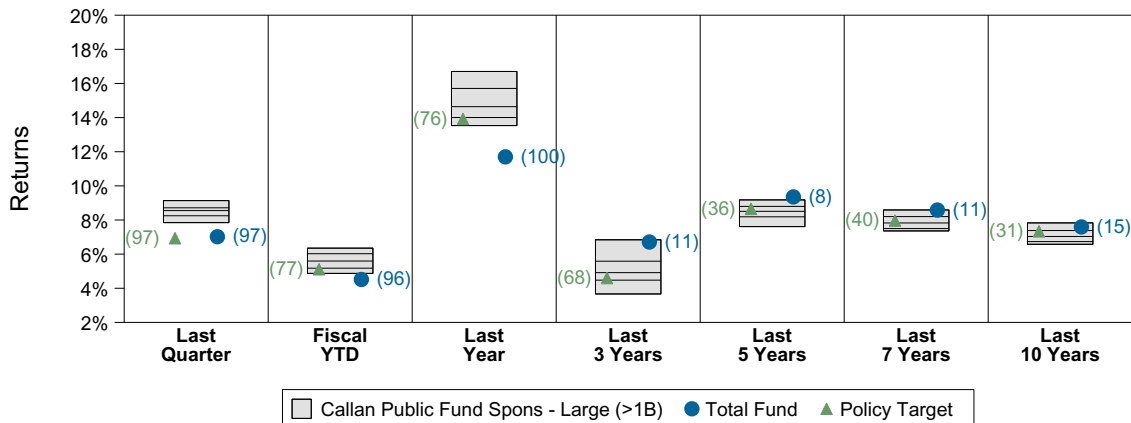
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Spons - Large (>1B) for periods ended December 31, 2023. 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 Spons - Large (>1B), both on an unadjusted and asset allocation adjusted basis.

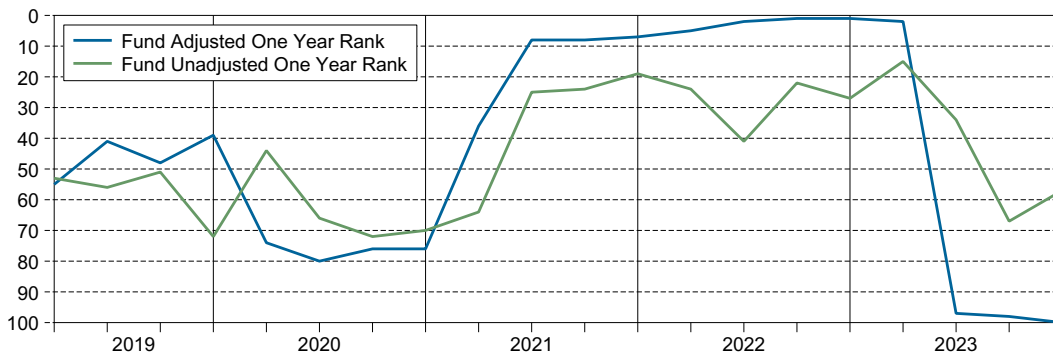
### Callan Public Fund Spons - Large (>1B)



### Asset Allocation Adjusted Ranking



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

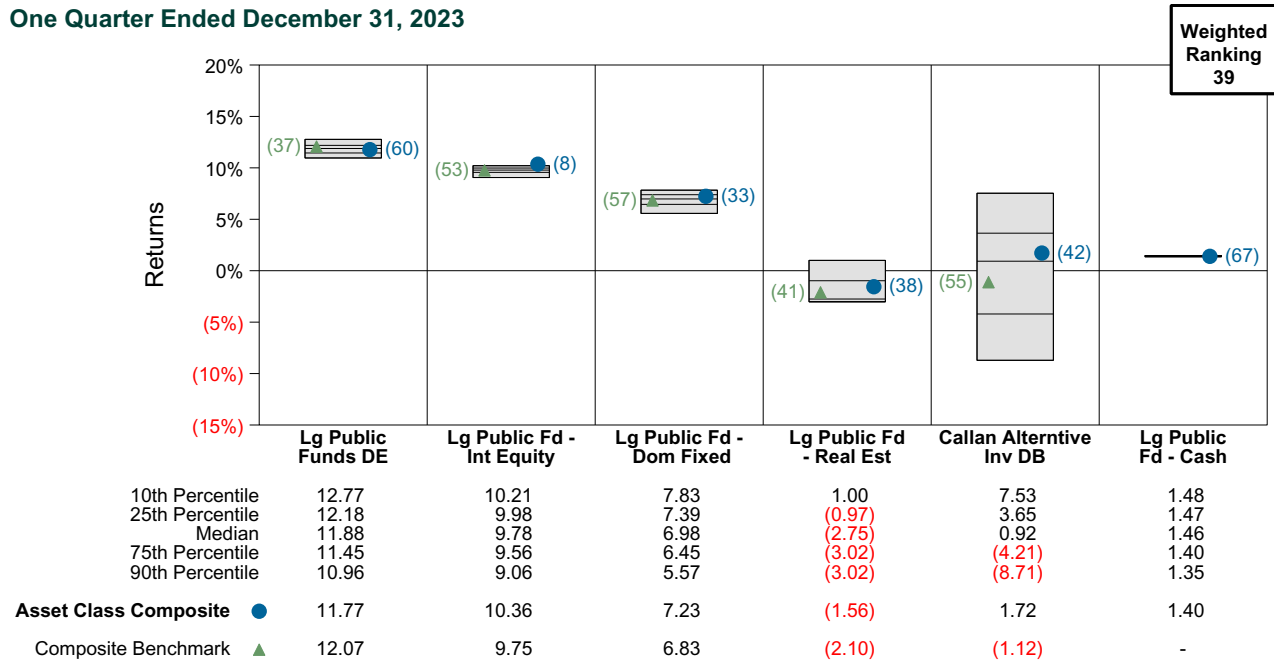


\* Current Quarter Target = 30.0% Russell 3000 Index, 25.0% Blmbg Universal, 20.0% MSCI ACWI xUS (Net), 10.0% NCREIF NFI-ODCE Val Wt Nt lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Blmbg HY Corp lagged 3 months+1.0% and 2.5% Mstar LSTA Lev Loan 100 lagged 3 months+1.0%.

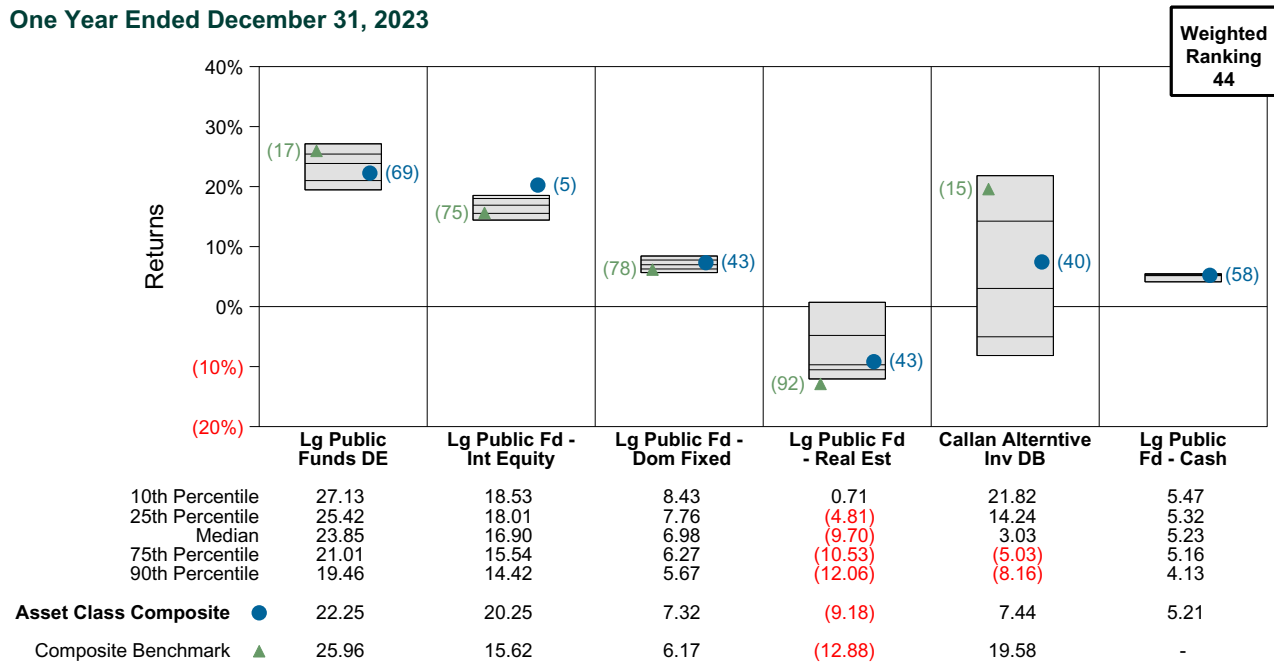
## Asset Class Rankings

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 December 31, 2023



### Total Asset Class Performance One Year Ended December 31, 2023

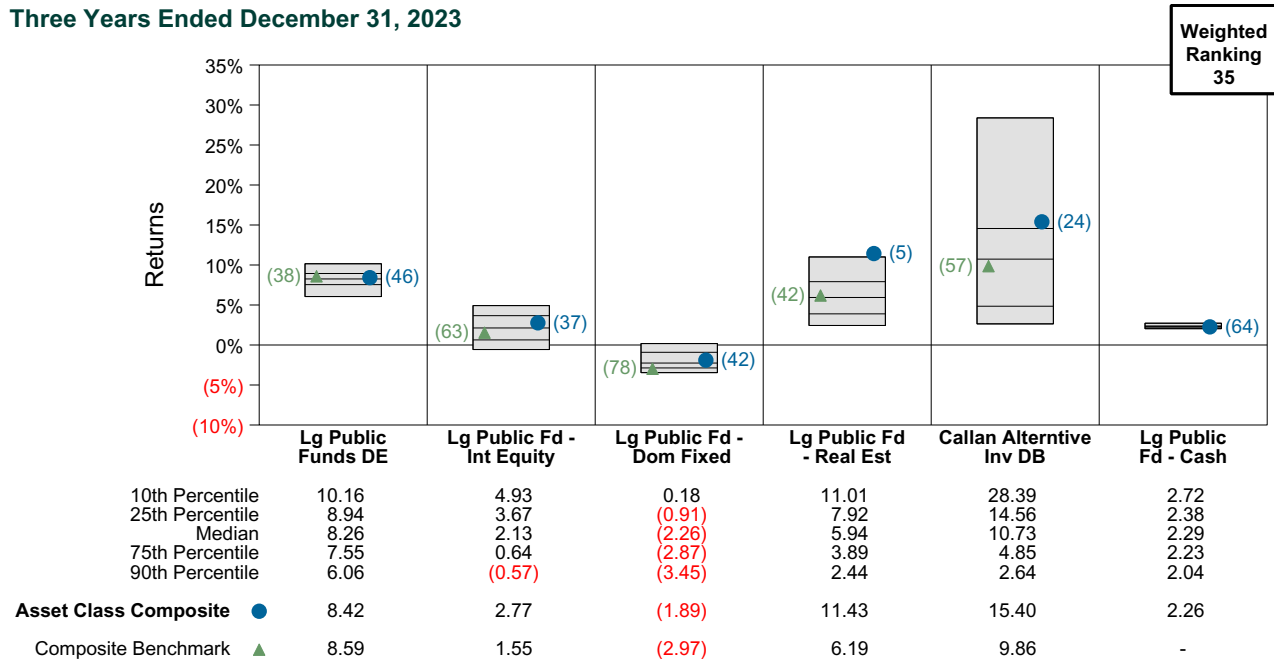


\* Current Quarter Target = 30.0% Russell 3000 Index, 25.0% Blmbg Universal, 20.0% MSCI ACWI xUS (Net), 10.0% NCREIF NFI-ODCE Val Wt Nt lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Blmbg HY Corp lagged 3 months+1.0% and 2.5% Mstar LSTA Lev Loan 100 lagged 3 months+1.0%.

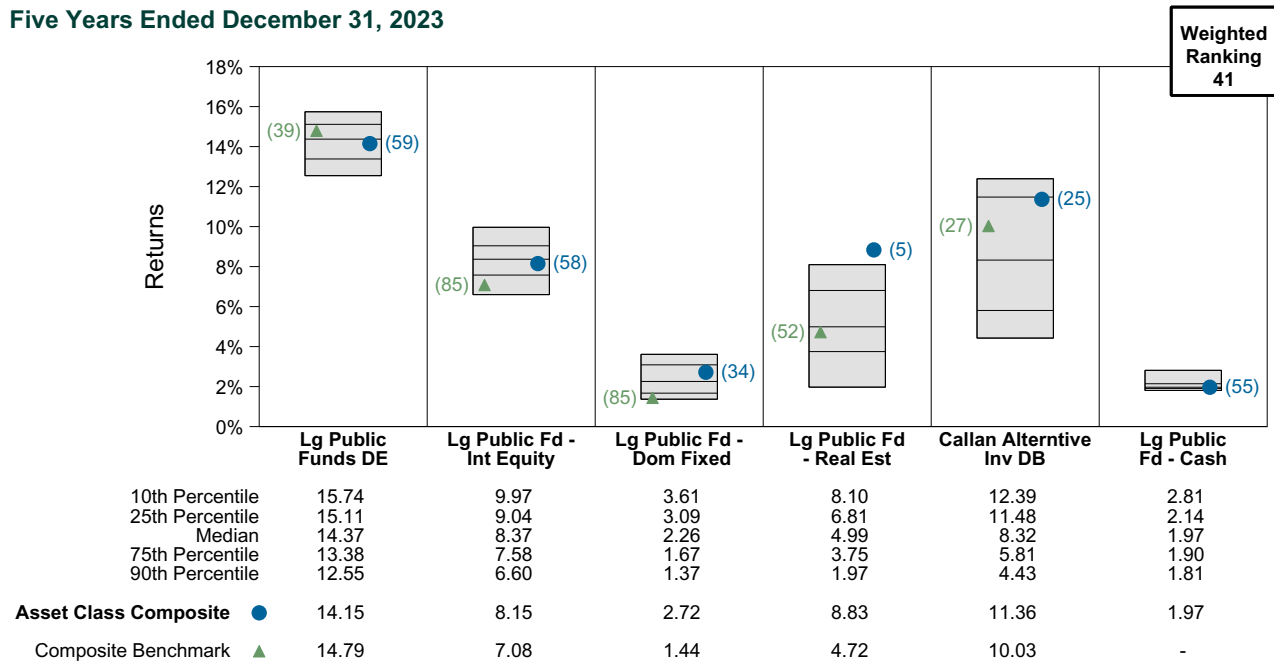
## Asset Class Rankings

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### Total Asset Class Performance Three Years Ended December 31, 2023



### Total Asset Class Performance Five Years Ended December 31, 2023

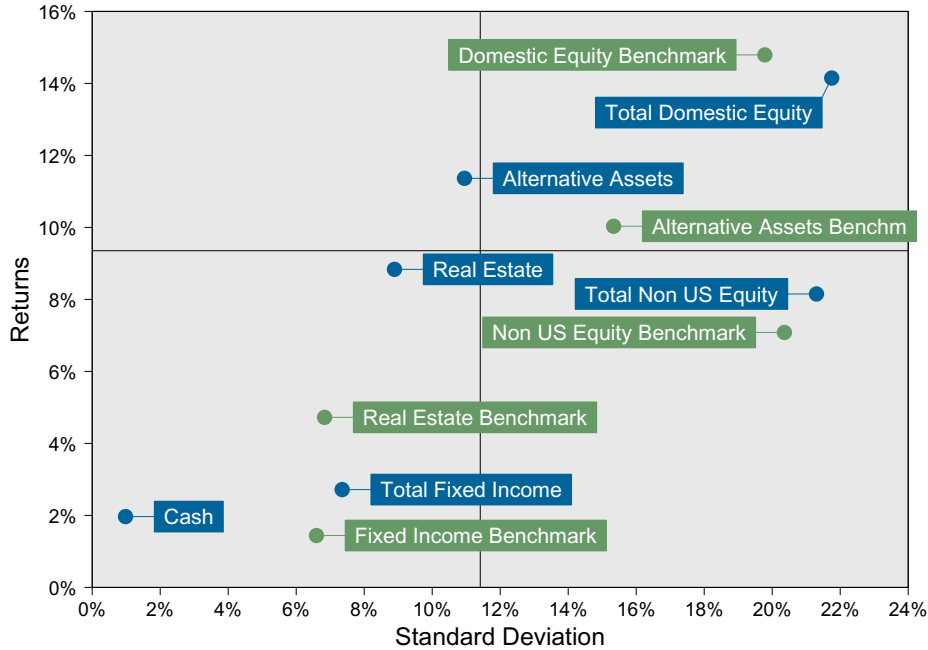


\* Current Quarter Target = 30.0% Russell 3000 Index, 25.0% Blmbg Universal, 20.0% MSCI ACWI xUS (Net), 10.0% NCREIF NFI-ODCE Val Wt Nt lagged 3 months, 10.0% Russell 3000 Index lagged 3 months+2.0%, 2.5% Blmbg HY Corp lagged 3 months+1.0% and 2.5% Mstar LSTA Lev Loan 100 lagged 3 months+1.0%.

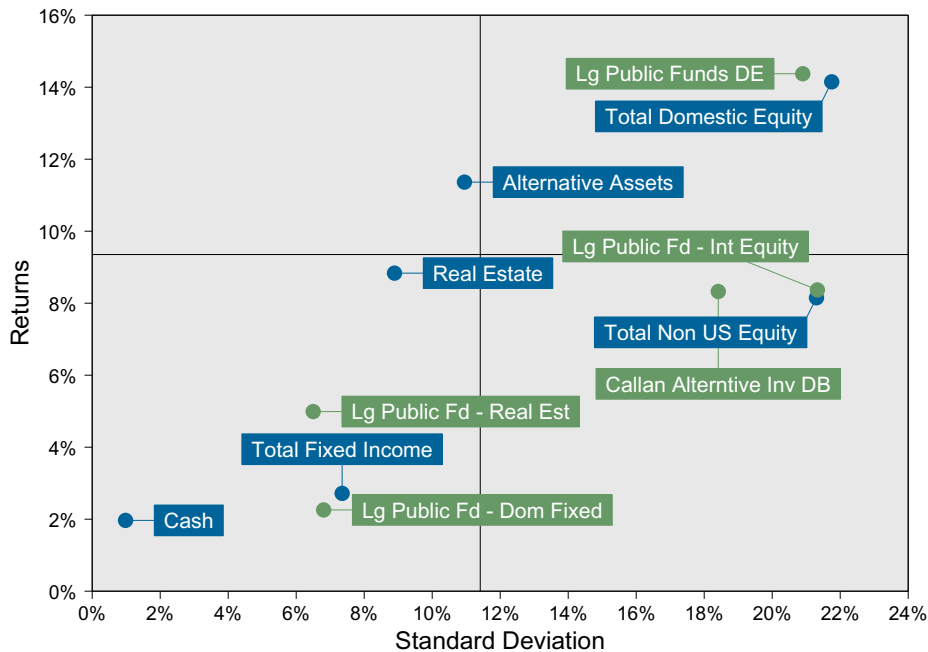
## Asset Class Risk and Return

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

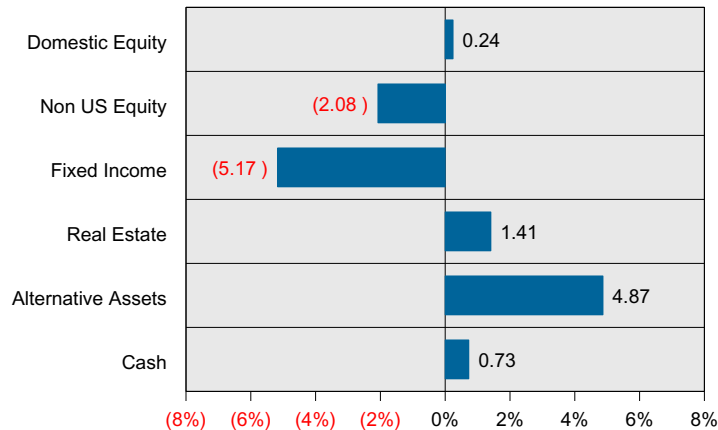




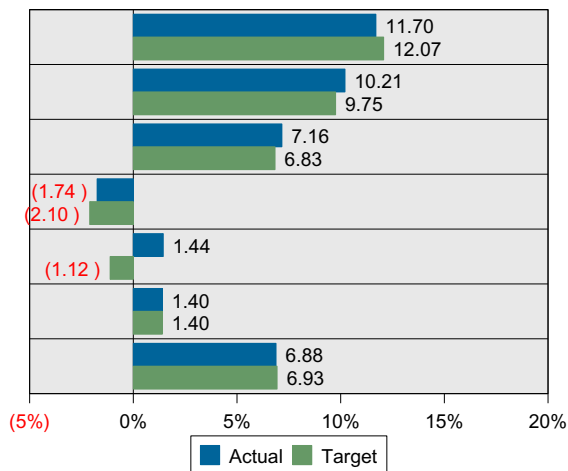
## Quarterly Total Fund Relative Attribution - December 31, 2023

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

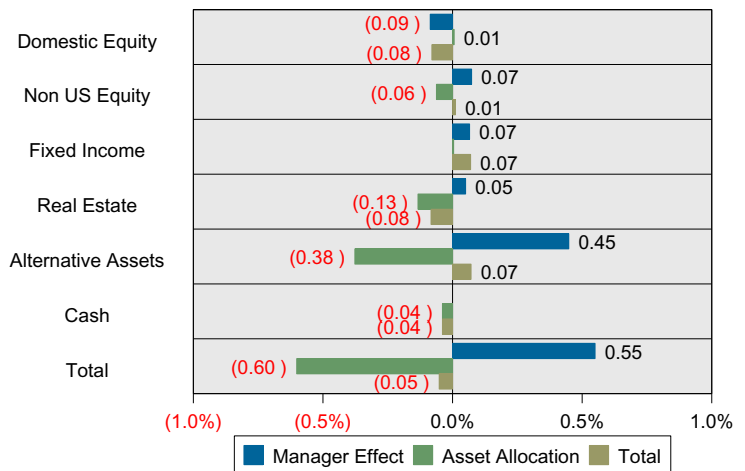
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended December 31, 2023

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	30%	11.70%	12.07%	(0.09%)	0.01%	(0.08%)
Non US Equity	18%	20%	10.21%	9.75%	0.07%	(0.06%)	0.01%
Fixed Income	20%	25%	7.16%	6.83%	0.07%	0.00%	0.07%
Real Estate	11%	10%	(1.74%)	(2.10%)	0.05%	(0.13%)	(0.08%)
Alternative Assets	20%	15%	1.44%	(1.12%)	0.45%	(0.38%)	0.07%
Cash	1%	0%	1.40%	1.40%	0.00%	(0.04%)	(0.04%)
<b>Total</b>			<b>6.88%</b>	<b>6.93%</b>	<b>+ 0.55%</b>	<b>+ (0.60%)</b>	<b>(0.05%)</b>

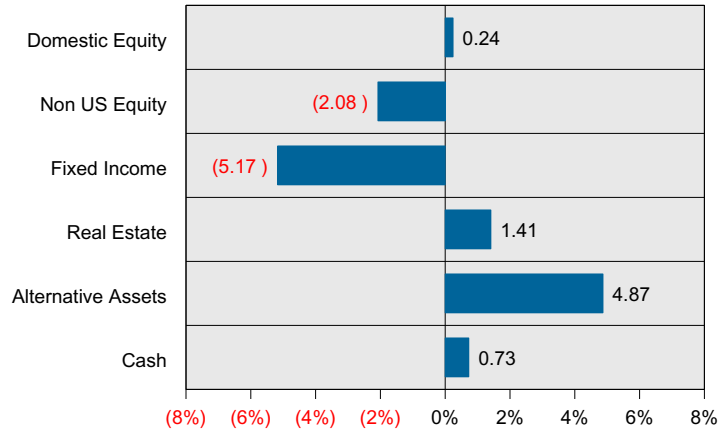
\* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

\* Actual returns are net of fees.

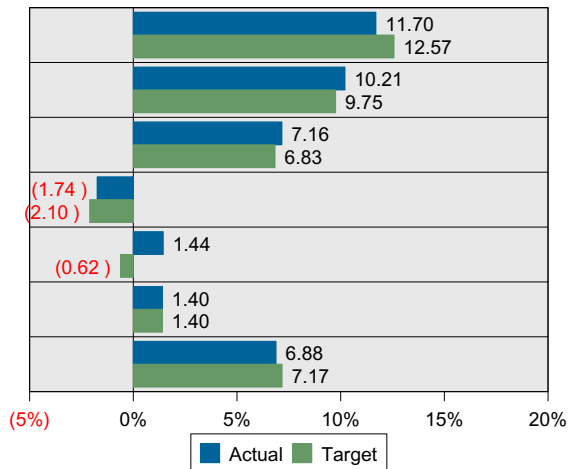
## Quarterly Total Fund Relative Attribution - December 31, 2023

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

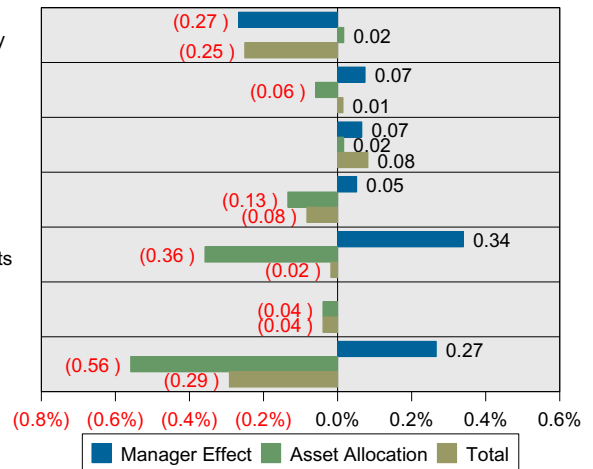
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended December 31, 2023

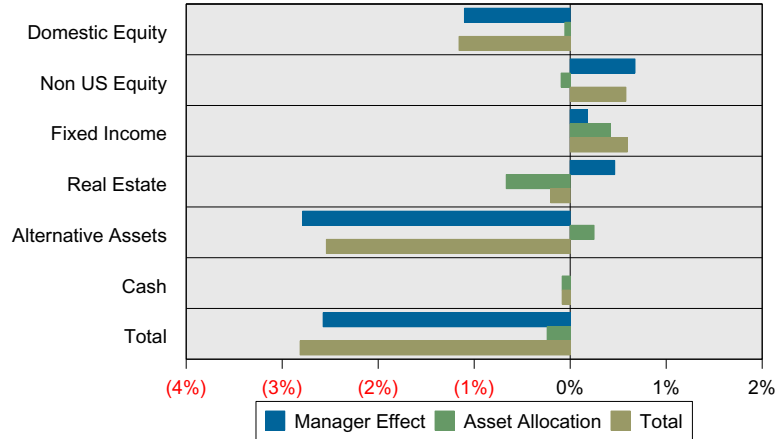
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	30%	11.70%	12.57%	(0.27%)	0.02%	(0.25%)
Non US Equity	18%	20%	10.21%	9.75%	0.07%	(0.06%)	0.01%
Fixed Income	20%	25%	7.16%	6.83%	0.07%	0.02%	0.08%
Real Estate	11%	10%	(1.74%)	(2.10%)	0.05%	(0.13%)	(0.08%)
Alternative Assets	20%	15%	1.44%	(0.62%)	0.34%	(0.36%)	(0.02%)
Cash	1%	0%	1.40%	1.40%	0.00%	(0.04%)	(0.04%)
<b>Total</b>			<b>6.88%</b>	<b>7.17%</b>	<b>+ 0.27%</b>	<b>+ (0.56%)</b>	<b>(0.29%)</b>

\* 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.

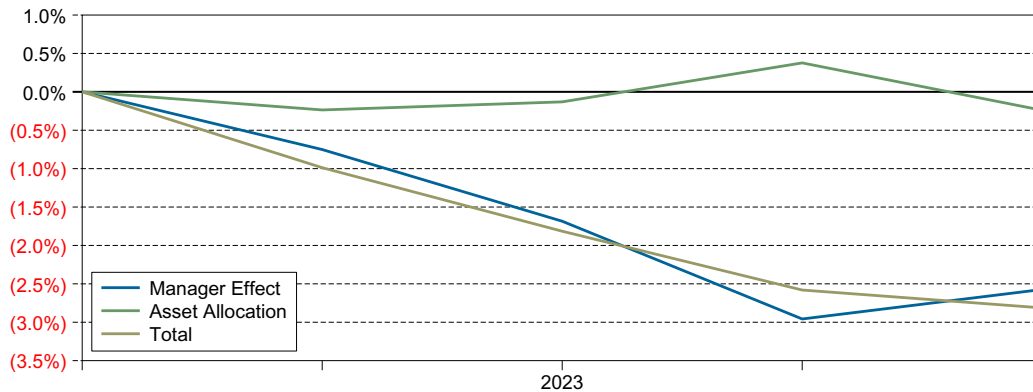
## Cumulative Total Fund Relative Attribution - December 31, 2023

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	30%	30%	21.93%	25.96%	(1.10%)	(0.06%)	(1.16%)
Non US Equity	18%	20%	19.60%	15.62%	0.67%	(0.09%)	0.58%
Fixed Income	19%	25%	7.03%	6.17%	0.18%	0.42%	0.60%
Real Estate	12%	10%	(9.94%)	(12.88%)	0.46%	(0.67%)	(0.20%)
Alternative Assets	19%	15%	6.31%	19.58%	(2.79%)	0.25%	(2.54%)
Cash	1%	0%	5.21%	5.21%	0.00%	(0.08%)	(0.08%)
<b>Total</b>			<b>11.11%</b>	<b>13.92%</b>	<b>+(2.57%)</b>	<b>+(0.24%)</b>	<b>(2.81%)</b>

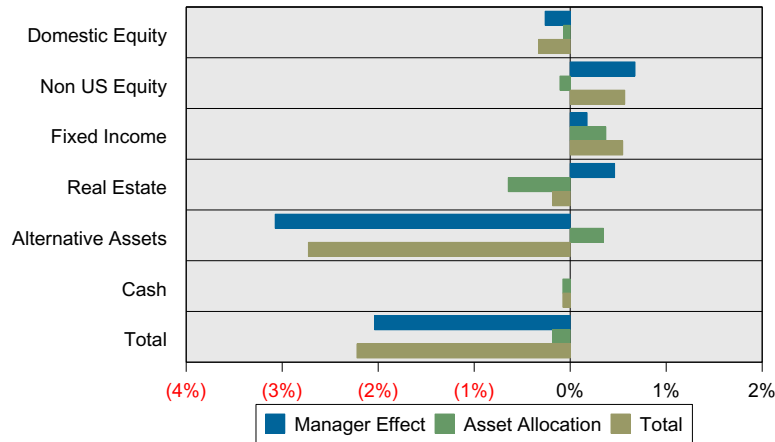
\* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

\* Actual returns are net of fees.

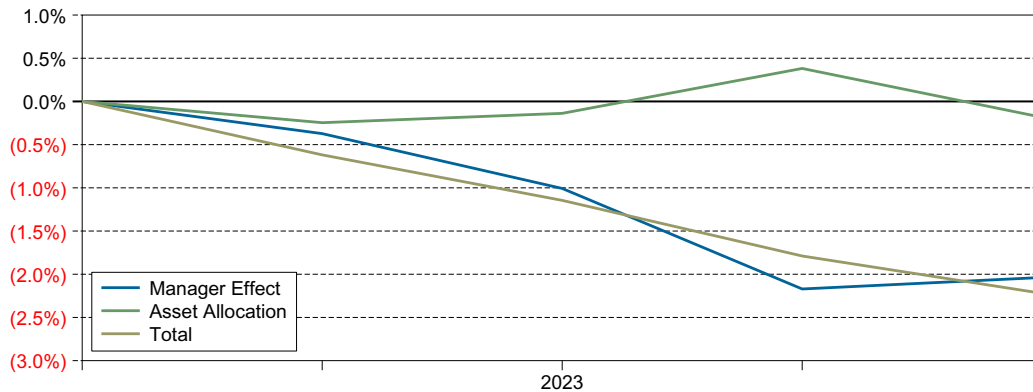
## Cumulative Total Fund Relative Attribution - December 31, 2023

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

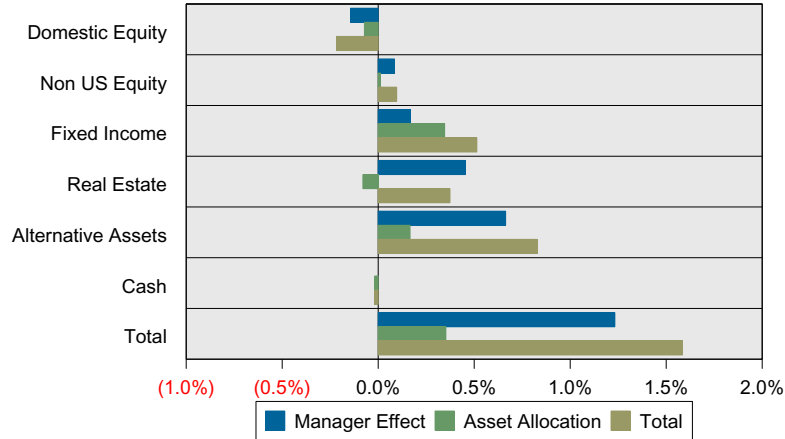
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	30%	30%	21.93%	22.81%	(0.26%)	(0.07%)	(0.33%)
Non US Equity	18%	20%	19.60%	15.62%	0.67%	(0.11%)	0.57%
Fixed Income	19%	25%	7.03%	6.17%	0.18%	0.37%	0.55%
Real Estate	12%	10%	(9.94%)	(12.88%)	0.46%	(0.65%)	(0.18%)
Alternative Assets	19%	15%	6.31%	21.33%	(3.07%)	0.35%	(2.73%)
Cash	1%	0%	5.21%	5.21%	0.00%	(0.08%)	(0.08%)
<b>Total</b>			<b>11.11%</b>	<b>13.33%</b>	<b>+(2.04%)</b>	<b>+(0.18%)</b>	<b>(2.22%)</b>

\* 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.

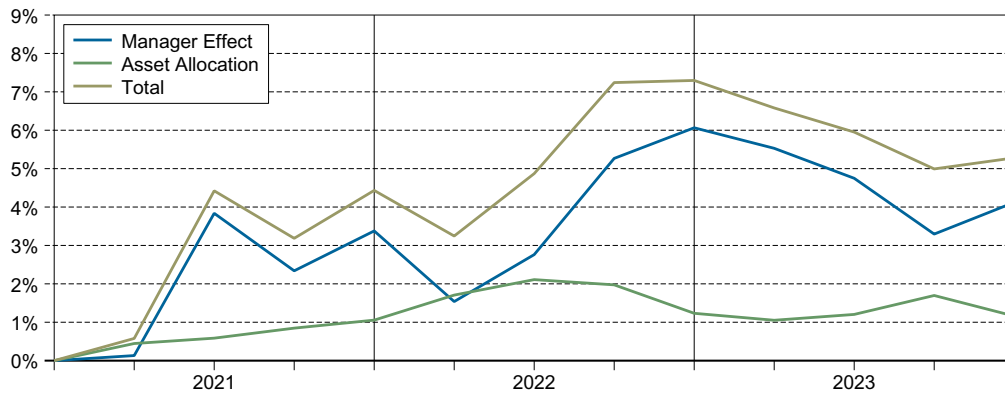
## Cumulative Total Fund Relative Attribution - December 31, 2023

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

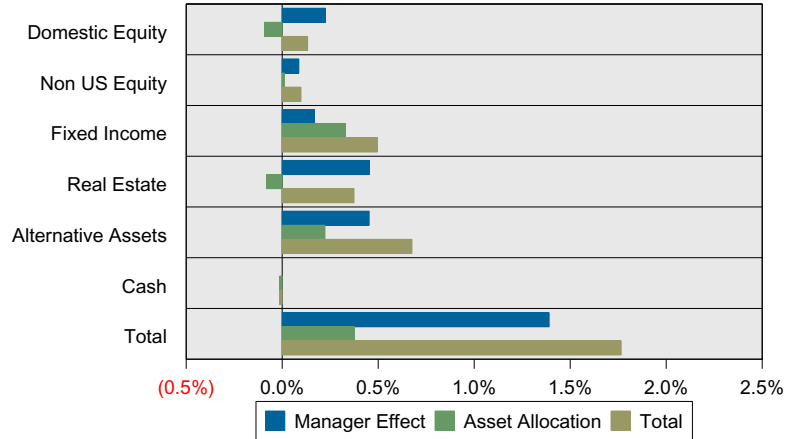
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	31%	30%	8.13%	8.59%	(0.14%)	(0.07%)	(0.22%)
Non US Equity	18%	20%	2.16%	1.55%	0.08%	0.01%	0.10%
Fixed Income	20%	25%	(2.16%)	(2.97%)	0.17%	0.35%	0.51%
Real Estate	11%	10%	10.54%	6.19%	0.45%	(0.08%)	0.37%
Alternative Assets	19%	15%	14.48%	9.86%	0.66%	0.17%	0.83%
Cash	1%	0%	2.26%	2.26%	0.00%	(0.02%)	(0.02%)
<b>Total</b>			<b>6.18%</b>	<b>4.60%</b>	<b>+ 1.23%</b>	<b>+ 0.35%</b>	<b>1.58%</b>

\* 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.

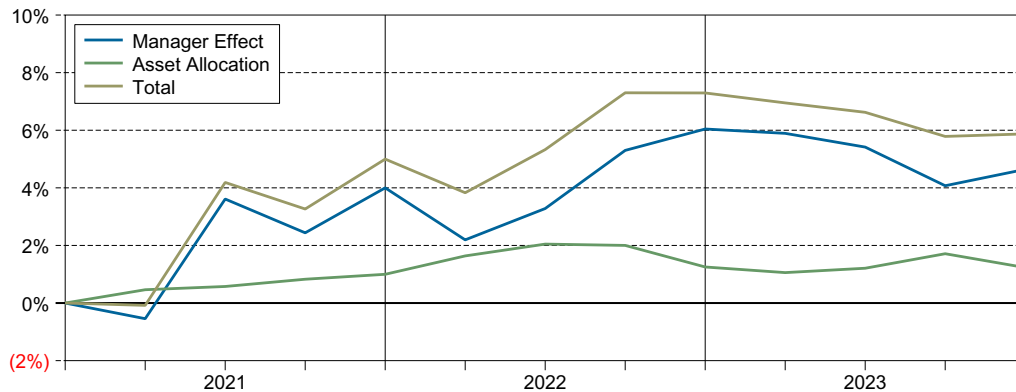
## Cumulative Total Fund Relative Attribution - December 31, 2023

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

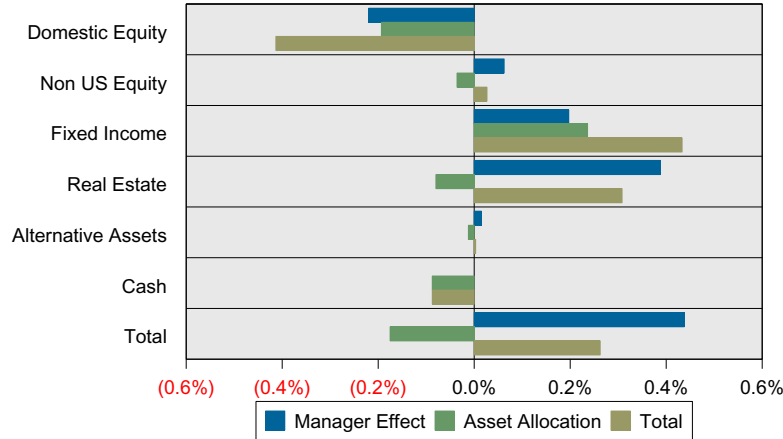
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	31%	30%	8.13%	7.38%	0.22%	(0.09%)	0.13%
Non US Equity	18%	20%	2.16%	1.55%	0.09%	0.01%	0.10%
Fixed Income	20%	25%	(2.16%)	(2.97%)	0.17%	0.33%	0.50%
Real Estate	11%	10%	10.54%	6.19%	0.45%	(0.08%)	0.37%
Alternative Assets	19%	15%	14.48%	10.98%	0.45%	0.22%	0.68%
Cash	1%	0%	2.26%	2.26%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>6.18%</b>	<b>4.42%</b>	<b>+ 1.39%</b>	<b>+ 0.38%</b>	<b>1.77%</b>

\* 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.

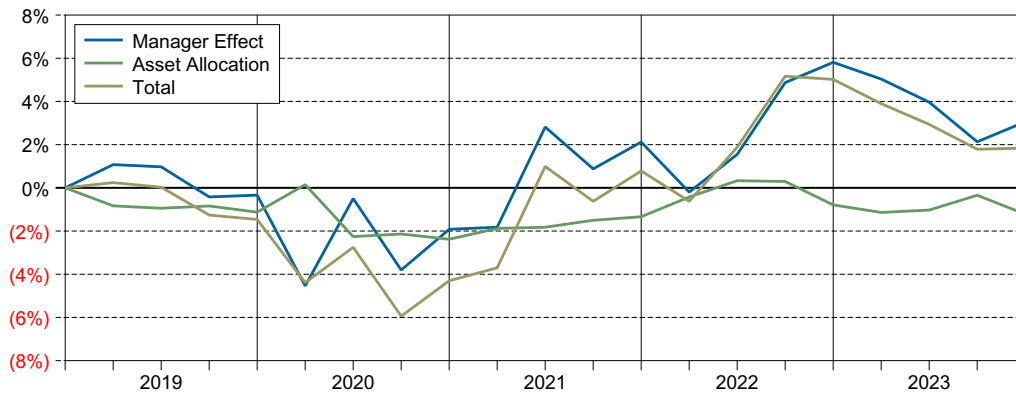
## Cumulative Total Fund Relative Attribution - December 31, 2023

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%	13.84%	14.79%	(0.22%)	(0.19%)	(0.41%)
Non US Equity	18%	20%	7.49%	7.08%	0.06%	(0.04%)	0.03%
Fixed Income	21%	25%	2.43%	1.44%	0.20%	0.24%	0.43%
Real Estate	11%	10%	8.31%	4.72%	0.39%	(0.08%)	0.31%
Alternative Assets	19%	15%	10.83%	10.03%	0.02%	(0.01%)	0.00%
Cash	1%	0%	1.97%	1.97%	0.00%	(0.09%)	(0.09%)
<b>Total</b>			<b>8.91%</b>	<b>8.65%</b>	<b>+ 0.44%</b>	<b>+ (0.18%)</b>	<b>0.26%</b>

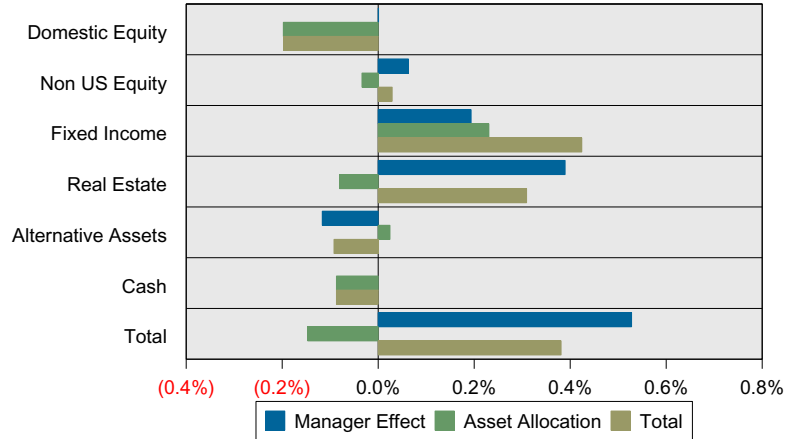
\* Current Quarter Target = 30% Russell 3000 Index, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net (1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).

\* Actual returns are net of fees.

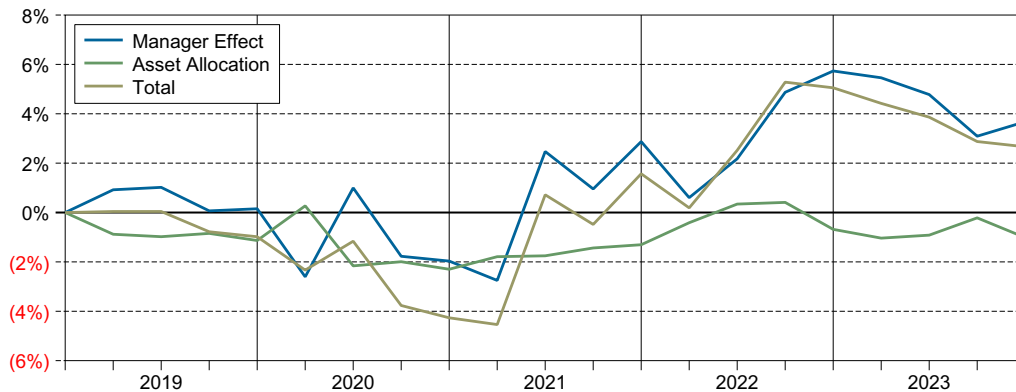
## Cumulative Total Fund Relative Attribution - December 31, 2023

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%	13.84%	13.88%	0.00%	(0.20%)	(0.20%)
Non US Equity	18%	20%	7.49%	7.08%	0.06%	(0.03%)	0.03%
Fixed Income	21%	25%	2.43%	1.44%	0.19%	0.23%	0.42%
Real Estate	11%	10%	8.31%	4.72%	0.39%	(0.08%)	0.31%
Alternative Assets	19%	15%	10.83%	10.70%	(0.12%)	0.02%	(0.09%)
Cash	1%	0%	1.97%	1.97%	0.00%	(0.09%)	(0.09%)
<b>Total</b>			<b>8.91%</b>	<b>8.53%</b>	<b>+ 0.53%</b>	<b>+ (0.15%)</b>	<b>0.38%</b>

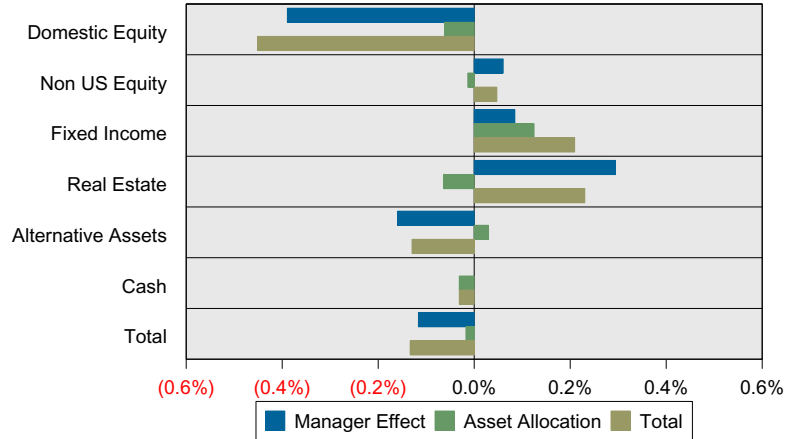
\* Current Quarter Target = 18% S+P 500 Index, 6% Russell 2500, 6% Russell 2000, 25% Bloomberg Universal, 20% MSCI ACWI ex US, 10% NCREIF NFI-ODCE Val Wt Net(1 qtr lag), 10% Russell 3000 Index +2.0% (1 qtr lag), 2.5% Bloomberg HY Corp +1.0% (1 qtr lag), and 2.5% S&P/LSTA Lev Loan 100 +1.0% (1 qtr lag).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



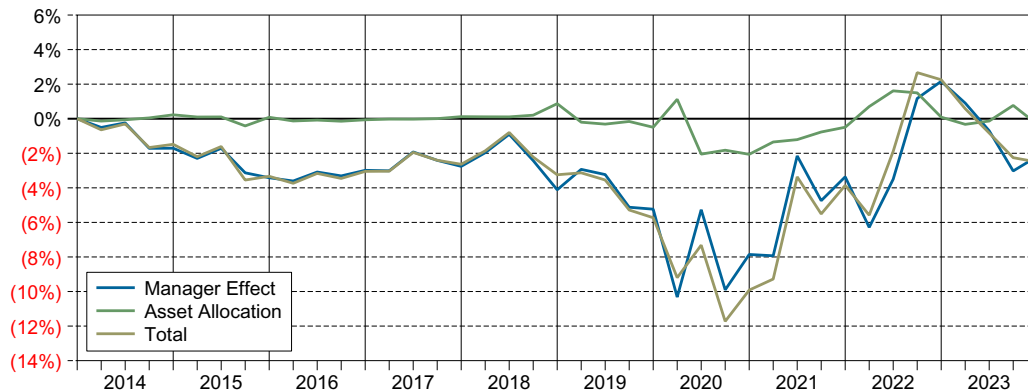
## Cumulative Total Fund Relative Attribution - December 31, 2023

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	33%	31%	10.26%	11.57%	(0.39%)	(0.06%)	(0.45%)
Non US Equity	19%	20%	4.21%	3.83%	0.06%	(0.01%)	0.05%
Fixed Income	22%	25%	2.52%	2.08%	0.08%	0.12%	0.21%
Real Estate	10%	10%	10.21%	7.30%	0.29%	(0.06%)	0.23%
Alternative Assets	16%	14%	9.42%	11.32%	(0.16%)	0.03%	(0.13%)
Cash	1%	0%	1.33%	1.33%	0.00%	(0.03%)	(0.03%)
<b>Total</b>			<b>7.20%</b>	<b>7.34%</b>	<b>(0.12%)</b>	<b>(0.02%)</b>	<b>(0.13%)</b>

\* 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 December 31, 2023, with the distribution as of September 30, 2023. 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, 2023		Net New Inv.	Inv. Return	September 30, 2023	
	Market Value	Weight			Market Value	Weight
<b>Total Domestic Equity</b>	<b>\$3,734,991,813</b>	<b>31.73%</b>	<b>\$0</b>	<b>\$393,347,127</b>	<b>\$3,341,644,686</b>	<b>30.18%</b>
<b>Large Cap Domestic Equity</b>	<b>\$2,161,866,634</b>	<b>18.37%</b>	<b>\$0</b>	<b>\$226,253,568</b>	<b>\$1,935,613,066</b>	<b>17.48%</b>
Blackrock S&P 500	2,161,866,634	18.37%	0	226,253,568	1,935,613,066	17.48%
<b>SMid Cap Domestic Equity</b>	<b>\$680,984,900</b>	<b>5.79%</b>	<b>\$0</b>	<b>\$69,181,233</b>	<b>\$611,803,668</b>	<b>5.53%</b>
AllianceBernstein	425,590,996	3.62%	0	52,173,335	373,417,661	3.37%
TSW	255,393,904	2.17%	0	17,007,898	238,386,007	2.15%
<b>Small Cap Domestic Equity</b>	<b>\$892,140,279</b>	<b>7.58%</b>	<b>\$0</b>	<b>\$97,912,326</b>	<b>\$794,227,953</b>	<b>7.17%</b>
Boston Trust	232,180,382	1.97%	0	22,141,414	210,038,968	1.90%
Segall Bryant & Hamill	246,291,763	2.09%	0	26,674,065	219,617,698	1.98%
Wellington	413,668,134	3.51%	0	49,096,848	364,571,287	3.29%
<b>Total Non US Equity</b>	<b>\$2,182,655,605</b>	<b>18.54%</b>	<b>\$(25)</b>	<b>\$204,821,466</b>	<b>\$1,977,834,164</b>	<b>17.86%</b>
<b>Core Non US Equity</b>	<b>\$1,329,966,023</b>	<b>11.30%</b>	<b>\$(25)</b>	<b>\$120,529,649</b>	<b>\$1,209,436,400</b>	<b>10.92%</b>
Aristotle	172,677,350	1.47%	0	16,143,540	156,533,810	1.41%
Artisan Partners	373,664,128	3.17%	0	32,825,405	340,838,723	3.08%
BlackRock Superfund	188,391,200	1.60%	0	16,535,232	171,855,968	1.55%
Causeway Capital	430,172,433	3.65%	0	37,765,755	392,406,678	3.54%
Lazard	164,377,378	1.40%	0	17,244,880	147,132,498	1.33%
<b>Emerging Markets</b>	<b>\$167,904,443</b>	<b>1.43%</b>	<b>\$0</b>	<b>\$10,635,694</b>	<b>\$157,268,749</b>	<b>1.42%</b>
Wellington Emerging Markets	167,904,443	1.43%	0	10,635,694	157,268,749	1.42%
<b>Non US Small Cap</b>	<b>\$134,953,584</b>	<b>1.15%</b>	<b>\$0</b>	<b>\$15,388,523</b>	<b>\$119,565,062</b>	<b>1.08%</b>
Wellington Int'l Small Cap Research	134,953,584	1.15%	0	15,388,523	119,565,062	1.08%
<b>Global Equity</b>	<b>\$549,831,555</b>	<b>4.67%</b>	<b>\$0</b>	<b>\$58,267,601</b>	<b>\$491,563,953</b>	<b>4.44%</b>
Walter Scott Global Equity	549,831,555	4.67%	0	58,267,601	491,563,953	4.44%
<b>Total Fixed Income</b>	<b>\$2,346,687,743</b>	<b>19.94%</b>	<b>\$0</b>	<b>\$158,304,313</b>	<b>\$2,188,383,430</b>	<b>19.77%</b>
BlackRock SIO Bond Fund	266,277,704	2.26%	0	14,260,902	252,016,802	2.28%
Brandywine Asset Mgmt	239,132,976	2.03%	0	26,920,089	212,212,886	1.92%
FIAM (Fidelity) Tactical Bond	375,407,619	3.19%	0	25,311,195	350,096,425	3.16%
Income Research & Management	785,987,790	6.68%	0	48,238,625	737,749,165	6.66%
Loomis Sayles	285,847,793	2.43%	0	19,008,605	266,839,188	2.41%
Manulife Strategic Fixed Income	214,913,943	1.83%	0	13,112,816	201,801,127	1.82%
Mellon US Agg Bond Index	179,119,918	1.52%	0	11,452,082	167,667,836	1.51%
<b>Total Cash</b>	<b>\$46,342,766</b>	<b>0.39%</b>	<b>\$(42,933,955)</b>	<b>\$1,165,405</b>	<b>\$88,111,316</b>	<b>0.80%</b>
<b>Total Marketable Assets</b>	<b>\$8,310,677,927</b>	<b>70.61%</b>	<b>\$(42,933,980)</b>	<b>\$757,638,311</b>	<b>\$7,595,973,596</b>	<b>68.61%</b>
<b>Total Real Estate</b>	<b>\$1,242,239,728</b>	<b>10.55%</b>	<b>\$(7,848,330)</b>	<b>\$(19,679,630)</b>	<b>\$1,269,767,688</b>	<b>11.47%</b>
Strategic Core Real Estate	771,525,310	6.55%	(10,853,385)	(10,620,024)	792,998,719	7.16%
Tactical Non-Core Real Estate	470,714,417	4.00%	3,798,660	(9,853,211)	476,768,969	4.31%
<b>Total Alternative Assets</b>	<b>\$2,217,599,162</b>	<b>18.84%</b>	<b>\$(25,646,114)</b>	<b>\$37,563,815</b>	<b>\$2,205,681,460</b>	<b>19.92%</b>
Private Equity	1,655,749,890	14.07%	(18,333,867)	26,054,796	1,648,028,961	14.89%
Private Debt	561,849,272	4.77%	(7,312,247)	11,509,019	557,652,500	5.04%
<b>Total Fund Composite</b>	<b>\$11,770,516,817</b>	<b>100.00%</b>	<b>\$(76,428,424)</b>	<b>\$775,522,497</b>	<b>\$11,071,422,744</b>	<b>100.00%</b>

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

-Includes \$683,533 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 December 31, 2023. 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 December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
<b>Gross of Fees</b>					
<b>Total Domestic Equity</b>	<b>11.77%</b>	<b>7.99%</b>	<b>22.25%</b>	<b>8.42%</b>	<b>14.15%</b>
Domestic Equity Benchmark (1)	12.07%	8.43%	25.96%	8.59%	14.79%
Secondary Domestic Equity Bmk (6)	12.57%	8.15%	22.81%	7.38%	13.88%
<b>Large Cap Domestic Equity</b>	<b>11.69%</b>	<b>8.04%</b>	<b>26.11%</b>	<b>9.94%</b>	<b>14.74%</b>
S&P 500 Index	11.69%	8.04%	26.29%	10.00%	15.69%
Blackrock S&P 500	11.69%	8.04%	26.11%	9.94%	15.64%
<b>SMid Cap Domestic Equity</b>	<b>11.31%</b>	<b>7.05%</b>	<b>16.40%</b>	<b>6.24%</b>	<b>12.09%</b>
Russell 2500 Index	13.35%	7.93%	17.42%	4.24%	11.67%
AllianceBernstein	13.97%	8.04%	18.79%	4.63%	12.77%
TSW	7.13%	5.43%	12.64%	9.17%	11.01%
TSW Blended Benchmark (2)	13.76%	9.59%	15.98%	8.81%	11.55%
<b>Small Cap Domestic Equity</b>	<b>12.33%</b>	<b>8.58%</b>	<b>17.25%</b>	<b>6.46%</b>	<b>14.41%</b>
Russell 2000 Index	14.03%	8.18%	16.93%	2.22%	9.97%
Boston Trust	10.54%	6.22%	11.16%	9.76%	13.99%
Segall Bryant & Hamill	12.15%	9.11%	15.55%	8.10%	15.03%
Wellington	13.47%	9.63%	22.07%	3.89%	14.29%
<b>Total Non US Equity</b>	<b>10.36%</b>	<b>5.51%</b>	<b>20.25%</b>	<b>2.77%</b>	<b>8.15%</b>
Non US Equity Benchmark (3)	9.75%	5.61%	15.62%	1.55%	7.08%
<b>Core Non US Equity</b>	<b>9.97%</b>	<b>5.75%</b>	<b>20.92%</b>	<b>4.55%</b>	<b>8.38%</b>
Core Non US Benchmark (4)	9.75%	5.61%	15.62%	1.55%	7.08%
Aristotle	10.31%	5.51%	19.22%	3.62%	-
Artisan Partners	9.63%	5.27%	16.60%	1.58%	8.13%
BlackRock Superfund	9.62%	5.52%	-	-	-
Causeway Capital	9.62%	6.43%	28.49%	9.71%	11.41%
Lazard	11.72%	5.59%	18.77%	1.82%	-
<b>Emerging Markets</b>	<b>6.76%</b>	<b>3.21%</b>	<b>10.36%</b>	<b>(6.10%)</b>	<b>2.80%</b>
MSCI EM	7.86%	4.71%	9.83%	(5.08%)	3.69%
Wellington Emerging Markets	6.76%	3.21%	7.99%	(6.25%)	3.02%
<b>Non US Small Cap</b>	<b>12.87%</b>	<b>8.12%</b>	<b>17.20%</b>	<b>(0.61%)</b>	<b>2.35%</b>
Wellington Int'l Small Cap Research	12.87%	8.12%	17.20%	-	-
MSCI EAFE Small Cap	11.14%	7.24%	13.16%	(0.69%)	6.58%
<b>Global Equity</b>	<b>11.85%</b>	<b>5.05%</b>	<b>24.04%</b>	<b>6.22%</b>	<b>13.60%</b>
MSCI ACWI net	11.03%	7.26%	22.20%	5.75%	11.72%
Walter Scott Global Equity	11.85%	5.05%	24.04%	6.22%	13.60%
Walter Scott Blended Benchmark (5)	11.03%	7.26%	22.20%	5.75%	11.72%

(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 December 31, 2023. 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 December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
<b>Gross of Fees</b>					
<b>Total Fixed Income</b>	<b>7.23%</b>	<b>4.24%</b>	<b>7.32%</b>	<b>(1.89%)</b>	<b>2.72%</b>
Fixed Income Benchmark (1)	6.83%	3.76%	6.17%	(2.97%)	1.44%
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
BlackRock SIO Bond Fund	5.66%	5.61%	7.97%	1.28%	3.54%
BlackRock Custom Benchmark (2)	1.37%	2.71%	5.09%	2.17%	1.92%
Brandywine Asset Mgmt	12.69%	4.50%	8.08%	(4.61%)	1.41%
Brandywine Custom Benchmark (3)	8.36%	3.48%	5.36%	(7.19%)	(1.39%)
FIAM (Fidelity) Tactical Bond	7.23%	3.96%	7.38%	(0.85%)	-
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
Income Research & Management	6.54%	3.46%	6.41%	(3.30%)	1.96%
Bloomberg Gov/Credit	6.63%	3.44%	5.72%	(3.53%)	1.41%
Loomis Sayles	7.12%	5.87%	8.85%	(0.31%)	4.52%
Loomis Sayles Custom Benchmark (4)	6.94%	4.85%	8.25%	(1.46%)	2.65%
Manulife Strategic Fixed Income	6.50%	4.21%	7.86%	(0.68%)	3.32%
Bloomberg Multiverse	8.13%	4.38%	6.05%	(5.26%)	(0.13%)
Mellon US Agg Bond Index	6.83%	3.38%	-	-	-
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
<b>Total Cash</b>	<b>1.40%</b>	<b>2.76%</b>	<b>5.21%</b>	<b>2.26%</b>	<b>1.97%</b>
3-month Treasury Bill	1.37%	2.70%	5.01%	2.15%	1.88%
<b>Total Marketable Assets</b>	<b>9.98%</b>	<b>6.23%</b>	<b>17.00%</b>	<b>3.87%</b>	<b>8.86%</b>
Total Marketable Index (5)	9.72%	6.17%	16.46%	2.97%	8.47%
<b>Total Real Estate</b>	<b>(1.56%)</b>	<b>(1.56%)</b>	<b>(9.18%)</b>	<b>11.43%</b>	<b>8.83%</b>
Real Estate Benchmark (6)	(2.10%)	(4.92%)	(12.88%)	6.19%	4.72%
Strategic Core Real Estate	(1.35%)	(1.36%)	(13.43%)	9.11%	7.10%
Tactical Non-Core Real Estate	(2.05%)	(2.06%)	(1.13%)	15.25%	11.81%
<b>Total Alternative Assets</b>	<b>1.72%</b>	<b>1.86%</b>	<b>7.44%</b>	<b>15.40%</b>	<b>11.36%</b>
Alternative Assets Benchmark (7)	(1.12%)	5.59%	19.58%	9.86%	10.03%
Total Private Equity	1.59%	1.75%	7.38%	17.80%	13.69%
Private Equity Benchmark (8)	(2.66%)	5.90%	22.76%	12.61%	12.97%
Cambridge Global PE Idx 1 Qtr Lag	(0.41%)	1.20%	4.29%	14.97%	14.42%
Total Private Debt	2.09%	2.21%	7.60%	9.77%	6.26%
Private Debt Benchmark (9)	2.02%	4.85%	13.14%	4.07%	3.47%
Cambridge Private Credit Idx 1 Qtr Lag	1.10%	3.08%	9.84%	10.66%	7.47%
<b>Total Fund Composite</b>	<b>7.02%</b>	<b>4.51%</b>	<b>11.70%</b>	<b>6.71%</b>	<b>9.35%</b>
Total Fund Benchmark *	6.93%	5.11%	13.92%	4.60%	8.65%

\* 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 ended December 31, 2023. 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 December 31, 2023

	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
<b>Gross of Fees</b>				
<b>Total Domestic Equity</b>	<b>11.60%</b>	<b>10.59%</b>	<b>7.48%</b>	<b>11.11%</b> (7/75)
Domestic Equity Benchmark (1)	12.79%	11.57%	7.61%	11.49% (7/75)
Secondary Domestic Equity Bmk (6)	11.41%	10.42%	8.08%	-
<b>Large Cap Domestic Equity</b>	<b>12.40%</b>	<b>11.18%</b>	-	<b>13.63%</b> (9/10)
S&P 500 Index	13.42%	12.03%	7.56%	14.23% (9/10)
Blackrock S&P 500	13.38%	12.01%	-	14.21% (9/10)
<b>SMid Cap Domestic Equity</b>	<b>9.14%</b>	<b>8.65%</b>	-	<b>11.27%</b> (12/10)
Russell 2500 Index	8.98%	8.36%	9.14%	10.69% (12/10)
AllianceBernstein	10.71%	9.46%	-	11.85% (12/10)
TSW	6.88%	7.44%	-	10.36% (12/10)
TSW Blended Benchmark (2)	8.89%	8.30%	9.12%	10.64% (12/10)
<b>Small Cap Domestic Equity</b>	<b>11.52%</b>	<b>10.24%</b>	-	<b>12.37%</b> (11/10)
Russell 2000 Index	7.33%	7.16%	7.91%	9.86% (11/10)
Boston Trust	10.97%	9.66%	-	11.71% (11/10)
Segall Bryant & Hamill	12.27%	9.91%	-	12.18% (11/10)
Wellington	11.43%	10.79%	-	13.36% (11/10)
<b>Total Non US Equity</b>	<b>7.66%</b>	<b>4.87%</b>	<b>5.24%</b>	<b>6.36%</b> (4/88)
Non US Equity Benchmark (3)	6.33%	3.83%	4.53%	5.03% (4/88)
<b>Core Non US Equity</b>	<b>7.48%</b>	<b>4.20%</b>	<b>5.03%</b>	<b>6.22%</b> (4/88)
Core Non US Benchmark (4)	6.33%	3.83%	4.31%	4.87% (4/88)
Aristotle	-	-	-	3.62% (1/21)
Artisan Partners	8.42%	-	-	5.08% (11/14)
BlackRock Superfund	-	-	-	8.28% (4/23)
Causeway Capital	8.85%	-	-	6.01% (10/14)
Lazard	-	-	-	1.82% (1/21)
MSCI EAFE	6.91%	4.28%	4.43%	4.02% (1/21)
<b>Emerging Markets</b>	<b>4.08%</b>	<b>2.57%</b>	-	<b>2.38%</b> (6/11)
MSCI EM	4.98%	2.66%	-	1.41% (6/11)
Wellington Emerging Markets	5.06%	3.60%	-	3.86% (6/11)
<b>Non US Small Cap</b>	<b>1.07%</b>	<b>0.55%</b>	-	<b>2.48%</b> (7/11)
MSCI EAFE Small Cap	5.98%	4.80%	7.20%	5.73% (7/11)
<b>Global Equity</b>	<b>13.38%</b>	<b>10.70%</b>	-	<b>9.45%</b> (5/08)
MSCI ACWI net	10.05%	7.93%	-	6.27% (5/08)
Walter Scott Global Equity	13.38%	10.70%	-	10.38% (1/05)
Walter Scott Blended Benchmark (5)	10.05%	7.93%	6.44%	7.53% (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 December 31, 2023. 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 December 31, 2023				
	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
<b>Gross of Fees</b>				
<b>Total Fixed Income</b>	<b>2.69%</b>	<b>2.82%</b>	<b>5.26%</b>	<b>7.40%</b> (7/75)
Fixed Income Benchmark (1)	1.57%	2.08%	4.13%	-
Bloomberg Aggregate	1.29%	1.81%	3.85%	-
BlackRock SIO Bond Fund	-	-	-	3.54% (1/19)
BlackRock Custom Benchmark (2)	-	-	-	1.92% (1/19)
Brandywine Asset Mgmt	2.14%	1.86%	5.85%	6.13% (11/97)
Brandywine Custom Benchmark (3)	(0.09%)	(0.32%)	2.73%	3.11% (11/97)
FIAM (Fidelity) Tactical Bond	-	-	-	3.44% (2/19)
Bloomberg Aggregate	1.29%	1.81%	3.85%	0.90% (2/19)
Income Research & Management	2.01%	2.49%	4.74%	6.32% (9/87)
Bloomberg Gov/Credit	1.52%	1.97%	3.91%	5.54% (9/87)
Loomis Sayles	4.03%	3.99%	-	7.22% (10/02)
Loomis Sayles Custom Benchmark (4)	2.49%	2.83%	4.80%	4.91% (10/02)
Manulife Strategic Fixed Income	2.69%	-	-	2.43% (3/15)
Bloomberg Multiverse	0.77%	0.53%	3.17%	0.65% (3/15)
Mellon US Agg Bond Index	-	-	-	3.38% (7/23)
Bloomberg Aggregate	1.29%	1.81%	3.85%	3.37% (7/23)
<b>Total Cash</b>	<b>1.83%</b>	<b>1.33%</b>	<b>1.99%</b>	<b>2.54%</b> (4/94)
3-month Treasury Bill	1.73%	1.25%	1.90%	2.44% (4/94)
<b>Total Marketable Assets</b>	<b>7.80%</b>	<b>6.74%</b>	<b>6.48%</b>	<b>9.45%</b> (7/75)
Total Marketable Index (5)	7.51%	6.59%	5.89%	-
<b>Total Real Estate</b>	<b>8.99%</b>	<b>10.47%</b>	<b>10.06%</b>	<b>9.77%</b> (3/83)
Real Estate Benchmark (6)	5.43%	7.30%	7.85%	-
Strategic Core Real Estate	7.70%	9.02%	9.59%	9.42% (4/83)
Tactical Non-Core Real Estate	11.23%	12.94%	-	10.46% (10/04)
<b>Total Alternative Assets</b>	<b>11.30%</b>	<b>9.76%</b>	<b>4.12%</b>	<b>7.36%</b> (3/87)
Alternative Assets Benchmark (7)	10.31%	11.32%	9.68%	-
Total Private Equity	14.56%	12.44%	4.21%	6.58% (12/90)
Private Equity Benchmark (8)	15.30%	15.39%	12.48%	15.21% (12/90)
Cambridge Global PE Idx 1 Qtr Lag	15.08%	14.14%	13.82%	15.24% (12/90)
Total Private Debt	6.69%	6.96%	-	5.42% (6/11)
Private Debt Benchmark (9)	3.84%	6.28%	-	8.50% (6/11)
Cambridge Private Credit Idx 1 Qtr Lag	8.61%	8.02%	9.51%	8.53% (6/11)
<b>Total Fund Composite</b>	<b>8.58%</b>	<b>7.59%</b>	<b>6.88%</b>	<b>8.92%</b> (6/89)
Total Fund Benchmark *	7.97%	7.34%	6.52%	-

\* 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. 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.

	2023	2022	2021	2020	2019
<b>Gross of Fees</b>					
<b>Total Domestic Equity</b>	<b>22.25%</b>	<b>(17.50%)</b>	<b>26.35%</b>	<b>17.06%</b>	<b>29.92%</b>
Domestic Equity Benchmark (1)	25.96%	(19.21%)	25.82%	18.40%	31.49%
Secondary Domestic Equity Bmk (6)	22.81%	(18.58%)	23.83%	19.35%	29.58%
<b>Large Cap Domestic Equity</b>	<b>26.11%</b>	<b>(18.10%)</b>	<b>28.64%</b>	<b>14.60%</b>	<b>30.61%</b>
S&P 500 Index	26.29%	(18.11%)	28.71%	18.40%	31.49%
Blackrock S&P 500	26.11%	(18.10%)	28.64%	18.37%	31.48%
<b>SMid Cap Domestic Equity</b>	<b>16.40%</b>	<b>(18.09%)</b>	<b>25.77%</b>	<b>17.97%</b>	<b>25.08%</b>
Russell 2500 Index	17.42%	(18.37%)	18.18%	19.99%	27.77%
AllianceBernstein	18.79%	(24.13%)	27.09%	26.15%	26.22%
TSW	12.64%	(6.30%)	23.28%	5.09%	23.32%
TSW Blended Benchmark (2)	15.98%	(13.08%)	27.78%	4.88%	27.84%
<b>Small Cap Domestic Equity</b>	<b>17.25%</b>	<b>(15.52%)</b>	<b>21.79%</b>	<b>23.11%</b>	<b>32.01%</b>
Russell 2000 Index	16.93%	(20.44%)	14.82%	19.96%	25.52%
Boston Trust	11.16%	(8.18%)	29.56%	10.66%	31.51%
Segall Bryant & Hamill	15.55%	(12.25%)	24.57%	24.00%	28.61%
Wellington	22.07%	(21.25%)	16.63%	29.55%	34.26%
<b>Total Non US Equity</b>	<b>20.25%</b>	<b>(17.52%)</b>	<b>9.44%</b>	<b>9.72%</b>	<b>24.23%</b>
Non US Equity Benchmark (3)	15.62%	(16.00%)	7.82%	10.65%	21.51%
<b>Core Non US Equity</b>	<b>20.92%</b>	<b>(14.63%)</b>	<b>10.69%</b>	<b>5.11%</b>	<b>24.51%</b>
Core Non US Benchmark (4)	15.62%	(16.00%)	7.82%	10.65%	21.51%
Artisan Partners	16.60%	(18.46%)	10.25%	7.81%	30.77%
Aristotle	19.22%	(20.48%)	17.35%	-	-
Causeway Capital	28.49%	(6.69%)	10.15%	6.88%	21.60%
Lazard	18.77%	(16.36%)	6.26%	-	-
MSCI EAFE	18.24%	(14.45%)	11.26%	7.82%	22.01%
<b>Emerging Markets</b>	<b>10.36%</b>	<b>(21.04%)</b>	<b>(4.98%)</b>	<b>15.78%</b>	<b>19.76%</b>
MSCI EM	9.83%	(20.09%)	(2.54%)	18.31%	18.44%
Wellington Emerging Markets	7.99%	(19.38%)	(5.37%)	17.67%	19.72%
<b>Non US Small Cap</b>	<b>17.20%</b>	<b>(23.55%)</b>	<b>9.57%</b>	<b>(3.66%)</b>	<b>18.71%</b>
Wellington Int'l Small Cap Research	17.20%	(23.55%)	-	-	-
MSCI EAFE Small Cap	13.16%	(21.39%)	10.10%	12.34%	24.96%
<b>Global Equity</b>	<b>24.04%</b>	<b>(19.11%)</b>	<b>19.44%</b>	<b>20.02%</b>	<b>31.50%</b>
MSCI ACWI net	22.20%	(18.36%)	18.54%	16.25%	26.60%
Walter Scott Global Equity	24.04%	(19.11%)	19.44%	20.02%	31.50%
Walter Scott Blended Benchmark (5)	22.20%	(18.36%)	18.54%	16.25%	26.60%

(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.

	2023	2022	2021	2020	2019
<b>Gross of Fees</b>					
<b>Total Fixed Income</b>	<b>7.32%</b>	<b>(11.77%)</b>	<b>(0.27%)</b>	<b>10.41%</b>	<b>9.68%</b>
Fixed Income Benchmark (1)	6.17%	(12.99%)	(1.10%)	7.58%	9.29%
Bloomberg Aggregate	5.53%	(13.01%)	(1.54%)	7.51%	8.72%
BlackRock SIO Bond Fund	7.97%	(5.79%)	2.13%	7.17%	6.89%
BlackRock Custom Benchmark (2)	5.09%	1.32%	0.17%	0.74%	2.37%
Brandywine Asset Mgmt	8.08%	(15.57%)	(4.89%)	12.55%	9.80%
Brandywine Custom Benchmark (3)	5.36%	(18.42%)	(6.98%)	10.11%	5.90%
FIAM (Fidelity) Tactical Bond	7.38%	(10.58%)	1.50%	9.79%	-
Bloomberg Aggregate	5.53%	(13.01%)	(1.54%)	7.51%	8.72%
Income Research & Management	6.41%	(13.74%)	(1.49%)	10.89%	9.91%
Bloomberg Gov/Credit	5.72%	(13.58%)	(1.75%)	8.93%	9.71%
Loomis Sayles	8.85%	(11.24%)	2.54%	13.08%	11.31%
Loomis Sayles Custom Benchmark (4)	8.25%	(12.32%)	0.81%	7.61%	10.69%
Manulife Strategic Fixed Income	7.86%	(9.58%)	0.47%	8.33%	10.91%
Bloomberg Multiverse	6.05%	(16.01%)	(4.51%)	9.02%	7.13%
<b>Total Cash</b>	<b>5.21%</b>	<b>1.58%</b>	<b>0.06%</b>	<b>0.63%</b>	<b>2.43%</b>
3-month Treasury Bill	5.01%	1.46%	0.05%	0.67%	2.28%
<b>Total Marketable Assets</b>	<b>17.00%</b>	<b>(15.62%)</b>	<b>13.49%</b>	<b>13.08%</b>	<b>20.67%</b>
Total Marketable Index (5)	16.46%	(16.01%)	11.63%	13.33%	21.34%
<b>Total Real Estate</b>	<b>(9.18%)</b>	<b>22.65%</b>	<b>24.22%</b>	<b>2.91%</b>	<b>7.24%</b>
Real Estate Benchmark (6)	(12.88%)	20.96%	13.64%	0.52%	4.64%
Strategic Core Real Estate	(13.43%)	27.48%	17.70%	1.62%	6.76%
Tactical Non-Core Real Estate	(1.13%)	13.65%	36.24%	5.48%	8.20%
<b>Total Alternative Assets</b>	<b>7.44%</b>	<b>4.21%</b>	<b>37.25%</b>	<b>5.28%</b>	<b>5.87%</b>
Alternative Assets Benchmark (7)	19.58%	(10.61%)	24.04%	12.87%	7.78%
Total Private Equity	7.38%	2.62%	48.35%	8.46%	7.13%
Private Equity Benchmark (8)	22.76%	(12.74%)	33.31%	19.37%	7.93%
Cambridge Global PE Idx 1 Qtr Lag	4.29%	(3.62%)	51.18%	17.92%	9.43%
Total Private Debt	7.60%	9.06%	12.72%	(0.96%)	3.41%
Private Debt Benchmark (9)	13.14%	(6.59%)	6.66%	1.71%	3.44%
Cambridge Private Credit Idx 1 Qtr Lag	9.84%	2.40%	20.49%	2.83%	2.85%
<b>Total Fund Composite</b>	<b>11.70%</b>	<b>(8.18%)</b>	<b>18.47%</b>	<b>10.50%</b>	<b>16.46%</b>
Total Fund Benchmark *	13.92%	(11.67%)	13.73%	12.50%	17.61%

\* 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 December 31, 2023. 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 December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
<b>Net of Fees</b>					
<b>Total Domestic Equity</b>	<b>11.70%</b>	<b>7.84%</b>	<b>21.93%</b>	<b>8.13%</b>	<b>13.84%</b>
Domestic Equity Benchmark (1)	12.07%	8.43%	25.96%	8.59%	14.79%
Secondary Domestic Equity Bmk (6)	12.57%	8.15%	22.81%	7.38%	13.88%
<b>Large Cap Domestic Equity</b>	<b>11.69%</b>	<b>8.04%</b>	<b>26.10%</b>	<b>9.92%</b>	<b>14.71%</b>
S&P 500 Index	11.69%	8.04%	26.29%	10.00%	15.69%
Blackrock S&P 500	11.69%	8.04%	26.10%	9.92%	15.63%
<b>SMid Cap Domestic Equity</b>	<b>11.16%</b>	<b>6.75%</b>	<b>15.77%</b>	<b>5.66%</b>	<b>11.46%</b>
Russell 2500 Index	13.35%	7.93%	17.42%	4.24%	11.67%
AllianceBernstein	13.82%	7.75%	18.16%	4.07%	12.16%
TSW	6.98%	5.13%	12.00%	8.55%	10.35%
TSW Blended Benchmark (2)	13.76%	9.59%	15.98%	8.81%	11.55%
<b>Small Cap Domestic Equity</b>	<b>12.14%</b>	<b>8.21%</b>	<b>16.47%</b>	<b>5.74%</b>	<b>13.64%</b>
Russell 2000 Index	14.03%	8.18%	16.93%	2.22%	9.97%
Boston Trust	10.41%	5.97%	10.65%	9.25%	13.44%
Segall Bryant & Hamill	11.93%	8.67%	14.64%	7.24%	14.12%
Wellington	13.27%	9.23%	21.21%	3.15%	13.47%
<b>Total Non US Equity</b>	<b>10.21%</b>	<b>5.23%</b>	<b>19.60%</b>	<b>2.16%</b>	<b>7.49%</b>
Non US Equity Benchmark (3)	9.75%	5.61%	15.62%	1.55%	7.08%
<b>Core Non US Equity</b>	<b>9.84%</b>	<b>5.50%</b>	<b>20.35%</b>	<b>4.00%</b>	<b>7.80%</b>
Core Non US Benchmark (4)	9.75%	5.61%	15.62%	1.55%	7.08%
Aristotle	10.19%	5.28%	18.69%	3.15%	-
Artisan Partners	9.46%	4.94%	15.87%	0.95%	7.44%
BlackRock Superfund	9.61%	5.50%	-	-	-
Causeway Capital	9.48%	6.15%	27.83%	9.14%	10.82%
Lazard	11.58%	5.32%	18.18%	1.31%	-
<b>Emerging Markets</b>	<b>6.50%</b>	<b>2.69%</b>	<b>9.28%</b>	<b>(6.98%)</b>	<b>1.84%</b>
MSCI EM	7.86%	4.71%	9.83%	(5.08%)	3.69%
Wellington Emerging Markets	6.50%	2.69%	6.91%	(7.19%)	2.00%
<b>Non US Small Cap</b>	<b>12.67%</b>	<b>7.73%</b>	<b>16.42%</b>	<b>(1.20%)</b>	<b>1.75%</b>
Wellington Int'l Small Cap Research	12.67%	7.73%	16.42%	-	-
MSCI EAFE Small Cap	11.14%	7.24%	13.16%	(0.69%)	6.58%
<b>Global Equity</b>	<b>11.71%</b>	<b>4.77%</b>	<b>23.40%</b>	<b>5.67%</b>	<b>12.98%</b>
MSCI ACWI net	11.03%	7.26%	22.20%	5.75%	11.72%
Walter Scott Global Equity	11.71%	4.77%	23.40%	5.67%	12.98%
Walter Scott Blended Benchmark (5)	11.03%	7.26%	22.20%	5.75%	11.72%

(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 December 31, 2023. 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 December 31, 2023

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years
<b>Net of Fees</b>					
<b>Total Fixed Income</b>	<b>7.16%</b>	<b>4.10%</b>	<b>7.03%</b>	<b>(2.16%)</b>	<b>2.43%</b>
Fixed Income Benchmark (1)	6.83%	3.76%	6.17%	(2.97%)	1.44%
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
BlackRock SIO Bond Fund	5.53%	5.36%	7.45%	0.79%	3.05%
BlackRock Custom Benchmark (2)	1.37%	2.71%	5.09%	2.17%	1.92%
Brandywine Asset Mgmt	12.59%	4.33%	7.73%	(4.92%)	1.09%
Brandywine Custom Benchmark (3)	8.36%	3.48%	5.36%	(7.19%)	(1.39%)
FIAM (Fidelity) Tactical Bond	7.14%	3.79%	7.04%	(1.17%)	-
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
Income Research & Management	6.49%	3.38%	6.23%	(3.46%)	1.79%
Bloomberg Gov/Credit	6.63%	3.44%	5.72%	(3.53%)	1.41%
Loomis Sayles	7.04%	5.69%	8.50%	(0.63%)	4.18%
Loomis Sayles Custom Benchmark (4)	6.94%	4.85%	8.25%	(1.46%)	2.65%
Manulife Strategic Fixed Income	6.42%	4.06%	7.56%	(0.96%)	3.03%
Bloomberg Multiverse	8.13%	4.38%	6.05%	(5.26%)	(0.13%)
Mellon US Agg Bond Index	6.83%	3.37%	-	-	-
Bloomberg Aggregate	6.82%	3.37%	5.53%	(3.31%)	1.10%
<b>Total Cash</b>	<b>1.40%</b>	<b>2.76%</b>	<b>5.21%</b>	<b>2.26%</b>	<b>1.97%</b>
3-month Treasury Bill	1.37%	2.70%	5.01%	2.15%	1.88%
<b>Total Marketable Assets</b>	<b>9.89%</b>	<b>6.05%</b>	<b>16.61%</b>	<b>3.51%</b>	<b>8.48%</b>
Total Marketable Index (5)	9.72%	6.17%	16.46%	2.97%	8.47%
<b>Total Real Estate (10)</b>	<b>(1.74%)</b>	<b>(1.91%)</b>	<b>(9.94%)</b>	<b>10.54%</b>	<b>8.31%</b>
Real Estate Benchmark (6)	(2.10%)	(4.92%)	(12.88%)	6.19%	4.72%
Strategic Core Real Estate	(1.65%)	(1.74%)	(13.99%)	8.40%	6.69%
Tactical Non-Core Real Estate	(1.89%)	(2.20%)	(1.79%)	14.35%	11.28%
<b>Total Alternative Assets</b>	<b>1.44%</b>	<b>1.42%</b>	<b>6.31%</b>	<b>14.48%</b>	<b>10.83%</b>
Alternative Assets Benchmark (7)	(1.12%)	5.59%	19.58%	9.86%	10.03%
Total Private Equity	1.35%	1.33%	6.67%	17.09%	13.28%
Private Equity Benchmark (8)	(2.66%)	5.90%	22.76%	12.61%	12.97%
Cambridge Global PE Idx 1 Qtr Lag	(0.41%)	1.20%	4.29%	14.97%	14.42%
Total Private Debt	1.71%	1.68%	5.31%	8.29%	5.40%
Private Debt Benchmark (9)	2.02%	4.85%	13.14%	4.07%	3.47%
Cambridge Private Credit Idx 1 Qtr Lag	1.10%	3.08%	9.84%	10.66%	7.47%
<b>Total Fund Composite</b>	<b>6.88%</b>	<b>4.26%</b>	<b>11.11%</b>	<b>6.18%</b>	<b>8.91%</b>
Total Fund Benchmark *	6.93%	5.11%	13.92%	4.60%	8.65%

\* 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 December 31, 2023. 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 December 31, 2023

	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
<b>Net of Fees</b>				
<b>Total Domestic Equity</b>	<b>11.28%</b>	<b>10.26%</b>	<b>7.16%</b>	<b>10.93%</b> (7/75)
Domestic Equity Benchmark (1)	12.79%	11.57%	7.61%	11.49% (7/75)
Secondary Domestic Equity Bmk (6)	11.41%	10.42%	8.08%	-
<b>Large Cap Domestic Equity</b>	<b>12.36%</b>	<b>11.11%</b>	-	<b>13.55%</b> (9/10)
S&P 500 Index	13.42%	12.03%	7.56%	14.23% (9/10)
Blackrock S&P 500	13.37%	12.00%	-	14.20% (9/10)
<b>SMid Cap Domestic Equity</b>	<b>8.50%</b>	<b>7.99%</b>	-	<b>10.56%</b> (12/10)
Russell 2500 Index	8.98%	8.36%	9.14%	10.69% (12/10)
AllianceBernstein	10.09%	8.82%	-	11.16% (12/10)
TSW	6.21%	6.75%	-	9.62% (12/10)
TSW Blended Benchmark (2)	8.89%	8.30%	9.12%	10.64% (12/10)
<b>Small Cap Domestic Equity</b>	<b>10.76%</b>	<b>9.47%</b>	-	<b>11.58%</b> (11/10)
Russell 2000 Index	7.33%	7.16%	7.91%	9.86% (11/10)
Boston Trust	10.43%	9.11%	-	11.12% (11/10)
Segall Bryant & Hamill	11.38%	9.00%	-	11.23% (11/10)
Wellington	10.63%	9.99%	-	12.52% (11/10)
<b>Total Non US Equity</b>	<b>6.99%</b>	<b>4.21%</b>	<b>4.67%</b>	<b>5.96%</b> (4/88)
Non US Equity Benchmark (3)	6.33%	3.83%	4.53%	5.03% (4/88)
<b>Core Non US Equity</b>	<b>6.90%</b>	<b>3.63%</b>	<b>4.50%</b>	<b>5.84%</b> (4/88)
Core Non US Benchmark (4)	6.33%	3.83%	4.31%	4.87% (4/88)
Artisan Partners	7.73%	-	-	4.41% (11/14)
Aristotle	-	-	-	3.15% (1/21)
BlackRock Superfund	-	-	-	8.26% (4/23)
Causeway Capital	8.27%	-	-	5.44% (10/14)
Lazard	-	-	-	1.31% (1/21)
<b>Emerging Markets</b>	<b>3.10%</b>	<b>1.60%</b>	-	<b>1.41%</b> (6/11)
MSCI EM	4.98%	2.66%	-	1.41% (6/11)
Wellington Emerging Markets	4.01%	2.57%	-	2.82% (6/11)
<b>Non US Small Cap</b>	<b>0.50%</b>	<b>(0.10%)</b>	-	<b>1.78%</b> (7/11)
MSCI EAFE Small Cap	5.98%	4.80%	7.20%	5.73% (7/11)
<b>Global Equity</b>	<b>12.76%</b>	<b>10.07%</b>	-	<b>8.80%</b> (5/08)
MSCI ACWI net	10.05%	7.93%	-	6.27% (5/08)
Walter Scott Global Equity	12.76%	10.07%	-	9.72% (1/05)
Walter Scott Blended Benchmark (5)	10.05%	7.93%	6.44%	7.53% (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 December 31, 2023. 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 December 31, 2023				
	Last 7 Years	Last 10 Years	Last 25 Years	Since Inception
<b>Net of Fees</b>				
<b>Total Fixed Income</b>	<b>2.40%</b>	<b>2.52%</b>	<b>5.01%</b>	<b>7.26%</b> (7/75)
Fixed Income Benchmark (1)	1.57%	2.08%	4.13%	-
Bloomberg Aggregate	1.29%	1.81%	3.85%	-
BlackRock SIO Bond Fund	-	-	-	3.05% (1/19)
BlackRock Custom Benchmark (2)	-	-	-	1.92% (1/19)
Brandywine Asset Mgmt	1.83%	1.54%	5.54%	5.83% (11/97)
Brandywine Custom Benchmark (3)	(0.09%)	(0.32%)	2.73%	3.11% (11/97)
FIAM (Fidelity) Tactical Bond	-	-	-	3.11% (2/19)
Bloomberg Aggregate	1.29%	1.81%	3.85%	0.90% (2/19)
Income Research & Management	1.83%	2.31%	4.54%	6.19% (9/87)
Bloomberg Gov/Credit	1.52%	1.97%	3.91%	5.54% (9/87)
Loomis Sayles	3.70%	3.66%	-	6.85% (10/02)
Loomis Sayles Custom Benchmark (4)	2.49%	2.83%	4.80%	4.91% (10/02)
Manulife Strategic Fixed Income	2.40%	-	-	2.14% (3/15)
Bloomberg Multiverse	0.77%	0.53%	3.17%	0.65% (3/15)
Mellon US Agg Bond Index	-	-	-	3.37% (7/23)
Bloomberg Aggregate	1.29%	1.81%	3.85%	3.37% (7/23)
<b>Total Cash</b>	<b>1.83%</b>	<b>1.33%</b>	<b>1.99%</b>	<b>2.54%</b> (4/94)
3-month Treasury Bill	1.73%	1.25%	1.90%	2.44% (4/94)
<b>Total Marketable Assets</b>	<b>7.41%</b>	<b>6.34%</b>	<b>6.12%</b>	<b>9.26%</b> (7/75)
Total Marketable Index (5)	7.51%	6.59%	5.89%	-
<b>Total Real Estate (10)</b>	<b>8.62%</b>	<b>10.21%</b>	<b>9.40%</b>	<b>9.25%</b> (3/83)
Real Estate Benchmark (6)	5.43%	7.30%	7.85%	-
Strategic Core Real Estate	7.40%	8.81%	8.95%	8.92% (4/83)
Tactical Non-Core Real Estate	10.86%	12.67%	-	9.62% (10/04)
<b>Total Alternative Assets</b>	<b>10.89%</b>	<b>9.42%</b>	<b>3.86%</b>	<b>7.18%</b> (3/87)
Alternative Assets Benchmark (7)	10.31%	11.32%	9.68%	-
Total Private Equity	14.26%	12.24%	4.12%	6.51% (12/90)
Private Equity Benchmark (8)	15.30%	15.39%	12.48%	15.21% (12/90)
Cambridge Global PE Idx 1 Qtr Lag	15.08%	14.14%	13.82%	15.24% (12/90)
Total Private Debt	6.07%	6.53%	-	4.99% (6/11)
Private Debt Benchmark (9)	3.84%	6.28%	-	8.50% (6/11)
Cambridge Private Credit Idx 1 Qtr Lag	8.61%	8.02%	9.51%	8.53% (6/11)
<b>Total Fund Composite</b>	<b>8.18%</b>	<b>7.20%</b>	<b>6.52%</b>	<b>8.65%</b> (6/89)
Total Fund Benchmark *	7.97%	7.34%	6.52%	-

\* 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.

	2023	2022	2021	2020	2019
<b>Net of Fees</b>					
<b>Total Domestic Equity</b>	<b>21.93%</b>	<b>(17.72%)</b>	<b>26.02%</b>	<b>16.75%</b>	<b>29.54%</b>
Domestic Equity Benchmark (1)	25.96%	(19.21%)	25.82%	18.40%	31.49%
Secondary Domestic Equity Bmk (6)	22.81%	(18.58%)	23.83%	19.35%	29.58%
<b>Large Cap Domestic Equity</b>	<b>26.10%</b>	<b>(18.11%)</b>	<b>28.63%</b>	<b>14.56%</b>	<b>30.54%</b>
S&P 500 Index	26.29%	(18.11%)	28.71%	18.40%	31.49%
Blackrock S&P 500	26.10%	(18.11%)	28.63%	18.36%	31.47%
<b>SMid Cap Domestic Equity</b>	<b>15.77%</b>	<b>(18.54%)</b>	<b>25.09%</b>	<b>17.31%</b>	<b>24.32%</b>
Russell 2500 Index	17.42%	(18.37%)	18.18%	19.99%	27.77%
AllianceBernstein	18.16%	(24.54%)	26.42%	25.47%	25.52%
TSW	12.00%	(6.83%)	22.58%	4.44%	22.47%
TSW Blended Benchmark (2)	15.98%	(13.08%)	27.78%	4.88%	27.84%
<b>Small Cap Domestic Equity</b>	<b>16.47%</b>	<b>(16.09%)</b>	<b>20.97%</b>	<b>22.26%</b>	<b>31.11%</b>
Russell 2000 Index	16.93%	(20.44%)	14.82%	19.96%	25.52%
Boston Trust	10.65%	(8.61%)	28.95%	10.10%	30.84%
Segall Bryant & Hamill	14.64%	(12.96%)	23.58%	23.01%	27.59%
Wellington	21.21%	(21.82%)	15.80%	28.62%	33.28%
<b>Total Non US Equity</b>	<b>19.60%</b>	<b>(18.04%)</b>	<b>8.78%</b>	<b>9.03%</b>	<b>23.44%</b>
Non US Equity Benchmark (3)	15.62%	(16.00%)	7.82%	10.65%	21.51%
<b>Core Non US Equity</b>	<b>20.35%</b>	<b>(15.10%)</b>	<b>10.09%</b>	<b>4.52%</b>	<b>23.81%</b>
Core Non US Benchmark (4)	15.62%	(16.00%)	7.82%	10.65%	21.51%
Artisan Partners	15.87%	(18.97%)	9.57%	7.14%	29.93%
Aristotle	18.69%	(20.84%)	16.84%	-	-
Causeway Capital	27.83%	(7.18%)	9.58%	6.31%	20.94%
Lazard	18.18%	(16.78%)	5.73%	-	-
<b>Emerging Markets</b>	<b>9.28%</b>	<b>(21.78%)</b>	<b>(5.85%)</b>	<b>14.72%</b>	<b>18.66%</b>
MSCI EM	9.83%	(20.09%)	(2.54%)	18.31%	18.44%
Wellington Emerging Markets	6.91%	(20.19%)	(6.31%)	16.51%	18.53%
<b>Non US Small Cap</b>	<b>16.42%</b>	<b>(24.06%)</b>	<b>9.08%</b>	<b>(4.19%)</b>	<b>18.06%</b>
Wellington Int'l Small Cap Research	16.42%	(24.06%)	-	-	-
MSCI EAFE Small Cap	13.16%	(21.39%)	10.10%	12.34%	24.96%
<b>Global Equity</b>	<b>23.40%</b>	<b>(19.54%)</b>	<b>18.82%</b>	<b>19.36%</b>	<b>30.73%</b>
MSCI ACWI net	22.20%	(18.36%)	18.54%	16.25%	26.60%
Walter Scott Global Equity	23.40%	(19.54%)	18.82%	19.36%	30.73%
Walter Scott Blended Benchmark (5)	22.20%	(18.36%)	18.54%	16.25%	26.60%

(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.

	2023	2022	2021	2020	2019
<b>Net of Fees</b>					
<b>Total Fixed Income</b>	<b>7.03%</b>	<b>(12.02%)</b>	<b>(0.55%)</b>	<b>10.10%</b>	<b>9.36%</b>
Fixed Income Benchmark (1)	6.17%	(12.99%)	(1.10%)	7.58%	9.29%
Bloomberg Aggregate	5.53%	(13.01%)	(1.54%)	7.51%	8.72%
BlackRock SIO Bond Fund	7.45%	(6.24%)	1.64%	6.66%	6.38%
BlackRock Custom Benchmark (2)	5.09%	1.32%	0.17%	0.74%	2.37%
Brandywine Asset Mgmt	7.73%	(15.84%)	(5.19%)	12.20%	9.47%
Brandywine Custom Benchmark (3)	5.36%	(18.42%)	(6.98%)	10.11%	5.90%
FIAM (Fidelity) Tactical Bond	7.04%	(10.86%)	1.17%	9.44%	-
Bloomberg Aggregate	5.53%	(13.01%)	(1.54%)	7.51%	8.72%
Income Research & Management	6.23%	(13.88%)	(1.65%)	10.70%	9.71%
Bloomberg Gov/Credit	5.72%	(13.58%)	(1.75%)	8.93%	9.71%
Loomis Sayles	8.50%	(11.53%)	2.21%	12.71%	10.97%
Loomis Sayles Custom Benchmark (4)	8.25%	(12.32%)	0.81%	7.61%	10.69%
Manulife Strategic Fixed Income	7.56%	(9.84%)	0.19%	8.03%	10.61%
Bloomberg Multiverse	6.05%	(16.01%)	(4.51%)	9.02%	7.13%
<b>Total Cash</b>	<b>5.21%</b>	<b>1.58%</b>	<b>0.06%</b>	<b>0.63%</b>	<b>2.43%</b>
3-month Treasury Bill	5.01%	1.46%	0.05%	0.67%	2.28%
<b>Total Marketable Assets</b>	<b>16.61%</b>	<b>(15.91%)</b>	<b>13.09%</b>	<b>12.67%</b>	<b>20.21%</b>
Total Marketable Index (5)	16.46%	(16.01%)	11.63%	13.33%	21.34%
<b>Total Real Estate (10)</b>	<b>(9.94%)</b>	<b>20.74%</b>	<b>24.22%</b>	<b>2.91%</b>	<b>7.24%</b>
Real Estate Benchmark (6)	(12.88%)	20.96%	13.64%	0.52%	4.64%
Strategic Core Real Estate	(13.99%)	25.83%	17.70%	1.62%	6.76%
Tactical Non-Core Real Estate	(1.79%)	11.73%	36.24%	5.48%	8.20%
<b>Total Alternative Assets</b>	<b>6.31%</b>	<b>2.83%</b>	<b>37.25%</b>	<b>5.28%</b>	<b>5.87%</b>
Alternative Assets Benchmark (7)	19.58%	(10.61%)	24.04%	12.87%	7.78%
Total Private Equity	6.67%	1.46%	48.35%	8.46%	7.13%
Private Equity Benchmark (8)	22.76%	(12.74%)	33.31%	19.37%	7.93%
Cambridge Global PE Idx 1 Qtr Lag	4.29%	(3.62%)	51.18%	17.92%	9.43%
Total Private Debt	5.31%	6.98%	12.72%	(0.96%)	3.41%
Private Debt Benchmark (9)	13.14%	(6.59%)	6.66%	1.71%	3.44%
Cambridge Private Credit Idx 1 Qtr Lag	9.84%	2.40%	20.49%	2.83%	2.85%
<b>Total Fund Composite</b>	<b>11.11%</b>	<b>(8.81%)</b>	<b>18.16%</b>	<b>10.21%</b>	<b>16.14%</b>
Total Fund Benchmark *	13.92%	(11.67%)	13.73%	12.50%	17.61%

\* 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.

(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 December 31, 2023, with the distribution as of September 30, 2023. 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, 2023			September 30, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Real Estate</b>						
<b>Strategic Core Real Estate</b>	<b>\$771,525,310</b>	<b>62.11%</b>	<b>\$(10,853,385)</b>	<b>\$(10,620,024)</b>	<b>\$792,998,719</b>	<b>62.45%</b>
Berkshire MF Income	22,223,478	1.79%	(136,421)	(2,113,273)	24,473,172	1.93%
Black Creek Industrial Fund	34,898,081	2.81%	(1,046,654)	435,210	35,509,525	2.80%
Brookfield Premier Real Estate Partners	72,351,275	5.82%	(340,195)	(3,764,665)	76,456,135	6.02%
Carlyle Property Investors	32,252,205	2.60%	(202,841)	13,739	32,441,307	2.55%
Clarion Lion Properties Fund	16,551,137	1.33%	(129,143)	(49,584)	16,729,864	1.32%
Cortland Growth & Income	25,946,143	2.09%	(377,197)	(1,099,798)	27,423,138	2.16%
Dream Industrial Fund	43,461,504	3.50%	(482,789)	773,223	43,171,070	3.40%
Greystar Growth And Income	12,891,386	1.04%	(56,554)	(1,030,502)	13,978,442	1.10%
Hancock US Real Estate	38,287,034	3.08%	(294,818)	(1,279,689)	39,861,540	3.14%
Jamestown Premier Property	29,813,437	2.40%	(44,528)	(2,096,642)	31,954,606	2.52%
JP Morgan Strategic Property	63,640,657	5.12%	(591,817)	(2,164,557)	66,397,032	5.23%
Kayne Anderson Core Real Estate	42,571,001	3.43%	(857,256)	68,524	43,359,733	3.41%
Lion Industrial Trust	103,896,227	8.36%	(7,750,133)	1,335,835	110,310,524	8.69%
MetLife Core Property	69,528,190	5.60%	(2,124,705)	473,735	71,179,160	5.61%
Prime Property Fund LLC	66,065,498	5.32%	(1,776,108)	15,011	67,826,596	5.34%
Smart Markets Fund	57,641,646	4.64%	(1,402,965)	(517,594)	59,562,205	4.69%
<b>Tactical Non-Core Real Estate</b>	<b>\$470,714,417</b>	<b>37.89%</b>	<b>\$3,798,660</b>	<b>\$(9,853,211)</b>	<b>\$476,768,969</b>	<b>37.55%</b>
Almanac Realty Securities (ARS) VII Side	18,022,122	1.45%	(280,658)	877,297	17,425,483	1.37%
Almanac Realty Securities VII LP	11,392,855	0.92%	(293,174)	432,674	11,253,355	0.89%
Almanac Realty Securities VIII LP	12,774,721	1.03%	869,160	(812,930)	12,718,491	1.00%
Alterra IOS Ventures II	17,425,282	1.40%	(3,232,110)	(740,990)	21,398,383	1.69%
Asana Real Estate Partners I	25,949,479	2.09%	548,431	(483,938)	25,884,986	2.04%
Berkshire Bridge Loan II	7,975,517	0.64%	(267,041)	256,560	7,985,998	0.63%
Bozzuto Capital Partners II, LLC	14,694,122	1.18%	(155,141)	(6,580)	14,855,843	1.17%
Bridge Logistics JV	18,697,513	1.51%	3,614,546	(578,725)	15,661,692	1.23%
Broadview Real Estate Partners LP	10,400,862	0.84%	(180,471)	(185,149)	10,766,482	0.85%
Brockton Capital II	1,025,976	0.08%	0	42,587	983,389	0.08%
BRV Partners I	4,125,815	0.33%	75,288	(173,577)	4,224,104	0.33%
Bryanston Retail Opportunity Fund	40,654	0.00%	(121)	605	40,170	0.00%
Buckingham Multifamily Fund I	24,744,287	1.99%	622,296	(2,184,223)	26,306,214	2.07%
Buckingham Multifamily Fund II	9,029,784	0.73%	(34,549)	(1,128,970)	10,193,303	0.80%
Caprock Partners Industrial Co-Investment	13,601,899	1.09%	(1,754)	(21,298)	13,624,951	1.07%
Carroll Fund V Bedrock Sidecar	852,860	0.07%	0	(167,842)	1,020,702	0.08%
Carroll Multifamily Real Estate Fund V	4,471,365	0.36%	0	(216,817)	4,688,182	0.37%
Carroll Multifamily Real Estate Fund VI	14,471,995	1.16%	(57,966)	(1,043,742)	15,573,703	1.23%
Carroll Multifamily Real Estate Fund VII	5,350,090	0.43%	0	(1,409,563)	6,759,653	0.53%
CITIC Capital China Retail Properties In	9,915,082	0.80%	0	12,892	9,902,190	0.78%
Crossbay Townsend Feeder	1,547,783	0.12%	0	87,817	1,459,965	0.11%
Fortress Japan Opportunity Fund IV	7,550,822	0.61%	(106,705)	514,741	7,142,786	0.56%
Fortress Japan Opportunity Fund I	242,385	0.02%	(327,956)	59,498	510,843	0.04%
Fortress Japan Opportunity Fund II	794,699	0.06%	(1,669,614)	(51,298)	2,515,611	0.20%
Fortress Japan Residential Co-Investment	22,304,934	1.80%	(215,777)	1,029,733	21,490,978	1.69%
Gerrity Retail II	16,832,930	1.36%	(52,208)	108,546	16,776,592	1.32%
GID Mainstay Fund	39,506,412	3.18%	6,760,739	381,001	32,364,672	2.55%
Gramercy Property EUR IV Townsend Feeder	23,571,573	1.90%	(244,797)	1,139,989	22,676,381	1.79%
Greenfield Partners	22,754	0.00%	0	83	22,671	0.00%
Greenfield VII	1,053,770	0.08%	(4,267)	31,240	1,026,797	0.08%
H/2 SOF III	5,158,330	0.42%	(220,375)	(3,446)	5,382,151	0.42%
H2 Special Opportunities II	162,383	0.01%	2,267	(6,057)	166,172	0.01%
Heitman Asia-Pacific Property Fund	9,459,919	0.76%	(81,102)	43,221	9,497,800	0.75%
HSRE Quad V	16,588,239	1.34%	(50,667)	314,386	16,324,520	1.29%
Jadian Real Estate I	28,472,452	2.29%	(129,746)	364,996	28,237,202	2.22%
Lone Star Fund V	81,980	0.01%	0	1,474	80,506	0.01%
Noble SSCIV	14,826,372	1.19%	(295,278)	330,391	14,791,259	1.16%
Oaktree Real Estate Opportunities Fund V	12,366,554	1.00%	(70,573)	30,815	12,406,312	0.98%
Prosperitas Real Estate Partners III	15,298	0.00%	0	(4,165)	19,463	0.00%
Resmark Townsend M H	4,435,144	0.36%	(537,472)	108,521	4,864,095	0.38%
Rockpoint Real Estate Fund III, L.P.	173,401	0.01%	0	3,522	169,879	0.01%
Slate Canadian Real Estate Opportunities	7,228,771	0.58%	0	(5,749,828)	12,978,598	1.02%
Slate Canadian Real Estate Opportunities	14,196,512	1.14%	40,313	157,722	13,998,478	1.10%
SLI European Real Estate Club II	1	0.00%	0	0	1	0.00%
Unico Core Plus Partners LP	8,676,268	0.70%	175,049	(735,072)	9,236,291	0.73%
VBI Brazil Real Estate Opportunities II	2,084,697	0.17%	(173,184)	(80,909)	2,338,790	0.18%
Waterton Residential Property Venture XI	1,914,659	0.15%	(9,889)	(30,556)	1,955,104	0.15%
Wolff Credit Partners II LP	2,304,978	0.19%	(532,029)	85,352	2,751,655	0.22%
<b>Total Real Estate</b>	<b>\$1,242,239,728</b>	<b>100.00%</b>	<b>\$(7,848,330)</b>	<b>\$(19,679,630)</b>	<b>\$1,269,767,688</b>	<b>100.00%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2023. 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 December 31, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net of Fees</b>					
<b>Total Strategic Core Real Estate</b>	<b>(1.65%)</b>	<b>(13.99%)</b>	<b>8.40%</b>	<b>6.69%</b>	<b>8.81%</b>
Berkshire MF Income	(8.64%)	(24.82%)	4.70%	3.48%	-
Black Creek Industrial Fund	(1.47%)	(13.37%)	12.97%	-	-
Brookfield Premier Real Estate Partners	(5.19%)	(21.44%)	5.75%	5.48%	-
Carlyle Property Investors	(0.21%)	(5.05%)	13.10%	11.07%	-
Cortland Growth & Income Fund	(3.60%)	(21.69%)	8.97%	8.33%	-
Greystar Growth And Income Fund LP	(7.66%)	(21.92%)	4.76%	3.04%	-
Hancock US Real Estate Fund LP	(3.36%)	(15.63%)	10.67%	-	-
Jamestown Premier Property Fund	(6.80%)	(52.32%)	(22.28%)	(14.82%)	(2.20%)
JP Morgan Strategic Property Fund	(3.51%)	(13.32%)	5.06%	3.82%	6.66%
Kayne Anderson Core Real Estate LP	(0.12%)	0.58%	8.01%	6.82%	-
Lion Industrial Trust	1.01%	(4.52%)	23.45%	19.43%	16.97%
MetLife Core Property Fund LP	0.46%	(12.95%)	9.13%	6.60%	-
Prime Property Fund LLC	(0.19%)	(7.22%)	8.17%	6.63%	8.90%
Smart Markets Fund	(1.13%)	(11.08%)	8.94%	6.98%	8.37%
<b>Total Tactical Non-Core Real Estate</b>	<b>(1.89%)</b>	<b>(1.79%)</b>	<b>14.35%</b>	<b>11.28%</b>	<b>12.67%</b>
Almanac Realty Securities VII LP	2.89%	4.39%	6.11%	8.96%	-
Almanac Realty Securities (ARS) VII Side	4.68%	4.50%	14.74%	14.90%	-
Almanac Realty Securities VIII LP	(2.37%)	1.93%	13.27%	(3.23%)	-
Asana Real Estate Partners I	0.25%	(3.31%)	13.58%	10.60%	-
Bozzuto Capital Partners II, LLC	(0.04%)	4.89%	3.43%	5.57%	13.08%
Broadview Real Estate Partners LP	(1.30%)	7.50%	19.76%	-	-
Brockton Capital II	4.33%	5.21%	(6.73%)	(4.86%)	0.66%
BRV Partners I	(4.31%)	(23.35%)	13.12%	10.17%	-
Bryanston Retail Opportunity Fund	1.21%	*****%	5525.25%	1161.95%	296.18%
Buckingham Multifamily Fund I	(5.94%)	(9.09%)	26.18%	17.59%	-
Caprock Partners Industrial Co-Investmen	(0.17%)	4.71%	41.69%	-	-
Carroll Fund V Bedrock Sidecar	(16.44%)	14.64%	8.28%	15.49%	-
Carroll Multifamily Real Estate Fund VI	(7.07%)	(20.38%)	11.26%	-	-
CITIC Capital China Retail Properties In	0.13%	(7.32%)	(3.75%)	(1.60%)	(1.41%)
Crossbay Townsend Feeder	6.02%	24.78%	28.33%	-	-
Fortress Japan Opportunity Fund I	11.88%	26.18%	16.95%	(1.96%)	15.76%
Fortress Japan Residential Co-Investment	3.79%	18.42%	25.99%	21.99%	-
Fortress Japan Opportunity Fund II	(2.00%)	11.51%	9.70%	9.29%	18.18%
Fortress Japan Opportunity Fund IV	5.71%	15.54%	22.82%	5.59%	-
Gerrity Retail II	0.34%	1.74%	3.51%	0.69%	-
GID Mainstay Fund	0.97%	(1.61%)	-	-	-
Gramercy Property EUR IV Townsend Feeder	5.03%	(4.68%)	12.45%	-	-
Greenfield VII	2.63%	(6.49%)	17.60%	14.27%	-
H2 Special Opportunities II	(2.28%)	4.66%	(4.74%)	(26.98%)	(9.24%)
H/2 SOF III	(0.44%)	1.14%	15.70%	1.74%	-
Heitman Asia-Pacific Property Fund	0.21%	(2.44%)	3.63%	1.27%	-
HSRE Quad V	1.81%	9.37%	15.61%	3.49%	-
Jadian Real Estate I	0.83%	13.47%	27.04%	-	-
Lone Star Fund V	1.83%	4.88%	7.03%	4.40%	(3.23%)
Oaktree Real Estate Opportunities Fund V	(0.12%)	(0.78%)	-	-	-
Rockpoint Real Estate Fund III, L.P.	2.07%	(22.36%)	(8.37%)	(0.96%)	0.15%
Slate Canadian Real Estate Opportunities	(44.30%)	(48.57%)	(24.35%)	(9.19%)	-
Slate Canadian Real Estate Opportunities	1.41%	3.58%	20.31%	-	-
SLI European Real Estate Club II	3.77%	(99.99%)	(98.06%)	*****%	-
Unico Core Plus Partners LP	(8.22%)	(49.66%)	(21.53%)	-	-
VBI Brazil Real Estate Opportunities II	(4.06%)	19.64%	5.18%	(2.28%)	(5.21%)
Waterton Residential Property Venture XI	(1.45%)	(16.85%)	2.07%	(0.69%)	8.36%
Wolff Credit Partners II LP	3.45%	12.21%	16.81%	16.03%	-
<b>Total Real Estate</b>	<b>(1.74%)</b>	<b>(9.94%)</b>	<b>10.54%</b>	<b>8.31%</b>	<b>10.21%</b>
Real Estate Benchmark*	(2.10%)	(12.88%)	6.19%	4.72%	7.30%

\* 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 December 31, 2023, with the distribution as of September 30, 2023. 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, 2023			September 30, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Alternatives</b>						
<b>Total Private Equity</b>	<b>\$1,655,749,890</b>	<b>74.66%</b>	<b>\$(18,333,867)</b>	<b>\$26,054,796</b>	<b>\$1,648,028,961</b>	<b>74.72%</b>
Actis Energy 4 LP	6,454,558	0.29%	(4,147,442)	43,175	10,558,825	0.48%
Apollo IX	40,128,948	1.81%	1,034,897	1,436,823	37,657,228	1.71%
BlackRock Private Op	375,085,833	16.91%	551,187	3,934,573	370,600,073	16.80%
Carlyle Asia Fund V LP	40,698,132	1.84%	1,765,873	1,683,285	37,248,974	1.69%
Carlyle Asia IV	27,169,274	1.23%	542,926	1,058,473	25,567,875	1.16%
Carlyle Japan III	5,150,512	0.23%	(135,741)	886,917	4,399,335	0.20%
Carlyle Sub-Saharan Africa Fund	22,901,714	1.03%	(4,615,040)	1,849,669	25,667,085	1.16%
CCMP Capital Investors III, L.P.	498,157	0.02%	24,236	(113,748)	587,669	0.03%
Coller International Partners VI, L.P.	2,131,330	0.10%	(469,669)	(57,699)	2,658,698	0.12%
Coller International Partners VIII LP	61,401,959	2.77%	(391,848)	1,326,771	60,467,036	2.74%
Coller VII	22,817,703	1.03%	(1,650,000)	744,505	23,723,198	1.08%
Dover Street IX LP	30,048,102	1.35%	(438,004)	99,669	30,386,437	1.38%
Dover Street VIII, L.P.	3,490,928	0.16%	(1,059,451)	(63,947)	4,614,326	0.21%
Dover Street X LP	41,177,093	1.86%	848,767	(506,967)	40,835,293	1.85%
HarbourVest HIPEP IX	26,588,487	1.20%	3,269,098	(719,394)	24,038,783	1.09%
HarbourVest HIPEP VII	47,767,692	2.15%	(1,422,290)	(327,487)	49,517,469	2.24%
HarbourVest HIPEP VIII	46,588,906	2.10%	(630,199)	(549,138)	47,768,243	2.17%
Industry Ventures Fund VI, LP	260,710	0.01%	53,874	(65,297)	272,133	0.01%
Industry Ventures Partnership Holdings I	35,315,766	1.59%	14,999	(718,443)	36,019,210	1.63%
Industry Ventures PH VI	14,551,004	0.66%	1,941,804	1,035,566	11,573,634	0.52%
Industry Ventures Partnership Holdings V	45,089,488	2.03%	388,823	(819,941)	45,520,606	2.06%
Industry Ventures Partnership III	27,722,966	1.25%	(290,300)	(341,113)	28,354,379	1.29%
Industry Ventures Secondary IX	55,110,529	2.49%	1,899,591	(363,693)	53,574,632	2.43%
Industry Ventures Secondary VII LP	5,081,142	0.23%	(756,234)	(268,740)	6,106,116	0.28%
Kayne Anderson Energy Fund VII LP	27,652,007	1.25%	(3,812,957)	4,599,134	26,865,830	1.22%
Lexington Capital Partners VII	4,102,362	0.18%	(255,777)	49,363	4,308,776	0.20%
Lexington Capital Partners VIII LP	29,253,490	1.32%	282,203	66,280	28,905,007	1.31%
NGP XI	46,088,614	2.08%	(6,079,340)	4,727,386	47,440,568	2.15%
Pine Brook Capital Partners II LP	36,847,779	1.66%	(82,244)	662,621	36,267,402	1.64%
RFE Investment Partners VIII, LP	16,226,636	0.73%	114,506	(572,532)	16,684,662	0.76%
SL Capital European Smaller Funds I	5,709,291	0.26%	(633,246)	354,232	5,988,305	0.27%
Edgewater Growth Capital Partners III	5,078,375	0.23%	0	(71,868)	5,150,243	0.23%
Edgewater Growth Capital Partners IV LP	39,525,216	1.78%	4,349,999	2,219,190	32,956,227	1.49%
Thoma Bravo Fund XIII LP	70,810,066	3.19%	(12,017,005)	3,067,445	79,759,626	3.62%
Thoma Bravo XII	51,392,135	2.32%	(95,822)	1,738,708	49,749,250	2.26%
Thoma Bravo Fund XIV LP	48,329,664	2.18%	(6,511,618)	1,371,380	53,469,901	2.42%
Top Tier Venture Velocity Fund 3 LP	19,841,444	0.89%	0	22,208	19,819,236	0.90%
Top Tier Venture Velocity Fund II LP	27,235,270	1.23%	(39,210)	(592,722)	27,867,202	1.26%
Top Tier VVF	12,534,895	0.57%	98,335	(983,353)	13,419,913	0.61%
Warburg Pincus Global Growth	60,485,081	2.73%	(110,000)	1,088,289	59,506,792	2.70%
Warburg Pincus Private Equity XII LP	52,937,242	2.39%	(275,200)	(2,326,459)	55,538,901	2.52%
<b>Total Private Debt</b>	<b>\$561,849,272</b>	<b>25.34%</b>	<b>\$(7,312,247)</b>	<b>\$11,509,019</b>	<b>\$557,652,500</b>	<b>25.28%</b>
Atalaya SOF VIII	43,530,079	1.96%	4,529,667	2,718,776	36,281,636	1.64%
Avenue Special Situations Fund VI (A), L	1,997,542	0.09%	0	(10,707)	2,008,249	0.09%
BlueBay DLF II	3,239,596	0.15%	(23,650)	(232,013)	3,495,259	0.16%
Bluebay DLF III	36,958,071	1.67%	(2,639,776)	(80,925)	39,678,772	1.80%
CarVal CVF III	7,577,560	0.34%	145,051	39,365	7,393,144	0.34%
CarVal Credit Value Fund IV LP	36,433,357	1.64%	(1,992,117)	701,223	37,724,251	1.71%
CarVal Credit Value Fund V LP	38,367,047	1.73%	2,412,177	892,349	35,062,521	1.59%
Clareant European DLF Investor Feeder LP	2,242,882	0.10%	(17,723)	177,230	2,083,375	0.09%
Clareant European DLF II	27,197,022	1.23%	(2,147,338)	183,972	29,160,389	1.32%
Alcentra European Direct Lending III	36,234,022	1.63%	(941,642)	911,648	36,264,016	1.64%
Comvest III	1,681,293	0.08%	(16,305)	68,726	1,628,872	0.07%
Comvest IV	26,524,615	1.20%	(1,799,352)	193,263	28,130,704	1.28%
Comvest V	39,755,233	1.79%	664,449	1,330,408	37,760,376	1.71%
Crescent Capital Direct Lending Levered	20,527,312	0.93%	(823,680)	928,641	20,422,351	0.93%
Crescent Direct Lending Fund	3,084,302	0.14%	(751,439)	140,157	3,695,584	0.17%
Crescent Direct III	27,204,070	1.23%	(1,370,232)	1,234,691	27,339,611	1.24%
Gramercy Distressed Opportunity II	24,076,670	1.09%	0	(221,305)	24,297,975	1.10%
Gramercy DOF III	17,248,811	0.78%	(2,336,617)	65,075	19,520,353	0.89%
Ironwood Mezzanine Fund III, L.P.	3,947,110	0.18%	(306,617)	(5,907)	4,259,634	0.19%
Matlin Patterson Global Opportunities II	41,652	0.00%	(202,731)	(62,226)	306,609	0.01%
Monroe Capital Private Credit Fund III L	29,267,257	1.32%	(4,125,179)	834,135	32,558,301	1.48%
Monroe Private Credit Fund II	8,388,488	0.38%	(1,536,343)	(177,342)	10,102,173	0.46%
Monroe Private Credit IV	43,233,447	1.95%	490,160	934,348	41,808,939	1.90%
Riverstone Credit	16,854,486	0.76%	(9,008)	(129,176)	16,992,670	0.77%
Riverstone Credit II NEPC	7,633,275	0.34%	(215,438)	260,340	7,588,373	0.34%
Riverstone Credit Partners II LP	23,794,999	1.07%	(242,727)	(234,516)	24,272,242	1.10%
Siguler Guff Distressed Opportunities IV	3,683,339	0.17%	(183,755)	(171,777)	4,038,871	0.18%
Tennenbaum Opportunities Fund VI, LLC	81,276	0.00%	(45,561)	45,562	81,275	0.00%
<b>Total Alternative Assets</b>	<b>\$2,217,599,162</b>	<b>100.00%</b>	<b>\$(25,646,114)</b>	<b>\$37,563,815</b>	<b>\$2,205,681,460</b>	<b>100.00%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended December 31, 2023. 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 December 31, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net of Fees</b>					
<b>Total Private Equity</b>	<b>1.35%</b>	<b>6.67%</b>	<b>17.09%</b>	<b>13.28%</b>	<b>12.24%</b>
Actis Energy 4 LP	(0.01%)	(3.50%)	15.70%	16.32%	-
Apollo IX	3.23%	18.90%	28.88%	-	-
BlackRock Private Op	0.90%	9.24%	13.37%	12.87%	-
Carlyle Asia Fund V LP	3.09%	0.76%	7.90%	8.65%	-
Carlyle Asia IV	3.04%	22.33%	19.69%	18.69%	-
Carlyle Japan III	17.07%	42.73%	43.55%	22.50%	-
Carlyle Sub-Saharan Africa Fund	8.78%	29.28%	29.12%	13.57%	-
CCMP Capital Investors III, L.P.	(15.23%)	20.47%	2.03%	3.18%	-
Coller International Partners VI, L.P.	(2.56%)	(7.94%)	10.48%	7.02%	11.09%
Coller International Partners VIII LP	2.21%	8.45%	34.76%	-	-
Coller VII	3.35%	12.80%	18.22%	11.91%	-
Dover Street IX LP	(0.15%)	(1.10%)	12.58%	14.38%	-
Dover Street VIII, L.P.	(1.69%)	(5.63%)	1.88%	4.82%	11.78%
Dover Street X LP	(1.57%)	5.57%	24.34%	-	-
Edgewater Growth Capital Partners III	(1.40%)	(22.23%)	9.49%	(1.46%)	3.90%
Edgewater Growth Capital Partners IV LP	6.32%	11.36%	26.67%	17.74%	-
HarbourVest HIPEP IX	(2.90%)	6.77%	-	-	-
HarbourVest HIPEP VII	(0.86%)	7.93%	17.17%	15.99%	-
HarbourVest HIPEP VIII	(1.34%)	8.57%	18.74%	14.96%	-
Industry Ventures Fund VI, LP	(4.20%)	8.00%	(4.06%)	0.20%	1.51%
Industry Ventures Partnership Holdings I	(1.95%)	(14.13%)	21.65%	19.75%	-
Industry Ventures Partnership Holdings V	(1.76%)	(9.02%)	29.80%	-	-
Industry Ventures Partnership III	(1.29%)	(12.52%)	11.45%	21.48%	19.64%
Industry Ventures Secondary VII LP	(4.06%)	(3.73%)	6.38%	13.80%	14.78%
Industry Ventures Secondary IX	(0.84%)	6.82%	-	-	-
Kayne Anderson Energy Fund VII LP	18.21%	15.86%	33.30%	(11.45%)	-
Lexington Capital Partners VII	1.18%	(3.29%)	13.39%	8.77%	10.22%
Lexington Capital Partners VIII LP	0.23%	1.00%	15.23%	11.01%	-
NGP XI	7.84%	15.07%	35.64%	9.78%	-
Pine Brook Capital Partners II LP	1.60%	0.66%	16.38%	4.16%	5.22%
RFE Investment Partners VIII, LP	(2.75%)	13.43%	14.48%	11.76%	11.69%
SL Capital European Smaller Funds I	5.60%	5.58%	5.60%	6.96%	4.94%
Thoma Bravo Fund XIII LP	4.41%	19.02%	12.04%	-	-
Thoma Bravo Fund XIV LP	2.92%	26.40%	-	-	-
Thoma Bravo XII	3.30%	12.76%	14.87%	17.89%	-
Top Tier Venture Velocity Fund 3 LP	0.11%	(6.37%)	0.81%	-	-
Top Tier Venture Velocity Fund II LP	(1.74%)	(15.15%)	13.98%	25.70%	-
Top Tier VVF	(6.59%)	(8.43%)	12.72%	12.13%	-
Warburg Pincus Global Growth	1.82%	8.03%	15.63%	-	-
Warburg Pincus Private Equity XII LP	(4.15%)	(10.80%)	15.62%	15.10%	-
<b>Total Private Debt</b>	<b>1.71%</b>	<b>5.31%</b>	<b>8.29%</b>	<b>5.40%</b>	<b>6.53%</b>
Alcentra European Direct Lending III	8.24%	13.68%	31.99%	15.91%	-
Avenue Special Situations Fund VI (A), L	(0.53%)	(2.20%)	20.19%	10.28%	3.29%
BlueBay DLF II	(7.31%)	12.77%	(6.24%)	(0.88%)	-
Bluebay DLF III	(0.93%)	7.24%	7.52%	7.08%	-
CarVal Credit Value Fund IV LP	2.16%	8.22%	11.36%	7.39%	-
CarVal CVF III	2.49%	9.12%	9.44%	6.08%	-
Clareant European DLF II	1.90%	3.74%	6.81%	5.45%	-
Clareant European DLF Investor Feeder LP	2.30%	3.43%	6.19%	-	-
Comvest III	3.22%	(56.18%)	(21.66%)	(10.41%)	-
Comvest IV	(0.05%)	(4.92%)	6.27%	6.59%	-
Comvest V	2.21%	7.67%	9.25%	-	-
Crescent Capital Direct Lending Levered	3.93%	12.73%	11.67%	9.92%	-
Crescent Direct Lending Fund	3.53%	16.92%	7.43%	6.91%	-
Gramercy Distressed Opportunity II	(0.91%)	(7.55%)	(2.87%)	(7.89%)	(4.01%)
Gramercy DOF III	0.34%	10.18%	0.73%	(3.70%)	-
Ironwood Mezzanine Fund III, L.P.	(0.69%)	11.64%	6.38%	6.60%	6.56%
Matlin Patterson Global Opportunities II	(59.90%)	(69.67%)	(43.25%)	(28.27%)	(16.90%)
Monroe Capital Private Credit Fund III L	2.63%	10.98%	8.81%	7.84%	-
Monroe Private Credit Fund II	(1.87%)	(2.25%)	5.87%	5.49%	-
Riverstone Credit	(0.81%)	(10.17%)	9.61%	2.00%	-
Riverstone Credit II NEPC	3.53%	10.18%	15.08%	12.13%	-
Riverstone Credit Partners II LP	(1.19%)	(1.69%)	18.69%	11.28%	-
Siguler Guff Distressed Opportunities IV	(4.41%)	(15.57%)	3.69%	3.73%	6.91%
Tennenbaum Opportunities Fund VI, LLC	0.00%	(0.49%)	5.05%	2.36%	3.97%
<b>Total Alternative Assets</b>	<b>1.44%</b>	<b>6.31%</b>	<b>14.48%</b>	<b>10.83%</b>	<b>9.42%</b>
Alternative Assets Benchmark*	(1.12%)	19.58%	9.86%	10.03%	11.32%

\* 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 December 31, 2023

## 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.

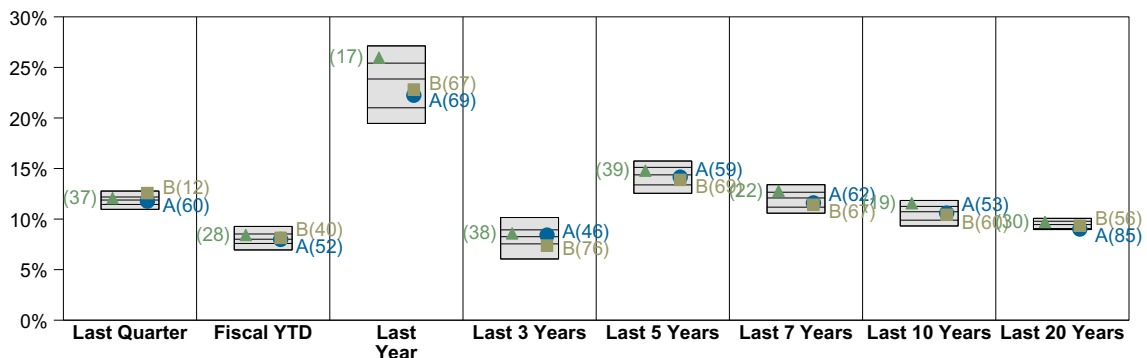
## Quarterly Summary and Highlights

- Total Domestic Equity's portfolio posted a 11.77% return for the quarter placing it in the 60 percentile of the Large Public Funds Domestic Equity group for the quarter and in the 69 percentile for the last year.
- Total Domestic Equity's portfolio underperformed the Domestic Equity Benchmark by 0.30% for the quarter and underperformed the Domestic Equity Benchmark for the year by 3.71%.

## Quarterly Asset Growth

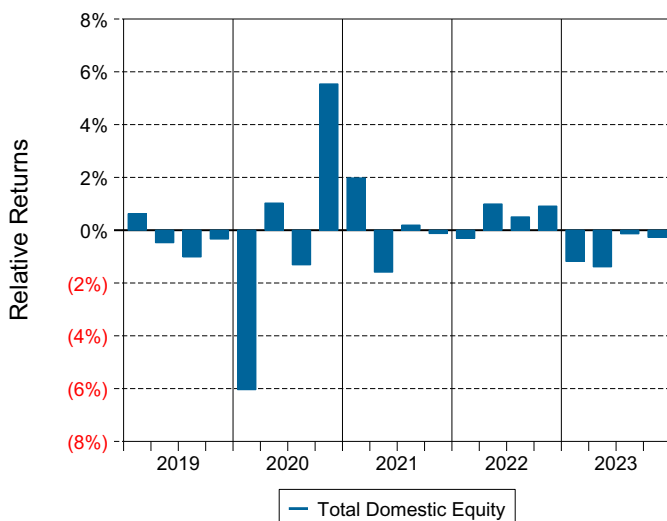
Beginning Market Value	\$3,341,644,686
Net New Investment	\$0
Investment Gains/(Losses)	\$393,347,127
Ending Market Value	\$3,734,991,813

## Performance vs Large Public Funds Domestic Equity (Gross)

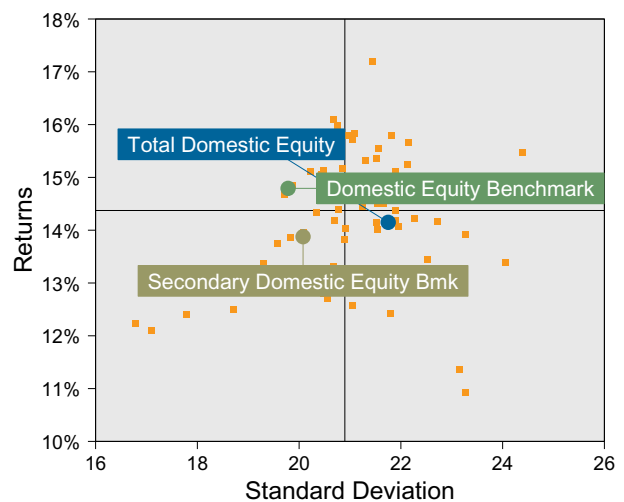


10th Percentile	12.77	9.27	27.13	10.16	15.74	13.40	11.84	10.07
25th Percentile	12.18	8.53	25.42	8.94	15.11	12.66	11.25	9.79
Median	11.88	8.01	23.85	8.26	14.37	12.09	10.72	9.46
75th Percentile	11.45	7.59	21.01	7.55	13.38	11.18	9.89	9.06
90th Percentile	10.96	6.95	19.46	6.06	12.55	10.58	9.32	8.96
Total Domestic Equity	● A 11.77	7.99	22.25	8.42	14.15	11.60	10.59	9.01
Domestic Equity Bmk	■ B 12.57	8.15	22.81	7.38	13.88	11.41	10.42	9.35
Domestic Equity Benchmark	▲ 12.07	8.43	25.96	8.59	14.79	12.79	11.57	9.71

## Relative Returns vs Domestic Equity Benchmark



## Large Public Funds Domestic Equity (Gross) Annualized Five Year Risk vs Return

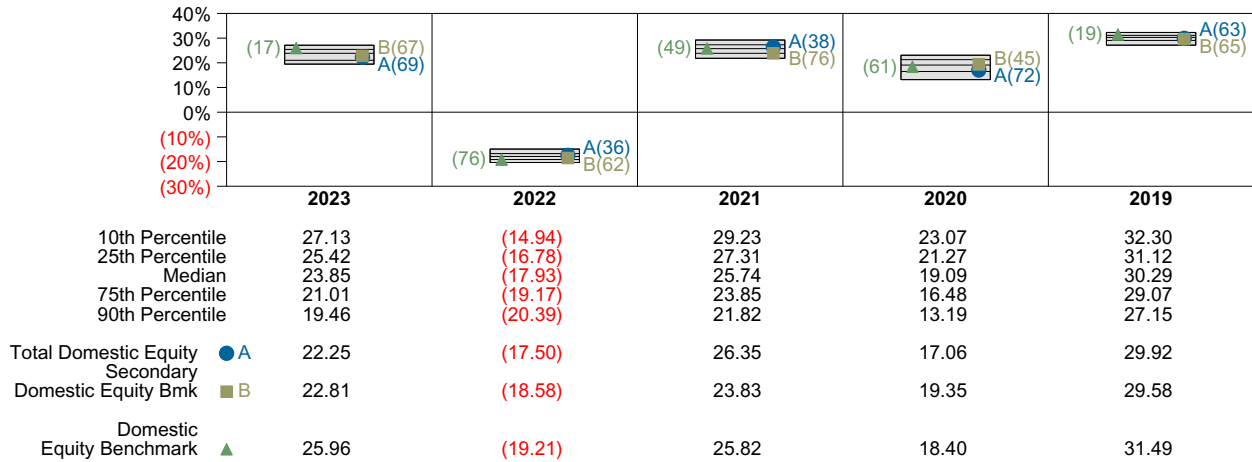


# Total Domestic Equity Return Analysis Summary

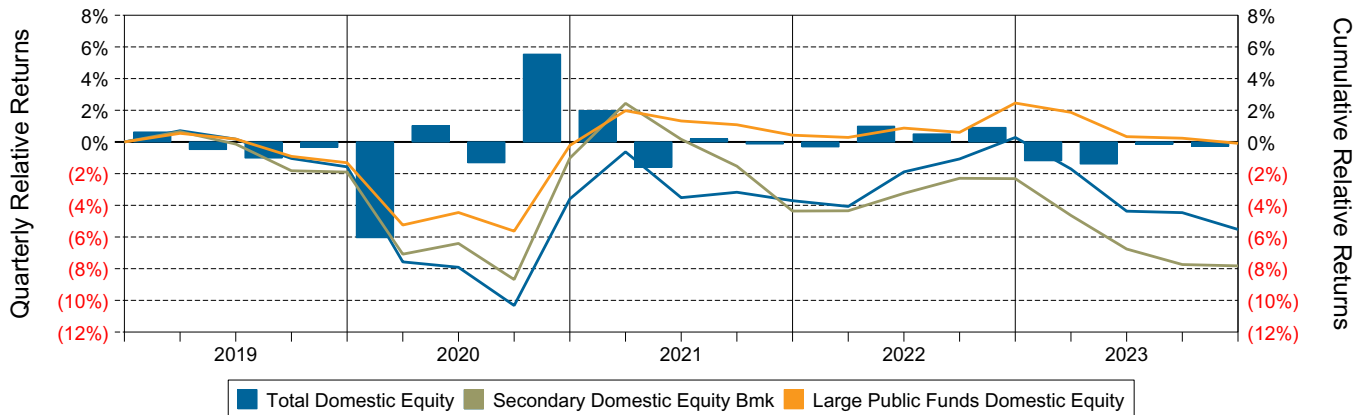
## Return Analysis

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.

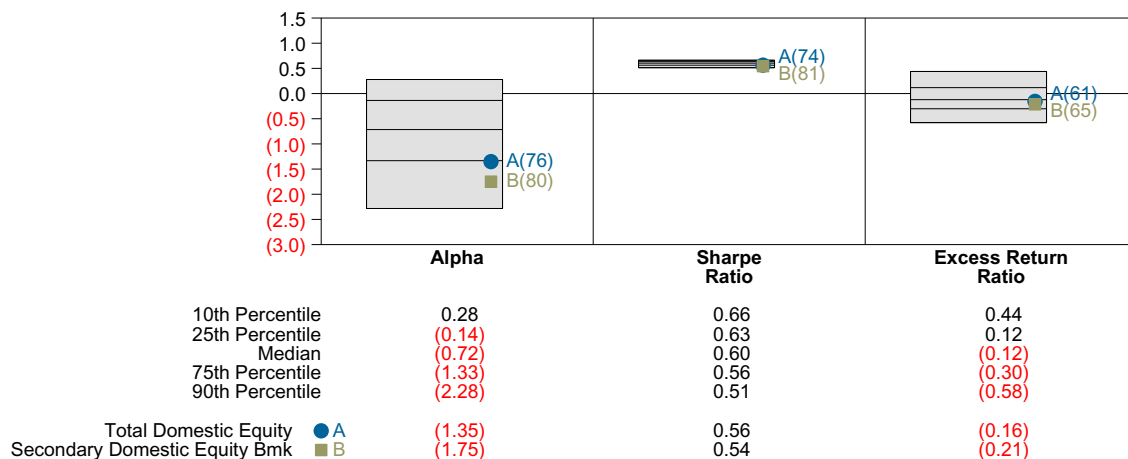
### Performance vs Large Public Funds Domestic Equity (Gross)



### 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 December 31, 2023

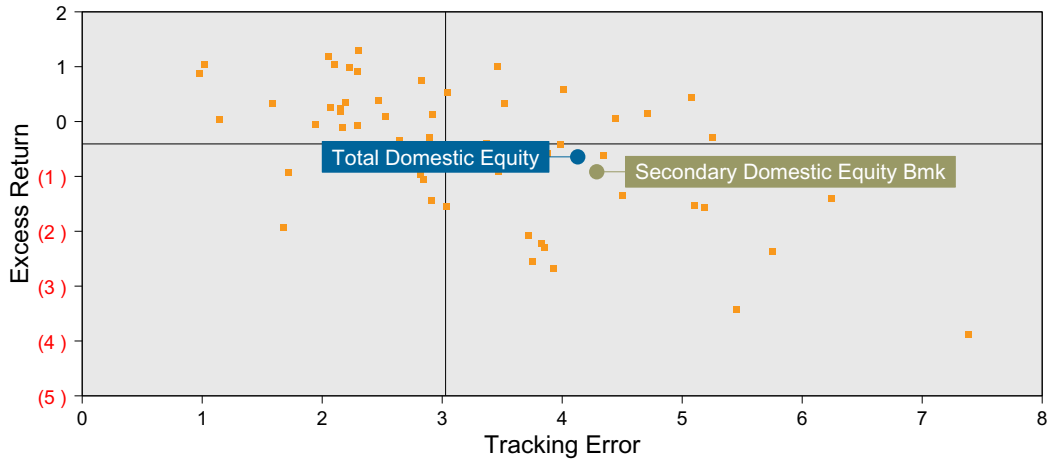


# Total Domestic Equity Risk Analysis Summary

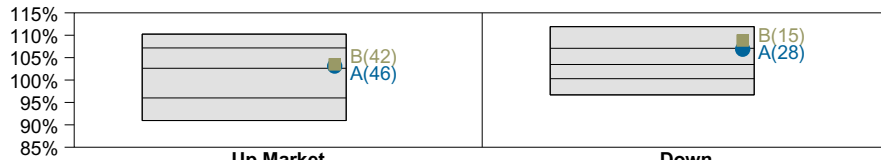
## Risk Analysis

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 December 31, 2023

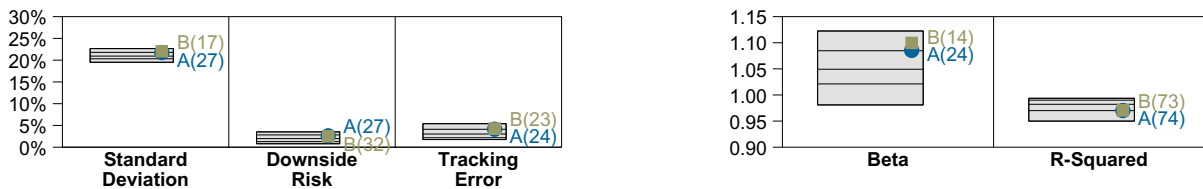


### Market Capture vs Domestic Equity Benchmark Rankings Against Large Public Funds Domestic Equity (Gross) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	110.25	111.91
25th Percentile	107.17	107.08
Median	102.62	103.47
75th Percentile	96.01	100.30
90th Percentile	90.96	96.68
Total Domestic Equity ● A	103.12	106.88
Secondary Domestic Equity Bmk ■ B	103.50	108.82

### Risk Statistics Rankings vs Domestic Equity Benchmark Rankings Against Large Public Funds Domestic Equity (Gross) Five Years Ended December 31, 2023



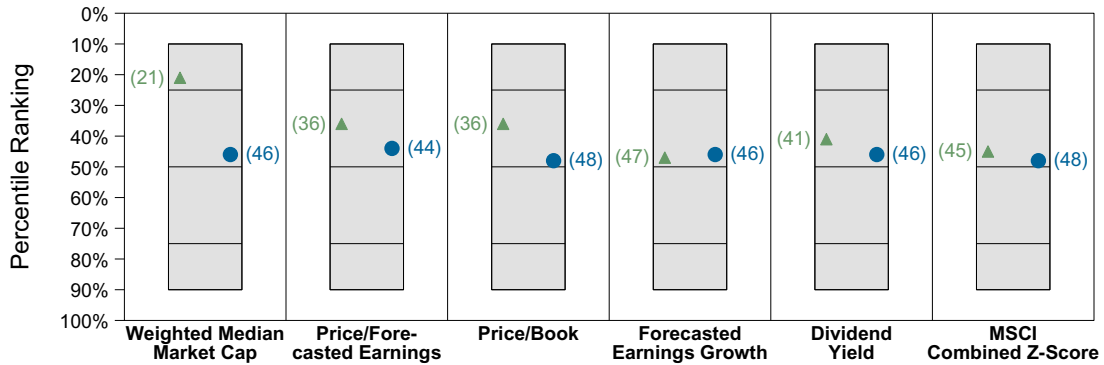
	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	22.66	3.52	5.41	1.12	0.99
25th Percentile	21.79	2.83	4.12	1.08	0.99
Median	20.93	1.97	3.03	1.05	0.98
75th Percentile	20.32	1.28	2.17	1.02	0.97
90th Percentile	19.51	0.79	1.76	0.98	0.95
Total Domestic Equity ● A	21.75	2.61	4.13	1.09	0.97
Secondary Domestic Equity Bmk ■ B	22.04	2.52	4.29	1.10	0.97

# 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 December 31, 2023

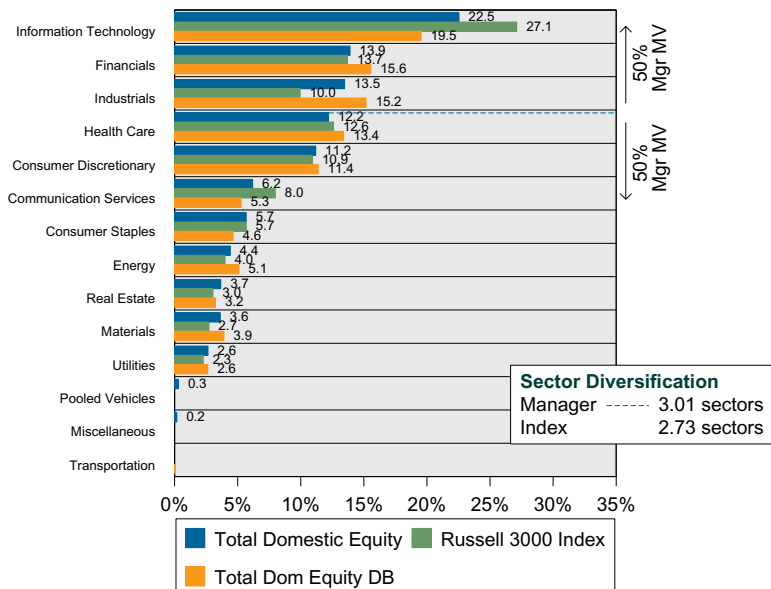


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	227.70	28.94	6.64	21.78	2.40	0.79
25th Percentile	123.09	22.78	4.16	18.13	1.81	0.39
Median	28.00	17.94	2.88	14.30	1.31	(0.06)
75th Percentile	4.94	14.42	2.08	11.22	0.69	(0.54)
90th Percentile	2.84	12.27	1.64	8.94	0.42	(0.91)
<b>Total Domestic Equity</b> ●	40.61	18.91	2.97	14.57	1.38	(0.03)
Russell 3000 Index ▲	142.88	19.99	3.68	14.49	1.43	(0.01)

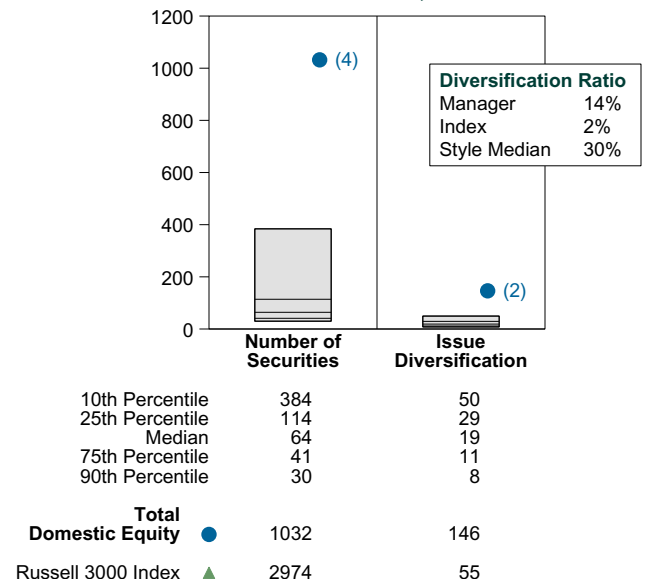
## Sector Weights

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.

### Sector Allocation December 31, 2023



### Diversification December 31, 2023





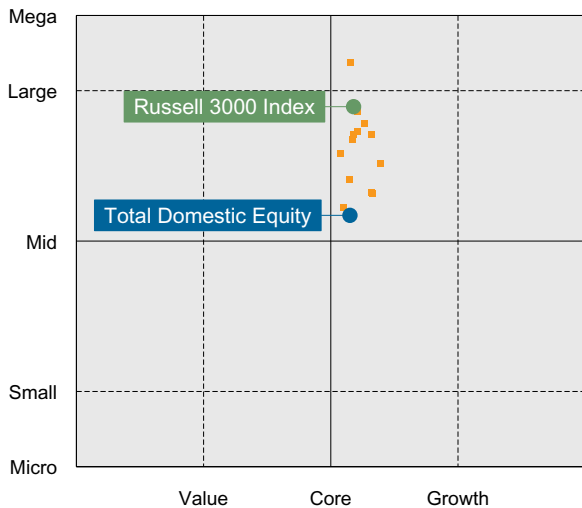
# Current Holdings Based Style Analysis

## Total Domestic Equity

### As of December 31, 2023

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.

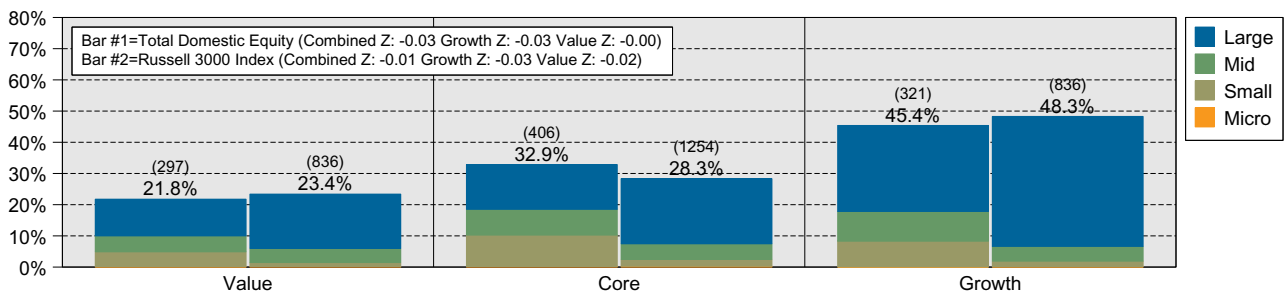
**Style Map vs Large Public Funds DE Holdings as of December 31, 2023**



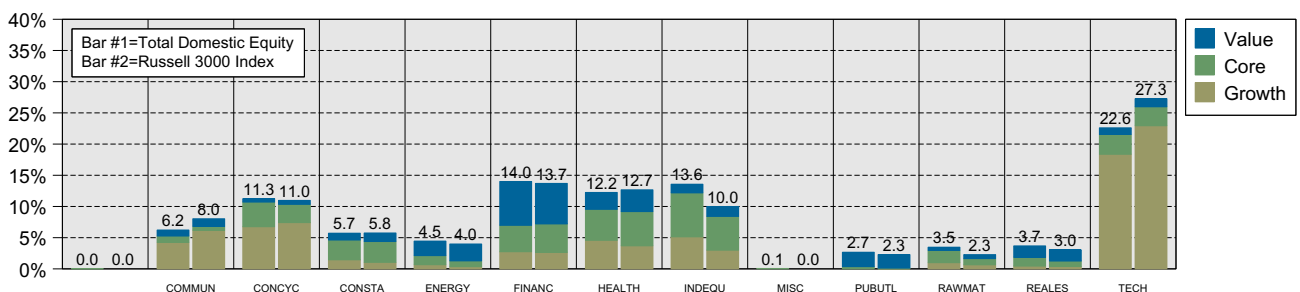
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	11.8% (96)	14.4% (95)	27.6% (84)	53.7% (275)
	17.3% (96)	20.9% (96)	41.7% (100)	79.9% (292)
Mid	5.1% (128)	8.3% (138)	9.5% (121)	22.9% (387)
	4.6% (166)	5.0% (207)	4.7% (213)	14.3% (586)
Small	4.8% (67)	10.0% (161)	8.2% (114)	23.0% (342)
	1.3% (282)	2.2% (528)	1.8% (362)	5.3% (1172)
Micro	0.1% (6)	0.2% (12)	0.0% (2)	0.4% (20)
	0.2% (292)	0.3% (423)	0.1% (161)	0.6% (876)
<b>Total</b>	<b>21.8% (297)</b>	<b>32.9% (406)</b>	<b>45.4% (321)</b>	<b>100.0% (1024)</b>
	23.4% (836)	28.3% (1254)	48.3% (836)	100.0% (2926)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



**Sector Weights Distribution Holdings as of December 31, 2023**





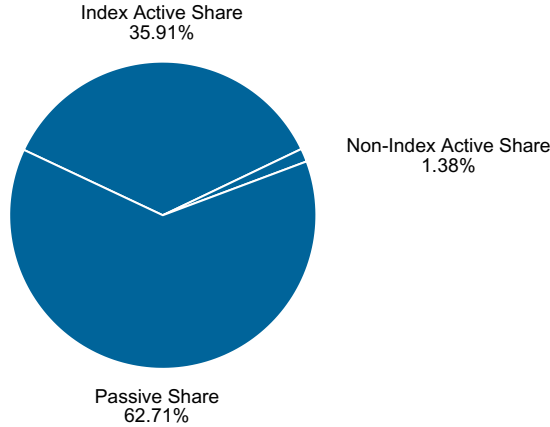
# Total Domestic Equity

## Active Share Analysis as of December 31, 2023

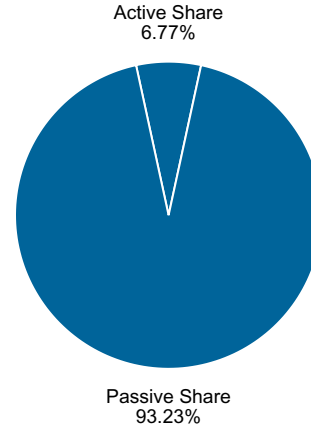
### vs. Russell 3000 Index

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



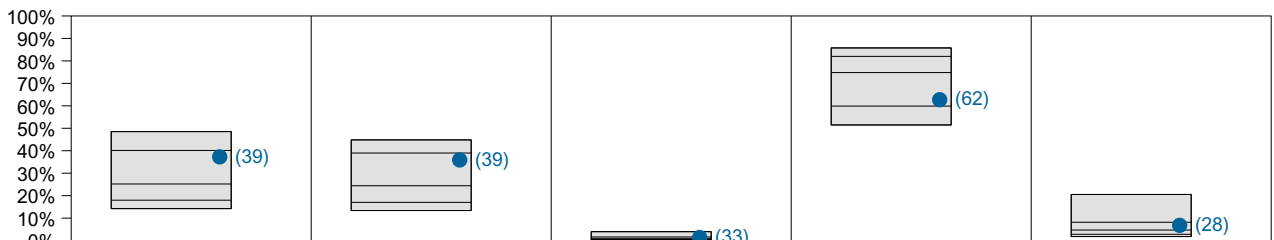
#### Sector Exposure Active Share



**Total Active Share: 37.29%**

	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	16.78%	1.13%	17.91%	7.99%	6.18%	1.98%
Consumer Discretionary	37.08%	1.16%	38.24%	10.93%	11.19%	4.16%
Consumer Staples	31.39%	1.29%	32.68%	5.68%	5.68%	1.87%
Energy	39.36%	3.23%	42.58%	4.00%	4.42%	1.70%
Financials	40.00%	0.00%	40.00%	13.70%	13.90%	5.47%
Health Care	33.48%	0.92%	34.40%	12.59%	12.19%	4.38%
Industrials	50.27%	1.05%	51.32%	9.95%	13.47%	5.57%
Information Technology	22.19%	1.42%	23.60%	27.12%	22.54%	7.48%
Materials	55.92%	4.00%	59.92%	2.73%	3.63%	1.80%
Miscellaneous	0.00%	100.00%	100.00%	-	0.17%	0.07%
Pooled Vehicles	0.00%	100.00%	100.00%	-	0.31%	0.16%
Real Estate	53.81%	0.08%	53.88%	3.04%	3.66%	1.69%
Utilities	41.89%	0.00%	41.89%	2.27%	2.65%	0.95%
<b>Total</b>	<b>35.91%</b>	<b>1.38%</b>	<b>37.29%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>37.27%</b>

#### Active Share vs. Lg Public Funds DE

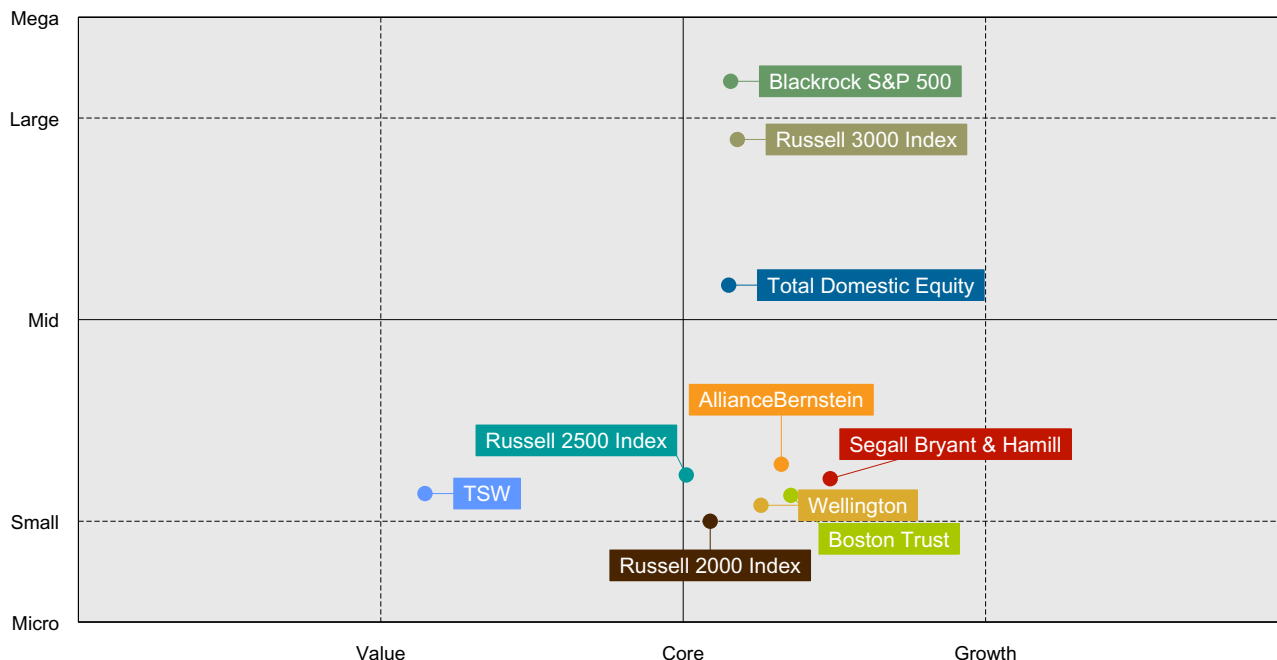


10th Percentile	48.53	44.84	3.98	85.76	20.53
25th Percentile	40.12	38.98	1.61	82.02	8.17
Median	25.20	24.42	1.00	74.80	4.70
75th Percentile	17.98	17.02	0.46	59.88	2.80
90th Percentile	14.24	13.40	0.28	51.47	1.80
<b>Total Domestic Equity</b>	<b>37.29</b>	<b>35.91</b>	<b>1.38</b>	<b>62.71</b>	<b>6.77</b>

## Holdings Based Style Analysis For One Quarter Ended December 31, 2023

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 December 31, 2023

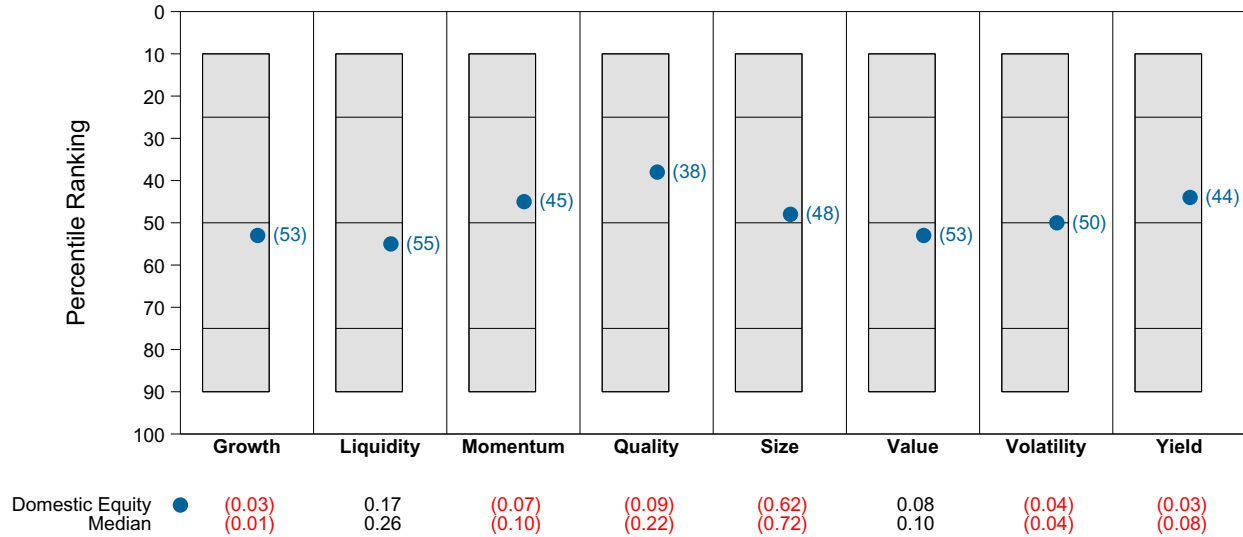


	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
Total Domestic Equity	100.00%	40.61	(0.03)	(0.03)	(0.00)	1032	146.31
Blackrock S&P 500	57.88%	206.53	(0.03)	(0.04)	(0.01)	503	35.63
Russell 3000 Index	-	142.88	(0.01)	(0.03)	(0.02)	2974	55.35
AllianceBernstein	11.39%	6.66	0.10	0.02	(0.08)	173	62.07
TSW	6.84%	4.69	(0.84)	(0.23)	0.61	85	25.56
Russell 2500 Index	-	5.94	(0.14)	(0.08)	0.06	2466	331.47
Boston Trust	6.22%	4.57	0.12	0.04	(0.09)	71	25.97
Segall Bryant & Hamill	6.59%	5.69	0.22	0.04	(0.19)	91	32.21
Wellington	11.08%	3.90	0.05	(0.05)	(0.10)	237	56.02
Russell 2000 Index	-	2.83	(0.08)	(0.10)	(0.02)	1964	312.22

**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.

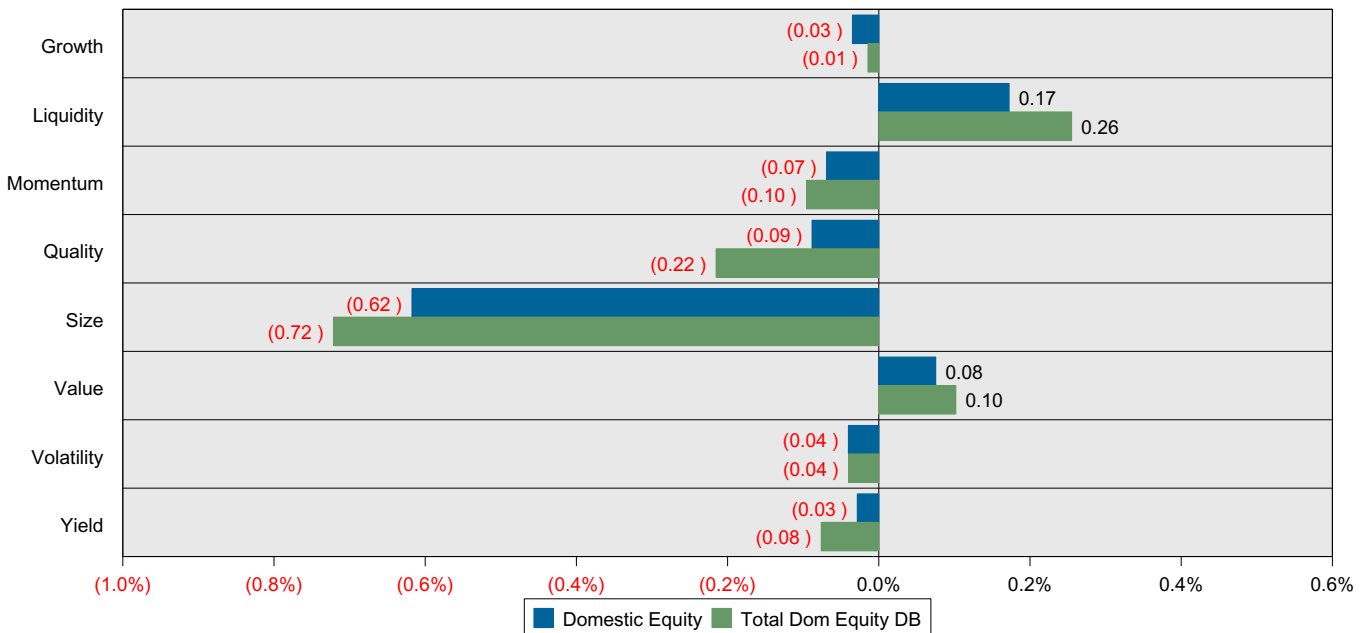
**Factor Exposures Relative to Russell 3000 Index, Rankings vs Total Domestic Equity Database for Period Ended December 31, 2023**



**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 December 31, 2023**



# Blackrock S&P 500 Period Ended December 31, 2023

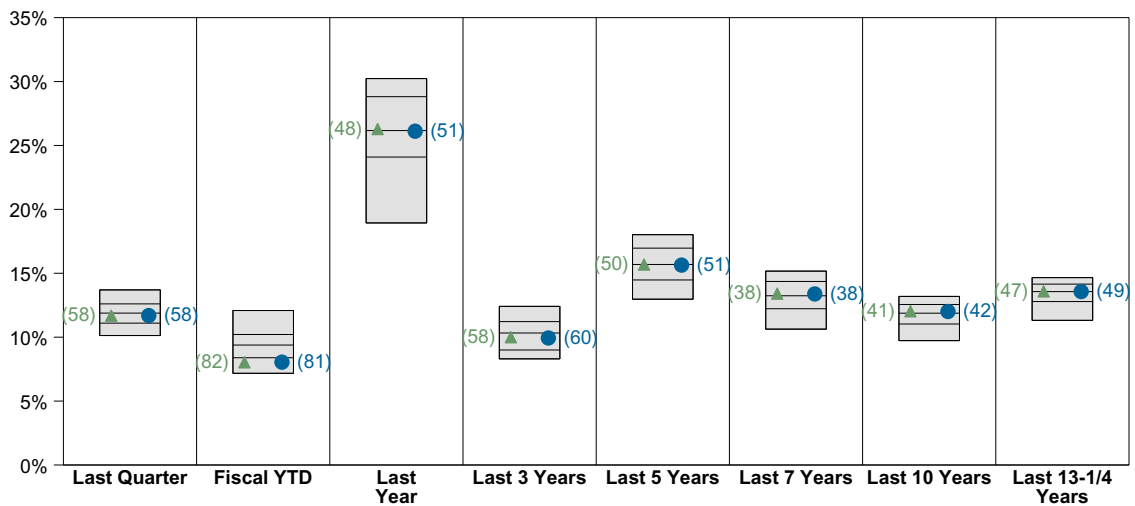
## Investment Philosophy

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	\$1,935,613,066
Net New Investment	\$0
Investment Gains/(Losses)	\$226,253,568
Ending Market Value	\$2,161,866,634

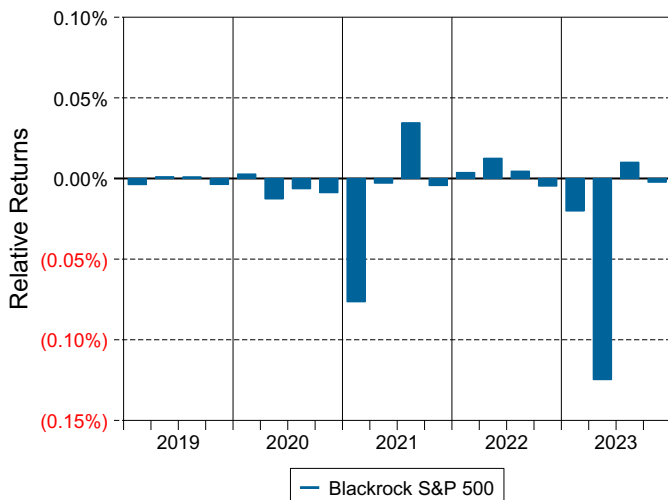
## Performance vs Callan Large Cap Core (Gross)



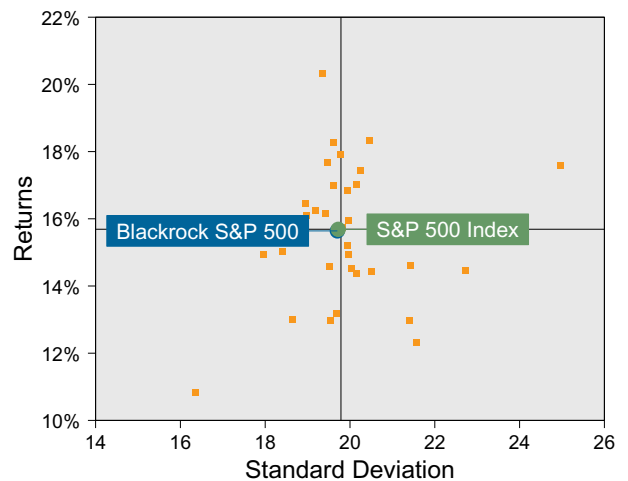
	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 13-1/4 Years
10th Percentile	13.70	12.09	30.23	12.41	18.02	15.17	13.19	14.66
25th Percentile	12.60	10.21	28.82	11.22	16.97	14.36	12.56	14.15
Median	11.88	9.38	26.16	10.33	15.69	13.24	11.88	13.56
75th Percentile	11.10	8.39	24.09	9.00	14.48	12.23	11.03	12.79
90th Percentile	10.13	7.17	18.94	8.30	12.97	10.63	9.73	11.32

<b>Blackrock S&amp;P 500</b> ●	11.69	8.04	26.11	9.94	15.64	13.38	12.01	13.57
S&P 500 Index ▲	11.69	8.04	26.29	10.00	15.69	13.42	12.03	13.59

### Relative Return vs S&P 500 Index



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

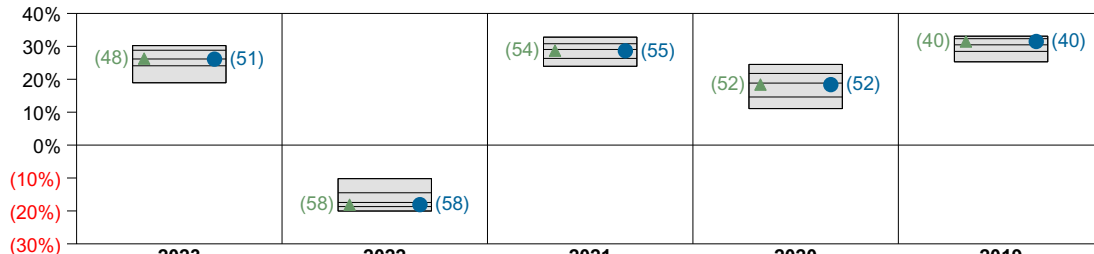


# Blackrock S&P 500 Return Analysis Summary

## Return Analysis

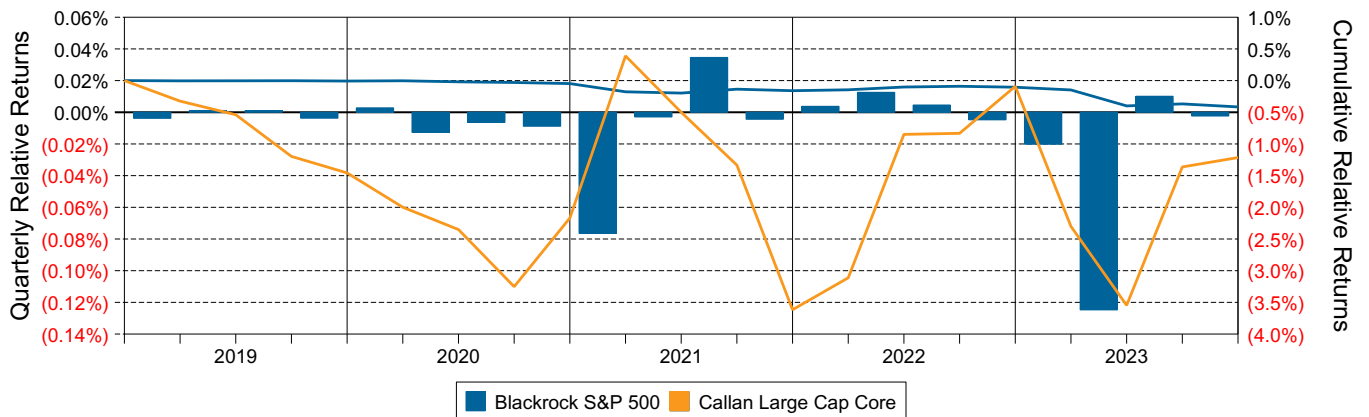
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

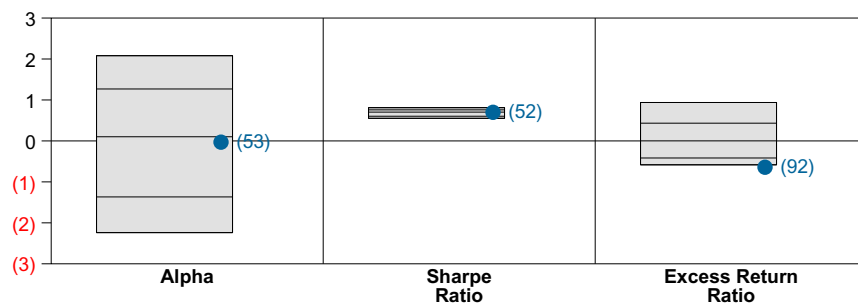


10th Percentile	30.23	(10.19)	32.80	24.51	33.09
25th Percentile	28.82	(14.48)	30.79	21.77	32.33
Median	26.16	(17.42)	29.05	18.84	30.46
75th Percentile	24.09	(18.69)	26.34	14.62	28.47
90th Percentile	18.94	(20.04)	23.94	11.09	25.31

### Cumulative and Quarterly Relative Returns vs S&P 500 Index



### Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core (Gross) Five Years Ended December 31, 2023



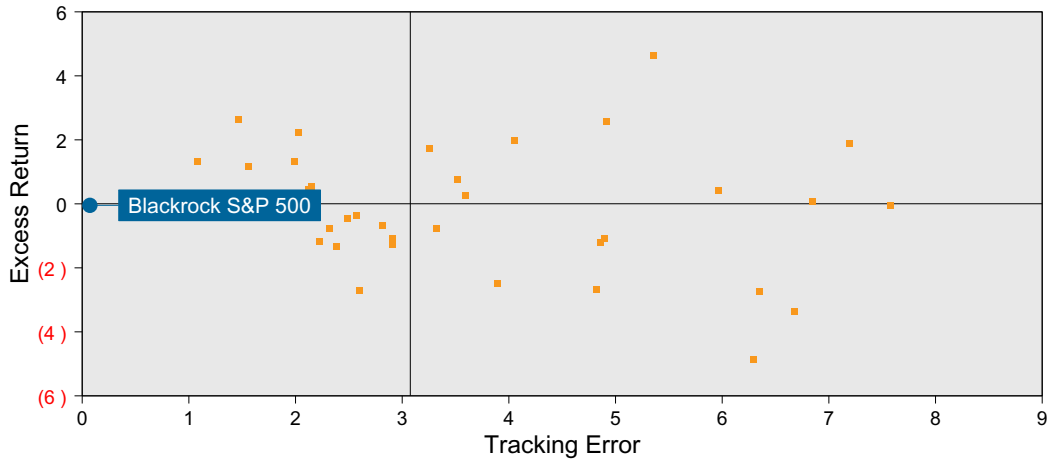
10th Percentile	2.08	0.81	0.94
25th Percentile	1.27	0.76	0.43
Median	0.10	0.70	0.00
75th Percentile	(1.37)	0.60	(0.42)
90th Percentile	(2.24)	0.55	(0.58)

# Blackrock S&P 500 Risk Analysis Summary

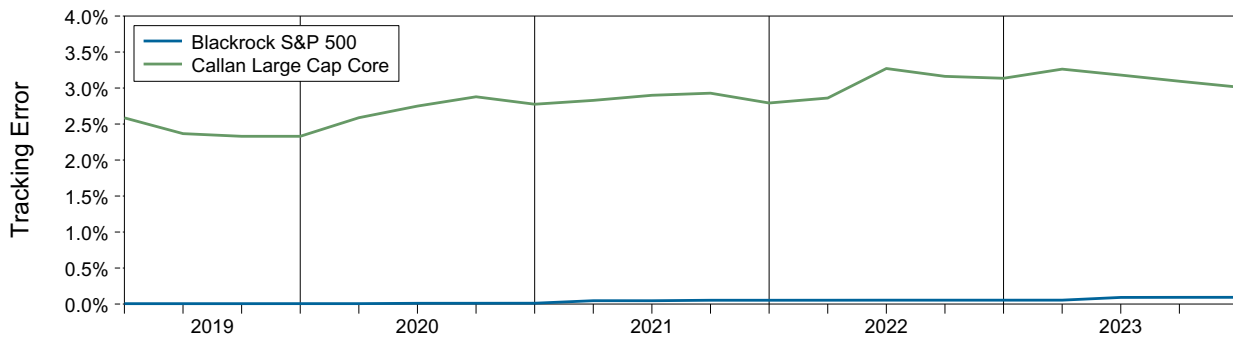
## Risk Analysis

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.

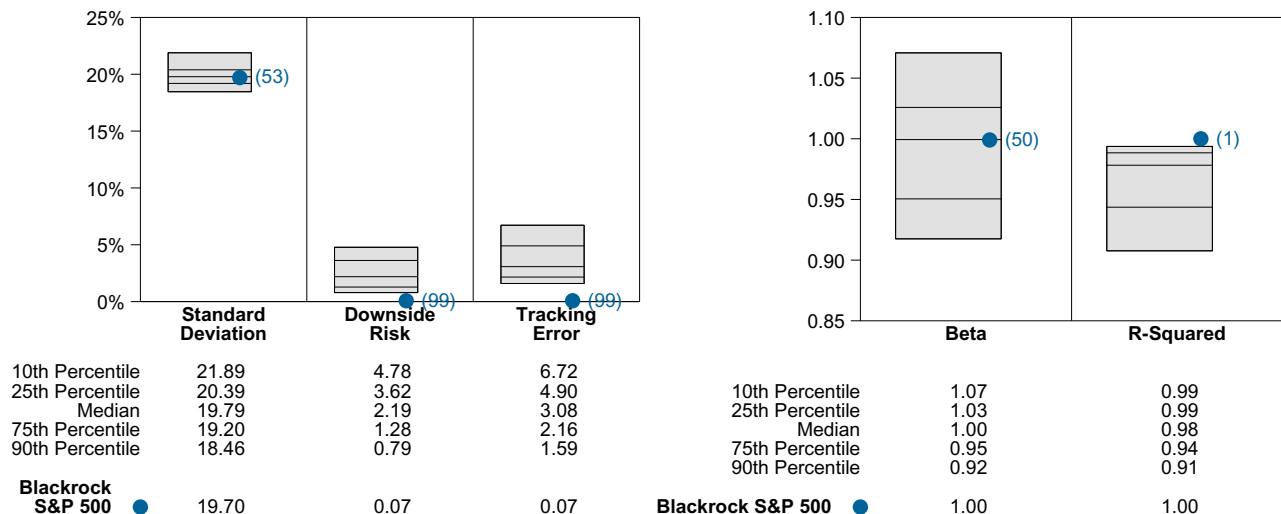
### Risk Analysis vs Callan Large Cap Core (Gross) Five Years Ended December 31, 2023



### 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 December 31, 2023

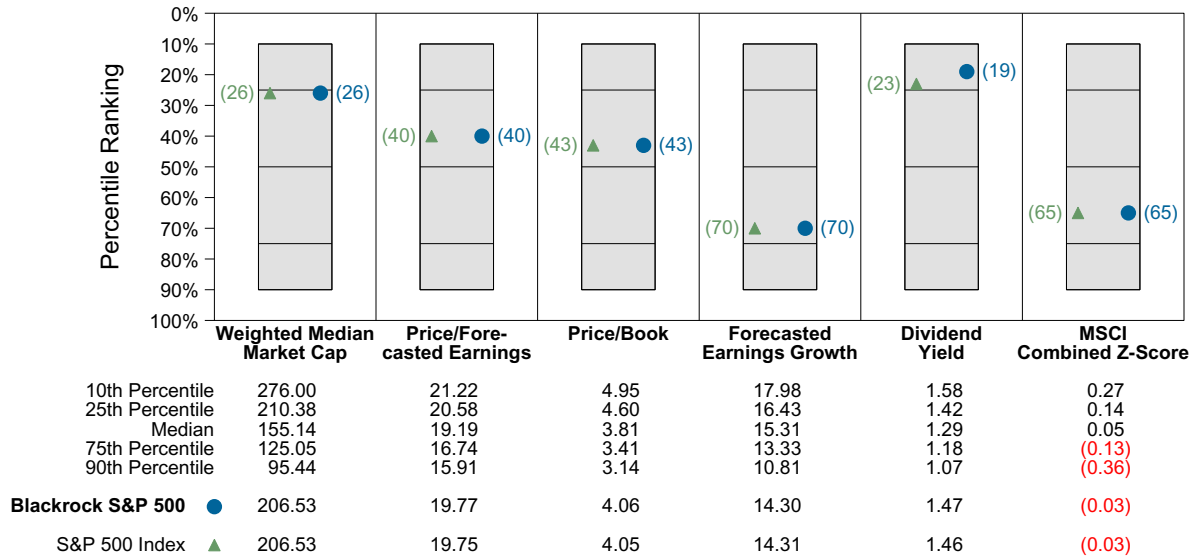


# Blackrock S&P 500 Equity Characteristics Analysis Summary

## Portfolio Characteristics

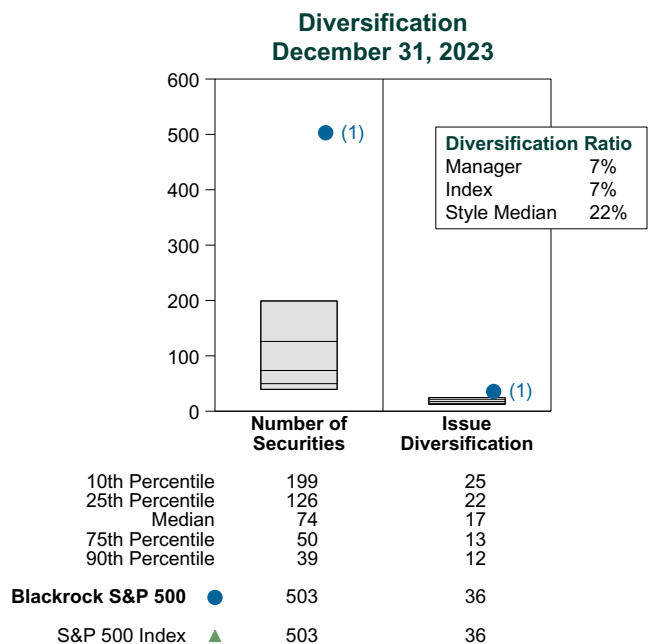
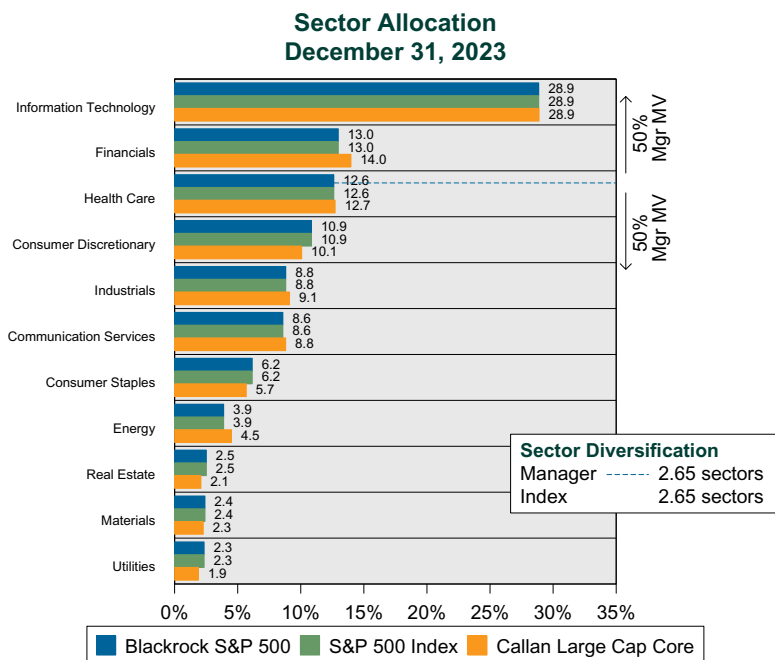
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Large Cap Core as of December 31, 2023



## 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.



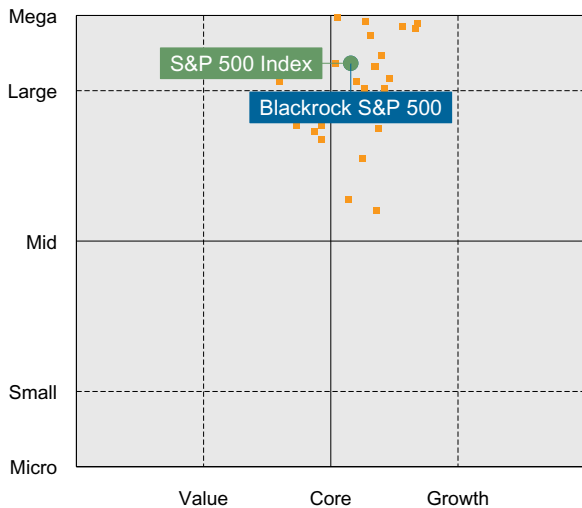
# Current Holdings Based Style Analysis

## Blackrock S&P 500

### As of December 31, 2023

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.

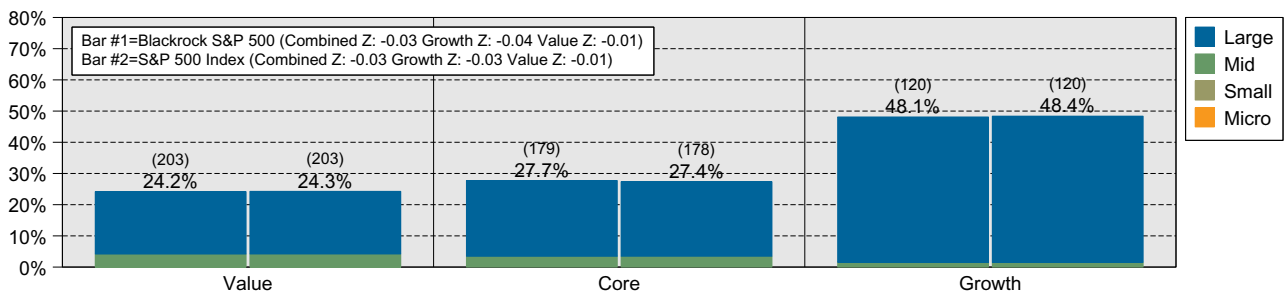
**Style Map vs Callan Large Cap Core Holdings as of December 31, 2023**



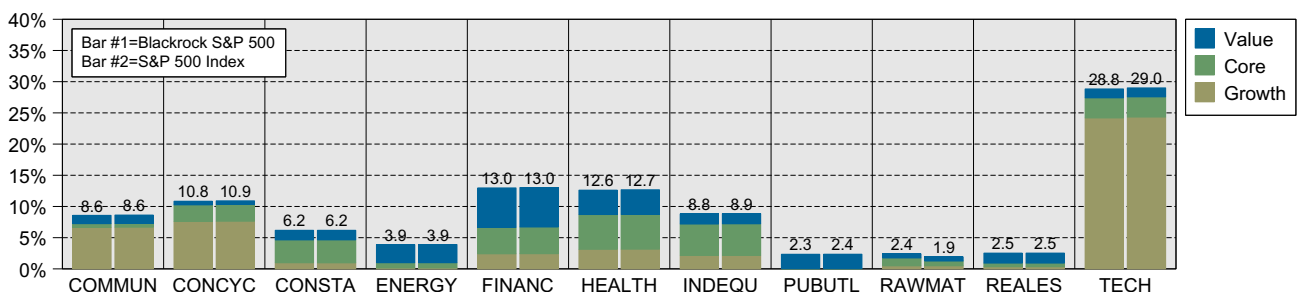
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	20.0% (96)	24.3% (95)	46.5% (83)	90.8% (274)
	20.1% (96)	23.9% (94)	46.8% (83)	90.7% (273)
Mid	4.2% (107)	3.5% (84)	1.6% (37)	9.2% (228)
	4.2% (107)	3.5% (84)	1.6% (37)	9.2% (228)
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	24.2% (203)	27.7% (179)	48.1% (120)	100.0% (502)
	24.3% (203)	27.4% (178)	48.4% (120)	100.0% (501)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



**Sector Weights Distribution Holdings as of December 31, 2023**





# SMid Cap Domestic Equity Period Ended December 31, 2023

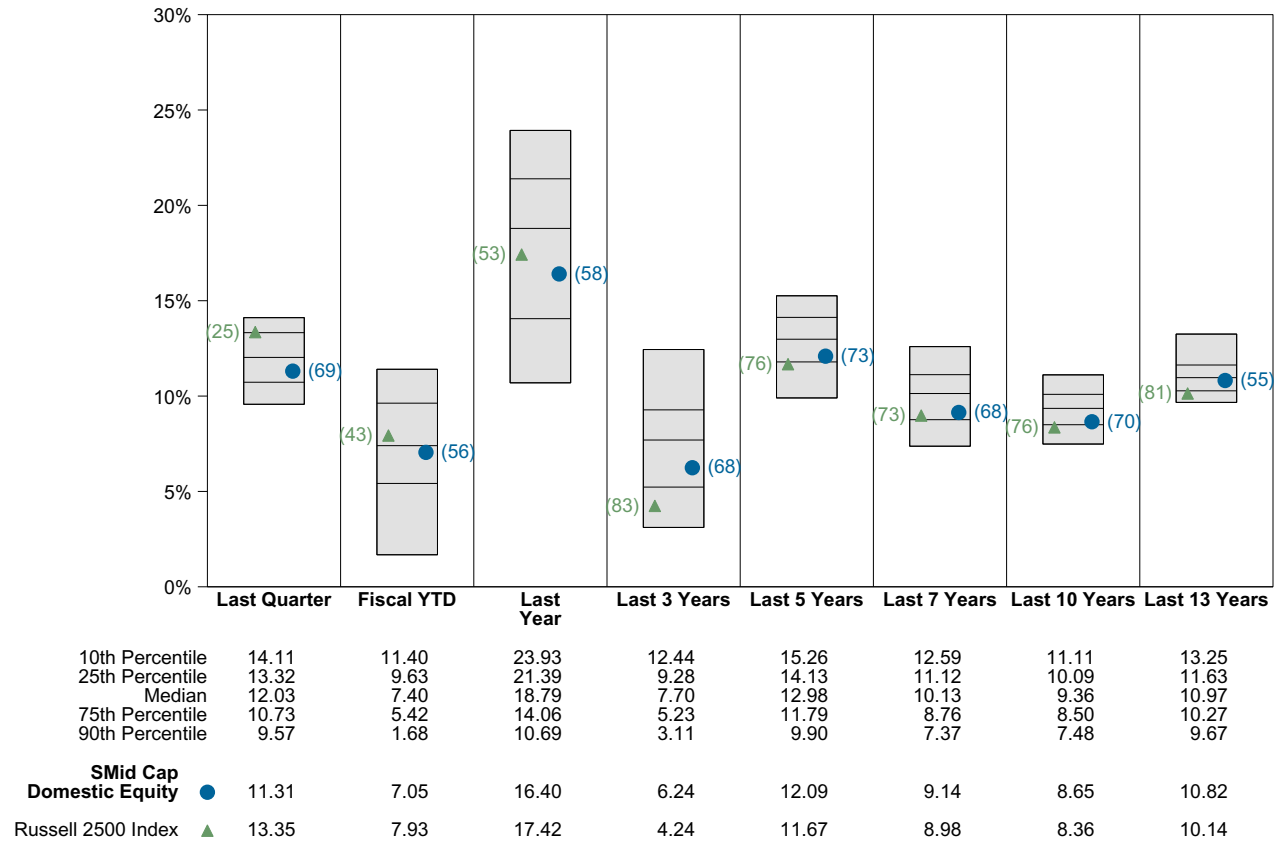
## Quarterly Summary and Highlights

- SMid Cap Domestic Equity's portfolio posted a 11.31% return for the quarter placing it in the 69 percentile of the Callan Small/MidCap Core group for the quarter and in the 58 percentile for the last year.
- SMid Cap Domestic Equity's portfolio underperformed the Russell 2500 Index by 2.05% for the quarter and underperformed the Russell 2500 Index for the year by 1.02%.

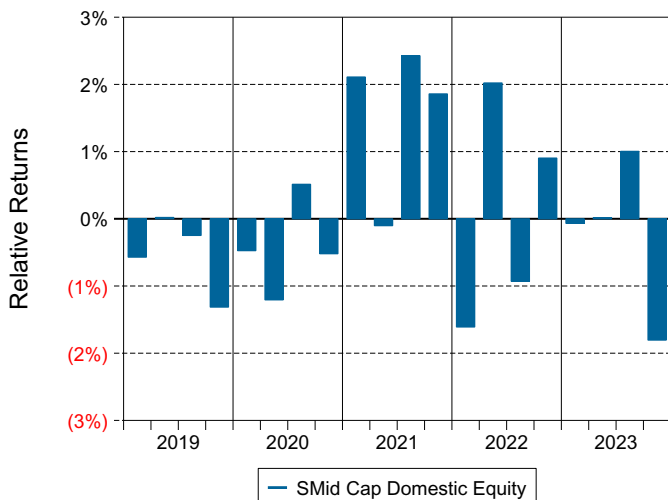
## Quarterly Asset Growth

Beginning Market Value	\$611,803,668
Net New Investment	\$0
Investment Gains/(Losses)	\$69,181,233
Ending Market Value	\$680,984,900

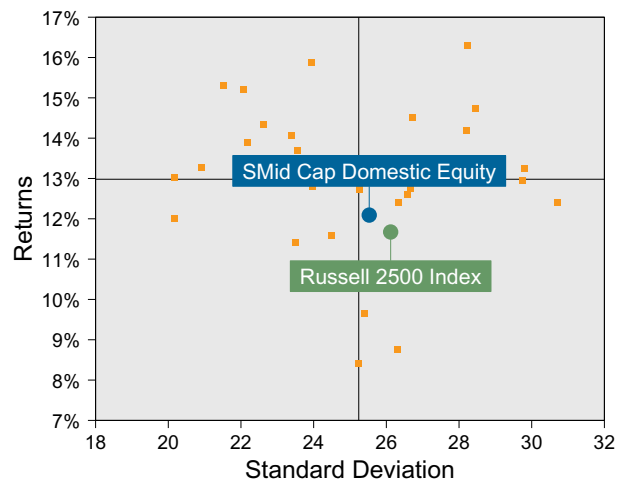
## Performance vs Callan Small/MidCap Core (Gross)



## Relative Return vs Russell 2500 Index



## Callan Small/MidCap Core (Gross) Annualized Five Year Risk vs Return

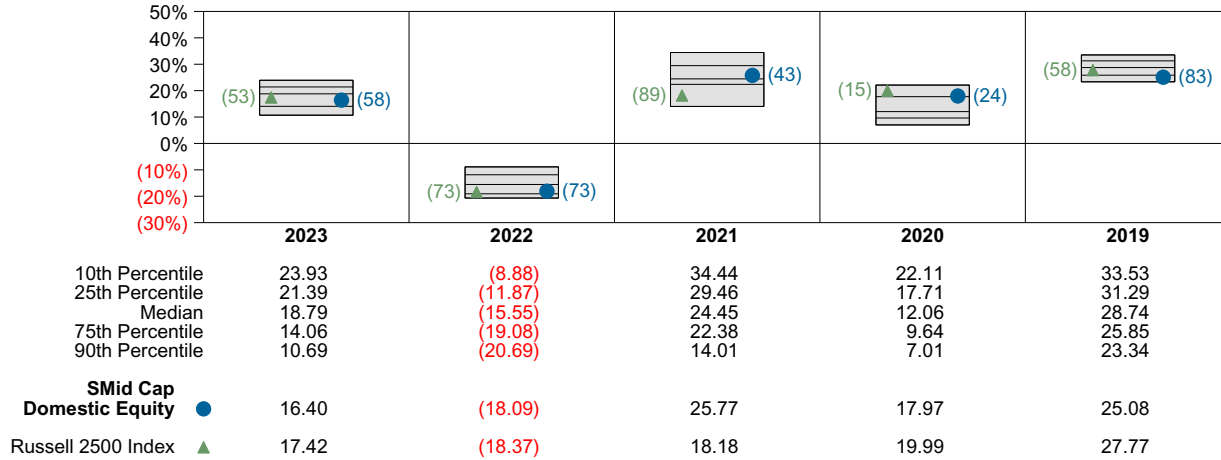


# SMid Cap Domestic Equity Return Analysis Summary

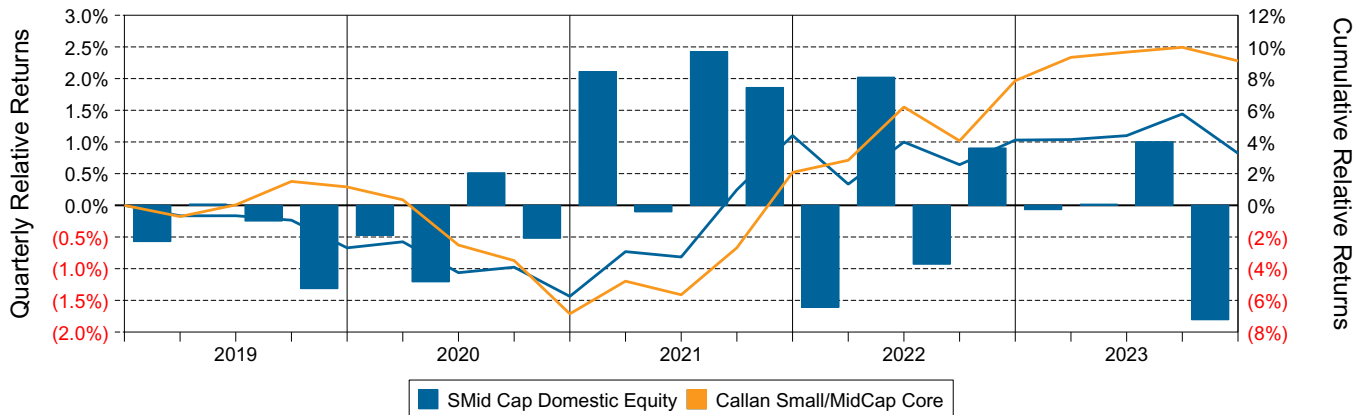
## Return Analysis

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.

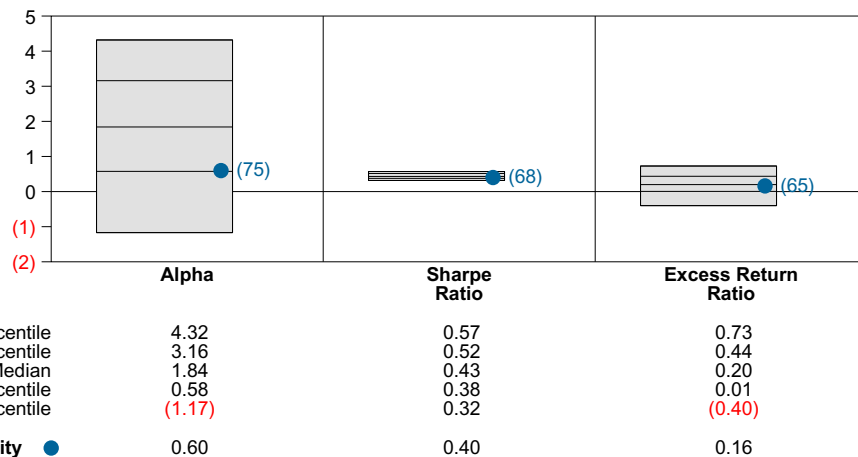
### Performance vs Callan Small/MidCap Core (Gross)



### 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 December 31, 2023

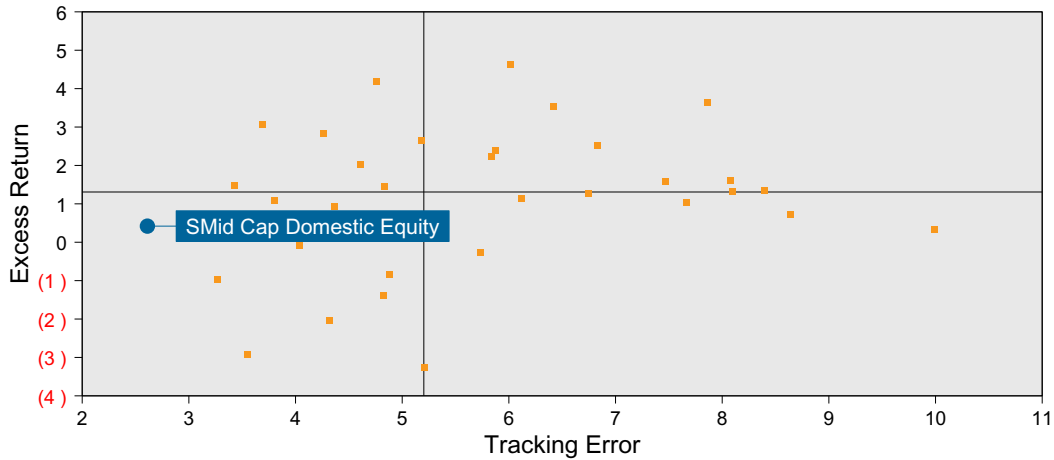


# SMid Cap Domestic Equity Risk Analysis Summary

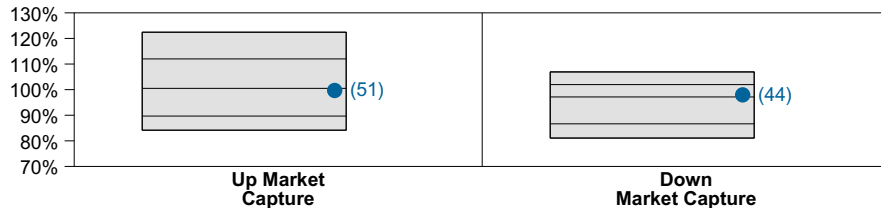
## Risk Analysis

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 December 31, 2023



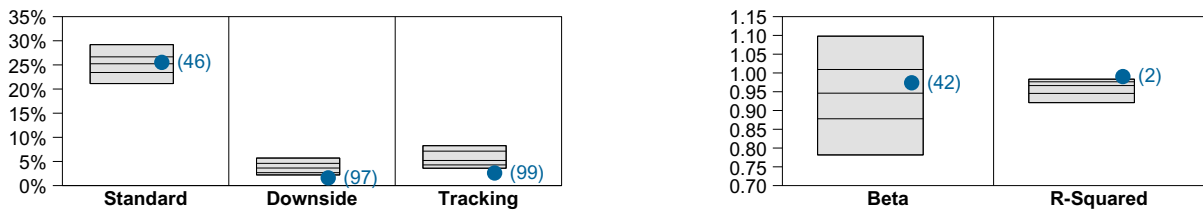
### Market Capture vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	122.44	106.91
25th Percentile	111.99	101.96
Median	100.50	97.15
75th Percentile	89.68	86.64
90th Percentile	84.15	81.08

SMid Cap Domestic Equity ● 99.66 97.96

### Risk Statistics Rankings vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended December 31, 2023



	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	29.20	5.70	8.27	1.10	0.98
25th Percentile	26.67	4.61	7.14	1.01	0.98
Median	25.24	3.64	5.20	0.95	0.97
75th Percentile	23.42	2.68	4.29	0.88	0.95
90th Percentile	21.14	2.21	3.60	0.78	0.92

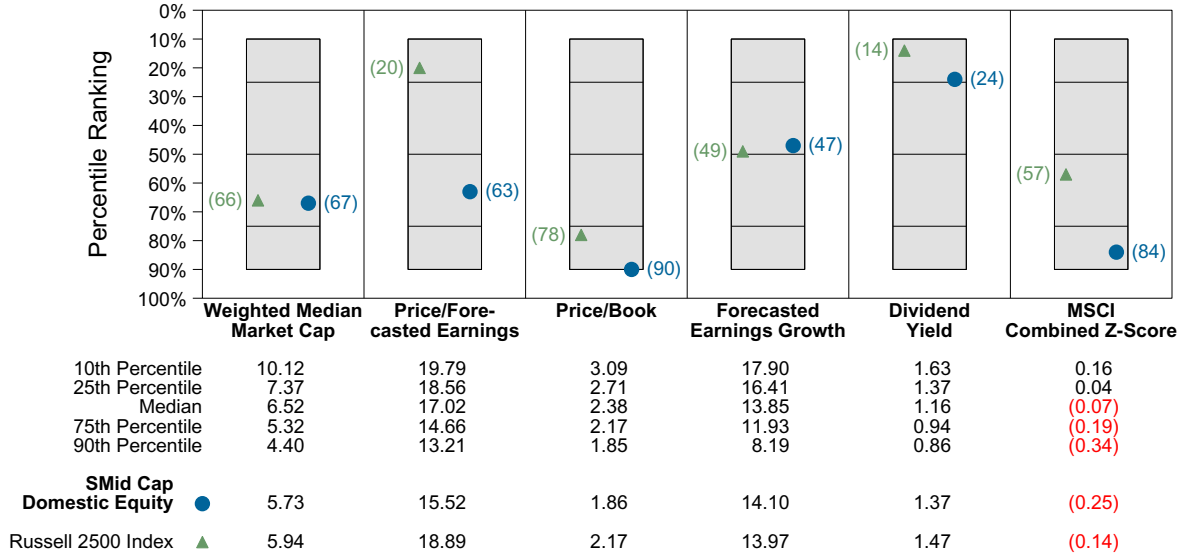
SMid Cap Domestic Equity ● 25.53 1.60 2.61 0.97 0.99

# SMid Cap Domestic Equity Equity Characteristics Analysis Summary

## Portfolio Characteristics

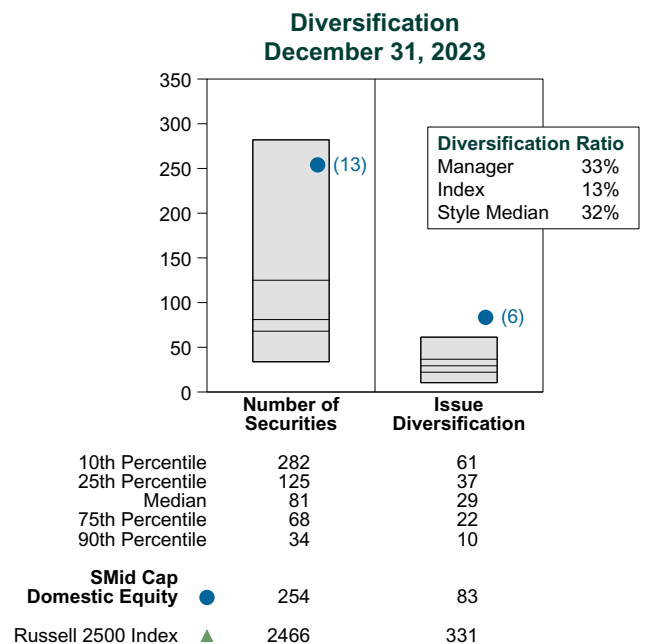
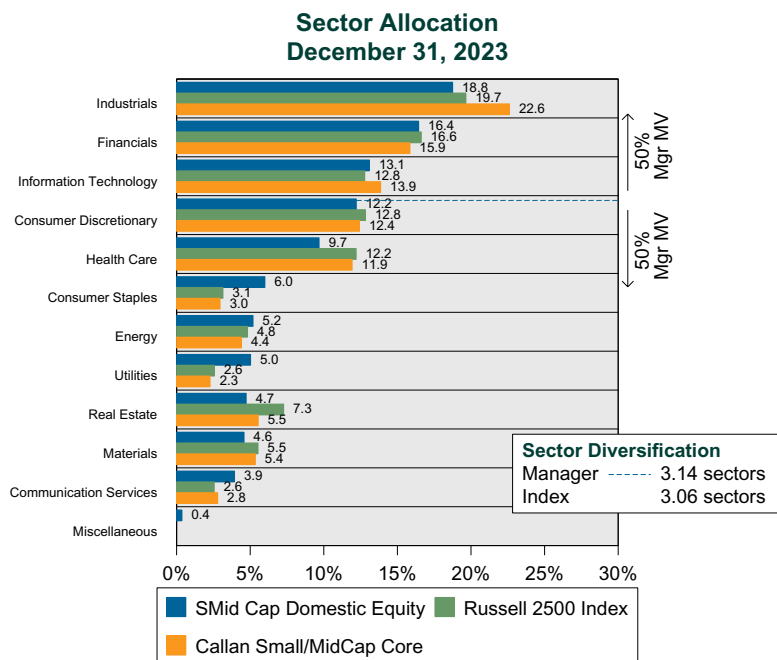
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Core as of December 31, 2023



## 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.



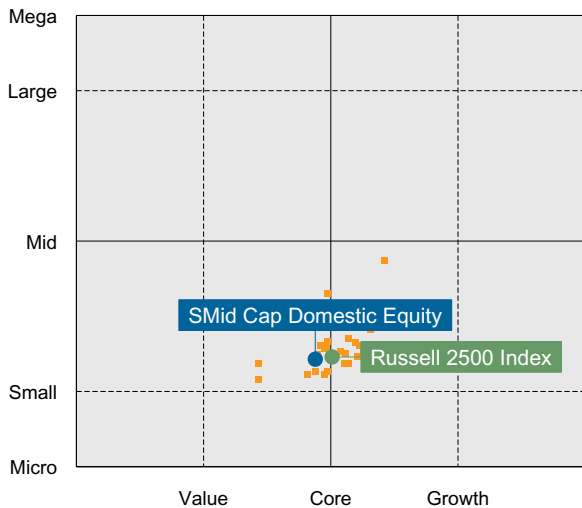
# Current Holdings Based Style Analysis

## SMid Cap Domestic Equity

### As of December 31, 2023

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.

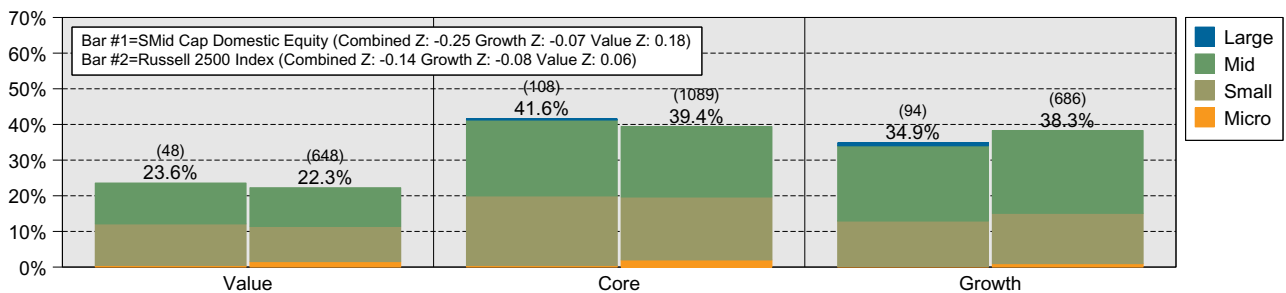
**Style Map vs Callan Small/MidCap Core Holdings as of December 31, 2023**



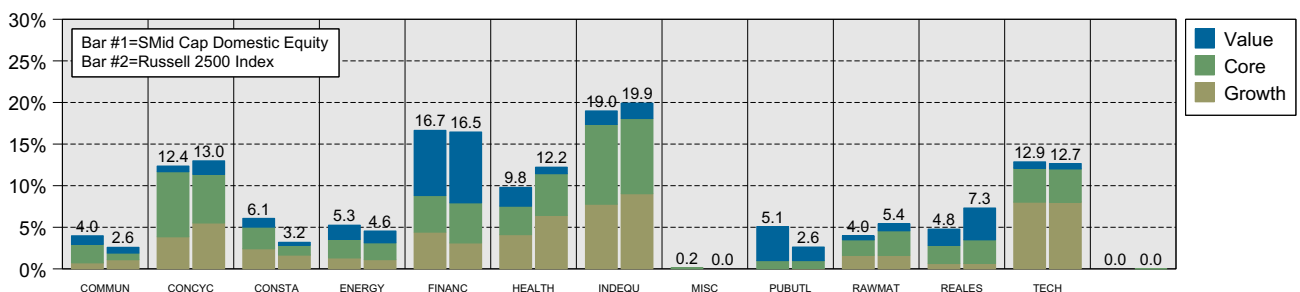
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.3% (1)	0.9% (3)	1.2% (4)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	11.5% (21)	21.3% (49)	21.1% (56)	53.9% (126)
	10.8% (77)	19.8% (142)	23.2% (164)	53.9% (383)
Small	11.7% (25)	19.5% (56)	12.7% (34)	43.9% (115)
	9.9% (279)	17.6% (525)	14.1% (361)	41.6% (1165)
Micro	0.4% (2)	0.4% (2)	0.2% (1)	1.0% (5)
	1.5% (292)	2.0% (422)	1.0% (161)	4.5% (875)
<b>Total</b>	<b>23.6% (48)</b>	<b>41.6% (108)</b>	<b>34.9% (94)</b>	<b>100.0% (250)</b>
	<b>22.3% (648)</b>	<b>39.4% (1089)</b>	<b>38.3% (686)</b>	<b>100.0% (2423)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



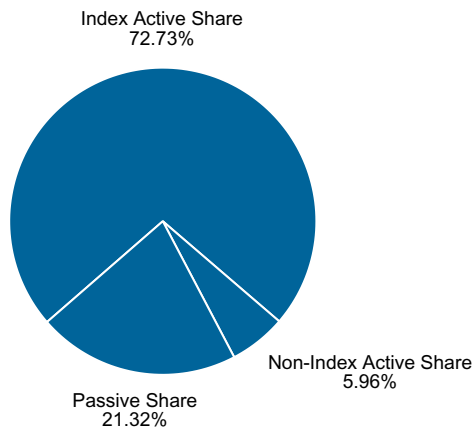
**Sector Weights Distribution Holdings as of December 31, 2023**



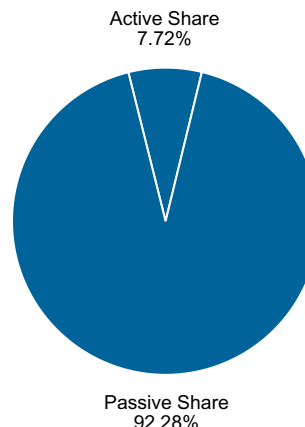
## SMid Cap Domestic Equity Active Share Analysis as of December 31, 2023 vs. Russell 2500 Index

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



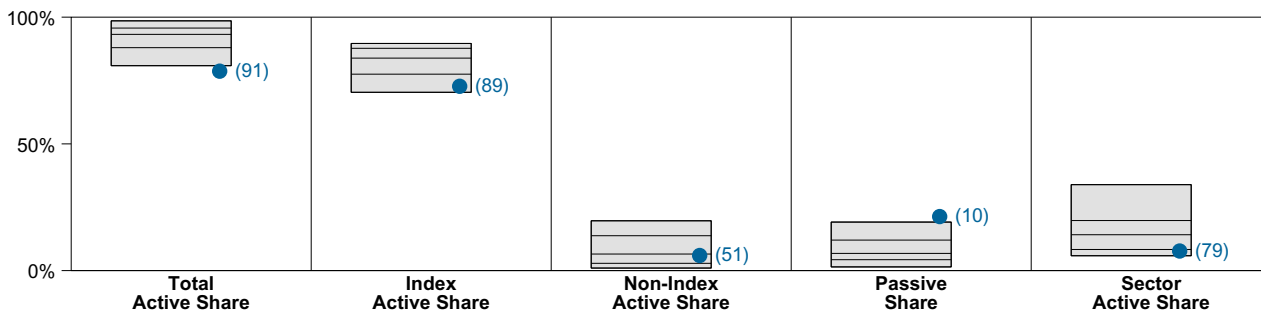
### Sector Exposure Active Share



**Total Active Share: 78.68%**

	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	68.70%	14.96%	83.66%	2.56%	3.93%	2.82%
Consumer Discretionary	71.49%	6.53%	78.01%	12.83%	12.21%	9.69%
Consumer Staples	59.29%	12.91%	72.20%	3.15%	6.00%	3.67%
Energy	71.09%	5.07%	76.16%	4.82%	5.19%	3.86%
Financials	76.53%	1.13%	77.65%	16.62%	16.44%	12.79%
Health Care	68.80%	11.94%	80.74%	12.20%	9.68%	8.73%
Industrials	71.79%	4.52%	76.31%	19.65%	18.75%	14.54%
Information Technology	70.45%	7.60%	78.05%	12.78%	13.10%	10.10%
Materials	86.69%	0.00%	86.69%	5.53%	4.58%	4.30%
Miscellaneous	0.00%	100.00%	100.00%	-	0.36%	0.18%
Real Estate	87.94%	0.00%	87.94%	7.27%	4.73%	5.11%
Utilities	61.54%	3.09%	64.63%	2.57%	5.03%	2.88%
<b>Total</b>	<b>72.73%</b>	<b>5.96%</b>	<b>78.68%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>78.68%</b>

### Active Share vs. Callan Small/MidCap Core



10th Percentile	98.55	89.63	19.65	19.15	33.92
25th Percentile	95.69	87.71	13.76	12.04	19.75
Median	93.22	83.84	6.54	6.78	14.15
75th Percentile	87.96	77.50	2.87	4.31	8.33
90th Percentile	80.85	70.35	0.99	1.45	5.86

SMid Cap Domestic Equity ●

78.68

72.73

5.96

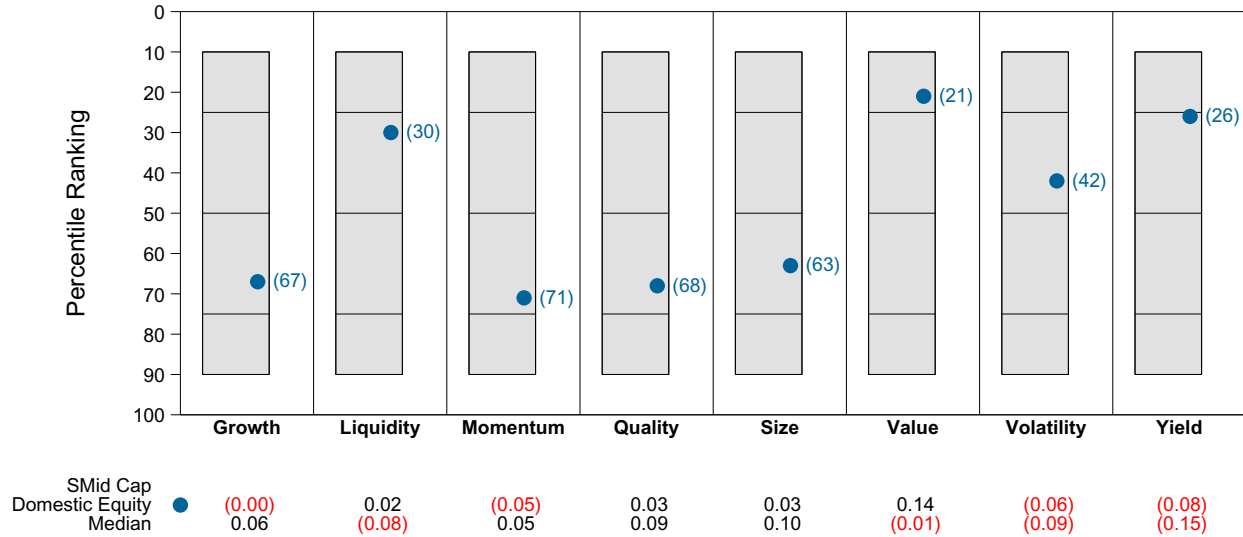
21.32

7.72

**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.

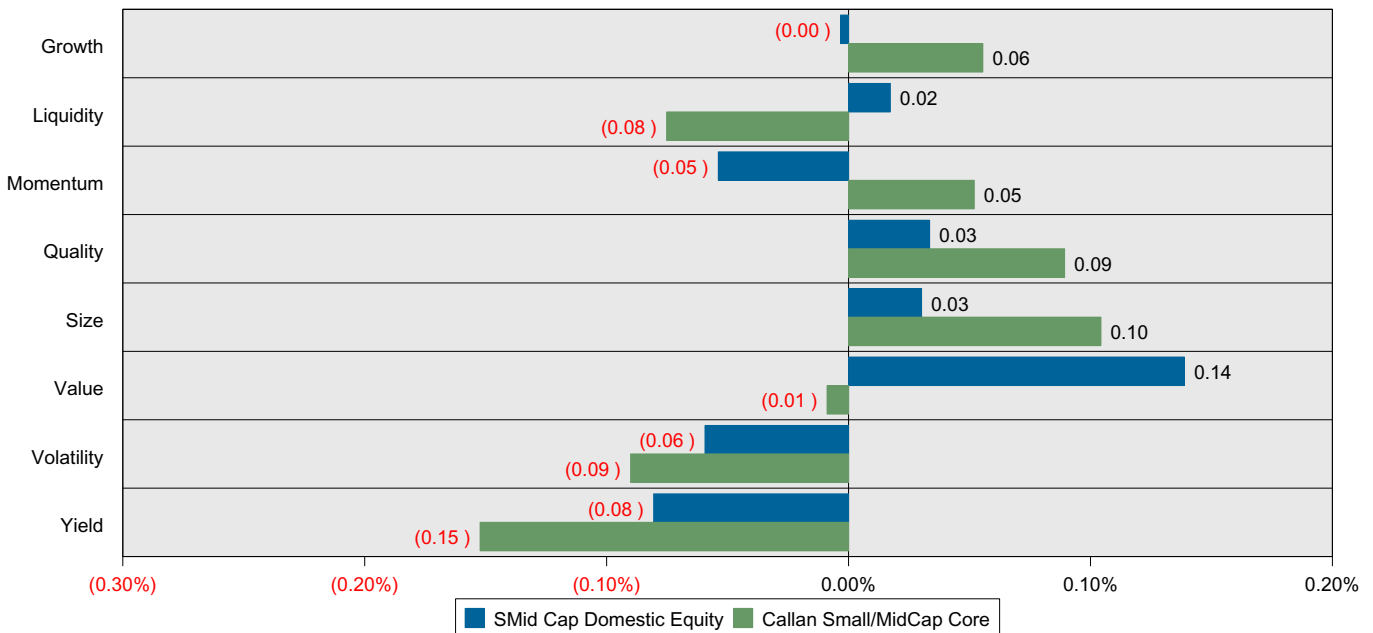
**Factor Exposures Relative to Russell 2500 Index, Rankings vs Callan Small/MidCap Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# AllianceBernstein Period Ended December 31, 2023

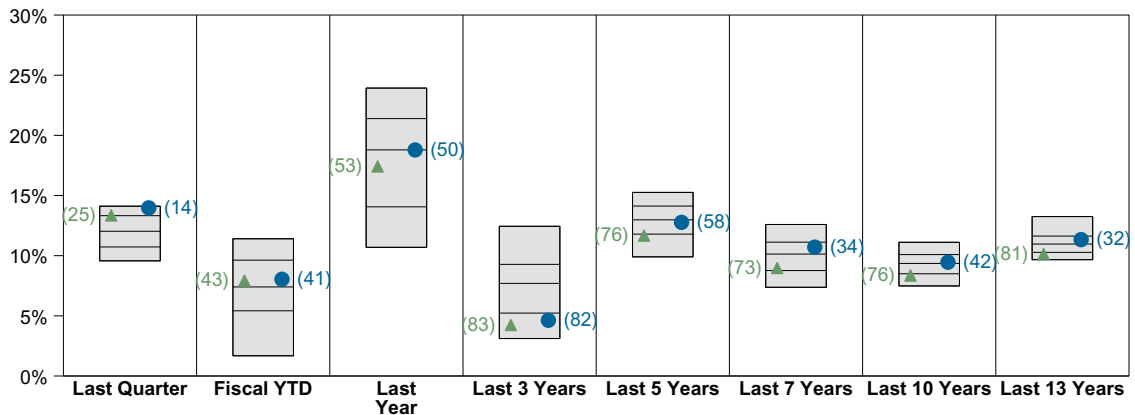
## Investment Philosophy

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

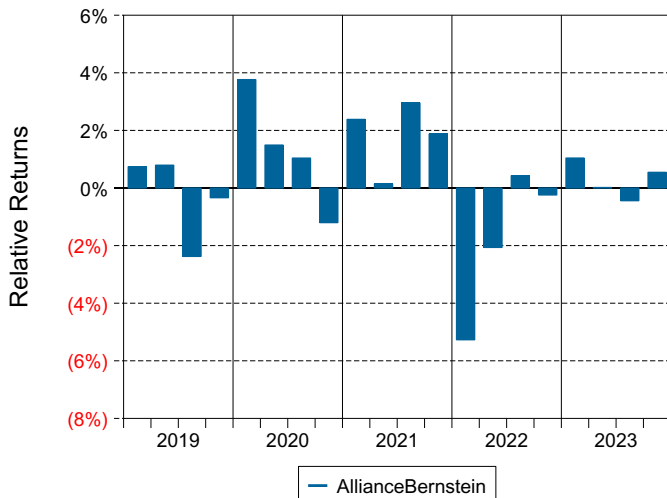
Beginning Market Value	\$373,417,661
Net New Investment	\$0
Investment Gains/(Losses)	\$52,173,335
Ending Market Value	\$425,590,996

## Performance vs Callan Small/MidCap Core (Gross)

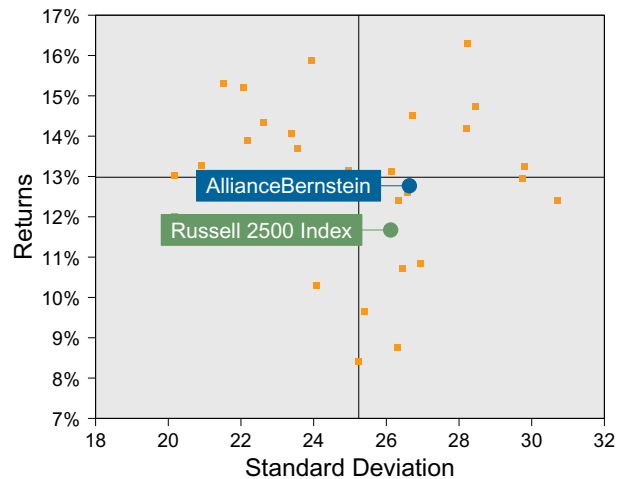


10th Percentile	14.11	11.40	23.93	12.44	15.26	12.59	11.11	13.25
25th Percentile	13.32	9.63	21.39	9.28	14.13	11.12	10.09	11.63
Median	12.03	7.40	18.79	7.70	12.98	10.13	9.36	10.97
75th Percentile	10.73	5.42	14.06	5.23	11.79	8.76	8.50	10.27
90th Percentile	9.57	1.68	10.69	3.11	9.90	7.37	7.48	9.67
<b>AllianceBernstein</b> ●	13.97	8.04	18.79	4.63	12.77	10.71	9.46	11.33
Russell 2500 Index ▲	13.35	7.93	17.42	4.24	11.67	8.98	8.36	10.14

### Relative Return vs Russell 2500 Index



### Callan Small/MidCap Core (Gross) Annualized Five Year Risk vs Return



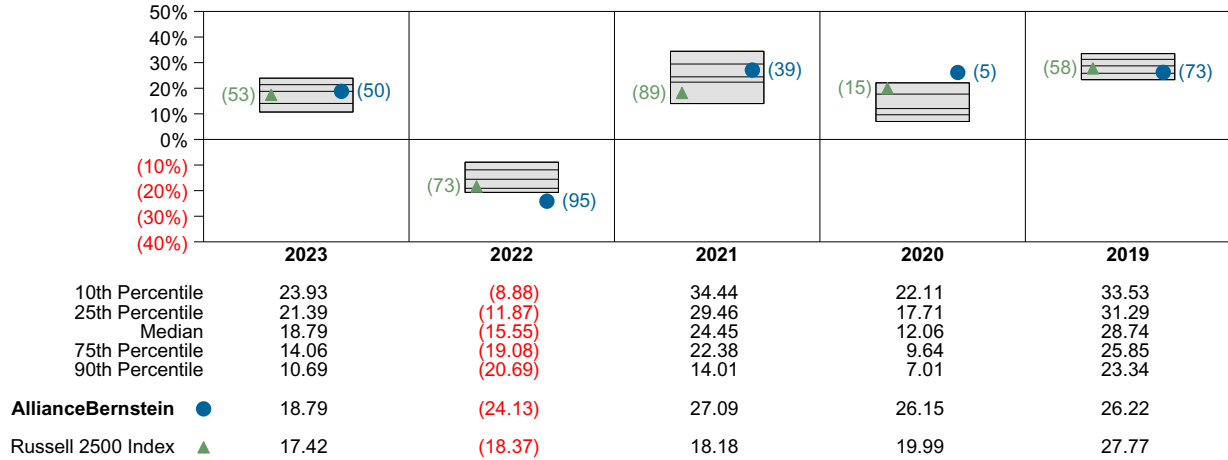


# AllianceBernstein Return Analysis Summary

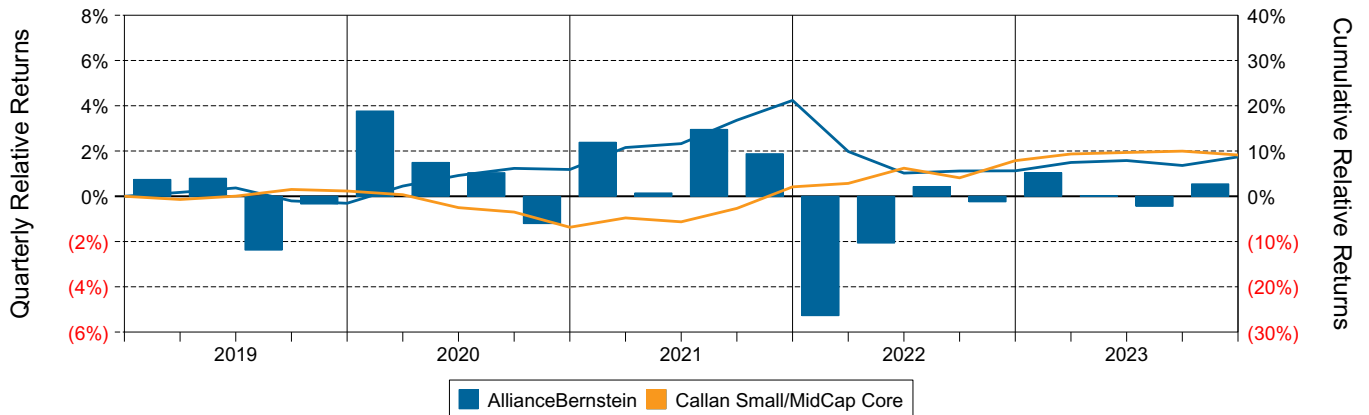
## Return Analysis

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.

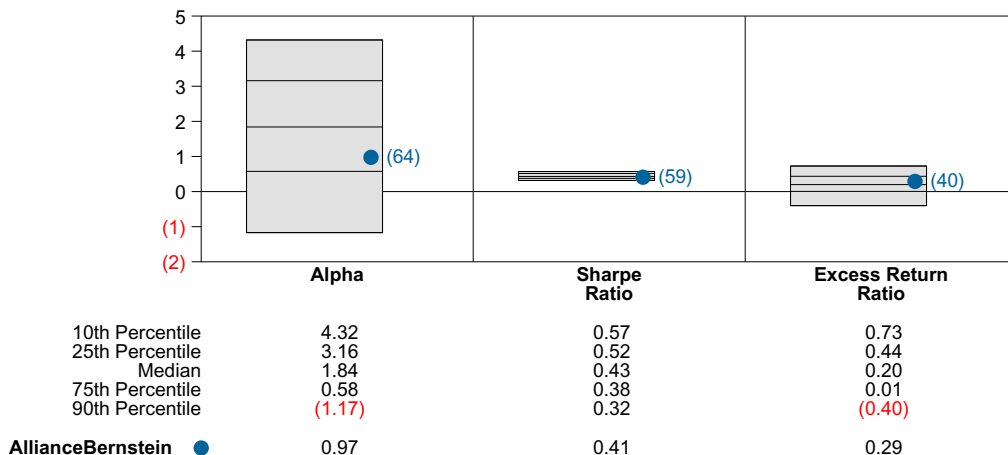
### Performance vs Callan Small/MidCap Core (Gross)



### 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 December 31, 2023

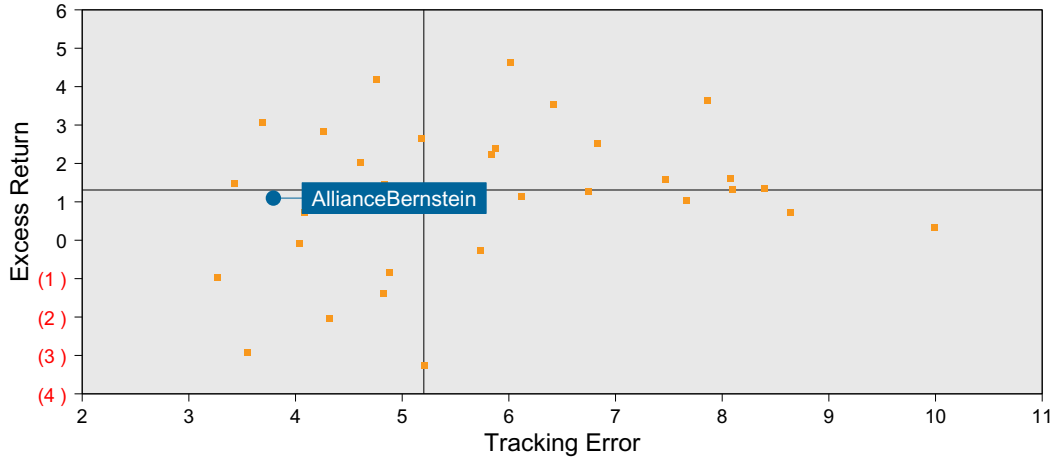


# AllianceBernstein Risk Analysis Summary

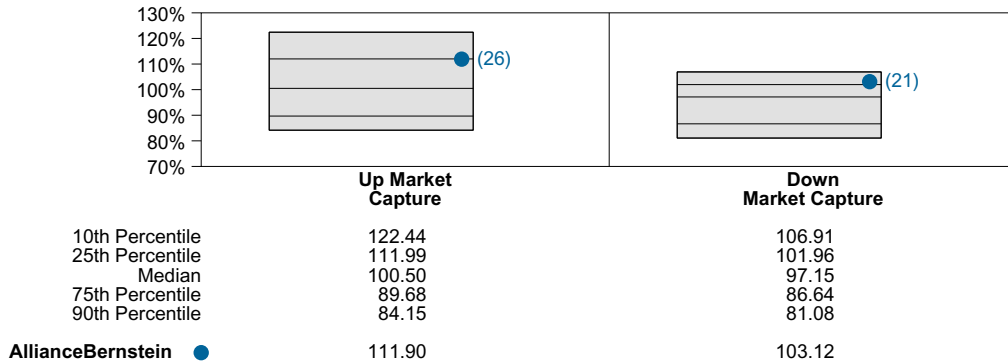
## Risk Analysis

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.

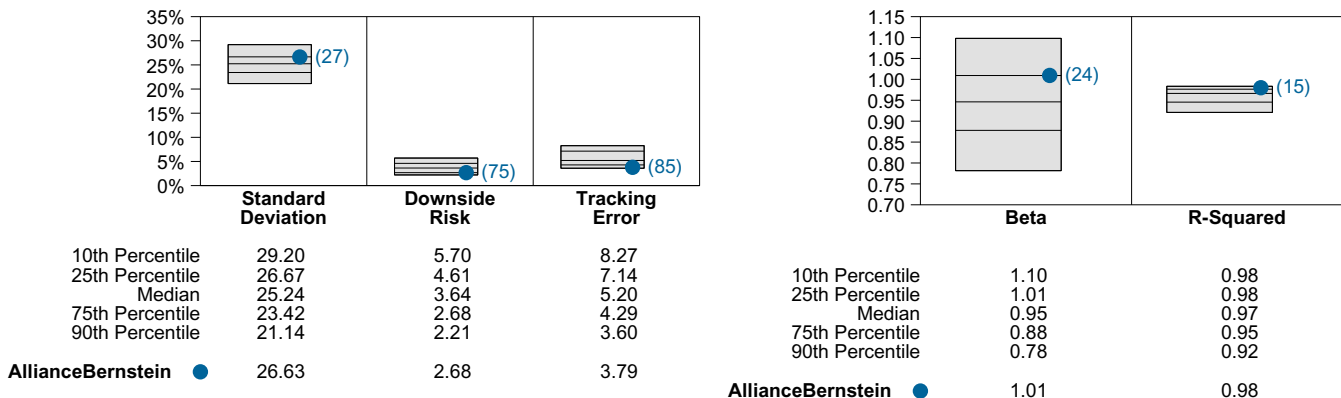
### Risk Analysis vs Callan Small/MidCap Core (Gross) Five Years Ended December 31, 2023



### Market Capture vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Russell 2500 Index Rankings Against Callan Small/MidCap Core (Gross) Five Years Ended December 31, 2023

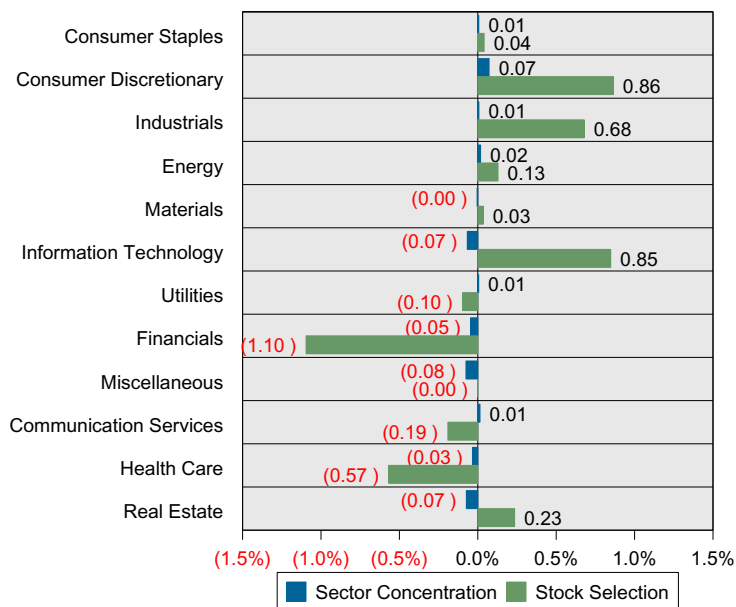


## AllianceBernstein vs Russell 2500 Index Quarterly Equity Buy and Hold Attribution

### 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.

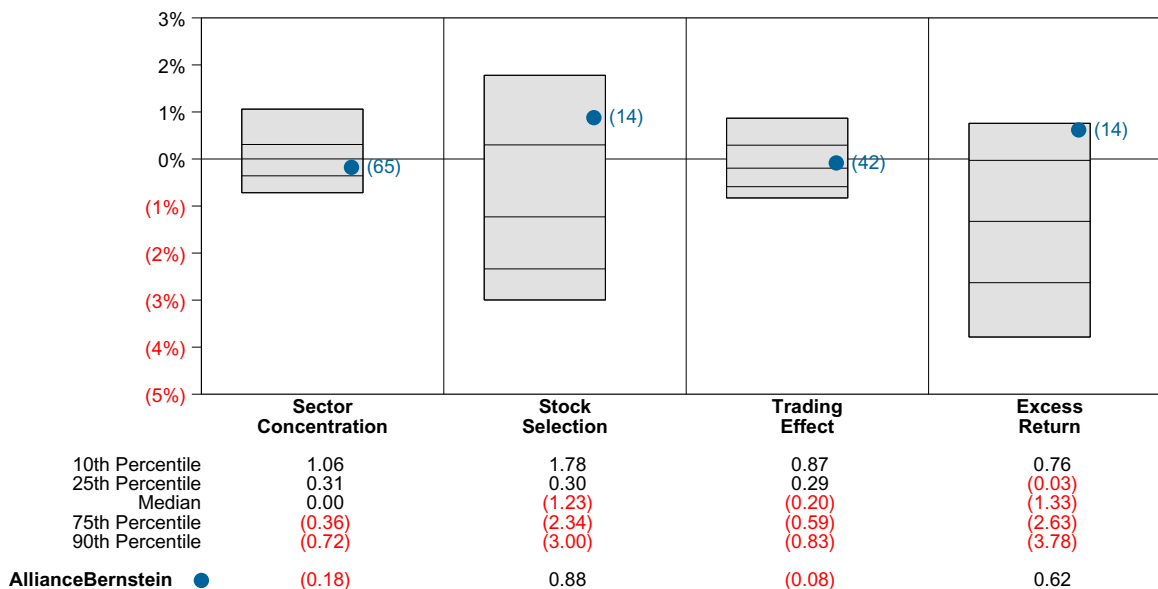
### Attribution Effects by Sector vs Russell 2500 Index Quarter ended December 31, 2023



Sector	Sector Concentration	Stock Selection
Consumer Staples	0.01%	0.04%
Consumer Discretionary	0.07%	0.86%
Industrials	0.01%	0.68%
Energy	0.02%	0.13%
Materials	(0.00%)	0.03%
Information Technology	(0.07%)	0.85%
Utilities	0.01%	(0.10%)
Financials	(0.05%)	(1.10%)
Miscellaneous	(0.08%)	(0.00%)
Communication Services	0.01%	(0.19%)
Health Care	(0.03%)	(0.57%)
Real Estate	(0.07%)	0.23%
<b>Total</b>	<b>(0.18%)</b>	<b>0.88%</b>

<b>Manager Return</b>	=	<b>Index Return</b>	+	<b>Sector Concentration</b>	+	<b>Stock Selection</b>	+	<b>Trading</b>
<b>13.97%</b>		<b>13.35%</b>		<b>(0.18%)</b>		<b>0.88%</b>		<b>(0.08%)</b>

### Equity Attribution Ranking vs Callan Small/MidCap Core Quarter ended December 31, 2023

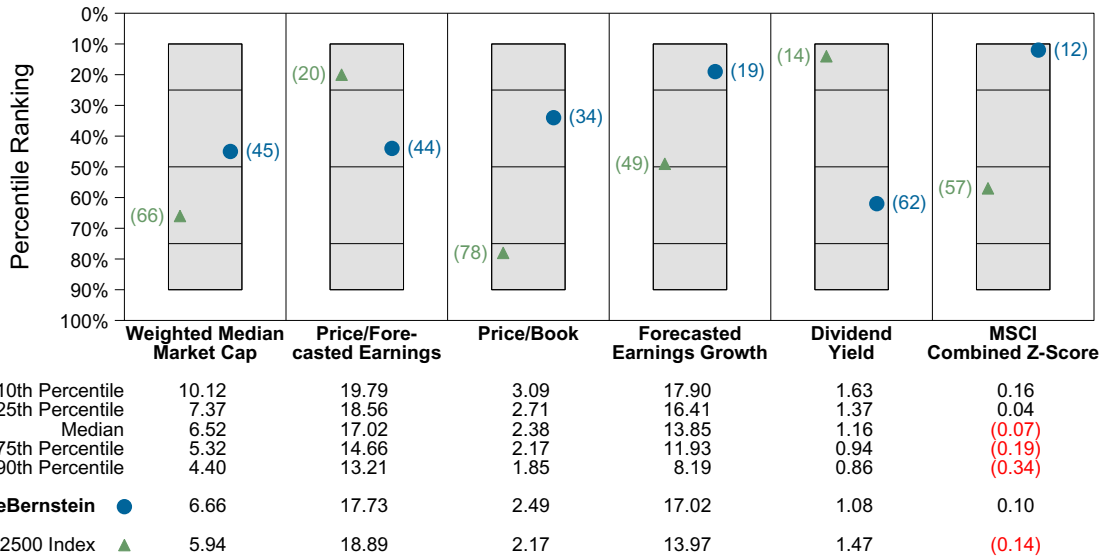


# AllianceBernstein Equity Characteristics Analysis Summary

## Portfolio Characteristics

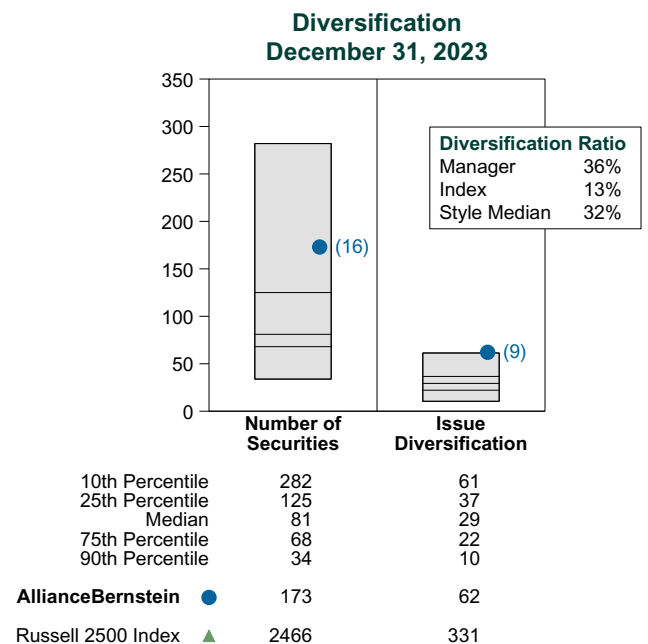
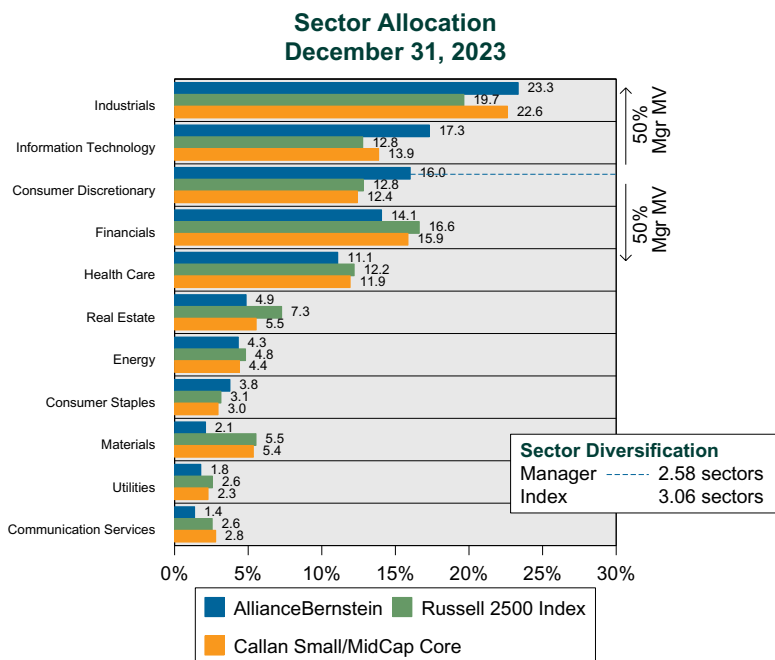
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Core as of December 31, 2023



## 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.

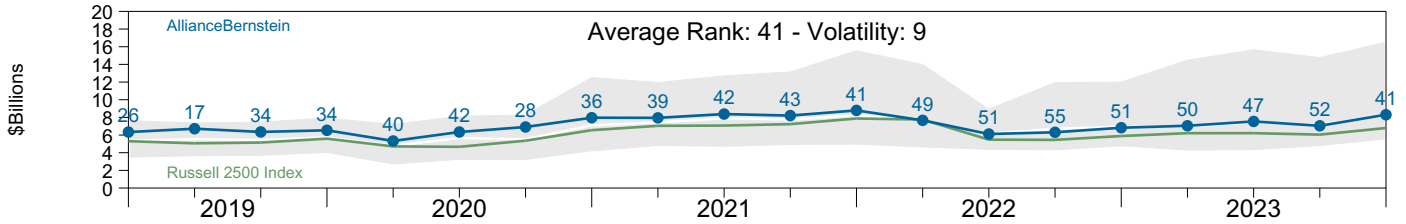


## Portfolio Characteristics Analysis

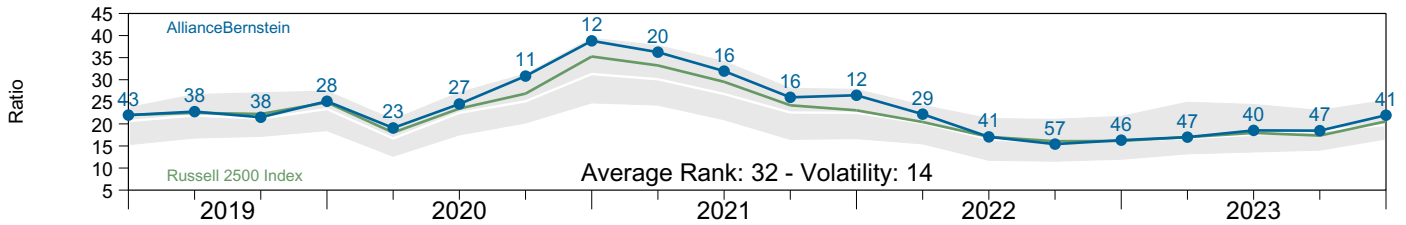
### Callan Small/MidCap Core

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.

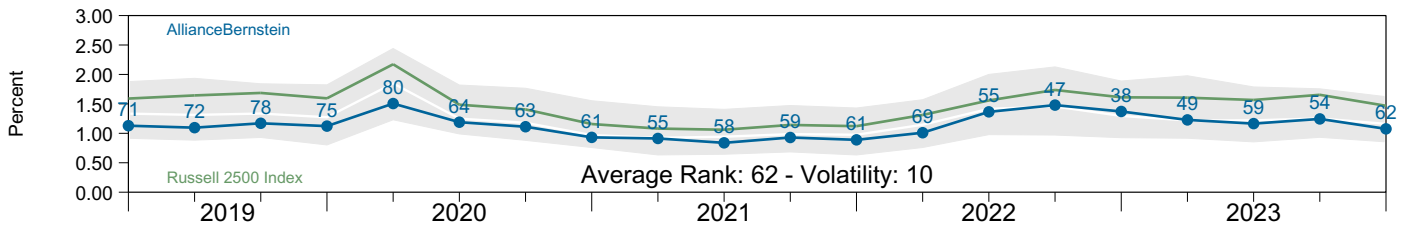
#### Weighted Average Market Cap



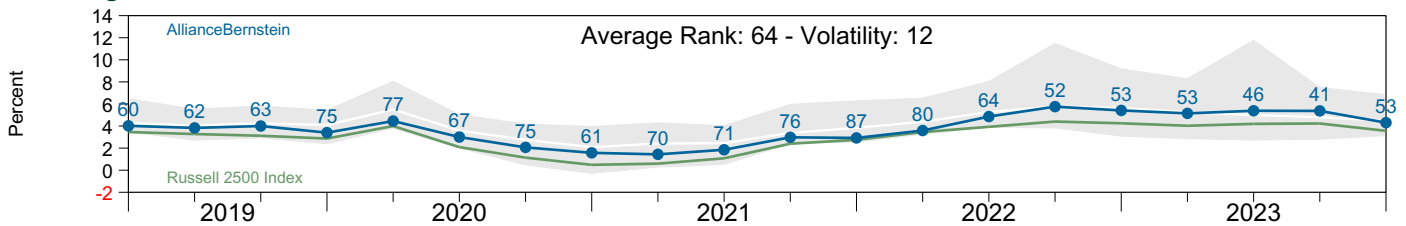
#### Trailing P/E



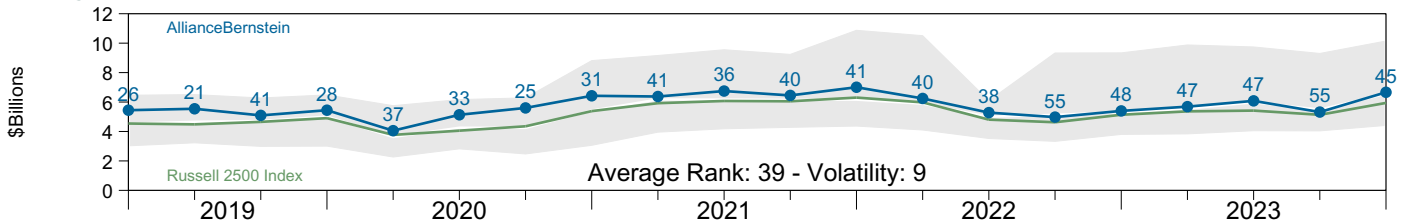
#### Dividend Yield



#### 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.

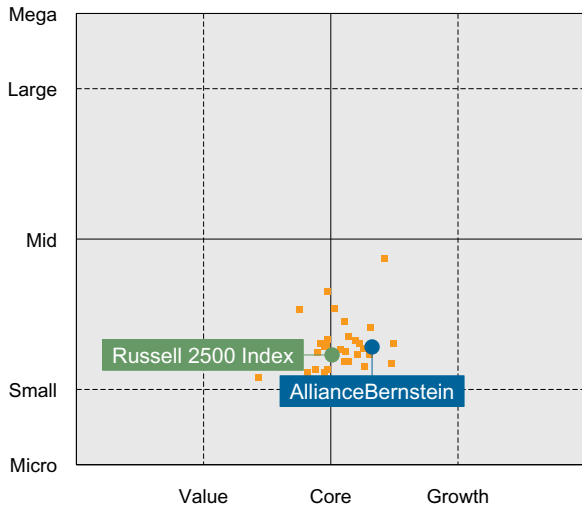
# Current Holdings Based Style Analysis

## AllianceBernstein

### As of December 31, 2023

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.

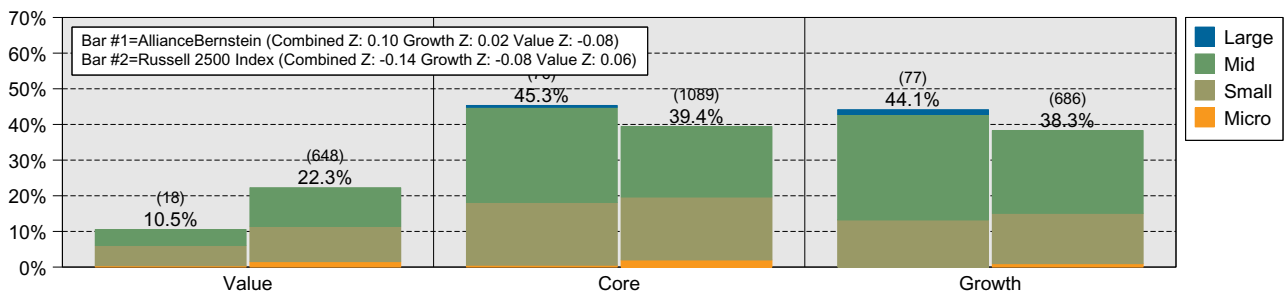
**Style Map vs Callan Small/MidCap Core Holdings as of December 31, 2023**



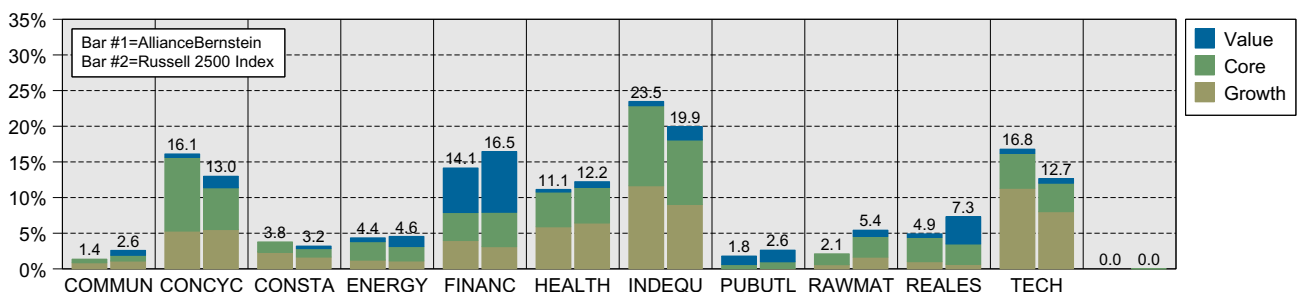
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.5% (1)	1.3% (3)	1.9% (4)
	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	4.5% (7)	26.7% (40)	29.6% (50)	60.8% (97)
	10.8% (77)	19.8% (142)	23.2% (164)	53.9% (383)
Small	5.7% (10)	17.6% (34)	13.2% (24)	36.5% (68)
	9.9% (279)	17.6% (525)	14.1% (361)	41.6% (1165)
Micro	0.4% (1)	0.5% (1)	0.0% (0)	0.9% (2)
	1.5% (292)	2.0% (422)	1.0% (161)	4.5% (875)
<b>Total</b>	<b>10.5% (18)</b>	<b>45.3% (76)</b>	<b>44.1% (77)</b>	<b>100.0% (171)</b>
	<b>22.3% (648)</b>	<b>39.4% (1089)</b>	<b>38.3% (686)</b>	<b>100.0% (2423)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



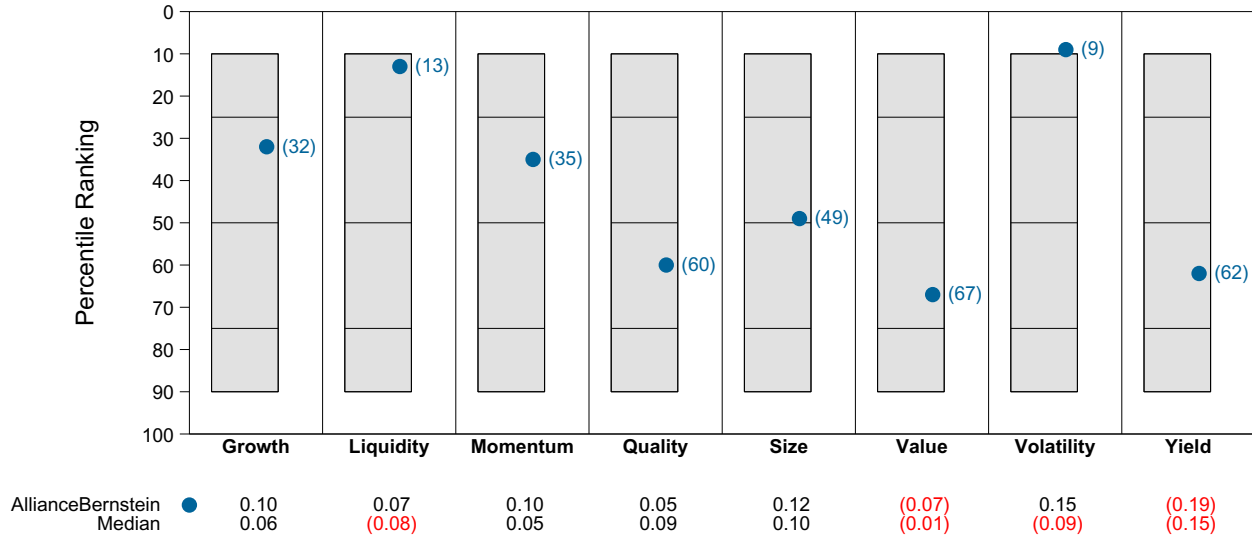
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

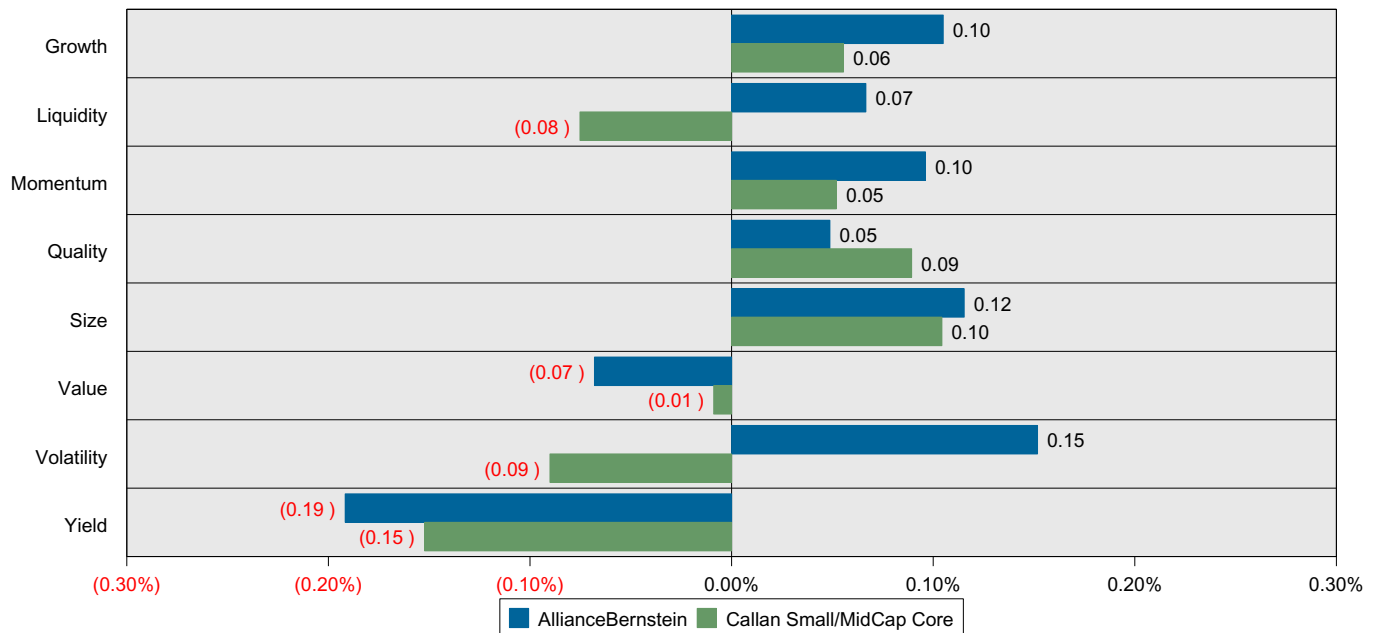
**Factor Exposures Relative to Russell 2500 Index, Rankings vs Callan Small/MidCap Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# TSW

## Period Ended December 31, 2023

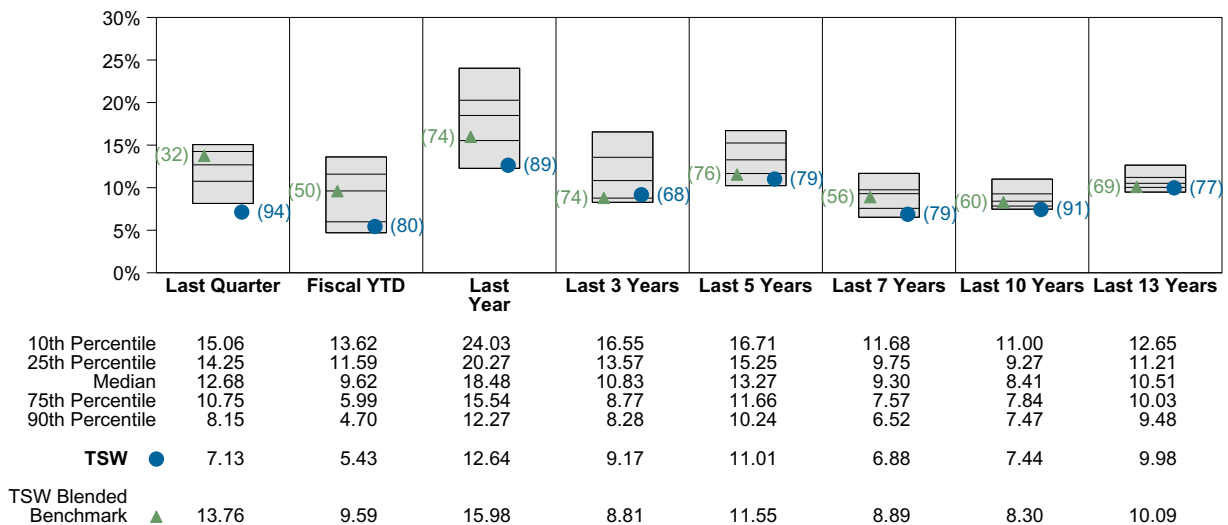
### Investment Philosophy

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.

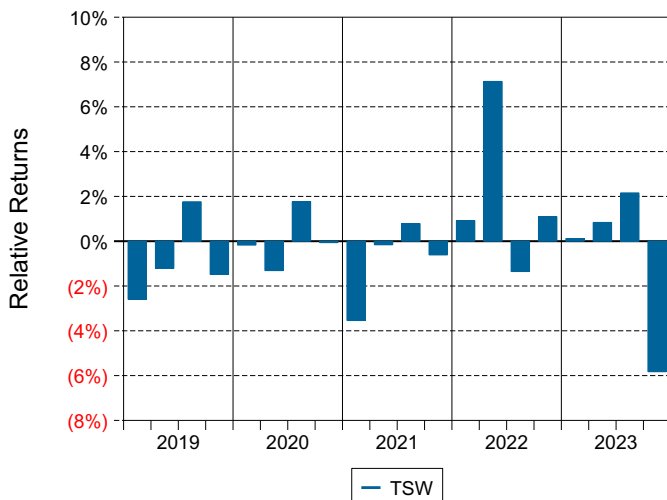
### Quarterly Asset Growth

Beginning Market Value	\$238,386,007
Net New Investment	\$0
Investment Gains/(Losses)	\$17,007,898
Ending Market Value	\$255,393,904

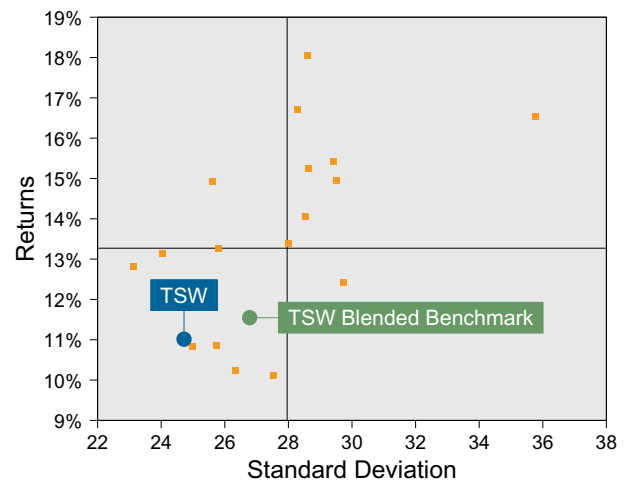
### Performance vs Callan Small/MidCap Value (Gross)



### Relative Return vs TSW Blended Benchmark



### Callan Small/MidCap Value (Gross) Annualized Five Year Risk vs Return



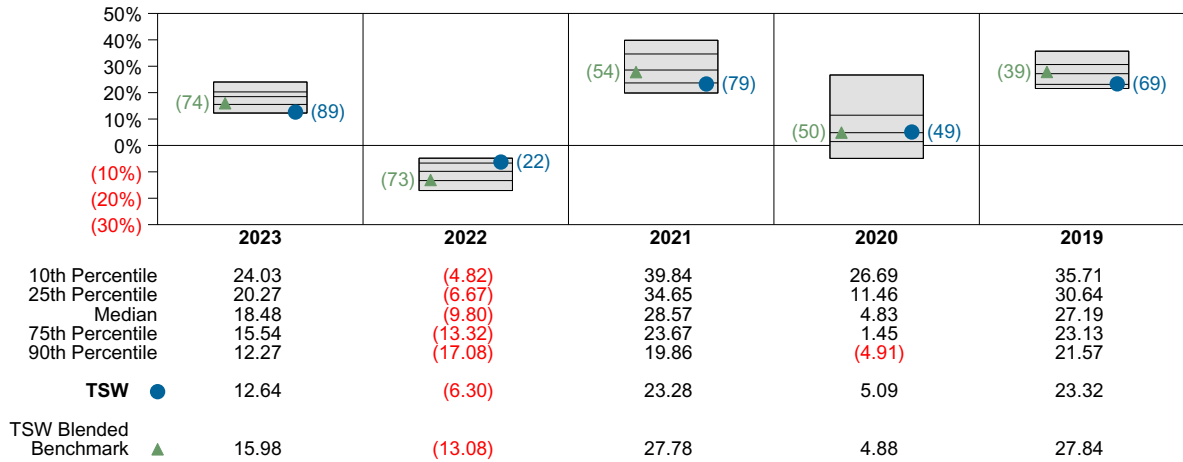


# TSW Return Analysis Summary

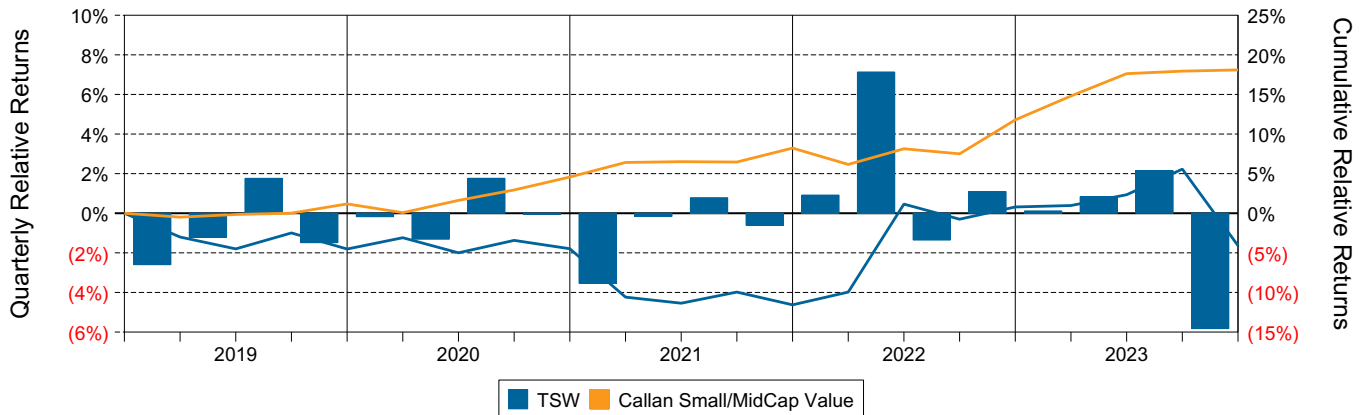
## Return Analysis

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.

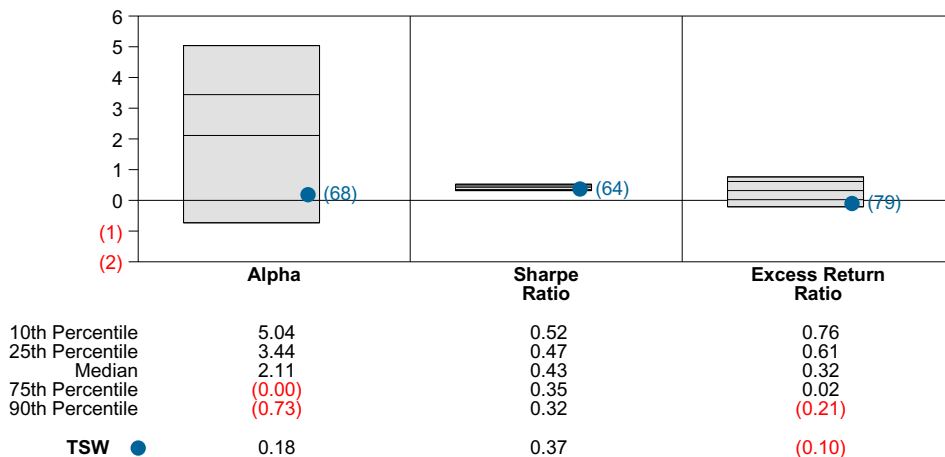
### Performance vs Callan Small/MidCap Value (Gross)



### 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 December 31, 2023

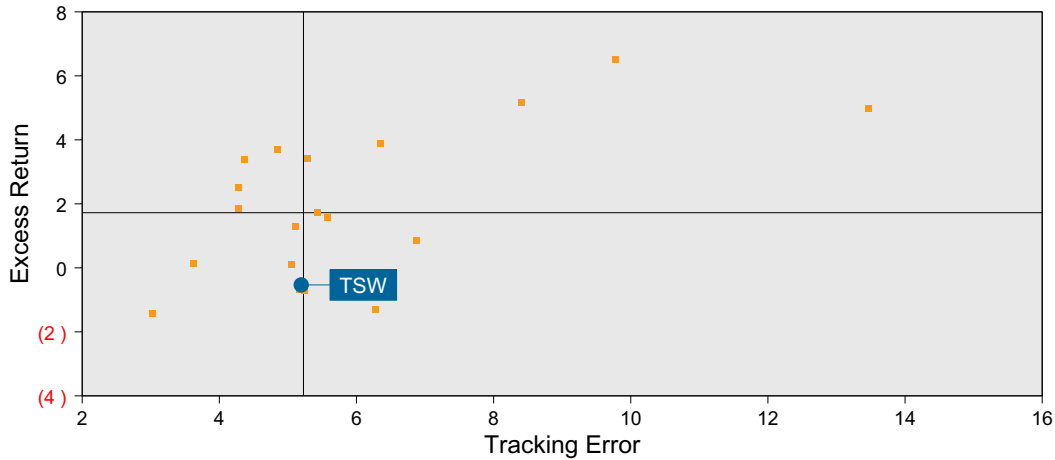


# TSW Risk Analysis Summary

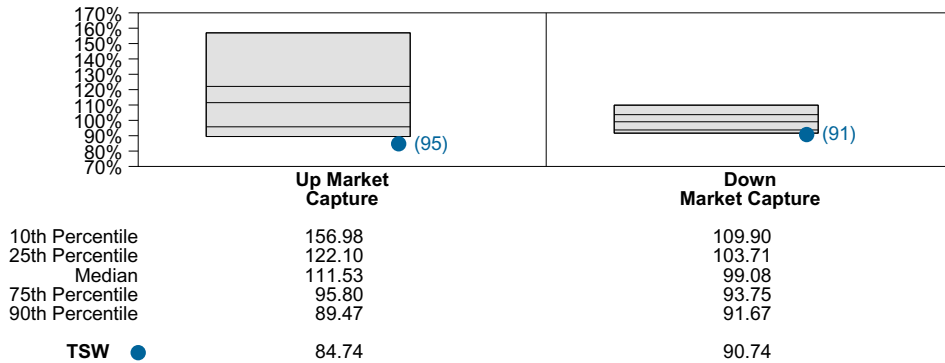
## Risk Analysis

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.

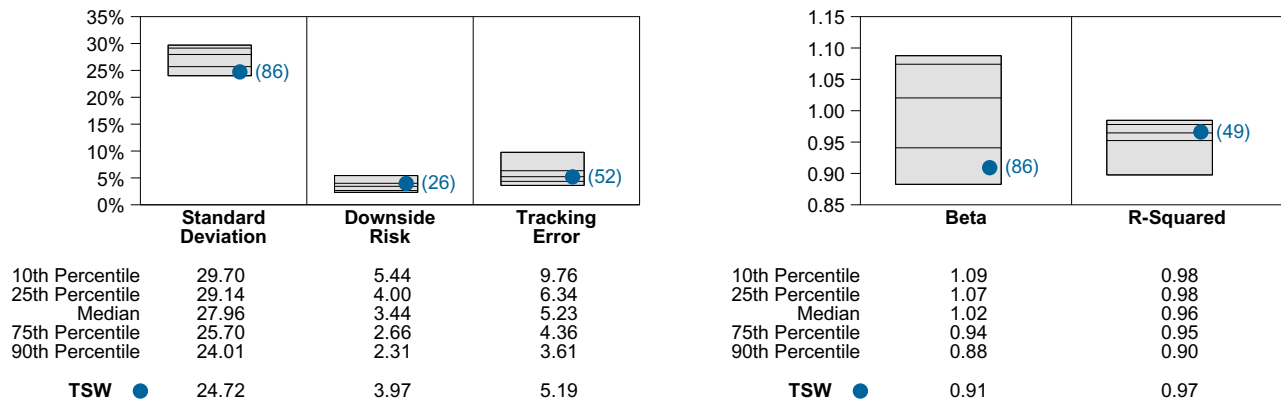
### Risk Analysis vs Callan Small/MidCap Value (Gross) Five Years Ended December 31, 2023



### Market Capture vs TSW Blended Benchmark Rankings Against Callan Small/MidCap Value (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs TSW Blended Benchmark Rankings Against Callan Small/MidCap Value (Gross) Five Years Ended December 31, 2023

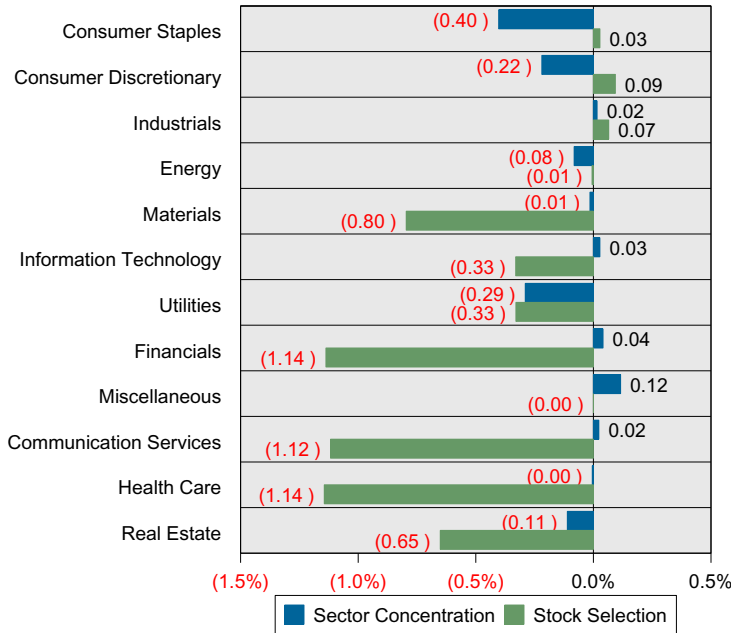


# TSW vs TSW Blended Benchmark Quarterly Equity Buy and Hold Attribution

## 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.

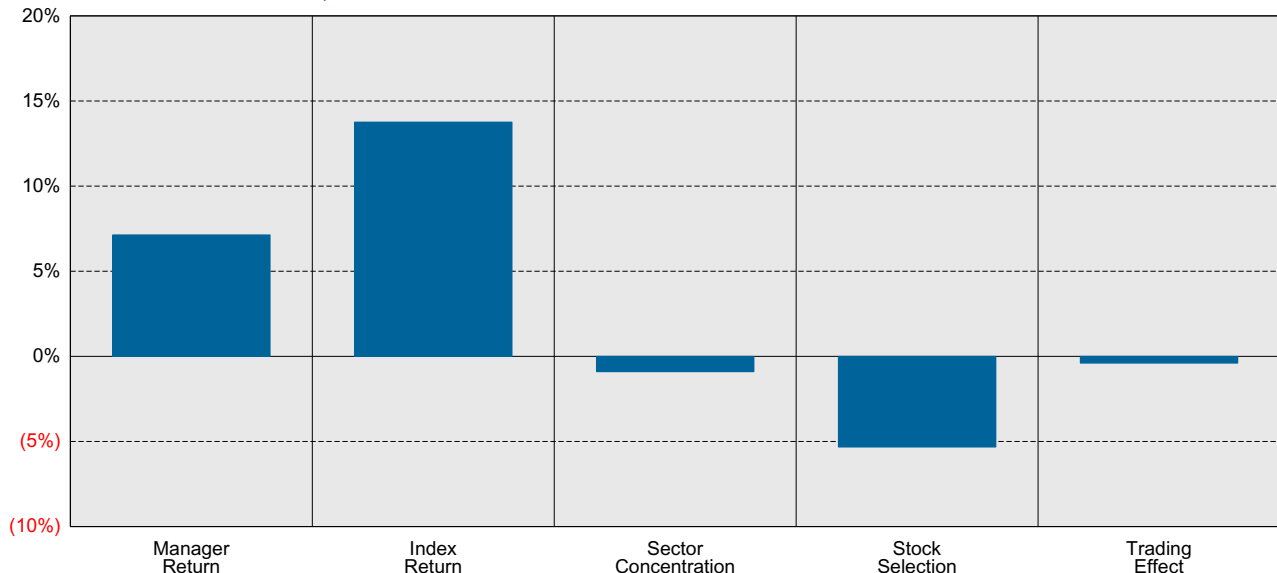
### Attribution Effects by Sector vs TSW Blended Benchmark Quarter ended December 31, 2023



Sector	Sector Concentration	Stock Selection
Consumer Staples	(0.40%)	0.03%
Consumer Discretionary	(0.22%)	0.09%
Industrials	0.02%	0.07%
Energy	(0.08%)	(0.01%)
Materials	(0.01%)	(0.80%)
Information Technology	0.03%	(0.33%)
Utilities	(0.29%)	(0.33%)
Financials	0.04%	(1.14%)
Miscellaneous	0.12%	(0.00%)
Communication Services	0.02%	(1.12%)
Health Care	(0.00%)	(1.14%)
Real Estate	(0.11%)	(0.65%)
<b>Total</b>	<b>(0.90%)</b>	<b>(5.33%)</b>

<b>Manager Return</b>	<b>=</b>	<b>Index Return</b>	<b>+</b>	<b>Sector Concentration</b>	<b>+</b>	<b>Stock Selection</b>	<b>+</b>	<b>Trading</b>
<b>7.13%</b>		<b>13.76%</b>		<b>(0.90%)</b>		<b>(5.33%)</b>		<b>(0.40%)</b>

### Total Fund Attribution Effects vs TSW Blended Benchmark Quarter ended December 31, 2023

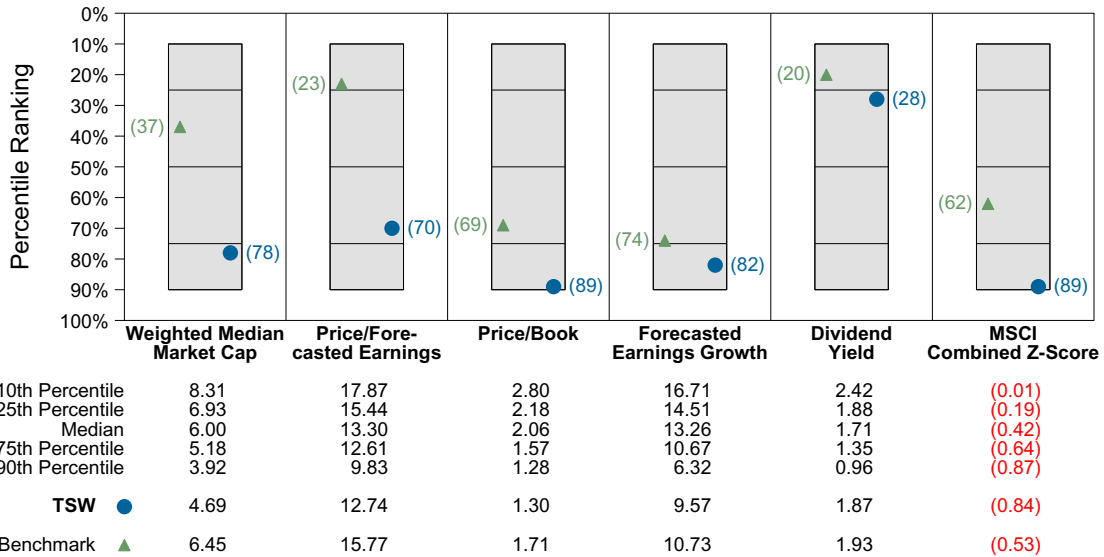


# TSW Equity Characteristics Analysis Summary

## Portfolio Characteristics

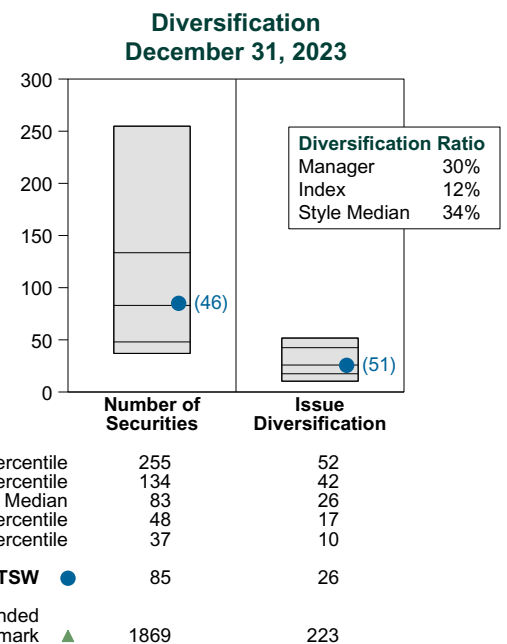
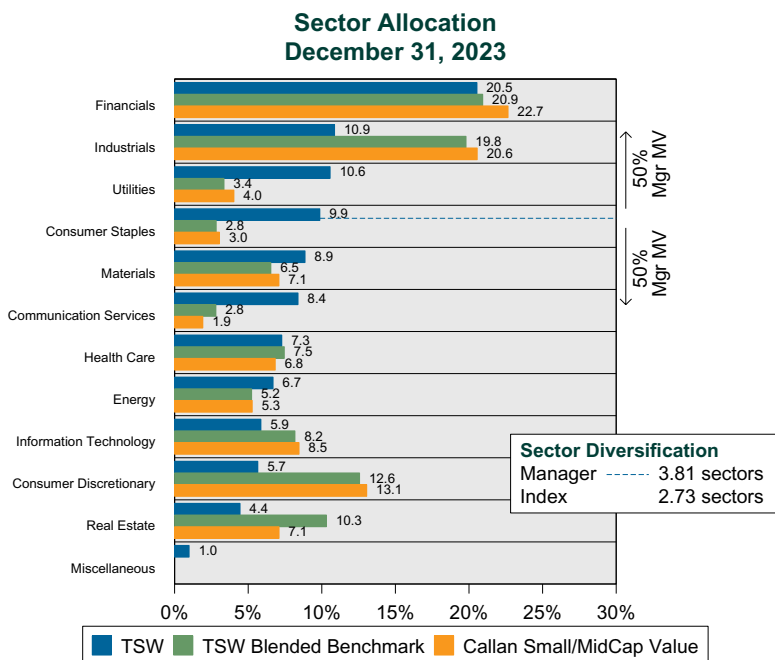
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small/MidCap Value as of December 31, 2023



## 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.

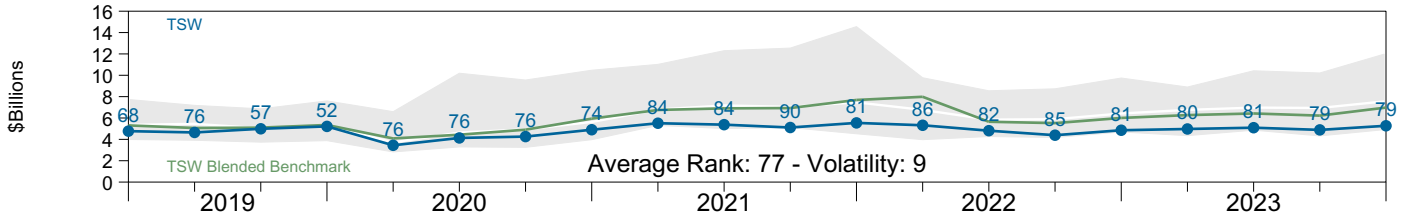


## Portfolio Characteristics Analysis

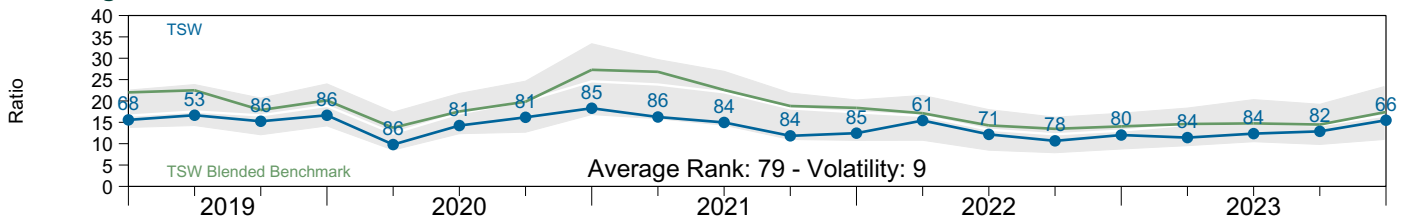
### Callan Small/MidCap Value

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.

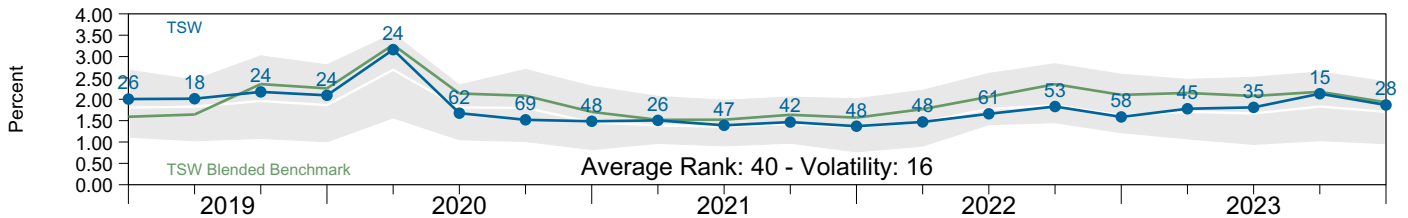
#### Weighted Average Market Cap



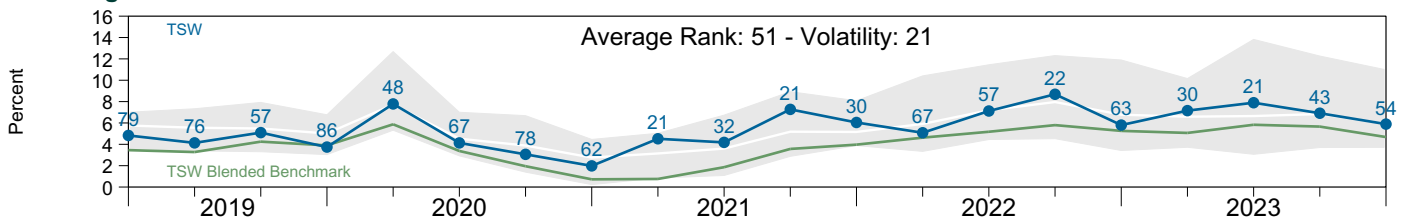
#### Trailing P/E



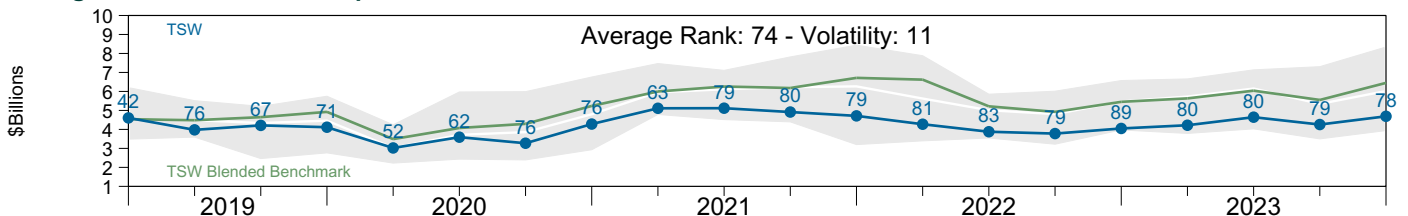
#### Dividend Yield



#### Earnings Yield



#### Weighted Median Market Cap



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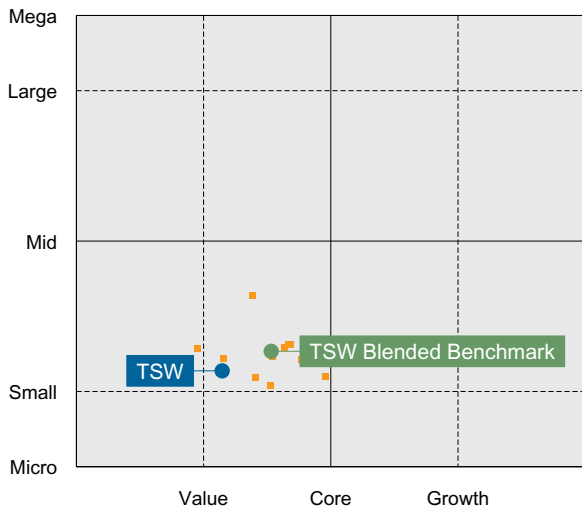
# Current Holdings Based Style Analysis

## TSW

### As of December 31, 2023

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.

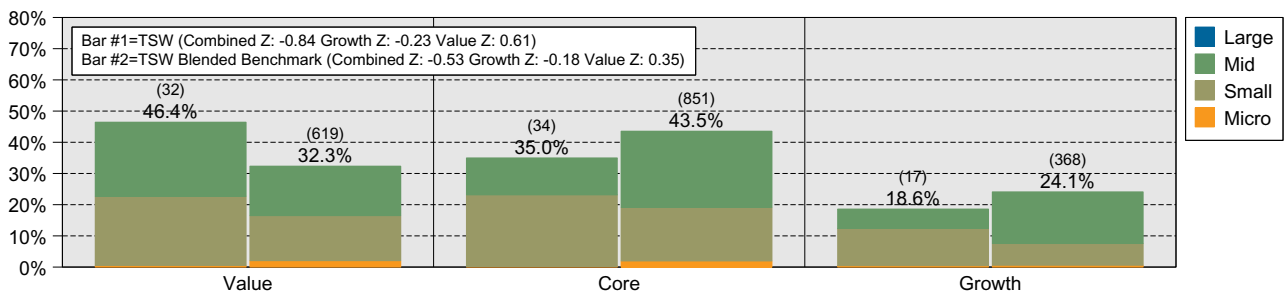
**Style Map vs Callan Small/MidCap Value Holdings as of December 31, 2023**



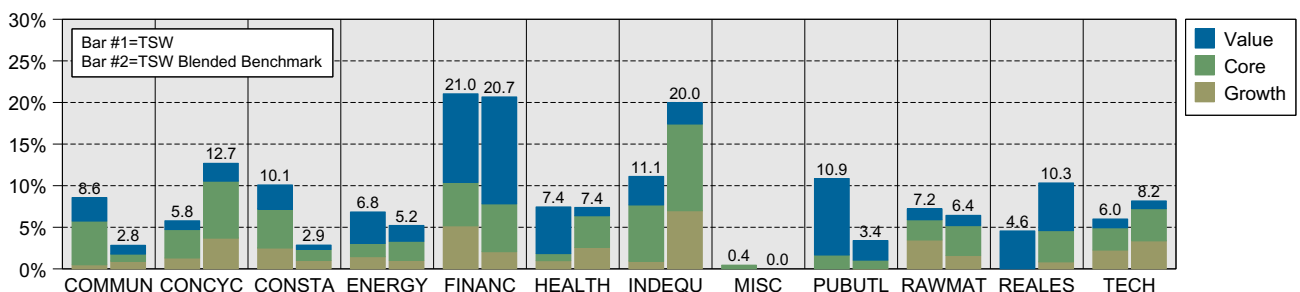
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	23.7% (15)	11.8% (9)	6.2% (6)	41.8% (30)
Small	15.9% (76)	24.4% (127)	16.6% (100)	56.9% (303)
Micro	0.6% (1)	0.3% (1)	0.5% (1)	1.3% (3)
<b>Total</b>	<b>46.4% (32)</b>	<b>35.0% (34)</b>	<b>18.6% (17)</b>	<b>100.0% (83)</b>
	32.3% (619)	43.5% (851)	24.1% (368)	100.0% (1838)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



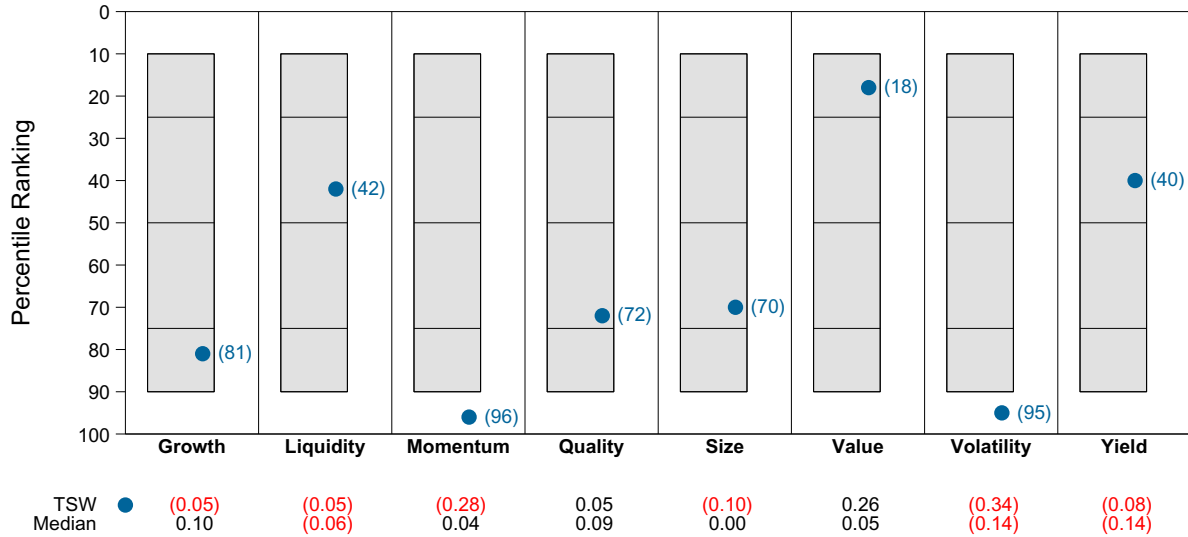
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

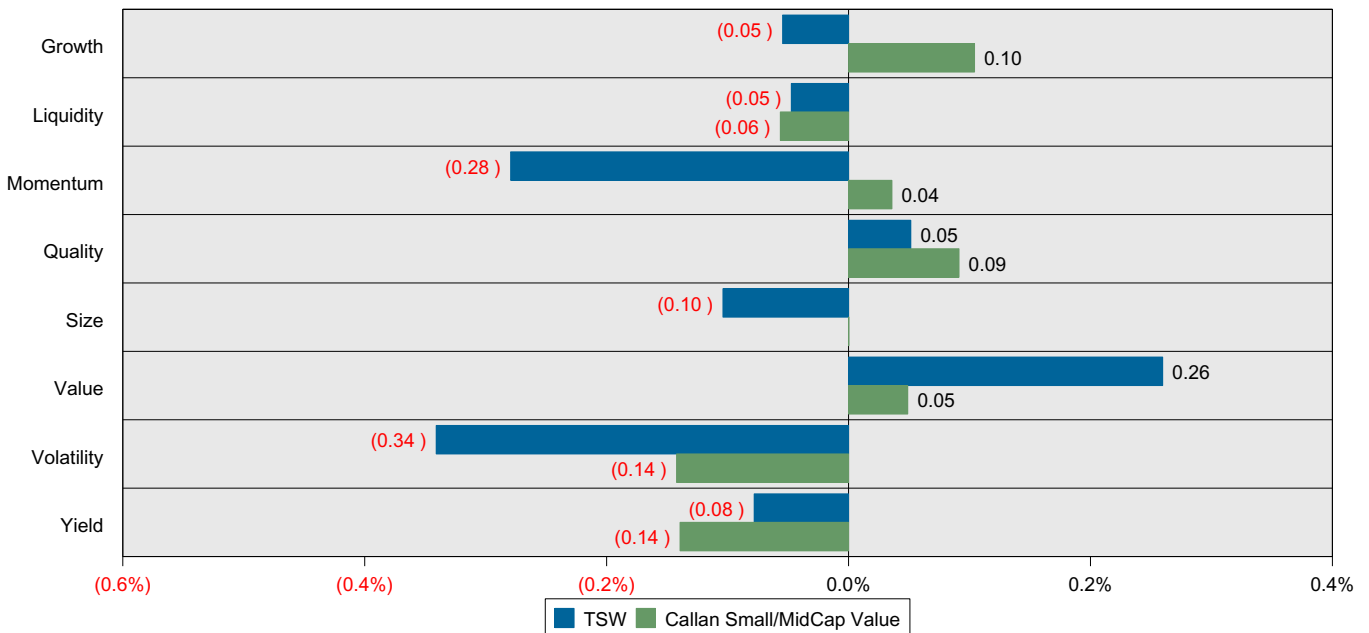
**Factor Exposures Relative to TSW Blended Benchmark, Rankings vs Callan Small/MidCap Value for Period Ended December 31, 2023**



**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 December 31, 2023**



# Small Cap Domestic Equity Period Ended December 31, 2023

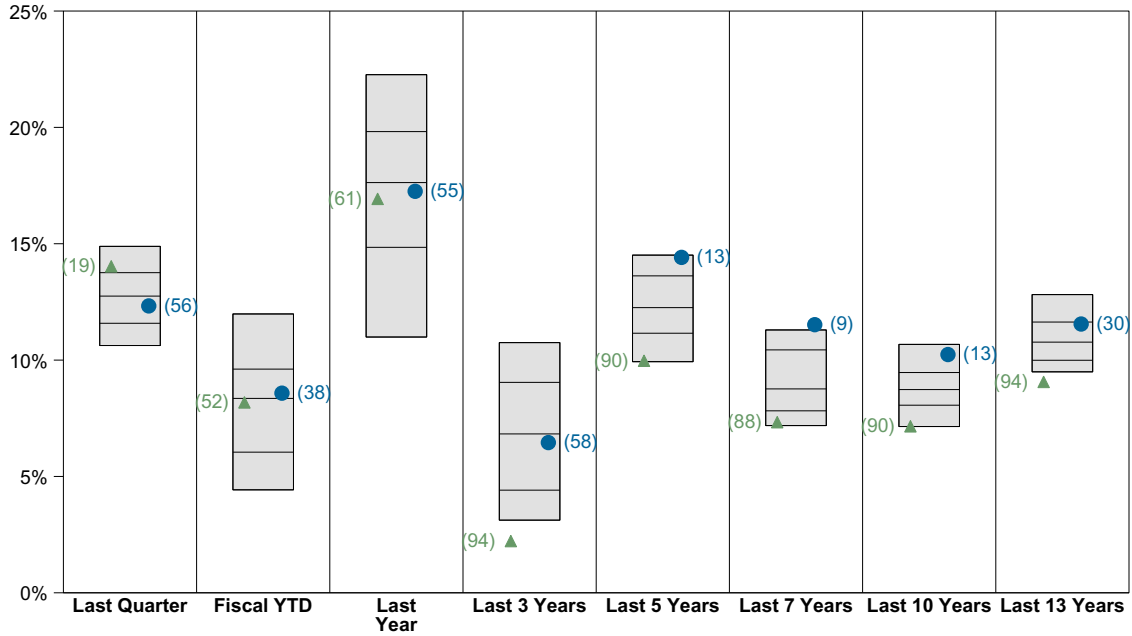
## Quarterly Summary and Highlights

- Small Cap Domestic Equity's portfolio posted a 12.33% return for the quarter placing it in the 56 percentile of the Callan Small Cap Core group for the quarter and in the 55 percentile for the last year.
- Small Cap Domestic Equity's portfolio underperformed the Russell 2000 Index by 1.70% for the quarter and outperformed the Russell 2000 Index for the year by 0.32%.

## Quarterly Asset Growth

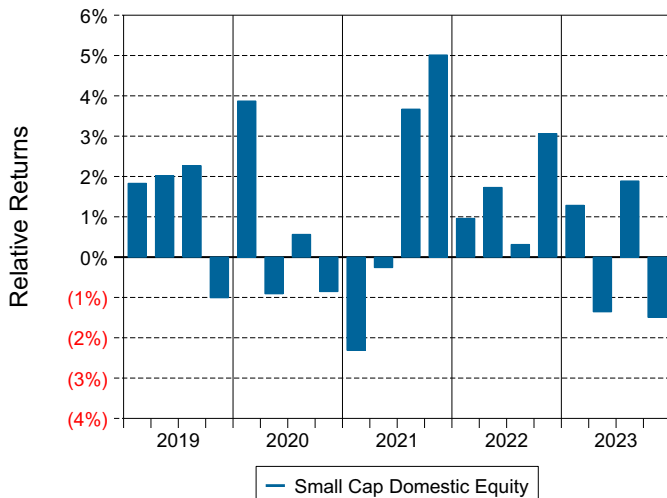
Beginning Market Value	\$794,227,953
Net New Investment	\$0
Investment Gains/(Losses)	\$97,912,326
Ending Market Value	\$892,140,279

## Performance vs Callan Small Cap Core (Gross)

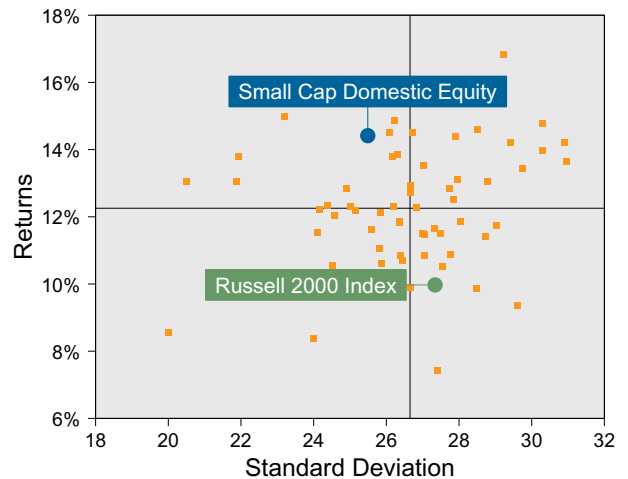


10th Percentile	14.89	11.98	22.27	10.75	14.51	11.30	10.67	12.82
25th Percentile	13.76	9.61	19.82	9.04	13.62	10.44	9.47	11.63
Median	12.75	8.35	17.63	6.83	12.25	8.76	8.73	10.77
75th Percentile	11.58	6.04	14.85	4.41	11.15	7.82	8.06	9.99
90th Percentile	10.63	4.42	10.99	3.12	9.93	7.19	7.15	9.49
<b>Small Cap Domestic Equity</b>	● 12.33	8.58	17.25	6.46	14.41	11.52	10.24	11.55
Russell 2000 Index	▲ 14.03	8.18	16.93	2.22	9.97	7.33	7.16	9.06

## Relative Return vs Russell 2000 Index



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



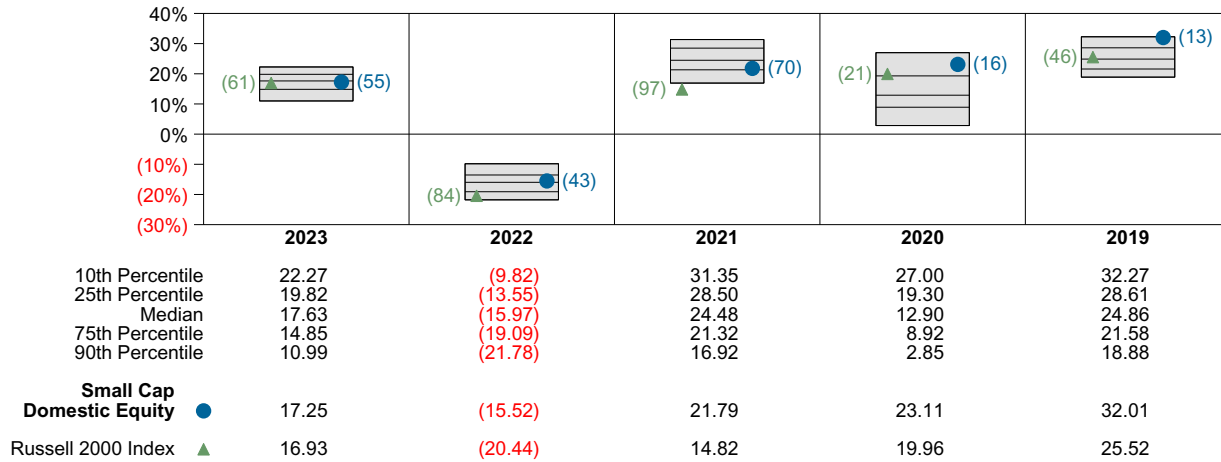


# Small Cap Domestic Equity Return Analysis Summary

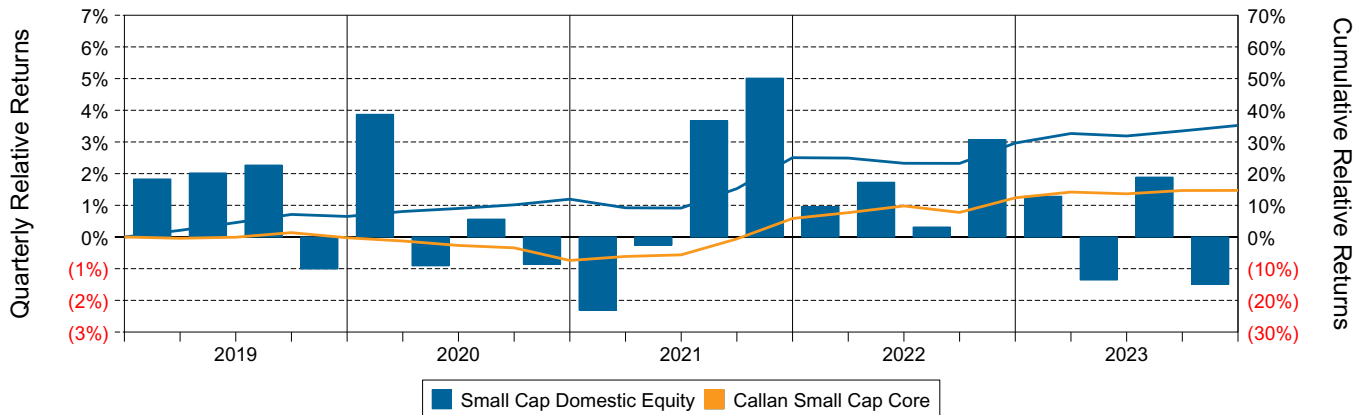
## Return Analysis

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.

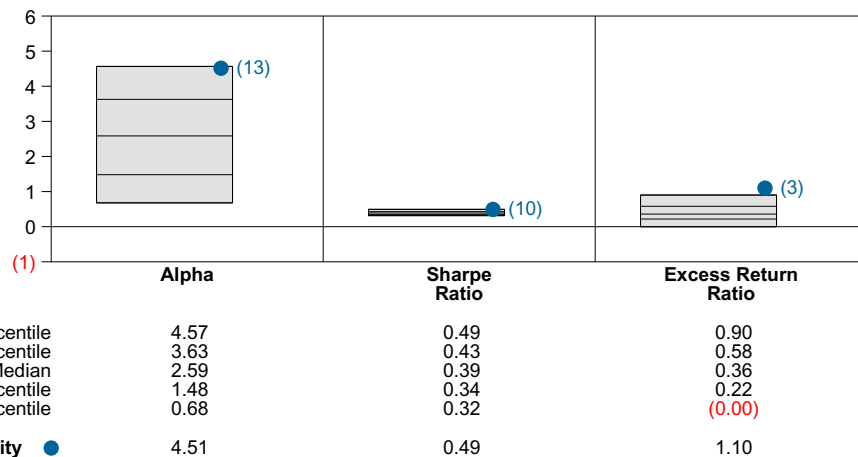
### Performance vs Callan Small Cap Core (Gross)



### 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 December 31, 2023

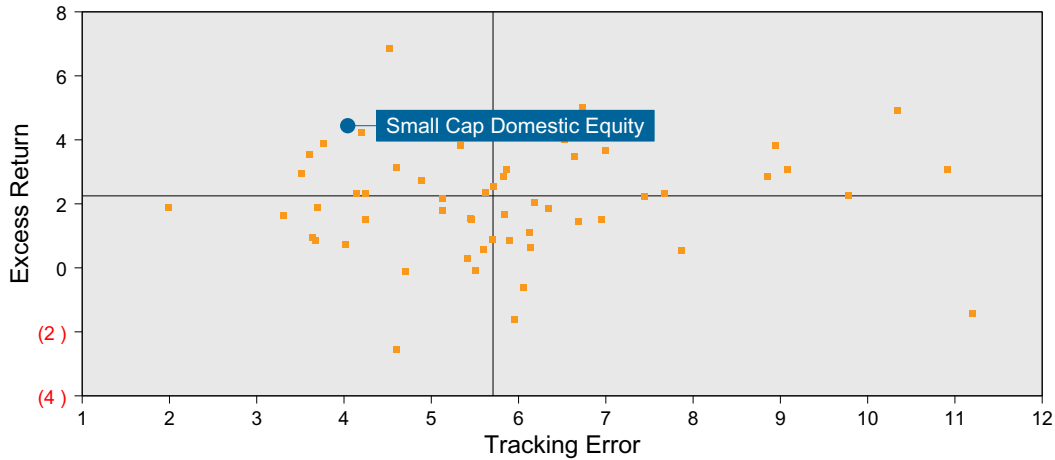


# Small Cap Domestic Equity Risk Analysis Summary

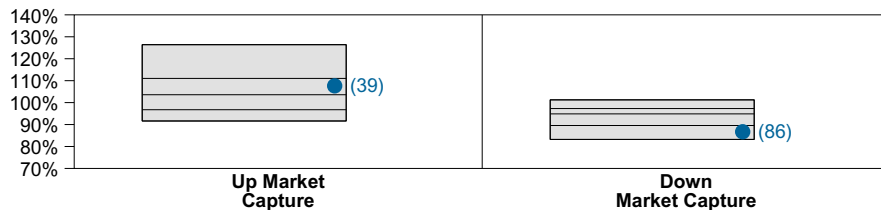
## Risk Analysis

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 December 31, 2023



### Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	126.40	101.26
25th Percentile	111.03	97.30
Median	103.59	94.87
75th Percentile	96.76	89.57
90th Percentile	91.62	83.22
<b>Small Cap Domestic Equity</b>	<b>107.64</b>	<b>86.71</b>

### Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



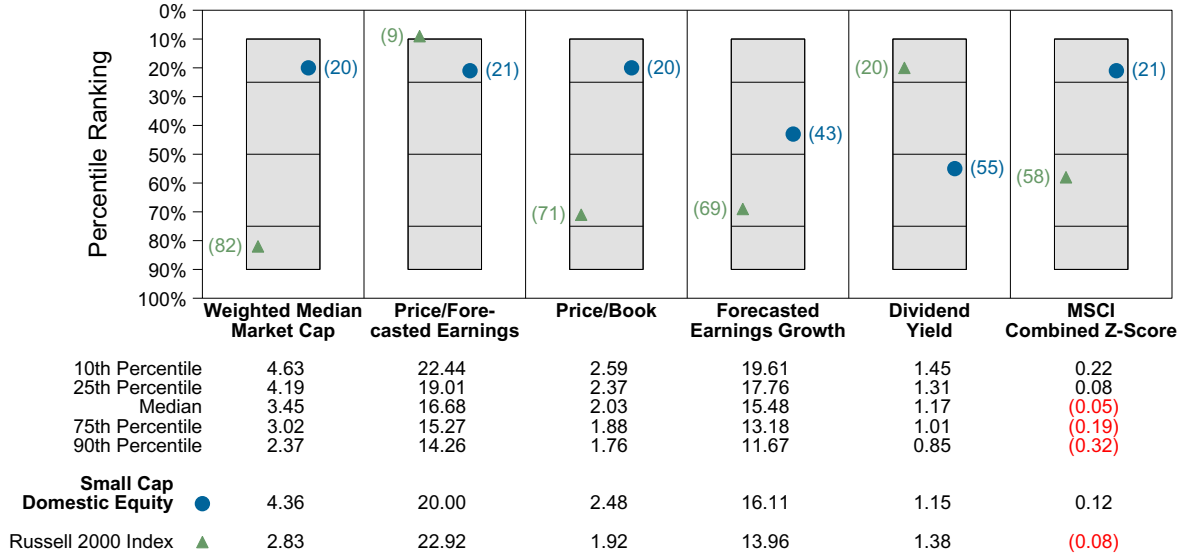
	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	29.54	5.76	8.92	1.06	0.98
25th Percentile	27.91	4.20	6.83	1.00	0.97
Median	26.65	3.22	5.71	0.96	0.96
75th Percentile	25.67	2.49	4.59	0.91	0.95
90th Percentile	23.99	2.00	3.66	0.84	0.92
<b>Small Cap Domestic Equity</b>	<b>25.49</b>	<b>1.76</b>	<b>4.04</b>	<b>0.92</b>	<b>0.98</b>

# Small Cap Domestic Equity Equity Characteristics Analysis Summary

## Portfolio Characteristics

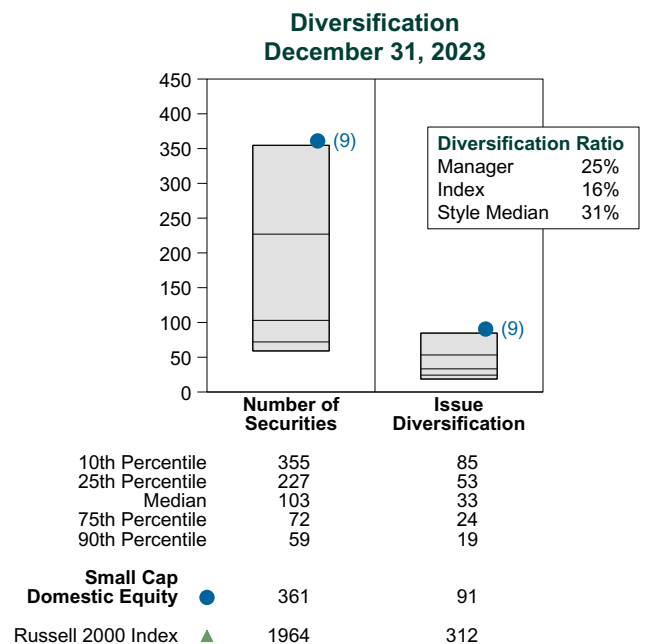
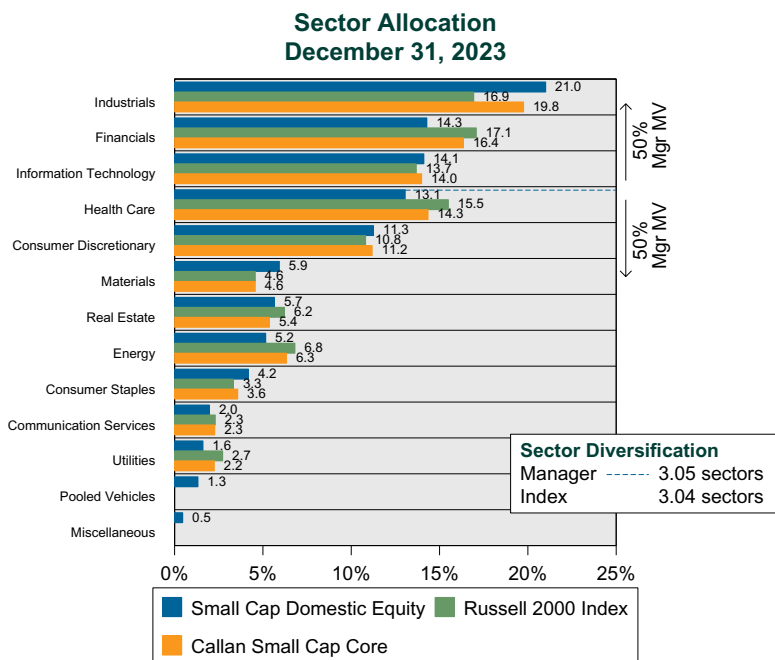
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of December 31, 2023



## Sector Weights

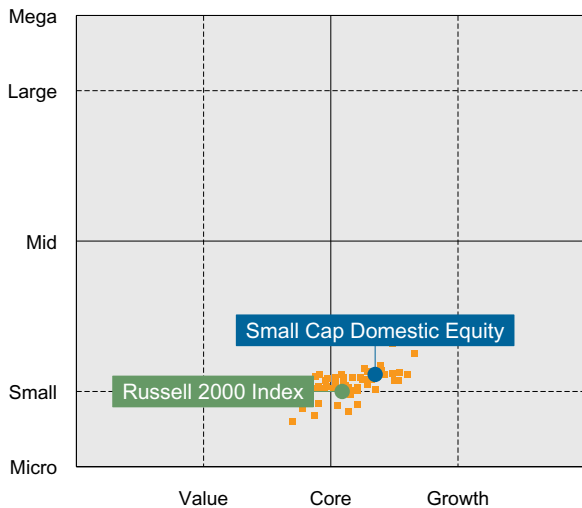
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. Diversification by number and concentration 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 Small Cap Domestic Equity As of December 31, 2023

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.

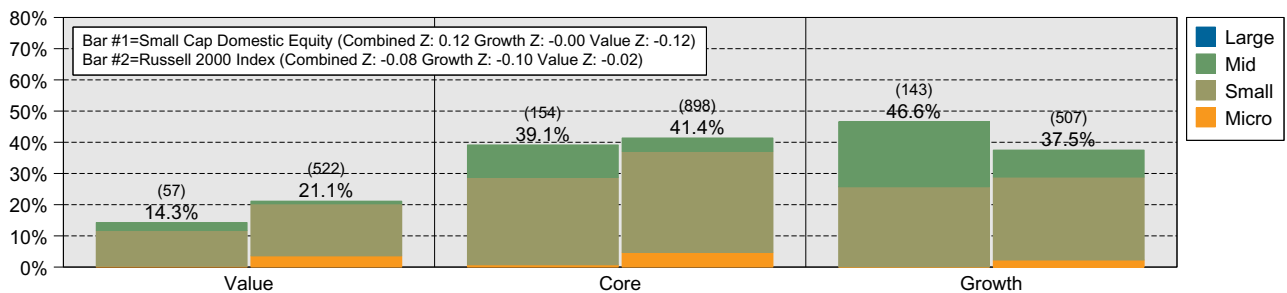
**Style Map vs Callan Small Cap Core Holdings as of December 31, 2023**



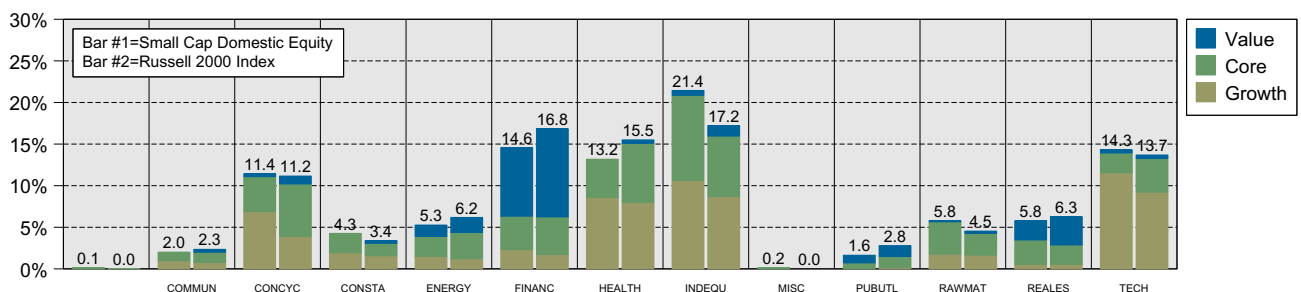
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	2.6% (7)	10.4% (29)	20.8% (52)	33.8% (88)
Small	11.5% (46)	28.0% (114)	25.7% (90)	65.2% (250)
Micro	0.2% (4)	0.7% (11)	0.1% (1)	1.0% (16)
<b>Total</b>	<b>14.3% (57)</b>	<b>39.1% (154)</b>	<b>46.6% (143)</b>	<b>100.0% (354)</b>
	21.1% (522)	41.4% (898)	37.5% (507)	100.0% (1927)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**

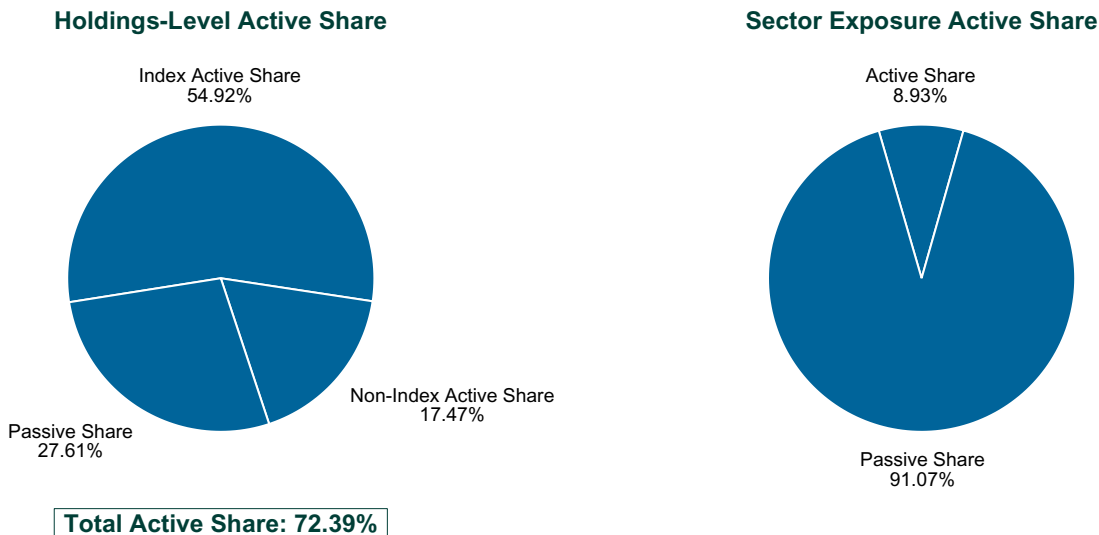


**Sector Weights Distribution Holdings as of December 31, 2023**



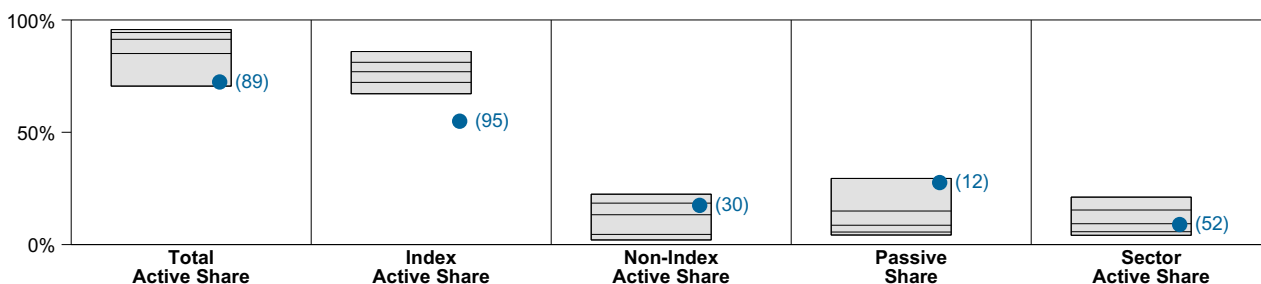
## Small Cap Domestic Equity Active Share Analysis as of December 31, 2023 vs. Russell 2000 Index

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.



	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	72.48%	13.15%	85.62%	2.30%	1.97%	1.80%
Consumer Discretionary	54.99%	24.03%	79.01%	10.81%	11.26%	8.78%
Consumer Staples	43.56%	12.74%	56.30%	3.33%	4.18%	2.24%
Energy	68.11%	9.08%	77.19%	6.81%	5.16%	4.44%
Financials	63.59%	11.65%	75.24%	17.08%	14.28%	11.52%
Health Care	51.64%	14.73%	66.37%	15.50%	13.06%	9.40%
Industrials	49.91%	20.32%	70.24%	16.93%	21.01%	13.84%
Information Technology	53.76%	15.67%	69.43%	13.68%	14.11%	9.67%
Materials	43.22%	25.19%	68.41%	4.57%	5.93%	3.59%
Miscellaneous	0.00%	100.00%	100.00%	-	0.46%	0.16%
Pooled Vehicles	0.00%	100.00%	100.00%	-	1.32%	0.66%
Real Estate	64.55%	15.76%	80.31%	6.22%	5.66%	4.71%
Utilities	65.39%	10.11%	75.50%	2.72%	1.61%	1.50%
<b>Total</b>	<b>54.92%</b>	<b>17.47%</b>	<b>72.39%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>72.32%</b>

### Active Share vs. Callan Small Cap Core



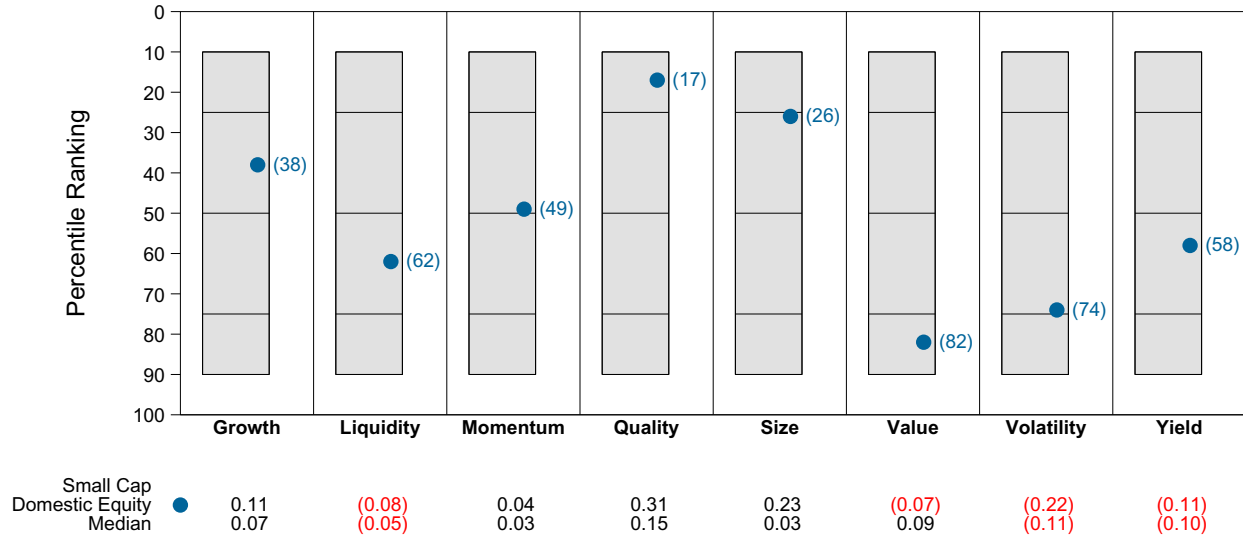
10th Percentile	95.73	85.95	22.43	29.46	21.13
25th Percentile	94.41	81.15	18.46	14.94	15.40
Median	91.39	76.96	13.30	8.61	9.29
75th Percentile	85.06	72.21	4.54	5.59	5.73
90th Percentile	70.54	67.16	2.07	4.27	4.15

<b>Small Cap Domestic Equity</b>	<b>72.39</b>	<b>54.92</b>	<b>17.47</b>	<b>27.61</b>	<b>8.93</b>
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**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.

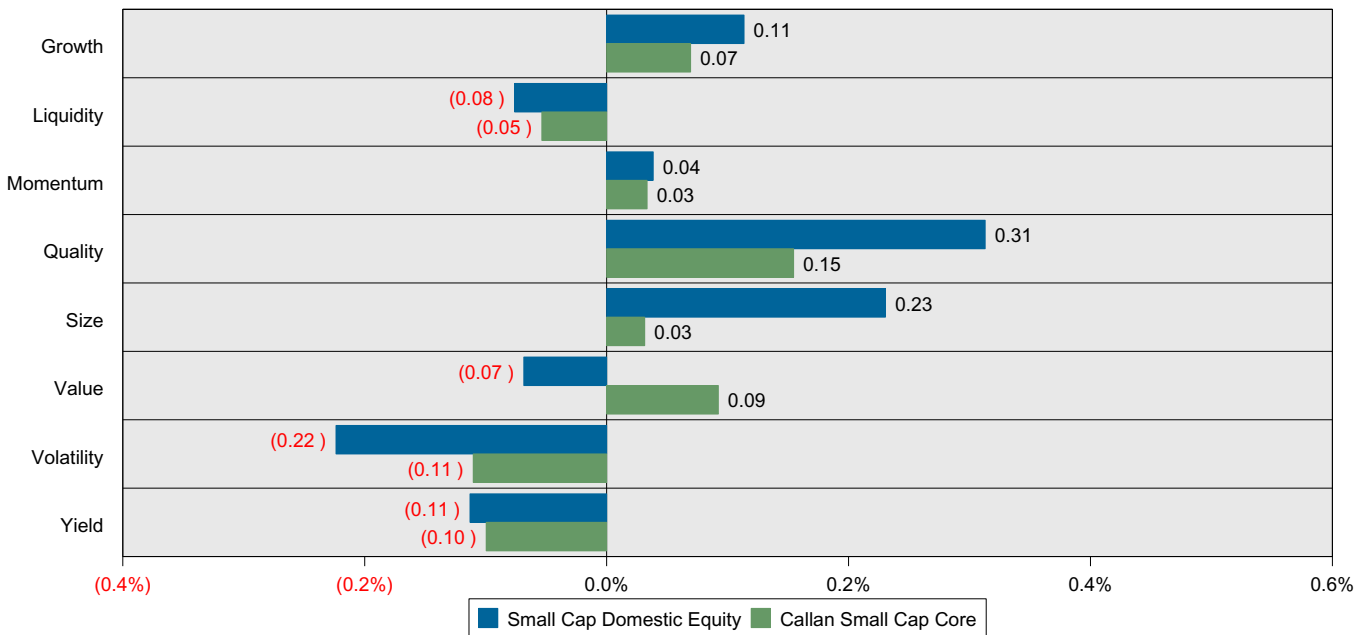
**Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# Boston Trust

## Period Ended December 31, 2023

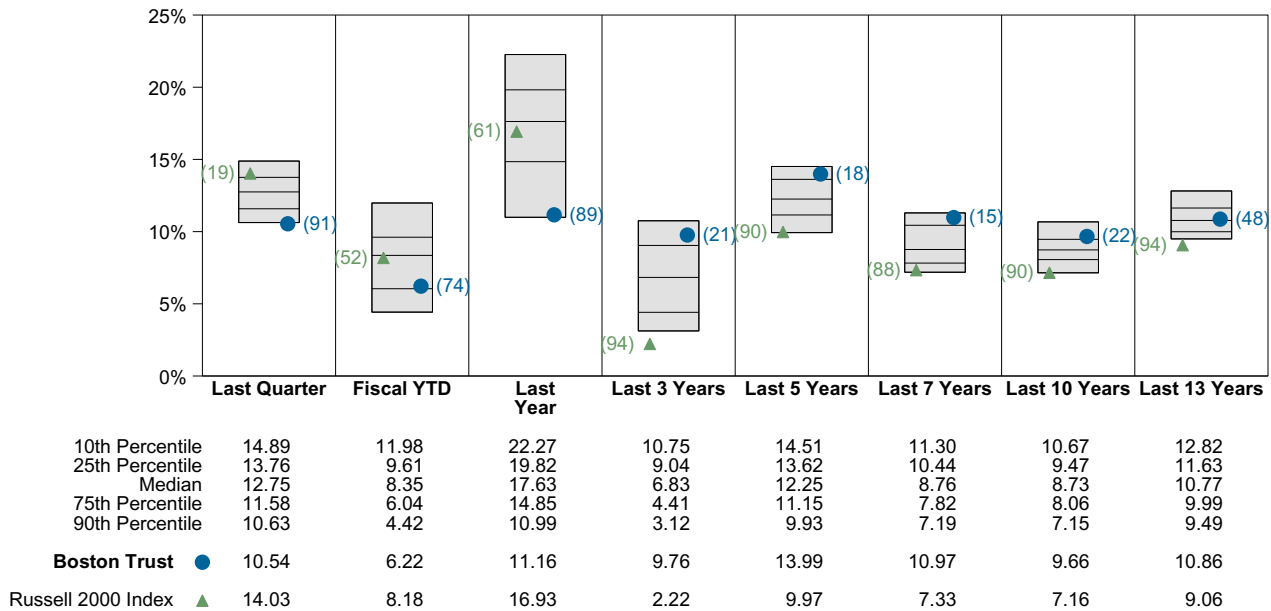
### Investment Philosophy

Boston Trust Walden Company is a Boston-based investment firm. The firm's small cap product is led by Ken Scott, with the help of two co-portfolio managers and leverages analyst research. 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 tends to be fairly sector neutral and is constructed through bottom up stock selection. NHRS inception in the fund is October 2010.

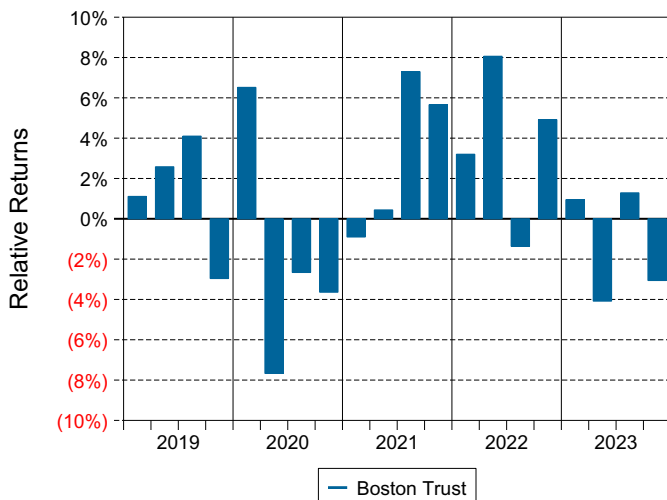
### Quarterly Asset Growth

Beginning Market Value	\$210,038,968
Net New Investment	\$0
Investment Gains/(Losses)	\$22,141,414
Ending Market Value	\$232,180,382

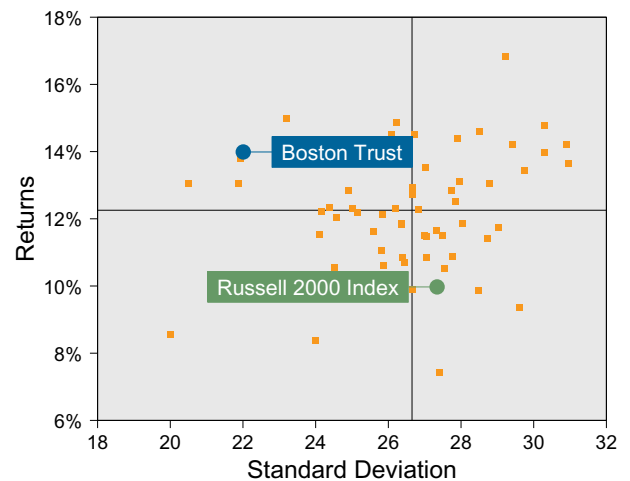
### Performance vs Callan Small Cap Core (Gross)



### Relative Return vs Russell 2000 Index



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

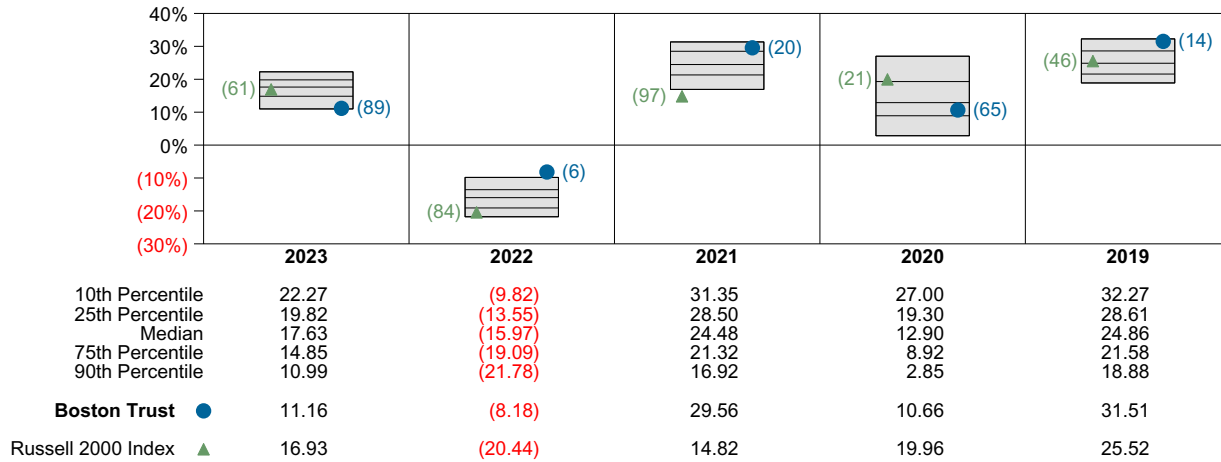


# Boston Trust Return Analysis Summary

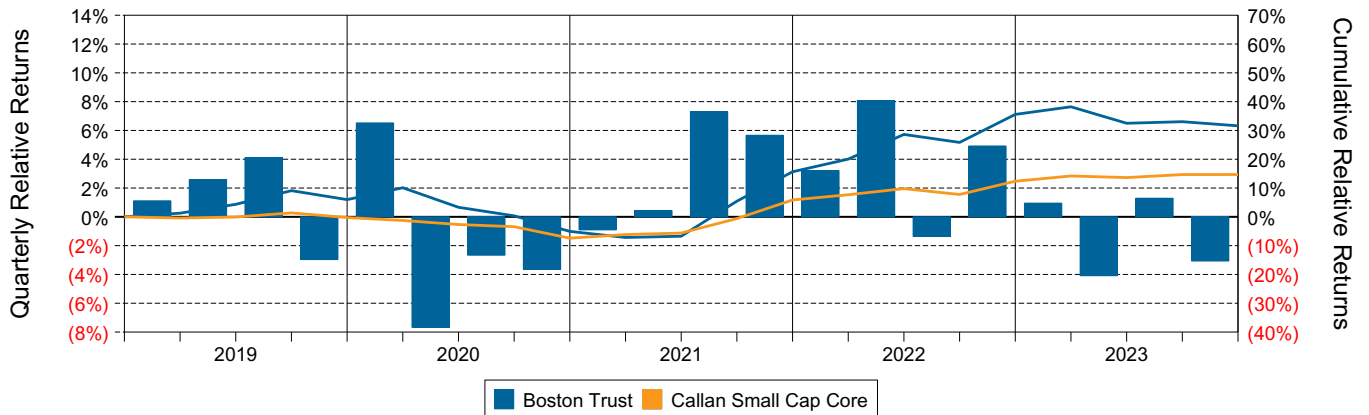
## Return Analysis

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.

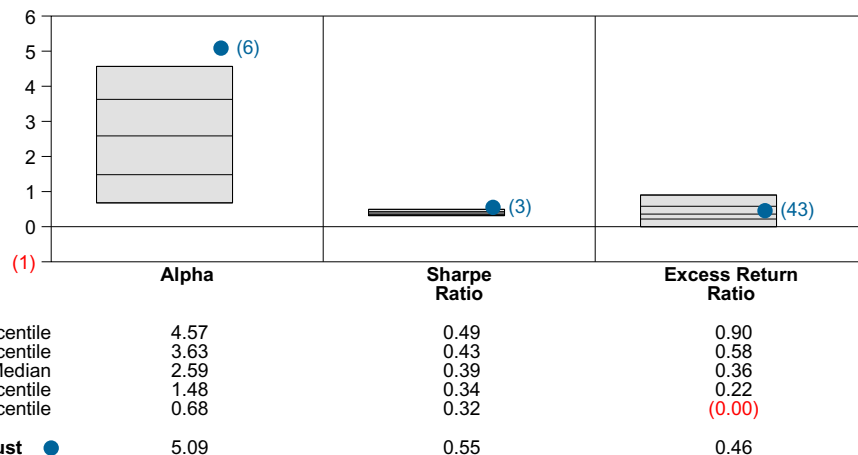
### Performance vs Callan Small Cap Core (Gross)



### 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 December 31, 2023



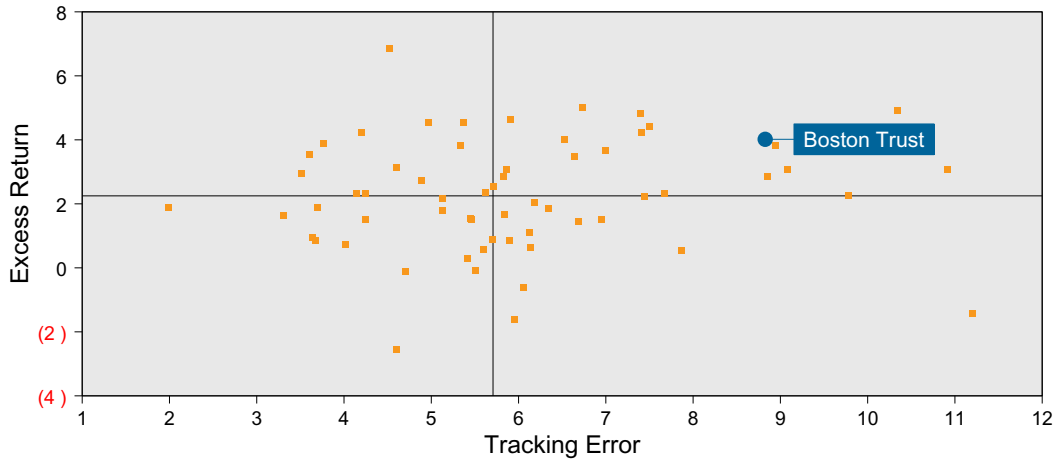


# Boston Trust Risk Analysis Summary

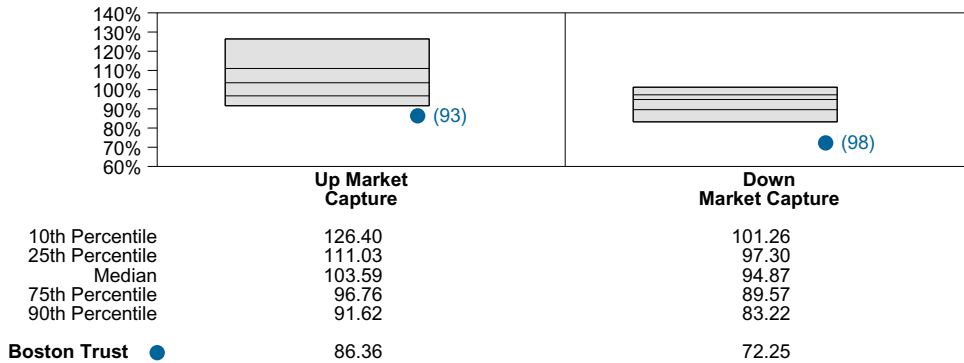
## Risk Analysis

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.

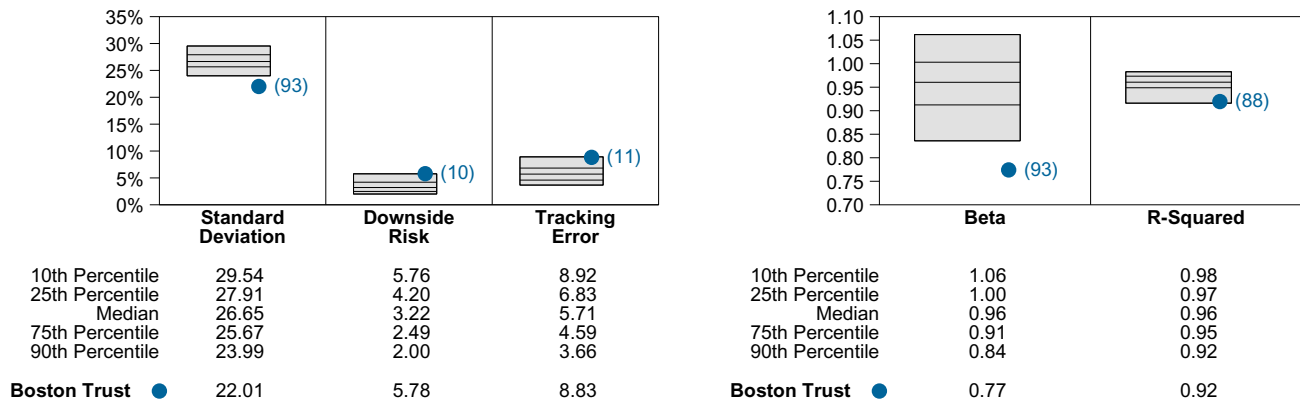
### Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023

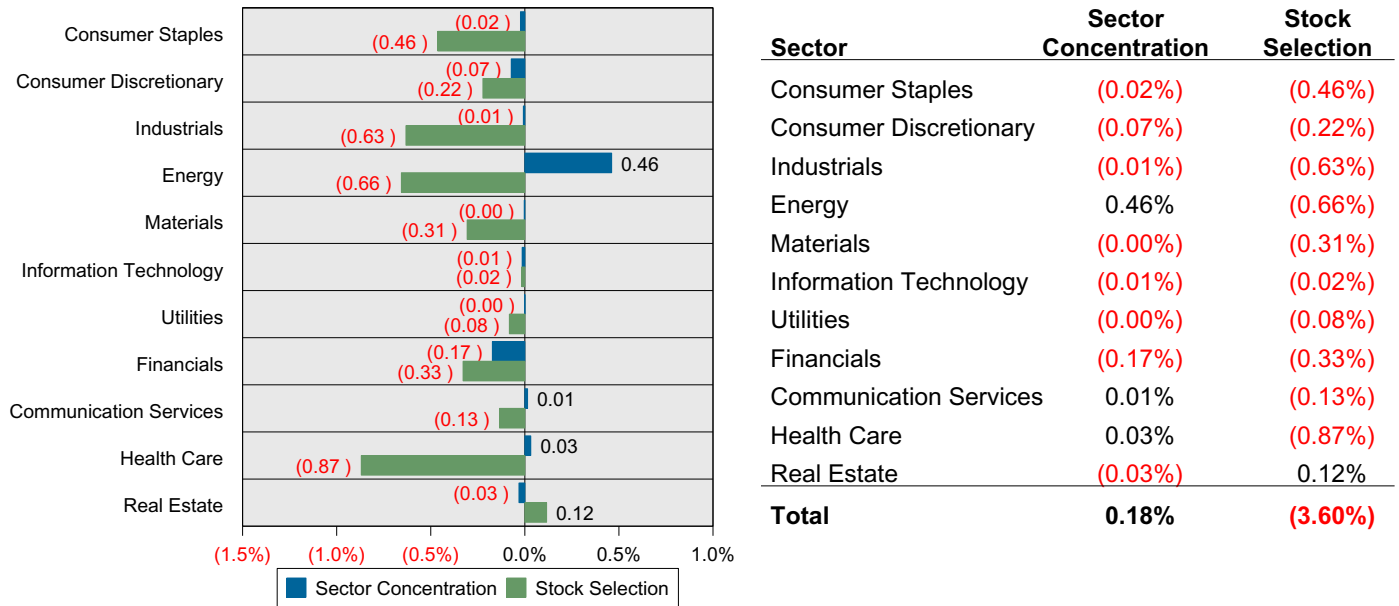


# Boston Trust vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

## Attribution Ranking and Sector Detail

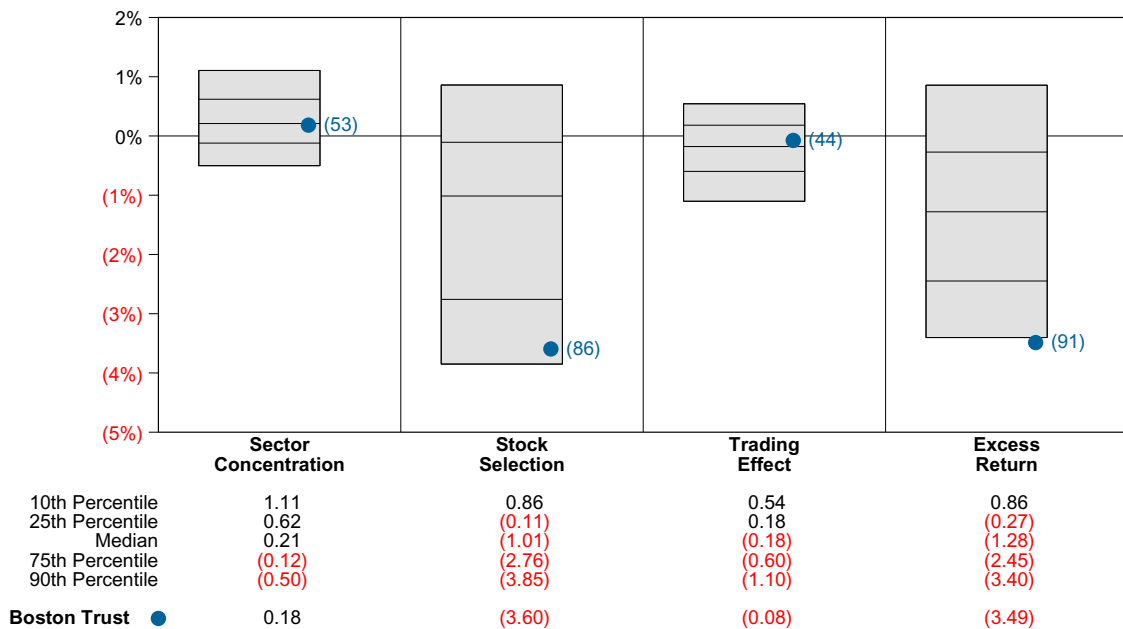
The first table and chart below break the manager's Sector Concentration and Stock Selection factors down to the sector level. The table in the center shows these factors for the total portfolio and includes the Trading and Asset Allocation Effects. The bottom chart ranks the excess return and the four 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 December 31, 2023



<b>Manager Return</b>	=	<b>Index Return</b>	+	<b>Sector Concentration</b>	+	<b>Stock Selection</b>	+	<b>Trading</b>
<b>10.54%</b>		<b>14.03%</b>		<b>0.18%</b>		<b>(3.60%)</b>		<b>(0.08%)</b>

## Equity Attribution Ranking vs Callan Small Cap Core Quarter ended December 31, 2023

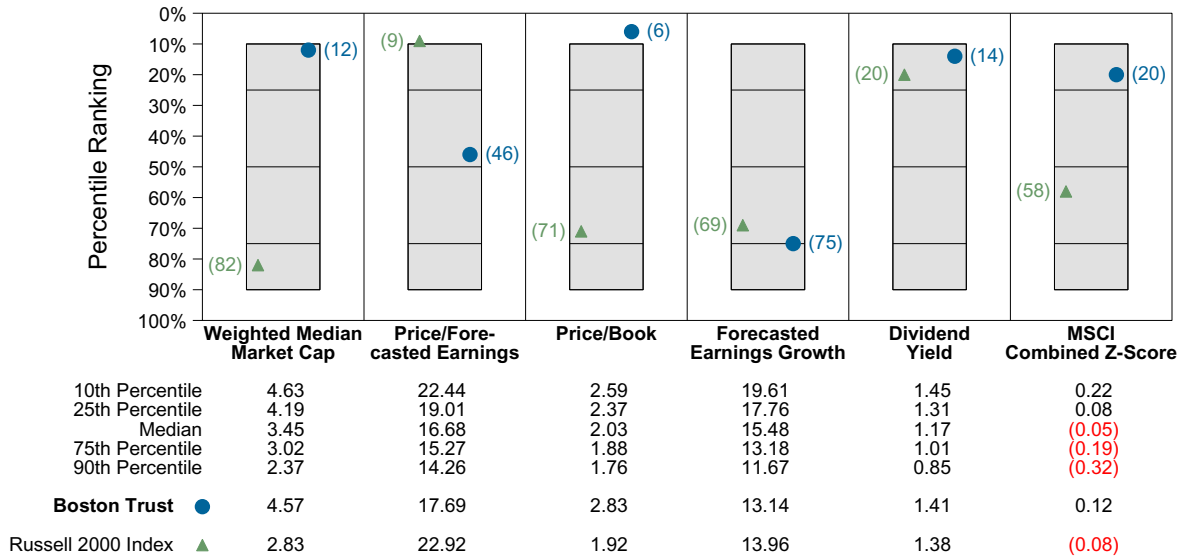


# Boston Trust Equity Characteristics Analysis Summary

## Portfolio Characteristics

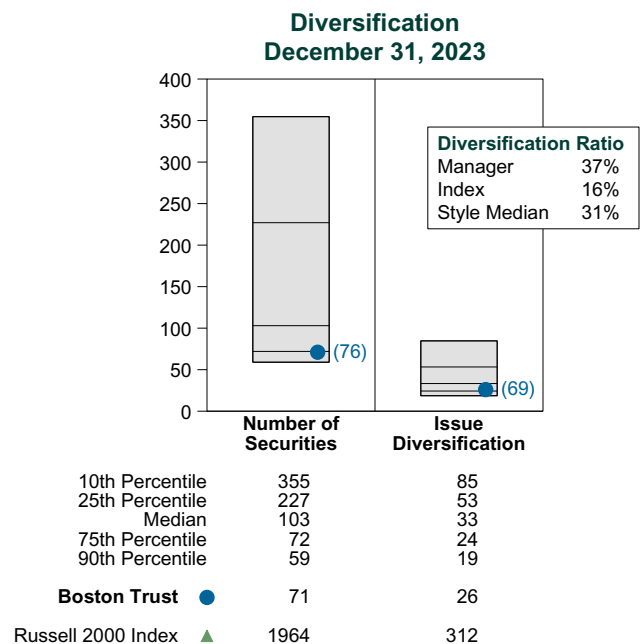
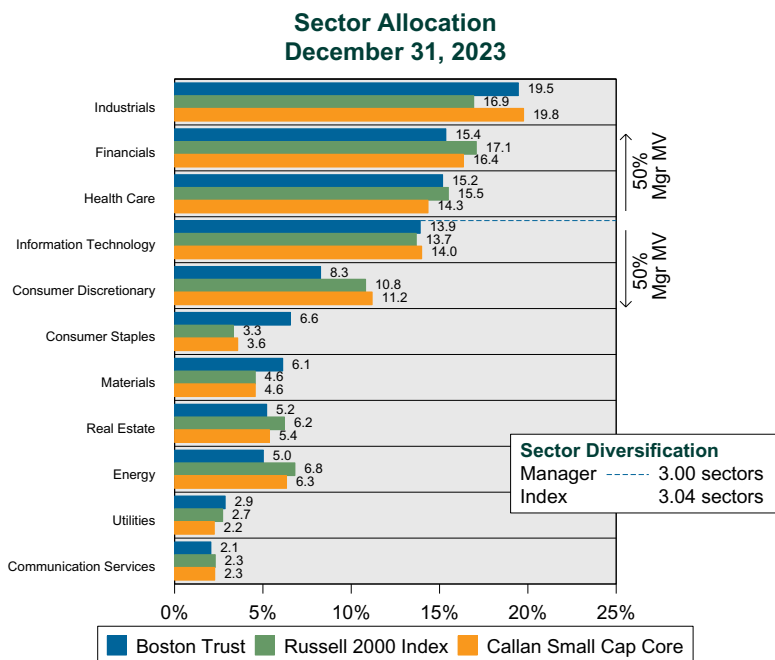
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of December 31, 2023



## 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.

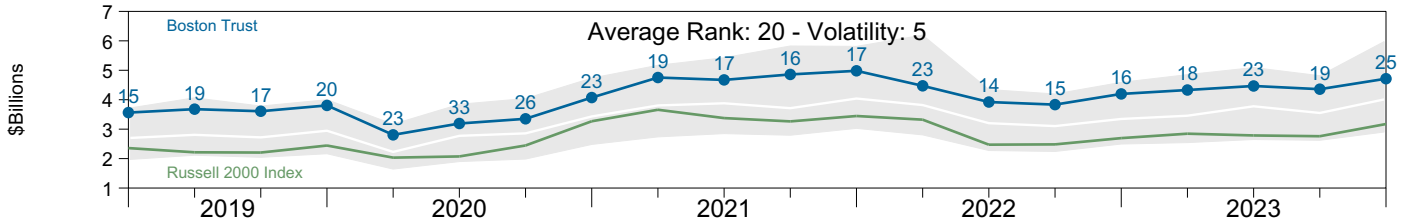


## Portfolio Characteristics Analysis

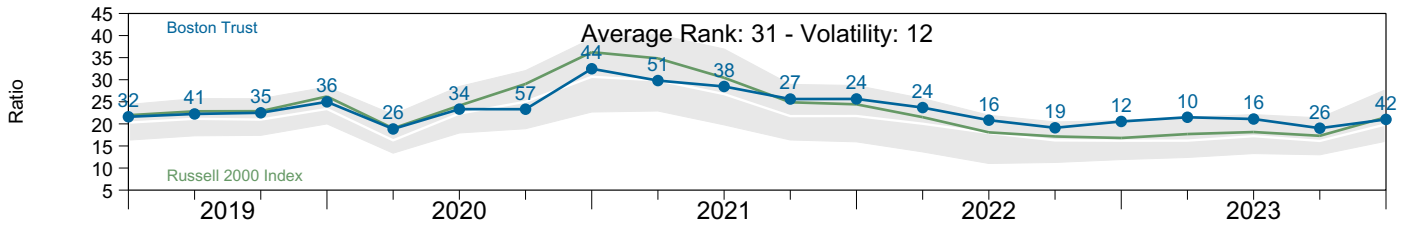
### Callan Small Cap Core

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.

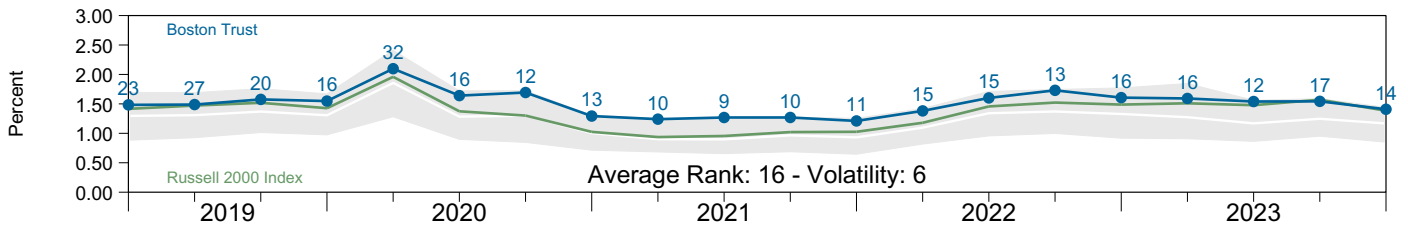
#### Weighted Average Market Cap



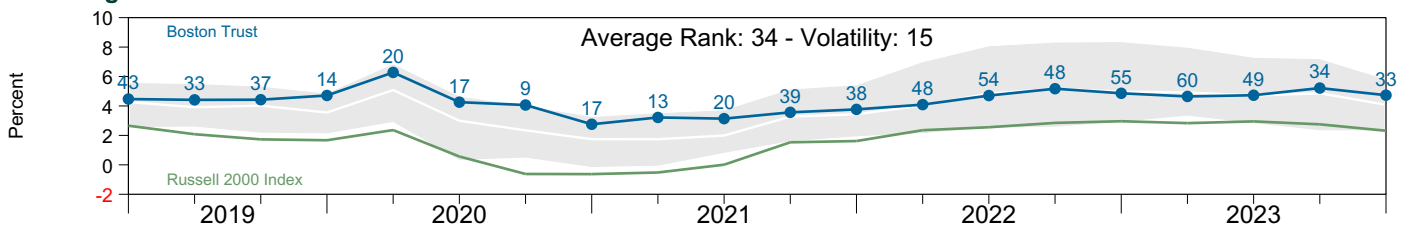
#### Trailing P/E



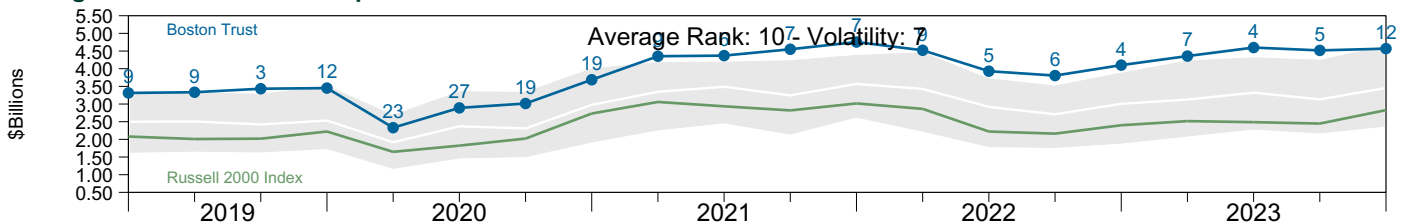
#### Dividend Yield



#### 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.

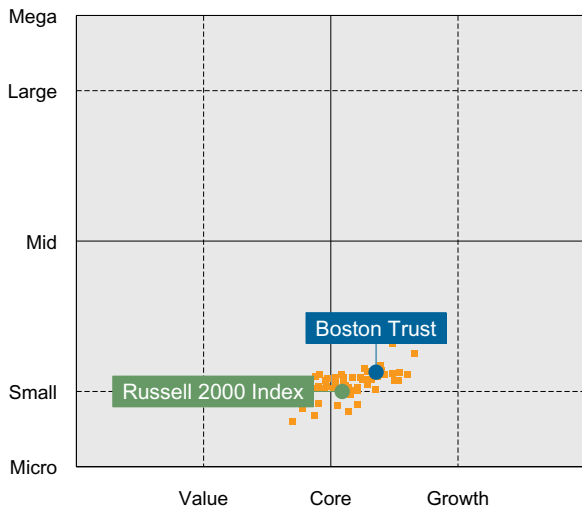
# Current Holdings Based Style Analysis

## Boston Trust

### As of December 31, 2023

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.

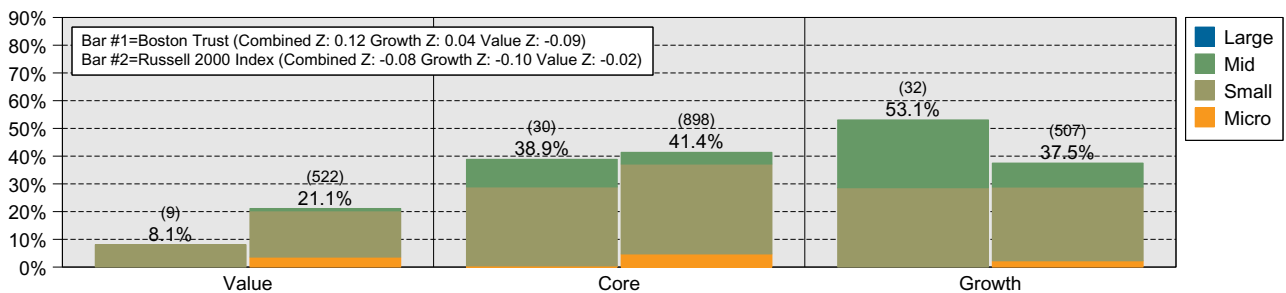
**Style Map vs Callan Small Cap Core Holdings as of December 31, 2023**



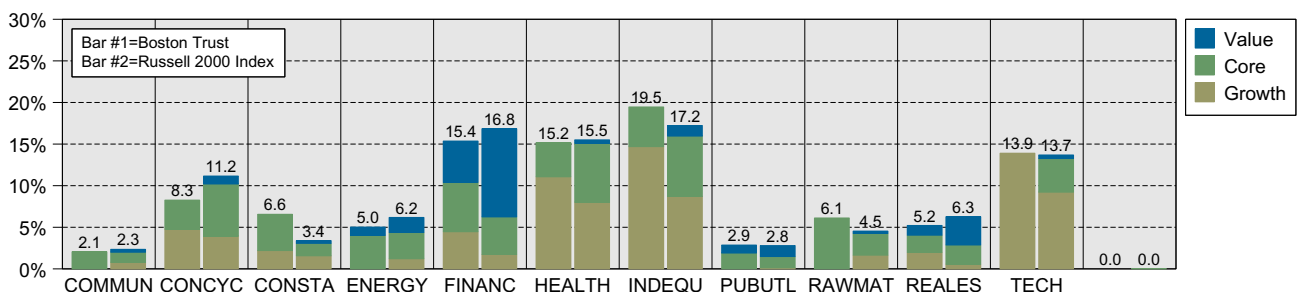
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	0.0% (0)	10.0% (6)	24.5% (14)	34.4% (20)
Small	8.1% (9)	28.5% (23)	28.6% (18)	65.2% (50)
Micro	0.0% (0)	0.4% (1)	0.0% (0)	0.4% (1)
<b>Total</b>	<b>8.1% (9)</b>	<b>38.9% (30)</b>	<b>53.1% (32)</b>	<b>100.0% (71)</b>
	21.1% (522)	41.4% (898)	37.5% (507)	100.0% (1927)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



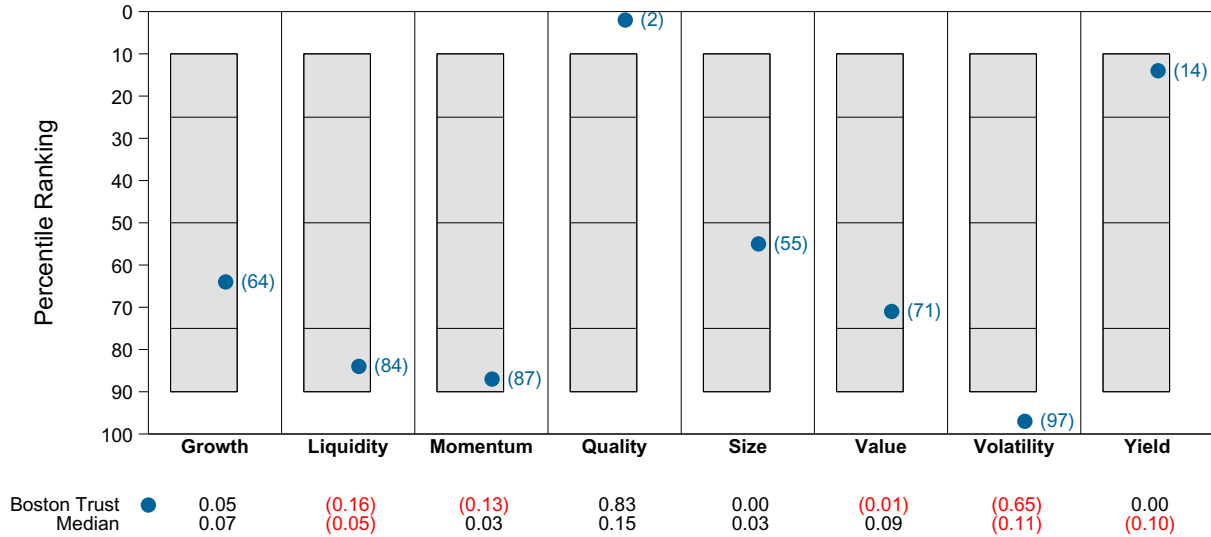
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

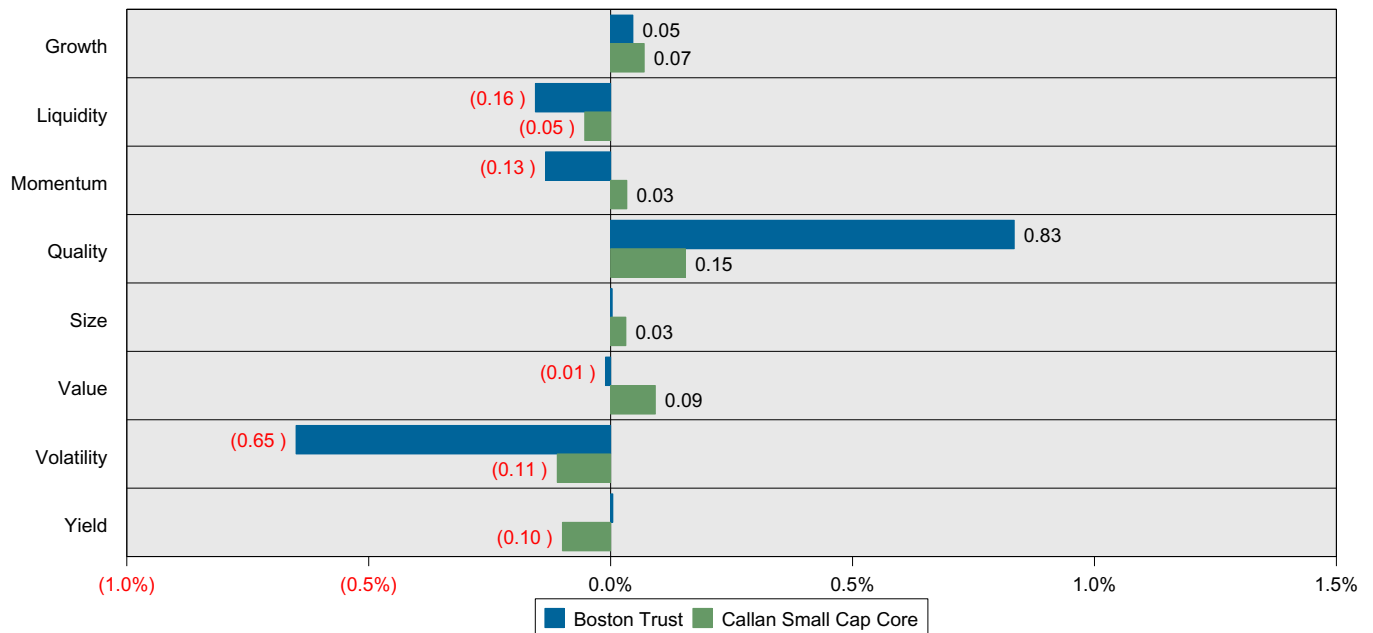
**Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# Segall Bryant & Hamill

## Period Ended December 31, 2023

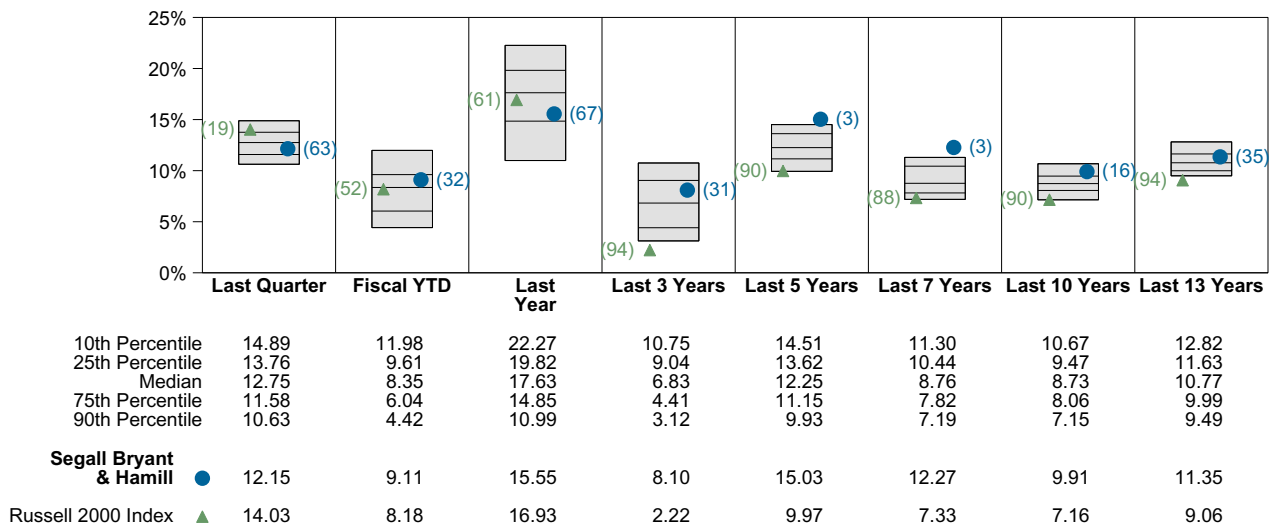
### Investment Philosophy

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 stylistic consistency and risk/return profile. NHRS inception in the fund is October 2010.

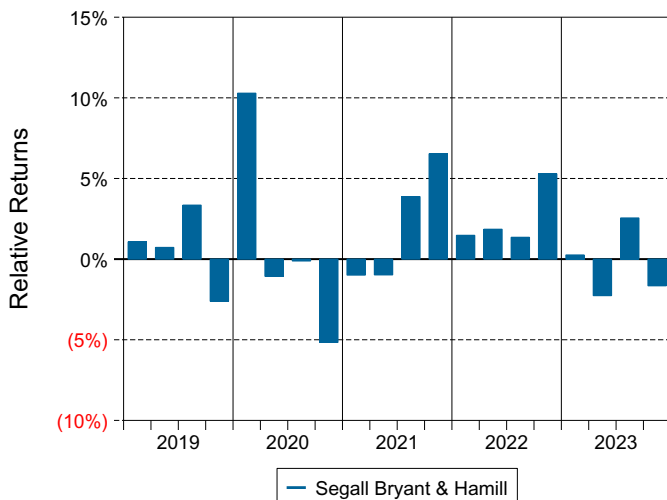
### Quarterly Asset Growth

Beginning Market Value	\$219,617,698
Net New Investment	\$0
Investment Gains/(Losses)	\$26,674,065
Ending Market Value	\$246,291,763

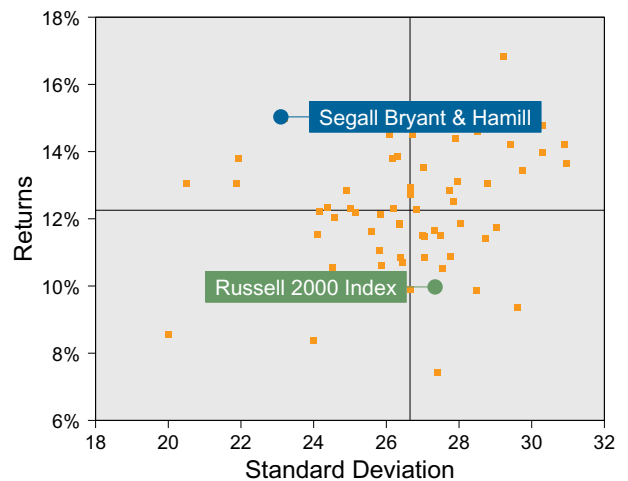
### Performance vs Callan Small Cap Core (Gross)



### Relative Return vs Russell 2000 Index



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

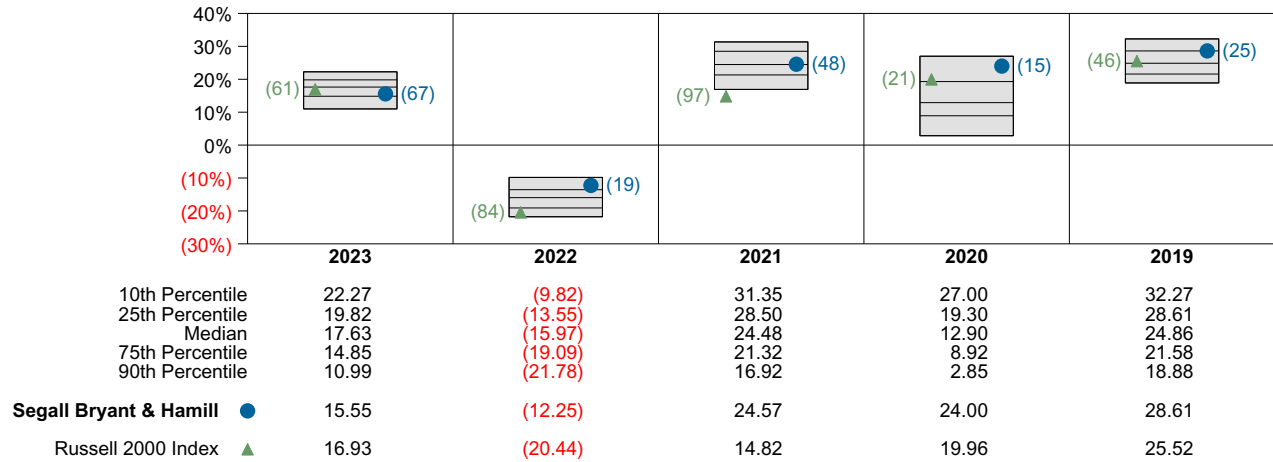


# Segall Bryant & Hamill Return Analysis Summary

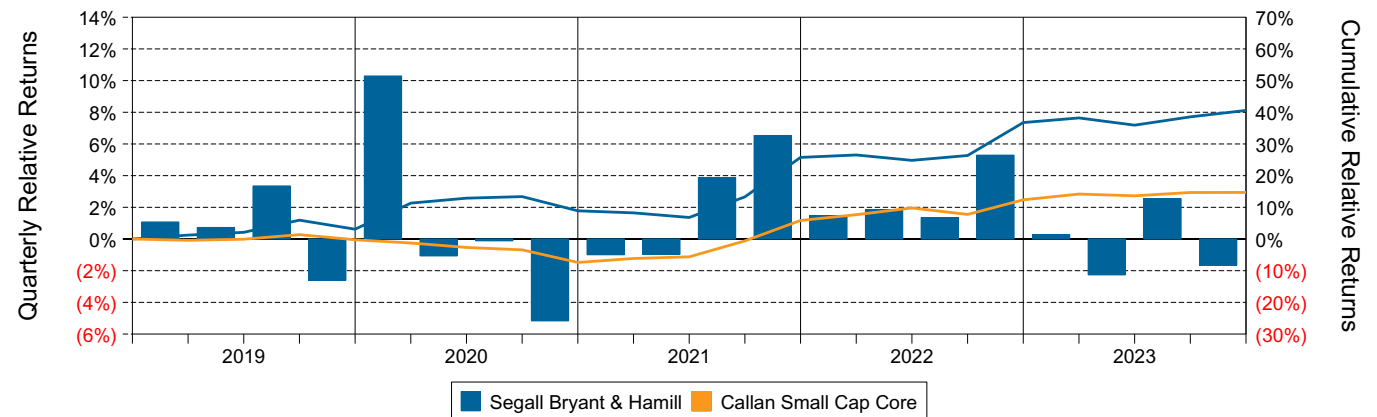
## Return Analysis

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.

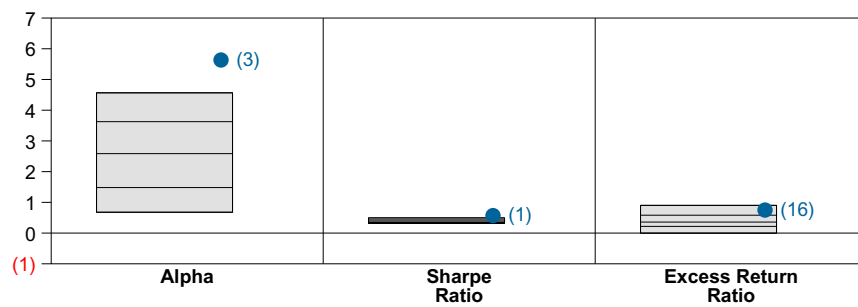
### Performance vs Callan Small Cap Core (Gross)



### 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 December 31, 2023



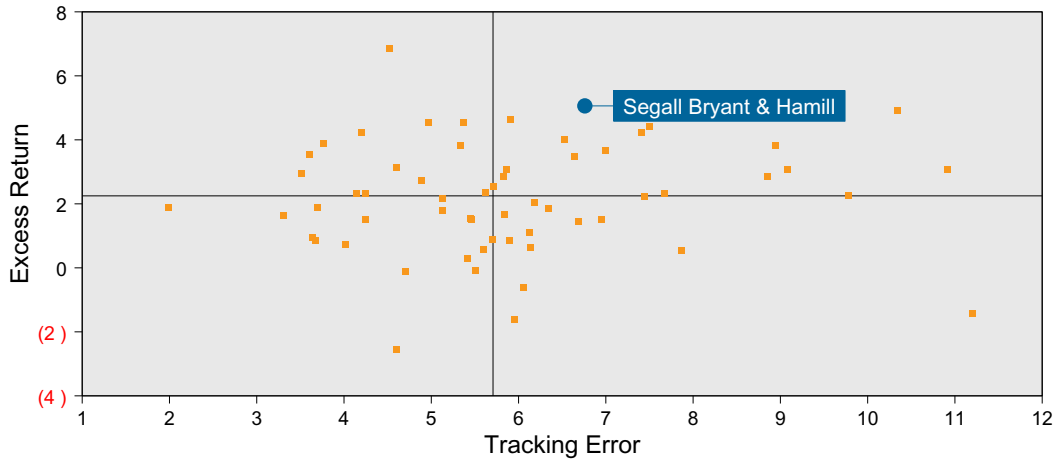


# Segall Bryant & Hamill Risk Analysis Summary

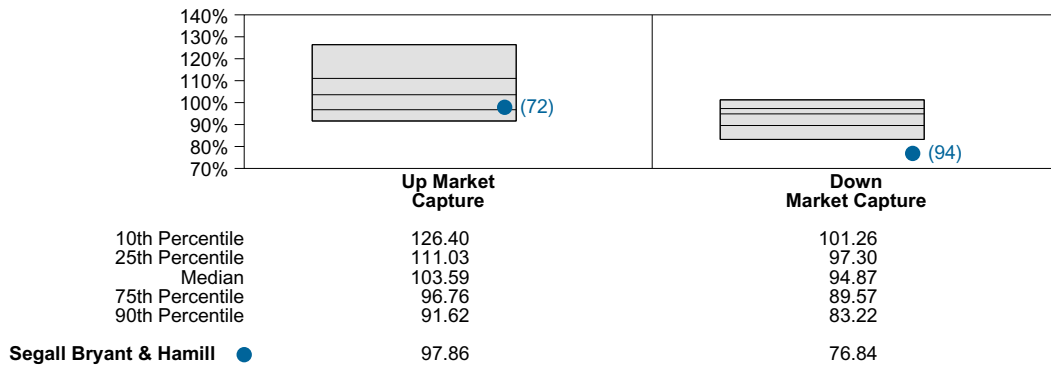
## Risk Analysis

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.

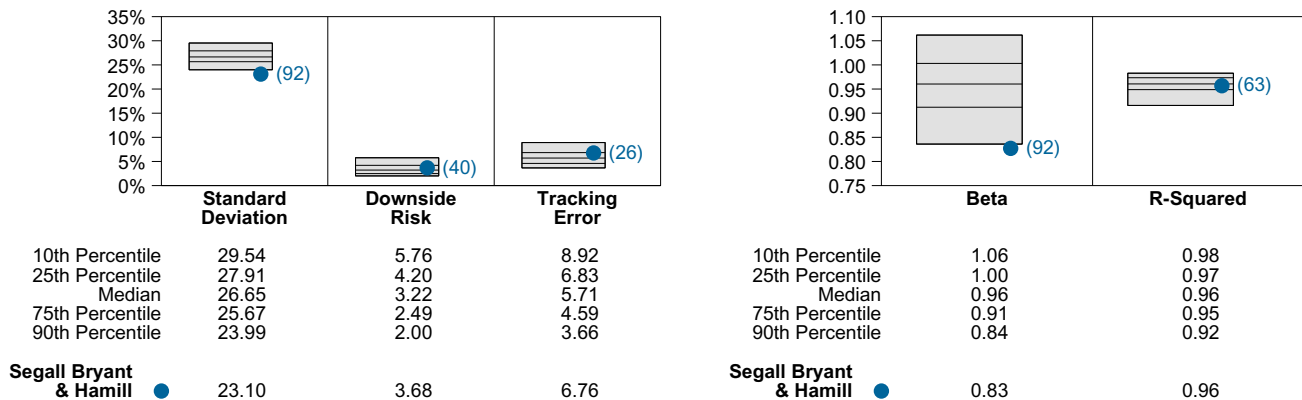
### Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023

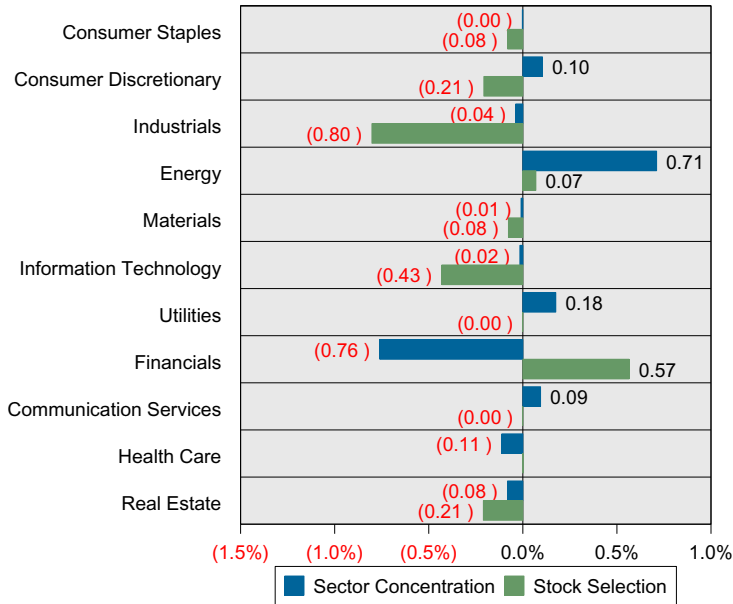


# Segall Bryant & Hamill vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

## 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.

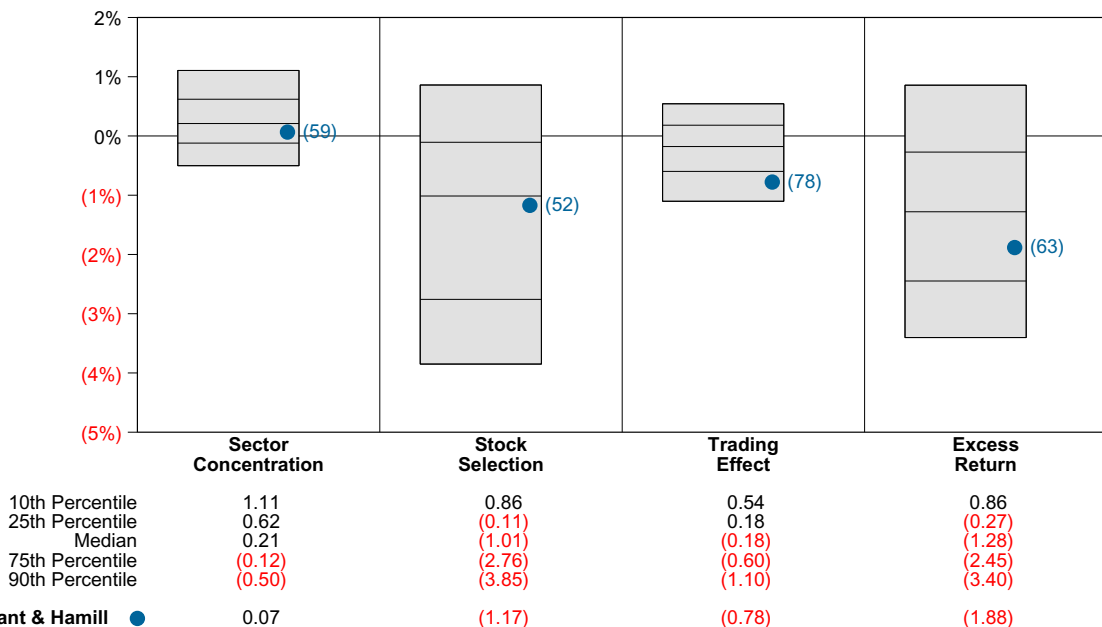
## Attribution Effects by Sector vs Russell 2000 Index Quarter ended December 31, 2023



Sector	Sector Concentration	Stock Selection
Consumer Staples	(0.00%)	(0.08%)
Consumer Discretionary	0.10%	(0.21%)
Industrials	(0.04%)	(0.80%)
Energy	0.71%	0.07%
Materials	(0.01%)	(0.08%)
Information Technology	(0.02%)	(0.43%)
Utilities	0.18%	(0.00%)
Financials	(0.76%)	0.57%
Communication Services	0.09%	(0.00%)
Health Care	(0.11%)	0.00%
Real Estate	(0.08%)	(0.21%)
<b>Total</b>	<b>0.07%</b>	<b>(1.17%)</b>

<b>Manager Return</b>	<b>=</b>	<b>Index Return</b>	<b>+</b>	<b>Sector Concentration</b>	<b>+</b>	<b>Stock Selection</b>	<b>+</b>	<b>Trading</b>
<b>12.15%</b>		<b>14.03%</b>		<b>0.07%</b>		<b>(1.17%)</b>		<b>(0.78%)</b>

## Equity Attribution Ranking vs Callan Small Cap Core Quarter ended December 31, 2023

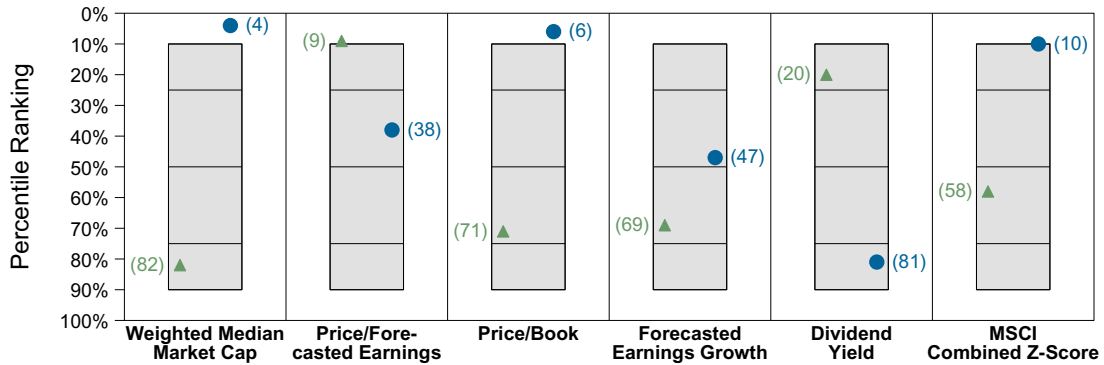


# Segall Bryant & Hamill Equity Characteristics Analysis Summary

## 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 December 31, 2023

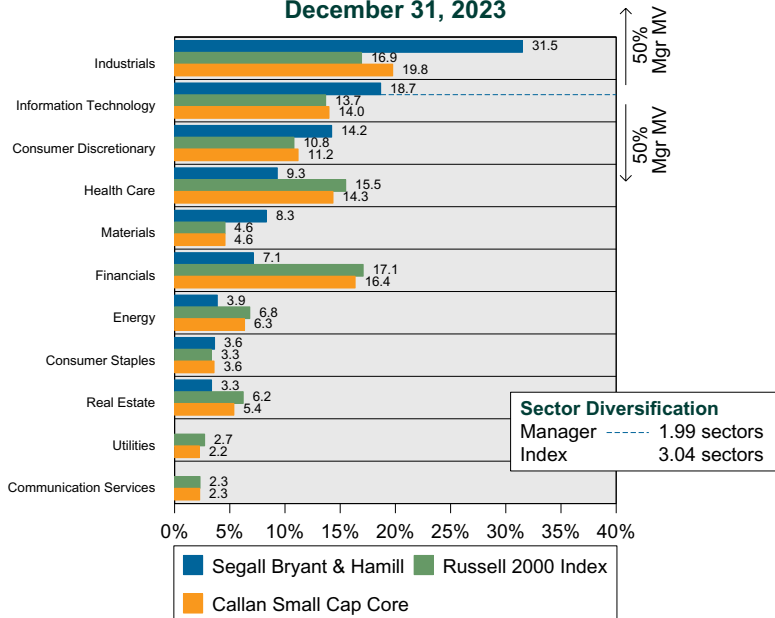


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	4.63	22.44	2.59	19.61	1.45	0.22
25th Percentile	4.19	19.01	2.37	17.76	1.31	0.08
Median	3.45	16.68	2.03	15.48	1.17	(0.05)
75th Percentile	3.02	15.27	1.88	13.18	1.01	(0.19)
90th Percentile	2.37	14.26	1.76	11.67	0.85	(0.32)
<b>Segall Bryant &amp; Hamill</b>	● 5.69	18.16	2.89	15.85	0.98	0.22
Russell 2000 Index	▲ 2.83	22.92	1.92	13.96	1.38	(0.08)

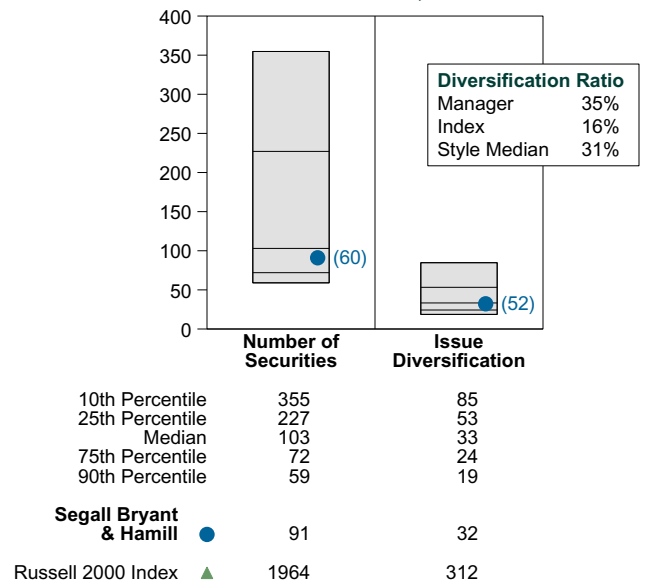
## Sector Weights

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.

### Sector Allocation December 31, 2023



### Diversification December 31, 2023

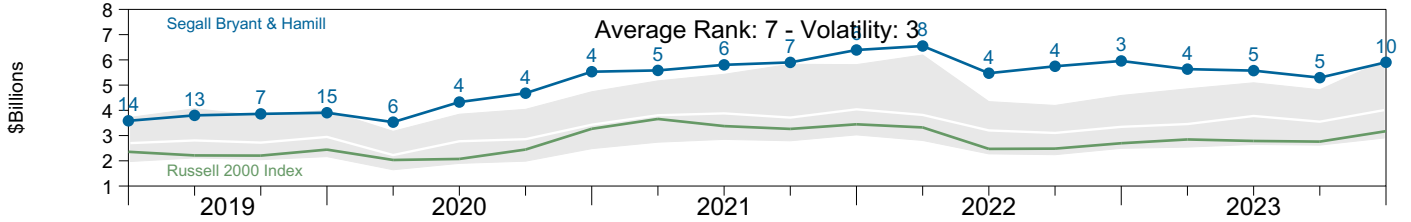


# Portfolio Characteristics Analysis

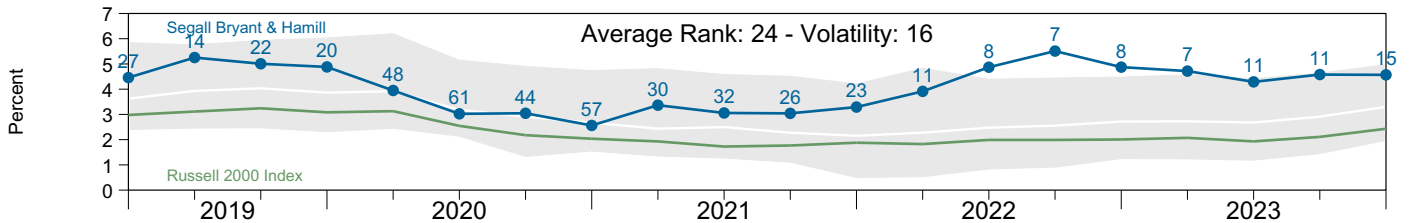
## Callan Small Cap Core

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.

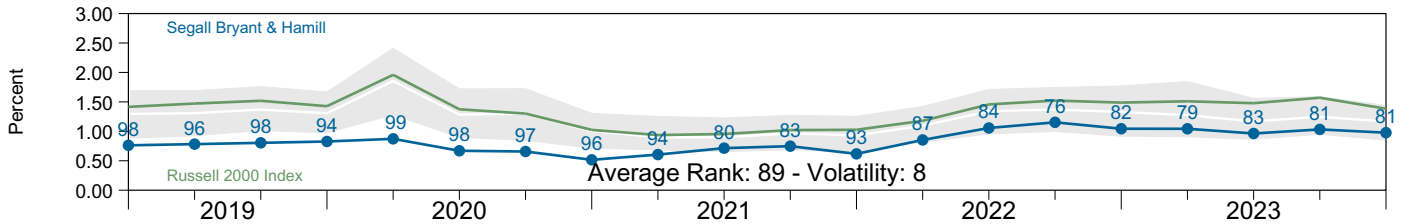
### Weighted Average Market Cap



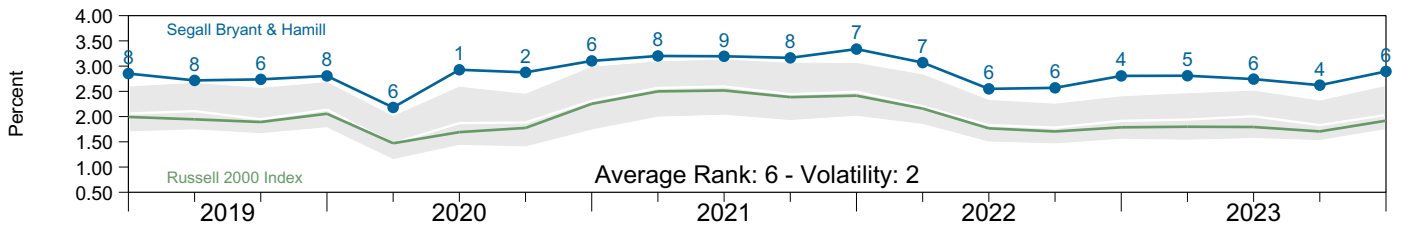
### Growth in Dividends



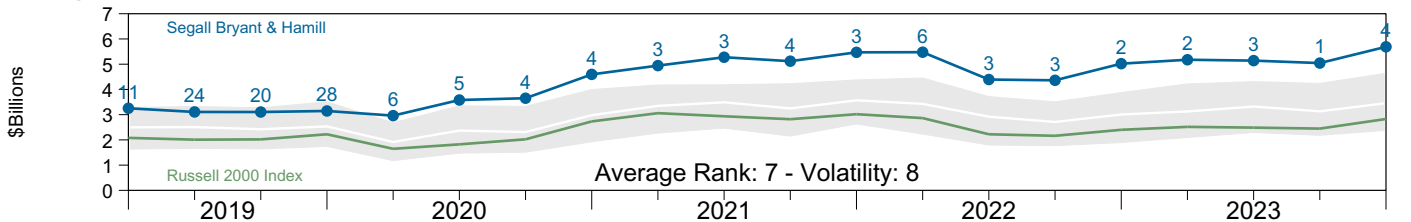
### Dividend Yield



### 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.

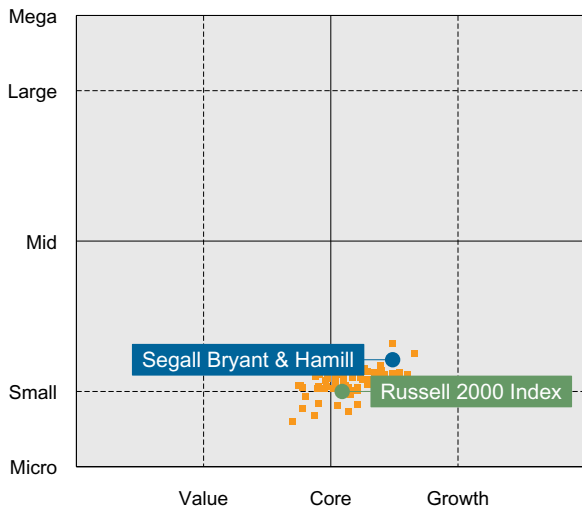
# Current Holdings Based Style Analysis

## Segall Bryant & Hamill

### As of December 31, 2023

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.

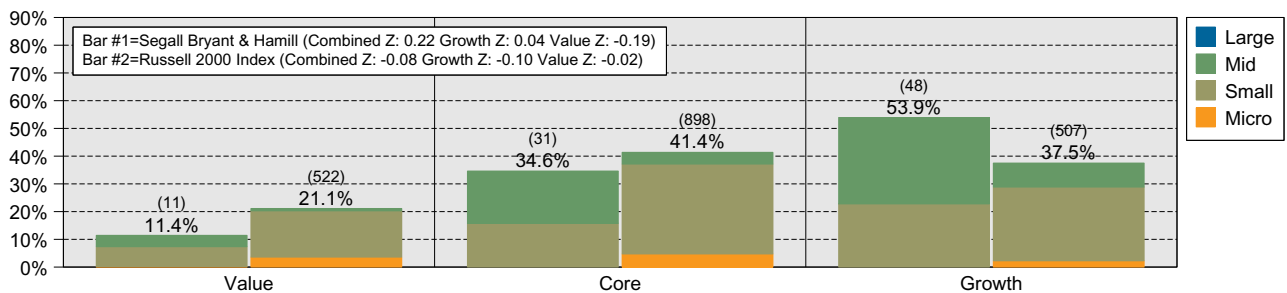
**Style Map vs Callan Small Cap Core Holdings as of December 31, 2023**



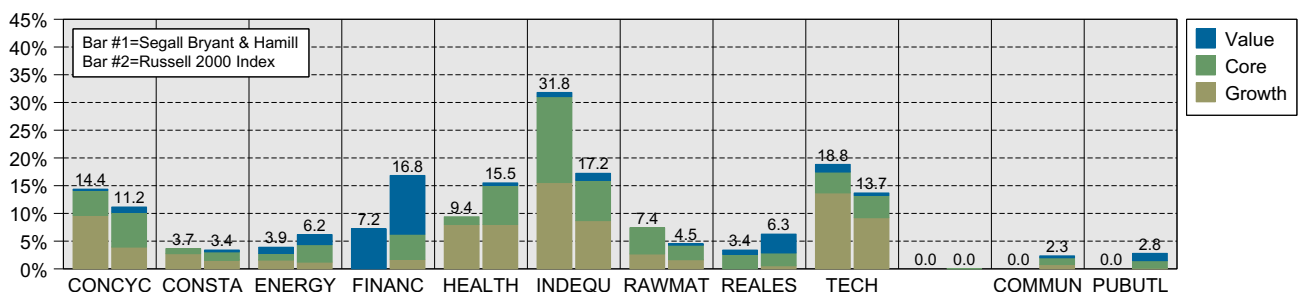
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	4.1% (3)	18.9% (15)	31.2% (26)	54.1% (44)
Small	7.2% (7)	15.7% (16)	22.8% (22)	45.7% (45)
Micro	0.2% (1)	0.0% (0)	0.0% (0)	0.2% (1)
<b>Total</b>	<b>11.4% (11)</b>	<b>34.6% (31)</b>	<b>53.9% (48)</b>	<b>100.0% (90)</b>
	21.1% (522)	41.4% (898)	37.5% (507)	100.0% (1927)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



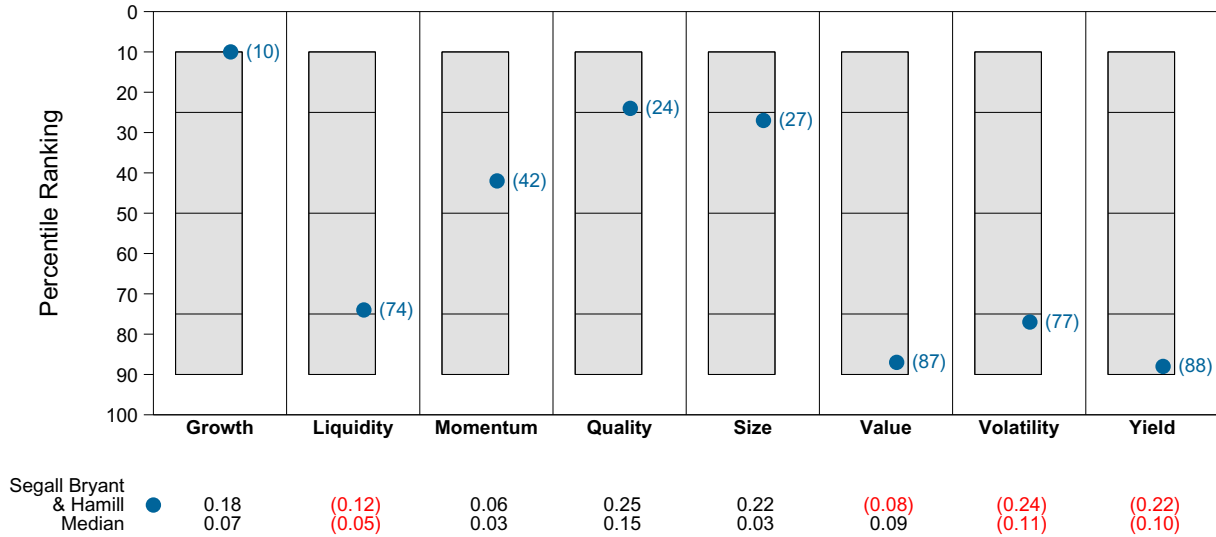
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

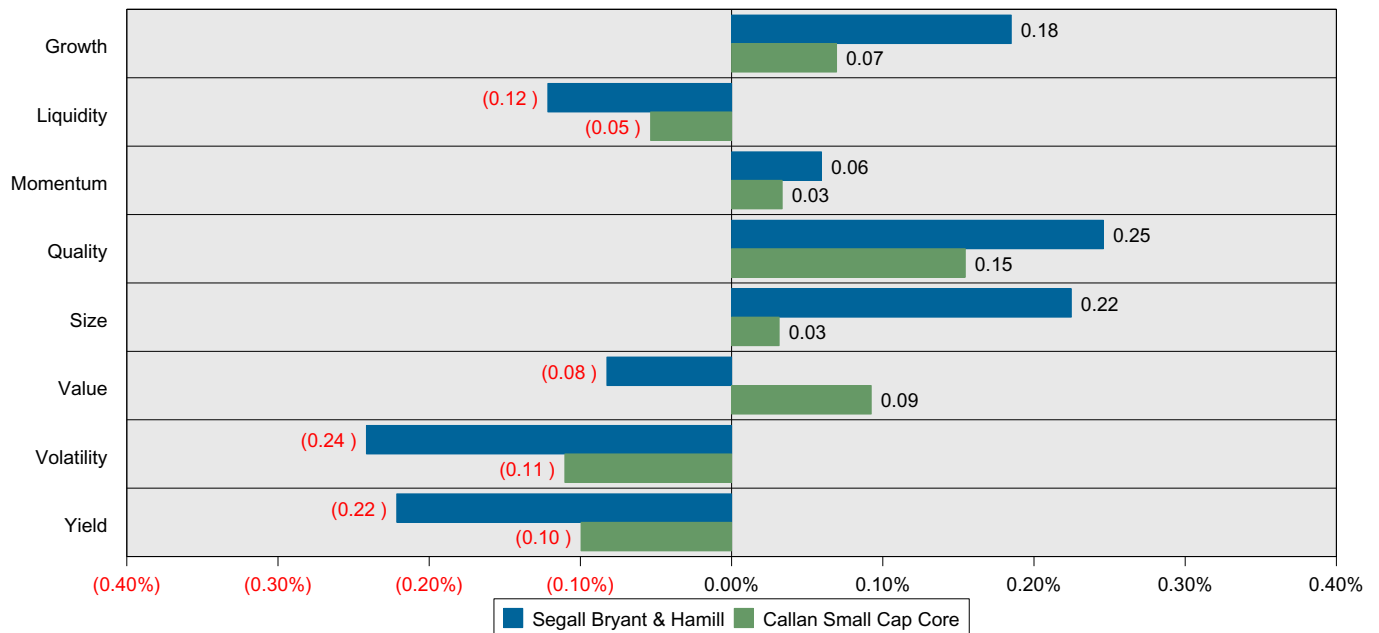
**Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core for Period Ended December 31, 2023**



**Relative Factor Exposures**

This graph compares the manager's factor exposures and the median factor for the Callan Small Cap Core group relative to the Russell 2000 Index.

**Factor Exposures Relative to Russell 2000 Index for Period Ended December 31, 2023**



# Wellington

## Period Ended December 31, 2023

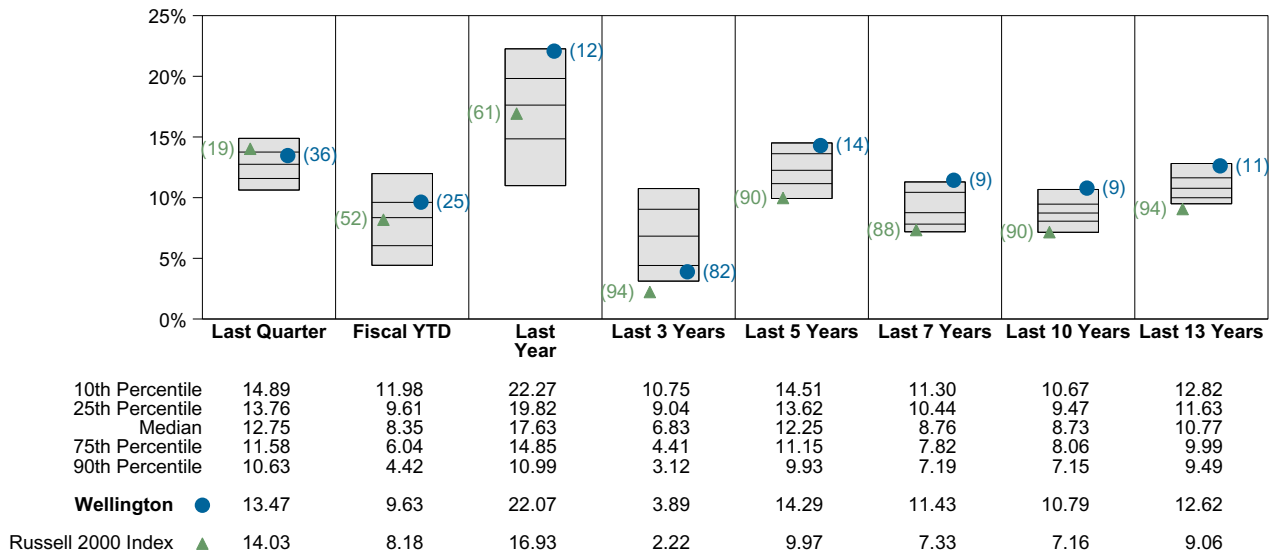
### Investment Philosophy

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.

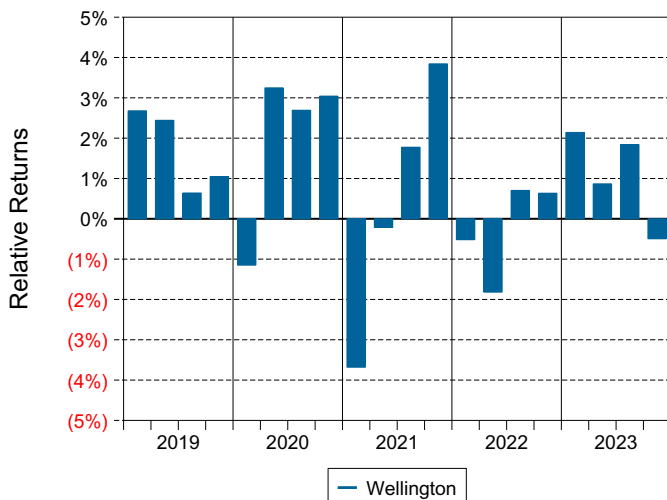
### Quarterly Asset Growth

Beginning Market Value	\$364,571,287
Net New Investment	\$0
Investment Gains/(Losses)	\$49,096,848
Ending Market Value	\$413,668,134

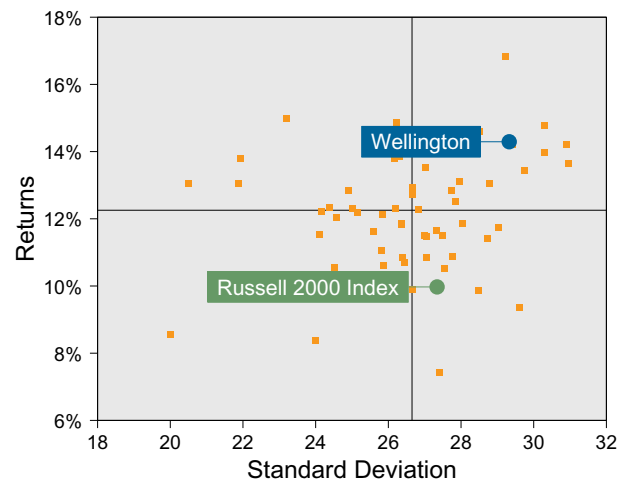
### Performance vs Callan Small Cap Core (Gross)



### Relative Return vs Russell 2000 Index



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

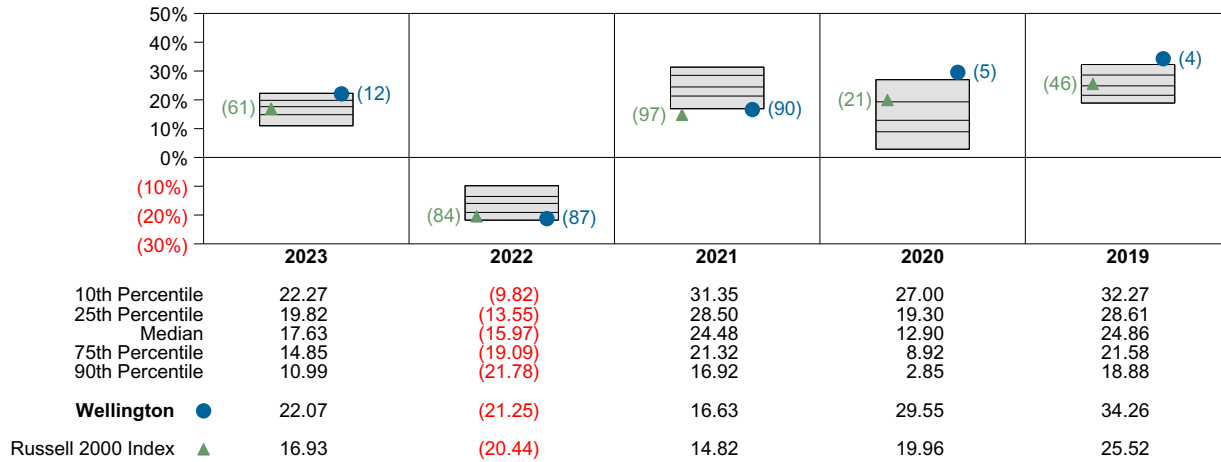


# Wellington Return Analysis Summary

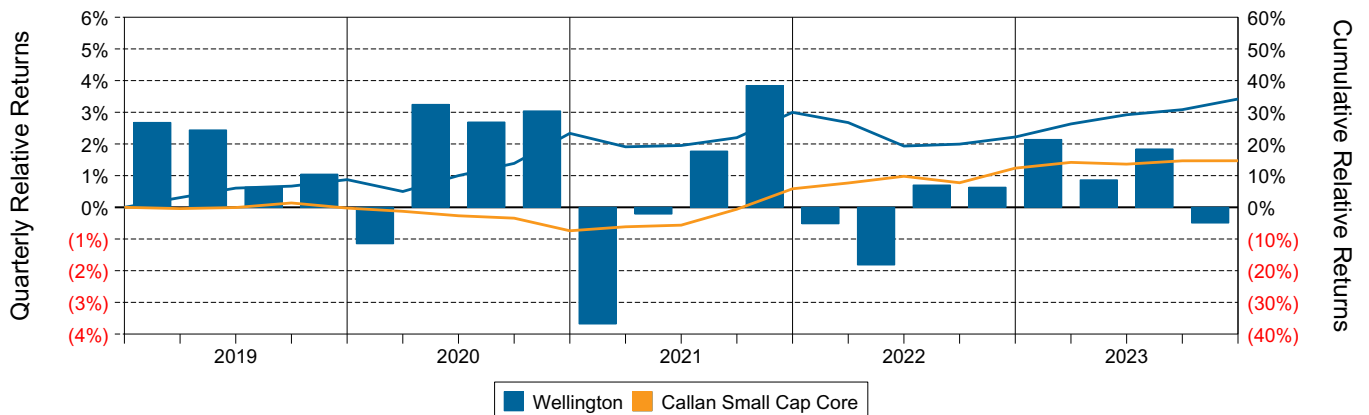
## Return Analysis

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.

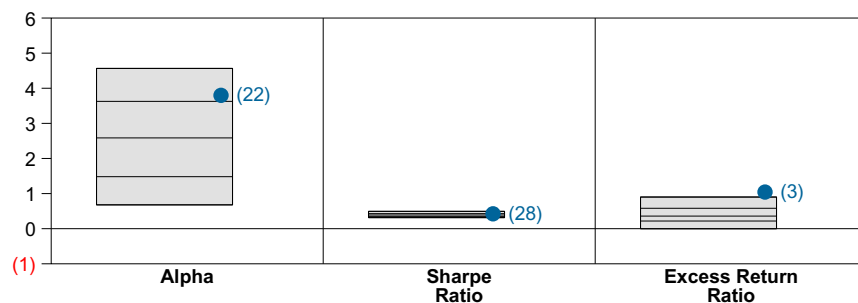
### Performance vs Callan Small Cap Core (Gross)



### 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 December 31, 2023



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.57	0.49	0.90
25th Percentile	3.63	0.43	0.58
Median	2.59	0.39	0.36
75th Percentile	1.48	0.34	0.22
90th Percentile	0.68	0.32	(0.00)
<b>Wellington</b> ●	3.80	0.42	1.04

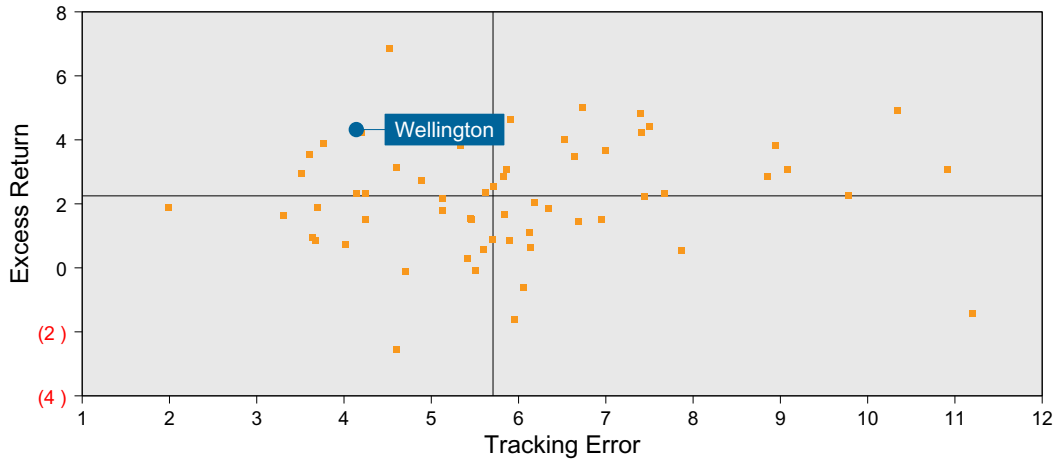


# Wellington Risk Analysis Summary

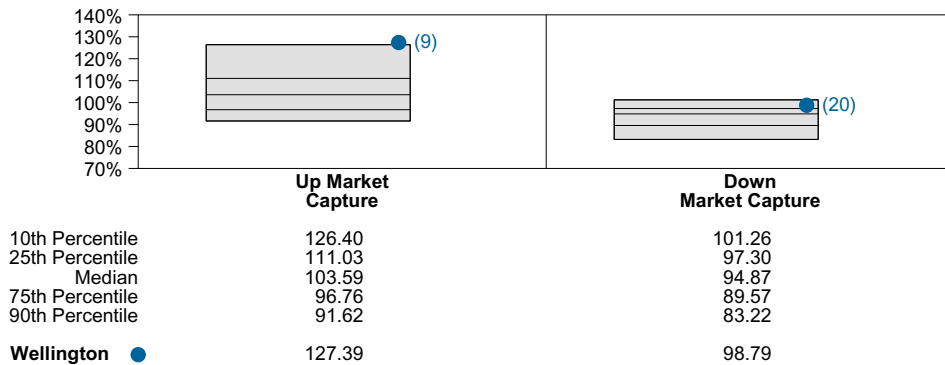
## Risk Analysis

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.

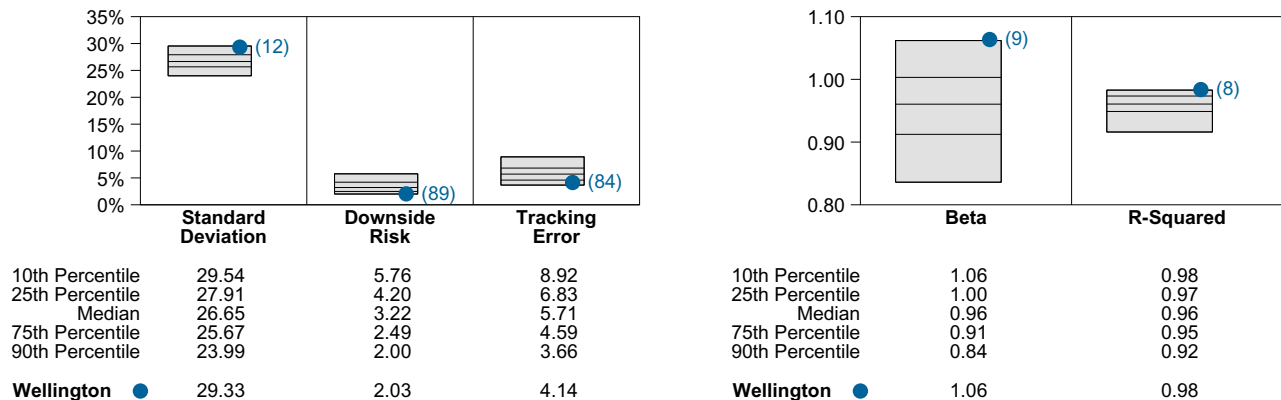
### Risk Analysis vs Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Market Capture vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended December 31, 2023

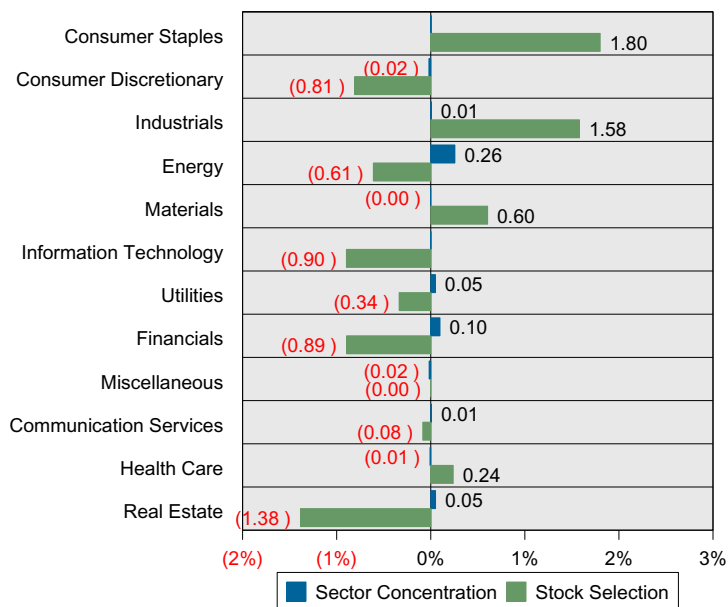


## Wellington vs Russell 2000 Index Quarterly Equity Buy and Hold Attribution

### 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.

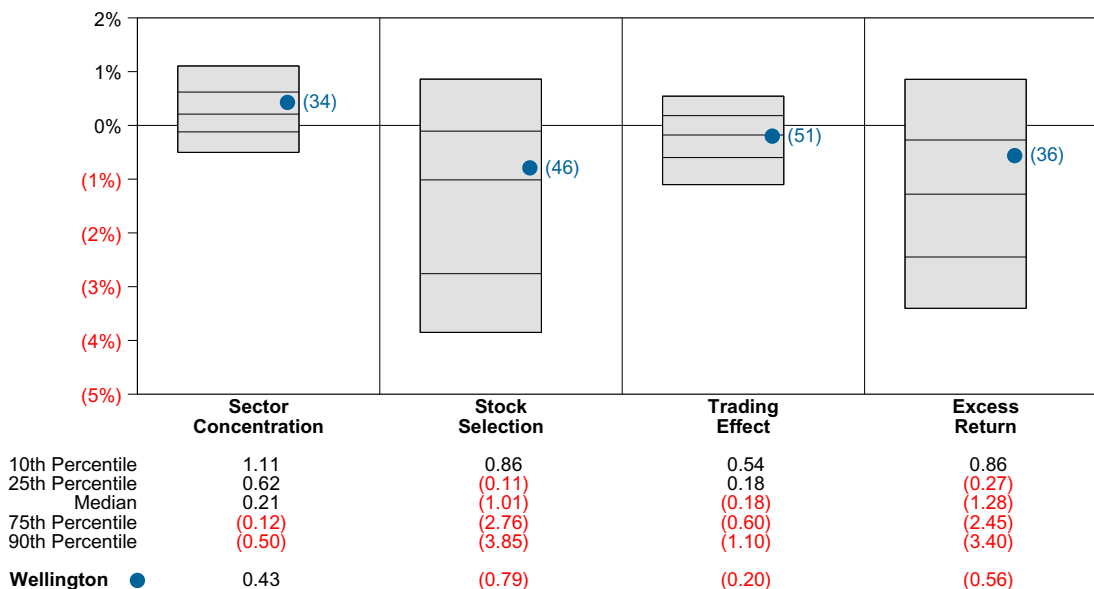
### Attribution Effects by Sector vs Russell 2000 Index Quarter ended December 31, 2023



Sector	Sector Concentration	Stock Selection
Consumer Staples	0.00%	1.80%
Consumer Discretionary	(0.02%)	(0.81%)
Industrials	0.01%	1.58%
Energy	0.26%	(0.61%)
Materials	(0.00%)	0.60%
Information Technology	0.00%	(0.90%)
Utilities	0.05%	(0.34%)
Financials	0.10%	(0.89%)
Miscellaneous	(0.02%)	(0.00%)
Communication Services	0.01%	(0.08%)
Health Care	(0.01%)	0.24%
Real Estate	0.05%	(1.38%)
<b>Total</b>	<b>0.43%</b>	<b>(0.79%)</b>

<b>Manager Return</b>	=	<b>Index Return</b>	+	<b>Sector Concentration</b>	+	<b>Stock Selection</b>	+	<b>Trading</b>
13.47%		14.03%		0.43%		(0.79%)		(0.20%)

### Equity Attribution Ranking vs Callan Small Cap Core Quarter ended December 31, 2023

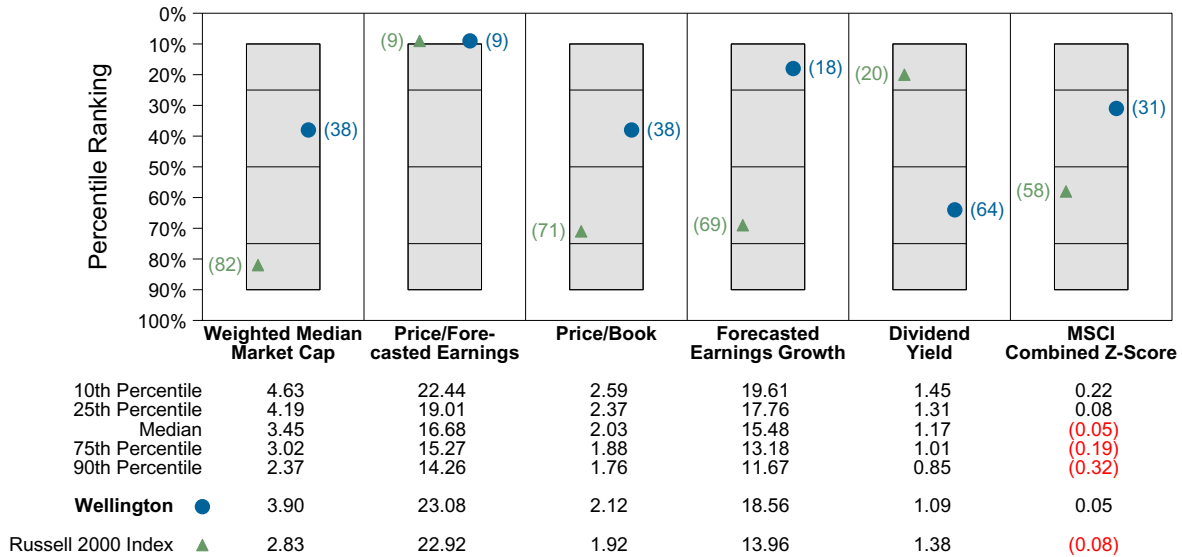


# Wellington Equity Characteristics Analysis Summary

## Portfolio Characteristics

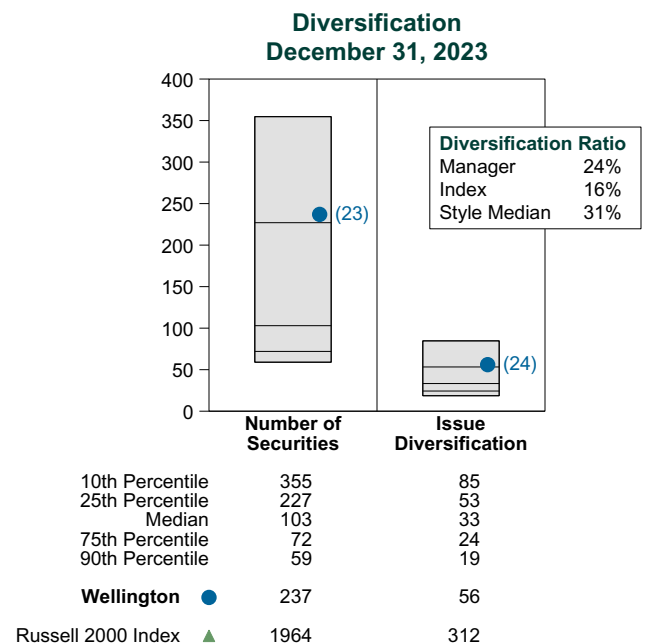
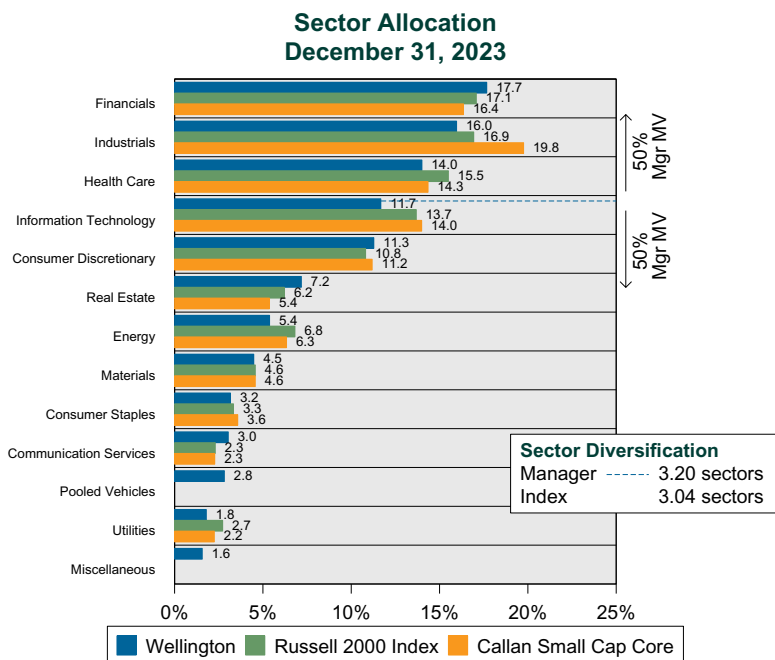
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Small Cap Core as of December 31, 2023



## 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.

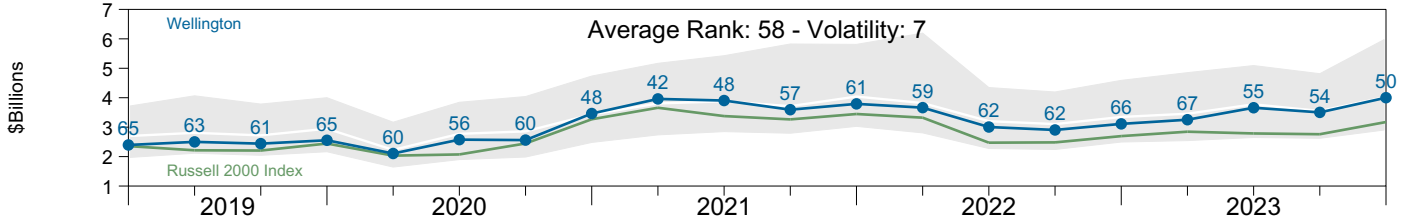


# Portfolio Characteristics Analysis

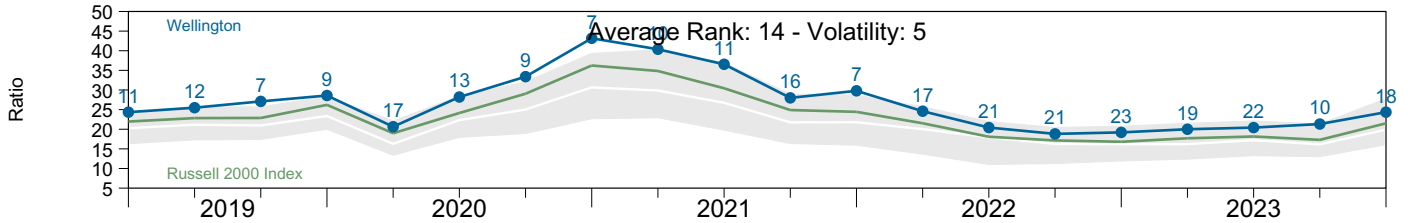
## Callan Small Cap Core

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.

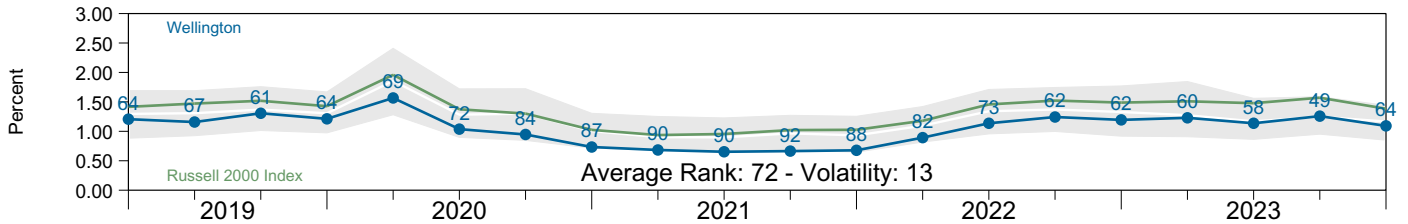
### Weighted Average Market Cap



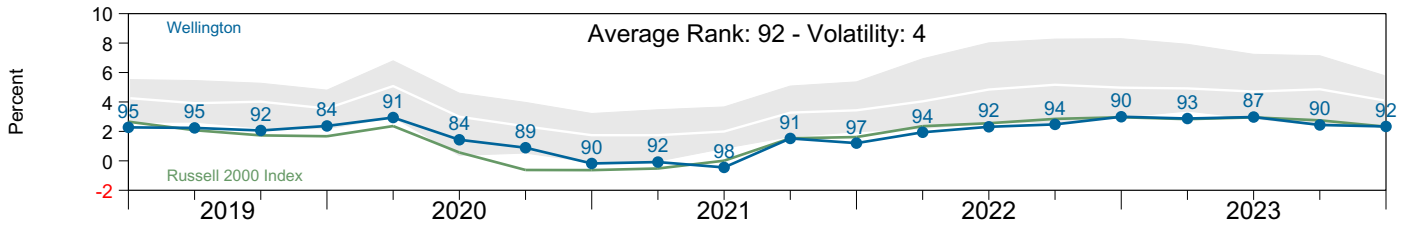
### Trailing P/E



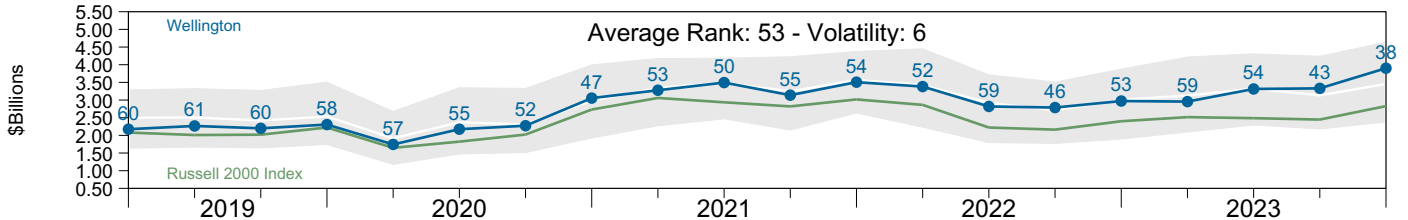
### Dividend Yield



### Earnings Yield



### Weighted Median Market Cap

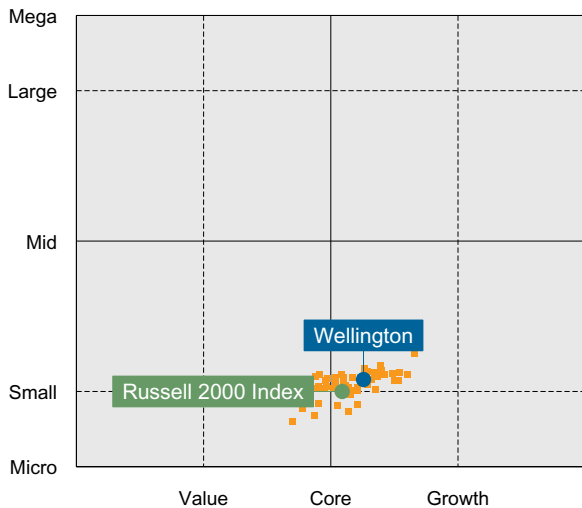


Any particular portfolio characteristic observation(s) may be missing due to a failure to pass a minimum "coverage hurdle" intended to ensure quality. This can occur when the portfolio has a significant weight in stocks for which the data vendor(s) cannot supply the particular relevant financial metric.

# Current Holdings Based Style Analysis Wellington As of December 31, 2023

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.

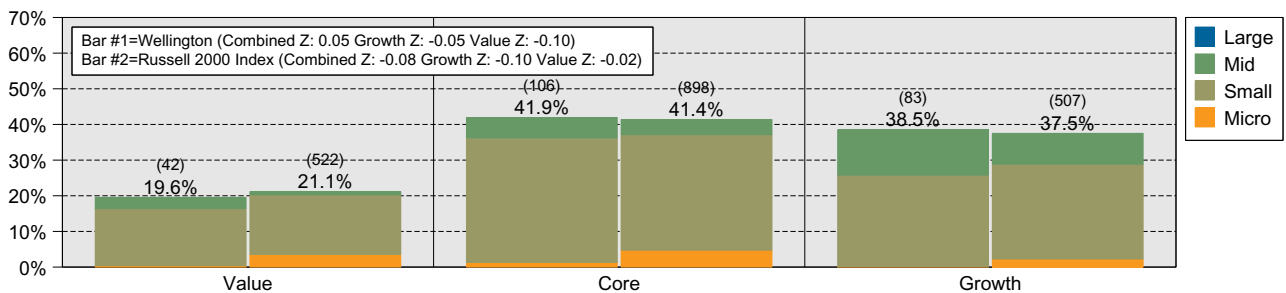
**Style Map vs Callan Small Cap Core Holdings as of December 31, 2023**



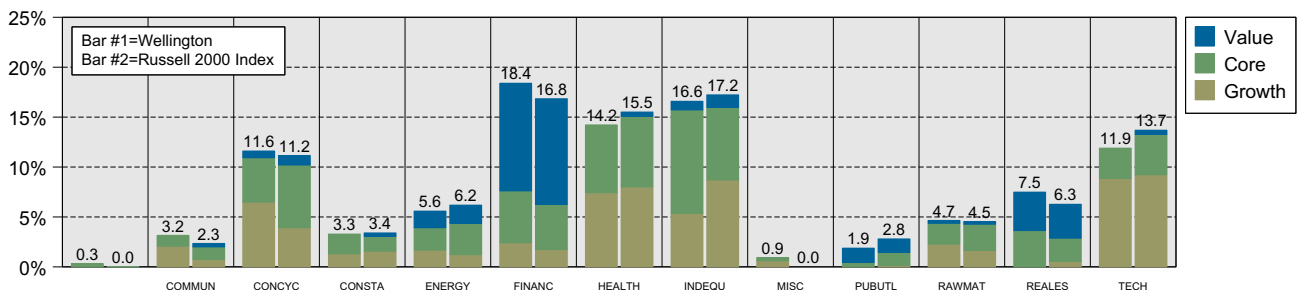
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Large	0.0% (0)	0.0% (0)	0.0% (0)	0.0% (0)
Mid	3.2% (6)	5.7% (12)	12.7% (23)	21.6% (41)
Small	16.0% (33)	34.9% (84)	25.6% (59)	76.5% (176)
Micro	0.4% (3)	1.4% (10)	0.2% (1)	1.9% (14)
<b>Total</b>	<b>19.6% (42)</b>	<b>41.9% (106)</b>	<b>38.5% (83)</b>	<b>100.0% (231)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



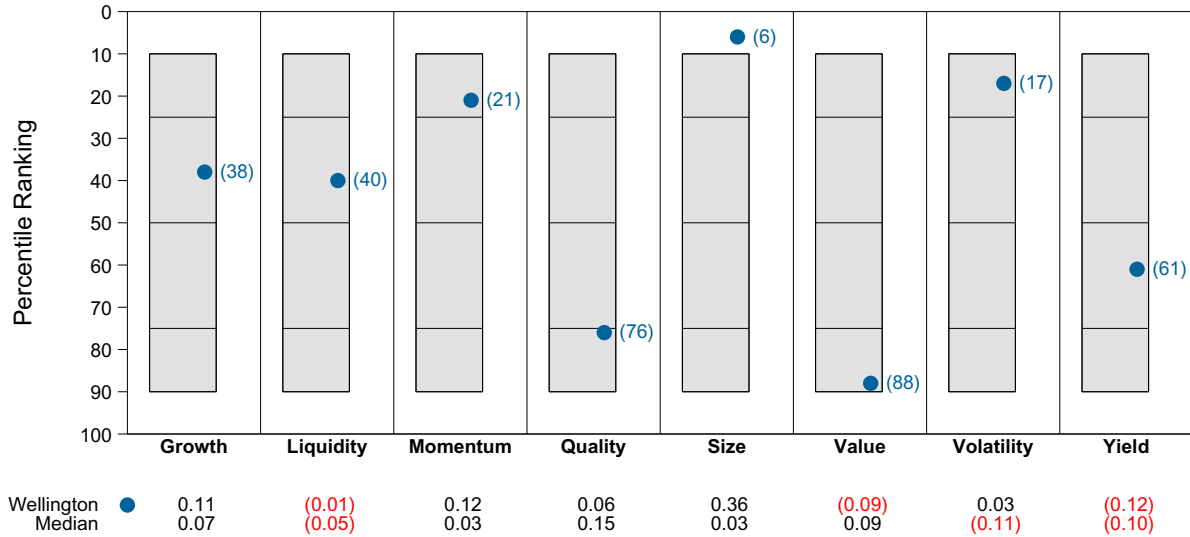
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

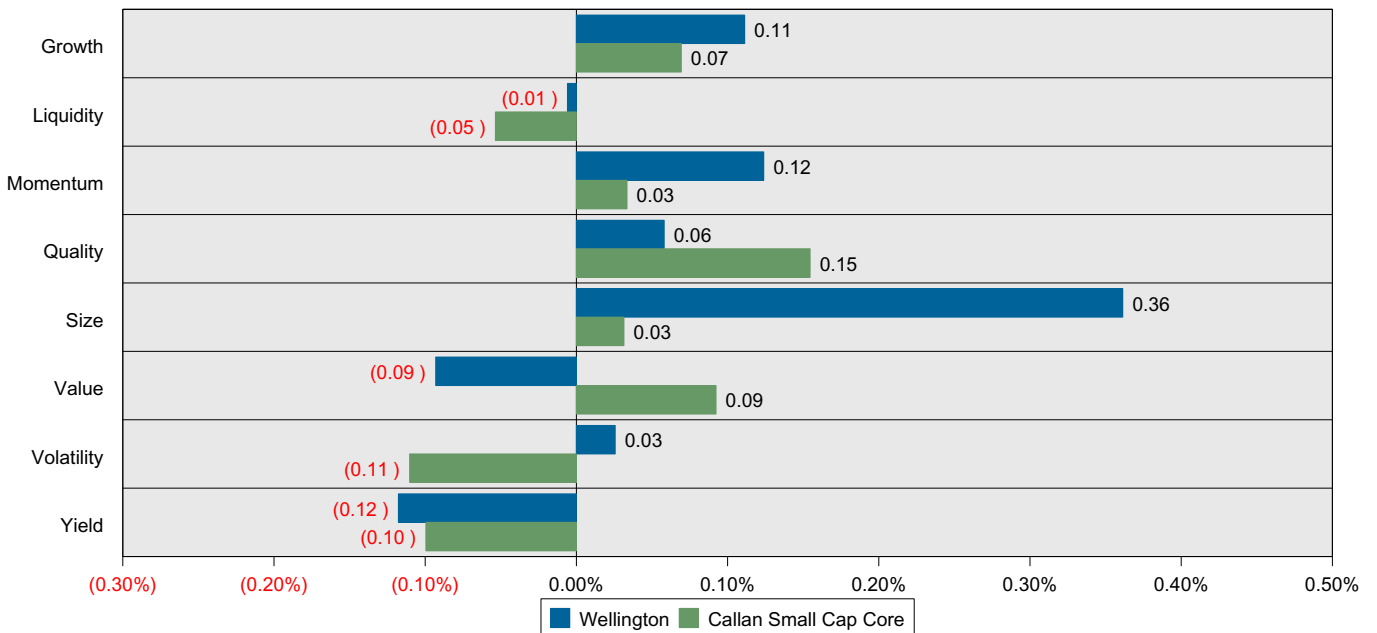
**Factor Exposures Relative to Russell 2000 Index, Rankings vs Callan Small Cap Core for Period Ended December 31, 2023**



**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 December 31, 2023**





# Total Non US Equity Period Ended December 31, 2023

## 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.

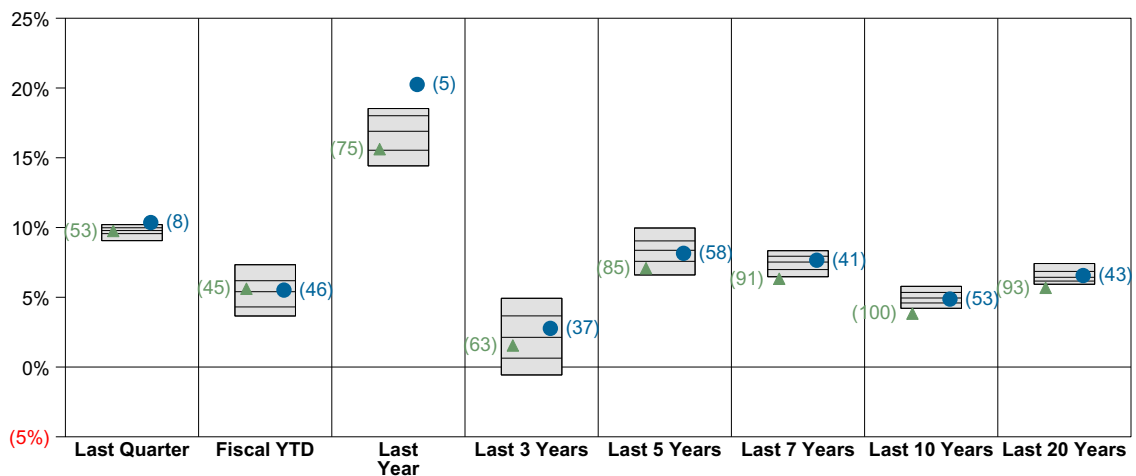
### Quarterly Summary and Highlights

- Total Non US Equity's portfolio posted a 10.36% return for the quarter placing it in the 8 percentile of the Large Public Fd - Int Equity group for the quarter and in the 5 percentile for the last year.
- Total Non US Equity's portfolio outperformed the Non US Equity Benchmark by 0.60% for the quarter and outperformed the Non US Equity Benchmark for the year by 4.64%.

### Quarterly Asset Growth

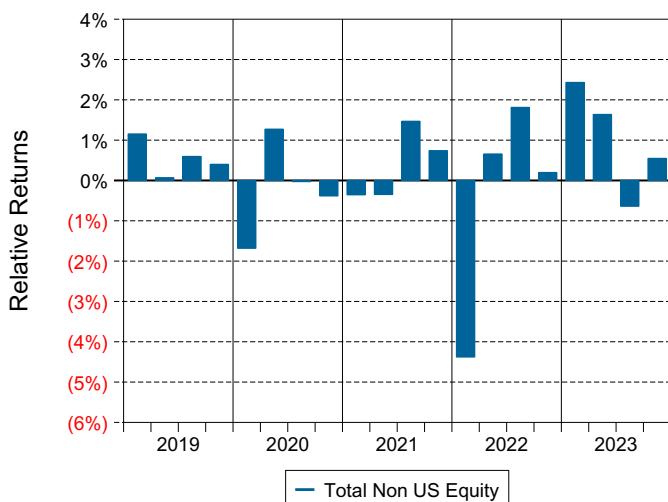
Beginning Market Value	\$1,977,834,164
Net New Investment	\$-25
Investment Gains/(Losses)	\$204,821,466
Ending Market Value	\$2,182,655,605

### Performance vs Large Public Fd - Int Equity (Gross)

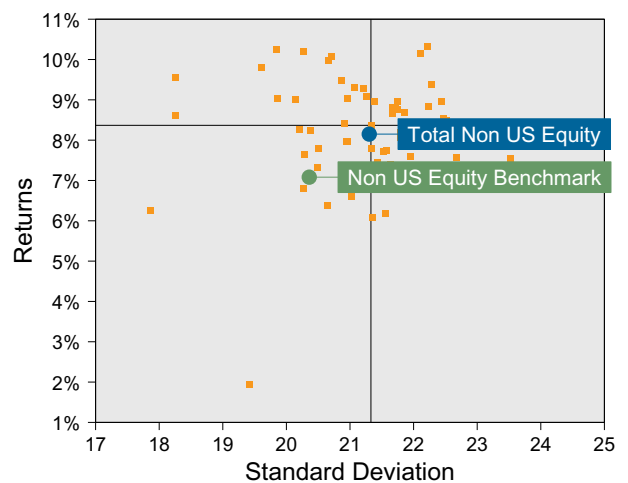


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	10.21	7.33	18.53	4.93	9.97	8.34	5.78	7.42
25th Percentile	9.98	6.19	18.01	3.67	9.04	7.94	5.35	6.85
Median	9.78	5.40	16.90	2.13	8.37	7.52	4.95	6.43
75th Percentile	9.56	4.31	15.54	0.64	7.58	6.99	4.59	6.16
90th Percentile	9.06	3.66	14.42	(0.57)	6.60	6.47	4.21	5.93
<b>Total Non US Equity</b> ●	10.36	5.51	20.25	2.77	8.15	7.66	4.87	6.56
Non US Equity Benchmark ▲	9.75	5.61	15.62	1.55	7.08	6.33	3.83	5.68

### Relative Return vs Non US Equity Benchmark



### Large Public Fd - Int Equity (Gross) Annualized Five Year Risk vs Return



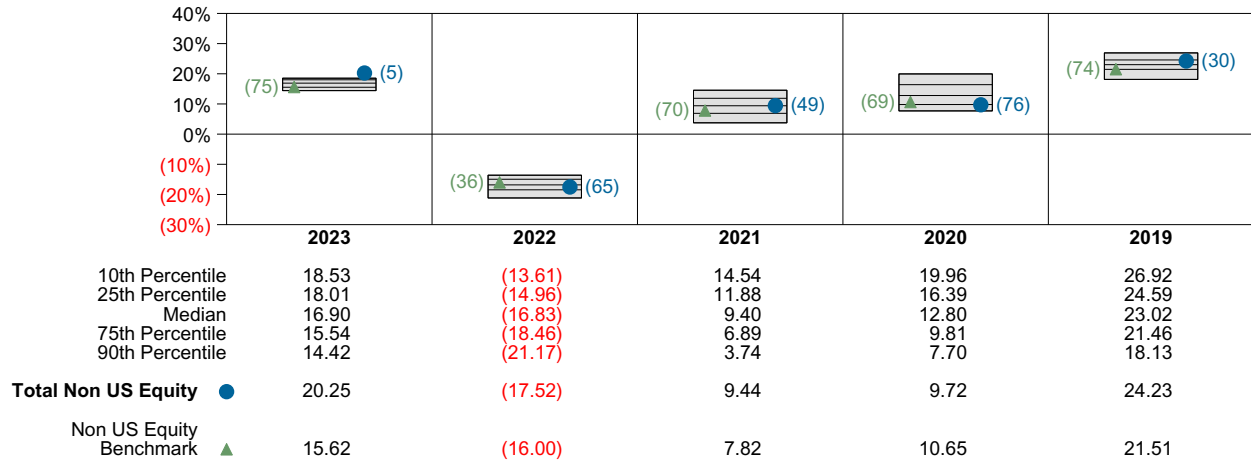


# Total Non US Equity Return Analysis Summary

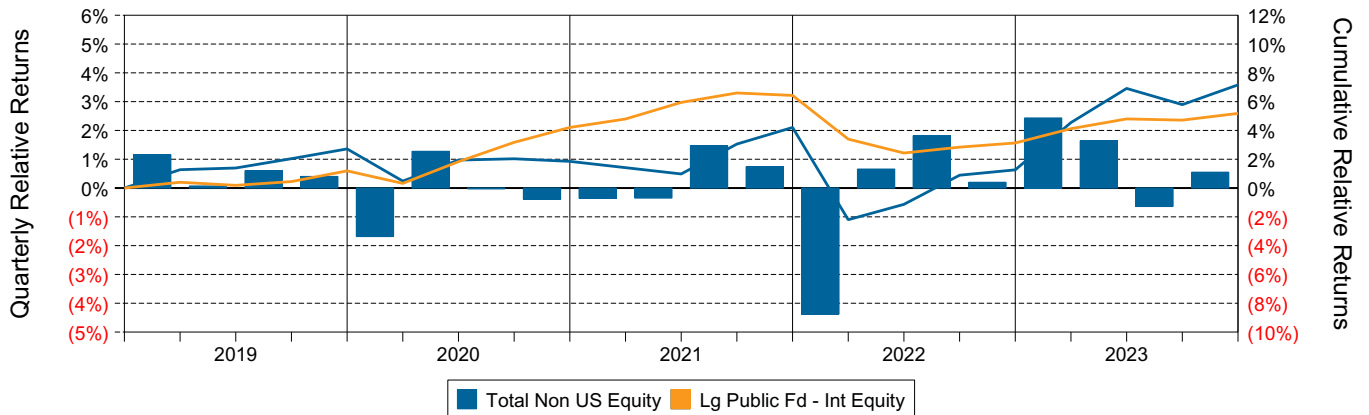
## Return Analysis

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.

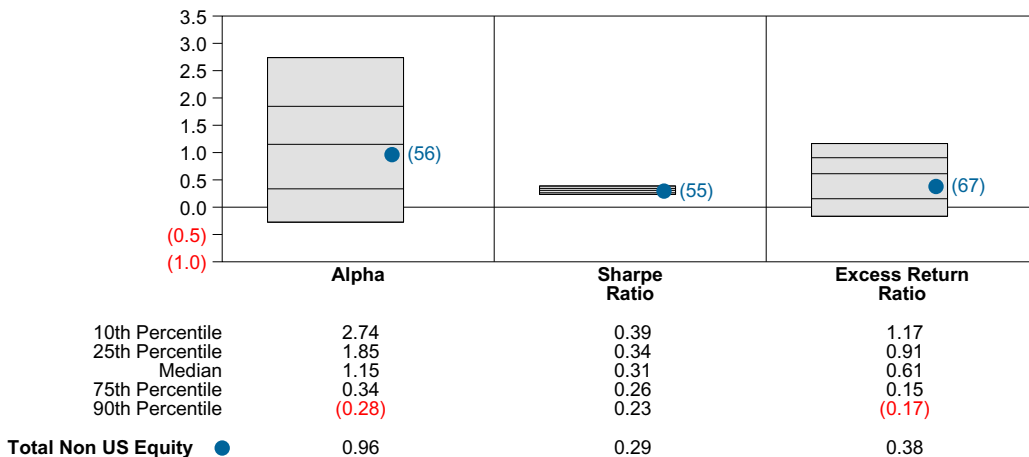
### Performance vs Lg Public Fd - Int Equity (Gross)



### 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 December 31, 2023

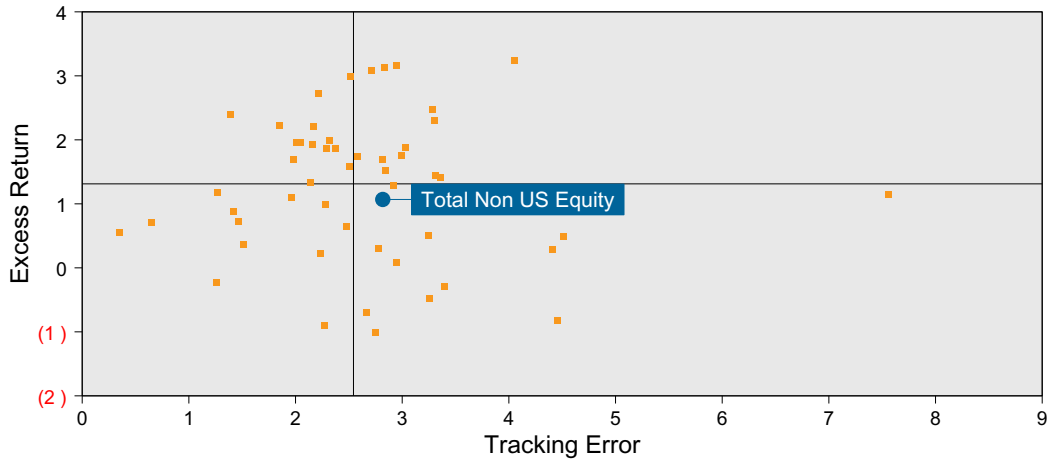


# Total Non US Equity Risk Analysis Summary

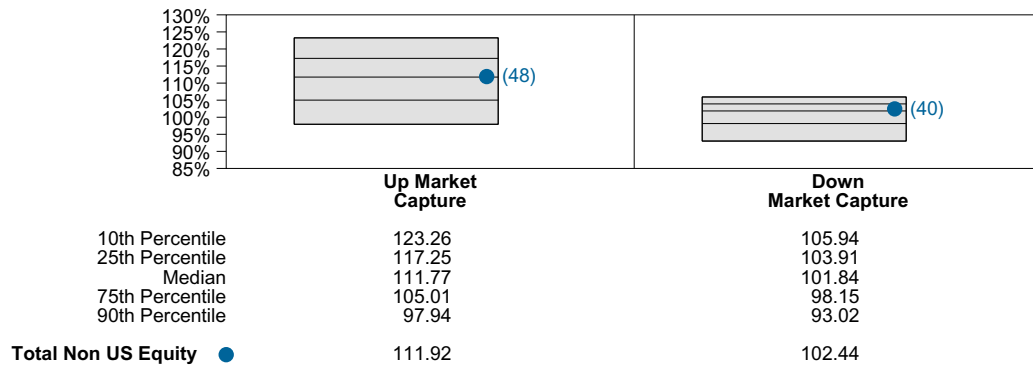
## Risk Analysis

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.

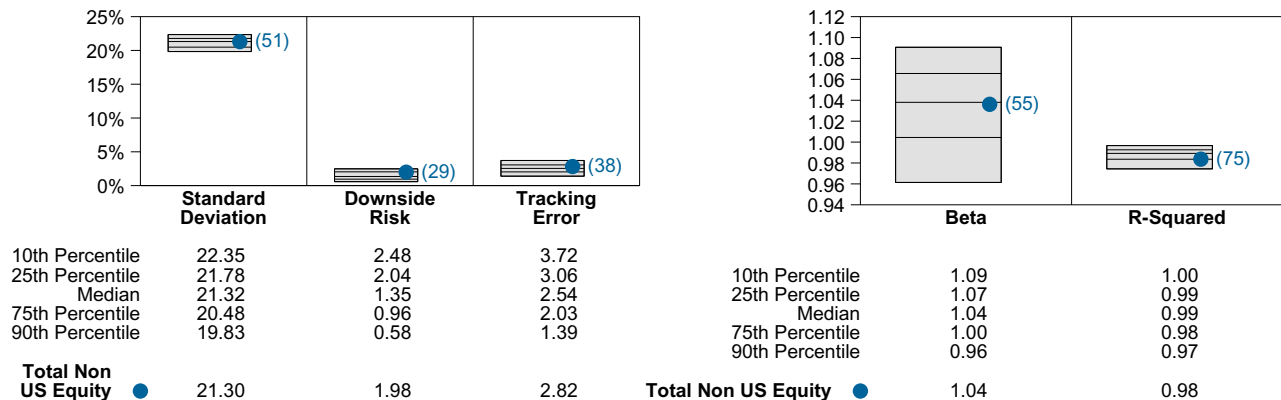
### Risk Analysis vs Lg Public Fund - International Equity (Gross) Five Years Ended December 31, 2023



### Market Capture vs Non US Equity Benchmark Rankings Against Lg Public Fund - International Equity (Gross) Five Years Ended December 31, 2023



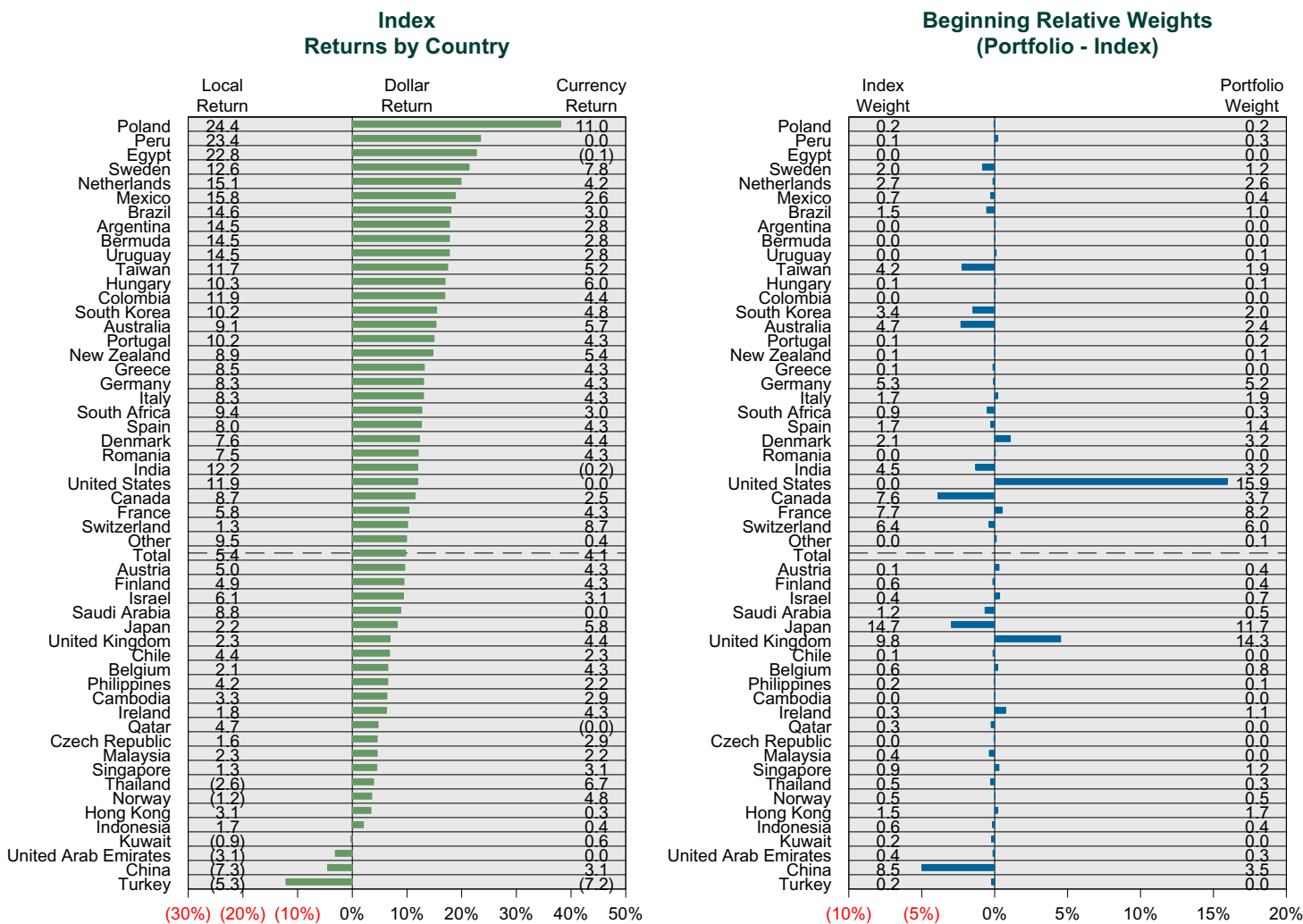
### Risk Statistics Rankings vs Non US Equity Benchmark Rankings Against Lg Public Fund - International Equity (Gross) Five Years Ended December 31, 2023



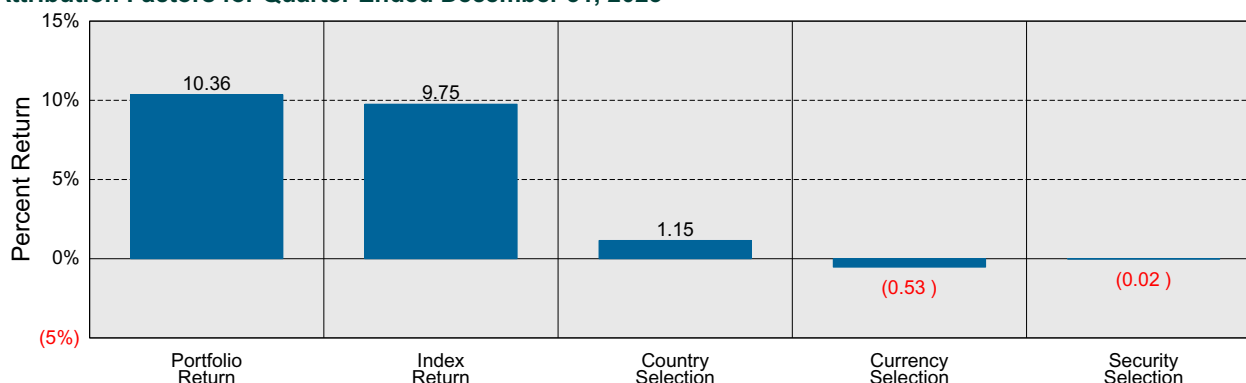
# Total Non US Equity vs MSCI ACWI xUS (Net) Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

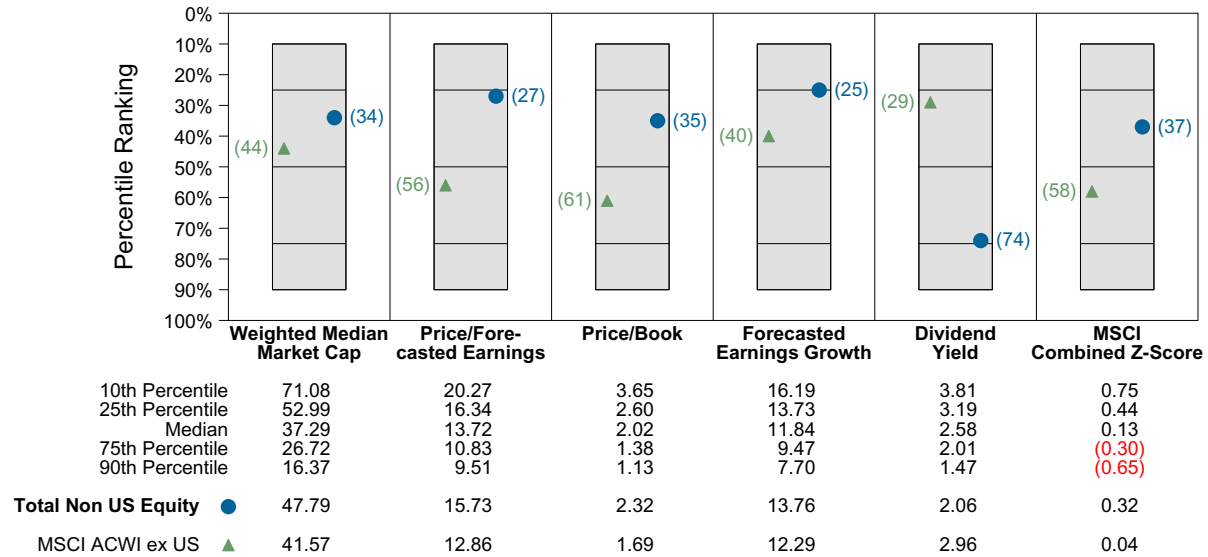


# Total Non US Equity Equity Characteristics Analysis Summary

## Portfolio Characteristics

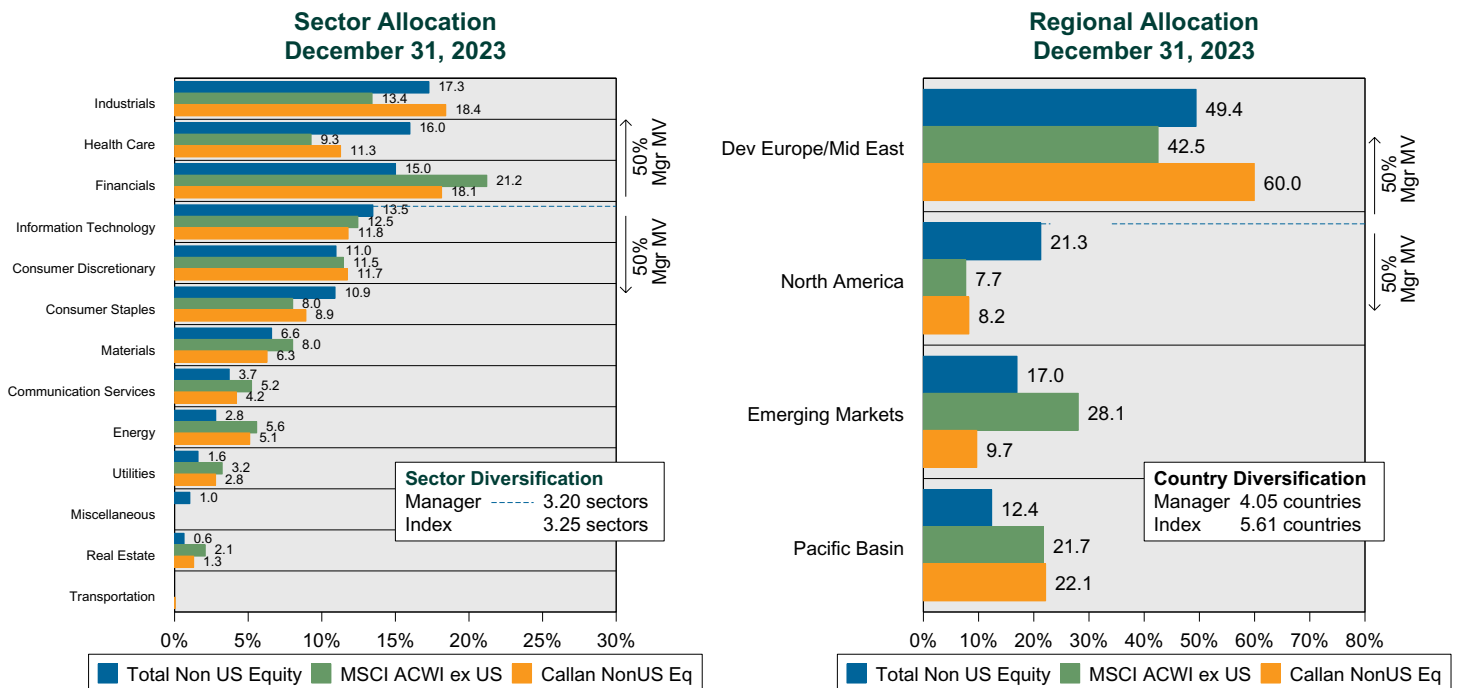
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of December 31, 2023



## 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

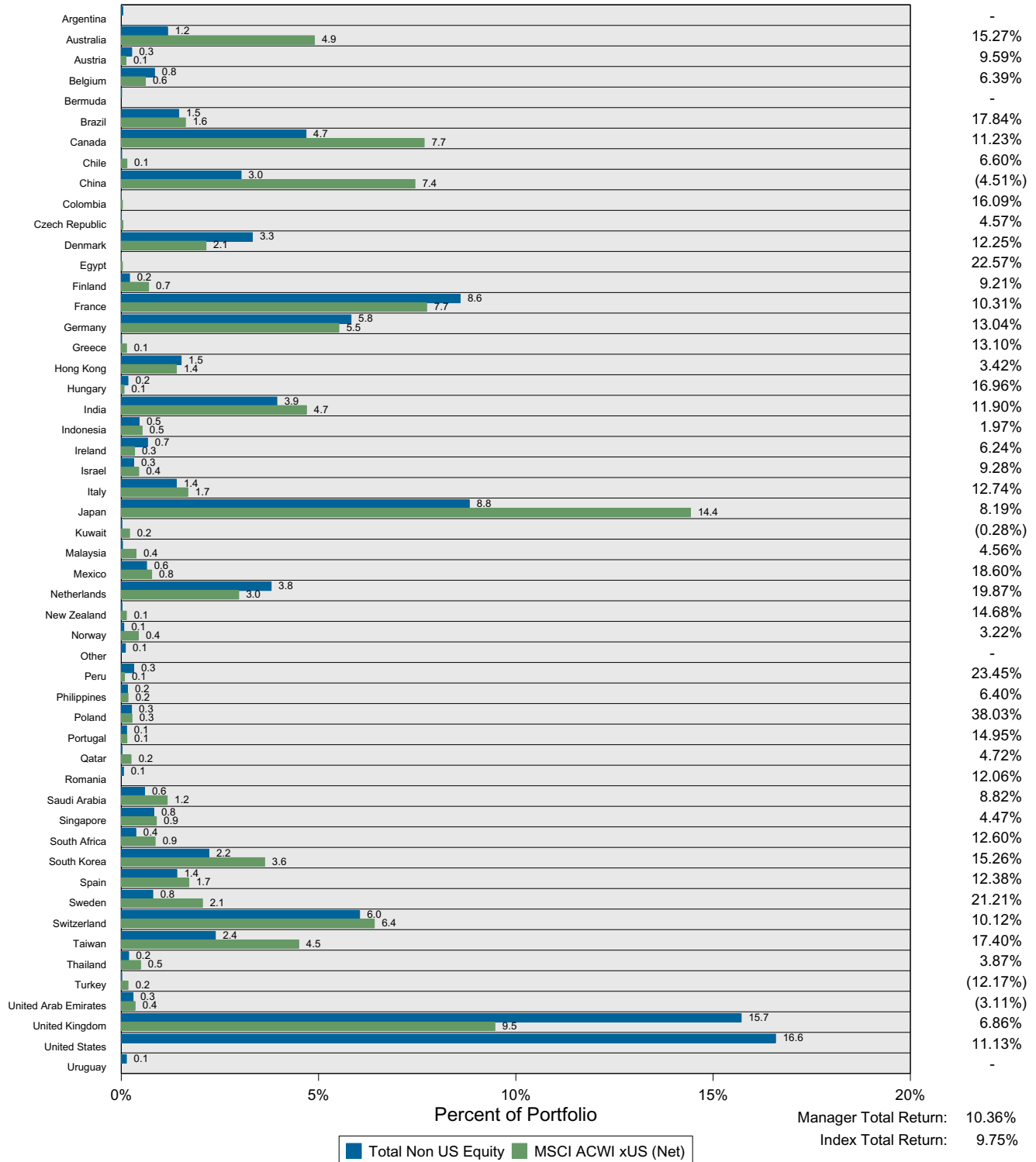
## Total Non US Equity VS MSCI ACWI xUS (Net)

### Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of December 31, 2023. 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 December 31, 2023

Index Rtns



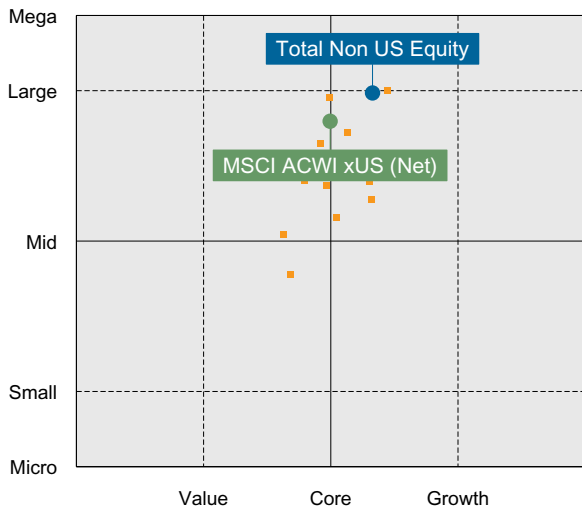
# Current Holdings Based Style Analysis

## Total Non US Equity

### As of December 31, 2023

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 chart 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.

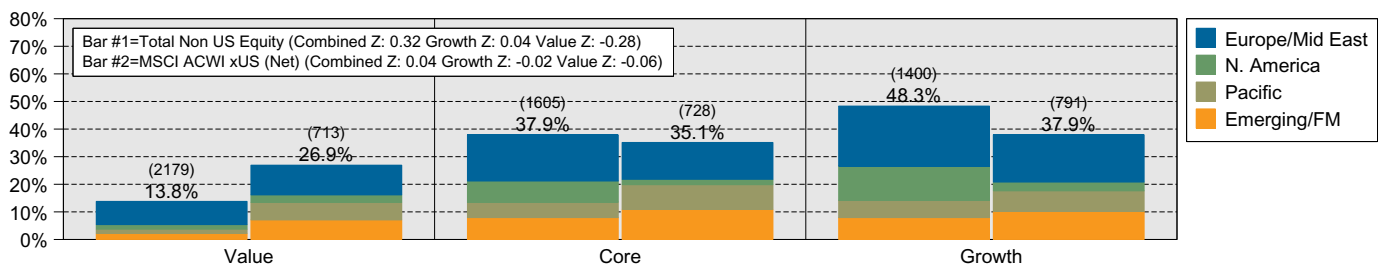
**Style Map vs Lg Public Fd - Int Equity Holdings as of December 31, 2023**



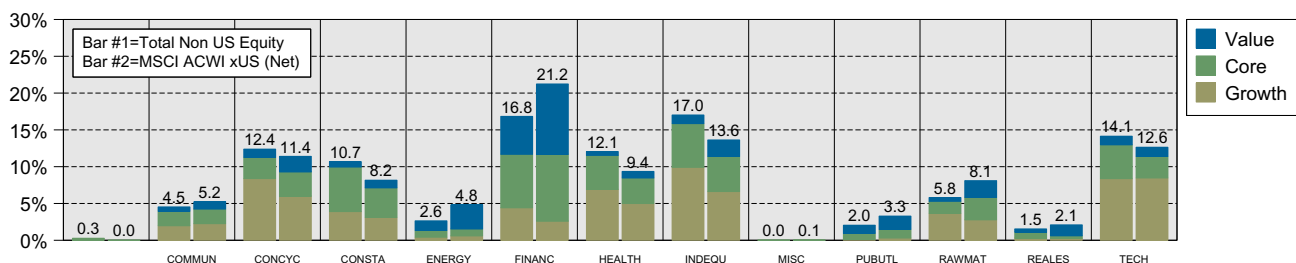
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	8.4% (214)	16.7% (226)	21.8% (201)	46.9% (641)
N. America	10.8% (147)	13.3% (137)	17.1% (149)	41.2% (433)
Pacific	1.7% (299)	7.6% (213)	12.4% (165)	21.7% (677)
Emerging/ FM	2.7% (27)	2.0% (26)	3.2% (36)	7.9% (89)
Total	13.8% (2179)	37.9% (1605)	48.3% (1400)	100.0% (5184)
	26.9% (713)	35.1% (728)	37.9% (791)	100.0% (2232)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**

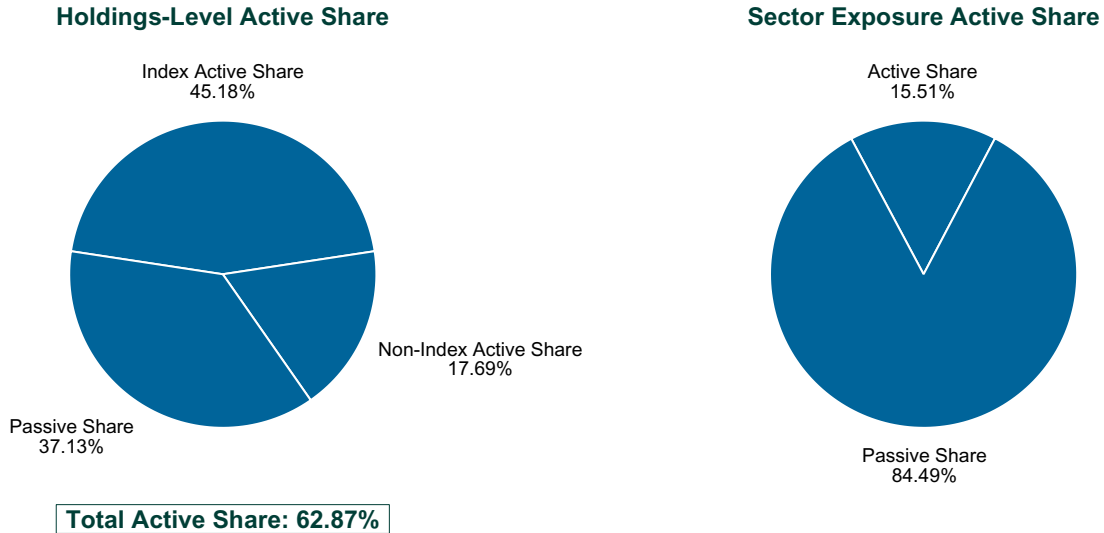


**Sector Weights Distribution Holdings as of December 31, 2023**



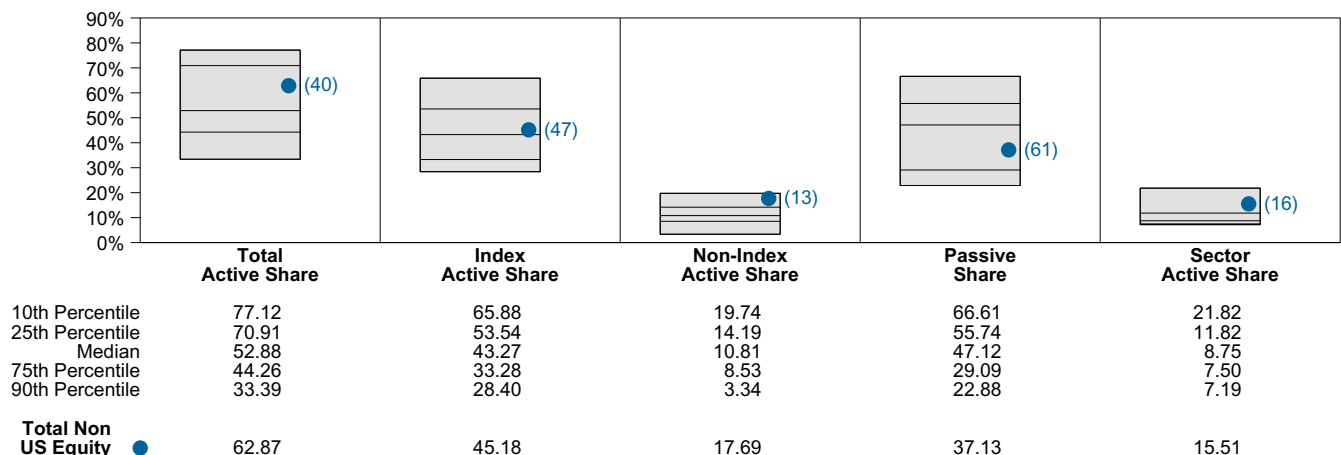
## Total Non US Equity Active Share Analysis as of December 31, 2023 vs. MSCI ACWI xUS (Net)

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.



	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	43.54%	14.63%	58.18%	5.23%	3.71%	2.81%
Consumer Discretionary	46.48%	21.00%	67.49%	11.47%	10.97%	7.80%
Consumer Staples	38.78%	10.28%	49.05%	8.02%	10.90%	4.48%
Energy	40.70%	21.64%	62.34%	5.58%	2.80%	2.86%
Financials	53.78%	10.65%	64.43%	21.21%	15.01%	12.11%
Health Care	34.63%	26.50%	61.13%	9.28%	15.99%	6.97%
Industrials	50.80%	14.85%	65.65%	13.42%	17.28%	9.90%
Information Technology	35.40%	21.99%	57.39%	12.45%	13.47%	7.34%
Materials	55.97%	17.41%	73.38%	8.02%	6.59%	5.19%
Miscellaneous	0.00%	100.00%	100.00%	-	1.04%	0.19%
Pooled Vehicles	0.00%	100.00%	100.00%	-	-	0.04%
Real Estate	49.75%	29.18%	78.94%	2.08%	0.64%	1.52%
Utilities	55.04%	6.73%	61.76%	3.23%	1.59%	1.54%
<b>Total</b>	<b>45.18%</b>	<b>17.69%</b>	<b>62.87%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>62.74%</b>

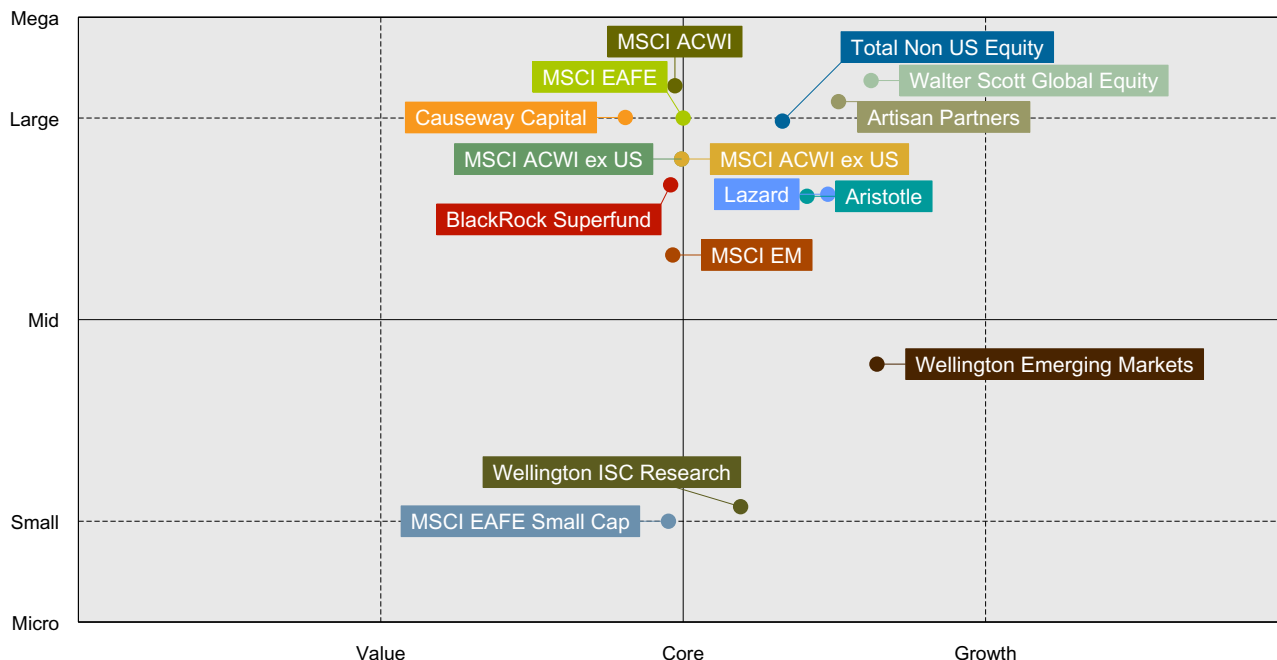
### Active Share vs. Lg Public Fd - Int Equity



## International Holdings Based Style Analysis For One Quarter Ended December 31, 2023

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 December 31, 2023



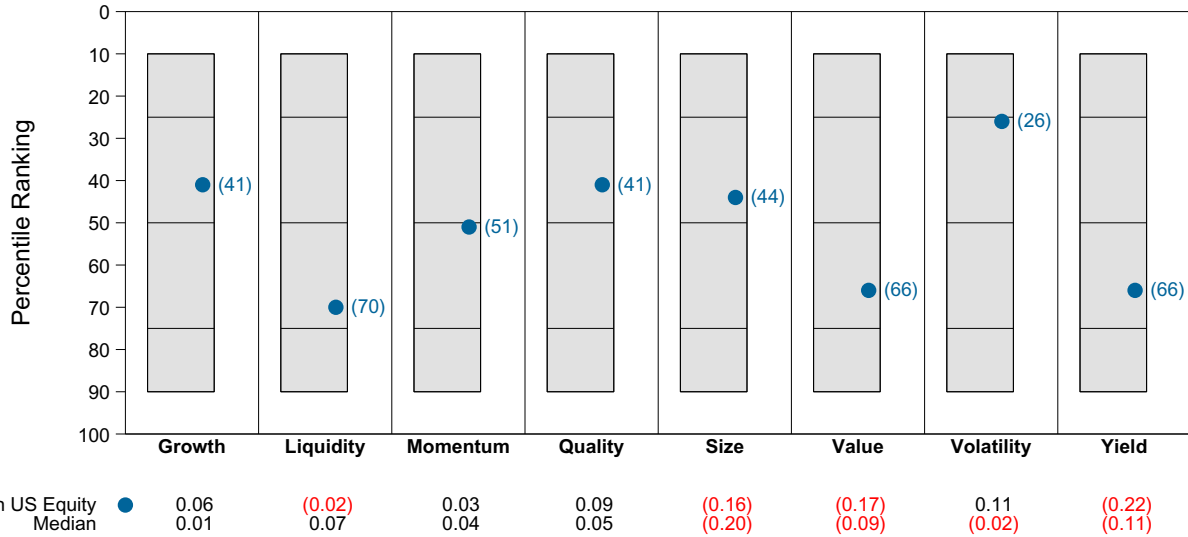
	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
Total Non US Equity	100.00%	47.79	0.32	0.04	(0.28)	5639	69.54
MSCI ACWI ex US	-	41.57	0.04	(0.02)	(0.06)	2311	160.92
Artisan Partners	17.12%	74.06	0.47	0.10	(0.37)	59	11.60
Causeway Capital	19.71%	49.18	(0.12)	(0.06)	0.06	70	19.18
Lazard	7.53%	35.78	0.44	0.12	(0.32)	59	19.13
Aristotle	7.91%	35.44	0.38	0.04	(0.34)	38	14.51
MSCI EAFE	-	48.30	0.05	(0.02)	(0.07)	783	89.49
BlackRock Superfund	8.63%	37.32	0.01	(0.02)	(0.04)	5445	159.74
MSCI ACWI ex US	-	41.57	0.04	(0.02)	(0.06)	2311	160.92
Wellington Emerging Markets	7.69%	12.39	0.57	0.13	(0.44)	104	32.73
MSCI EM	-	25.80	0.02	(0.02)	(0.04)	1440	87.26
Wellington ISC Research	6.18%	3.44	0.20	0.04	(0.16)	261	57.86
MSCI EAFE Small Cap	-	2.53	0.01	(0.01)	(0.01)	2173	437.51
Walter Scott Global Equity	25.19%	107.16	0.55	0.02	(0.53)	47	16.48
MSCI ACWI	-	98.94	0.02	(0.02)	(0.04)	2920	128.04



**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.

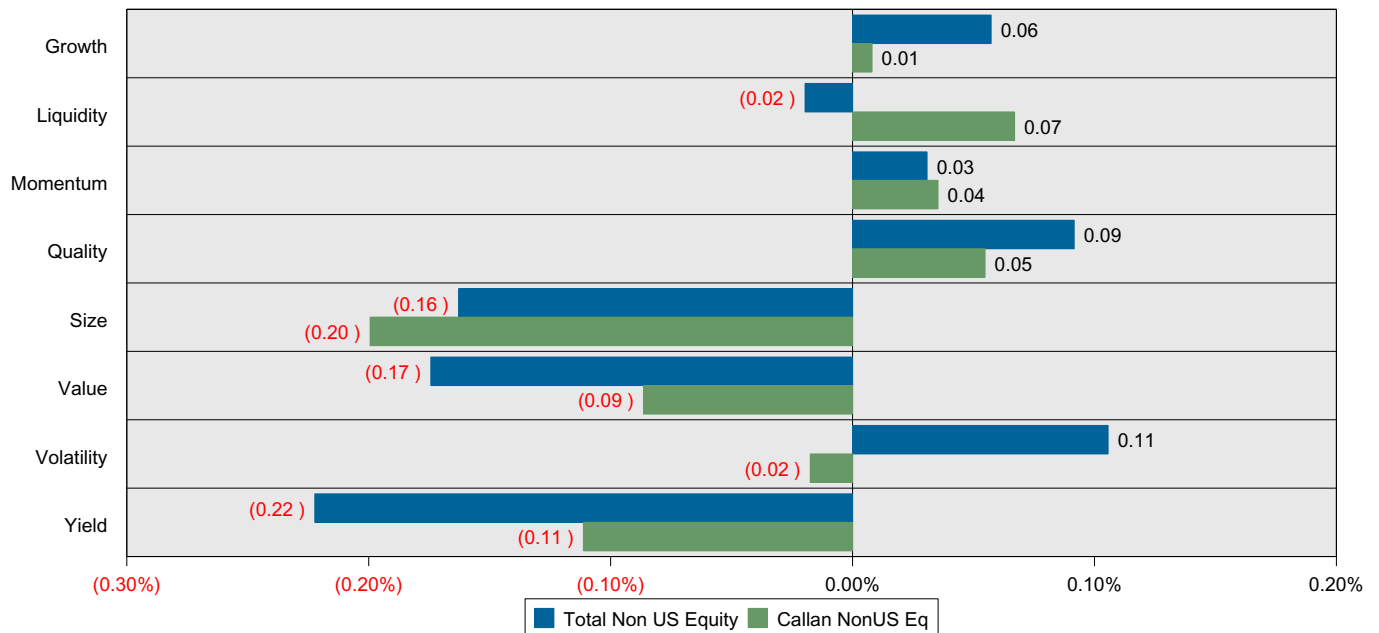
**Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# Core Non US Equity Period Ended December 31, 2023

## 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.

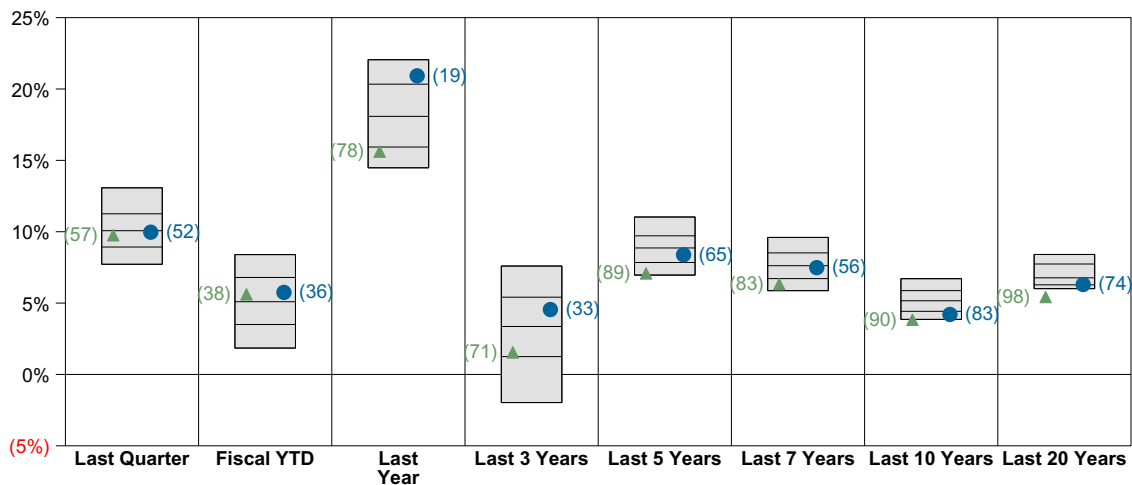
### Quarterly Summary and Highlights

- Core Non US Equity's portfolio posted a 9.97% return for the quarter placing it in the 52 percentile of the Callan NonUS Eq group for the quarter and in the 19 percentile for the last year.
- Core Non US Equity's portfolio outperformed the Core Non US Benchmark by 0.21% for the quarter and outperformed the Core Non US Benchmark for the year by 5.31%.

### Quarterly Asset Growth

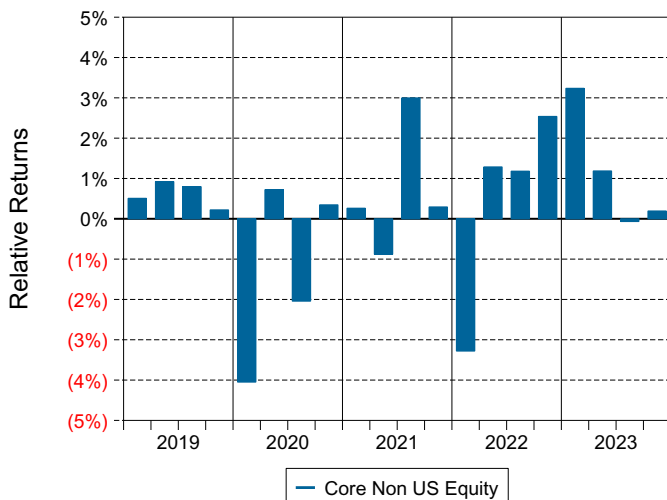
Beginning Market Value	\$1,209,436,400
Net New Investment	\$-25
Investment Gains/(Losses)	\$120,529,649
Ending Market Value	\$1,329,966,023

### Performance vs Callan NonUS Eq (Gross)

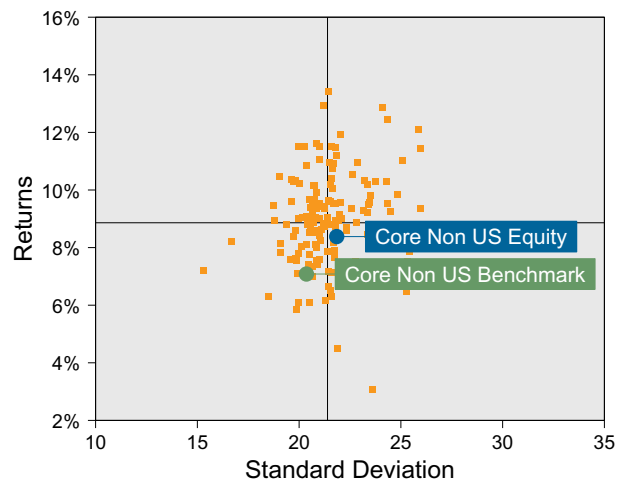


10th Percentile	13.08	8.40	22.05	7.60	11.03	9.60	6.71	8.41
25th Percentile	11.26	6.79	20.34	5.41	9.71	8.52	5.87	7.74
Median	10.07	5.09	18.08	3.36	8.86	7.62	5.16	6.77
75th Percentile	8.93	3.50	15.93	1.25	7.84	6.72	4.42	6.28
90th Percentile	7.72	1.85	14.48	(1.97)	6.96	5.87	3.86	6.01
<b>Core Non US Equity</b>	● 9.97	5.75	20.92	4.55	8.38	7.48	4.20	6.30
Core Non US Benchmark	▲ 9.75	5.61	15.62	1.55	7.08	6.33	3.83	5.43

### Relative Return vs Core Non US Benchmark



### Callan NonUS Eq (Gross) Annualized Five Year Risk vs Return

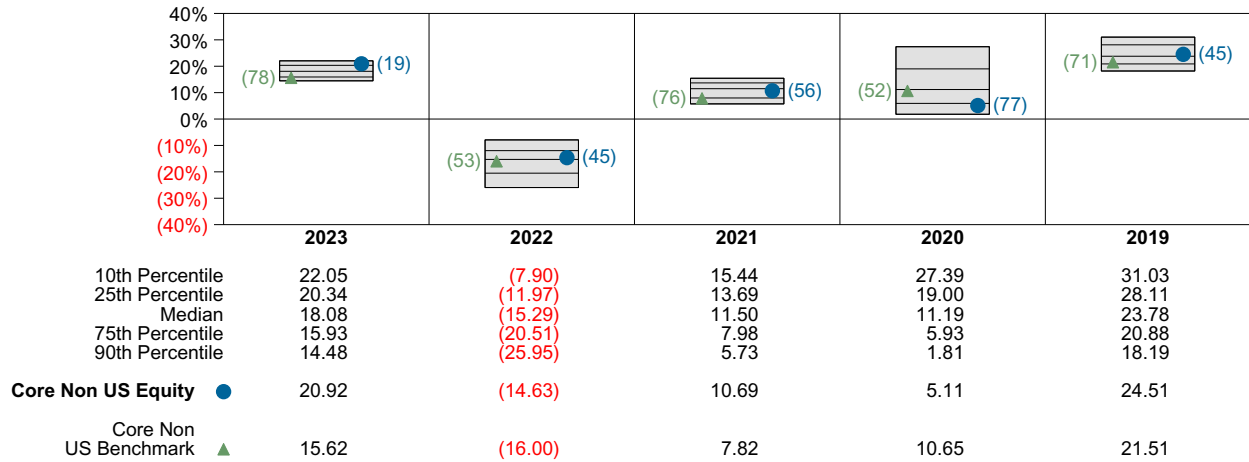


# Core Non US Equity Return Analysis Summary

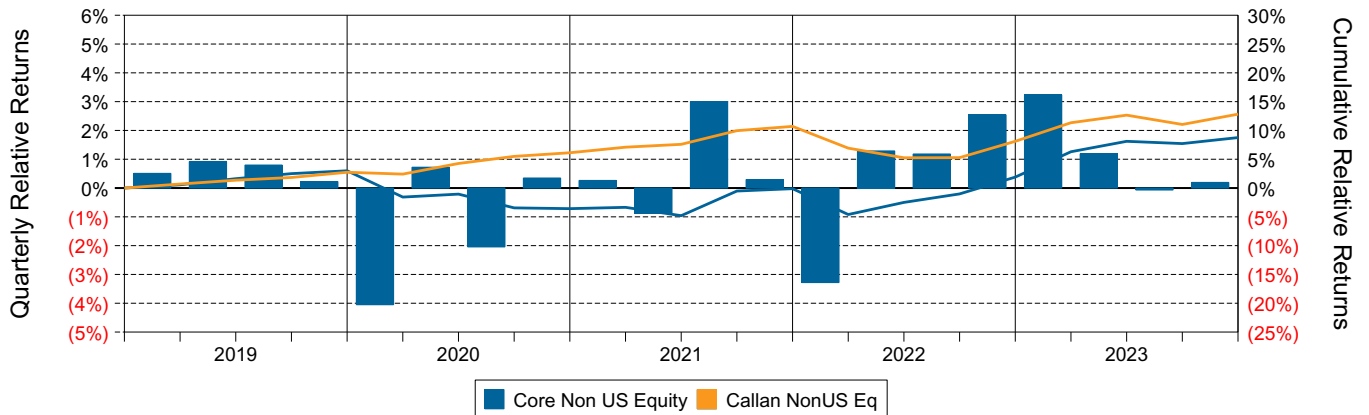
## Return Analysis

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.

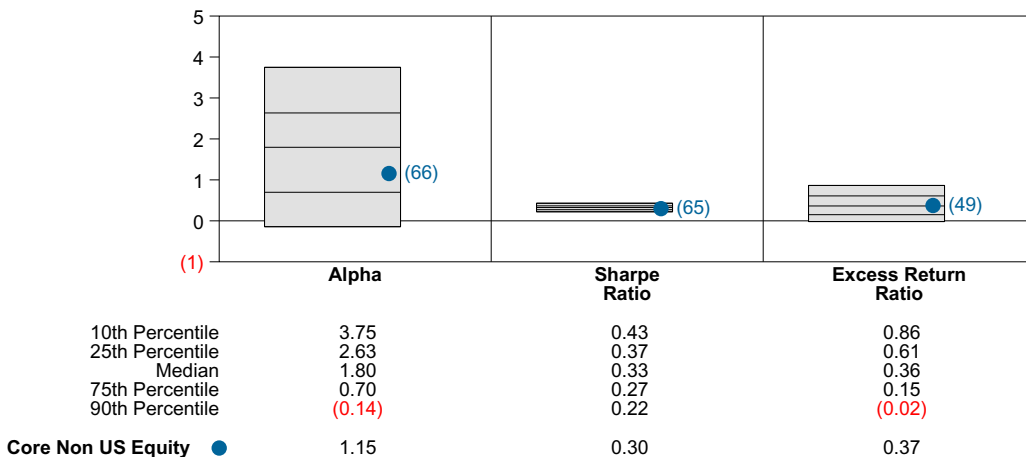
### Performance vs Callan NonUS Eq (Gross)



### 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 December 31, 2023

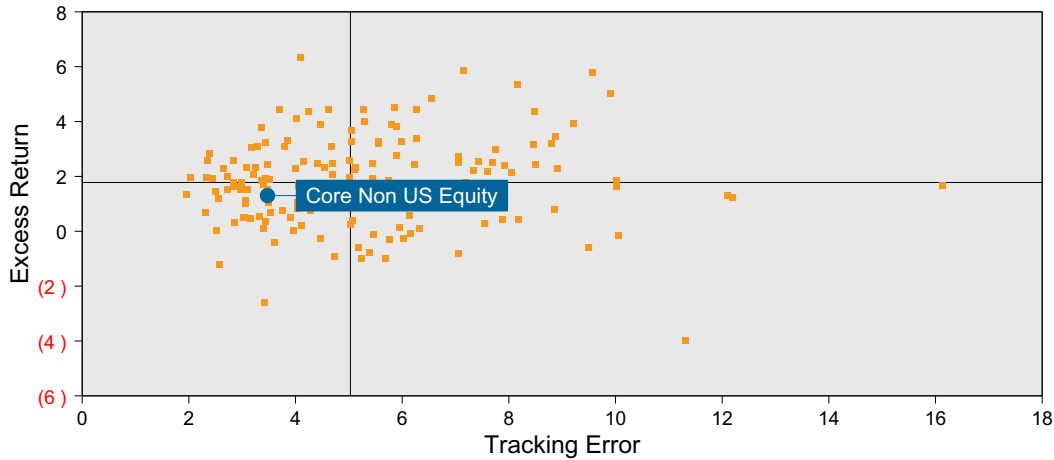


# Core Non US Equity Risk Analysis Summary

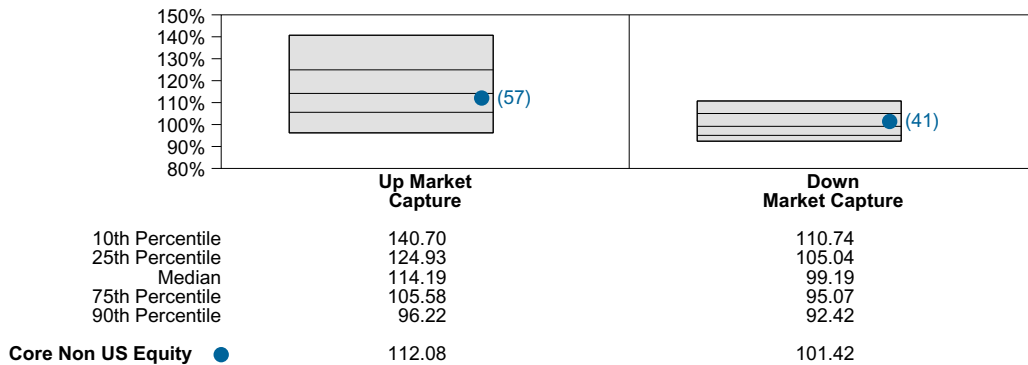
## Risk Analysis

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.

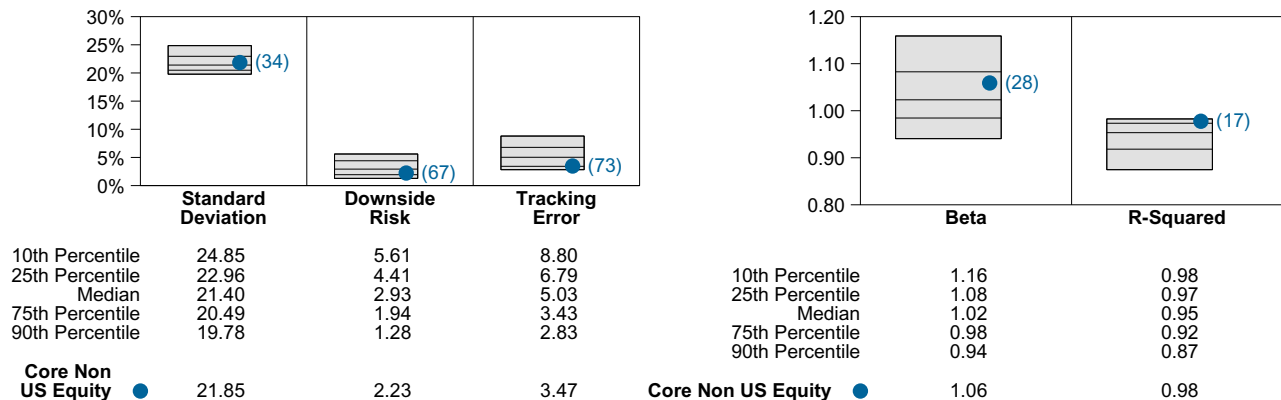
### Risk Analysis vs Callan Non-US Equity (Gross) Five Years Ended December 31, 2023



### Market Capture vs Core Non US Benchmark Rankings Against Callan Non-US Equity (Gross) Five Years Ended December 31, 2023



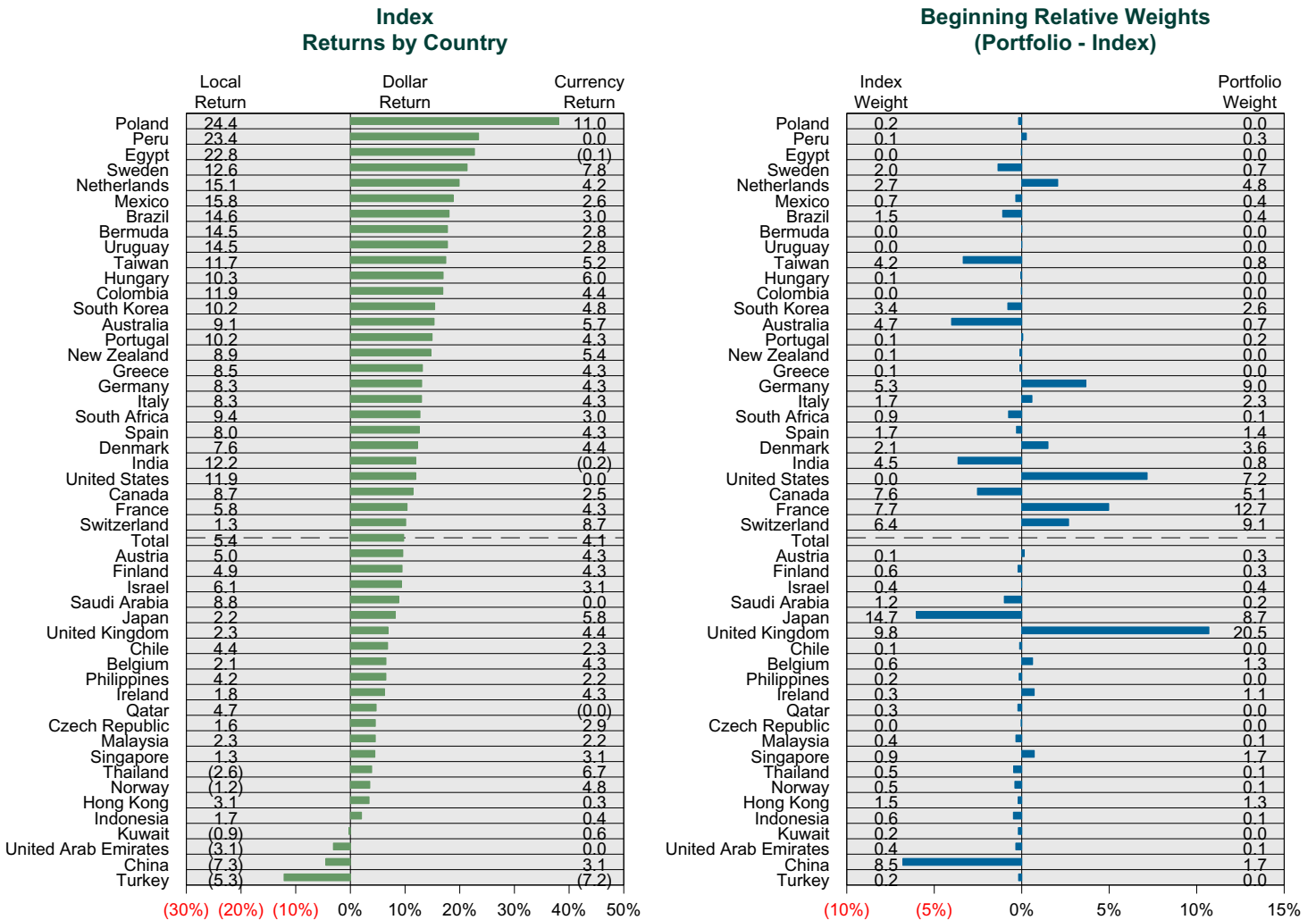
### Risk Statistics Rankings vs Core Non US Benchmark Rankings Against Callan Non-US Equity (Gross) Five Years Ended December 31, 2023



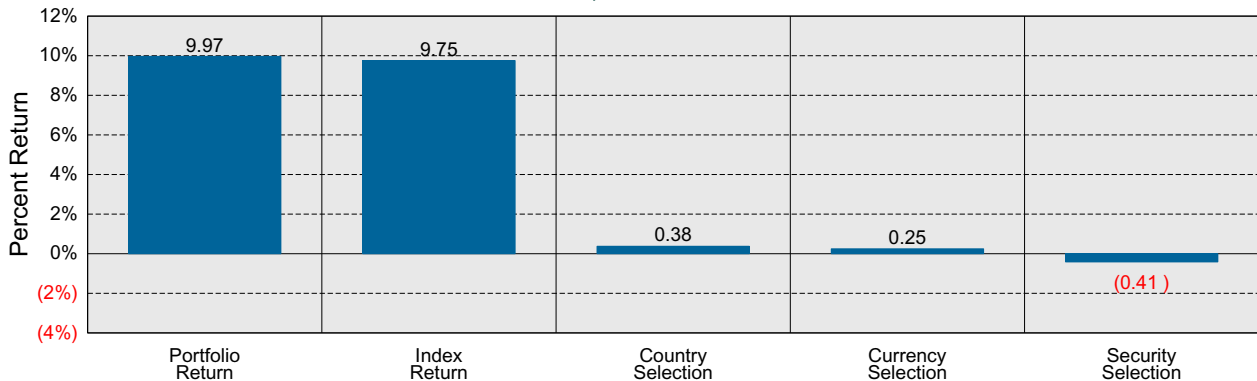
# Core Non US Equity vs MSCI ACWI xUS (Net) Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

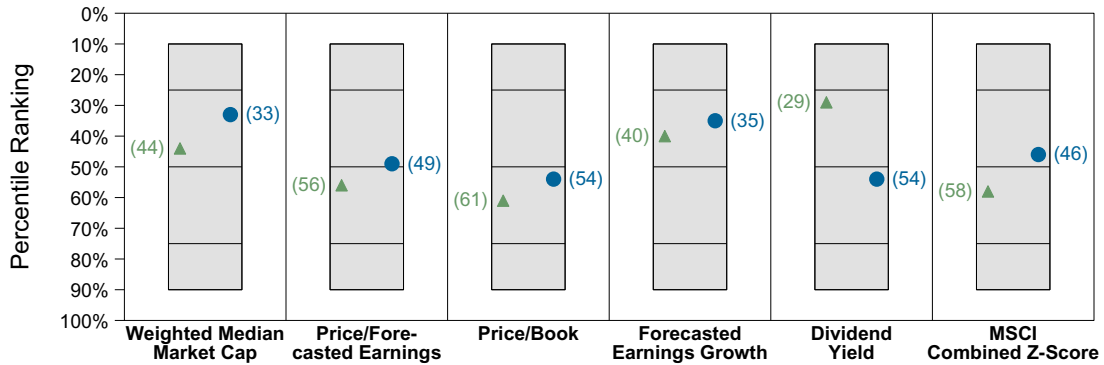


# Core Non US Equity Equity Characteristics Analysis Summary

## 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 December 31, 2023

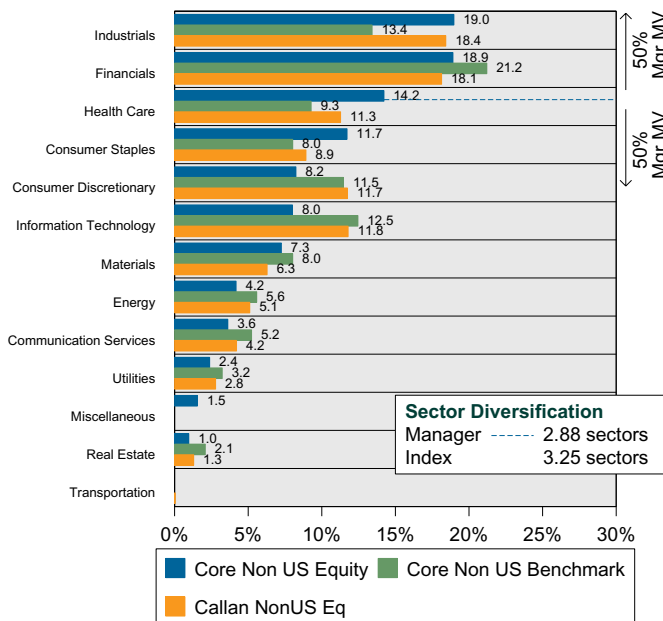


	Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	71.08	20.27	3.65	16.19	3.81	0.75
25th Percentile	52.99	16.34	2.60	13.73	3.19	0.44
Median	37.29	13.72	2.02	11.84	2.58	0.13
75th Percentile	26.72	10.83	1.38	9.47	2.01	(0.30)
90th Percentile	16.37	9.51	1.13	7.70	1.47	(0.65)
<b>Core Non US Equity</b>	<b>47.98</b>	<b>13.74</b>	<b>1.91</b>	<b>12.66</b>	<b>2.47</b>	<b>0.18</b>
Core Non US Benchmark	41.57	12.86	1.69	12.29	2.96	0.04

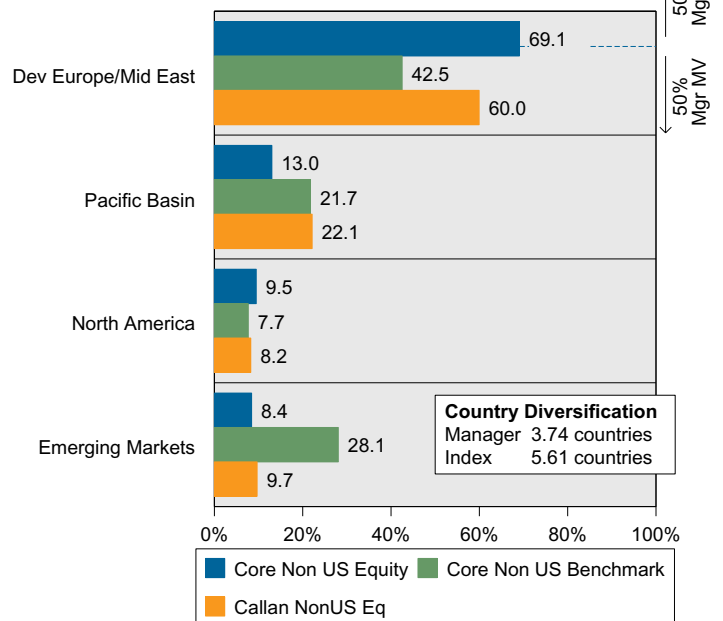
## Sector Weights

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.

### Sector Allocation December 31, 2023



### Regional Allocation December 31, 2023



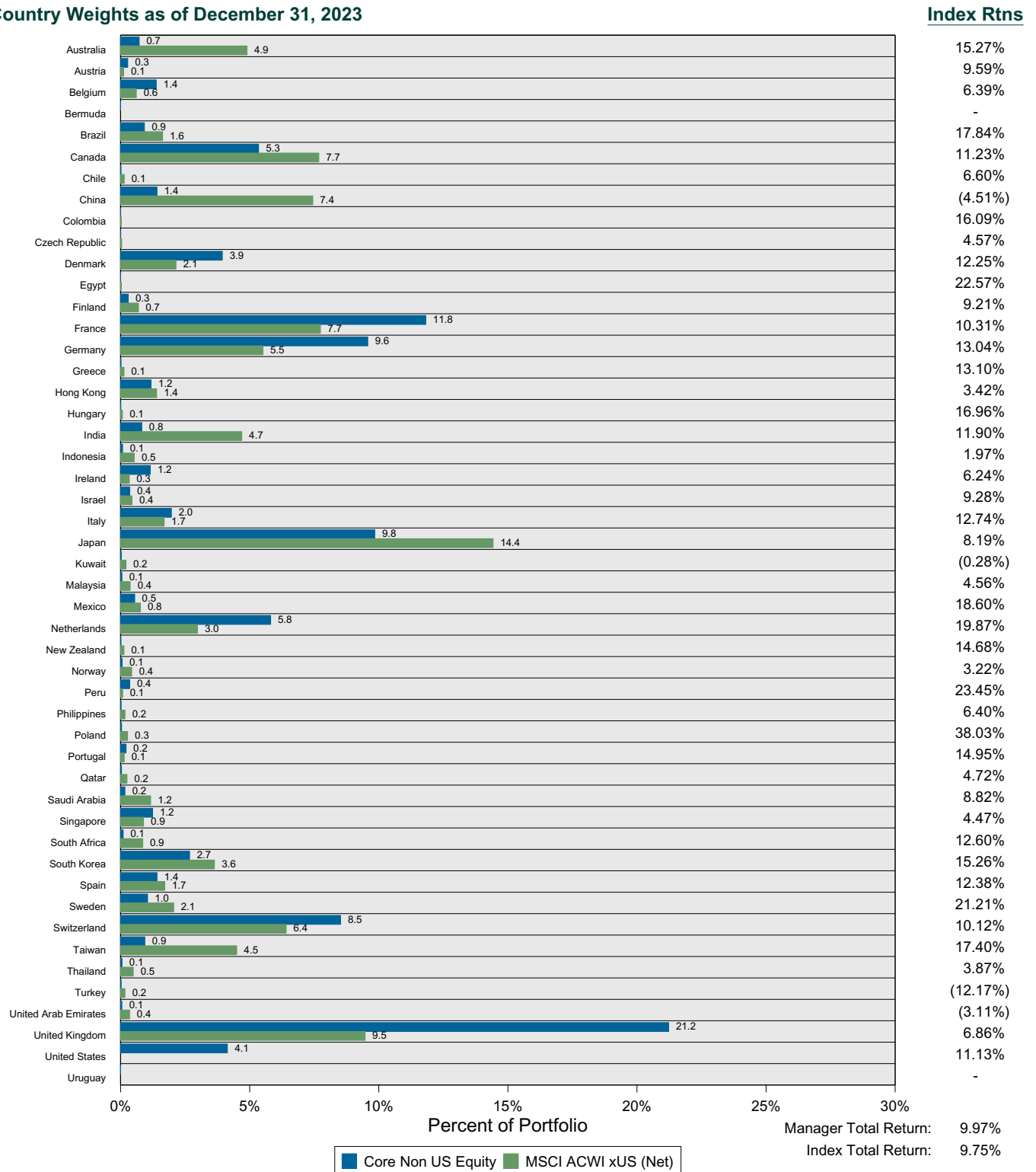
# Country Allocation

## 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 December 31, 2023. 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 December 31, 2023



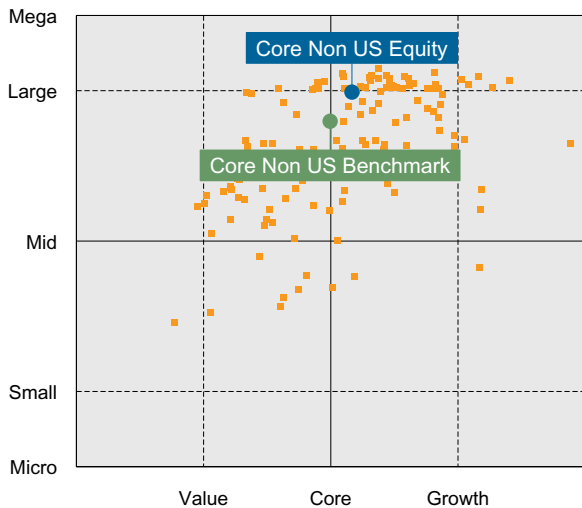
# Current Holdings Based Style Analysis

## Core Non US Equity

### As of December 31, 2023

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.

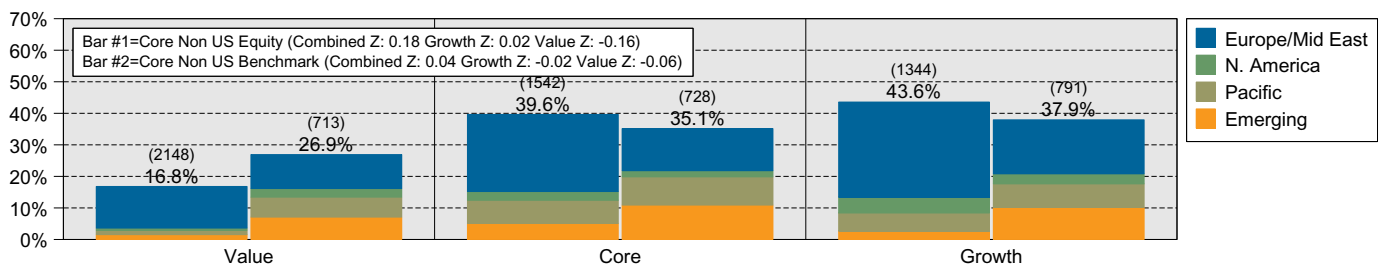
**Style Map vs Callan NonUS Eq Holdings as of December 31, 2023**



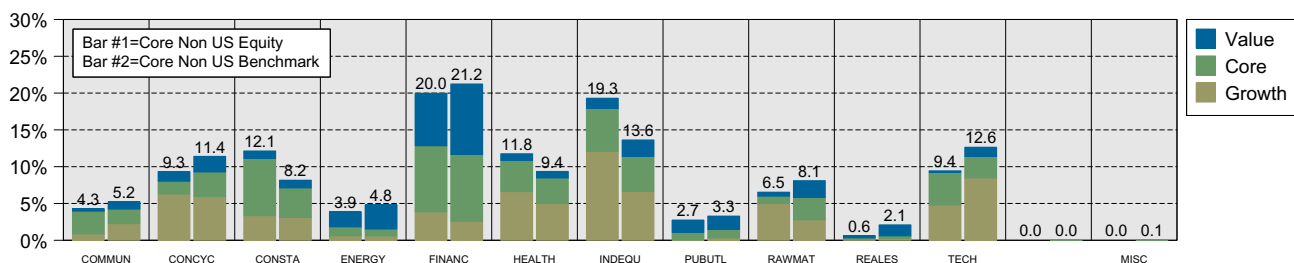
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	13.2% (193)	24.4% (201)	30.2% (176)	67.8% (570)
N. America	10.8% (147)	13.3% (137)	17.1% (149)	41.2% (433)
Pacific	0.7% (297)	2.8% (202)	5.0% (158)	8.5% (657)
Emerging	2.7% (27)	2.0% (26)	3.2% (36)	7.9% (89)
<b>Total</b>	<b>16.8% (2148)</b>	<b>39.6% (1542)</b>	<b>43.6% (1344)</b>	<b>100.0% (5034)</b>
	26.9% (713)	35.1% (728)	37.9% (791)	100.0% (2232)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



**Sector Weights Distribution Holdings as of December 31, 2023**

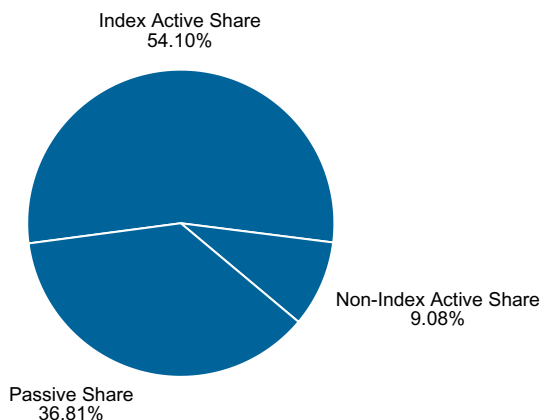




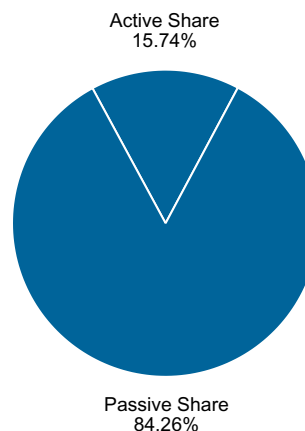
## Core Non US Equity Active Share Analysis as of December 31, 2023 vs. MSCI ACWI xUS (Net)

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



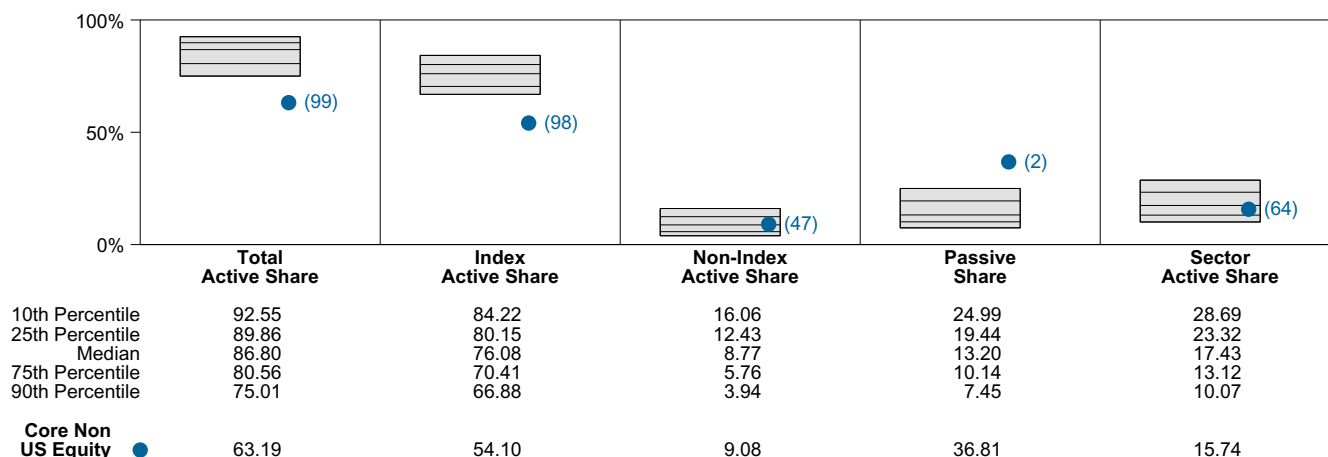
### Sector Exposure Active Share



**Total Active Share: 63.19%**

	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	63.19%	0.72%	63.91%	5.23%	3.61%	2.96%
Consumer Discretionary	54.41%	12.49%	66.90%	11.47%	8.24%	6.82%
Consumer Staples	50.88%	4.09%	54.97%	8.02%	11.71%	5.46%
Energy	45.96%	21.57%	67.53%	5.58%	4.18%	3.41%
Financials	61.33%	6.18%	67.50%	21.21%	18.91%	13.89%
Health Care	35.66%	16.89%	52.55%	9.28%	14.22%	6.33%
Industrials	57.07%	4.84%	61.91%	13.42%	18.97%	9.81%
Information Technology	44.25%	7.67%	51.92%	12.45%	8.01%	5.60%
Materials	62.10%	12.19%	74.29%	8.02%	7.25%	5.71%
Miscellaneous	0.00%	100.00%	100.00%	-	1.55%	0.27%
Pooled Vehicles	0.00%	100.00%	100.00%	-	-	0.00%
Real Estate	46.42%	25.41%	71.83%	2.08%	0.96%	1.23%
Utilities	60.35%	0.72%	61.07%	3.23%	2.38%	1.69%
<b>Total</b>	<b>54.10%</b>	<b>9.08%</b>	<b>63.19%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>63.19%</b>

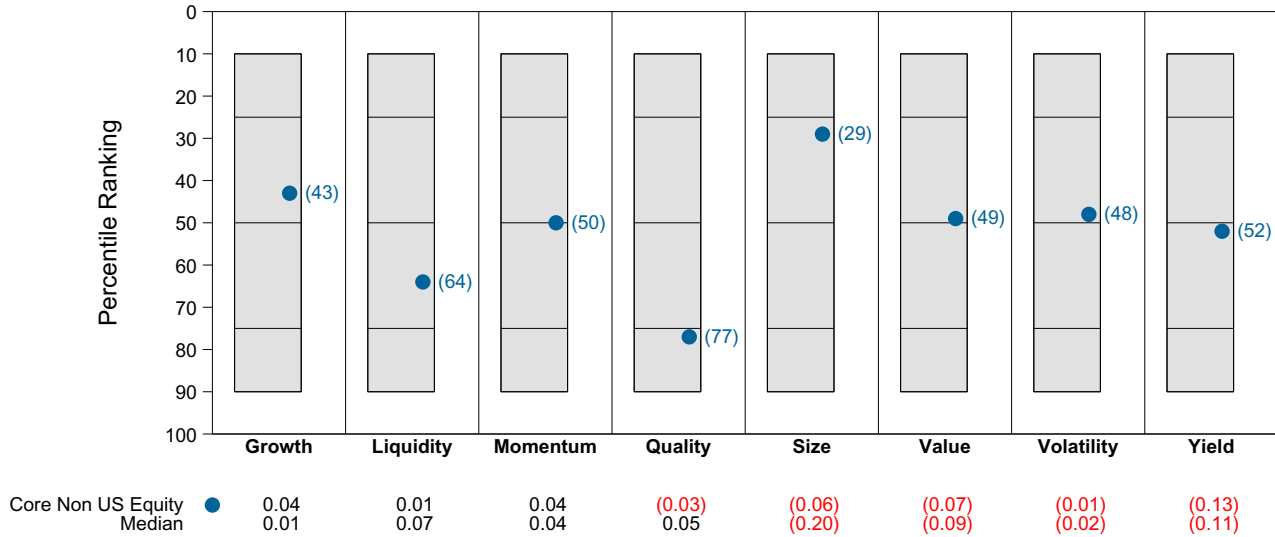
### Active Share vs. Callan NonUS Eq



**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.

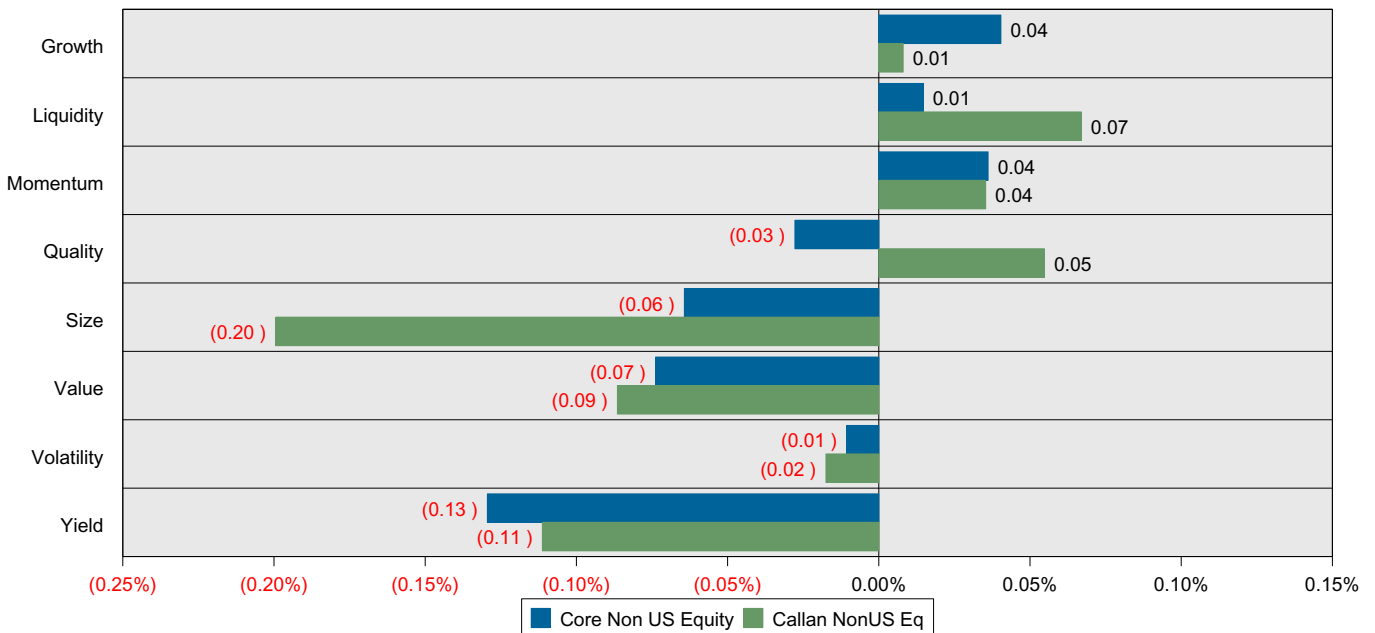
**Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# Aristotle

## Period Ended December 31, 2023

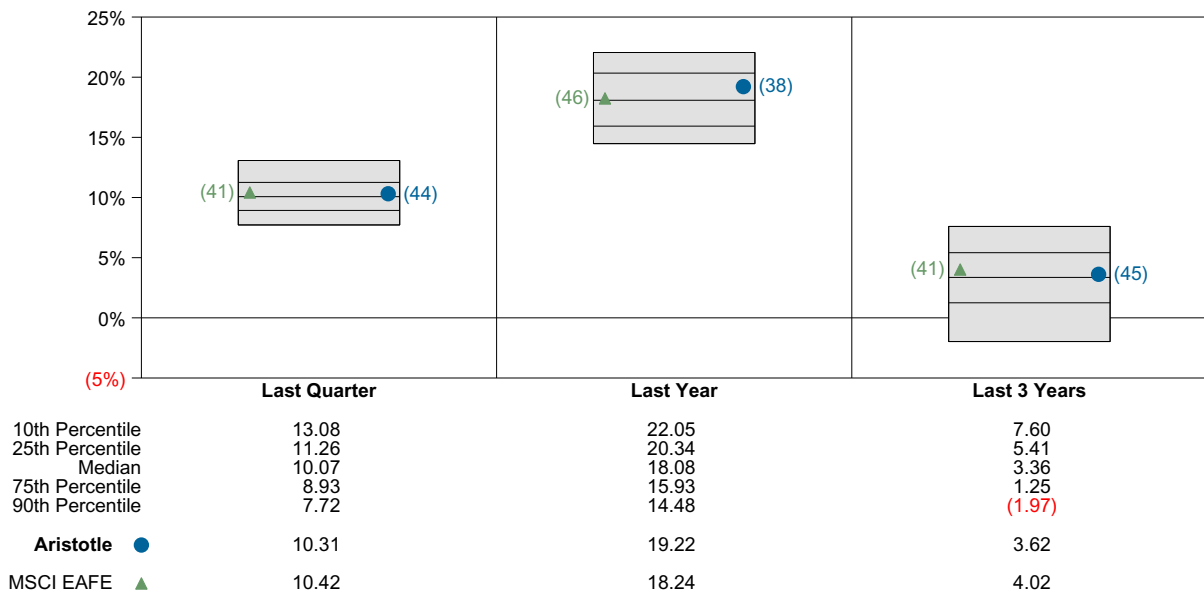
### Investment Philosophy

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.

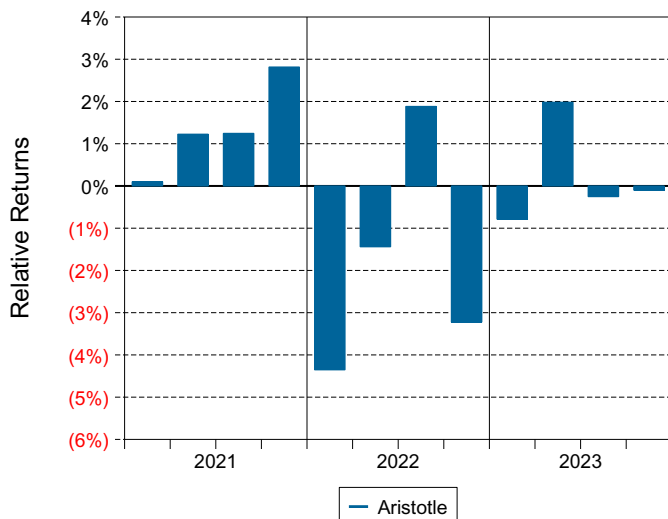
### Quarterly Asset Growth

Beginning Market Value	\$156,533,810
Net New Investment	\$0
Investment Gains/(Losses)	\$16,143,540
Ending Market Value	\$172,677,350

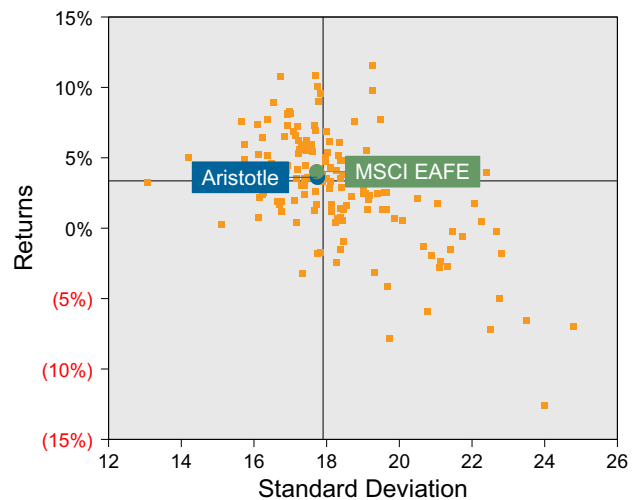
### Performance vs Callan NonUS Eq (Gross)



### Relative Return vs MSCI EAFE



### Callan NonUS Eq (Gross) Annualized Three Year Risk vs Return

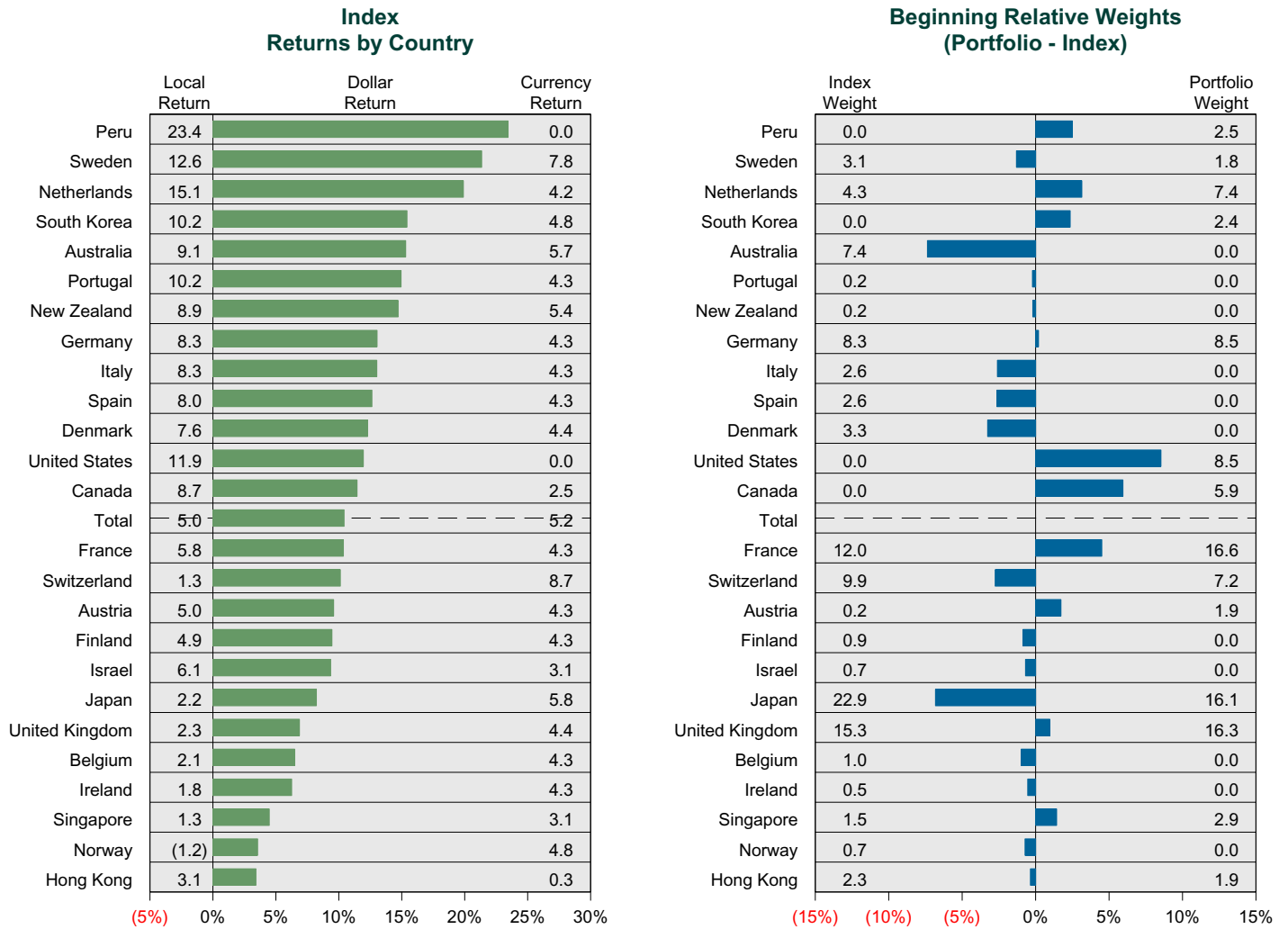


# Aristotle vs MSCI EAFE

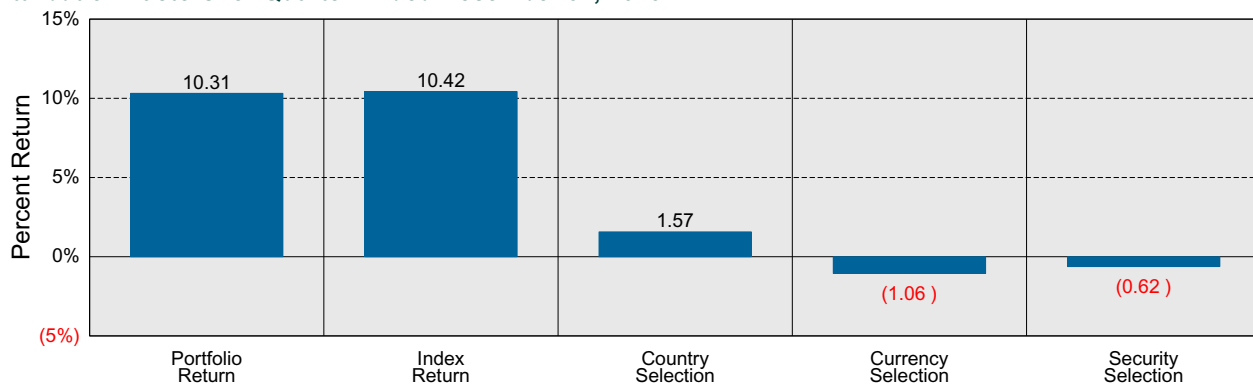
## Attribution for Quarter Ended December 31, 2023

### 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 December 31, 2023

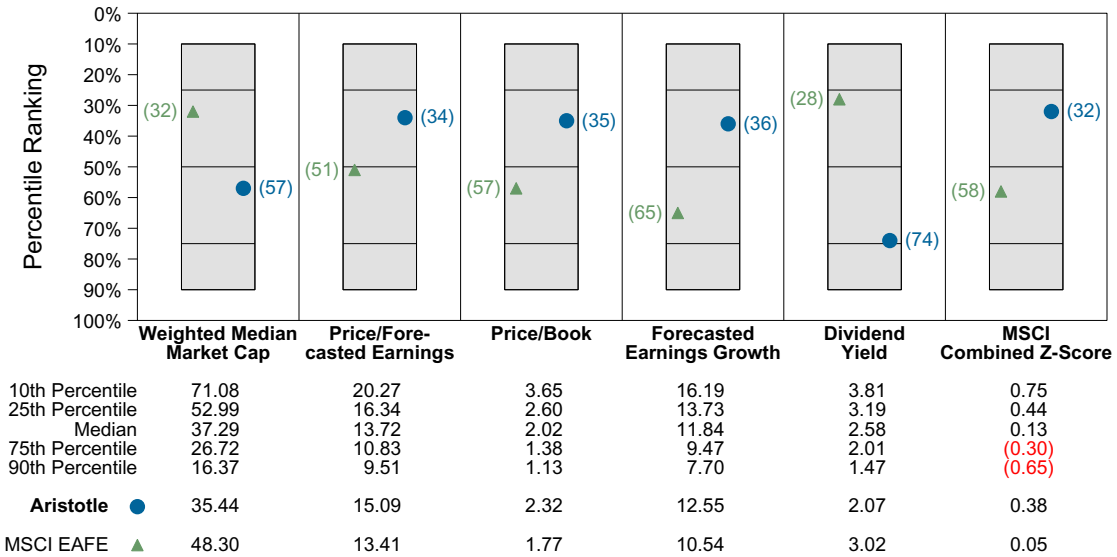


# Aristotle Equity Characteristics Analysis Summary

## Portfolio Characteristics

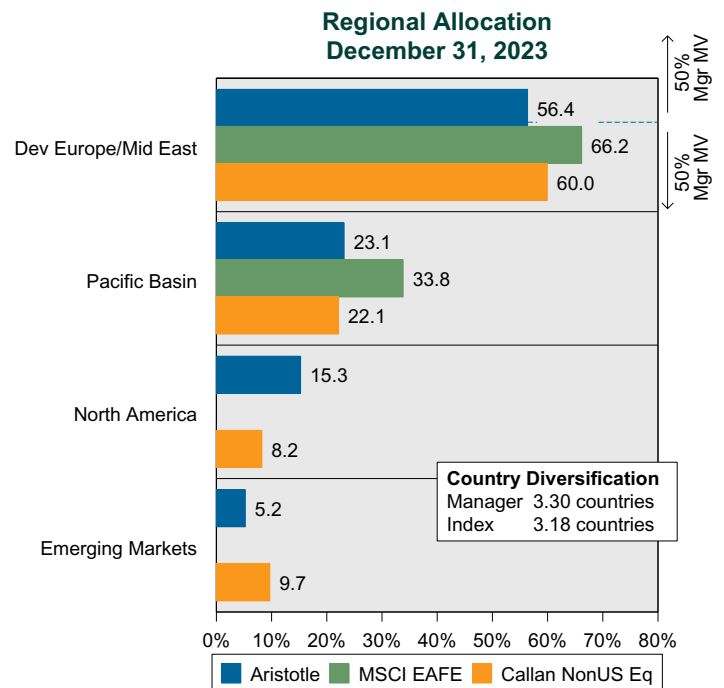
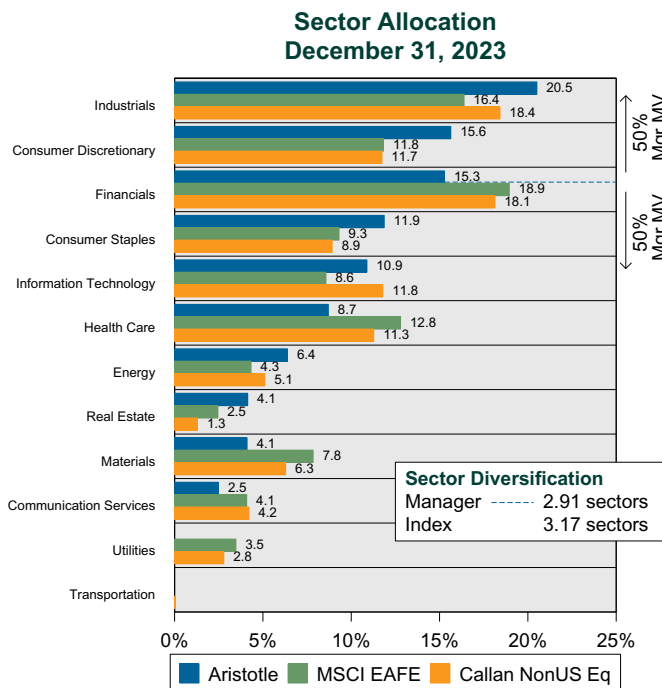
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of December 31, 2023



## 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.



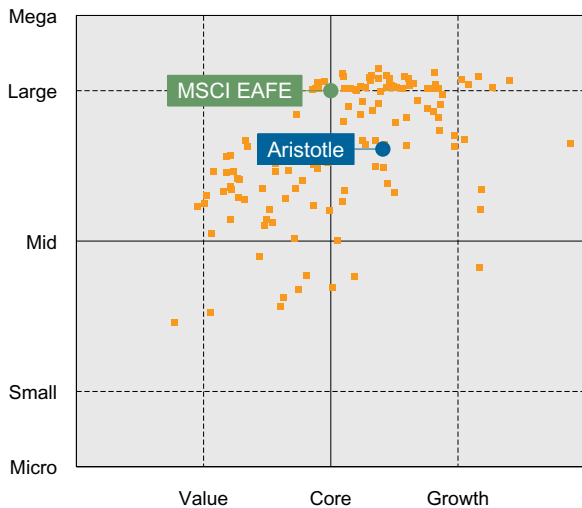
# Current Holdings Based Style Analysis

## Aristotle

### As of December 31, 2023

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 chart 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.

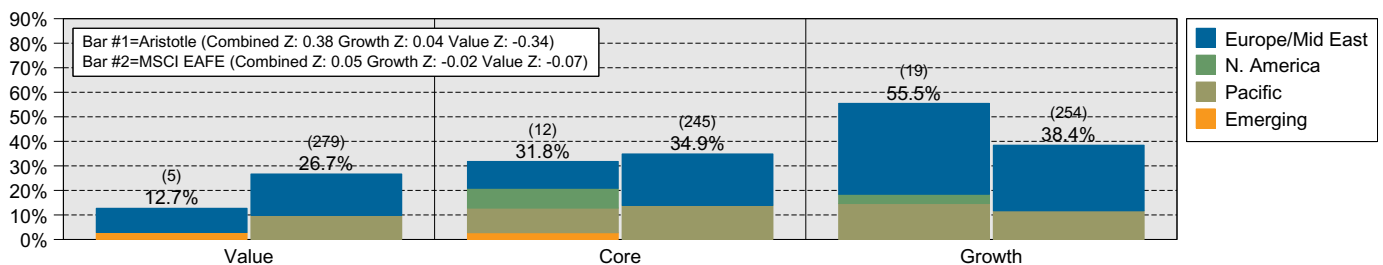
**Style Map vs Callan NonUS Eq Holdings as of December 31, 2023**



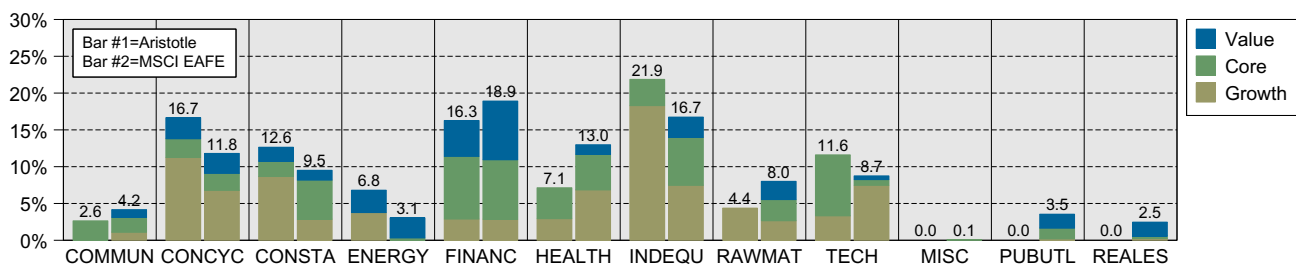
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	9.9% (4) 16.8% (147)	10.9% (4) 20.8% (137)	37.1% (13) 26.7% (149)	57.9% (21) 64.4% (433)
N. America	0.0% (0) 0.0% (0)	8.1% (2) 0.1% (1)	3.8% (1) 0.0% (0)	11.8% (3) 0.1% (1)
Pacific	0.0% (0) 9.9% (132)	10.0% (5) 13.9% (107)	14.7% (5) 11.7% (105)	24.7% (10) 35.5% (344)
Emerging	2.8% (1) 0.0% (0)	2.8% (1) 0.0% (0)	0.0% (0) 0.0% (0)	5.6% (2) 0.0% (0)
<b>Total</b>	<b>12.7% (5)</b> <b>26.7% (279)</b>	<b>31.8% (12)</b> <b>34.9% (245)</b>	<b>55.5% (19)</b> <b>38.4% (254)</b>	<b>100.0% (36)</b> <b>100.0% (778)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



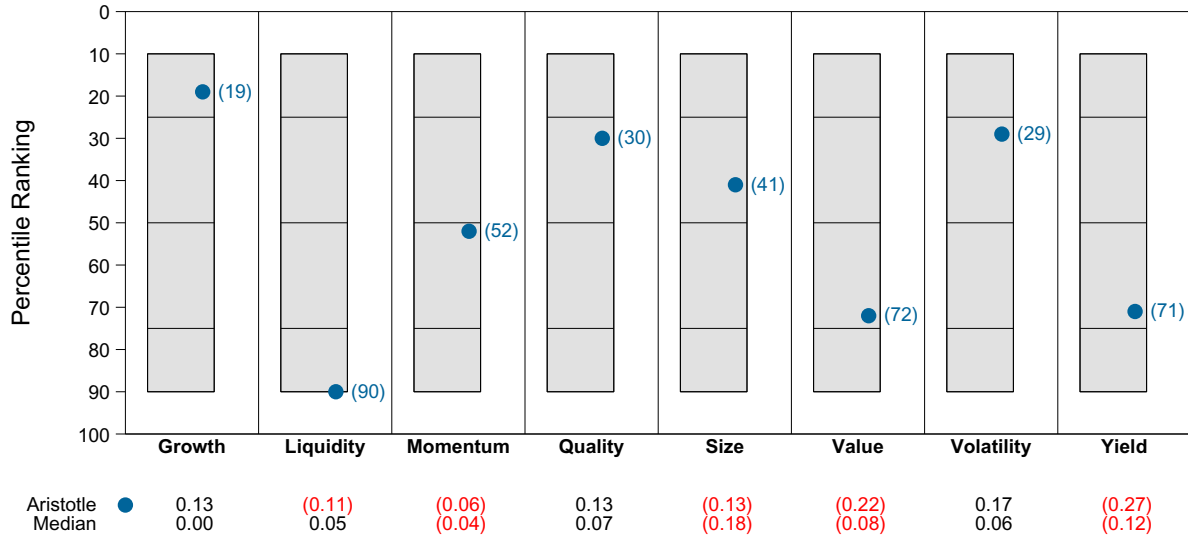
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

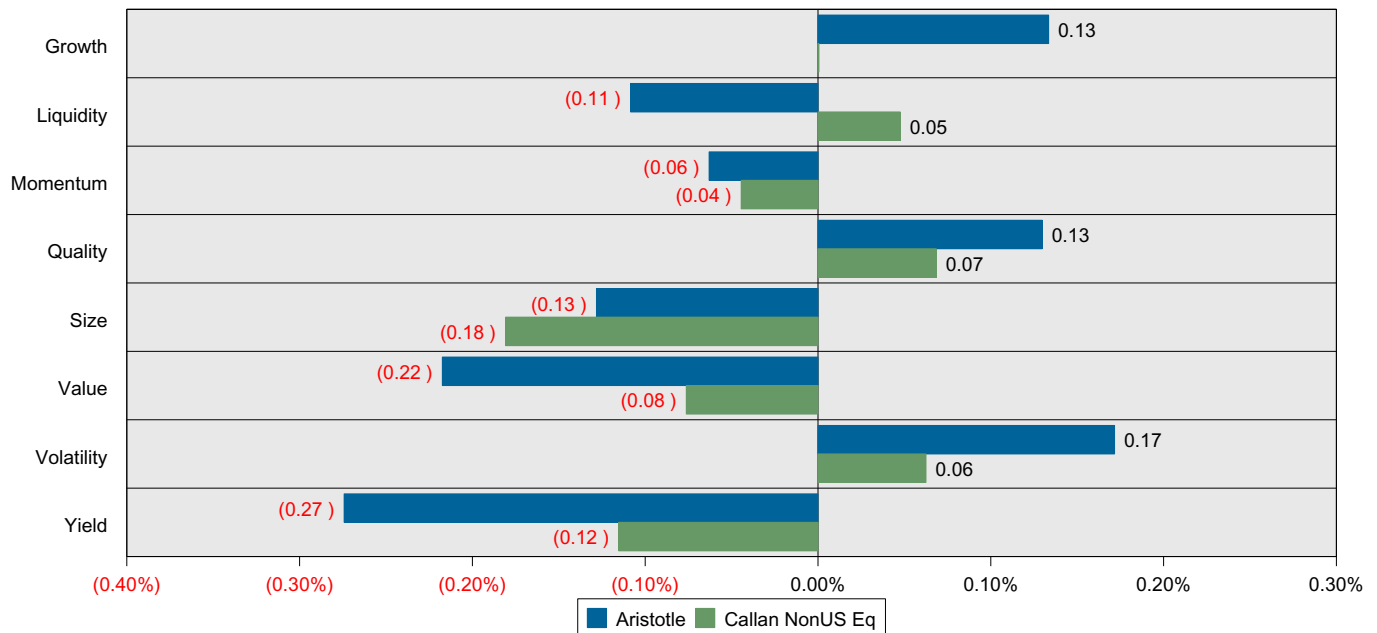
**Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# Artisan Partners

## Period Ended December 31, 2023

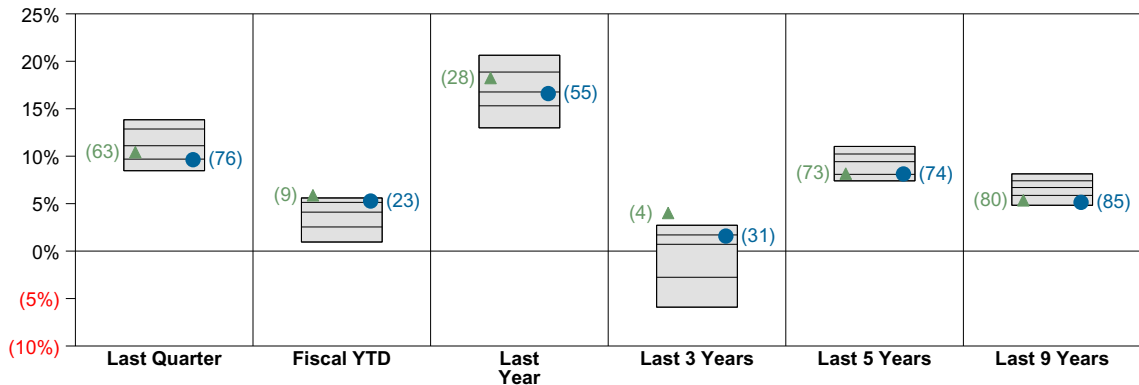
### Investment Philosophy

Artisan Partners, founded in 1994, is a publicly traded company with 10 unique investment units that is headquartered in Milwaukee. The leadership of the strategy has been stable under Portfolio Manager Mark Yockey since inception in 1996. Yockey is supported by two co-portfolio managers and 10 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

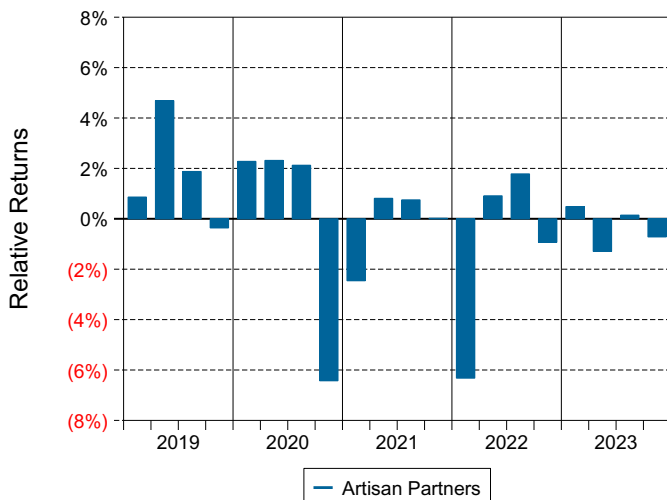
Beginning Market Value	\$340,838,723
Net New Investment	\$0
Investment Gains/(Losses)	\$32,825,405
Ending Market Value	\$373,664,128

### Performance vs Callan NonUS AC Gr Eq (Gross)

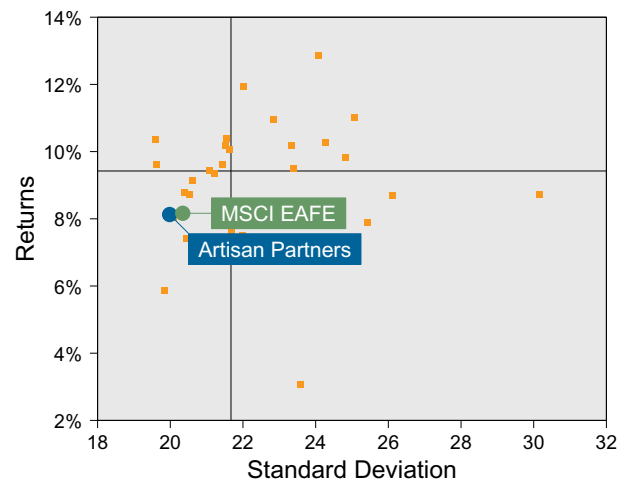


10th Percentile	13.84	5.60	20.64	2.72	11.03	8.14
25th Percentile	12.86	5.13	18.87	1.70	10.23	7.41
Median	11.10	4.10	16.77	0.72	9.42	6.70
75th Percentile	9.69	2.54	15.31	(2.76)	8.09	5.87
90th Percentile	8.47	0.96	12.99	(5.91)	7.40	4.83
<b>Artisan Partners</b> ●	9.63	5.27	16.60	1.58	8.13	5.14
<b>MSCI EAFE</b> ▲	10.42	5.88	18.24	4.02	8.16	5.35

### Relative Return vs MSCI EAFE



### Callan NonUS AC Gr Eq (Gross) Annualized Five Year Risk vs Return



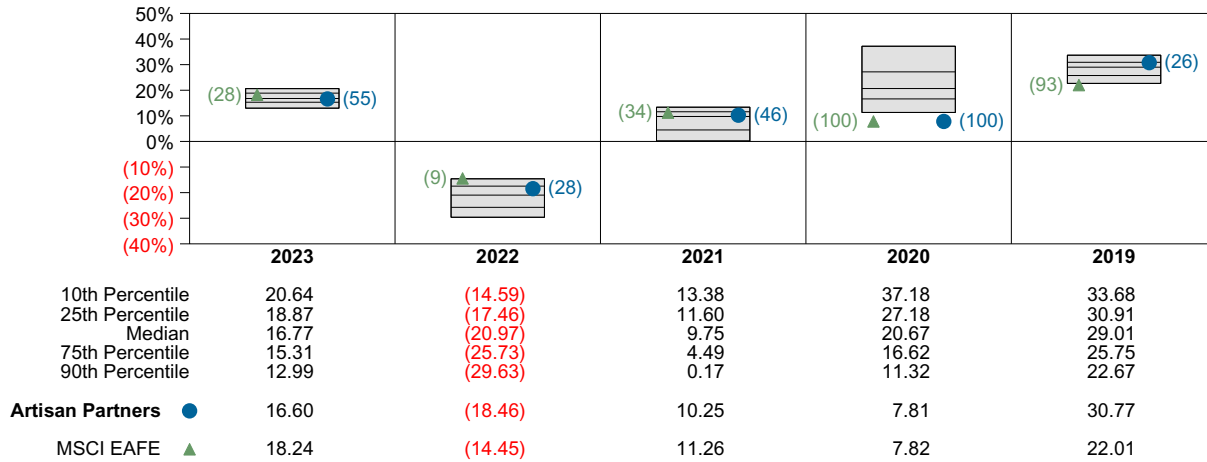


# Artisan Partners Return Analysis Summary

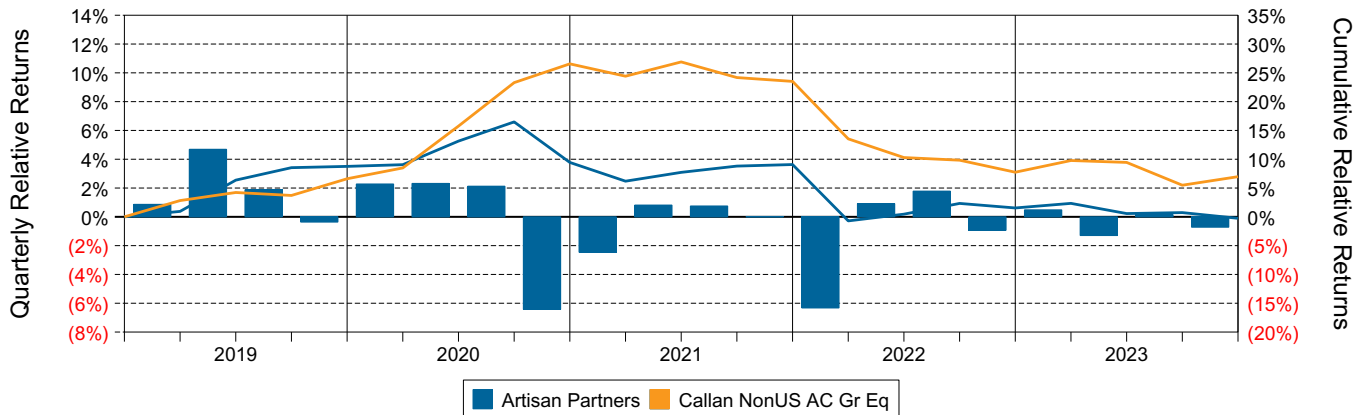
## Return Analysis

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.

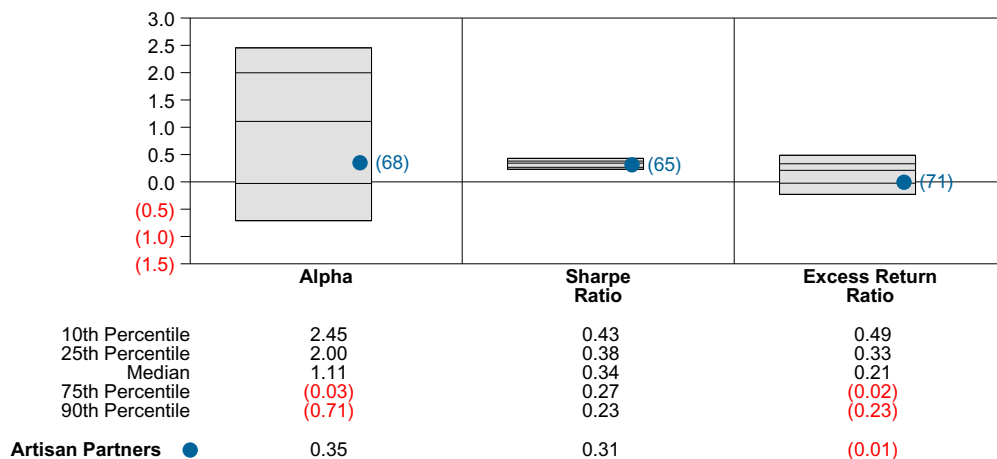
### Performance vs Callan NonUS AC Gr Eq (Gross)



### 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 December 31, 2023

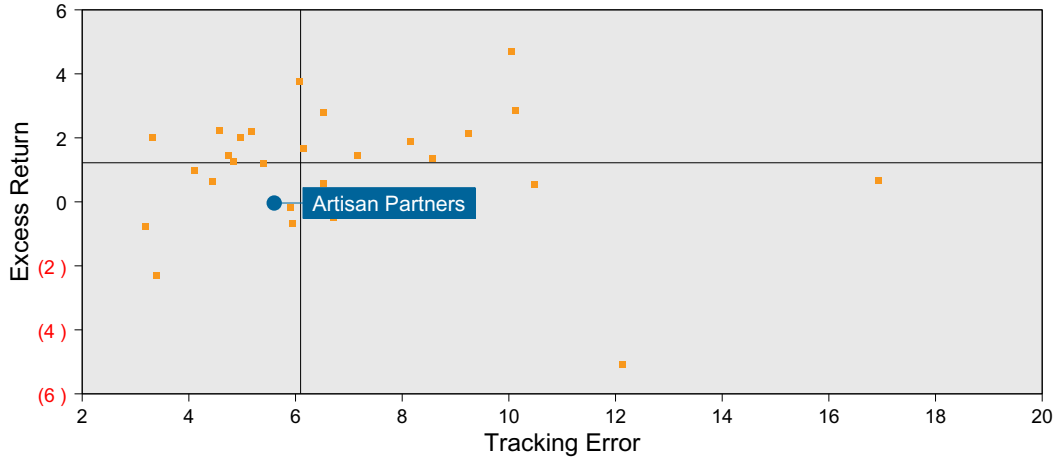


# Artisan Partners Risk Analysis Summary

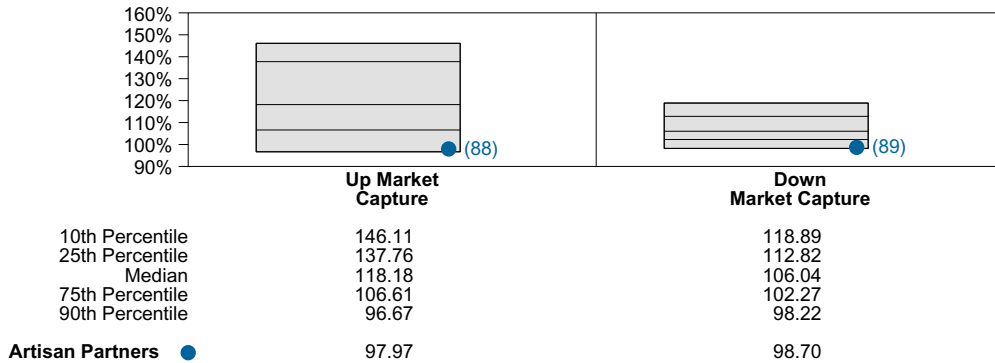
## Risk Analysis

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.

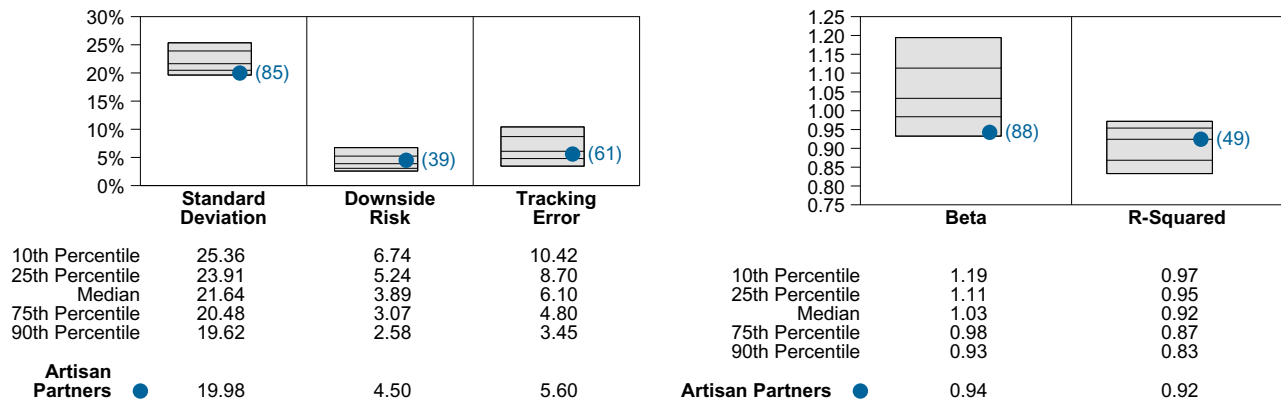
### Risk Analysis vs Callan Non-US All Country Growth Equity (Gross) Five Years Ended December 31, 2023



### Market Capture vs MSCI EAFE Rankings Against Callan Non-US All Country Growth Equity (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs MSCI EAFE Rankings Against Callan Non-US All Country Growth Equity (Gross) Five Years Ended December 31, 2023

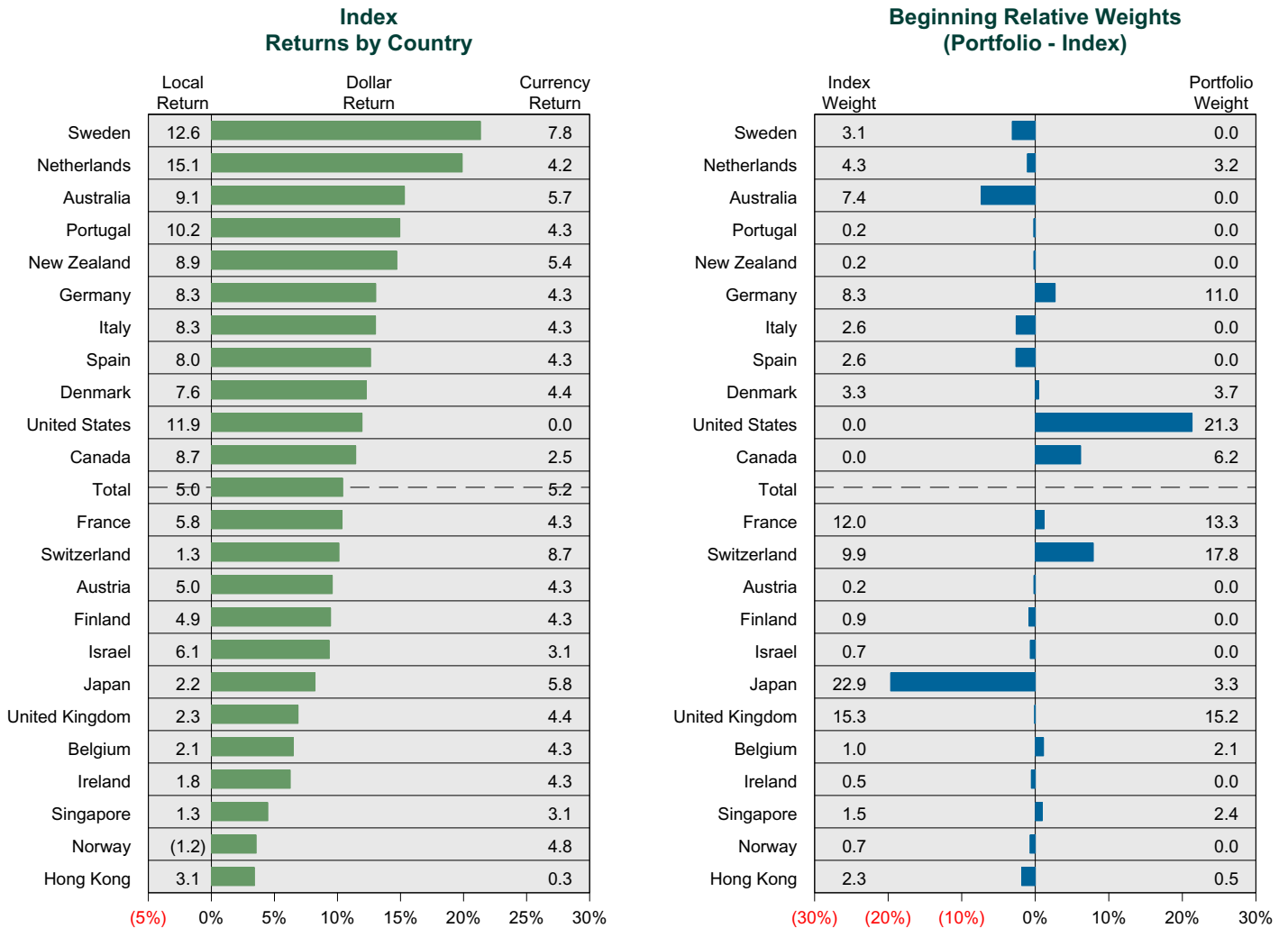


# Artisan Partners vs MSCI EAFE

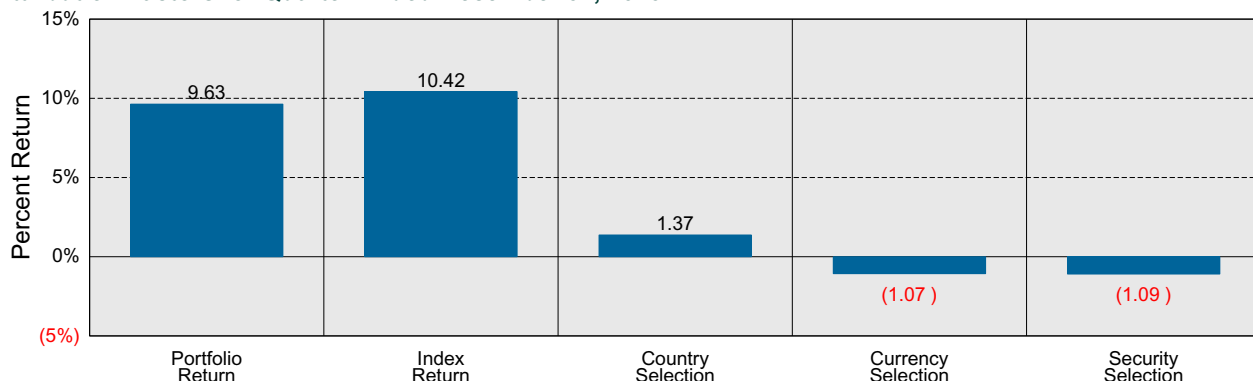
## Attribution for Quarter Ended December 31, 2023

### 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 December 31, 2023

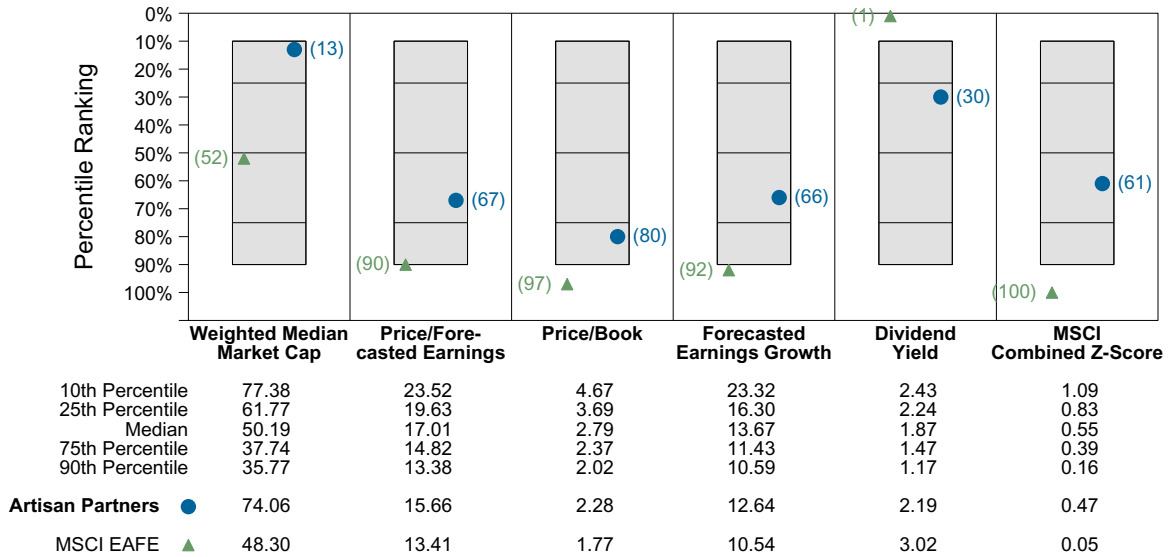


# Artisan Partners Equity Characteristics Analysis Summary

## Portfolio Characteristics

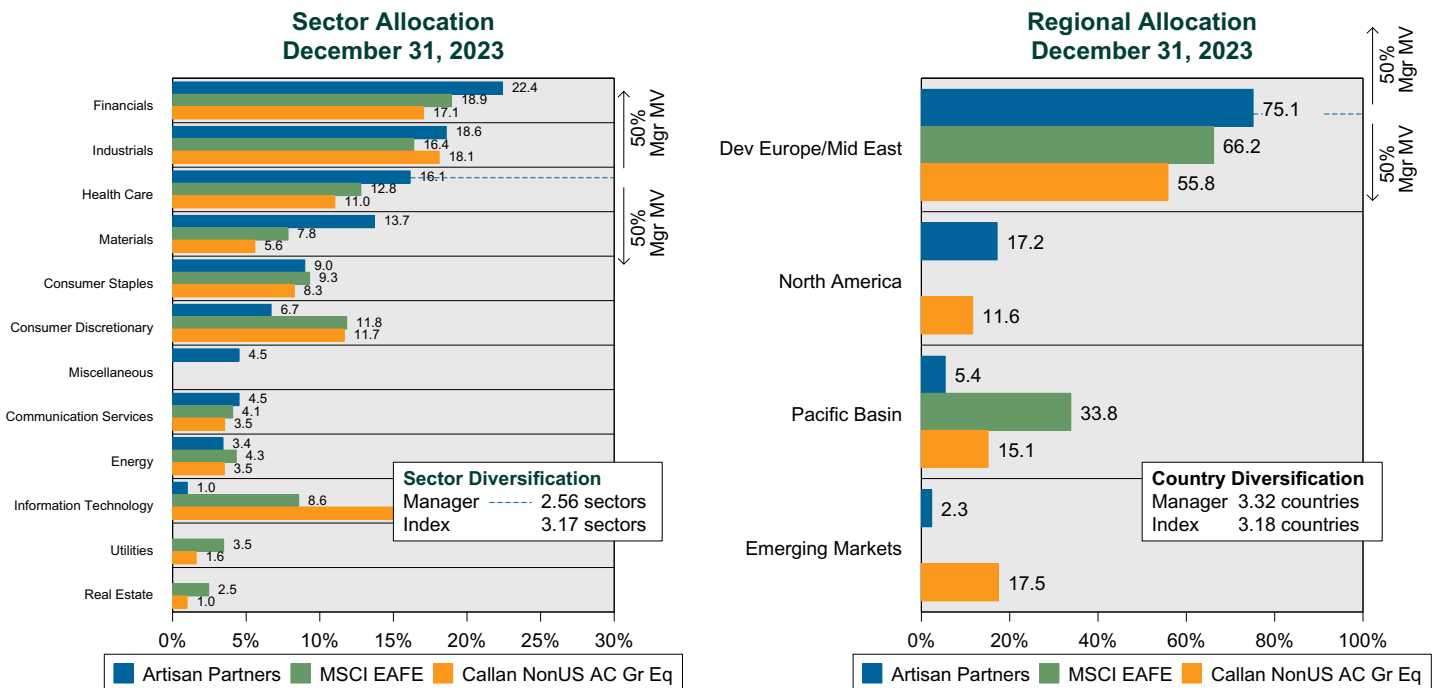
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US All Country Growth Equity as of December 31, 2023



## 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.

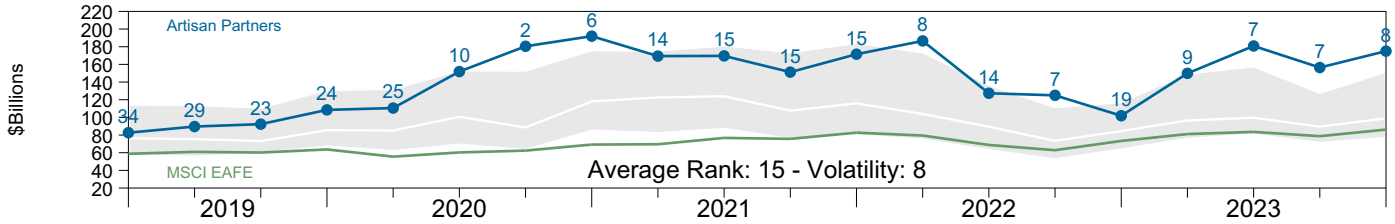


## Portfolio Characteristics Analysis

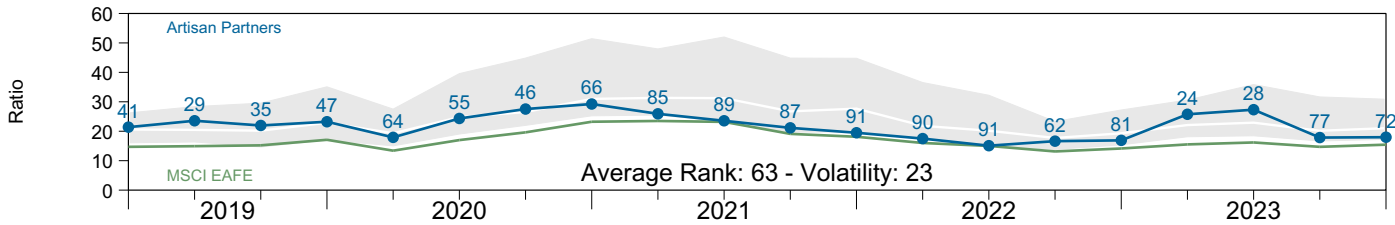
### Callan NonUS AC Gr Eq

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.

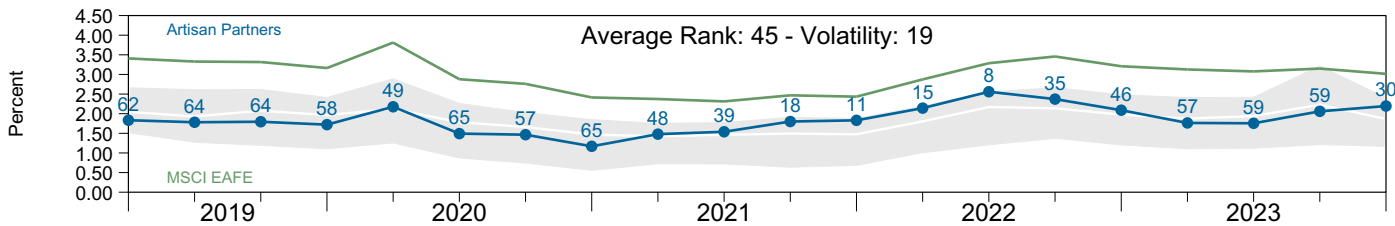
#### Weighted Average Market Cap



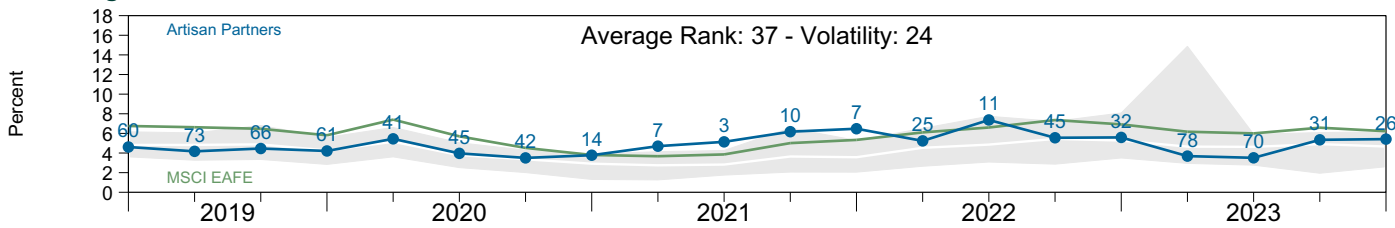
#### Trailing P/E



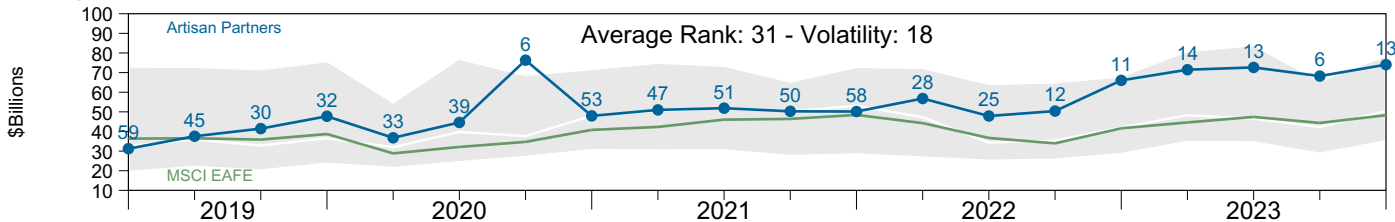
#### Dividend Yield



#### 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.

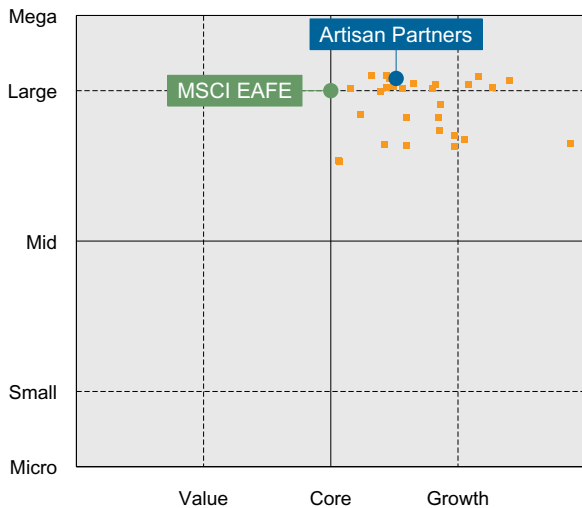
# Current Holdings Based Style Analysis

## Artisan Partners

### As of December 31, 2023

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 chart 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.

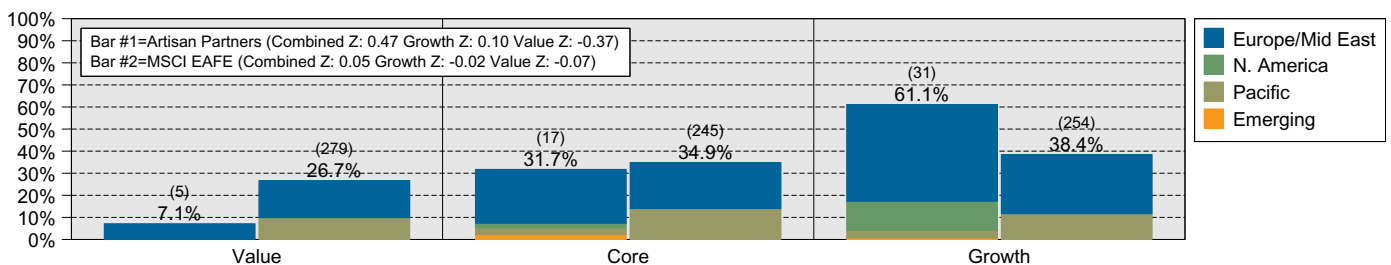
**Style Map vs Callan NonUS AC Gr Eq Holdings as of December 31, 2023**



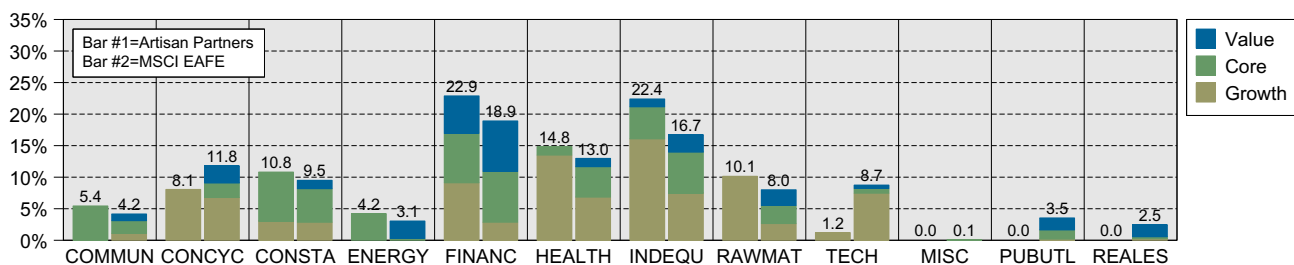
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	7.1% (5) 16.8% (147)	24.4% (11) 20.8% (137)	43.8% (23) 26.7% (149)	75.4% (39) 64.4% (433)
N. America	0.0% (0) 0.0% (0)	2.1% (1) 0.1% (1)	13.2% (4) 0.0% (0)	15.2% (5) 0.1% (1)
Pacific	0.0% (0) 9.9% (132)	3.1% (4) 13.9% (107)	3.4% (3) 11.7% (105)	6.5% (7) 35.5% (344)
Emerging	0.0% (0) 0.0% (0)	2.1% (1) 0.0% (0)	0.7% (1) 0.0% (0)	2.9% (2) 0.0% (0)
<b>Total</b>	<b>7.1% (5)</b> <b>26.7% (279)</b>	<b>31.7% (17)</b> <b>34.9% (245)</b>	<b>61.1% (31)</b> <b>38.4% (254)</b>	<b>100.0% (53)</b> <b>100.0% (778)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



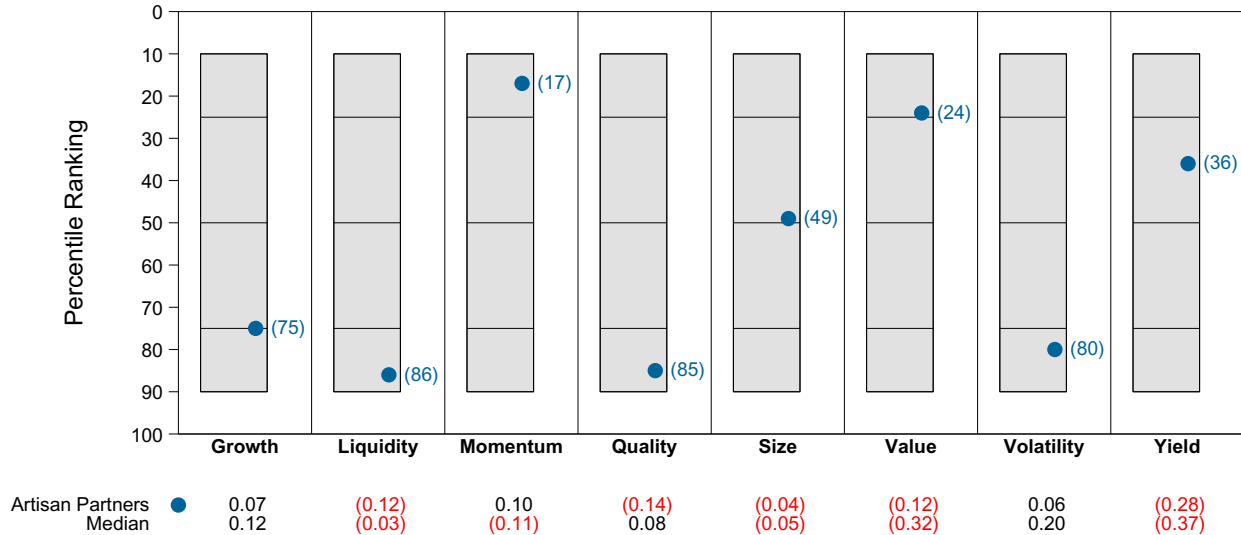
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

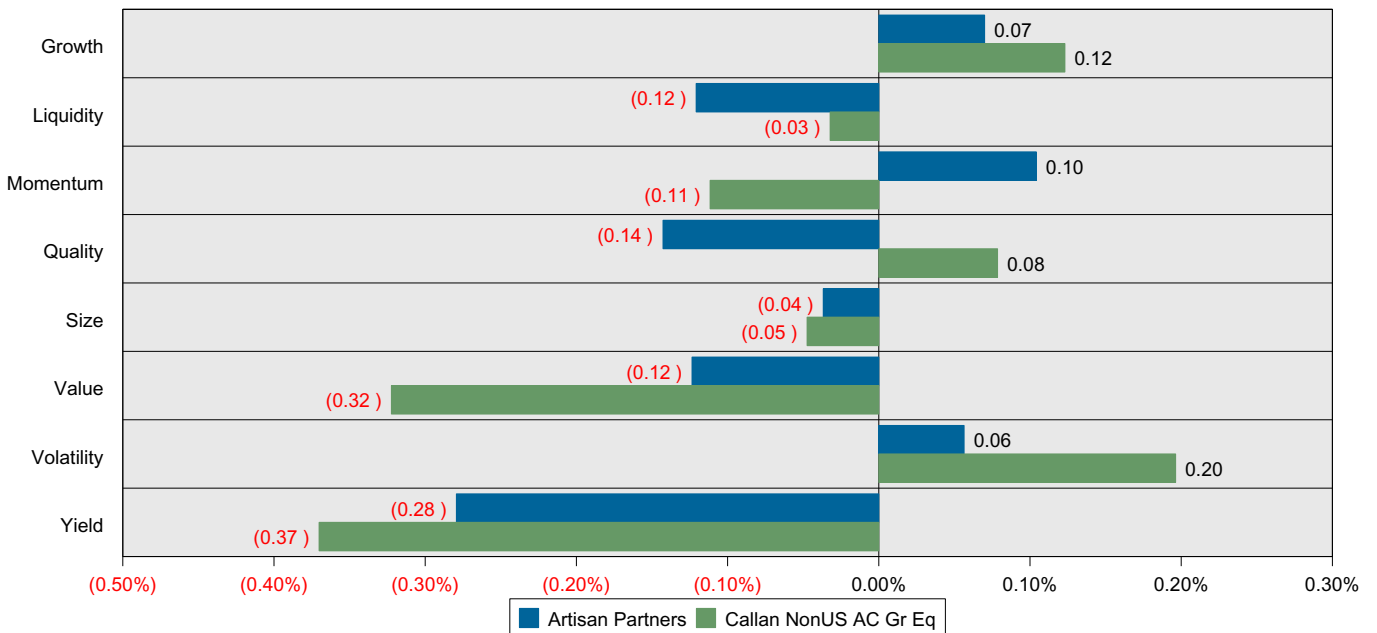
**Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US All Country Growth Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# BlackRock Superfund

## Period Ended December 31, 2023

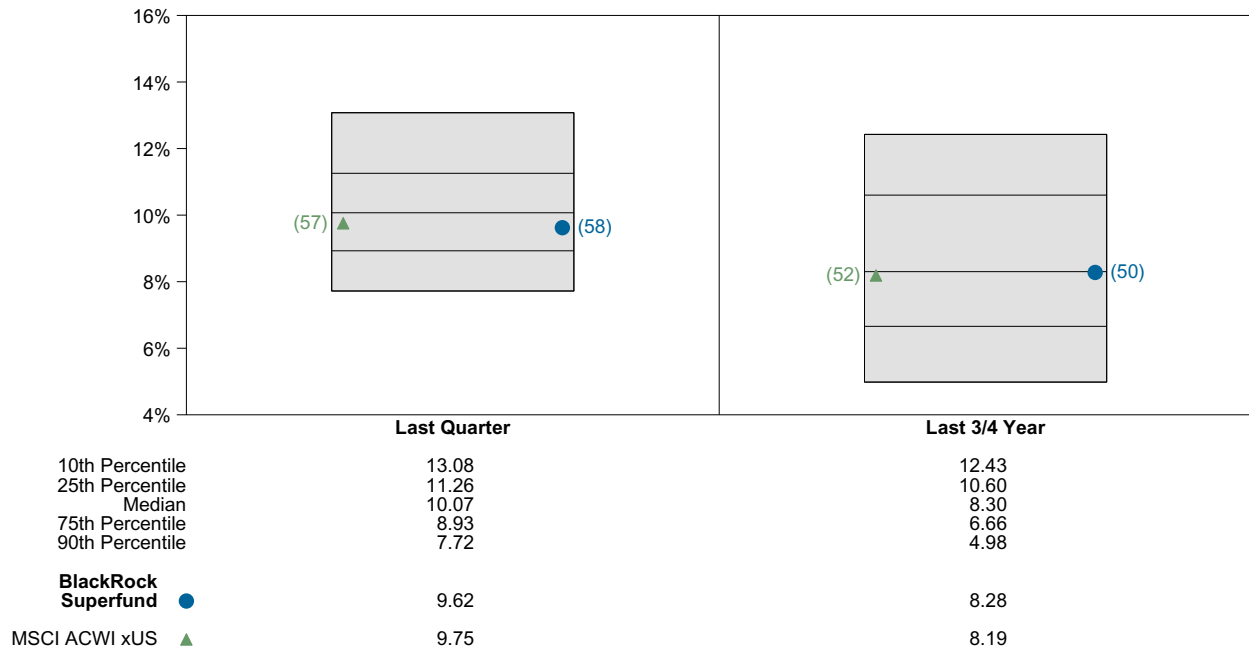
### Investment Philosophy

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.

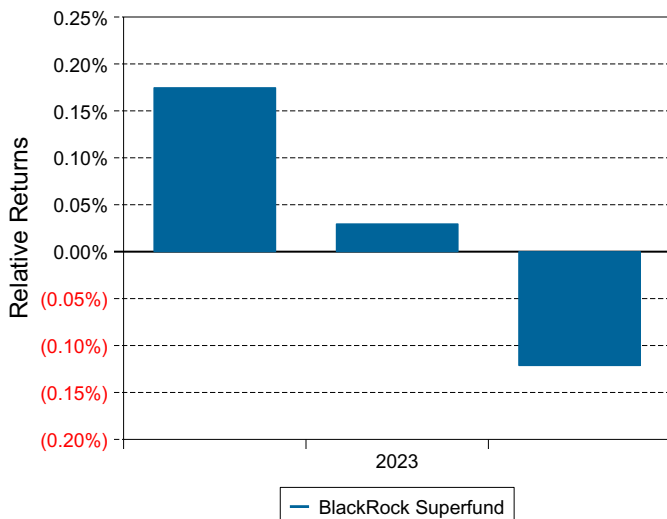
### Quarterly Asset Growth

Beginning Market Value	\$171,855,968
Net New Investment	\$0
Investment Gains/(Losses)	\$16,535,232
Ending Market Value	\$188,391,200

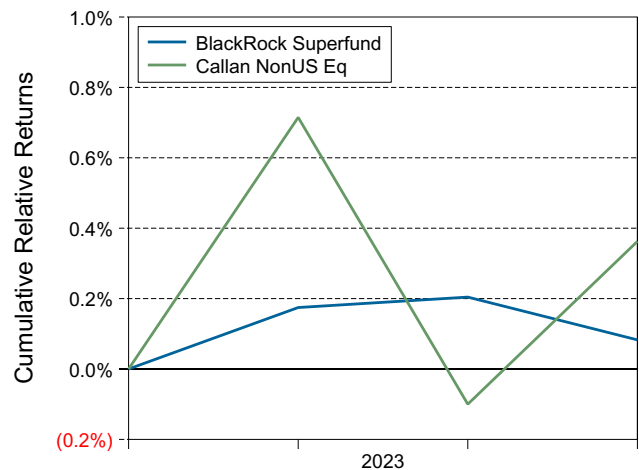
### Performance vs Callan NonUS Eq (Gross)



### Relative Return vs MSCI ACWI xUS



### Cumulative Returns vs MSCI ACWI xUS

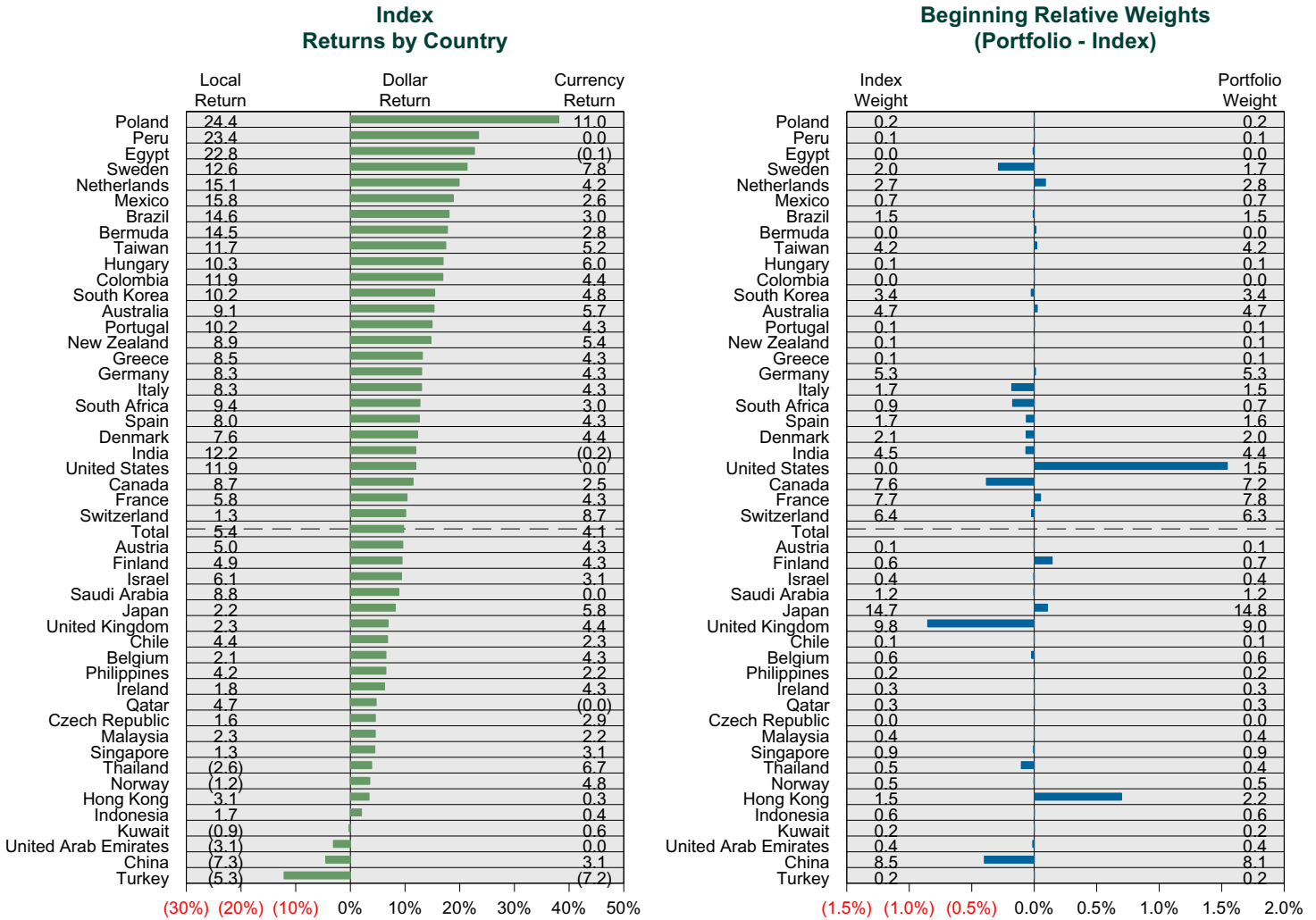




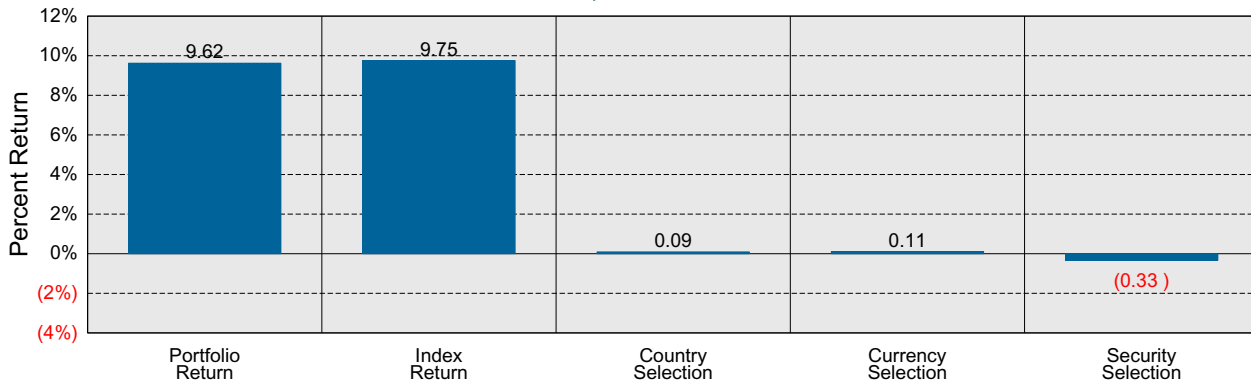
# BlackRock Superfund vs MSCI ACWI xUS (Net) Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

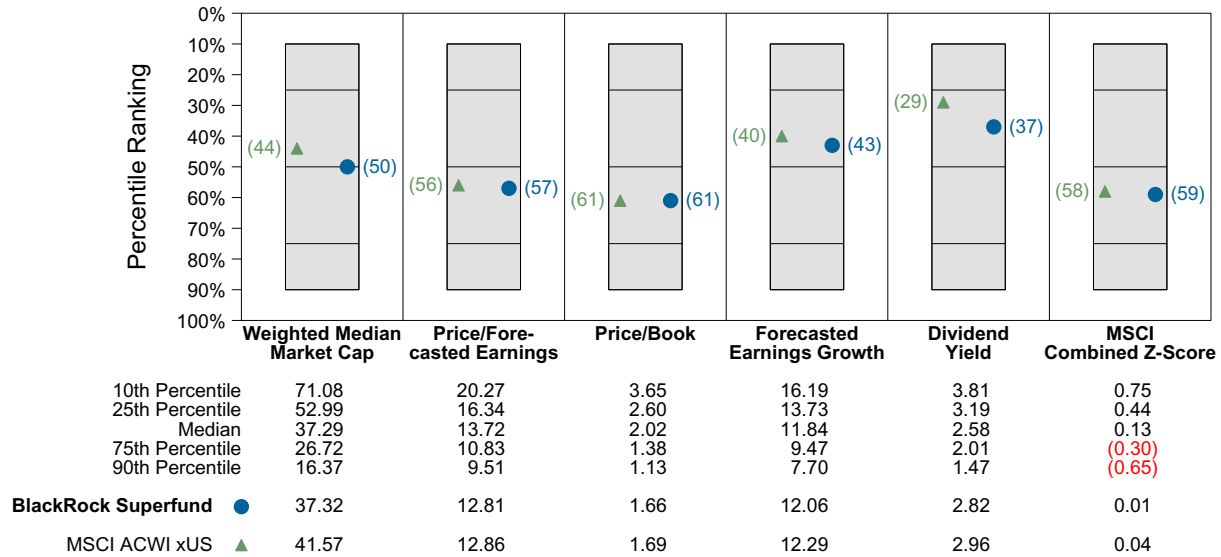


# BlackRock Superfund Equity Characteristics Analysis Summary

## Portfolio Characteristics

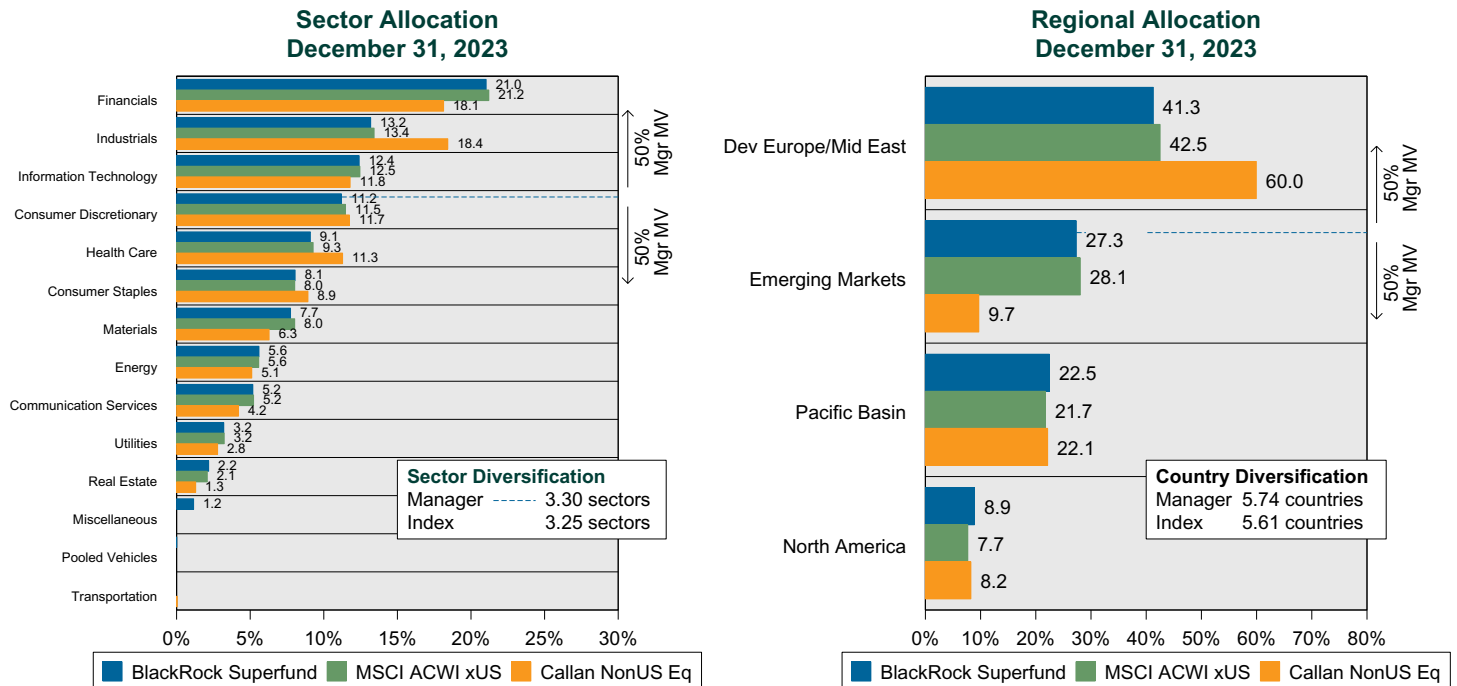
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of December 31, 2023



## Sector Weights

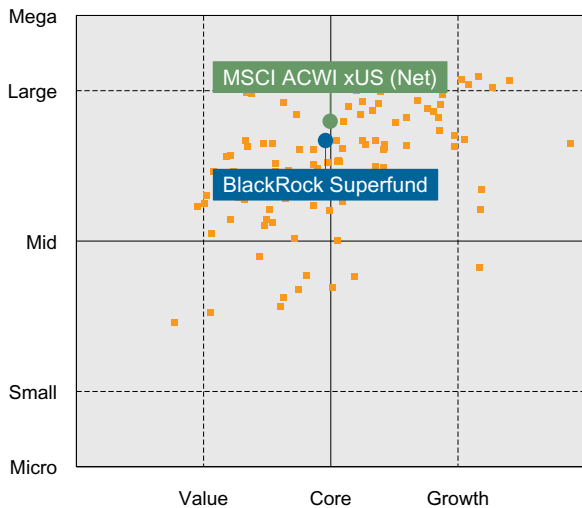
The graph below contrasts the manager's sector weights with those of the benchmark and median sector weights across the members of the peer group. The magnitude of sector weight differences from the index and the manager's sector diversification are also shown. The regional allocation chart compares 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 December 31, 2023

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.

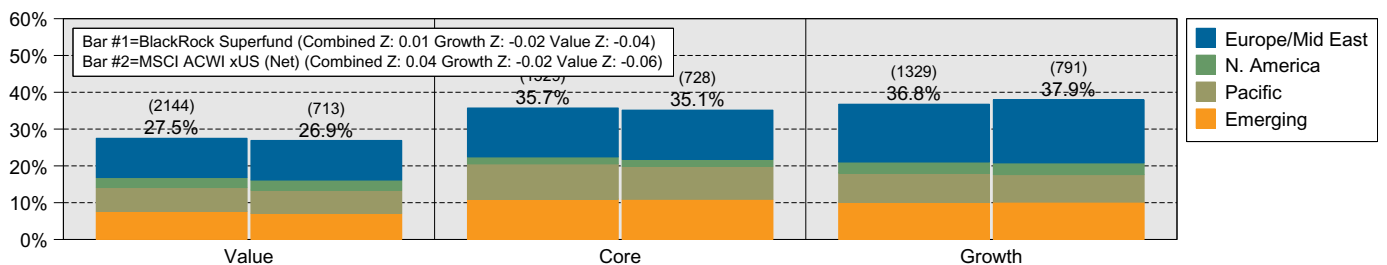
**Style Map vs Callan NonUS Eq Holdings as of December 31, 2023**



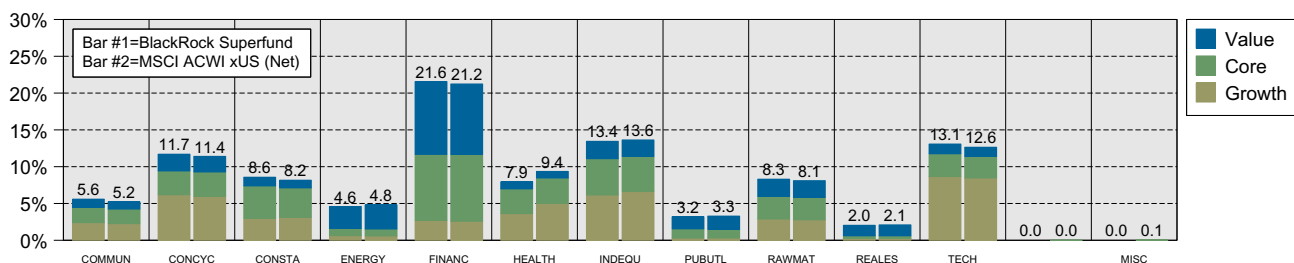
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	10.7% (189)	13.3% (195)	15.7% (163)	39.7% (547)
N. America	10.8% (147)	13.3% (137)	17.1% (149)	41.2% (433)
Pacific	2.7% (297)	1.9% (202)	3.0% (157)	7.6% (656)
Emerging	2.7% (27)	2.0% (26)	3.2% (36)	7.9% (89)
<b>Total</b>	<b>27.5% (2144)</b>	<b>35.7% (1529)</b>	<b>36.8% (1329)</b>	<b>100.0% (5002)</b>
	26.9% (713)	35.1% (728)	37.9% (791)	100.0% (2232)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



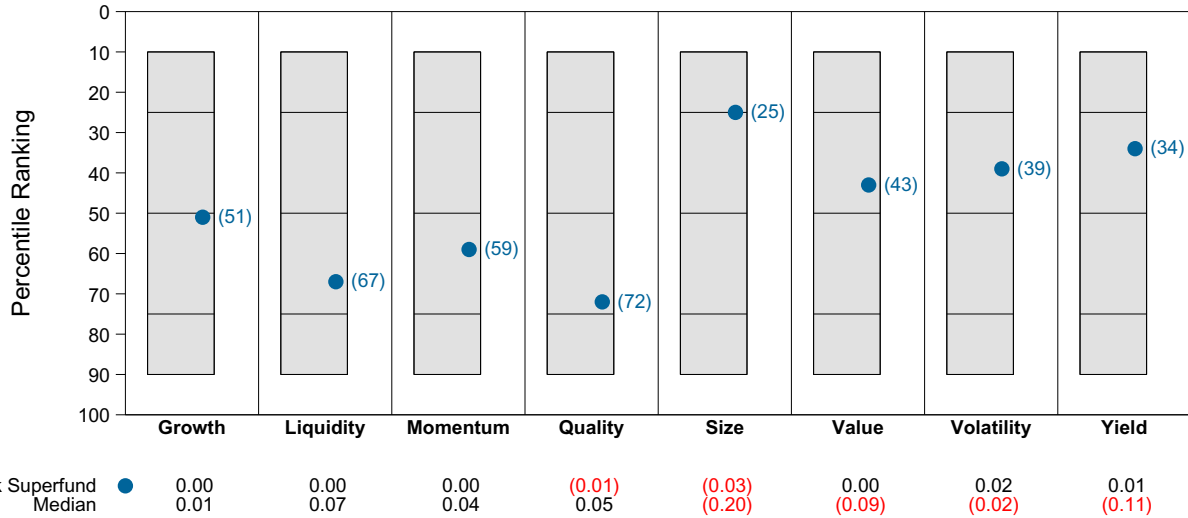
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

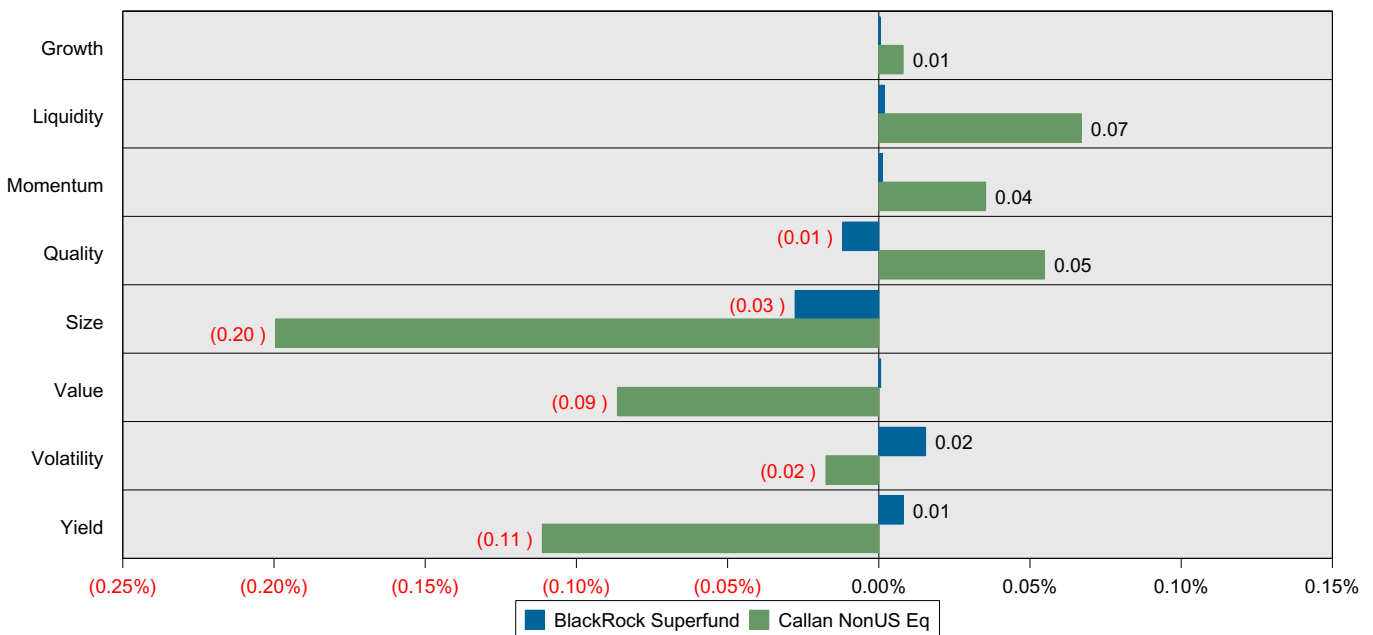
**Factor Exposures Relative to MSCI ACWI xUS (Net), Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# Causeway Capital

## Period Ended December 31, 2023

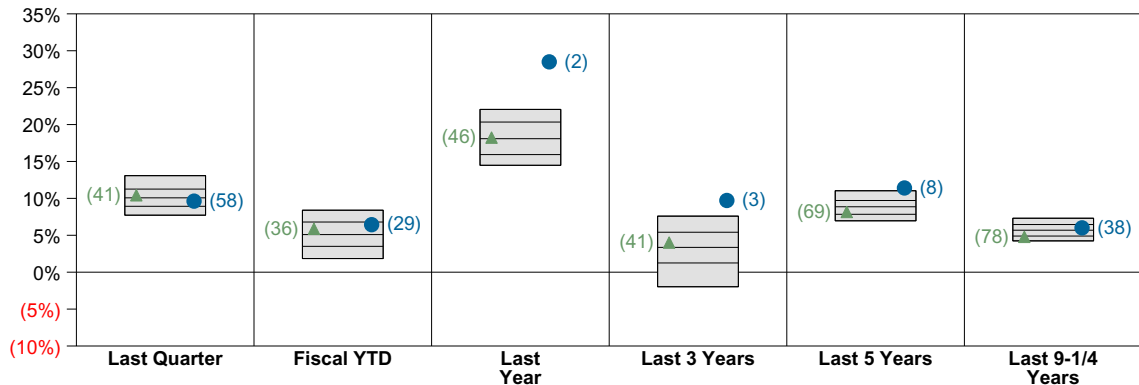
### Investment Philosophy

Causeway is a stable, employee-owned firm focused on value investing. 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 50-80 holdings with 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. Performance is competitive over the long-term versus both the broad and value indices. NHRS inception in the fund is September 2014.

### Quarterly Asset Growth

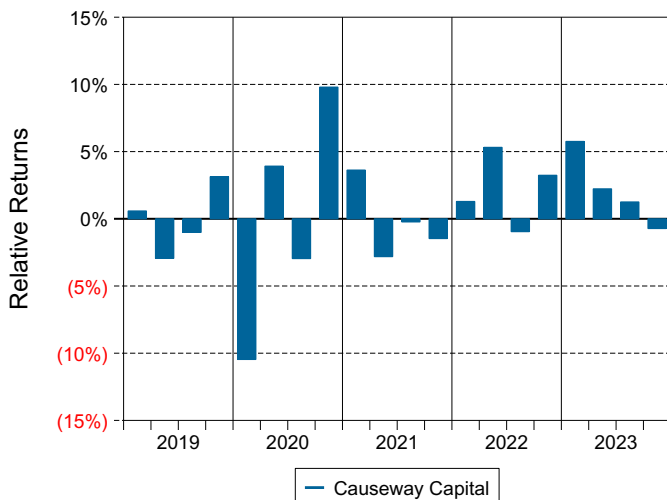
Beginning Market Value	\$392,406,678
Net New Investment	\$0
Investment Gains/(Losses)	\$37,765,755
Ending Market Value	\$430,172,433

### Performance vs Callan NonUS Eq (Gross)

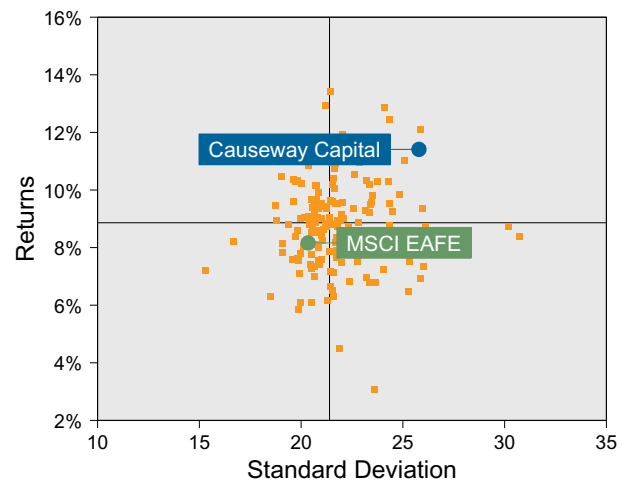


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 9-1/4 Years
10th Percentile	13.08	8.40	22.05	7.60	11.03	7.31
25th Percentile	11.26	6.79	20.34	5.41	9.71	6.46
Median	10.07	5.09	18.08	3.36	8.86	5.69
75th Percentile	8.93	3.50	15.93	1.25	7.84	4.90
90th Percentile	7.72	1.85	14.48	(1.97)	6.96	4.24
<b>Causeway Capital</b>	● 9.62	6.43	28.49	9.71	11.41	6.01
<b>MSCI EAFE</b>	▲ 10.42	5.88	18.24	4.02	8.16	4.79

### Relative Return vs MSCI EAFE



### Callan NonUS Eq (Gross) Annualized Five Year Risk vs Return

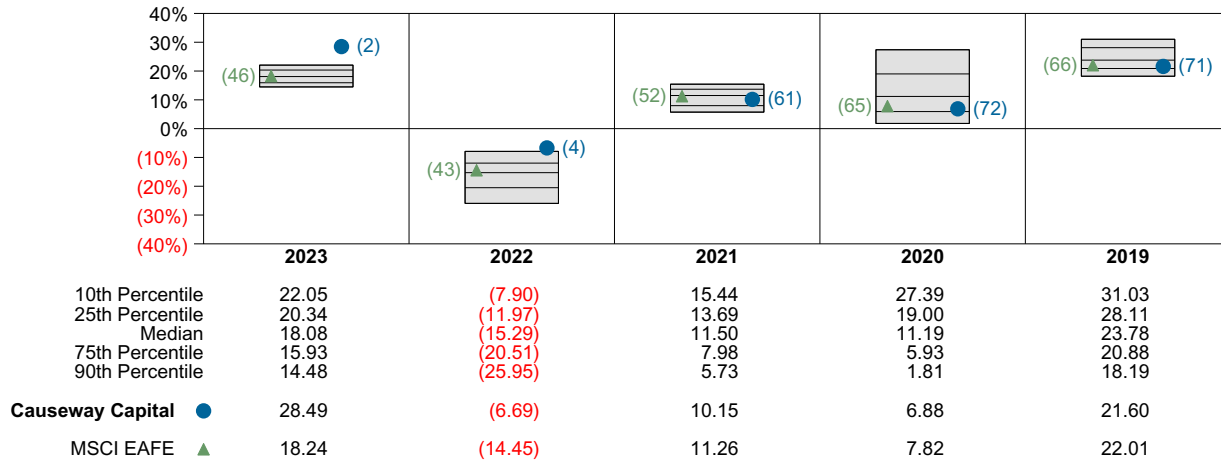


# Causeway Capital Return Analysis Summary

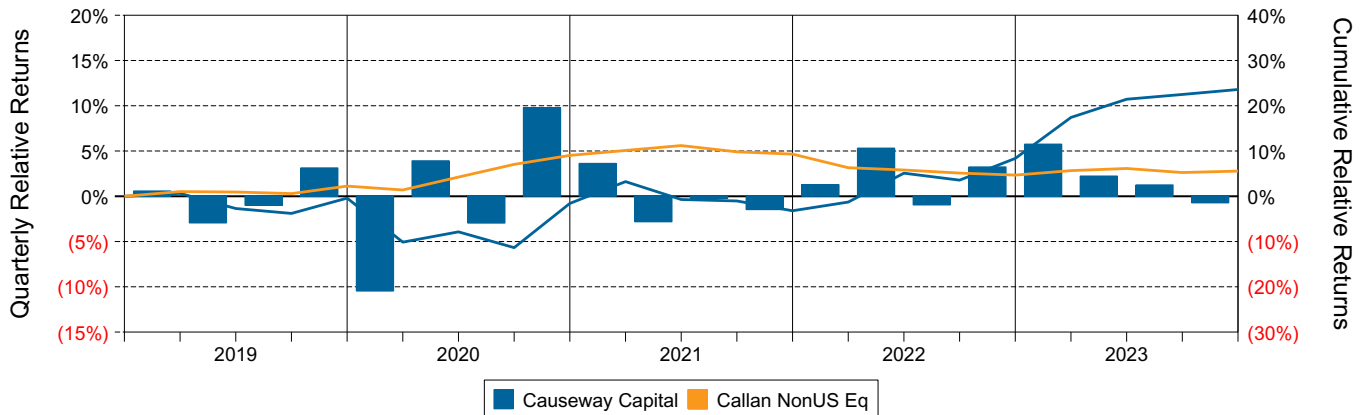
## Return Analysis

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.

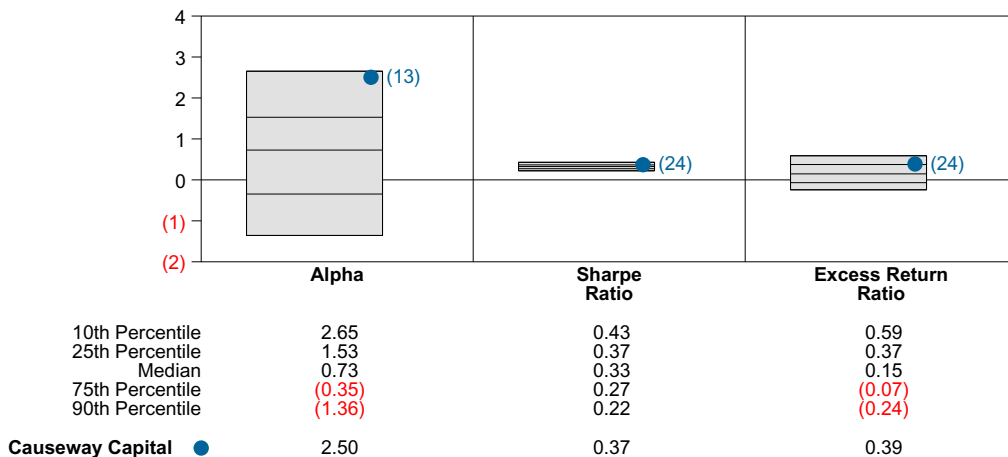
### Performance vs Callan NonUS Eq (Gross)



### Cumulative and Quarterly Relative Returns vs MSCI EAFE



### Risk Adjusted Return Measures vs MSCI EAFE Rankings Against Callan NonUS Eq (Gross) Five Years Ended December 31, 2023

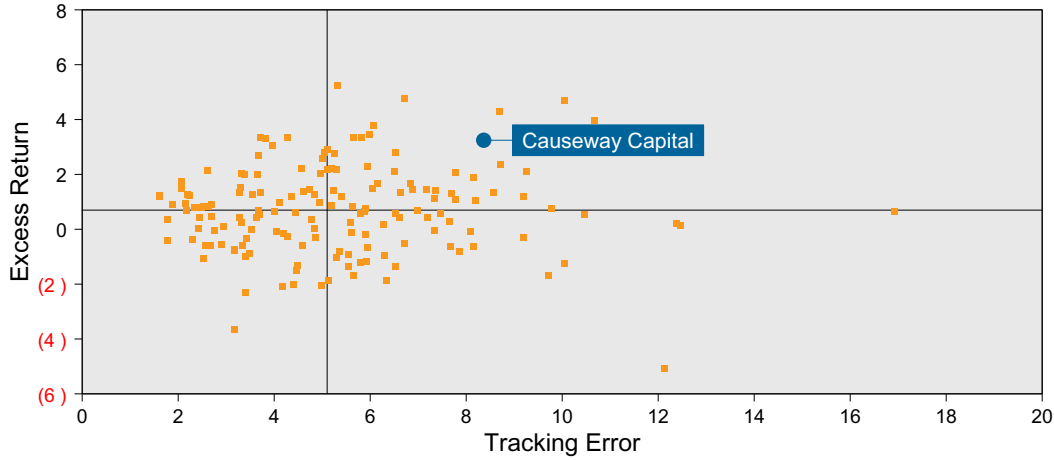


# Causeway Capital Risk Analysis Summary

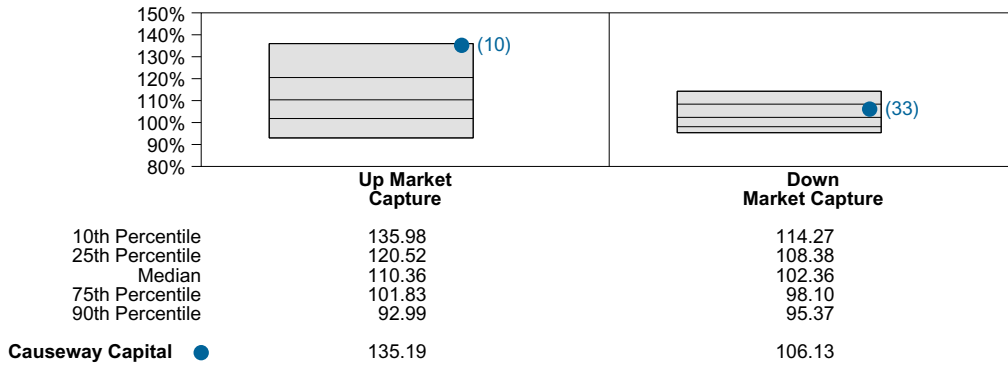
## Risk Analysis

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.

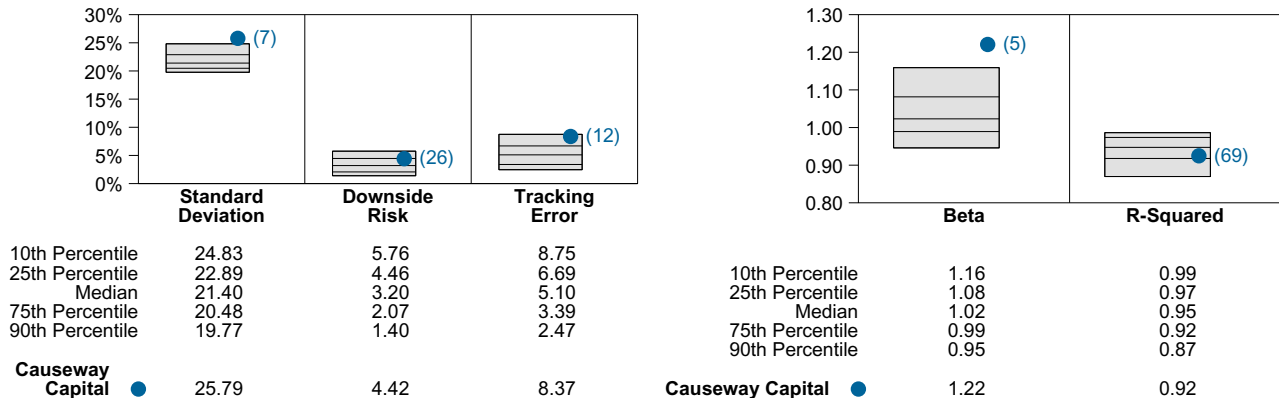
### Risk Analysis vs Callan Non-US Equity (Gross) Five Years Ended December 31, 2023



### Market Capture vs MSCI EAFE Rankings Against Callan Non-US Equity (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs MSCI EAFE Rankings Against Callan Non-US Equity (Gross) Five Years Ended December 31, 2023

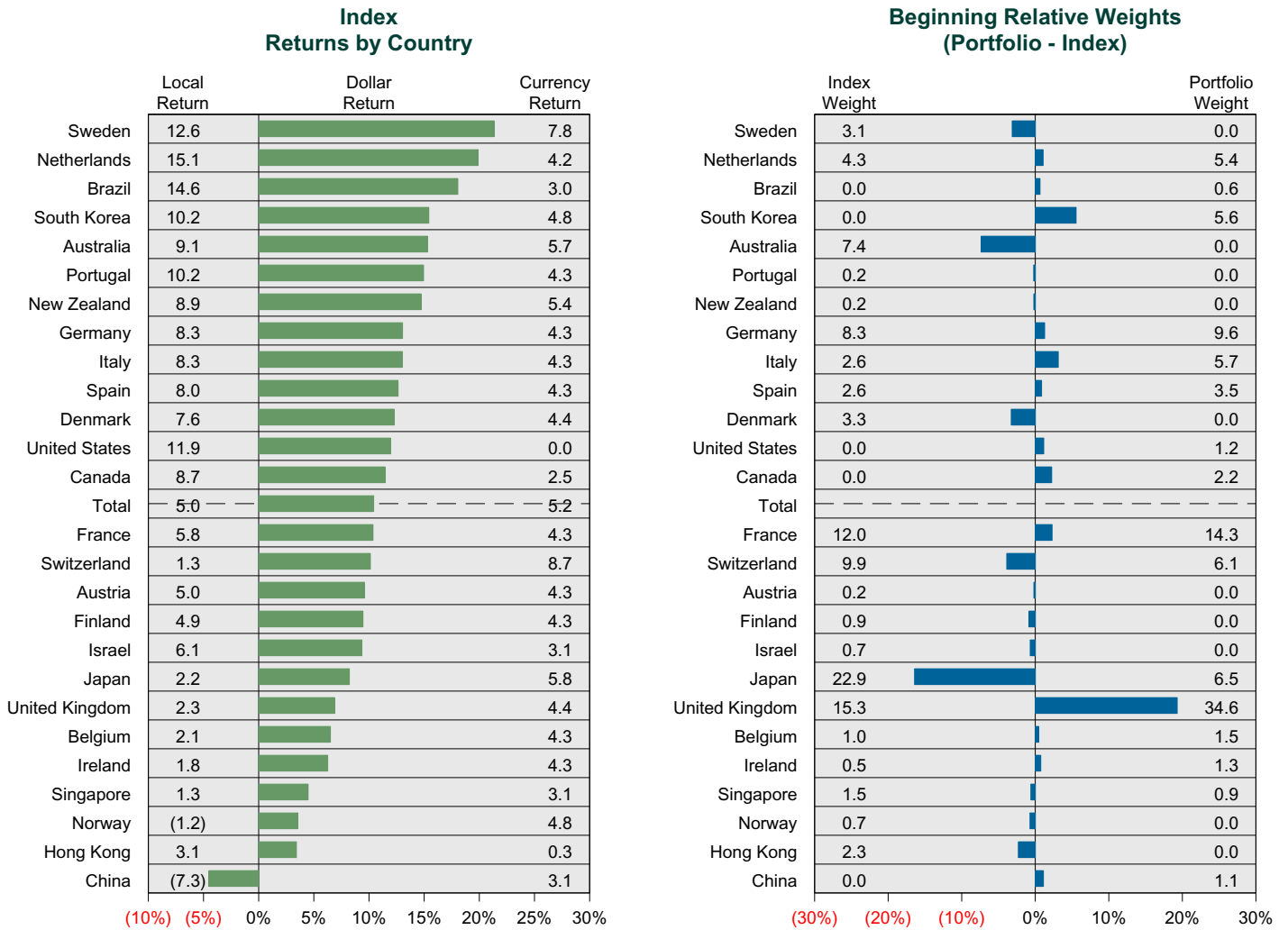


# Causeway Capital vs MSCI EAFE

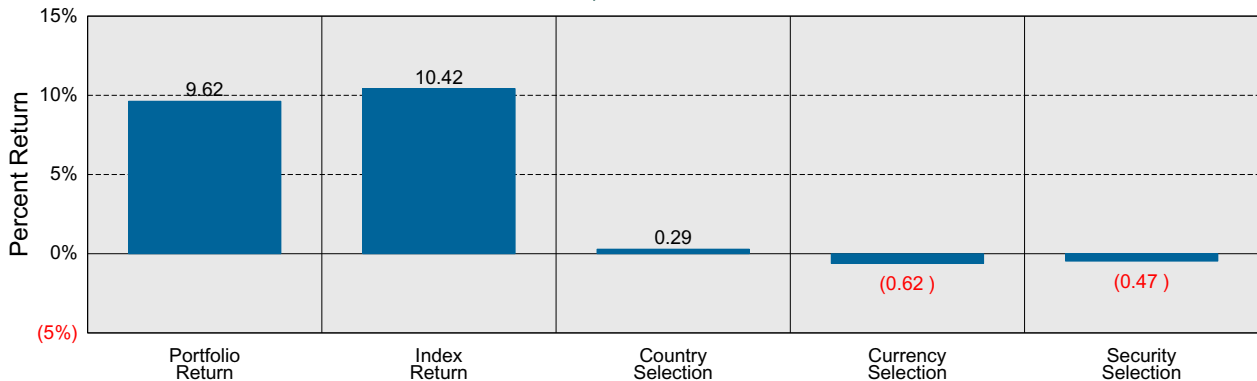
## Attribution for Quarter Ended December 31, 2023

### 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 December 31, 2023



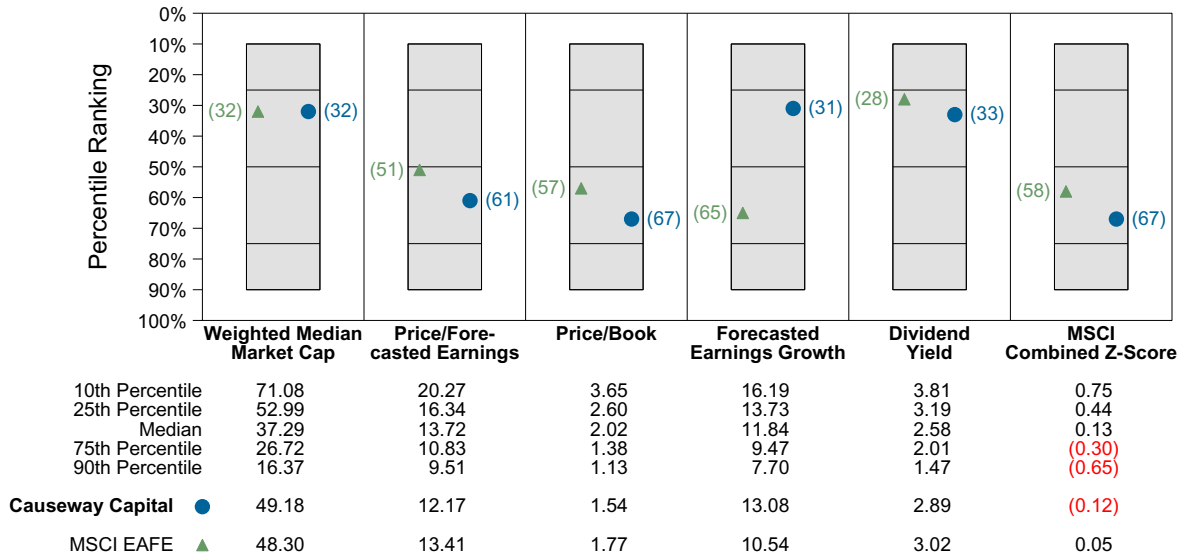


# Causeway Capital Equity Characteristics Analysis Summary

## Portfolio Characteristics

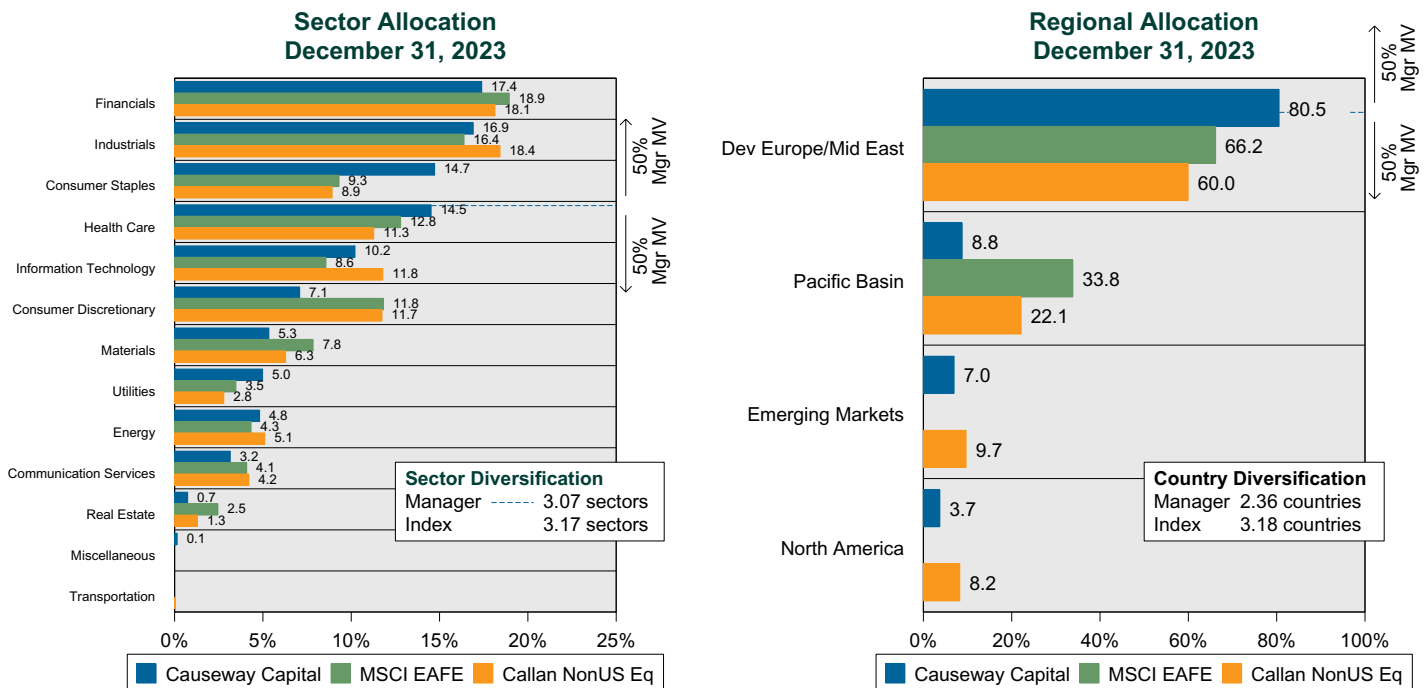
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of December 31, 2023



## 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.

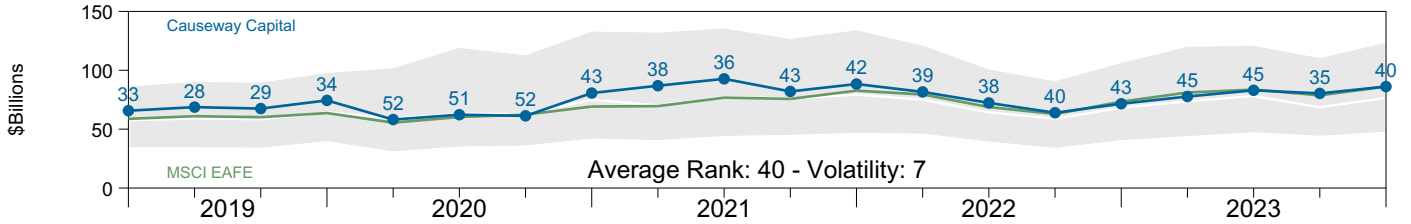


## Portfolio Characteristics Analysis

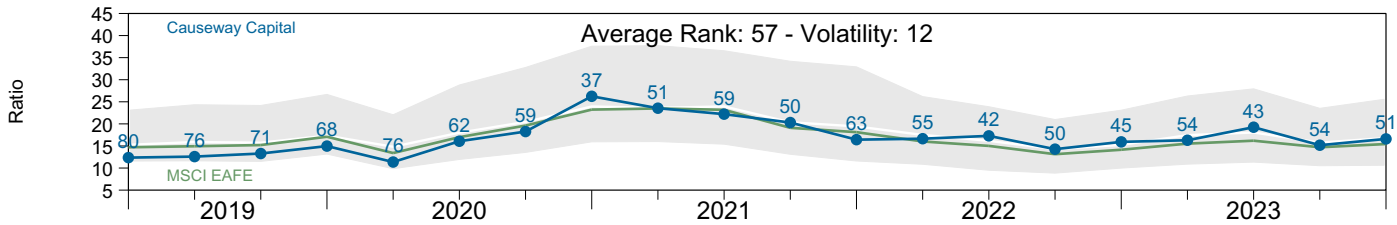
### Callan NonUS Eq

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.

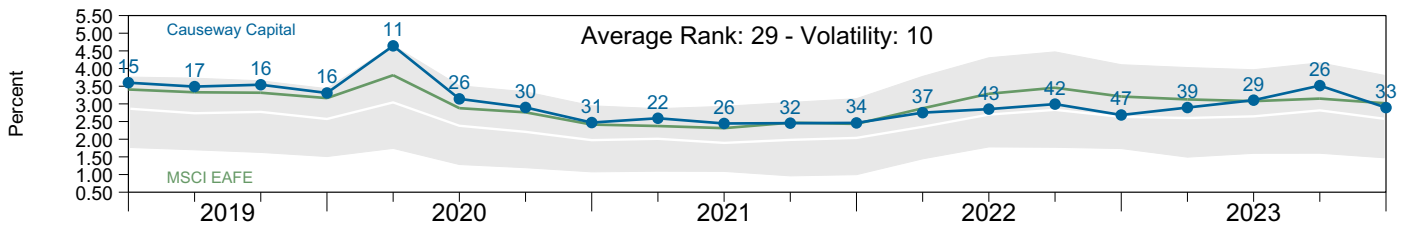
#### Weighted Average Market Cap



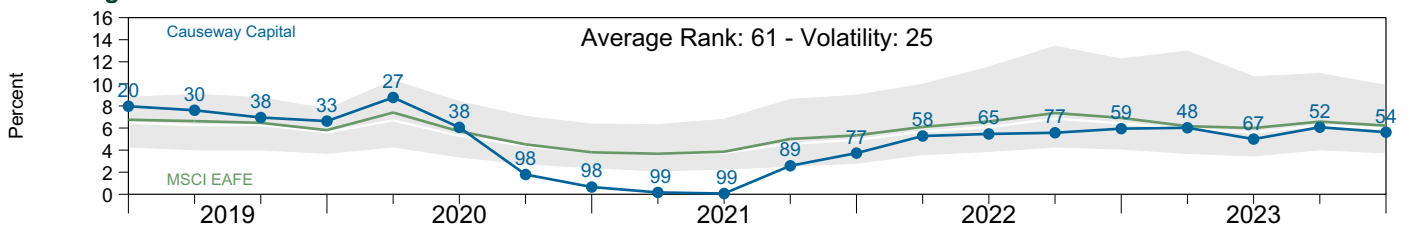
#### Trailing P/E



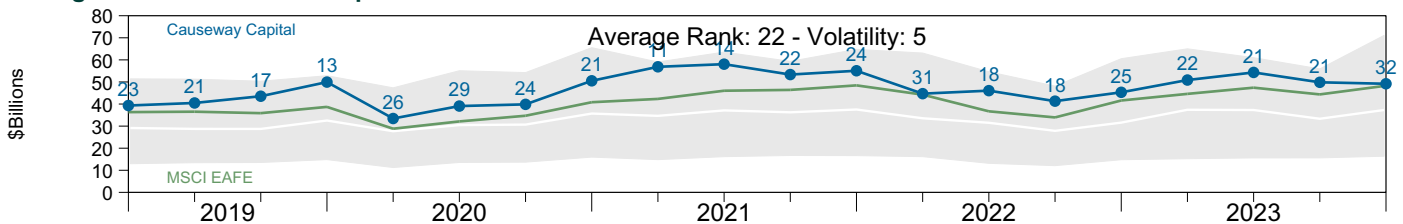
#### Dividend Yield



#### 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.

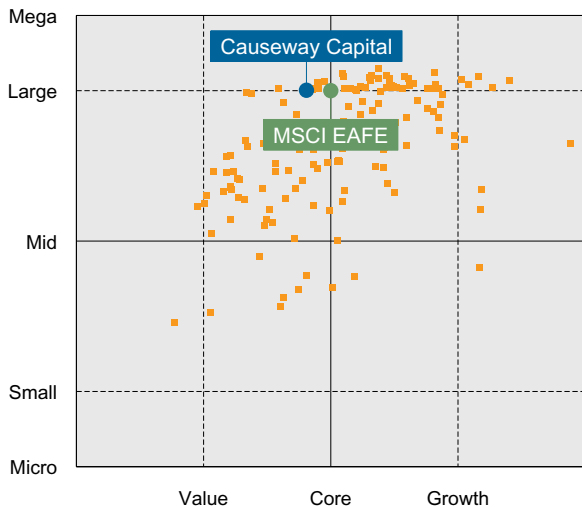
# Current Holdings Based Style Analysis

## Causeway Capital

### As of December 31, 2023

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 chart 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.

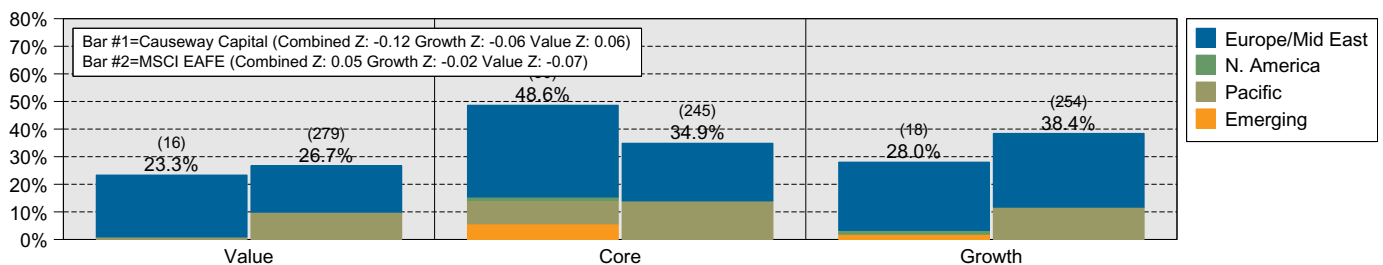
**Style Map vs Callan NonUS Eq Holdings as of December 31, 2023**



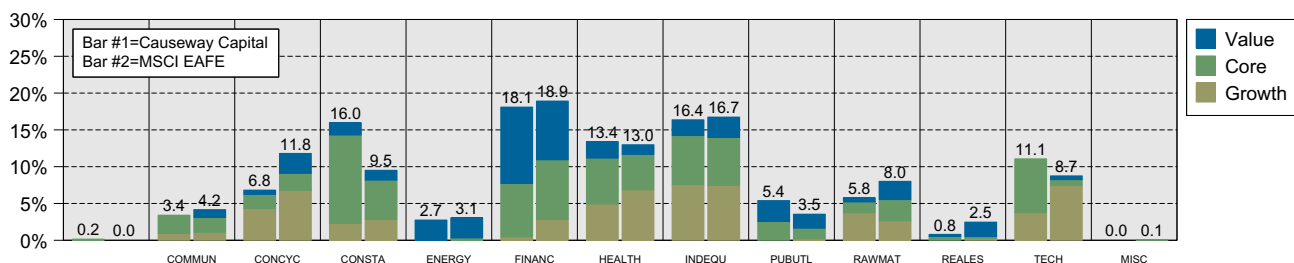
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	22.4% (14) 16.8% (147)	33.3% (21) 20.8% (137)	24.7% (15) 26.7% (149)	<b>80.4% (50)</b> <b>64.4% (433)</b>
N. America	0.0% (0) 0.0% (0)	1.1% (1) 0.1% (1)	1.4% (1) 0.0% (0)	<b>2.6% (2)</b> <b>0.1% (1)</b>
Pacific	0.9% (2) 9.9% (132)	8.6% (6) 13.9% (107)	0.0% (0) 11.7% (105)	<b>9.5% (8)</b> <b>35.5% (344)</b>
Emerging	0.0% (0) 0.0% (0)	5.7% (2) 0.0% (0)	1.9% (2) 0.0% (0)	<b>7.6% (4)</b> <b>0.0% (0)</b>
<b>Total</b>	<b>23.3% (16)</b> <b>26.7% (279)</b>	<b>48.6% (30)</b> <b>34.9% (245)</b>	<b>28.0% (18)</b> <b>38.4% (254)</b>	<b>100.0% (64)</b> <b>100.0% (778)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



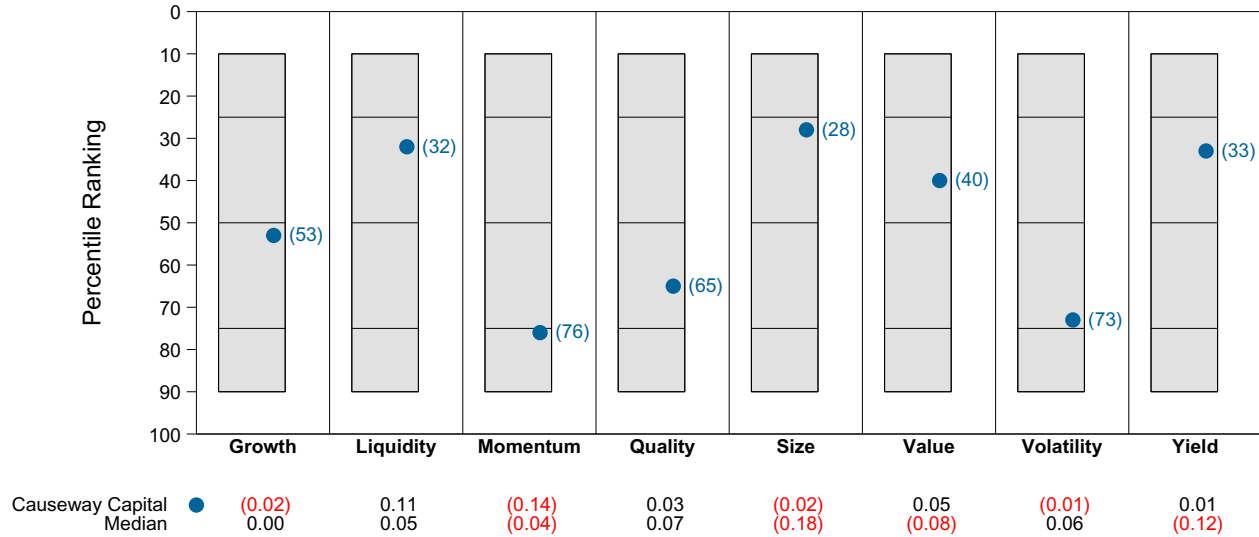
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

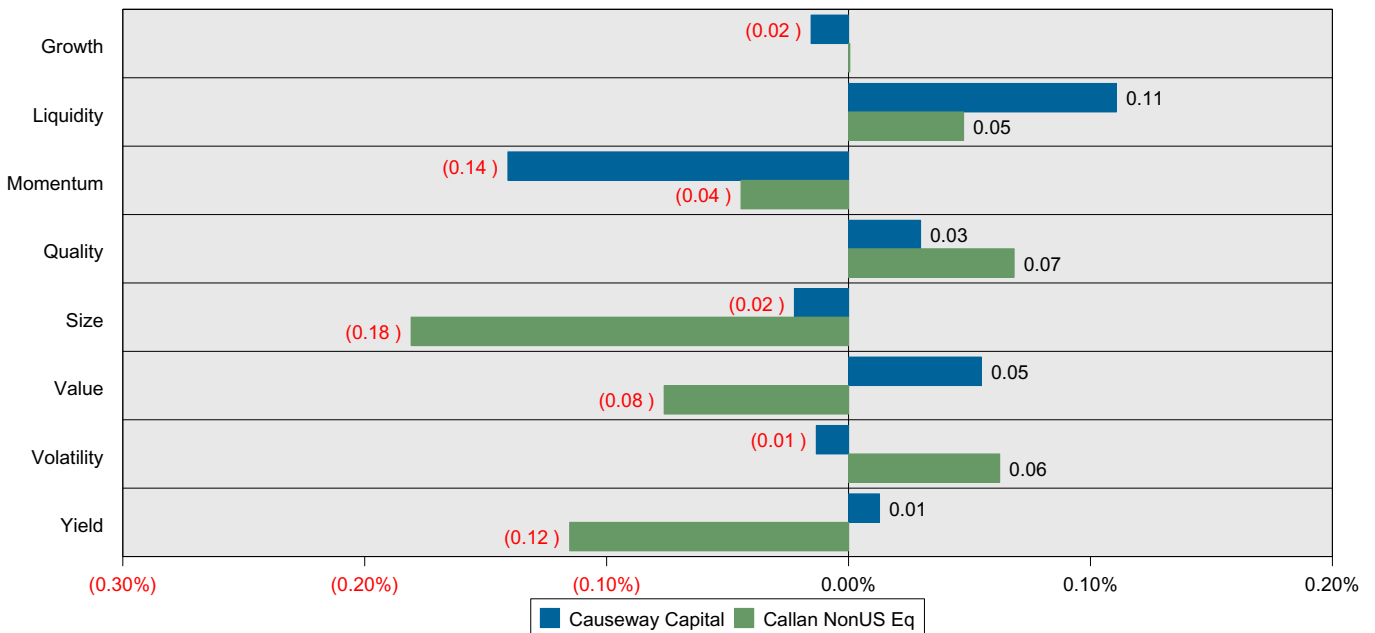
**Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



**Lazard**  
**Period Ended December 31, 2023**

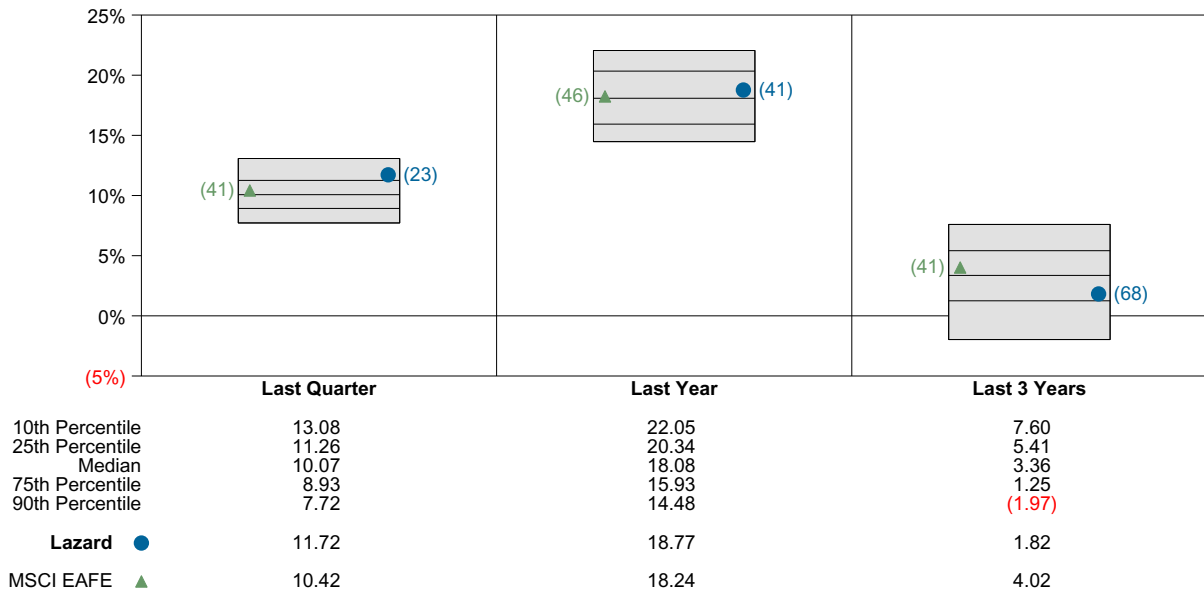
**Investment Philosophy**

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.

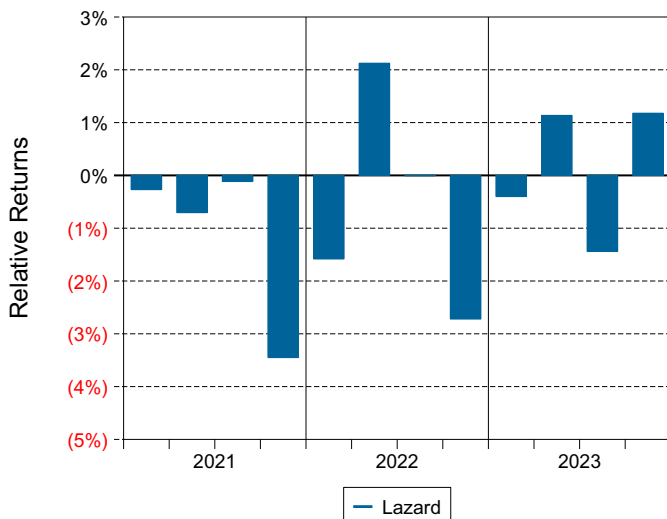
**Quarterly Asset Growth**

Beginning Market Value	\$147,132,498
Net New Investment	\$0
Investment Gains/(Losses)	\$17,244,880
Ending Market Value	\$164,377,378

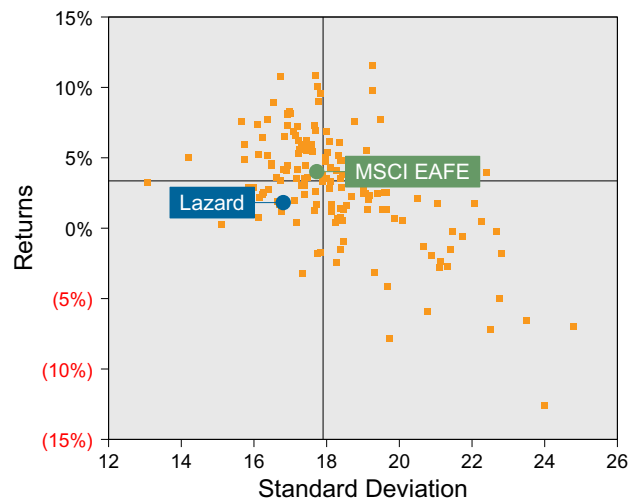
**Performance vs Callan NonUS Eq (Gross)**



**Relative Return vs MSCI EAFE**



**Callan NonUS Eq (Gross) Annualized Three Year Risk vs Return**

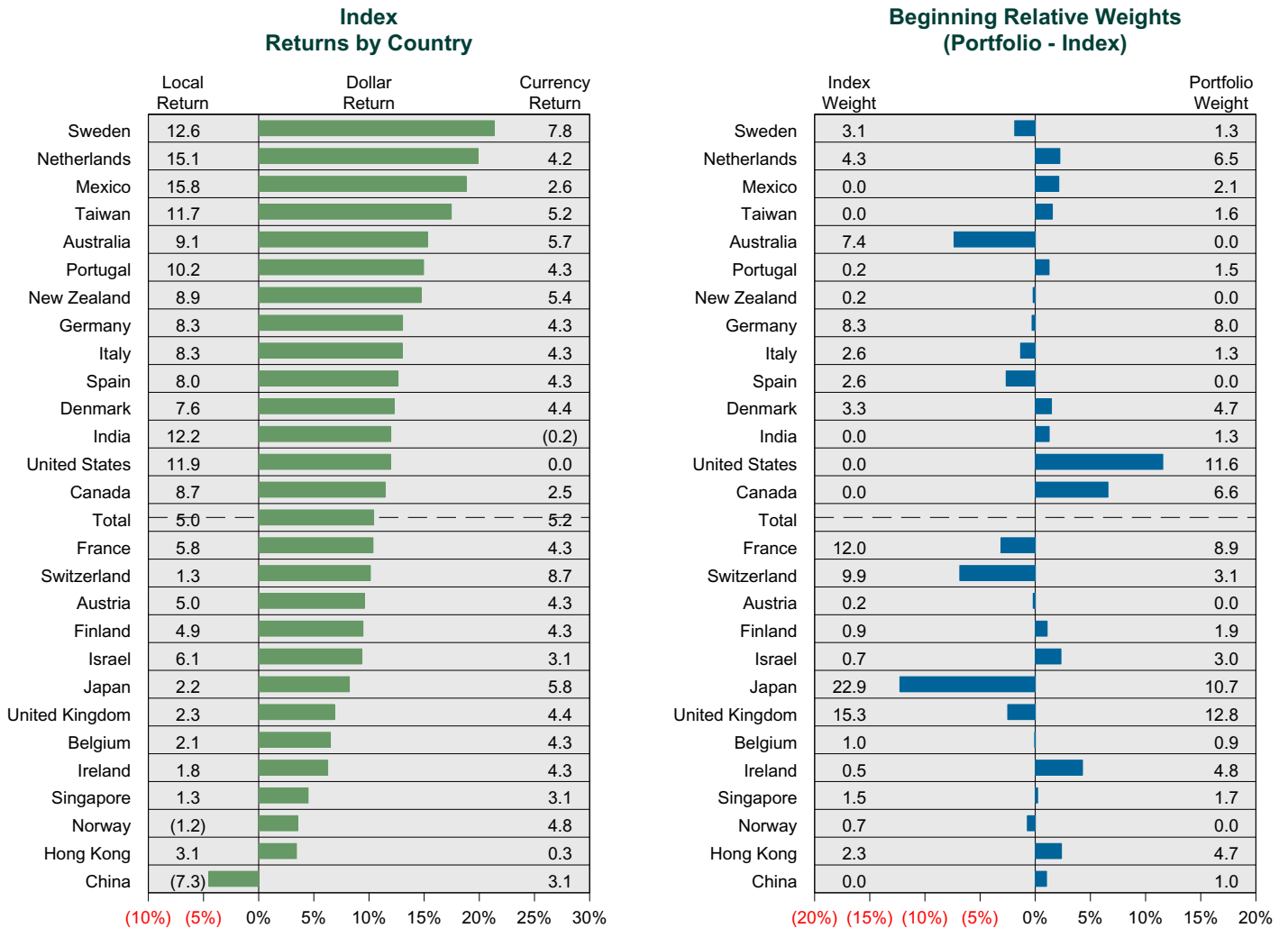


# Lazard vs MSCI EAFE

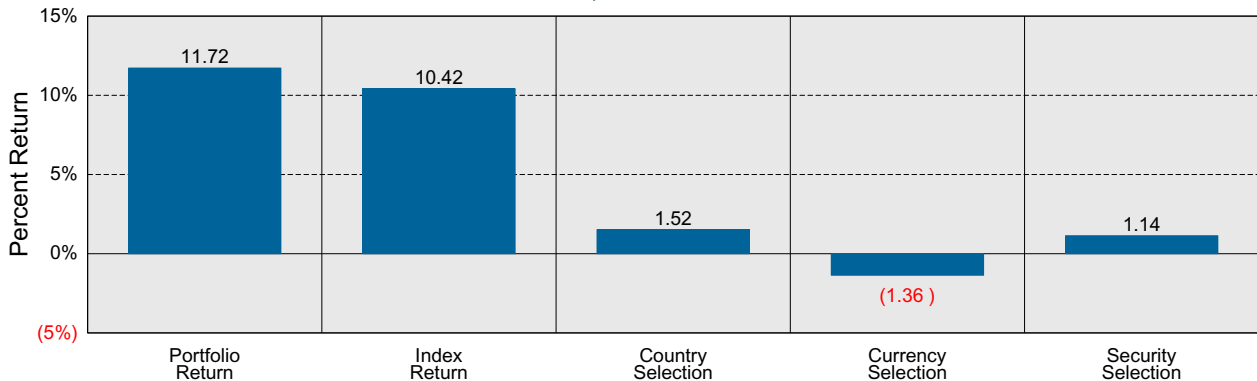
## Attribution for Quarter Ended December 31, 2023

### 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 December 31, 2023

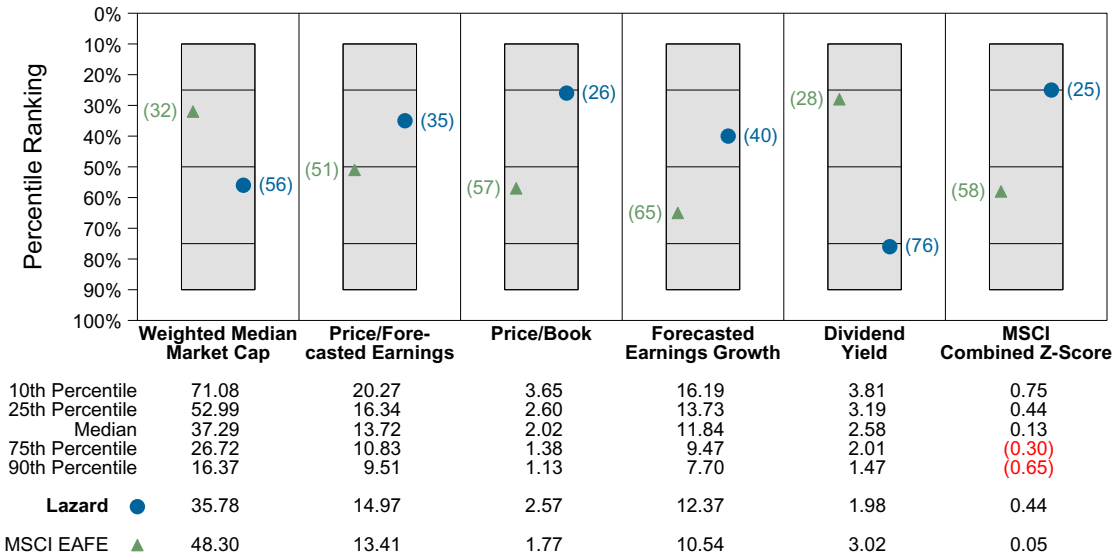


# Lazard Equity Characteristics Analysis Summary

## Portfolio Characteristics

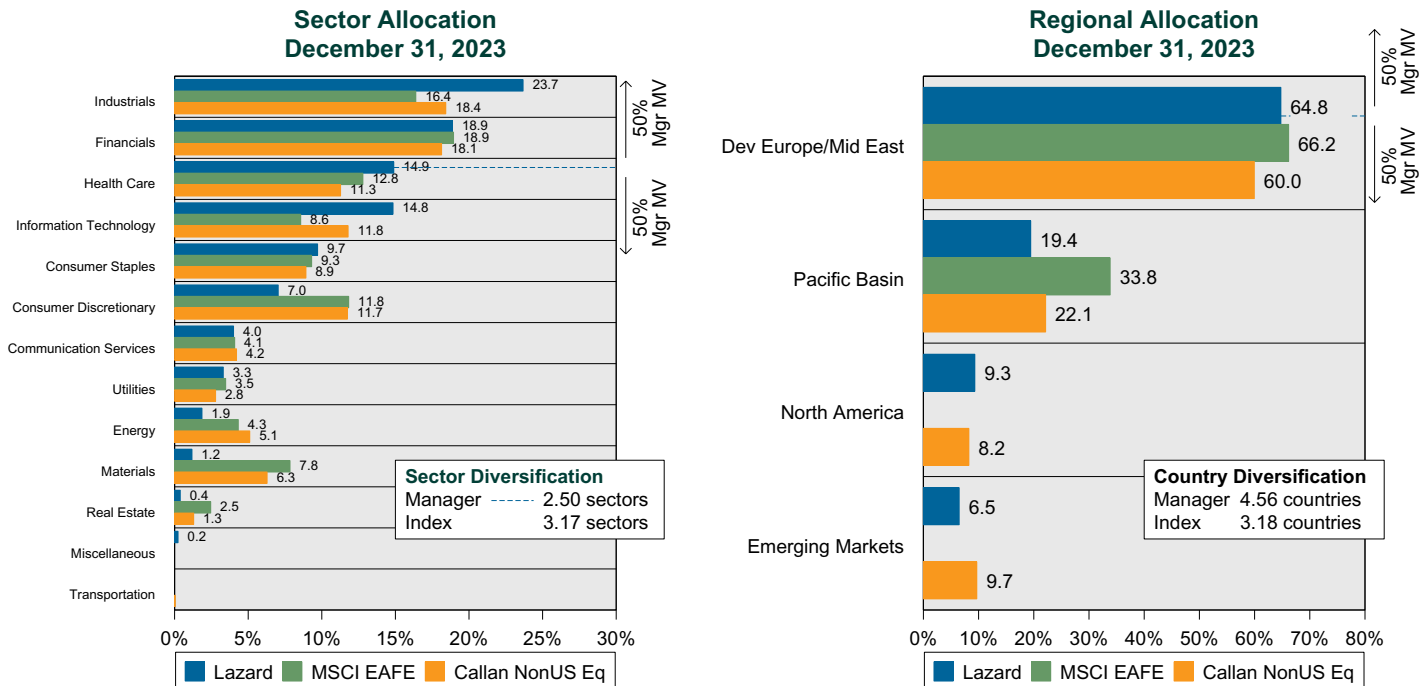
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Non-US Equity as of December 31, 2023



## 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.



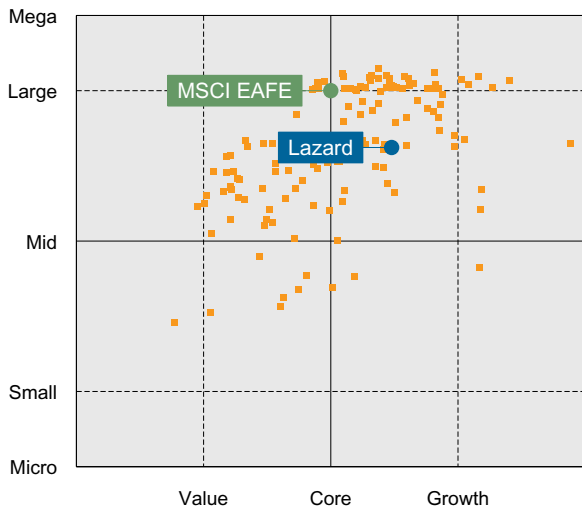
# Current Holdings Based Style Analysis

Lazard

As of December 31, 2023

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 chart illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right chart 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.

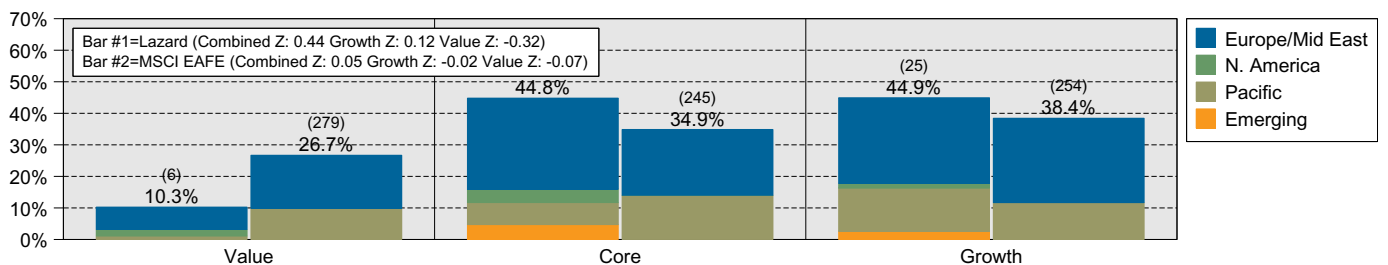
**Style Map vs Callan NonUS Eq Holdings as of December 31, 2023**



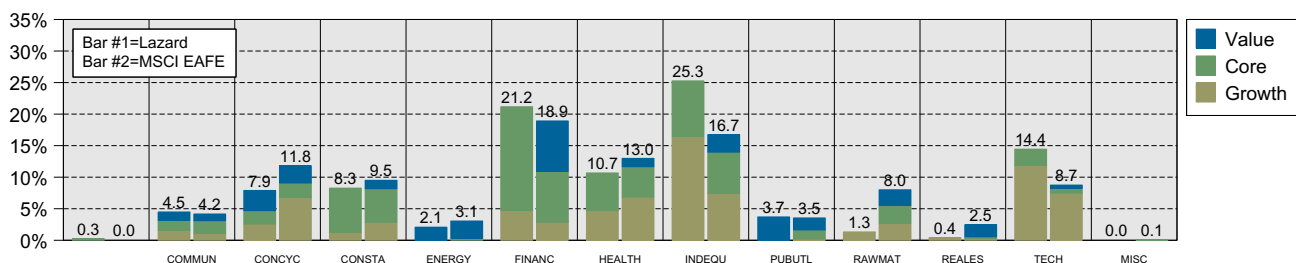
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	7.1% (4) 16.8% (147)	28.9% (14) 20.8% (137)	27.2% (14) 26.7% (149)	63.1% (32) 64.4% (433)
N. America	2.1% (1) 0.0% (0)	4.3% (2) 0.1% (1)	1.5% (1) 0.0% (0)	7.8% (4) 0.1% (1)
Pacific	1.1% (1) 9.9% (132)	7.0% (5) 13.9% (107)	13.7% (9) 11.7% (105)	21.8% (15) 35.5% (344)
Emerging	0.0% (0) 0.0% (0)	4.7% (3) 0.0% (0)	2.6% (1) 0.0% (0)	7.3% (4) 0.0% (0)
<b>Total</b>	<b>10.3% (6)</b> <b>26.7% (279)</b>	<b>44.8% (24)</b> <b>34.9% (245)</b>	<b>44.9% (25)</b> <b>38.4% (254)</b>	<b>100.0% (55)</b> <b>100.0% (778)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



**Sector Weights Distribution Holdings as of December 31, 2023**

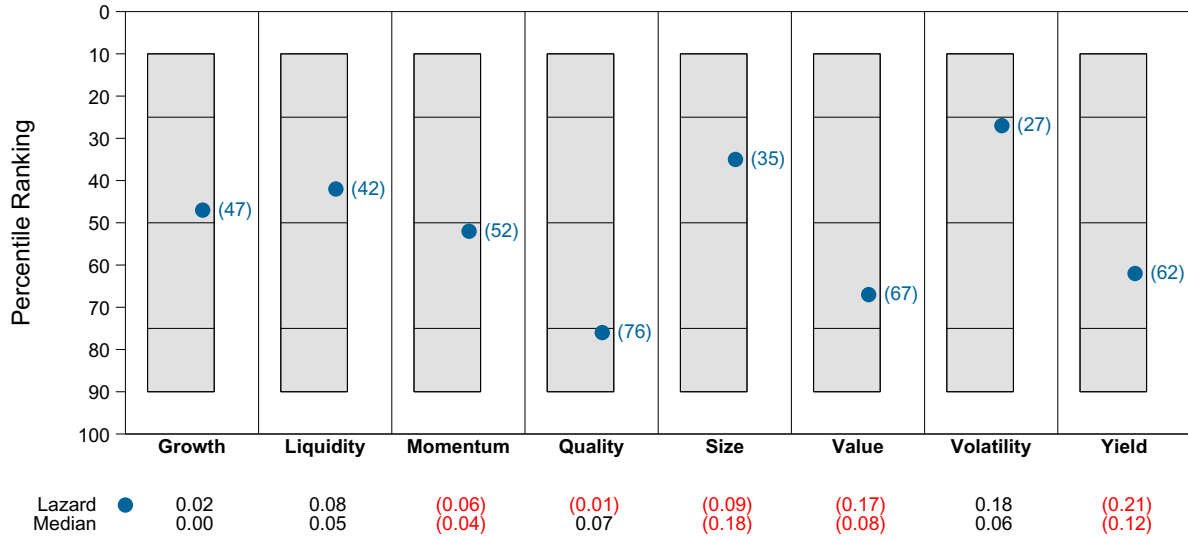




**Relative Factor Exposure Rankings**

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.

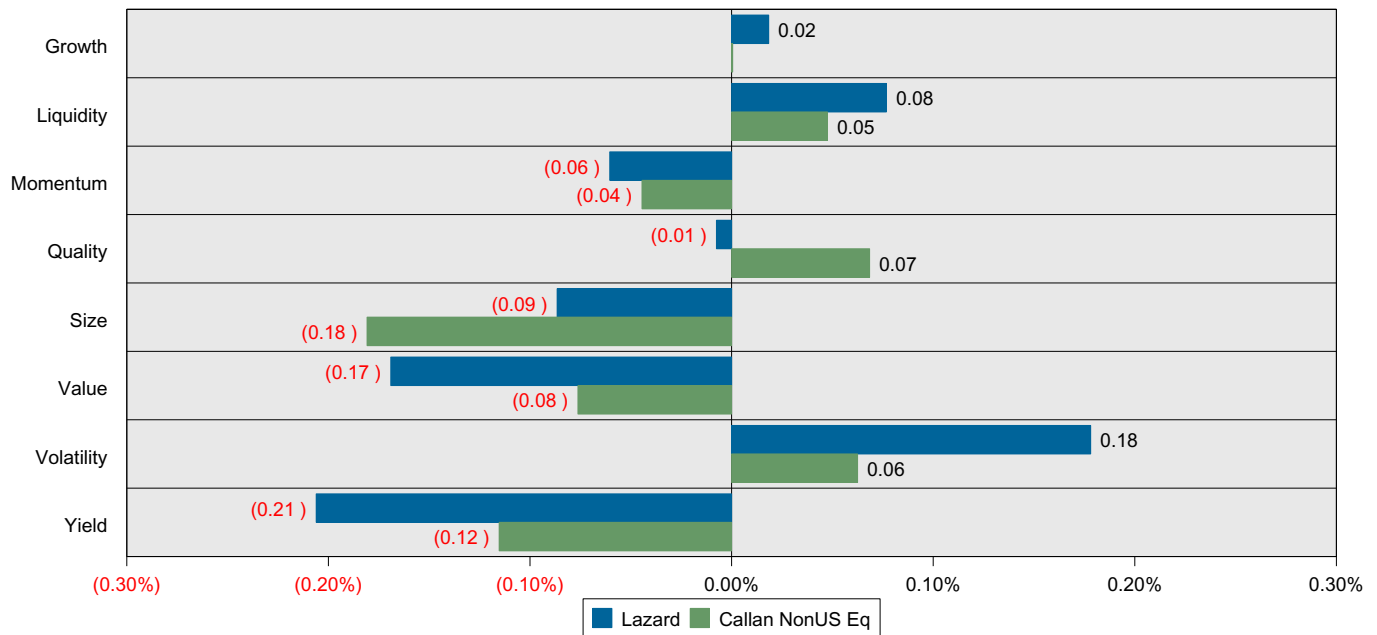
**Factor Exposures Relative to MSCI EAFE, Rankings vs Callan Non-US Equity for Period Ended December 31, 2023**



**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 December 31, 2023**



# Emerging Markets

## Period Ended December 31, 2023

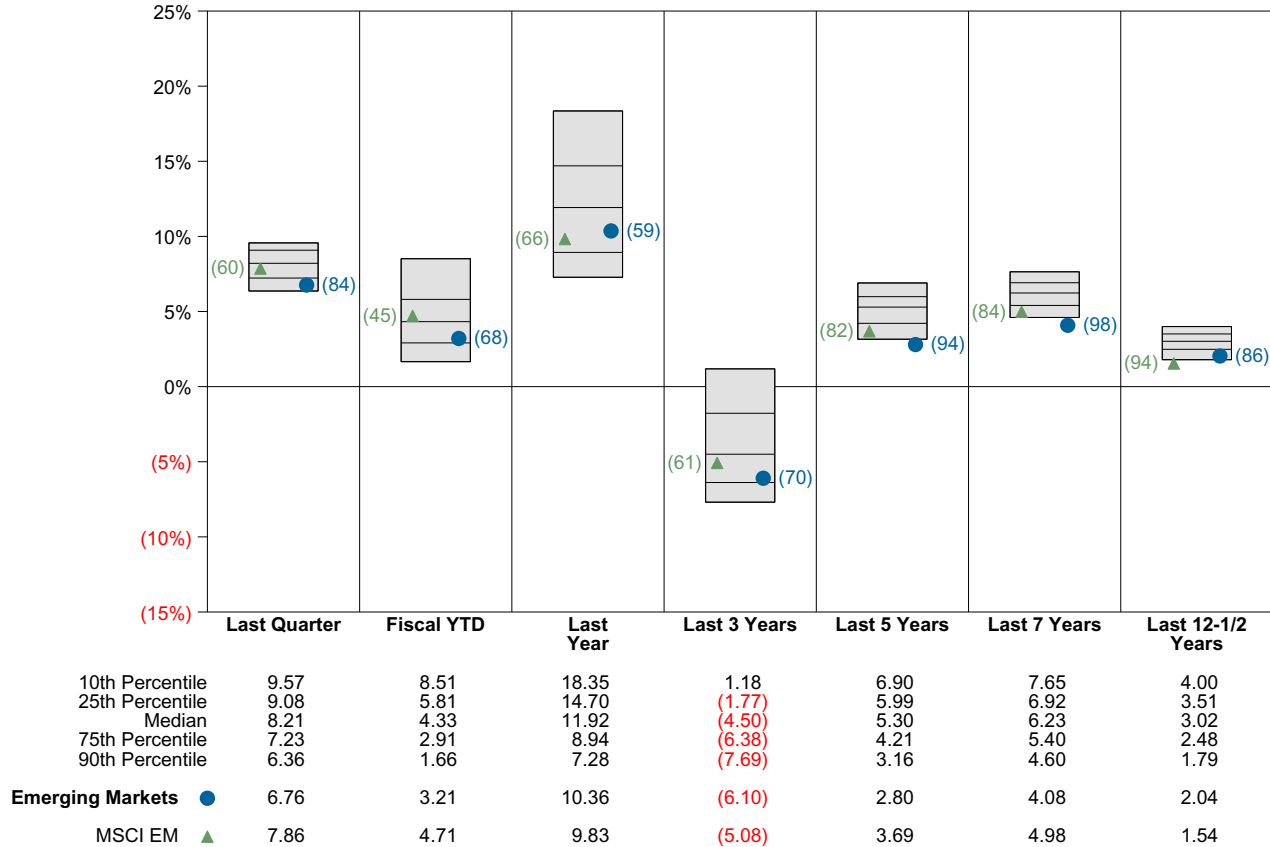
### Quarterly Summary and Highlights

- Emerging Markets's portfolio posted a 6.76% return for the quarter placing it in the 84 percentile of the Callan Emerging Core group for the quarter and in the 59 percentile for the last year.
- Emerging Markets's portfolio underperformed the MSCI EM by 1.10% for the quarter and outperformed the MSCI EM for the year by 0.53%.

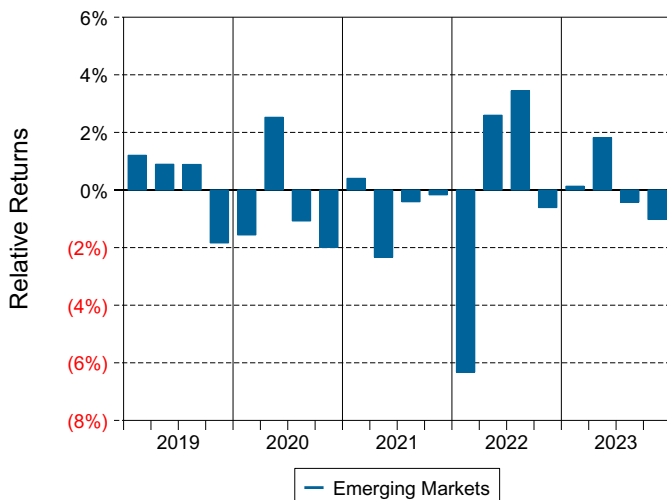
### Quarterly Asset Growth

Beginning Market Value	\$157,268,749
Net New Investment	\$0
Investment Gains/(Losses)	\$10,635,694
Ending Market Value	\$167,904,443

### Performance vs Callan Emerging Core (Gross)



### Relative Return vs MSCI EM



### Callan Emerging Core (Gross) Annualized Five Year Risk vs Return

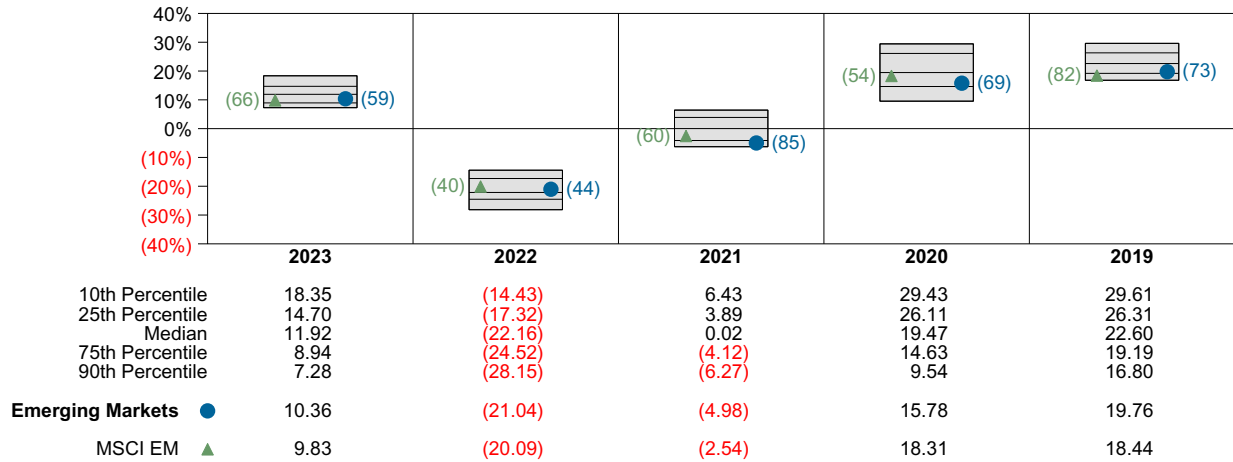


# Emerging Markets Return Analysis Summary

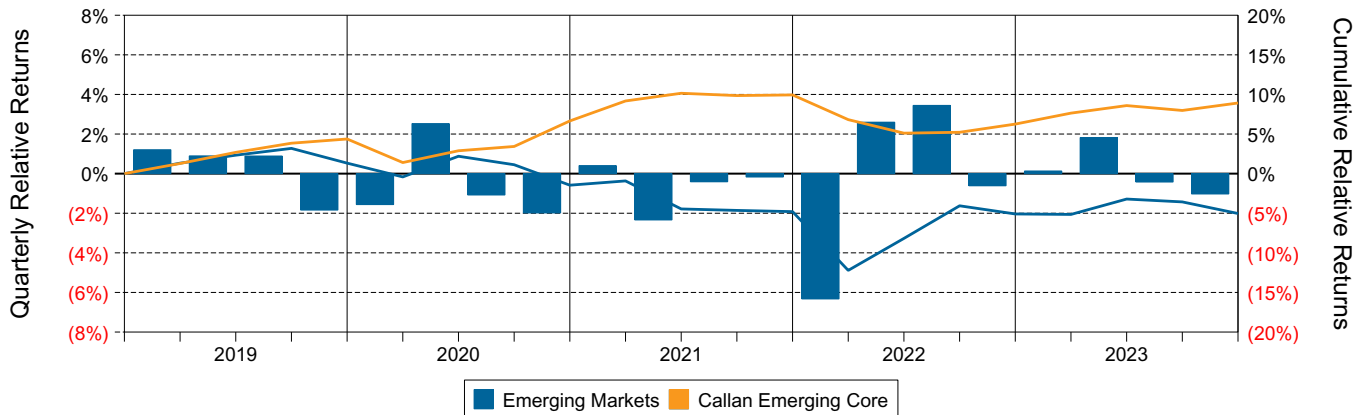
## Return Analysis

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.

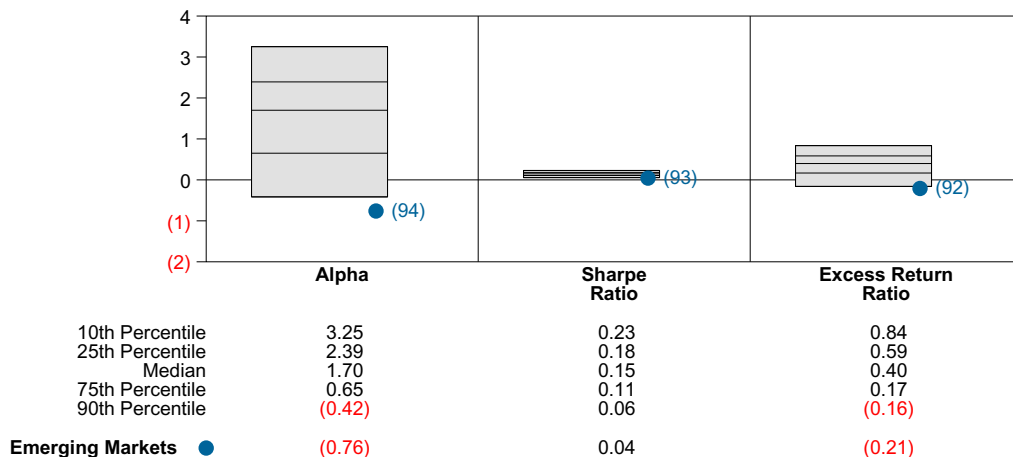
### Performance vs Callan Emerging Core (Gross)



### Cumulative and Quarterly Relative Returns vs MSCI EM



### Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023

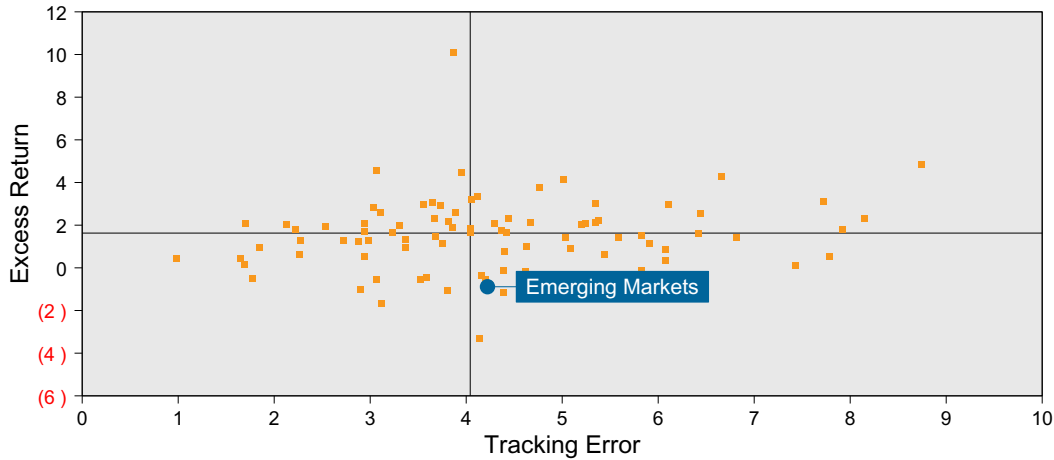


# Emerging Markets Risk Analysis Summary

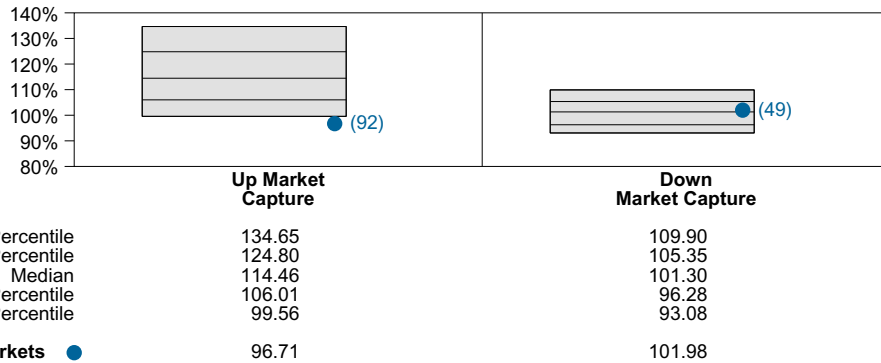
## Risk Analysis

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.

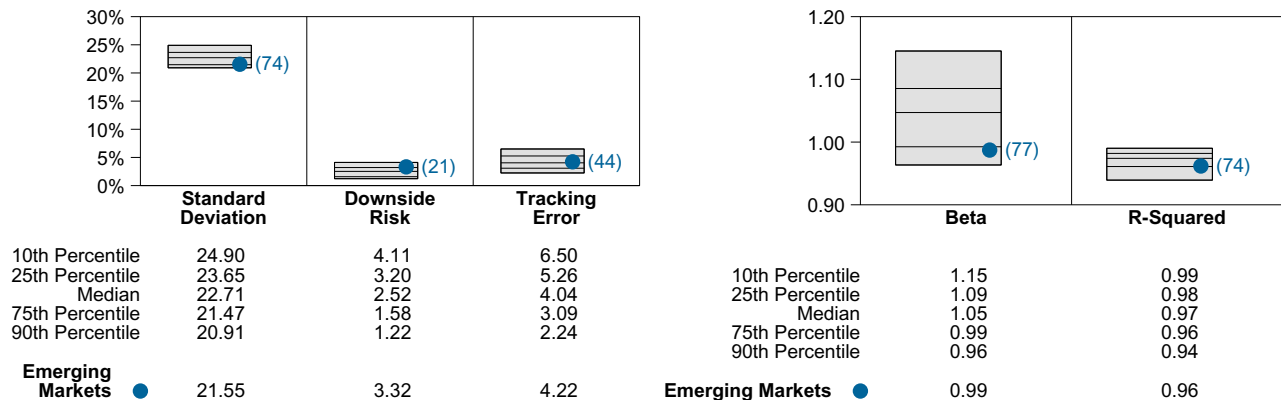
### Risk Analysis vs Callan Emerging Core (Gross) Five Years Ended December 31, 2023



### Market Capture vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023

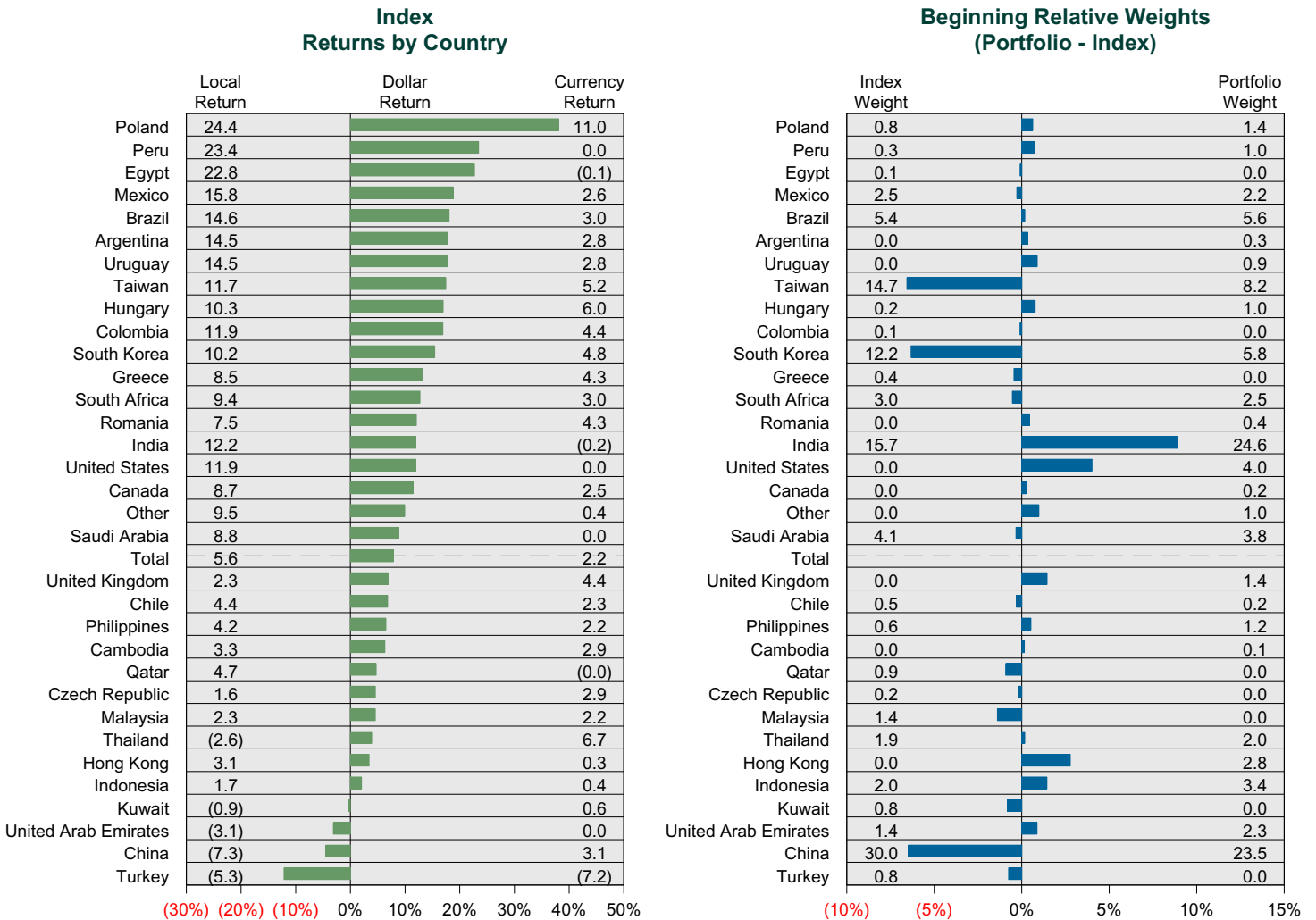


# Emerging Markets vs MSCI EM

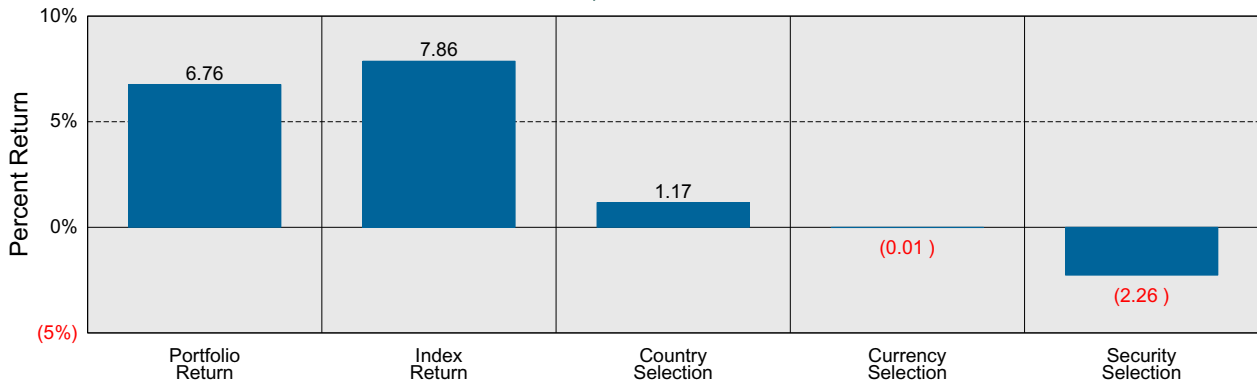
## Attribution for Quarter Ended December 31, 2023

### 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 December 31, 2023

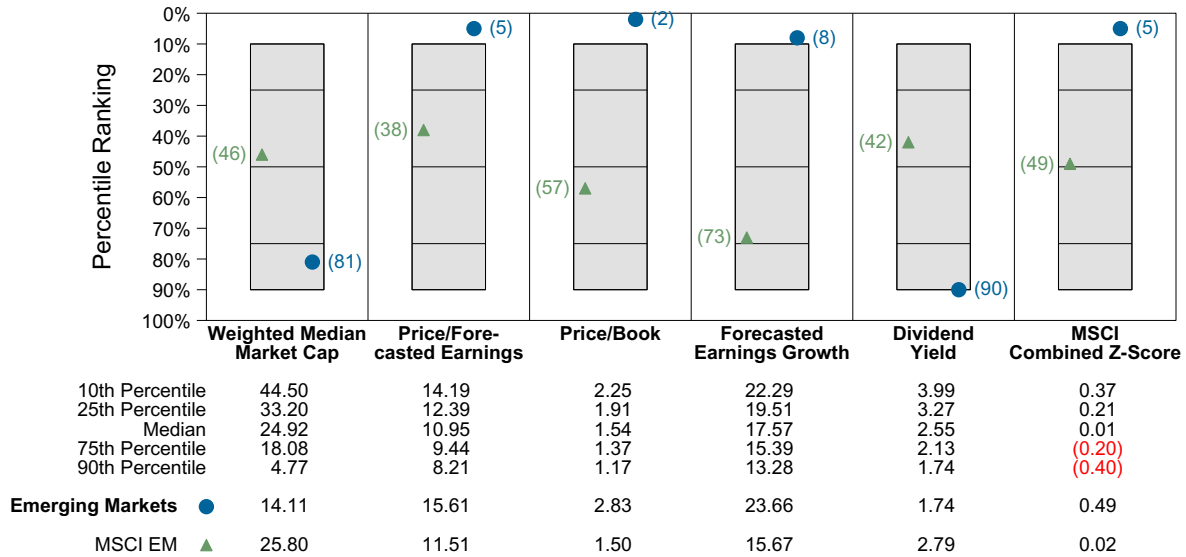


# Emerging Markets Equity Characteristics Analysis Summary

## Portfolio Characteristics

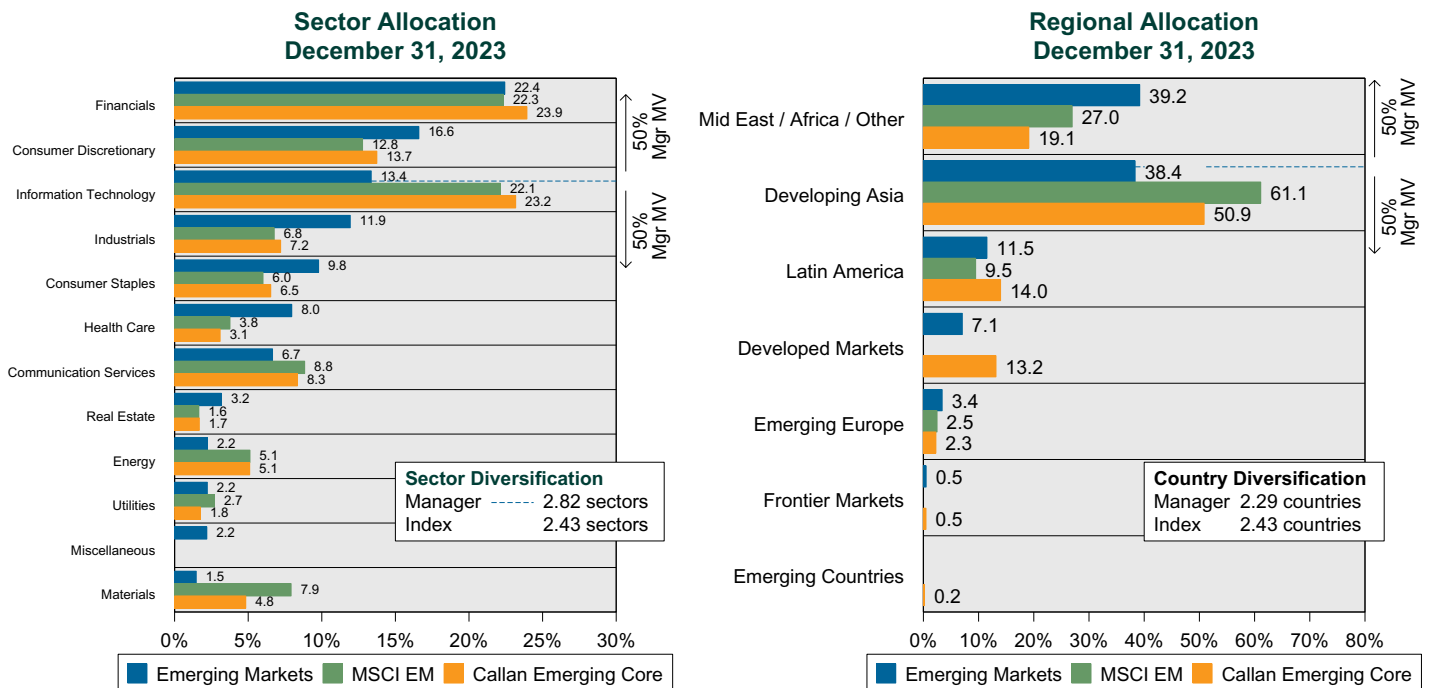
This graph compares the portfolio's characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Emerging Core as of December 31, 2023



## 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.



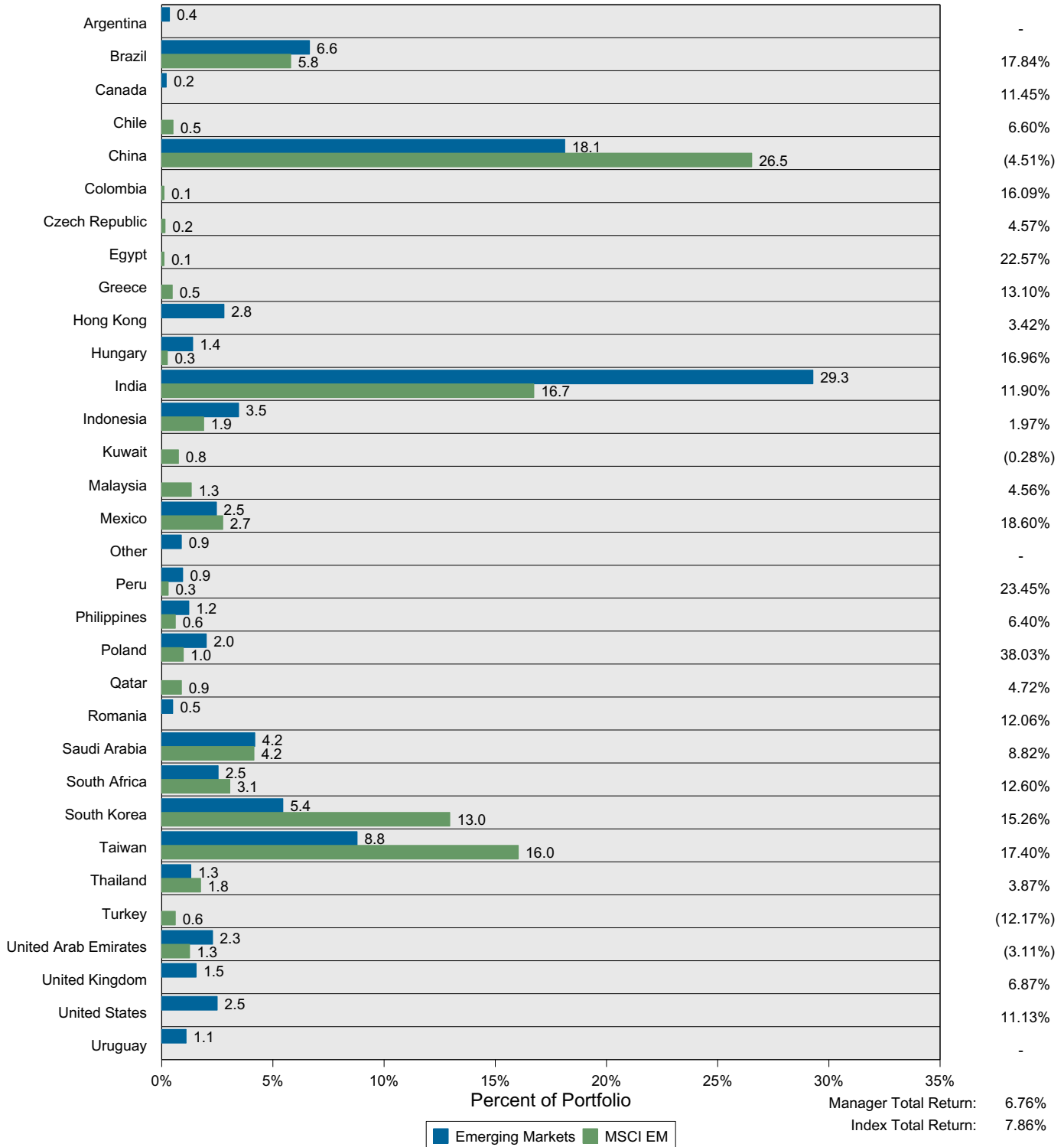
## Country Allocation Emerging Markets VS MSCI Emerging Markets (Net)

### Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of December 31, 2023. 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 December 31, 2023

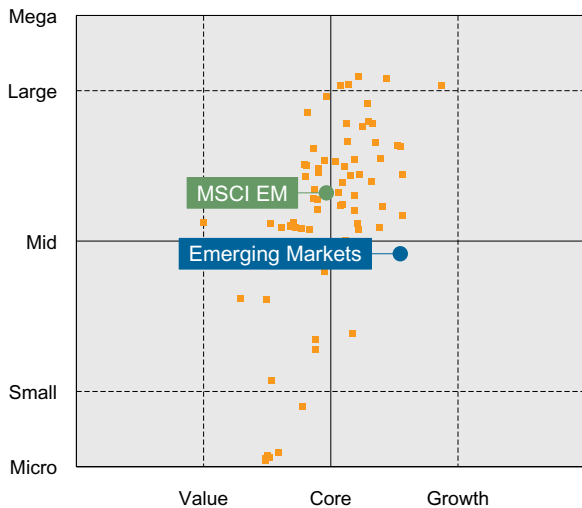
### Index Rtns



# Current Holdings Based Style Analysis Emerging Markets As of December 31, 2023

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 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.

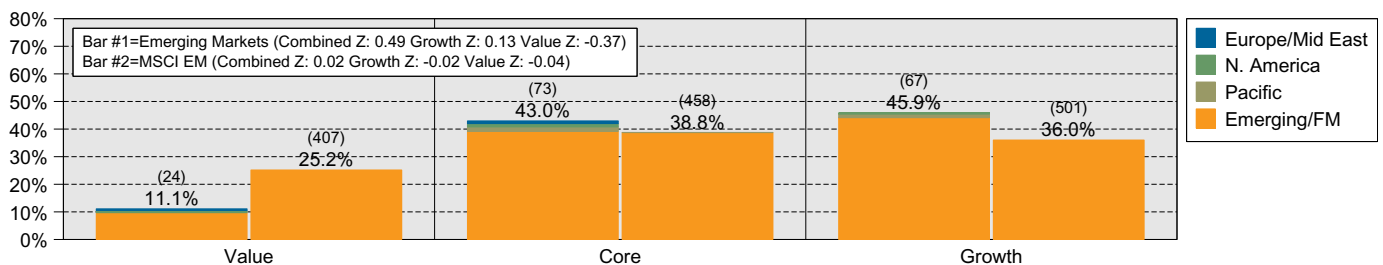
**Style Map vs Callan Emerging Core Holdings as of December 31, 2023**



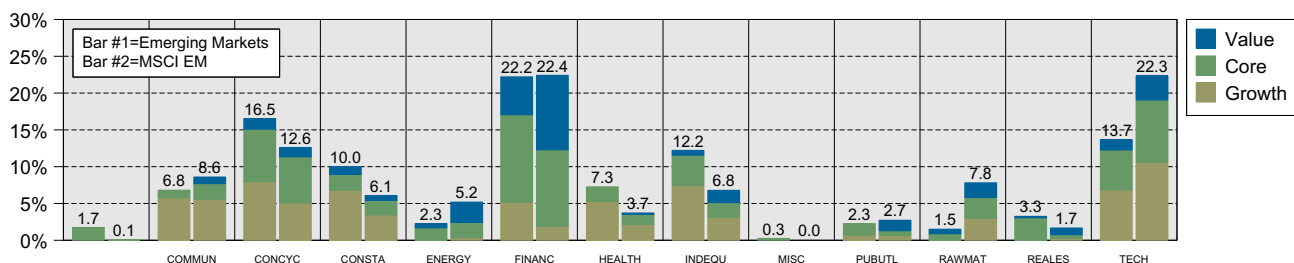
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	0.6% (1) 0.0% (0)	1.0% (2) 0.0% (0)	0.0% (0) 0.0% (0)	1.6% (3) 0.0% (0)
N. America	0.8% (3) 0.0% (0)	1.2% (2) 0.0% (0)	0.5% (1) 0.0% (0)	2.5% (6) 0.0% (0)
Pacific	0.0% (0) 0.0% (0)	1.6% (2) 0.1% (2)	1.3% (2) 0.0% (0)	2.9% (4) 0.1% (2)
Emerging/ FM	9.7% (20) 25.2% (407)	39.2% (67) 38.7% (456)	44.1% (64) 36.0% (501)	93.0% (151) 99.9% (1364)
<b>Total</b>	<b>11.1% (24)</b> <b>25.2% (407)</b>	<b>43.0% (73)</b> <b>38.8% (458)</b>	<b>45.9% (67)</b> <b>36.0% (501)</b>	<b>100.0% (164)</b> <b>100.0% (1366)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



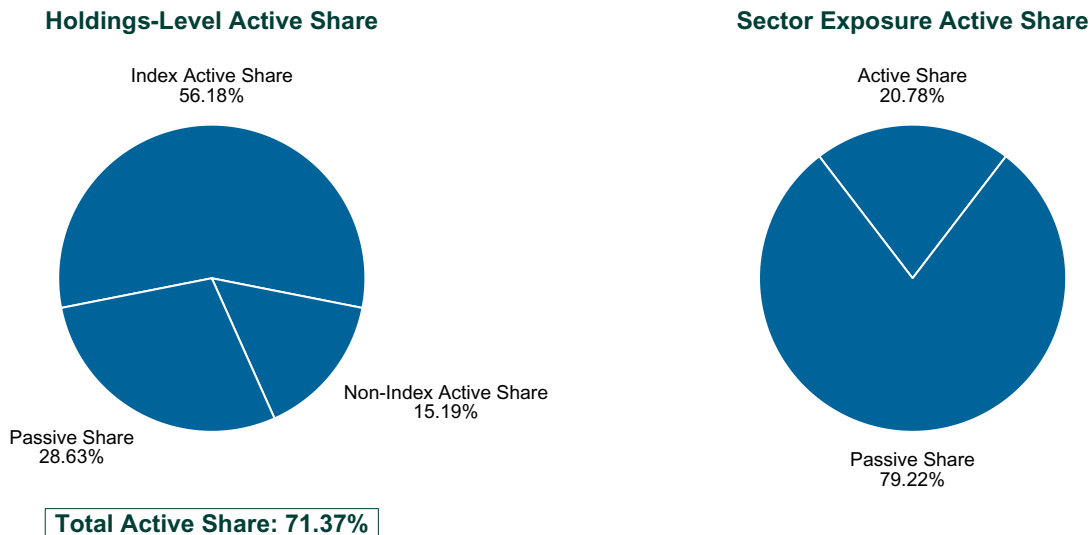
**Sector Weights Distribution Holdings as of December 31, 2023**





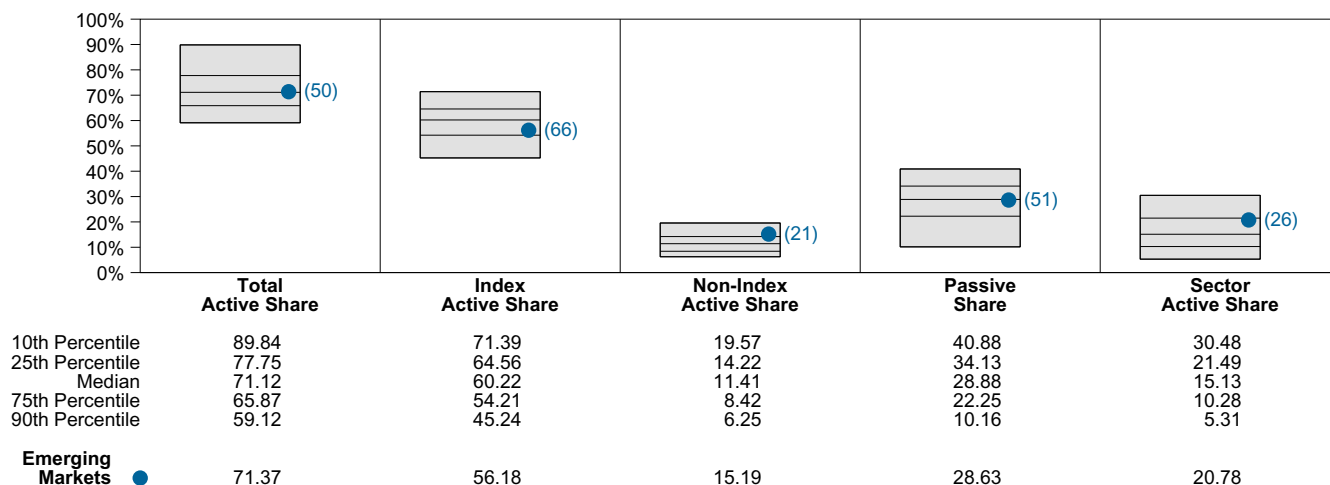
## Emerging Markets Active Share Analysis as of December 31, 2023 vs. MSCI Emerging Markets (Net)

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.



	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	42.68%	4.31%	46.99%	8.83%	6.65%	3.30%
Consumer Discretionary	52.63%	25.52%	78.15%	12.77%	16.59%	11.63%
Consumer Staples	66.59%	4.51%	71.10%	6.01%	9.78%	6.11%
Energy	50.09%	4.63%	54.72%	5.12%	2.23%	1.54%
Financials	59.21%	8.83%	68.04%	22.34%	22.43%	15.23%
Health Care	51.50%	32.76%	84.26%	3.76%	7.96%	5.27%
Industrials	65.16%	16.60%	81.76%	6.77%	11.93%	7.96%
Information Technology	43.48%	7.59%	51.08%	22.14%	13.36%	10.35%
Materials	52.57%	43.87%	96.44%	7.92%	1.47%	4.50%
Miscellaneous	0.00%	100.00%	100.00%	-	2.19%	0.24%
Real Estate	70.79%	12.82%	83.61%	1.65%	3.18%	2.14%
Utilities	73.87%	17.86%	91.73%	2.70%	2.23%	2.24%
<b>Total</b>	<b>56.18%</b>	<b>15.19%</b>	<b>71.37%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>70.52%</b>

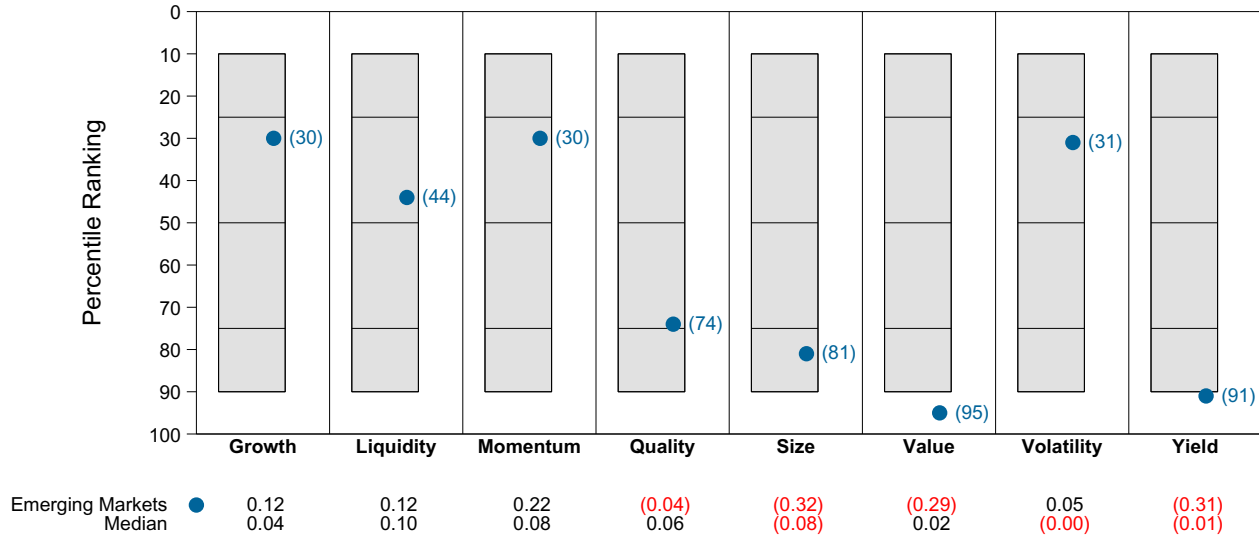
### Active Share vs. Callan Emerging Core



**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.

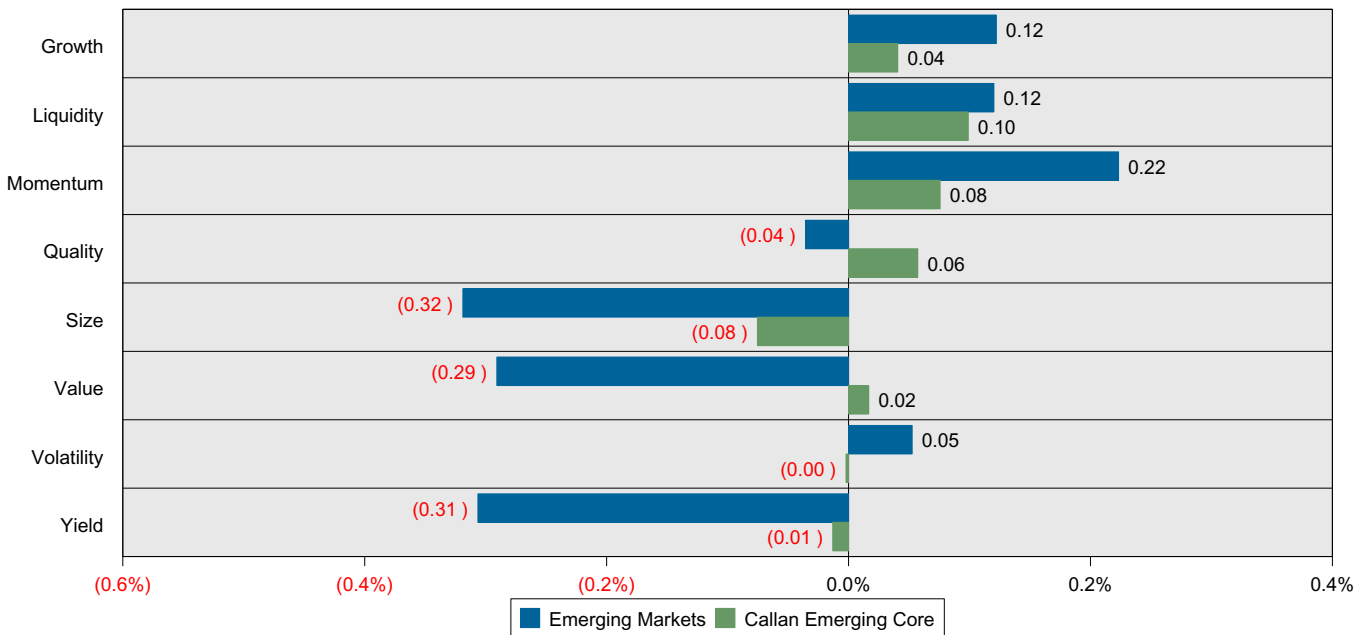
**Factor Exposures Relative to MSCI EM, Rankings vs Callan Emerging Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# Wellington Emerging Markets Period Ended December 31, 2023

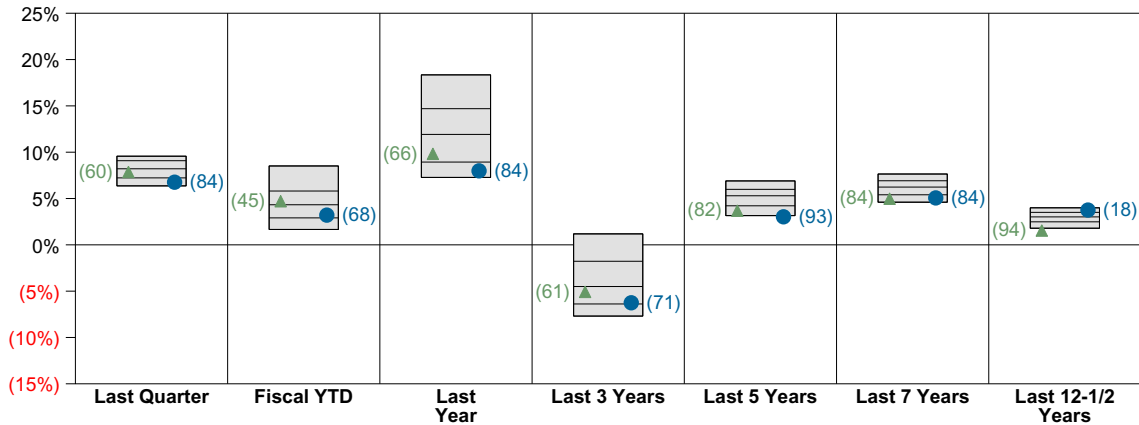
## Investment Philosophy

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

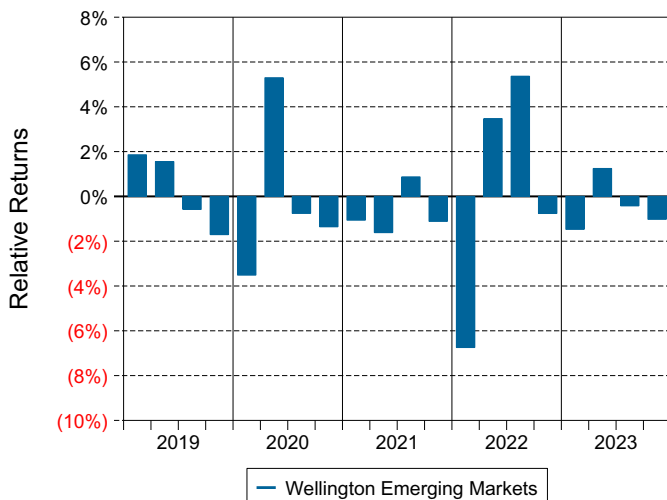
Beginning Market Value	\$157,268,749
Net New Investment	\$0
Investment Gains/(Losses)	\$10,635,694
Ending Market Value	\$167,904,443

## Performance vs Callan Emerging Core (Gross)

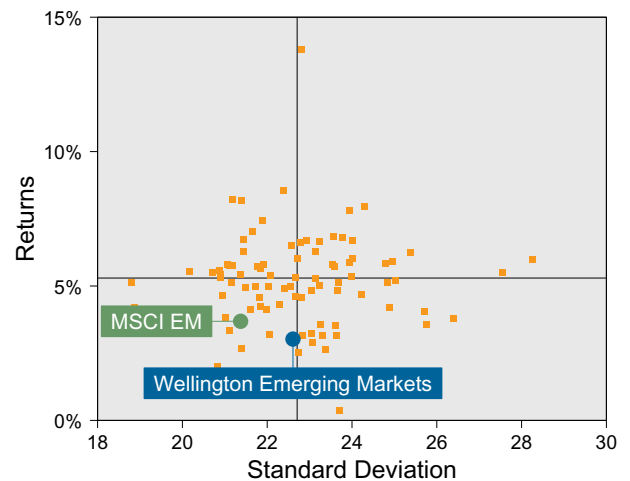


10th Percentile	9.57	8.51	18.35	1.18	6.90	7.65	4.00
25th Percentile	9.08	5.81	14.70	(1.77)	5.99	6.92	3.51
Median	8.21	4.33	11.92	(4.50)	5.30	6.23	3.02
75th Percentile	7.23	2.91	8.94	(6.38)	4.21	5.40	2.48
90th Percentile	6.36	1.66	7.28	(7.69)	3.16	4.60	1.79

### Relative Return vs MSCI EM



### Callan Emerging Core (Gross) Annualized Five Year Risk vs Return

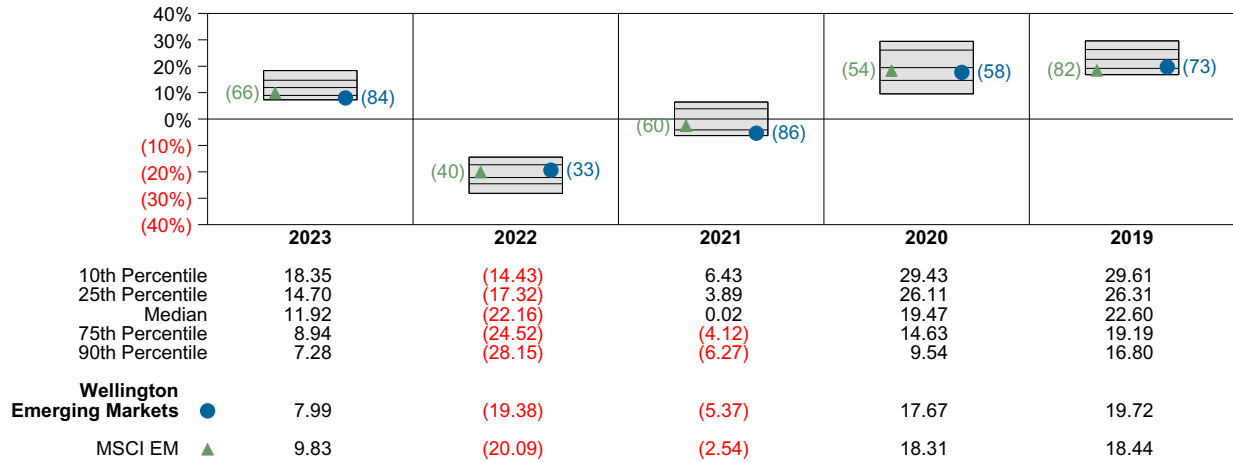


# Wellington Emerging Markets Return Analysis Summary

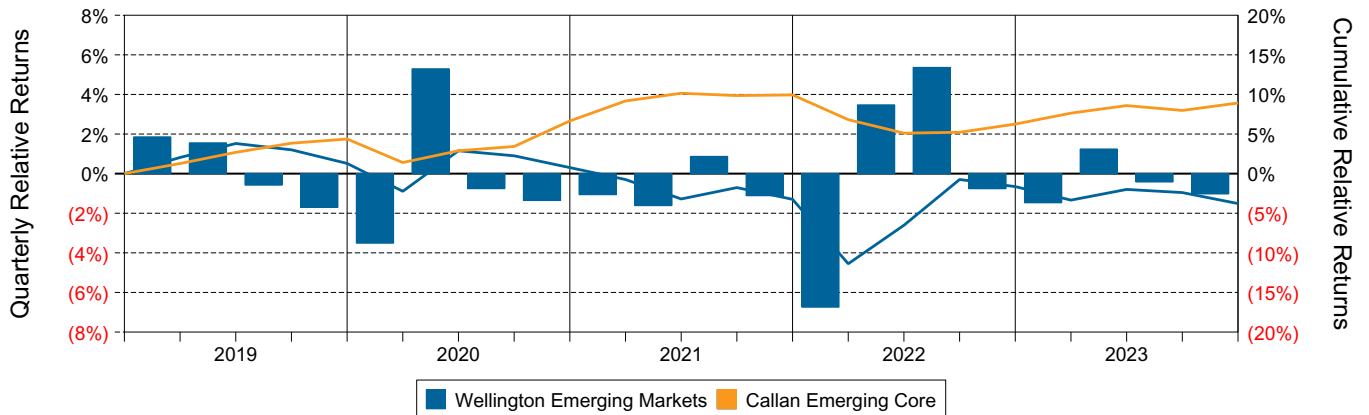
## Return Analysis

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.

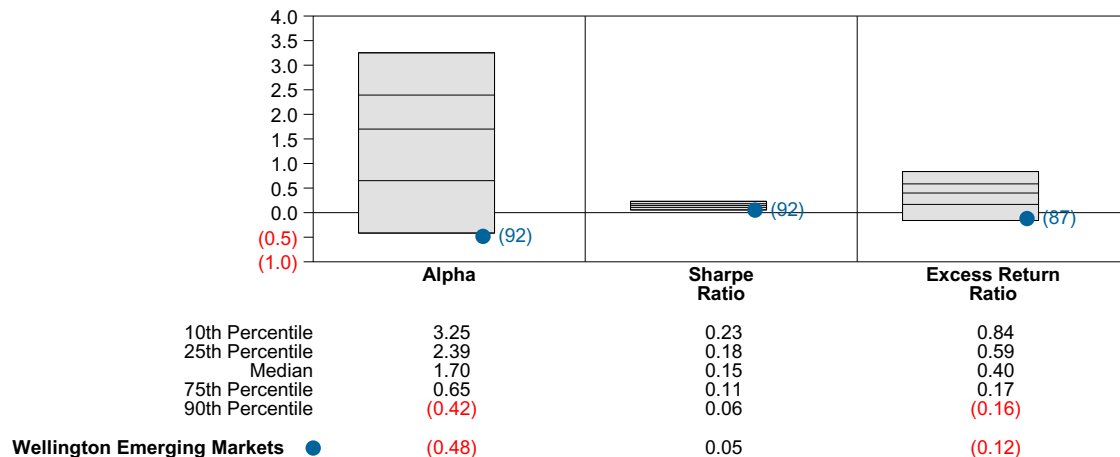
### Performance vs Callan Emerging Core (Gross)



### Cumulative and Quarterly Relative Returns vs MSCI EM



### Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023

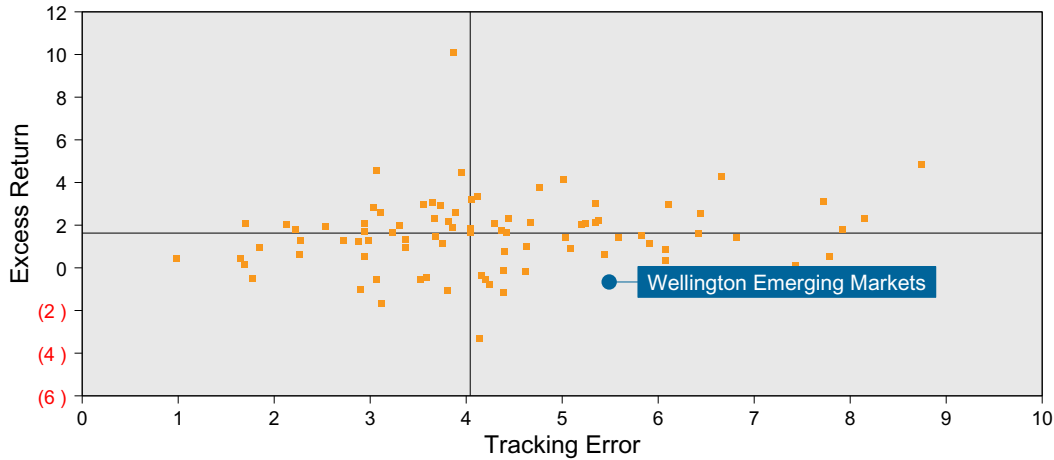


# Wellington Emerging Markets Risk Analysis Summary

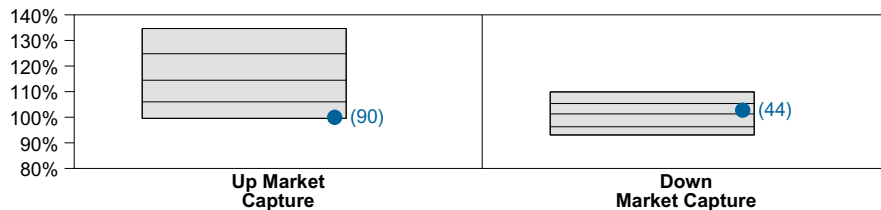
## Risk Analysis

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 December 31, 2023

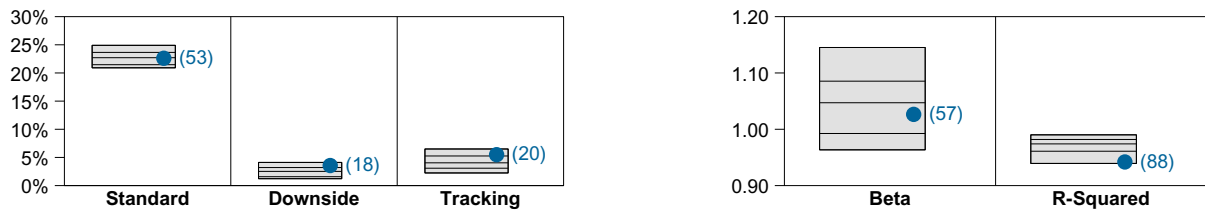


### Market Capture vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	134.65	109.90
25th Percentile	124.80	105.35
Median	114.46	101.30
75th Percentile	106.01	96.28
90th Percentile	99.56	93.08
<b>Wellington Emerging Markets</b>	<b>99.96</b>	<b>102.76</b>

### Risk Statistics Rankings vs MSCI EM Rankings Against Callan Emerging Core (Gross) Five Years Ended December 31, 2023

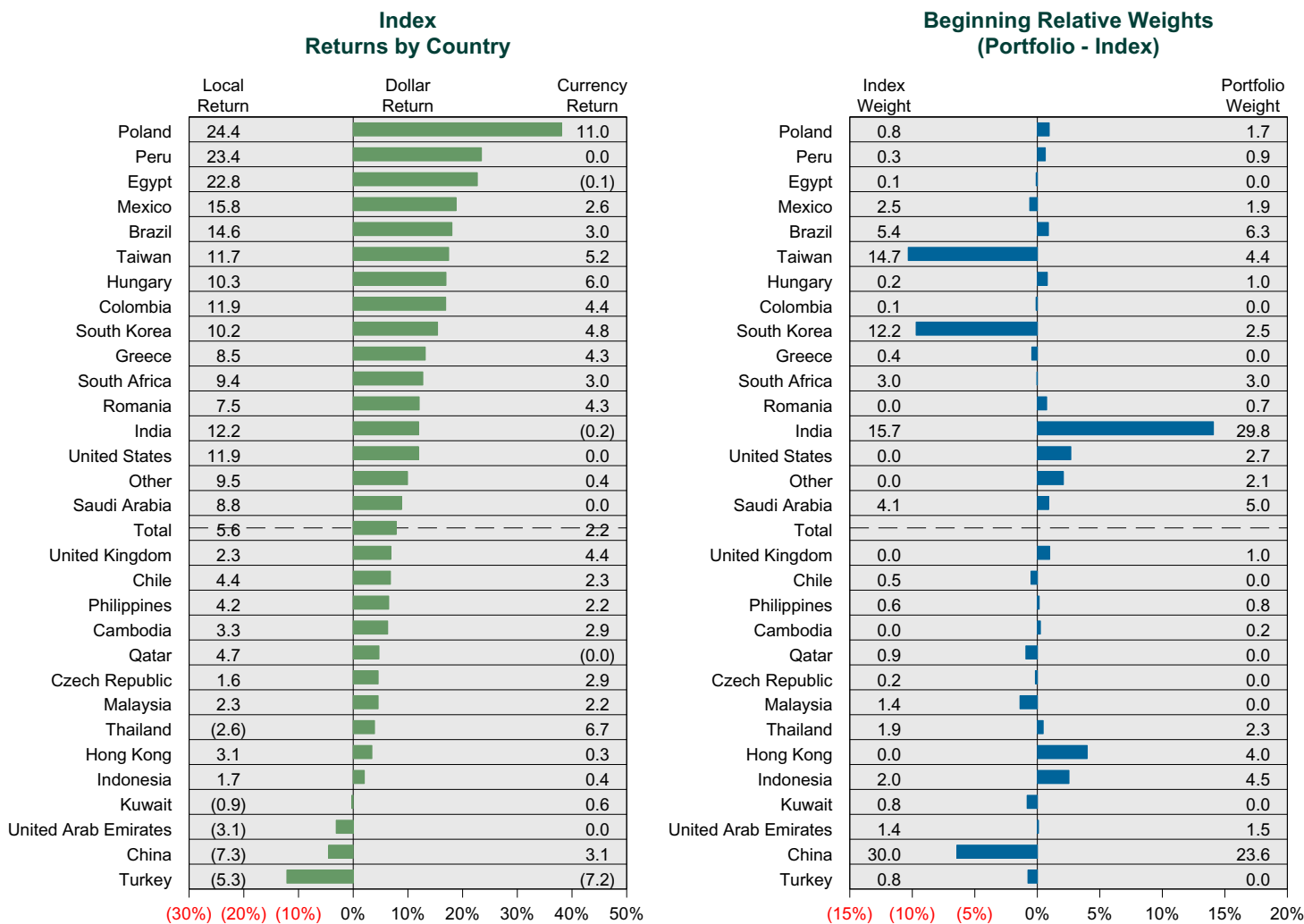


	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	24.90	4.11	6.50	1.15	0.99
25th Percentile	23.65	3.20	5.26	1.09	0.98
Median	22.71	2.52	4.04	1.05	0.97
75th Percentile	21.47	1.58	3.09	0.99	0.96
90th Percentile	20.91	1.22	2.24	0.96	0.94
<b>Wellington Emerging Markets</b>	<b>22.61</b>	<b>3.56</b>	<b>5.49</b>	<b>1.03</b>	<b>0.94</b>

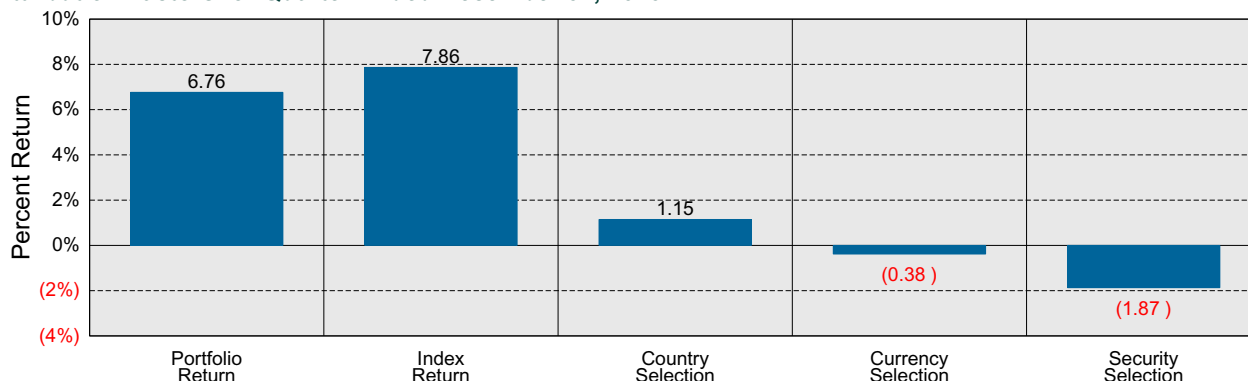
# Wellington Emerging Markets vs MSCI EM Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

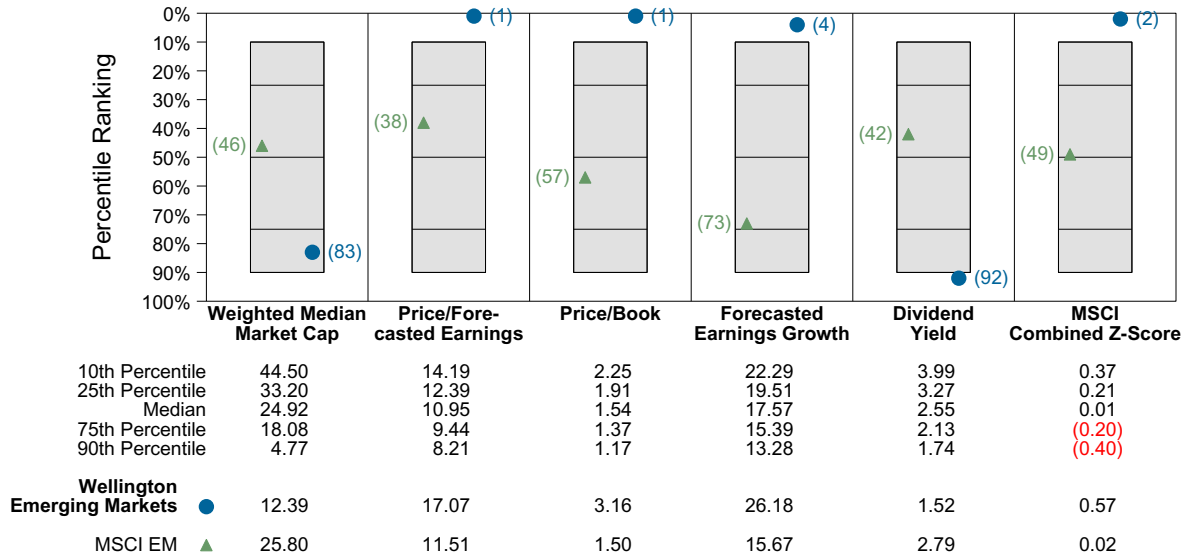


# Wellington Emerging Markets Equity Characteristics Analysis Summary

## Portfolio Characteristics

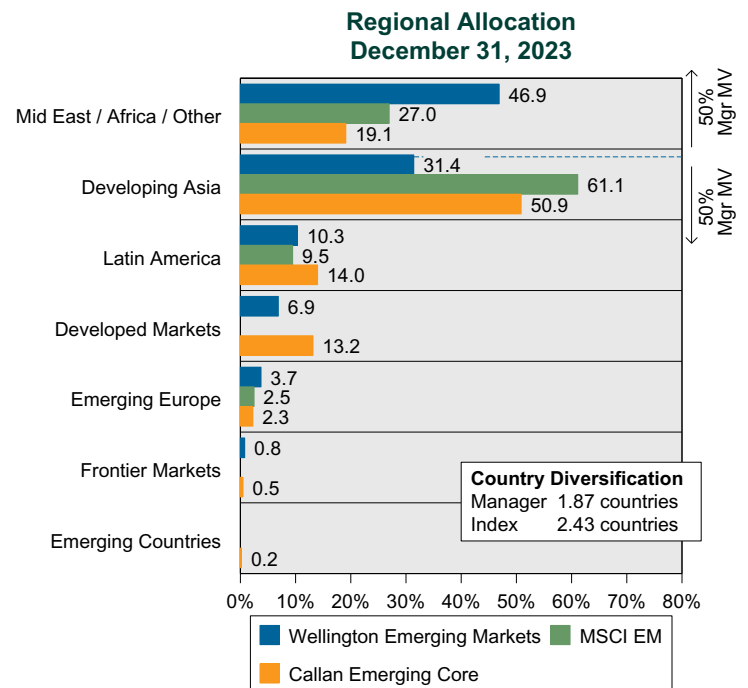
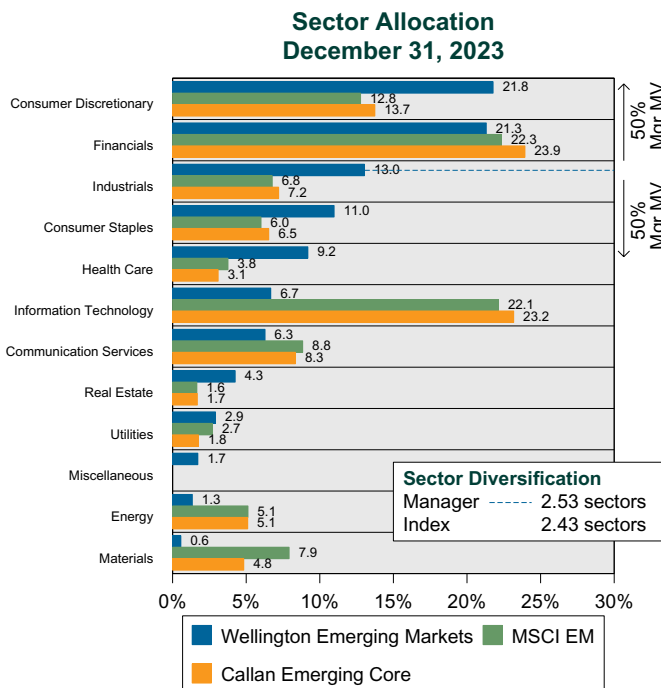
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Emerging Core as of December 31, 2023



## 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.

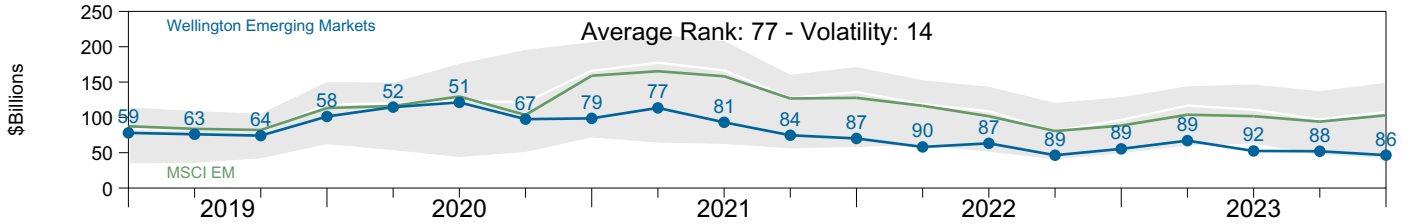


## Portfolio Characteristics Analysis

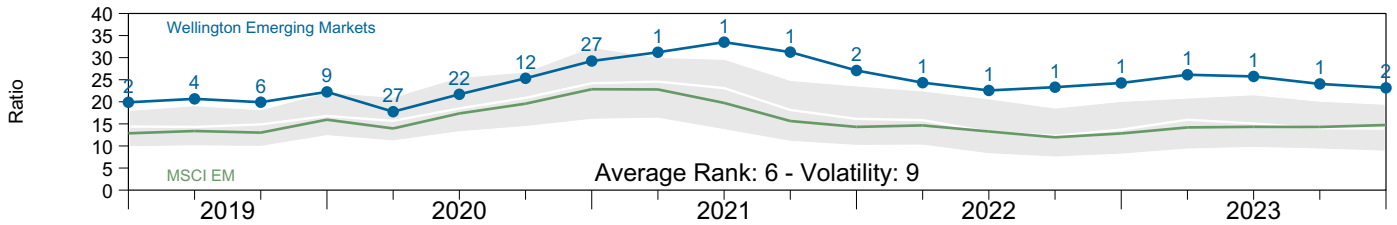
### Callan Emerging Core

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.

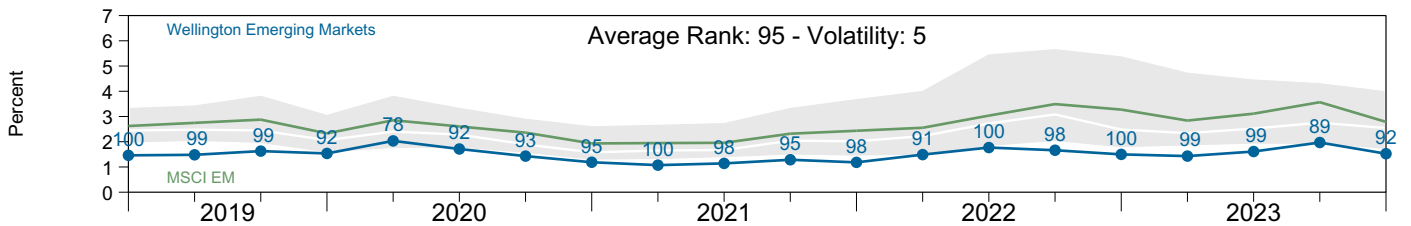
#### Weighted Average Market Cap



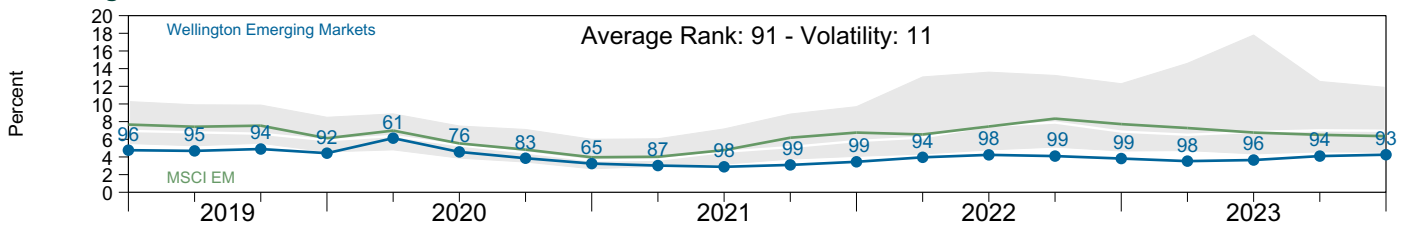
#### Trailing P/E



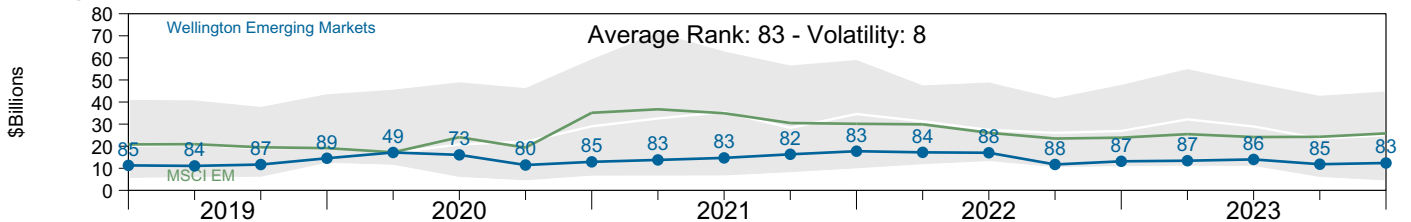
#### Dividend Yield



#### 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.



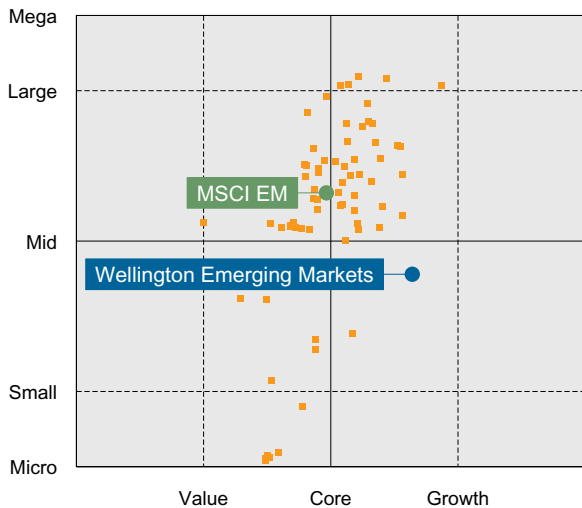
# Current Holdings Based Style Analysis

## Wellington Emerging Markets

### As of December 31, 2023

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 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.

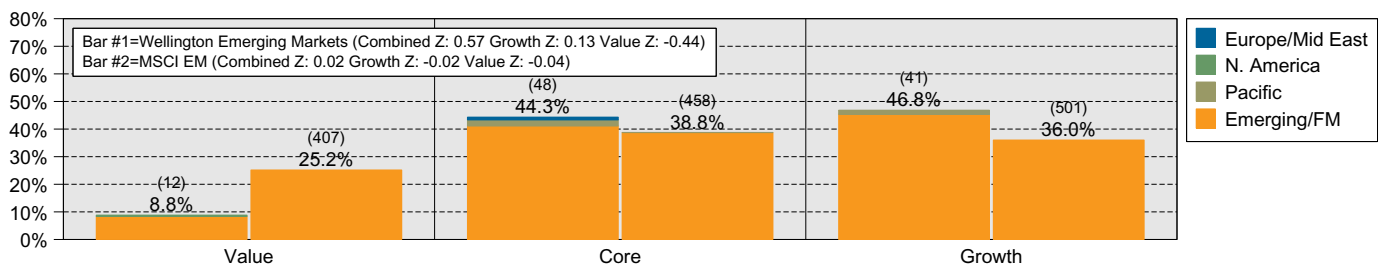
**Style Map vs Callan Emerging Core Holdings as of December 31, 2023**



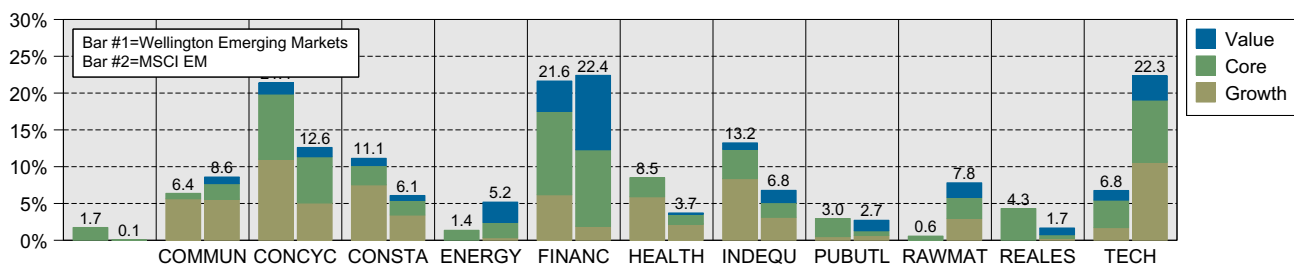
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	0.0% (0) 0.0% (0)	1.0% (1) 0.0% (0)	0.0% (0) 0.0% (0)	1.0% (1) 0.0% (0)
N. America	0.5% (1) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.5% (1) 0.0% (0)
Pacific	0.0% (0) 0.0% (0)	2.2% (2) 0.1% (2)	1.5% (2) 0.0% (0)	3.7% (4) 0.1% (2)
Emerging/ FM	8.3% (11) 25.2% (407)	41.1% (45) 38.7% (456)	45.3% (39) 36.0% (501)	94.8% (95) 99.9% (1364)
<b>Total</b>	<b>8.8% (12)</b> <b>25.2% (407)</b>	<b>44.3% (48)</b> <b>38.8% (458)</b>	<b>46.8% (41)</b> <b>36.0% (501)</b>	<b>100.0% (101)</b> <b>100.0% (1366)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



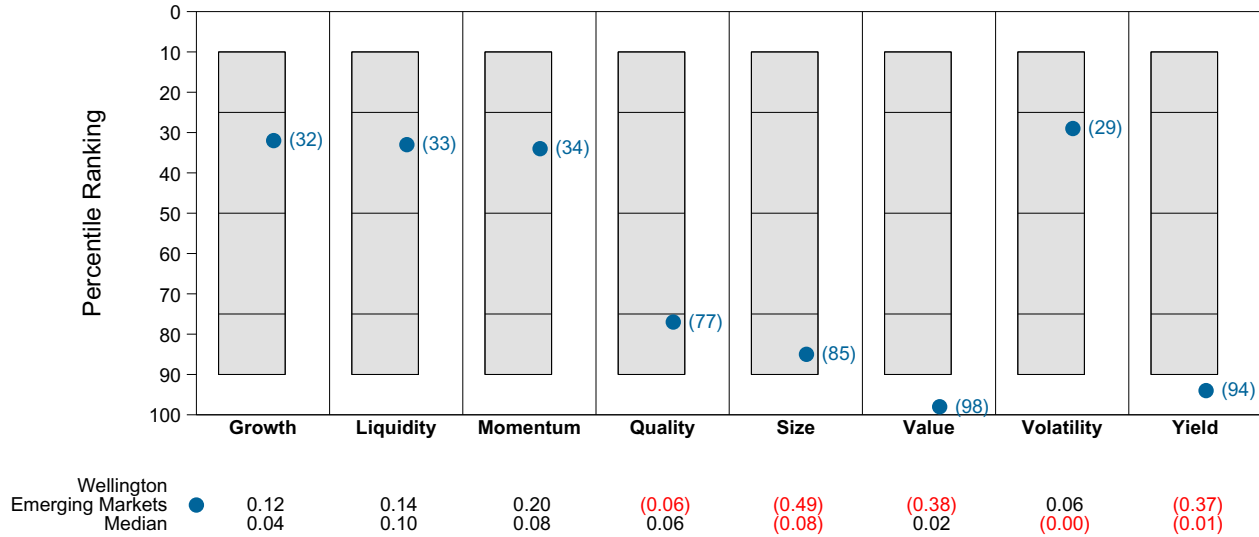
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

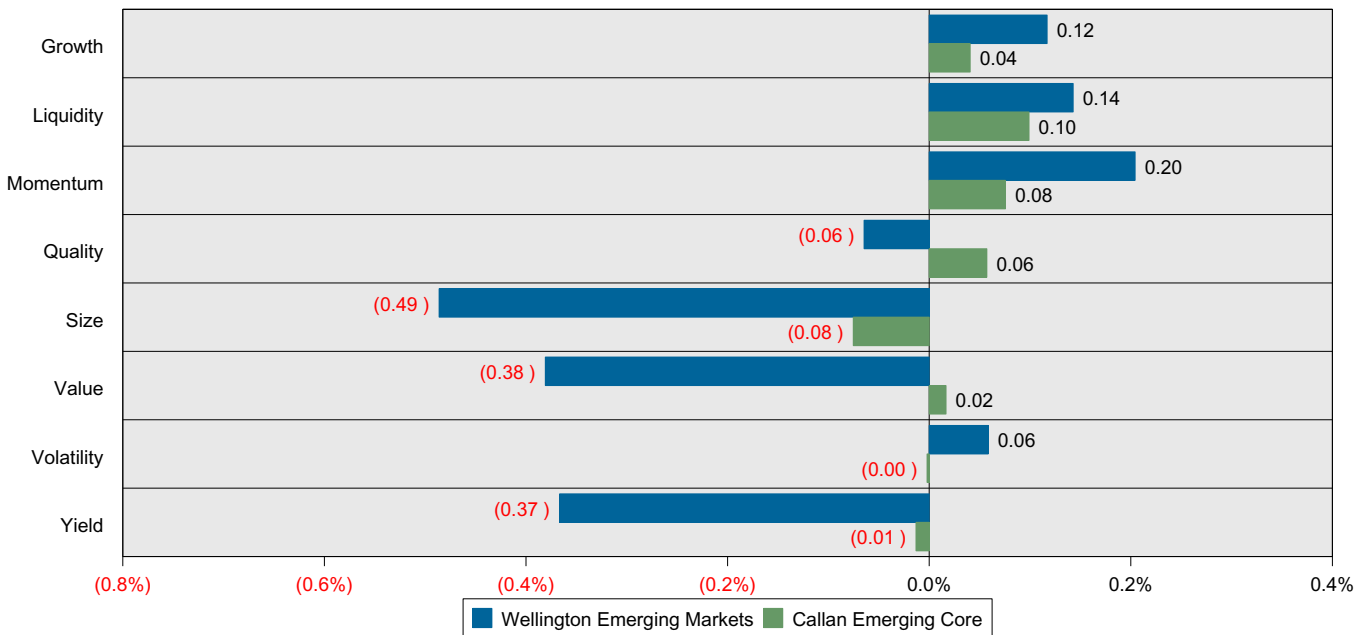
**Factor Exposures Relative to MSCI EM, Rankings vs Callan Emerging Core for Period Ended December 31, 2023**



**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 December 31, 2023**



# Wellington Int'l Small Cap Research Period Ended December 31, 2023

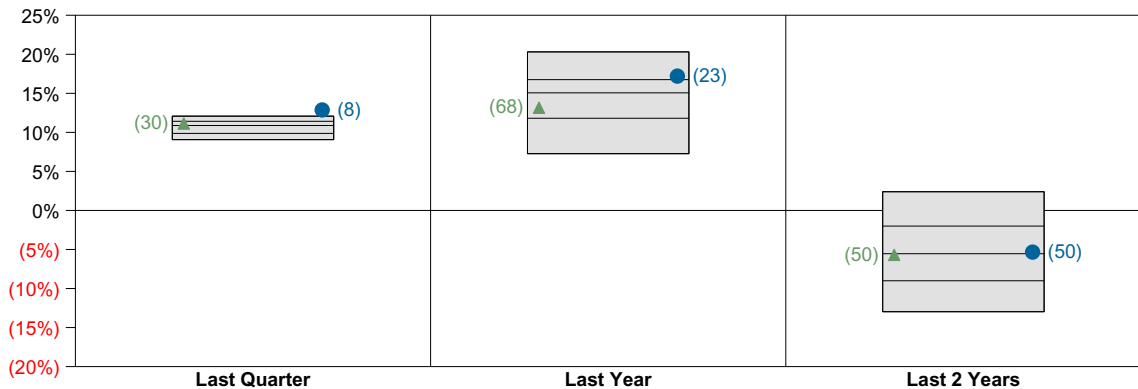
## Investment Philosophy

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 November 2021.

### Quarterly Asset Growth

Beginning Market Value	\$119,565,062
Net New Investment	\$0
Investment Gains/(Losses)	\$15,388,523
Ending Market Value	\$134,953,584

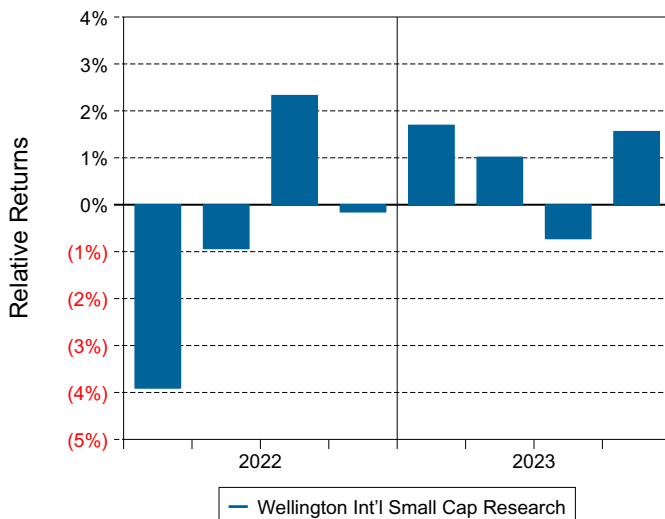
## Performance vs Callan Intl Small Cap (Gross)



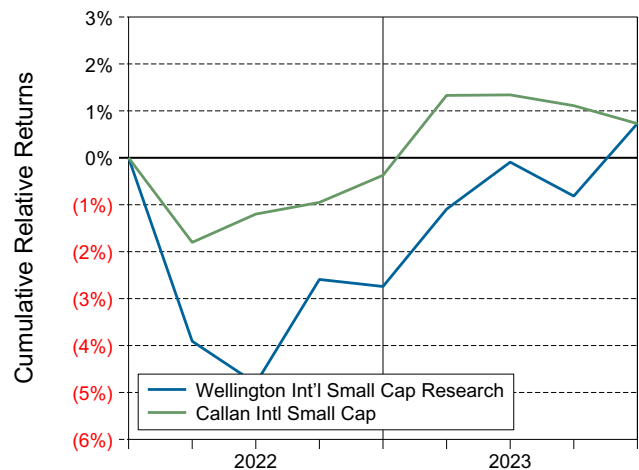
	Last Quarter	Last Year	Last 2 Years
10th Percentile	12.08	20.31	2.40
25th Percentile	11.42	16.75	(2.00)
Median	10.88	15.06	(5.54)
75th Percentile	9.87	11.81	(9.01)
90th Percentile	9.07	7.27	(12.97)

Wellington Int'l Small Cap Research ●  
MSCI EAFE Small Cap ▲

### Relative Return vs MSCI EAFE Small Cap



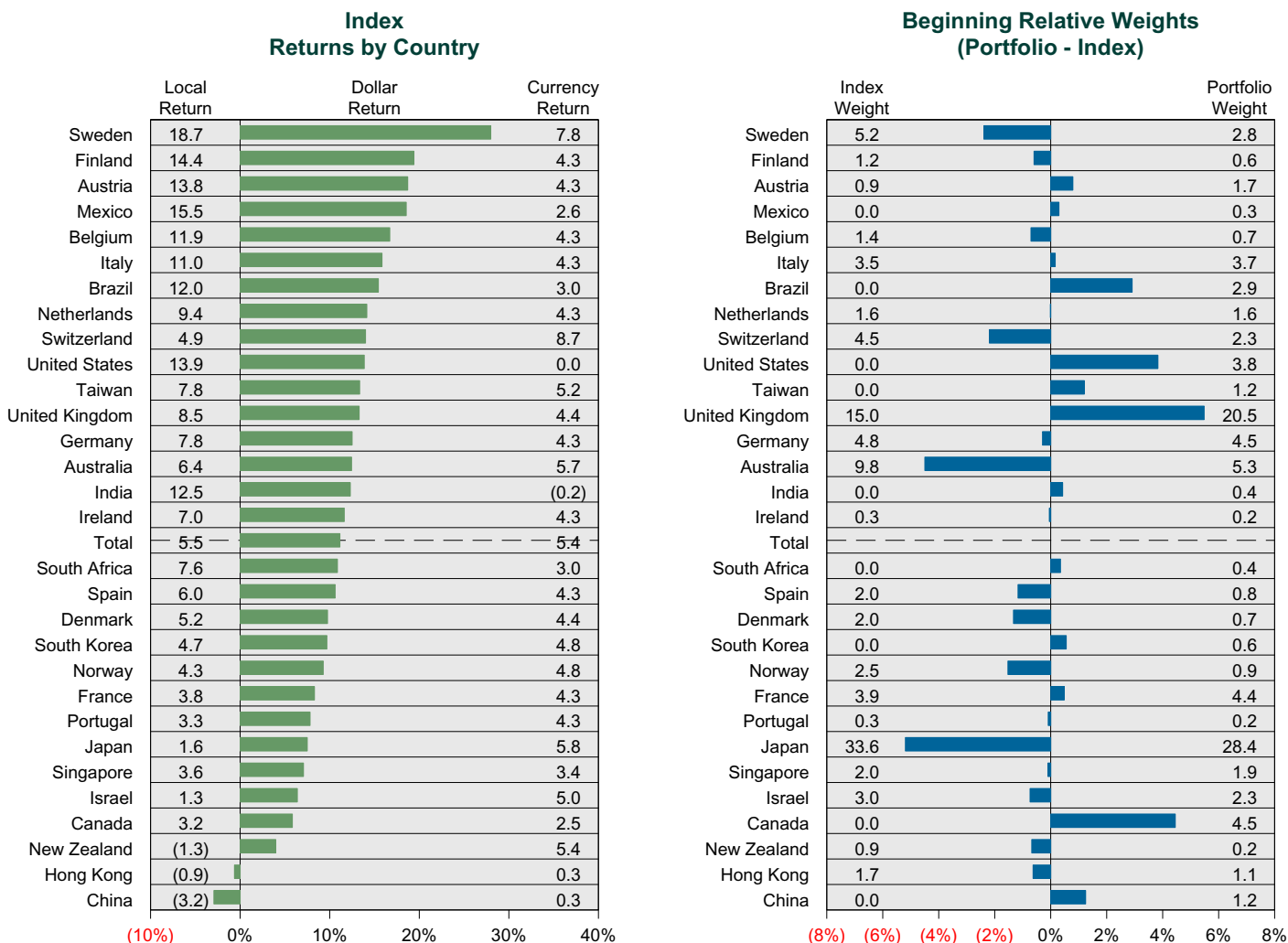
### Cumulative Returns vs MSCI EAFE Small Cap



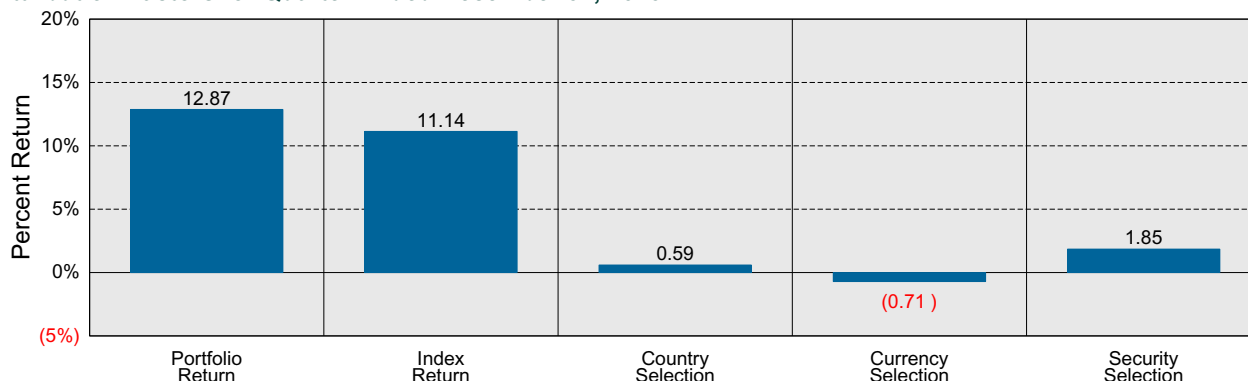
# Wellington Int'l Small Cap Research vs MSCI EAFE Small Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

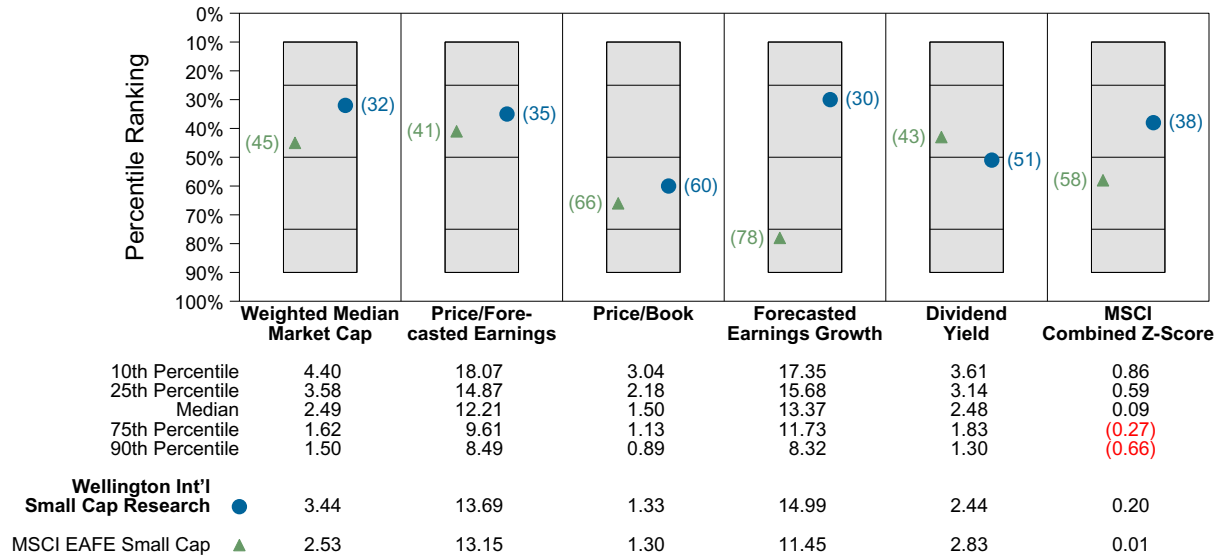


# Wellington Int'l Small Cap Research Equity Characteristics Analysis Summary

## Portfolio Characteristics

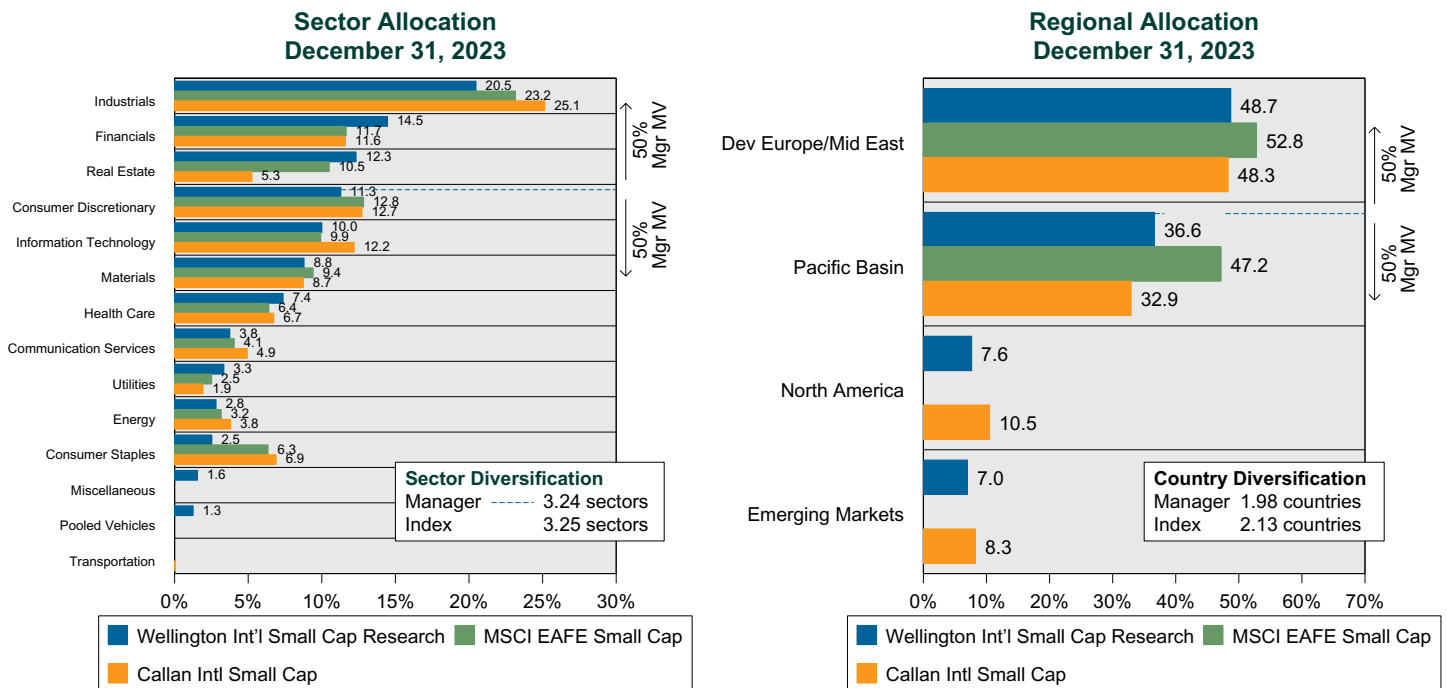
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan International Small Cap as of December 31, 2023



## 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.



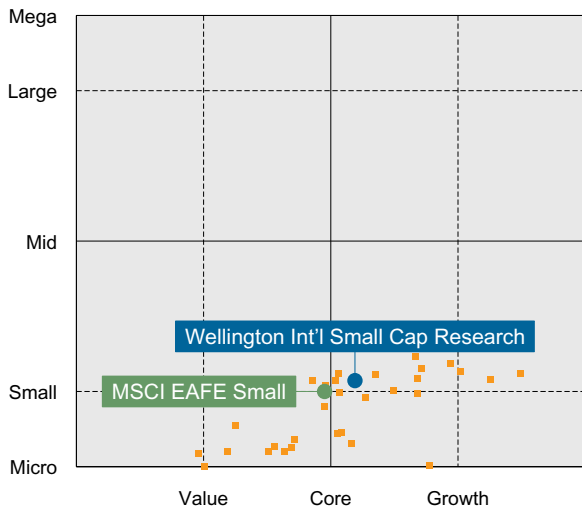
# Current Holdings Based Style Analysis

## Wellington Int'l Small Cap Research

### As of December 31, 2023

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 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.

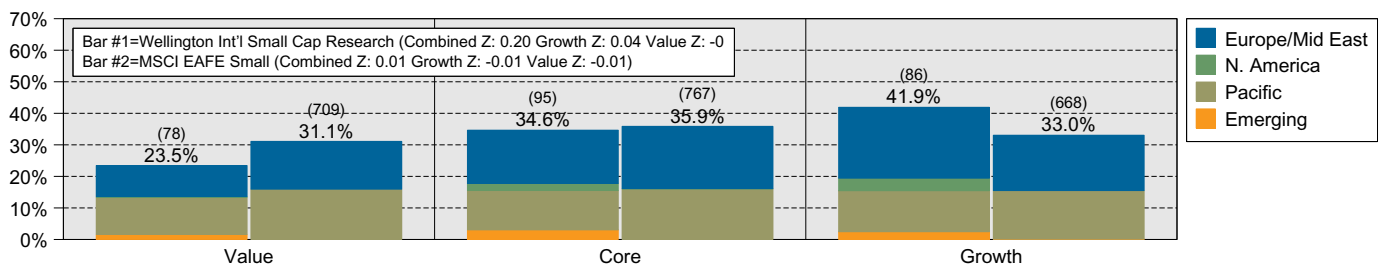
**Style Map vs Callan Intl Small Cap Holdings as of December 31, 2023**



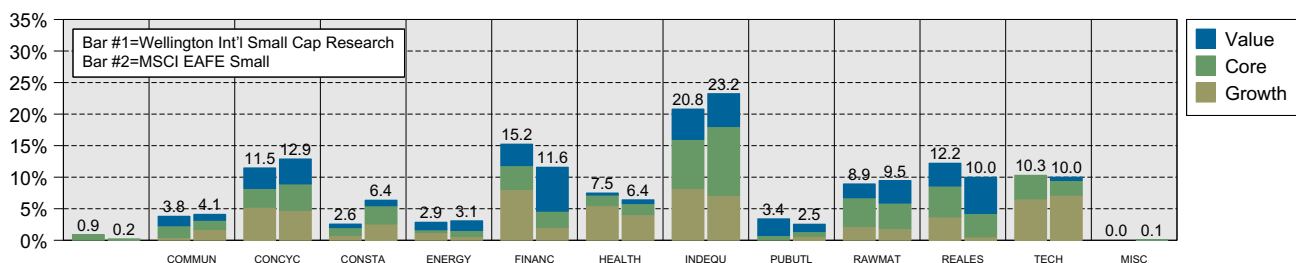
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	9.8% (30)	16.9% (33)	22.5% (36)	49.2% (99)
N. America	15.1% (314)	19.7% (370)	17.5% (301)	52.4% (985)
Pacific	0.3% (1)	2.2% (9)	4.0% (8)	6.5% (18)
Emerging	0.0% (0)	0.1% (4)	0.0% (0)	0.1% (4)
<b>Total</b>	<b>23.5% (78)</b>	<b>34.6% (95)</b>	<b>41.9% (86)</b>	<b>100.0% (259)</b>
	31.1% (709)	35.9% (767)	33.0% (668)	100.0% (2144)

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



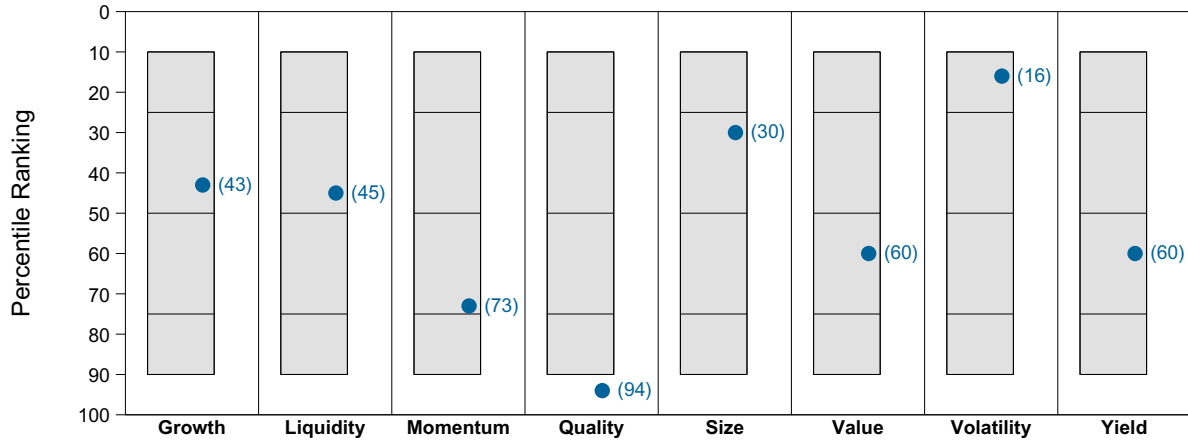
**Sector Weights Distribution Holdings as of December 31, 2023**



**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 December 31, 2023**

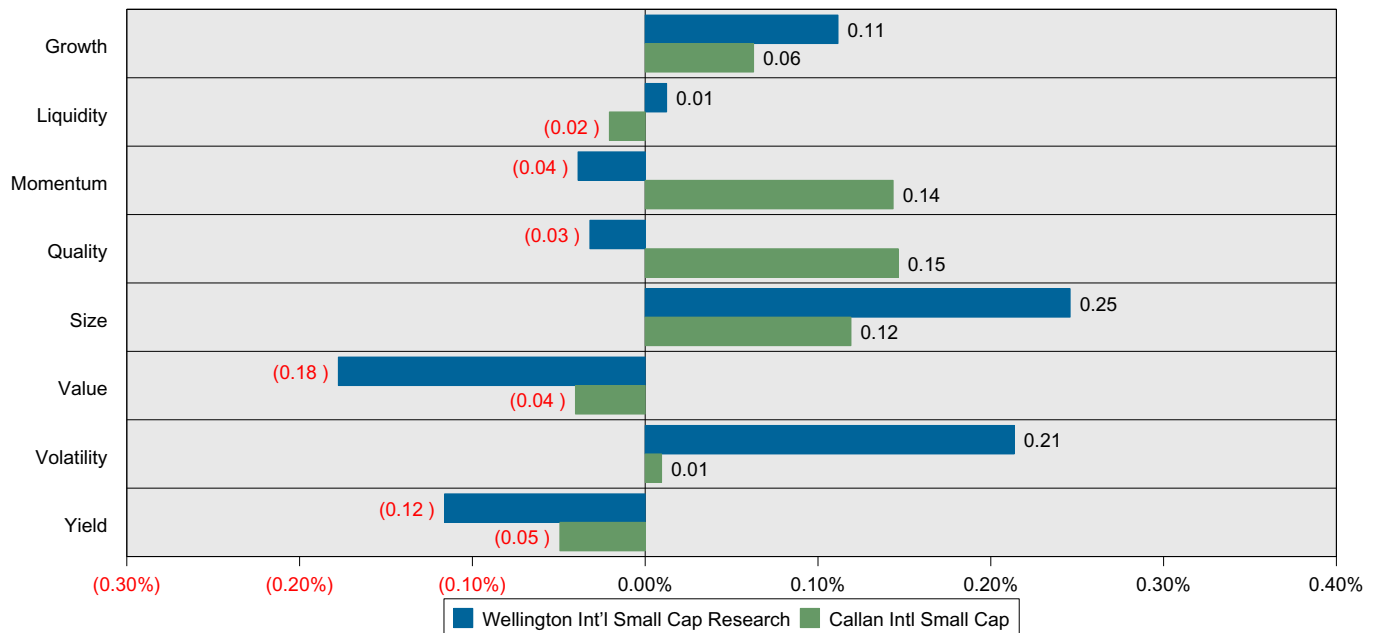


Wellington Int'l Small Cap Research	Callan Intl Small Cap
● 0.11	0.06
0.01	(0.02)
(0.04)	0.14
(0.03)	0.15
0.25	0.12
(0.18)	(0.04)
0.21	0.01
(0.12)	(0.05)

**Relative Factor Exposures**

This graph compares the manager's factor exposures and the median factor for the Callan International Small Cap group relative to the MSCI EAFE Small.

**Factor Exposures Relative to MSCI EAFE Small for Period Ended December 31, 2023**



# Walter Scott Global Equity Period Ended December 31, 2023

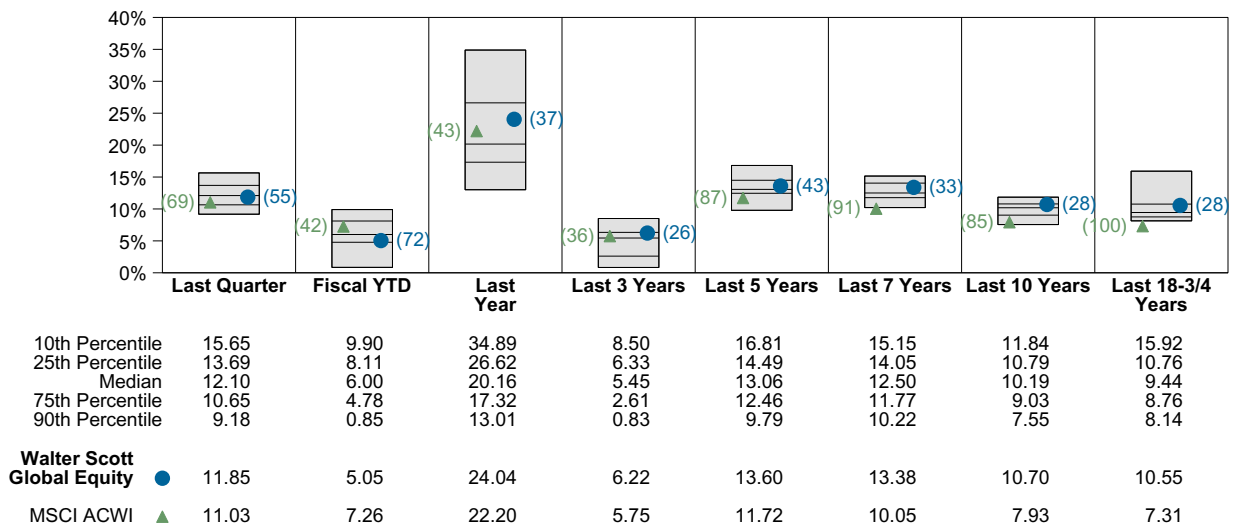
## Investment Philosophy

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.

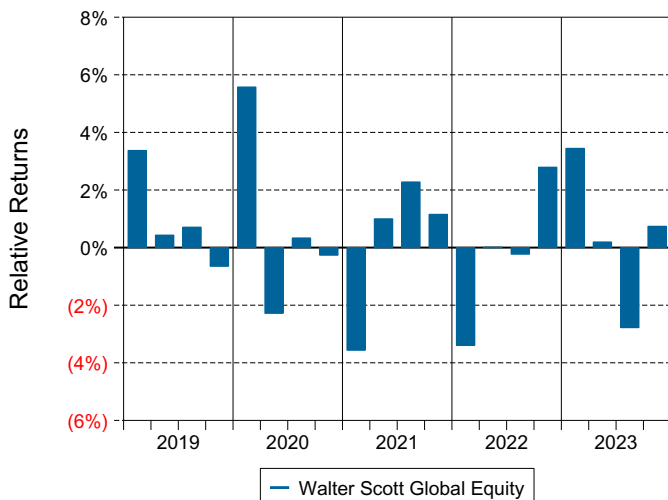
### Quarterly Asset Growth

Beginning Market Value	\$491,563,953
Net New Investment	\$0
Investment Gains/(Losses)	\$58,267,601
Ending Market Value	\$549,831,555

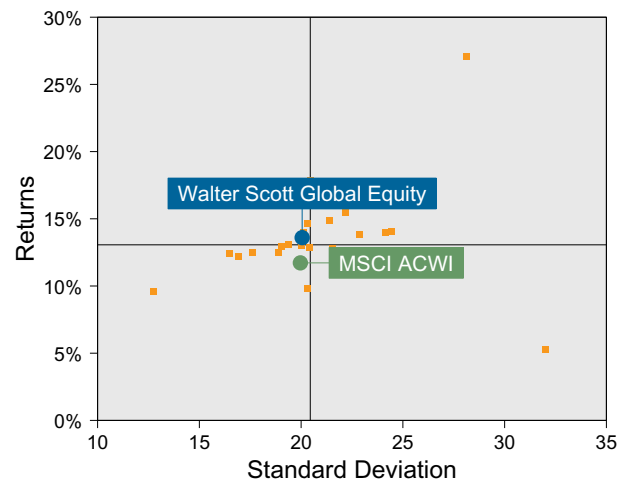
### Performance vs Callan Gbl Dev Gr Eq (Gross)



### Relative Return vs MSCI ACWI



### Callan Gbl Dev Gr Eq (Gross) Annualized Five Year Risk vs Return



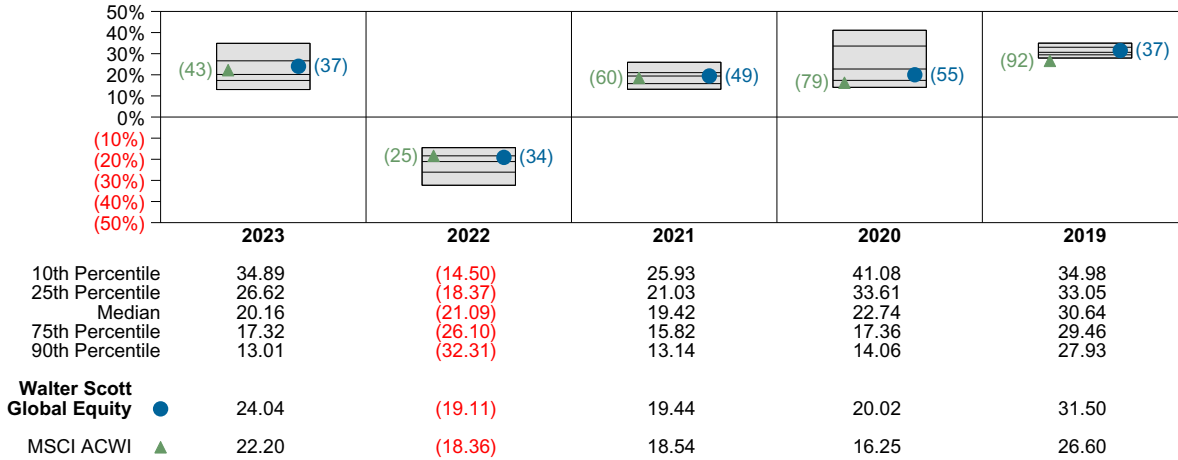


# Walter Scott Global Equity Return Analysis Summary

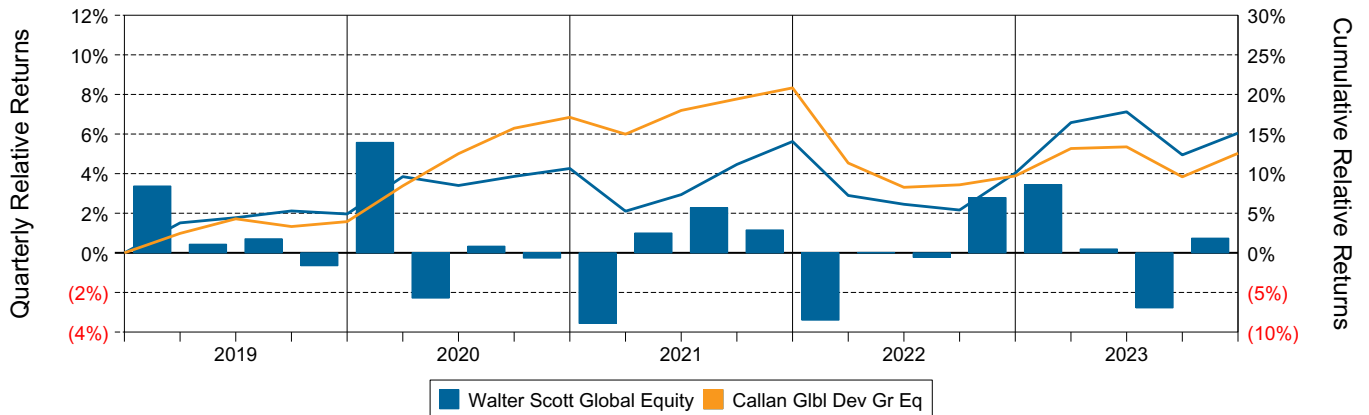
## Return Analysis

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.

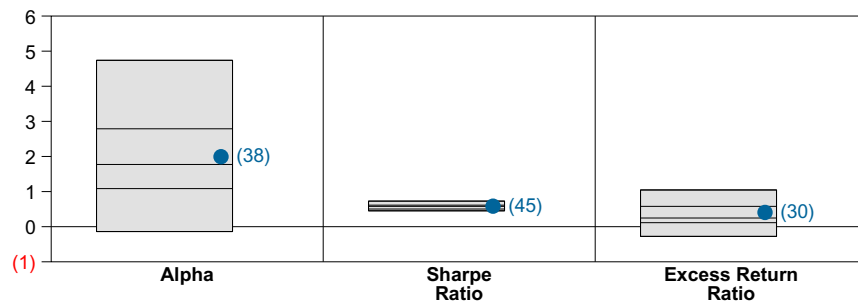
### Performance vs Callan Gbl Dev Gr Eq (Gross)



### 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 December 31, 2023



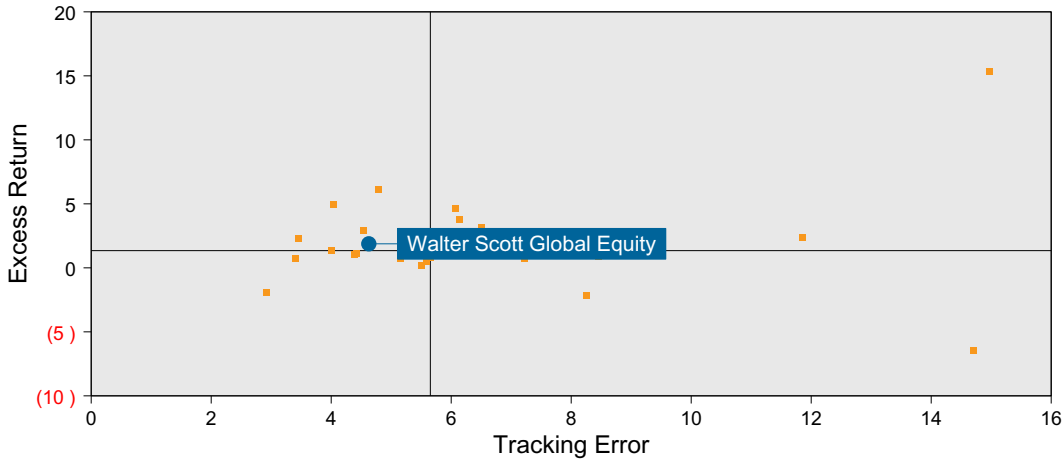
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.74	0.73	1.05
25th Percentile	2.79	0.61	0.58
Median	1.77	0.58	0.25
75th Percentile	1.09	0.50	0.11
90th Percentile	(0.14)	0.45	(0.28)
<b>Walter Scott Global Equity</b>	1.99	0.58	0.41

# Walter Scott Global Equity Risk Analysis Summary

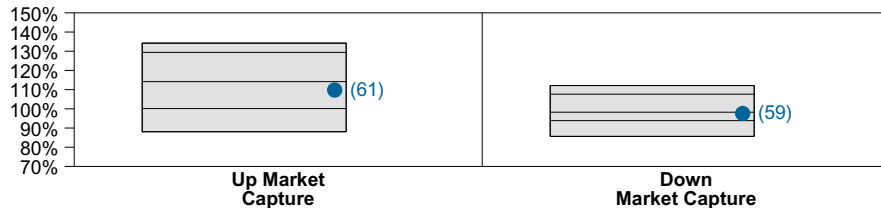
## Risk Analysis

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 December 31, 2023



### Market Capture vs MSCI ACWI Rankings Against Callan Global Developed Growth Equity (Gross) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	134.22	112.12
25th Percentile	129.40	107.64
Median	114.16	98.24
75th Percentile	100.14	93.86
90th Percentile	88.07	85.66

Walter Scott Global Equity ● 109.79 97.57

### Risk Statistics Rankings vs MSCI ACWI Rankings Against Callan Global Developed Growth Equity (Gross) Five Years Ended December 31, 2023



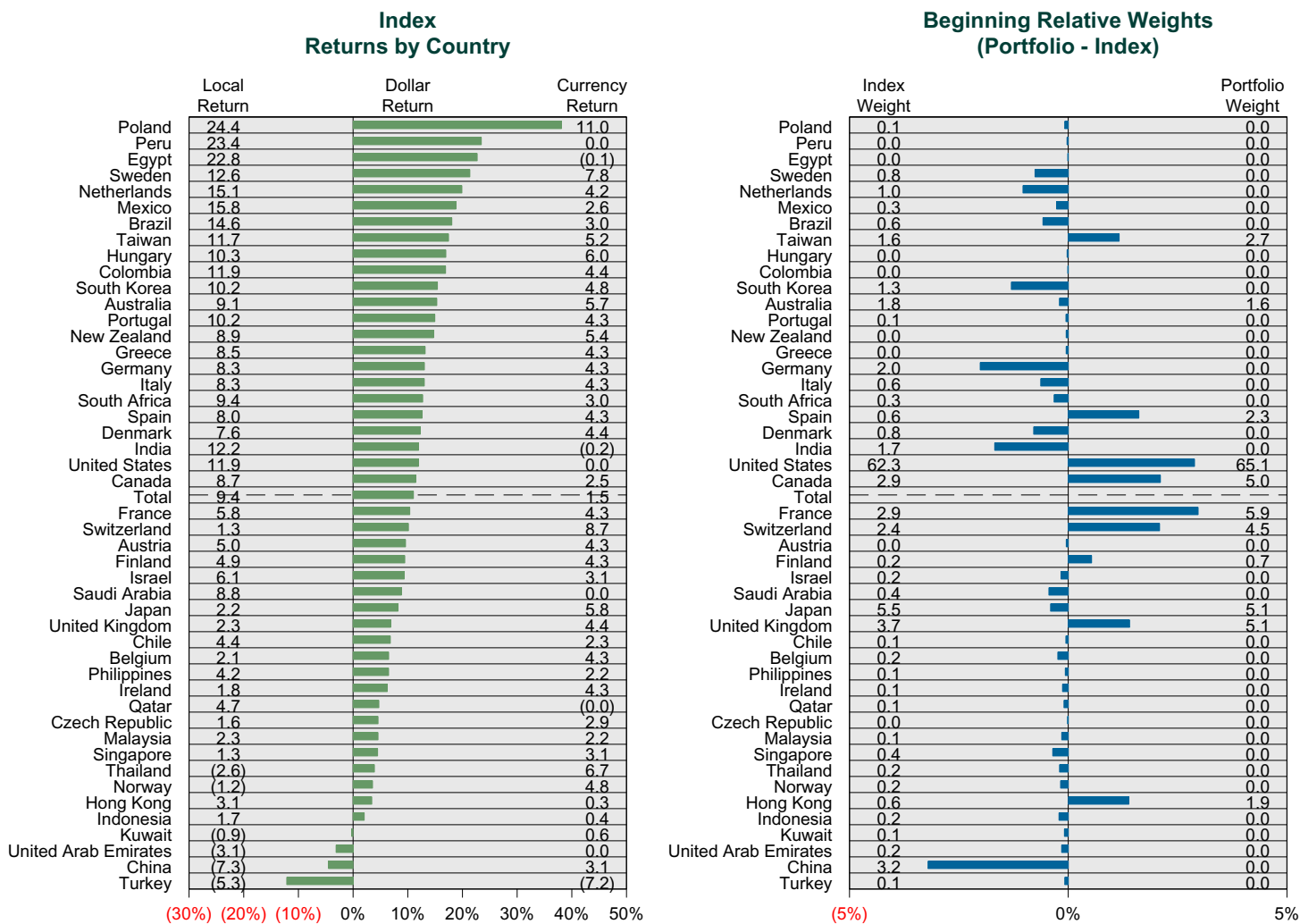
	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	24.77	6.54	12.12	1.14	0.97
25th Percentile	22.64	4.81	7.91	1.07	0.95
Median	20.45	3.40	5.65	1.00	0.93
75th Percentile	19.49	2.66	4.44	0.95	0.89
90th Percentile	16.84	1.83	3.44	0.81	0.87

Walter Scott Global Equity ● 20.05 2.81 4.63 0.97 0.95

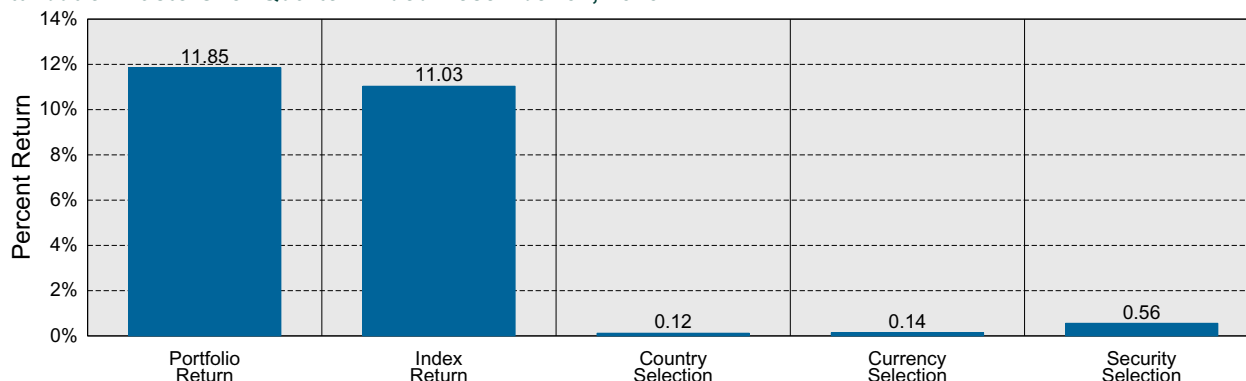
# Walter Scott Global Equity vs MSCI ACWI Attribution for Quarter Ended December 31, 2023

## 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 December 31, 2023

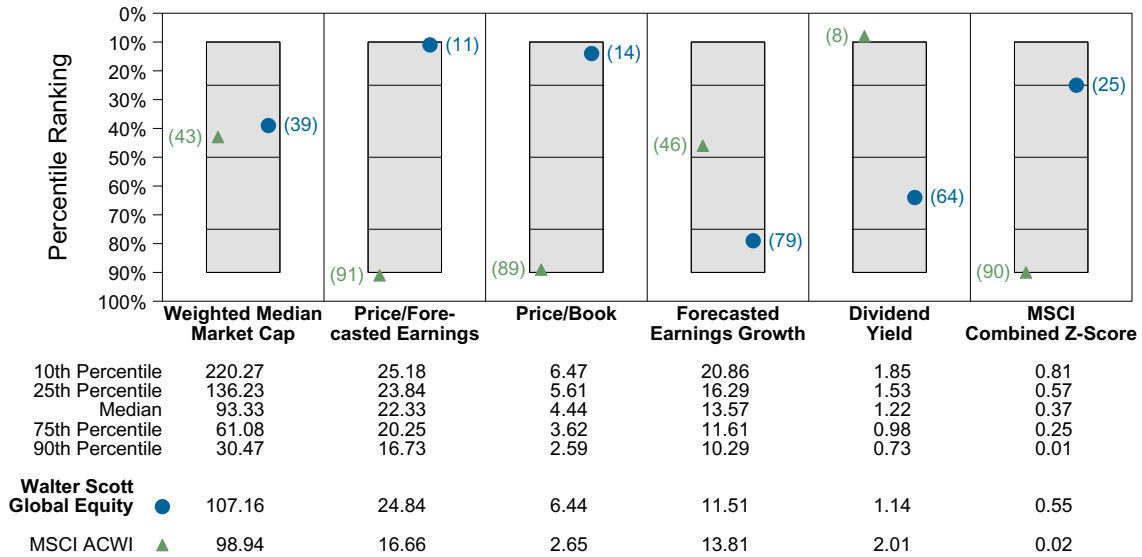


# Walter Scott Global Equity Equity Characteristics Analysis Summary

## Portfolio Characteristics

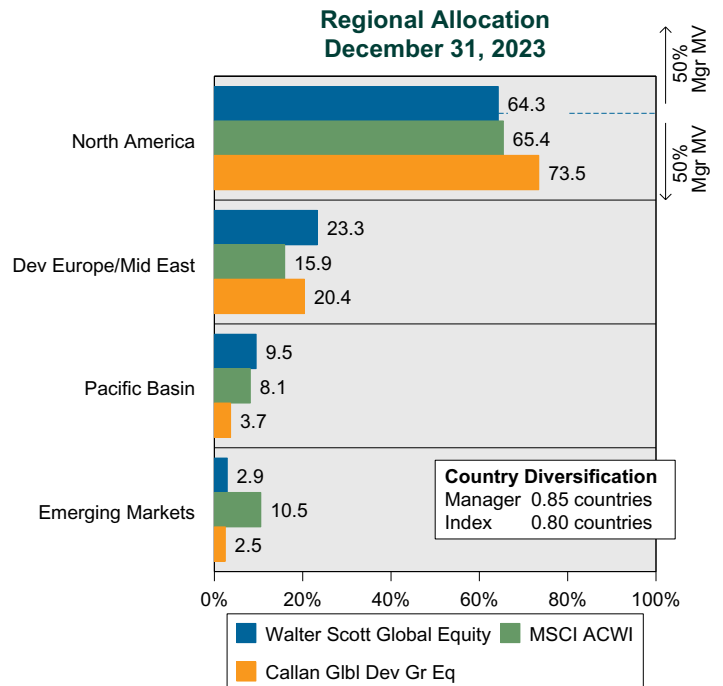
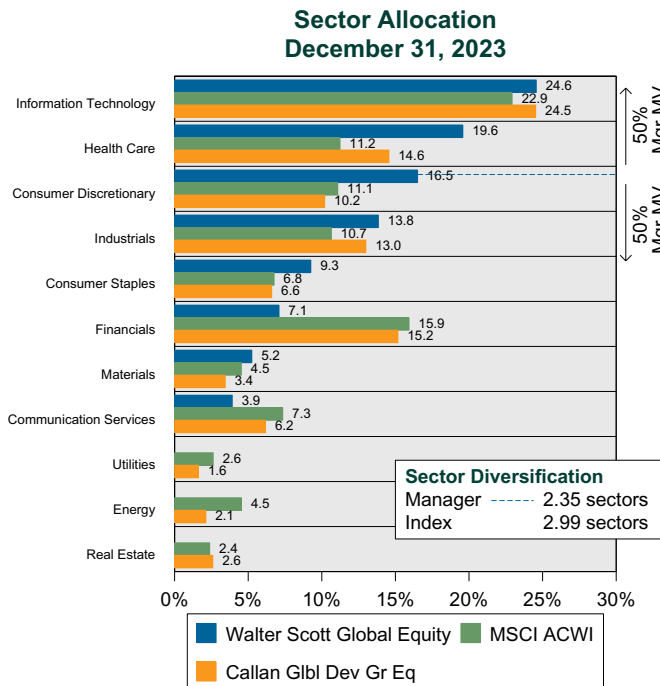
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Portfolio Characteristics Percentile Rankings Rankings Against Callan Global Developed Growth Equity as of December 31, 2023



## 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.

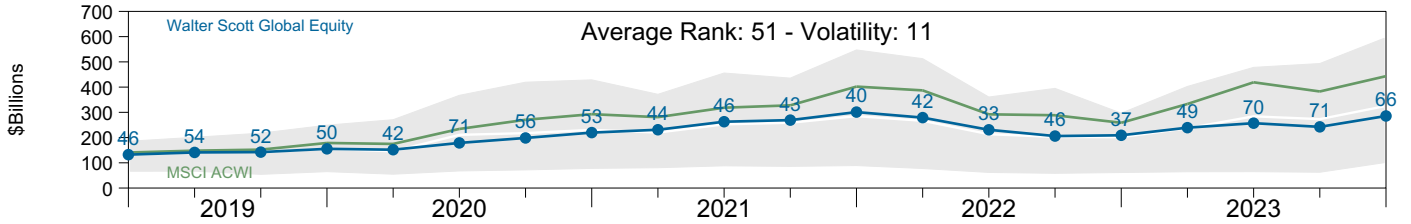


## Portfolio Characteristics Analysis

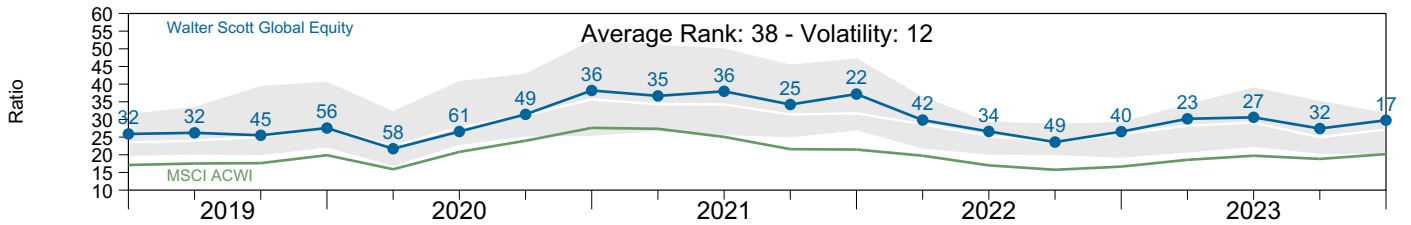
### Callan Gbl Dev Gr Eq

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.

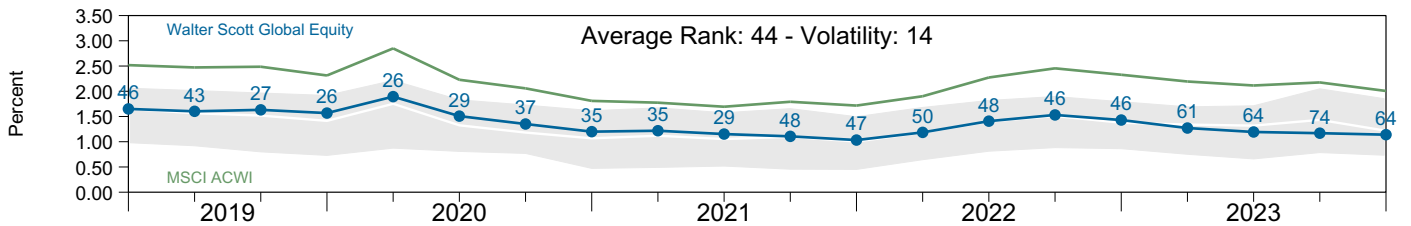
#### Weighted Average Market Cap



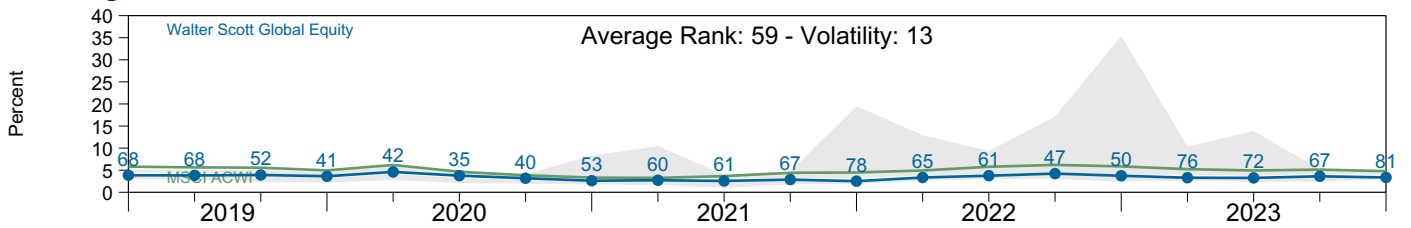
#### Trailing P/E



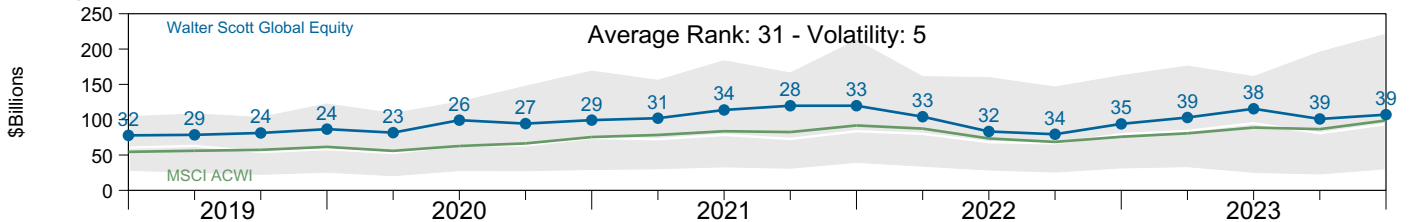
#### Dividend Yield



#### 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.

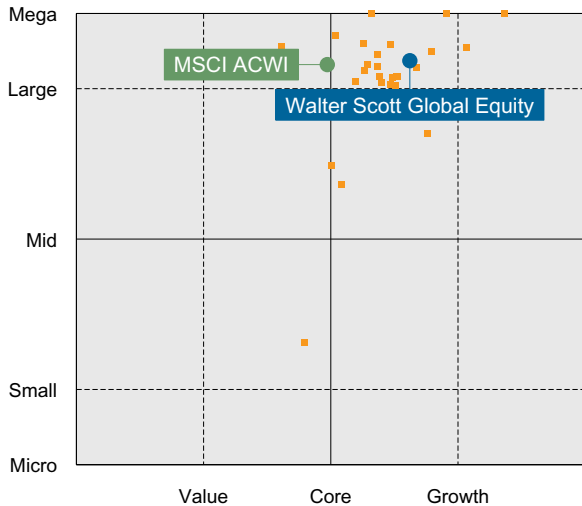
# Current Holdings Based Style Analysis

## Walter Scott Global Equity

### As of December 31, 2023

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 chart 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.

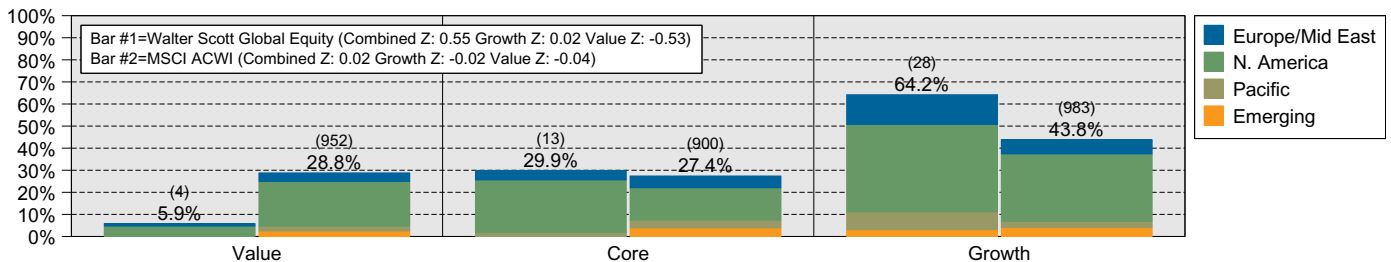
**Style Map vs Callan Gbl Dev Gr Eq Holdings as of December 31, 2023**



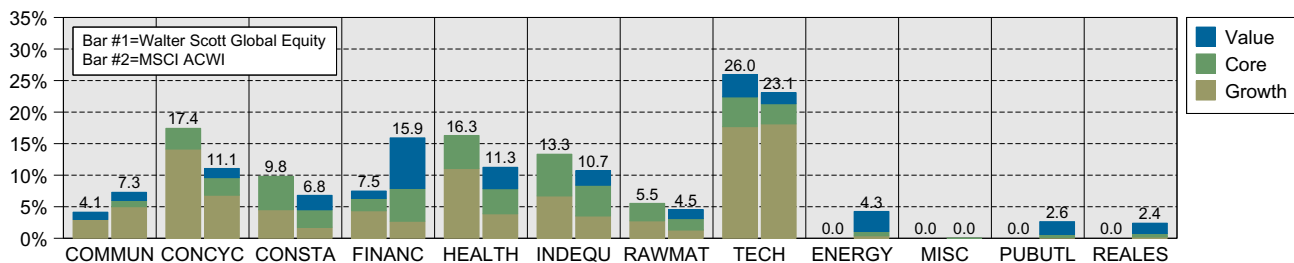
**Style Exposure Matrix Holdings as of December 31, 2023**

	Value	Core	Growth	Total
Europe/ Mid East	1.2% (1) 3.8% (140)	4.3% (3) 5.3% (144)	13.5% (6) 6.4% (153)	19.0% (10) 15.6% (437)
N. America	4.7% (3) 20.3% (293)	23.7% (9) 14.7% (201)	39.6% (17) 30.4% (191)	68.0% (29) 65.4% (685)
Pacific	0.0% (0) 2.2% (126)	2.0% (1) 3.5% (114)	8.0% (4) 2.9% (107)	10.0% (5) 8.5% (347)
Emerging	0.0% (0) 2.5% (393)	0.0% (0) 3.9% (441)	3.1% (1) 4.1% (532)	3.1% (1) 10.5% (1366)
<b>Total</b>	<b>5.9% (4)</b> <b>28.8% (952)</b>	<b>29.9% (13)</b> <b>27.4% (900)</b>	<b>64.2% (28)</b> <b>43.8% (983)</b>	<b>100.0% (45)</b> <b>100.0% (2835)</b>

**Combined Z-Score Style Distribution Holdings as of December 31, 2023**



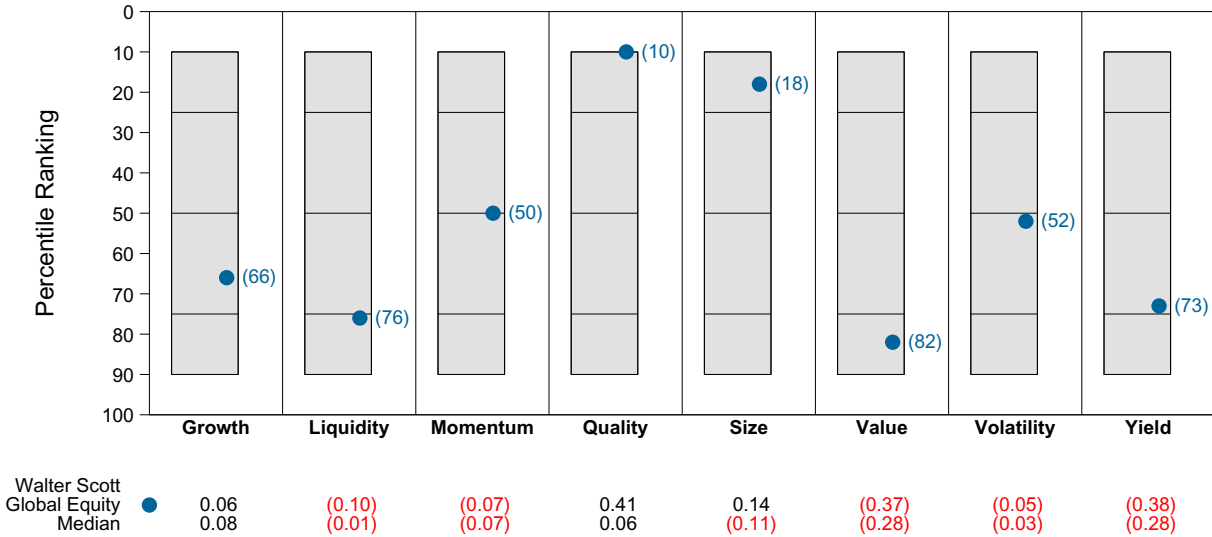
**Sector Weights Distribution Holdings as of December 31, 2023**



**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.

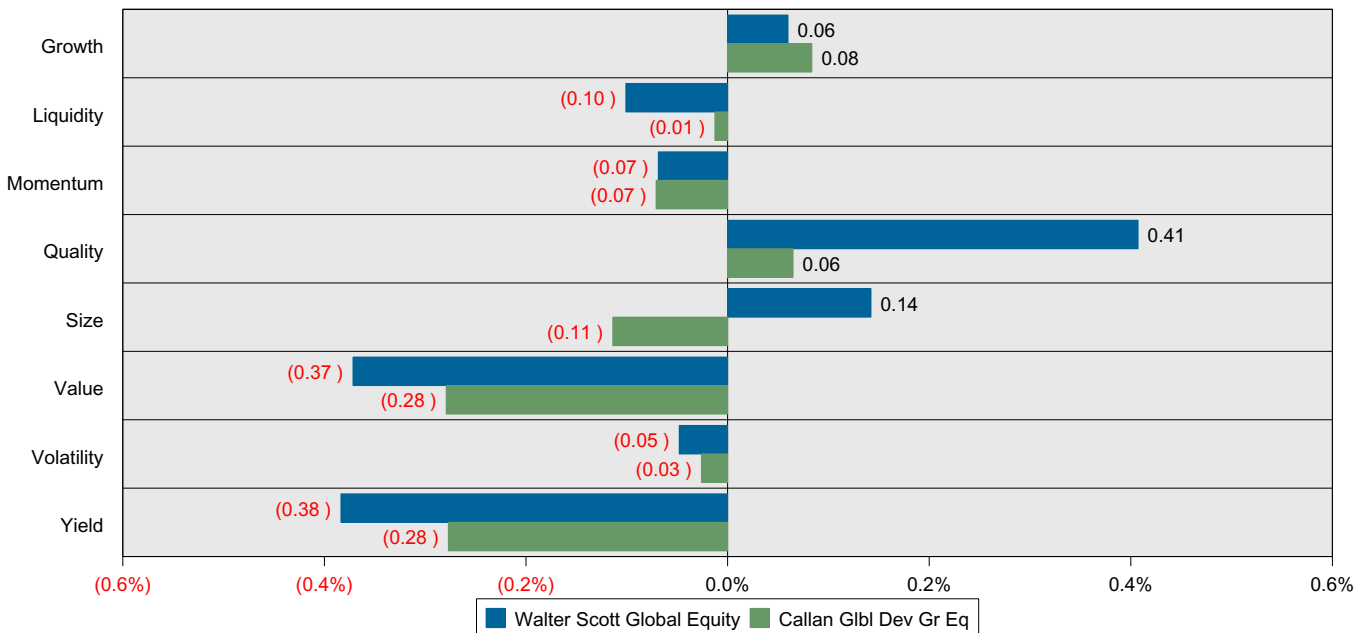
**Factor Exposures Relative to MSCI ACWI, Rankings vs Callan Global Developed Growth Equity for Period Ended December 31, 2023**



**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 December 31, 2023**







# Total Fixed Income Period Ended December 31, 2023

## 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.

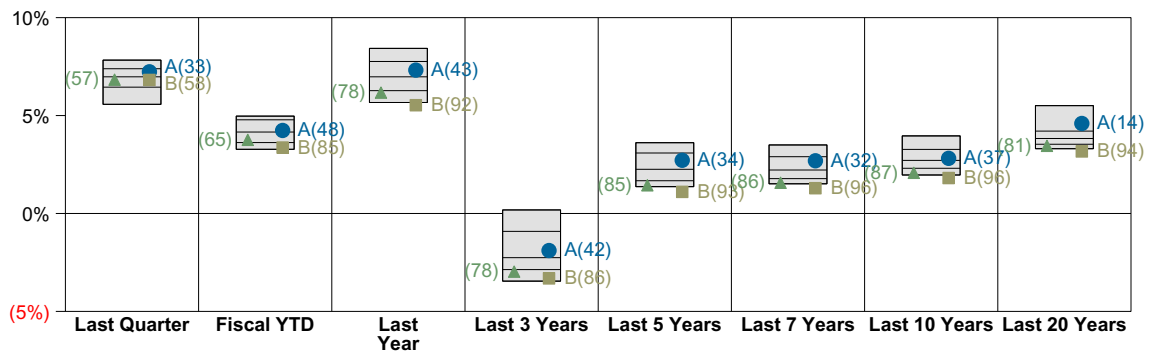
## Quarterly Summary and Highlights

- Total Fixed Income's portfolio posted a 7.23% return for the quarter placing it in the 33 percentile of the Large Public Fd - Dom Fixed group for the quarter and in the 43 percentile for the last year.
- Total Fixed Income's portfolio outperformed the Fixed Income Benchmark by 0.40% for the quarter and outperformed the Fixed Income Benchmark for the year by 1.15%.

## Quarterly Asset Growth

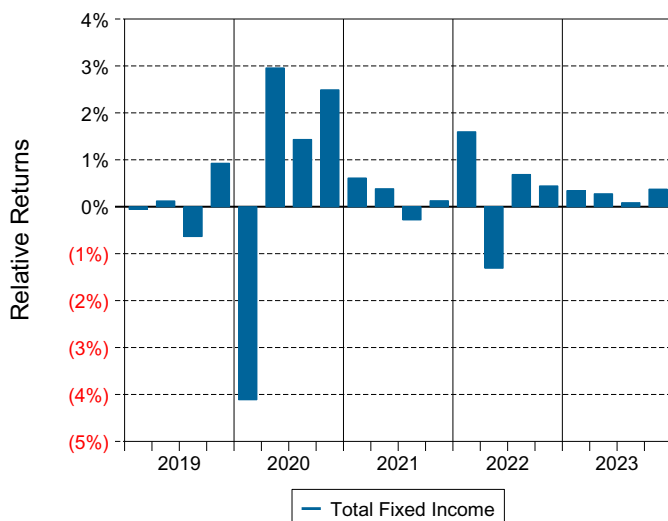
Beginning Market Value	\$2,188,383,430
Net New Investment	\$0
Investment Gains/(Losses)	\$158,304,313
Ending Market Value	\$2,346,687,743

## Performance vs Large Public Fd - Dom Fixed (Gross)

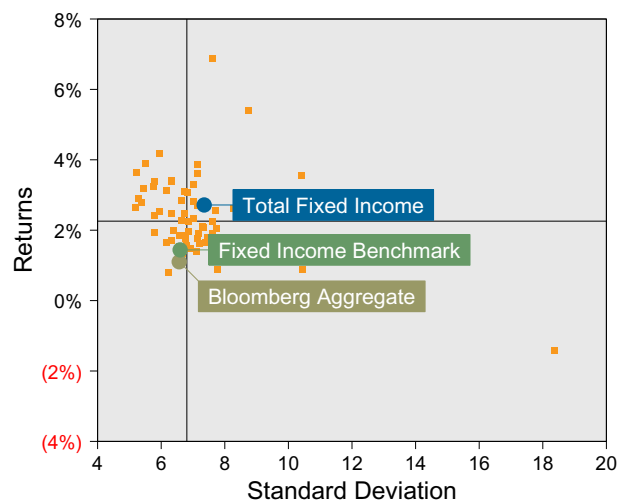


		Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile		7.83	4.97	8.43	0.18	3.61	3.50	3.96	5.51
25th Percentile		7.39	4.78	7.76	(0.91)	3.09	2.90	3.27	4.21
Median		6.98	4.16	6.98	(2.26)	2.26	2.22	2.71	3.83
75th Percentile		6.45	3.62	6.27	(2.87)	1.67	1.78	2.31	3.53
90th Percentile		5.57	3.28	5.67	(3.45)	1.37	1.52	1.96	3.31
Total Fixed Income	● A	7.23	4.24	7.32	(1.89)	2.72	2.69	2.82	4.60
Bloomberg Aggregate	■ B	6.82	3.37	5.53	(3.31)	1.10	1.29	1.81	3.17
Fixed Income Benchmark	▲	6.83	3.76	6.17	(2.97)	1.44	1.57	2.08	3.46

## Relative Return vs Fixed Income Benchmark



## Large Public Fd - Dom Fixed (Gross) Annualized Five Year Risk vs Return

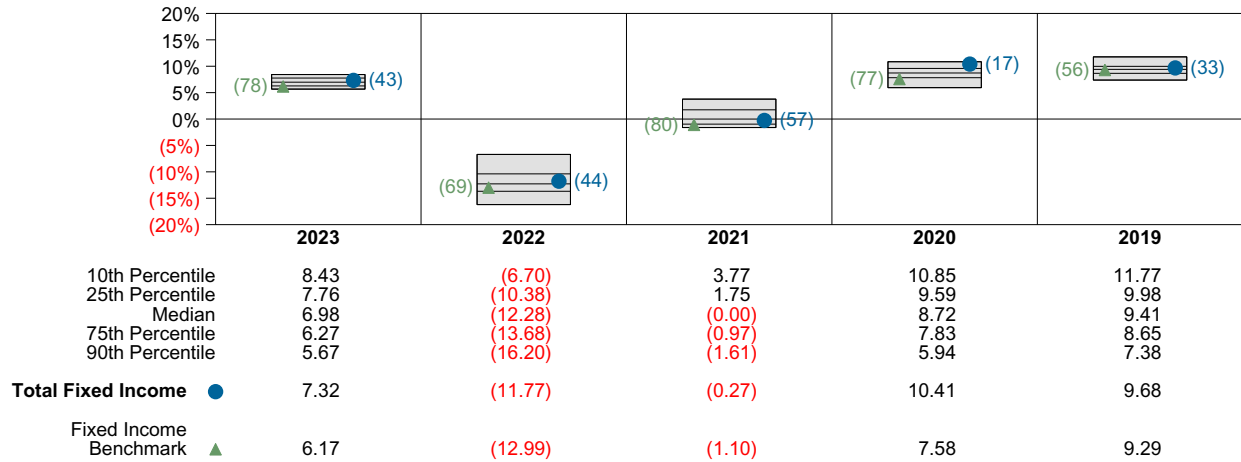


# Total Fixed Income Return Analysis Summary

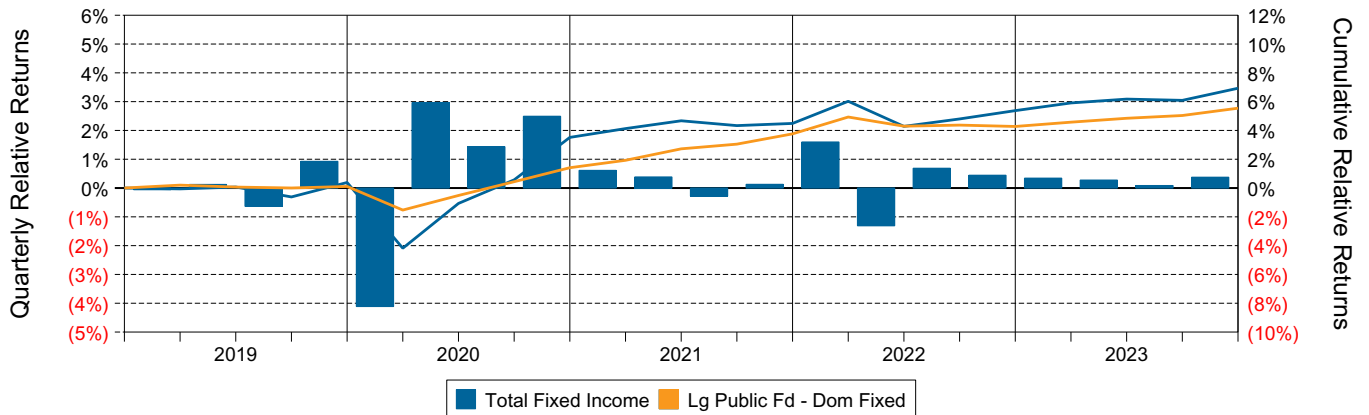
## Return Analysis

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.

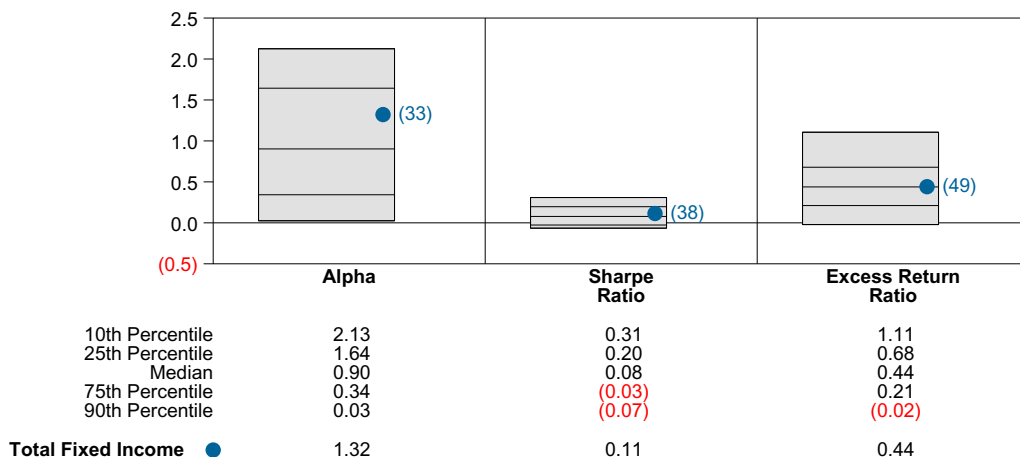
### Performance vs Lg Public Fd - Dom Fixed (Gross)



### 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 December 31, 2023

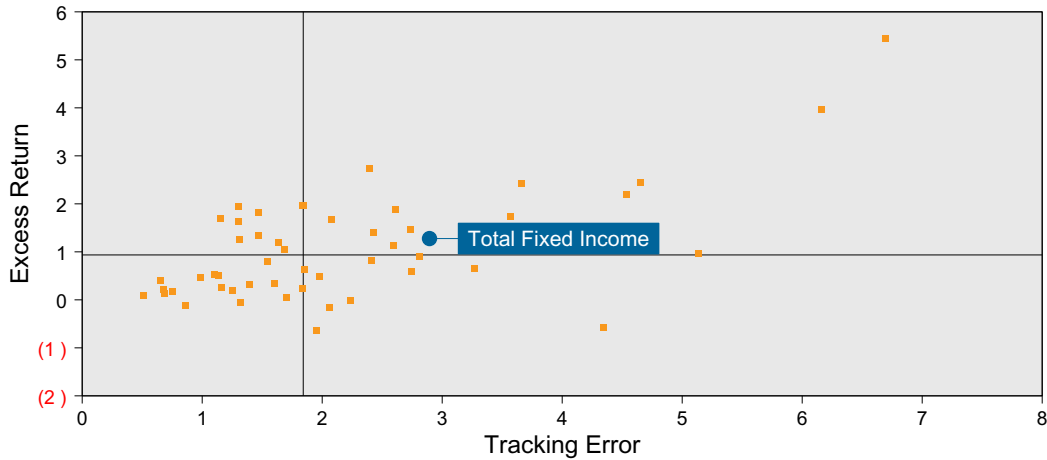


# Total Fixed Income Risk Analysis Summary

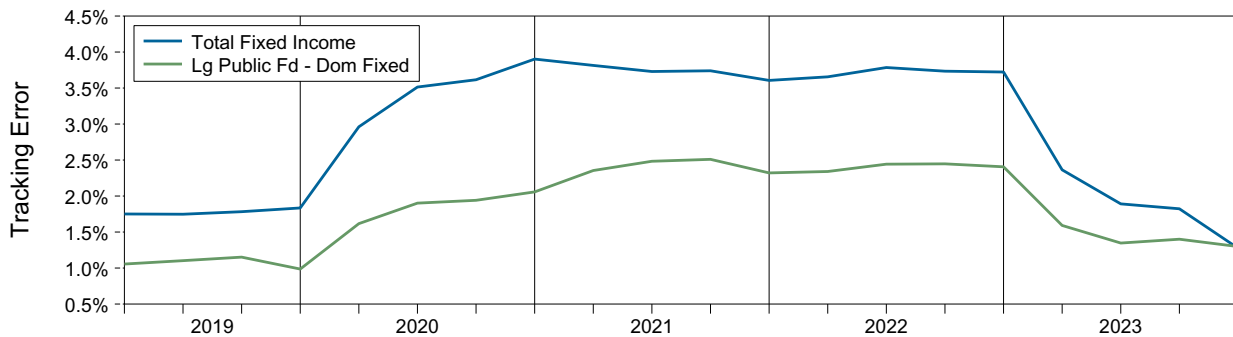
## Risk Analysis

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.

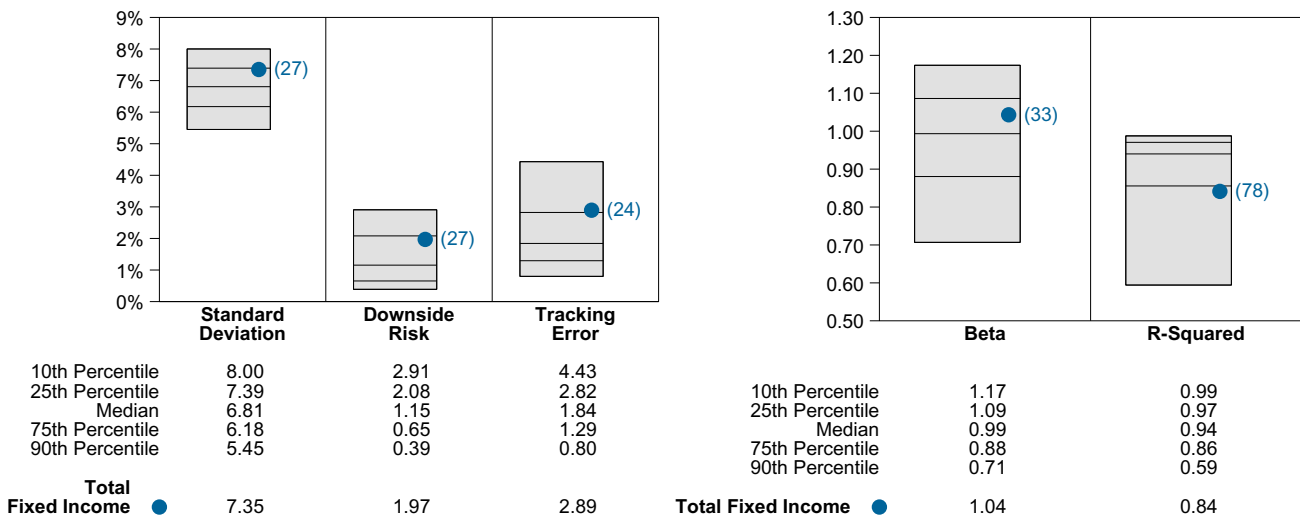
### Risk Analysis vs Lg Public Fund - Domestic Fixed (Gross) Five Years Ended December 31, 2023



### 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 December 31, 2023

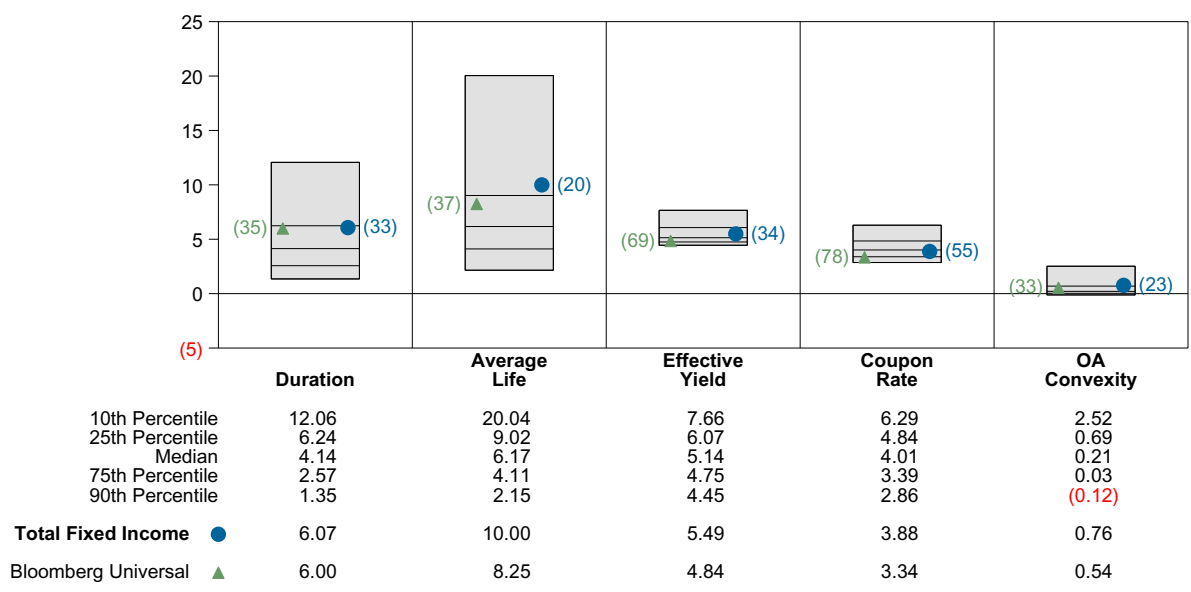


# Total Fixed Income Bond Characteristics Analysis Summary

## Portfolio Characteristics

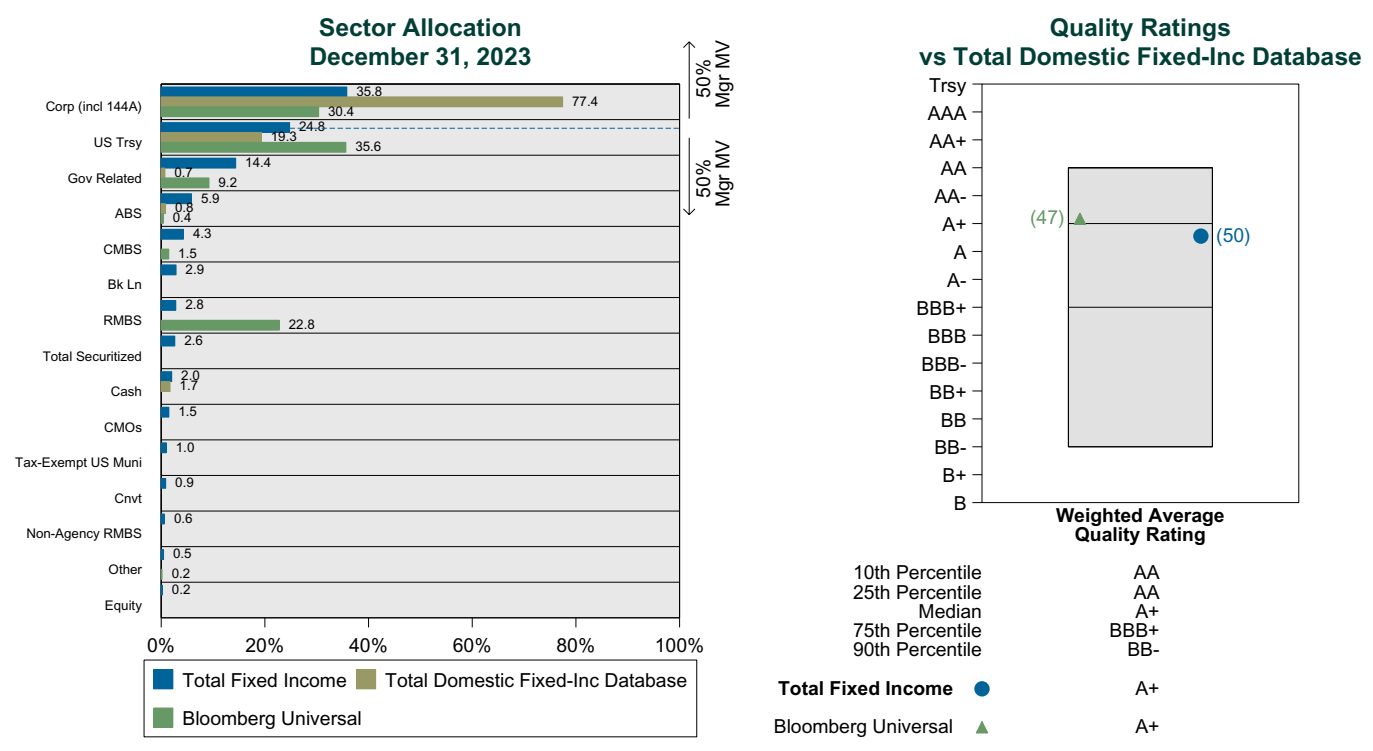
This graph compares the portfolio characteristics with the range of characteristics for the portfolios which make up the portfolio's style group. This analysis illustrates whether the portfolio's current holdings are consistent with other portfolios employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Total Domestic Fixed-Inc Database as of December 31, 2023



## 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.

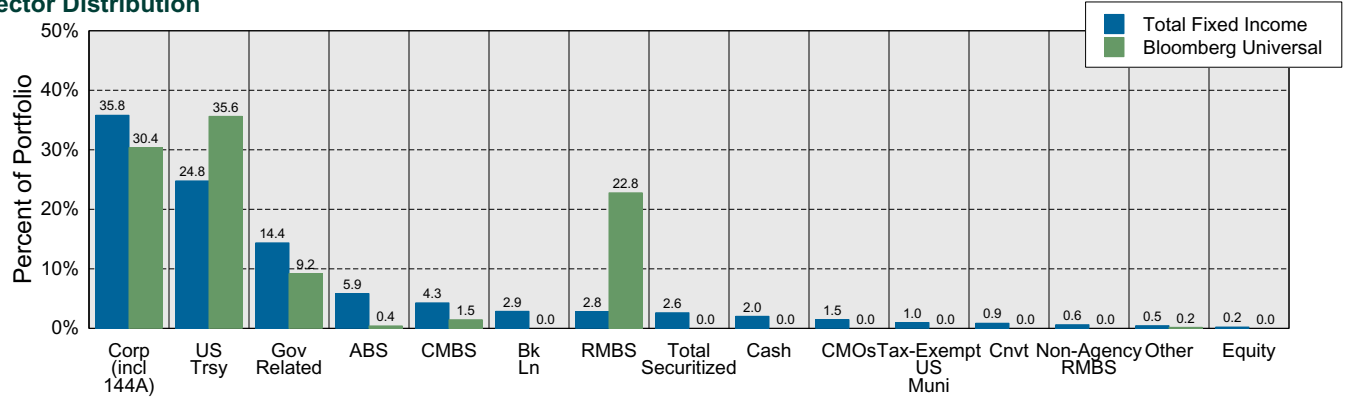


# Total Fixed Income Portfolio Characteristics Summary As of December 31, 2023

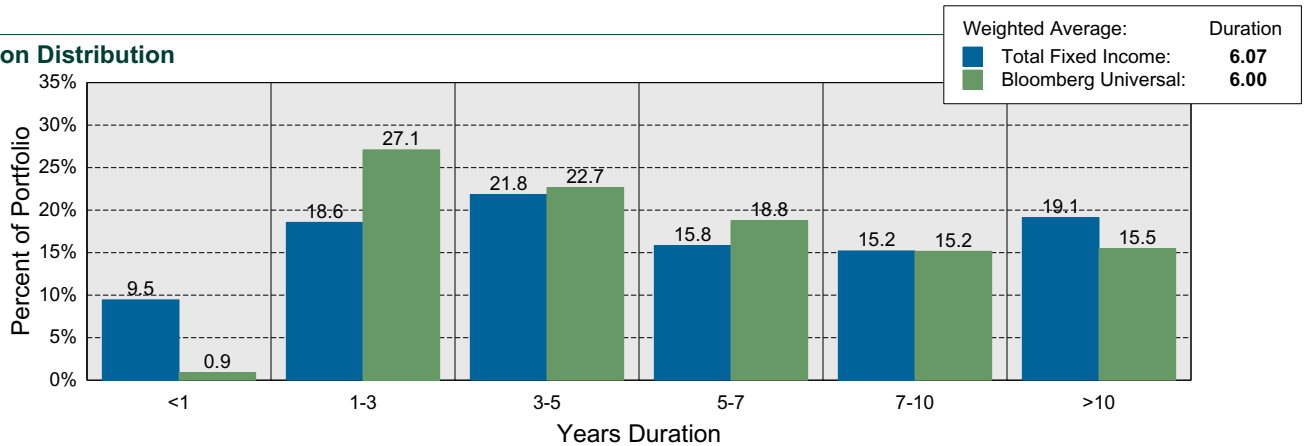
## Portfolio Structure Comparison

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.

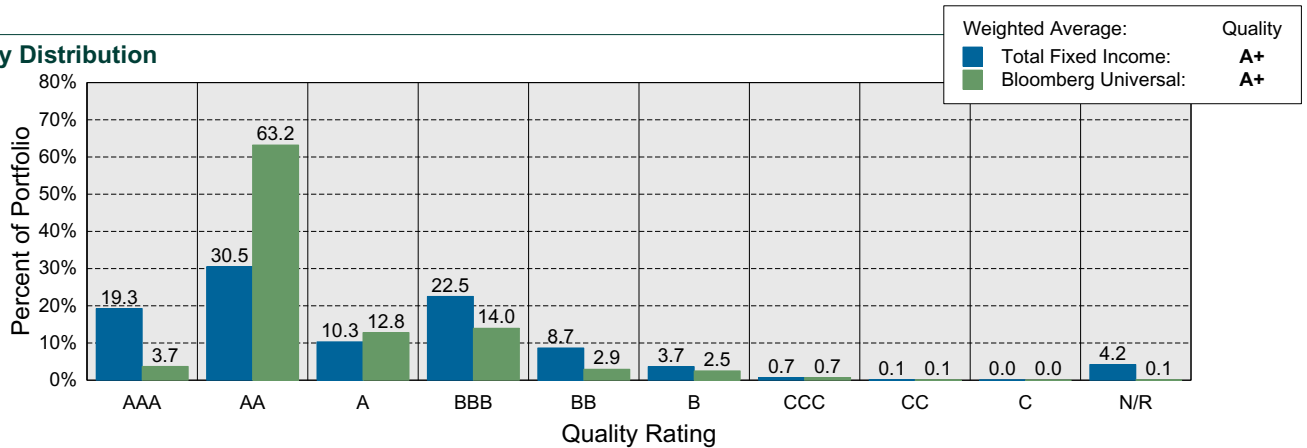
### Sector Distribution



### Duration Distribution



### Quality Distribution



# BlackRock SIO Bond Fund

## Period Ended December 31, 2023

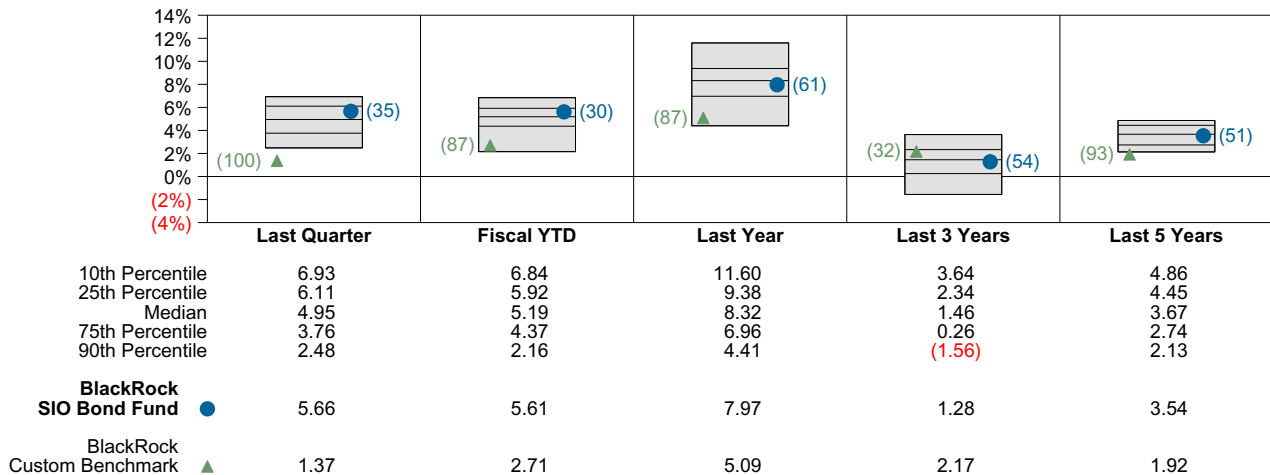
### Investment Philosophy

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.

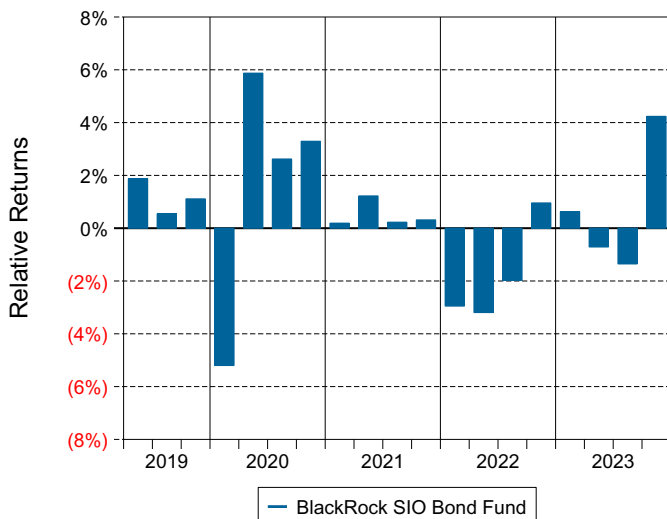
### Quarterly Asset Growth

Beginning Market Value	\$252,016,802
Net New Investment	\$0
Investment Gains/(Losses)	\$14,260,902
Ending Market Value	\$266,277,704

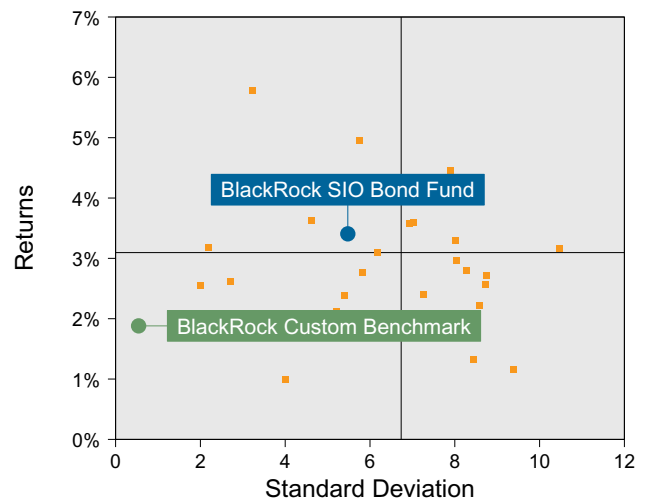
### Performance vs Callan Unconstrained FI (Gross)



### Relative Returns vs BlackRock Custom Benchmark



### Callan Unconstrained FI (Gross) Annualized Four and Three-Quarter Year Risk vs Return

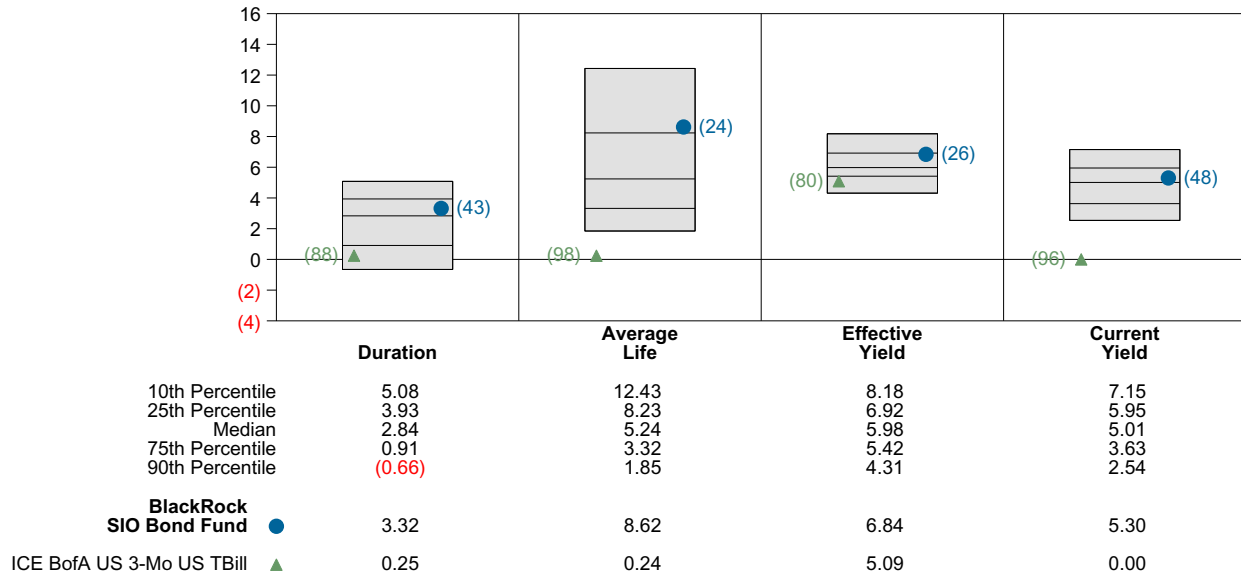


# BlackRock SIO Bond Fund Bond Characteristics Analysis Summary

## Portfolio Characteristics

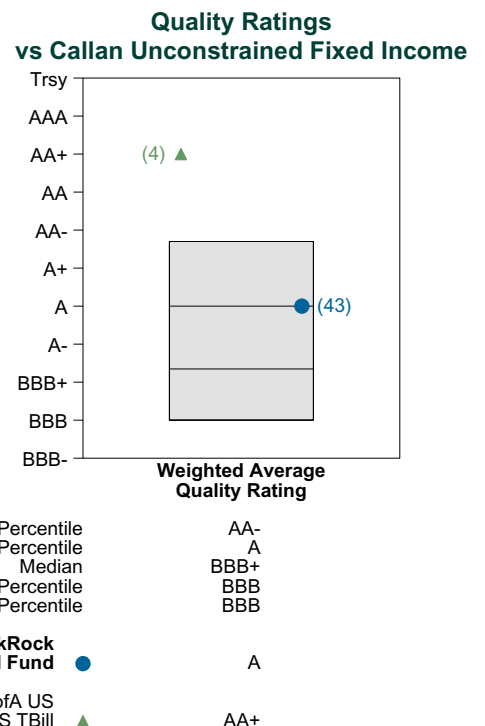
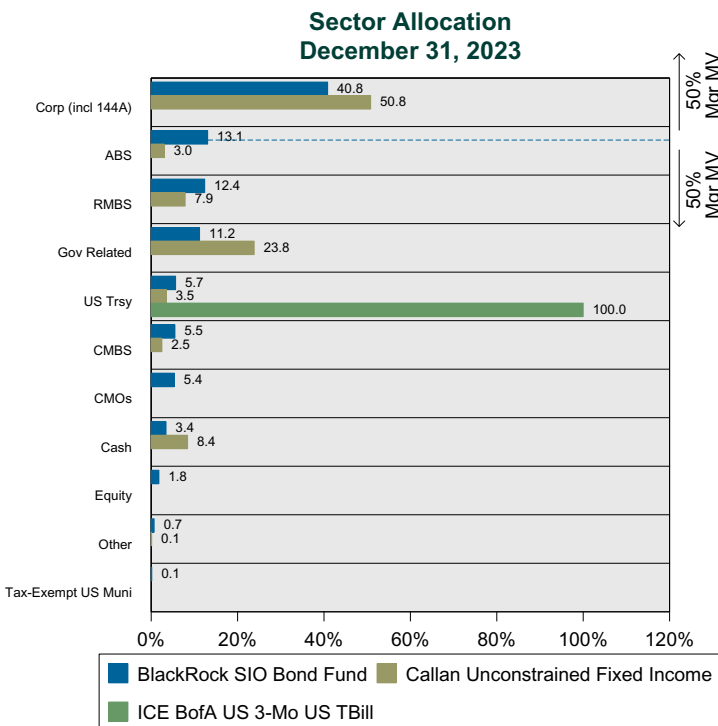
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Unconstrained Fixed Income as of December 31, 2023



## 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.

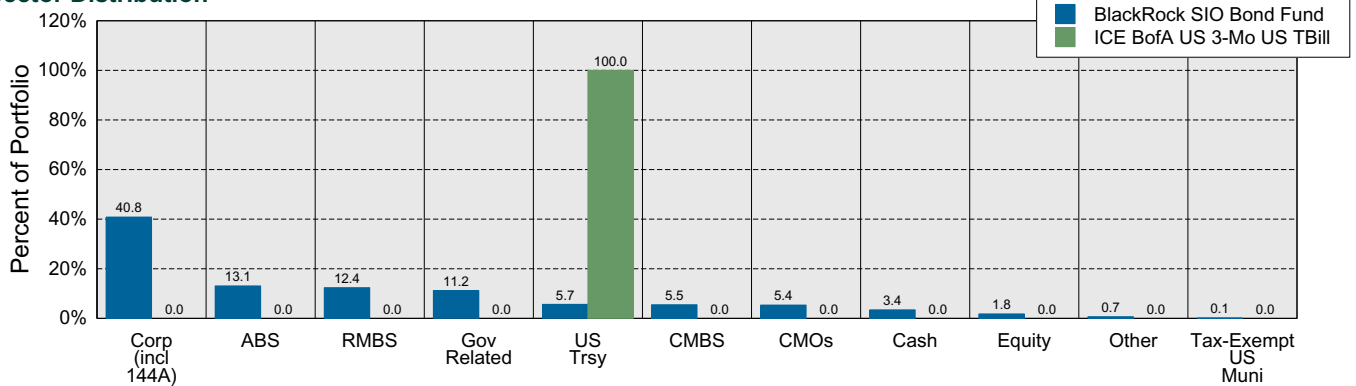


# BlackRock SIO Bond Fund Portfolio Characteristics Summary As of December 31, 2023

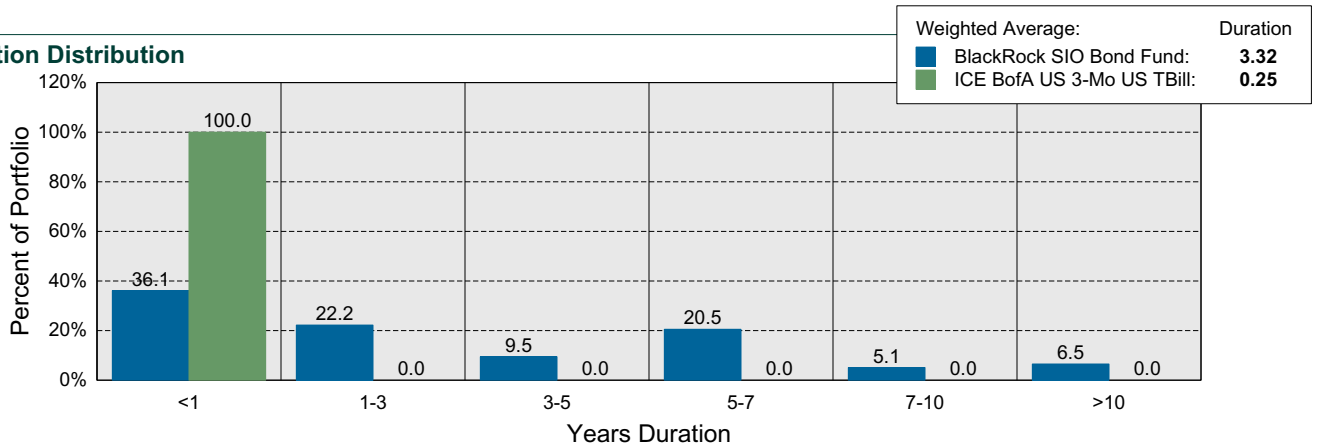
## Portfolio Structure Comparison

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.

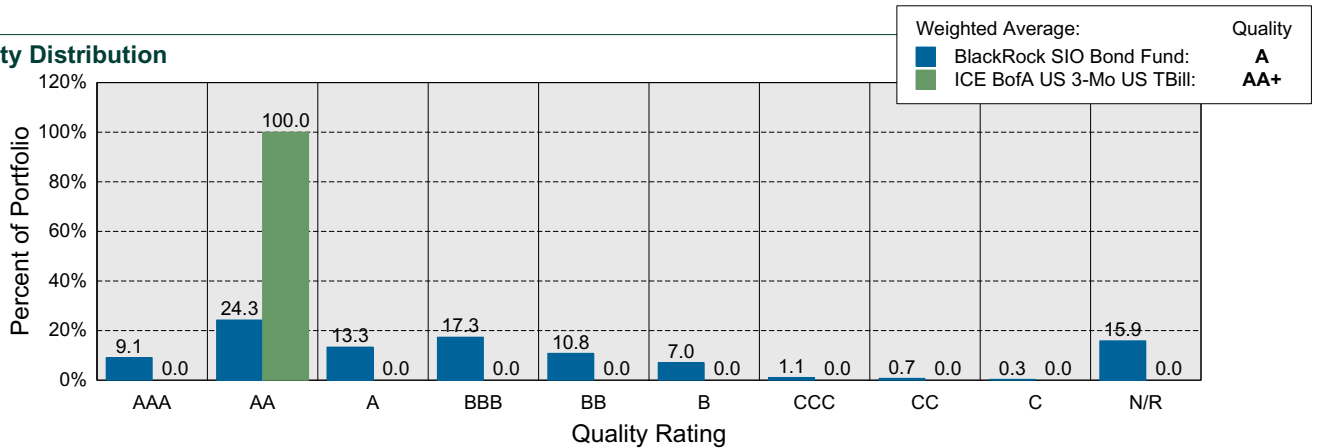
### Sector Distribution



### Duration Distribution



### Quality Distribution





# Brandywine Asset Mgmt Period Ended December 31, 2023

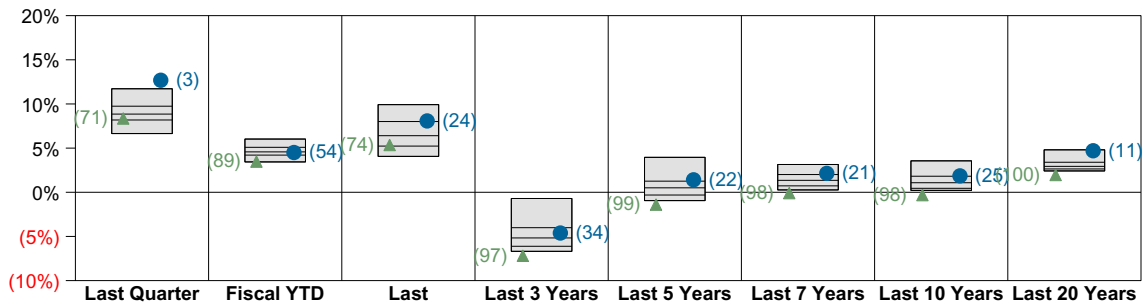
## Investment Philosophy

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

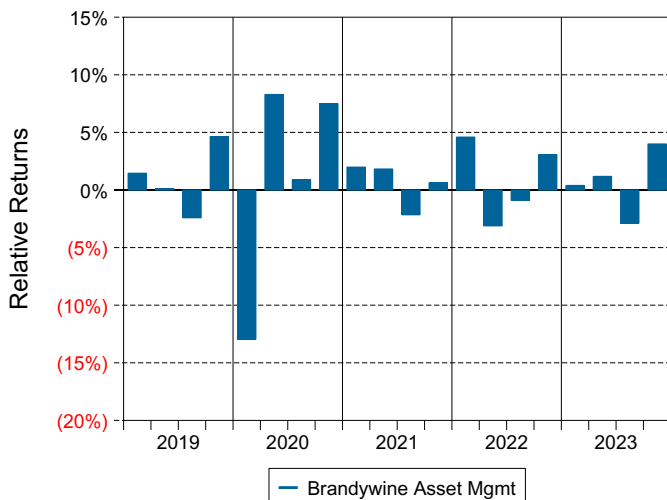
Beginning Market Value	\$212,212,886
Net New Investment	\$0
Investment Gains/(Losses)	\$26,920,089
Ending Market Value	\$239,132,976

### Performance vs Callan Global Fixed Income (Unhedged) (Gross)

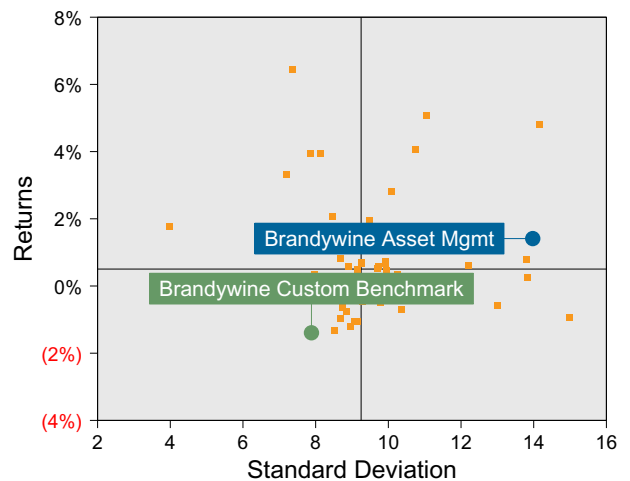


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	11.72	6.03	9.92	(0.70)	3.95	3.15	3.56	4.81
25th Percentile	9.75	5.09	8.01	(4.01)	1.26	2.01	1.82	3.40
Median	8.85	4.58	6.41	(5.17)	0.50	1.35	1.08	2.93
75th Percentile	8.19	4.21	5.23	(6.11)	(0.31)	0.73	0.45	2.64
90th Percentile	6.65	3.44	4.06	(6.69)	(0.94)	0.26	0.22	2.42
<b>Brandywine Asset Mgmt</b> ●	12.69	4.50	8.08	(4.61)	1.41	2.14	1.86	4.70
Brandywine Custom Benchmark ▲	8.36	3.48	5.36	(7.19)	(1.39)	(0.09)	(0.32)	1.96

### Relative Returns vs Brandywine Custom Benchmark



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

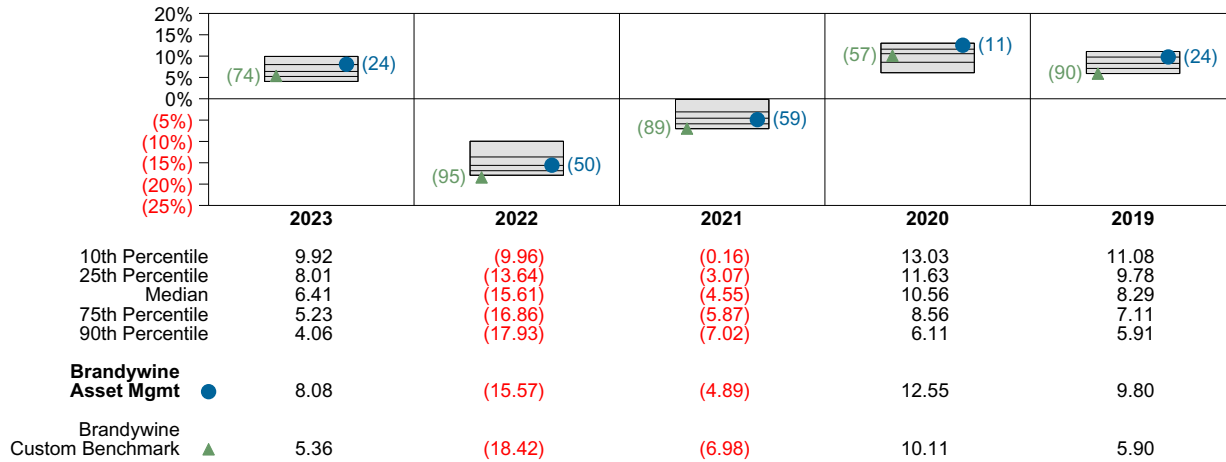


# Brandywine Asset Mgmt Return Analysis Summary

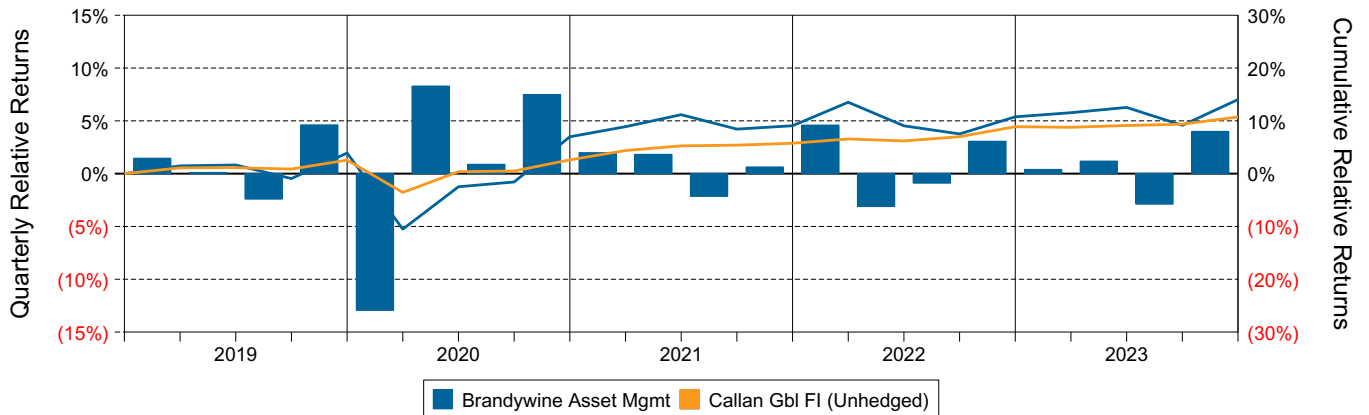
## Return Analysis

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.

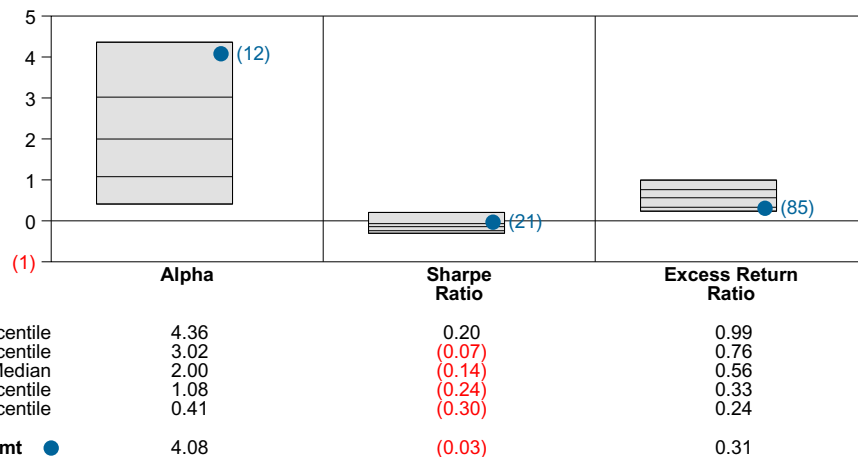
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



### 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 December 31, 2023

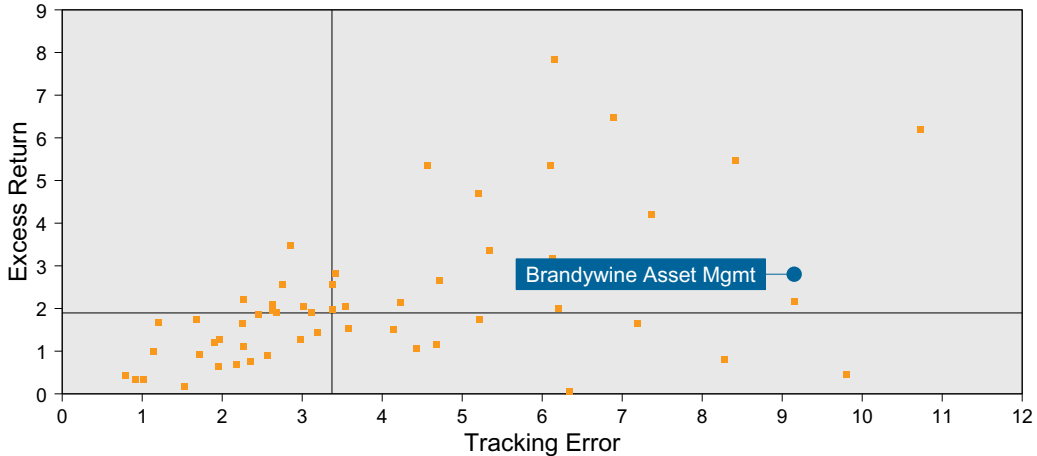


# Brandywine Asset Mgmt Risk Analysis Summary

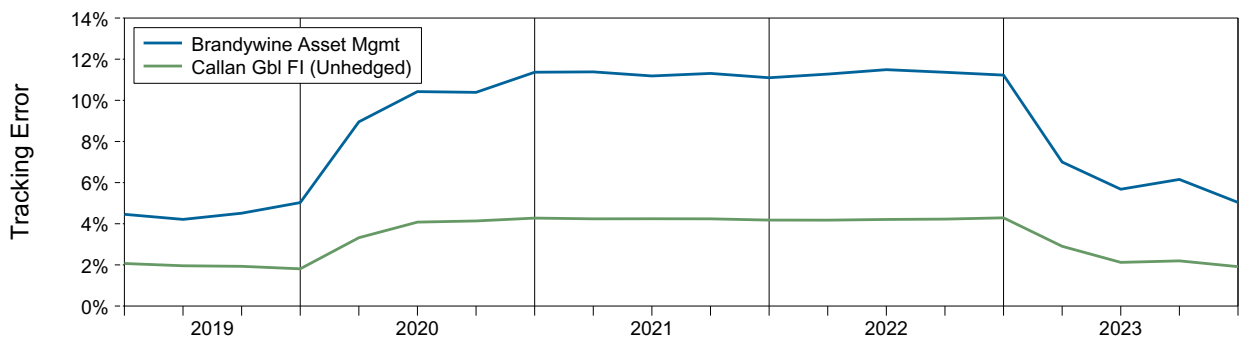
## Risk Analysis

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.

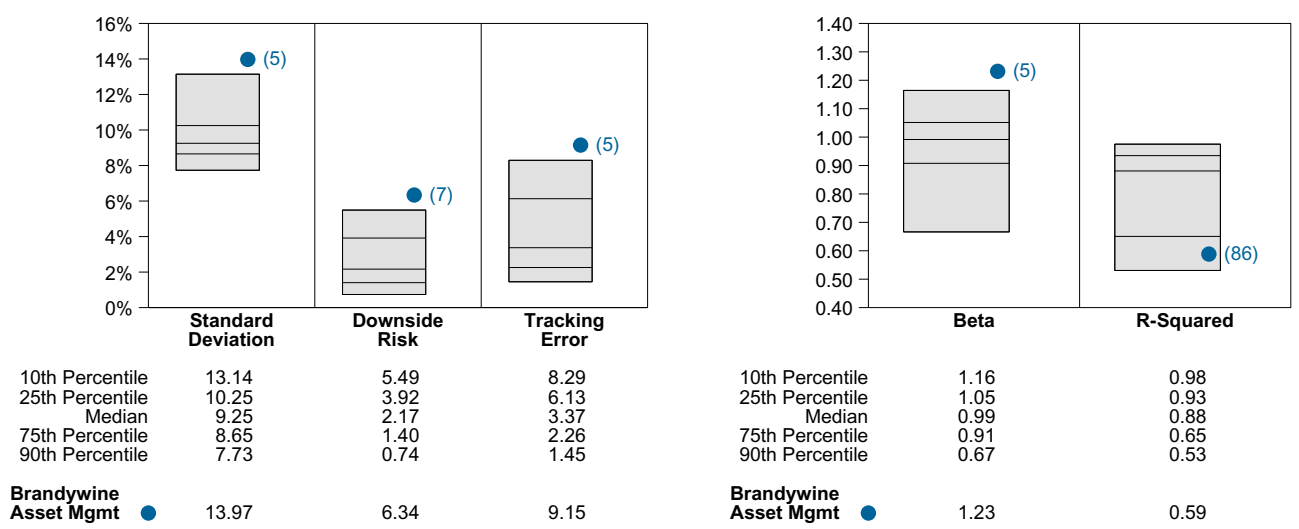
### Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended December 31, 2023



### 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 December 31, 2023

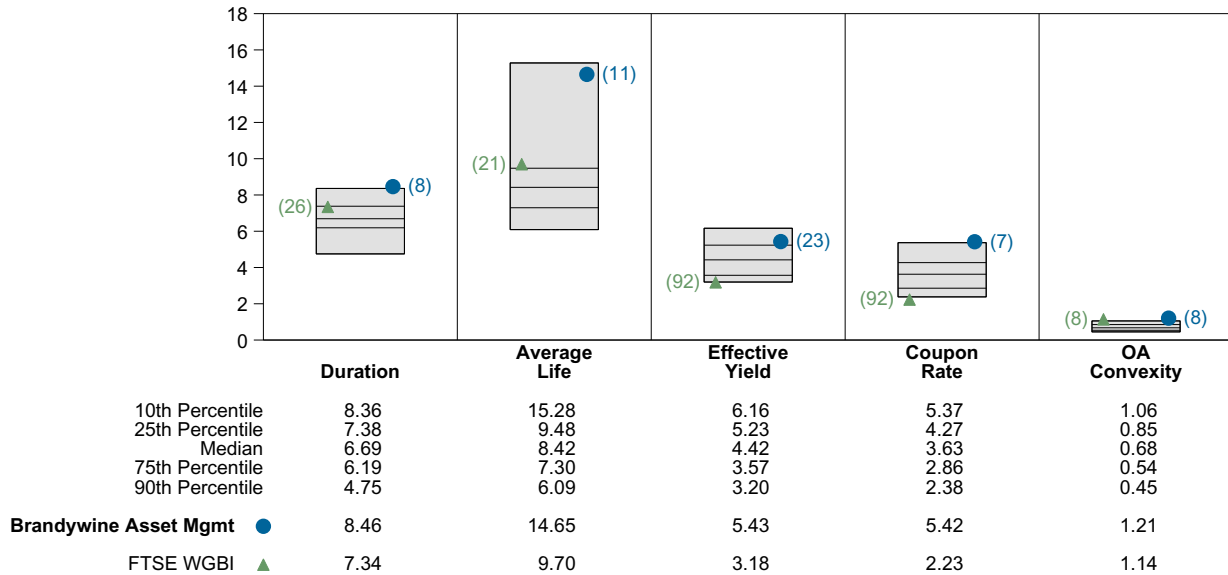


# Brandywine Asset Mgmt Bond Characteristics Analysis Summary

## Portfolio Characteristics

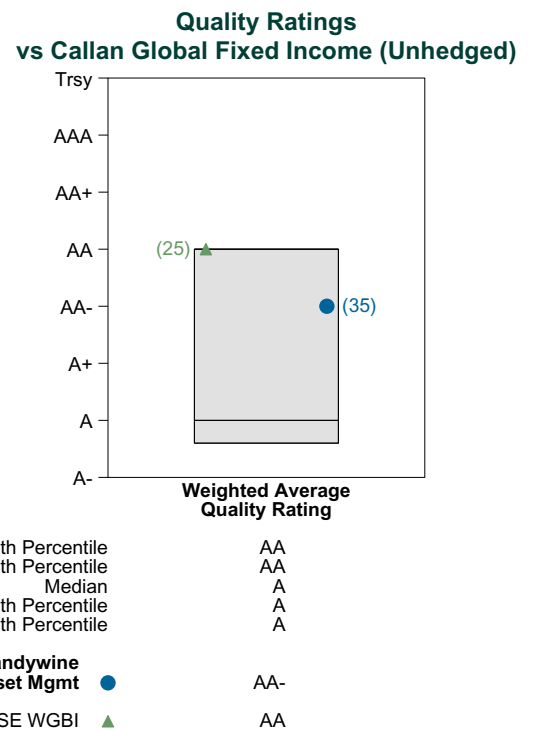
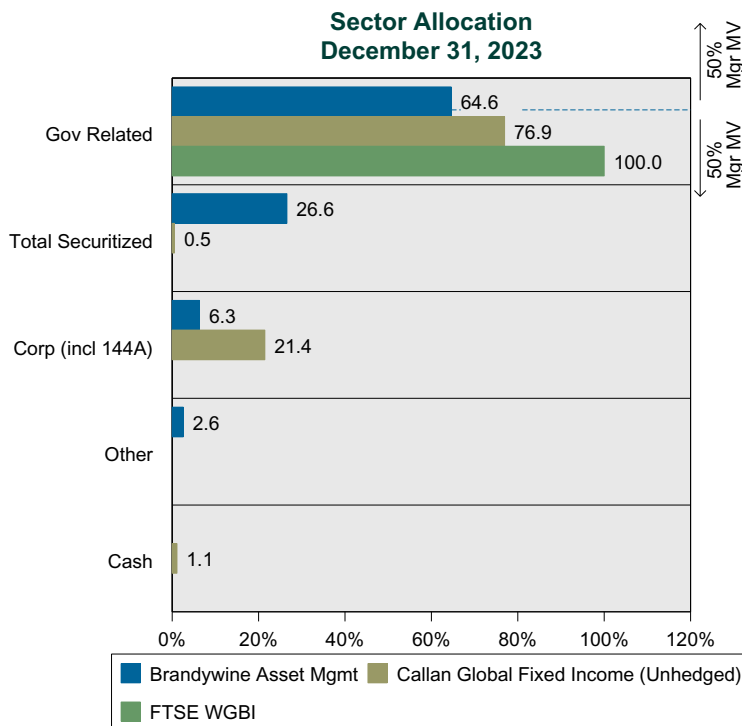
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Global Fixed Income (Unhedged) as of December 31, 2023



## 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.

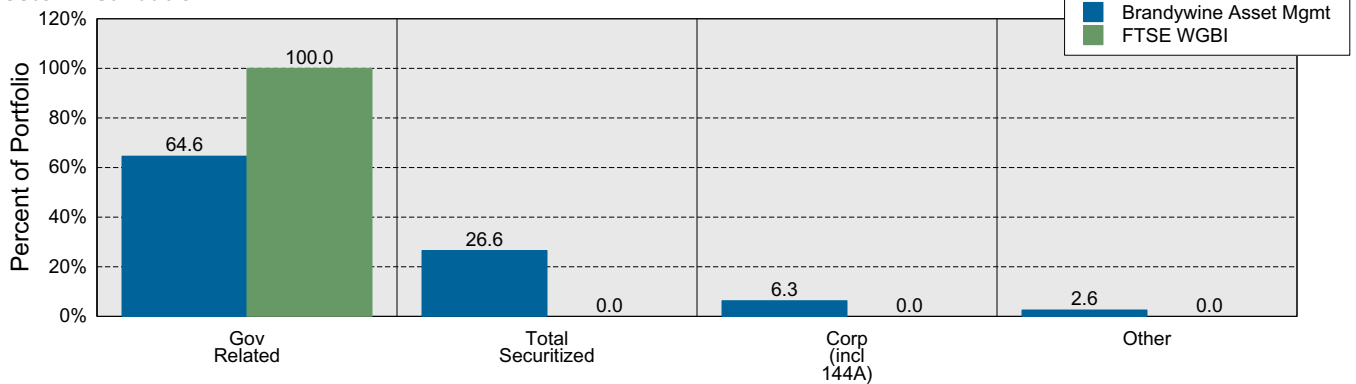


# Brandywine Asset Mgmt Portfolio Characteristics Summary As of December 31, 2023

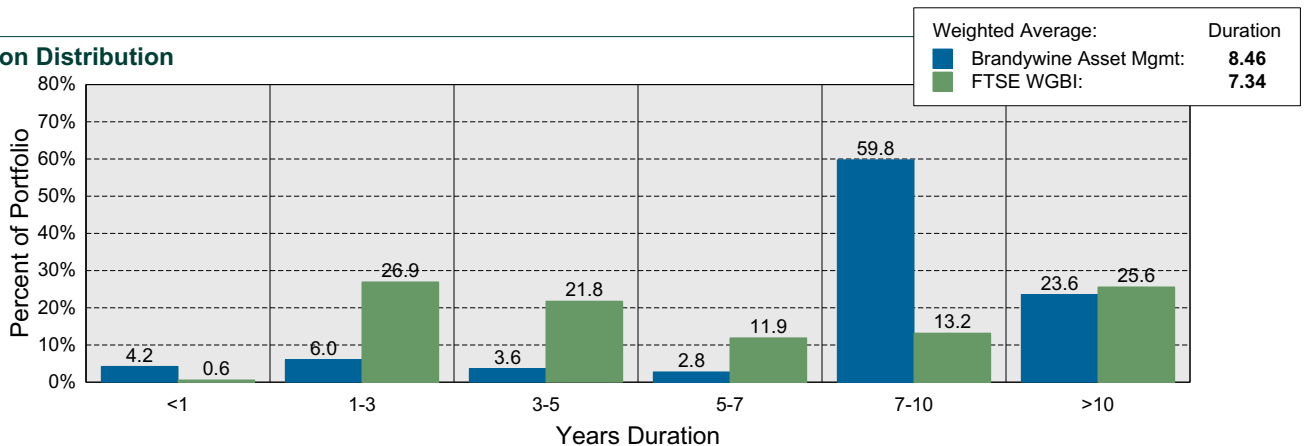
## Portfolio Structure Comparison

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.

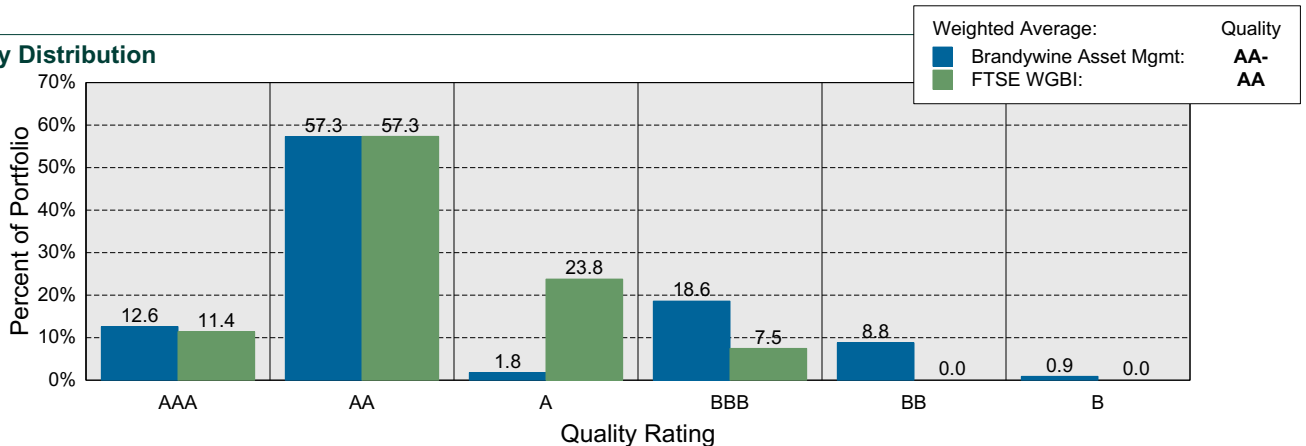
### Sector Distribution



### Duration Distribution



### Quality Distribution



# FIAM (Fidelity) Tactical Bond Fund

## Period Ended December 31, 2023

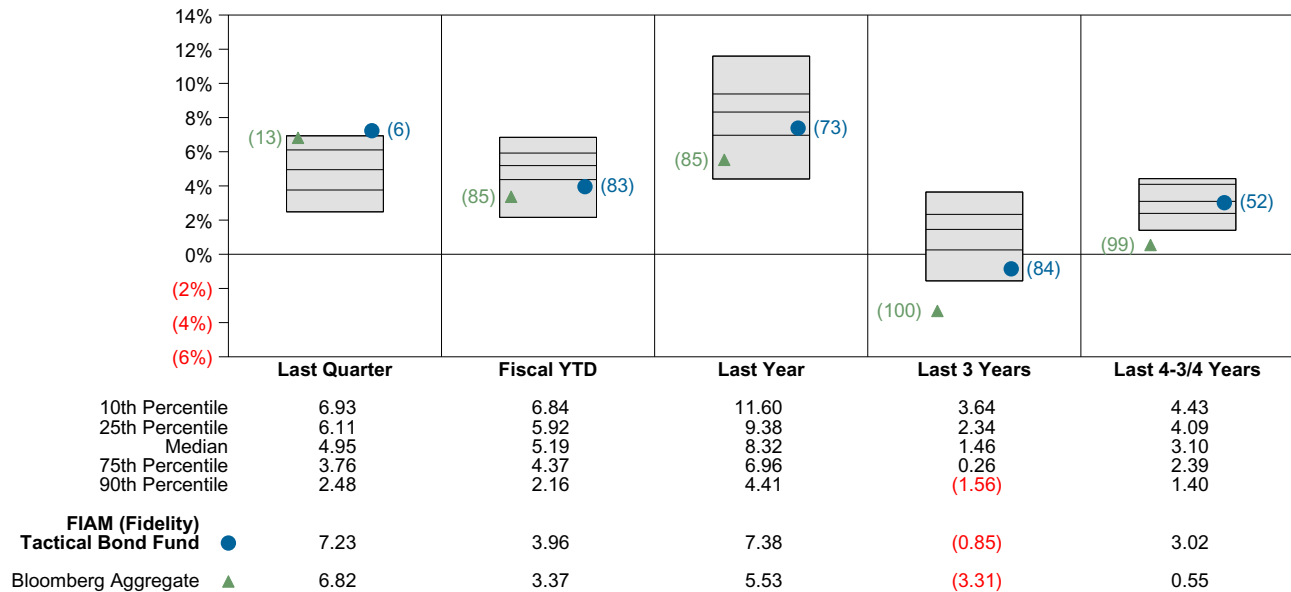
### Investment Philosophy

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.

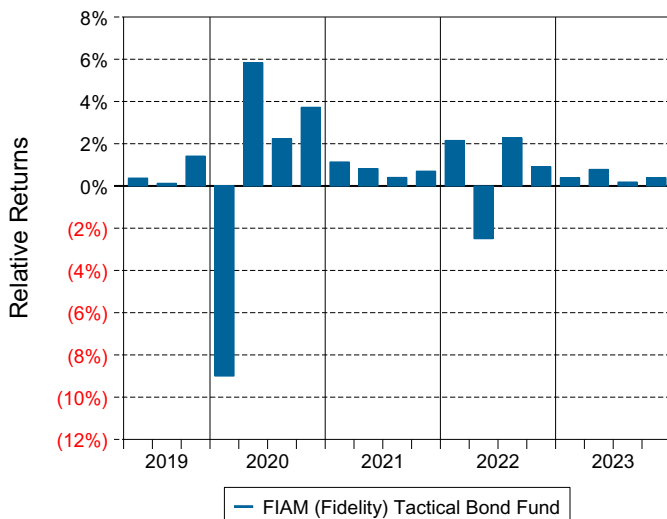
### Quarterly Asset Growth

Beginning Market Value	\$350,096,425
Net New Investment	\$0
Investment Gains/(Losses)	\$25,311,195
Ending Market Value	\$375,407,619

### Performance vs Callan Unconstrained FI (Gross)

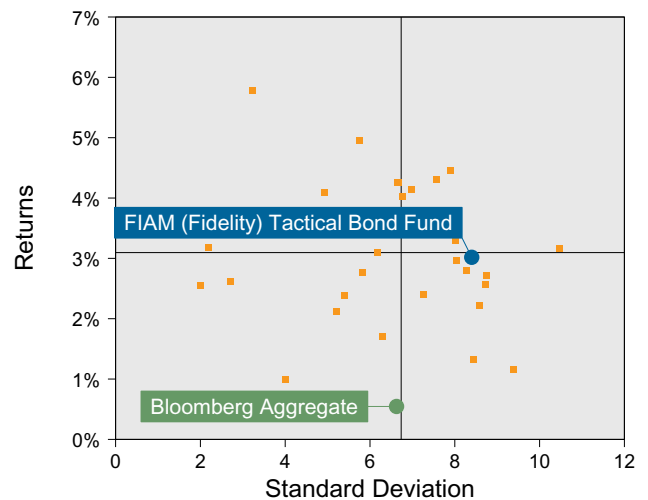


### Relative Return vs Bloomberg Aggregate



### Callan Unconstrained FI (Gross)

#### Annualized Four and Three-Quarter Year Risk vs Return

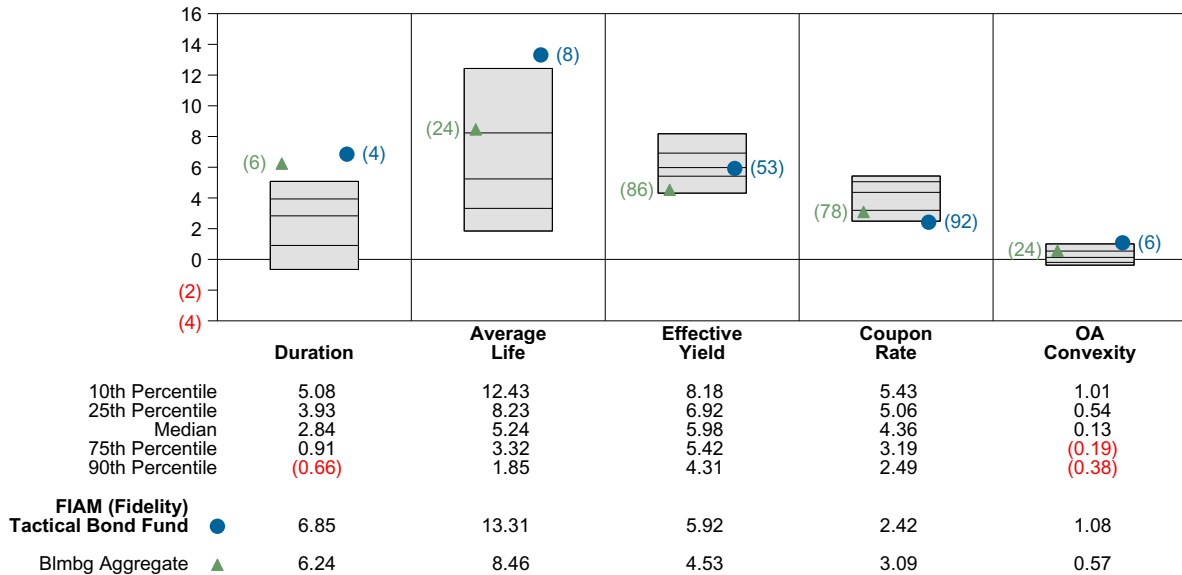


# FIAM (Fidelity) Tactical Bond Fund Bond Characteristics Analysis Summary

## Portfolio Characteristics

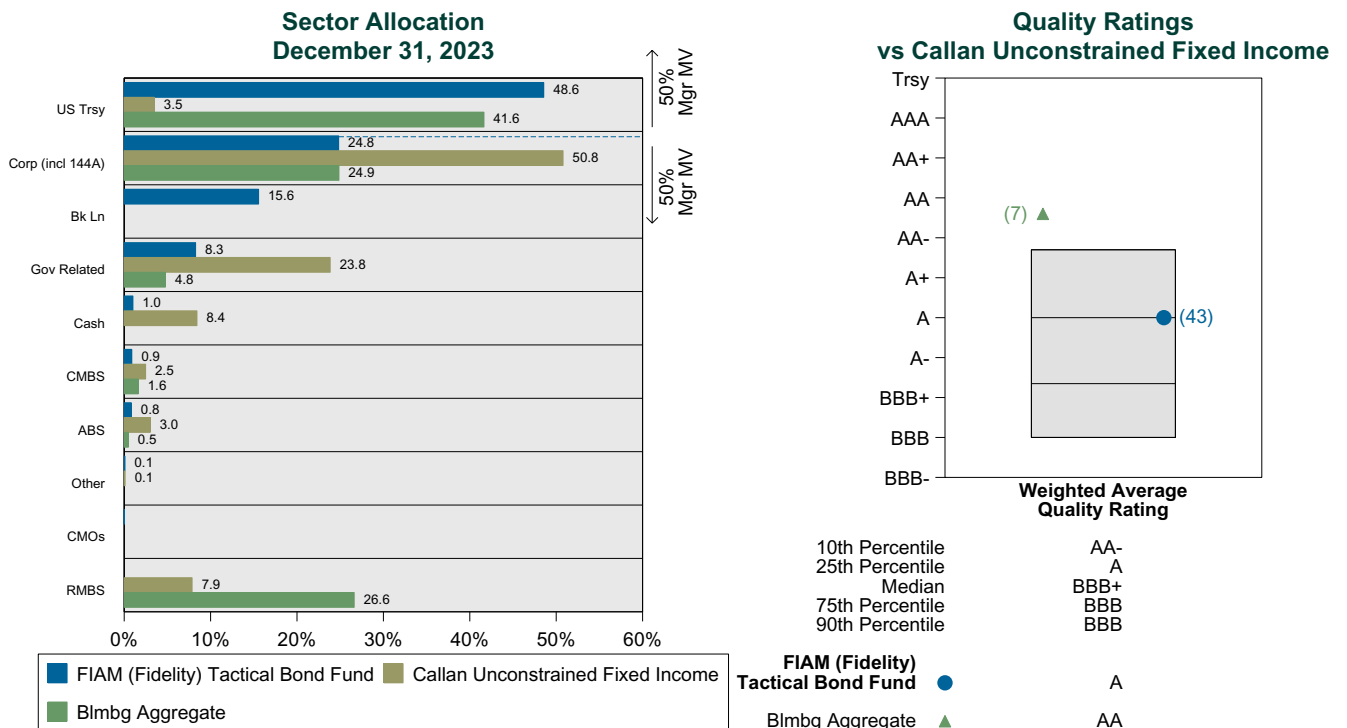
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Unconstrained Fixed Income as of December 31, 2023



## 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.

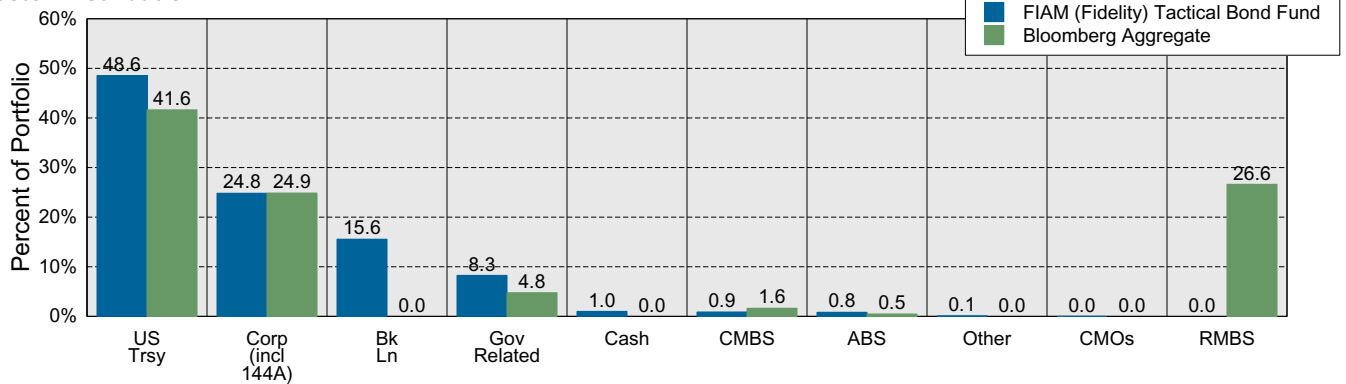


# FIAM (Fidelity) Tactical Bond Fund Portfolio Characteristics Summary As of December 31, 2023

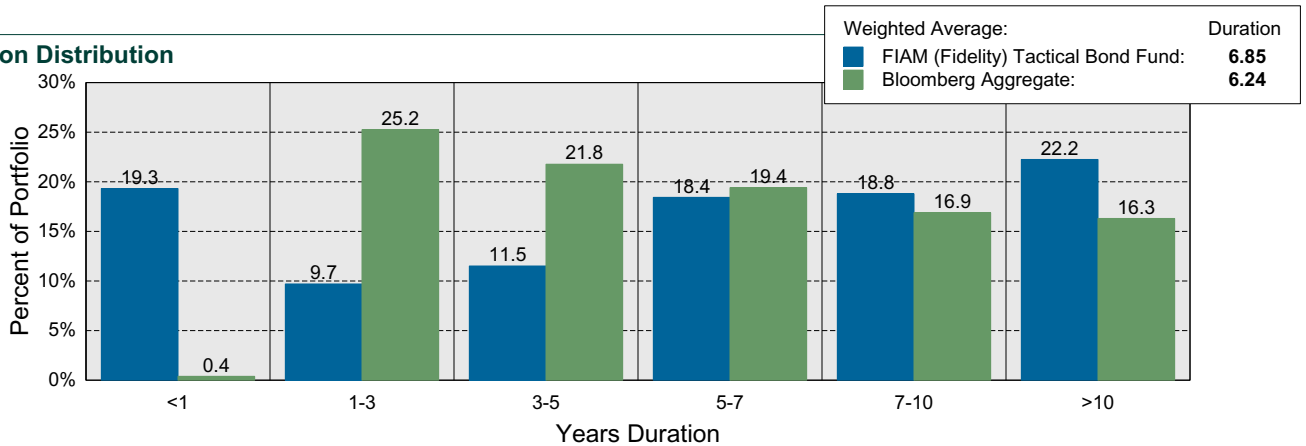
## Portfolio Structure Comparison

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.

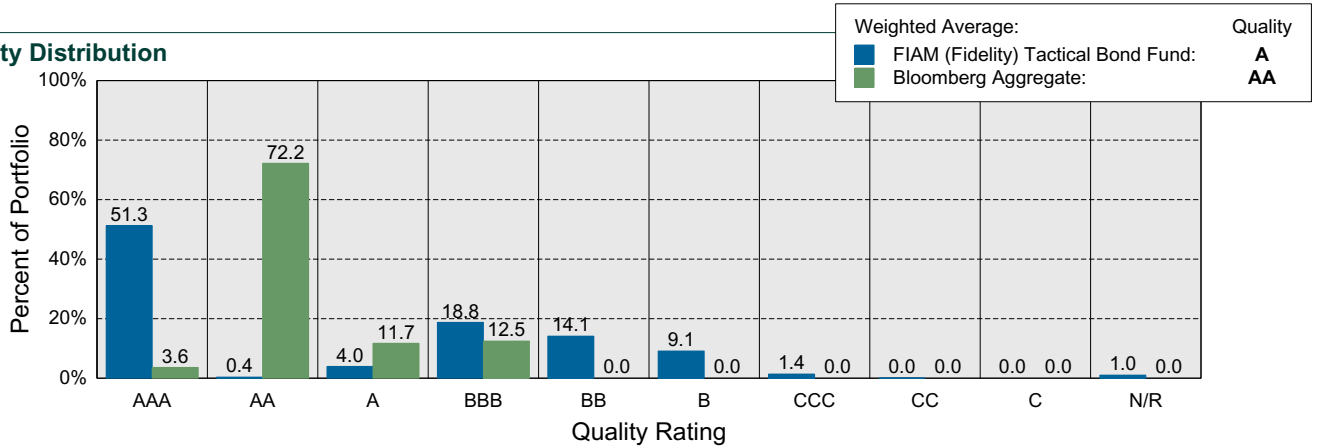
### Sector Distribution



### Duration Distribution



### Quality Distribution





# Income Research & Management Period Ended December 31, 2023

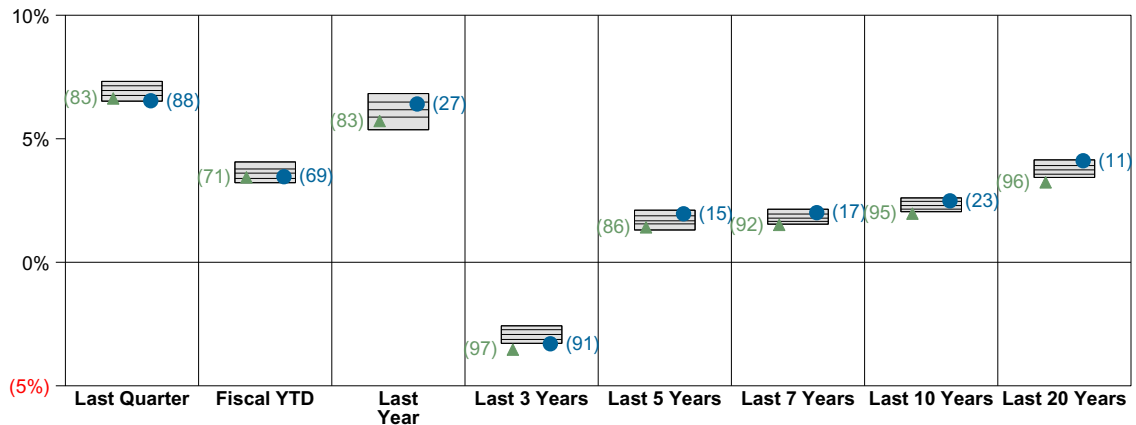
## Investment Philosophy

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	\$737,749,165
Net New Investment	\$0
Investment Gains/(Losses)	\$48,238,625
Ending Market Value	\$785,987,790

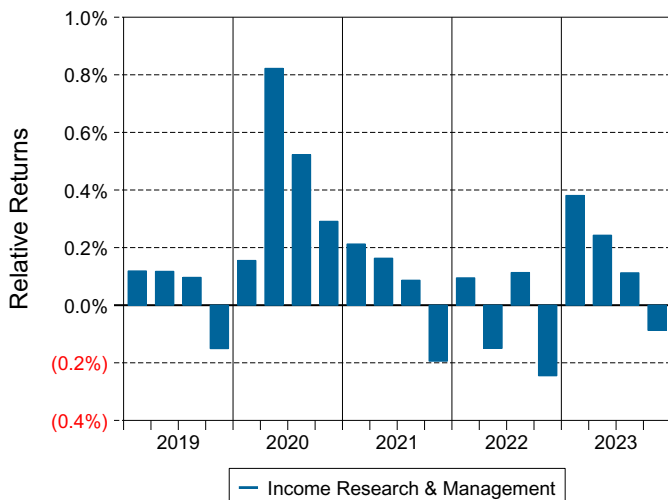
## Performance vs Callan Core Bond FI (Gross)



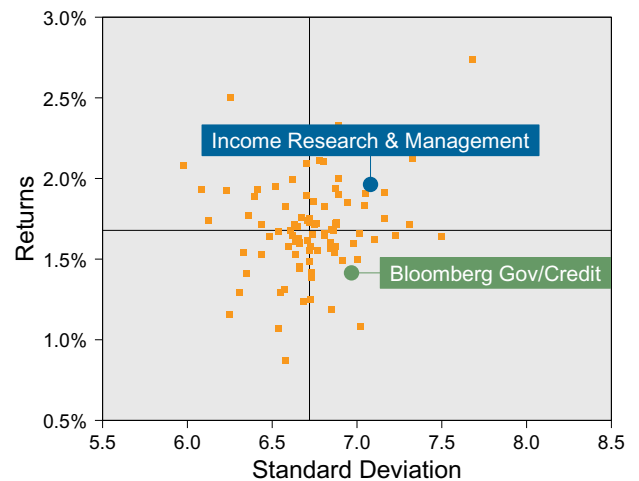
	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	7.32	4.06	6.83	(2.57)	2.11	2.15	2.61	4.15
25th Percentile	7.14	3.78	6.49	(2.73)	1.88	1.95	2.47	3.92
Median	6.95	3.61	6.17	(2.92)	1.68	1.79	2.30	3.74
75th Percentile	6.75	3.39	5.88	(3.12)	1.55	1.66	2.15	3.57
90th Percentile	6.52	3.22	5.36	(3.28)	1.31	1.54	2.05	3.43

	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
<b>Income Research &amp; Management</b>	6.54	3.46	6.41	(3.30)	1.96	2.01	2.49	4.11
<b>Bloomberg Gov/Credit</b>	6.63	3.44	5.72	(3.53)	1.41	1.52	1.97	3.24

### Relative Return vs Bloomberg Gov/Credit



### Callan Core Bond FI (Gross) Annualized Five Year Risk vs Return

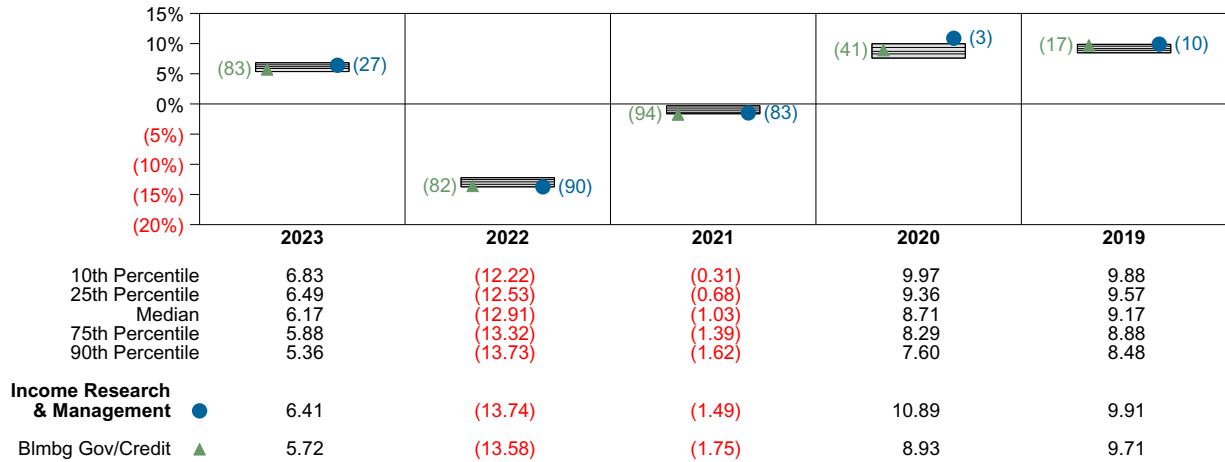


# Income Research & Management Return Analysis Summary

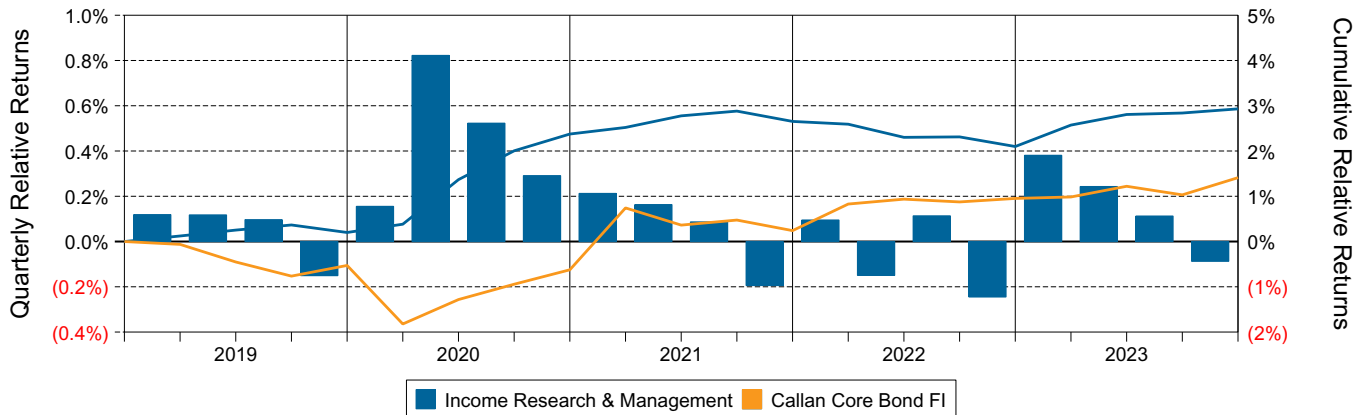
## Return Analysis

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.

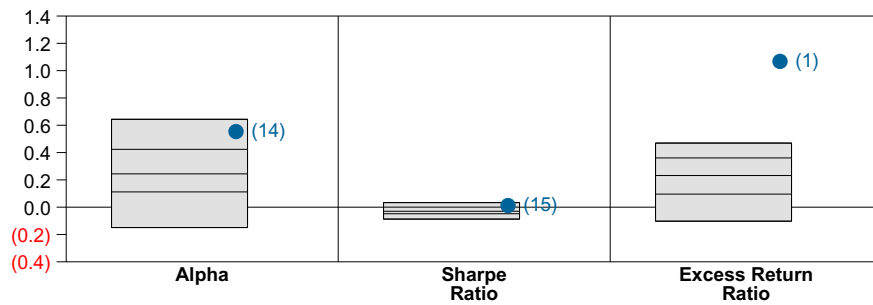
### Performance vs Callan Core Bond FI (Gross)



### 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 December 31, 2023



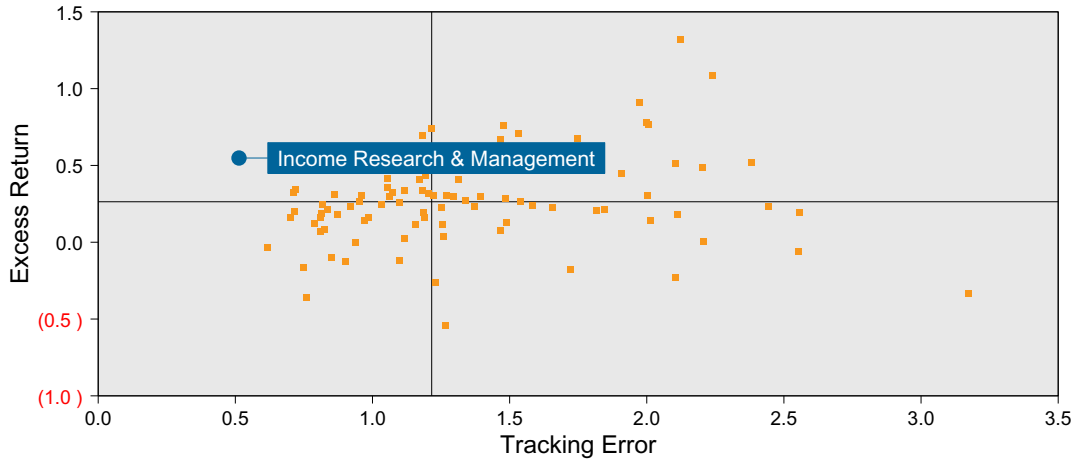
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.64	0.03	0.47
25th Percentile	0.42	0.00	0.36
Median	0.24	(0.03)	0.23
75th Percentile	0.11	(0.05)	0.10
90th Percentile	(0.15)	(0.09)	(0.10)
<b>Income Research &amp; Management</b>	0.55	0.01	1.07

# Income Research & Management Risk Analysis Summary

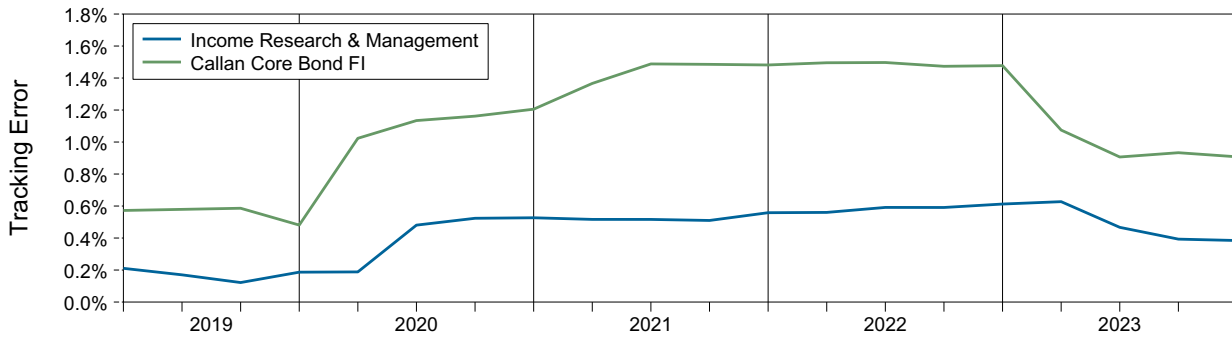
## Risk Analysis

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.

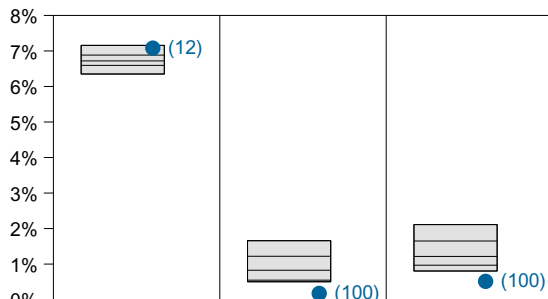
### Risk Analysis vs Callan Core Bond Fixed Income (Gross) Five Years Ended December 31, 2023



### Rolling 12 Quarter Tracking Error vs Blmbg Gov/Credit



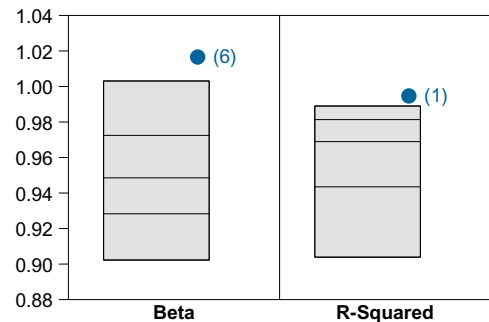
### Risk Statistics Rankings vs Blmbg Gov/Credit Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended December 31, 2023



10th Percentile 7.16  
25th Percentile 6.88  
Median 6.72  
75th Percentile 6.59  
90th Percentile 6.35

10th Percentile 1.66  
25th Percentile 1.22  
Median 0.83  
75th Percentile 0.55  
90th Percentile 0.50

10th Percentile 2.11  
25th Percentile 1.65  
Median 1.22  
75th Percentile 0.97  
90th Percentile 0.80



10th Percentile 1.00  
25th Percentile 0.97  
Median 0.95  
75th Percentile 0.93  
90th Percentile 0.90

10th Percentile 0.99  
25th Percentile 0.98  
Median 0.97  
75th Percentile 0.94  
90th Percentile 0.90

Income Research & Management ● 7.08 0.17 0.51

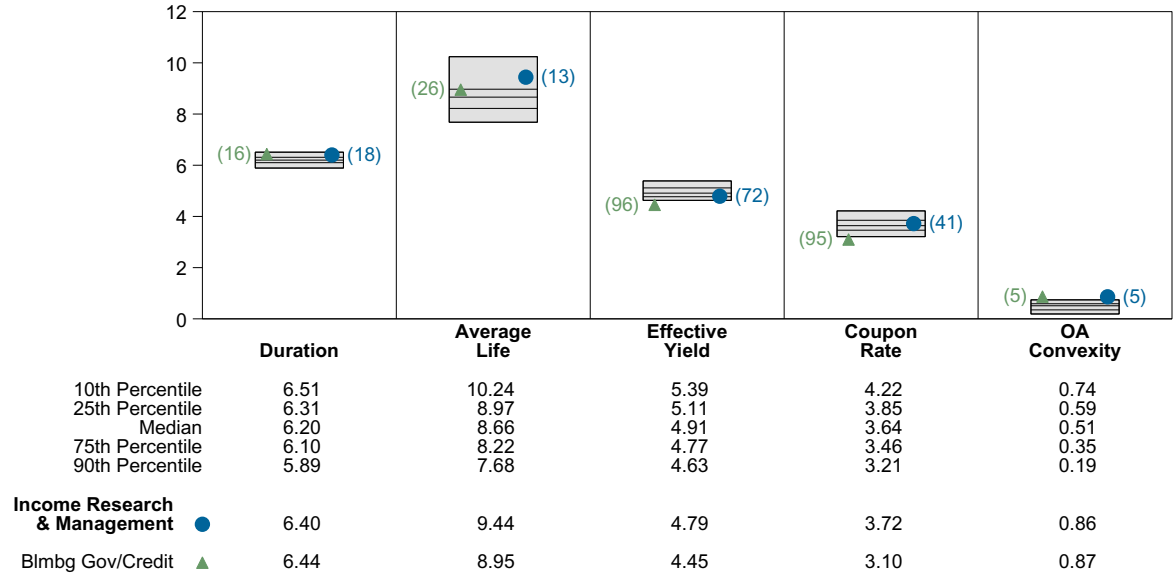
Income Research & Management ● 1.02 0.99

# Income Research & Management Bond Characteristics Analysis Summary

## Portfolio Characteristics

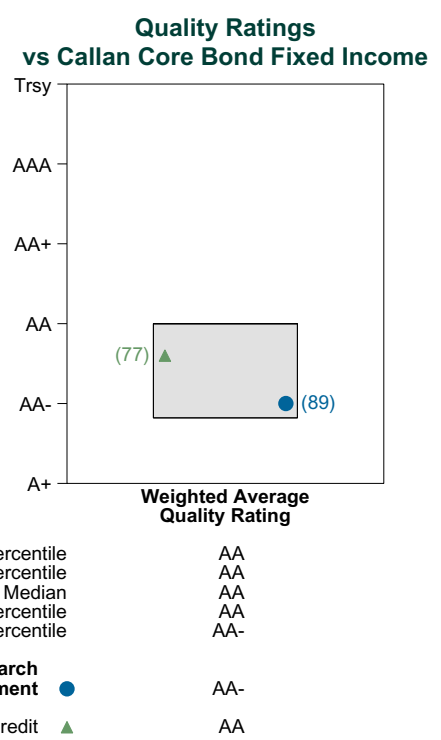
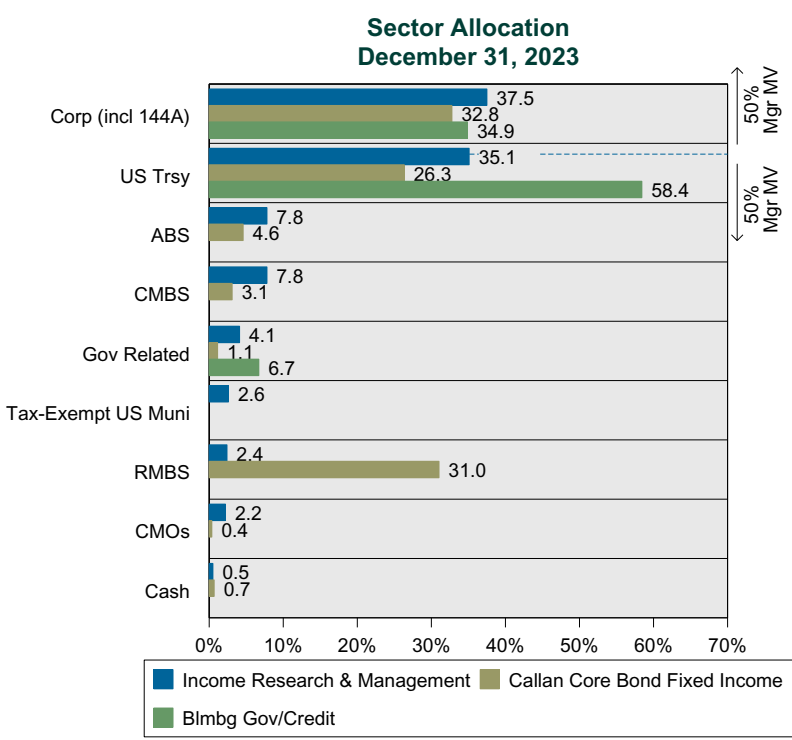
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Core Bond Fixed Income as of December 31, 2023



## 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.

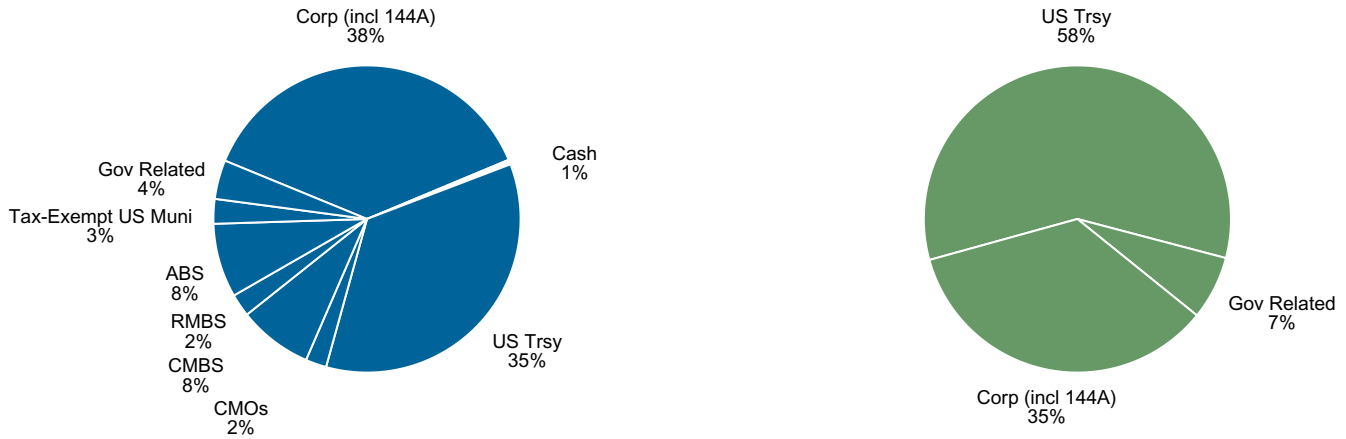


# Income Research & Management Portfolio Characteristics Summary As of December 31, 2023

## 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.

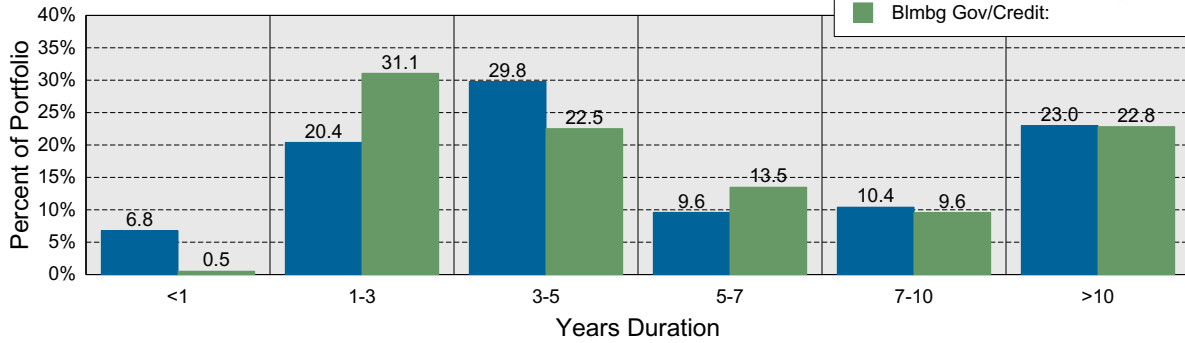
### Sector Allocation



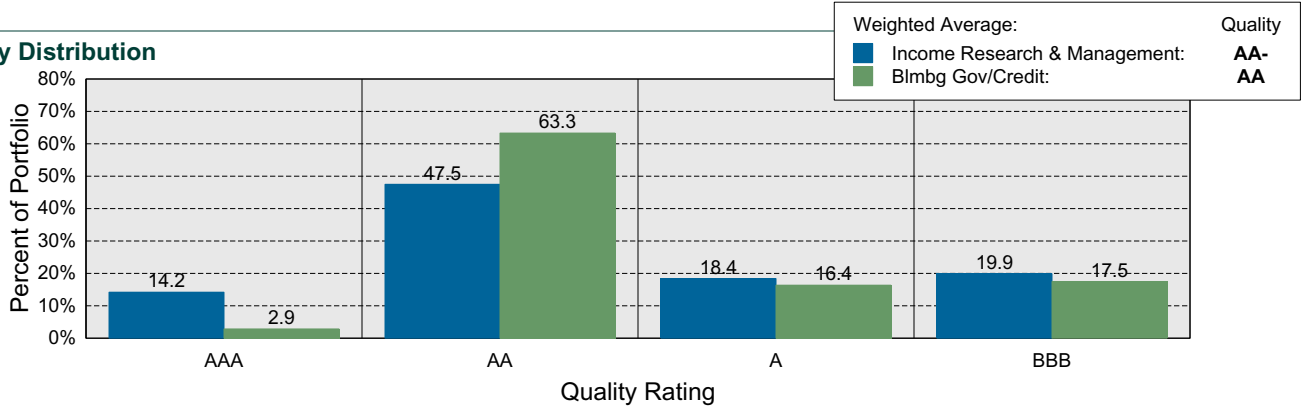
### Income Research & Management

### Blmbg Gov/Credit

#### Duration Distribution



#### Quality Distribution



# Loomis Sayles

## Period Ended December 31, 2023

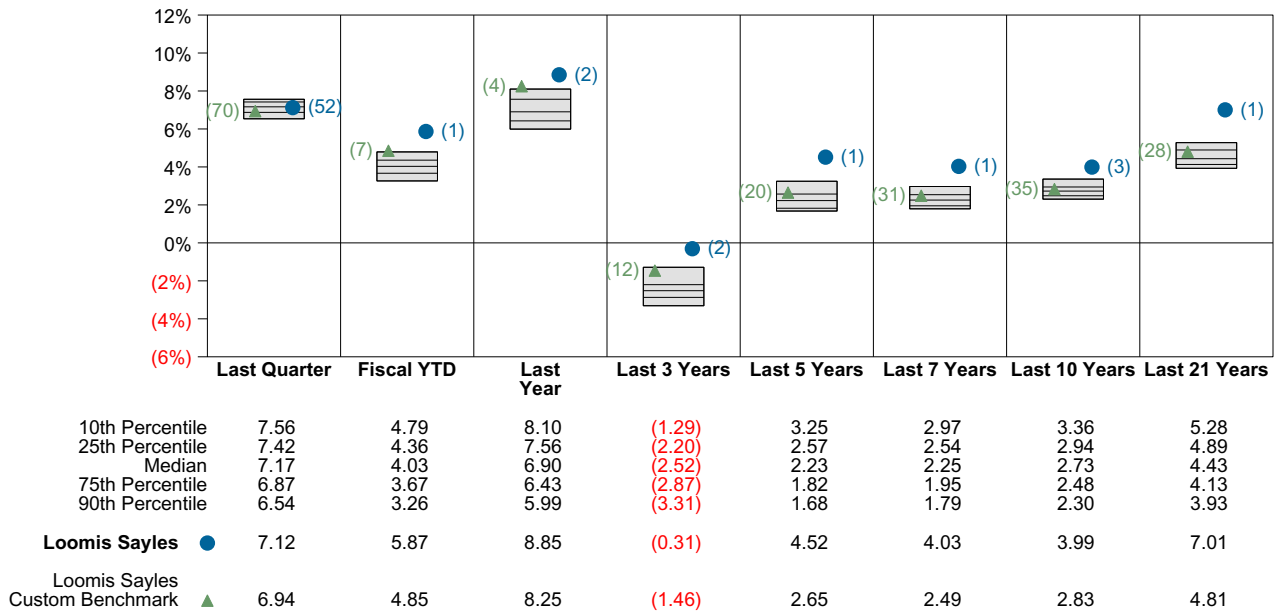
### Investment Philosophy

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.

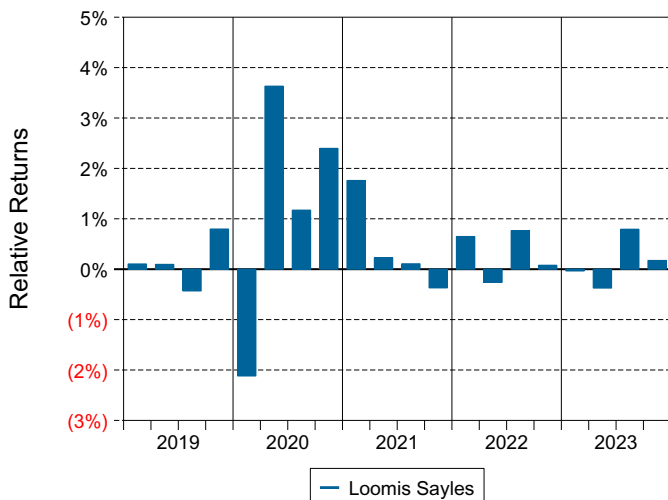
### Quarterly Asset Growth

Beginning Market Value	\$266,839,188
Net New Investment	\$0
Investment Gains/(Losses)	\$19,008,605
Ending Market Value	\$285,847,793

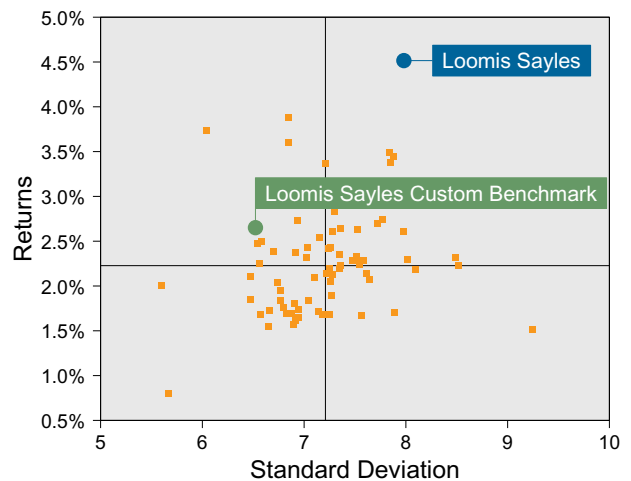
### Performance vs Callan Core Plus FI (Gross)



### Relative Returns vs Loomis Sayles Custom Benchmark



### Callan Core Plus FI (Gross) Annualized Five Year Risk vs Return

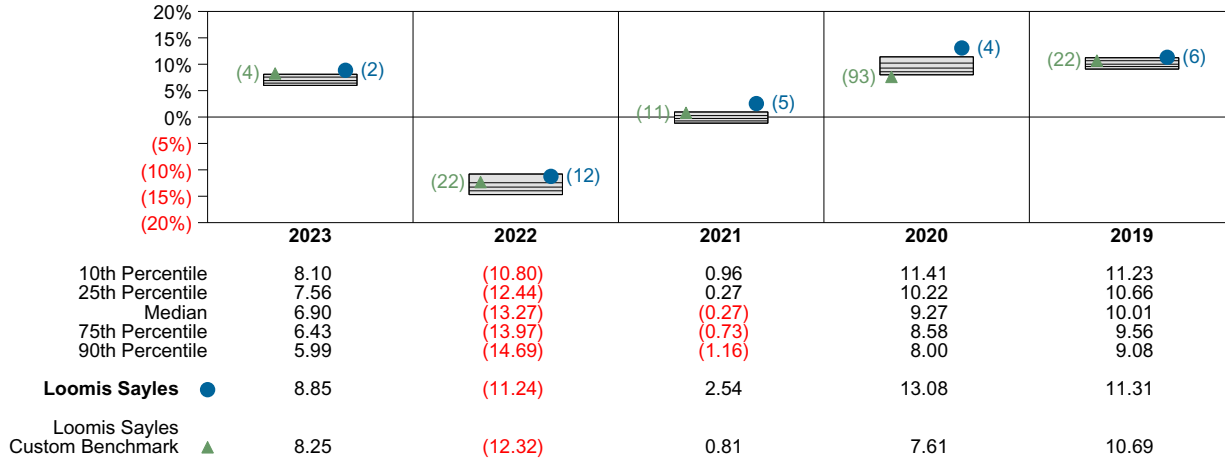


# Loomis Sayles Return Analysis Summary

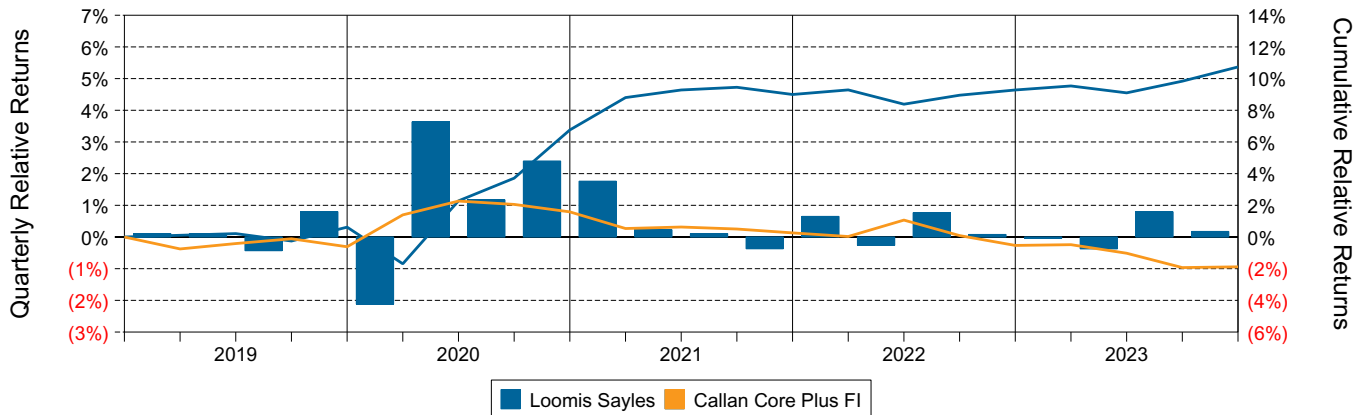
## Return Analysis

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.

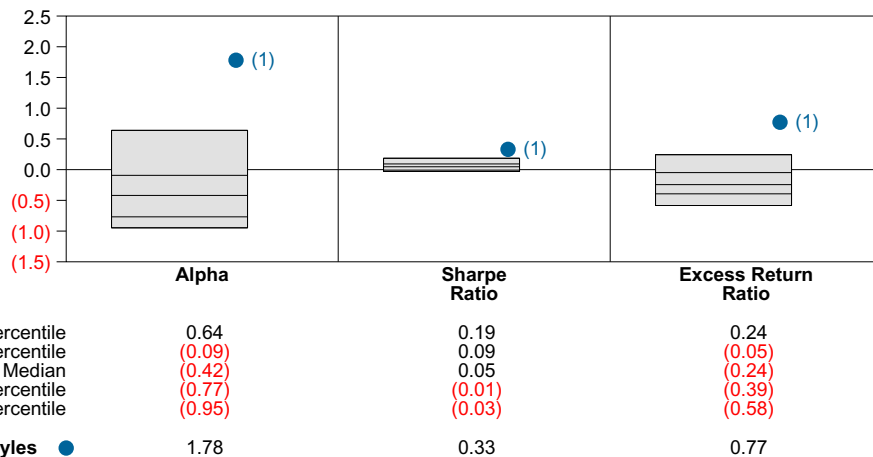
### Performance vs Callan Core Plus FI (Gross)



### 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 December 31, 2023

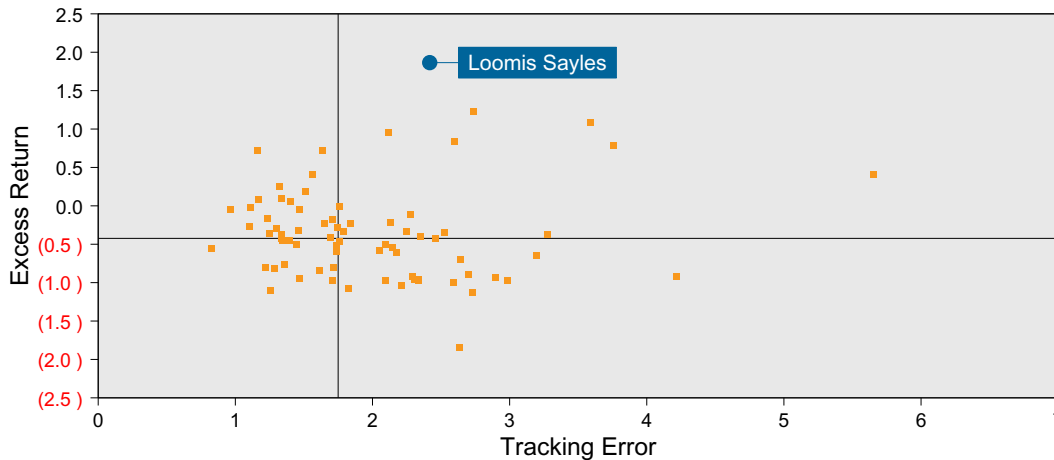


# Loomis Sayles Risk Analysis Summary

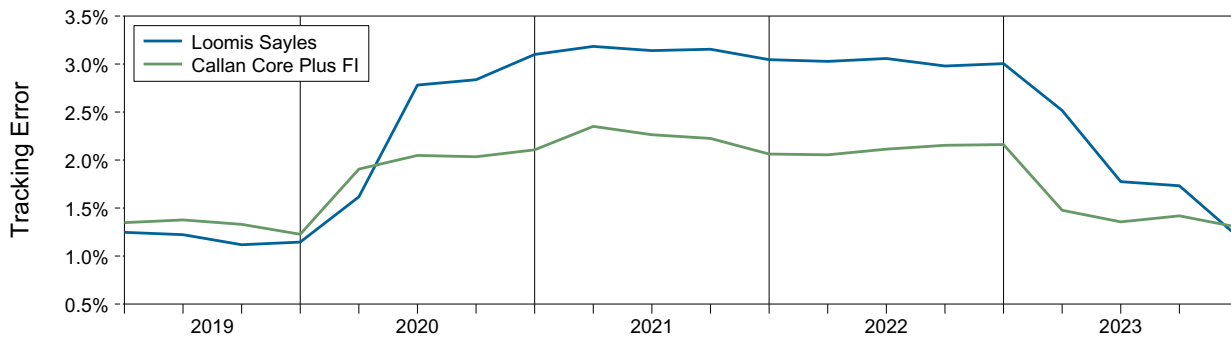
## Risk Analysis

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.

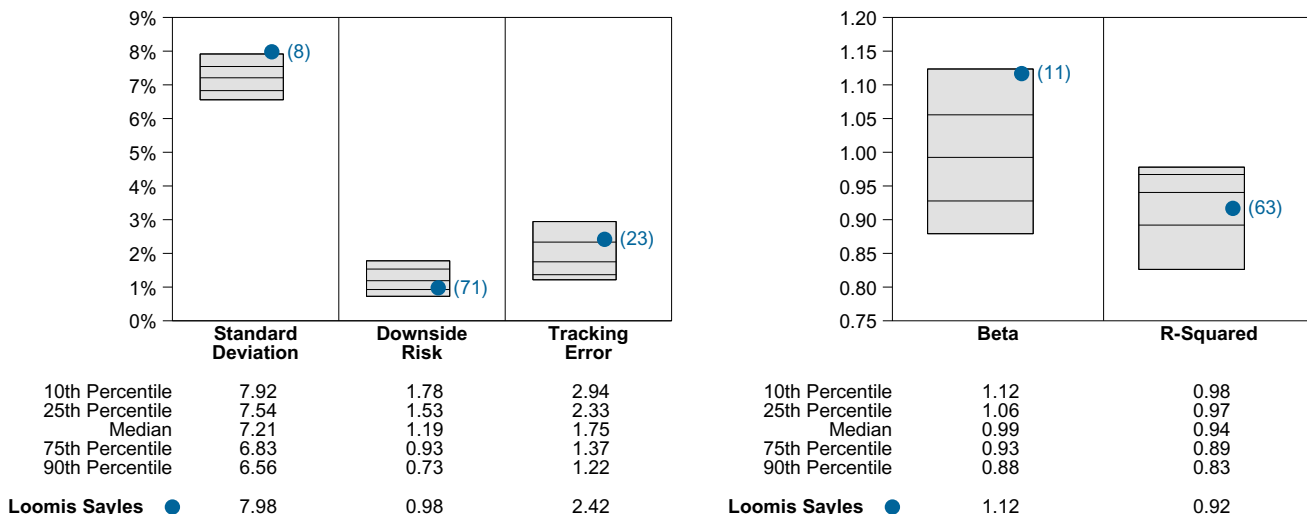
### Risk Analysis vs Callan Core Plus Fixed Income (Gross) Five Years Ended December 31, 2023



### 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 December 31, 2023



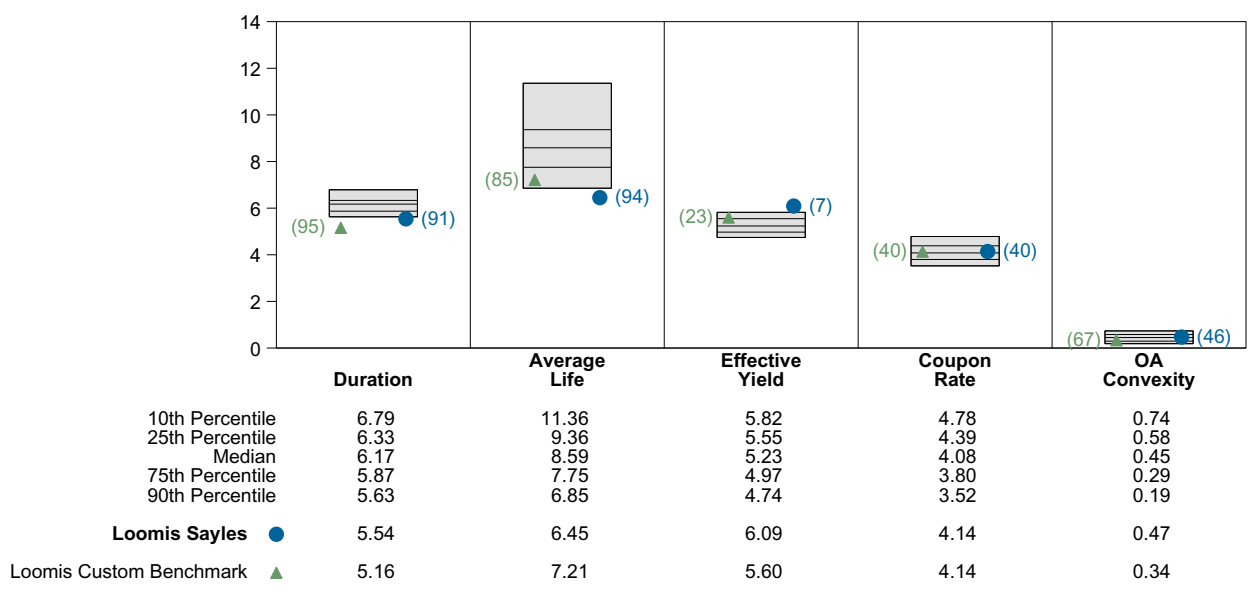


# Loomis Sayles Bond Characteristics Analysis Summary

## Portfolio Characteristics

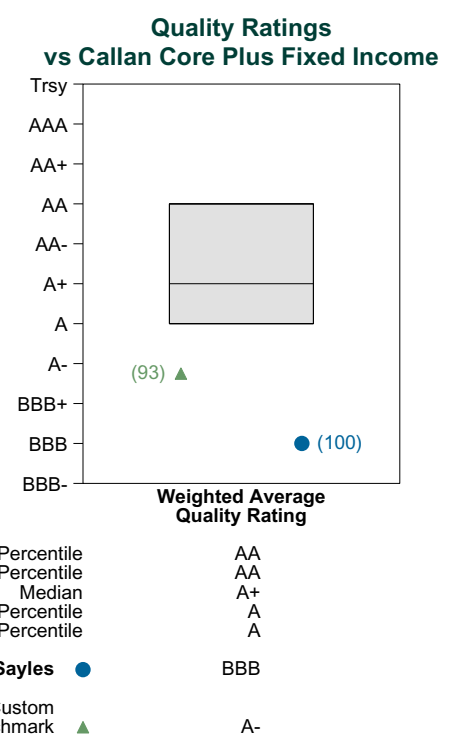
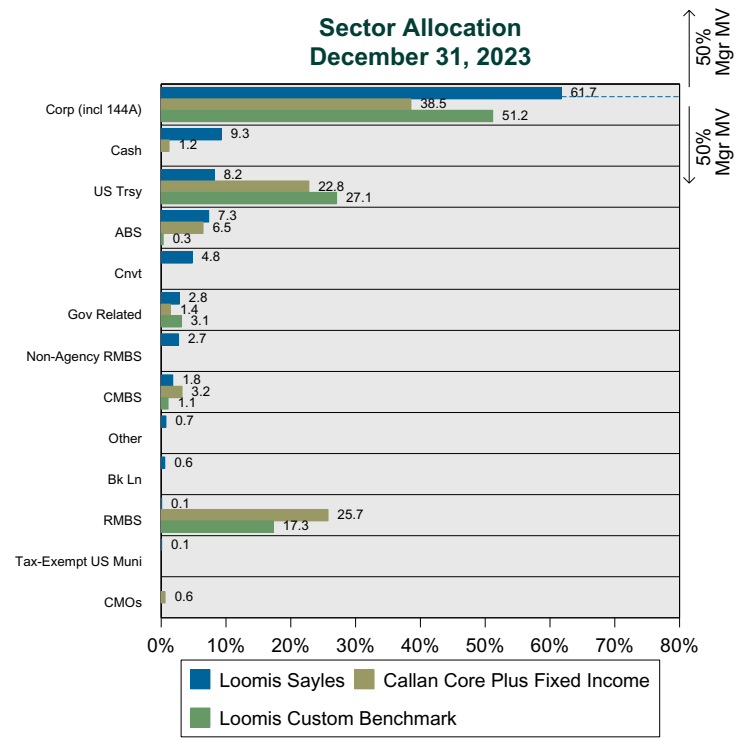
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Core Plus Fixed Income as of December 31, 2023



## 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.

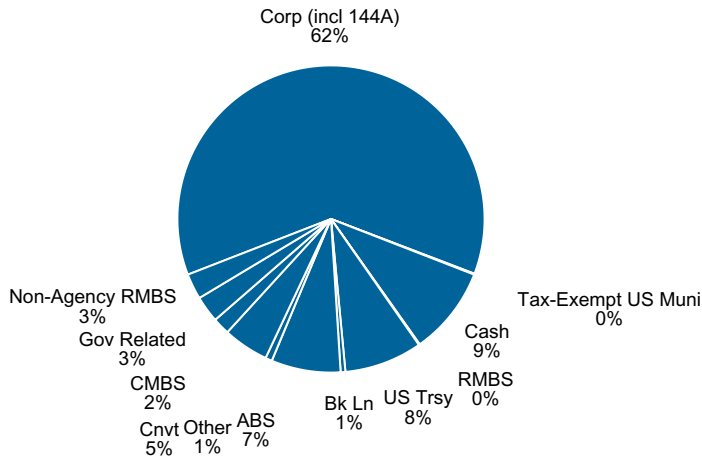


**Loomis Sayles**  
**Portfolio Characteristics Summary**  
**As of December 31, 2023**

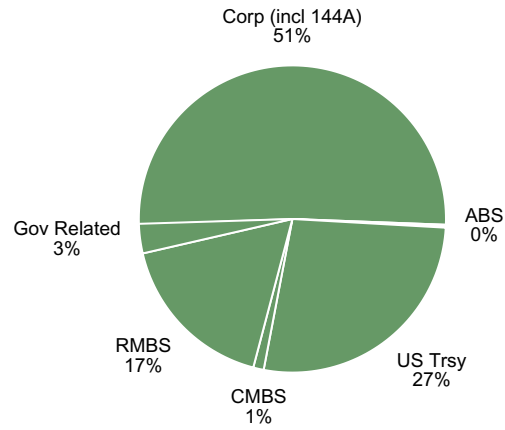
**Portfolio Structure Comparison**

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**

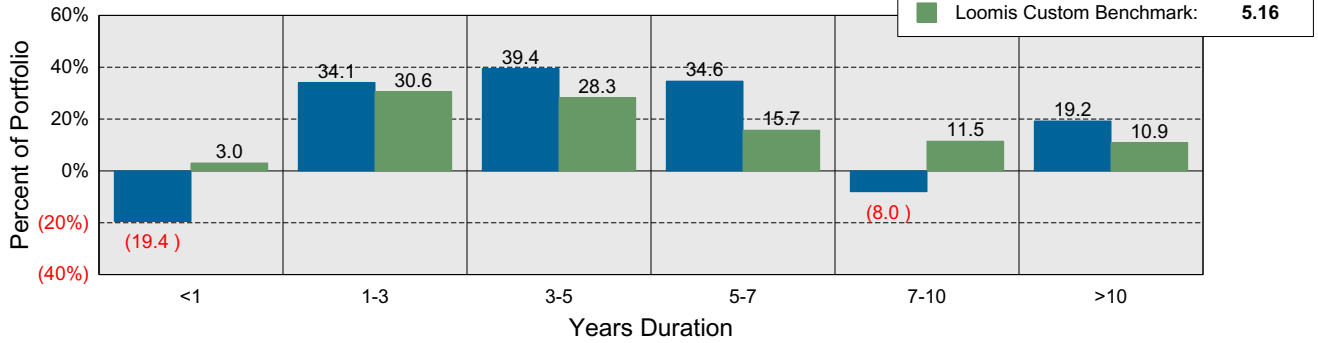


**Loomis Sayles**

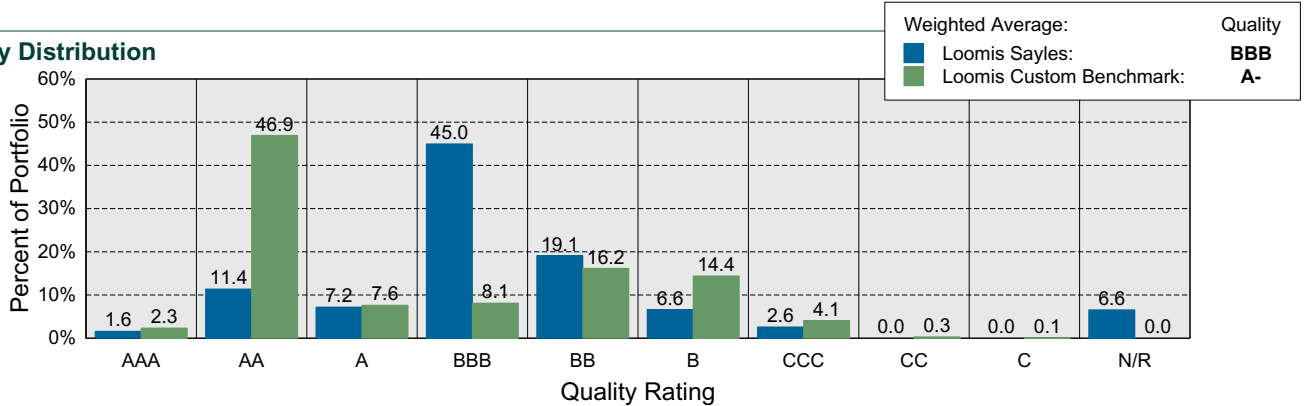


**Loomis Custom Benchmark**

**Duration Distribution**



**Quality Distribution**



# Manulife Strategic Fixed Income Fund

## Period Ended December 31, 2023

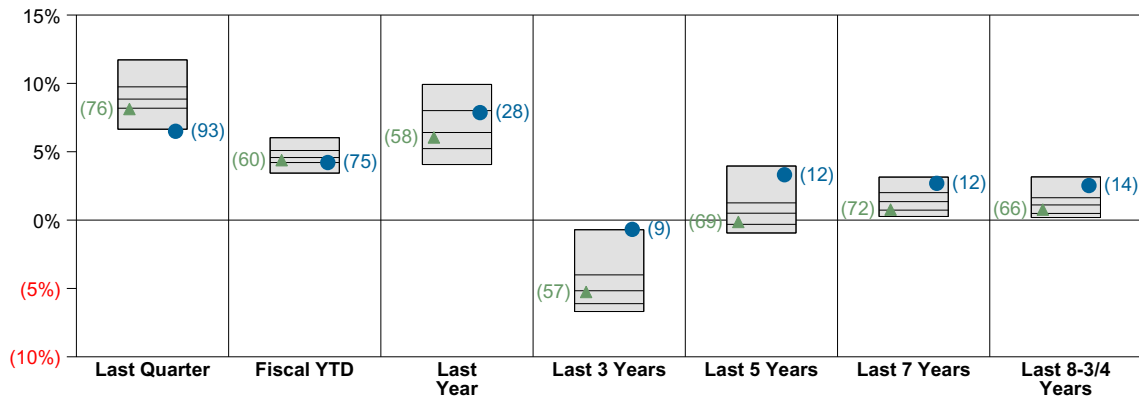
### Investment Philosophy

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	\$201,801,127
Net New Investment	\$0
Investment Gains/(Losses)	\$13,112,816
Ending Market Value	\$214,913,943

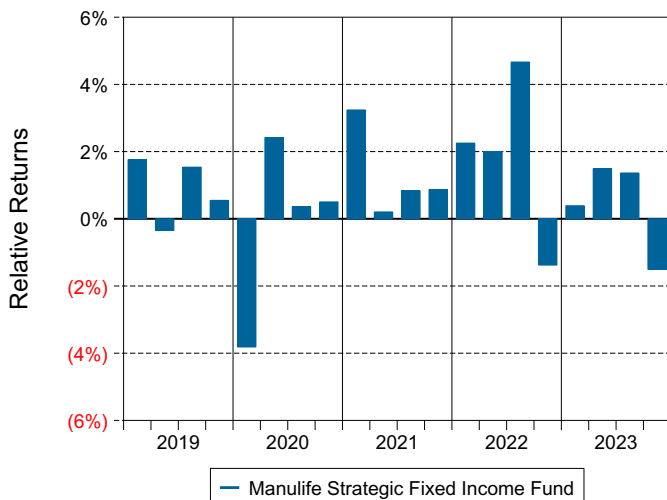
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



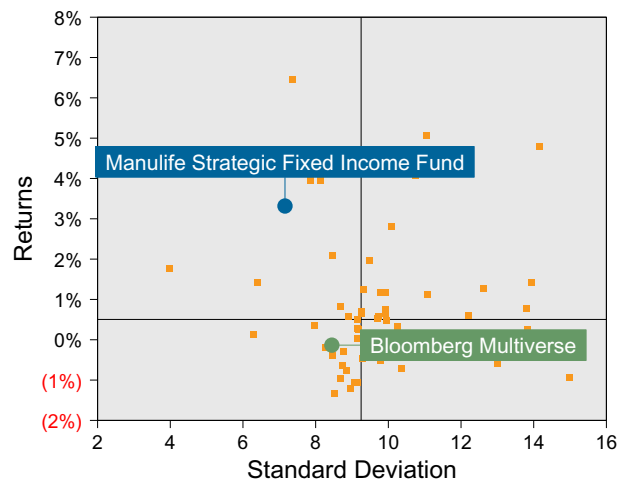
10th Percentile	11.72	6.03	9.92	(0.70)	3.95	3.15	3.16
25th Percentile	9.75	5.09	8.01	(4.01)	1.26	2.01	1.64
Median	8.85	4.58	6.41	(5.17)	0.50	1.35	1.11
75th Percentile	8.19	4.21	5.23	(6.11)	(0.31)	0.73	0.49
90th Percentile	6.65	3.44	4.06	(6.69)	(0.94)	0.26	0.19

<b>Manulife Strategic Fixed Income Fund</b> ●	6.50	4.21	7.86	(0.68)	3.32	2.69	2.53
Bloomberg Multiverse ▲	8.13	4.38	6.05	(5.26)	(0.13)	0.77	0.77

### Relative Return vs Bloomberg Multiverse



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

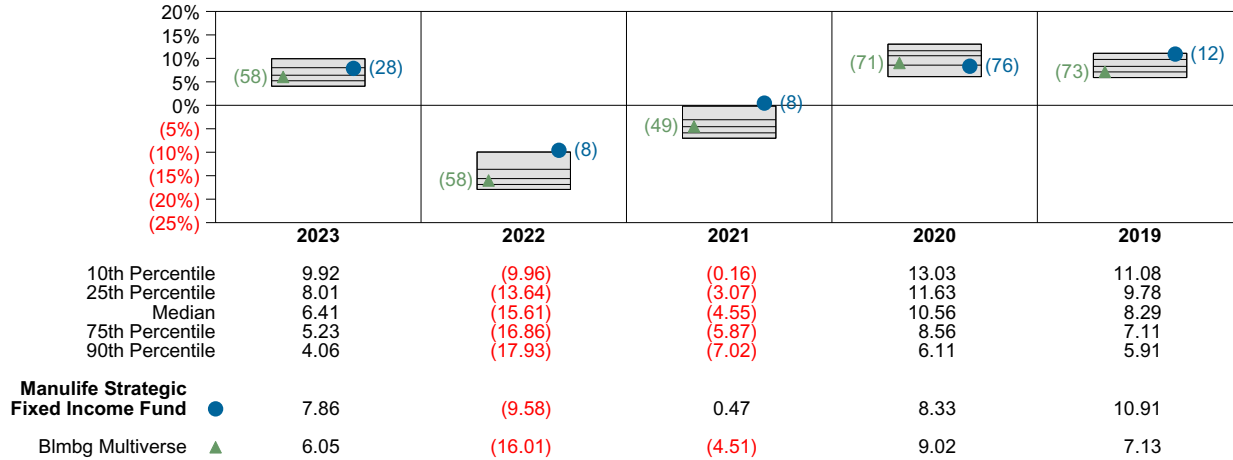


# Manulife Strategic Fixed Income Fund Return Analysis Summary

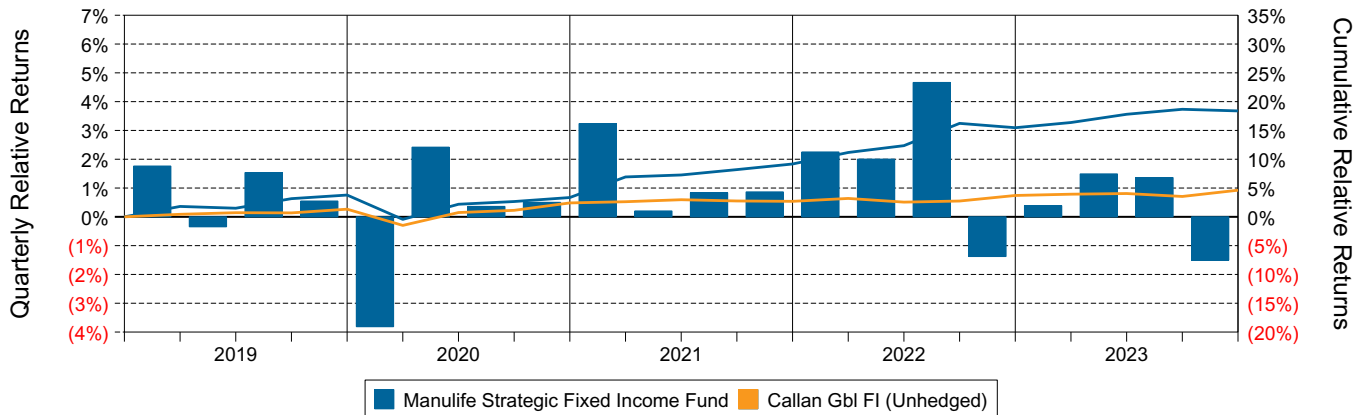
## Return Analysis

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.

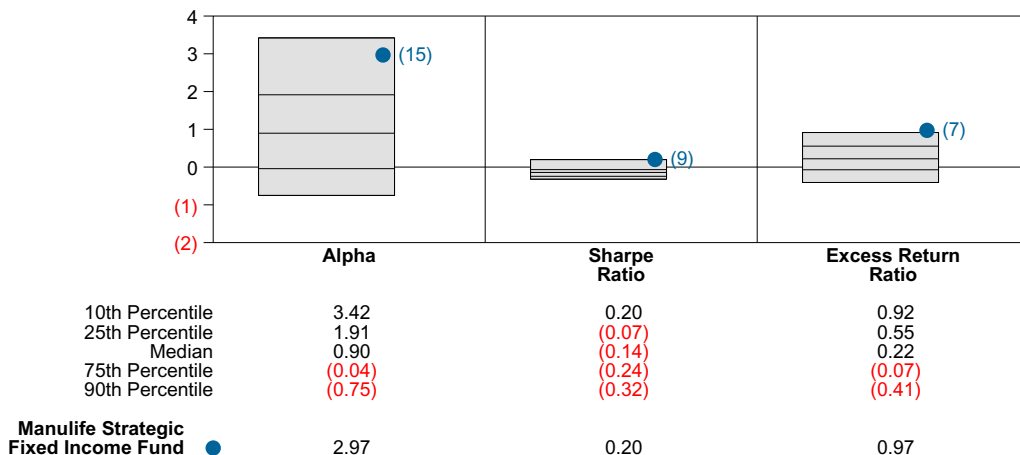
### Performance vs Callan Global Fixed Income (Unhedged) (Gross)



### 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 December 31, 2023

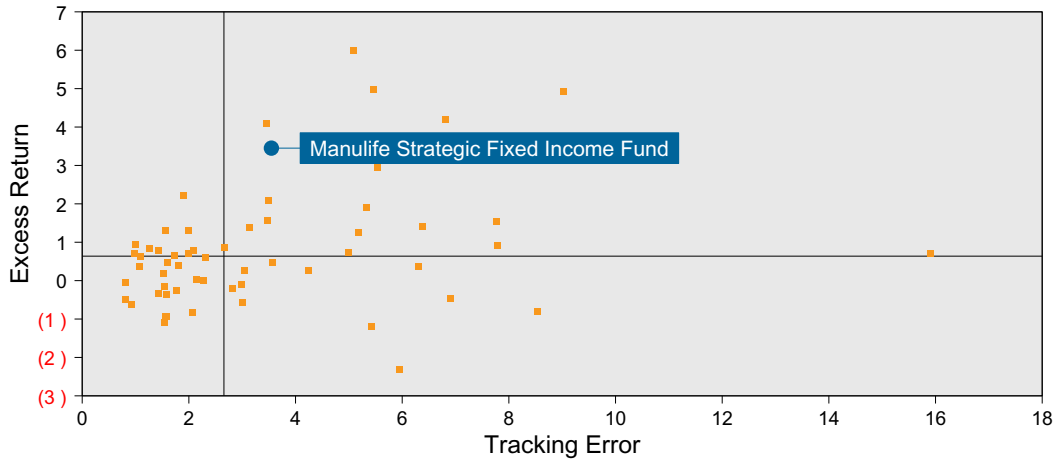


# Manulife Strategic Fixed Income Fund Risk Analysis Summary

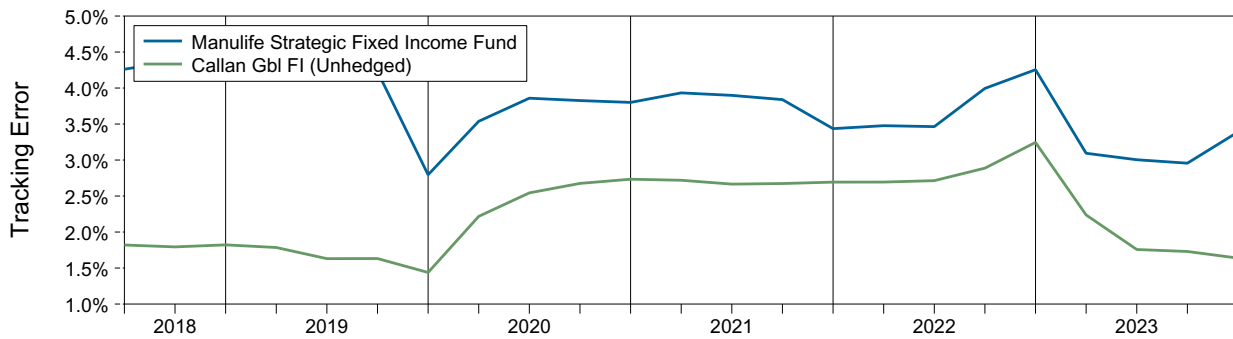
## Risk Analysis

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.

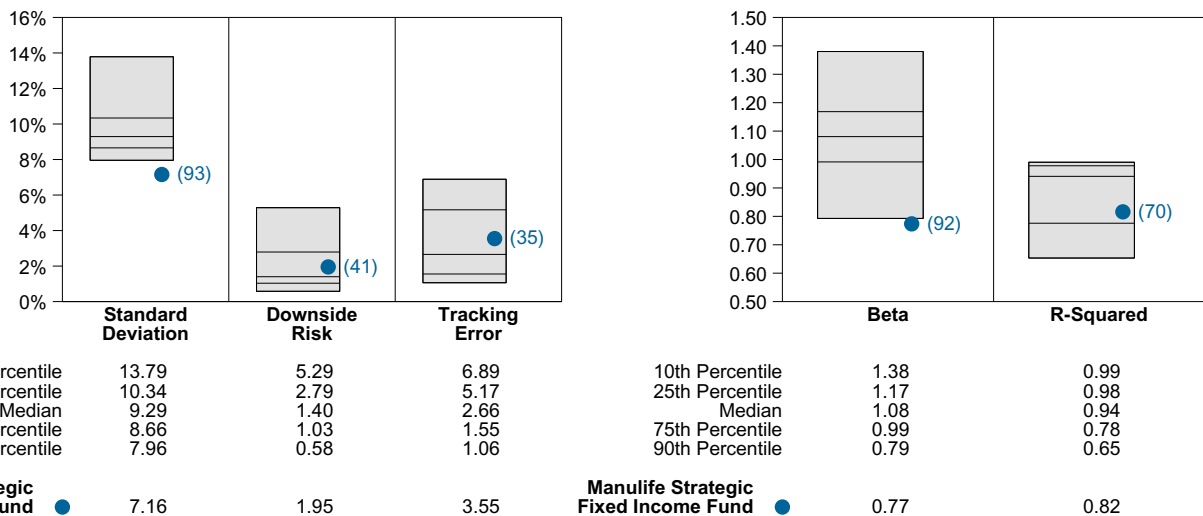
### Risk Analysis vs Callan Global Fixed Income (Unhedged) (Gross) Five Years Ended December 31, 2023



### 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 December 31, 2023

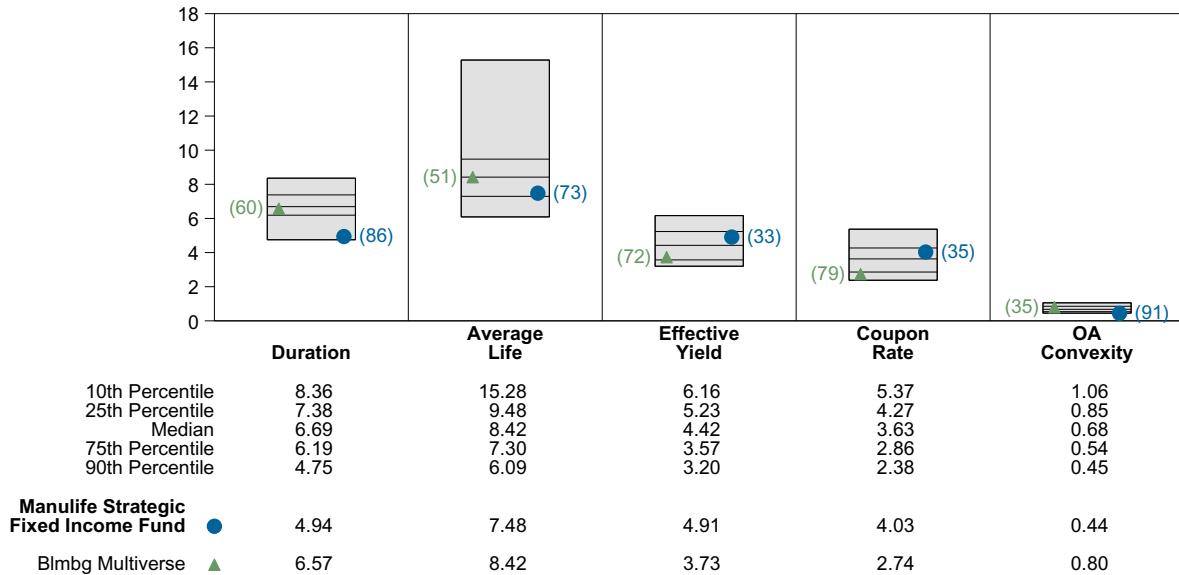


# Manulife Strategic Fixed Income Fund Bond Characteristics Analysis Summary

## Portfolio Characteristics

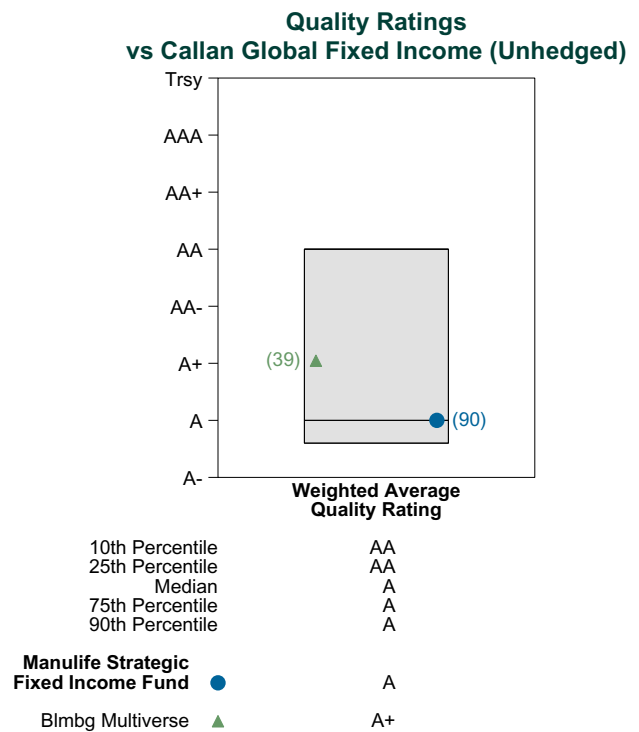
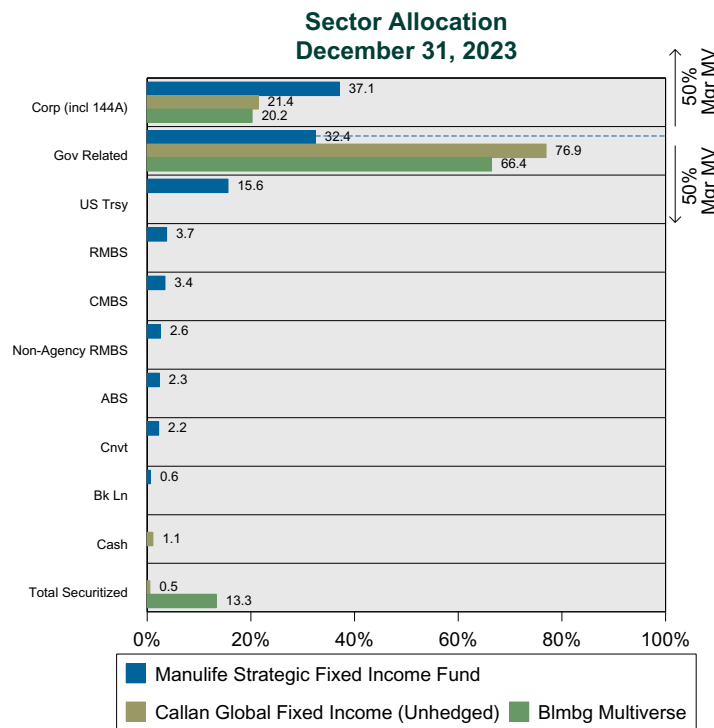
This graph compares the manager's portfolio characteristics with the range of characteristics for the portfolios which make up the manager's style group. This analysis illustrates whether the manager's current holdings are consistent with other managers employing the same style.

## Fixed Income Portfolio Characteristics Rankings Against Callan Global Fixed Income (Unhedged) as of December 31, 2023



## 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.

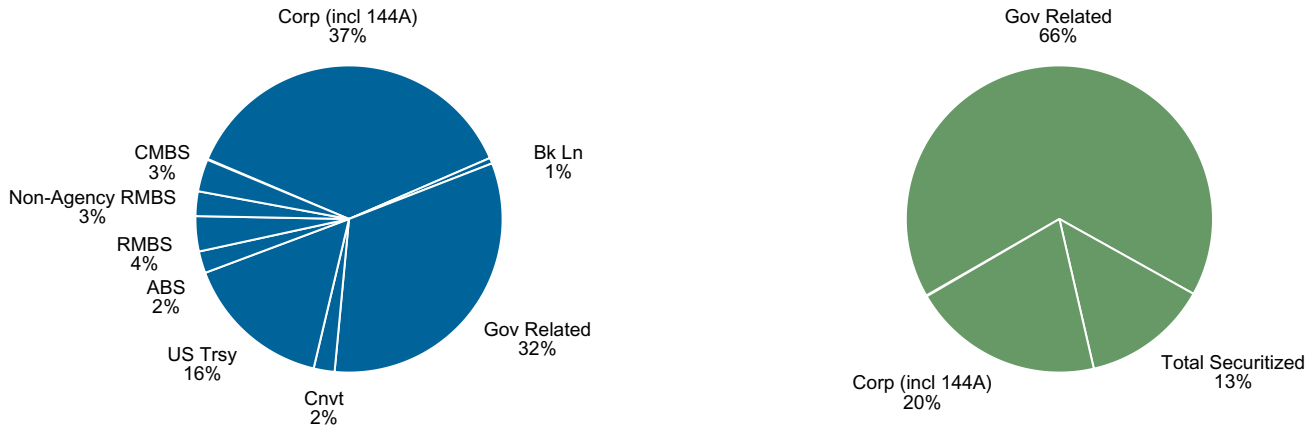


# Manulife Strategic Fixed Income Fund Portfolio Characteristics Summary As of December 31, 2023

## 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.

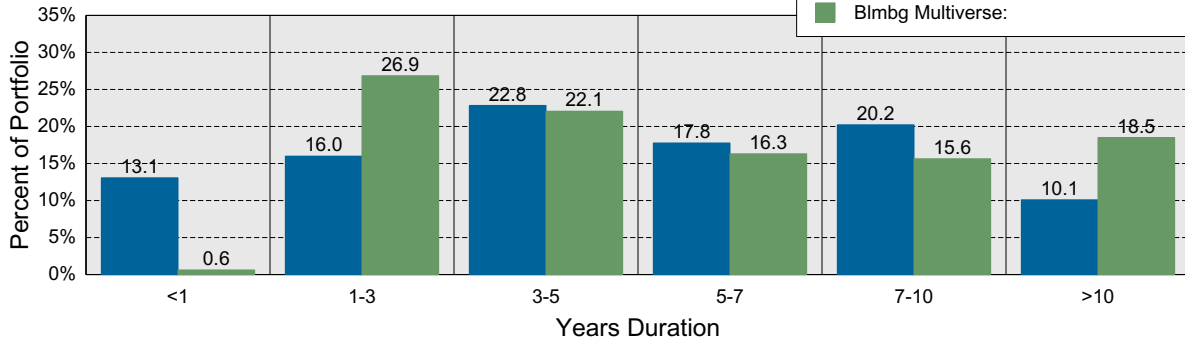
### Sector Allocation



### Manulife Strategic Fixed Income Fund

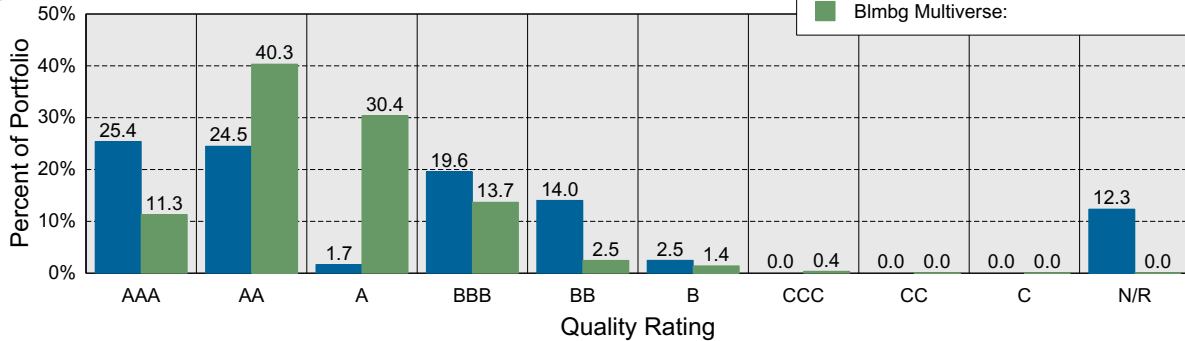
### Blmbg Multiverse

#### Duration Distribution



Weighted Average:	Duration
Manulife Strategic Fixed Income Fund:	4.94
Blmbg Multiverse:	6.57

#### Quality Distribution



Weighted Average:	Quality
Manulife Strategic Fixed Income Fund:	A
Blmbg Multiverse:	A+





# Total Real Estate

## Period Ended December 31, 2023

### 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.

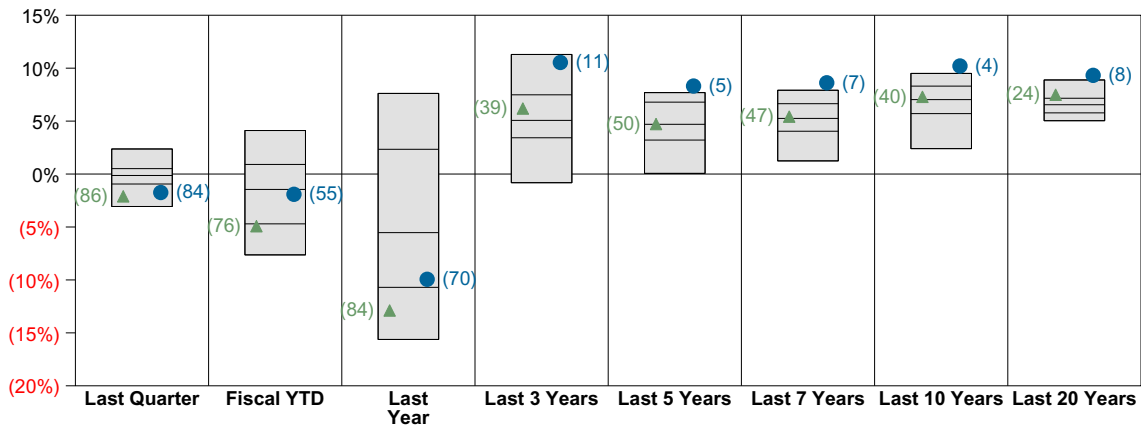
### Quarterly Summary and Highlights

- Total Real Estate's portfolio posted a (1.74)% return for the quarter placing it in the 84 percentile of the Callan Total Real Estate group for the quarter and in the 70 percentile for the last year.
- Total Real Estate's portfolio outperformed the Real Estate Benchmark by 0.36% for the quarter and outperformed the Real Estate Benchmark for the year by 2.95%.

### Quarterly Asset Growth

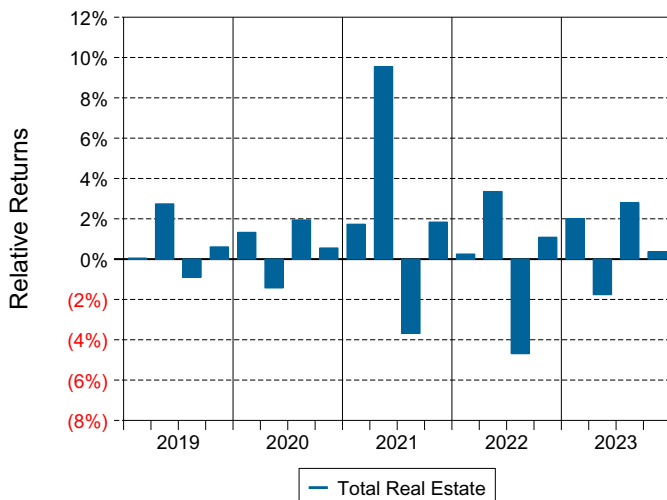
Beginning Market Value	\$1,269,767,688
Net New Investment	\$-6,869,414
Investment Gains/(Losses)	\$-20,658,546
Ending Market Value	\$1,242,239,728

### Performance vs Callan Total Real Estate (Net)

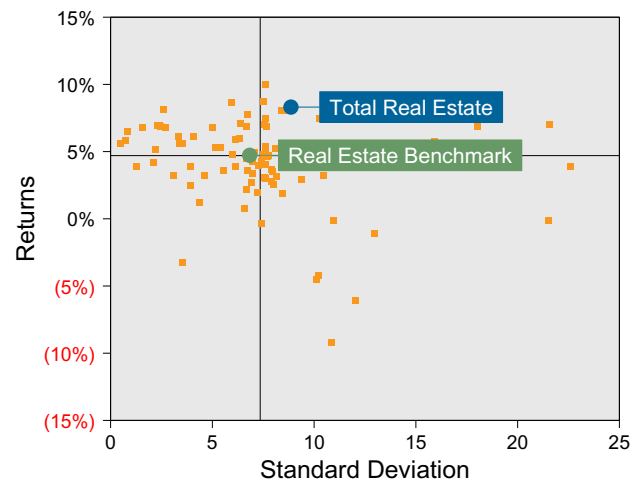


10th Percentile	2.37	4.11	7.62	11.30	7.69	7.91	9.50	8.89
25th Percentile	0.51	0.91	2.34	7.48	6.79	6.64	8.30	7.16
Median	(0.14)	(1.45)	(5.53)	5.07	4.70	5.26	7.03	6.55
75th Percentile	(0.94)	(4.70)	(10.70)	3.43	3.21	4.04	5.71	5.78
90th Percentile	(3.06)	(7.64)	(15.62)	(0.82)	0.06	1.24	2.40	5.04
<b>Total Real Estate</b> ●	<b>(1.74)</b>	<b>(1.91)</b>	<b>(9.94)</b>	10.54	8.31	8.62	10.21	9.32
Real Estate Benchmark ▲	(2.10)	(4.92)	(12.88)	6.19	4.72	5.43	7.30	7.49

### Relative Return vs Real Estate Benchmark



### Callan Total Real Estate (Net) Annualized Five Year Risk vs Return

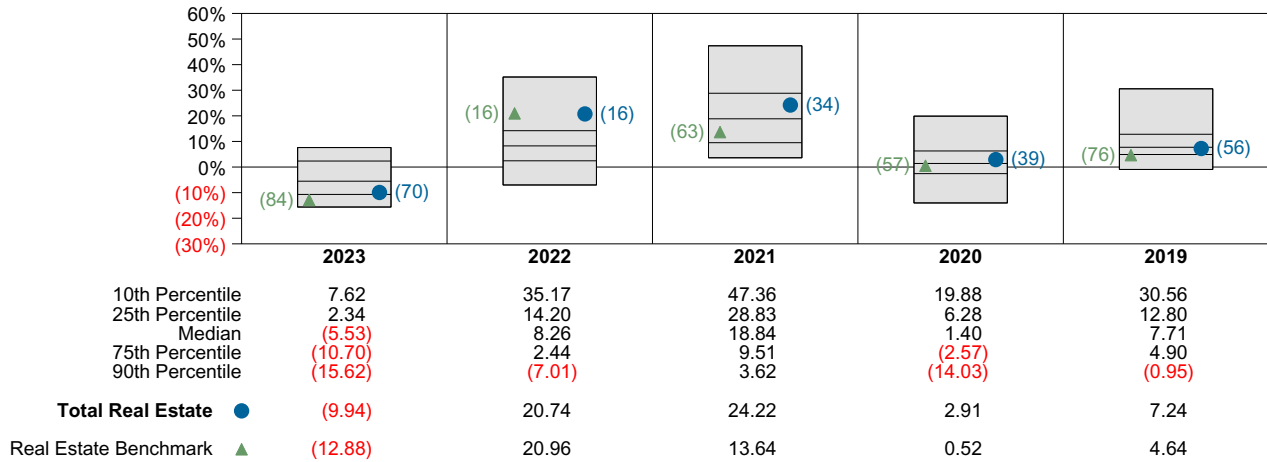


# Total Real Estate Return Analysis Summary

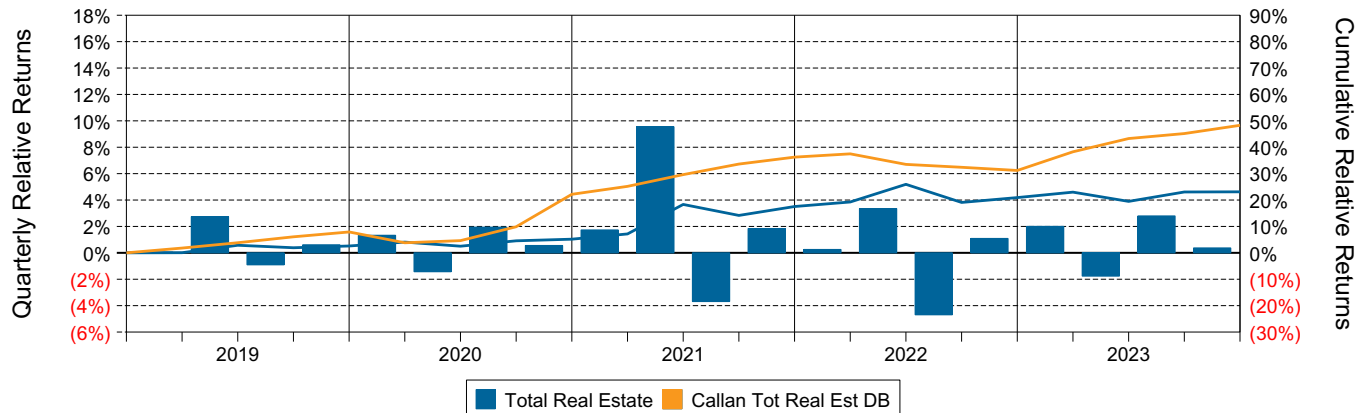
## Return Analysis

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.

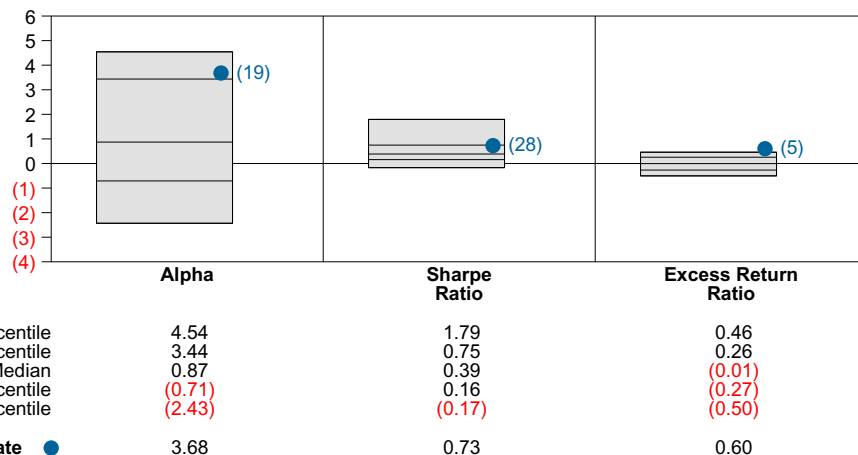
### Performance vs Callan Tot Real Est DB (Net)



### 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 December 31, 2023

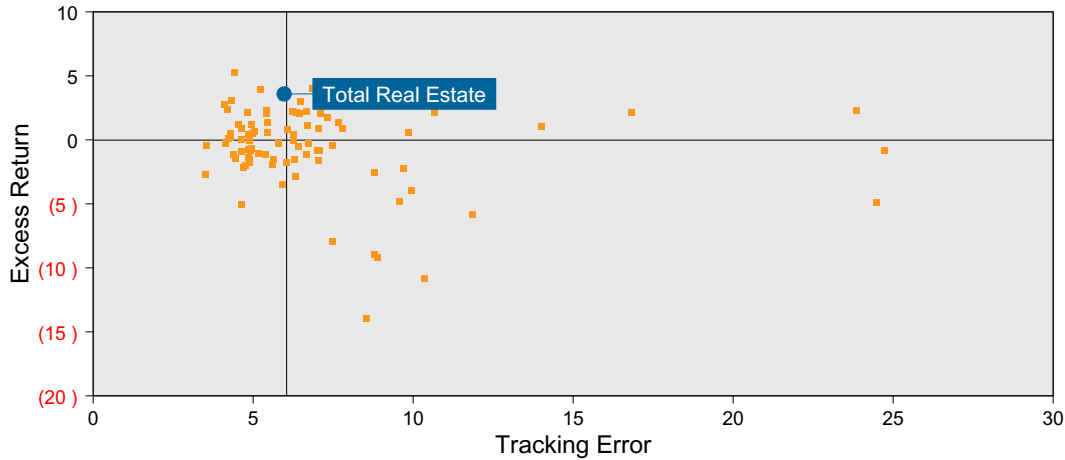


# Total Real Estate Risk Analysis Summary

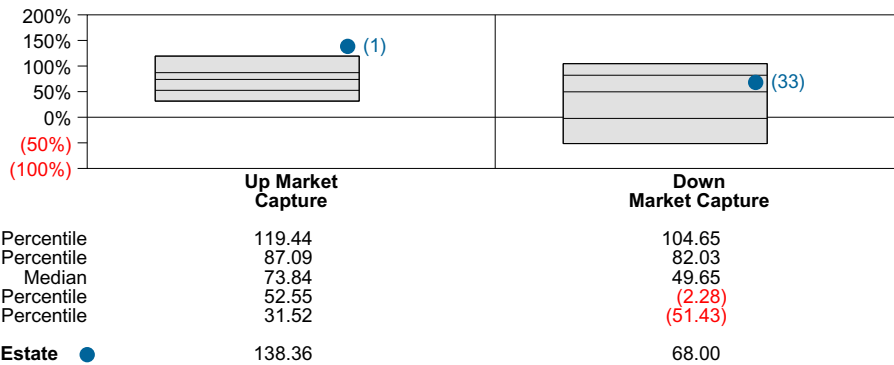
## Risk Analysis

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.

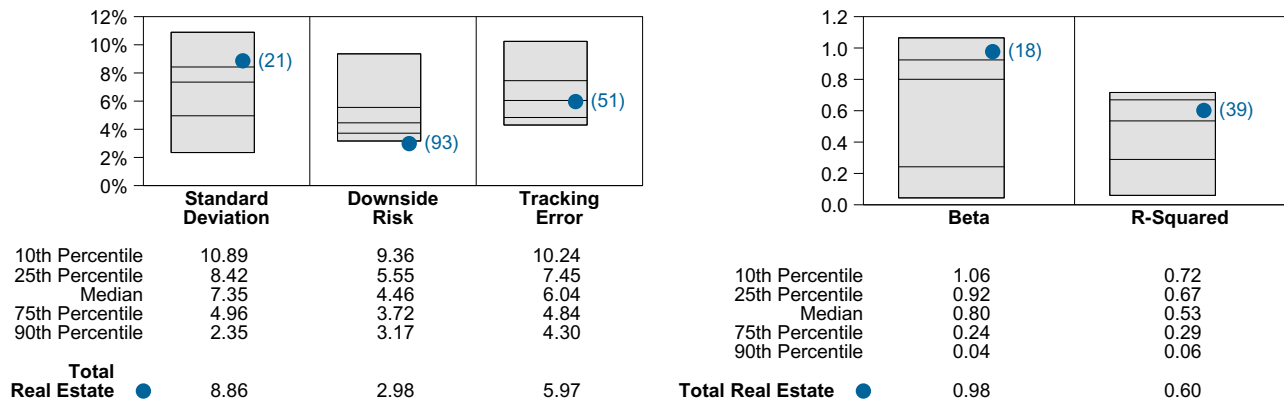
### Risk Analysis vs Callan Total Domestic Real Estate DB (Net) Five Years Ended December 31, 2023



### Market Capture vs Real Estate Benchmark Rankings Against Callan Total Domestic Real Estate DB (Net) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Total Domestic Real Estate DB (Net) Five Years Ended December 31, 2023



# Strategic Core Real Estate Period Ended December 31, 2023

## 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).

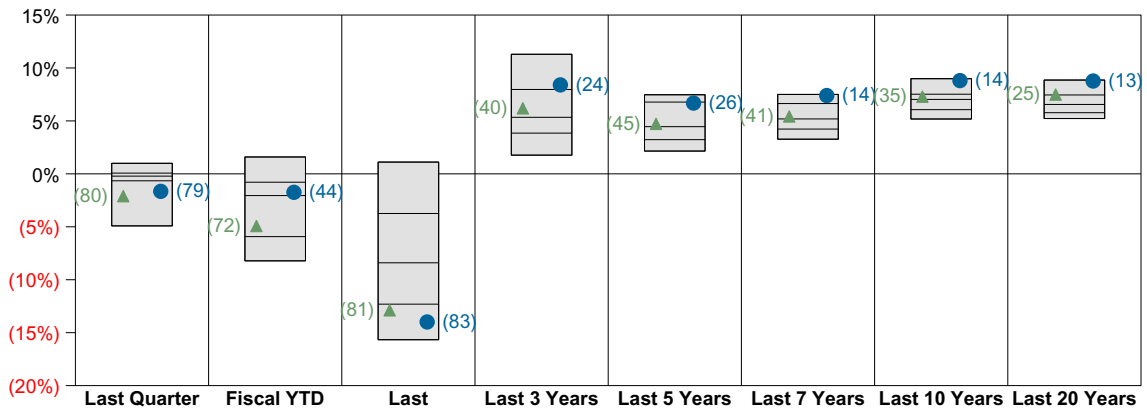
## Quarterly Summary and Highlights

- Strategic Core Real Estate's portfolio posted a (1.65)% return for the quarter placing it in the 79 percentile of the Callan Real Estate Core group for the quarter and in the 83 percentile for the last year.
- Strategic Core Real Estate's portfolio outperformed the Real Estate Benchmark by 0.45% for the quarter and underperformed the Real Estate Benchmark for the year by 1.11%.

## Quarterly Asset Growth

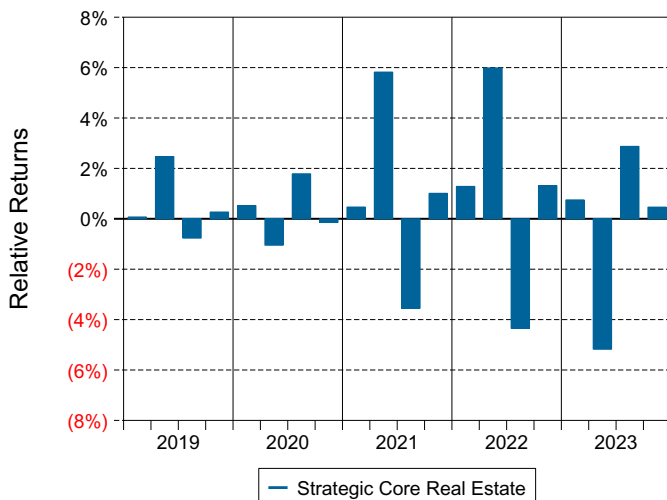
Beginning Market Value	\$792,998,719
Net New Investment	\$-9,874,875
Investment Gains/(Losses)	\$-11,598,534
Ending Market Value	\$771,525,310

## Performance vs Callan Real Estate Core (Net)

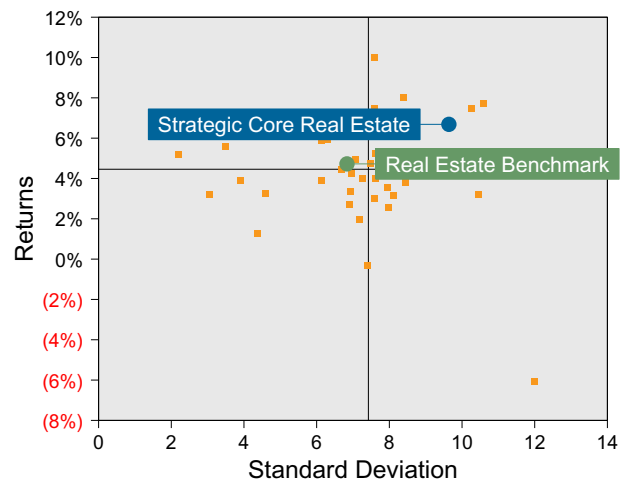


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	1.00	1.60	1.11	11.30	7.47	7.50	8.99	8.86
25th Percentile	0.07	(0.79)	(3.74)	7.97	6.78	6.64	7.52	7.45
Median	(0.22)	(2.05)	(8.40)	5.34	4.46	5.19	7.03	6.56
75th Percentile	(0.66)	(5.93)	(12.31)	3.85	3.23	4.23	6.06	5.78
90th Percentile	(4.92)	(8.22)	(15.67)	1.77	2.15	3.27	5.18	5.23
<b>Strategic Core Real Estate</b>	● (1.65)	(1.74)	(13.99)	8.40	6.69	7.40	8.81	8.77
Real Estate Benchmark	▲ (2.10)	(4.92)	(12.88)	6.19	4.72	5.43	7.30	7.49

## Relative Return vs Real Estate Benchmark



## Callan Real Estate Core (Net) Annualized Five Year Risk vs Return

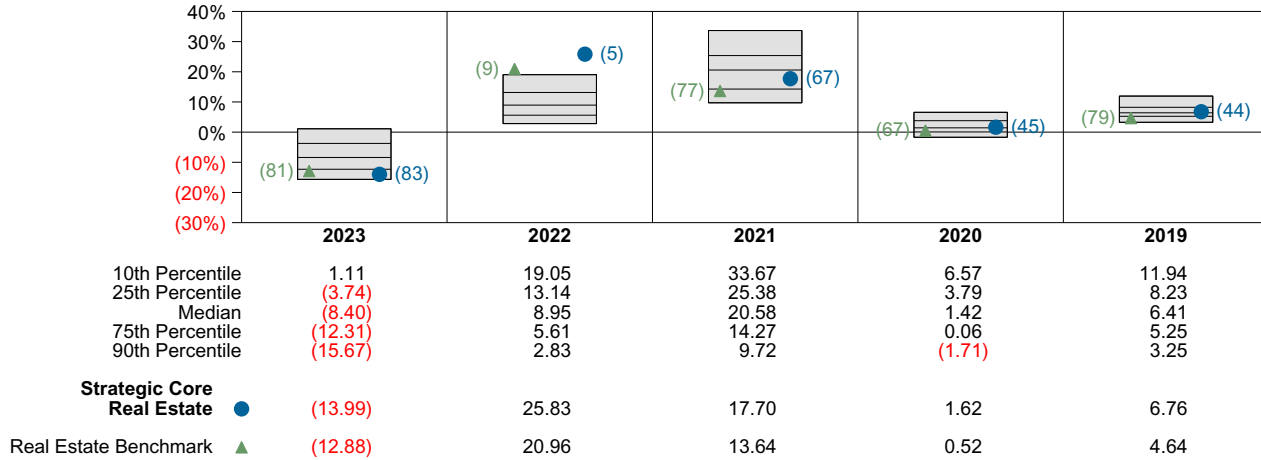


# Strategic Core Real Estate Return Analysis Summary

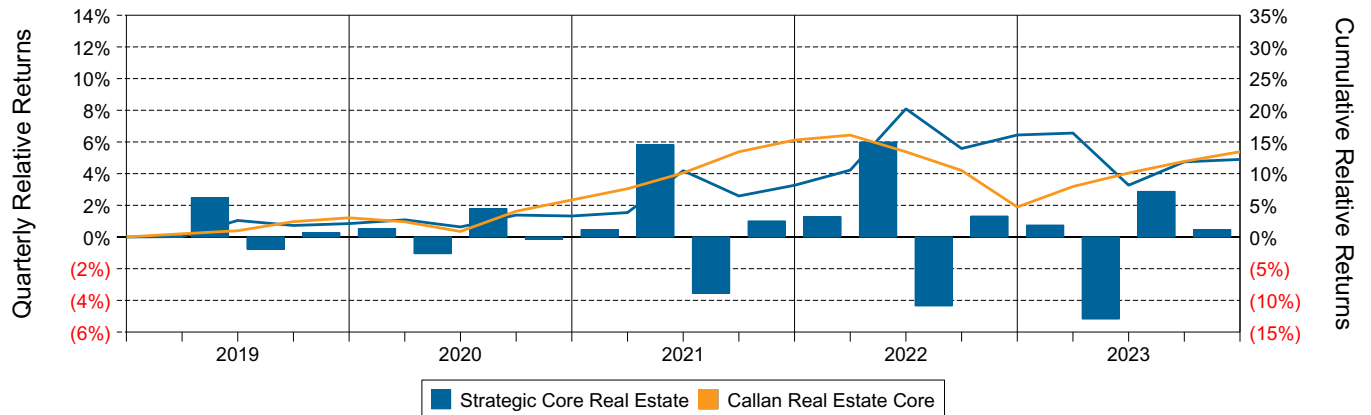
## Return Analysis

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.

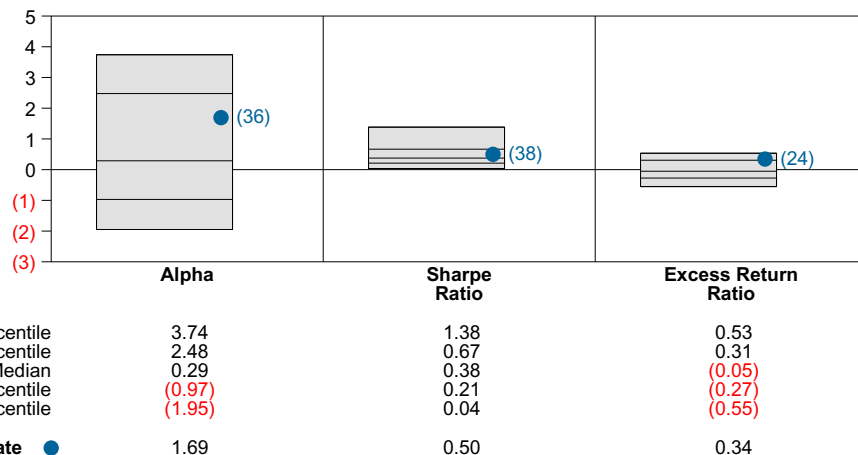
### Performance vs Callan Real Estate Core (Net)



### 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 December 31, 2023

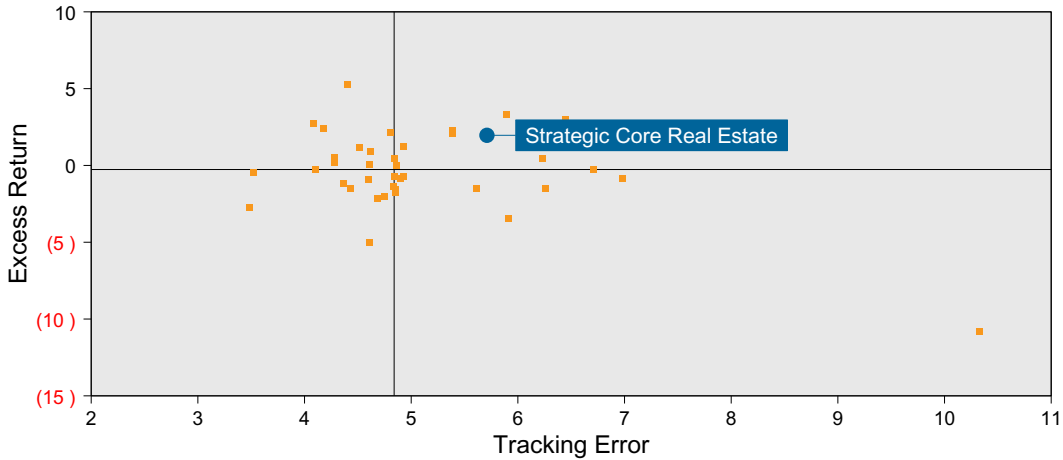


# Strategic Core Real Estate Risk Analysis Summary

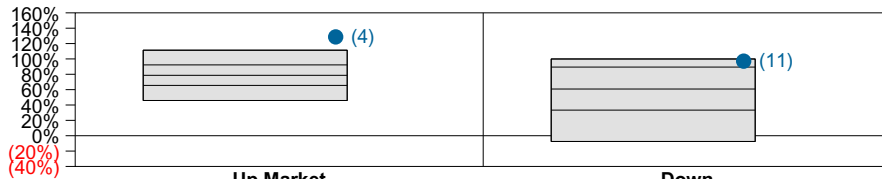
## Risk Analysis

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 December 31, 2023

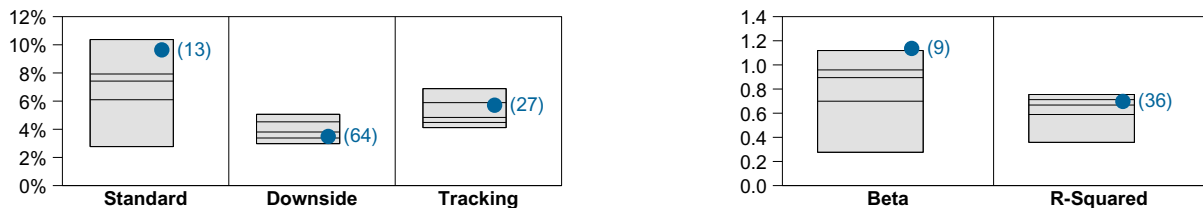


### Market Capture vs Real Estate Benchmark Rankings Against Callan Real Estate Core (Net) Five Years Ended December 31, 2023



	Up Market Capture	Down Market Capture
10th Percentile	111.36	99.94
25th Percentile	92.22	89.36
Median	78.65	60.79
75th Percentile	65.53	33.33
90th Percentile	45.88	(7.49)
<b>Strategic Core Real Estate</b>	<b>128.66</b>	<b>97.08</b>

### Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Real Estate Core (Net) Five Years Ended December 31, 2023



	Standard Deviation	Downside Risk	Tracking Error	Beta	R-Squared
10th Percentile	10.37	5.06	6.89	1.12	0.75
25th Percentile	7.93	4.53	5.89	0.96	0.71
Median	7.42	3.81	4.84	0.89	0.67
75th Percentile	6.10	3.38	4.48	0.70	0.59
90th Percentile	2.77	2.98	4.12	0.28	0.36
<b>Strategic Core Real Estate</b>	<b>9.64</b>	<b>3.49</b>	<b>5.71</b>	<b>1.14</b>	<b>0.70</b>

# Tactical Non-Core Real Estate Period Ended December 31, 2023

## 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).

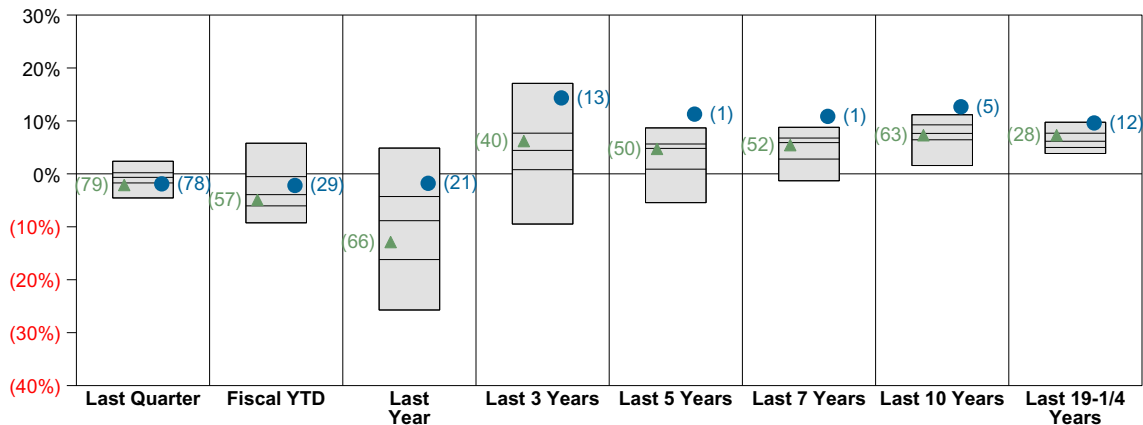
## Quarterly Summary and Highlights

- Tactical Non-Core Real Estate's portfolio posted a (1.89)% return for the quarter placing it in the 78 percentile of the Callan Real Est Val Add group for the quarter and in the 21 percentile for the last year.
- Tactical Non-Core Real Estate's portfolio outperformed the Real Estate Benchmark by 0.21% for the quarter and outperformed the Real Estate Benchmark for the year by 11.10%.

## Quarterly Asset Growth

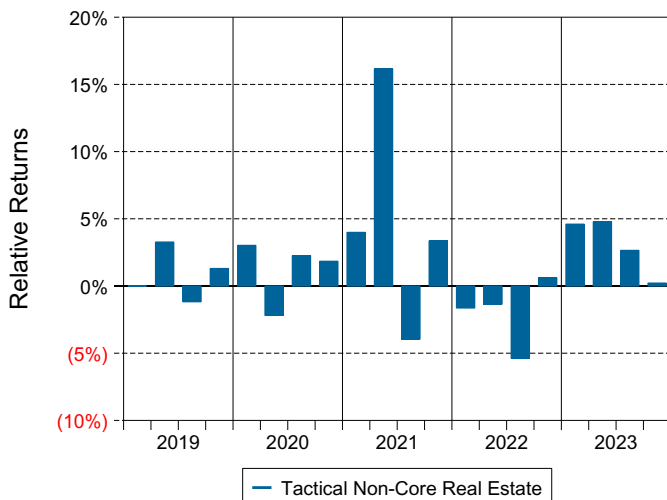
Beginning Market Value	\$476,768,969
Net New Investment	\$3,005,461
Investment Gains/(Losses)	\$-9,060,012
Ending Market Value	\$470,714,417

## Performance vs Callan Real Est Val Add (Net)

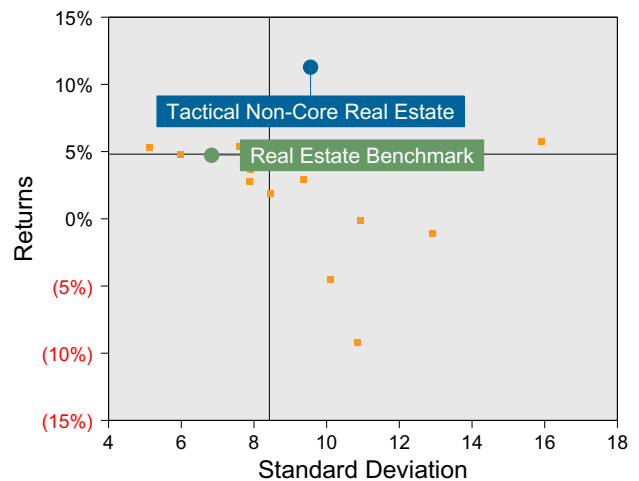


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 19-1/4 Years
10th Percentile	2.38	5.78	4.87	17.10	8.68	8.79	11.17	9.75
25th Percentile	0.21	(0.53)	(4.28)	7.68	5.64	6.76	9.26	7.68
Median	(0.66)	(3.93)	(8.85)	4.43	4.81	5.90	7.64	6.16
75th Percentile	(1.72)	(6.05)	(16.19)	0.79	0.88	2.79	6.44	4.99
90th Percentile	(4.55)	(9.25)	(25.72)	(9.49)	(5.44)	(1.31)	1.57	3.85
<b>Tactical Non-Core Real Estate</b>	● (1.89)	(2.20)	(1.79)	14.35	11.28	10.86	12.67	9.62
<b>Real Estate Benchmark</b>	▲ (2.10)	(4.92)	(12.88)	6.19	4.72	5.43	7.30	7.30

## Relative Return vs Real Estate Benchmark



## Callan Real Est Val Add (Net) Annualized Five Year Risk vs Return

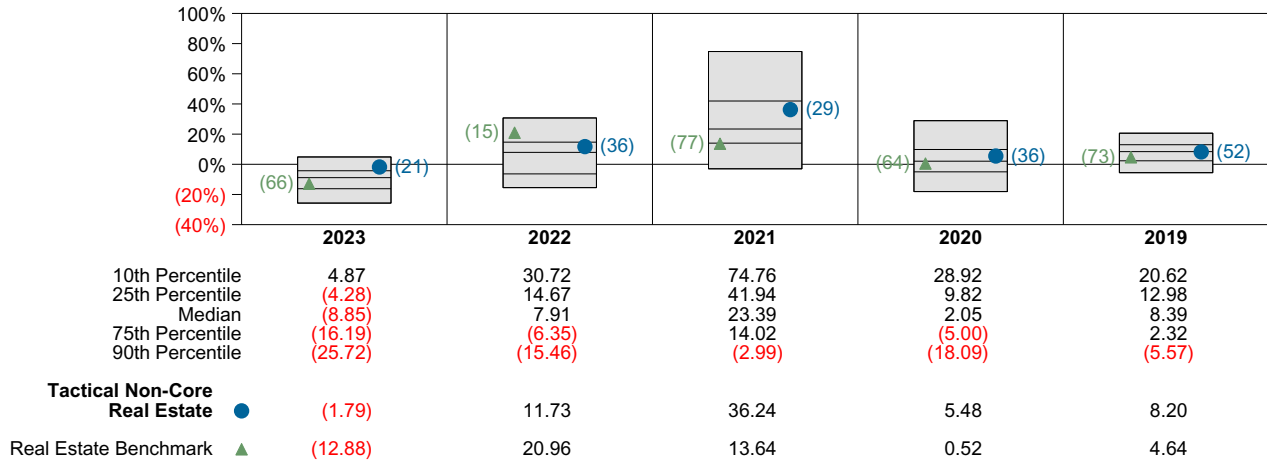


# Tactical Non-Core Real Estate Return Analysis Summary

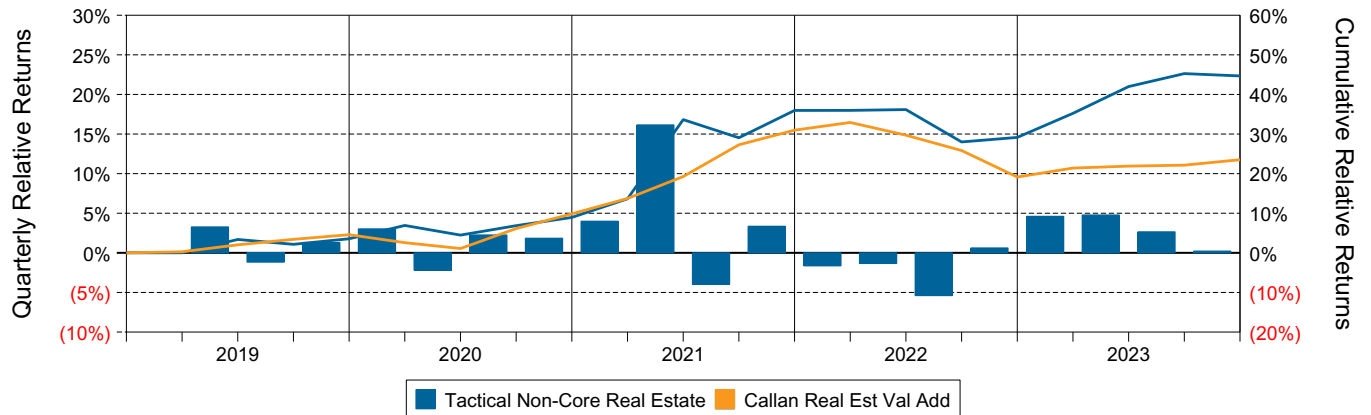
## Return Analysis

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.

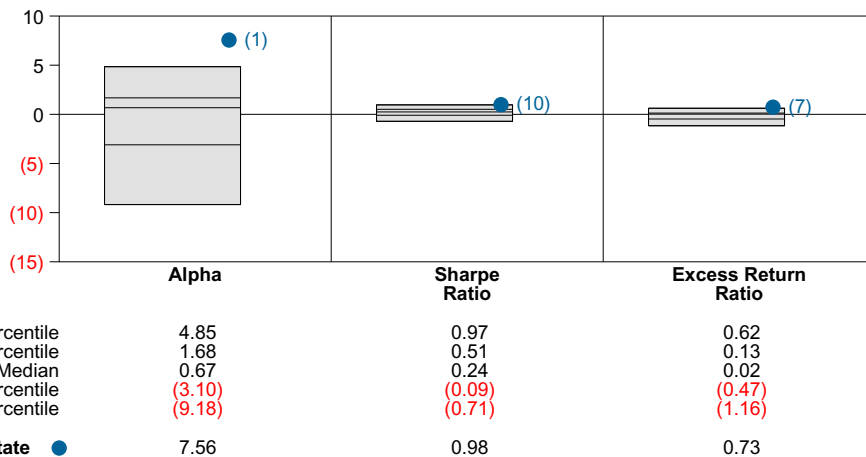
### Performance vs Callan Real Est Val Add (Net)



### 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 December 31, 2023



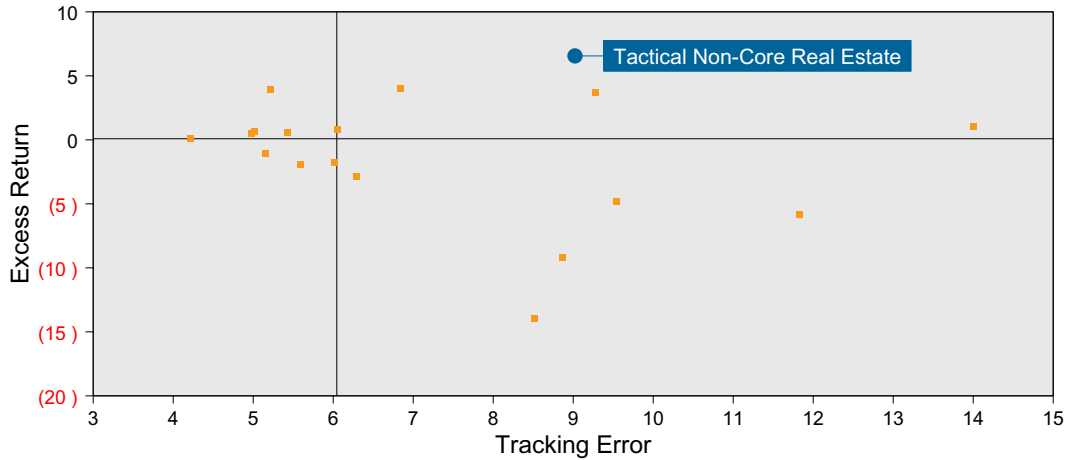


# Tactical Non-Core Real Estate Risk Analysis Summary

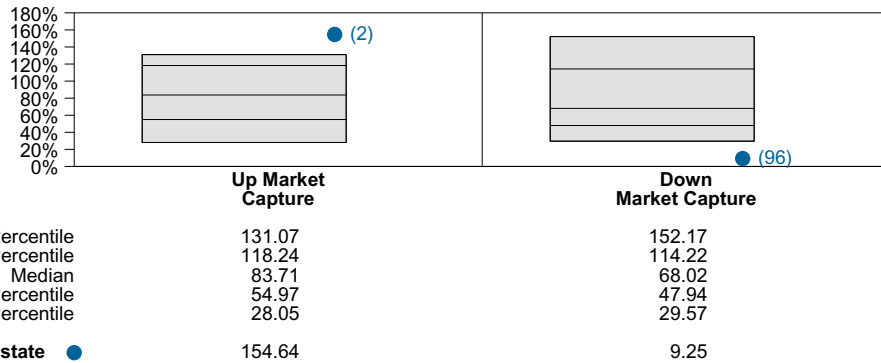
## Risk Analysis

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.

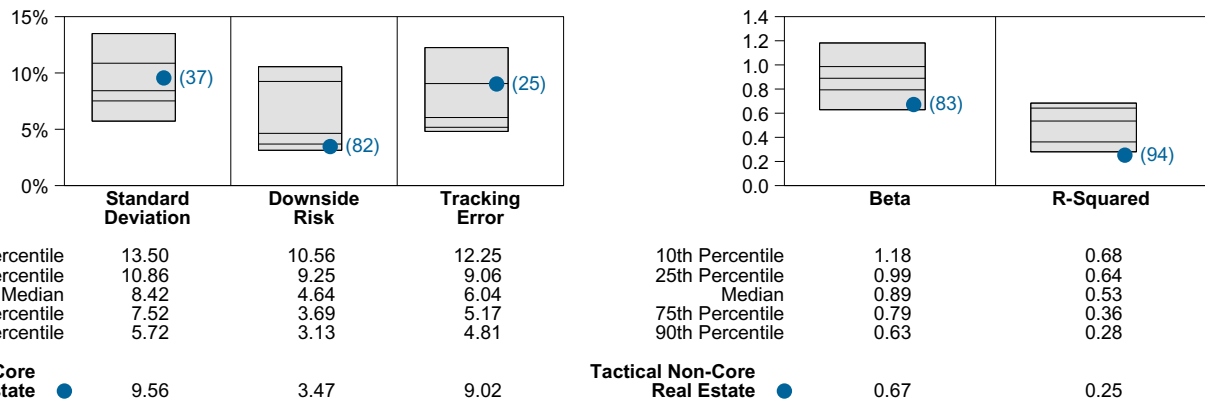
### Risk Analysis vs Callan Real Estate Value Added (Net) Five Years Ended December 31, 2023



### Market Capture vs Real Estate Benchmark Rankings Against Callan Real Estate Value Added (Net) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Real Estate Benchmark Rankings Against Callan Real Estate Value Added (Net) Five Years Ended December 31, 2023





# Total Alternative Assets Period Ended December 31, 2023

## 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).

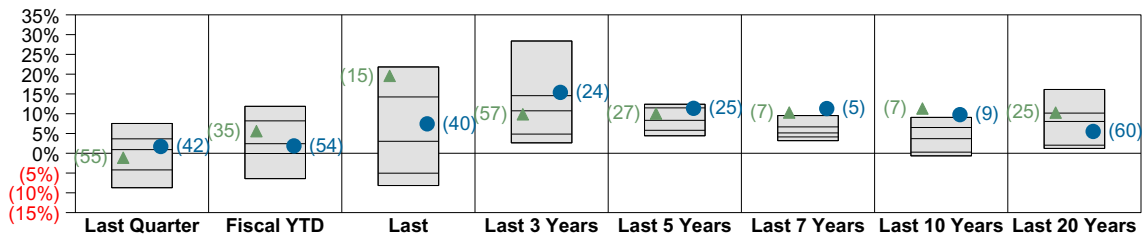
## Quarterly Summary and Highlights

- Total Alternative Assets's portfolio posted a 1.72% return for the quarter placing it in the 42 percentile of the Callan Alternative Inv DB group for the quarter and in the 40 percentile for the last year.
- Total Alternative Assets's portfolio outperformed the Alternative Assets Benchmark by 2.83% for the quarter and underperformed the Alternative Assets Benchmark for the year by 12.14%.

## Quarterly Asset Growth

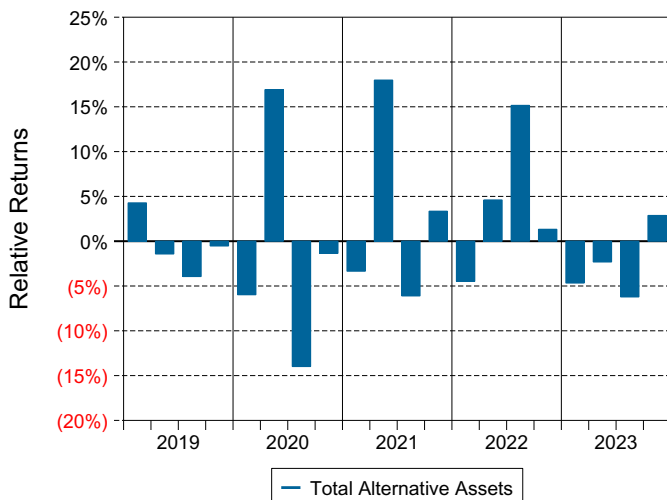
Beginning Market Value	\$2,205,681,460
Net New Investment	\$-25,646,114
Investment Gains/(Losses)	\$37,563,815
Ending Market Value	\$2,217,599,162

## Performance vs Callan Alternative Inv DB (Gross)

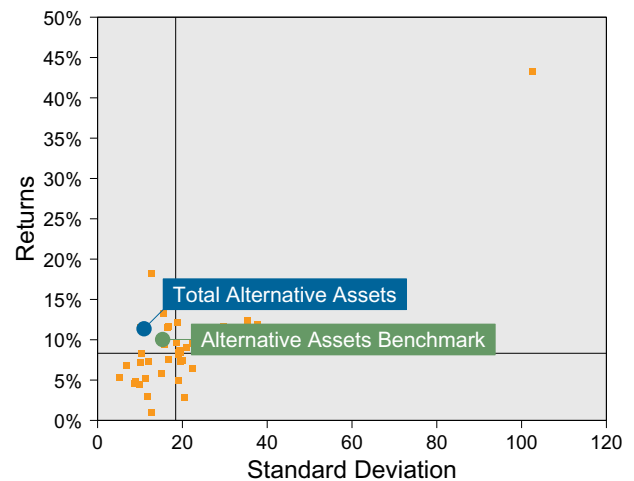


10th Percentile	7.53	11.87	21.82	28.39	12.39	9.53	9.07	16.13
25th Percentile	3.65	8.19	14.24	14.56	11.48	6.67	6.51	10.16
Median	0.92	2.42	3.03	10.73	8.32	5.14	3.70	8.05
75th Percentile	(4.21)	(0.05)	(5.03)	4.85	5.81	4.13	0.28	2.05
90th Percentile	(8.71)	(6.41)	(8.16)	2.64	4.43	3.19	(0.65)	1.22
<b>Total Alternative Assets</b>	● 1.72	1.86	7.44	15.40	11.36	11.30	9.76	5.52
Alternative Assets Benchmark	▲ (1.12)	5.59	19.58	9.86	10.03	10.31	11.32	10.29

## Relative Returns vs Alternative Assets Benchmark



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

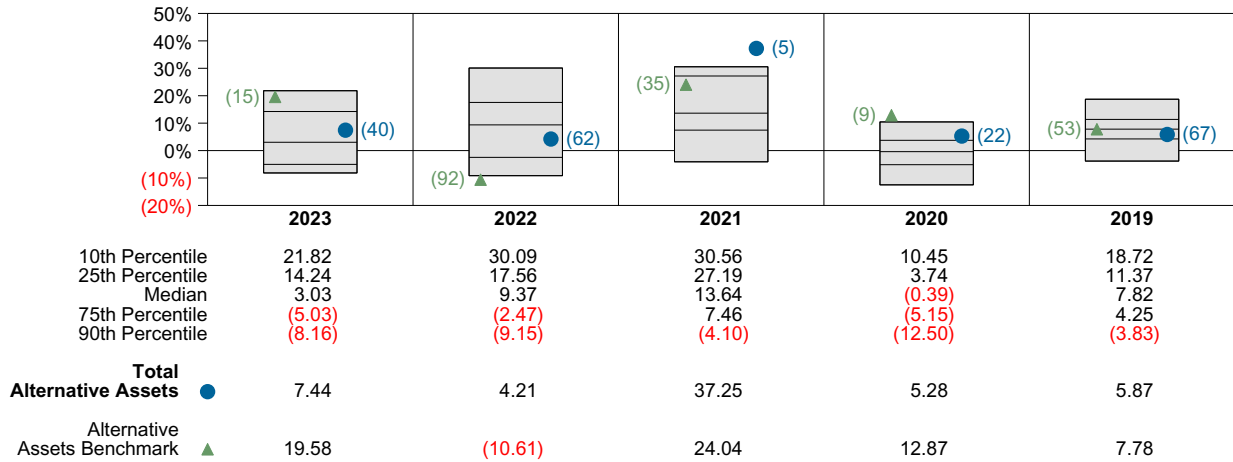


# Total Alternative Assets Return Analysis Summary

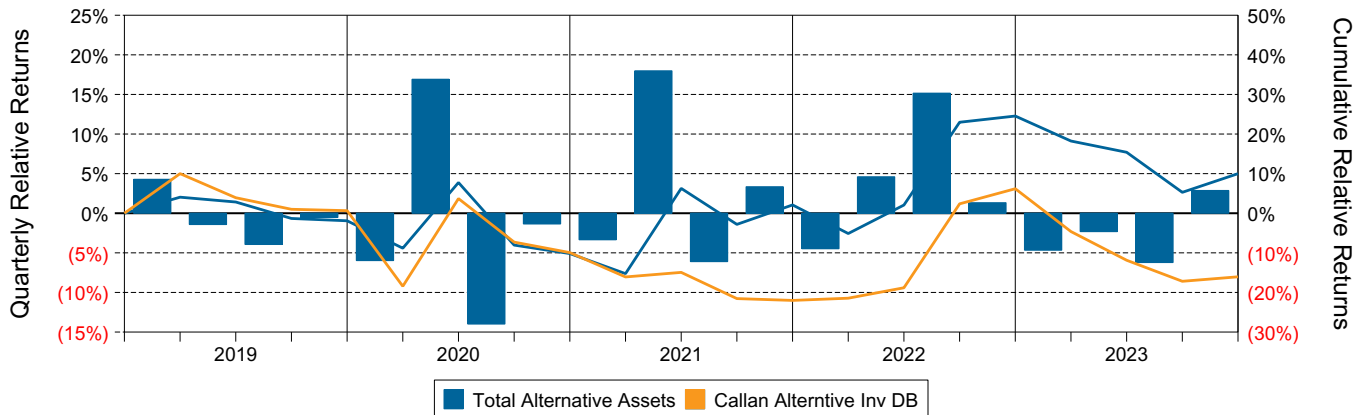
## Return Analysis

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.

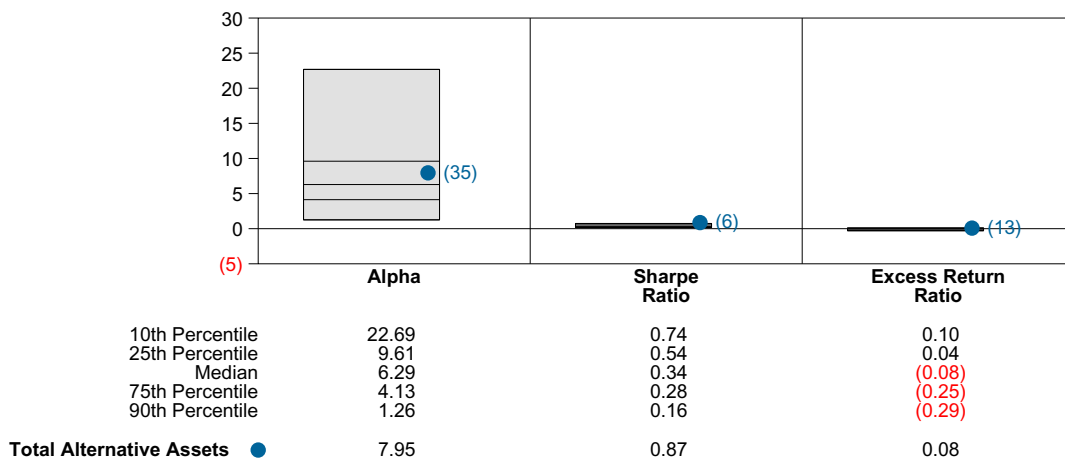
### Performance vs Callan Alternative Inv DB (Gross)



### 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 December 31, 2023

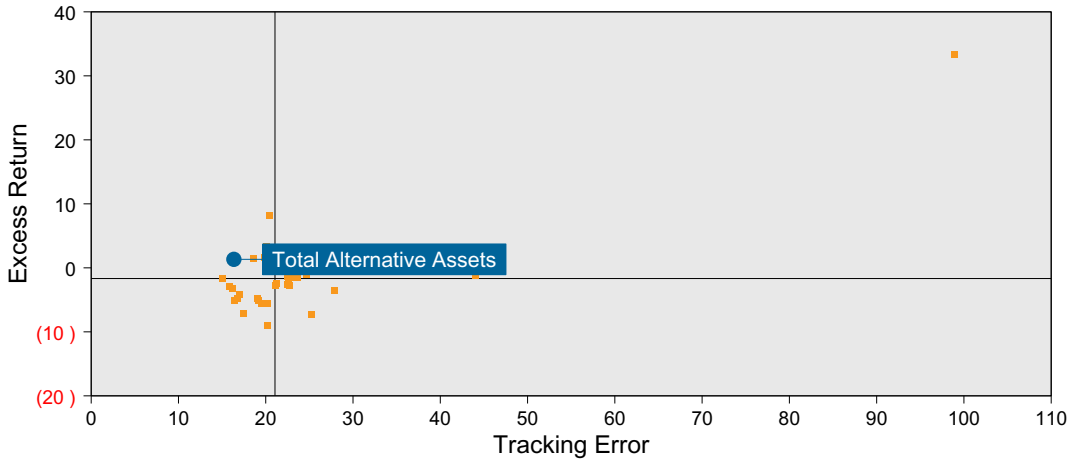


# Total Alternative Assets Risk Analysis Summary

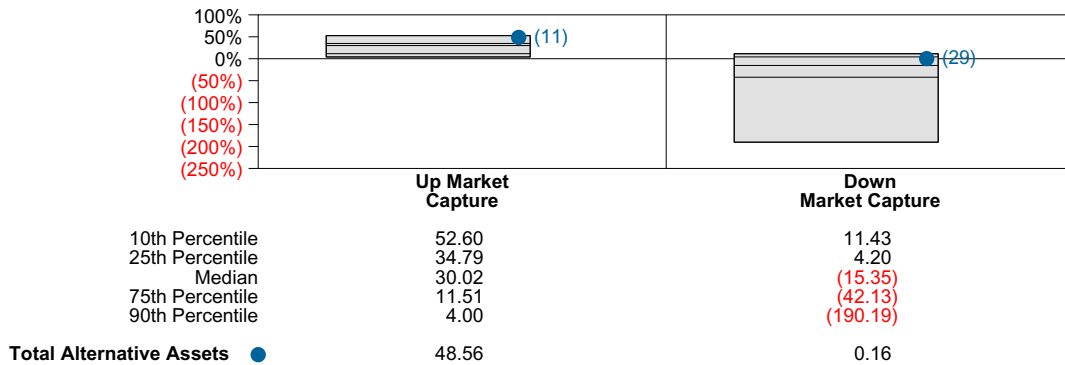
## Risk Analysis

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.

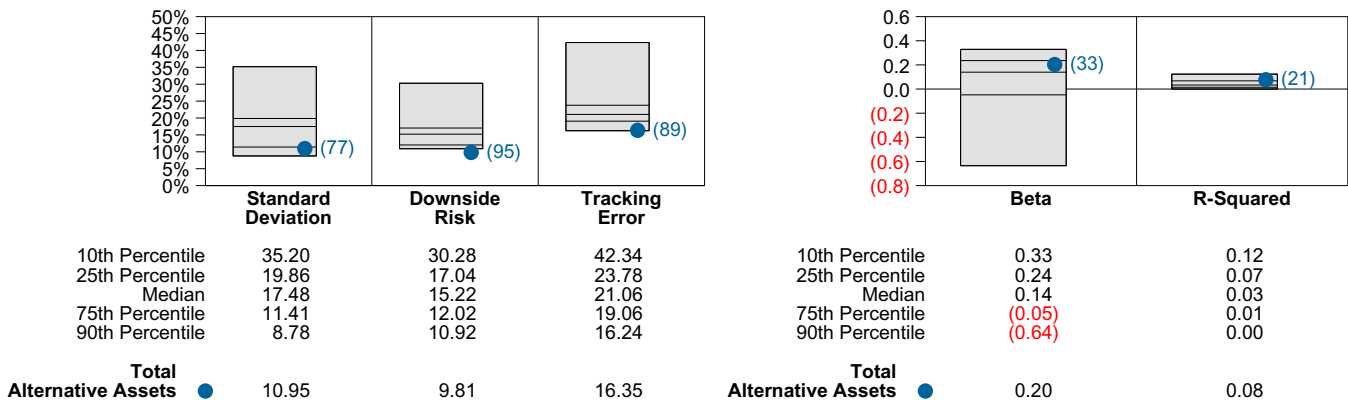
### Risk Analysis vs Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Market Capture vs Alternative Assets Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Alternative Assets Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



# Private Equity Period Ended December 31, 2023

## 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).

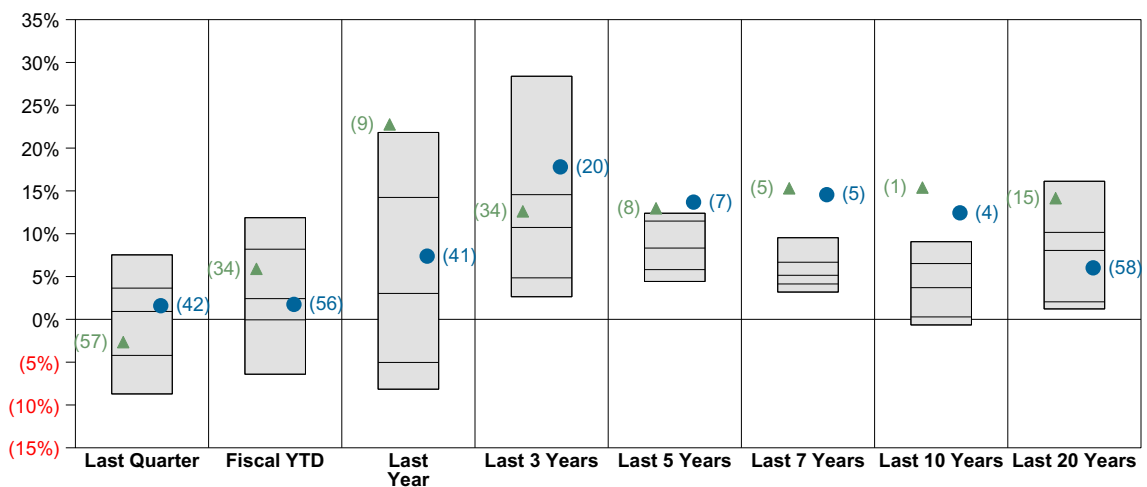
### Quarterly Summary and Highlights

- Private Equity's portfolio posted a 1.59% return for the quarter placing it in the 42 percentile of the Callan Alternative Inv DB group for the quarter and in the 41 percentile for the last year.
- Private Equity's portfolio outperformed the Private Equity Benchmark by 4.25% for the quarter and underperformed the Private Equity Benchmark for the year by 15.38%.

### Quarterly Asset Growth

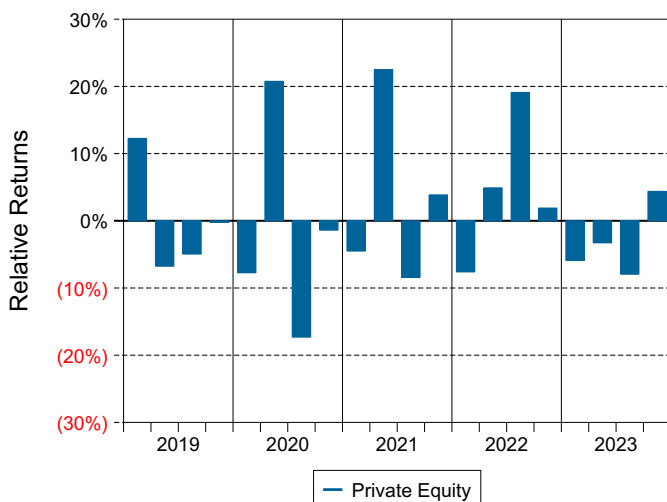
Beginning Market Value	\$1,648,028,961
Net New Investment	\$-18,333,867
Investment Gains/(Losses)	\$26,054,796
Ending Market Value	\$1,655,749,890

### Performance vs Callan Alternative Inv DB (Gross)

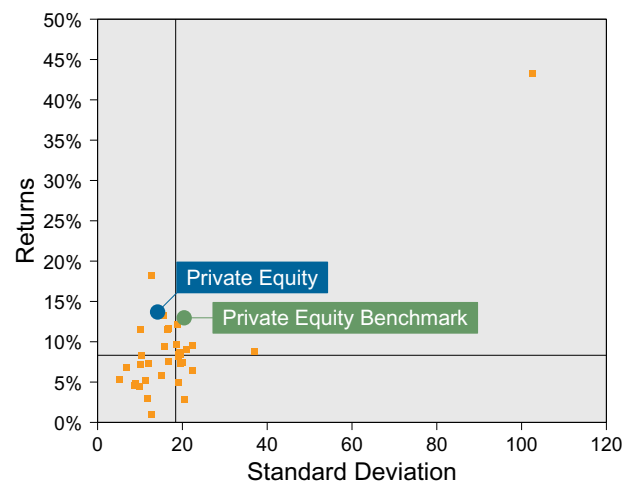


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 20 Years
10th Percentile	7.53	11.87	21.82	28.39	12.39	9.53	9.07	16.13
25th Percentile	3.65	8.19	14.24	14.56	11.48	6.67	6.51	10.16
Median	0.92	2.42	3.03	10.73	8.32	5.14	3.70	8.05
75th Percentile	(4.21)	(0.05)	(5.03)	4.85	5.81	4.13	0.28	2.05
90th Percentile	(8.71)	(6.41)	(8.16)	2.64	4.43	3.19	(0.65)	1.22
<b>Private Equity</b> ●	1.59	1.75	7.38	17.80	13.69	14.56	12.44	6.02
Private Equity Benchmark ▲	(2.66)	5.90	22.76	12.61	12.97	15.30	15.39	14.15

### Relative Return vs Private Equity Benchmark



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

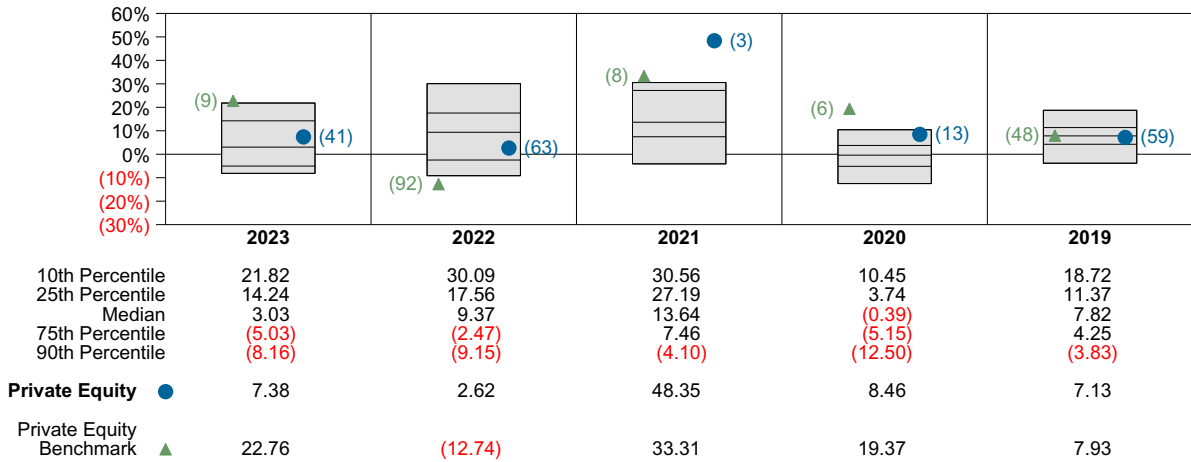


# Private Equity Return Analysis Summary

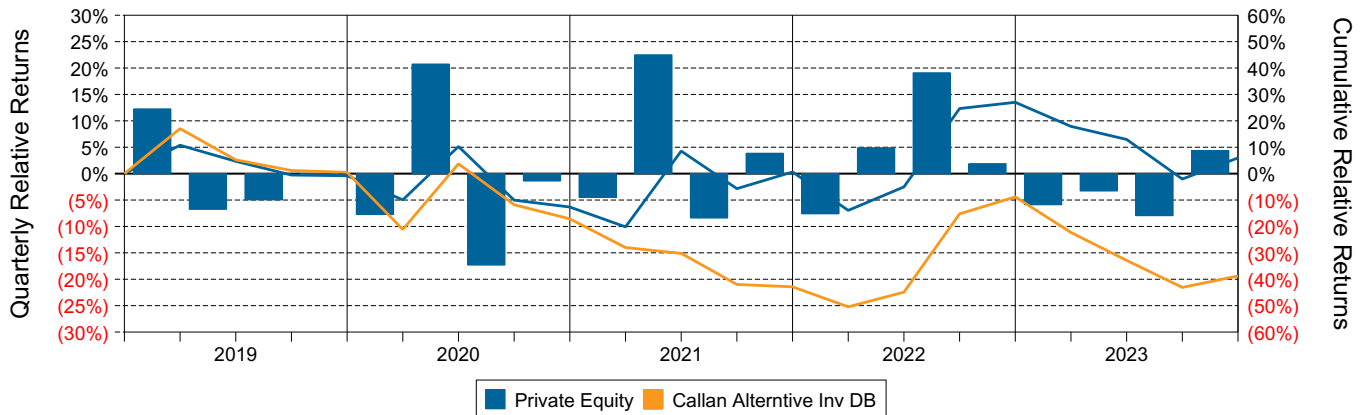
## Return Analysis

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.

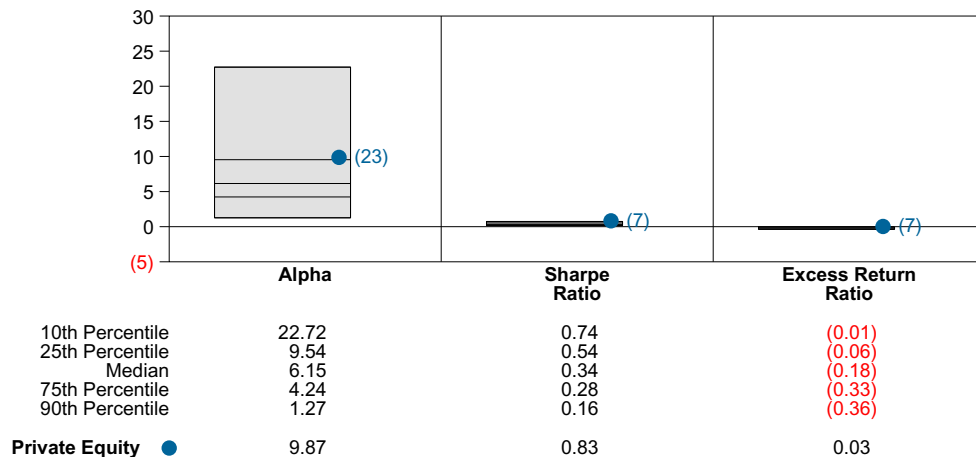
### Performance vs Callan Alternative Inv DB (Gross)



### 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 December 31, 2023

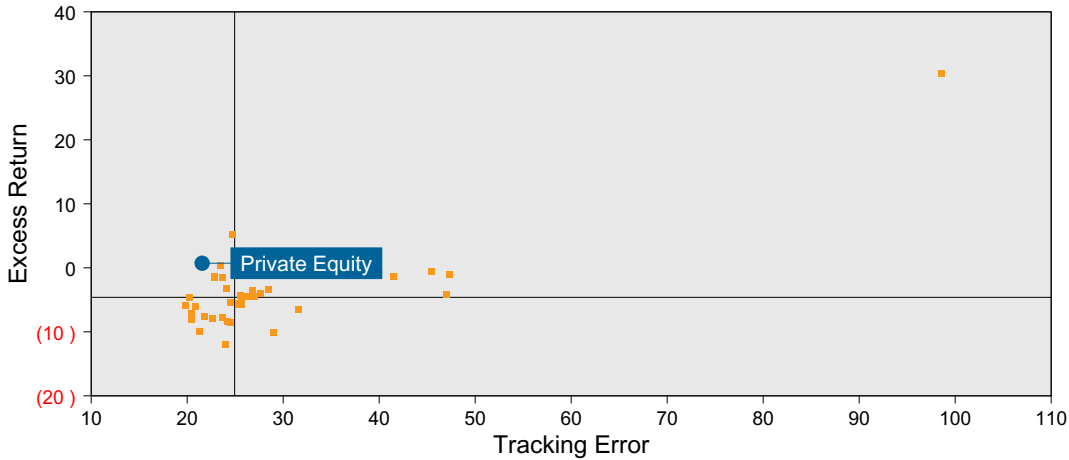


# Private Equity Risk Analysis Summary

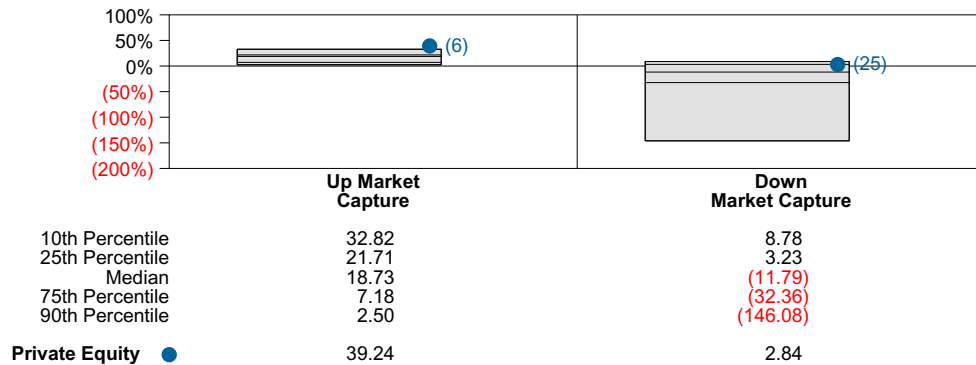
## Risk Analysis

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.

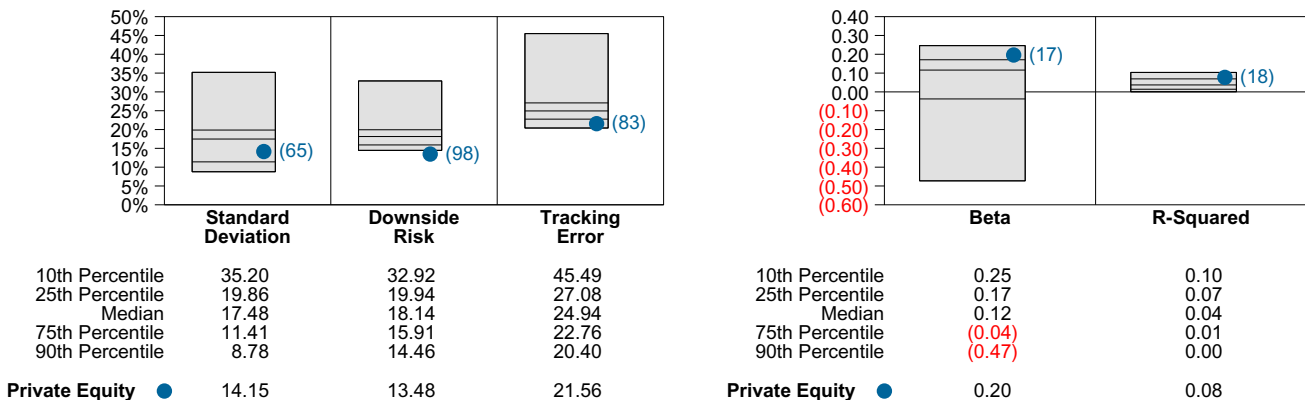
### Risk Analysis vs Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Market Capture vs Private Equity Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Private Equity Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023





# Private Debt Period Ended December 31, 2023

## 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).

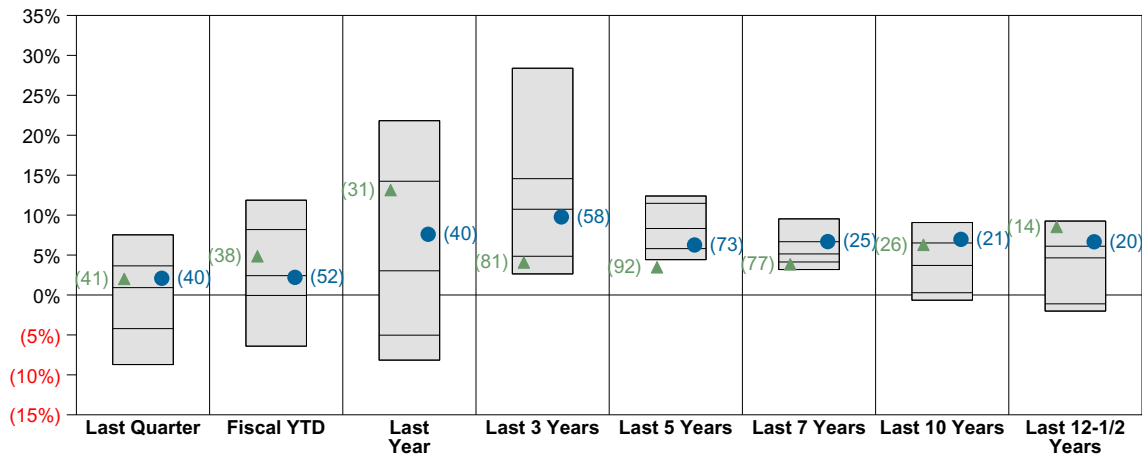
## Quarterly Summary and Highlights

- Private Debt's portfolio posted a 2.09% return for the quarter placing it in the 40 percentile of the Callan Alternative Inv DB group for the quarter and in the 40 percentile for the last year.
- Private Debt's portfolio outperformed the Private Debt Benchmark by 0.07% for the quarter and underperformed the Private Debt Benchmark for the year by 5.54%.

## Quarterly Asset Growth

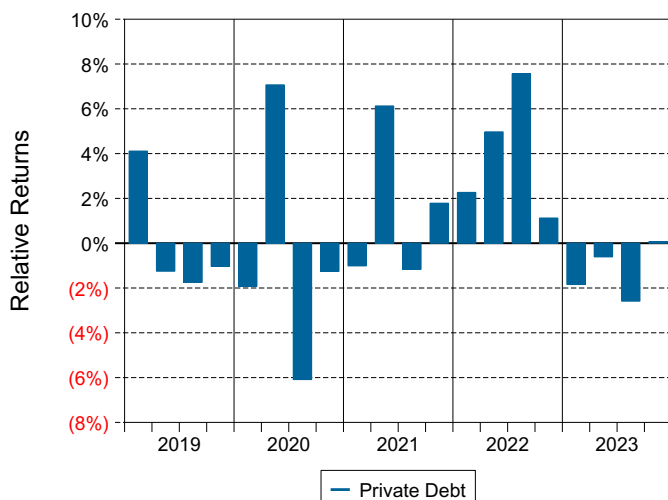
Beginning Market Value	\$557,652,500
Net New Investment	\$-7,312,247
Investment Gains/(Losses)	\$11,509,019
Ending Market Value	\$561,849,272

## Performance vs Callan Alternative Inv DB (Gross)

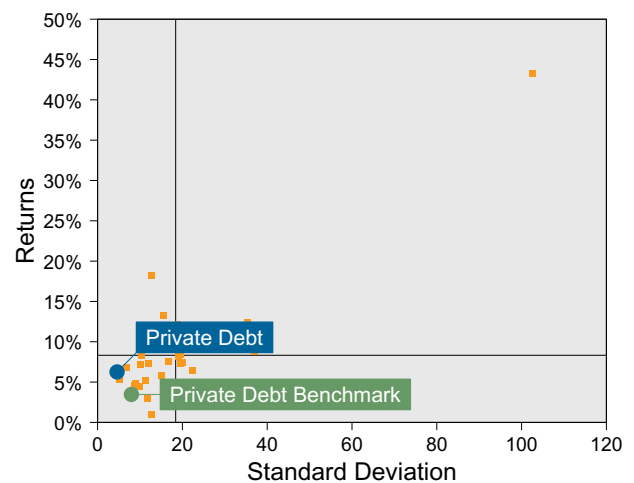


	Last Quarter	Fiscal YTD	Last Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 12-1/2 Years
10th Percentile	7.53	11.87	21.82	28.39	12.39	9.53	9.07	9.26
25th Percentile	3.65	8.19	14.24	14.56	11.48	6.67	6.51	6.11
Median	0.92	2.42	3.03	10.73	8.32	5.14	3.70	4.65
75th Percentile	(4.21)	(0.05)	(5.03)	4.85	5.81	4.13	0.28	(1.11)
90th Percentile	(8.71)	(6.41)	(8.16)	2.64	4.43	3.19	(0.65)	(2.02)
<b>Private Debt</b>	● 2.09	2.21	7.60	9.77	6.26	6.69	6.96	6.66
Private Debt Benchmark	▲ 2.02	4.85	13.14	4.07	3.47	3.84	6.28	8.52

## Relative Return vs Private Debt Benchmark



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

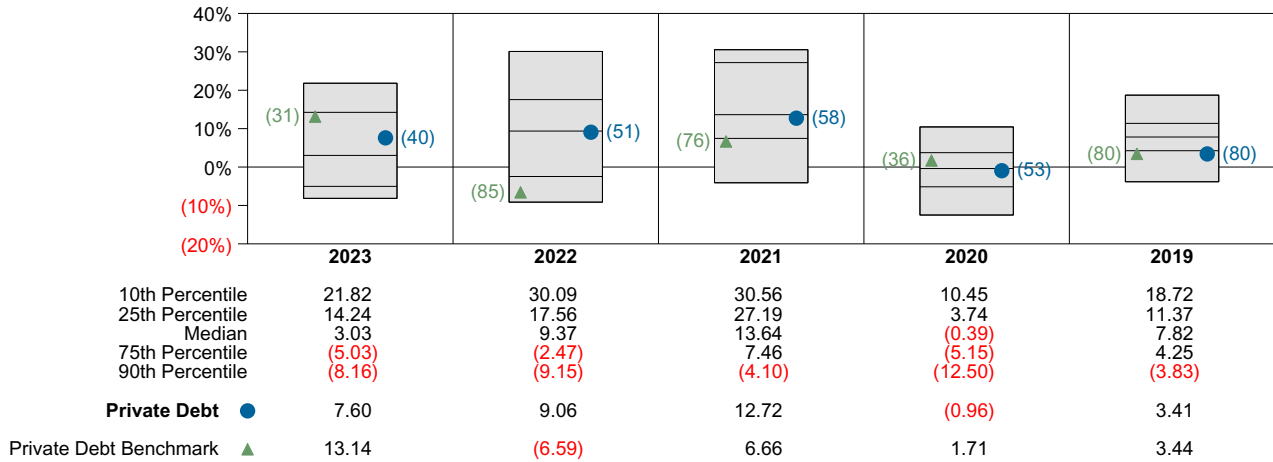


# Private Debt Return Analysis Summary

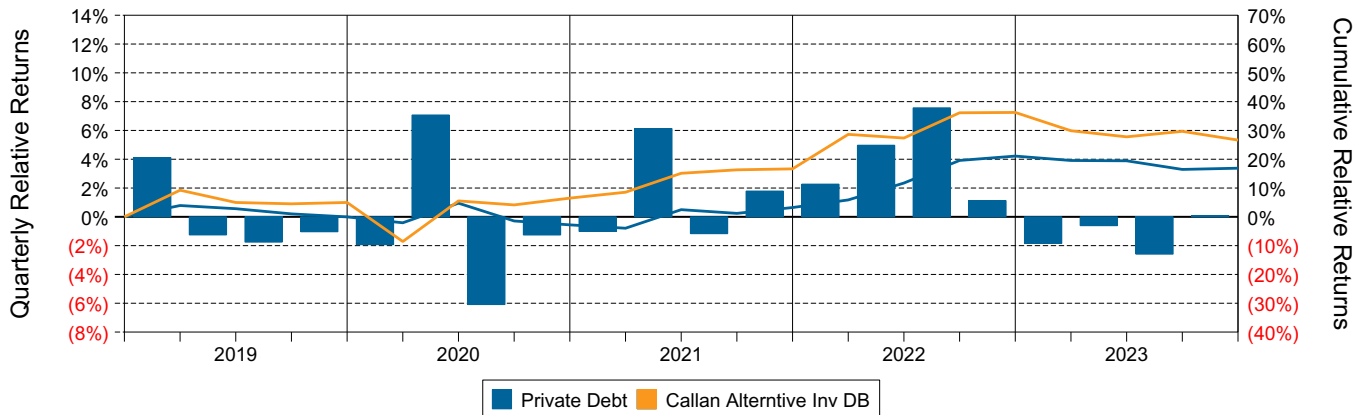
## Return Analysis

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.

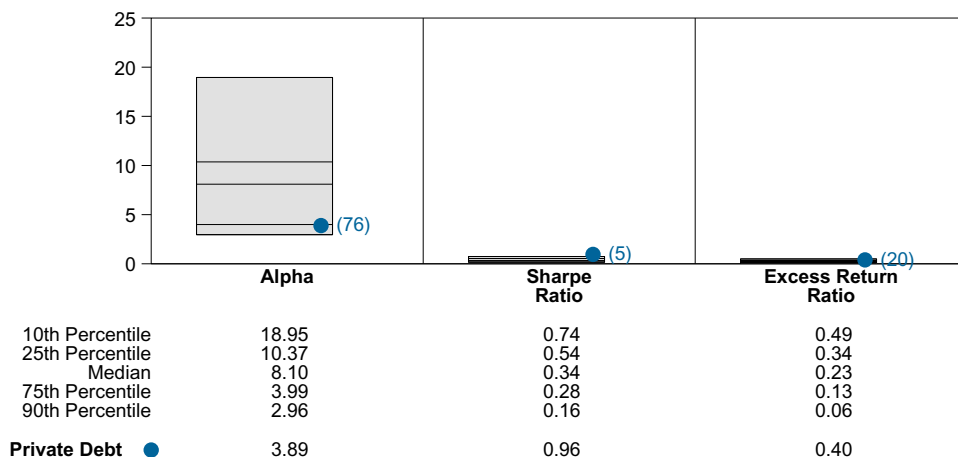
### Performance vs Callan Alternative Inv DB (Gross)



### 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 December 31, 2023

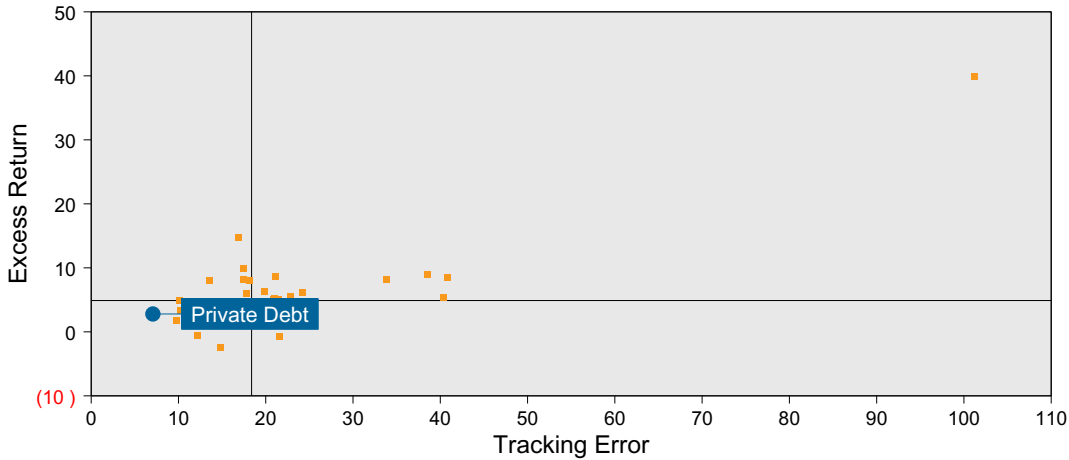


# Private Debt Risk Analysis Summary

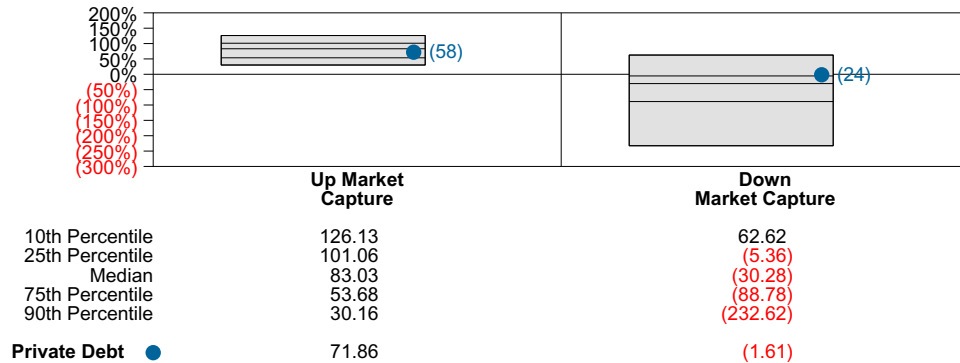
## Risk Analysis

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.

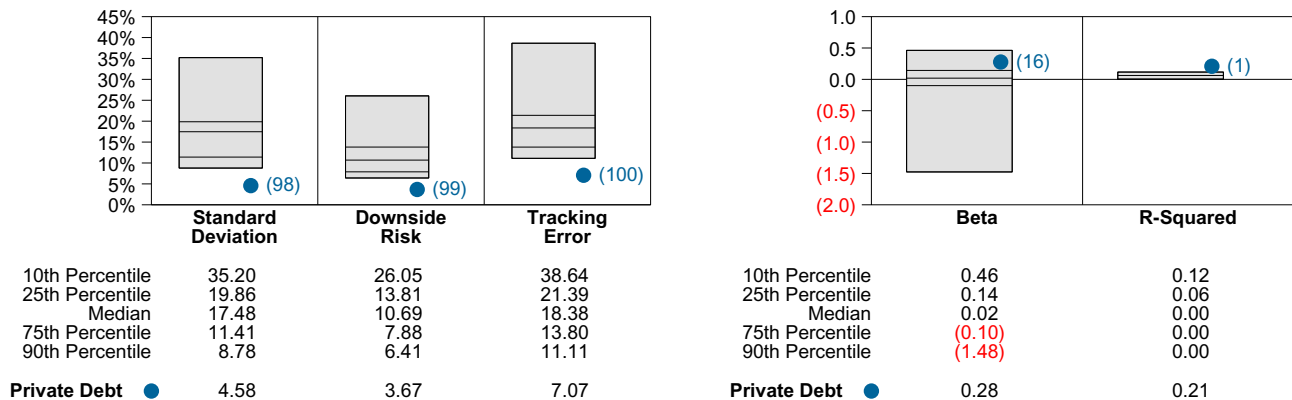
### Risk Analysis vs Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Market Capture vs Private Debt Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023



### Risk Statistics Rankings vs Private Debt Benchmark Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended December 31, 2023





## New Hampshire Retirement System Target History

30-Jun-2022 - 31-Dec-2023		
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%

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## 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.



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## 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 December 31, 2023**

Domestic Equity Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Large Cap Core	30	36	8,263.2	1,867.7	256.2
Callan Small/MidCap Core	32	33	1,106.4	614.8	32.1
Callan Small/MidCap Value	18	20	2,490.7	692.1	47.3
Callan Small Cap Core	56	61	2,097.8	852.3	117.5

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	2,425.1	1,557.6	75.2
Callan Core Bond Fixed Income	81	96	9,693.2	2,468.1	872.4
Callan Core Plus Fixed Income	63	73	12,391.3	4,145.3	867.4

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	106	251	4,318.2	1,612.8	475.0
Callan Real Estate Core	46	68	7,555.4	5,233.0	370.2
Callan Real Estate Value Added	34	50	2,525.9	1,007.5	55.6
Callan Alternative Investments DB	90	140	651,970.1	323.0	31,946.5

**International Equity and Fixed Income Style Groups**  
**Period Ended December 31, 2023**

International Equity Style Groups	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Non-US Equity	93	158	5,115.6	1,605.7	767.3
Callan Non-US All Country Growth Equity	25	30	6,988.8	2,379.4	188.7
Callan Emerging Core	56	87	3,544.8	1,593.8	287.1
Callan International Small Cap	34	36	1,867.5	1,011.6	57.9
Callan Global Developed Growth Equity	25	28	6,880.3	2,811.6	185.8

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	58	1,776.0	721.3	94.1

**Fund Sponsor Database Statistics**  
**Period Ended December 31, 2023**

Fund Sponsor Database	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Callan Public Fund Spons - Large (>1B)	129	129	20,427.0	5,712.2	2,430.8
Lg Public Fund - Domestic Equity	129	129	20,427.0	5,712.2	2,430.8
Lg Public Fund - International Equity	129	129	20,427.0	5,712.2	2,430.8

Fund Sponsor Database	Number of Organizations	Number of Funds	Assets Under Management		
			Mean(\$mil)	Median(\$mil)	Total(\$bil)
Lg Public Fund - Domestic Fixed	129	129	20,427.0	5,712.2	2,430.8



## Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends, carefully structured educational programs to enhance the knowledge of industry professionals, and events to enhance dialogue among investing professionals. Visit [www.callan.com/research-library](http://www.callan.com/research-library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog. For more information contact Barb Gerraty at 415-274-3093 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan's Experts

**[2023 Nuclear Decommissioning Funding Study](#)** | Callan's annual study offers key insights into the status of nuclear decommissioning funding to make peer comparisons more accurate and relevant.

**[2023 Investment Management Fee Study](#)** | The purpose of the study is to provide a detailed analysis on fee levels and trends across multiple asset classes and mandate sizes, for both active and passive management.

**[2023 Asset Manager ESG Study](#)** | Callan's inaugural ESG Study analyzes responses to various environmental, social, and governance questions in Callan's manager database by firm size, asset class, country of domicile, and ownership structure.

## Webinar Replays

**[Research Cafe: Office-to-Residential Conversions](#)** | During this interview, Callan specialists Aaron Quach and Christine Mays of Callan's Real Assets Consulting Group discuss office-to-residential conversions.

**[Webinar: Callan's Retirement Conundrum](#)** | During this discussion, representatives from Callan and October Three (a human resource and actuarial consulting firm) discuss how a small provision in SECURE 2.0 has paved the way for cash-balance pension plans to meet retirement income needs.

## Blog Highlights

**[How Your Public DB Plan's Returns Compare](#)** | This 3Q23 update to our quarterly series of blog posts provides context for public defined benefit (DB) plans about their returns over time.

**[ILS on Pace for Banner Year in 2023](#)** | When reviewing hedge fund portfolios, those investing in insurance-linked securities (ILS) are finding that this oft-overlooked strategy is buoying performance.

## Quarterly Updates

**[Private Equity Update, 3Q23](#)** | A high-level summary of private equity activity in the quarter through all the investment stages

**[Active vs. Passive Charts, 3Q23](#)** | A comparison of active managers alongside relevant benchmarks over the long term

**[Market Pulse, 3Q23](#)** | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

**[Capital Markets Review, 3Q23](#)** | Analysis and a broad overview of the economy and public and private markets activity each quarter across a wide range of asset classes

**[Hedge Fund Update, 3Q23](#)** | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

**[Real Assets Update, 3Q23](#)** | A summary of market activity for real assets and private real estate during the quarter

**[Private Credit Update, 3Q23](#)** | A review of performance and fund-raising activity for private credit during the quarter

**[Callan Target Date Index™, 3Q23](#)** | Tracks the performance and asset allocation of available target date mutual funds and CITs

**[Callan DC Index™, 3Q23](#)** | Provides underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets

## Events

A complete list of all upcoming events can be found on our website: [callan.com/events-education](https://callan.com/events-education).

Please mark your calendar and look forward to upcoming invitations:

### 2024 National Conference

April 8-10, 2024 – San Francisco

### June Regional Workshops

June 25, 2024 – Atlanta

June 27, 2024 – San Francisco

For more information about events, please contact Barb Gerraty: 415-274-3093 / [gerraty@callan.com](mailto:gerraty@callan.com)

## Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

4,845

Total attendees of the "Callan College" since 1994

## Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

### Alternative Investments

Feb. 21-22, 2024 – Virtual

Alternative investments like private equity, hedge funds, and real estate can play a key role in any portfolio. In our "Callan College" on Alternatives, you will learn about the importance of allocations to alternatives, and how to consider integrating, evaluating, and monitoring them.

### Introduction to Investments

March 19-21, 2024 – Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities.

Our virtual sessions are held over two to three days with virtual modules of 2.5-3 hours, while in-person sessions run either a full day or one-and-a-half days. Virtual tuition is \$950 per person and includes instruction and digital materials. In-person tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including registration can be found at: [callan.com/events-education](https://callan.com/events-education)



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer



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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.

September 30, 2023

## New Hampshire Retirement System



Redacted Private Markets Report

**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.**

This report has been redacted per the NHRS Private Market Disclosure Policy.

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**New Hampshire Retirement System**  
**September 30, 2023**

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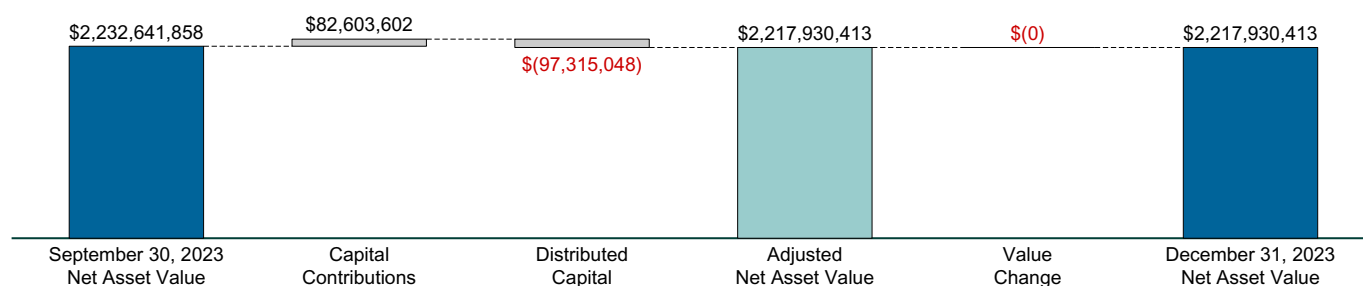
<b>Total Alternatives</b>	<b>3</b>
<b>Appendix</b>	<b>28</b>

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## Total Alternatives Period Ended December 31, 2023

Quarterly Portfolio Flows	September 30, 2023	Quarterly Change	December 31, 2023
# Partnerships	79	1	80
# General Partners	33	0	33
Capital Committed	\$3,672,901,728	\$43,885,125	\$3,716,786,853
Capital Contributed	\$3,354,812,634	\$82,603,602	\$3,437,416,236
Unfunded Commitments	\$927,144,244	\$(19,229,693)	\$907,914,550
Distributed Capital	\$2,527,702,881	\$97,315,048	\$2,625,017,929
Recallable Distributions	\$604,049,179	\$19,082,595	\$623,131,774
Non-Recallable Distributions	\$1,923,653,703	\$78,232,452	\$2,001,886,155
Net Asset Value	\$2,232,641,858	\$(14,711,446)	\$2,217,930,413
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$4,760,344,739</b>	<b>\$82,603,602</b>	<b>\$4,842,948,341</b>

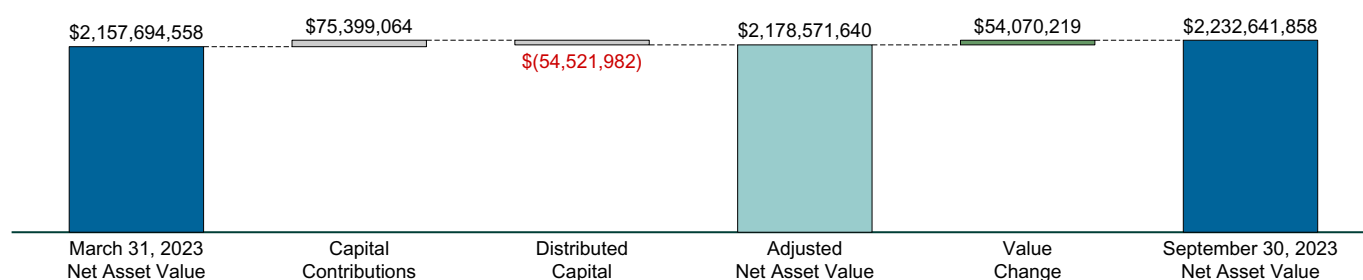
Ratios and Performance	September 30, 2023	Quarterly Change	December 31, 2023
Net Internal Rate of Return, Since Inception	10.64%	(0.28%)	10.35%
Total Value to Paid-in Capital (TVPI)	1.42x	(0.01x)	1.41x
Distributions to Paid-in Capital (DPI)	0.75x	0.01x	0.76x
Residual Value to Paid-in Capital (RVPI)	0.67x	(0.02x)	0.65x
% of Commitments Contributed	91.34%	1.14%	92.48%



## Total Alternatives Period Ended September 30, 2023

Two Quarters Portfolio Flows	March 31, 2023	Change	September 30, 2023
# Partnerships	76	3	79
# General Partners	32	1	33
Capital Committed	\$3,567,300,304	\$105,601,425	\$3,672,901,728
Capital Contributed	\$3,279,413,570	\$75,399,064	\$3,354,812,634
Unfunded Commitments	\$808,372,518	\$118,771,726	\$927,144,244
Distributed Capital	\$2,473,180,899	\$54,521,982	\$2,527,702,881
Recallable Distributions	\$520,026,578	\$84,022,601	\$604,049,179
Non-Recallable Distributions	\$1,953,154,321	\$(29,500,619)	\$1,923,653,703
Net Asset Value	\$2,157,694,558	\$74,947,300	\$2,232,641,858
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$4,630,875,457</b>	<b>\$129,469,282</b>	<b>\$4,760,344,739</b>

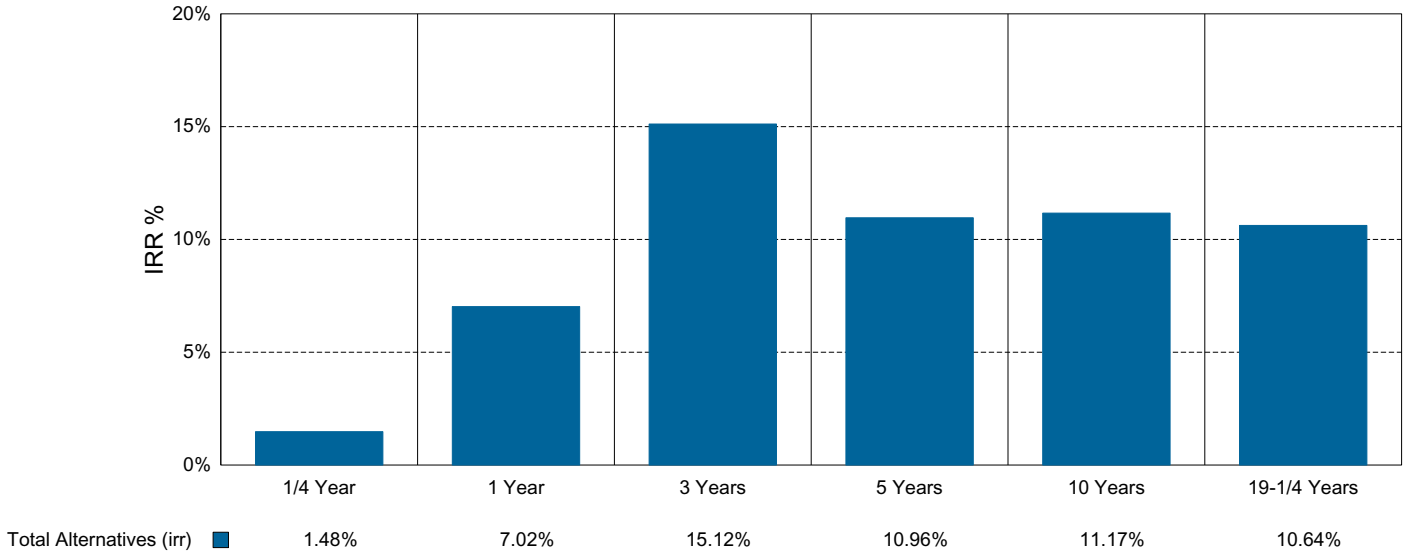
Ratios and Performance	March 31, 2023	Change	September 30, 2023
Net Internal Rate of Return, Since Inception	10.80%	(0.16%)	10.64%
Total Value to Paid-in Capital (TVPI)	1.41x	0.01x	1.42x
Distributions to Paid-in Capital (DPI)	0.75x	(0.00x)	0.75x
Residual Value to Paid-in Capital (RVPI)	0.66x	0.01x	0.67x
% of Commitments Contributed	91.93%	(0.59%)	91.34%



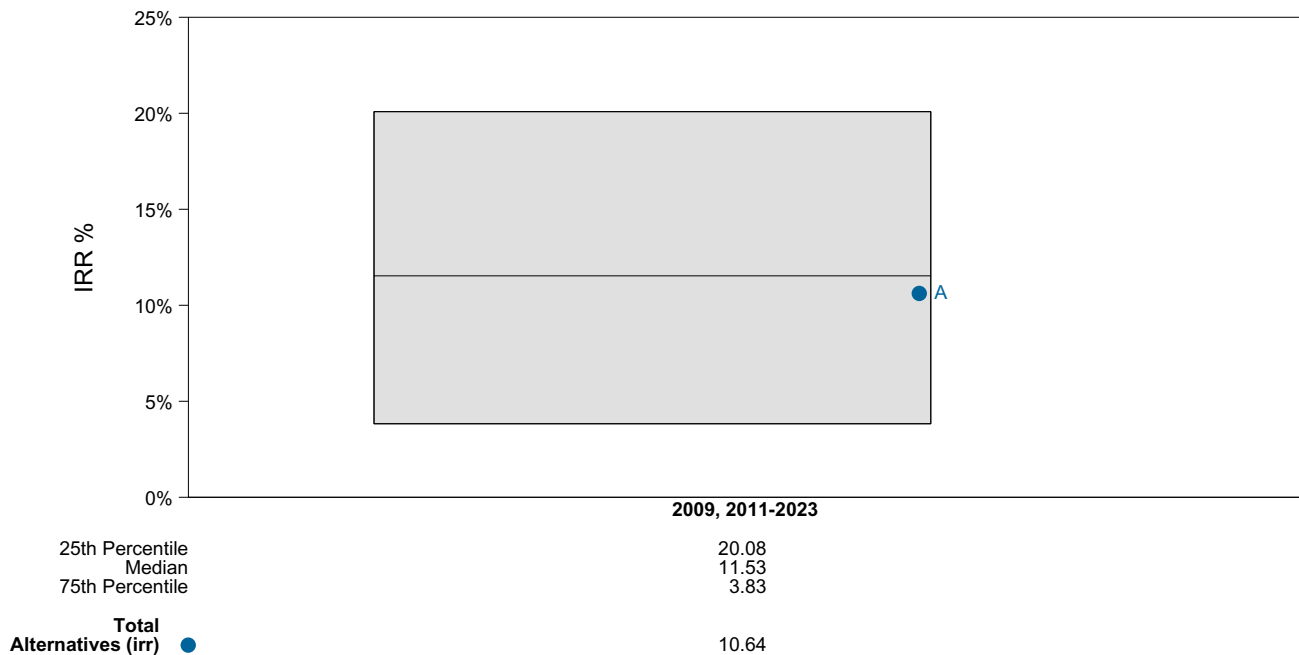
## Performance Analysis Total Alternatives

The first chart below compares the performance (internal rate of return) of the fund to its benchmarks over various time periods. The second chart displays the performance of the component investments of the fund by vintage year (inception) along with its benchmark returns.

### Cumulative Performance Periods Ended September 30, 2023



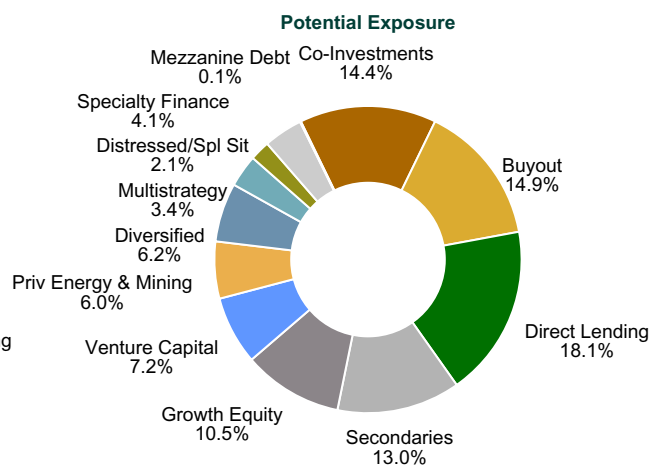
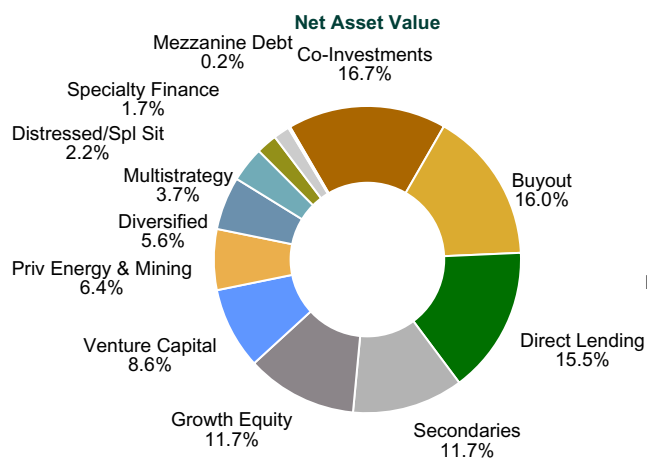
### Vintage Year Performance vs. Cambridge Private Markets



## Portfolio Diversification Total Alternatives Period Ended September 30, 2023

The following tables illustrate current and potential exposure by Strategy type as of September 30, 2023 in USD millions.

Portfolio Exposure by Strategy Type	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Co-Investments	\$374	16.75%	\$80	8.65%	\$454	14.37%
Buyout	\$358	16.05%	\$112	12.07%	\$470	14.88%
Direct Lending	\$345	15.47%	\$227	24.44%	\$572	18.10%
Secondaries	\$262	11.74%	\$150	16.20%	\$412	13.05%
Growth Equity	\$260	11.66%	\$71	7.67%	\$331	10.49%
Venture Capital	\$192	8.58%	\$35	3.79%	\$227	7.17%
Priv Energy & Mining	\$142	6.35%	\$48	5.13%	\$189	5.99%
Diversified	\$125	5.62%	\$70	7.58%	\$196	6.19%
Multistrategy	\$82	3.65%	\$25	2.70%	\$107	3.37%
Distressed/Spl Sit	\$50	2.23%	\$18	1.95%	\$68	2.15%
Specialty Finance	\$38	1.72%	\$91	9.79%	\$129	4.09%
Mezzanine Debt	\$4	0.19%	\$0	0.04%	\$5	0.15%
<b>Total Alternatives</b>	<b>\$2,233</b>		<b>\$927</b>		<b>\$3,160</b>	



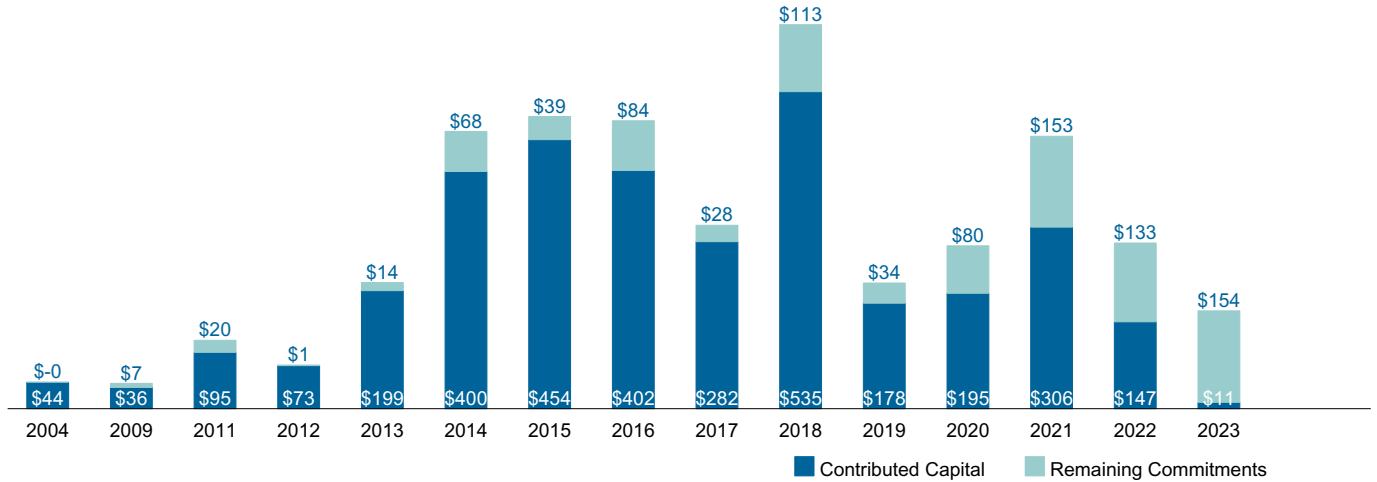
# Cash Flow Analysis

## Total Alternatives

### Period Ended September 30, 2023

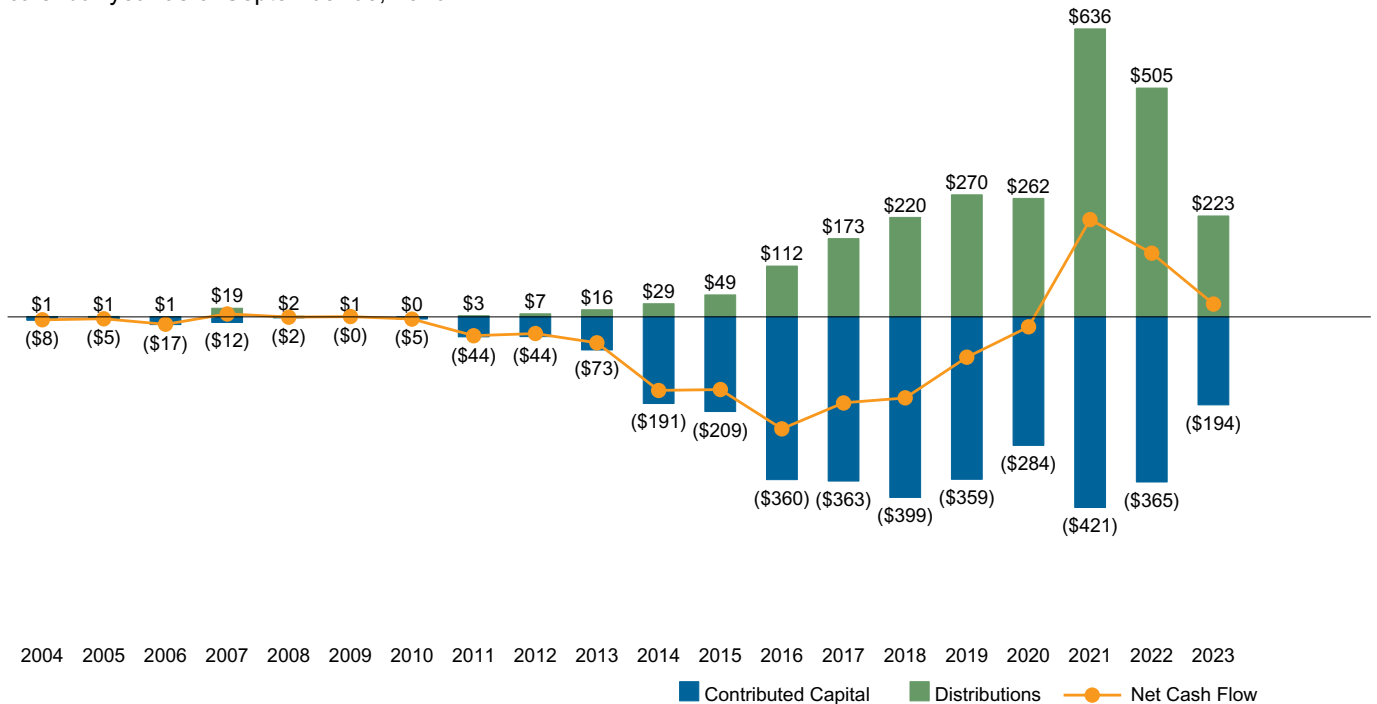
#### Contributed Capital and Unfunded Commitments

The following chart illustrates contributed capital and the unfunded commitments by vintage year, as of September 30, 2023 in USD millions. Vintage is defined as the clients first cash flow.



#### Cash Flow by Calendar Year

The following chart illustrates historical capital contributions made, distributions received and the resultant net cash flow by calendar year as of September 30, 2023.



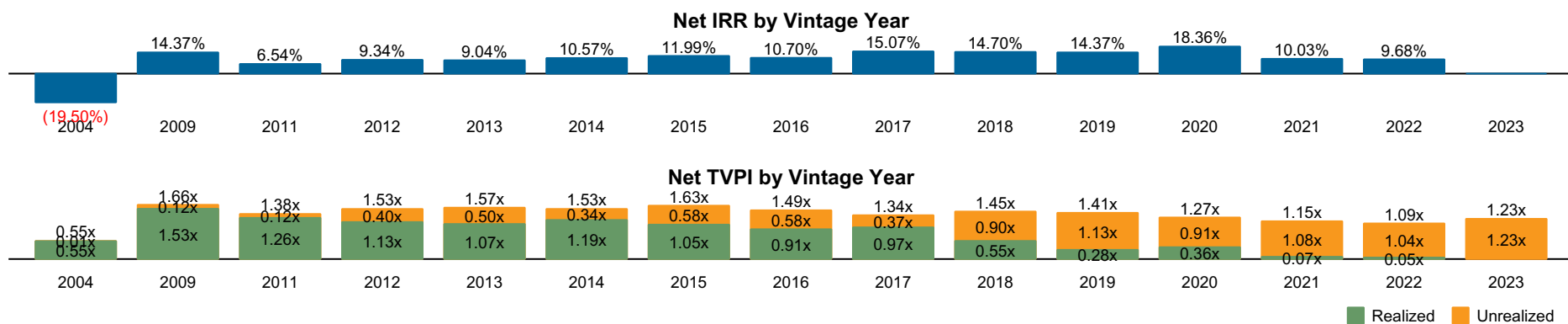


**Performance by Vintage Year**  
**Total Alternatives**  
**Period Ended September 30, 2023**

The following tables illustrate current performance by Vintage Year as of September 30, 2023 in USD millions.

Portfolio Performance by Vintage Year	Capital Commitments	Capital Contributions	Unfunded Commitments	Distributions	Net Asset Value	DPI	TVPI	TVPI Quartile	Net IRR	Net IRR Quartile
2004	\$30	\$44	\$-0	\$24	\$0	0.55x	0.55x	-	(19.50%)	-
2009	\$40	\$36	\$7	\$55	\$4	1.53x	1.66x	3rd	14.37%	2nd
2011	\$100	\$95	\$20	\$119	\$11	1.26x	1.38x	3rd	6.54%	3rd
2012	\$71	\$73	\$1	\$82	\$29	1.13x	1.53x	3rd	9.34%	3rd
2013	\$190	\$199	\$14	\$213	\$99	1.07x	1.57x	3rd	9.04%	3rd
2014	\$369	\$400	\$68	\$477	\$134	1.19x	1.53x	3rd	10.57%	3rd
2015	\$429	\$454	\$39	\$476	\$263	1.05x	1.63x	3rd	11.99%	3rd
2016	\$414	\$402	\$84	\$365	\$233	0.91x	1.49x	3rd	10.70%	3rd
2017	\$175	\$282	\$28	\$272	\$104	0.97x	1.34x	4th	15.07%	3rd
2018	\$550	\$535	\$113	\$295	\$479	0.55x	1.45x	3rd	14.70%	3rd
2019	\$190	\$178	\$34	\$50	\$201	0.28x	1.41x	2nd	14.37%	3rd
2020	\$225	\$195	\$80	\$70	\$176	0.36x	1.27x	2nd	18.36%	1st
2021	\$450	\$306	\$153	\$21	\$332	0.07x	1.15x	1st	10.03%	1st
2022	\$275	\$147	\$133	\$7	\$152	0.05x	1.09x	1st	9.68%	1st
2023	\$165	\$11	\$154	\$0	\$13	0.00x	1.23x	1st	NM	-
<b>Total Alternatives</b>	<b>\$3,673</b>	<b>\$3,355</b>	<b>\$927</b>	<b>\$2,528</b>	<b>\$2,233</b>	<b>0.75x</b>	<b>1.42x</b>	<b>3rd</b>	<b>10.64%</b>	<b>3rd</b>

**Performance Metrics by Vintage Year**



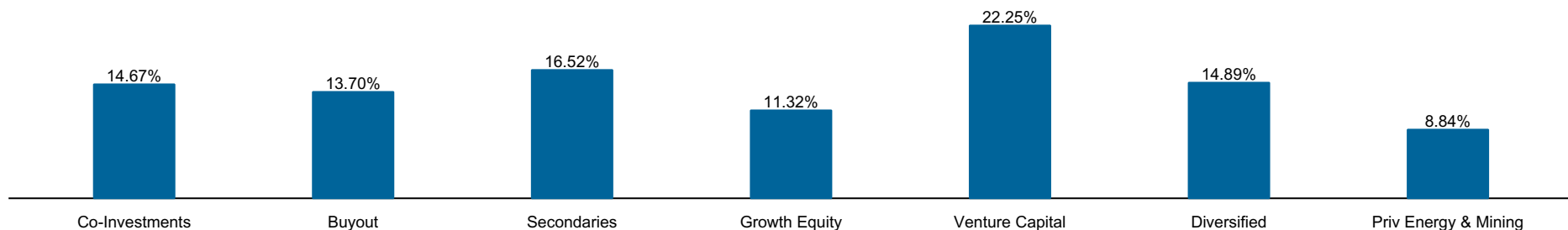
## Performance by Strategy Total Private Equity Period Ended September 30, 2023

The following tables illustrate current performance by Strategy type as of September 30, 2023 in USD millions.

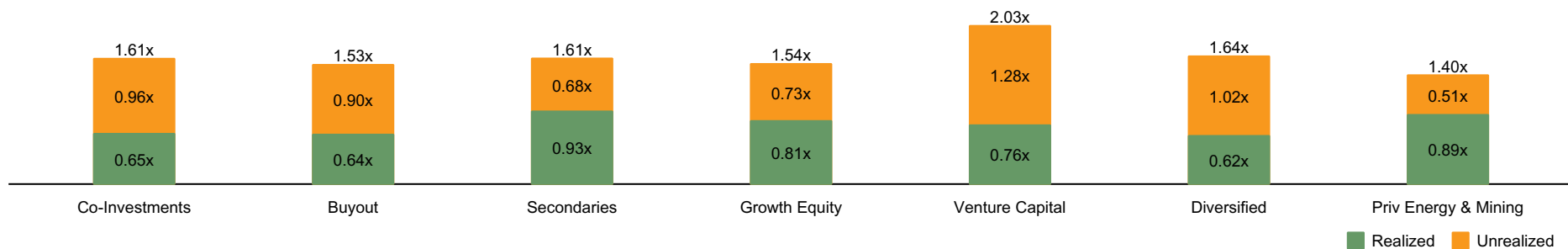
Portfolio Performance by Strategy Type	Capital Commitments	Capital Contributions	Unfunded Commitments	Distributions	Net Asset Value	DPI	TVPI	TVPI Quartile	Net IRR	Net IRR Quartile
Co-Investments	\$450	\$388	\$80	\$251	\$374	0.65x	1.61x	2nd	14.67%	3rd
Buyout	\$466	\$400	\$112	\$254	\$358	0.64x	1.53x	2nd	13.70%	3rd
Secondaries	\$520	\$385	\$150	\$360	\$262	0.93x	1.61x	2nd	16.52%	2nd
Growth Equity	\$363	\$355	\$71	\$288	\$260	0.81x	1.54x	2nd	11.32%	3rd
Venture Capital	\$185	\$150	\$35	\$113	\$192	0.76x	2.03x	2nd	22.25%	1st
Diversified	\$191	\$123	\$70	\$76	\$125	0.62x	1.64x	2nd	14.89%	2nd
Priv Energy & Mining	\$175	\$183	\$25	\$163	\$93	0.89x	1.40x	3rd	8.84%	3rd
<b>Total Private Equity</b>	<b>\$2,350</b>	<b>\$1,984</b>	<b>\$544</b>	<b>\$1,504</b>	<b>\$1,665</b>	<b>0.76x</b>	<b>1.60x</b>	<b>2nd</b>	<b>14.22%</b>	<b>2nd</b>

### Performance Metrics by Strategy

Net IRR by Strategy



Net TVPI by Strategy



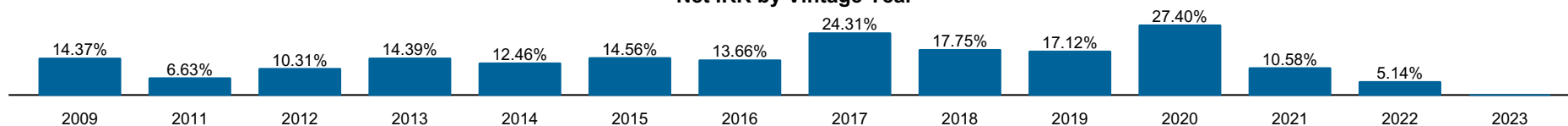
## Performance by Vintage Year Total Private Equity Period Ended September 30, 2023

The following tables illustrate current performance by Vintage Year as of September 30, 2023 in USD millions.

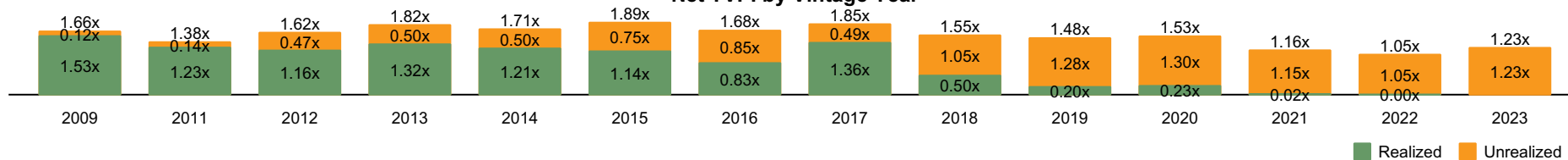
Portfolio Performance by Vintage Year	Capital Commitments	Capital Contributions	Unfunded Commitments	Distributions	Net Asset Value	DPI	TVPI	TVPI Quartile	Net IRR	Net IRR Quartile
2009	\$40	\$36	\$7	\$55	\$4	1.53x	1.66x	3rd	14.37%	2nd
2011	\$40	\$38	\$2	\$47	\$5	1.23x	1.38x	3rd	6.63%	3rd
2012	\$51	\$53	\$1	\$61	\$25	1.16x	1.62x	3rd	10.31%	3rd
2013	\$140	\$149	\$14	\$197	\$75	1.32x	1.82x	2nd	14.39%	2nd
2014	\$219	\$240	\$13	\$290	\$121	1.21x	1.71x	3rd	12.46%	3rd
2015	\$339	\$321	\$35	\$365	\$241	1.14x	1.89x	3rd	14.56%	3rd
2016	\$216	\$204	\$41	\$169	\$173	0.83x	1.68x	3rd	13.66%	3rd
2017	\$75	\$78	\$18	\$106	\$38	1.36x	1.85x	2nd	24.31%	2nd
2018	\$350	\$334	\$50	\$167	\$352	0.50x	1.55x	3rd	17.75%	2nd
2019	\$140	\$128	\$21	\$26	\$164	0.20x	1.48x	2nd	17.12%	2nd
2020	\$125	\$79	\$52	\$18	\$102	0.23x	1.53x	1st	27.40%	1st
2021	\$350	\$228	\$123	\$4	\$261	0.02x	1.16x	1st	10.58%	1st
2022	\$175	\$85	\$90	\$0	\$89	0.00x	1.05x	1st	5.14%	1st
2023	\$90	\$11	\$79	\$0	\$13	0.00x	1.23x	1st	NM	-
<b>Total Private Equity</b>	<b>\$2,350</b>	<b>\$1,984</b>	<b>\$544</b>	<b>\$1,504</b>	<b>\$1,665</b>	<b>0.76x</b>	<b>1.60x</b>	<b>2nd</b>	<b>14.22%</b>	<b>2nd</b>

### Performance Metrics by Vintage Year

Net IRR by Vintage Year



Net TVPI by Vintage Year



Realized Unrealized

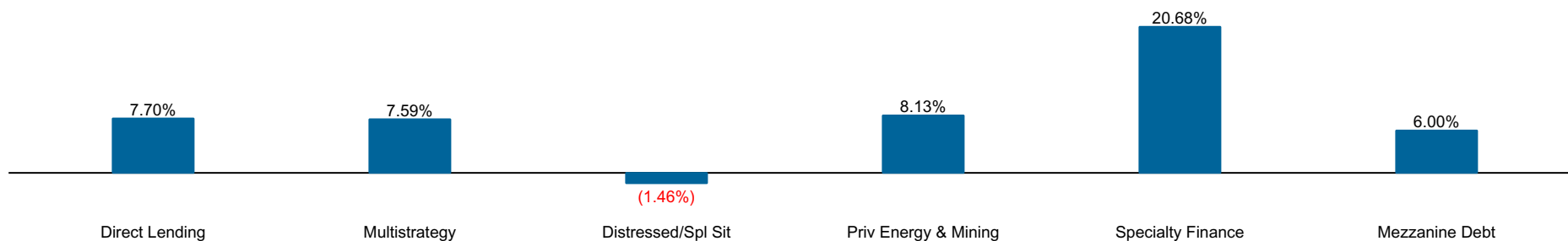
## Performance by Strategy Total Private Credit Period Ended September 30, 2023

The following tables illustrate current performance by Strategy type as of September 30, 2023 in USD millions.

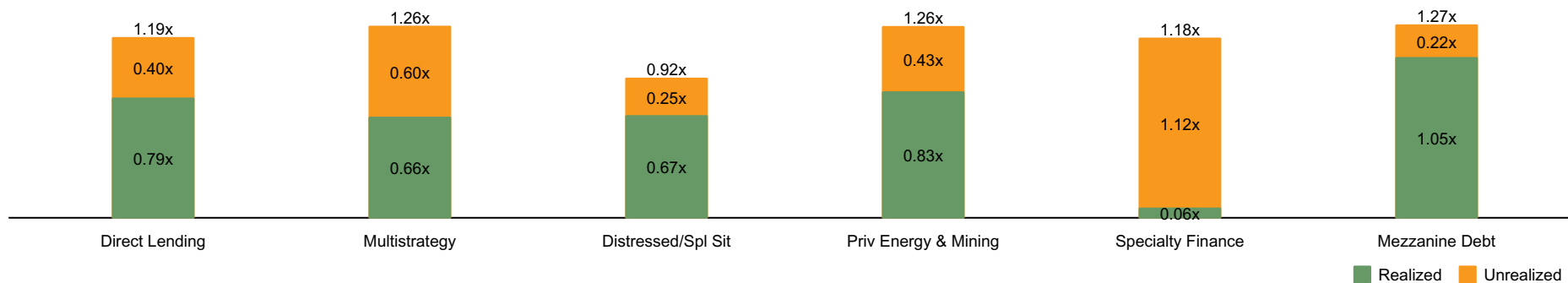
Portfolio Performance by Strategy Type	Capital Commitments	Capital Contributions	Unfunded Commitments	Distributions	Net Asset Value	DPI	TVPI	TVPI Quartile	Net IRR	Net IRR Quartile
Direct Lending	\$738	\$866	\$227	\$682	\$345	0.79x	1.19x	3rd	7.70%	3rd
Multistrategy	\$150	\$136	\$25	\$90	\$82	0.66x	1.26x	3rd	7.59%	3rd
Distressed/Spl Sit	\$190	\$202	\$18	\$135	\$50	0.67x	0.92x	4th	(1.46%)	4th
Priv Energy & Mining	\$100	\$113	\$22	\$94	\$49	0.83x	1.26x	3rd	8.13%	3rd
Specialty Finance	\$125	\$34	\$91	\$2	\$38	0.06x	1.18x	1st	20.68%	1st
Mezzanine Debt	\$20	\$20	\$0	\$21	\$4	1.05x	1.27x	3rd	6.00%	3rd
<b>Total Private Credit</b>	<b>\$1,323</b>	<b>\$1,371</b>	<b>\$383</b>	<b>\$1,023</b>	<b>\$568</b>	<b>0.75x</b>	<b>1.16x</b>	<b>3rd</b>	<b>4.91%</b>	<b>4th</b>

### Performance Metrics by Strategy

Net IRR by Strategy



Net TVPI by Strategy

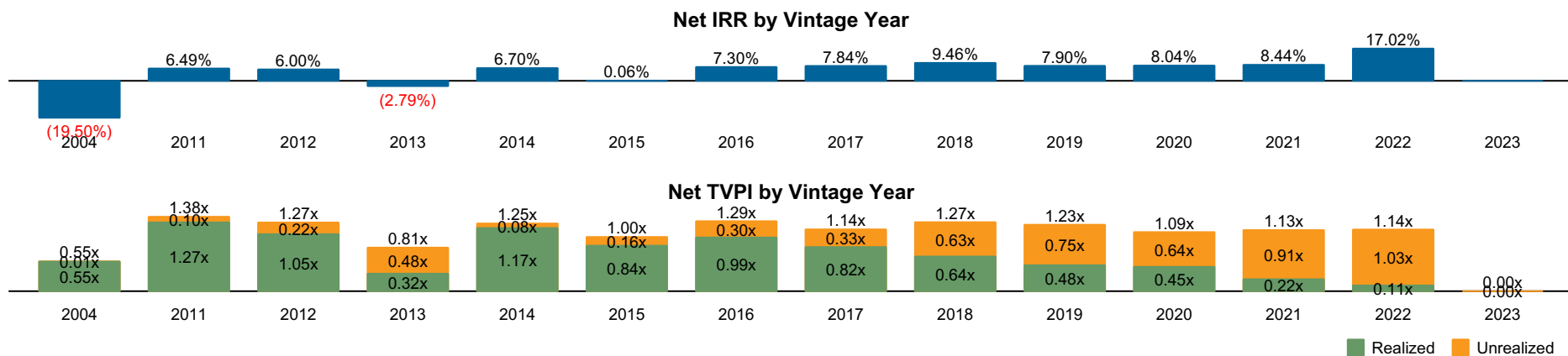


## Performance by Vintage Year Total Private Credit Period Ended September 30, 2023

The following tables illustrate current performance by Vintage Year as of September 30, 2023 in USD millions.

Portfolio Performance by Vintage Year	Capital Commitments	Capital Contributions	Unfunded Commitments	Distributions	Net Asset Value	DPI	TVPI	TVPI Quartile	Net IRR	Net IRR Quartile
2004	\$30	\$44	\$-0	\$24	\$0	0.55x	0.55x	-	(19.50%)	-
2011	\$60	\$57	\$18	\$73	\$6	1.27x	1.38x	2nd	6.49%	3rd
2012	\$20	\$20	\$0	\$21	\$4	1.05x	1.27x	3rd	6.00%	3rd
2013	\$50	\$50	\$0	\$16	\$24	0.32x	0.81x	4th	(2.79%)	4th
2014	\$150	\$160	\$55	\$187	\$13	1.17x	1.25x	3rd	6.70%	3rd
2015	\$90	\$132	\$4	\$111	\$21	0.84x	1.00x	4th	0.06%	4th
2016	\$198	\$198	\$43	\$197	\$60	0.99x	1.29x	3rd	7.30%	3rd
2017	\$100	\$204	\$10	\$166	\$66	0.82x	1.14x	4th	7.84%	3rd
2018	\$200	\$201	\$63	\$129	\$127	0.64x	1.27x	3rd	9.46%	2nd
2019	\$50	\$50	\$13	\$24	\$37	0.48x	1.23x	3rd	7.90%	3rd
2020	\$100	\$116	\$28	\$52	\$74	0.45x	1.09x	3rd	8.04%	3rd
2021	\$100	\$78	\$30	\$17	\$71	0.22x	1.13x	2nd	8.44%	2nd
2022	\$100	\$61	\$43	\$6	\$63	0.11x	1.14x	2nd	17.02%	2nd
2023	\$75	\$0	\$75	\$0	\$0	0.00x	0.00x	1st	0.00%	1st
<b>Total Private Credit</b>	<b>\$1,323</b>	<b>\$1,371</b>	<b>\$383</b>	<b>\$1,023</b>	<b>\$568</b>	<b>0.75x</b>	<b>1.16x</b>	<b>3rd</b>	<b>4.91%</b>	<b>4th</b>

### Performance Metrics by Vintage Year



# Callan

## **New Hampshire Retirement System**

Private Equity Program Review

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## Total Private Equity Portfolio Summary

### Portfolio Overview & History

New Hampshire Retirement System re-established the Private Equity Program in 2009. The Private Equity Program seeks to generate enhanced risk-adjusted investment returns over a long time horizon through targeted private equity primary partnership investments, secondaries, diversified fund of funds, and co-investments. The portfolio is intended to be diversified by private equity strategy types and be led by a concentrated roster of private equity managers. Venture capital commitments to Industry Ventures and Top Tier have been the strongest contributors to performance, generating an aggregate return of a 2.03x net TVPI and 22.25% net IRR. Historical commitments to oil and gas strategies have detracted the most from overall performance. The asset class rebounded slightly through 2022, however still has generated meaningfully lower performance relative to other private equity strategy types the plan is invested in.

	Net IRR	Quartile Rank	Net TVPI	Quartile Rank
NHRS Private Equity Portfolio	14.22%	2 <sup>nd</sup>	1.60x	2 <sup>nd</sup>

### Quarterly Highlights & Portfolio Commentary

- The Private Equity program had \$41.1 million of called capital and \$60.1 million of distributions during the fourth quarter of 2023, resulting in a net cash inflow of \$19.0 million.
- The Private Equity program had \$40.1 million of called capital and \$55.3 million of distributions during the third quarter of 2023, resulting in a net cash inflow of \$15.2 million.
  - The private equity program appreciated by \$21.7 million, or 1.3%, during the third quarter. Performance was flat to modestly up across the portfolio.

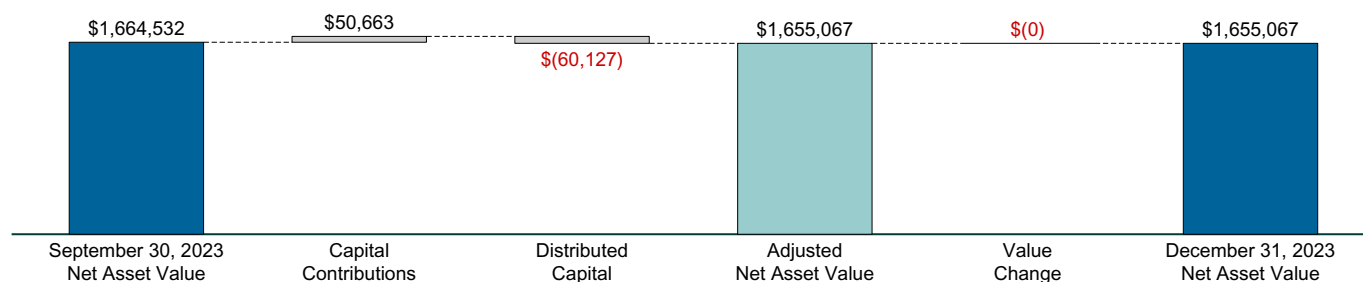
There were no new private equity commitments funded in 3Q 2023.

Quarterly Follow-On Commitment Activity	Strategy	Primary Geography	Commitment
NA	-	-	-

## Total Private Equity Period Ended December 31, 2023

Quarterly Portfolio Flows \$(Thousands)	September 30, 2023	Quarterly Change	December 31, 2023
# Partnerships	49	1	50
# General Partners	19	0	19
Capital Committed	\$2,350,325	\$41,787	\$2,392,112
Capital Contributed	\$1,983,636	\$50,663	\$2,034,299
Unfunded Commitments	\$543,911	\$(55)	\$543,856
Distributed Capital	\$1,504,479	\$60,127	\$1,564,606
Recallable Distributions	\$172,411	\$8,414	\$180,825
Non-Recallable Distributions	\$1,332,068	\$51,713	\$1,383,781
Net Asset Value	\$1,664,532	\$(9,465)	\$1,655,067
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$3,169,010</b>	<b>\$50,663</b>	<b>\$3,219,673</b>

Ratios and Performance	September 30, 2023	Quarterly Change	December 31, 2023
Net Internal Rate of Return, Since Inception	14.22%	(0.42%)	13.80%
Total Value to Paid-in Capital (TVPI)	1.60x	(0.01x)	1.58x
Distributions to Paid-in Capital (DPI)	0.76x	0.01x	0.77x
Residual Value to Paid-in Capital (RVPI)	0.84x	(0.03x)	0.81x
% of Commitments Contributed	84.40%	0.64%	85.04%

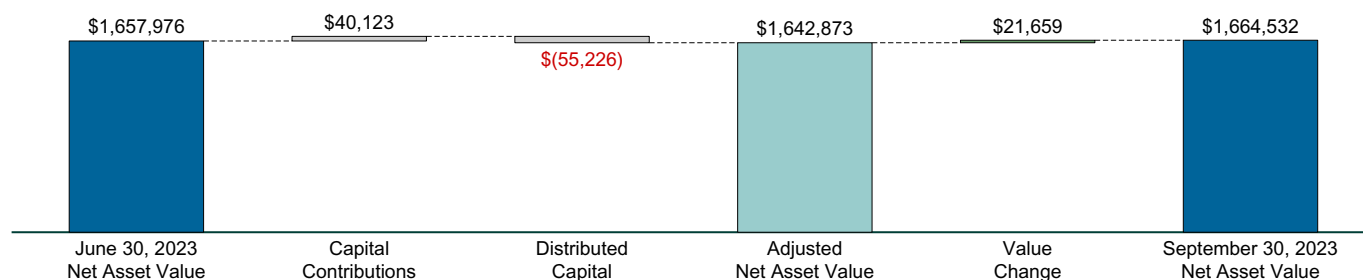




## Total Private Equity Period Ended September 30, 2023

Quarterly Portfolio Flows \$(Thousands)	June 30, 2023	Quarterly Change	September 30, 2023
# Partnerships	49	0	49
# General Partners	19	0	19
Capital Committed	\$2,351,475	\$(1,150)	\$2,350,325
Capital Contributed	\$1,943,513	\$40,123	\$1,983,636
Unfunded Commitments	\$582,315	\$(38,403)	\$543,911
Distributed Capital	\$1,449,253	\$55,226	\$1,504,479
Recallable Distributions	\$170,770	\$1,641	\$172,411
Non-Recallable Distributions	\$1,278,483	\$53,585	\$1,332,068
Net Asset Value	\$1,657,976	\$6,555	\$1,664,532
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$3,107,229</b>	<b>\$61,782</b>	<b>\$3,169,010</b>

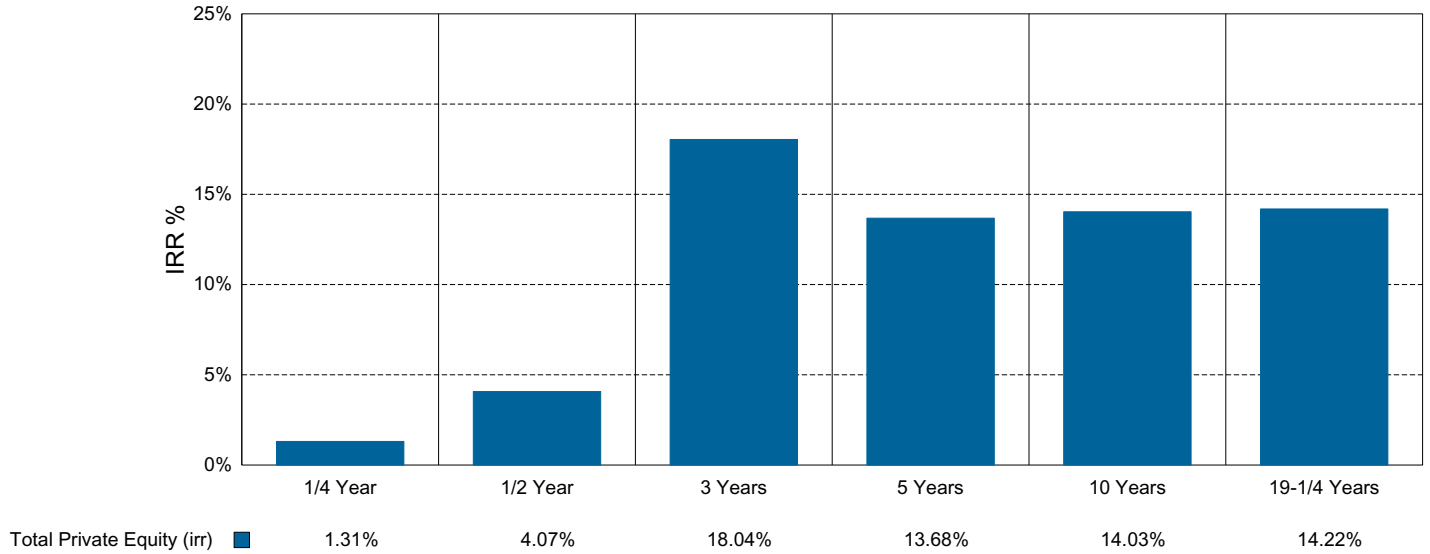
Ratios and Performance	June 30, 2023	Quarterly Change	September 30, 2023
Net Internal Rate of Return, Since Inception	14.49%	(0.27%)	14.22%
Total Value to Paid-in Capital (TVPI)	1.60x	(0.00x)	1.60x
Distributions to Paid-in Capital (DPI)	0.75x	0.01x	0.76x
Residual Value to Paid-in Capital (RVPI)	0.85x	(0.01x)	0.84x
% of Commitments Contributed	82.65%	1.75%	84.40%



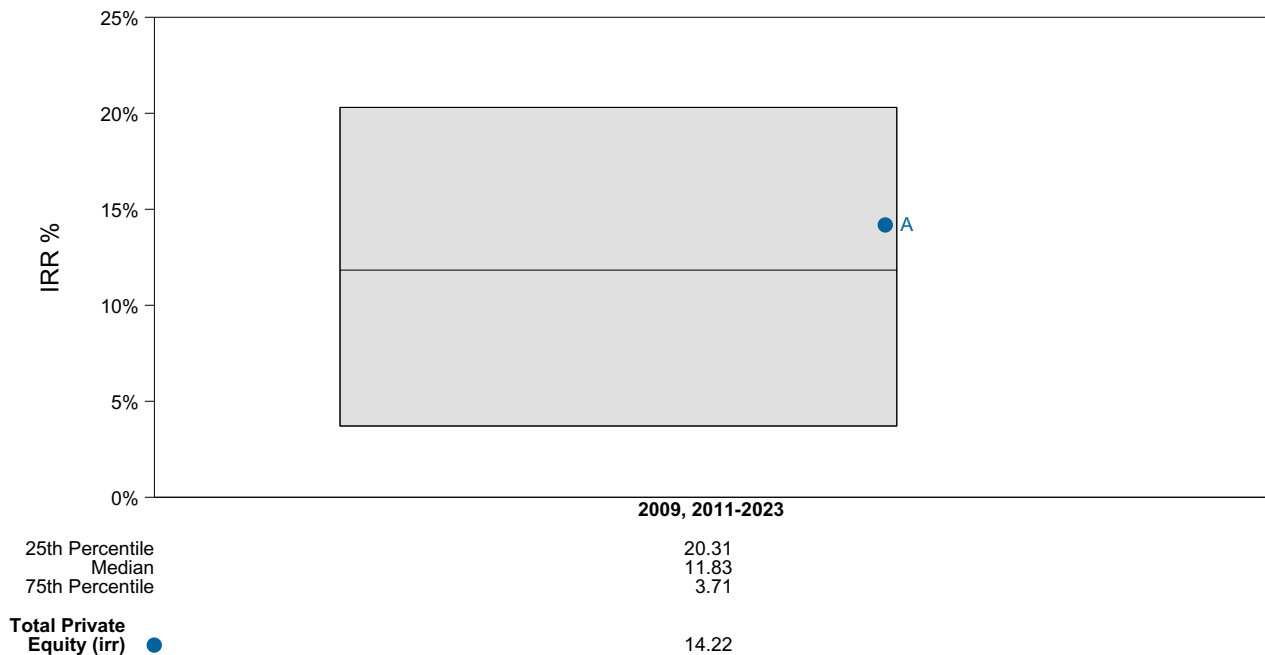
## Performance Analysis Total Private Equity

The first chart below compares the performance (internal rate of return) of the fund to its benchmarks over various time periods. The second chart displays the performance of the component investments of the fund by vintage year (inception) along with its benchmark returns.

### Cumulative Performance Periods Ended September 30, 2023



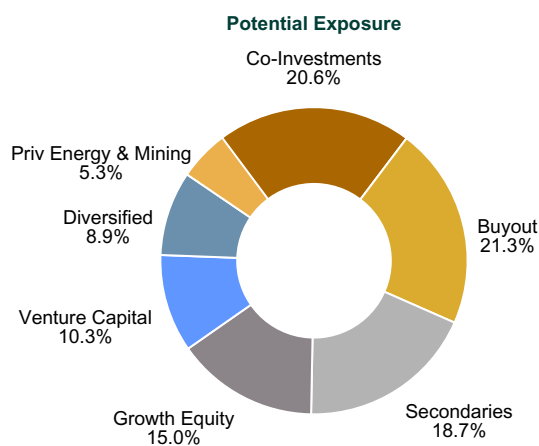
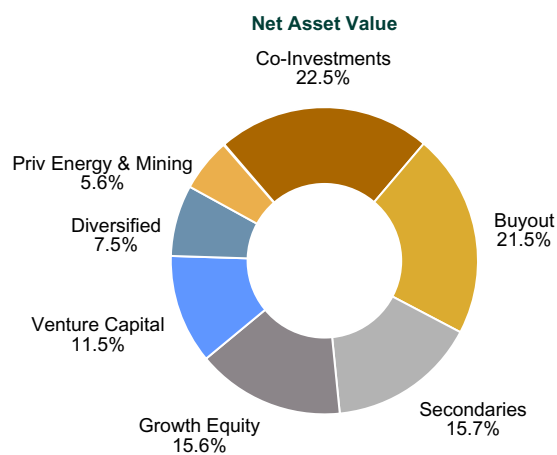
### Vintage Year Performance vs. Cambridge Private Equity



## Portfolio Diversification Total Private Equity Period Ended September 30, 2023

The following tables illustrate current and potential exposure by Strategy type as of September 30, 2023 in USD millions.

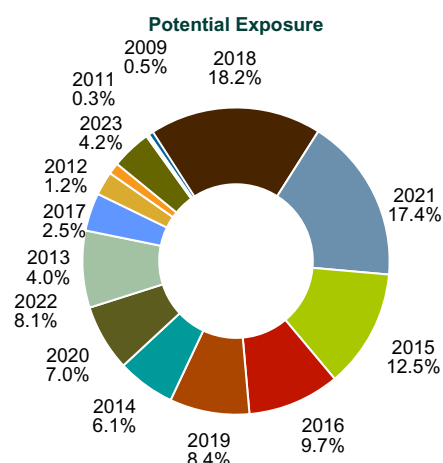
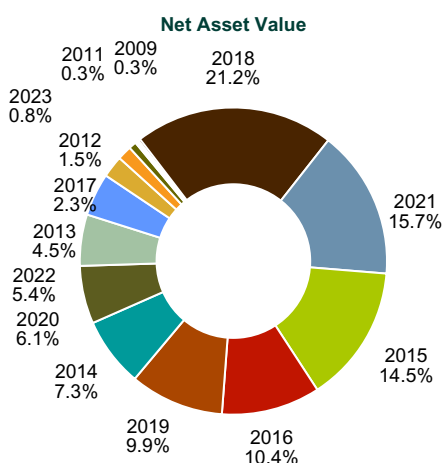
Portfolio Exposure by Strategy Type	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Co-Investments	\$374	22.47%	\$80	14.75%	\$454	20.57%
Buyout	\$358	21.52%	\$112	20.58%	\$470	21.29%
Secondaries	\$262	15.74%	\$150	27.62%	\$412	18.67%
Growth Equity	\$260	15.63%	\$71	13.07%	\$331	15.00%
Venture Capital	\$192	11.50%	\$35	6.46%	\$227	10.26%
Diversified	\$125	7.53%	\$70	12.91%	\$196	8.86%
Priv Energy & Mining	\$93	5.59%	\$25	4.60%	\$118	5.35%
<b>Total Private Equity</b>	<b>\$1,665</b>		<b>\$544</b>		<b>\$2,208</b>	



**Portfolio Diversification  
Total Private Equity  
Period Ended September 30, 2023**

The following tables illustrate current and potential exposure by Vintage Year as of September 30, 2023 in USD millions.

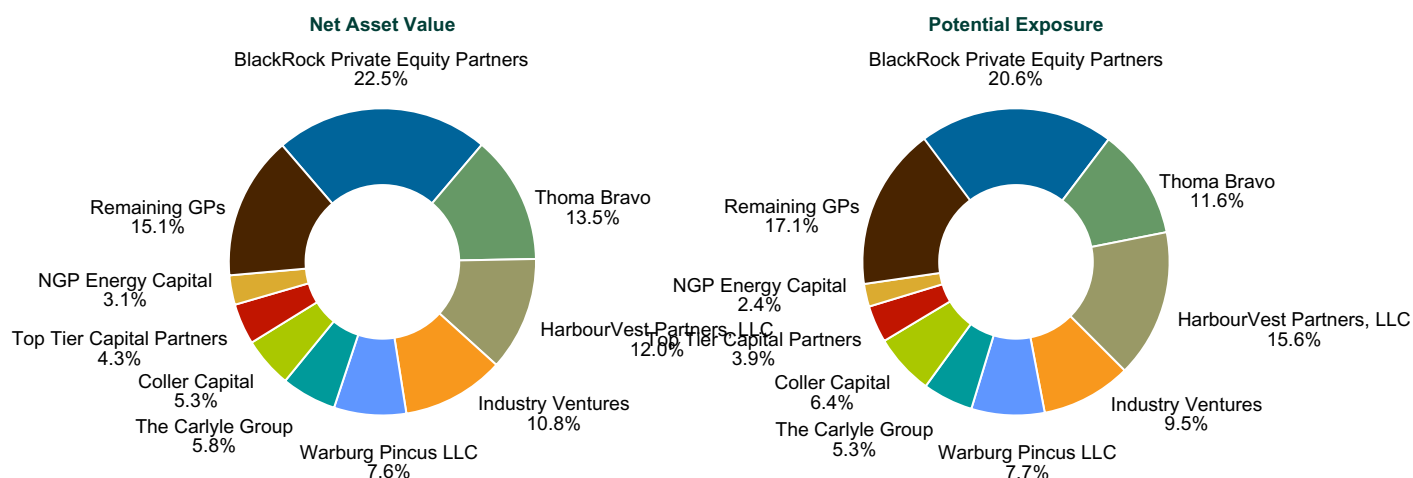
Portfolio Exposure by Vintage Year	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
2018	\$352	21.15%	\$50	9.17%	\$402	18.20%
2021	\$261	15.68%	\$123	22.67%	\$384	17.40%
2015	\$241	14.50%	\$35	6.40%	\$276	12.50%
2016	\$173	10.39%	\$41	7.48%	\$214	9.68%
2019	\$164	9.85%	\$21	3.79%	\$185	8.36%
2014	\$121	7.26%	\$13	2.37%	\$134	6.06%
2020	\$102	6.13%	\$52	9.49%	\$154	6.96%
2022	\$89	5.37%	\$90	16.47%	\$179	8.11%
2013	\$75	4.52%	\$14	2.52%	\$89	4.03%
2017	\$38	2.28%	\$18	3.26%	\$56	2.52%
2012	\$25	1.49%	\$1	0.13%	\$25	1.15%
2023	\$13	0.79%	\$79	14.58%	\$92	4.19%
2011	\$5	0.32%	\$2	0.42%	\$8	0.34%
2009	\$4	0.26%	\$7	1.25%	\$11	0.50%
<b>Total Private Equity</b>	<b>\$1,665</b>		<b>\$544</b>		<b>\$2,208</b>	



## Portfolio Diversification Total Private Equity Period Ended September 30, 2023

The following tables illustrate current and potential exposure by GP as of September 30, 2023 in USD millions.

Portfolio Exposure by GP	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
BlackRock Private Equity Partners	\$374	22.47%	\$80	14.75%	\$454	20.57%
Thoma Bravo	\$225	13.50%	\$32	5.93%	\$257	11.64%
HarbourVest Partners, LLC	\$200	12.02%	\$144	26.38%	\$344	15.56%
Industry Ventures	\$180	10.80%	\$30	5.48%	\$210	9.49%
Warburg Pincus LLC	\$126	7.58%	\$44	8.02%	\$170	7.69%
The Carlyle Group	\$97	5.84%	\$21	3.79%	\$118	5.34%
Coller Capital	\$89	5.34%	\$52	9.59%	\$141	6.39%
Top Tier Capital Partners	\$71	4.27%	\$15	2.82%	\$86	3.91%
NGP Energy Capital	\$51	3.07%	\$1	0.22%	\$52	2.37%
Apollo Global Management, Inc.	\$46	2.79%	\$45	8.27%	\$91	4.14%
The Edgewater Funds	\$40	2.42%	\$8	1.50%	\$48	2.19%
Pine Brook Partners	\$37	2.21%	\$7	1.26%	\$44	1.98%
Lexington Partners	\$33	2.00%	\$15	2.81%	\$49	2.20%
Kayne Anderson Capital Advisors LP	\$31	1.89%	\$6	1.16%	\$38	1.71%
Clearlake Capital	\$30	1.81%	\$21	3.89%	\$51	2.32%
RFE Investment Partners	\$16	0.97%	\$0	0.04%	\$16	0.74%
Actis	\$11	0.63%	\$18	3.22%	\$28	1.27%
SL Capital Partners	\$6	0.35%	\$-1	(0.09%)	\$5	0.24%
CCMP Capital Advisors	\$0	0.03%	\$5	0.95%	\$6	0.26%
<b>Total Private Equity</b>	<b>\$1,665</b>		<b>\$544</b>		<b>\$2,208</b>	



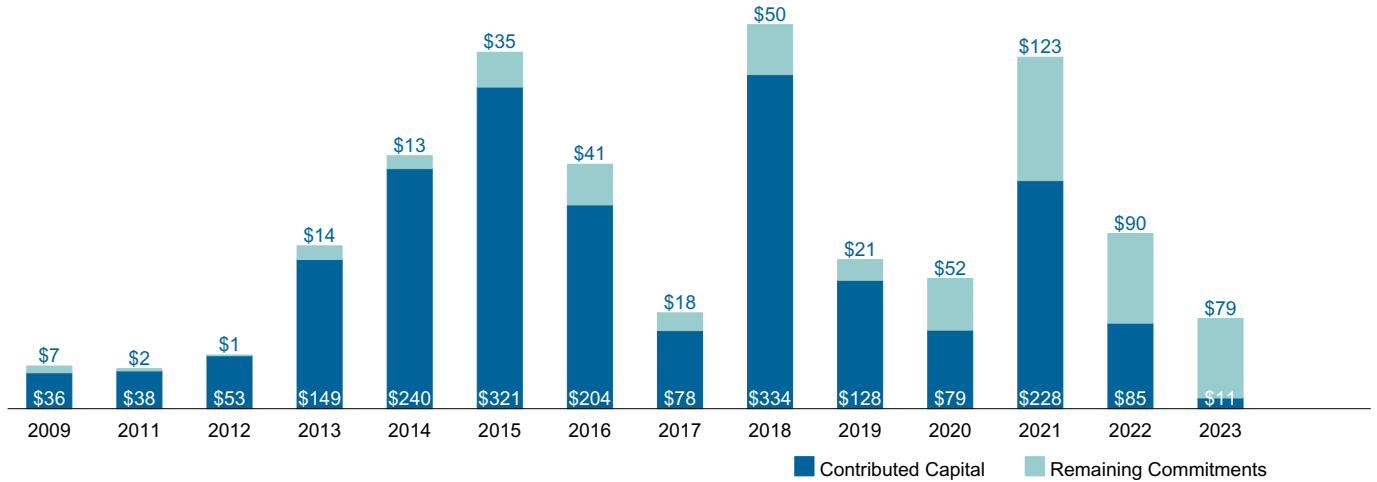
# Cash Flow Analysis

## Total Private Equity

### Period Ended September 30, 2023

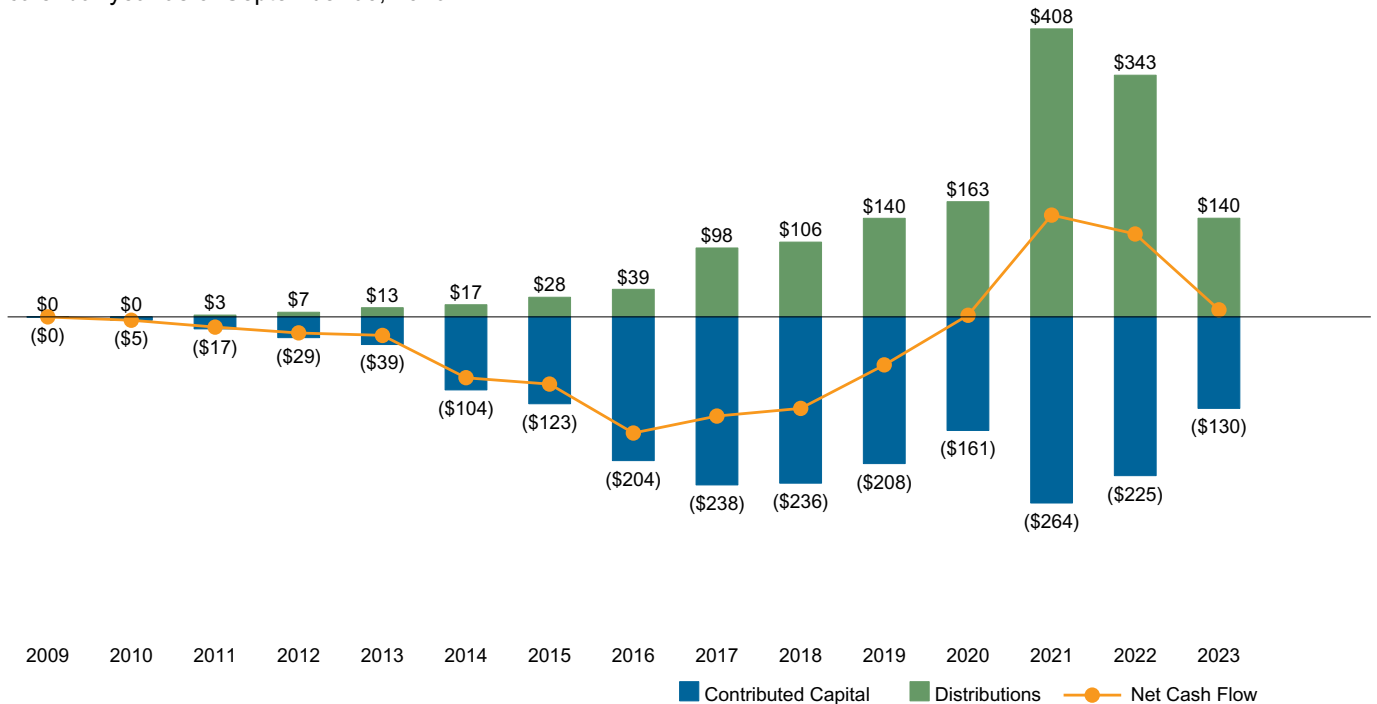
#### Contributed Capital and Unfunded Commitments

The following chart illustrates contributed capital and the unfunded commitments by vintage year, as of September 30, 2023 in USD millions. Vintage is defined as the clients first cash flow.



#### Cash Flow by Calendar Year

The following chart illustrates historical capital contributions made, distributions received and the resultant net cash flow by calendar year as of September 30, 2023.



# Callan

## **New Hampshire Retirement System**

Private Credit Program Review

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## Total Private Credit Portfolio Summary

### Portfolio Overview & History

New Hampshire Retirement System re-established the Direct Private Credit Program in 2011. The Direct Private Credit Program seeks to generate enhanced risk-adjusted investment returns over a long time horizon through targeted private credit primary partnership investments diversified by private credit strategy types. As of 09/30/2023 the private credit program has generated a net IRR of 4.91%, which ranks in the fourth quartile relative to the Refinitiv/Cambridge private credit database. There is less available peer performance data for the private credit universe, making peer group comparisons less meaningful than for private equity. However, the private credit performance to date is still lagging expectations. Underperformance has been principally driven by early allocations to distressed strategies. Most have which have significantly underperformed and are currently valued below cost. Core allocations to direct lending and multistrategy funds have performed well, generating net IRRs of 7.70% and 7.59% respectively.

	Net IRR	Quartile Rank	Net TVPI	Quartile Rank
NHRS Private Credit Portfolio	4.91%	4 <sup>th</sup>	1.16x	3 <sup>rd</sup>

### Quarterly Highlights & Portfolio Commentary

- The Direct Private Credit Program saw a \$5.3 million net cash outflow in the fourth quarter of 2023. During the quarter, \$31.9 million of capital contributions were made and \$37.2 million of distributions were received.
- The Direct Private Credit Program saw a \$12.2 million net cash outflow in the third quarter of 2023. During the quarter, \$11.6 million of capital contributions were made and \$23.9 million of distributions were received.

The value of the Private Credit Program increased \$11.1 million over the third quarter of 2023, net of quarterly cash flow.

### New Capital Commitments

One new private credit partnership was funded in 3Q 2023.

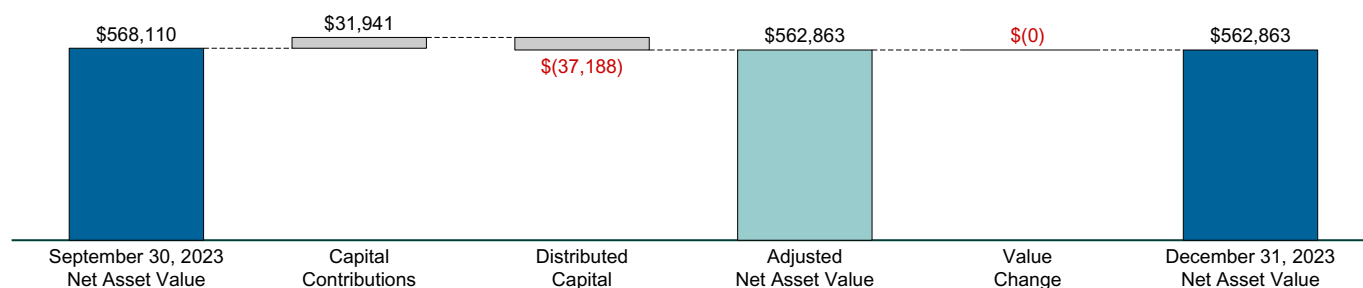
Quarterly Follow-On Commitment Activity	Strategy	Primary Geography	Commitment
Ares Pathfinder II	Specialty Finance	Global	\$75



## Total Private Credit Period Ended December 31, 2023

Quarterly Portfolio Flows \$(Thousands)	September 30, 2023	Quarterly Change	December 31, 2023
# Partnerships	30	0	30
# General Partners	15	0	15
Capital Committed	\$1,322,577	\$2,098	\$1,324,675
Capital Contributed	\$1,371,176	\$31,941	\$1,403,117
Unfunded Commitments	\$383,233	\$(19,175)	\$364,058
Distributed Capital	\$1,023,224	\$37,188	\$1,060,412
Recallable Distributions	\$431,638	\$10,669	\$442,307
Non-Recallable Distributions	\$591,586	\$26,519	\$618,105
Net Asset Value	\$568,110	\$(5,247)	\$562,863
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$1,591,335</b>	<b>\$31,941</b>	<b>\$1,623,276</b>

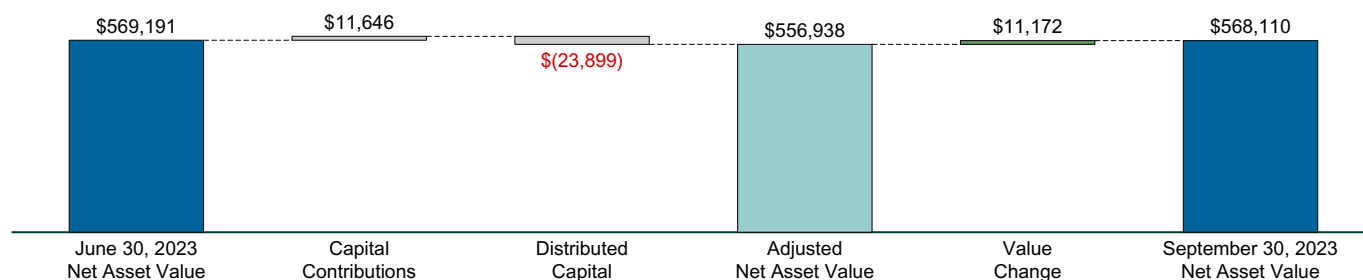
Ratios and Performance	September 30, 2023	Quarterly Change	December 31, 2023
Net Internal Rate of Return, Since Inception	4.91%	(0.12%)	4.79%
Total Value to Paid-in Capital (TVPI)	1.16x	(0.00x)	1.16x
Distributions to Paid-in Capital (DPI)	0.75x	0.01x	0.76x
Residual Value to Paid-in Capital (RVPI)	0.41x	(0.01x)	0.40x
% of Commitments Contributed	103.67%	2.25%	105.92%



## Total Private Credit Period Ended September 30, 2023

Quarterly Portfolio Flows \$(Thousands)	June 30, 2023	Quarterly Change	September 30, 2023
# Partnerships	29	1	30
# General Partners	14	1	15
Capital Committed	\$1,249,090	\$73,486	\$1,322,577
Capital Contributed	\$1,359,531	\$11,646	\$1,371,176
Unfunded Commitments	\$311,851	\$71,382	\$383,233
Distributed Capital	\$999,325	\$23,899	\$1,023,224
Recallable Distributions	\$422,097	\$9,542	\$431,638
Non-Recallable Distributions	\$577,229	\$14,357	\$591,586
Net Asset Value	\$569,191	\$(1,081)	\$568,110
<b>Total Distributed Capital and Net Asset Value</b>	<b>\$1,568,516</b>	<b>\$22,818</b>	<b>\$1,591,335</b>

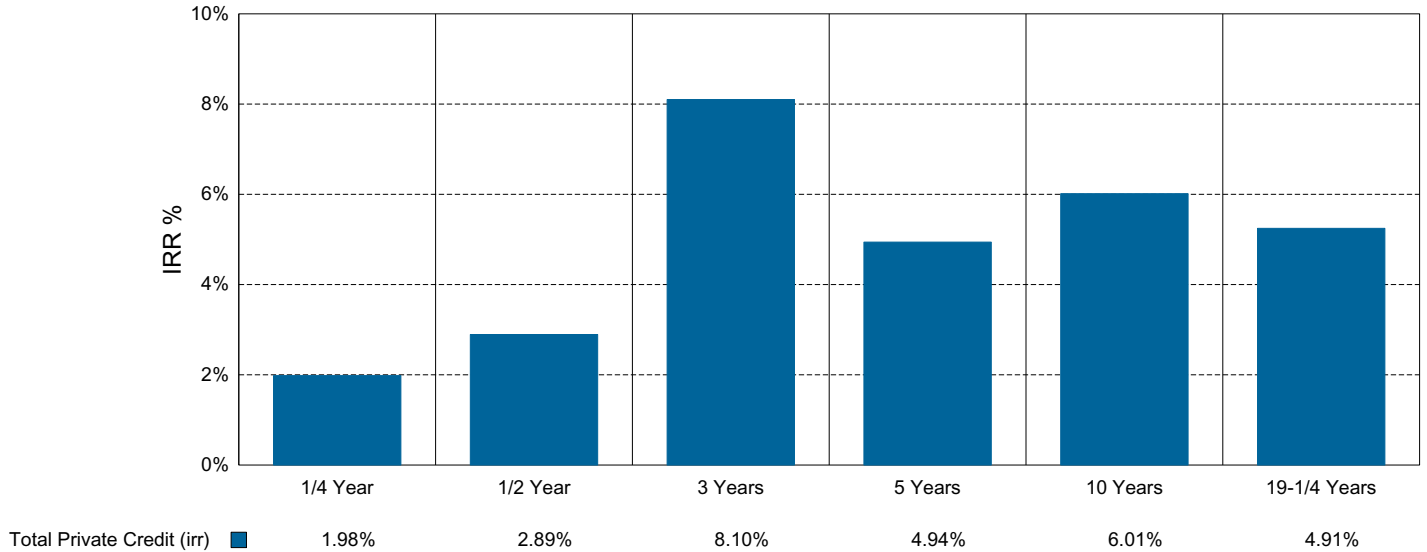
Ratios and Performance	June 30, 2023	Quarterly Change	September 30, 2023
Net Internal Rate of Return, Since Inception	4.83%	0.08%	4.91%
Total Value to Paid-in Capital (TVPI)	1.15x	0.01x	1.16x
Distributions to Paid-in Capital (DPI)	0.74x	0.01x	0.75x
Residual Value to Paid-in Capital (RVPI)	0.42x	(0.00x)	0.41x
% of Commitments Contributed	108.84%	(5.17%)	103.67%



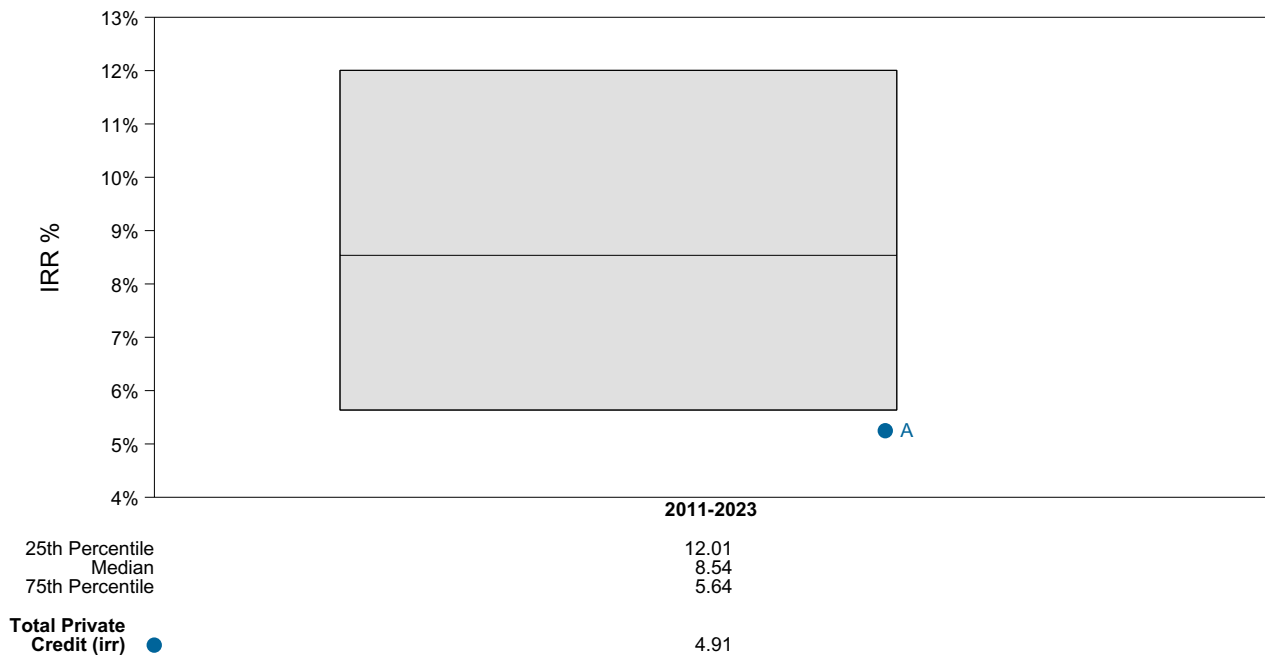
## Performance Analysis Total Private Credit

The first chart below compares the performance (internal rate of return) of the fund to its benchmarks over various time periods. The second chart displays the performance of the component investments of the fund by vintage year (inception) along with its benchmark returns.

### Cumulative Performance Periods Ended September 30, 2023



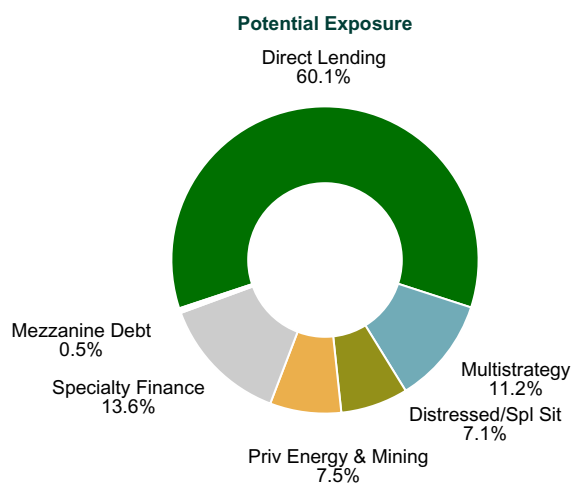
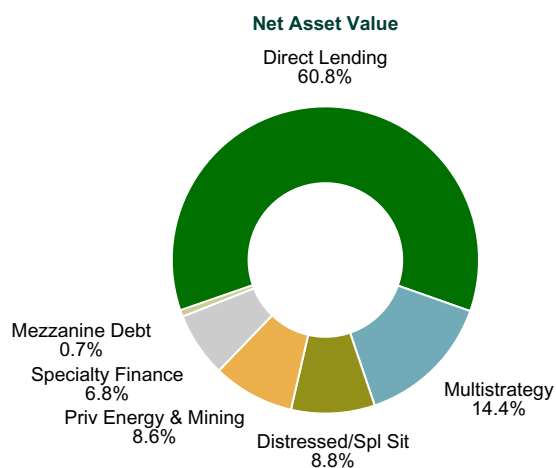
### Vintage Year Performance vs. Cambridge Private Debt



**Portfolio Diversification**  
**Total Private Credit**  
**Period Ended September 30, 2023**

The following tables illustrate current and potential exposure by Strategy type as of September 30, 2023 in USD millions.

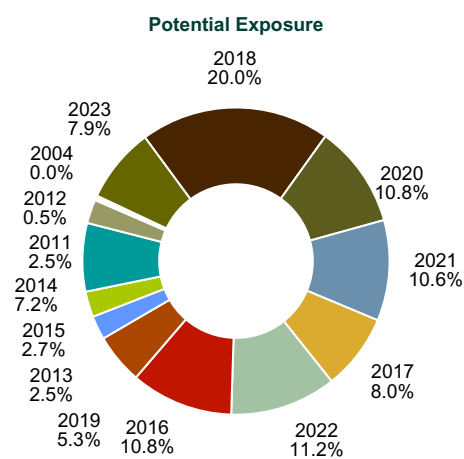
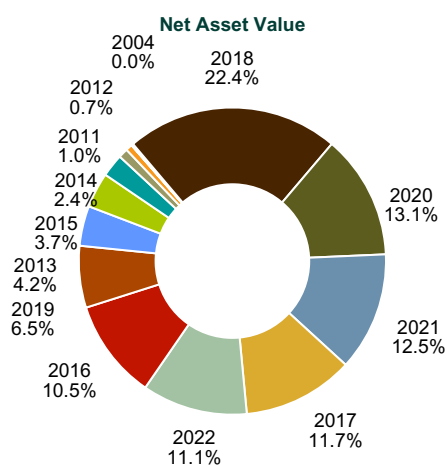
Portfolio Exposure by Strategy Type	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Direct Lending	\$345	60.79%	\$227	59.13%	\$572	60.12%
Multistrategy	\$82	14.36%	\$25	6.52%	\$107	11.20%
Distressed/Spl Sit	\$50	8.78%	\$18	4.71%	\$68	7.14%
Priv Energy & Mining	\$49	8.57%	\$22	5.87%	\$71	7.48%
Specialty Finance	\$38	6.76%	\$91	23.67%	\$129	13.57%
Mezzanine Debt	\$4	0.74%	\$0	0.09%	\$5	0.48%
<b>Total Private Credit</b>	<b>\$568</b>		<b>\$383</b>		<b>\$951</b>	



**Portfolio Diversification  
Total Private Credit  
Period Ended September 30, 2023**

The following tables illustrate current and potential exposure by Vintage Year as of September 30, 2023 in USD millions.

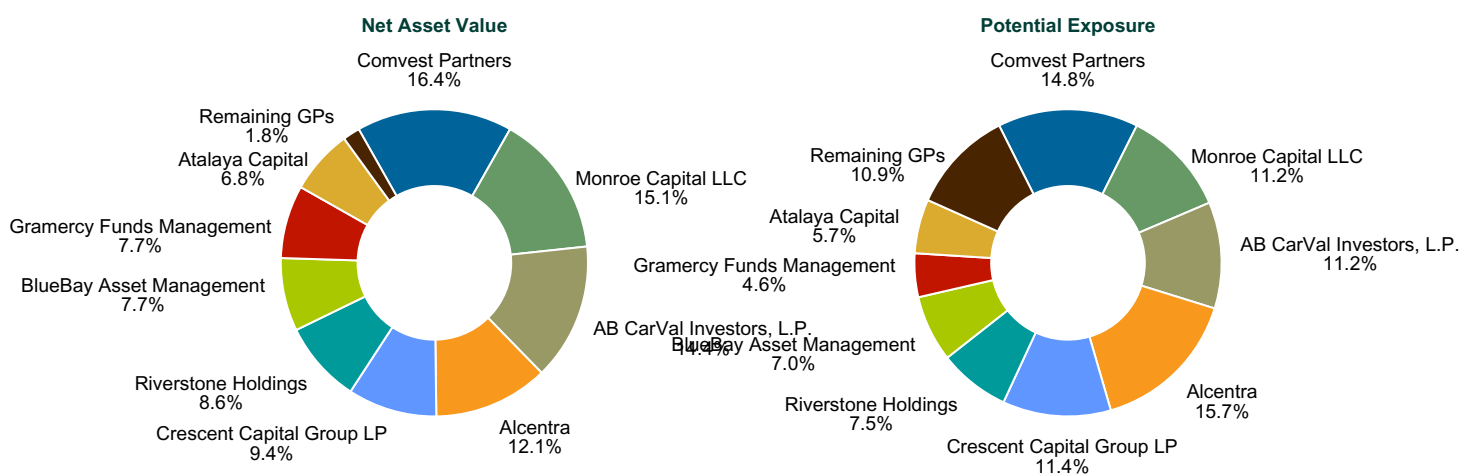
Portfolio Exposure by Vintage Year	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
2018	\$127	22.39%	\$63	16.46%	\$190	20.00%
2020	\$74	13.11%	\$28	7.40%	\$103	10.81%
2021	\$71	12.51%	\$30	7.79%	\$101	10.61%
2017	\$66	11.69%	\$10	2.60%	\$76	8.03%
2022	\$63	11.10%	\$43	11.28%	\$106	11.17%
2016	\$60	10.48%	\$43	11.23%	\$103	10.78%
2019	\$37	6.53%	\$13	3.50%	\$50	5.31%
2013	\$24	4.24%	\$0	0.00%	\$24	2.53%
2015	\$21	3.74%	\$4	1.10%	\$25	2.68%
2014	\$13	2.37%	\$55	14.26%	\$68	7.16%
2011	\$6	1.05%	\$18	4.71%	\$24	2.52%
2012	\$4	0.74%	\$0	0.09%	\$5	0.48%
2004	\$0	0.04%	\$-0	(0.00%)	\$0	0.03%
2023	\$0	0.00%	\$75	19.57%	\$75	7.88%
<b>Total Private Credit</b>	<b>\$568</b>		<b>\$383</b>		<b>\$951</b>	



## Portfolio Diversification Total Private Credit Period Ended September 30, 2023

The following tables illustrate current and potential exposure by GP as of September 30, 2023 in USD millions.

Portfolio Exposure by GP	Net Asset Value	%	Unfunded Commitments	%	Potential Exposure	%
Comvest Partners	\$93	16.38%	\$48	12.41%	\$141	14.78%
Monroe Capital LLC	\$86	15.14%	\$21	5.38%	\$107	11.21%
AB CarVal Investors, L.P.	\$82	14.36%	\$25	6.52%	\$107	11.20%
Alcentra	\$69	12.14%	\$80	20.94%	\$149	15.69%
Crescent Capital Group LP	\$53	9.39%	\$55	14.44%	\$109	11.42%
Riverstone Holdings	\$49	8.57%	\$22	5.87%	\$71	7.48%
BlueBay Asset Management	\$44	7.74%	\$23	5.97%	\$67	7.02%
Gramercy Funds Management	\$44	7.69%	\$0	0.00%	\$44	4.59%
Atalaya Capital	\$38	6.76%	\$16	4.10%	\$54	5.69%
Ironwood Capital Holdings LLC	\$4	0.74%	\$0	0.09%	\$5	0.48%
Siguler Guff & Company, LP	\$4	0.68%	\$2	0.44%	\$6	0.59%
Avenue Capital Group	\$2	0.35%	\$0	0.00%	\$2	0.21%
MatlinPatterson Asset Management	\$0	0.04%	\$-0	(0.00%)	\$0	0.03%
Tennenbaum Capital Partners	\$0	0.01%	\$16	4.27%	\$16	1.73%
Ares Management LLC	\$0	0.00%	\$75	19.57%	\$75	7.88%
<b>Total Private Credit</b>	<b>\$568</b>		<b>\$383</b>		<b>\$951</b>	



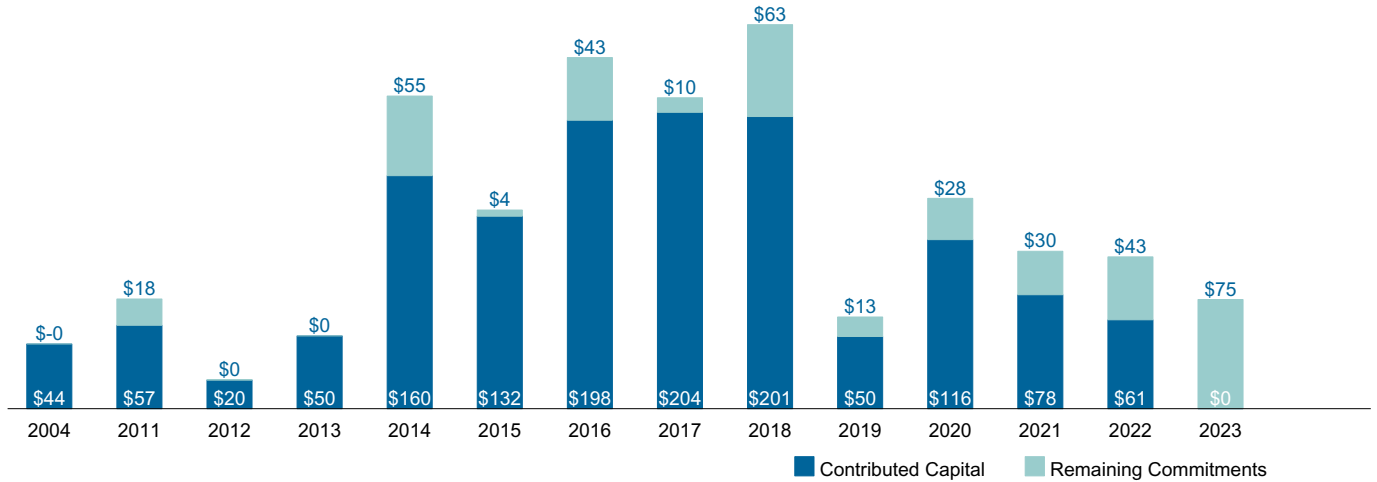
# Cash Flow Analysis

## Total Private Credit

### Period Ended September 30, 2023

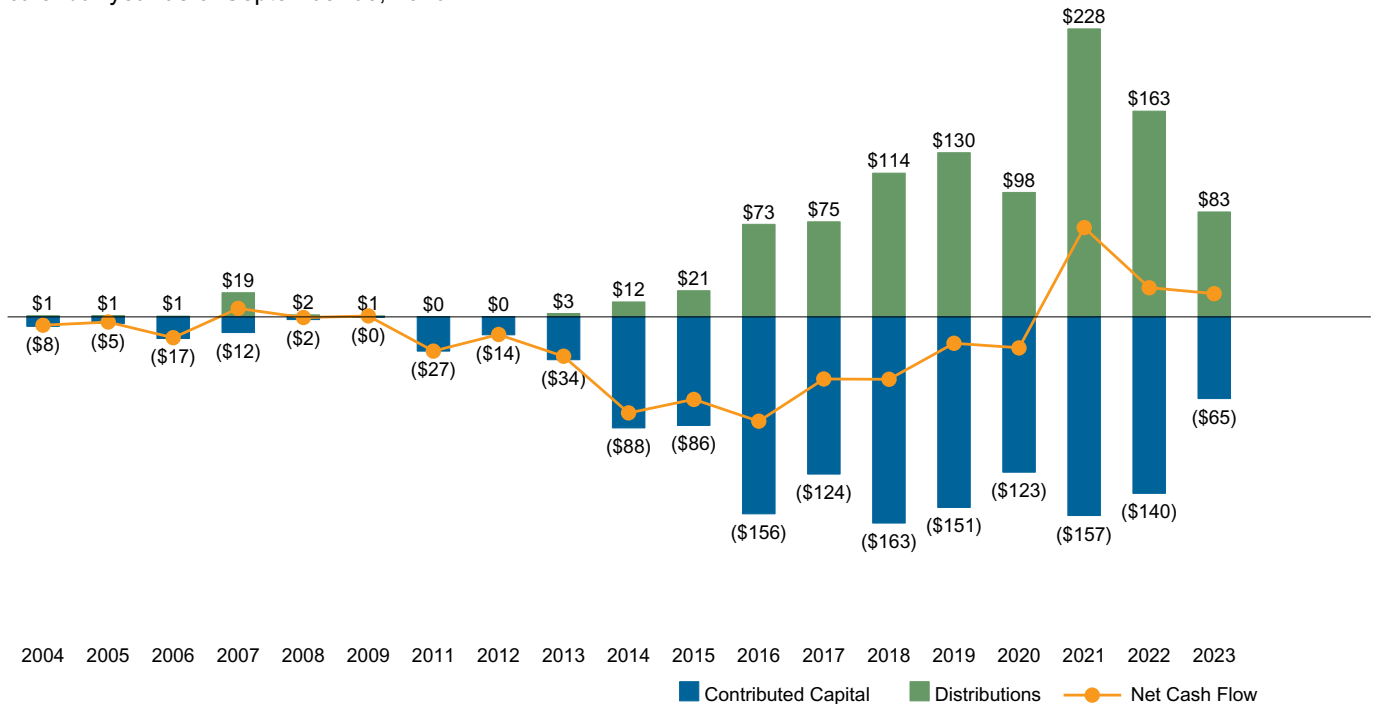
#### Contributed Capital and Unfunded Commitments

The following chart illustrates contributed capital and the unfunded commitments by vintage year, as of September 30, 2023 in USD millions. Vintage is defined as the clients first cash flow.



#### Cash Flow by Calendar Year

The following chart illustrates historical capital contributions made, distributions received and the resultant net cash flow by calendar year as of September 30, 2023.



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## Private Market Terms and Glossary

### General Terms

**Private Equity:** Refers to equity and equity-related investments in companies that are not quoted on the stock exchange. Investments are typically illiquid in nature. Ownership is typically accessed through limited partnership interests.

**Vintage Year:** The year in which a private equity partnership makes its first investment.

**J Curve Effect:** A common phenomenon associated with a developing private equity program where the return during the first several years can be moderately negative prior to larger positive returns developing (hence the “J” representation). The actual curve is depicted by plotting the return generated by a private equity fund against time (from inception to termination). In the early years of a developing program the payment of management fees out of drawn down capital does not produce an equivalent book value. Consequently, a private equity fund will initially show a negative return. For more detailed information on the “J-Curve Effect” ask to see Callan’s Whitepaper on the topic.

### Cash Flow and Valuation Definitions

**Commitment:** The amount of a limited partner’s obligation to a private equity fund.

**Capital Contribution:** The amount of the commitment that has been called by the general partner for company investments and also fees and expenses. Capital contributed is also referred to as paid-in capital.

**Recycling/Reinvestment and Recalable Cash Flows:** Private equity vehicles are usually characterized by the prohibition (unless stipulated by agreement) to reinvest proceeds or allow redemptions. This means that unless otherwise agreed to, private equity funds must distribute proceeds from investments to limited partners and cannot reinvest that capital. In some cases, distributions are “recalable”, that is, after the fund distributes proceeds to its investors, it can draw down the same capital again, which makes it possible for the fund to draw capital in excess of its total committed capital.

Distributions include both recalable and non-recalable distributions. This means that a recalable distribution must be treated as an actual distribution and, if and when that distribution is called again, it must be treated as additional paid-in capital but must not reduce unfunded commitments or change cumulative committed capital.

It should be noted that recalable distributions have an impact on the metric calculations. For example, this recalable feature means that cumulative paid-in capital can be higher than cumulative committed capital. It also means that, all other things being equal, the DPI, RVPI, and TVPI multiples will be lower for funds with recalable distributions as the denominator will be increased. It also means that the PIC multiple (paid-in capital to cumulative committed capital) will be higher for funds with recalable distributions, all other things being equal. *(Source: GIPS Guidance Statement on Private Equity, January 2011)*

**Distribution:** The returns of cash or securities that an investor in a private equity fund receives.

**Market Value or Net Asset Value (NAV):** The carrying value of the investments as determined by the general partner of a partnership in accordance with a limited partnership’s valuation policy.

### Major Components

#### Venture Capital

- **Seed Capital** – An initial investment funding a start-up company’s initial activities, such as business plan development, initial management and employee hiring, prototype development, and product beta testing



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## Private Market Terms and Glossary

- **Series A** – first round of institutional investment capital
  - **Series B** – second round of institutional investment capital
  - **Series C** – third round of institutional investment capital (*Source: VCExperts*)
- **Early Stage** – Funding a company typically subsequent to its seed stage that has a founding or core senior management team, has proven its concept or completed its beta test, has minimal revenues, and no positive earnings or cash flows. (*Source: VCExperts*)
  - **Later Stage** – Financing for the expansion of a company that is producing, shipping its product, and increasing its sales volume. Later stage funds often provide the financing to help a company achieve critical mass in order to position its shareholders for an exit event (e.g., an IPO or strategic sale of the company). (*Source: VCExperts*)

### Buyouts / Corporate Finance

- **Leveraged Buyout** – The acquisition of a company using a combination of equity and borrowed funds. Generally the target company's assets act as the collateral for the loans taken out by the acquiring group. The acquiring group then repays the loan from the cash flow of the acquired company. For example, a group of investors may borrow funds, using the assets of the company as collateral, in order to take ownership of a company. (*Source: VCExperts*)
- **Management Buyout** – A private equity firm will often provide financing to enable current operating management to acquire a significant stake in the business they manage, along with the private equity firm providing significant equity and arranging other financing. (*Source: VCExperts*)
- **Categorizations of Buyout Funds by Fund Size:**

Small Buyout	(\$0 to \$1 billion)
Medium Buyout	(\$1 billion to \$3 billion)
Large Buyout	(\$3 billion to \$7 billion)
Mega Buyout	(\$7 billion +)

**Mezzanine (Subordinated Debt):** An investment strategy that involves providing capital or financing that is below the senior debt and above the equity in terms of liquidation priority. Mezzanine is analogous to private high yield debt and typically includes preferred stock and warrants. The majority of return is provided through coupon payments and equity rights typically increase the return. Mezzanine debt is commonly structured as part of a Buyout transaction.

**Distressed Debt:** Investing in corporate bonds of companies that have either filed for bankruptcy or appear likely to do so in the near future. The strategy of distressed debt involves first becoming a major creditor of the target company by buying up a company's bonds at a deep discount to par. Securing a position as a key creditor allows for influence regarding the plan for reorganization of the company. In the event of liquidation distressed debt investors have a senior position to the equity holders for priority of repayment and normally recover the full par value of debt securities. Usually a reorganization allows the company to avoid or emerge from bankruptcy protection. In some instances distressed debt firms convert the debt obligations to equity in the company, and gain majority control of the newly capitalized business. (*Source: VCExperts*)

**Secondary Investing:** There is a private equity secondary market where investors in private equity funds can privately negotiate the sale of their interest(s) to a new buyer. Secondary funds are vehicles which buy (invest in)

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## Private Market Terms and Glossary

secondary partnership interests purchased from pre-existing investors. Usually secondary purchases are made at a discount to the partnerships' stated valuation.

**Fund-of-Funds:** A vehicle established to invest in a diversified portfolio of private equity partnerships over a period of several vintage years. The underlying partnerships in turn invest the capital in companies. Investing in fund-of-funds can help spread the risk of investing in private equity because they invest the capital in a variety of funds and provide diversification by general partner, industry, geography, time and strategy. Fund-of-funds are specialist private equity investors and have existing relationships with general partner firms. Fund-of-funds may be able to provide investors with a route to investing in partnerships that would otherwise not be available to them. (*Source: VCExperts*)

### Performance Metrics

**DPI** = Distributions as a ratio of (divided by) paid-in capital (notionally a DPI ratio of 0.60 means that 60 cents has been distributed back to investors for every dollar contributed).

**RVPI** = Residual Value (NAV) as a ratio of (divided by) paid-in capital (notionally a RVPI ratio of 0.70 means that the remaining investment(s) is currently valued at 70 cents for every dollar contributed).

**TVPI** = Total Value (Distributions + Net Asset Value) as a ratio of (divided by) paid-in capital. Notionally a TVPI ratio of 1.30 means that the investment has created a total gain of 30 cent for every dollar contributed. TVPI is composed of both returned capital and residual value (e.g., DPI of 0.60 + RVPI of 0.70 = TVPI of 1.30).

**Public Market Equivalent (PME) TVPI:** A TVPI calculated by applying the called capital and distributed capital of the private equity investment as an equivalent purchase and sale of the chosen benchmark. The calculated net asset value (NAV) is then used to calculate the benchmark's RVPI, which is subsequently added to the investors actual DPI to get a benchmark TVPI. The figure is intended to evaluate the investor's total value if they had moved money in and out of the chose benchmark instead of the partnership.

**Internal Rate of Return (IRR):** The CFA Institute GIPS approved methodology to calculate return performance of private equity investments. The IRR calculates the rate of return since inception (implied interest rate earned) of an investment based on the amount and timing of capital contributions (money invested), distributions (money returned from investments), and the current unrealized value of investments. The IRR is a capital- or dollar-weighted calculation and accounts for the timing and size of flows. IRR differs from the time-weighted return (TWR) calculation employed with equity and fixed income investments, where a series of interim period (e.g., quarterly) returns are linked together in an equal-weighted manner to derive a percentage return unaffected by cash flows.

**Public Market Equivalent (PME) IRR:** An internal rate of return (IRR) calculated by applying the called capital and distributed capital of the private equity investment as an equivalent purchase and sale of the chosen benchmark. The calculated net asset value (NAV) is then used to calculate the benchmark's IRR. The figure is intended to evaluate the investor's return if they had moved money in and out of the chose benchmark instead of the partnership.

**Cash Yield:** Quarter's Distributed capital change divided by the quarter's beginning Net Asset Value. It values the percentage of realized appreciation/depreciation embedded in the NAV. For example, a cash yield of 5% means every dollar of residual value (NAV) has paid 5 cents to the investor this quarter.

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## Private Market Terms and Glossary

**\$ Unrealized Appreciation/ Depreciation** = Quarter's Total Value change minus the quarter's Distribution capital change minus the quarter's Paid-In capital change. The dollar amount values the unrealized appreciation/depreciation embedded in the Net Asset Value.

**% Unrealized Appreciation/ Depreciation** = Unrealized Appreciation/ Depreciation in dollars divided by the quarter's starting Net Asset Value. It values the percentage of unrealized appreciation/depreciation embedded in the NAV. For example, unrealized appreciation of 2% means every dollar of residual value (NAV) has a gain of 2 cents that has yet to be paid to investors.

**\$ Total Valuation Change** = Quarter's Distributed capital change minus the quarter's Paid-In capital during the quarter plus the quarter's change in Net Asset Value. It values the total dollar amount of both realized and unrealized gains/ losses that the investor received over the quarter.

**% Total Valuation Change** = Total Valuation Change in dollars divided by the quarter's starting Net Asset Value. It values the percentage of both realized and unrealized gains/ losses that the investor received over the quarter. For example, total valuation change of 4% means every dollar of residual value (NAV) has a gain of 4 cents of which a portion has and a portion has not been paid to investors.

### Database Metrics

**Pooled IRR:** An IRR calculation that treats a database of multiple private equity partnerships (such as Thomson Reuters/Cambridge) as a single portfolio. The initial flow in the calculation represents the total market value of the database (if any). The subsequent cash inflows and outflows are incorporated, and the final cash flow is the ending valuation of the database holdings.

**TVPI Quartile:** Drawn from a database of multiple private equity partnerships, the quartile is a breakpoint return that separates the partnerships' TVPIs in a selected sample into 25% increments ranked from highest to lowest, e.g. 1<sup>st</sup> quartile is the highest 25% performing funds. Members may be separated into by specific vintage years and strategies.

**IRR Quartile:** Drawn from a database of multiple private equity partnerships, the quartile is a breakpoint return that separates the partnerships' IRRs in a selected sample into 25% increments ranked from highest to lowest, e.g. 1<sup>st</sup> quartile is the highest 25% performing funds. Members may be separated into by specific vintage years and strategies.

## List of Callan’s Investment Manager Clients

Confidential – For Callan Client Use Only

Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager’s business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan’s ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan’s Compliance department.

Manager Name
abrdn
ABS Global Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AEW Capital Management, L.P.
AllianceBernstein
Allspring Global Investments, LLC
Altrinsic Global Advisors, LLC
American Century Investments
Amundi US, Inc.
Antares Capital LP
Apollo Global Management, Inc.
AQR Capital Management
Ares Management LLC
Ariel Investments, LLC
Aristotle Capital Management, LLC
Atlanta Capital Management Co., LLC

Manager Name
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
Belle Haven Investments L.P.
BentallGreenOak
Beutel, Goodman & Company Ltd.
BlackRock
Blackstone Group (The)
Blue Owl Capital, Inc.
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brookfield Asset Management Inc.
Brown Brothers Harriman & Company

**Manager Name**

Brown Investment Advisory &amp; Trust Company

Capital Group

CastleArk Management, LLC

CIBC Asset Management Inc.

ClearBridge Investments, LLC

Cohen &amp; Steers Capital Management, Inc.

Columbia Threadneedle Investments NA

Comvest Partners

Covenant Capital Group

CQS

Credit Suisse Asset Management, LLC

D.E. Shaw Investment Management, LLC

DePrince, Race &amp; Zollo, Inc.

Diamond Hill Capital Management, Inc.

Dimensional Fund Advisors L.P.

Doubleline

DWS

EARNEST Partners, LLC

Fayez Sarofim &amp; Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Eagle Investment Management, LLC

First Hawaiian Bank Wealth Management Division

First Sentier Investors

Fisher Investments

Franklin Templeton

Fred Alger Management, LLC

GAM (USA) Inc.

GlobeFlex Capital, L.P.

GoldenTree Asset Management, LP

Goldman Sachs

Golub Capital

Guggenheim Investments

GW&amp;K Investment Management

Harbor Capital Advisors

Harding Loevner LP

Hardman Johnston Global Advisors LLC

Heitman LLC

Hotchkis &amp; Wiley Capital Management, LLC

**Manager Name**

Impax Asset Management LLC

Income Research + Management

Insight Investment

Intech Investment Management LLC

Intercontinental Real Estate Corporation

Invesco

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

KeyCorp

Kohlberg Kravis Roberts &amp; Co. L.P. (KKR)

Lazard Asset Management

LGIM America

Lincoln National Corporation

Longview Partners

Loomis, Sayles &amp; Company, L.P.

Lord, Abbett &amp; Company

LSV Asset Management

MackKay Shields LLC

Macquarie Asset Management (MAM)

Manulife Investment Management

Marathon Asset Management, L.P.

MetLife Investment Management

MFS Investment Management

MidFirst Bank

Mondrian Investment Partners Limited

Montag &amp; Caldwell, LLC

Morgan Stanley Investment Management

MUFG Union Bank, N.A.

Natixis Investment Managers

Neuberger Berman

Newton Investment Management

Northern Trust Asset Management

Nuveen

Oaktree Capital Management, L.P.

P/E Investments

Pacific Investment Management Company

Pantheon Ventures

Parametric Portfolio Associates LLC

**Manager Name**

Partners Group (USA) Inc.

Pathway Capital Management, LP

PFM Asset Management LLC

PGIM DC Solutions

PGIM Fixed Income

PGIM Quantitative Solutions LLC

Pictet Asset Management

PineBridge Investments

Polen Capital Management, LLC

Pretium Partners, LLC

Principal Asset Management

Putnam Investments, LLC

Raymond James Investment Management

RBC Global Asset Management

Regions Financial Corporation

Robeco Institutional Asset Management, US Inc.

Rockpoint

S&amp;P Dow Jones Indices

Sands Capital Management

Schroder Investment Management North America Inc.

Segall Bryant &amp; Hamill

SLC Management

Smith Graham &amp; Co. Investment Advisors, L.P.

State Street Global Advisors

**Manager Name**

Strategic Global Advisors, LLC

T. Rowe Price Associates, Inc.

TD Global Investment Solutions – TD Epoch

The Carlyle Group

The TCW Group, Inc.

Thompson, Siegel &amp; Walmsley LLC

Top Tier Capital Partners

Tri-Star Trust Bank

Turning Rock Partners, L.P.

UBS Asset Management

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management

Voya

Walter Scott &amp; Partners Limited

WCM Investment Management

Wellington Management Company, LLP

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair &amp; Company LLC

Xponance, Inc.

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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.

# New Hampshire Retirement System

## ADJUSTED ENDING VALUE WITH TVPI, DPI & RVPI As of 12/31/2023

NHRS - Real Estate

Base Currency: USD

Investment	Commitment	Vintage Year	Contributions	Distributions	Valuation				Performance			
			Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI
<b>New Hampshire Retirement System</b>												
Alm na Realty Securities (ARS) VII Sidecar	14,965,000	2018										
Alm na Realty Securities VII LP	20,000,000	2014										
Alm na Realty Securities VIII LP	20,000,000	2018										
Alterra IOS Venture II	20,000,000	2022										
Are Industrial Real Estate Fund LP	25,000,000	2020										
Asana Real Estate Partners I	20,000,000	2016										
Asana Real Estate Partners III	20,000,000	2022										
Berkshi e Bridge Loan Investors II	8,055,600	2021										
Berkshi e MF Income	20,000,000	2015										
Bozzuto Capital Partners II, LLC	22,400,000	2011										
Bridge Logistics US Venture I LP	20,400,000	2022										
Bridge Logistics US Venture II	12,875,000	2023										
Broadview Real Estate Partners LP	20,000,000	2018										
Brockton Capital II	8,502,916	2010										
Brookfield Premier Real Estate Partners	60,000,000	2016										
BRV Pa tners I	8,420,000	2015										
Bryanston Retail Opportunity Fund	7,000,000	2005										
Buckingham Multifamily Fund I	14,810,000	2018										
Buckingham Multifamily Fund II	12,242,991	2022										
Caprock Partners Industrial Co-Investment Fund III	13,233,333	2020										
Carlyle Property Investors	15,981,000	2016										
Car oll Fund V Bedrock Sidecar	8,860,000	2017										
Car oll Multifamily Real Estate Fund VI LP	20,000,000	2019										
Car oll Multifamily Real Estate VII	20,000,000	2021										
Car oll Multifamily Real Estate Fund V LP	15,960,000	2017										
Cinespace Studio Venture	14,206,788	2023										
CITIC Capital China Retail Properties Investment Fund LP	15,000,000	2011										
Cla ion Lion Properties Fund	14,699,339	2021										
Cor land Growth & Income Fund	20,000,000	2018										
Cro sbay Townsend Feeder	17,088,936	2020										
Dream U.S. Industrial Fund	30,000,000	2021										
Fortress Japan Opportunity Fund I	6,490,282	2010										
Fortress Japan Opportunity Fund II	5,174,641	2011										
Fortress Japan Opportunity Fund IV	8,625,000	2018										
Fortress Japan Residential Co-Investment	20,000,000	2017										



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			Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI
<b>New Hampshire Retirement System</b>												
Gerrity Retail II	20,000,000	2015										
GID Mainstay Fund	40,000,000	2022										
Grammy Property EUR IV Townsend Feeder Limited	19,426,441	2019										
Greenfield Partners	9,000,000	2013										
Greenfield VII	13,500,000	2015										
Greysta Growth And Income Fund LP	11,564,013	2017										
H/2 SOF III	20,000,000	2015										
H2 Special Opportunities II	10,000,000	2010										
Hancock US Real Estate Fund LP	30,000,000	2019										
Heitman Asia-Pacific Property Fund	15,000,000	2018										
HSRE Quad V	20,000,000	2015										
IG S Asia Data Center 2	9,416,196	2023										
Jadison IOS Fund 1-A	16,160,310	2023										
Jadison IT AIV POV I LP	14,194,123	2022										
Jadison Real Estate Fund I	20,000,000	2020										
Jamestown Premier Property Fund	40,000,000	2011										
JP Morgan Strategic Property Fund	40,000,000	2010										
Kayne Anderson Core Real Estate LP	36,030,000	2017										
Lion Industrial Trust	30,000,000	2012										
Lone Star Fund V	8,100,000	2005										
MetLife Core Property Fund LP	85,000,000	2013										
Noble Hospitality Fund IV- SSCIV	12,500,000	2020										
Oaktree Real Estate Opportunities Fund VIII LP	20,000,000	2020										
Prime Property Fund LLC	40,000,000	2010										
Prosperitas Real Estate Partners III	10,000,000	2010										
Resmark-Townsend Model Home Leaseback	11,818,182	2021										
Rockpoint Real Estate Fund III, L.P.	6,646,661	2011										
Slate Canadian Real Estate Opportunities Fund I (SCREO)	11,527,378	2018										
Slate Canadian Real Estate Opportunities Fund II (SCREO)	21,234,643	2020										
SL European Real Estate Club II	20,870,017	2015										
Smart Markets Fund	30,273,946	2013										
TTG Freid Feeder	18,612,080	2022										
Unico Core Plus Partners LP	20,000,000	2019										
VBI Brazil Real Estate Opportunities II	15,000,000	2011										

# New Hampshire Retirement System

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			Funding	Cumulative Distributions	Valuation Date	Reported Valuation	Adjustments	Adjusted Valuation	IRR	TVPI	DPI	RVPI
<b>New Hampshire Retirement System</b>												
Waterton Residential Property Venture XI	20,000,000	2010										
Wo ff C edit Partners II LP	20,000,000	2017										
Wo ff C edit Partners III LP	20,000,000	2021										
<b>Total: Real Estate</b>	<b>72</b>											<b>1,405,864,815</b>