♥NORWALK

To: Norwalk Municipal Employees' Food Service Committee of the Pension Board

From: Tina Fogell, Chief Human Resources Officer

Date: September 8, 2023

Subject: Food Services Committee – Wednesday, September 13, 2023 – Hybrid Meeting

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A meeting of the Norwalk Municipal Employees' Pension Board's Food Services Committee will be held on **Wednesday, September 13, 2023 at 5:55pm,** via zoom / Room 220.

To allow public access, anyone may access a meeting by telephone, Zoom, and/or the City of Norwalk YouTube channel. Specific instructions and links can be found at norwalkct.org/meetings

AGENDA

1. Call to Order and Approval of Minutes for April 12, 2023
2. Approval of Food Services Pension Applications
3. Adjourn

cc: Mayor Harry Rilling
Irene Dixon, City Clerk
Steven Browning, Food Services Pension

CITY OF NORWALK
NORWALK MUNICIPAL EMPLOYEES PENSION BOARD
FOOD SERVICES COMMITTEE
REGULAR MEETING
APRIL 12, 2023
VIA TELECONFERENCE

ATTENDANCE: Frank Nash, Chair; Richard Baskin, James Hendrickson, Charles Pirro

OTHERS: Chitsamay Lam, Comptroller; Geri DiStefano, Benefits Manager; Tina Fogell

CALL TO ORDER

The meeting was called to order at 6:25 p.m.

Approval of Minutes – December 14, 2022

** MR. HENDRICKSON MOVED TO APPROVE MINUTES OF THE MEETING OF DECEMBER 14, 2022 AS PRESENTED.
** MR. PIRRO SECONDED THE MOTION.
** MOTION PASSED UNANIMOUSLY.

Ms. DiStefano presented the following pension application:

APPROVAL OF FOOD SERVICE PENSION APPLICATIONS
Meeting of: April 12, 2023

Name	Years of Service	Age	Type of Pension	Option Selected
Mercede Mancusi Board of Education Cafeteria Worker Commencement Date	15 Years, 0 Months January 1, 2023	58	Early	Standard

** MR. PIRRO MOVED TO APPROVE THE PENSION AS PRESENTED.
** MR. HENDRICKSON SECONDED THE MOTION.
** MOTION PASSED UNANIMOUSLY.

** MR. HENDRICKSON MOVED TO ADJOURN THE MEETING.
** MR. PIRRO SECONDED THE MOTION.
** MOTION PASSED UNANIMOUSLY.

The meeting was adjourned at 6:30 p.m.

Respectfully Submitted,

M. Knox
Telesco Secretarial Services.

APPROVAL OF PENSION APPLICATIONS

MEETING OF: September 13,2023

FOOD SERVICE

Name	Years of Service	Type of Pension	Option Selected
Felicia Best Board of Education Cafeteria Worker Commencement date	16 Years, 6 months 06/02/2023	Early	Option III
Niem Soccie Board of Education Cafeteria Worker Commencement date	21 years, 8 months 06/17/2023	Normal	Standard Form

I♥NORWALK

To: Norwalk Municipal Employees' Pension Board

From: Tina Fogell, Chief Human Resources Officer

Date: September 8, 2023

Subject: Pension Board Meeting – Wednesday, September 13, 2023 - Hybrid meeting

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A meeting of the Norwalk Municipal Employees' Pension Board will be held on **Wednesday, September 13, 2023 at 6:00 p.m.,** via zoom / Room 220.

To allow public access, anyone may access a meeting by telephone, Zoom, and/or the City of Norwalk YouTube channel. Specific instructions and links can be found at norwalkct.org/meetings

AGENDA

1. Call to Order and Approval of Minutes from June 14, 2023
2. Public Comments
3. Approval of Pension Applications
4. UBS Portfolio Review
5. Performance Review
6. Adjourn

Next meeting scheduled for October 11, 2023.

cc: Mayor Harry Rilling
Irene Dixon, City Clerk
Britton Murdoch, Callan Associates Inc.
Kevin Schmidt, Callan Associates Inc.
Billy Ireland, Fire Union President
Al Palumbo, NASA President

CITY OF NORWALK
NORWALK MUNICIPAL EMPLOYEES PENSION BOARD
REGULAR MEETING
JUNE 14, 2023

VIA TELECONFERENCE

ATTENDANCE: Frank Nash, Chair; Charlie Pirro, Eileen Romeo, Richard Baskin, James Hendrickson, Dave Pramer

OTHERS: Tina Fogell, Chief Human Resource Officer; Britton Murdoch, Callan LLC; Kevin Schmidt, Callaen LLC, Scott Kemper, LSV

CALL TO ORDER

Mr. Nash called the meeting to order at 6:10 p.m. A quorum was present.

APPROVAL OF MINUTES

- **May 10, 2023**

**** MR. PIRRO MOVED TO APPROVE THE MINUTES OF THE MAY 10, 2023 MEETING.**
**** MR. BASKIN SECONDED.**
**** THE MOTION TO APPROVE THE MINUTES OF THE MAY 10, 2023 MEETING AS PRESENTED PASSED UNANIMOUSLY.**

PUBLIC COMMENT

There was no one present who wished to comment at this time.

Mr. Nash said that the Disability Board had met earlier in the day and approved two disability pensions.

**** MR. PIRRO MOVED TO APPROVE THE TWO DISABILITY PENSIONS AS PRESENTED.**
**** MR. HENDRICKSON SECONDED.**
**** THE MOTION TO APPROVE THE TWO DISABILITY PENSIONS AS PRESENTED PASSED UNANIMOUSLY.**

APPROVAL OF PENSION APPLICATIONS

NAME	YEARS OF SERVICE	PENSION	OPTION

Charles Horner	**19 Years, 7 Months**	**Regular**	**Standard**
Daryl Sheppard	**13 Years, 2 Months**	**Early**	**Option III**

Ms. Fogell presented the details of the two pension applications.

**** MR. BASKIN MOVED TO APPROVE THE FOLLOWING PENSIONS:**

NAME	YEARS OF SERVICE	PENSION	OPTION
CHARLES HORNER	19 YEARS, 7 MONTHS	REGULAR	STANDARD
DARYL SHEPPARD	13 YEARS, 2 MONTHS	EARLY	OPTION III

**** MR. PIRRO SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

DISCUSSION AND DECISION REGARDING PENSION PLAN CONSULTING SERVICES CONTRACT BASED UPON RFP 4028

Mr. Nash said that the Committee had completed a search for consulting services and that the Board has decided to rehire Callan for a 4-year period with an additional 1 year extension option. ~~the new contract would run for five years~~.

**** MR. BASKIN MOVED TO APPROVE THE RECOMMENDED PENSION PLAN CONSULTING SERVICES CONTRACT BASED UPON RFP 4028.**
**** MR. HENDRICKSON SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

LSV PRESENTATION

~~The representative~~Mr. Kemper from LSV came forward and said that the company had celebrated their 20th anniversary with the City in March. He updated the Board regarding some personnel changes in the LSV staff and then proceeded to narrate the presentation. Questions and comments from the Board members were fielded through the presentation.

PERFORMANCE REVIEW

~~Mr. Murdoch reviewed the overall LSV small cap and large cap performances.~~

Mr. Schmidt gave an overview of the April 2023 ~~performance~~market environment.

Mr. Murdoch reviewed the asset ~~allocating and stated that they would be liquidating Blackstone. There was a partial redemption for Pimco recently~~allocation and performance as of 4/30/23. Questions and comments from the Board members were fielded through the presentation.

CITY CONTRIBUTION REINVESTMENT

Mr. Murdoch said that he had spoken with Ms. Lam and reported to the Board that Ms. Lam would need 10 million for benefit payment ~~to bring her through to~~through September. Mr. Murdoch presented Callan's investment proposal for the City's Pension contribution in July. Mr. Murdoch suggested that the Board invest $8.6 million into the BlackRock Russell 1000 Index Fund and leave $5 million in cash and use $5 million from the Blackstone redemption ~~of $22.5 million~~ that is expected to arrive in July to pay benefit payments. Discussion followed.

**** MR. PIRRO MOVED TO ~~HOLD $10 MILLION IN CASH AND~~ ALLOCATE $8.6 MILLION OF THE CITY'S CONTRIBUTIONINTO THE BLACKROCK RUSSELL 1000 INDEX FUND.**
**** MR. BASKIN SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

ADJOURNMENT

**** MR. PRAMER MOVED TO ADJOURN.**
**** MR. PIRRO SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

The meeting adjourned at 7:28 p.m.

Respectfully submitted,

S. L. Soltes
Telesco Secretarial Services

APPROVAL OF PENSION APPLICATIONS

MEETING OF: September 13,2023

Name	Years of Service	Type of Pension	Option Selected
Beth Pearce Board of Education Instructional Aide Commencement date	21 years, 11 months 08/19/2023	Regular	Option II
Breege Melia-O'Reilly Board of Education School Nurse Commencement date	19 years, 11 months 08/05/2023	Regular	Option III
Paul Dirsa City/Sewage Treatment Lead Mechanic Commencement date	23 years, 6 months 04/27/2023	Regular	Standard
Sue Yin Kahler Board of Education Para Educator Commencement date	21 years, 11 months 08/05/2023	Regular	Option II
Marylin Knox Board of Education Secretary/Bookkeeper Commencement date	20 years, 11 months 06/15/2023	Regular	Option I

APPROVAL OF PENSION APPLICATIONS

MEETING OF: September 13,2023

Name	Years of Service	Type of Pension	Option Selected
Lorraine Lorusso Board of Education Para-educator Commencement date	26 years, 5 months 07/01/2023	Regular	Option III
Beverly Dixon Board of Education Accounts Payable Specialist Commencement date	22 years, 5 months 07/01/2023	Regular	Standard
Patricia Rivera Board of Education Executive Secretary Commencement date	18 years, 2 months 07/01/2023	Regular	Option II
Victoria O'Connor Board of Education Family Center Liaison Commencement date	21 years, 11 months 07/01/2023	Regular	Standard

To: Norwalk Municipal Employees' Pension Board

From: Tina Fogell, Chief Human Resources Officer

Date: September 8, 2023

Subject: OPEB Committee Meeting – Wednesday, September 13, 2023 – Hybrid meeting

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A meeting of the Norwalk Municipal Employees' Pension Board's OPEB Committee will be held on **Wednesday, September 13, 2023 at 6:30 p.m.,** via zoom / Room 220.

To allow public access, anyone may access a meeting by telephone, Zoom, and/or the City of Norwalk YouTube channel. Specific instructions and links can be found at norwalkct.org/meetings

AGENDA

1. Call to Order and Approval of Minutes from June 14, 2023
2. Performance Review
3. Adjourn

cc: Mayor Harry Rilling
Irene Dixon, City Clerk
Kevin Schmidt, Callan Associates, Inc.
Britton Murdoch, Callan Associates Inc.
Billy Ireland, Fire Union President

CITY OF NORWALK
NORWALK MUNICIPAL EMPLOYEES PENSION BOARD
OPEB COMMITTEE
REGULAR MEETING
JUNE 14, 2023

VIA TELECONFERENCE

ATTENDANCE: Frank Nash, Chair; Richard Baskin, James Hendrickson, Dave Pramer, Charlie Pirro, Eileen Romeo

OTHERS: ———Tina Fogell, Chief Human Resource Officer, Britton Murdoch, Callan LLC; Kevin Schmidt, Callan LLC

CALL TO ORDER

Mr. Nash called the meeting to order at 7:29 p.m. A quorum was present.

APPROVAL OF MINUTES

- **March 8, 2023**

**** MR. HENDRICKSON MOVED TO APPROVE THE MINUTES OF THE MARCH 8, 2023 MEETING.**
**** MR. PRAMER SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

PERFORMANCE REVIEW

Mr. Murdoch reviewed ~~the recent~~the OPEB asset allocation and performance as of 4/30/23 ~~of the investment~~. Mr. Schmidt noted that based on the new contract, Callan would be providing ~~they would be presenting these reviews on a quarterly basis in the future~~quarterly performance reports going forward.

ADJOURNMENT

**** MR. PIRRO MOVED TO ADJOURN.**
**** MR. HENRICKSON SECONDED.**
**** THE MOTION PASSED UNANIMOUSLY.**

The meeting adjourned at 7:35 p.m.

Respectfully submitted,

S. L. Soltes
Telesco Secretarial Services

Callan

September 13, 2023

City of Norwalk Pension and OPEB Performance Review

Period ended June 30, 2023

Britton M. Murdoch
Vice President

Kevin Schmidt
Senior Vice President

Overview

- Market Environment
- Pension Performance
- OPEB Performance

Callan

Market Environment

Equity Markets Rebound Sharply in 1Q and 2Q; Fixed Income Markets Down in 2Q

Stocks and bonds still have ground to make up after first three quarters of 2022

S&P 500 up 16.9% in first half of 2023.

- Loss through first three quarters of 2022 was 23.9%; rebound in the following three quarters reduced the loss to 2.9% since the start of 2022. Greater loss reduction in large cap (U.S. and global ex-U.S.) compared to emerging and small cap

Fixed income recovered as high inflation began to ease; speculation about interest rate cuts evaporated in 2Q

- Bloomberg Aggregate: up 3% in 1Q, but declined 0.8% in 2Q as Fed continued to raise rates
- CPI-U: +3% year-over year for 2Q, down from +6.5% for the year ended Dec. 2022

Inflation hit the highest rate (9%) in decades in June of 2022.

Economic data defied expectations of recession; GDP growth was revised up to 2.0% in 1Q, and hit 2.4% in 2Q

- Job market remains solid, providing support to Fed efforts to fight inflation

Returns for Periods ended 6/30/23

	Quarter	Last 3 Qtrs	1Q-3Q 2022	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	8.39	24.51	-24.62	11.39	12.34	7.72
S&P 500	8.74	25.73	-23.87	12.31	12.86	7.61
Russell 2000	5.21	14.82	-25.10	4.21	8.26	7.26
Global ex-U.S. Equity						
MSCI World ex USA	3.03	29.30	-26.23	4.58	5.40	4.49
MSCI Emerging Markets	0.90	15.07	-27.16	0.93	2.95	--
MSCI ACWI ex USA Small Cap	2.05	21.06	-29.37	2.62	5.75	6.73
Fixed Income						
Bloomberg Aggregate	-0.84	4.00	-14.61	0.77	1.52	3.90
90-day T-Bill	1.17	3.12	0.61	1.55	0.98	1.89
Bloomberg Long Gov/Credit	-1.29	7.11	-28.94	0.66	2.86	5.33
Bloomberg Global Agg ex-US	-2.16	7.70	-23.88	-2.65	-0.90	2.62
Real Estate						
NCREIF Property	-1.81	-6.97	9.35	5.94	7.84	8.53
FTSE Nareit Equity	2.62	10.89	-28.13	4.55	6.42	8.32
Alternatives						
CS Hedge Fund Index	1.71	2.80	0.14	4.52	4.06	5.49
Cambridge Private Equity*	2.12	1.12	-1.84	15.98	15.04	13.83
Bloomberg Commodity	-2.56	-5.74	13.57	4.73	-0.99	2.04
Gold Spot Price	-2.86	15.39	-8.56	8.99	4.66	7.76
Inflation - CPI-U	1.08	2.80	6.46	3.90	2.71	2.54

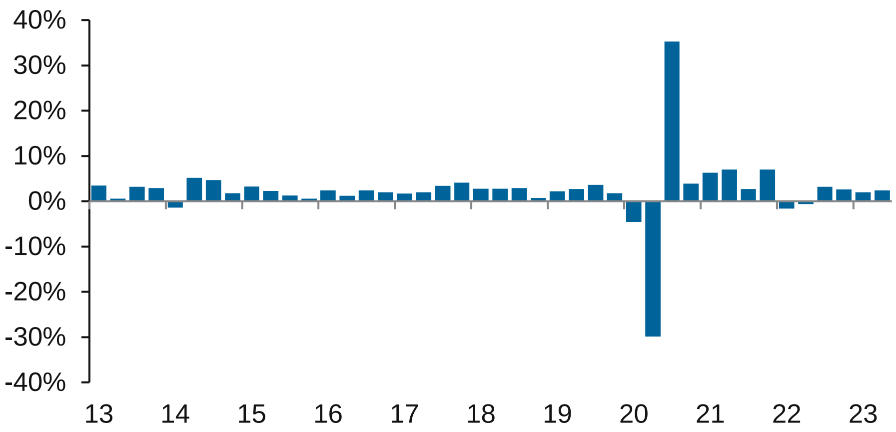
*Cambridge PE data as of 1Q23

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

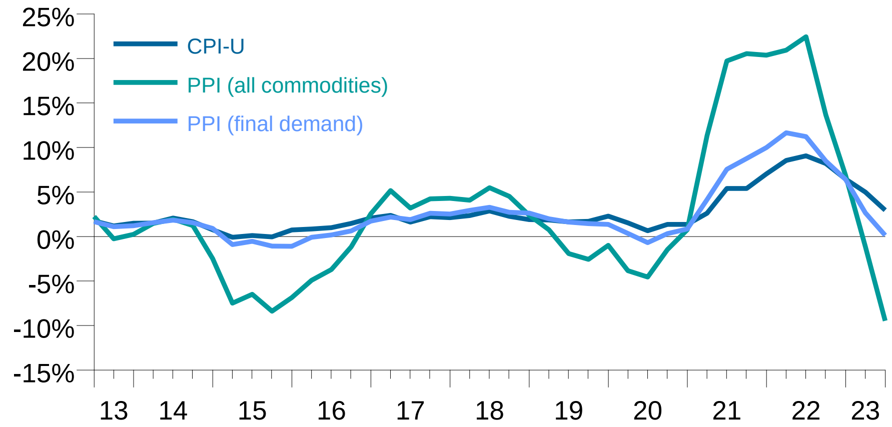
U.S. Economy—Summary

For periods ended 6/30/23

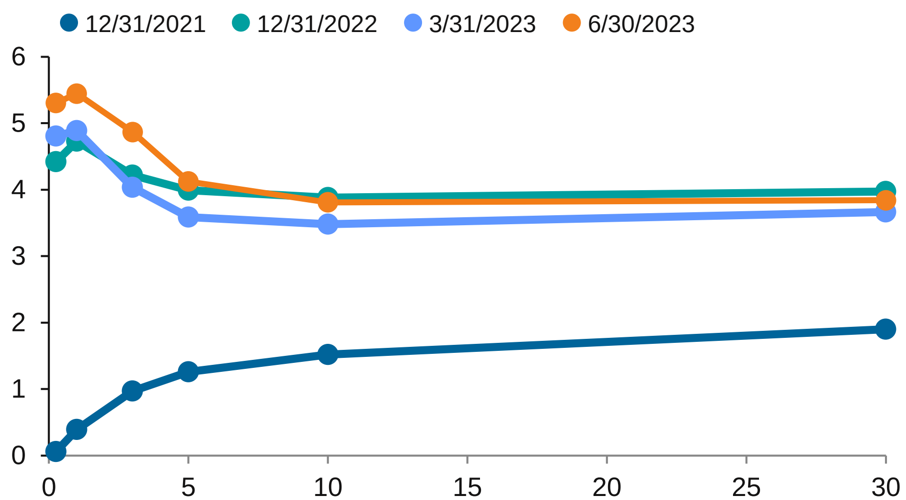
Quarterly Real GDP Growth



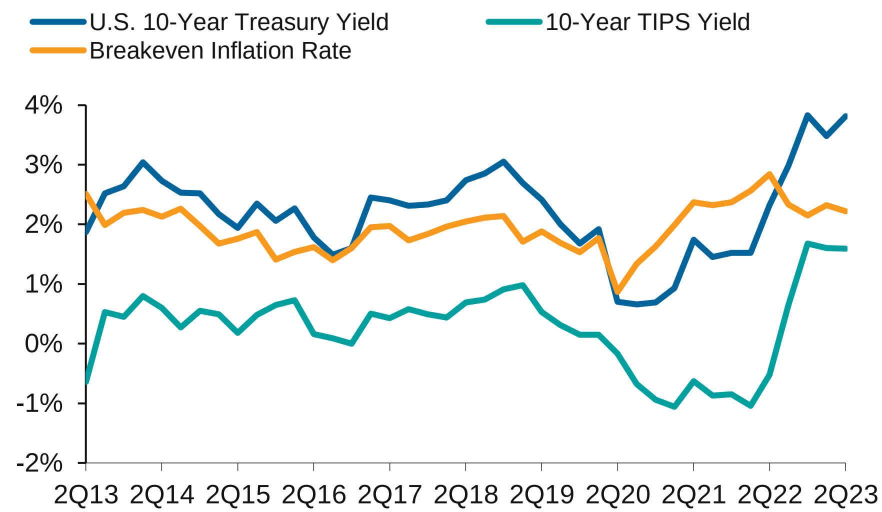
Inflation Year-Over-Year



U.S. Treasury Yield Curves



Historical 10-Year Yields Through 6/30/23

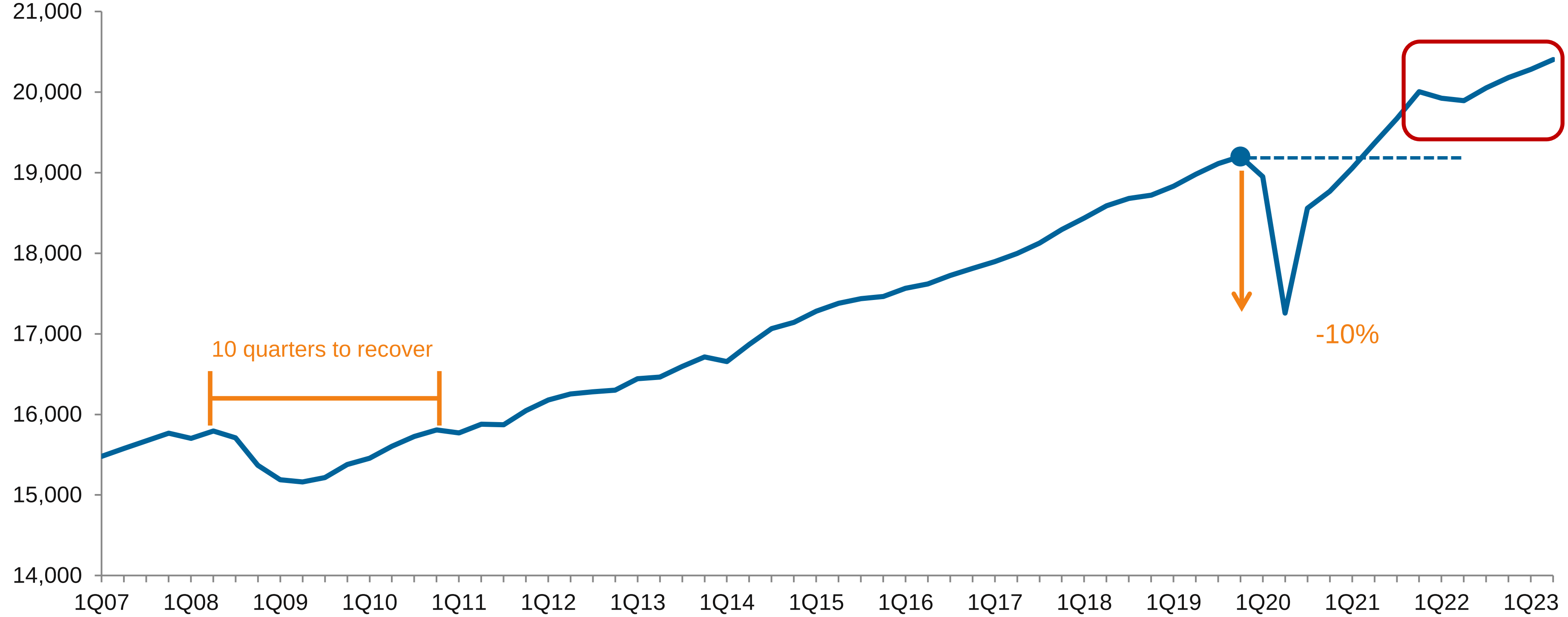


Sources: Bloomberg, Bureau of Labor Statistics, Callan

GDP Rose 2.4% in 2Q, Building on the 2% Gain in 1Q

Widespread expectations for a recession in 2023 were proven wrong

Seasonally Adjusted Real GDP in Billions of Dollars Through 6/30/23



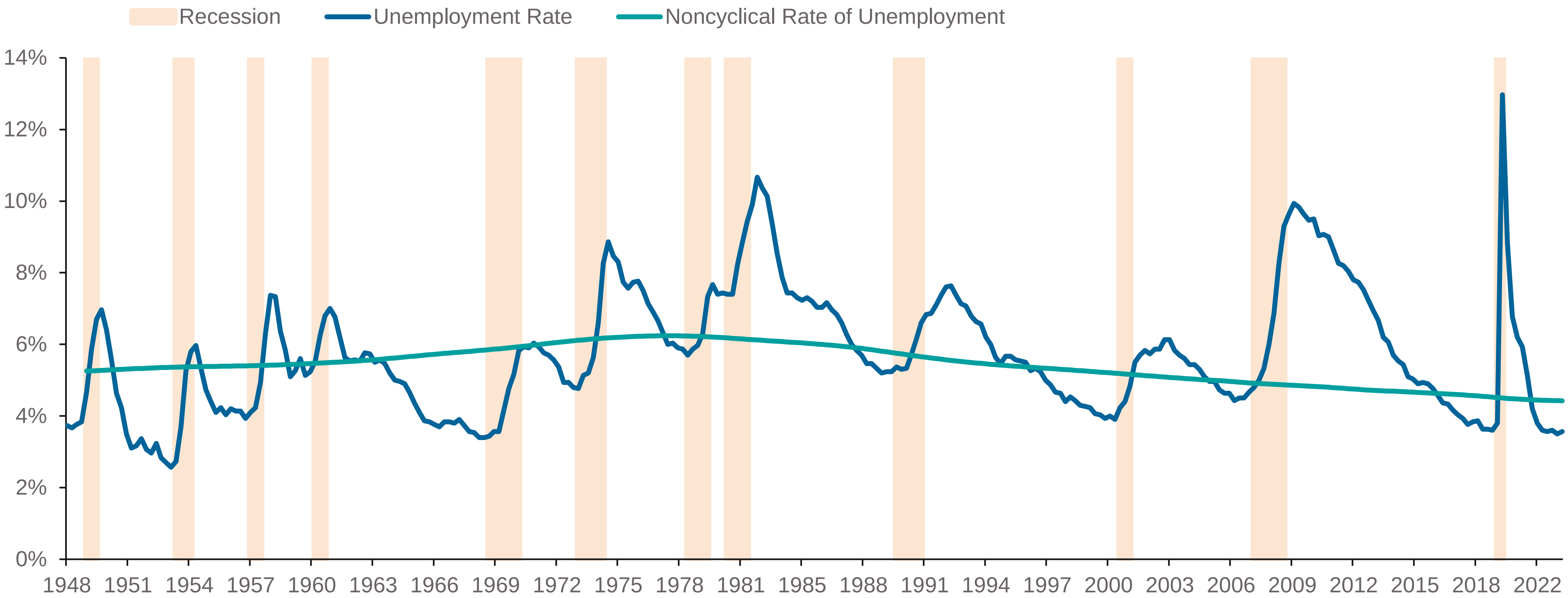
GDP rose 2.0% and 2.4% in the first two quarters, after 2.1% growth in 2022.

- The GDP drop widely anticipated happened LAST year in 1Q and 2Q22, followed by gains of 3.2% in 3Q and 2.6% in 4Q.
- Loss of business and consumer confidence followed the start of the conflict in Ukraine
- Consumer wealth hit by stock and bond market drop in 2022, but has recently rebounded. Residential housing saw a sharp downturn, as mortgage rates doubled from the start of last year. But prices remain high due to strong demand and lack of supply.

Source: Federal Reserve Bank of St. Louis

Difficult to Deliver a Soft Landing

Unemployment rate and recessions



Unemployment rates typically spike beyond a “soft landing” during recessions (the shaded bars in the chart above).

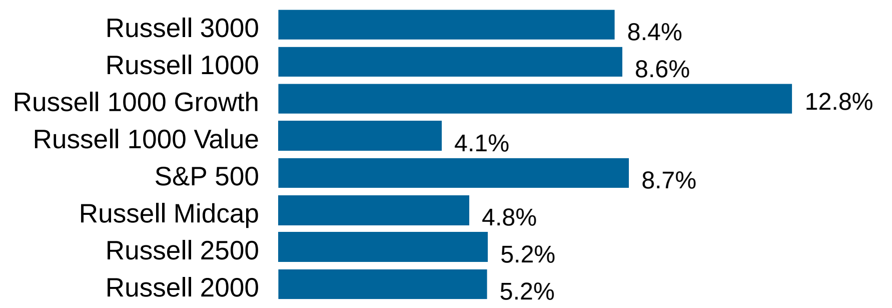
Source: Federal Reserve Bank of St. Louis

U.S. Equity Performance: 2Q23

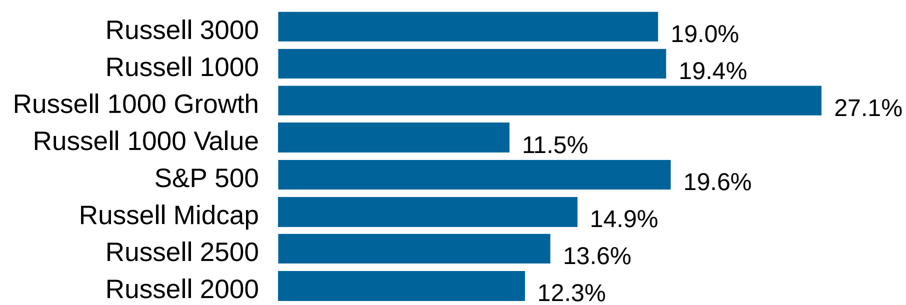
Large cap growth stocks lead broad indices higher; small cap indices continue to lag large caps

- The S&P 500 posted a second straight quarter of positive performance, gaining 8.7%; large cap growth led all styles, advancing 12.8%. All U.S. equity indices produced absolute positive returns; small value and low volatility produced the lowest 2Q returns.
- Nine of the 11 S&P 500 Index sectors produced a positive 2Q return. Information Technology (17.2%), Consumer Discretionary (14.6%), and Communication Services (13.1%) drove the overall index return; all other sectors underperformed the index.
- Similar to the first quarter, small caps (Russell 2000) underperformed large caps (Russell 1000) and growth outperformed value during the quarter, a reversal of trend from 2022. Financials (-1.1%) detracted returns for the Russell 2000 (5.2%) while Health Care was the only small cap sector to produce double digit returns (11.2%) within the small cap index.

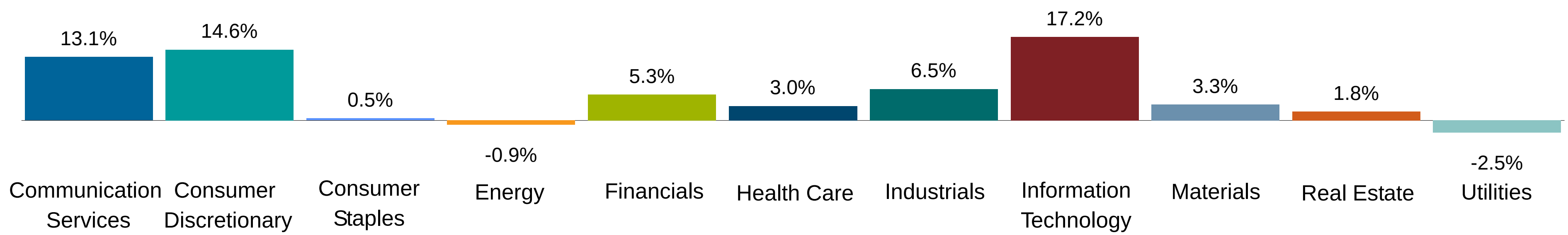
U.S. Equity: Quarter Ended 6/30/23



U.S. Equity: One-Year Returns Ended 6/30/23



Industry Sector Quarterly Performance (S&P 500) as of 6/30/23



Sources: FTSE Russell, S&P Dow Jones Indices

U.S. Equity Key Theme

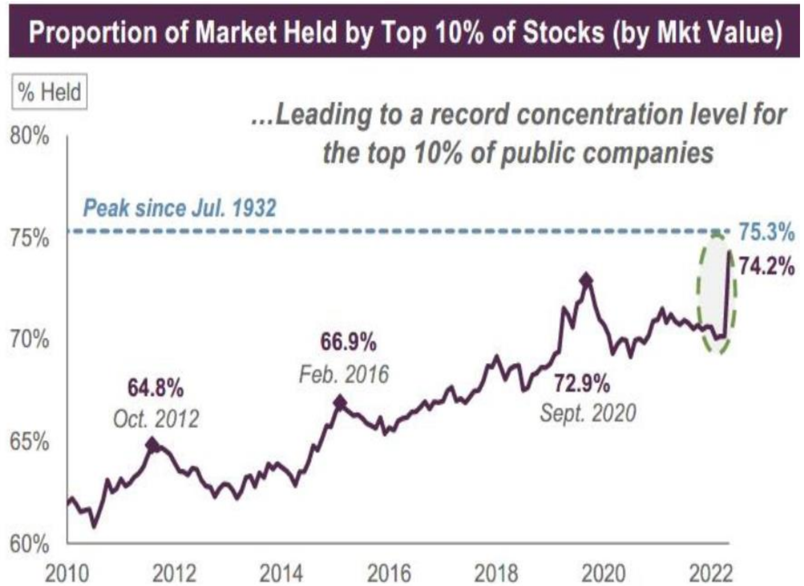
AI and the ‘Magnificent 7’ a key trend for 2Q

The 2Q top contributors, coined the “Magnificent Seven,” were Nvidia (52%), Meta (35%), Amazon (26%), Tesla (26%), Apple (18%), Microsoft (18%), and Alphabet (15%).

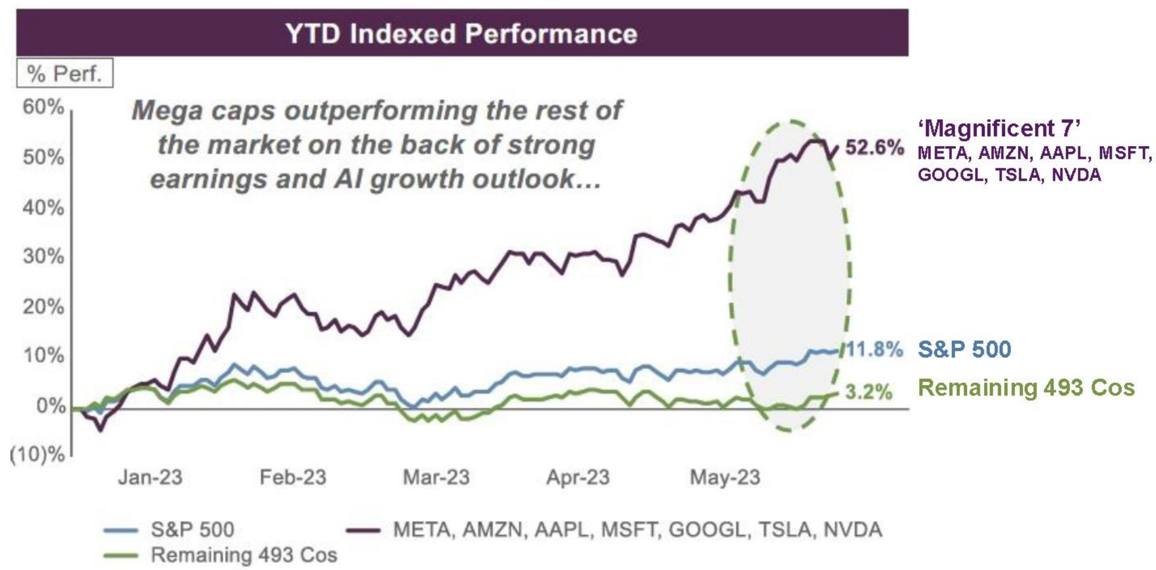
– The index is now the most concentrated that it has been since the 1970s with those stocks accounting for about 25% of the S&P 500, 33% of the Russell 1000 Growth and nearly 50% of the Nasdaq.

– AI market-related focus disproportionately benefitting this group of stocks.

– $1 in every $6 of global market cap (MSCI ACWI) concentrated in these names



Near all-time high market concentration



Sources: Guggenheim as of 6/11/23

Global/Global ex-U.S. Equity Performance: 2Q23

Continued market rally

2Q23 continued global and global ex-U.S. equity markets positive performance from the prior quarter.

Technology stocks lead markets higher

– The second quarter of the year saw global markets led higher by mega cap technology stocks, in part due to increased optimism around artificial intelligence advancements.
– Market expectations of a recession decreased as inflation showed signs of abating while the Fed kept rates unchanged in June.
– Japan outperformed other regions in local currency as valuations continued to be attractive alongside the Bank of Japan's easy monetary policy.

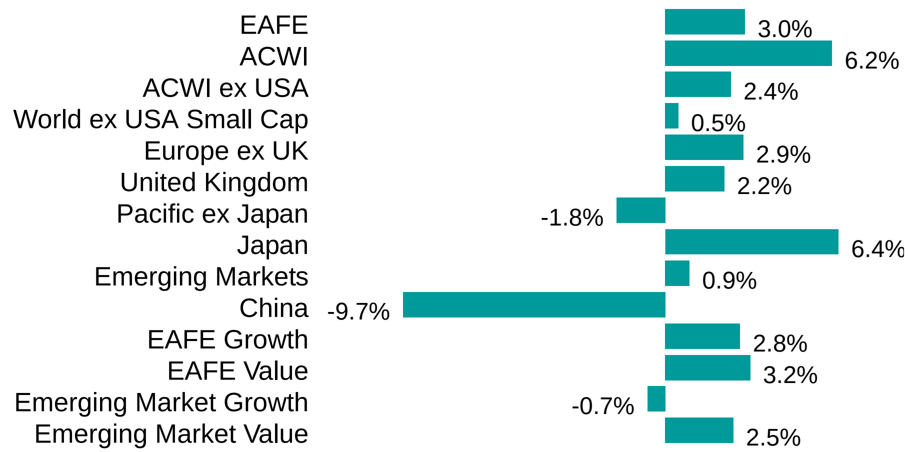
Developed vs. emerging markets

– Developed markets outperformed emerging markets as China weighed on EM indices.

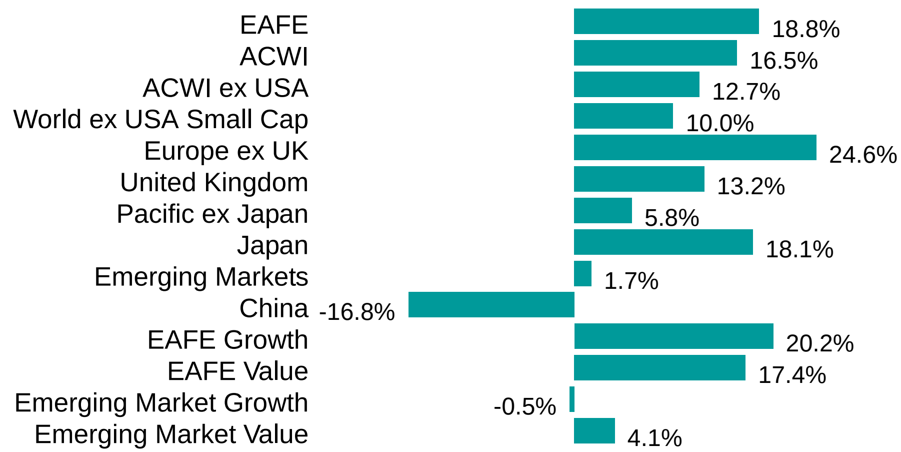
Growth vs. value

– Mega cap technology companies, which are primarily U.S.-based, led markets higher and resulted in large dispersions between U.S. growth and value indices. Outside of the U.S., growth and value index returns were relatively balanced.

Global Equity Returns: Quarter Ended 6/30/23



Global Equity Returns: One Year Ended 6/30/23



Source: MSCI

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

India and Japan are outshining China

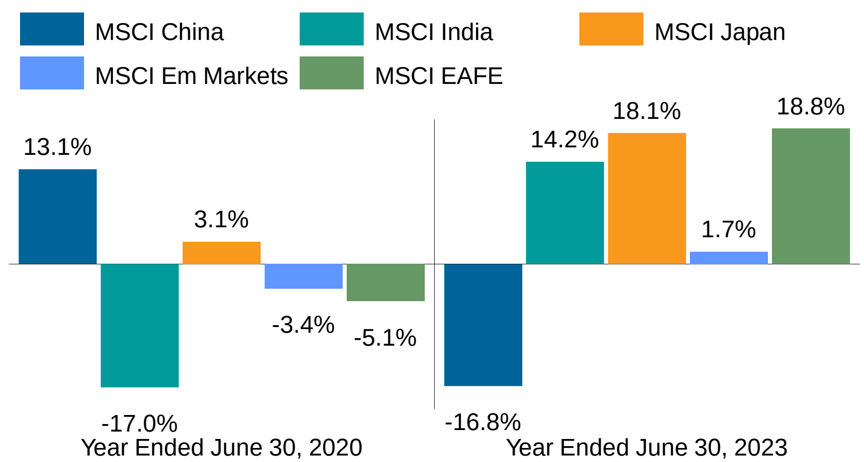
India vs. China

- Economics
  - Chinese geopolitical tensions have, in part, driven outside investment elsewhere contrasted to India with Prime Minister Modi's visit to the U.S. highlighting its place in the world economy.
  - China's New Espionage Law (effect. July 2023) likely contributing to less foreign investment; $20 billion ended 1Q23 versus $100 billion ended 1Q22.
- Asset flows
  - India's equity market has more than doubled since 2010.
- Growth
  - India surpassing China with % of population in the middle class in 2030 and from 2023 to 2030 will contribute twice as much growth from this group than China in the Asia Pacific region.

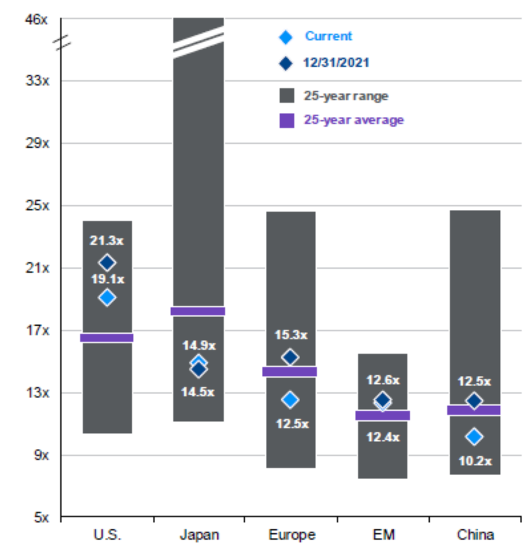
Japan's turn

- Valuation below historical levels.
- Economic recovery; in the first quarter Japan transitioned out of a recession as GDP grew 2.7%.
- Next 12 months consensus earnings estimates show Japan outpacing China, EM, Europe and only trailing the U.S.

Trailing One-Year Returns



Global Valuations (current and 25-year next 12 months price-to-earnings ratio)



Sources: Wall Street Journal, J.P. Morgan, Capital Group

U.S. Fixed Income Performance: 2Q23

Bloomberg Aggregate down as rates rose, risk appetite and solid economic news spurred returns for spread sectors and lower quality

- Corporate excess return: +131 bps
- Mortgage excess return: +76 bps
- High yield corporates excess return: +279 bps
- AA excess returns: +84 bps
- BBB excess returns: +157 bps

U.S. Treasury yield curve inversion steepened to 106 bps from 58 bps on 3/31

- 2- year UST: 4.87%; 10-year UST: 3.81%

TIPS performed in line with nominal U.S. Treasuries

- Five-year breakeven spreads narrowed to 2.18% from 2.4% on 3/31; Fed and markets expect inflation to trend down over longer periods

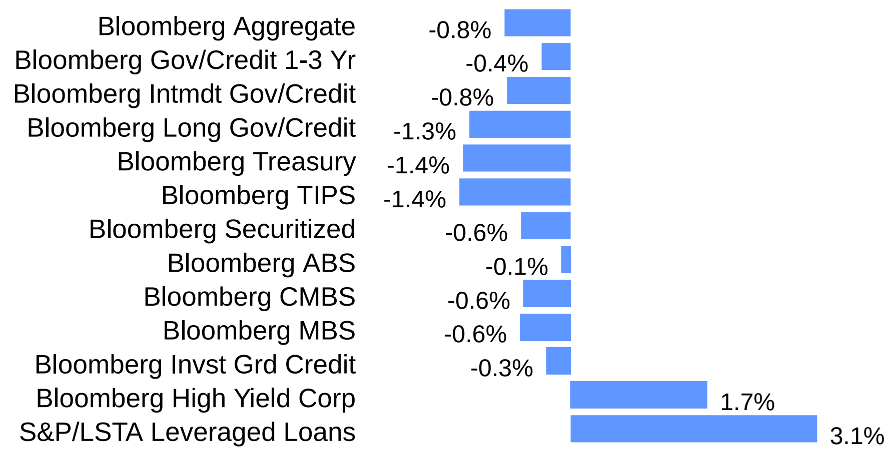
Fed Funds target raised to 5.00% - 5.25%

- Paused at June meeting but suggested that further hikes are likely
- Median expectation from Fed is 5.6% for year-end 2023
- Market expectations are similar at 5.4%; up sharply from expectations for cuts at the end of 1Q

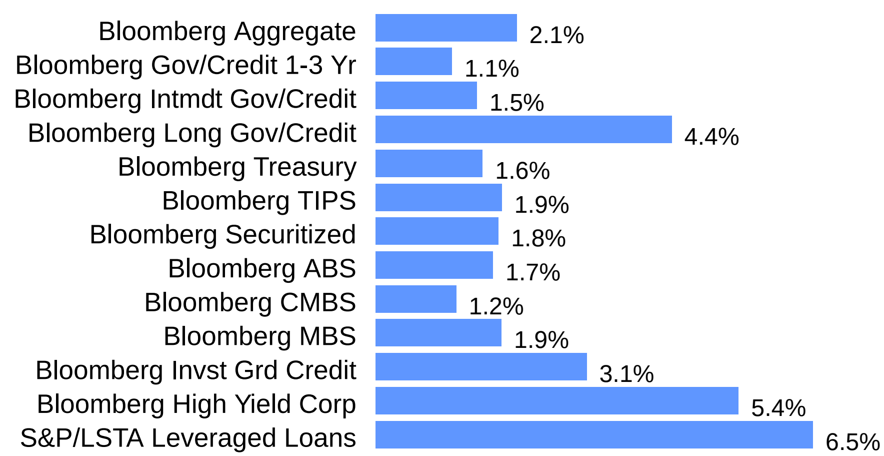
Valuations fair

- Credit spreads have not widened materially and are close to historical averages
- Demand has remained robust with muted issuance

U.S. Fixed Income Returns: Quarter Ended 6/30/23



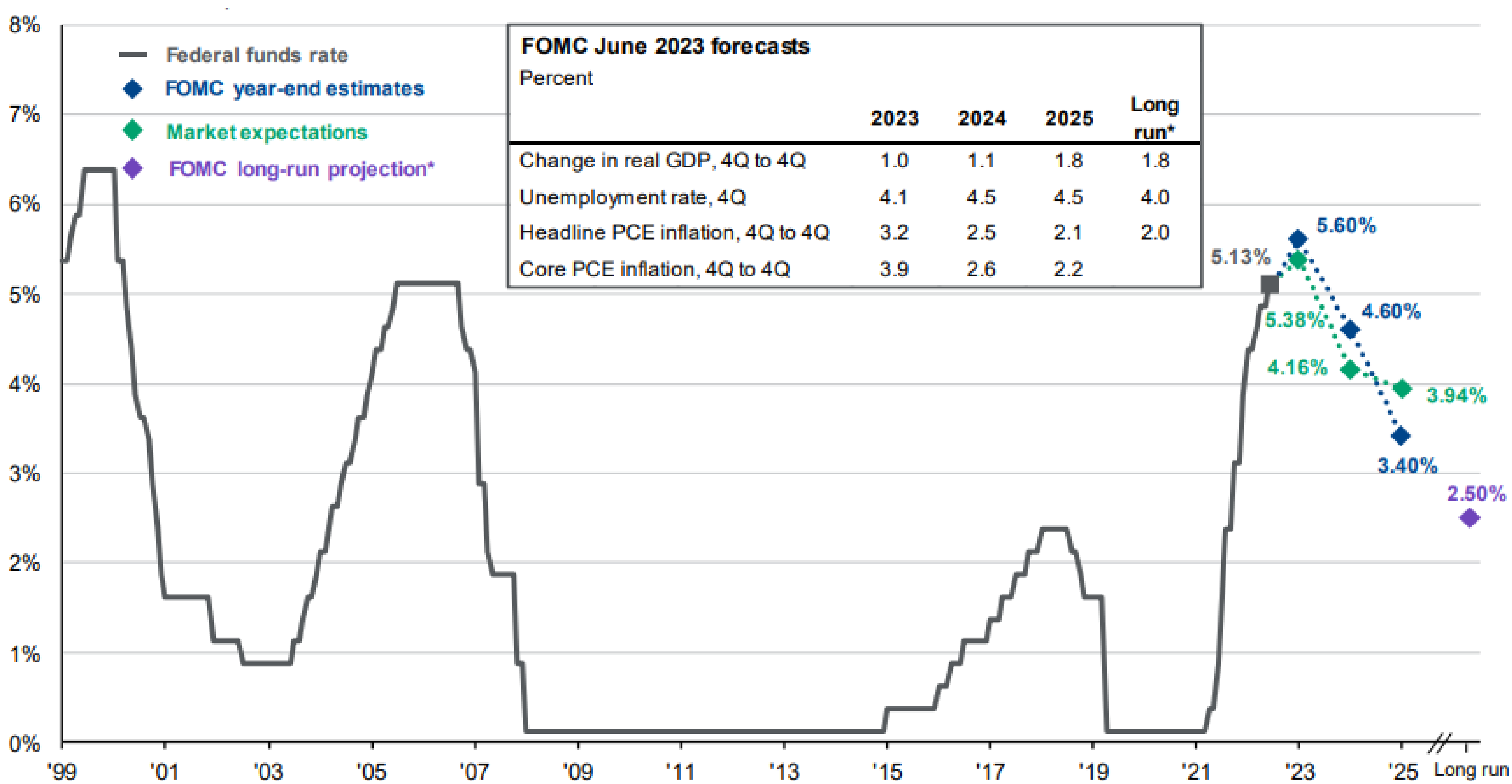
U.S. Fixed Income Returns: Six Months Ended 6/30/23



Sources: Bloomberg, S&P Dow Jones Indices

Fed Pivot Nearing?

Implied probability of further rate hikes following July meeting is low; rates remain restrictive



FOMC June 2023 forecasts
Percent

	2023	2024	2025	Long run*
Change in real GDP, 4Q to 4Q	1.0	1.1	1.8	1.8
Unemployment rate, 4Q	4.1	4.5	4.5	4.0
Headline PCE inflation, 4Q to 4Q	3.2	2.5	2.1	2.0
Core PCE inflation, 4Q to 4Q	3.9	2.6	2.2	

Sources: Bloomberg, FactSet, Federal Reserve, J.P. Morgan Asset Management

Hedge Fund Performance: 2Q23

Global equities turned in another strong gain for the quarter

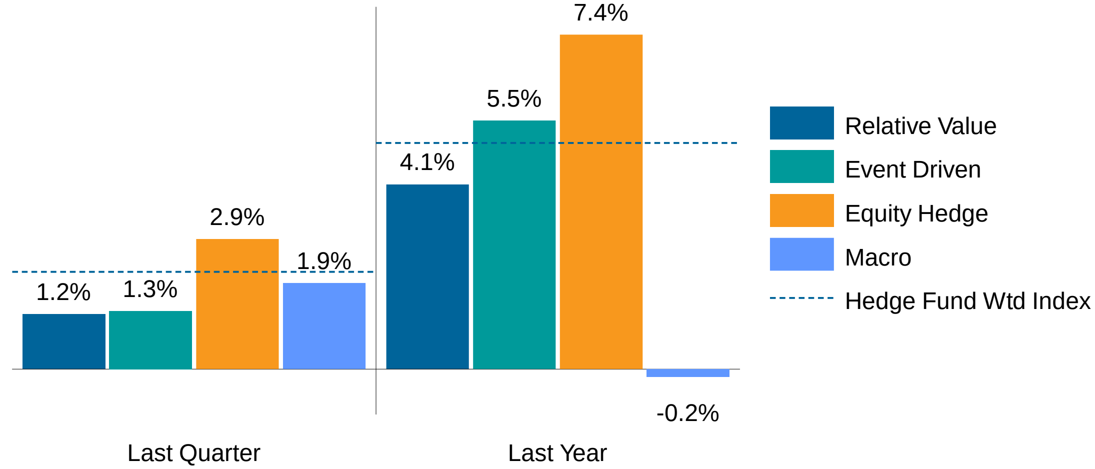
Equities gained as the Federal Reserve paused for the first time, and some macro data points rekindled hopes for a potential soft landing.

- Equity hedge strategies soared, led by technology-focused managers that were tilted towards mega-cap stocks.
- Macro strategies bounced back during the second quarter, as managers were short U.K. rates and long technology equities.
- Event-driven strategies put together a solid quarter, as a focus on out-of-favor equities & credit drove performance.
- Relative value gains were driven by fundamental equity relative value, commodity relative value, and fixed income relative value.

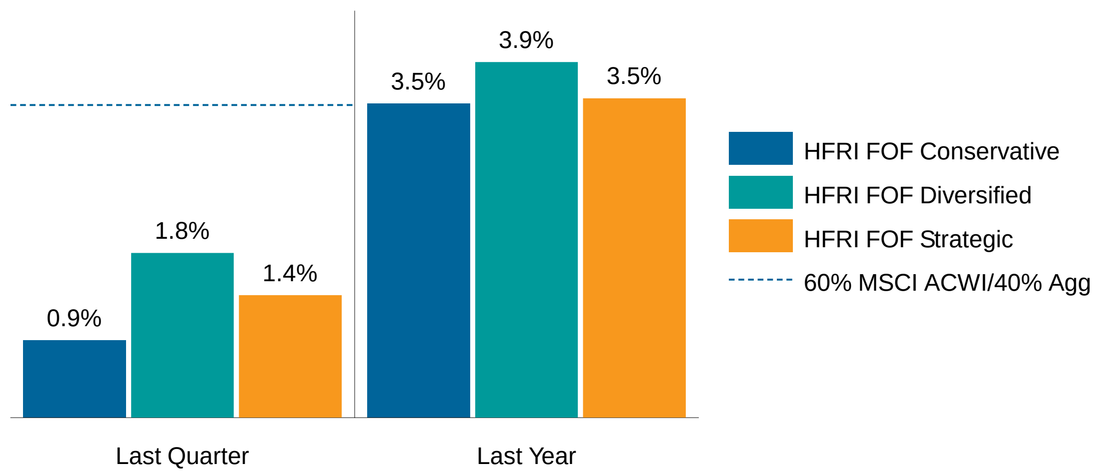
FOFs ended the year on a strong note

- FOFs with more mega-cap technology exposure had a strong quarter.
- Those FOFs with more diversified managers lagged managers with more equity exposure.

HFRI Strategy Index Returns vs. Broad Hedge Fund Universe as of 6/30/23



HFRI Fund-of-Funds Returns vs. 60% Stock/40% Bond Mix as of 6/30/23



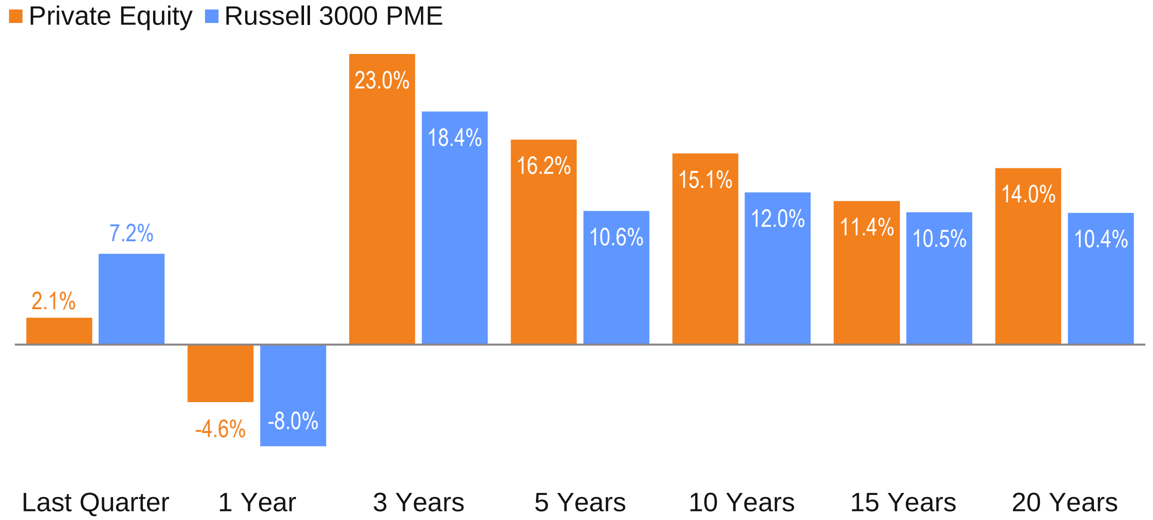
Source: Hedge Fund Research (www.hedgefundresearch.com)

Private Equity Performance

Smoothing effect across both down and up markets

- While private equity does not experience the same sharp declines as public equity during market downturns, it also does not rebound as quickly—as seen in 1Q23.
- Just as private equity was only down about a third as much as the public markets in 2022, it was up about a third as much in 1Q23.
- As has been the case for the past year, the tech-heavy venture capital and growth equity strategies continued to decline more than buyouts and other corporate finance strategies.
- Portfolio companies are typically valued internally by the manager on a quarterly basis. Valuations are based on the operating metrics of the company, recent comparable transactions, and public market comps.

Net IRRs as of 03/31/23



Net IRRs by Strategy as of 03/31/23

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	-0.7%	-16.4%	25.0%	20.4%	18.7%	13.2%
Growth Equity	1.3%	-9.3%	21.3%	16.5%	15.1%	12.7%
Buyouts	3.5%	0.7%	23.9%	16.0%	15.2%	10.8%
Mezzanine	3.5%	6.1%	14.9%	10.9%	11.1%	10.3%
Credit Opportunities	2.0%	4.0%	13.4%	7.3%	7.9%	9.2%
Control-Oriented Distressed	1.6%	2.6%	26.0%	13.9%	12.1%	10.7%
Total Private Equity	**2.1%**	**-4.6%**	**23.0%**	**16.2%**	**15.1%**	**14.0%**

Source: Refinitiv/Cambridge

Diversification Remains Key Risk Control

Periodic Table of Investment Returns

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2 Qtrs. 2023
Emerging Markets 25.55%	Emerging Markets 34.00%	Emerging Markets 32.17%	Emerging Markets 39.38%	U.S. Fixed 5.24%	Emerging Markets 78.51%	Small Cap 26.85%	Real Estate Funds 14.96%	Emerging Markets 18.23%	Small Cap 38.82%	Large Cap 13.69%	Real Estate Funds 13.95%	Small Cap 21.31%	Emerging Markets 37.28%	Real Estate Funds 7.36%	Large Cap 31.49%	Small Cap 19.96%	Large Cap 28.71%	Real Estate Funds 6.55%	Large Cap 16.89%
Non-U.S. Equity 20.38%	Real Estate Funds 20.15%	Non-U.S. Equity 25.71%	Real Estate Funds 14.84%	Non-U.S. Fixed 4.39%	High Yield 58.21%	Emerging Markets 18.88%	U.S. Fixed 7.84%	Non-U.S. Equity 16.41%	Large Cap 32.39%	Real Estate Funds 11.46%	Large Cap 1.38%	High Yield 17.13%	Non-U.S. Equity 24.21%	Cash Equivalent 1.87%	Small Cap 25.52%	Large Cap 18.40%	Real Estate Funds 21.02%	Cash Equivalent 1.46%	Non-U.S. Equity 11.29%
Small Cap 18.33%	Non-U.S. Equity 14.47%	Small Cap 18.37%	Hedge Funds 12.56%	Cash Equivalent 2.06%	Non-U.S. Equity 33.67%	Real Estate Funds 15.26%	High Yield 4.98%	Small Cap 16.35%	Non-U.S. Equity 21.02%	U.S. Fixed 5.97%	U.S. Fixed 0.55%	Large Cap 11.96%	Large Cap 21.83%	U.S. Fixed 0.01%	Non-U.S. Equity 22.49%	Emerging Markets 18.31%	Small Cap 14.82%	Hedge Funds 1.06%	Small Cap 8.09%
Non-U.S. Fixed 12.54%	Hedge Funds 7.61%	Large Cap 15.79%	Non-U.S. Equity 12.44%	Real Estate Funds -10.70%	Small Cap 27.17%	High Yield 15.12%	Non-U.S. Fixed 4.36%	Large Cap 16.00%	Real Estate Funds 12.90%	Small Cap 4.89%	Cash Equivalent 0.05%	Emerging Markets 11.19%	Small Cap 14.65%	High Yield -2.08%	Emerging Markets 18.44%	Non-U.S. Fixed 10.11%	Non-U.S. Equity 12.62%	High Yield -11.19%	High Yield 5.38%
Real Estate Funds 12.00%	Large Cap 4.91%	Real Estate Funds 15.27%	Non-U.S. Fixed 11.03%	Hedge Funds -19.07%	Large Cap 26.47%	Large Cap 15.06%	Large Cap 2.11%	High Yield 15.81%	Hedge Funds 9.73%	Hedge Funds 4.13%	Hedge Funds -0.71%	Real Estate Funds 7.79%	Non-U.S. Fixed 10.51%	Non-U.S. Fixed -2.15%	High Yield 14.32%	Non-U.S. Equity 7.59%	Hedge Funds 8.23%	U.S. Fixed -13.01%	Emerging Markets 4.89%
High Yield 11.13%	Small Cap 4.55%	Hedge Funds 13.86%	U.S. Fixed 6.97%	High Yield -26.16%	Hedge Funds 18.57%	Hedge Funds 10.95%	Cash Equivalent 0.10%	Real Estate Funds 9.79%	High Yield 7.44%	High Yield 2.45%	Non-U.S. Equity -3.04%	Non-U.S. Equity 2.75%	High Yield 7.50%	Hedge Funds -3.19%	Hedge Funds 9.31%	U.S. Fixed 7.51%	High Yield 5.28%	Non-U.S. Equity -14.29%	Cash Equivalent 2.25%
Large Cap 10.88%	Cash Equivalent 3.06%	High Yield 11.85%	Large Cap 5.49%	Small Cap -33.79%	Non-U.S. Fixed 7.53%	Non-U.S. Equity 8.95%	Hedge Funds -2.52%	Hedge Funds 7.67%	Cash Equivalent 0.07%	Cash Equivalent 0.04%	Small Cap -4.41%	U.S. Fixed 2.65%	Hedge Funds 7.12%	Large Cap -4.38%	U.S. Fixed 8.72%	High Yield 7.11%	Cash Equivalent 0.05%	Large Cap -18.11%	U.S. Fixed 2.09%
Hedge Funds 9.64%	High Yield 2.74%	Non-U.S. Fixed 8.16%	Cash Equivalent 5.00%	Large Cap -37.00%	U.S. Fixed 5.93%	U.S. Fixed 6.54%	Small Cap -4.18%	U.S. Fixed 4.21%	U.S. Fixed -2.02%	Emerging Markets -2.19%	High Yield -4.47%	Non-U.S. Fixed 1.49%	Real Estate Funds 6.66%	Small Cap -11.01%	Non-U.S. Fixed 5.09%	Hedge Funds 6.36%	U.S. Fixed -1.54%	Non-U.S. Fixed -18.70%	Hedge Funds 1.87%
U.S. Fixed 4.34%	U.S. Fixed 2.43%	Cash Equivalent 4.86%	High Yield 1.87%	Non-U.S. Equity -43.56%	Cash Equivalent 0.21%	Non-U.S. Fixed 4.95%	Non-U.S. Equity -12.21%	Non-U.S. Fixed 4.09%	Emerging Markets -2.60%	Non-U.S. Fixed -3.09%	Non-U.S. Fixed -6.02%	Hedge Funds 1.25%	U.S. Fixed 3.54%	Non-U.S. Equity -14.09%	Real Estate Funds 4.39%	Cash Equivalent 0.67%	Emerging Markets -2.54%	Emerging Markets -20.09%	Non-U.S. Fixed 0.83%
Cash Equivalent 1.33%	Non-U.S. Fixed -8.65%	U.S. Fixed 4.33%	Small Cap -1.57%	Emerging Markets -53.33%	Real Estate Funds -30.40%	Cash Equivalent 0.13%	Emerging Markets -18.42%	Cash Equivalent 0.11%	Non-U.S. Fixed -3.08%	Non-U.S. Equity -4.32%	Emerging Markets -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Markets -14.57%	Cash Equivalent 2.28%	Real Estate Funds 0.34%	Non-U.S. Fixed -7.05%	Small Cap -20.44%	Real Estate Funds -6.16%

- Bloomberg Barclays Corp High Yield
- Bloomberg Barclays Global Aggregate ex US
- Bloomberg Barclays US Aggregate
- Credit Suisse Hedge Fund
- ICE BofAML US 3-Month Treasury Bill
- MSCI Emerging Markets
- MSCI World ex USA
- NFI-ODCE (value-weighted net)
- Russell 2000
- S&P 500

Published Research Highlights from 2Q23

2023 Private Credit Fees and Terms Study

The Critical Underlying Technology Behind Digital Assets: A Primer for Institutional Investors

Understanding the DNA of the U.S. Life Sciences Sector

Research Café: ESG Interview Series Session

Recent Blog Posts

Biodiversity: A Relatively New Theme for ESG-focused Investors

Kristin Bradbury

How Your Public DB Plan's Returns Compare

Public DB Plan Focus Group

How to Improve DC Plans with DEI

Jana Steele

Additional Reading

Alternatives Focus quarterly newsletter

Active vs. Passive quarterly charts

Capital Markets Review quarterly newsletter

Monthly Updates to the Periodic Table

Market Pulse Flipbook quarterly markets update

Real Estate Indicators market outlook

Callan Institute Events

Upcoming conferences, workshops, and webinars

Callan College

Intro to Alternatives

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with alternative investments like private equity, hedge funds, and real estate and how they can play a key role in any portfolio. You will learn about the importance of allocations to alternatives and how to consider integrating, evaluating, and monitoring them.

– August 23-24, 2023 – Virtual Session via Zoom

Intro to Investments—Learn the Fundamentals

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with basic investment theory, terminology, and practices.

– September 26–28, 2023 – Virtual Session via Zoom

– November 1–2, 2023 – Atlanta, Georgia

Please visit our website at callan.com/events-education as we add dates to our 2023 calendar!

Mark Your Calendar

2023 Regional Workshops

October 24, 2023 – New York

October 26, 2023 – Chicago

2024 National Conference

April 8 –10, 2024 – San Francisco

Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Webinar:
The End of the Low-Yield Environment

August 9, 2023 – 9:30am (PT)

Pension Plan Performance

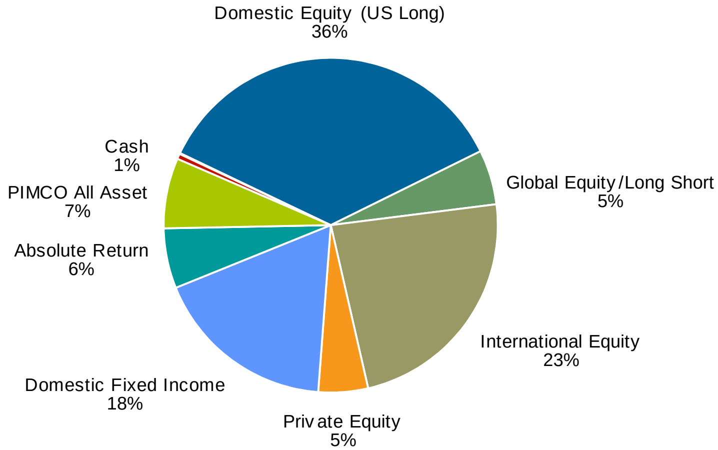
Actual versus Target Asset Allocation

For Periods Ended June 30, 2023

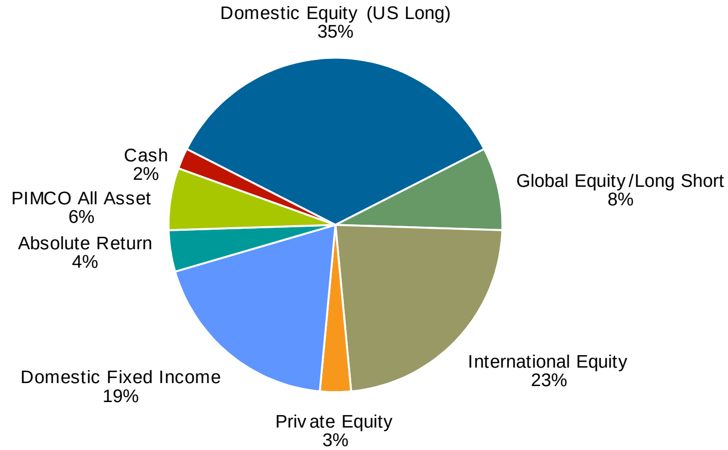
Overweights:

- Absolute Return (5.8% vs 4% target)
- Private Equity (4.8% vs 3% target)
- Real Assets (6.8% vs 6% target)
- Domestic Equity (35.6% vs 35% target)
- International Equity (23.4% vs 23% target)

Actual Asset Allocation



Target Asset Allocation



Underweights:

- Global Equity Long/Short (5.3% vs 8% target)
- Domestic Fixed Income (17.7% vs 19% target)

Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity (US Long)	169,339	35.6%	35.0%	0.6%	2,981
Global Equity/Long Short	25,120	5.3%	8.0%	(2.7%)	(12,905)
International Equity	111,189	23.4%	23.0%	0.4%	1,868
Private Equity	22,877	4.8%	3.0%	1.8%	8,618
Domestic Fixed Income	84,332	17.7%	19.0%	(1.3%)	(5,977)
Absolute Return	27,464	5.8%	4.0%	1.8%	8,452
PIMCO All Asset	32,375	6.8%	6.0%	0.8%	3,857
Cash	2,611	0.5%	2.0%	(1.5%)	(6,895)
Total	475,309	100.0%	100.0%		

- The cash was 0.5% in the first quarter.

Portfolio Holdings

For Periods Ended June 30, 2023

- As of June 30, 2023, total fund assets were $475.3 million, up from $469.2 million as of March 31, 2023.
- The total fund had a positive investment return of $15.0 million for the quarter.

	June 30, 2023				March 31, 2023	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	**$328,525,418**	**69.12%**	**$(5,471,114)**	**$15,685,867**	**$318,310,665**	**67.83%**
U.S. Equity	**$169,338,648**	**35.63%**	**$(168,263)**	**$12,224,362**	**$157,282,550**	**33.52%**
BR Russell 1000 Index Non-Lendable	124,621,437	26.22%	0	9,846,819	114,774,618	24.46%
LSV	22,277,517	4.69%	(168,263)	811,682	21,634,098	4.61%
Principal Dynamic Growth	22,439,695	4.72%	0	1,565,861	20,873,834	4.45%
International Equity	**$111,189,376**	**23.39%**	**$(112,939)**	**$3,051,390**	**$108,250,925**	**23.07%**
Developed Markets	**$92,376,465**	**19.44%**	**$(112,939)**	**$3,112,875**	**$89,376,528**	**19.05%**
Silchester	58,796,944	12.37%	(112,939)	1,974,915	56,934,968	12.13%
Walter Scott	33,579,521	7.06%	0	1,137,960	32,441,560	6.91%
Emerging Markets	**$18,812,912**	**3.96%**	**$0**	**$(61,485)**	**$18,874,397**	**4.02%**
BlackRock EM Alpha Tilts	18,812,912	3.96%	0	(61,485)	18,874,397	4.02%
Global Equity Long/Short	**$25,120,063**	**5.29%**	**$(4,974,912)**	**$410,115**	**$29,684,860**	**6.33%**
ABS Global	20,059,168	4.22%	0	324,132	19,735,036	4.21%
Blackstone Park Ave. NT	5,060,895	1.06%	(4,974,912)	85,983	9,949,824	2.12%
Private Equity (1)	**$22,877,330**	**4.81%**	**$(215,000)**	**$0**	**$23,092,330**	**4.92%**
Pantheon USA IV	178,762	0.04%	0	0	178,762	0.04%
Pantheon USA VI	143,861	0.03%	0	0	143,861	0.03%
Pantheon USA VII	690,779	0.15%	(30,000)	0	720,779	0.15%
Pantheon Europe Fund V A	386,891	0.08%	(20,000)	0	406,891	0.09%
Pantheon Global Secondary Fund III	59,955	0.01%	0	0	59,955	0.01%
Pantheon US Select 2014	21,417,082	4.51%	(165,000)	0	21,582,082	4.60%
Domestic Fixed Income	**$84,332,000**	**17.74%**	**$(11,036)**	**$(893,536)**	**$85,236,571**	**18.16%**
Prudential Cons Core Bond Fund	37,395,021	7.87%	(11,036)	(282,832)	37,688,888	8.03%
Metropolitan West Fund	46,936,979	9.88%	0	(610,704)	47,547,683	10.13%
Absolute Return	**$27,464,410**	**5.78%**	**$0**	**$(15,637)**	**$27,480,047**	**5.86%**
UBS AIS	27,464,410	5.78%	0	(15,637)	27,480,047	5.86%
Real Assets	**$32,375,445**	**6.81%**	**$(3,000,000)**	**$193,330**	**$35,182,114**	**7.50%**
PIMCO All Asset	32,375,445	6.81%	(3,000,000)	193,330	35,182,114	7.50%
Cash	**$2,611,266**	**0.55%**	**$(475,813)**	**$51,135**	**$3,035,944**	**0.65%**
Cash Account	2,611,266	0.55%	(475,813)	51,135	3,035,944	0.65%
Total Fund	**$475,308,537**	**100.0%**	**$(8,957,962)**	**$15,021,159**	**$469,245,341**	**100.0%**

Portfolio Holdings

For Periods Ended June 30, 2023

	June 30, 2023					March 31, 2023		
	Market Value	Weight	(min)	Target	(max)	Market Value	Weight	Target
Total Equity	**$328,525,418**	**69.12%**	**60.00%**	**69.00%**	**75.00%**	**$318,310,665**	**67.83%**	**69.00%**
U.S. Equity	**$169,338,648**	**35.63%**	**27.00%**	**35.00%**	**40.00%**	**$157,282,550**	**33.52%**	**35.00%**
BR Russell 1000 Idx Non-Lendable	124,621,437	26.22%				114,774,618	24.46%	
LSV	22,277,517	4.69%				21,634,098	4.61%	
Principal Dynamic Growth	22,439,695	4.72%				20,873,834	4.45%	
International Equity	**$111,189,376**	**23.39%**	**18.00%**	**23.00%**	**28.00%**	**$108,250,925**	**23.07%**	**23.00%**
Developed Markets	**$92,376,465**	**19.44%**	**-**	**-**	**-**	**$89,376,528**	**19.05%**	**-**
Silchester	58,796,944	12.37%				56,934,968	12.13%	
Walter Scott	33,579,521	7.06%				32,441,560	6.91%	
Emerging Markets	**$18,812,912**	**3.96%**	**-**	**-**	**-**	**$18,874,397**	**4.02%**	**-**
BlackRock EM Alpha Tilts	18,812,912	3.96%				18,874,397	4.02%	
Global Equity/Long Short	**$25,120,063**	**5.29%**	**4.00%**	**8.00%**	**12.00%**	**$29,684,860**	**6.33%**	**8.00%**
ABS Global	20,059,168	4.22%				19,735,036	4.21%	
Blackstone Park Ave. NT	5,060,895	1.06%				9,949,824	2.12%	
Private Equity (1)	**$22,877,330**	**4.81%**	**0.00%**	**3.00%**	**6.00%**	**$23,092,330**	**4.92%**	**3.00%**
Pantheon USA IV	178,762	0.04%				178,762	0.04%	
Pantheon USA VI	143,861	0.03%				143,861	0.03%	
Pantheon USA VII	690,779	0.15%				720,779	0.15%	
Pantheon Europe Fund V A	386,891	0.08%				406,891	0.09%	
Pantheon Global Fund III	59,955	0.01%				59,955	0.01%	
Pantheon US Select 2014	21,417,082	4.51%				21,582,082	4.60%	
Domestic Fixed Income	**$84,332,000**	**17.74%**	**14.00%**	**19.00%**	**24.00%**	**$85,236,571**	**18.16%**	**19.00%**
Prudential Cons Core Bond Fund	37,395,021	7.87%				37,688,888	8.03%	
Metropolitan West Fund CIT	46,936,979	9.88%				47,547,683	10.13%	
Absolute Return	**$27,464,410**	**5.78%**	**0.00%**	**4.00%**	**6.00%**	**$27,480,047**	**5.86%**	**4.00%**
UBS AIS	27,464,410	5.78%				27,480,047	5.86%	
Real Assets	**$32,375,445**	**6.81%**	**4.00%**	**6.00%**	**12.00%**	**$35,182,114**	**7.50%**	**6.00%**
PIMCO All Asset	32,375,445	6.81%	4.00%	6.00%	10.00%	35,182,114	7.50%	6.00%
Cash	**$2,611,266**	**0.55%**	**0.00%**	**2.00%**	**4.00%**	**$3,035,944**	**0.65%**	**2.00%**
Cash Account	2,611,266	0.55%				3,035,944	0.65%	
Total Fund	**$475,308,537**	**100.0%**		**100.0%**		**$469,245,341**	**100.0%**	**100.0%**

Investment Manager Returns

For Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Total Equity	**5.02%**	**14.40%**	**10.95%**	**7.91%**	**9.51%**
U.S. Long Equity	**7.78%**	**17.93%**	**14.30%**	**10.95%**	**12.67%**
Pure US Equity Composite	**7.78%**	**17.93%**	**14.37%**	**11.01%**	**12.77%**
Russell 3000 Index	8.39%	18.95%	13.89%	11.39%	12.86%
Russell 1000 Index Non-Lendable	8.58%	19.37%	14.10%	11.93%	13.15%
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	13.15%
LSV	3.80%	12.16%	21.72%	4.83%	7.87%
Russell 2000 Value Index	3.18%	6.01%	15.43%	3.54%	7.70%
Principal Dynamic Growth	7.50%	16.17%	10.71%	12.54%	16.70%
Russell 2500 Growth Index	6.41%	18.58%	6.56%	7.00%	10.95%
International Equity	**2.82%**	**15.70%**	**7.61%**	**4.10%**	**6.47%**
MSCI ACWI ex US	2.44%	12.72%	7.22%	3.52%	6.32%
Developed Markets	**3.49%**	**19.12%**	**8.96%**	**4.83%**	**7.24%**
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	6.88%
Silchester	3.47%	17.84%	12.21%	4.71%	7.82%
MSCI EAFE Val Idx	3.15%	17.40%	11.34%	2.93%	6.02%
Walter Scott	3.51%	-	-	-	-
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	6.88%
MSCI EAFE Growth	2.77%	20.20%	6.27%	5.44%	7.41%
Emerging Markets	**(0.33%)**	**2.00%**	**1.98%**	**0.94%**	**3.20%**
MSCI Emerging Mkts Idx Net	0.90%	1.75%	2.32%	0.93%	4.95%
BlackRock EM Alpha Tilts	(0.33%)	2.00%	1.98%	-	-
MSCI Emerging Mkts Idx Net	0.90%	1.75%	2.32%	0.93%	4.95%
Global Equity/Long Short	**1.63%**	**4.10%**	**3.24%**	**3.33%**	**4.50%**
HFRI FOF: Strategic Index	1.97%	4.16%	4.34%	2.67%	4.05%
ABS Global	1.64%	5.08%	4.37%	3.62%	5.14%
MSCI ACWI Idx	6.35%	17.13%	11.51%	8.64%	10.50%
Blackstone Park Ave. NT	1.34%	2.20%	1.67%	2.59%	3.73%
S&P 500 Index	8.74%	19.59%	14.60%	12.31%	13.38%
Private Equity (1)	**0.00%**	**(0.52%)**	**20.30%**	**16.16%**	**15.01%**
Pantheon USA IV	0.00%	(1.24%)	2.15%	0.46%	2.27%
Pantheon USA VI	0.00%	(5.42%)	(11.87%)	(10.71%)	(5.23%)
Pantheon USA VII	0.00%	(2.06%)	14.54%	9.35%	11.08%
Pantheon Europe Fund V A	0.00%	(4.35%)	10.13%	11.59%	12.94%
Pantheon Global Secondary Fund III	0.00%	0.36%	(4.19%)	(1.31%)	2.36%
Pantheon US Select 2014	0.00%	(0.38%)	22.40%	20.27%	19.44%

Zesiger portfolio is included in US Long Equity Assets and Returns.
(1) Current 0% return due to a one quarter lag in valuation.

Investment Manager Returns

For Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Domestic Fixed Income	**(1.05%)**	**(0.95%)**	**(3.93%)**	**0.85%**	**0.58%**
Prudential Core Bond	(0.75%)	(0.51%)	(3.84%)	0.73%	0.44%
Metropolitan West Fund*	(1.28%)	(1.29%)	(4.00%)	0.90%	0.67%
Blmbg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	0.44%
Absolute Return	**(0.06%)**	**4.23%**	**7.42%**	**5.60%**	**5.11%**
UBS AIS	(0.06%)	4.23%	7.42%	5.60%	5.11%
HFRI FOF: Conservative In	1.03%	3.65%	6.07%	3.92%	4.13%
Real Assets	**0.71%**	**4.64%**	**6.91%**	**4.84%**	**6.60%**
PIMCO All Asset	0.71%	4.64%	6.91%	4.65%	5.45%
Blmbg US TIPS 1-10	(1.42%)	(0.91%)	1.15%	2.75%	2.13%
Cash	**1.24%**	**4.04%**	**1.54%**	**1.78%**	**1.59%**
Cash Account	1.24%	4.04%	1.54%	1.78%	1.59%
3-month Treasury Bill	1.17%	3.59%	1.27%	1.55%	1.37%
Total Fund	**3.24%**	**10.01%**	**7.53%**	**6.15%**	**7.21%**
Target Benchmark (1)	3.47%	9.82%	6.72%	6.23%	7.06%
Annual Discount Rate:6.625%					

(1) Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI ex US, 19.0% Blmbg Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.
*On August 24,2022 switched from Mutual Fund to CIT

Investment Manager Returns – Fiscal Years

For Periods Ended June 30, 2023

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Total Equity	**14.40%**	**(14.13%)**	**39.04%**	**1.53%**	**5.50%**
U.S. Long Equity	**17.93%**	**(14.69%)**	**48.45%**	**5.18%**	**7.04%**
Russell 3000 Index	18.95%	(13.87%)	44.16%	6.53%	8.98%
Russell 1000 Index Non-Lendable	19.37%	(13.03%)	43.08%	7.47%	10.04%
Russell 1000 Index	19.36%	(13.04%)	43.07%	7.48%	10.02%
LSV	12.16%	(6.00%)	71.06%	(23.09%)	(8.73%)
Russell 2000 Value Index	6.01%	(16.28%)	73.28%	(17.48%)	(6.24%)
Principal Dynamic Growth	16.17%	(28.37%)	63.07%	22.10%	8.96%
Russell 2500 Growth Index	18.58%	(31.81%)	49.63%	9.21%	6.13%
International Equity	**15.70%**	**(18.54%)**	**32.22%**	**(4.70%)**	**2.95%**
MSCI ACWI ex US	12.72%	(19.42%)	35.72%	(4.80%)	1.29%
Developed Markets	**19.12%**	**(16.32%)**	**29.77%**	**(5.04%)**	**3.07%**
MSCI EAFE Index	18.77%	(17.77%)	32.35%	(5.13%)	1.08%
Silchester	17.84%	(11.34%)	35.22%	(9.35%)	(1.71%)
MSCI EAFE Val Idx	17.40%	(11.95%)	33.50%	(14.48%)	(2.10%)
MSCI EAFE Index	18.77%	(17.77%)	32.35%	(5.13%)	1.08%
MSCI EAFE Growth Idx	20.20%	(23.76%)	30.97%	4.15%	4.24%
Emerging Markets	**2.00%**	**(27.08%)**	**42.61%**	**(3.22%)**	**2.06%**
MSCI Emerging Mkts Idx Net	1.75%	(25.28%)	40.90%	(3.39%)	1.22%
BlackRock EM Alpha Tilts	2.00%	(27.08%)	42.61%	(3.22%)	-
MSCI Emerging Mkts Idx Net	1.75%	(25.28%)	40.90%	(3.39%)	1.22%
Global Equity/Long Short	**4.10%**	**(13.73%)**	**22.51%**	**4.25%**	**2.71%**
HFRI FOF: Strategic Index	4.16%	(11.92%)	23.82%	0.40%	0.01%
ABS Global	5.08%	(9.66%)	19.76%	5.07%	0.01%
MSCI ACWI Idx	17.13%	(15.37%)	39.87%	2.64%	6.33%
Blackstone Park Ave. NT	2.20%	(17.37%)	24.45%	3.92%	4.03%
S&P 500 Index	19.59%	(10.62%)	40.79%	7.51%	10.42%
Private Equity	**(0.52%)**	**12.77%**	**55.16%**	**5.82%**	**14.80%**
Pantheon USA IV	(1.24%)	(4.88%)	13.48%	0.00%	(4.04%)
Pantheon USA VI	(5.42%)	(22.03%)	(7.18%)	(21.95%)	6.24%
Pantheon USA VII	(2.06%)	4.03%	47.49%	(0.99%)	5.11%
Pantheon Europe Fund V A	(4.35%)	(12.57%)	59.73%	11.81%	15.86%
Pantheon Global Secondary Fund III	0.36%	(19.00%)	8.19%	0.15%	6.28%
Pantheon US Select 2014	(0.38%)	15.05%	59.99%	12.67%	21.80%

Zesiger portfolio is included in US Long Equity Assets and Returns.

Investment Manager Returns – Fiscal Years

For Periods Ended June 30, 2023

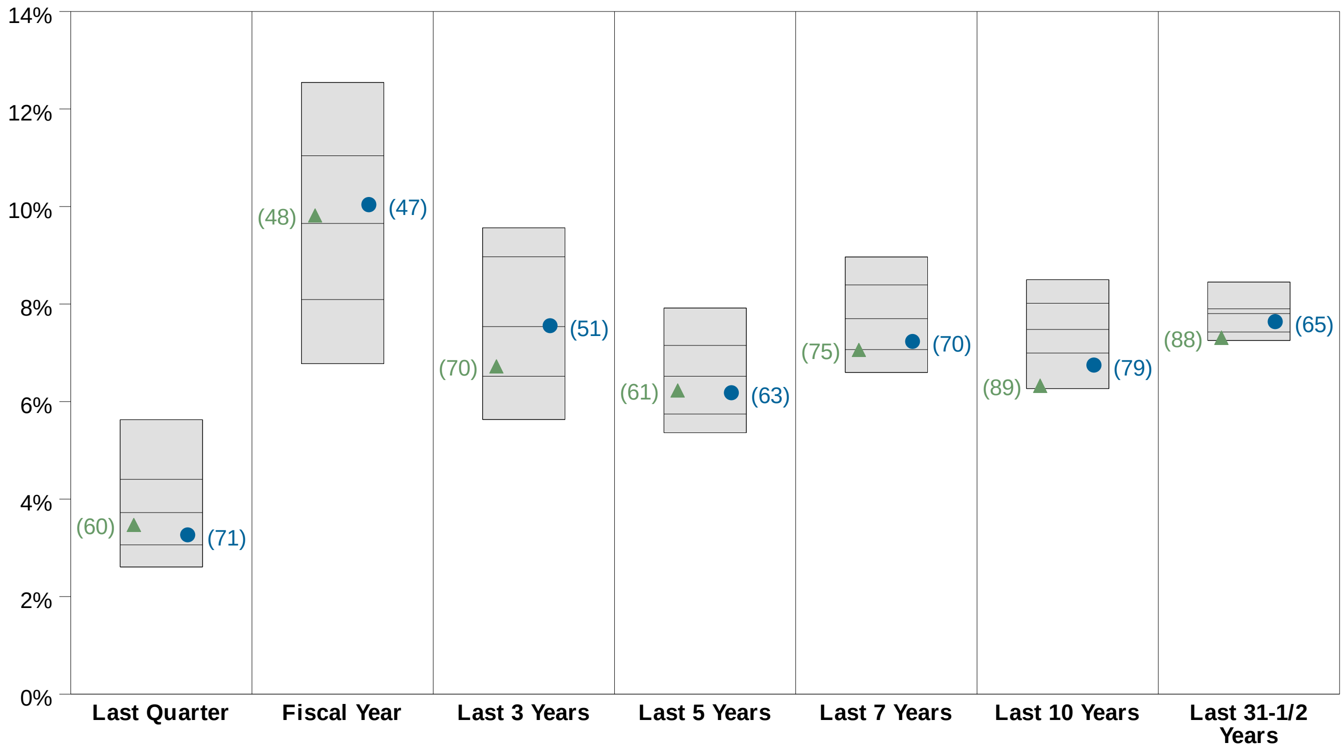
	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Domestic Fixed Income	**(0.95%)**	**(11.14%)**	**0.72%**	**8.89%**	**8.07%**
Prudential Cons Core Bond Fund	(0.51%)	(10.60%)	(0.02%)	8.11%	7.90%
Metropolitan West Fund	(1.29%)	(11.56%)	1.36%	9.18%	8.24%
Blmbg Aggregate Index	(0.94%)	(10.29%)	(0.33%)	8.74%	7.87%
Absolute Return	**4.23%**	**7.95%**	**10.18%**	**4.05%**	**1.79%**
UBS AIS	4.23%	7.95%	10.18%	4.05%	1.79%
HFRI FOF: Conservative In	3.65%	0.10%	15.01%	(0.48%)	2.06%
Real Assets	**4.64%**	**(9.86%)**	**29.53%**	**(2.18%)**	**5.97%**
PIMCO All Asset	4.64%	(9.85%)	29.55%	(2.23%)	5.03%
Blmbg US TIPS 1-10	(0.91%)	(2.03%)	6.60%	5.75%	4.67%
Cash	**4.04%**	**0.35%**	**0.26%**	**1.75%**	**2.52%**
Cash Account	4.04%	0.35%	0.26%	1.75%	2.52%
3-month Treasury Bill	3.59%	0.17%	0.09%	1.63%	2.31%
Total Fund	**10.01%**	**(11.98%)**	**28.40%**	**2.76%**	**5.51%**
Total Fund Custom Benchmark*	9.82%	(11.91%)	25.66%	4.63%	6.36%
Annual Discount Rate:6.625%					

*Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI ex US, 19.0% Blmbg Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

Cumulative Performance versus Target

For Periods Ended June 30, 2023

Performance vs Callan Public Fund Spons- Mid (100M-1B) (Gross)

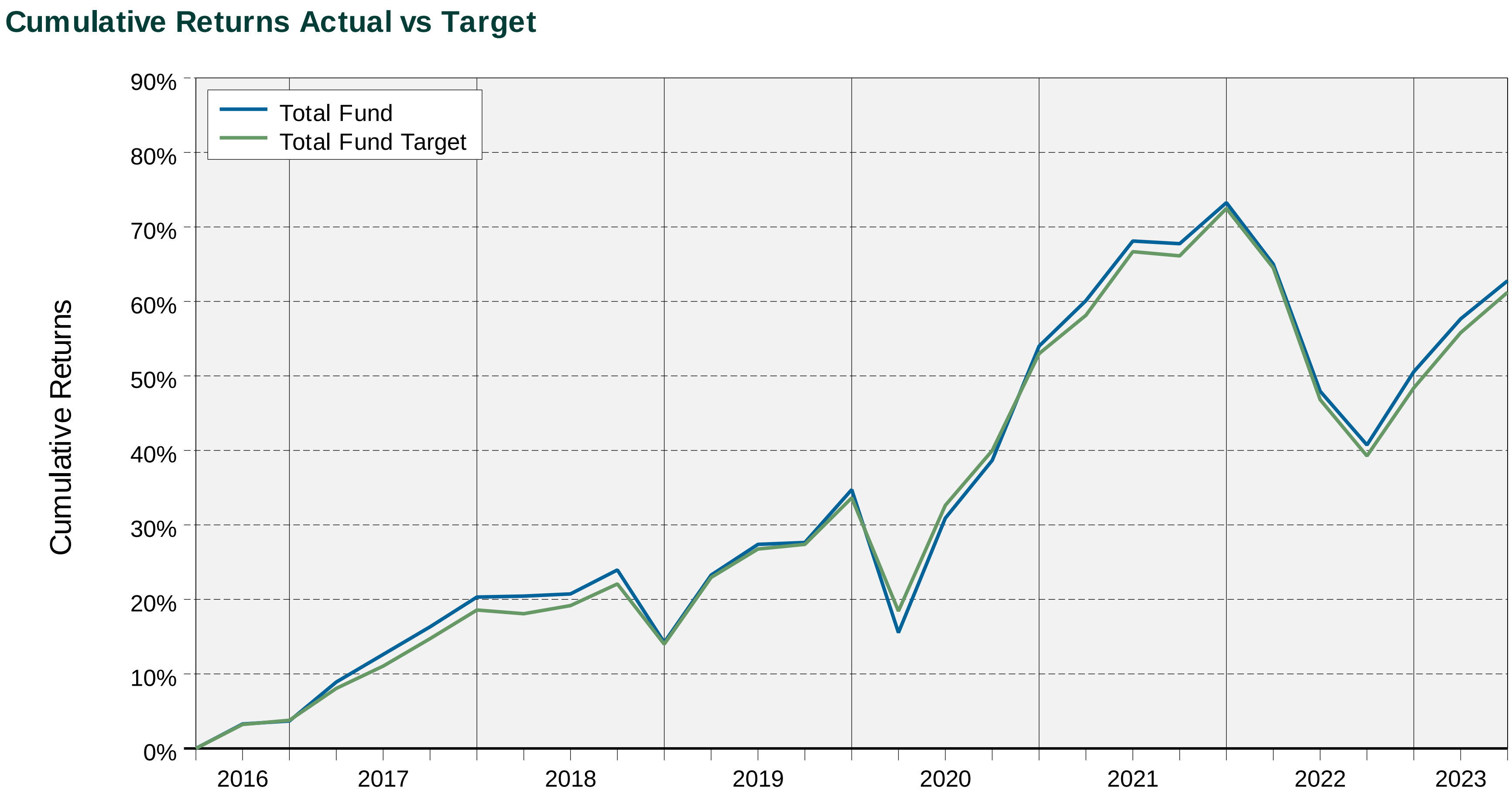


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 31-1/2 Years
10th Percentile	5.63	12.54	9.56	7.92	8.97	8.50	8.45
25th Percentile	4.41	11.04	8.97	7.15	8.39	8.02	7.90
Median	3.72	9.65	7.54	6.52	7.70	7.48	7.80
75th Percentile	3.06	8.09	6.52	5.75	7.07	7.00	7.43
90th Percentile	2.61	6.78	5.63	5.36	6.60	6.27	7.25
Total Fund ●	3.24	10.01	7.53	6.15	7.21	6.72	7.61
Total Fund Custom Benchmark ▲	3.47	9.82	6.72	6.23	7.06	6.33	7.31

Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI ex US, 19.0% Blmbg Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

Cumulative Performance versus Target

For Periods Ended June 30, 2023



Performance Attribution

For Periods Ended June 30, 2023

Relative Attribution Effects for Quarter ended June 30, 2023

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	34%	35%	7.78%	8.39%	(0.21%)	(0.06%)	(0.26%)
Domestic Fixed Income	18%	19%	(1.05%)	(0.84%)	(0.04%)	0.03%	(0.01%)
International Equity	23%	23%	2.82%	2.44%	0.09%	(0.00%)	0.09%
Absolute Return	6%	4%	(0.06%)	1.05%	(0.07%)	(0.05%)	(0.11%)
Global Equity/Long Short	6%	8%	1.63%	1.95%	(0.02%)	0.03%	0.01%
Private Equity	5%	3%	0.00%	0.00%	0.00%	(0.07%)	(0.07%)
PIMCO All Asset	7%	6%	0.71%	(1.42%)	0.15%	(0.06%)	0.09%
Cash	1%	2%	1.24%	1.17%	0.00%	0.03%	0.03%
Total			**3.24% =**	**3.47% +**	**(0.08%) +**	**(0.15%)**	**(0.23%)**

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	33%	35%	17.93%	18.95%	(0.34%)	(0.15%)	(0.49%)
Domestic Fixed Income	18%	19%	(0.95%)	(0.94%)	(0.00%)	0.06%	0.06%
International Equity	22%	23%	15.70%	12.72%	0.64%	(0.11%)	0.53%
Global Equity Long/Short	7%	8%	4.10%	4.15%	(0.01%)	0.08%	0.07%
Absolute Return	6%	4%	4.23%	3.67%	0.04%	(0.14%)	(0.10%)
Private Equity	5%	3%	(0.52%)	(0.52%)	0.00%	(0.23%)	(0.23%)
PIMCO All Asset Class	8%	6%	4.64%	(0.91%)	0.44%	(0.18%)	0.26%
Cash	1%	2%	4.04%	3.59%	0.00%	0.10%	0.11%
Total			**10.01% =**	**9.82% +**	**0.77% +**	**(0.58%)**	**0.20%**

Summary Observations

For Periods Ended June 30, 2023

- The total fund returned +3.24% for the quarter, +10.01% annualized for the trailing 1-year period, +7.53% annualized for the trailing 3-year period and +6.15% annualized for the trailing 5-year period. For the trailing 7-year period, the total fund returned +7.21%, annualized.

Fiscal Year 2023 Attribution - what helped:

- Relative performance of international equity manager Silchester
- Relative performance of PIMCO All Asset Fund
- An underweight to domestic fixed income, global equity long/short and cash versus target

Fiscal Year 2023 - what hurt:

- Relative performance of domestic equity manager Principal
- An overweight to private equity, PIMCO All Asset and absolute return asset classes versus target
- An underweight to international equity and domestic equity versus target

OPEB Performance

Actual versus Target Asset Allocation

For Periods Ended June 30, 2023

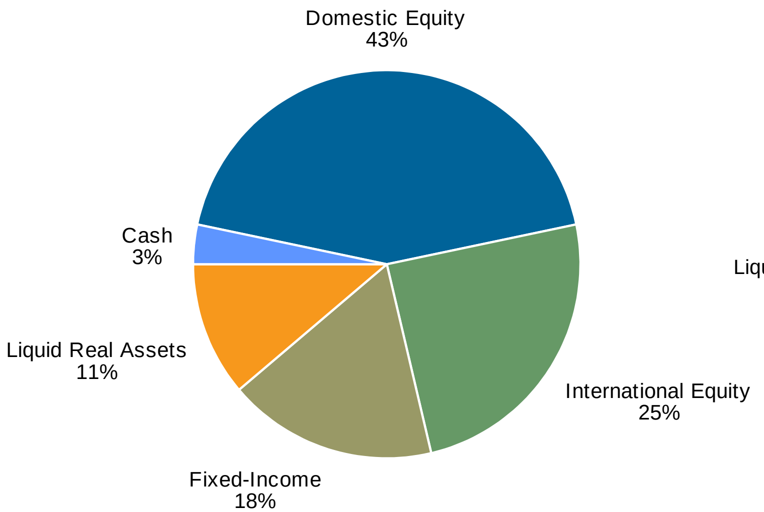
Overweight's:

- Cash (3.3% vs 0% target)
- Domestic Equity (43.4% vs 41% target)

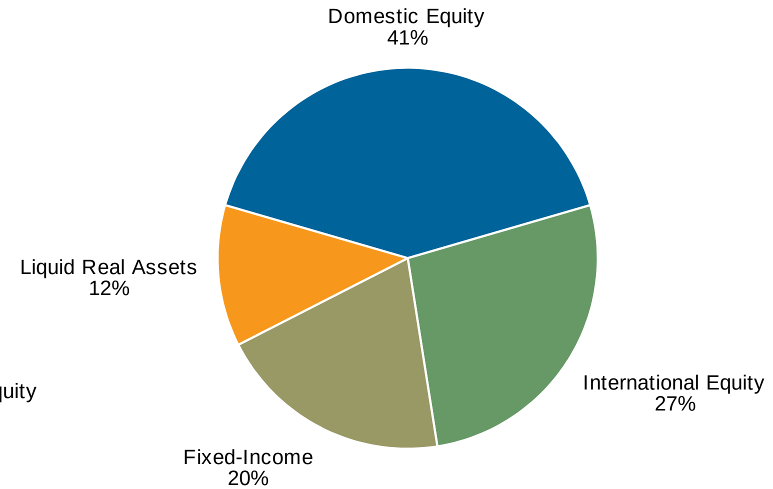
Underweights:

- Fixed-Income (17.5% vs 20% target)
- International equity (24.6% vs 27% target)
- Liquid Real Assets (11.2% vs 12% target)

Actual Asset Allocation



Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	55,856	43.4%	41.0%	2.4%	3,079
International Equity	31,639	24.6%	27.0%	(2.4%)	(3,116)
Fixed-Income	22,578	17.5%	20.0%	(2.5%)	(3,166)
Liquid Real Assets	14,426	11.2%	12.0%	(0.8%)	(1,021)
Cash	4,224	3.3%	0.0%	3.3%	4,224
Total	128,723	100.0%	100.0%		

Portfolio Holdings

For Periods Ended June 30, 2023

	June 30, 2023				March 31, 2023	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	**$87,495,094**	**67.97%**	**$0**	**$5,138,427**	**$82,356,667**	**65.61%**
Domestic Equity	**$55,855,731**	**43.39%**	**$0**	**$4,333,748**	**$51,521,983**	**41.04%**
Vanguard Total Stock Mrkt	55,855,731	43.39%	0	4,333,748	51,521,983	41.04%
International Equity	**$31,639,363**	**24.58%**	**$0**	**$804,679**	**$30,834,684**	**24.56%**
Vanguard Total Intl Stock	31,639,363	24.58%	0	804,679	30,834,684	24.56%
Fixed Income	**$22,578,242**	**17.54%**	**$(4,157)**	**$(214,861)**	**$22,797,260**	**18.16%**
Metropolitan West Fund	8,533,025	6.63%	0	(109,736)	8,642,761	6.88%
Prudential Cons Core Bond Fnd	14,045,217	10.91%	(4,157)	(105,125)	14,154,500	11.28%
Liquid Real Assets	**$14,425,977**	**11.21%**	**$0**	**$106,284**	**$14,319,692**	**11.41%**
PIMCO All Assets	14,425,977	11.21%	0	106,284	14,319,692	11.41%
Cash	**$4,223,646**	**3.28%**	**$(1,904,739)**	**$69,603**	**$6,058,782**	**4.83%**
Short Term Fund	4,223,646	3.28%	(1,904,739)	69,603	6,058,782	4.83%
Total Fund	**$128,722,959**	**100.0%**	**$(1,908,896)**	**$5,099,453**	**$125,532,401**	**100.0%**

- Total fund increased to $128.7 million at the end of the quarter from $125.5 million as of March 31, 2023.

Portfolio Holdings

For Periods Ended June 30, 2023

	June 30, 2023					March 31, 2023		
	Market Value	Weight	(min)	Target	(max)	Market Value	Weight	Target
Total Equity	**$87,495,094**	**67.97%**	**53.00%**	**68.00%**	**83.00%**	**$82,356,667**	**65.61%**	**68.00%**
Domestic Equity	**$55,855,731**	**43.39%**	**31.00%**	**41.00%**	**51.00%**	**$51,521,983**	**41.04%**	**41.00%**
Vanguard Total Stock Mkt	55,855,731	43.39%				51,521,983	41.04%	
International Equity	**$31,639,363**	**24.58%**	**20.00%**	**27.00%**	**34.00%**	**$30,834,684**	**24.56%**	**27.00%**
Vanguard Total Int'l. Stock	31,639,363	24.58%				30,834,684	24.56%	
Fixed Income	**$22,578,242**	**17.54%**	**15.00%**	**20.00%**	**25.00%**	**$22,797,260**	**18.16%**	**20.00%**
Metropolitan West Fund	8,533,025	6.63%				8,642,761	6.88%	
Prudential Cons Core Bond	14,045,217	10.91%				14,154,500	11.28%	
Liquid Real Assets	**$14,425,977**	**11.21%**	**0.00%**	**12.00%**	**20.00%**	**$14,319,692**	**11.41%**	**12.00%**
PIMCO All Assets	14,425,977	11.21%				14,319,692	11.41%	
Cash	**$4,223,646**	**3.28%**	**0.00%**	**0.00%**	**0.00%**	**$6,058,782**	**4.83%**	**0.00%**
Short Term Fund	4,223,646	3.28%				6,058,782	4.83%	
Total Fund	**$128,722,959**	**100.0%**		**100.0%**		**$125,532,401**	**100.0%**	**100.0%**

Investment Manager Returns

For Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Total Equity	**6.24%**	**16.47%**	**11.35%**	**8.39%**	**10.34%**
Domestic Equity	**8.41%**	**18.93%**	**13.76%**	**11.31%**	**12.81%**
Vanguard Total Stock Market (1)	8.41%	18.93%	13.76%	11.31%	12.81%
Vanguard Total Stock Benchmark (2)	8.41%	18.94%	13.77%	11.31%	12.81%
Russell 3000 Index	8.39%	18.95%	13.89%	11.39%	12.86%
International Equity	**2.61%**	**12.34%**	**7.54%**	**3.72%**	**6.40%**
Vanguard Total Int'l. Stock (3)	2.61%	12.34%	7.54%	3.72%	6.40%
Vanguard International Benchmark (4)	2.68%	12.89%	7.94%	3.97%	6.78%
MSCI ACWI ex US	2.44%	12.72%	7.22%	3.52%	6.32%
Fixed-Income	**(0.94%)**	**(0.85%)**	**(3.92%)**	**0.86%**	**0.56%**
Prudential Conservative Core Bond (5)	(0.77%)	(0.68%)	(3.98%)	0.73%	0.39%
Metropolitan West Fund	(1.27%)	(1.36%)	(4.02%)	0.88%	0.66%
Blmbg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	0.44%
Liquid Real Assets	**0.74%**	**4.68%**	**6.92%**	**4.65%**	**5.45%**
PIMCO All Asset	0.74%	4.68%	6.92%	4.65%	5.45%
Blmbg US TIPS 1-10	(1.42%)	(0.91%)	1.15%	2.75%	2.13%
Cash	**1.23%**	**3.43%**	**1.22%**	**1.48%**	**1.33%**
Short Term Fund	1.23%	3.43%	1.22%	1.48%	1.33%
3-month Treasury Bill	1.17%	3.59%	1.27%	1.55%	1.37%
Total Fund	**4.09%**	**11.12%**	**7.77%**	**6.55%**	**7.63%**
Total Fund Benchmark*	3.74%	10.93%	7.07%	6.55%	7.38%

Annual Discount Rate:6.5%

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI ex US, 20.0% Blmbg Aggregate and 12.0% Blmbg:TIPS 1-10 Yr.
(1) Vanguard Total Stock Market switched to Admiral Shares from Signal Shares in October 2014. In November 2014 switched to institutional shares.
(2) Vanguard Total Stock Market Benchmark was US Broad Market Index switched to CRSP U.S. Total Market Index Jun. 2013
(3) Vanguard Total Int'l. Stock switched to Institutional Shares from Investor Shares on November 30, 2014
(4) Vanguard Total International Benchmark was MSCI ACWI ex US IMI switched to FTSE Global All Cap ex US Index Jun. 2013.
(5) February 8, 2017 fund switched to Institutional Trust.

Investment Manager Returns – Fiscal Years

For Periods Ended June 30, 2023

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Total Equity	**16.47%**	**(16.08%)**	**41.24%**	**2.43%**	**5.80%**
Domestic Equity	**18.93%**	**(14.24%)**	**44.33%**	**6.47%**	**9.00%**
Vanguard Total Stock Market (1)	18.93%	(14.24%)	44.33%	6.47%	9.00%
Vanguard Total Stock Benchmark (2)	18.94%	(14.22%)	44.35%	6.47%	9.00%
Russell 3000 Index	18.95%	(13.87%)	44.16%	6.53%	8.98%
International Equity	**12.34%**	**(18.92%)**	**36.54%**	**(4.07%)**	**0.62%**
Vanguard Total Int'l. Stock (3)	12.34%	(18.92%)	36.54%	(4.07%)	0.62%
Vanguard International Benchmark (4)	12.89%	(19.01%)	37.55%	(4.16%)	0.81%
MSCI ACWI ex US	12.72%	(19.42%)	35.72%	(4.80%)	1.29%
Fixed-Income	**(0.85%)**	**(10.95%)**	**0.45%**	**8.94%**	**8.04%**
Prudential Cons Core Bond Fnd (5)	(0.68%)	(10.70%)	(0.16%)	8.65%	7.80%
Metropolitan West Fund	(1.36%)	(11.56%)	1.36%	9.18%	8.23%
Blmbg Aggregate Index	(0.94%)	(10.29%)	(0.33%)	8.74%	7.87%
Liquid Real Assets	**4.68%**	**(9.85%)**	**29.55%**	**(2.23%)**	**5.03%**
PIMCO All Asset	4.68%	(9.85%)	29.55%	(2.23%)	5.03%
Blmbg US TIPS 1-10	(0.91%)	(2.03%)	6.60%	5.75%	4.67%
Cash	**3.43%**	**0.16%**	**0.09%**	**1.78%**	**2.00%**
Short Term Fund	3.43%	0.16%	0.09%	1.78%	2.00%
3-month Treasury Bill	3.59%	0.17%	0.09%	1.63%	2.31%
Total Fund	**11.12%**	**(14.34%)**	**31.50%**	**3.26%**	**6.24%**
Total Fund Benchmark*	10.93%	(13.16%)	27.43%	4.85%	6.71%

Annual Discount Rate:6.5%

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI ex US, 20.0% Blmbg Aggregate and 12.0% Blmbg:TIPS 1-10 Yr.
(1) Vanguard Total Stock Market switched to Admiral Shares from Signal Shares in October 2014. In November 14th, 2014 switched to Institutional shares.
(2) Vanguard Total Stock Market Benchmark was US Broad Market Index switched to CRSP U.S. Total Market Index Jun. 2013
(3) Vanguard Total Int'l. Stock switched to Institutional Shares from Investor Shares in November 30, 2014
(4) Vanguard Total International Benchmark was MSCI ACWI ex US IMI switched to FTSE Global All Cap ex US Index Jun. 2013.
(5) February 8, 2017 fund switched to Institutional Trust.

Performance Attribution

For Periods Ended June 30, 2023

Relative Attribution Effects for Quarter ended June 30, 2023

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	41%	41%	8.41%	8.39%	0.01%	0.03%	0.04%
Fixed-Income	18%	20%	(0.94%)	(0.84%)	(0.02%)	0.08%	0.07%
International Equity	25%	27%	2.61%	2.44%	0.04%	0.02%	0.06%
Dvsfd Real Assets	11%	12%	0.74%	(1.42%)	0.25%	0.04%	0.28%
Cash	4%	0%	1.23%	1.23%	0.00%	(0.10%)	(0.10%)
Total			**4.09% =**	**3.74% +**	**0.28% +**	**0.07%**	**0.35%**

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	42%	41%	18.93%	18.95%	(0.01%)	(0.03%)	(0.04%)
Fixed-Income	19%	20%	(0.85%)	(0.94%)	0.01%	0.03%	0.05%
International Equity	25%	27%	12.34%	12.72%	(0.10%)	(0.10%)	(0.20%)
Dvsfd Real Assets	12%	12%	4.68%	(0.91%)	0.70%	(0.00%)	0.70%
Cash	2%	0%	3.43%	3.43%	0.00%	(0.31%)	(0.31%)
Total			**11.12% =**	**10.93% +**	**0.60% +**	**(0.41%)**	**0.19%**

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Callan

June 30, 2023

City of Norwalk

Investment Measurement Service
Quarterly Review

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Economic forecasts have shifted tone, from one of certain recession to no recession this year or next. What happened? A robust job market, declining inflation, and a GDP rebound appear to point to a soft landing, but recession risks have not completely disappeared.

Equity Gains Power Positive Returns

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All investor types saw gains for the one year ended 2Q23 after equity gains in the quarter, but trailed a 60% stocks/40% bonds benchmark. Over the last 20 years, all investor types were within range of the 60%/40% benchmark, lagging U.S. equities but topping U.S. fixed income.

Large Cap Growth Leads Indices Higher

EQUITY

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All U.S. equity indices produced positive returns; large cap growth (led by big technology firms) helped power the gains. Global and global ex-U.S. indices also showed gains, while developed markets outperformed emerging markets, in part due to China.

Aggregate Falls with Rise in Interest Rates

FIXED INCOME

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The Bloomberg Aggregate fell as interest rates increased, but investors' risk appetite and solid economic news spurred returns for spread sectors and lower quality bonds. The unhedged Global Aggregate fell but the hedged index showed gains.

Private RE Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS

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The NCREIF Property Index fell 2.0% during 2Q23. The NCREIF Open-End Diversified Core Equity Index fell 2.7%. Global REITs underperformed, up 0.2% compared to a 6.8% rise for global equities (MSCI World). U.S. REITs rose 2.6%, compared to 8.7% for the S&P 500.

Headwinds in Market Slow Deal Liquidity

PRIVATE EQUITY

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First-half private equity fundraising and deal activity continued a declining trend, with only IPOs increasing slightly. LPs are consolidating and upgrading portfolios, and GPs are focusing on existing portfolio management to increase exits and distributions.

IRRs Stay Steady and Range from 8%-10%

PRIVATE CREDIT

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Private credit has generated net IRRs of 8% to 10% for trailing periods ended 1Q23. Higher-risk strategies performed better than lower-risk strategies. Investors focused on relative value, downside protection, and managers' internal workout resources.

Hedge Funds Gain but Lag Equity Indices

HEDGE FUNDS/MACs

13 PAGE

Hedge funds ended 2Q higher but unable to keep up with soaring equity indices, as equity market volatility subsided from 1Q. For individual managers, equity hedge strategies, event-driven managers, and macro strategies all ended with gains for the quarter.

Index Starts off 2023 With a 5.3% Increase

DEFINED CONTRIBUTION

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The Callan DC Index gained 5.3% in 1Q23, and balances within the index rose by the same amount. Target date funds continued to see the largest net inflows. U.S. large cap saw big gains in participant allocations; capital preservation fund options saw a decline.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000

8.4%

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

2.4%

U.S. Fixed Income
Bloomberg Agg

-0.8%

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

-2.2%

Sources: Bloomberg, FTSE Russell, MSCI

Is Recession Risk Really Off the Table?

ECONOMY | Jay Kloepfer

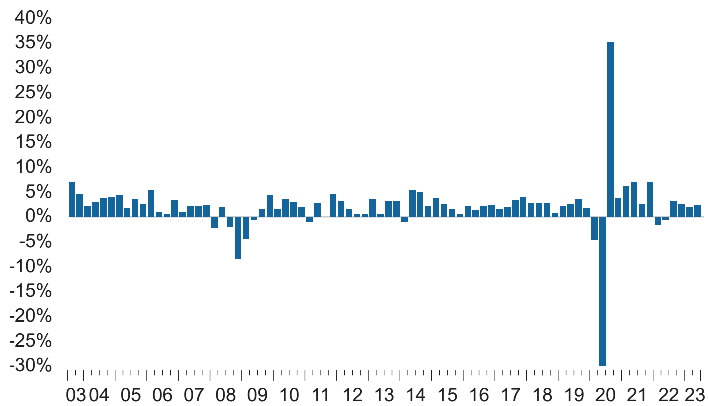
We saw a change in tone in economic forecasts coming in over the past six weeks, from one of certain recession in 2023 or at the least 2024, to one of “no recession here.” We see it in the tea leaves of the Fed’s releases after its last couple of meetings and in investment managers’ updates and strategy pieces, and now the professional forecasting community is, well, forecasting no recession this year or next.

What happened? First, the job market remains robust, with unemployment stuck at a generational low. Second, inflation dropped from an alarming 9% rate last June to 3% in just one year. In the broad economy, GDP rebounded from two quarters of decline in 2022 to log four consecutive quarters of solid growth, notching 2.4% in 2Q23. Expectations established just six months ago had a recession hitting in 2Q or 3Q of *this* year. Now it is rare to find a shorter-term outlook (12-18 months) with a recession as the base case; we’re back to the notion of a soft landing, with GDP gently declining to 1%-1.5% growth in 2024. Did recession risk really disappear?

Interest rates could rise more in the second half of 2023, even though inflation is now down at 3%. The Fed has suggested two more rate hikes are in their cards. The strength remaining in the economy after rates rose 5% in one year gives the Fed headroom to further flex its inflation-fighting chops. The bond market has been expecting a recession since last July, when the yield curve inverted, and there is growing sentiment that perhaps this time, bond investors just might be wrong. The argument is that the bond market got ahead of itself in the spring of 2022, when it immediately and (almost) fully priced in the expected Fed moves by June last year. Then almost as quickly as the market believed the Fed would execute as telegraphed, the market began doubting the resolve of the Fed and the ability of the economy to absorb the historic jump in interest rates, and hence the inversion of the yield curve.

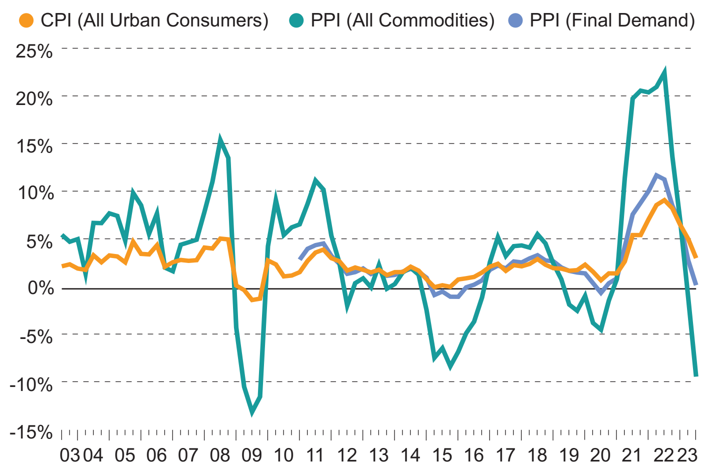
The strength of the job market has been Fed Chair Jerome Powell’s secret weapon, and we have been looking at the details of the job market with great interest. The U.S. economy recouped the nearly 20 million jobs lost in the first months of the pandemic by the middle of 2022, and now supports 4.3 million more non-farm jobs than at the end of 2019. However, some sectors are still woefully short of workers, and many observers believed a recession was necessary to convince people to take the jobs they no longer wanted in hospitality (hotels and restaurants), retail trade, and state and local government. These three sectors make up 34% of the U.S. job market, but all three have yet to surpass their pre-pandemic levels of employment; in fact, they are still 300,000 behind. That means only two-thirds of the job market has accounted for the 4.3 million new jobs. These lagging sectors have large concentrations

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

of lower-paying jobs, so the differential growth in the job market is exacerbating pressure on lower-income workers.

Three threats that spurred recession fears earlier this year have not yet panned out: crypto, regional banks, and headline layoffs in technology. The collapse of FTX and the troubles across all manner of digital currencies have hurt investors but not taken a meaningful number of jobs, and the failure and takeover of three regional banks has not dented the exuberance of the stock market and the economic forecasters. The job cuts that made headlines at highly visible technology firms were large at the firm level, but small at the industry level, and the job-cutting was contained to technology.

So as recession fears fade, what does it mean for short interest rates, for long rates, and for the stock market? Longer term, the Fed telegraphs 2.5% as the anchor for the Federal Funds rate, but we may see 5%-5.5% for the next 18 months. The broad U.S. stock market (Russell 3000) dropped 24.6% in the first three quarters of 2022, but the index is up 24.5% in the three quarters through June 2023, and the total return since December 2021 is -3%. The back-story is that these gains came from just seven stocks; the rest of the stock market has been flat. Market expectations for stocks exclusive of these hot dots is subdued.

The risk of recession has not gone away, but the onset may have been delayed. One important economic rule of thumb to remember is that it takes about a year for a change in interest rates to work its way through the economy. The Fed started raising rates in March 2022, and has continued into 2023. We may be a year from seeing the full effect of higher rates on the economy.

The Long-Term View

		Periods Ended 6/30/23			
Index	**2Q23**	**1 Yr**	**5 Yrs**	**10 Yrs**	**25 Yrs**
U.S. Equity					
Russell 3000	8.4	19.0	11.4	12.3	7.7
S&P 500	8.7	19.6	12.3	12.9	7.6
Russell 2000	5.2	12.3	4.2	8.3	7.3
Global ex-U.S. Equity					
MSCI EAFE	3.0	18.8	4.4	5.4	4.3
MSCI ACWI ex USA	2.4	12.7	3.5	4.7	--
MSCI Emerging Markets	0.9	1.7	0.9	3.0	--
MSCI ACWI ex USA Small Cap	2.0	10.9	2.6	5.8	6.7
Fixed Income					
Bloomberg Agg	-0.8	-0.9	0.8	1.5	3.9
90-Day T-Bill	1.2	3.6	1.6	1.0	1.9
Bloomberg Long G/C	-1.3	-2.6	0.7	2.9	5.3
Bloomberg Gl Agg ex US	-2.2	-1.8	-2.7	-0.9	2.6
Real Estate					
NCREIF Property	-2.0	-6.6	5.9	7.8	8.5
FTSE Nareit Equity	2.6	-0.1	4.6	6.4	8.3
Alternatives					
CS Hedge Fund	2.2	5.0	5.0	4.7	6.1
Cambridge PE*	2.1	-4.6	16.0	15.0	13.8
Bloomberg Commodity	-2.6	-9.6	4.7	-1.0	2.0
Gold Spot Price	-2.9	6.8	9.0	4.7	7.8
Inflation – CPI-U	1.1	3.0	3.9	2.7	2.5

*Data for most recent period lags. Data as of 1Q23.
Sources: Bloomberg, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

Recent Quarterly Economic Indicators

	2Q23	1Q23	4Q22	3Q22	2Q22	1Q22
Employment Cost: Total Compensation Growth	4.5%	4.8%	5.1%	5.0%	5.1%	4.5%
Nonfarm Business: Productivity Growth	3.7%	-1.2%	1.6%	1.2%	-3.7%	-6.0%
GDP Growth	2.4%	2.0%	2.6%	3.2%	-0.6%	-1.6%
Manufacturing Capacity Utilization	78.3%	78.2%	78.5%	79.4%	79.6%	79.2%
Consumer Sentiment Index (1966=100)	62.4	64.6	58.8	56.1	57.8	63.1

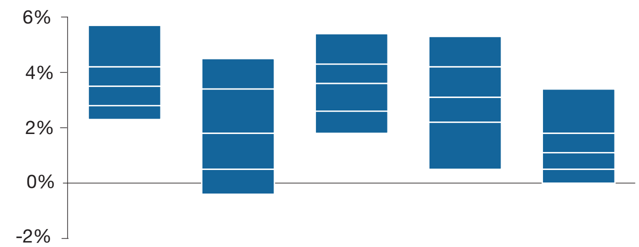
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

Equity Gains Power Positive Returns

INSTITUTIONAL INVESTORS

- Strong equity gains helped all investor types report gains for the trailing year, compared to single-digit losses in the year ending 1Q23.
- Nonprofits reported the best results for the trailing one year, followed closely by public defined benefit plans. Corporate plans and insurance assets, with their typically higher allocations to fixed income, saw the lowest gains.
- All investor types crushed bonds but lagged a benchmark consisting of 60% stocks/40% bonds.
- Over the last 20 years, all investor types were within range of the 60%/40% benchmark, lagging U.S. equities but topping U.S. fixed income and global ex-U.S. equities.
- After a disastrous 2022, the S&P 500 and Bloomberg Aggregate are both up through 2Q23.
  - S&P 500 up 16.9%
  - Aggregate up 2.1%
  - Nasdaq 100 is up almost 40%
- However, seven stocks are leading the charge with most others being flat to negative.
- The yield curve has remained inverted implying a recession is on the horizon
- Investors are focused on how much the world has changed, and whether it alters how they should view and implement portfolios.

Quarterly Returns, Callan Database Groups (6/30/23)



	Public	Corporate	Nonprofit	Taft-Hartley	Insurance Assets
10th Percentile	5.6	4.5	5.4	5.2	3.4
25th Percentile	4.2	3.4	4.3	4.1	1.8
Median	3.5	1.8	3.6	3.1	1.1
75th Percentile	2.7	0.5	2.6	2.2	0.5
90th Percentile	2.3	-0.4	1.8	0.5	0.0

Source: Callan

Callan Database Median and Index Returns* for Periods Ended 6/30/23

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	**3.5**	**9.3**	**8.0**	**6.7**	**7.5**	**7.5**
Corporate Database	**1.8**	**5.0**	**2.5**	**4.7**	**6.3**	**7.0**
Nonprofit Database	**3.6**	**9.6**	**8.1**	**6.4**	**7.1**	**7.4**
Taft-Hartley Database	**3.1**	**8.4**	**8.1**	**6.5**	**7.7**	**7.1**
Insurance Assets Database	**1.1**	**3.4**	**1.3**	**3.1**	**3.8**	**4.8**
All Institutional Investors	**3.1**	**8.5**	**7.5**	**6.2**	**7.2**	**7.2**
Large (>$1 billion)	**2.7**	**7.5**	**8.4**	**6.8**	**7.6**	**7.6**
Medium ($100mm - $1bn)	**3.3**	**8.7**	**7.6**	**6.3**	**7.3**	**7.2**
Small (<$100 million)	**3.5**	**9.3**	**7.2**	**6.0**	**6.9**	**6.9**
60% S&P 500/40% Bloomberg Agg	4.9	11.1	7.1	8.1	8.5	7.5

*Returns less than one year are not annualized.

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

Corporate DB Plans

- Liabilities decreased slightly, reflecting a small increase in discount rates, but assets (both LDI and equities) were up, offsetting any negative liability impact.
- Total return-oriented plans continued to see their funded status improve as the equity market kept rallying.
- Plans that were fully hedged experienced minimal, if any, funded status volatility over the quarter.
- There is a disconnect between hedging the accounting funding ratio and the rules for the ERISA minimum required contributions (MRCs). Callan's forecasted median ERISA rate (used for MRCs) lags the accounting rate by ~100 bps, which could trigger required contributions.

Public DB Plans

- The trend of "de-risking," moving to more fixed income, has somewhat abated.
- Plans have grown accustomed to their current level of risk; they lived through both the pandemic and 2022, and they would rather maintain this risk and collect a higher return.
- For plans that measure at 6/30, they should see a realized one-year return well in excess of their discount rate assumption. For those that smooth their assets, deferring the gains will help offset losses from FYE 2021, stabilizing future contribution requirements.

Insurers

- Insurance companies are some of the few investors that fared well following the spike in yields during 2022.
- Typically invested to match short-term liabilities, they are focused on investment income and use it to offset operating expenses.
- As interest rates rose, insurers sold bonds with lower book yields and took losses, then re-invested at much higher book yields.

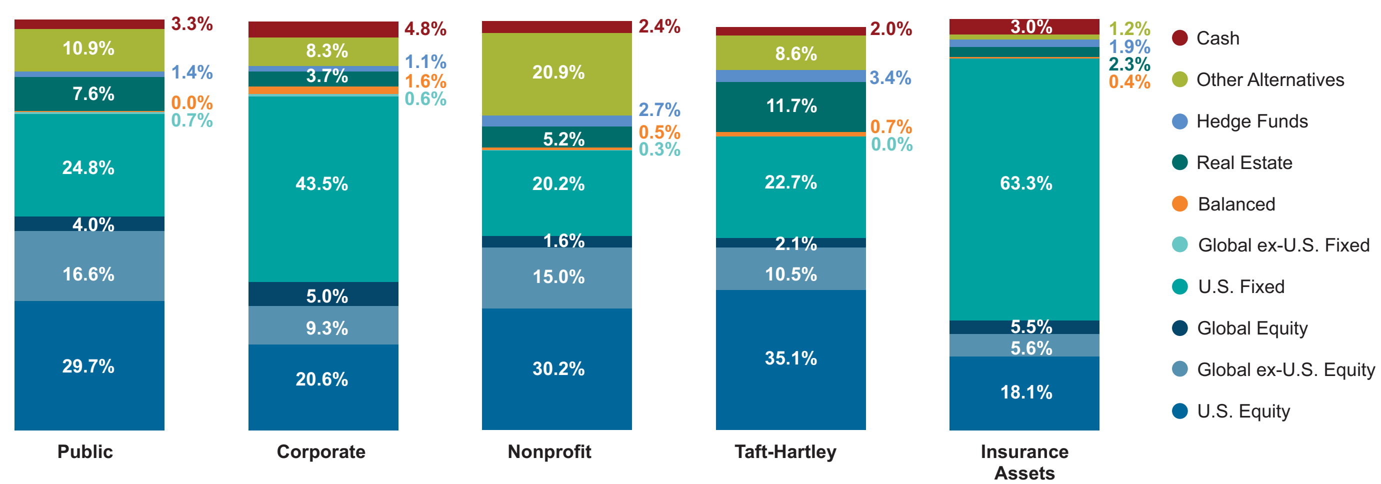
Nonprofits

- Foundations and endowments are seeing effective spending rates coming down, to reflect the losses in 2022 (since current spending rates don't yet reflect them, with lags and averages).

Defined Contribution Plans

- Sponsors focused on these significant new issues:
  - SECURE 2.0: Digesting the new provisions and learning what they mean for them
  - Rate environment: Helping participants with options to manage higher inflation
  - Managed accounts and retirement income: Keeping terminated participants and retirees in 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

Large cap growth stocks lead broad indices higher

- The S&P 500 posted a second straight quarter of positive performance, gaining 8.7%; large cap growth led all styles, advancing 12.8%.
- All U.S. equity indices produced positive returns; small value and low volatility produced the lowest 2Q returns.
- Nine of the 11 S&P Index sectors produced a positive 2Q23 return.
- Similar to 1Q23, small caps (Russell 2000) underperformed large caps (Russell 1000) and growth outperformed value during the quarter, a reversal of trend from 2022.
- Financials (-1.1%) detracted from returns for the Russell 2000 (+5.2%) while Health Care was the only small cap sector to produce double-digit returns (+11.2%).

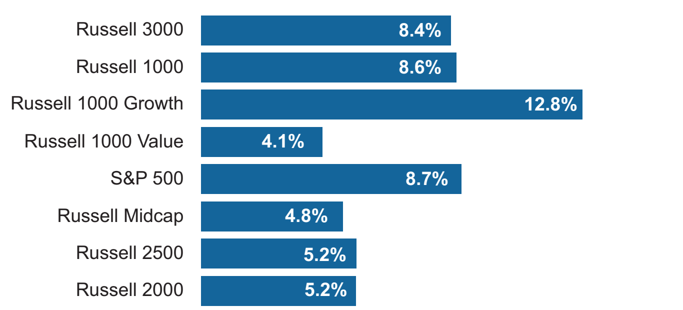
Index concentration is a significant 2Q theme

- 10 stocks within the S&P 500 Index contributed 80% of the 16.9% return YTD through 6/30; average appreciation is 82%, and these stocks had an average forward price/earnings ratio of 36x.
- 2Q return for the S&P 500 Index was 8.7%; the equal weight S&P 500 Index returned 4%.
- The YTD return difference is nearly 10 percentage points; if this gap holds through year-end, it would be the largest since 1998.

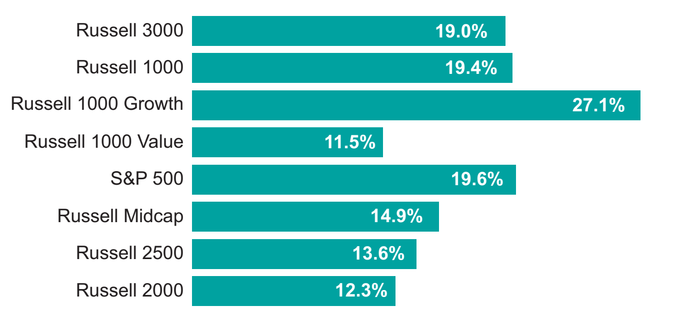
Small cap valuations point to potential opportunity

- Small cap continues to trade at a meaningful discount to its historical valuations; large cap (particularly growth) continues to trade at a premium to its historical valuations.
- Favorable developments in the inflation data could give the small cap market a boost in performance.
- One recent issue that caused this relative valuation gap is debt; on average, small cap companies have a higher exposure to variable rate debt than large cap counterparts.

U.S. Equity: Quarterly Returns (6/30/23)

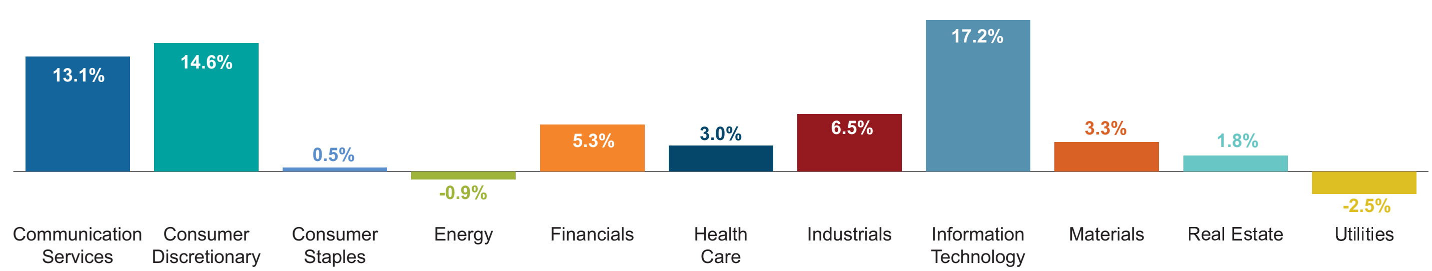


U.S. Equity: One-Year Returns (6/30/23)



Sources: FTSE Russell and S&P Dow Jones Indices

Quarterly Performance of Industry Sectors (6/30/23)



Source: S&P Dow Jones Indices

Global Equities

2Q23 continued global and global ex-U.S. equity markets' positive performance from the prior quarter.

Technology stocks lead markets higher

- 2Q23 saw global markets led higher by mega cap technology stocks, in part due to increased optimism around artificial intelligence advancements.
- Market expectations of a recession decreased as inflation showed signs of abating while the Fed kept rates unchanged in June.
- Japan outperformed other regions in local currency as valuations continued to be attractive alongside the Bank of Japan's easy monetary policy.

Developed vs. emerging markets

- Developed markets outperformed emerging markets as China weighed on EM indices.

Growth vs. value

- Mega cap technology companies, which are primarily U.S.-based, led markets higher and resulted in large dispersions between U.S. growth and value indices. However, outside of the U.S., growth and value index returns were relatively balanced.

Japan's turn

- Valuation below historical levels
- Economic recovery; in 1Q Japan transitioned out of a recession as GDP grew 2.7%.
- Next 12 months consensus earnings estimates show Japan outpacing China, EM, and Europe, and only trailing the U.S.

India vs. China

Economics

- Chinese geopolitical tensions have, in part, driven outside investment elsewhere compared to India, with Prime Minister Modi's visit to the U.S. highlighting its place in the world economy.
- China's New Espionage Law (effective July 2023) likely contributing to less foreign investment; $20 billion ended 1Q23 versus $100 billion ended 1Q22.

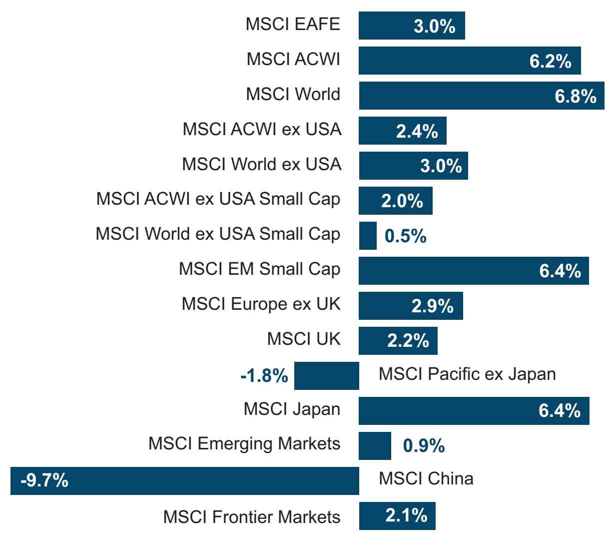
Asset flows

- India's equity market has more than doubled since 2010.

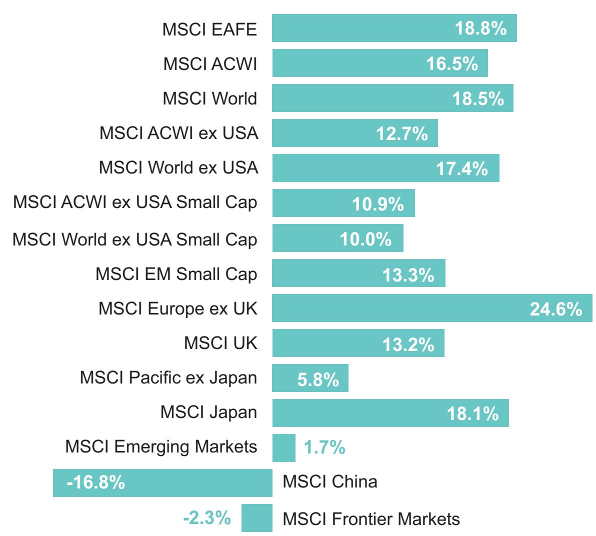
Growth

- India surpassing China with % of population in the middle class in 2030, and from 2023 to 2030 will contribute twice as much growth from this group than China in the Asia Pacific region.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 6/30/23)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 6/30/23)



Source: MSCI

Fixed Income

U.S. Fixed Income

Bloomberg Aggregate down as rates rose

Risk appetite and solid economic news spurred returns for spread sectors and lower quality.

- Corporate excess return: +131 bps
- Mortgage excess return: +76 bps
- High yield corporates excess return: +279 bps
- AA excess return: +84 bps
- BBB excess return: +157 bps

Yield curve inversion steepened

- 2-year U.S. Treasury: 4.87%; 10-year: 3.81%

TIPS performed in line with nominal U.S. Treasuries

- Five-year breakeven spreads narrowed to 2.18% from 2.40% on 3/31.
- Fed and markets expect inflation to trend down over longer periods.
- Fed Funds target raised to 5.00% - 5.25%
- Paused at June meeting but suggested that further hikes are likely
- Median expectation from Fed: 5.6% for year-end 2023
- Market expectations are similar at 5.4%; up sharply from expectations for cuts at the end of 1Q.

Valuations fair

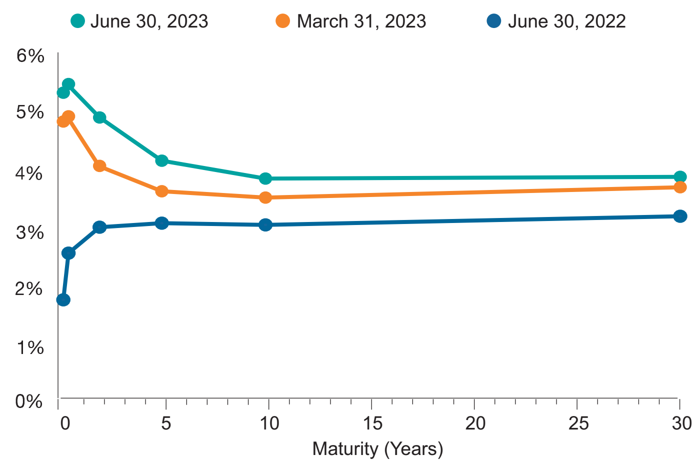
- Credit spreads have not widened materially and are close to historical averages.
- Demand has remained robust with muted issuance.

Municipal Bonds

Municipal bonds outperformed U.S. Treasuries in 2Q

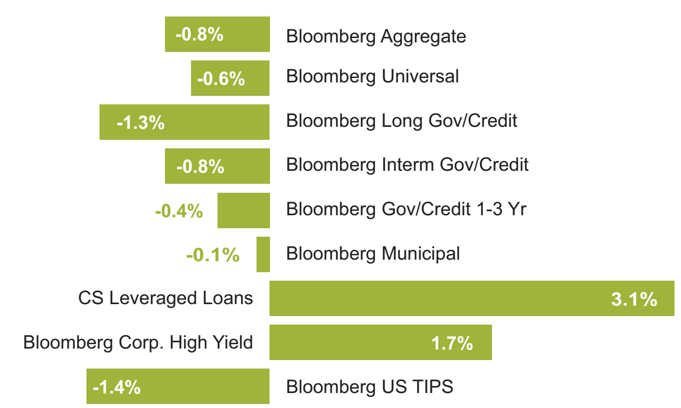
- Bloomberg Municipal Bond Index: -0.1%; Bloomberg U.S. Treasury Index: -1.4%
- Lower quality munis outperformed (AAA: -0.4%; AA: -0.2%; A: +0.2%; BBB: +0.7%)

U.S. Treasury Yield Curves



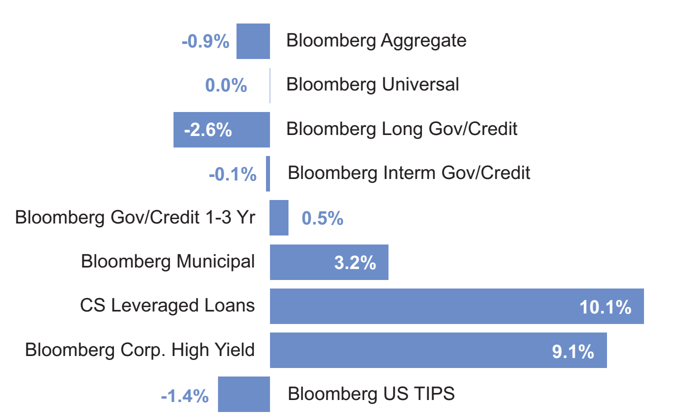
Source: Bloomberg

U.S. Fixed Income: Quarterly Returns (6/30/23)



Sources: Bloomberg and Credit Suisse

U.S. Fixed Income: One-Year Returns (6/30/23)



Muni curve inverted; less so than U.S. Treasury curve

- 2-year AAA Muni yield: 2.93%; 10-year AAA Muni yield: 2.56%

Valuations relative to U.S. Treasuries remain rich

- 10-year AAA Muni/10-year U.S. Treasury yield ratio 67%; below 10-year median of 87%
- After-tax yield 5.95% (Bloomberg Municipal Bond Index)

Supply/demand

- Outflows of roughly $8 billion YTD, mostly from short-term bond funds (record was $122 billion in 2022)
- Supply remained muted; YTD about 25% below 2022

Fundamentals remain sound

- "Rainy Day" fund balances and state tax revenues continued to be robust.
- Upgrades continued to significantly outpace downgrades in 1Q.

Global Fixed Income

Global Aggregate down unhedged but up hedged

- Rates mixed; up in the U.S., Great Britain, and Australia and flat to slightly down across other developed markets
- Japan (-8%) worst performer on sharp yen deprecation
- Bank of England surprised markets with 50 bps increase to combat sticky inflation.

U.S. dollar mixed

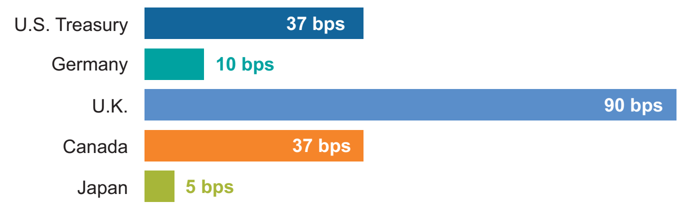
- Euro: +0.4% vs dollar
- British pound: +2.8% vs dollar
- Canadian dollar: +2.3% vs dollar
- Japanese yen: -7.9% vs dollar
- Australian dollar: -0.6% vs dollar
- Chinese yuan: -5.4% vs dollar
- Mexican peso: +5.3% vs dollar
- Brazilian real: +5.1% vs dollar

Emerging market debt delivered solid results

- Growth differentials have improved as inflation has peaked in many markets

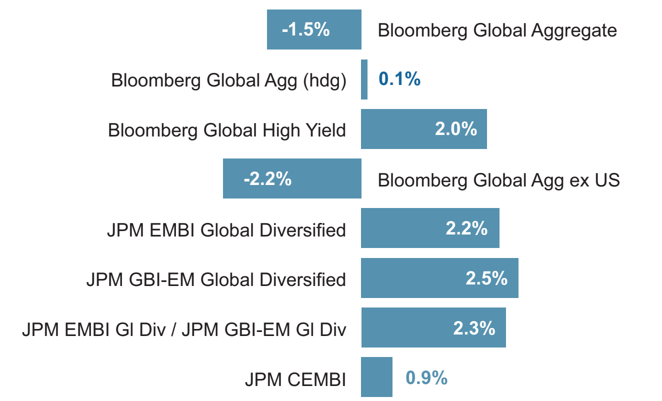
Change in 10-Year Global Government Bond Yields

1Q23 to 2Q23



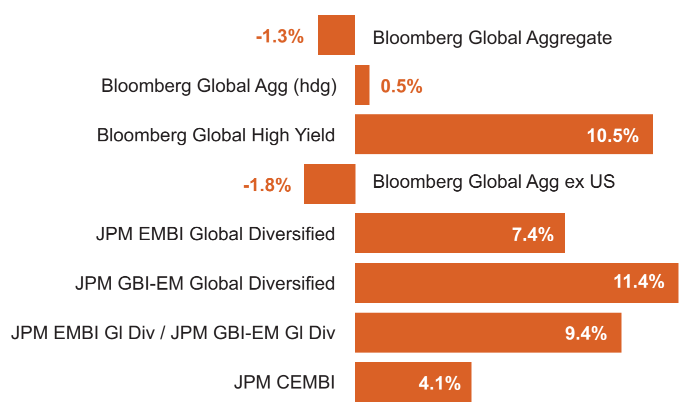
Source: Bloomberg

Global Fixed Income: Quarterly Returns (6/30/23)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns (6/30/23)



Sources: Bloomberg and JPMorgan Chase

Private Real Estate Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS | Kristin Bradbury, Munir Iman, and Aaron Quach

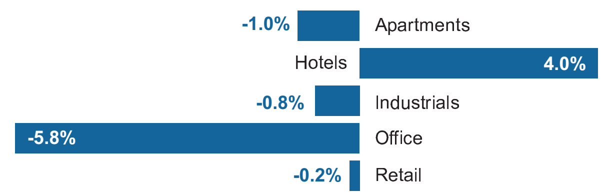
Private RE falls but income returns were positive

- The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 2.0% during 2Q23. The income return was 1.0% while the appreciation return was –3.0%.
- Hotels, which represent a small portion of the index, led property sector performance with a gain of 4.0%. Office finished last with a loss of 5.8%.
- Regionally, the South led with a loss of 0.8%, while the East was the worst performer with a loss of 2.7%.
- The NCREIF Open-End Diversified Core Equity Index, representing equity ownership positions in U.S. core real estate, fell 2.7% during 2Q, with an income return of 0.9% and an appreciation return of -3.6%.

REITs underperform equities

- Global REITs underperformed in 2Q23, rising 0.3% compared to a 6.8% rise for global equities (MSCI World).
- U.S. REITs rose 2.6% in 2Q23, in contrast with the S&P 500 Index, which rose 8.7%.
- The outperformance in the U.S. was driven by the resilient U.S. economy but continued to face headwinds due to higher interest rates and negative sentiment in the capital markets.

Sector Quarterly Returns by Property Type (6/30/23)



Source: NCREIF

Real Assets

- The S&P GSCI fell 2.7% in 2Q.
- WTI Crude ended the quarter at $70.64/barrel, down from $75.67/barrel on 3/31.
- Copper (-8%) fell on concerns over ebbing global demand and a slowdown in China, and gold (S&P Gold Spot Price: -2.9%) was hurt by lowered expectations for inflation and reduced safe-haven demand.
- TIPS (Bloomberg TIPS: -1.4%) were hurt by rising interest rates.

Callan Database Median and Index Returns* for Periods Ended 6/30/23

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	**-1.0**	**-4.9**	**-9.2**	**7.8**	**6.5**	**8.3**	**4.8**
NFI-ODCE (value-weighted, net)	-2.9	-6.2	-10.7	7.0	5.6	7.8	4.7
NCREIF Property	-2.0	-3.8	-6.6	6.8	5.9	7.8	6.1
NCREIF Farmland	0.8	2.9	8.2	7.6	6.5	8.3	9.9
NCREIF Timberland	1.7	3.5	11.1	8.7	5.8	5.9	4.6
Public Real Estate							
Global Real Estate Style	**0.8**	**2.8**	**-2.9**	**4.5**	**2.5**	**5.2**	**5.2**
FTSE EPRA Nareit Developed	0.3	1.0	-4.5	3.3	-0.1	2.9	3.2
Global ex-U.S. Real Estate Style	**-2.3**	**-2.5**	**-7.4**	**-1.1**	**-1.1**	**3.8**	**3.0**
FTSE EPRA Nareit Dev ex US	-3.1	-4.7	-9.3	-2.6	-3.8	0.6	1.2
U.S. REIT Style	**2.6**	**5.8**	**-0.7**	**8.6**	**6.0**	**7.3**	**7.7**
FTSE EPRA Nareit Equity REITs	2.6	5.4	-0.1	8.9	4.6	6.4	6.8

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

Headwinds Slow Liquidity

PRIVATE EQUITY | Gary Robertson

Fundraising ▶ Final closes for private equity partnerships in 2Q23 totaled $170 billion of commitments in 470 partnerships. (Unless otherwise noted, all data in this commentary come from PitchBook.) The dollar volume was down 2% from 1Q23, but the number of funds rose 7%. For the first half, commitments are running 31% behind those of a year ago, with the number of funds down by 51%, and with venture capital commitment volumes falling most notably from about 34% a year ago.

Buyouts ▶ New buyout transactions by count fell 13% from 1Q23 to 2,462, and disclosed deal value declined 18% to $122 billion. 1H23 numbers also saw declines of 30% in number of investments and 36% in disclosed value. YTD average buyout prices fell almost a turn (0.9x EBITDA) to 13.4x but remain high on an absolute basis. Average leverage levels YTD fell to only 31% of new deal capital structures, with interest costs rising and impinging company profitability.

VC Investments ▶ New rounds of financing in venture capital companies totaled 9,955, with $86 billion of announced value. The number of investments preliminarily fell 20% from 1Q23, but announced value fell only 1%. 1H23 numbers plunged 33% for rounds and 48% for disclosed value compared to 1H22.

Exits ▶ There were 472 private M&A exits of private equity-backed companies, with disclosed values totaling $90 billion. The preliminary private sale count fell 21% and the announced dollar volume dropped 13%. There were 46 private equity-backed IPOs in 2Q23 raising an aggregate $7 billion, up 15% by count, with issuance leaping 40% from 1Q23.

Venture-backed M&A exits totaled 541 transactions with disclosed value of $14 billion. The number of sales declined 18% from 1Q23, and announced value plunged 50%. There were 86 VC-backed IPOs in 2Q23 with a combined float of $12 billion; the count was up 19% and the issuance grew 71%.

Returns ▶ With an uptick in public equity markets in the last two quarters, private equity lagged in both periods but posted modestly positive returns in each.

Funds Closed 1/1/23 to 6/30/23

Strategy	No. of Funds	Amt ($mm)	Share
Venture Capital	554	59,101	17%
Growth Equity	53	47,704	14%
Buyouts	213	136,312	40%
Mezzanine Debt	11	29,663	9%
Distressed/Special Credit	15	24,043	7%
Energy	4	1,467	0%
Secondary and Other	53	42,486	12%
Fund-of-Funds	7	2,429	1%
Totals	**910**	**343,205**	**100%**

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

Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	-0.70	-16.37	24.98	20.43	18.73	13.20	12.62	19.35
Growth Equity	1.27	-9.26	21.28	16.51	15.11	12.70	14.39	14.17
All Buyouts	3.52	0.69	23.86	16.00	15.24	10.84	15.07	12.82
Mezzanine	3.49	6.08	14.91	10.88	11.08	10.34	11.38	10.02
Credit Opportunities	2.01	4.00	13.42	7.30	7.86	9.17	9.79	9.53
Control Distressed	1.60	2.59	26.00	13.90	12.14	10.72	11.85	11.51
All Private Equity	**2.12**	**-4.57**	**22.98**	**16.20**	**15.12**	**11.36**	**13.95**	**13.37**
S&P 500	8.74	19.59	14.60	12.31	12.86	10.88	10.04	7.61
Russell 3000	8.39	18.95	13.89	11.39	12.34	10.61	10.05	7.72

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

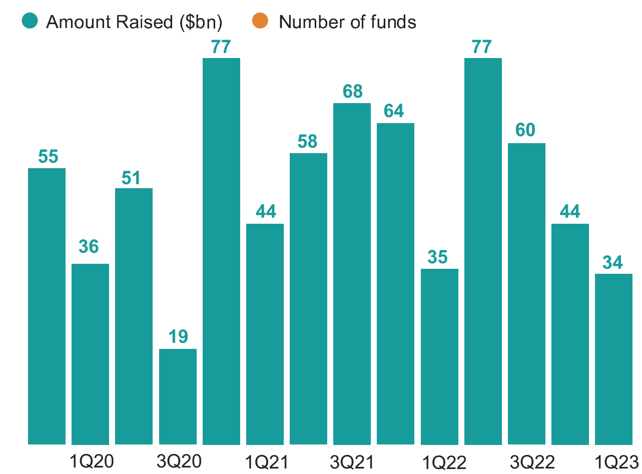
Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of the *Capital Markets Review* and other Callan publications.

IRRs Stay Steady and Range from 8%-10%

PRIVATE CREDIT | Catherine Beard

- Private credit performance varied across sub-asset class and underlying return drivers.
- On average, the asset class has generated net IRRs of 8% to 10% for trailing periods ended March 31, 2023.
- As interest rates declined after the GFC, private credit attracted increased interest from institutional investors.
- Private credit fundraising was robust leading into the COVID dislocation with a particular focus on direct lending, asset-based lending, and distressed strategies.
- Renewed focus on relative value, downside protection, and managers' internal workout resources
- Renewed interest in strategies with strong collateral protection such as asset-based lending as well as capital solutions and distressed/special situations strategies
- Larger sponsor-backed lending is seeing a new focus due to the high yield/broadly syndicated loans disintermediation by private credit.
- U.S. sub-investment grade corporate yields rose dramatically at the beginning of 2022 with yields peaking in September. This was a combination of higher interest rates due to tighter Fed policy and a widening of high yield spreads.
- Spreads widened during the first half of 2022 due to weaker credit conditions as the U.S. economic outlook worsened. This has since moderated.
- Default rates for U.S. corporate bonds ticked up in 2Q but remained well below the historical average of 3%-4%. Callan expects defaults to increase somewhat in coming months as economic growth slows and potentially turns negative.
- The Corporate Bond Market Distress Index (CMDI) rose rapidly during the first nine months of 2022, especially for investment grade bonds, highlighting market volatility and a drying up of liquidity, but has fallen since then.
- In 2023, as the IG distress index continued to fall, the HY bond indicator was roughly flat with the end of 2022. The CMDI incorporates a range of indicators, including new issuance and pricing for primary and secondary market bonds.
- During 2Q23, clients took a new look at upper-middle-market direct lending as all-in spreads have widened by over 500 bps and lenders are able to get tighter terms. Strong deal volume was driven partially by a shift from public to private market debt financings in the recent market environment.

Private Credit Fundraising ($bn)



Source: Preqin

Private Credit Performance (%) (Pooled Horizon IRRs through 3/31/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	8 Years	10 Years	15 Years	20 Years
Senior Debt	2.8	4.3	8.8	5.9	7.0	6.8	7.0	6.9
Mezzanine	3.5	6.1	14.9	10.9	11.2	11	10.5	11.4
Credit Opportunities	2.0	4.0	13.4	7.3	7.3	7.9	9.2	9.4
Total Private Credit	2.5	4.5	12.8	7.9	8.2	8.4	9.2	9.6

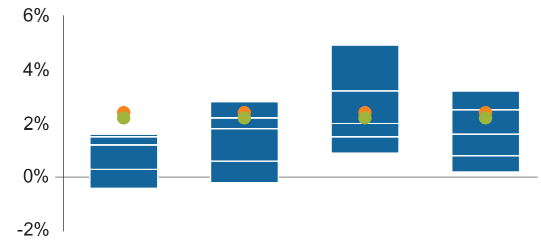
Source: Refinitiv/Cambridge
*Most recent data available at time of publication

Hedge Funds Gain but Lag Equity Indices

HEDGE FUNDS/MACs | Joe McGuane

Equity markets continued to march higher for the first half of this year, as growth equities surpassed expectations while the Federal Reserve paused the hiking cycle for the first time. Treasury yields moved higher across the curve and the spread between 2-year and 10-year Treasuries further inverted in 2Q23. Hedge funds ended 2Q higher but unable to keep up with soaring equity indices, as equity market volatility subsided from 1Q. Equity hedge strategies had another strong quarter, as managers focused on technology and biotechnology companies. Event-driven managers ended the quarter higher, aided by liquid corporate credit and equities. Macro strategies ended with gains, bouncing back from a difficult 1Q.

Hedge Fund Style Group Returns (6/30/23)



	Absolute Return FOF	Core Div. FOF	Long/Short Equity FOF	Institutional Hedge Funds
10th Percentile	1.6	2.8	4.9	3.2
25th Percentile	1.5	2.2	3.2	2.5
Median	1.2	1.8	2	1.6
75th Percentile	0.3	0.6	1.5	0.8
90th Percentile	-0.4	-0.2	0.9	0.2
HFRI Fund Wtd Index ●	2.2	2.2	2.2	2.2
90-Day T-Bills +5% ●	2.4	2.4	2.4	2.4

Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 6/30/23

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	**1.6**	**4.6**	**7.6**	**5.4**	**5.7**	**5.9**
Callan Fund-of-Funds Peer Group	**1.5**	**5.0**	**6.1**	**4.1**	**4.5**	**3.8**
Callan Absolute Return FOF Style	**1.2**	**3.8**	**7.0**	**4.1**	**4.6**	**3.7**
Callan Core Diversified FOF Style	**1.8**	**5.1**	**6.2**	**4.1**	**3.9**	**3.7**
Callan Long/Short Equity FOF Style	**2.0**	**5.9**	**3.6**	**3.8**	**5.0**	**4.2**
HFRI Fund-Weighted Index	2.2	5.0	8.1	5.0	4.7	4.0
HFRI Fixed Convertible Arbitrage	1.4	7.2	7.7	5.6	5.0	5.5
HFRI Distressed/Restructuring	1.4	1.6	9.3	4.5	4.3	4.5
HFRI Emerging Markets	2.6	3.4	4.6	2.5	3.4	2.2
HFRI Equity Market Neutral	0.6	2.9	4.1	2.0	2.9	1.9
HFRI Event-Driven	1.1	5.3	8.5	4.3	4.5	4.5
HFRI Relative Value	1.2	4.0	5.9	3.6	4.0	4.6
HFRI Macro	1.7	-0.4	7.3	5.0	3.1	2.4
HFRI Equity Hedge	3.1	7.6	9.0	5.5	5.7	4.3
HFRI Multi-Strategy	0.7	1.9	4.2	2.5	2.7	2.9
HFRI Merger Arbitrage	-1.0	1.9	7.4	4.6	4.2	3.9
90-Day T-Bill + 5%	2.4	8.6	6.3	6.6	6.0	5.8

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

Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group rose 1.6%. Within this style group of 50 peers, the average hedged credit manager gained 2.1% as high yield credit performed positively due to tightening credit spreads. Meanwhile, the average hedged equity manager added 1.7%, as managers with a focus on growth-oriented equities drove performance.

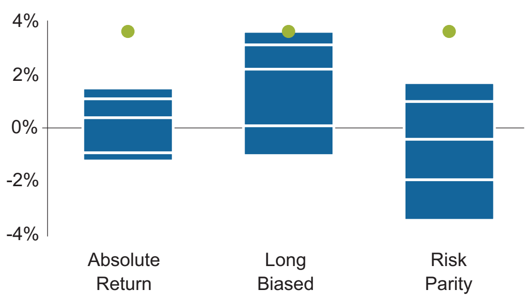
Within the HFRI indices, the best-performing strategy last quarter was the equity hedge index (3.1%), led by manager exposure to AI and growth-related sectors. Macro strategies finished up 1.7%, as managers went long equities and short rates across the U.S. and Europe.

Across the Callan Hedge FOF Database Group, the median Callan Long-Short Equity Fund-of-Funds (FOF) ended up 2.0%, as managers benefited from soaring large-cap technology companies. Meanwhile, the median Callan Core Diverse FOF gained 1.8%, as equity hedge, event-driven, and macro managers drove performance. The Callan Absolute Return FOF rose 1.2%, as a lower weight to equity hedge exposure led to a lower return compared to managers with more equity beta.

Within Callan's database, the median Callan Multi-Asset Class (MAC) Long Biased peer group gained 2.2%, the Callan MAC Absolute Return peer group was up 0.4%, and the Callan MAC Risk Parity peer group fell 0.4%.

The strong equity rally during the first half of this year has been hard for hedge funds to keep up with, as many managers came into 2023 more defensive. Throughout the second quarter we began to see managers taking on more risk to catch some of this broader market move higher. As the macro outlook appears to be more benign going into the second half of this year, we continue to think fundamental long/short equity managers are well positioned to profit from this current environment. Long/short credit managers will be able to opportunistically allocate capital to credits they believe are over- or undervalued in this current environment. We continue to believe macro managers are well positioned to allocate capital across the most attractive asset classes.

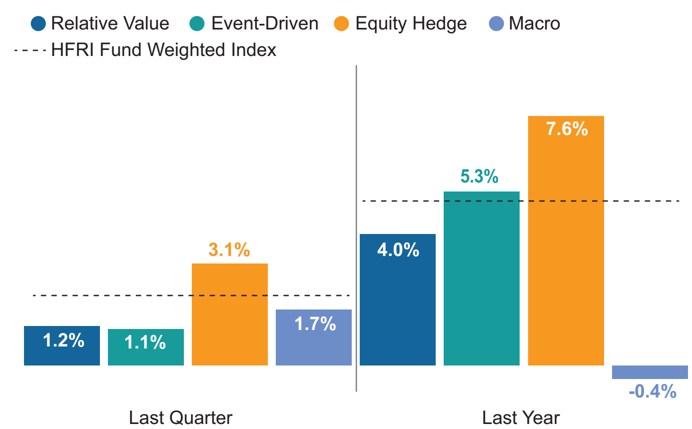
MAC Style Group Returns (6/30/23)



	Absolute Return	Long Biased	Risk Parity
10th Percentile	1.5	3.6	1.7
25th Percentile	1.1	3.1	1.0
Median	0.4	2.2	-0.4
75th Percentile	-0.9	0.1	-1.9
90th Percentile	-1.2	-1.0	-3.4
60% ACWI / 40% Blimmberg Agg	3.4	3.4	3.4

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

HFRI Hedge Fund-Weighted Strategy Returns (6/30/23)



Source: HFRI

Index Starts off 2023 With a Gain

DEFINED CONTRIBUTION | Scotty Lee

Performance: DC Index Rises 5.3% in 1Q23

– The Callan DC Index™ gained 5.3% in 1Q23, which brought the Index's trailing one-year loss to 5.2%.

Growth Sources: Investment Gains Lead to Rise in Balances

– Balances within the DC Index rose by 5.3% after a 5.8% increase in the previous quarter.

– Investment gains (+5.3%) were the sole driver of the gain, while net flows (+0.03%) had a negligible effect.

Turnover: Net Transfers Increase Again

– Turnover (i.e., net transfer activity levels within DC plans) jumped to 0.70% from the previous quarter's measure of 0.18%. The quarterly turnover figure marked the Index's highest level since 2020, when market volatility was heightened during the onset of the COVID-19 pandemic.

Net Cash Flow Analysis: TDFs Remain in Top Spot

– Target date funds (TDFs) received the largest net inflows in the DC Index, as the asset allocation funds garnered 90.6% of quarterly net flows.

Equity Allocation: Exposure Above Historical Average

– The Index's overall allocation to equity (70.8%) rose from the previous quarter's level (70.1%) and sits above the Index's historical average (68.4%).

Asset Allocation: Capital Preservation Declines

– U.S. large cap (25.7%) and global ex-U.S. equity (5.2%) were among the asset classes with the largest percentage increases in allocation.

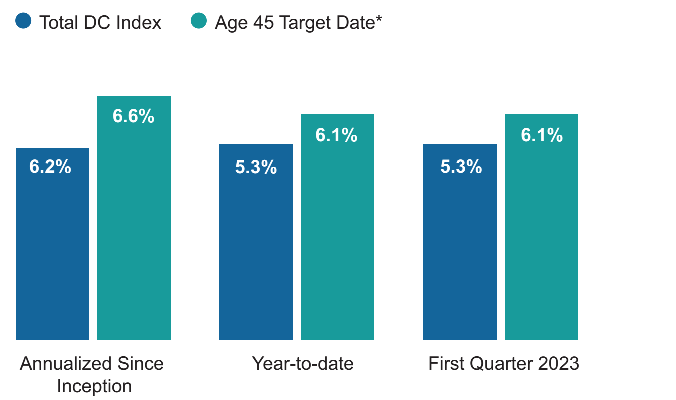
– Within capital preservation, stable value (9.2%) had a decrease in allocation from the previous quarter's level (10.0%), which was exacerbated by investor outflows.

Prevalence of Asset Class: Balanced Funds Rise

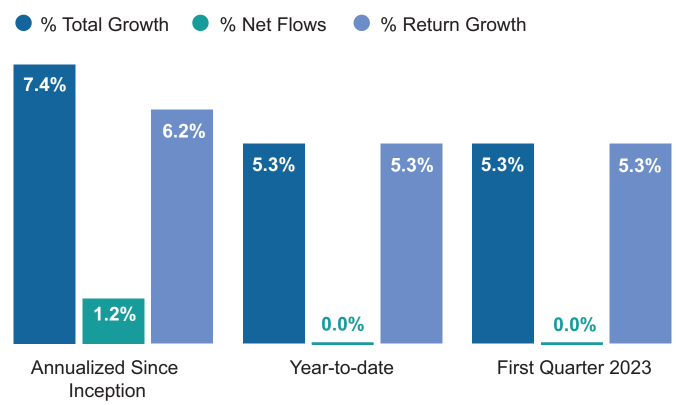
– The prevalence of a balanced fund (42.1%) rose by 1.3 percentage points, the first increase in two years.

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 (3/31/23)



Growth Sources (3/31/23)



Net Cash Flow Analysis (1Q23)
(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	90.6%
Brokerage Window	5.6%
U.S. Large Cap	-34.0%
Stable Value	-37.7%
Total Turnover**	**0.7%**

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

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

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

Asset Allocation
and Performance

ASSET ALLOCATION AND PERFORMANCE

Asset Allocation and Performance

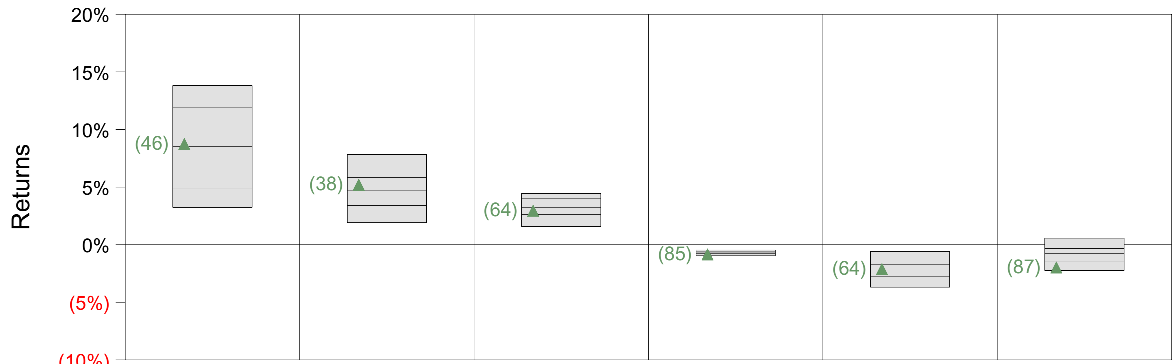
This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance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

Market Overview
Active Management vs Index Returns

Market Overview

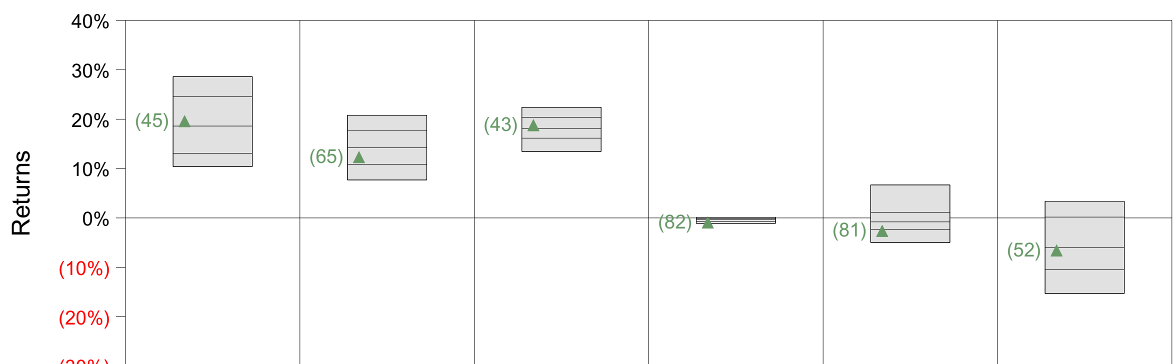
The charts below illustrate the range of returns across managers in Callan's Separate Account database over the most recent one quarter and one year time periods. The database is broken down by asset class to illustrate the difference in returns across those asset classes. An appropriate index is also shown for each asset class for comparison purposes. As an example, the first bar in the upper chart illustrates the range of returns for domestic equity managers over the last quarter. The triangle represents the S&P 500 return. The number next to the triangle represents the ranking of the S&P 500 in the Large Cap Equity manager database.

Range of Separate Account Manager Returns by Asset Class
One Quarter Ended June 30, 2023



	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Blmbg Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	13.82	7.83	4.45	(0.46)	(0.58)	0.57
25th Percentile	11.94	5.84	4.03	(0.56)	(1.68)	(0.33)
Median	8.51	4.73	3.21	(0.64)	(1.74)	(0.78)
75th Percentile	4.84	3.41	2.61	(0.78)	(2.74)	(1.50)
90th Percentile	3.24	1.91	1.57	(0.97)	(3.68)	(2.24)
Index ▲	8.74	5.21	2.95	(0.84)	(2.12)	(1.98)

Range of Separate Account Manager Returns by Asset Class
One Year Ended June 30, 2023

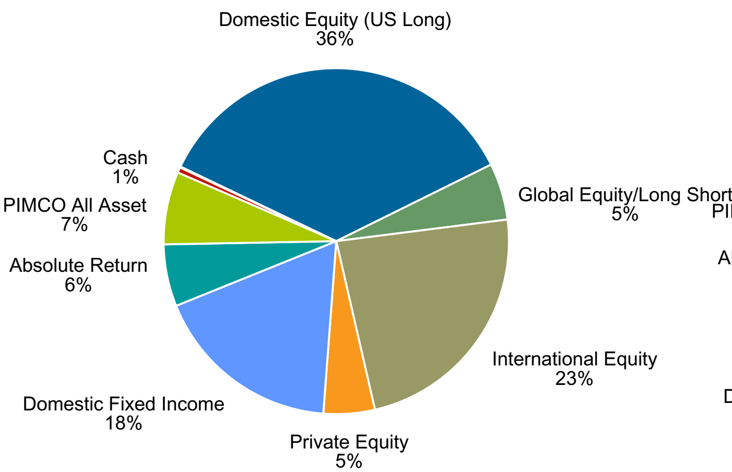


	Large Cap Equity vs S&P 500	Small Cap Equity vs Russell 2000	Non-US Equity vs MSCI EAFE	Domestic Fixed Income vs Blmbg Aggr Bd	Non-US Fixed Income vs Citi Non-US Govt	Real Estate vs NCREIF Index
10th Percentile	28.63	20.79	22.40	0.13	6.69	3.38
25th Percentile	24.58	17.77	20.37	(0.13)	1.12	0.17
Median	18.61	14.23	18.10	(0.34)	(0.80)	(6.00)
75th Percentile	13.09	10.86	16.16	(0.74)	(2.33)	(10.46)
90th Percentile	10.40	7.69	13.46	(1.11)	(4.99)	(15.30)
Index ▲	19.59	12.31	18.77	(0.94)	(2.63)	(6.60)

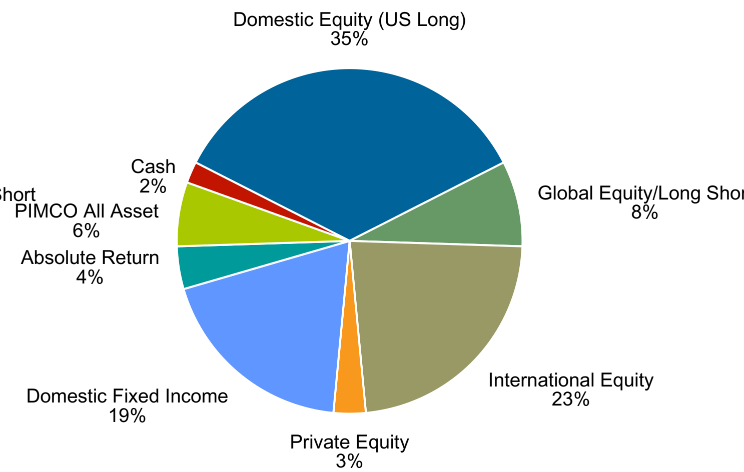
Actual vs Target Asset Allocation
As of June 30, 2023

The top left chart shows the Fund's asset allocation as of June 30, 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- Mid (100M-1B).

Actual Asset Allocation

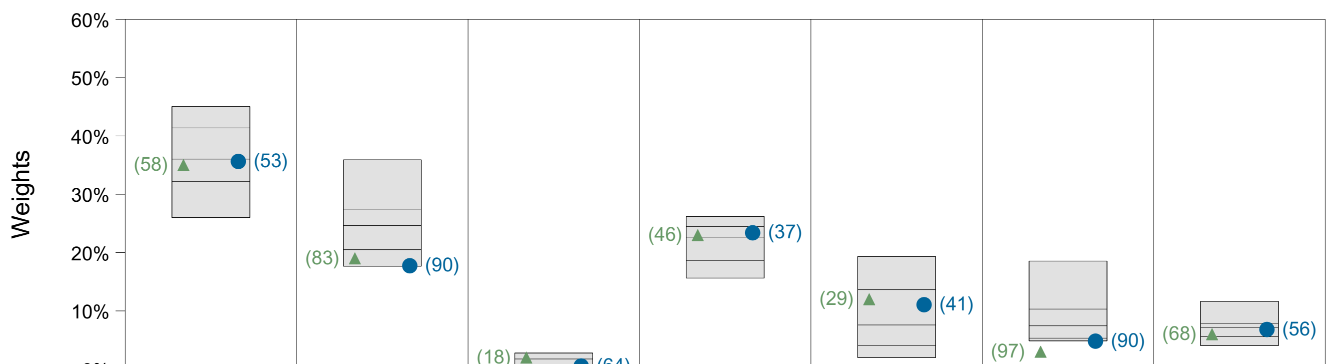


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity (US Long)	169,339	35.6%	35.0%	0.6%	2,981
Global Equity/Long Short	25,120	5.3%	8.0%	(2.7%)	(12,905)
International Equity	111,189	23.4%	23.0%	0.4%	1,868
Private Equity	22,877	4.8%	3.0%	1.8%	8,618
Domestic Fixed Income	84,332	17.7%	19.0%	(1.3%)	(5,977)
Absolute Return	27,464	5.8%	4.0%	1.8%	8,452
PIMCO All Asset	32,375	6.8%	6.0%	0.8%	3,857
Cash	2,611	0.5%	2.0%	(1.5%)	(6,895)
Total	475,309	100.0%	100.0%		

Asset Class Weights vs Callan Public Fund Spons- Mid (100M-1B)



	Domestic Equity (US Long)	Domestic Fixed Income	Cash	International Equity	Alternative	Private Equity	PIMCO All Asset
10th Percentile	45.05	35.90	2.78	26.20	19.34	18.54	11.65
25th Percentile	41.37	27.45	1.76	24.47	13.64	10.32	7.87
Median	36.03	24.63	0.85	22.65	7.59	7.45	7.17
75th Percentile	32.21	20.50	0.13	18.66	4.05	5.33	5.58
90th Percentile	26.00	17.67	0.04	15.63	1.99	4.86	4.05
Fund ●	35.63	17.74	0.55	23.39	11.06	4.81	6.81
Target ▲	35.00	19.00	2.00	23.00	12.00	3.00	6.00
% Group Invested	100.00%	100.00%	80.77%	100.00%	34.62%	23.08%	30.77%

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2023, with the distribution as of March 31, 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

	June 30, 2023				March 31, 2023	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	**$328,525,418**	**69.12%**	**$(5,471,114)**	**$15,685,867**	**$318,310,665**	**67.83%**
U.S. Equity	**$169,338,648**	**35.63%**	**$(168,263)**	**$12,224,362**	**$157,282,550**	**33.52%**
BR Russell 1000 Index Non-Lendable	124,621,437	26.22%	0	9,846,819	114,774,618	24.46%
LSV	22,277,517	4.69%	(168,263)	811,682	21,634,098	4.61%
Principal Dynamic Growth	22,439,695	4.72%	0	1,565,861	20,873,834	4.45%
International Equity	**$111,189,376**	**23.39%**	**$(112,939)**	**$3,051,390**	**$108,250,925**	**23.07%**
Developed Markets	**$92,376,465**	**19.44%**	**$(112,939)**	**$3,112,875**	**$89,376,528**	**19.05%**
Silchester	58,796,944	12.37%	(112,939)	1,974,915	56,934,968	12.13%
Walter Scott	33,579,521	7.06%	0	1,137,960	32,441,560	6.91%
Emerging Markets	**$18,812,912**	**3.96%**	**$0**	**$(61,485)**	**$18,874,397**	**4.02%**
BlackRock EM Alpha Tilts	18,812,912	3.96%	0	(61,485)	18,874,397	4.02%
Global Equity Long/Short	**$25,120,063**	**5.29%**	**$(4,974,912)**	**$410,115**	**$29,684,860**	**6.33%**
ABS Global	20,059,168	4.22%	0	324,132	19,735,036	4.21%
Blackstone Park Ave. NT	5,060,895	1.06%	(4,974,912)	85,983	9,949,824	2.12%
Private Equity (1)	**$22,877,330**	**4.81%**	**$(215,000)**	**$0**	**$23,092,330**	**4.92%**
Pantheon USA IV	178,762	0.04%	0	0	178,762	0.04%
Pantheon USA VI	143,861	0.03%	0	0	143,861	0.03%
Pantheon USA VII	690,779	0.15%	(30,000)	0	720,779	0.15%
Pantheon Europe Fund V A	386,891	0.08%	(20,000)	0	406,891	0.09%
Pantheon Global Secondary Fund III	59,955	0.01%	0	0	59,955	0.01%
Pantheon US Select 2014	21,417,082	4.51%	(165,000)	0	21,582,082	4.60%
Domestic Fixed Income	**$84,332,000**	**17.74%**	**$(11,036)**	**$(893,536)**	**$85,236,571**	**18.16%**
Prudential Cons Core Bond Fund	37,395,021	7.87%	(11,036)	(282,832)	37,688,888	8.03%
Metropolitan West Fund	46,936,979	9.88%	0	(610,704)	47,547,683	10.13%
Absolute Return	**$27,464,410**	**5.78%**	**$0**	**$(15,637)**	**$27,480,047**	**5.86%**
UBS AIS	27,464,410	5.78%	0	(15,637)	27,480,047	5.86%
Real Assets	**$32,375,445**	**6.81%**	**$(3,000,000)**	**$193,330**	**$35,182,114**	**7.50%**
PIMCO All Asset	32,375,445	6.81%	(3,000,000)	193,330	35,182,114	7.50%
Cash	**$2,611,266**	**0.55%**	**$(475,813)**	**$51,135**	**$3,035,944**	**0.65%**
Cash Account	2,611,266	0.55%	(475,813)	51,135	3,035,944	0.65%
Total Fund	**$475,308,537**	**100.0%**	**$(8,957,962)**	**$15,021,159**	**$469,245,341**	**100.0%**

(1) Market Values have a one quarter lag and are adjusted for asset flows.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2023, with the distribution as of March 31, 2023.

Asset Distribution Across Investment Managers

	June 30, 2023					March 31, 2023		
	Market Value	Weight	(min)	Target	(max)	Market Value	Weight	Target
Total Equity	**$328,525,418**	**69.12%**	**60.00%**	**69.00%**	**75.00%**	**$318,310,665**	**67.83%**	**69.00%**
U.S. Equity	**$169,338,648**	**35.63%**	**27.00%**	**35.00%**	**40.00%**	**$157,282,550**	**33.52%**	**35.00%**
BR Russell 1000 Idx Non-Lendable	124,621,437	26.22%				114,774,618	24.46%	
LSV	22,277,517	4.69%				21,634,098	4.61%	
Principal Dynamic Growth	22,439,695	4.72%				20,873,834	4.45%	
International Equity	**$111,189,376**	**23.39%**	**18.00%**	**23.00%**	**28.00%**	**$108,250,925**	**23.07%**	**23.00%**
Developed Markets	**$92,376,465**	**19.44%**	**-**	**-**	**-**	**$89,376,528**	**19.05%**	**-**
Silchester	58,796,944	12.37%				56,934,968	12.13%	
Walter Scott	33,579,521	7.06%				32,441,560	6.91%	
Emerging Markets	**$18,812,912**	**3.96%**	**-**	**-**	**-**	**$18,874,397**	**4.02%**	**-**
BlackRock EM Alpha Tilts	18,812,912	3.96%				18,874,397	4.02%	
Global Equity/Long Short	**$25,120,063**	**5.29%**	**4.00%**	**8.00%**	**12.00%**	**$29,684,860**	**6.33%**	**8.00%**
ABS Global	20,059,168	4.22%				19,735,036	4.21%	
Blackstone Park Ave. NT	5,060,895	1.06%				9,949,824	2.12%	
Private Equity (1)	**$22,877,330**	**4.81%**	**0.00%**	**3.00%**	**6.00%**	**$23,092,330**	**4.92%**	**3.00%**
Pantheon USA IV	178,762	0.04%				178,762	0.04%	
Pantheon USA VI	143,861	0.03%				143,861	0.03%	
Pantheon USA VII	690,779	0.15%				720,779	0.15%	
Pantheon Europe Fund V A	386,891	0.08%				406,891	0.09%	
Pantheon Global Fund III	59,955	0.01%				59,955	0.01%	
Pantheon US Select 2014	21,417,082	4.51%				21,582,082	4.60%	
Domestic Fixed Income	**$84,332,000**	**17.74%**	**14.00%**	**19.00%**	**24.00%**	**$85,236,571**	**18.16%**	**19.00%**
Prudential Cons Core Bond Fund	37,395,021	7.87%				37,688,888	8.03%	
Metropolitan West Fund CIT	46,936,979	9.88%				47,547,683	10.13%	
Absolute Return	**$27,464,410**	**5.78%**	**0.00%**	**4.00%**	**6.00%**	**$27,480,047**	**5.86%**	**4.00%**
UBS AIS	27,464,410	5.78%				27,480,047	5.86%	
Real Assets	**$32,375,445**	**6.81%**	**4.00%**	**6.00%**	**12.00%**	**$35,182,114**	**7.50%**	**6.00%**
PIMCO All Asset	32,375,445	6.81%	4.00%	6.00%	10.00%	35,182,114	7.50%	6.00%
Cash	**$2,611,266**	**0.55%**	**0.00%**	**2.00%**	**4.00%**	**$3,035,944**	**0.65%**	**2.00%**
Cash Account	2,611,266	0.55%				3,035,944	0.65%	
Total Fund	**$475,308,537**	**100.0%**		**100.0%**		**$469,245,341**	**100.0%**	**100.0%**

(1) Market Values have a one quarter lag and are adjusted for asset flows.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 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 June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Total Equity	**5.02%**	**14.40%**	**10.95%**	**7.91%**	**9.51%**
U.S. Long Equity	**7.78%**	**17.93%**	**14.30%**	**10.95%**	**12.67%**
Pure US Equity Composite	**7.78%**	**17.93%**	**14.37%**	**11.01%**	**12.77%**
Russell 3000 Index	8.39%	18.95%	13.89%	11.39%	12.86%
Russell 1000 Index Non-Lendable	8.58%	19.37%	14.10%	11.93%	13.15%
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	13.15%
LSV	3.80%	12.16%	21.72%	4.83%	7.87%
Russell 2000 Value Index	3.18%	6.01%	15.43%	3.54%	7.70%
Principal Dynamic Growth	7.50%	16.17%	10.71%	12.54%	16.70%
Russell 2500 Growth Index	6.41%	18.58%	6.56%	7.00%	10.95%
International Equity	**2.82%**	**15.70%**	**7.61%**	**4.10%**	**6.47%**
MSCI ACWI ex US	2.44%	12.72%	7.22%	3.52%	6.32%
Developed Markets	**3.49%**	**19.12%**	**8.96%**	**4.83%**	**7.24%**
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	6.88%
Silchester	3.47%	17.84%	12.21%	4.71%	7.82%
MSCI EAFE Val Idx	3.15%	17.40%	11.34%	2.93%	6.02%
Walter Scott	3.51%	-	-	-	-
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	6.88%
MSCI EAFE Growth	2.77%	20.20%	6.27%	5.44%	7.41%
Emerging Markets	**(0.33%)**	**2.00%**	**1.98%**	**0.94%**	**3.20%**
MSCI Emerging Mkts Idx Net	0.90%	1.75%	2.32%	0.93%	4.95%
BlackRock EM Alpha Tilts	(0.33%)	2.00%	1.98%	-	-
MSCI Emerging Mkts Idx Net	0.90%	1.75%	2.32%	0.93%	4.95%
Global Equity/Long Short	**1.63%**	**4.10%**	**3.24%**	**3.33%**	**4.50%**
HFRI FOF: Strategic Index	1.97%	4.16%	4.34%	2.67%	4.05%
ABS Global	1.64%	5.08%	4.37%	3.62%	5.14%
MSCI ACWI Idx	6.35%	17.13%	11.51%	8.64%	10.50%
Blackstone Park Ave. NT	1.34%	2.20%	1.67%	2.59%	3.73%
S&P 500 Index	8.74%	19.59%	14.60%	12.31%	13.38%
Private Equity (1)	**0.00%**	**(0.52%)**	**20.30%**	**16.16%**	**15.01%**
Pantheon USA IV	0.00%	(1.24%)	2.15%	0.46%	2.27%
Pantheon USA VI	0.00%	(5.42%)	(11.87%)	(10.71%)	(5.23%)
Pantheon USA VII	0.00%	(2.06%)	14.54%	9.35%	11.08%
Pantheon Europe Fund V A	0.00%	(4.35%)	10.13%	11.59%	12.94%
Pantheon Global Secondary Fund III	0.00%	0.36%	(4.19%)	(1.31%)	2.36%
Pantheon US Select 2014	0.00%	(0.38%)	22.40%	20.27%	19.44%

(1) Current 0% return due to a one quarter lag in valuation.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 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 June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Domestic Fixed Income	**(1.05%)**	**(0.95%)**	**(3.93%)**	**0.85%**	**0.58%**
Prudential Core Bond	(0.75%)	(0.51%)	(3.84%)	0.73%	0.44%
Metropolitan West Fund*	(1.28%)	(1.29%)	(4.00%)	0.90%	0.67%
Blmbg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	0.44%
Absolute Return	**(0.06%)**	**4.23%**	**7.42%**	**5.60%**	**5.11%**
UBS AIS	(0.06%)	4.23%	7.42%	5.60%	5.11%
HFRI FOF: Conservative In	1.03%	3.65%	6.07%	3.92%	4.13%
Real Assets	**0.71%**	**4.64%**	**6.91%**	**4.84%**	**6.60%**
PIMCO All Asset	0.71%	4.64%	6.91%	4.65%	5.45%
Blmbg US TIPS 1-10	(1.42%)	(0.91%)	1.15%	2.75%	2.13%
Cash	**1.24%**	**4.04%**	**1.54%**	**1.78%**	**1.59%**
Cash Account	1.24%	4.04%	1.54%	1.78%	1.59%
3-month Treasury Bill	1.17%	3.59%	1.27%	1.55%	1.37%
Total Fund	**3.24%**	**10.01%**	**7.53%**	**6.15%**	**7.21%**
Target Benchmark (1)	3.47%	9.82%	6.72%	6.23%	7.06%
Annual Discount Rate:6.625%					

(1) The Total Fund Custom Benchmark is 35.0% Russell 3000 Index, 23.0% MSCI ACWI ex-US, 19.0% Bloomberg Aggregate Index 3.0% Private Equity, 8.0% HFRI FOF Strategic, 6.0% Blmbg US TIPS 1-10 Year Index, 2.0% TBIL, 4.0% HFRI FOF Conservative.
* On August 24, 2022 switched from Mutual Fund to CIT.

Investment Manager Returns

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

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Total Equity	**14.40%**	**(14.13%)**	**39.04%**	**1.53%**	**5.50%**
U.S. Long Equity	**17.93%**	**(14.69%)**	**48.45%**	**5.18%**	**7.04%**
Russell 3000 Index	18.95%	(13.87%)	44.16%	6.53%	8.98%
Russell 1000 Index Non-Lendable	19.37%	(13.03%)	43.08%	7.47%	10.04%
Russell 1000 Index	19.36%	(13.04%)	43.07%	7.48%	10.02%
LSV	12.16%	(6.00%)	71.06%	(23.09%)	(8.73%)
Russell 2000 Value Index	6.01%	(16.28%)	73.28%	(17.48%)	(6.24%)
Principal Dynamic Growth	16.17%	(28.37%)	63.07%	22.10%	8.96%
Russell 2500 Growth Index	18.58%	(31.81%)	49.63%	9.21%	6.13%
International Equity	**15.70%**	**(18.54%)**	**32.22%**	**(4.70%)**	**2.95%**
MSCI ACWI ex US	12.72%	(19.42%)	35.72%	(4.80%)	1.29%
Developed Markets	**19.12%**	**(16.32%)**	**29.77%**	**(5.04%)**	**3.07%**
MSCI EAFE Index	18.77%	(17.77%)	32.35%	(5.13%)	1.08%
Silchester	17.84%	(11.34%)	35.22%	(9.35%)	(1.71%)
MSCI EAFE Val Idx	17.40%	(11.95%)	33.50%	(14.48%)	(2.10%)
MSCI EAFE Index	18.77%	(17.77%)	32.35%	(5.13%)	1.08%
MSCI EAFE Growth Idx	20.20%	(23.76%)	30.97%	4.15%	4.24%
Emerging Markets	**2.00%**	**(27.08%)**	**42.61%**	**(3.22%)**	**2.06%**
MSCI Emerging Mkts Idx Net	1.75%	(25.28%)	40.90%	(3.39%)	1.22%
BlackRock EM Alpha Tilts	2.00%	(27.08%)	42.61%	(3.22%)	-
MSCI Emerging Mkts Idx Net	1.75%	(25.28%)	40.90%	(3.39%)	1.22%
Global Equity/Long Short	**4.10%**	**(13.73%)**	**22.51%**	**4.25%**	**2.71%**
HFRI FOF: Strategic Index	4.16%	(11.92%)	23.82%	0.40%	0.01%
ABS Global	5.08%	(9.66%)	19.76%	5.07%	0.01%
MSCI ACWI Idx	17.13%	(15.37%)	39.87%	2.64%	6.33%
Blackstone Park Ave. NT	2.20%	(17.37%)	24.45%	3.92%	4.03%
S&P 500 Index	19.59%	(10.62%)	40.79%	7.51%	10.42%
Private Equity	**(0.52%)**	**12.77%**	**55.16%**	**5.82%**	**14.80%**
Pantheon USA IV	(1.24%)	(4.88%)	13.48%	0.00%	(4.04%)
Pantheon USA VI	(5.42%)	(22.03%)	(7.18%)	(21.95%)	6.24%
Pantheon USA VII	(2.06%)	4.03%	47.49%	(0.99%)	5.11%
Pantheon Europe Fund V A	(4.35%)	(12.57%)	59.73%	11.81%	15.86%
Pantheon Global Secondary Fund III	0.36%	(19.00%)	8.19%	0.15%	6.28%
Pantheon US Select 2014	(0.38%)	15.05%	59.99%	12.67%	21.80%

Investment Manager Returns

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

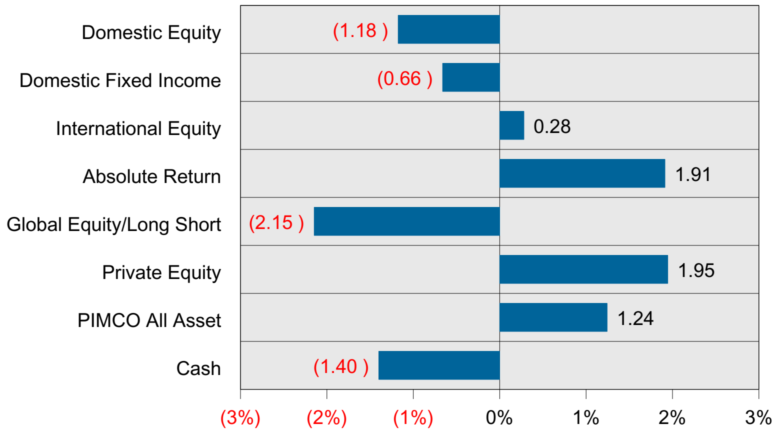
	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Domestic Fixed Income	**(0.95%)**	**(11.14%)**	**0.72%**	**8.89%**	**8.07%**
Prudential Cons Core Bond Fund	(0.51%)	(10.60%)	(0.02%)	8.11%	7.90%
Metropolitan West Fund	(1.29%)	(11.56%)	1.36%	9.18%	8.24%
Blmbg Aggregate Index	(0.94%)	(10.29%)	(0.33%)	8.74%	7.87%
Absolute Return	**4.23%**	**7.95%**	**10.18%**	**4.05%**	**1.79%**
UBS AIS	4.23%	7.95%	10.18%	4.05%	1.79%
HFRI FOF: Conservative In	3.65%	0.10%	15.01%	(0.48%)	2.06%
Real Assets	**4.64%**	**(9.86%)**	**29.53%**	**(2.18%)**	**5.97%**
PIMCO All Asset	4.64%	(9.85%)	29.55%	(2.23%)	5.03%
Blmbg US TIPS 1-10	(0.91%)	(2.03%)	6.60%	5.75%	4.67%
Cash	**4.04%**	**0.35%**	**0.26%**	**1.75%**	**2.52%**
Cash Account	4.04%	0.35%	0.26%	1.75%	2.52%
3-month Treasury Bill	3.59%	0.17%	0.09%	1.63%	2.31%
Total Fund	**10.01%**	**(11.98%)**	**28.40%**	**2.76%**	**5.51%**
Total Fund Custom Benchmark*	9.82%	(11.91%)	25.66%	4.63%	6.36%
Annual Discount Rate:6.625%					

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

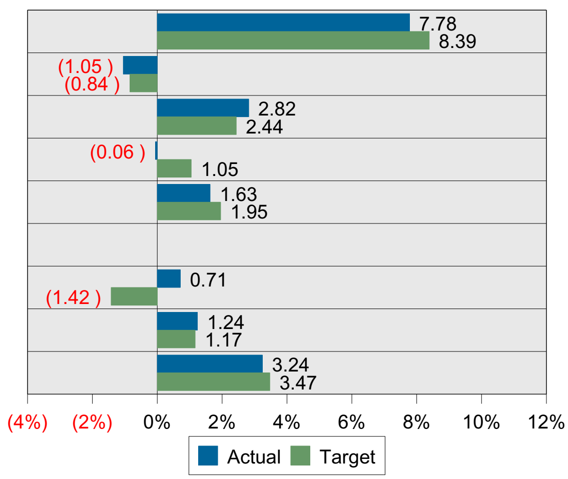
Quarterly Total Fund Relative Attribution - June 30, 2023

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.

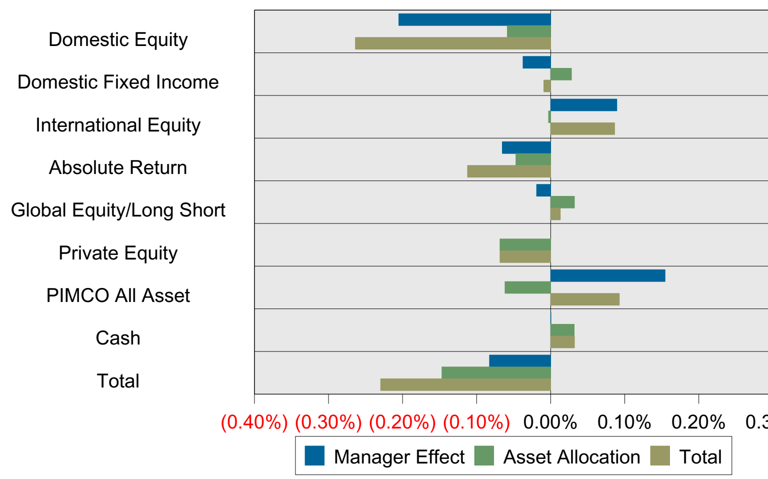
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended June 30, 2023

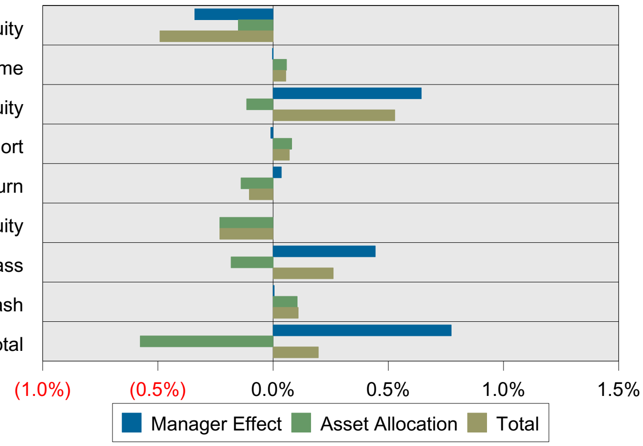
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	34%	35%	7.78%	8.39%	(0.21%)	(0.06%)	(0.26%)
Domestic Fixed Income	18%	19%	(1.05%)	(0.84%)	(0.04%)	0.03%	(0.01%)
International Equity	23%	23%	2.82%	2.44%	0.09%	(0.00%)	0.09%
Absolute Return	6%	4%	(0.06%)	1.05%	(0.07%)	(0.05%)	(0.11%)
Global Equity/Long Short	6%	8%	1.63%	1.95%	(0.02%)	0.03%	0.01%
Private Equity	5%	3%	0.00%	0.00%	0.00%	(0.07%)	(0.07%)
PIMCO All Asset	7%	6%	0.71%	(1.42%)	0.15%	(0.06%)	0.09%
Cash	1%	2%	1.24%	1.17%	0.00%	0.03%	0.03%
Total			**3.24% =**	**3.47% +**	**(0.08%) +**	**(0.15%)**	**(0.23%)**

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

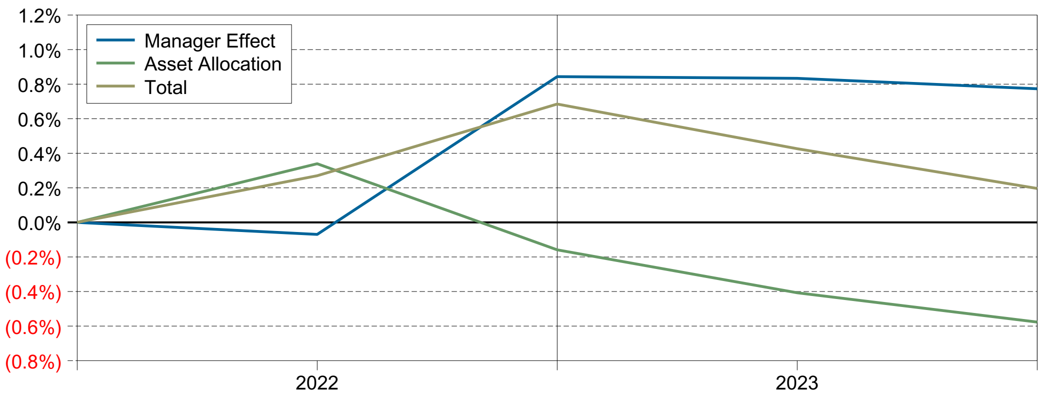
Cumulative Total Fund Relative Attribution - June 30, 2023

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

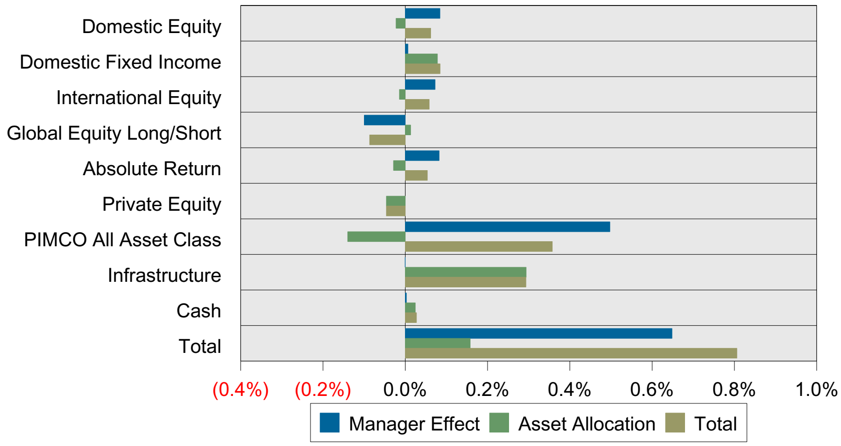
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	33%	35%	17.93%	18.95%	(0.34%)	(0.15%)	(0.49%)
Domestic Fixed Income	18%	19%	(0.95%)	(0.94%)	(0.00%)	0.06%	0.06%
International Equity	22%	23%	15.70%	12.72%	0.64%	(0.11%)	0.53%
Global Equity Long/Short	7%	8%	4.10%	4.15%	(0.01%)	0.08%	0.07%
Absolute Return	6%	4%	4.23%	3.67%	0.04%	(0.14%)	(0.10%)
Private Equity	5%	3%	(0.52%)	(0.52%)	0.00%	(0.23%)	(0.23%)
PIMCO All Asset Class	8%	6%	4.64%	(0.91%)	0.44%	(0.18%)	0.26%
Cash	1%	2%	4.04%	3.59%	0.00%	0.10%	0.11%
Total			**10.01% =**	**9.82% +**	**0.77% +**	**(0.58%)**	**0.20%**

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

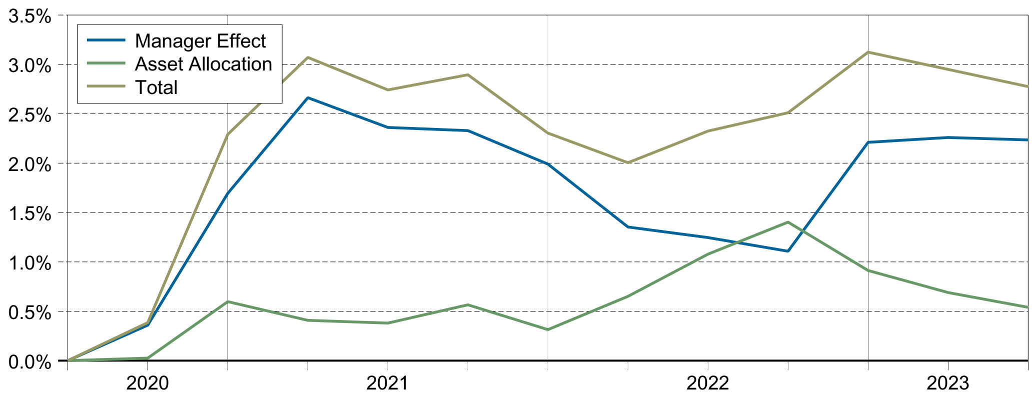
Cumulative Total Fund Relative Attribution - June 30, 2023

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

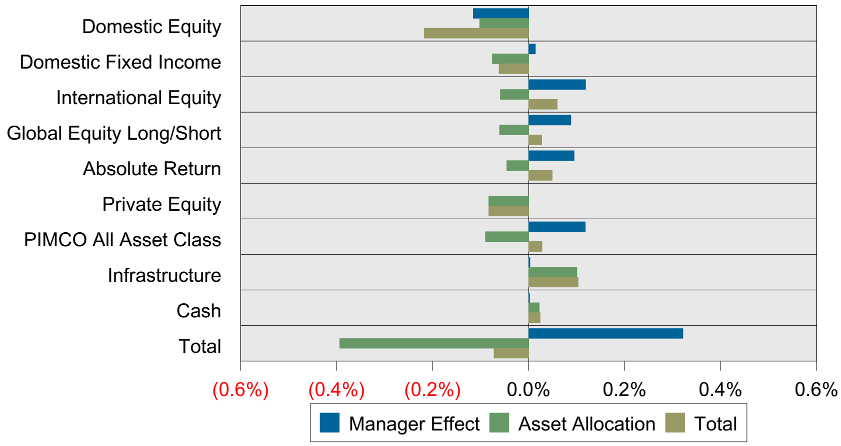
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	32%	33%	14.30%	13.89%	0.08%	(0.02%)	0.06%
Domestic Fixed Income	18%	20%	(3.93%)	(3.96%)	0.01%	0.08%	0.08%
International Equity	22%	23%	7.61%	7.22%	0.07%	(0.01%)	0.06%
Global Equity Long/Short	9%	8%	3.24%	4.34%	(0.10%)	0.01%	(0.09%)
Absolute Return	5%	4%	7.42%	6.08%	0.08%	(0.03%)	0.05%
Private Equity	5%	4%	20.30%	20.30%	0.00%	(0.05%)	(0.05%)
PIMCO All Asset Class	8%	6%	6.91%	1.15%	0.50%	(0.14%)	0.36%
Infrastructure	0%	1%	-	-	(0.00%)	0.29%	0.29%
Cash	1%	1%	1.54%	1.27%	0.00%	0.02%	0.03%
Total			**7.53% =**	**6.72% +**	**0.65% +**	**0.16%**	**0.81%**

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

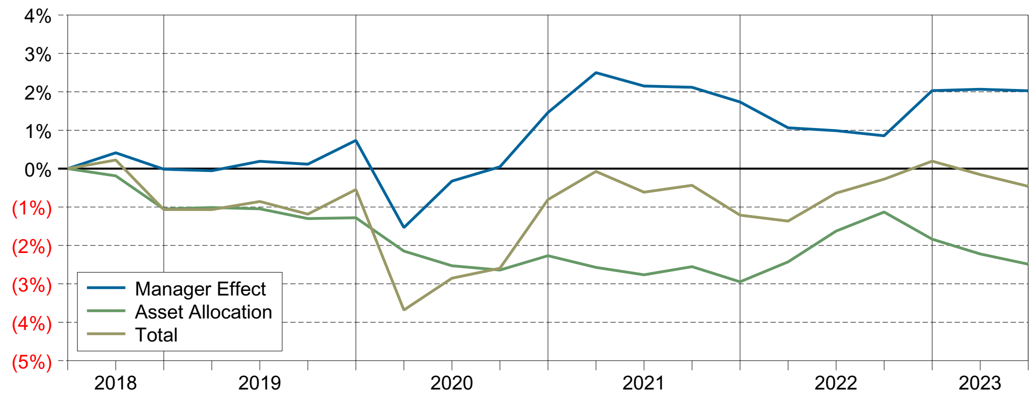
Cumulative Total Fund Relative Attribution - June 30, 2023

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%	31%	10.95%	11.39%	(0.12%)	(0.10%)	(0.22%)
Domestic Fixed Income	19%	20%	0.85%	0.77%	0.01%	(0.08%)	(0.06%)
International Equity	22%	22%	4.10%	3.52%	0.12%	(0.06%)	0.06%
Global Equity Long/Short	10%	8%	3.33%	2.66%	0.09%	(0.06%)	0.03%
Absolute Return	5%	4%	5.60%	3.93%	0.09%	(0.05%)	0.05%
Private Equity	4%	5%	16.16%	16.16%	0.00%	(0.08%)	(0.08%)
PIMCO All Asset Class	9%	6%	4.65%	2.75%	0.12%	(0.09%)	0.03%
Infrastructure	0%	3%	-	-	0.00%	0.10%	0.10%
Cash	1%	1%	1.78%	1.55%	0.00%	0.02%	0.02%
Total			**6.15% =**	**6.23% +**	**0.32% +**	**(0.39%)**	**(0.07%)**

* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

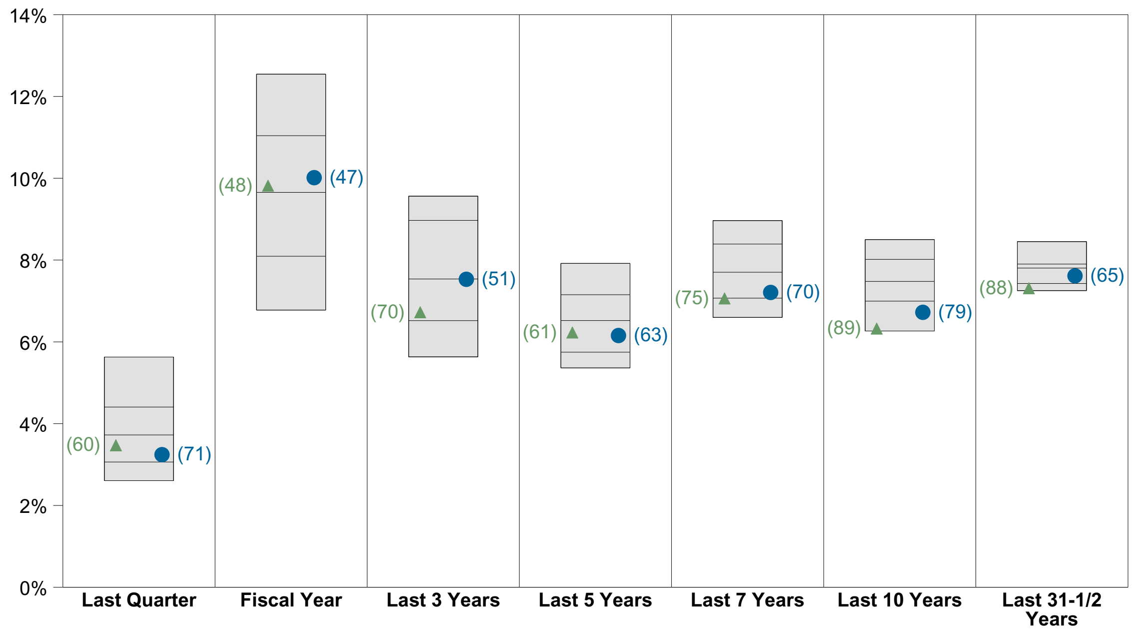
Quarterly Summary and Highlights

- Total Fund's portfolio posted a 3.24% return for the quarter placing it in the 71 percentile of the Callan Public Fund Spons- Mid (100M-1B) group for the quarter and in the 47 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Custom Benchmark by 0.23% for the quarter and outperformed the Total Fund Custom Benchmark for the year by 0.20%.

Quarterly Asset Growth

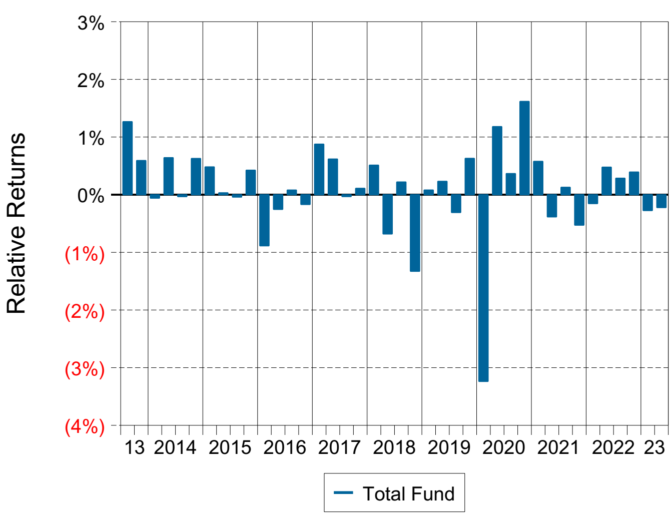
Beginning Market Value	$469,245,341
Net New Investment	$-8,957,962
Investment Gains/(Losses)	$15,021,159
Ending Market Value	$475,308,537

Performance vs Callan Public Fund Spons- Mid (100M-1B) (Gross)

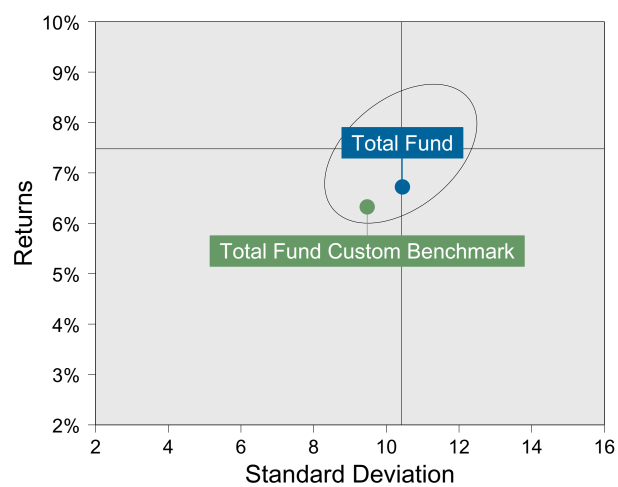


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years	Last 31-1/2 Years
10th Percentile	5.63	12.54	9.56	7.92	8.97	8.50	8.45
25th Percentile	4.41	11.04	8.97	7.15	8.39	8.02	7.90
Median	3.72	9.65	7.54	6.52	7.70	7.48	7.80
75th Percentile	3.06	8.09	6.52	5.75	7.07	7.00	7.43
90th Percentile	2.61	6.78	5.63	5.36	6.60	6.27	7.25
Total Fund ●	3.24	10.01	7.53	6.15	7.21	6.72	7.61
Total Fund Custom Benchmark ▲	3.47	9.82	6.72	6.23	7.06	6.33	7.31

Relative Returns vs Total Fund Custom Benchmark



Callan Public Fund Spons- Mid (100M-1B) (Gross) Annualized Ten Year Risk vs Return

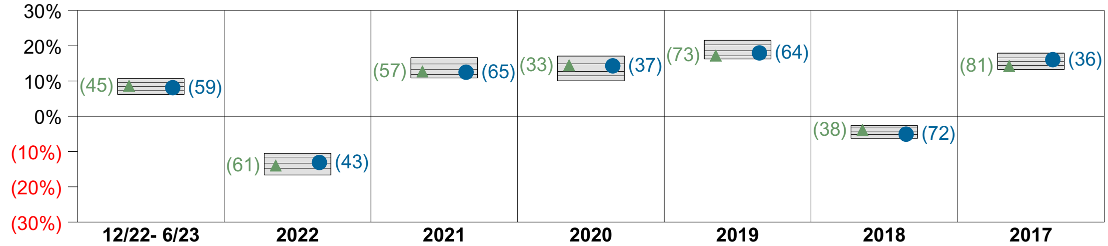


Total Fund
Return Analysis Summary

Return Analysis

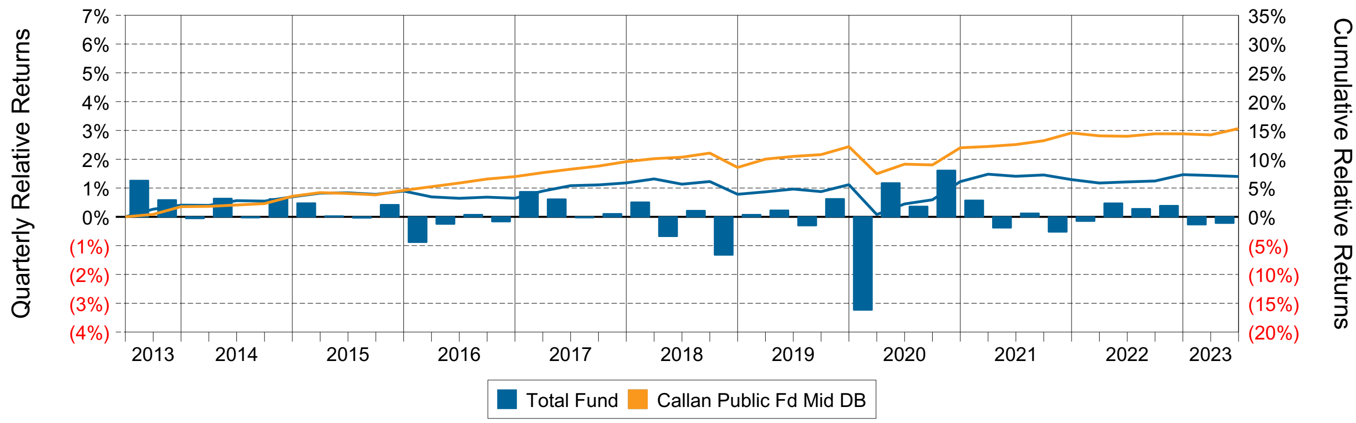
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Public Fund Spons- Mid (100M-1B) (Gross)

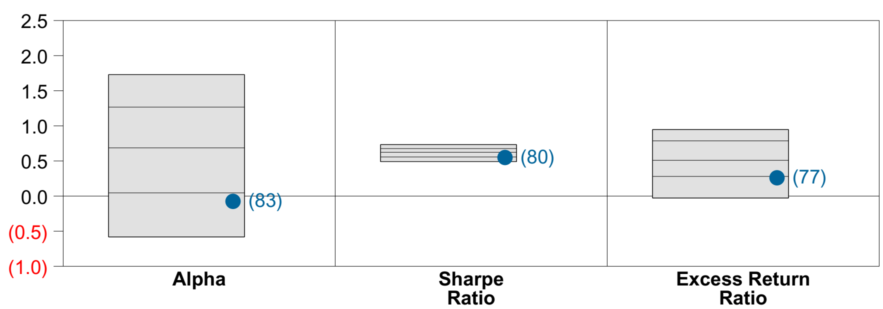


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	10.67	(10.50)	16.62	17.08	21.55	(2.66)	17.90
25th Percentile	9.55	(11.58)	14.84	14.89	20.26	(3.30)	16.56
Median	8.42	(13.31)	13.23	12.73	18.60	(4.42)	15.51
75th Percentile	7.26	(14.76)	11.84	11.50	17.14	(5.15)	14.44
90th Percentile	6.21	(16.66)	10.87	10.05	16.26	(6.23)	13.25
Total Fund ●	8.11	(13.10)	12.50	14.30	17.97	(5.08)	16.05
Total Fund Custom Benchmark ▲	8.64	(13.96)	12.73	14.47	17.23	(3.84)	14.25

Cumulative and Quarterly Relative Returns vs Total Fund Custom Benchmark



Risk Adjusted Return Measures vs Total Fund Custom Benchmark
Rankings Against Callan Public Fund Spons- Mid (100M-1B) (Gross)
Ten Years Ended June 30, 2023

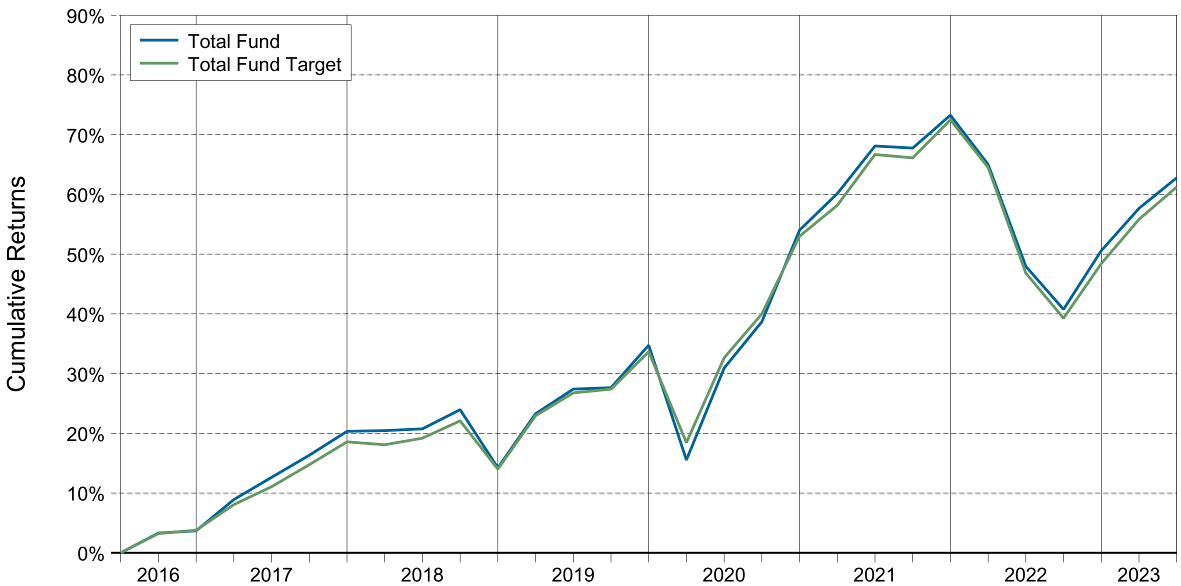


	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.73	0.73	0.95
25th Percentile	1.27	0.68	0.79
Median	0.69	0.62	0.51
75th Percentile	0.05	0.56	0.28
90th Percentile	(0.58)	0.49	(0.03)
Total Fund ●	(0.08)	0.55	0.26

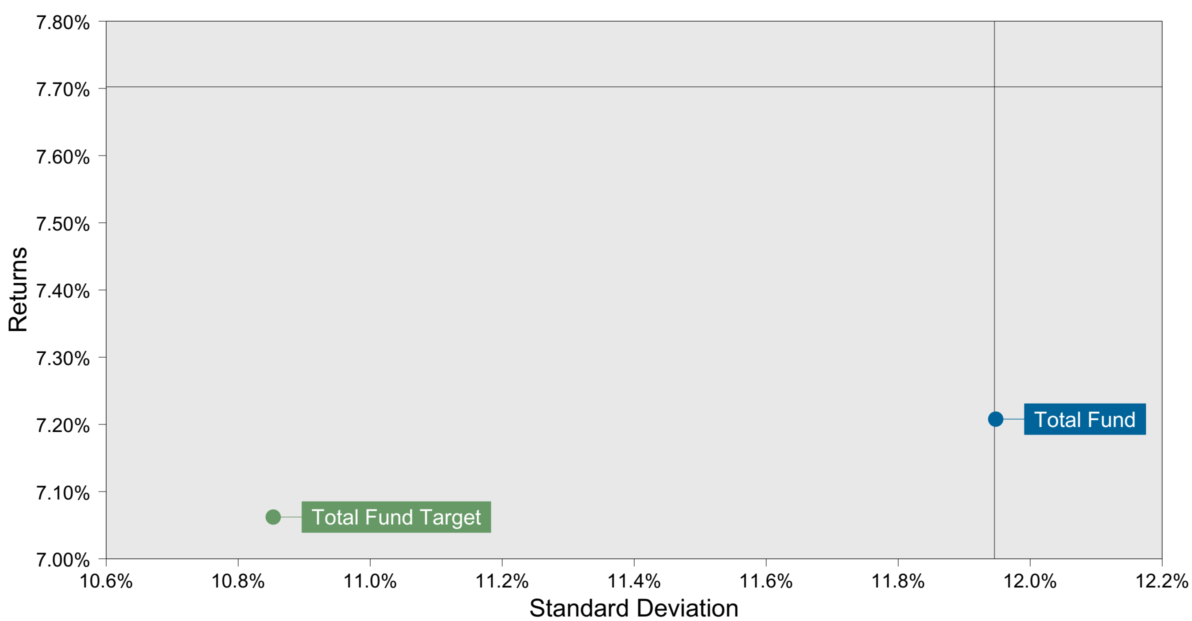
Cumulative Performance Relative to Target

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- Mid (100M-1B).

Cumulative Returns Actual vs Target



Seven Year Annualized Risk vs Return



* Current Quarter Target = 35.0% Russell 3000 Index, 23.0% MSCI ACWI xUS, 19.0% Blmbg:Aggregate, 8.0% HFRI FOF: Strategic Index, 6.0% Blmbg TIPS 1-10 Yr, 4.0% HFRI FOF: Conservative In, 3.0% Private Equity and 2.0% 3-month Treasury Bill.

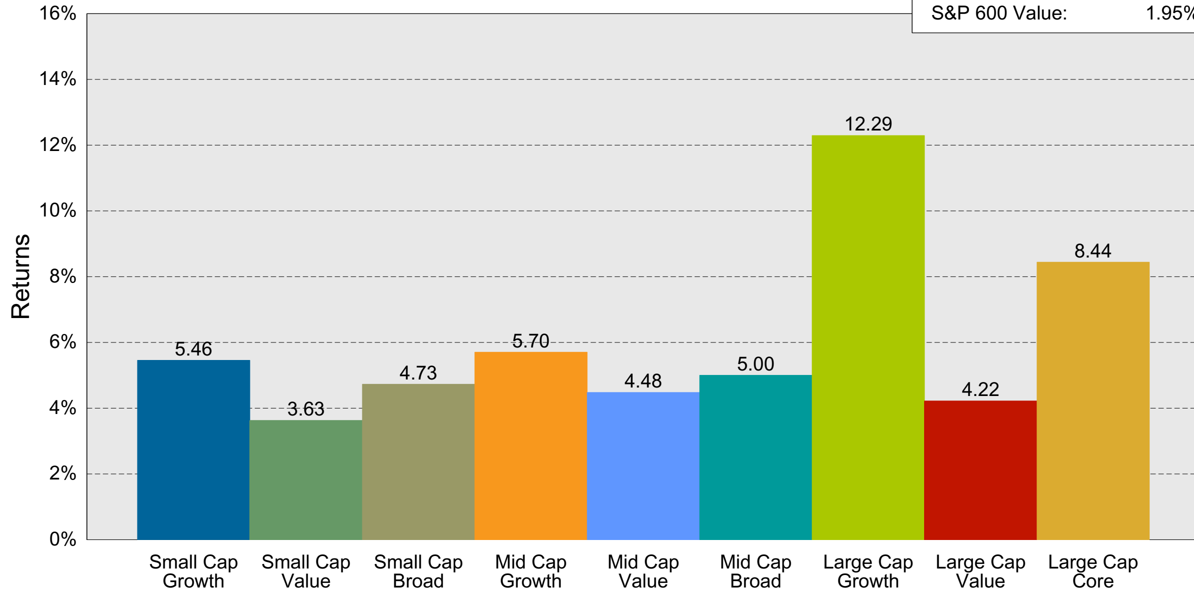
Manager Performance
Domestic Equity

Domestic Equity
Active Management Overview

U.S. stock indices posted positive returns in 2Q with performance dominated by large cap technology stocks. The S&P 500 Index rose 8.7% while the tech-heavy Nasdaq Composite returned +13.1%. Within the S&P 500, Technology (+17.2%), Communication Services (+13.1%), and Consumer Discretionary (+14.6%) rose sharply while Energy (-0.9%) and Utilities (-2.5%) fell. Growth stocks trounced value for the quarter (Russell 1000 Growth: +12.8%; Russell 1000 Value: +4.1%) due largely to the sharp outperformance of Technology relative to Health Care, Energy, and Financials. Small cap stocks underperformed large (Russell 2000: +5.2%; Russell 1000: +8.6%) across the style spectrum. Index concentration continued to have a significant impact on returns in 2Q. The aptly named Magnificent Seven (Nvidia, Meta Platforms, Amazon, Tesla, Apple, Microsoft, Alphabet) comprise roughly 25% of the S&P 500 and have accounted for the vast majority of S&P 500 gains in 2023 (Mag 7 up 64% versus 3% for the rest of the Index).

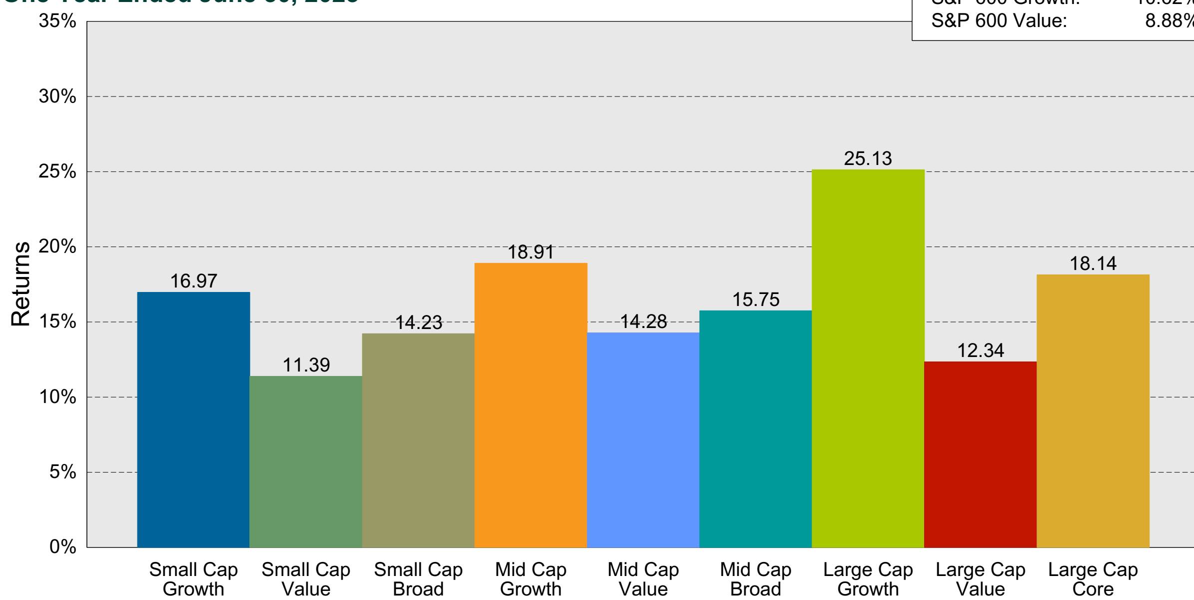
S&P 500:	8.74%
S&P 500 Growth:	10.59%
S&P 500 Value:	6.64%
S&P Mid Cap:	4.85%
S&P 600:	3.38%
S&P 600 Growth:	4.78%
S&P 600 Value:	1.95%

Separate Account Style Group Median Returns for Quarter Ended June 30, 2023



S&P 500:	19.59%
S&P 500 Growth:	18.25%
S&P 500 Value:	19.99%
S&P Mid Cap:	17.61%
S&P 600:	9.75%
S&P 600 Growth:	10.62%
S&P 600 Value:	8.88%

Separate Account Style Group Median Returns for One Year Ended June 30, 2023



Domestic Equity
Period Ended June 30, 2023

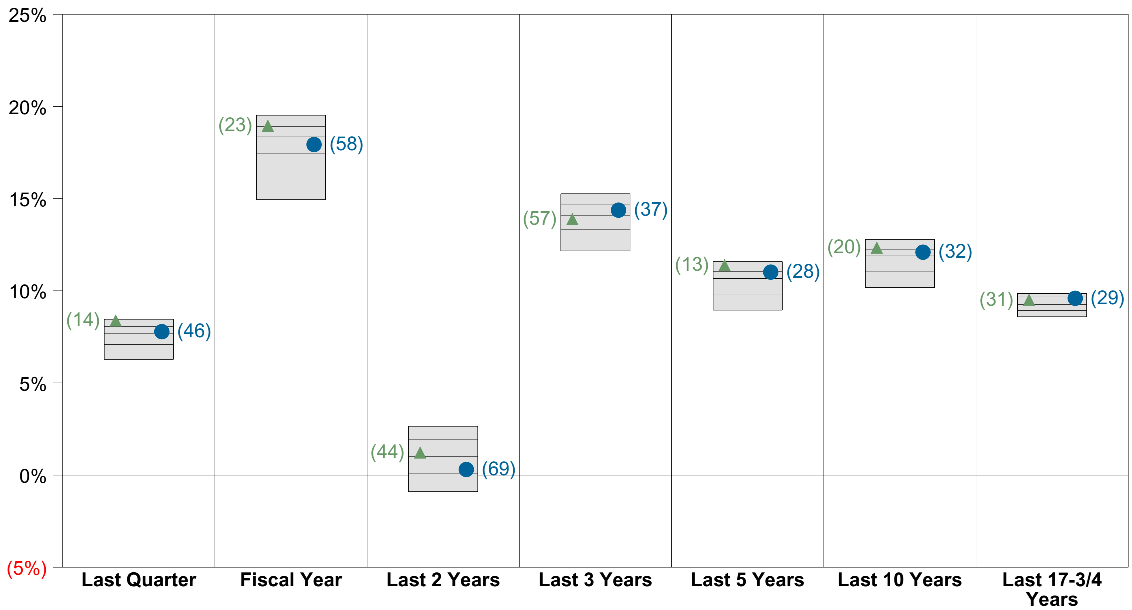
Composite Construction

The Pure US Equity composite is comprised of the BR Russell 1000 Index Non-Lendable, the LSV account and the Principal Dynamic Growth Fund.

Quarterly Summary and Highlights

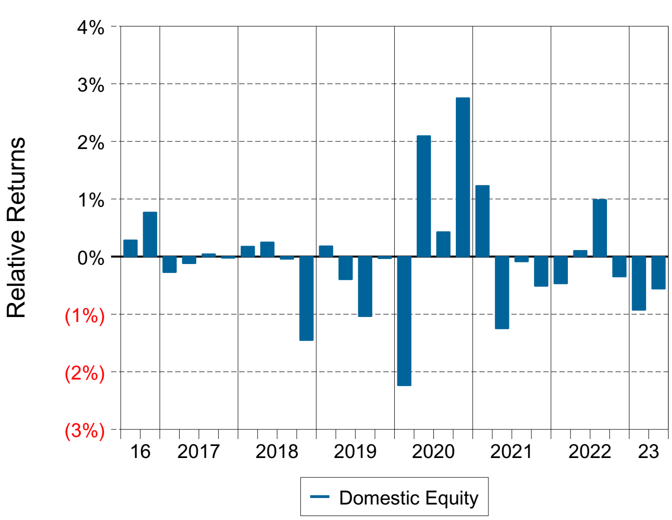
- Domestic Equity's portfolio posted a 7.78% return for the quarter placing it in the 46 percentile of the Public Fund - Domestic Equity group for the quarter and in the 58 percentile for the last year.
- Domestic Equity's portfolio underperformed the Russell 3000 Index by 0.61% for the quarter and underperformed the Russell 3000 Index for the year by 1.02%.

Performance vs Public Fund - Domestic Equity (Gross)

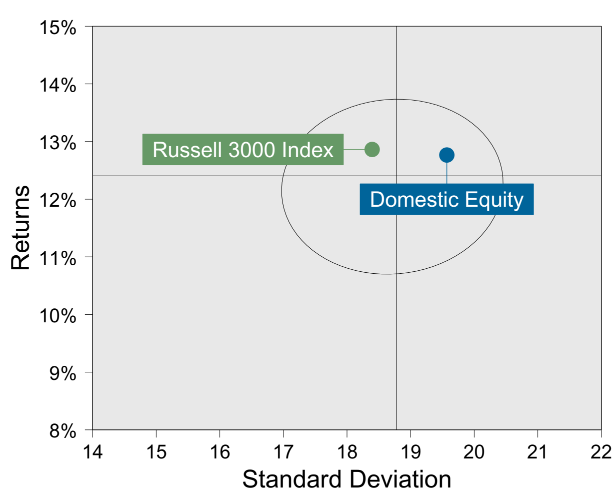


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 17-3/4 Years
10th Percentile	8.46	19.53	2.65	15.26	11.58	12.79	9.85
25th Percentile	8.05	18.92	1.92	14.70	11.06	12.22	9.66
Median	7.69	18.39	1.00	14.07	10.67	11.94	9.25
75th Percentile	7.09	17.43	0.07	13.31	9.77	11.06	8.93
90th Percentile	6.28	14.94	(0.90)	12.16	8.95	10.17	8.59
Domestic Equity ●	7.78	17.93	0.30	14.37	11.01	12.09	9.59
Russell 3000 Index ▲	8.39	18.95	1.22	13.89	11.39	12.34	9.51

Relative Return vs Russell 3000 Index



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



Domestic 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.

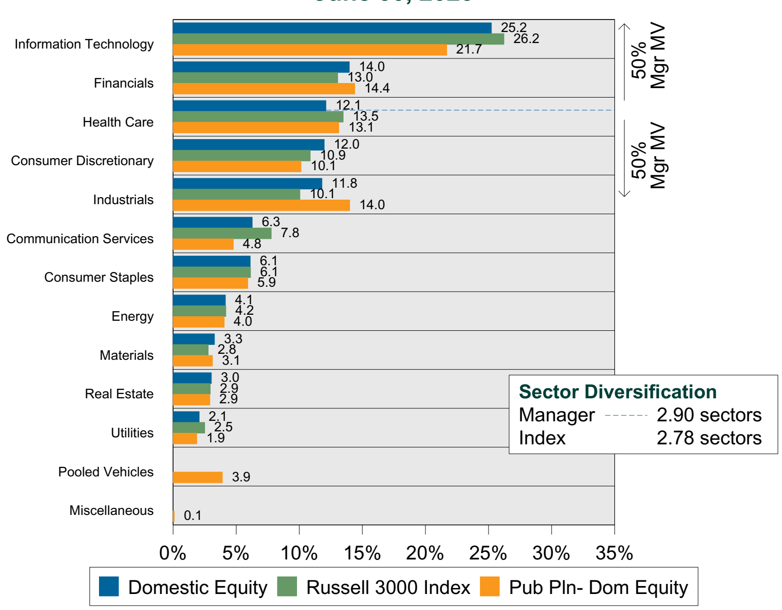
Portfolio Characteristics Percentile Rankings
Rankings Against Public Fund - Domestic Equity
as of June 30, 2023

	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	194.95	19.33	3.89	12.34	1.61	0.06
25th Percentile	113.52	19.19	3.55	11.87	1.55	0.01
Median	82.42	18.24	3.16	11.17	1.48	(0.02)
75th Percentile	49.04	17.51	2.85	10.32	1.40	(0.05)
90th Percentile	37.17	15.91	2.55	9.63	1.33	(0.20)
Domestic Equity ●	63.95	17.84	2.98	12.40	1.53	(0.02)
Russell 3000 Index ▲	128.58	19.60	3.55	10.53	1.51	(0.01)

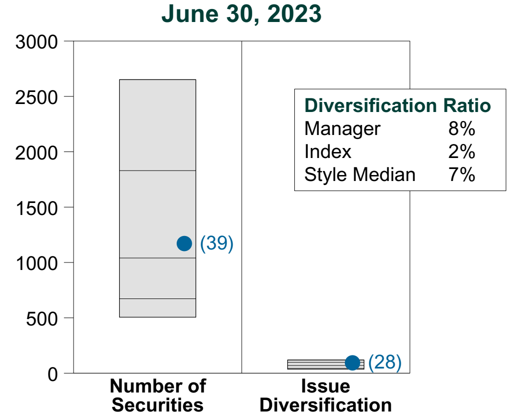
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



	Number of Securities	Issue Diversification
10th Percentile	2652	120
25th Percentile	1830	98
Median	1041	69
75th Percentile	673	43
90th Percentile	506	36
Domestic Equity ●	1171	93
Russell 3000 Index ▲	3009	57

Domestic Equity
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Apple Inc	Information Technology	$9,035,582	5.3%	17.79%	3050.90	30.17	0.49%	7.30%
Microsoft Corp	Information Technology	$7,910,879	4.7%	18.38%	2532.08	31.09	0.80%	11.65%
Amazon.Com	Consumer Discretionary	$3,667,933	2.2%	26.21%	1337.54	62.67	0.00%	8.16%
Nvidia Corp	Information Technology	$3,138,952	1.9%	52.31%	1044.86	47.67	0.04%	21.20%
Tesla Mtrs Inc	Consumer Discretionary	$2,254,038	1.3%	26.18%	829.68	62.87	0.00%	9.88%
Alphabet Inc Cl A	Communication Services	$2,219,840	1.3%	15.40%	711.14	20.65	0.00%	18.40%
Meta Platforms Inc	Communication Services	$1,982,611	1.2%	35.40%	634.84	21.88	0.00%	18.50%
Berkshire Hathaway Inc Del Cl B New	Financials	$1,962,364	1.2%	10.44%	441.93	20.23	0.00%	9.41%
Alphabet Inc Cl C	Communication Services	$1,945,924	1.1%	16.32%	710.58	20.98	0.00%	18.40%
Unitedhealth Group	Health Care	$1,397,058	0.8%	2.11%	447.49	18.18	1.56%	13.00%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Super Micro Computer Inc	Information Technology	$249,250	0.1%	133.93%	13.08	23.01	0.00%	49.36%
Wayfair Inc Cl A	Consumer Discretionary	$16,796	0.0%	89.31%	5.63	(26.76)	0.00%	-
Carnival Corp	Consumer Discretionary	$59,022	0.0%	85.52%	21.08	38.67	0.00%	(15.72)%
Xpo Logistics Inc	Industrials	$190,779	0.1%	84.95%	6.84	21.62	0.00%	2.00%
Palantir Technologies Inc Cl A	Information Technology	$87,834	0.1%	81.42%	30.87	66.36	0.00%	73.00%
Mongodb Inc Cl A	Information Technology	$83,678	0.0%	76.30%	29.01	231.67	0.00%	-
Gs Acquisition Hldgs Corp Com Cl A	Industrials	$291,513	0.2%	73.10%	9.41	17.88	0.04%	53.98%
Applovin Corp	Information Technology	$345,461	0.2%	63.33%	7.12	55.57	0.00%	-
Norwegian Cruise Line Hldgs Shs	Consumer Discretionary	$24,241	0.0%	61.85%	9.23	18.75	0.00%	4.81%
Celsius Holdings Inc	Consumer Staples	$601,290	0.4%	60.52%	11.45	83.21	0.00%	137.75%

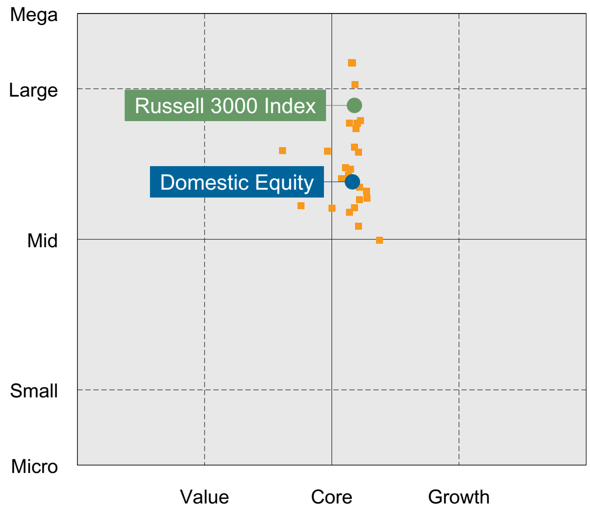
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Homestreet Inc	Financials	$14,208	0.0%	(66.56)%	0.11	6.39	6.76%	28.50%
Victorias Secret & Co Com	Consumer Discretionary	$5,171	0.0%	(48.96)%	1.34	6.36	0.00%	(12.00)%
Advance Auto Parts Inc	Consumer Discretionary	$12,317	0.0%	(41.49)%	4.18	10.95	1.42%	(1.90)%
Tandem Diabetes Care Inc	Health Care	$4,966	0.0%	(39.59)%	1.59	(19.94)	0.00%	-
First Horizon Natl Corp	Financials	$18,386	0.0%	(35.81)%	6.07	7.71	5.32%	8.22%
Office Pptys Income Tr Com Shs Ben I	Real Estate	$14,615	0.0%	(35.15)%	0.37	(19.01)	12.99%	(8.10)%
Ubiquiti Inc	Information Technology	$707	0.0%	(35.09)%	10.62	19.55	1.37%	20.40%
Catalent Inc	Health Care	$24,522	0.0%	(34.01)%	7.82	35.54	0.00%	7.70%
Concentrix Corp Com	Industrials	$10,895	0.0%	(33.37)%	4.20	6.72	1.36%	7.65%
Marketaxess Hldgs Inc	Financials	$29,737	0.0%	(33.03)%	9.85	32.42	1.10%	13.49%

Current Holdings Based Style Analysis
Domestic Equity
As of June 30, 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.

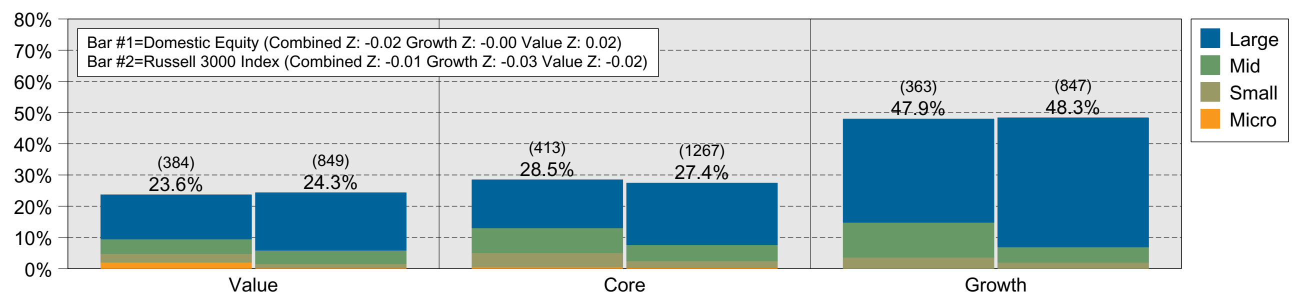
Style Map vs Pub Pln- Dom Equity
Holdings as of June 30, 2023



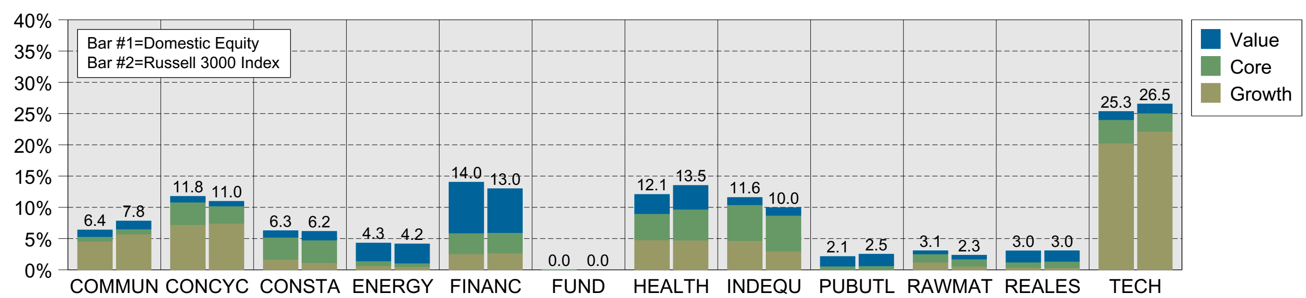
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Large	14.1% (84) 18.4% (90)	15.4% (95) 19.8% (98)	33.1% (102) 41.3% (108)	**62.7% (281)** **79.6% (296)**
Mid	4.7% (159) 4.4% (159)	8.0% (204) 5.2% (219)	11.2% (190) 5.0% (215)	**23.8% (553)** **14.5% (593)**
Small	2.8% (87) 1.3% (288)	4.6% (103) 2.2% (525)	3.5% (68) 1.8% (372)	**10.9% (258)** **5.3% (1185)**
Micro	2.0% (54) 0.2% (312)	0.5% (11) 0.3% (425)	0.1% (3) 0.1% (152)	**2.6% (68)** **0.6% (889)**
Total	**23.6% (384)** **24.3% (849)**	**28.5% (413)** **27.4% (1267)**	**47.9% (363)** **48.3% (847)**	**100.0% (1160)** **100.0% (2963)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023



Russell 1000 Index Non-Lendable
Period Ended June 30, 2023

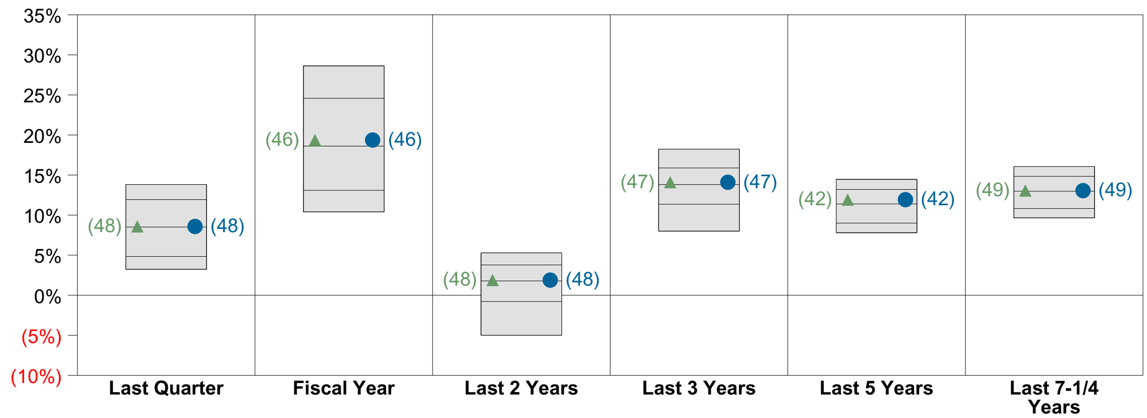
Investment Philosophy

As with all indexing strategies, the objective of the Russell 1000 Index Fund is to track the performance of its benchmark, the Russell 1000 Index. To manage the fund effectively, BlackRock focuses on three objectives: minimizing transaction costs, minimizing tracking error and minimizing risk. The Fund fully replicates the Russell 1000 Index, holding every stock in the index in its market capitalization weight to ensure close tracking and minimize transaction costs. As a fully replicating strategy, the only necessary trading is for dividend reinvestments, index changes, and to implement client contributions and redemptions, so costs can be controlled. BlackRock produces significant economies of scale for further minimizing transaction costs to clients, as the team has the ability to "cross" a majority of trades among funds tracking related US equity security universes.

Quarterly Summary and Highlights

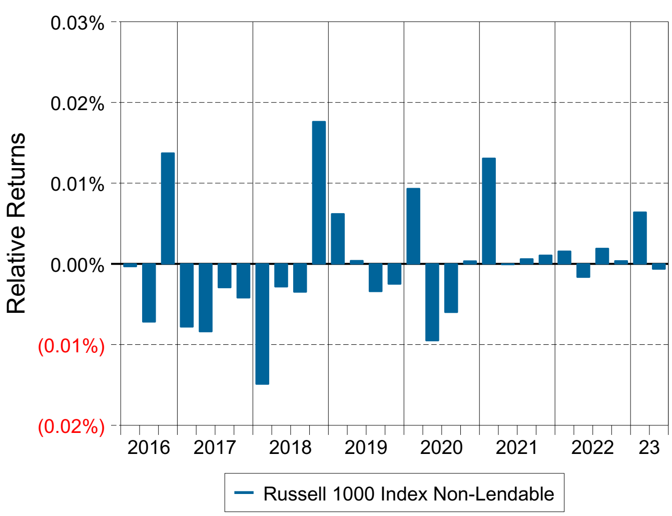
- Russell 1000 Index Non-Lendable's portfolio posted a 8.58% return for the quarter placing it in the 48 percentile of the Callan Large Capitalization group for the quarter and in the 46 percentile for the last year.
- Russell 1000 Index Non-Lendable's portfolio underperformed the Russell 1000 Index by 0.00% for the quarter and outperformed the Russell 1000 Index for the year by 0.01%.

Performance vs Callan Large Capitalization (Gross)

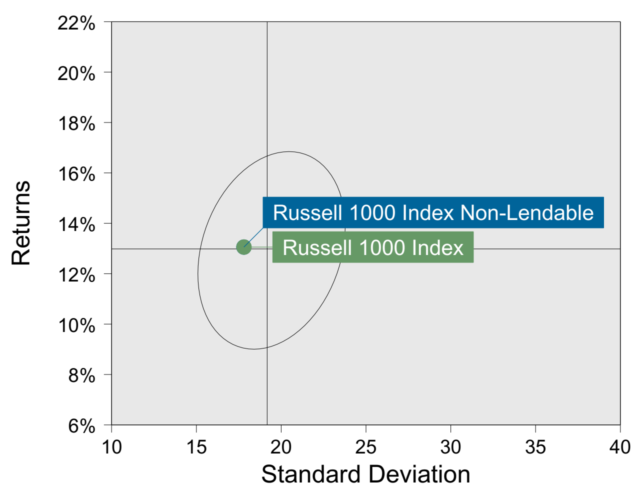


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 7-1/4 Years
10th Percentile	13.82	28.63	5.29	18.24	14.47	16.06
25th Percentile	11.94	24.58	3.78	15.89	13.20	14.84
Median	8.51	18.61	1.78	13.81	11.40	12.98
75th Percentile	4.84	13.09	(0.78)	11.36	9.00	10.83
90th Percentile	3.24	10.40	(5.00)	8.00	7.80	9.65
Russell 1000 Index Non-Lendable ●	8.58	19.37	1.89	14.10	11.93	13.06
Russell 1000 Index ▲	8.58	19.36	1.88	14.09	11.92	13.06

Relative Return vs Russell 1000 Index



Callan Large Capitalization (Gross)
Annualized Seven and One-Quarter Year Risk vs Return

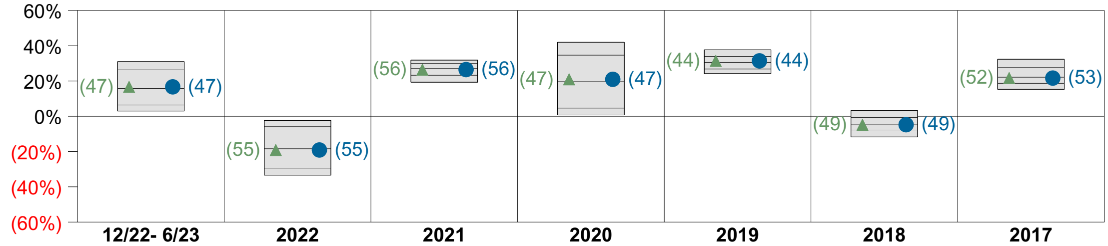


Russell 1000 Index Non-Lendable
Return Analysis Summary

Return Analysis

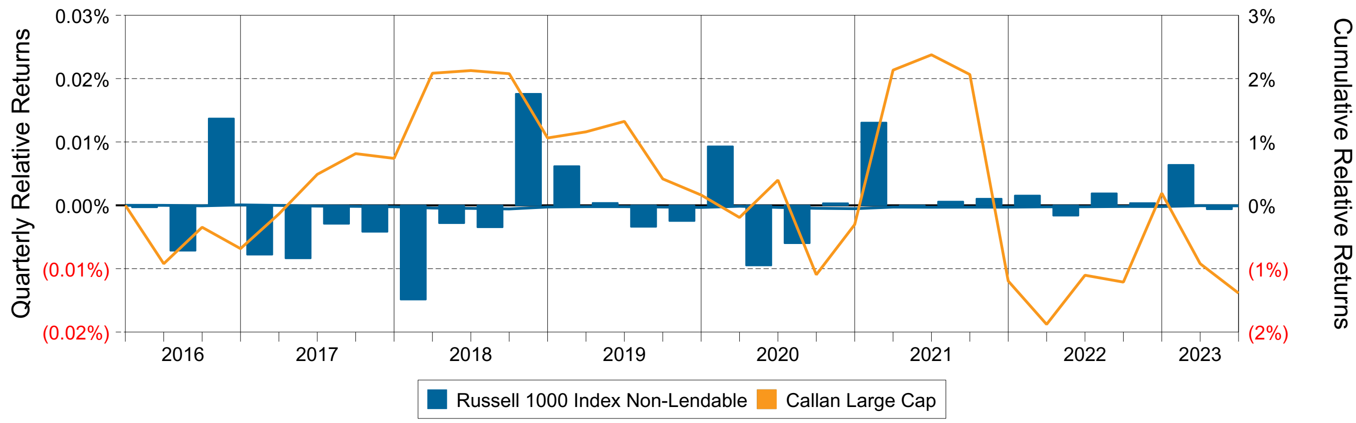
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Large Capitalization (Gross)

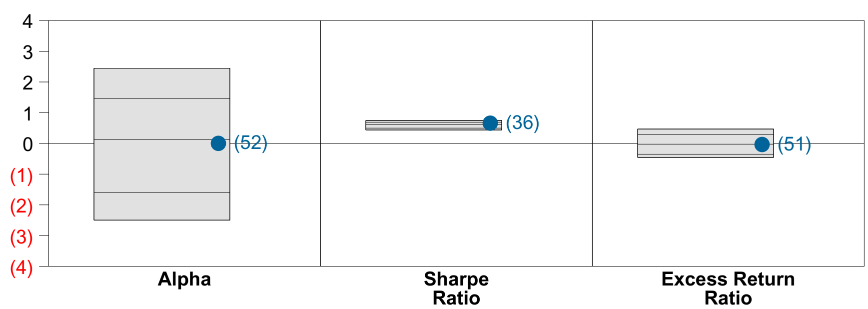


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	30.98	(2.37)	31.86	41.97	37.69	3.28	32.34
25th Percentile	26.31	(5.90)	29.93	34.65	33.97	(0.63)	27.61
Median	15.77	(18.40)	27.05	19.61	30.58	(4.85)	22.15
75th Percentile	6.40	(29.39)	23.26	4.64	26.81	(7.79)	18.68
90th Percentile	2.98	(33.39)	19.32	0.73	24.17	(11.73)	15.27
Russell 1000 Index Non-Lendable ●	16.69	(19.13)	26.47	20.96	31.43	(4.79)	21.66
Russell 1000 Index ▲	16.68	(19.13)	26.45	20.96	31.43	(4.78)	21.69

Cumulative and Quarterly Relative Returns vs Russell 1000 Index



Risk Adjusted Return Measures vs Russell 1000 Index
Rankings Against Callan Large Capitalization (Gross)
Seven and One-Quarter Years Ended June 30, 2023



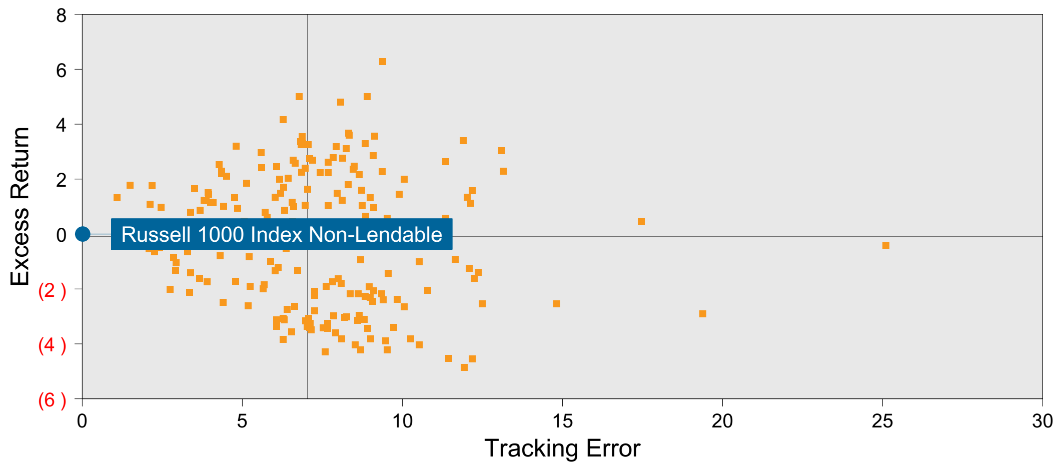
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.45	0.75	0.47
25th Percentile	1.47	0.69	0.29
Median	0.13	0.61	(0.02)
75th Percentile	(1.60)	0.50	(0.35)
90th Percentile	(2.50)	0.44	(0.46)
Russell 1000 Index Non-Lendable ●	0.00	0.66	(0.04)

Russell 1000 Index Non-Lendable
Risk Analysis Summary

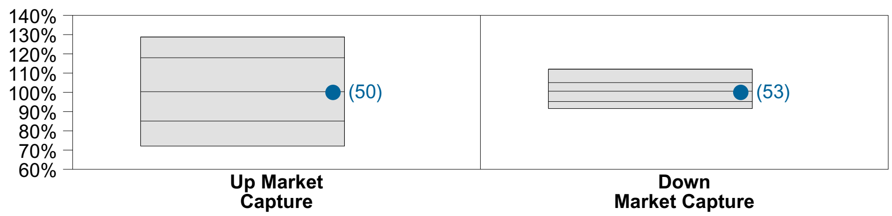
Risk Analysis

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 Large Capitalization (Gross)
Seven and One-Quarter Years Ended June 30, 2023

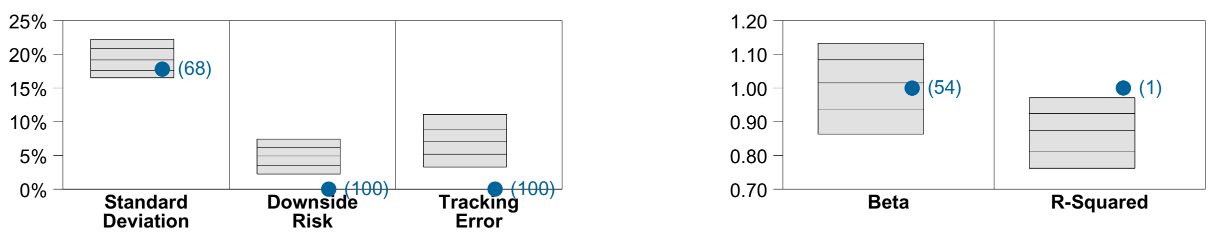


Market Capture vs Russell 1000 Index
Rankings Against Callan Large Capitalization (Gross)
Seven and One-Quarter Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	128.78	112.06
25th Percentile	117.99	105.06
Median	100.35	100.59
75th Percentile	85.09	95.23
90th Percentile	72.08	91.60
Russell 1000 Index Non-Lendable ●	99.98	99.99

Risk Statistics Rankings vs Russell 1000 Index
Rankings Against Callan Large Capitalization (Gross)
Seven and One-Quarter Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	22.22	7.43	11.10
25th Percentile	20.85	6.17	8.81
Median	19.17	4.93	7.04
75th Percentile	17.60	3.51	5.18
90th Percentile	16.52	2.25	3.29
Russell 1000 Index Non-Lendable ●	17.80	0.01	0.01

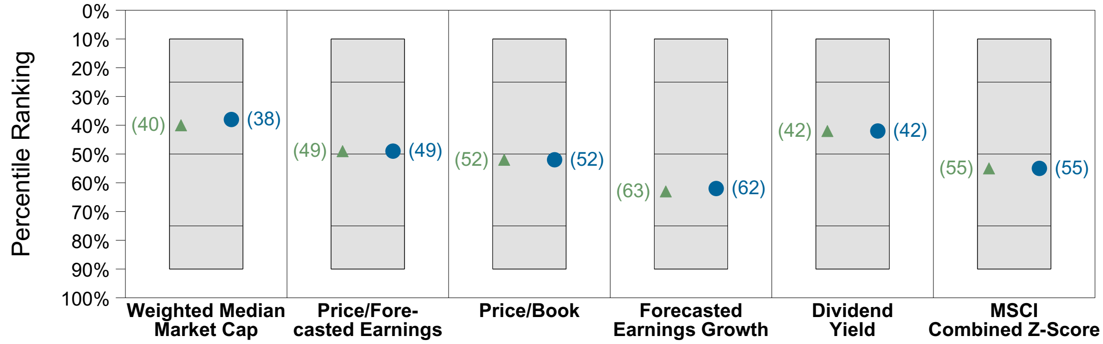
	Beta	R-Squared
10th Percentile	1.13	0.97
25th Percentile	1.08	0.92
Median	1.02	0.87
75th Percentile	0.94	0.81
90th Percentile	0.86	0.76
Russell 1000 Index Non-Lendable ●	1.00	1.00

Russell 1000 Index Non-Lendable
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 Capitalization
as of June 30, 2023

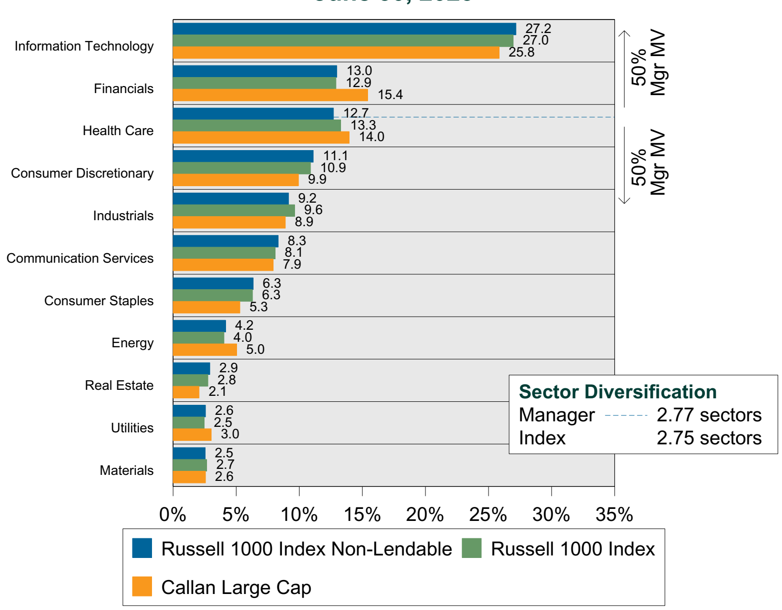


	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	383.06	30.83	8.79	15.03	2.60	0.97
25th Percentile	218.10	26.18	7.37	13.69	2.09	0.79
Median	122.22	18.75	3.99	11.39	1.34	0.10
75th Percentile	63.18	13.78	2.40	9.15	0.71	(0.76)
90th Percentile	45.50	11.57	1.96	7.37	0.51	(1.14)
Russell 1000 Index Non-Lendable ●	150.35	19.44	3.74	10.45	1.51	(0.00)
Russell 1000 Index ▲	142.65	19.48	3.76	10.35	1.51	(0.01)

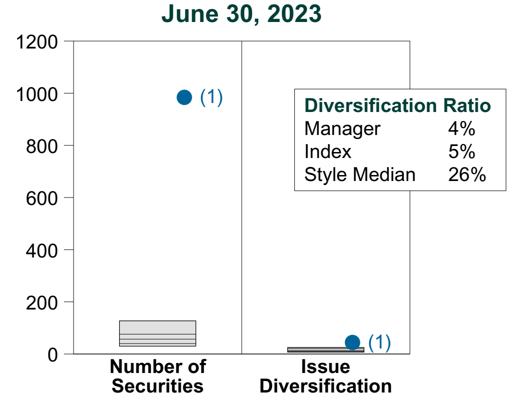
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



	Number of Securities	Issue Diversification
10th Percentile	127	25
25th Percentile	76	20
Median	57	13
75th Percentile	40	10
90th Percentile	30	7
Russell 1000 Index Non-Lendable ●	984	44
Russell 1000 Index ▲	1008	48

Russell 1000 Index Non-Lendable
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

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Carnival Corp	Consumer Discretionary	$59,022	0.0%	85.52%	21.08	38.67	0.00%	(15.72)%
Xpo Logistics Inc	Industrials	$17,441	0.0%	84.95%	6.84	21.62	0.00%	2.00%
Palantir Technologies Inc Cl A	Information Technology	$87,834	0.1%	81.42%	30.87	66.36	0.00%	73.00%
Mongodb Inc Cl A	Information Technology	$83,678	0.1%	76.30%	29.01	231.67	0.00%	-
Gs Acquisition Hldgs Corp Com Cl A	Industrials	$22,742	0.0%	73.10%	9.41	17.88	0.04%	53.98%
Applovin Corp	Information Technology	$18,407	0.0%	63.33%	7.12	55.57	0.00%	-
Norwegian Cruise Line Hldgs Shs	Consumer Discretionary	$24,241	0.0%	61.85%	9.23	18.75	0.00%	4.81%
Celsius Holdings Inc	Consumer Staples	$25,391	0.0%	60.52%	11.45	83.21	0.00%	137.75%
Royal Caribbean Cruises Ltd	Consumer Discretionary	$76,213	0.1%	58.87%	26.53	17.75	0.00%	(31.43)%

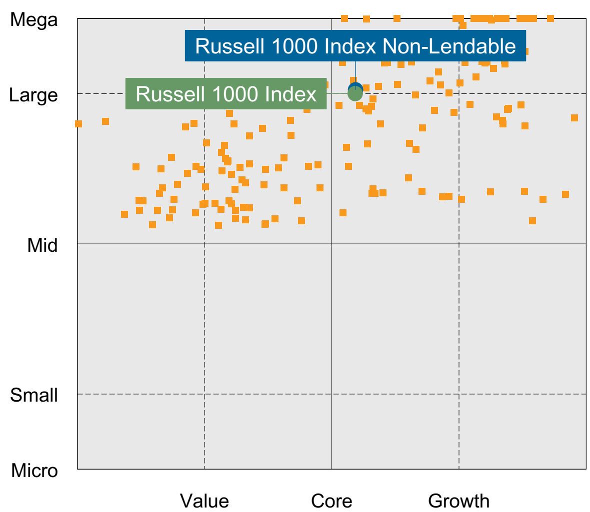
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Victorias Secret & Co Com	Consumer Discretionary	$5,171	0.0%	(48.96)%	1.34	6.36	0.00%	(12.00)%
Advance Auto Parts Inc	Consumer Discretionary	$12,317	0.0%	(41.49)%	4.18	10.95	1.42%	(1.90)%
Tandem Diabetes Care Inc	Health Care	$4,966	0.0%	(39.59)%	1.59	(19.94)	0.00%	-
First Horizon Natl Corp	Financials	$18,386	0.0%	(35.81)%	6.07	7.71	5.32%	8.22%
Ubiquiti Inc	Information Technology	$707	0.0%	(35.09)%	10.62	19.55	1.37%	20.40%
Catalent Inc	Health Care	$24,522	0.0%	(34.01)%	7.82	35.54	0.00%	7.70%
Concentrix Corp Com	Industrials	$10,895	0.0%	(33.37)%	4.20	6.72	1.36%	7.65%
Marketaxess Hldgs Inc	Financials	$29,737	0.0%	(33.03)%	9.85	32.42	1.10%	13.49%
Mercury Sys Inc	Industrials	$5,288	0.0%	(32.34)%	2.01	19.38	0.00%	(1.14)%
Peloton Interactive Inc A Common Sto	Consumer Discretionary	$7,412	0.0%	(32.19)%	2.58	(6.48)	0.00%	-

Current Holdings Based Style Analysis
Russell 1000 Index Non-Lendable
As of June 30, 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.

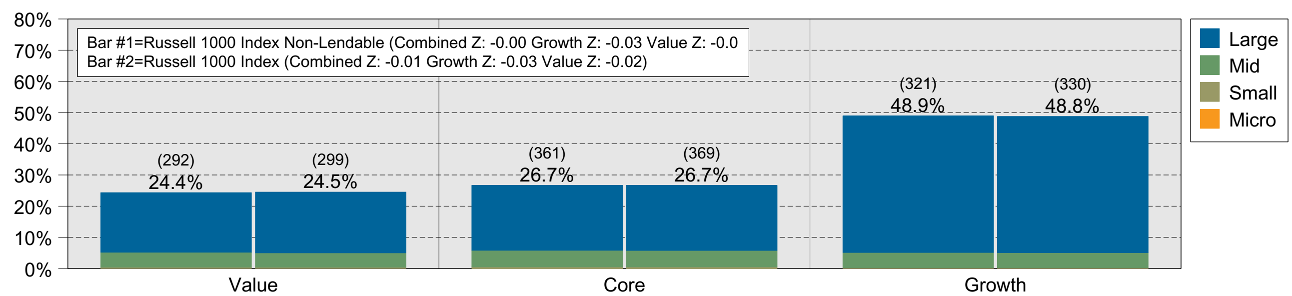
Style Map vs Callan Large Cap
Holdings as of June 30, 2023



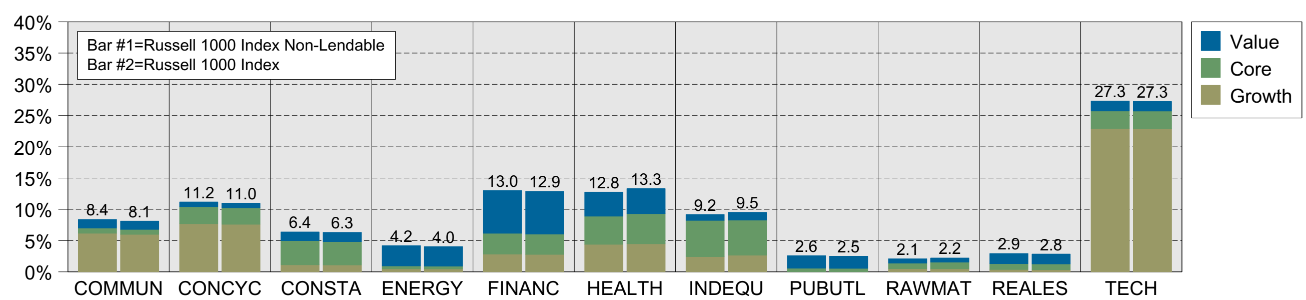
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Large	19.1% (84) 19.5% (90)	20.9% (95) 20.9% (98)	43.8% (101) 43.7% (108)	83.8% (280) 84.1% (296)
Mid	4.8% (157) 4.6% (158)	5.3% (201) 5.3% (205)	4.9% (180) 4.8% (182)	15.0% (538) 14.7% (545)
Small	0.4% (51) 0.4% (51)	0.5% (65) 0.5% (66)	0.3% (40) 0.3% (40)	1.2% (156) 1.2% (157)
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	**24.4% (292)** **24.5% (299)**	**26.7% (361)** **26.7% (369)**	**48.9% (321)** **48.8% (330)**	**100.0% (974)** **100.0% (998)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023



LSV
Period Ended June 30, 2023

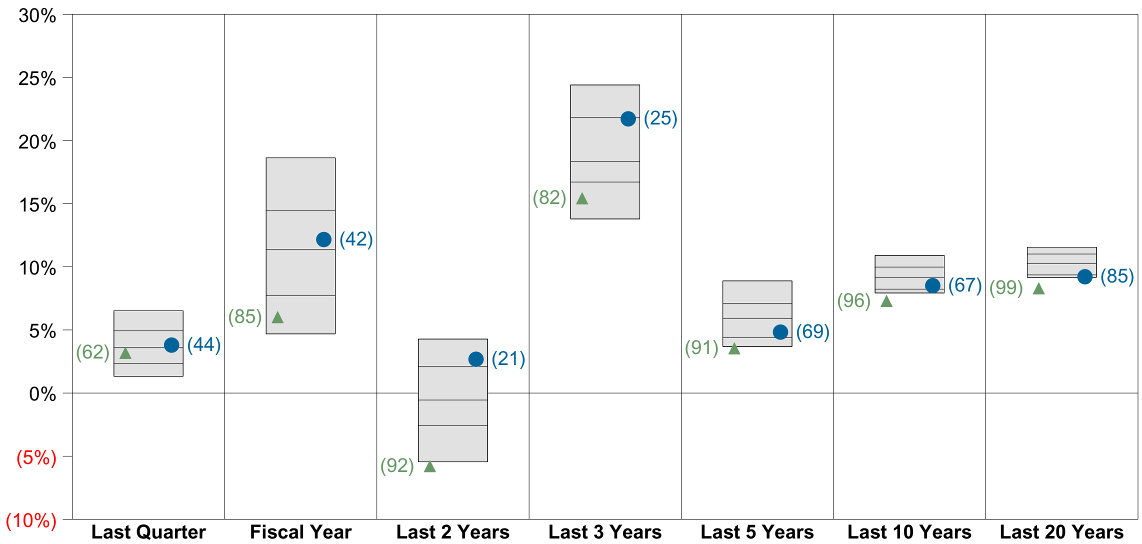
Investment Philosophy

LSV Asset Management seeks to systematically exploit the judgmental biases and behavioral weaknesses that influence the market. The strategy's primary emphasis is the use of quantative techniques to select individual securities in what would be considered a bottom-up approach.

Quarterly Summary and Highlights

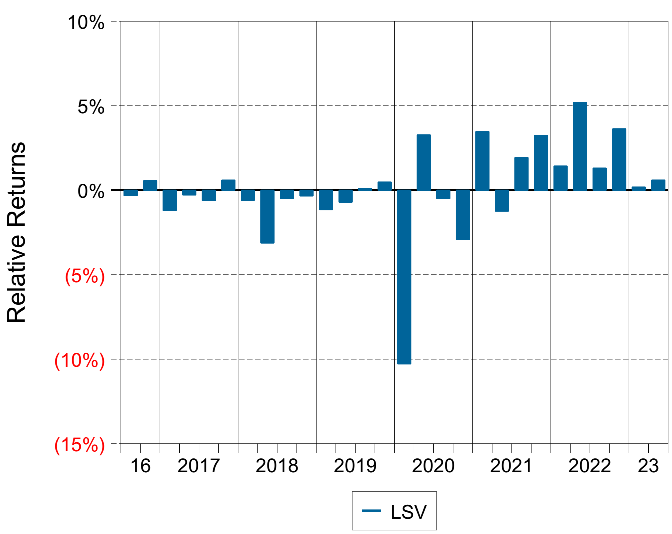
- LSV's portfolio posted a 3.80% return for the quarter placing it in the 44 percentile of the Callan Small Cap Value group for the quarter and in the 42 percentile for the last year.
- LSV's portfolio outperformed the Russell 2000 Value Index by 0.62% for the quarter and outperformed the Russell 2000 Value Index for the year by 6.15%.

Performance vs Callan Small Cap Value (Gross)

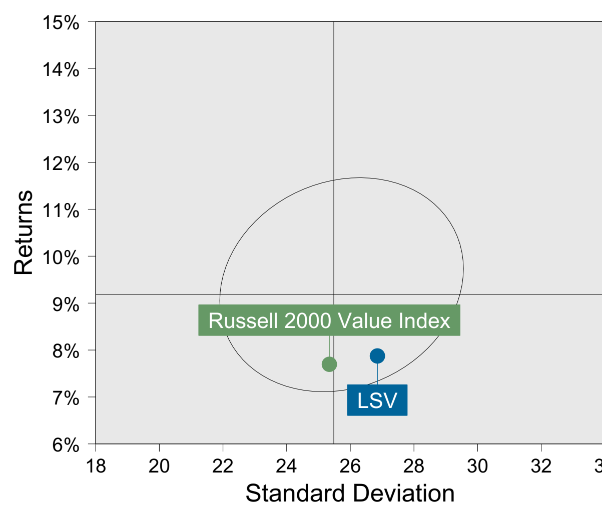


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 20 Years
10th Percentile	6.52	18.63	4.28	24.41	8.89	10.91	11.55
25th Percentile	4.93	14.48	2.12	21.84	7.11	9.98	11.01
Median	3.63	11.39	(0.55)	18.35	5.89	9.13	10.25
75th Percentile	2.35	7.71	(2.58)	16.71	4.38	8.23	9.36
90th Percentile	1.33	4.69	(5.44)	13.79	3.69	7.93	9.16
LSV ●	3.80	12.16	2.68	21.72	4.83	8.51	9.21
Russell 2000 Value Index ▲	3.18	6.01	(5.79)	15.43	3.54	7.29	8.29

Relative Return vs Russell 2000 Value Index



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

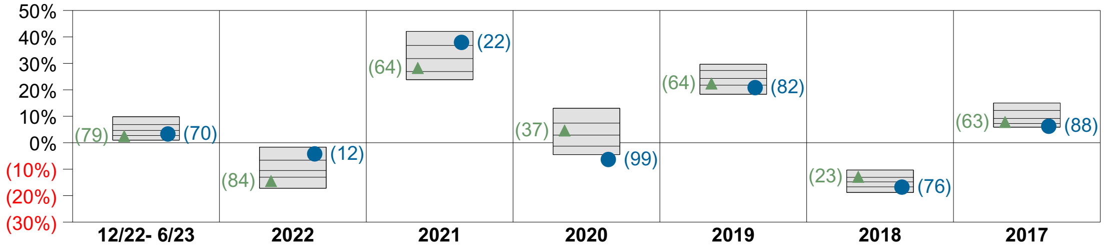


LSV
Return Analysis Summary

Return Analysis

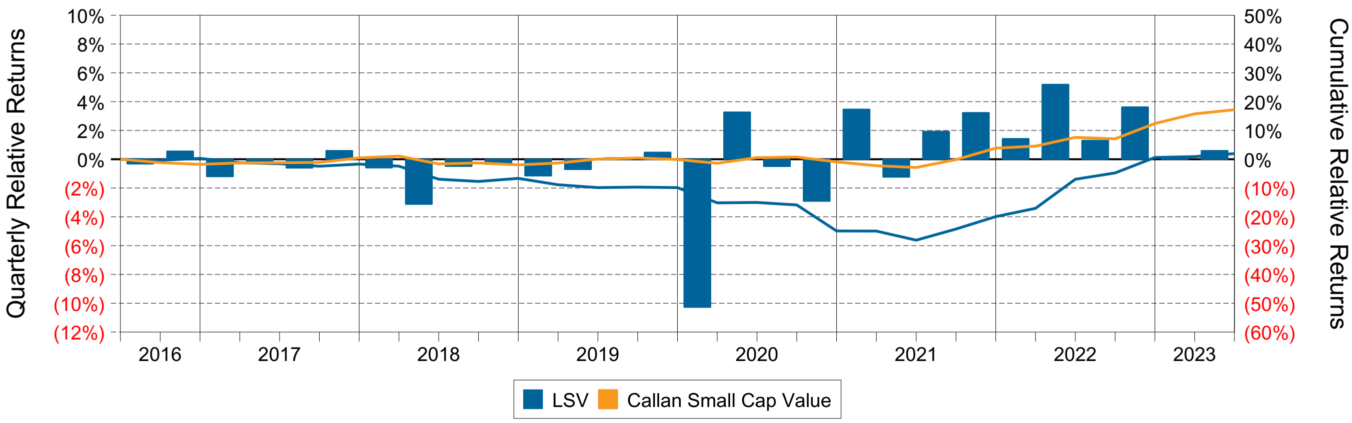
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Small Cap Value (Gross)

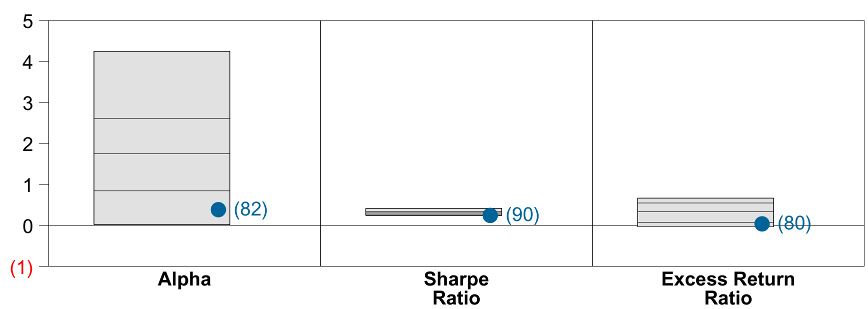


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	9.84	(1.66)	42.10	13.02	29.67	(10.31)	15.02
25th Percentile	6.86	(6.61)	36.79	7.41	27.31	(13.10)	12.21
Median	4.64	(10.51)	31.82	2.88	24.31	(14.79)	9.18
75th Percentile	2.72	(13.03)	26.90	(1.30)	21.75	(16.68)	7.28
90th Percentile	0.97	(17.21)	23.82	(4.50)	18.32	(18.80)	5.88
LSV ●	3.31	(4.21)	37.93	(6.34)	20.83	(16.78)	6.23
Russell 2000 Value Index ▲	2.50	(14.48)	28.27	4.63	22.39	(12.86)	7.84

Cumulative and Quarterly Relative Returns vs Russell 2000 Value Index



Risk Adjusted Return Measures vs Russell 2000 Value Index
Rankings Against Callan Small Cap Value (Gross)
Seven Years Ended June 30, 2023



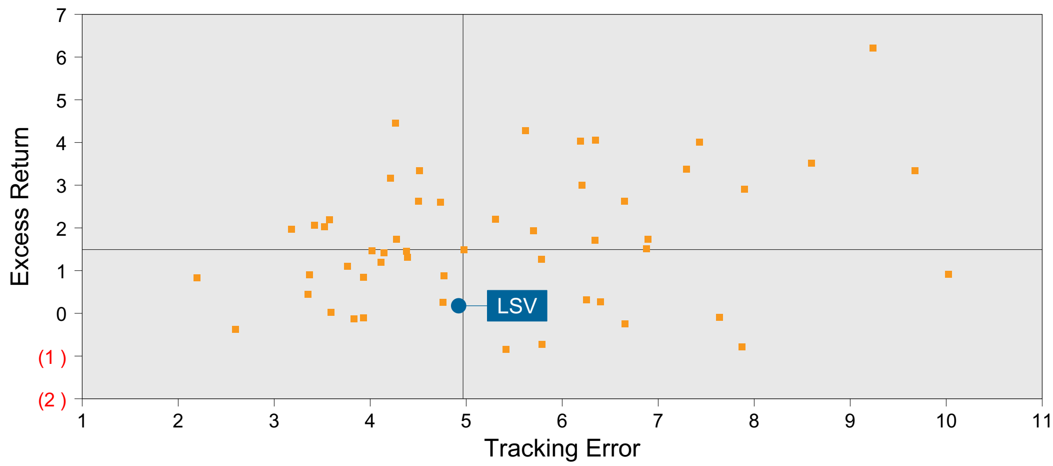
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	4.25	0.41	0.66
25th Percentile	2.61	0.34	0.55
Median	1.75	0.30	0.33
75th Percentile	0.84	0.27	0.07
90th Percentile	0.02	0.24	(0.03)
LSV ●	0.38	0.24	0.04

LSV
Risk Analysis Summary

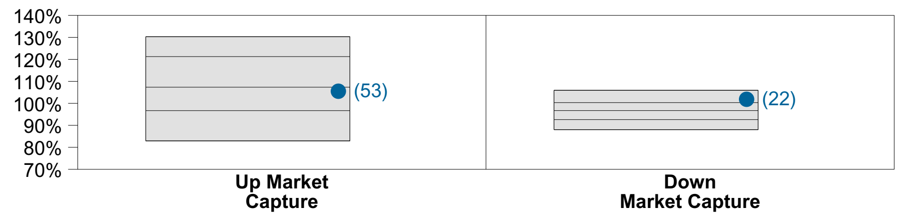
Risk Analysis

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 Value (Gross)
Seven Years Ended June 30, 2023

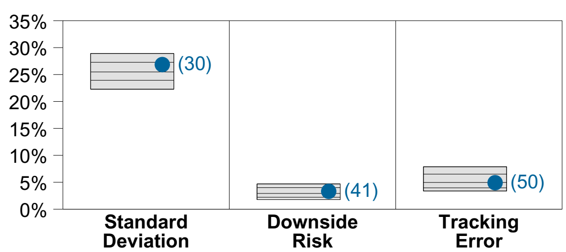


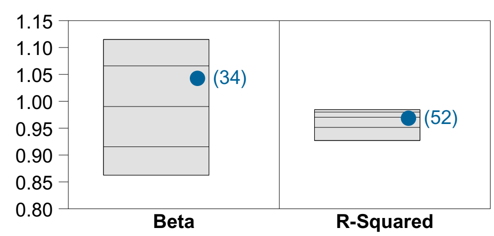
Market Capture vs Russell 2000 Value Index
Rankings Against Callan Small Cap Value (Gross)
Seven Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	130.30	105.93
25th Percentile	121.26	100.34
Median	107.34	96.72
75th Percentile	96.68	92.61
90th Percentile	82.93	88.03
LSV ●	105.52	101.85

Risk Statistics Rankings vs Russell 2000 Value Index
Rankings Against Callan Small Cap Value (Gross)
Seven Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	28.91	4.70	7.88
25th Percentile	27.28	4.01	6.51
Median	25.48	2.93	4.97
75th Percentile	23.93	2.22	3.97
90th Percentile	22.28	1.78	3.38
LSV ●	26.85	3.32	4.92

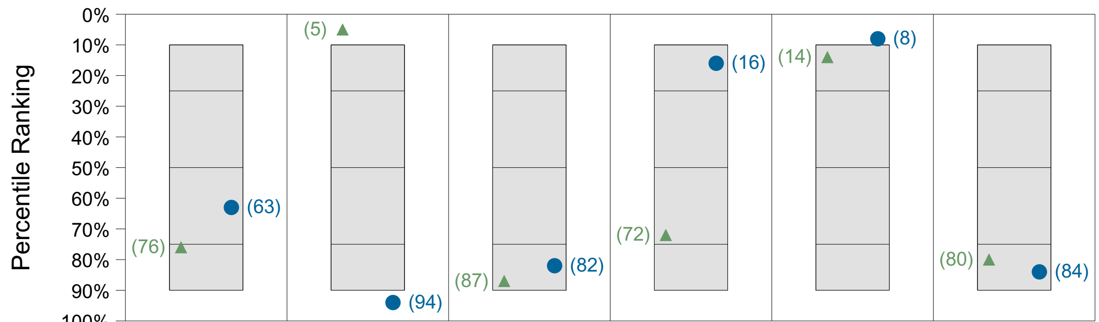
	Beta	R-Squared
10th Percentile	1.12	0.98
25th Percentile	1.07	0.98
Median	0.99	0.97
75th Percentile	0.92	0.95
90th Percentile	0.86	0.93
LSV ●	1.04	0.97

LSV
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 Value
as of June 30, 2023

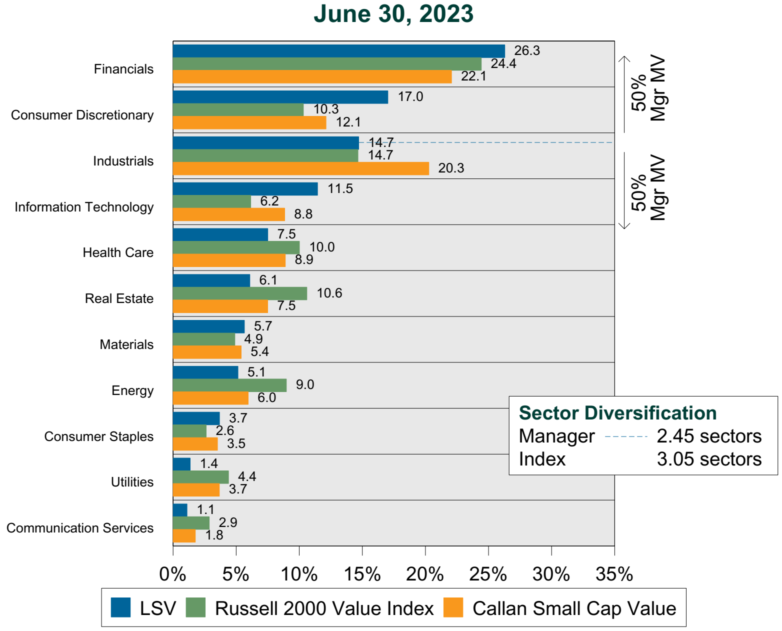


		Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile		3.92	14.43	1.73	18.95	2.51	(0.37)
25th Percentile		3.44	13.24	1.65	15.83	2.02	(0.44)
Median		2.56	12.45	1.49	14.34	1.85	(0.57)
75th Percentile		2.09	11.11	1.31	10.72	1.60	(0.68)
90th Percentile		1.47	9.82	1.09	9.09	1.48	(0.87)
LSV	●	2.45	9.29	1.27	16.55	2.73	(0.84)
Russell 2000 Value Index	▲	2.00	15.76	1.18	11.38	2.34	(0.78)

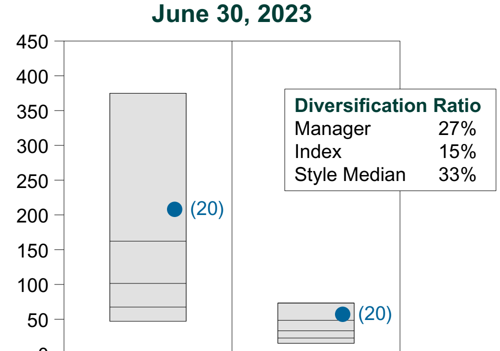
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



		Number of Securities	Issue Diversification
10th Percentile		375	73
25th Percentile		162	48
Median		102	33
75th Percentile		68	23
90th Percentile		47	15
LSV	●	208	57
Russell 2000 Value Index	▲	1457	217

LSV
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Atkore Intl Group Inc	Industrials	$343,068	1.5%	11.01%	6.07	9.26	0.00%	66.19%
Modine Mfg Co	Consumer Discretionary	$336,804	1.5%	43.25%	1.72	13.16	0.00%	4.40%
Bel Fuse Inc Cl B	Information Technology	$275,568	1.2%	53.07%	0.61	11.38	0.49%	25.26%
Cno Finl Group Inc	Financials	$274,572	1.2%	7.35%	2.71	8.15	2.53%	8.54%
Pdc Energy Inc	Energy	$270,332	1.2%	11.46%	6.19	4.97	2.25%	114.11%
Greif Inc Cl A	Materials	$268,671	1.2%	9.49%	1.75	12.00	2.90%	18.25%
Amkor Technology Inc	Information Technology	$267,750	1.2%	14.67%	7.31	13.17	1.01%	(10.22)%
Avnet Inc	Information Technology	$262,340	1.2%	12.34%	4.61	8.90	2.30%	20.91%
National Fuel Gas Co N J	Utilities	$261,936	1.2%	(10.19)%	4.72	9.40	3.86%	9.70%
Moog Inc Cl A	Industrials	$260,232	1.2%	7.94%	3.11	17.16	1.00%	2.87%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Super Micro Computer Inc	Information Technology	$249,250	1.1%	133.93%	13.08	23.01	0.00%	49.36%
Photronics	Information Technology	$43,843	0.2%	55.55%	1.61	12.03	0.00%	36.07%
Amphastar Pharmaceuticals In	Health Care	$45,976	0.2%	53.25%	2.77	22.41	0.00%	66.88%
Builders Firstsource Inc	Industrials	$108,800	0.5%	53.19%	17.43	14.29	0.00%	79.74%
Bel Fuse Inc Cl B	Information Technology	$275,568	1.2%	53.07%	0.61	11.38	0.49%	25.26%
Aaron’s Co Inc	Consumer Discretionary	$35,350	0.2%	47.78%	0.44	10.65	3.54%	-
Modine Mfg Co	Consumer Discretionary	$336,804	1.5%	43.25%	1.72	13.16	0.00%	4.40%
Uniti Group Inc	Real Estate	$37,792	0.2%	34.47%	1.10	12.76	12.99%	17.40%
Toll Brothers	Consumer Discretionary	$221,396	1.0%	32.19%	8.65	7.76	1.06%	26.89%
Amn Healthcare Services Inc	Health Care	$98,208	0.4%	31.53%	4.33	13.28	0.00%	38.39%

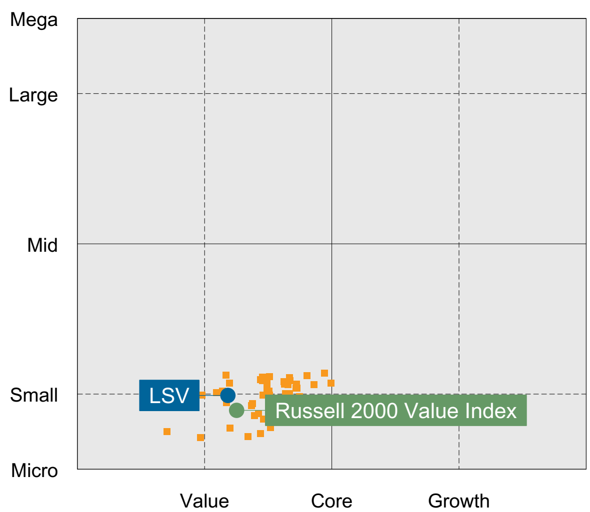
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Homestreet Inc	Financials	$14,208	0.1%	(66.56)%	0.11	6.39	6.76%	28.50%
Office Pptys Income Tr Com Shs Ben I	Real Estate	$14,615	0.1%	(35.15)%	0.37	(19.01)	12.99%	(8.10)%
Amc Networks Inc Cl A	Communication Services	$27,485	0.1%	(32.03)%	0.38	1.77	0.00%	0.54%
Eagle Pharmaceuticals Inc	Health Care	$50,544	0.2%	(31.48)%	0.25	5.10	0.00%	12.60%
Foot Locker Inc	Consumer Discretionary	$43,376	0.2%	(31.01)%	2.55	11.15	5.90%	(6.94)%
Cirrus Logic Inc	Information Technology	$81,010	0.4%	(25.94)%	4.43	14.89	0.00%	1.20%
Tredegar Corp	Materials	$22,011	0.1%	(25.41)%	0.23	(59.03)	7.80%	-
Ugi Corp New	Utilities	$124,062	0.6%	(21.36)%	5.65	8.66	5.56%	5.75%
Meridian Corporation	Financials	$81,889	0.4%	(21.15)%	0.11	6.11	5.10%	38.94%
Premier Financial Corp	Financials	$66,050	0.3%	(21.05)%	0.57	7.02	7.74%	6.20%

Current Holdings Based Style Analysis
LSV
As of June 30, 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.

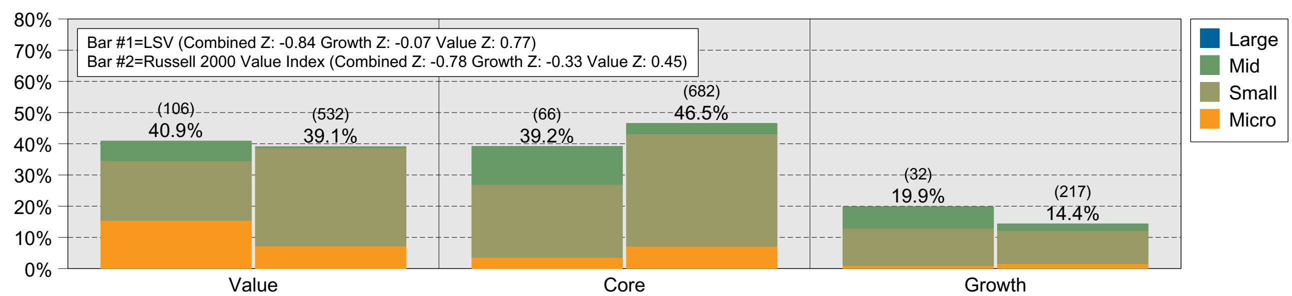
Style Map vs Callan Small Cap Value
Holdings as of June 30, 2023



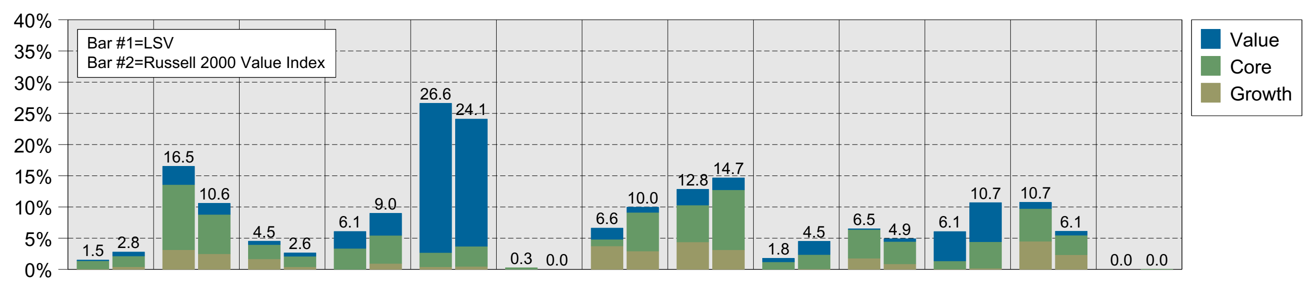
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	**Total**
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	**0.0% (0)** **0.0% (0)**
Mid	6.4% (10) 0.4% (1)	12.2% (19) 3.4% (9)	7.0% (8) 2.2% (8)	**25.6% (37)** **5.9% (18)**
Small	19.1% (43) 31.5% (233)	23.5% (37) 36.1% (333)	12.0% (21) 10.6% (129)	**54.6% (101)** **78.1% (695)**
Micro	15.4% (53) 7.2% (298)	3.5% (10) 7.1% (340)	0.9% (3) 1.6% (80)	**19.9% (66)** **15.9% (718)**
Total	**40.9% (106)** **39.1% (532)**	**39.2% (66)** **46.5% (682)**	**19.9% (32)** **14.4% (217)**	**100.0% (204)** **100.0% (1431)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023



Principal Dynamic Growth
Period Ended June 30, 2023

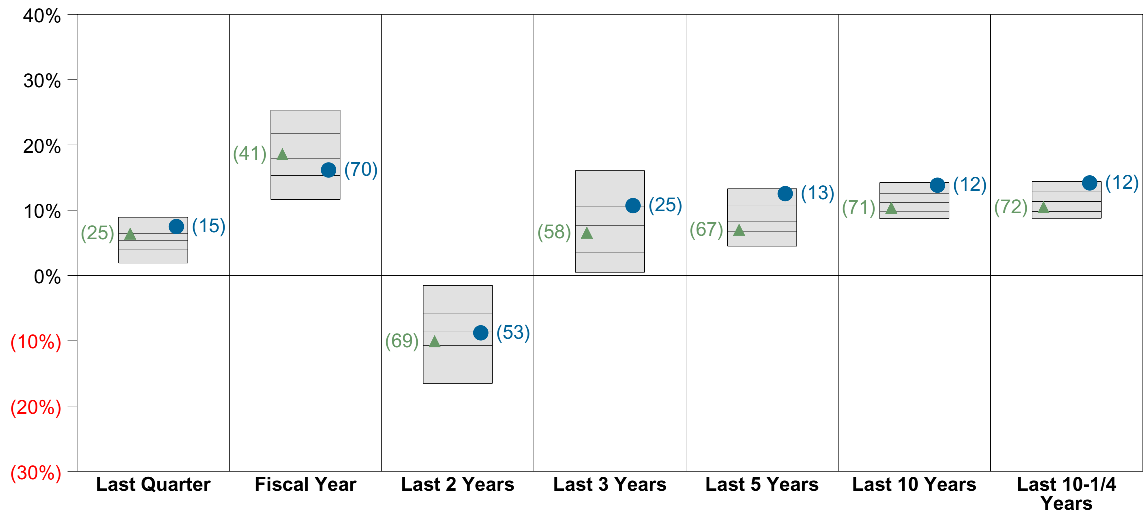
Investment Philosophy

The investment philosophy of Columbus Circle Investors (CCI) is based on the premise that companies doing better than expected will have rising securities prices, while companies producing less than expected results will not. They refer to their discipline as Positive Momentum & Positive Surprise. Analysis of company's fundamentals in the context of the prevailing economic environment allows CCI to measure and select companies based on the criteria of this discipline.

Quarterly Summary and Highlights

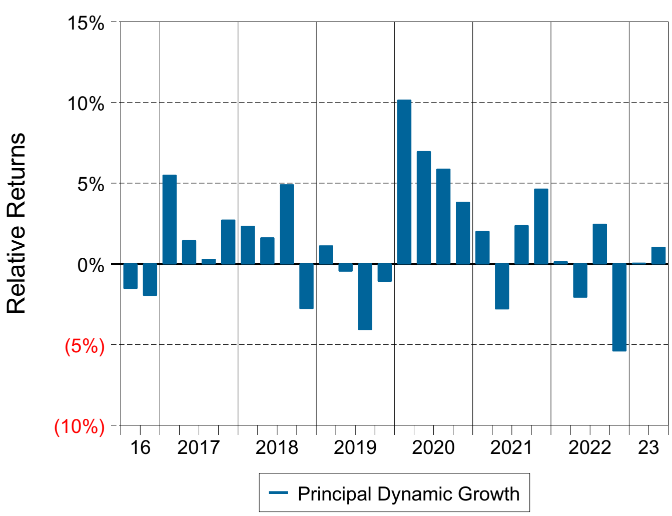
- Principal Dynamic Growth's portfolio posted a 7.50% return for the quarter placing it in the 15 percentile of the Callan Small/MidCap Growth group for the quarter and in the 70 percentile for the last year.
- Principal Dynamic Growth's portfolio outperformed the Russell 2500 Growth Index by 1.09% for the quarter and underperformed the Russell 2500 Growth Index for the year by 2.42%.

Performance vs Callan Small/MidCap Growth (Gross)

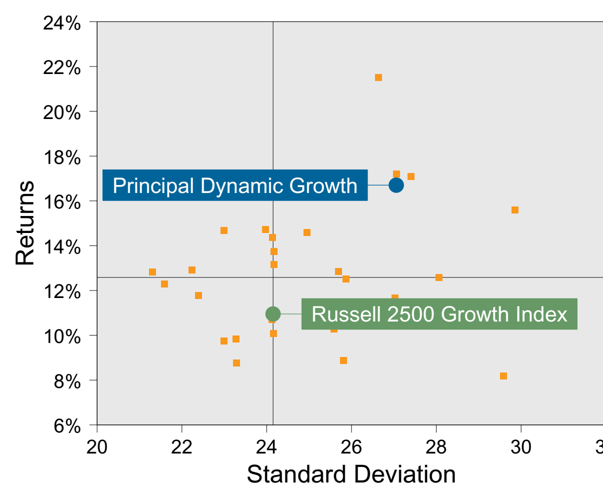


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 10-1/4 Years
10th Percentile	8.94	25.34	(1.51)	16.05	13.28	14.23	14.39
25th Percentile	6.40	21.72	(5.88)	10.63	10.65	12.53	12.80
Median	5.33	17.89	(8.50)	7.63	8.22	11.20	11.34
75th Percentile	4.04	15.31	(10.74)	3.58	6.70	9.84	9.79
90th Percentile	1.91	11.64	(16.51)	0.51	4.51	8.70	8.77
Principal Dynamic Growth ●	7.50	16.17	(8.78)	10.71	12.54	13.83	14.18
Russell 2500 Growth Index ▲	6.41	18.58	(10.07)	6.56	7.00	10.38	10.46

Relative Return vs Russell 2500 Growth Index



Callan Small/MidCap Growth (Gross) Annualized Seven Year Risk vs Return

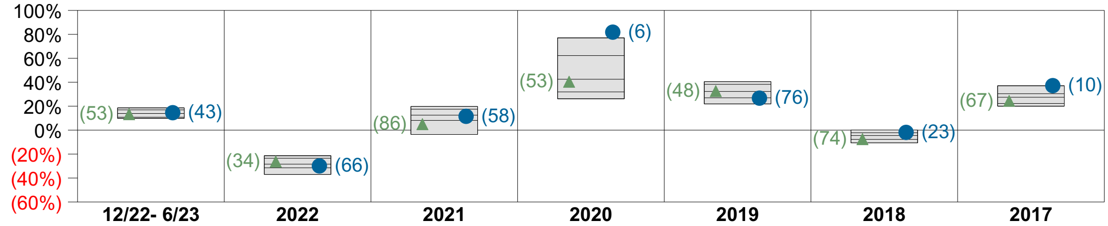


Principal Dynamic Growth
Return Analysis Summary

Return Analysis

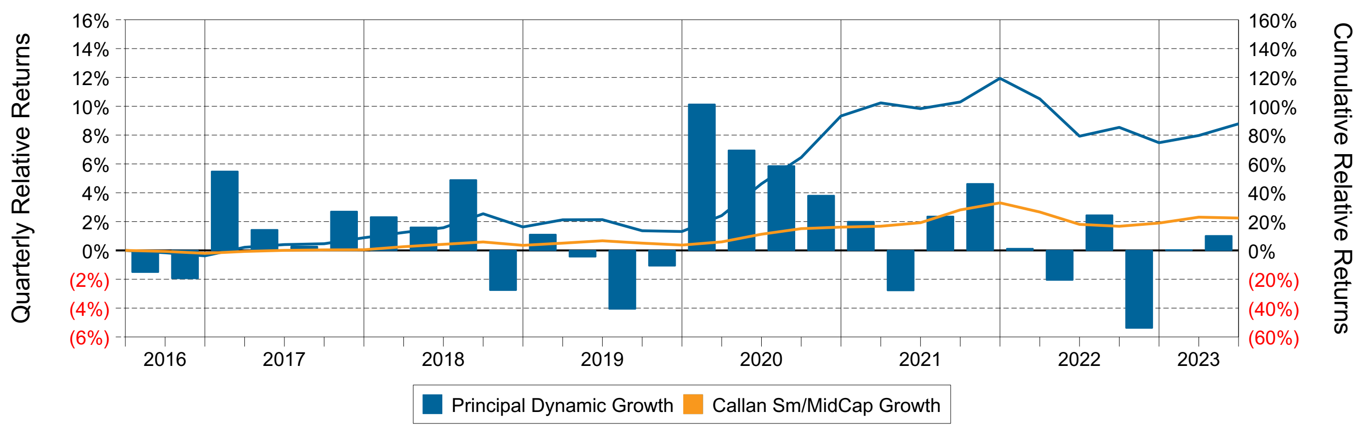
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

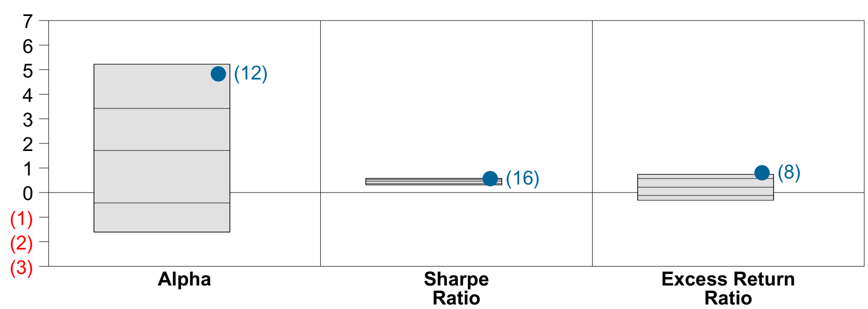


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	18.63	(21.33)	19.80	77.07	40.53	0.15	37.09
25th Percentile	16.96	(23.47)	17.49	62.26	38.24	(2.12)	30.44
Median	13.91	(28.40)	12.52	42.51	32.31	(4.49)	27.46
75th Percentile	10.80	(31.44)	8.13	31.96	27.02	(7.68)	22.26
90th Percentile	9.85	(36.99)	(3.59)	26.20	21.88	(10.62)	20.01
Principal Dynamic Growth ●	14.59	(29.86)	11.56	81.85	26.73	(1.87)	37.17
Russell 2500 Growth Index ▲	13.38	(26.21)	5.04	40.47	32.65	(7.47)	24.46

Cumulative and Quarterly Relative Returns vs Russell 2500 Growth Index



Risk Adjusted Return Measures vs Russell 2500 Growth Index
Rankings Against Callan Small/MidCap Growth (Gross)
Seven Years Ended June 30, 2023



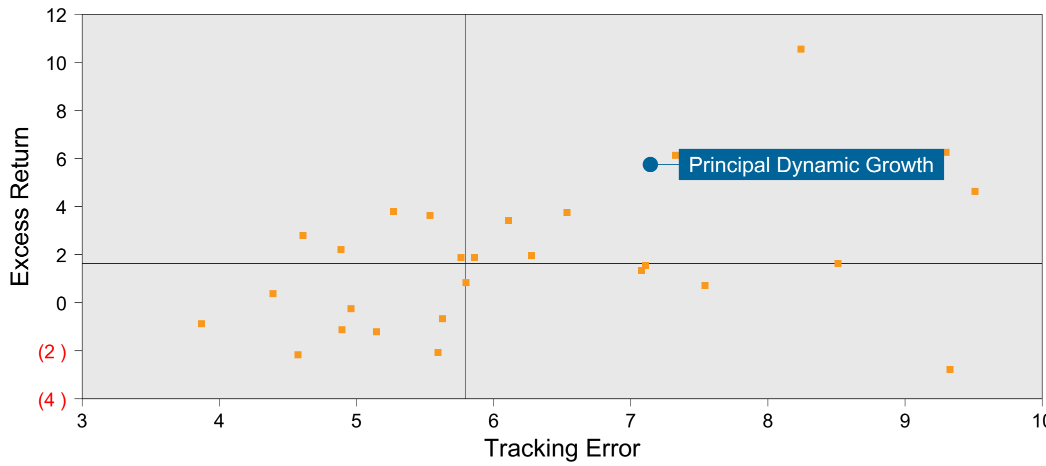
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	5.22	0.58	0.74
25th Percentile	3.42	0.54	0.57
Median	1.71	0.47	0.22
75th Percentile	(0.42)	0.36	(0.12)
90th Percentile	(1.61)	0.31	(0.31)
Principal Dynamic Growth ●	4.83	0.57	0.80

Principal Dynamic Growth
Risk Analysis Summary

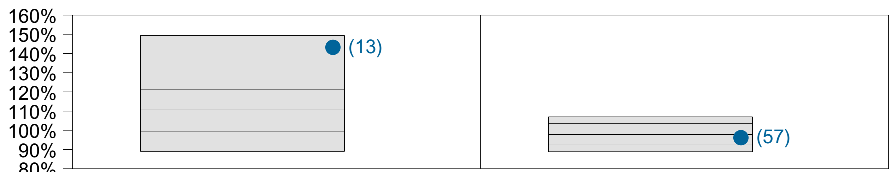
Risk Analysis

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 Growth (Gross)
Seven Years Ended June 30, 2023

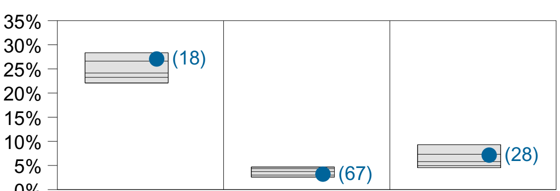


Market Capture vs Russell 2500 Growth Index
Rankings Against Callan Small/MidCap Growth (Gross)
Seven Years Ended June 30, 2023

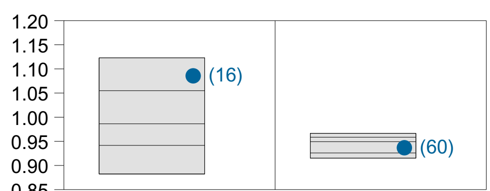


	Up Market Capture	Down Market Capture
10th Percentile	149.31	106.98
25th Percentile	121.38	103.49
Median	110.58	97.80
75th Percentile	99.20	92.34
90th Percentile	89.06	88.79
Principal Dynamic Growth ●	143.21	96.16

Risk Statistics Rankings vs Russell 2500 Growth Index
Rankings Against Callan Small/MidCap Growth (Gross)
Seven Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	28.34	4.68	9.30
25th Percentile	26.61	4.35	7.32
Median	24.15	3.73	5.79
75th Percentile	23.25	3.01	4.95
90th Percentile	22.08	2.58	4.53
Principal Dynamic Growth ●	27.06	3.21	7.14



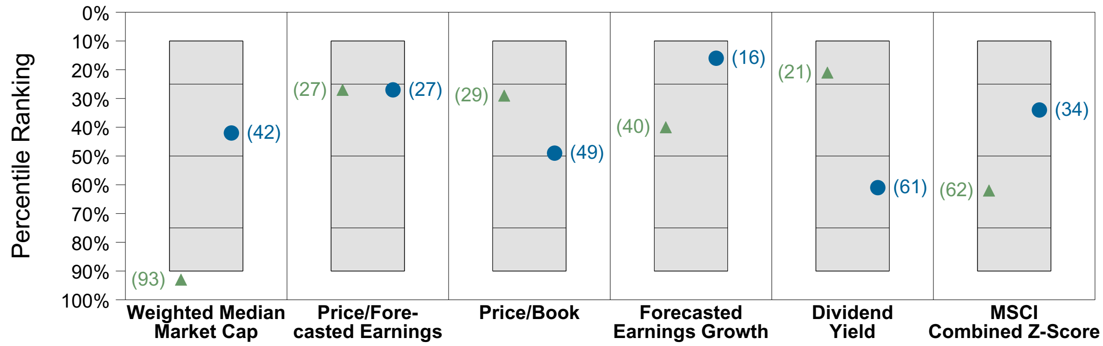
	Beta	R-Squared
10th Percentile	1.12	0.97
25th Percentile	1.05	0.96
Median	0.99	0.95
75th Percentile	0.94	0.93
90th Percentile	0.88	0.92
Principal Dynamic Growth ●	1.09	0.94

Principal Dynamic Growth
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 Growth
as of June 30, 2023

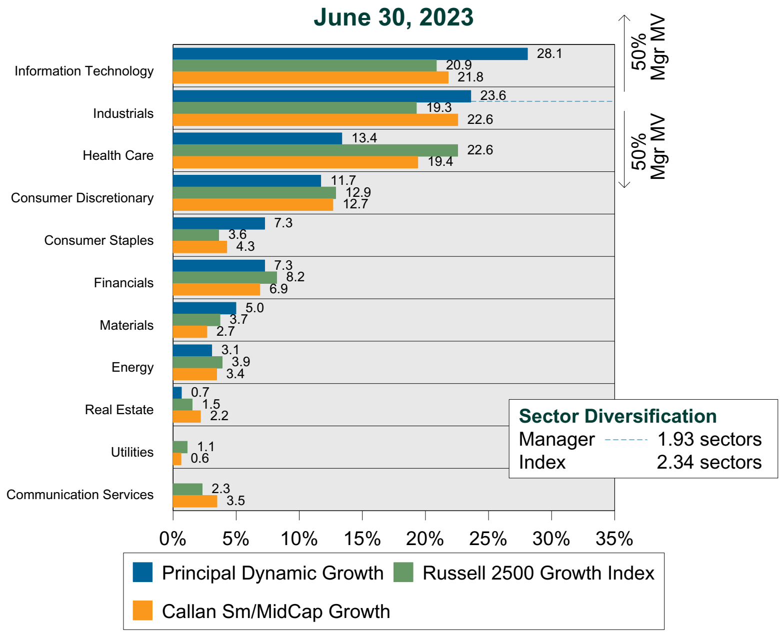


	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	12.38	44.36	4.97	23.52	0.82	0.78
25th Percentile	10.22	34.58	4.84	20.85	0.57	0.75
Median	8.27	27.63	4.06	18.00	0.41	0.66
75th Percentile	7.09	24.14	3.78	15.91	0.30	0.50
90th Percentile	5.50	21.35	3.24	13.17	0.23	0.36
Principal Dynamic Growth ●	8.67	31.66	4.11	22.58	0.36	0.72
Russell 2500 Growth Index ▲	4.69	31.02	4.74	19.28	0.63	0.61

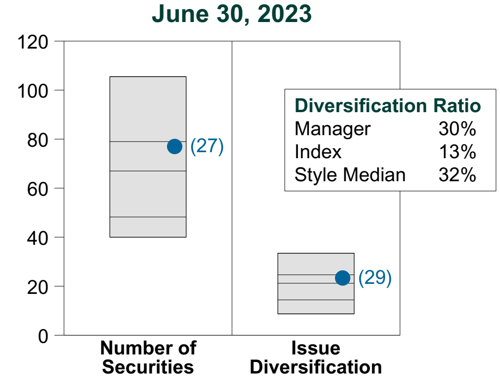
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



	Number of Securities	Issue Diversification
10th Percentile	106	33
25th Percentile	79	25
Median	67	21
75th Percentile	48	14
90th Percentile	40	9
Principal Dynamic Growth ●	77	23
Russell 2500 Growth Index ▲	1280	160

Principal Dynamic Growth
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Quanta Services Common	Industrials	$771,059	3.4%	18.00%	28.52	25.63	0.16%	15.29%
Inspire Med Sys Inc	Health Care	$705,027	3.1%	38.69%	9.47	(418.35)	0.00%	-
Celsius Holdings Inc	Consumer Staples	$575,900	2.6%	60.52%	11.45	83.21	0.00%	137.75%
Rambus Inc Del	Information Technology	$560,619	2.5%	25.19%	6.98	33.04	0.00%	11.74%
Doubleverify Holdings Inc	Information Technology	$517,998	2.3%	29.09%	6.47	94.01	0.00%	72.30%
Martin Marietta Matls Inc	Materials	$517,355	2.3%	30.25%	28.61	26.81	0.57%	19.20%
Monolithic Pwr Sys Inc	Information Technology	$512,863	2.3%	8.13%	25.62	41.95	0.74%	25.00%
Exact Sciences Corp	Health Care	$510,525	2.3%	38.47%	16.94	(59.32)	0.00%	-
Azek Co Inc	Industrials	$508,890	2.3%	28.69%	4.57	36.72	0.00%	4.09%
Howmet Aerospace Inc	Industrials	$508,468	2.3%	17.08%	20.48	26.08	0.32%	16.80%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Xpo Logistics Inc	Industrials	$173,338	0.8%	84.95%	6.84	21.62	0.00%	2.00%
Gs Acquisition Hldgs Corp Com Cl A	Industrials	$268,771	1.2%	73.10%	9.41	17.88	0.04%	53.98%
Applovin Corp	Information Technology	$327,054	1.5%	63.33%	7.12	55.57	0.00%	-
Celsius Holdings Inc	Consumer Staples	$575,900	2.6%	60.52%	11.45	83.21	0.00%	137.75%
Confluent Inc	Information Technology	$253,744	1.1%	46.68%	6.63	(4413.75)	0.00%	-
Pure Storage Inc Cl A	Information Technology	$168,494	0.8%	44.33%	11.32	24.58	0.00%	30.24%
Glaukos Corp	Health Care	$233,549	1.0%	42.14%	3.43	(34.75)	0.00%	-
Prothena Corp Plc Shs	Health Care	$175,008	0.8%	40.87%	3.60	(16.53)	0.00%	-
Samsara A	Information Technology	$174,765	0.8%	40.52%	4.66	9236.67	0.00%	-
Shake Shack Inc Cl A	Consumer Discretionary	$369,480	1.6%	40.06%	3.06	358.16	0.00%	(42.47)%

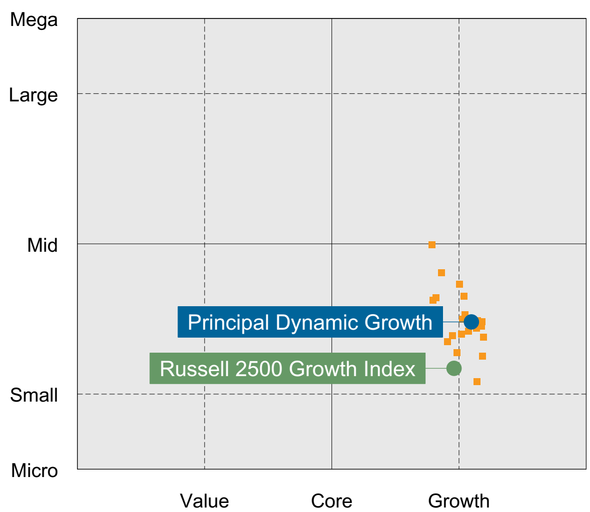
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Academy Sports & Outdoors In	Consumer Discretionary	$96,192	0.4%	(17.02)%	4.13	7.41	0.67%	15.27%
First Solar Inc	Information Technology	$182,094	0.8%	(12.60)%	20.31	18.98	0.00%	0.32%
Natera Inc	Health Care	$212,799	0.9%	(12.36)%	5.56	(14.18)	0.00%	-
Globant S A	Information Technology	$104,793	0.5%	(10.80)%	7.63	28.33	0.00%	29.18%
Universal Display Corp	Information Technology	$141,784	0.6%	(6.86)%	6.82	33.57	0.97%	12.16%
Evolent Health Inc Cl A	Health Care	$154,242	0.7%	(6.63)%	3.41	38.45	0.00%	-
Bruker Corp	Health Care	$220,789	1.0%	(6.17)%	10.85	26.97	0.27%	24.40%
Allegro Microsystems Inc	Information Technology	$193,079	0.9%	(5.94)%	8.68	30.38	0.00%	18.00%
Twilio Inc Cl A	Information Technology	$208,320	0.9%	(4.52)%	11.09	38.75	0.00%	38.71%
Wex Inc	Financials	$156,477	0.7%	(0.99)%	7.80	12.12	0.00%	7.30%

Current Holdings Based Style Analysis
Principal Dynamic Growth
As of June 30, 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.

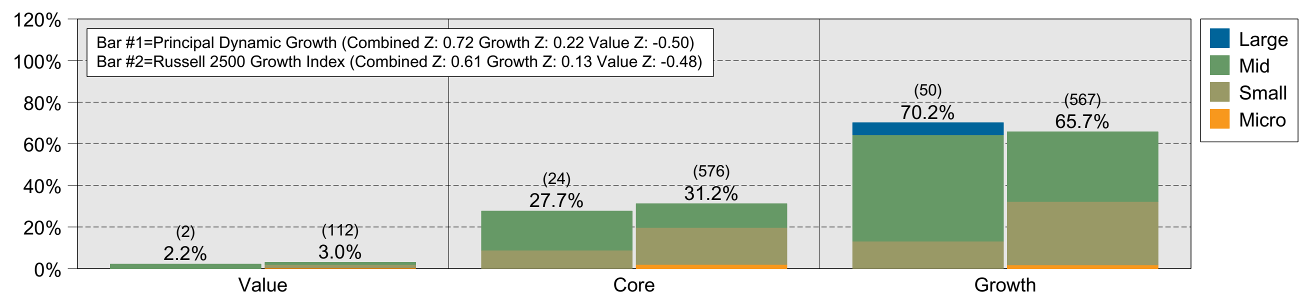
Style Map vs Callan Sm/MidCap Growth
Holdings as of June 30, 2023



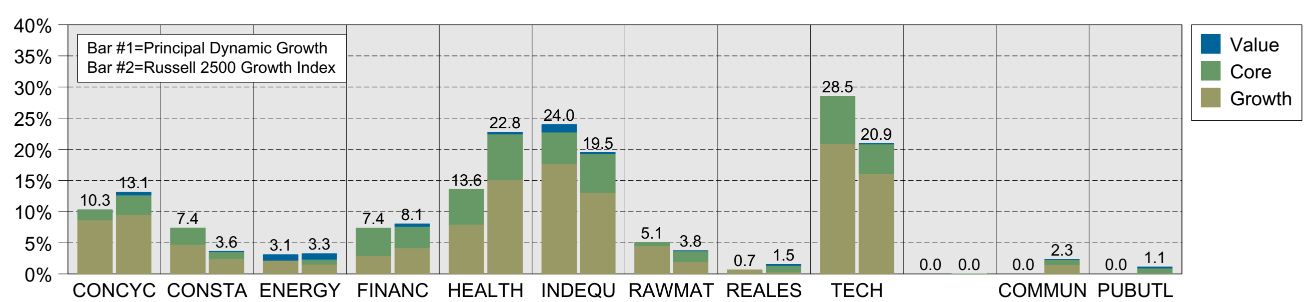
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Large	0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0)	5.9% (2) 0.0% (0)	**5.9% (2)** **0.0% (0)**
Mid	2.2% (2) 1.1% (5)	18.8% (15) 11.5% (57)	51.2% (36) 33.5% (121)	**72.2% (53)** **46.2% (183)**
Small	0.0% (0) 1.5% (49)	8.8% (9) 17.8% (311)	13.1% (12) 30.5% (324)	**22.0% (21)** **49.8% (684)**
Micro	0.0% (0) 0.4% (58)	0.0% (0) 1.9% (208)	0.0% (0) 1.8% (122)	**0.0% (0)** **4.1% (388)**
Total	**2.2% (2)** **3.0% (112)**	**27.7% (24)** **31.2% (576)**	**70.2% (50)** **65.7% (567)**	**100.0% (76)** **100.0% (1255)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023

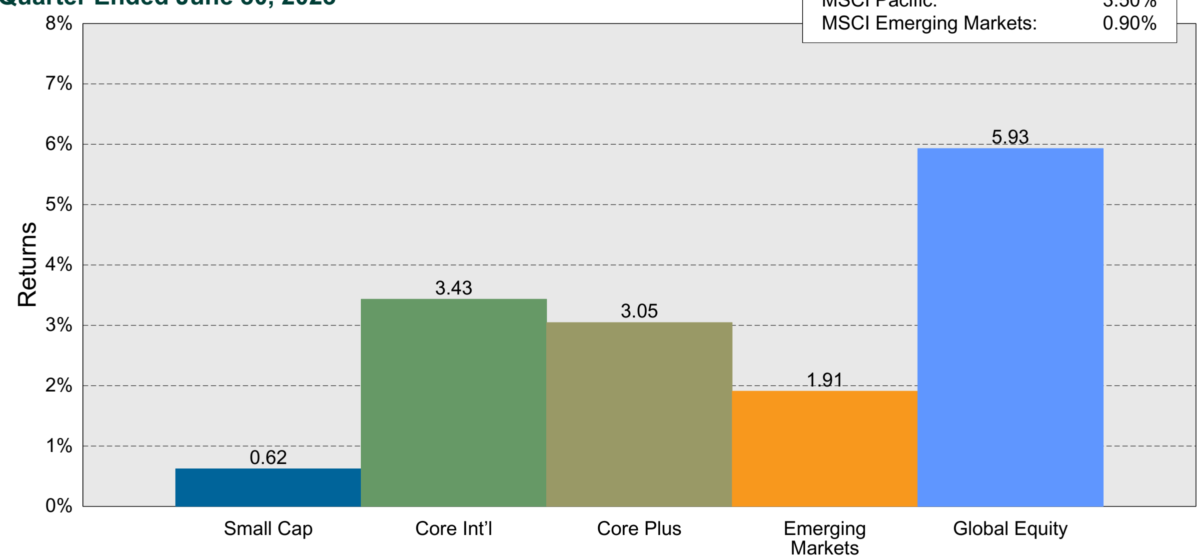


International Equity
Active Management Overview

Global ex-U.S. equity markets trailed U.S. equity markets given lower technology exposure. Lacking the U.S. markets exuberance for any company associated with Artificial Intelligence, style impacts in developed ex-U.S. equity were more muted with value (MSCI World ex USA Value: +3.1%) in line with growth (MSCI World ex USA Growth: +3.0%). Illustratively, Industrials (EAFE Industrials: +6.4%) outperformed Technology (EAFE Technology: +5.9%). Japan (+6.4%) was a top performer and the Nikkei 225 Index hit its highest level since 1990. Japan benefited from strong inflows from foreign investors, expectations for corporate governance reform and an improved outlook for the Japanese economy. The yen sank 8% versus the U.S. dollar as monetary policy was kept ultra-loose, but the dollar fell versus the British pound (+2.8%) and the euro (+0.4%).^L^LEmerging market equity underperformed developed market equity, but results varied widely. Emerging Europe (+11.2%) and Latin America (+14.0%) posted double-digit results while Emerging Asia (-0.8%) was hurt by poor performance from China (-9.7%) offsetting results from India (+12.2%). Poland (+24.5%) boosted the performance of Emerging Europe while Turkey (-10.7%) weighed on the regions results. In Latin America, Brazil (+20.7%) and Colombia (+11.7%) were top performers.

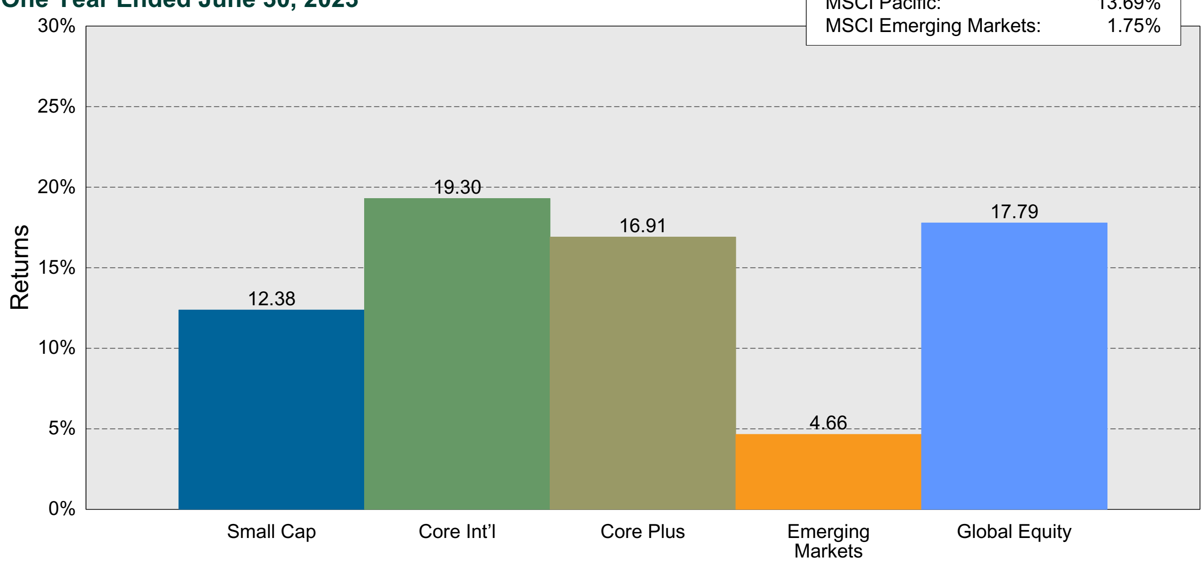
MSCI AC World Index	6.35%
MSCI ACW ex US Free:	2.44%
MSCI EAFE:	2.95%
MSCI Europe:	2.74%
MSCI Pacific:	3.50%
MSCI Emerging Markets:	0.90%

Separate Account Style Group Median Returns for Quarter Ended June 30, 2023



MSCI AC World Index	17.13%
MSCI ACW ex US Free:	12.72%
MSCI EAFE:	18.77%
MSCI Europe:	21.81%
MSCI Pacific:	13.69%
MSCI Emerging Markets:	1.75%

Separate Account Style Group Median Returns for One Year Ended June 30, 2023



International Equity
Period Ended June 30, 2023

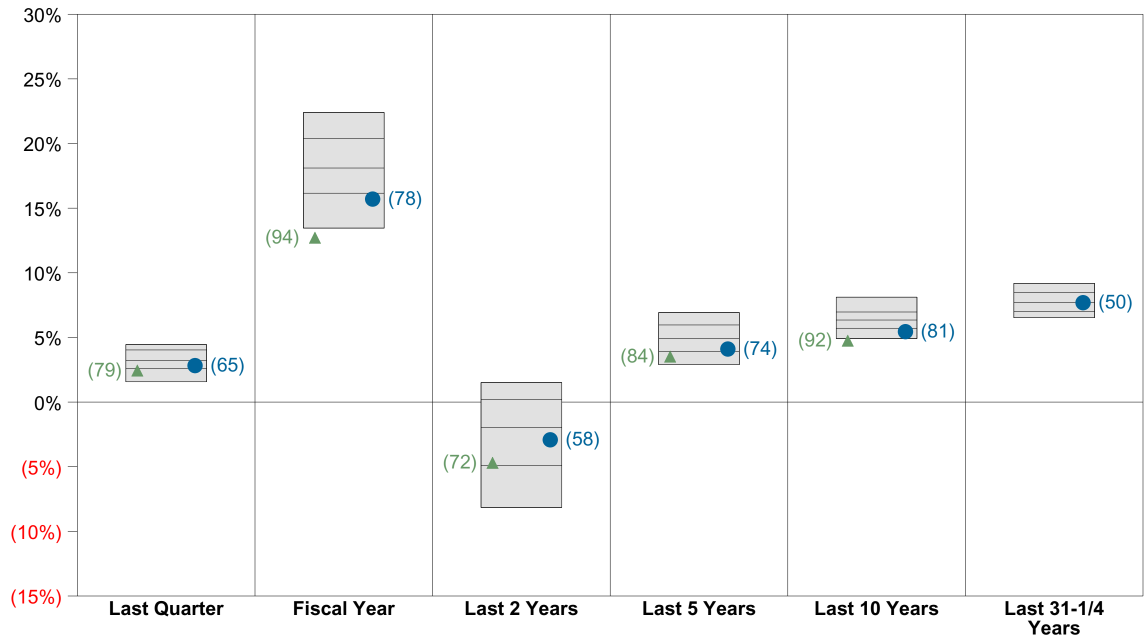
Composite Construction

The International Equity composite is comprised of the Artisan Fund, the Silchester Fund, and the BlackRock EM Tilts fund.

Quarterly Summary and Highlights

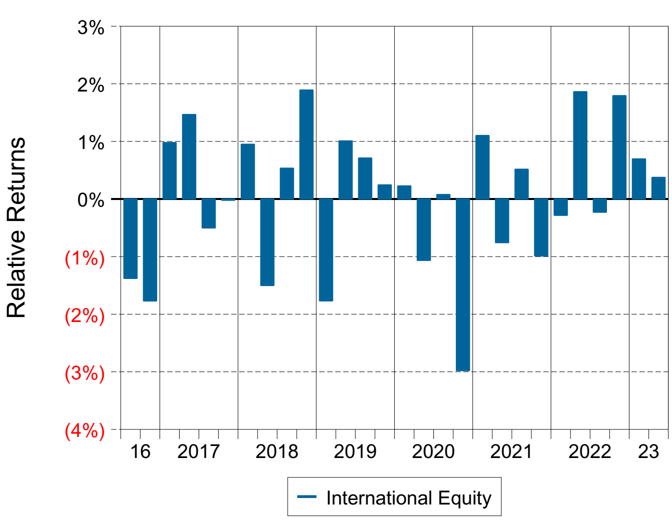
- International Equity's portfolio posted a 2.82% return for the quarter placing it in the 65 percentile of the Callan Non-US Equity group for the quarter and in the 78 percentile for the last year.
- International Equity's portfolio outperformed the MSCI ACWI xUS by 0.38% for the quarter and outperformed the MSCI ACWI xUS for the year by 2.99%.

Performance vs Callan Non-US Equity (Gross)

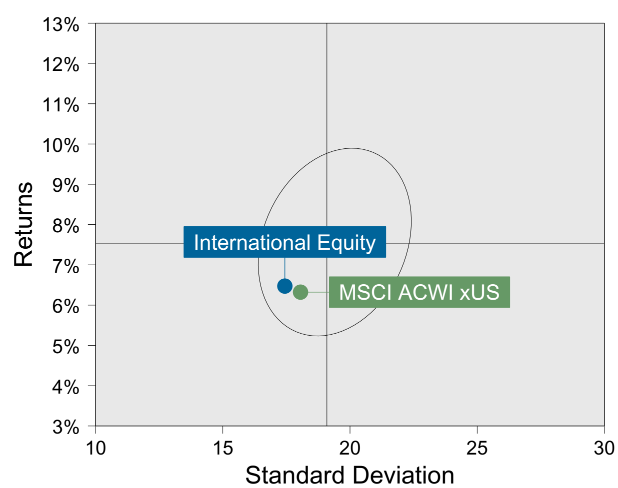


	Last Quarter	Fiscal Year	Last 2 Years	Last 5 Years	Last 10 Years	Last 31-1/4 Years
10th Percentile	4.45	22.40	1.51	6.93	8.11	9.18
25th Percentile	4.03	20.37	0.19	5.96	6.97	8.48
Median	3.21	18.10	(1.96)	4.90	6.35	7.69
75th Percentile	2.61	16.16	(4.92)	3.93	5.71	7.02
90th Percentile	1.57	13.46	(8.15)	2.89	4.91	6.53
International Equity ●	2.82	15.70	(2.92)	4.10	5.45	7.69
MSCI ACWI xUS ▲	2.44	12.72	(4.70)	3.52	4.75	-

Relative Return vs MSCI ACWI xUS



Callan Non-US Equity (Gross) Annualized Seven Year Risk vs Return

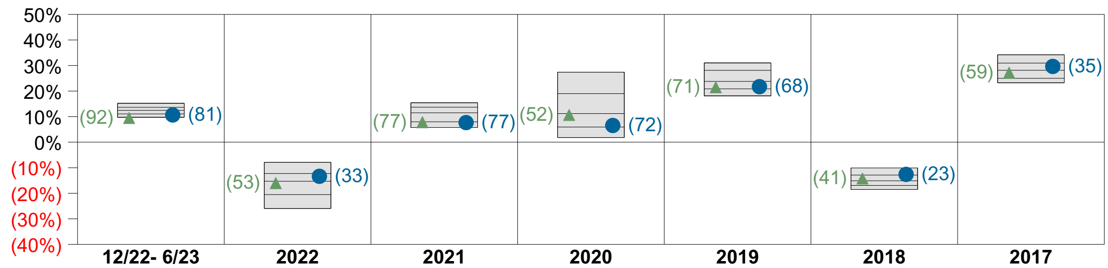


International Equity
Return Analysis Summary

Return Analysis

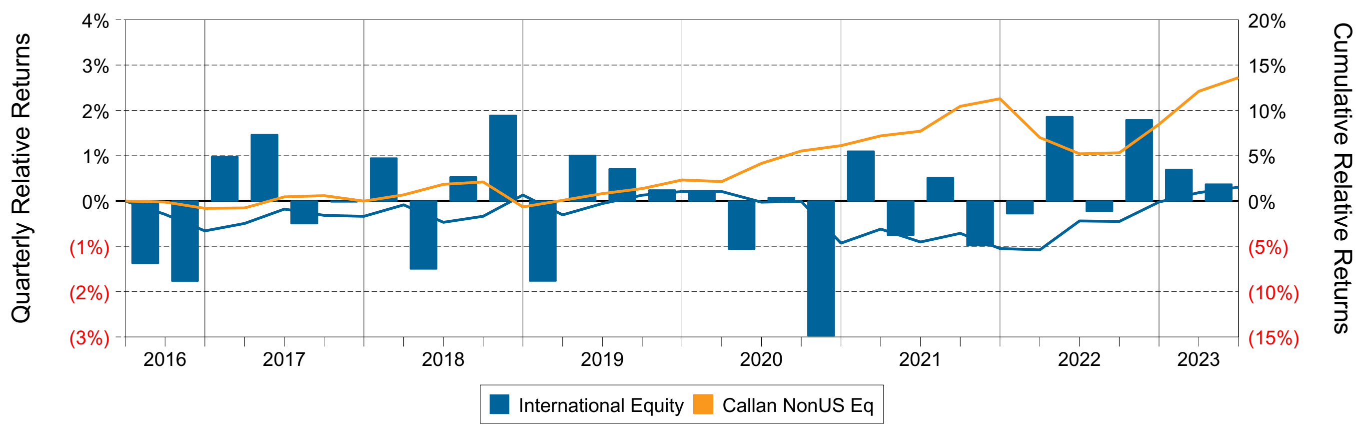
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Non-US Equity (Gross)

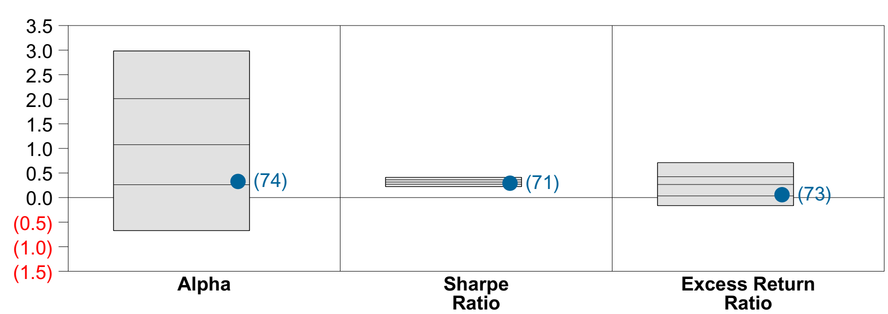


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	15.22	(7.90)	15.44	27.39	31.03	(10.08)	34.21
25th Percentile	13.64	(12.27)	13.69	19.00	28.11	(12.87)	30.96
Median	12.45	(15.29)	11.50	11.19	23.78	(15.12)	28.13
75th Percentile	11.06	(20.51)	7.98	5.93	20.88	(16.93)	24.99
90th Percentile	9.74	(25.95)	5.73	1.81	18.13	(18.49)	23.25
International Equity ●	10.64	(13.35)	7.67	6.54	21.72	(12.60)	29.64
MSCI ACWI xUS ▲	9.47	(16.00)	7.82	10.65	21.51	(14.20)	27.19

Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS



Risk Adjusted Return Measures vs MSCI ACWI xUS
Rankings Against Callan Non-US Equity (Gross)
Seven Years Ended June 30, 2023



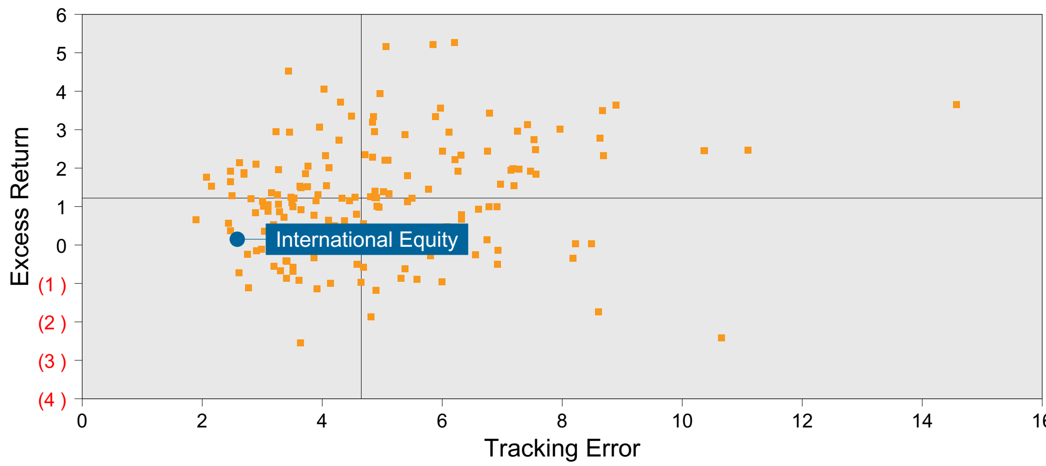
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.98	0.41	0.71
25th Percentile	2.01	0.36	0.42
Median	1.08	0.32	0.27
75th Percentile	0.26	0.27	0.03
90th Percentile	(0.67)	0.22	(0.16)
International Equity ●	0.33	0.29	0.06

International Equity
Risk Analysis Summary

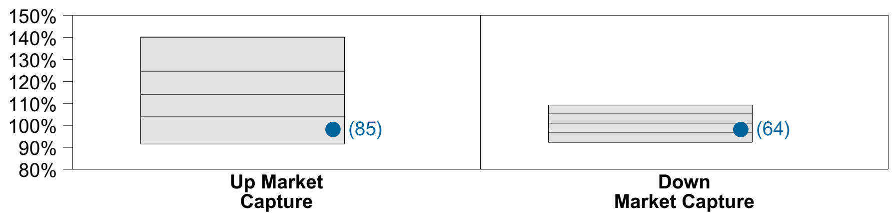
Risk Analysis

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 Non-US Equity (Gross)
Seven Years Ended June 30, 2023

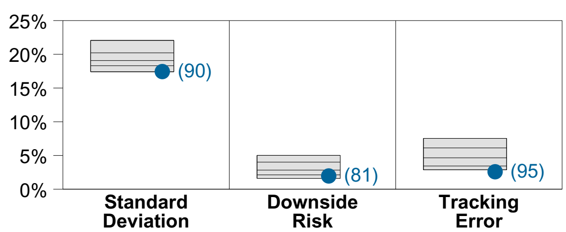


Market Capture vs MSCI ACWI xUS (Net)
Rankings Against Callan Non-US Equity (Gross)
Seven Years Ended June 30, 2023

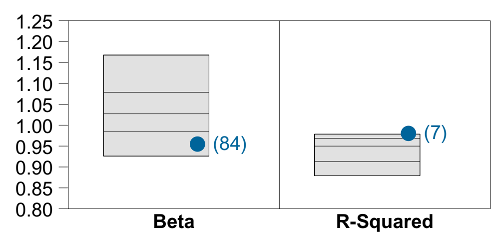


	Up Market Capture	Down Market Capture
10th Percentile	140.09	109.23
25th Percentile	124.61	105.23
Median	113.97	100.99
75th Percentile	103.89	96.84
90th Percentile	91.50	92.32
International Equity ●	98.15	98.08

Risk Statistics Rankings vs MSCI ACWI xUS (Net)
Rankings Against Callan Non-US Equity (Gross)
Seven Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	22.07	5.02	7.53
25th Percentile	20.22	4.01	6.12
Median	19.07	2.83	4.65
75th Percentile	18.31	2.12	3.44
90th Percentile	17.41	1.60	2.88
International Equity ●	17.44	1.96	2.58



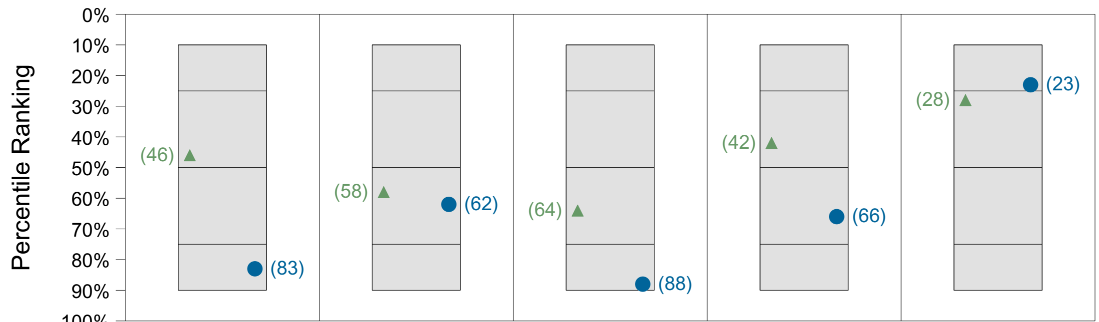
	Beta	R-Squared
10th Percentile	1.17	0.98
25th Percentile	1.08	0.97
Median	1.03	0.95
75th Percentile	0.99	0.91
90th Percentile	0.93	0.88
International Equity ●	0.95	0.98

International 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 Non-US Equity
as of June 30, 2023

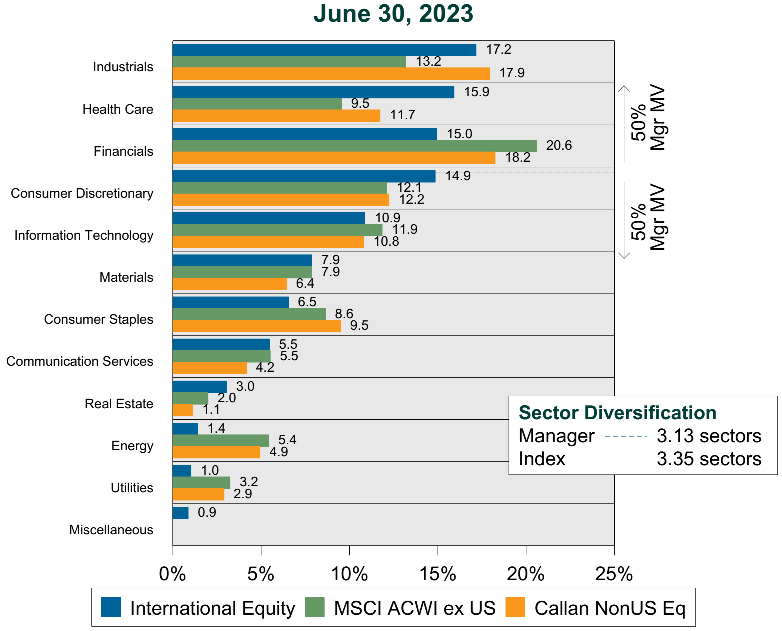


	Weighted Median Market Cap	Forecasted P/E	Price/ Book Value	Forecasted Growth in Earnings	Dividend Yield
10th Percentile	66.98	21.25	3.54	15.40	3.96
25th Percentile	52.05	16.50	2.70	13.24	3.26
Median	36.53	14.03	2.08	10.79	2.56
75th Percentile	26.08	10.93	1.43	8.46	1.99
90th Percentile	15.85	9.68	1.12	6.36	1.53
International Equity ●	20.99	12.43	1.24	9.42	3.33
MSCI ACWI ex US ▲	38.97	12.83	1.65	11.37	3.10

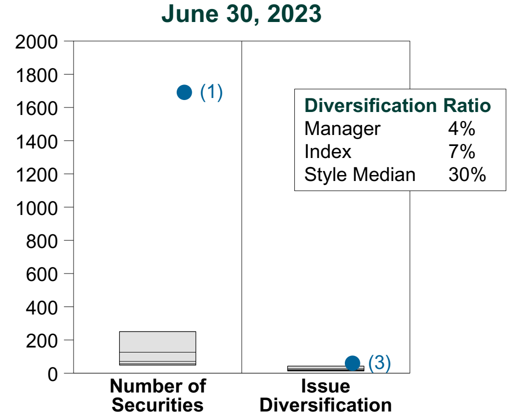
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



	Number of Securities	Issue Diversification
10th Percentile	250	43
25th Percentile	126	28
Median	71	21
75th Percentile	57	18
90th Percentile	49	14
International Equity ●	1691	60
MSCI ACWI ex US ▲	2304	160

International Equity
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Novartis	Health Care	$2,229,922	2.0%	9.72%	229.11	14.19	3.56%	9.12%
Honda Motor Co Ltd Shs	Consumer Discretionary	$2,133,409	1.9%	13.88%	54.40	8.23	2.76%	14.30%
Sanofi Shs	Health Care	$1,744,797	1.6%	2.09%	135.25	11.48	3.63%	7.40%
Bmw Stamm	Consumer Discretionary	$1,500,998	1.3%	21.02%	73.76	6.99	7.57%	(16.93)%
Tesco Plc Ord	Consumer Staples	$1,426,444	1.3%	(1.40)%	22.72	11.17	4.39%	5.53%
Gsk Plc Ord	Health Care	$1,402,209	1.3%	0.91%	72.30	9.25	6.19%	7.34%
Novo Nordisk B	Health Care	$1,370,946	1.2%	1.72%	276.68	28.97	1.13%	25.20%
Roche Hldgs Ag Basel Div Rts Ctf	Health Care	$1,319,498	1.2%	7.02%	214.78	13.49	3.47%	4.95%
Taiwan Semicond Manufac Co L Shs	Information Technology	$1,226,276	1.1%	6.14%	479.60	16.35	1.95%	3.91%
Asml Holding N V Asml Rev Stk Spl	Information Technology	$1,183,245	1.1%	6.80%	291.61	31.86	0.90%	26.35%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Wistron	Information Technology	$359	0.0%	112.11%	8.45	22.81	2.86%	9.84%
Azul Sa	Industrials	$6,932	0.0%	90.97%	1.52	(28.14)	0.00%	27.51%
Cogna Educacao S A Shs New	Consumer Discretionary	$139,685	0.1%	83.24%	1.27	42.50	0.00%	42.50%
Quanta Computer Inc Shs	Information Technology	$126,569	0.1%	79.01%	18.85	18.63	3.95%	6.69%
Daewoo Intl	Industrials	$75	0.0%	76.56%	5.32	9.57	2.51%	46.90%
Hapvida Partp.E Invms.On	Health Care	$226	0.0%	75.70%	6.79	455.00	1.00%	(28.61)%
Sunonwealth Elec.Co	Industrials	$14,691	0.0%	73.51%	0.75	16.43	2.80%	14.47%
Marcopolo Sa Polo Pfd Shs	Industrials	$8,417	0.0%	72.20%	0.65	9.39	3.81%	25.97%
Bco Btg Pactual Unt	Financials	$363	0.0%	68.22%	21.97	11.94	0.47%	13.10%
Rede D Or Sao Luiz Sa Common Stock	Health Care	$184	0.0%	62.89%	15.62	30.18	1.23%	(2.26)%

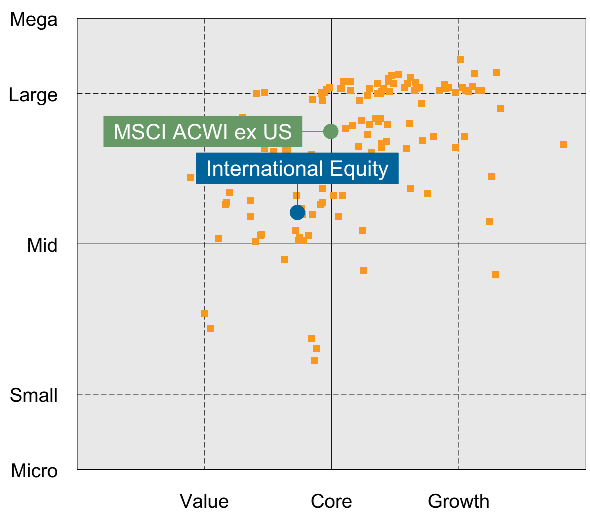
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Xiabuxiabu Cater.Man. (China) Hdg.	Consumer Discretionary	$28,641	0.0%	(51.14)%	0.51	9.79	1.71%	19.17%
Television Broadcasts Ltd Ordinary S	Communication Services	$48,860	0.0%	(50.42)%	0.27	(6.01)	0.00%	(34.08)%
China Meidong Auto Hdg.	Consumer Discretionary	$37	0.0%	(48.87)%	1.55	9.09	2.47%	12.30%
China Tourism Group Duty F H	Consumer Discretionary	$52	0.0%	(48.36)%	1.57	16.80	0.86%	15.64%
Gds Holdings Ltd Cl A Common Stock U	Information Technology	$61	0.0%	(46.84)%	1.99	(8.43)	0.00%	-
China Intl.Trvl.Ser.'a'	Consumer Discretionary	$84	0.0%	(43.06)%	29.71	19.00	1.36%	13.61%
Hangzhou Tigermed Cny1 H	Health Care	$33	0.0%	(42.24)%	0.70	13.44	1.40%	47.44%
Bilibili Z	Communication Services	$138	0.0%	(41.89)%	4.87	(19.29)	0.00%	-
Hebei Yufeng Ind.	Consumer Staples	$9	0.0%	(36.86)%	3.09	26.75	1.22%	31.18%
Shai.Fudan Mircoelec H	Information Technology	$33	0.0%	(36.47)%	0.70	11.82	0.78%	19.33%

Current Holdings Based Style Analysis
International Equity
As of June 30, 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.

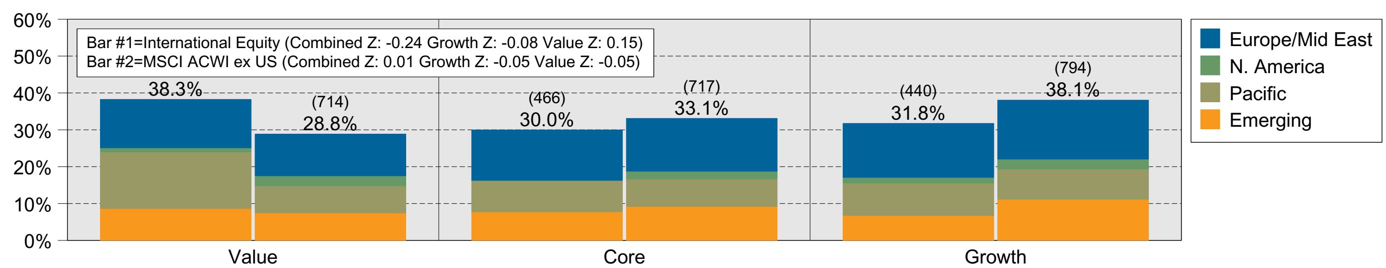
Style Map vs Callan NonUS Eq
Holdings as of June 30, 2023



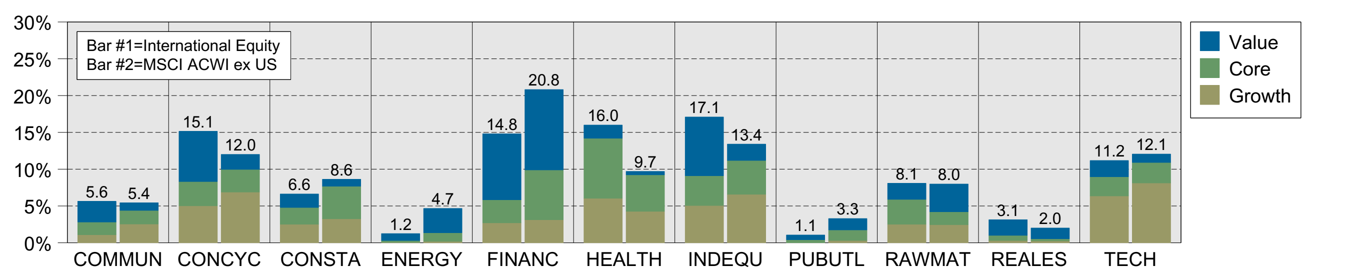
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Europe/ Mid East	13.2% (29) 11.3% (150)	13.7% (24) 14.4% (140)	14.7% (25) 16.0% (148)	**41.5% (78)** **41.7% (438)**
N. America	1.1% (2) 2.7% (27)	0.1% (1) 2.1% (27)	1.5% (3) 2.7% (32)	**2.8% (6)** **7.5% (86)**
Pacific	15.3% (39) 7.3% (130)	8.4% (25) 7.4% (117)	8.8% (16) 8.2% (111)	**32.6% (80)** **22.9% (358)**
Emerging	8.6% (423) 7.5% (407)	7.7% (416) 9.2% (433)	6.8% (396) 11.1% (503)	**23.1% (1235)** **27.8% (1343)**
Total	**38.3% (493)** **28.8% (714)**	**30.0% (466)** **33.1% (717)**	**31.8% (440)** **38.1% (794)**	**100.0% (1399)** **100.0% (2225)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023

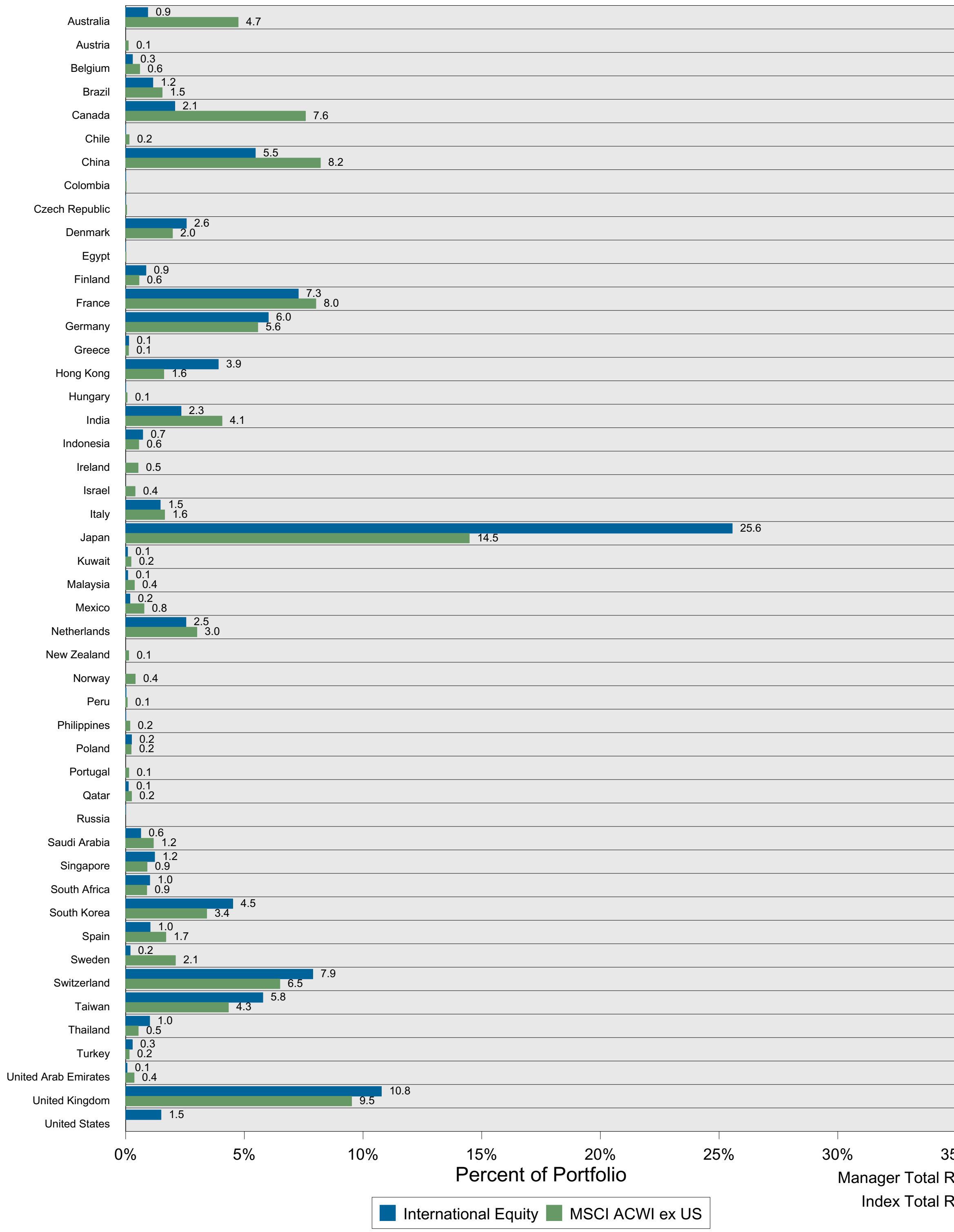


Country Allocation
International Equity VS MSCI ACWI ex US

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 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 June 30, 2023



	Index Rtns
Australia	0.28%
Austria	4.35%
Belgium	(6.12%)
Brazil	20.67%
Canada	3.69%
Chile	2.40%
China	(10.66%)
Colombia	11.73%
Czech Republic	(5.14%)
Denmark	1.65%
Egypt	3.92%
Finland	(8.09%)
France	3.23%
Germany	2.80%
Greece	23.85%
Hong Kong	(5.05%)
Hungary	24.77%
India	12.23%
Indonesia	2.79%
Ireland	4.28%
Israel	(3.95%)
Italy	8.21%
Japan	6.47%
Kuwait	(0.92%)
Malaysia	(8.37%)
Mexico	5.59%
Netherlands	4.14%
New Zealand	(6.01%)
Norway	(0.99%)
Peru	6.46%
Philippines	(1.29%)
Poland	24.49%
Portugal	(1.07%)
Qatar	(2.40%)
Russia	-
Saudi Arabia	6.30%
Singapore	(5.57%)
South Africa	(4.92%)
South Korea	4.43%
Spain	5.57%
Sweden	(1.18%)
Switzerland	4.02%
Taiwan	4.52%
Thailand	(8.20%)
Turkey	(10.67%)
United Arab Emirates	5.80%
United Kingdom	2.19%
United States	6.34%

Manager Total Return: 2.82%

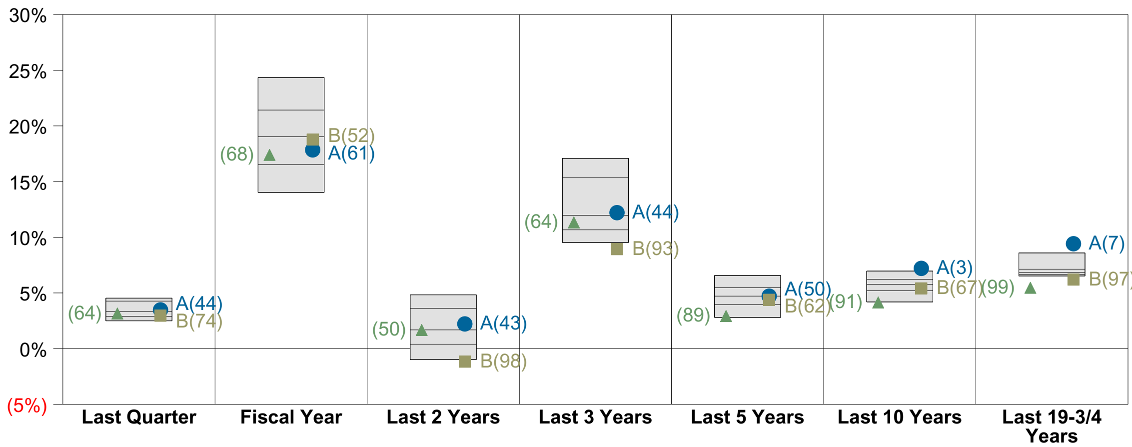
Index Total Return: 2.44%

Silchester
Period Ended June 30, 2023

Investment Philosophy
Silchester is a London based, employee-owned, investment management firm focused on the International Value portfolio. The team is tenured and well resourced with 10 investment professionals responsible for decision making. The process is fundamentally based and seeks to maximize intrinsic value of the assets, earnings and dividends a company delivers to the investor, by focusing on price and quality. The International Equity strategy has historically exhibited value-tilted characteristics and smaller market capitalization than its international equity peers. Given the philosophy and construction process, the strategy can be expected to slightly trail or remain in-line with the index in strong up markets but provide the majority of outperformance through downside protection; it should be evaluated over a full market cycle.

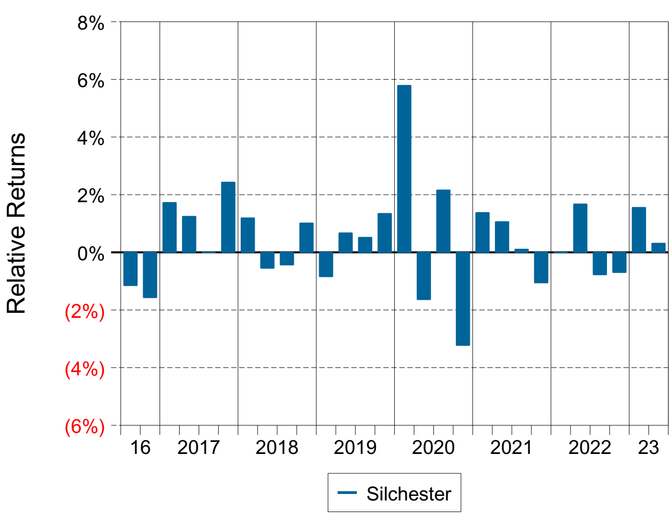
Quarterly Summary and Highlights
- Silchester's portfolio posted a 3.47% return for the quarter placing it in the 44 percentile of the Callan Non-US Developed Value Equity group for the quarter and in the 61 percentile for the last year.
- Silchester's portfolio outperformed the MSCI EAFE Value by 0.32% for the quarter and outperformed the MSCI EAFE Value for the year by 0.45%.

Performance vs Callan Non-US Developed Value Equity (Gross)

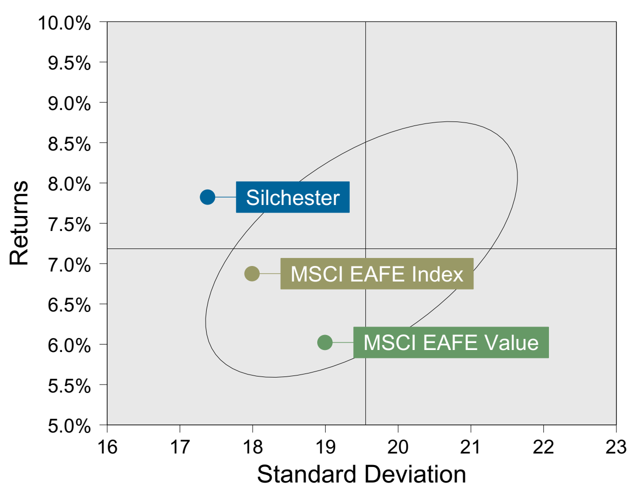


		Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 19-3/4 Years
10th Percentile		4.53	24.35	4.83	17.08	6.57	6.96	8.59
25th Percentile		4.27	21.42	3.61	15.39	5.47	6.22	7.13
Median		3.33	19.03	1.68	11.97	4.71	5.78	6.85
75th Percentile		2.91	16.53	0.40	10.66	3.95	5.20	6.66
90th Percentile		2.50	14.02	(0.99)	9.53	2.80	4.19	6.52
Silchester	● A	3.47	17.84	2.22	12.21	4.71	7.20	9.42
MSCI EAFE Index	■ B	2.95	18.77	(1.17)	8.93	4.39	5.41	6.20
MSCI EAFE Value	▲	3.15	17.40	1.67	11.34	2.93	4.15	5.47

Relative Return vs MSCI EAFE Value



Callan Non-US Developed Value Equity (Gross) Annualized Seven Year Risk vs Return

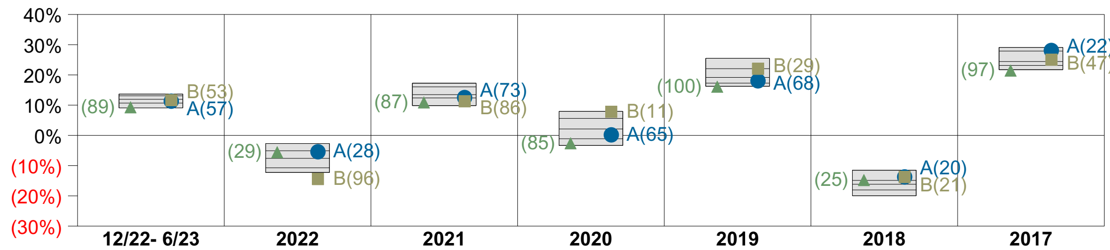


Silchester
Return Analysis Summary

Return Analysis

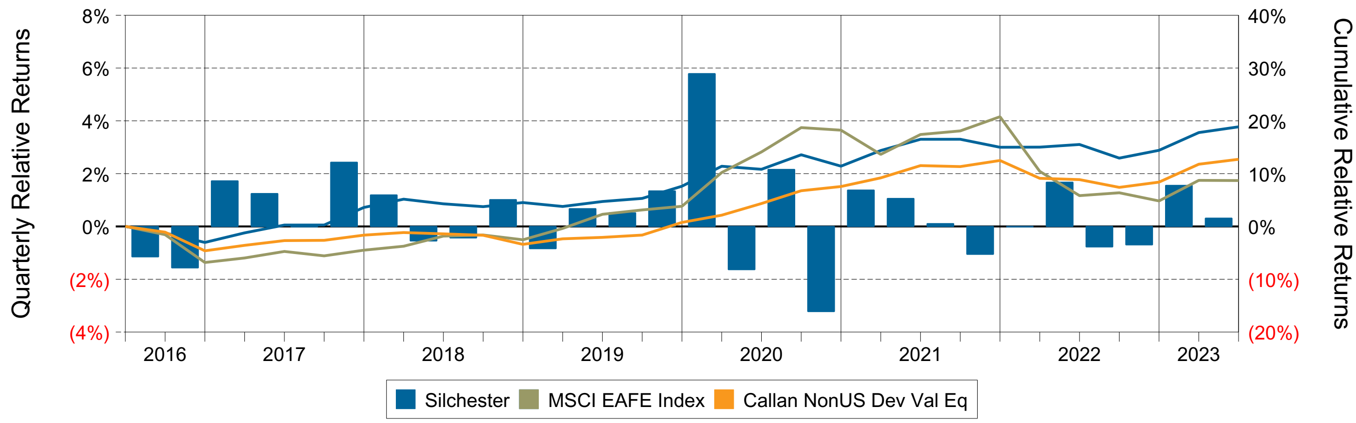
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Non-US Developed Value Equity (Gross)

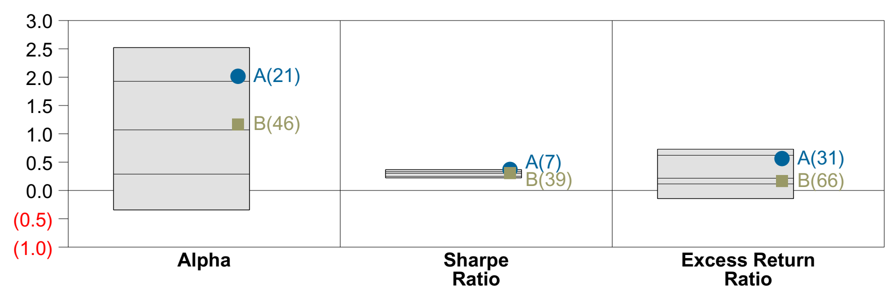


		12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile		13.68	(2.70)	17.27	7.94	25.50	(11.52)	29.10
25th Percentile		13.10	(5.08)	16.06	5.62	22.08	(14.88)	27.89
Median		11.94	(7.59)	13.48	2.13	19.18	(16.16)	24.44
75th Percentile		10.69	(10.72)	12.39	(1.11)	17.29	(18.04)	23.14
90th Percentile		9.08	(12.26)	9.85	(3.32)	16.23	(19.96)	21.73
Silchester	● A	11.32	(5.42)	12.52	0.17	18.05	(13.74)	28.09
MSCI EAFE Index	■ B	11.67	(14.45)	11.26	7.82	22.01	(13.79)	25.03
MSCI EAFE Value	▲	9.28	(5.58)	10.89	(2.63)	16.09	(14.78)	21.44

Cumulative and Quarterly Relative Returns vs MSCI EAFE Value



Risk Adjusted Return Measures vs MSCI EAFE Value
Rankings Against Callan Non-US Developed Value Equity (Gross)
Seven Years Ended June 30, 2023



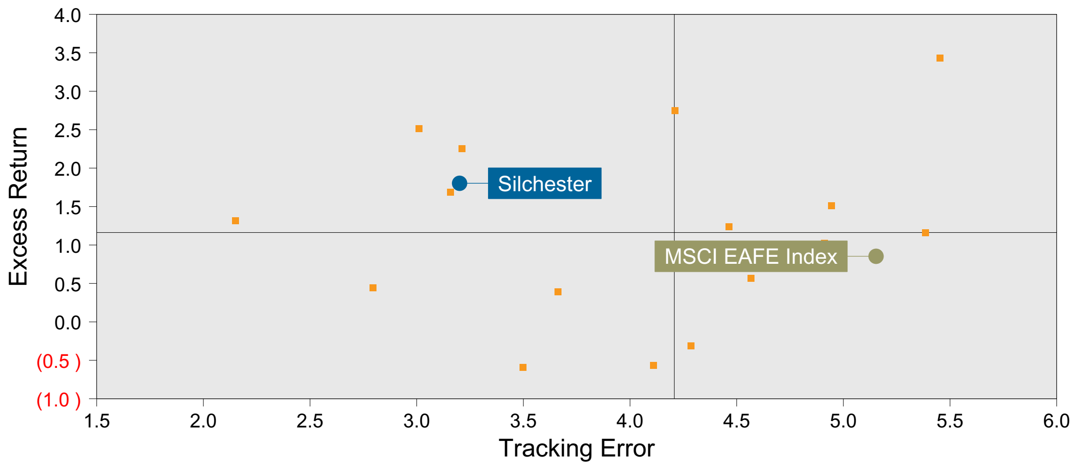
		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		2.52	0.37	0.73
25th Percentile		1.93	0.33	0.62
Median		1.07	0.30	0.22
75th Percentile		0.29	0.25	0.12
90th Percentile		(0.34)	0.22	(0.14)
Silchester	● A	2.02	0.37	0.56
MSCI EAFE Index	■ B	1.17	0.31	0.17

Silchester
Risk Analysis Summary

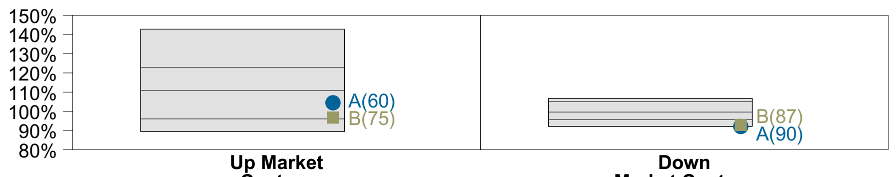
Risk Analysis

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 Developed Value Equity (Gross)
Seven Years Ended June 30, 2023

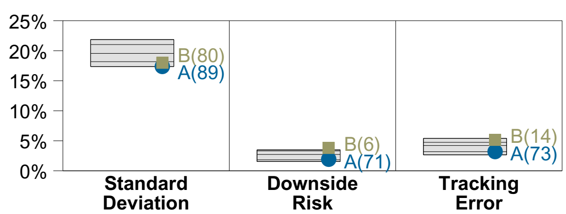


Market Capture vs MSCI EAFE Value (Net)
Rankings Against Callan Non-US Developed Value Equity (Gross)
Seven Years Ended June 30, 2023

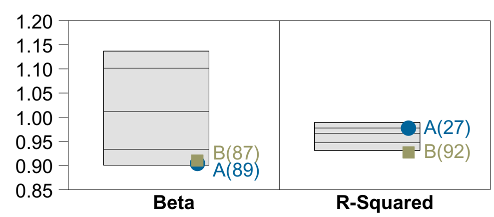


	Up Market Capture	Down Market Capture
10th Percentile	142.79	106.72
25th Percentile	122.95	105.12
Median	110.85	99.63
75th Percentile	96.06	95.71
90th Percentile	89.48	92.13
Silchester ● A	104.45	92.10
MSCI EAFE Index ■ B	96.73	92.91

Risk Statistics Rankings vs MSCI EAFE Value (Net)
Rankings Against Callan Non-US Developed Value Equity (Gross)
Seven Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	21.86	3.48	5.39
25th Percentile	21.03	3.31	4.74
Median	19.55	2.72	4.21
75th Percentile	18.18	1.83	3.18
90th Percentile	17.36	1.55	2.66
Silchester ● A	17.38	1.92	3.20
MSCI EAFE Index ■ B	17.99	3.81	5.15



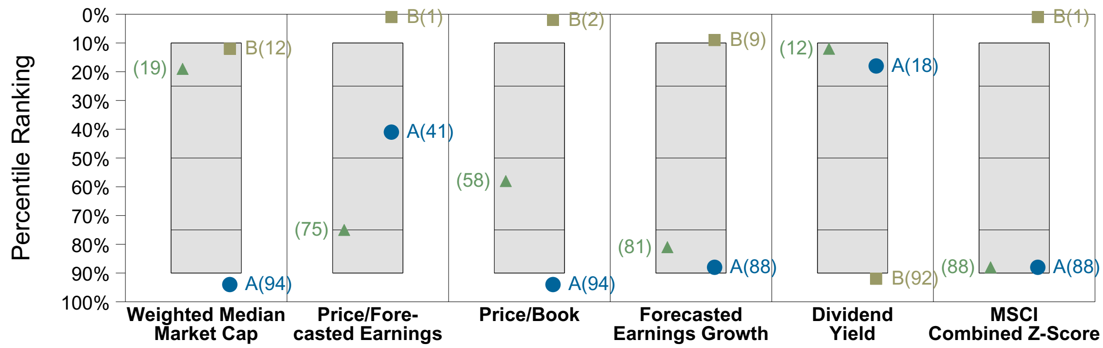
	Beta	R-Squared
10th Percentile	1.14	0.99
25th Percentile	1.10	0.98
Median	1.01	0.97
75th Percentile	0.93	0.95
90th Percentile	0.90	0.93
Silchester ● A	0.90	0.98
MSCI EAFE Index ■ B	0.91	0.93

Silchester
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 Developed Value Equity
as of June 30, 2023

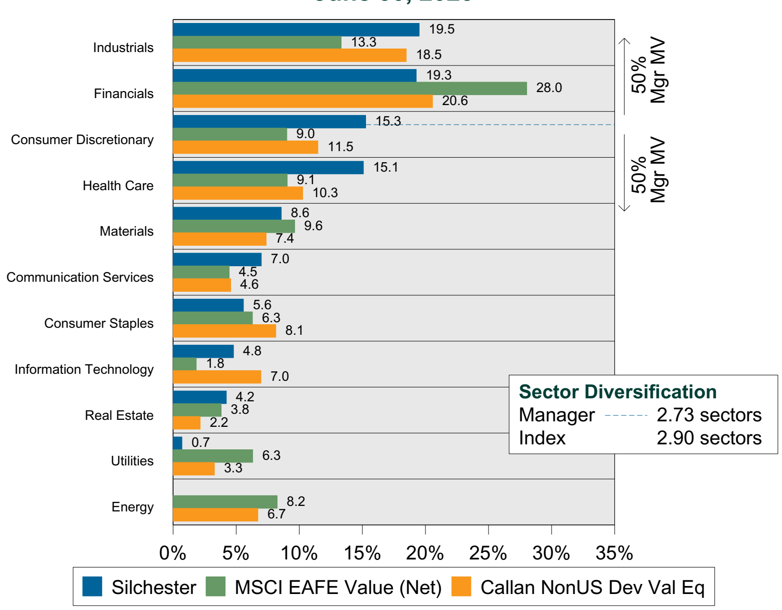


		Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile		48.39	11.72	1.47	10.07	4.45	(0.29)
25th Percentile		35.20	10.93	1.41	8.60	4.09	(0.48)
Median		29.76	10.02	1.31	6.59	3.72	(0.60)
75th Percentile		23.38	9.50	1.08	5.79	3.46	(0.79)
90th Percentile		12.82	7.95	0.96	5.43	3.14	(0.95)
Silchester	● A	8.63	10.17	0.87	5.49	4.18	(0.92)
MSCI EAFE Index	■ B	47.41	13.20	1.76	10.21	3.08	0.01
MSCI EAFE Value (Net)	▲	40.17	9.51	1.14	5.57	4.42	(0.92)

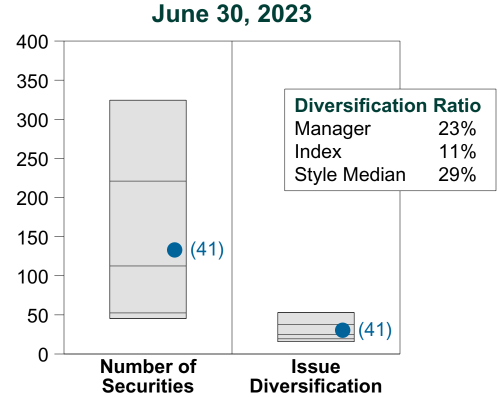
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



		Number of Securities	Issue Diversification
10th Percentile		324	53
25th Percentile		221	38
Median		113	25
75th Percentile		53	19
90th Percentile		45	16
Silchester	●	133	30
MSCI EAFE Value (Net)	▲	486	55

Silchester
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Honda Motor Co Ltd Shs	Consumer Discretionary	$2,133,409	3.6%	13.88%	54.40	8.23	2.76%	14.30%
Sanofi Shs	Health Care	$1,744,797	3.0%	2.09%	135.25	11.48	3.63%	7.40%
Bmw Stamm	Consumer Discretionary	$1,500,998	2.6%	21.02%	73.76	6.99	7.57%	(16.93)%
Novartis	Health Care	$1,485,635	2.5%	9.72%	229.11	14.19	3.56%	9.12%
Tesco Plc Ord	Consumer Staples	$1,426,444	2.4%	(1.40)%	22.72	11.17	4.39%	5.53%
Gsk Plc Ord	Health Care	$1,402,209	2.4%	0.91%	72.30	9.25	6.19%	7.34%
Randstad Holding NV Ord	Industrials	$1,114,356	1.9%	(11.15)%	9.70	11.13	5.90%	(4.09)%
Ubs Ag Shs New	Financials	$1,101,649	1.9%	(1.71)%	70.02	8.34	2.75%	12.41%
Adecco Sa Cheserex Ord	Industrials	$1,085,969	1.8%	(2.83)%	5.50	9.76	8.55%	(6.82)%
Wpp Plc New Shs	Communication Services	$1,026,807	1.7%	(9.19)%	11.25	7.85	4.79%	5.65%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Lite-On Technology Co Ord	Information Technology	$261,794	0.4%	38.04%	7.85	16.68	3.62%	4.59%
Ipto Holding	Utilities	$29,179	0.0%	30.95%	0.58	31.65	4.57%	(10.13)%
Toyota Industries Corp Shs	Industrials	$84,096	0.1%	28.66%	23.12	15.01	1.85%	5.70%
Colruyt Sa Halle Strip Vvpr	Consumer Staples	$323,876	0.6%	27.39%	5.00	18.90	2.25%	(11.58)%
Covestro	Materials	$594,057	1.0%	25.23%	10.01	24.65	0.00%	(30.80)%
Mitie Group Plc Shs	Industrials	$285,795	0.5%	23.95%	1.65	10.17	3.01%	(9.79)%
Royal Philips NV Shs	Health Care	$422,890	0.7%	23.42%	20.07	15.94	4.11%	23.40%
Bmw Stamm	Consumer Discretionary	$1,500,998	2.6%	21.02%	73.76	6.99	7.57%	(16.93)%
Danske Bank A/S Shs	Financials	$493,626	0.8%	20.85%	20.97	7.51	0.00%	20.15%
Medipal Holdings Corp Shs	Health Care	$587,164	1.0%	20.00%	3.67	14.70	1.96%	(5.13)%

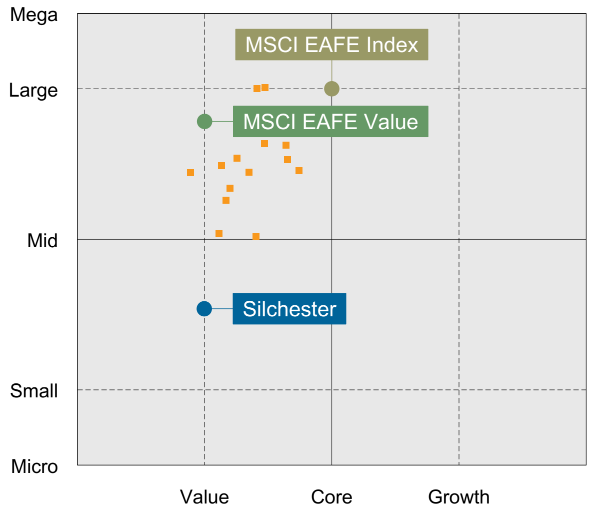
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Television Broadcasts Ltd Ordinary S	Communication Services	$48,860	0.1%	(50.42)%	0.27	(6.01)	0.00%	(34.08)%
Tiger Brands	Consumer Staples	$407,371	0.7%	(21.67)%	1.60	9.61	5.82%	(18.42)%
Luk Fook Hdg.	Consumer Discretionary	$278,800	0.5%	(19.98)%	1.50	6.73	5.49%	(1.18)%
Jupiter Fund Management	Financials	$203,328	0.3%	(18.04)%	0.75	8.90	7.81%	(27.70)%
Rtl Group Sa Luxembourg Shs	Communication Services	$406,444	0.7%	(16.96)%	6.23	8.91	10.84%	(1.57)%
Turkcell Iletisim Hizmet Ord	Communication Services	$213,512	0.4%	(16.42)%	3.06	5.02	1.57%	44.26%
C&c Group Plc Shs	Consumer Staples	$18,592	0.0%	(16.00)%	0.62	13.71	2.63%	(2.33)%
Hysan Dev Ltd Ord	Real Estate	$296,399	0.5%	(14.11)%	2.51	9.00	7.53%	(2.67)%
Cosco Pacific Ltd Ord	Industrials	$237,224	0.4%	(14.03)%	2.08	6.20	6.07%	(2.36)%
Golden Agri Resources Ltd Shs	Consumer Staples	$354,487	0.6%	(12.39)%	2.32	5.84	7.35%	(53.39)%

Current Holdings Based Style Analysis
Silchester
As of June 30, 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.

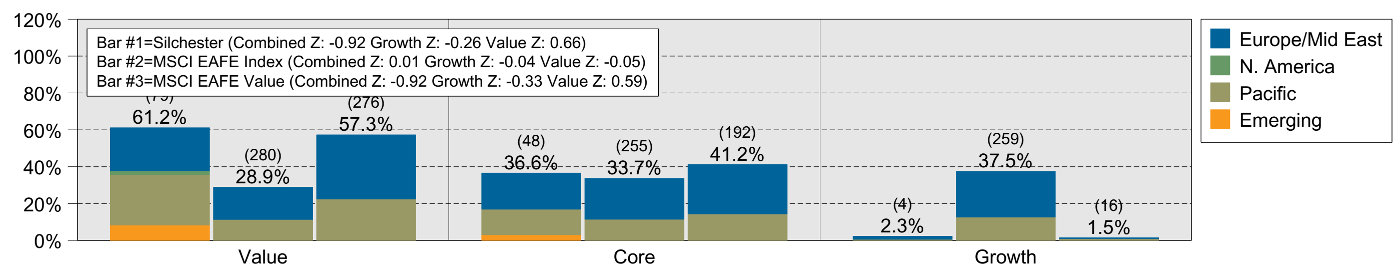
Style Map vs Callan NonUS Dev Val Eq
Holdings as of June 30, 2023



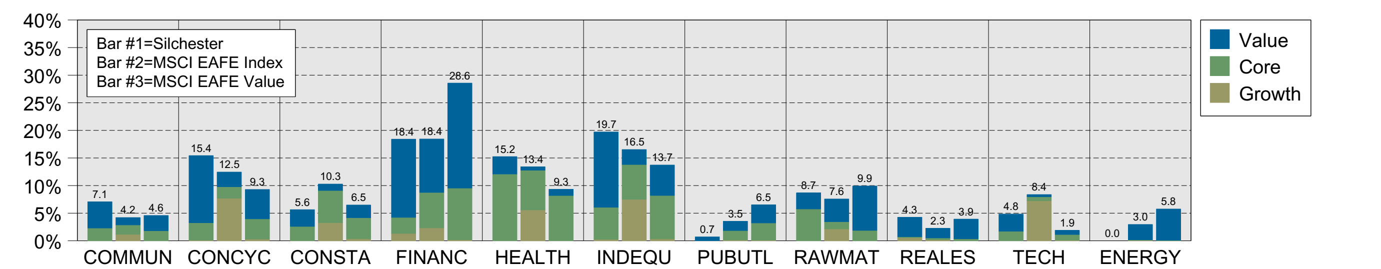
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Europe/ Mid East	23.3% (27) 17.5% (150) 34.9% (148)	19.7% (21) 22.2% (140) 26.8% (115)	1.7% (3) 24.8% (148) 0.6% (9)	44.7% (51) 64.5% (438) 62.3% (272)
N. America	2.1% (2) 0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0) 0.0% (0)	2.1% (2) 0.0% (0) 0.0% (0)
Pacific	27.4% (37) 11.4% (130) 22.4% (128)	13.9% (21) 11.5% (115) 14.4% (77)	0.6% (1) 12.7% (111) 0.9% (7)	41.9% (59) 35.5% (356) 37.7% (212)
Emerging	8.3% (13) 0.0% (0) 0.0% (0)	3.0% (6) 0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0) 0.0% (0)	11.4% (19) 0.0% (0) 0.0% (0)
Total	61.2% (79) 28.9% (280) 57.3% (276)	36.6% (48) 33.7% (255) 41.2% (192)	2.3% (4) 37.5% (259) 1.5% (16)	100.0% (131) 100.0% (794) 100.0% (484)

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023

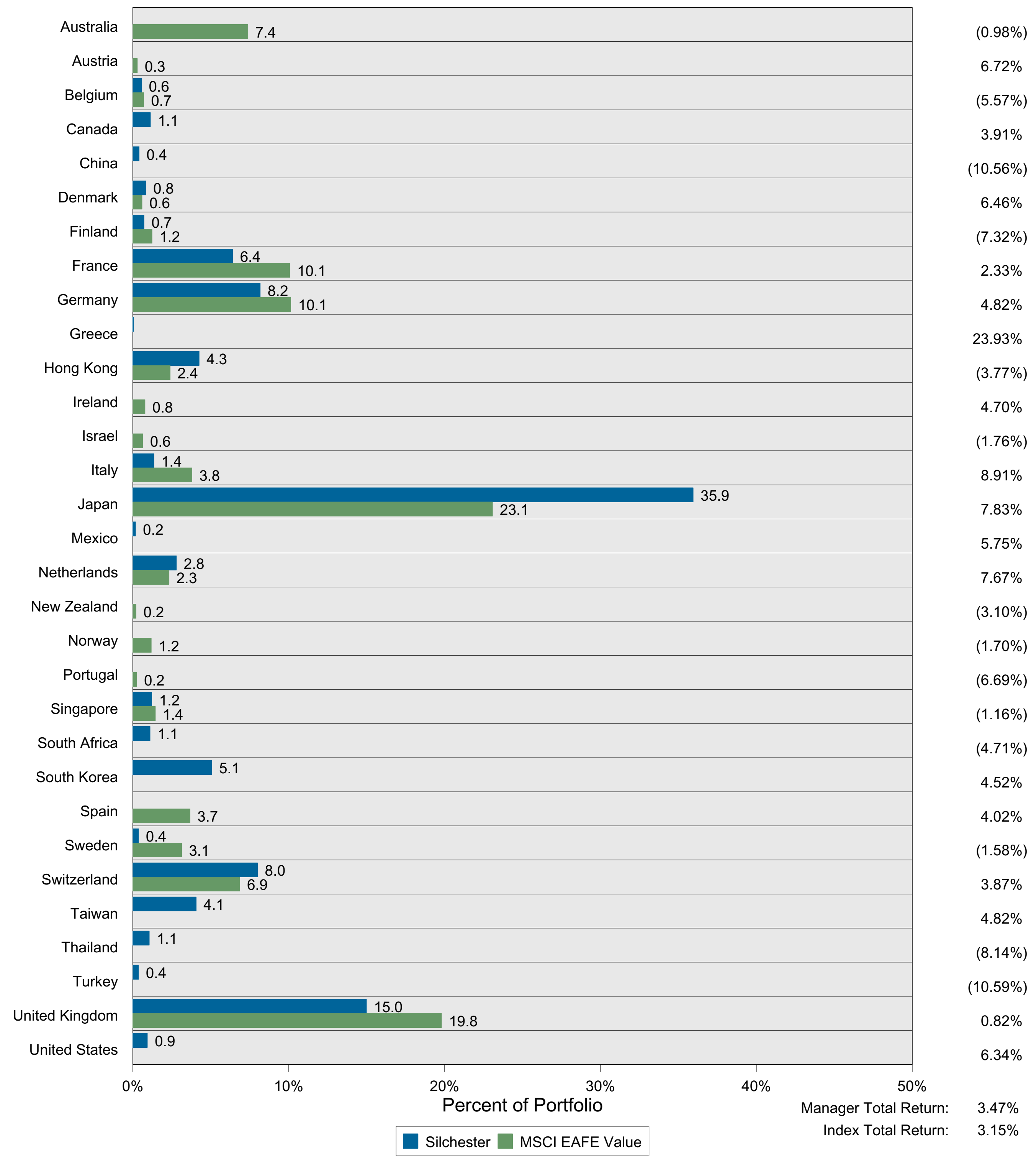


Country Allocation
Silchester VS MSCI EAFE Value (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 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 June 30, 2023



Walter Scott
Period Ended June 30, 2023

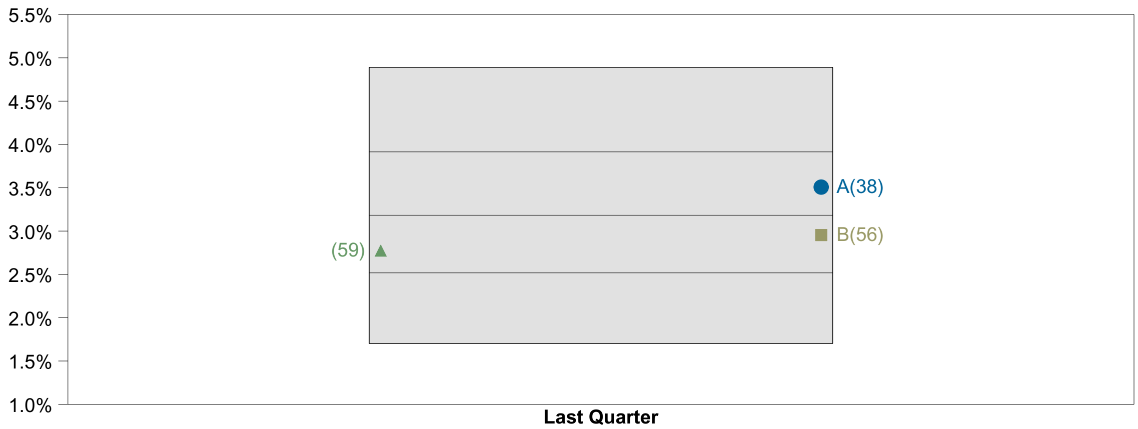
Investment Philosophy

Walter Scott employs a traditional bottom-up process to build portfolios with between 40 and 60 names. Given this bottom up approach, country weighting deviations from the benchmark can be significant. The team looks for companies with IRRs greater than 20% and then evaluates return components such as dividend yield, earnings growth, and P/E multiple expansion. The firm is unique in that its initial universe is primarily selected from a review of financial statements received directly from companies. Then, those that are likely to meet their financial criteria (IRR > 20%) are subject to in-depth review going back five years. A comprehensive analysis follows including assessment of the company's competitive position, industry, management, financials, and profitability. The team must be unanimously in favor of buying the stock before it is added to the portfolio.

Quarterly Summary and Highlights

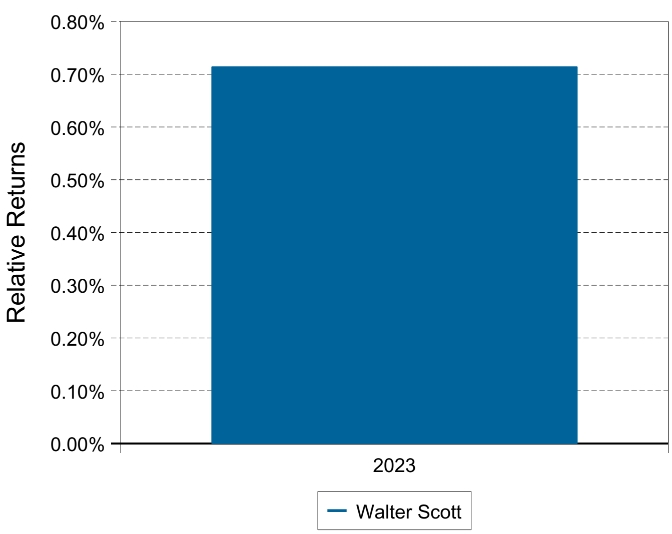
- Walter Scott's portfolio posted a 3.51% return for the quarter placing it in the 38 percentile of the Callan Non-US Developed Growth Equity group for the quarter.
- Walter Scott's portfolio outperformed the MSCI EAFE Growth by 0.73% for the quarter.

Performance vs Callan Non-US Developed Growth Equity (Gross)

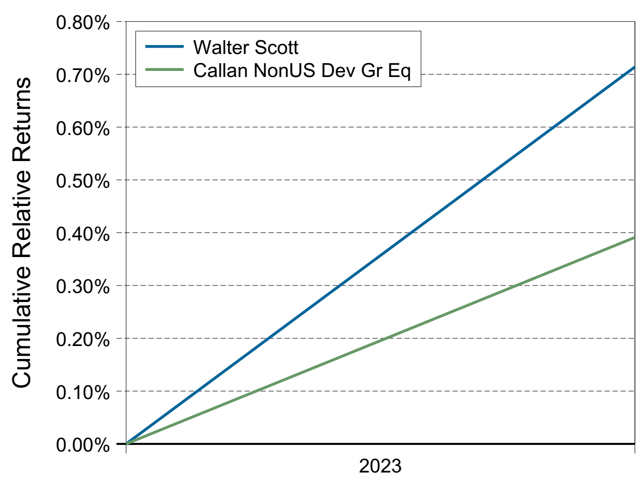


	Last Quarter
10th Percentile	4.89
25th Percentile	3.91
Median	3.18
75th Percentile	2.52
90th Percentile	1.70
Walter Scott ● A	3.51
MSCI EAFE Index ■ B	2.95
MSCI EAFE Growth ▲	2.77

Relative Return vs MSCI EAFE Growth



Cumulative Returns vs MSCI EAFE Growth

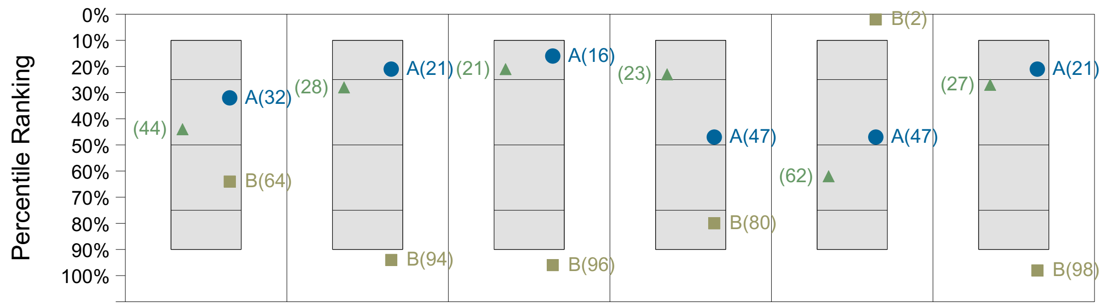


Walter Scott
Equity Characteristics Analysis Summary

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 Developed Growth Equity
as of June 30, 2023

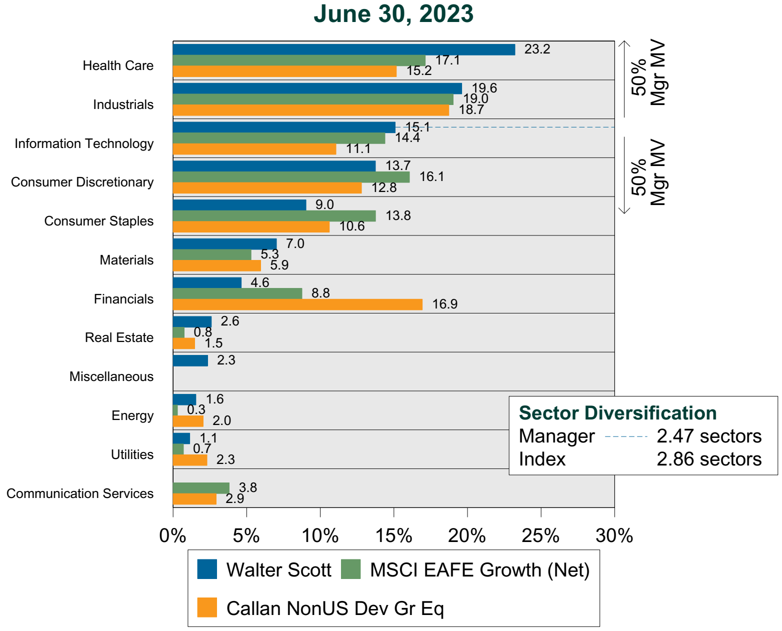


		Weighted Median Market Cap	Price/Forecasted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile		88.74	29.03	5.66	16.56	2.44	1.01
25th Percentile		62.09	21.58	3.58	14.44	2.28	0.90
Median		52.24	18.25	3.07	12.00	1.89	0.63
75th Percentile		40.09	15.41	2.58	10.82	1.68	0.36
90th Percentile		24.60	14.29	2.12	8.05	1.37	0.15
Walter Scott	● A	59.35	22.15	3.88	12.23	1.90	0.91
MSCI EAFE Index	■ B	47.41	13.20	1.76	10.21	3.08	0.01
MSCI EAFE Growth (Net)	▲	56.39	20.86	3.69	14.65	1.78	0.90

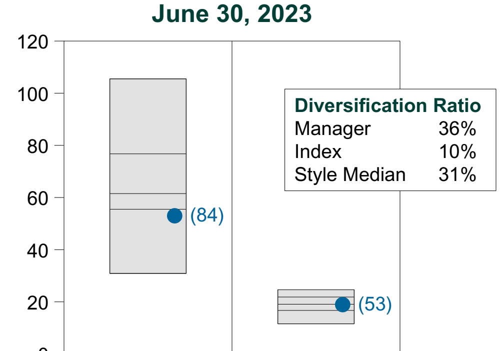
Sector Weights

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
June 30, 2023



Diversification
June 30, 2023



		Number of Securities	Issue Diversification
10th Percentile		106	25
25th Percentile		77	22
Median		62	19
75th Percentile		56	17
90th Percentile		31	12
Walter Scott	●	53	19
MSCI EAFE Growth (Net)	▲	429	41

Walter Scott
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Novo Nordisk B	Health Care	$1,370,946	4.1%	1.72%	276.68	28.97	1.13%	25.20%
Asml Holding N V Asml Rev Stk Spl	Information Technology	$1,183,245	3.5%	6.80%	291.61	31.86	0.90%	26.35%
Keyence Corp Ord	Information Technology	$1,081,154	3.2%	(3.06)%	114.17	41.47	0.44%	14.88%
Lvmh Moet Hennessy Lou Vuitt Ord	Consumer Discretionary	$989,038	2.9%	3.44%	472.70	24.88	1.39%	12.20%
Taiwan Semiconductor Mfg Co Ltd Spon	Information Technology	$987,087	2.9%	6.59%	479.60	16.35	1.95%	3.91%
Shin Etsu Chemical Co Ltd Shs	Materials	$928,709	2.8%	2.70%	66.77	15.43	2.10%	20.24%
Compass Group Plc Ord	Consumer Discretionary	$899,589	2.7%	12.14%	48.56	22.88	1.68%	21.32%
Alimentation Couche Tardmulti Vtg.Sh	Consumer Staples	$878,953	2.6%	2.42%	50.26	17.65	0.82%	4.20%
Loreal	Consumer Staples	$858,141	2.6%	5.75%	249.74	33.95	1.12%	8.36%
Aia Group Ltd Com Par Usd 1	Financials	$849,746	2.5%	(2.74)%	116.94	16.00	1.94%	4.97%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Ferrari N V	Consumer Discretionary	$455,908	1.4%	21.39%	59.47	43.92	0.59%	13.10%
Terumo Corp Ord	Health Care	$393,230	1.2%	17.54%	23.60	30.76	0.88%	13.77%
Vat Group Ag Common Stock Chf.1	Industrials	$586,986	1.7%	17.26%	12.41	46.97	1.69%	0.13%
Industria De Diseno Textil I Shs New	Consumer Discretionary	$763,658	2.3%	17.05%	120.57	21.45	2.54%	11.41%
Experian Group Ord Gbp0	Industrials	$782,004	2.3%	16.68%	35.30	25.93	1.44%	9.20%
Recordati	Health Care	$374,197	1.1%	14.30%	9.98	19.24	2.63%	10.73%
Daikin Industries Ltd Shs	Industrials	$689,493	2.1%	14.02%	59.35	29.05	0.82%	14.20%
Amadeus It Group S A Ord Shs	Consumer Discretionary	$387,405	1.2%	13.51%	34.26	25.62	1.06%	26.92%
Compass Group Plc Ord	Consumer Discretionary	$899,589	2.7%	12.14%	48.56	22.88	1.68%	21.32%
Adidas Ag Namen -Akt	Consumer Discretionary	$633,525	1.9%	10.77%	34.90	349.40	0.39%	27.37%

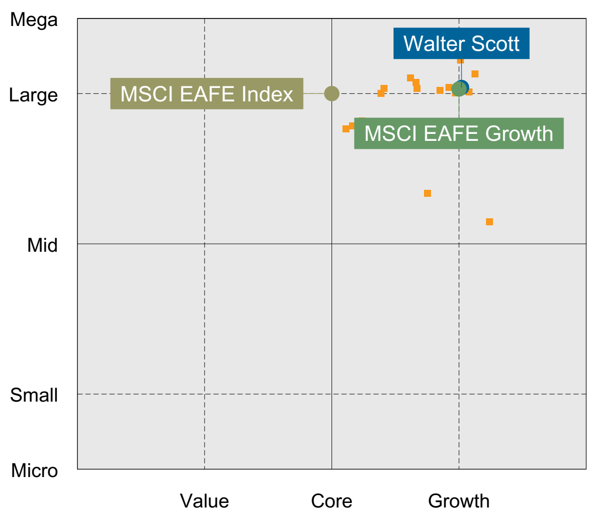
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Misumi Group Inc Shs	Industrials	$291,177	0.9%	(19.99)%	5.65	21.46	1.05%	13.47%
Hang Lung Properties Limited Shs	Real Estate	$230,456	0.7%	(13.67)%	6.95	10.03	6.45%	(1.39)%
Merck Kgaa Darmstadt Shs	Health Care	$641,700	1.9%	(10.19)%	21.44	15.18	1.45%	5.21%
Novozymes A/S Shs B New	Materials	$295,821	0.9%	(8.98)%	10.59	24.31	1.89%	5.99%
Chr Hansen Holding	Materials	$293,063	0.9%	(8.68)%	9.15	30.01	1.49%	10.16%
Murata Manufacturing Co Ltd Shs	Information Technology	$531,257	1.6%	(5.67)%	38.51	24.40	1.82%	14.25%
Ascendas Real Estate Inv	Real Estate	$643,037	1.9%	(4.49)%	8.82	17.63	4.67%	(7.47)%
Coloplast As Almindelig Aktie	Health Care	$394,298	1.2%	(4.43)%	24.75	31.29	2.34%	10.30%
Csl Ltd Shs	Health Care	$683,033	2.0%	(4.11)%	89.07	29.73	1.21%	13.60%
Diageo Plc Ord	Consumer Staples	$658,754	2.0%	(3.86)%	96.56	19.65	2.25%	7.68%

Current Holdings Based Style Analysis
Walter Scott
As of June 30, 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.

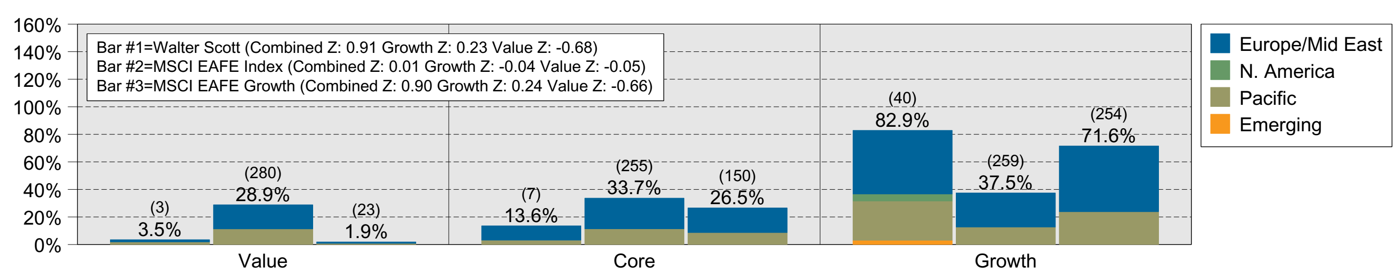
Style Map vs Callan NonUS Dev Gr Eq
Holdings as of June 30, 2023



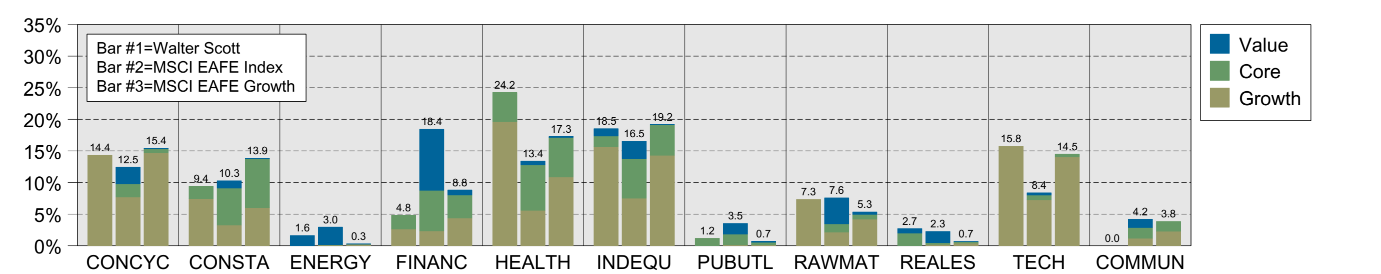
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Europe/ Mid East	1.6% (1) 17.5% (150) 1.0% (12)	10.4% (5) 22.2% (140) 17.9% (72)	46.2% (22) 24.8% (148) 47.7% (145)	**58.2% (28)** **64.5% (438)** **66.6% (229)**
N. America	0.0% (0) 0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0) 0.0% (0)	5.1% (2) 0.0% (0) 0.0% (0)	**5.1% (2)** **0.0% (0)** **0.0% (0)**
Pacific	1.9% (2) 11.4% (130) 0.9% (11)	3.2% (2) 11.5% (115) 8.7% (78)	28.5% (15) 12.7% (111) 23.8% (109)	**33.6% (19)** **35.5% (356)** **33.4% (198)**
Emerging	0.0% (0) 0.0% (0) 0.0% (0)	0.0% (0) 0.0% (0) 0.0% (0)	3.1% (1) 0.0% (0) 0.0% (0)	**3.1% (1)** **0.0% (0)** **0.0% (0)**
Total	**3.5% (3)** **28.9% (280)** **1.9% (23)**	**13.6% (7)** **33.7% (255)** **26.5% (150)**	**82.9% (40)** **37.5% (259)** **71.6% (254)**	**100.0% (50)** **100.0% (794)** **100.0% (427)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023

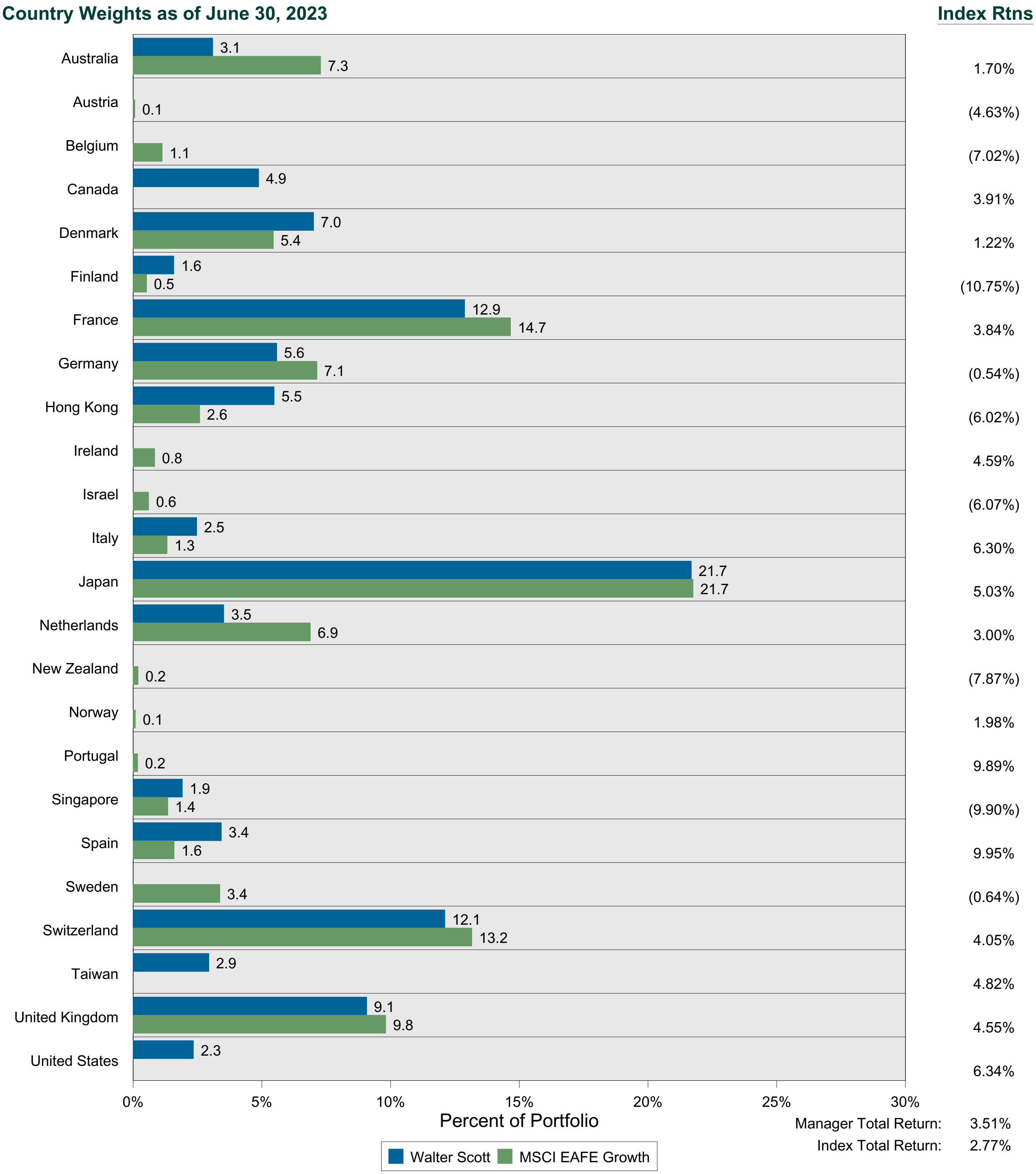


Country Allocation
Walter Scott VS MSCI EAFE Growth (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 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 June 30, 2023



Manager Total Return: 3.51%
Index Total Return: 2.77%

BlackRock EM Alpha Tilts
Period Ended June 30, 2023

Investment Philosophy

BlackRock's Emerging Markets Opportunities Fund (EMOF), managed by BlackRock's Systematic Active Equity Team, offers investors active exposure to emerging markets equities as represented by the MSCI Emerging Markets Index. The EMOF strategy utilizes return forecasting techniques to identify opportunities across emerging markets. These opportunities are captured by over and underweighting securities and countries while managing the overall risk to the fund. The Fund's predicted alpha is 3-6% annualized over a market cycle, with 3-6% active risk. Overall, the strategy seeks to deliver absolute risk levels similar to that of the index

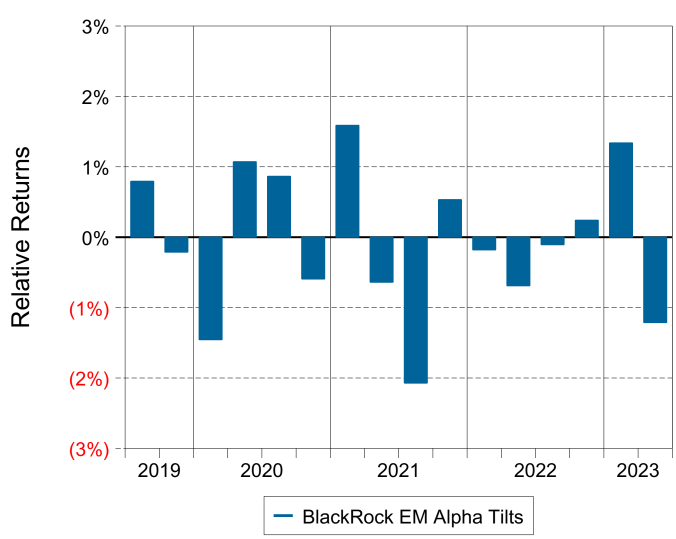
Quarterly Summary and Highlights

- BlackRock EM Alpha Tilts's portfolio posted a (0.33)% return for the quarter placing it in the 92 percentile of the Callan Emerging Broad group for the quarter and in the 77 percentile for the last year.
- BlackRock EM Alpha Tilts's portfolio underperformed the MSCI EM by 1.22% for the quarter and outperformed the MSCI EM for the year by 0.25%.

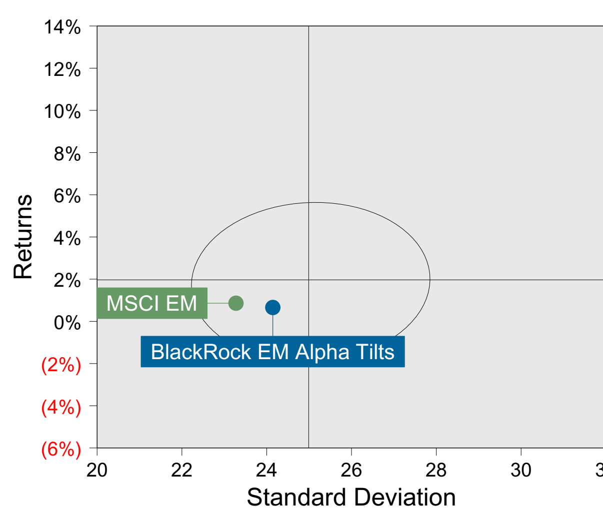
Performance vs Callan Emerging Broad (Gross)

	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 4 Years
10th Percentile	4.40	11.88	(5.71)	9.73	4.24
25th Percentile	2.94	9.50	(9.18)	5.64	2.99
Median	1.91	4.66	(13.18)	3.22	1.97
75th Percentile	0.82	2.29	(15.75)	0.36	0.46
90th Percentile	0.00	(0.29)	(17.79)	(1.10)	(1.05)
BlackRock EM Alpha Tilts ●	(0.33)	2.00	(13.76)	1.98	0.66
MSCI EM ▲	0.90	1.75	(12.81)	2.32	0.86

Relative Return vs MSCI EM



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

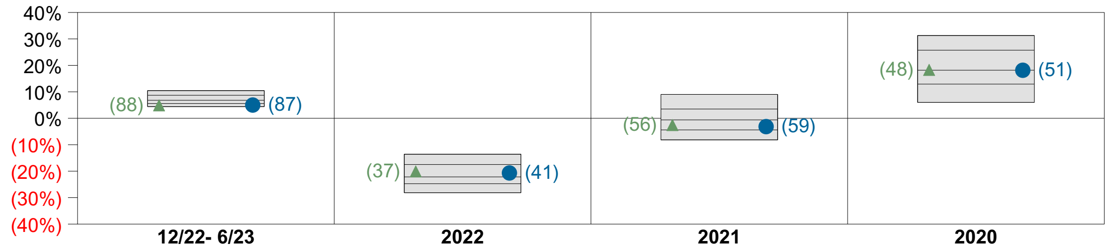


BlackRock EM Alpha Tilts
Return Analysis Summary

Return Analysis

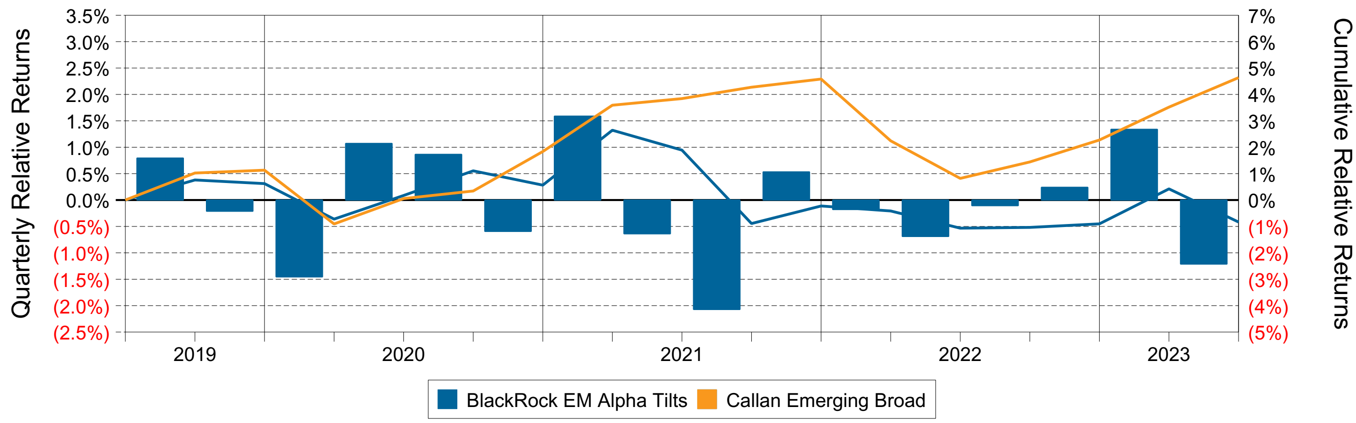
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Emerging Broad (Gross)

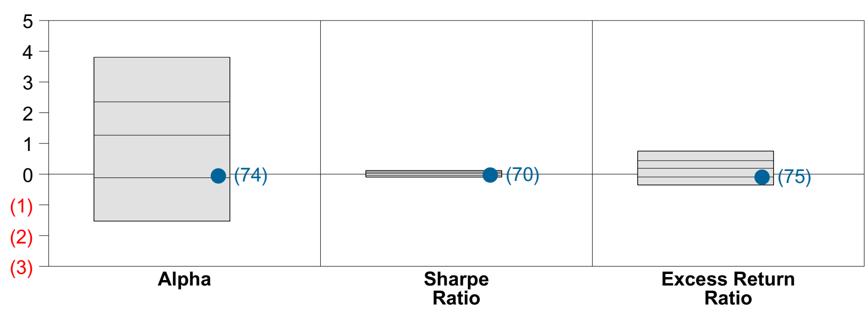


	12/22- 6/23	2022	2021	2020
10th Percentile	10.46	(13.59)	9.02	31.29
25th Percentile	8.70	(17.48)	3.49	25.73
Median	6.81	(22.16)	(0.60)	18.17
75th Percentile	5.57	(24.74)	(4.40)	12.92
90th Percentile	4.42	(28.15)	(8.17)	6.00
BlackRock EM Alpha Tilts ●	5.00	(20.68)	(3.15)	18.15
MSCI EM ▲	4.89	(20.09)	(2.54)	18.31

Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM
Rankings Against Callan Emerging Broad (Gross)
Four Years Ended June 30, 2023



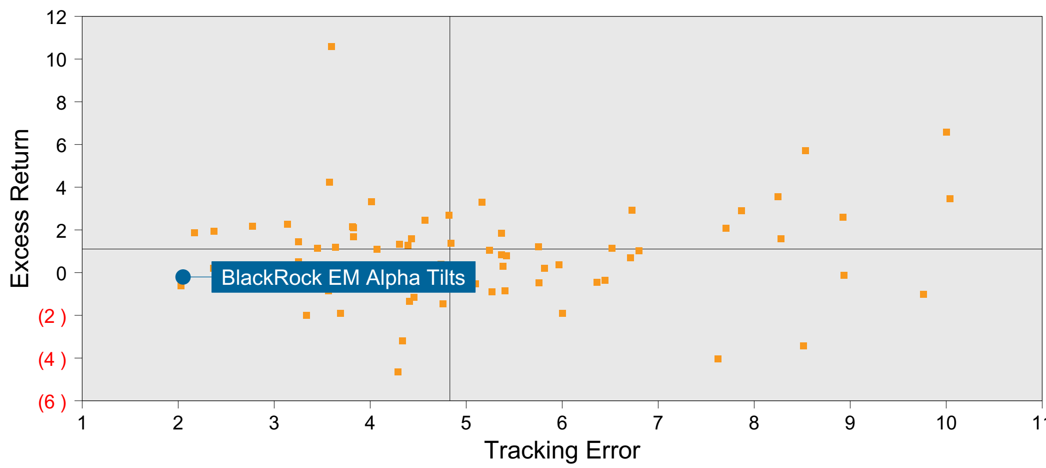
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.81	0.12	0.75
25th Percentile	2.35	0.07	0.44
Median	1.27	0.02	0.19
75th Percentile	(0.12)	(0.04)	(0.09)
90th Percentile	(1.53)	(0.10)	(0.35)
BlackRock EM Alpha Tilts ●	(0.06)	(0.03)	(0.10)

BlackRock EM Alpha Tilts
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.

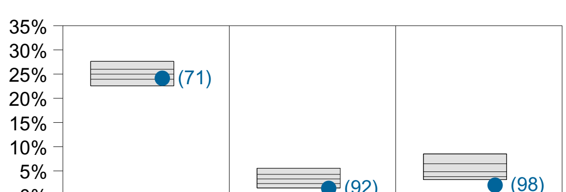
Risk Analysis vs Callan Emerging Broad (Gross)
Four Years Ended June 30, 2023



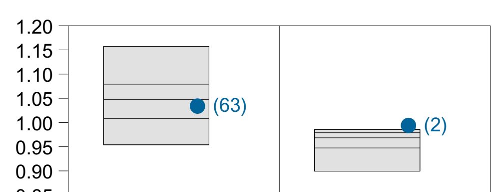
Market Capture vs MSCI Emerging Markets (Net)
Rankings Against Callan Emerging Broad (Gross)
Four Years Ended June 30, 2023

	Up Market Capture	Down Market Capture
10th Percentile	131.67	111.88
25th Percentile	120.46	106.93
Median	112.20	101.89
75th Percentile	103.56	97.26
90th Percentile	95.00	93.73
BlackRock EM Alpha Tilts ●	104.57	102.96

Risk Statistics Rankings vs MSCI Emerging Markets (Net)
Rankings Against Callan Emerging Broad (Gross)
Four Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	27.64	5.55	8.51
25th Percentile	26.00	4.29	6.47
Median	24.99	3.34	4.83
75th Percentile	23.94	2.38	3.81
90th Percentile	22.57	1.48	3.20
BlackRock EM Alpha Tilts ●	24.14	1.39	2.05



	Beta	R-Squared
10th Percentile	1.16	0.99
25th Percentile	1.08	0.98
Median	1.05	0.97
75th Percentile	1.01	0.95
90th Percentile	0.95	0.90
BlackRock EM Alpha Tilts ●	1.03	0.99

BlackRock EM Alpha Tilts
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.

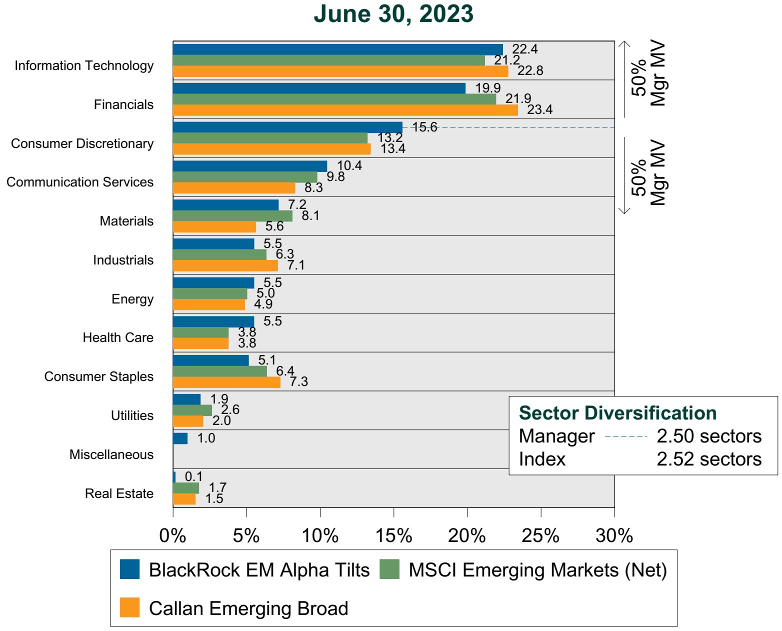
Portfolio Characteristics Percentile Rankings
Rankings Against Callan Emerging Broad
as of June 30, 2023

	Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile	53.75	17.33	2.76	20.31	5.80	0.53
25th Percentile	41.77	15.52	2.33	17.88	3.42	0.37
Median	28.93	12.85	1.67	15.87	2.54	0.14
75th Percentile	14.60	10.23	1.26	13.69	1.95	(0.16)
90th Percentile	7.03	7.64	0.93	10.29	1.69	(0.63)
BlackRock EM Alpha Tilts ●	33.14	11.76	1.48	17.21	3.23	(0.06)
MSCI Emerging Markets (Net) ▲	24.14	12.00	1.42	14.91	3.11	(0.00)

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
June 30, 2023



Diversification
June 30, 2023

	Number of Securities	Issue Diversification
10th Percentile	396	42
25th Percentile	146	28
Median	81	18
75th Percentile	61	13
90th Percentile	46	11
BlackRock EM Alpha Tilts ●	1522	35
MSCI Emerging Markets (Net) ▲	1419	83

BlackRock EM Alpha Tilts
Top 10 Portfolio Holdings Characteristics
as of June 30, 2023

10 Largest Holdings

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Taiwan Semicond Manufac Co L Shs	Information Technology	$1,226,276	6.5%	6.14%	479.60	16.35	1.95%	3.91%
Tencent Holdings Limited Shs Par Hkd	Communication Services	$879,025	4.7%	(18.28)%	405.12	18.32	0.72%	14.34%
Samsung Electronics Co Ltd Ord	Information Technology	$838,903	4.5%	12.10%	327.11	24.18	2.00%	(3.12)%
Alibaba Group Holding Ltd	Consumer Discretionary	$568,114	3.0%	(23.66)%	219.51	9.83	0.00%	10.32%
Icici Bank Limited Shs Dematerial	Financials	$303,081	1.6%	6.73%	79.71	17.21	0.86%	115.21%
Meituan Dianping Hk/03690	Consumer Discretionary	$277,331	1.5%	(19.55)%	87.98	28.95	0.00%	121.70%
Hon Hai Precision Inds Ltd Ord	Information Technology	$265,265	1.4%	6.22%	50.30	10.80	4.69%	11.33%
Netease Inc Common Stock Usd.0001	Communication Services	$249,576	1.3%	4.92%	62.79	17.98	1.57%	13.03%
Ping An Insurance H	Financials	$242,325	1.3%	(4.96)%	47.38	5.75	5.53%	20.45%
Baidu Com Inc Shs A	Communication Services	$241,707	1.3%	(15.70)%	47.94	13.37	0.00%	14.49%

10 Best Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Wistron	Information Technology	$359	0.0%	112.11%	8.45	22.81	2.86%	9.84%
Azul Sa	Industrials	$6,932	0.0%	90.97%	1.52	(28.14)	0.00%	27.51%
Cogna Educacao S A Shs New	Consumer Discretionary	$139,685	0.7%	83.24%	1.27	42.50	0.00%	42.50%
Quanta Computer Inc Shs	Information Technology	$126,569	0.7%	79.01%	18.85	18.63	3.95%	6.69%
Daewoo Intl	Industrials	$75	0.0%	76.56%	5.32	9.57	2.51%	46.90%
Hapvida Partp.E Invms.On	Health Care	$226	0.0%	75.70%	6.79	455.00	1.00%	(28.61)%
Sunonwealth Elec.Co	Industrials	$14,691	0.1%	73.51%	0.75	16.43	2.80%	14.47%
Marcopolo Sa Polo Pfd Shs	Industrials	$8,417	0.0%	72.20%	0.65	9.39	3.81%	25.97%
Bco Btg Pactual Unt	Financials	$363	0.0%	68.22%	21.97	11.94	0.47%	13.10%
Rede D Or Sao Luiz Sa Common Stock	Health Care	$184	0.0%	62.89%	15.62	30.18	1.23%	(2.26)%

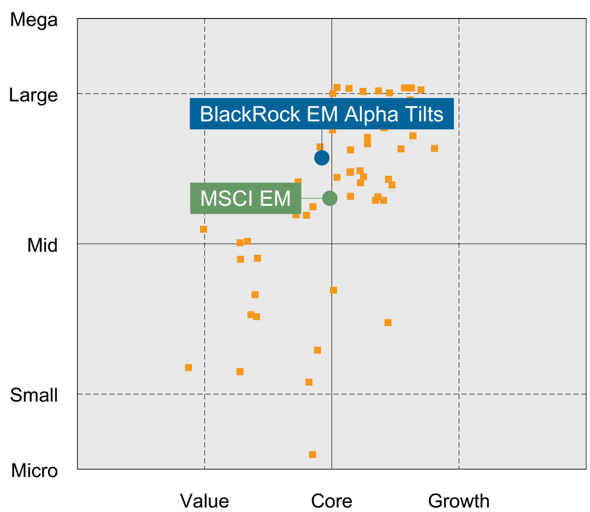
10 Worst Performers

Stock	Sector	Ending Market Value	Percent of Portfolio	Qtrly Return	Market Capital	Price/ Forecasted Earnings Ratio	Dividend Yield	Forecasted Growth in Earnings
Xiabuxiabu Cater.Man. (China) Hdg.	Consumer Discretionary	$28,641	0.2%	(51.14)%	0.51	9.79	1.71%	19.17%
China Meidong Auto Hdg.	Consumer Discretionary	$37	0.0%	(48.87)%	1.55	9.09	2.47%	12.30%
China Tourism Group Duty F H	Consumer Discretionary	$52	0.0%	(48.36)%	1.57	16.80	0.86%	15.64%
Gds Holdings Ltd Cl A Common Stock U	Information Technology	$61	0.0%	(46.84)%	1.99	(8.43)	0.00%	-
China Intl.Trvl.Ser.'a'	Consumer Discretionary	$84	0.0%	(43.06)%	29.71	19.00	1.36%	13.61%
Hangzhou Tigermed Cny1 H	Health Care	$33	0.0%	(42.24)%	0.70	13.44	1.40%	47.44%
Bilibili Z	Communication Services	$138	0.0%	(41.89)%	4.87	(19.29)	0.00%	-
Hebei Yufeng Ind.	Consumer Staples	$9	0.0%	(36.86)%	3.09	26.75	1.22%	31.18%
Shai.Fudan Mircoelec H	Information Technology	$33	0.0%	(36.47)%	0.70	11.82	0.78%	19.33%
Cj Corp (Cheil Jedang)	Industrials	$36	0.0%	(35.30)%	1.51	5.52	3.66%	(35.91)%

Current Holdings Based Style Analysis
BlackRock EM Alpha Tilts
As of June 30, 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 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.

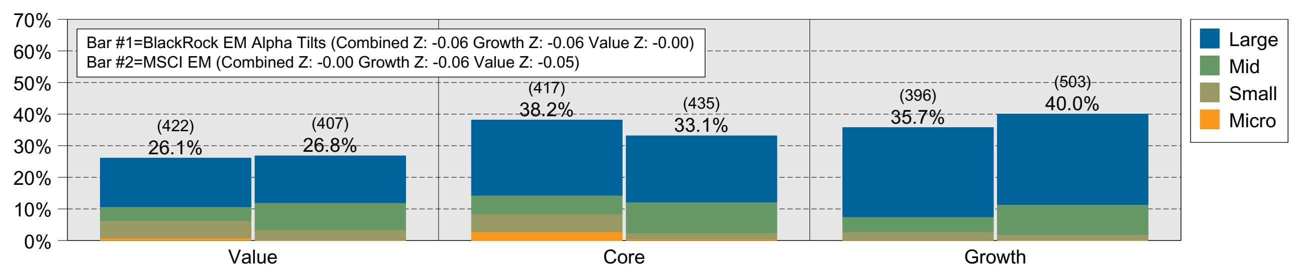
Style Map vs Callan Emerging Broad
Holdings as of June 30, 2023



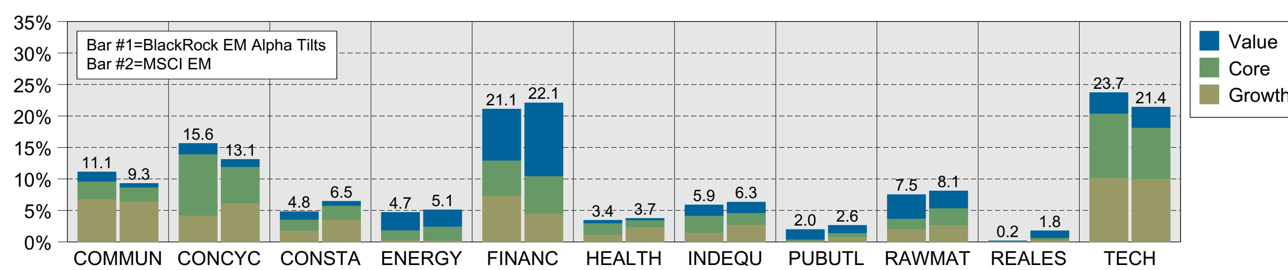
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Large	15.5% (85) / 14.9% (89)	23.9% (70) / 21.0% (70)	28.3% (92) / 28.7% (107)	**67.6% (247)** / **64.5% (266)**
Mid	4.4% (170) / 8.6% (173)	5.9% (217) / 9.8% (248)	4.8% (209) / 9.5% (274)	**15.1% (596)** / **27.8% (695)**
Small	5.5% (161) / 3.3% (143)	5.6% (117) / 2.0% (115)	2.6% (90) / 1.9% (118)	**13.8% (368)** / **7.2% (376)**
Micro	0.8% (6) / 0.1% (2)	2.7% (13) / 0.4% (2)	0.1% (5) / 0.1% (4)	**3.6% (24)** / **0.5% (8)**
Total	**26.1% (422)** / **26.8% (407)**	**38.2% (417)** / **33.1% (435)**	**35.7% (396)** / **40.0% (503)**	**100.0% (1235)** / **100.0% (1345)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



Sector Weights Distribution
Holdings as of June 30, 2023

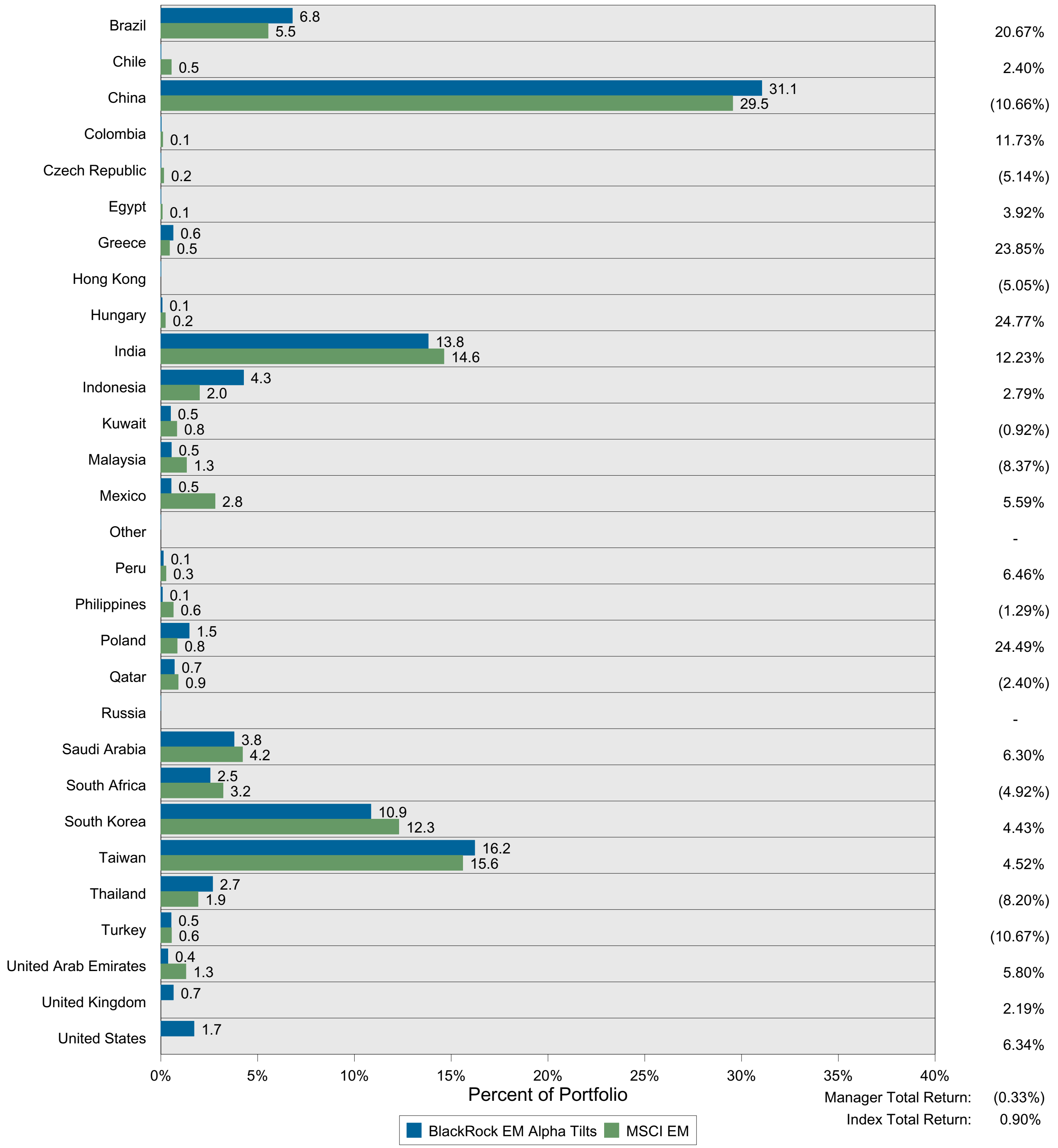


Country Allocation
BlackRock EM Alpha Tilts VS MSCI Emerging Markets (Net)

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 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 June 30, 2023 — Index Rtns



ABS Global
Period Ended June 30, 2023

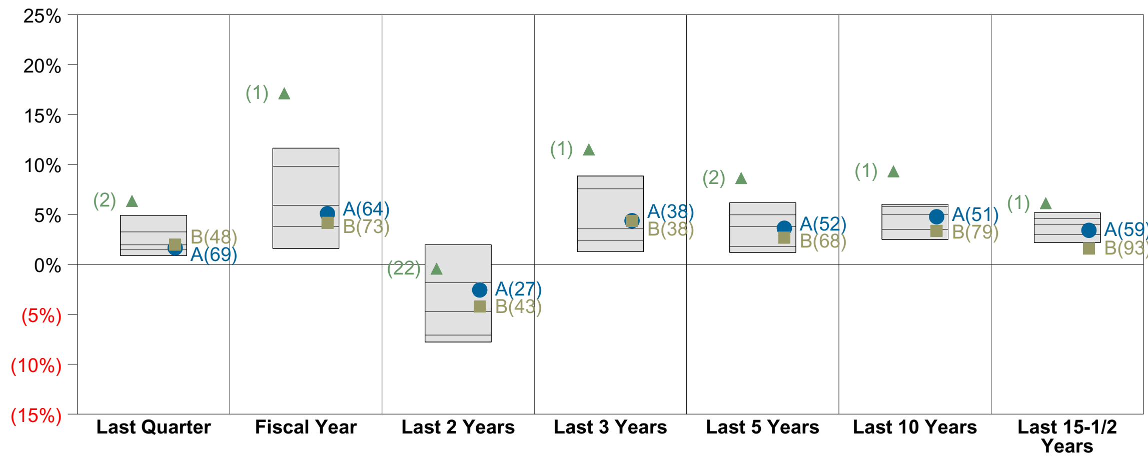
Investment Philosophy

ABS believes that equity long/short strategies provide an attractive long term risk reward profile in all market environments, making it not only an appealing alternative to long-only investing, but also an attractive approach to alternative asset investing. Coupled with their focus on equity long/short strategies, ABS believes that the FoHF portfolio framework enables investors the opportunity to invest in diversified portfolios with less volatility than the general equity markets. ABS manages portfolios employing a fundamental, global investment focus that target global equity market returns with significantly less volatility over a full market cycle.

Quarterly Summary and Highlights

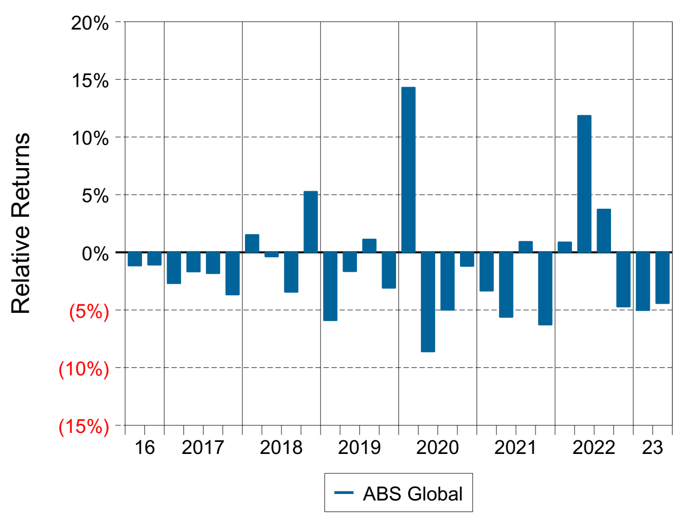
- ABS Global's portfolio posted a 1.64% return for the quarter placing it in the 69 percentile of the Callan Long/Short Equity Fund of Funds group for the quarter and in the 64 percentile for the last year.
- ABS Global's portfolio underperformed the MSCI ACWI GD by 4.71% for the quarter and underperformed the MSCI ACWI GD for the year by 12.05%.

Performance vs Callan Long/Short Equity Fund of Funds (Net)

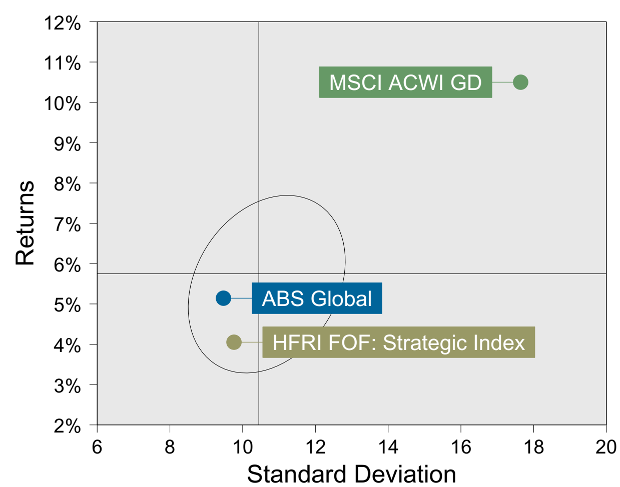


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 15-1/2 Years
10th Percentile	4.91	11.64	1.97	8.85	6.18	6.02	5.18
25th Percentile	3.25	9.82	(1.84)	7.56	4.96	5.80	4.59
Median	1.95	5.92	(4.73)	3.56	3.78	5.02	4.02
75th Percentile	1.46	3.79	(7.08)	2.42	1.79	3.50	2.98
90th Percentile	0.87	1.58	(7.78)	1.27	1.19	2.49	2.18
ABS Global ● A	1.64	5.08	(2.57)	4.37	3.62	4.76	3.41
HFRI FOF: Strategic Index ■ B	1.97	4.16	(4.22)	4.34	2.67	3.35	1.58
MSCI ACWI GD ▲	6.35	17.13	(0.43)	11.51	8.64	9.32	6.13

Relative Return vs MSCI ACWI GD



Callan Long/Short Equity Fund of Funds (Net) Annualized Seven Year Risk vs Return

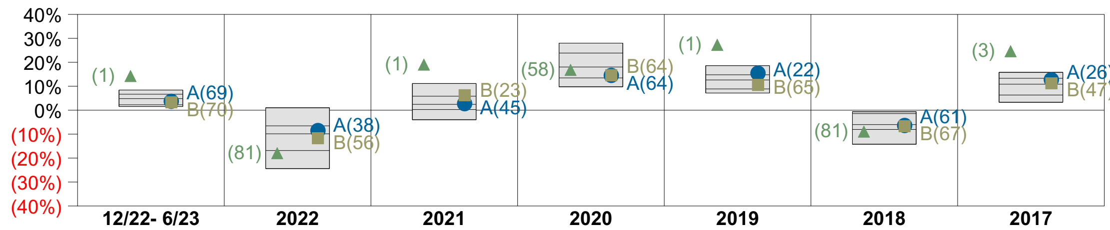


ABS Global
Return Analysis Summary

Return Analysis

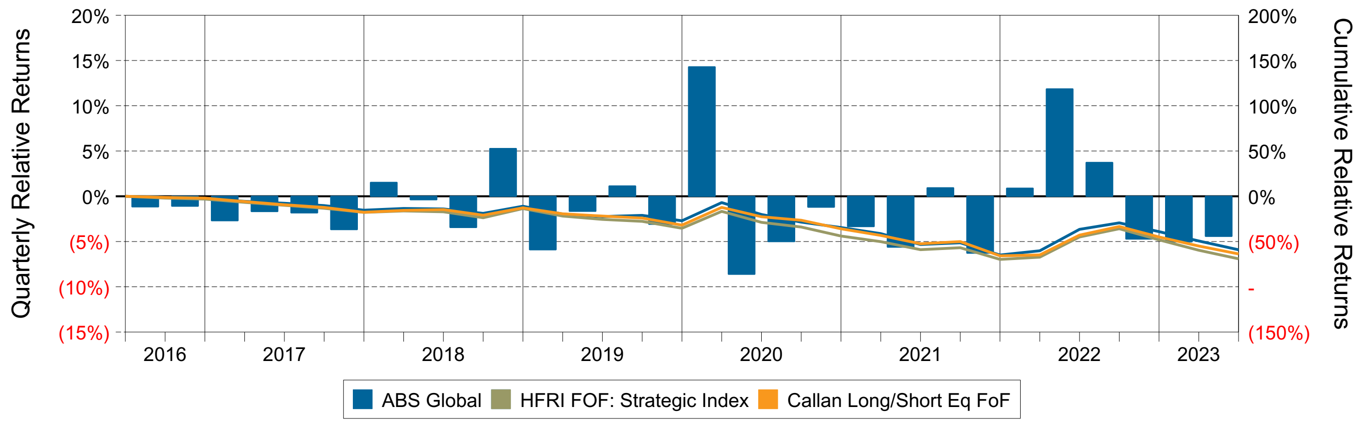
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Long/Short Equity Fund of Funds (Net)

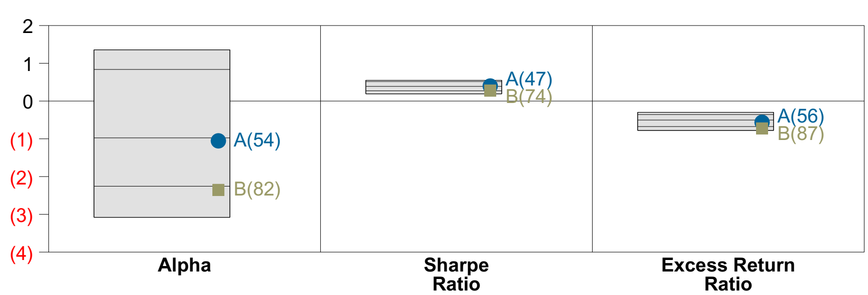


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	8.42	1.02	11.14	28.00	18.61	(0.63)	15.82
25th Percentile	6.67	(6.54)	5.84	23.87	14.79	(1.42)	13.32
Median	4.83	(9.85)	2.44	18.05	12.63	(6.02)	10.86
75th Percentile	2.25	(16.85)	0.27	13.49	8.89	(8.04)	6.33
90th Percentile	1.53	(24.38)	(3.99)	9.78	7.17	(14.21)	3.30
ABS Global ● A	3.71	(8.50)	2.72	14.53	15.45	(6.37)	12.75
HFRI FOF: Strategic Index ■ B	3.25	(11.71)	6.26	14.62	10.52	(6.67)	11.22
MSCI ACWI GD ▲	14.26	(17.96)	19.04	16.82	27.30	(8.93)	24.62

Cumulative and Quarterly Relative Returns vs MSCI ACWI GD



Risk Adjusted Return Measures vs MSCI ACWI GD
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023



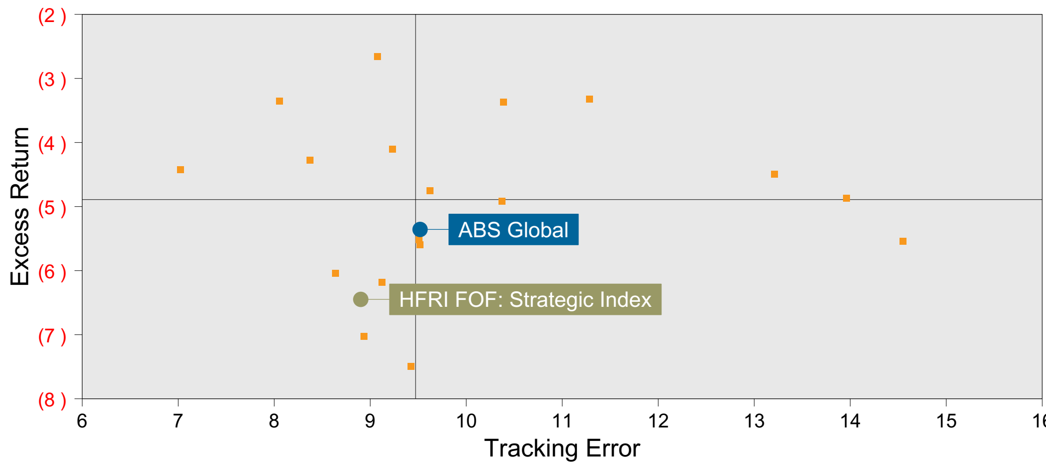
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.36	0.55	(0.30)
25th Percentile	0.84	0.52	(0.36)
Median	(0.97)	0.39	(0.50)
75th Percentile	(2.26)	0.27	(0.68)
90th Percentile	(3.08)	0.19	(0.78)
ABS Global ● A	(1.05)	0.40	(0.56)
HFRI FOF: Strategic Index ■ B	(2.35)	0.27	(0.72)

ABS Global
Risk Analysis Summary

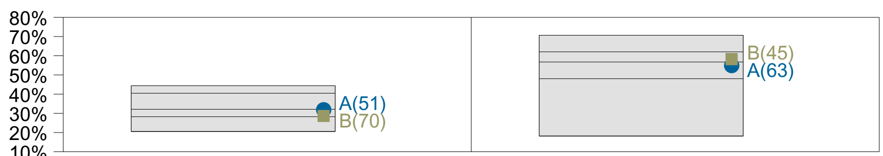
Risk Analysis

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 Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023

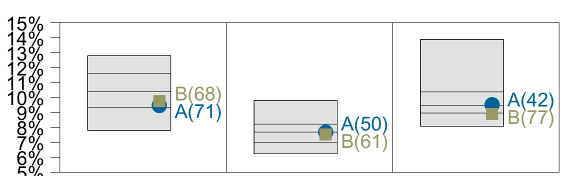


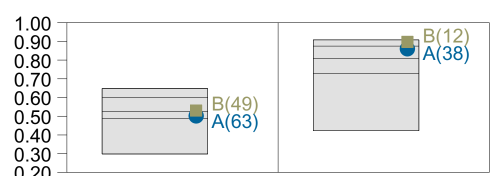
Market Capture vs MSCI ACWI (Gross)
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	44.38	70.67
25th Percentile	40.48	62.03
Median	32.12	56.74
75th Percentile	28.23	48.04
90th Percentile	20.54	18.16
ABS Global ● A	31.84	54.90
HFRI FOF: Strategic Index ■ B	28.64	58.19

Risk Statistics Rankings vs MSCI ACWI (Gross)
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	12.79	9.80	13.88
25th Percentile	11.61	8.22	10.38
Median	10.39	7.69	9.47
75th Percentile	9.35	7.02	8.96
90th Percentile	7.81	6.25	8.08
ABS Global ● A	9.47	7.68	9.52
HFRI FOF: Strategic Index ■ B	9.76	7.54	8.90

	Beta	R-Squared
10th Percentile	0.65	0.91
25th Percentile	0.60	0.87
Median	0.53	0.81
75th Percentile	0.49	0.73
90th Percentile	0.30	0.42
ABS Global ● A	0.50	0.86
HFRI FOF: Strategic Index ■ B	0.53	0.90

Blackstone Park Ave. NT
Period Ended June 30, 2023

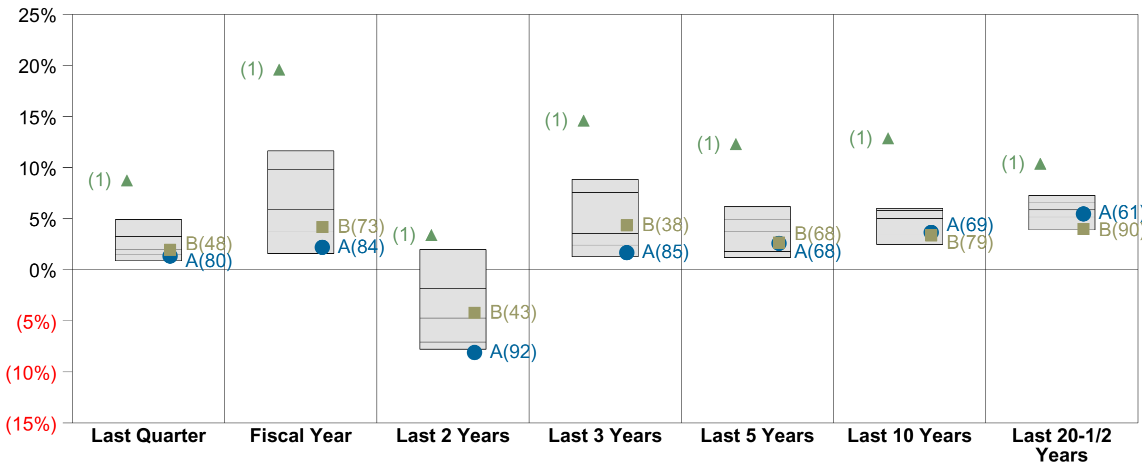
Investment Philosophy

BAAM's investment philosophy is to utilize leading non-traditional money managers to achieve attractive risk-adjusted returns with low volatility and low correlation to traditional asset classes. Their fund-of-hedge-funds offerings are designed to deliver a high degree of consistency in performance by being well diversified among a variety of outstanding managers whose strategies balance and complement each other. A focus on downside protection is a prominent theme across all strategies.

Quarterly Summary and Highlights

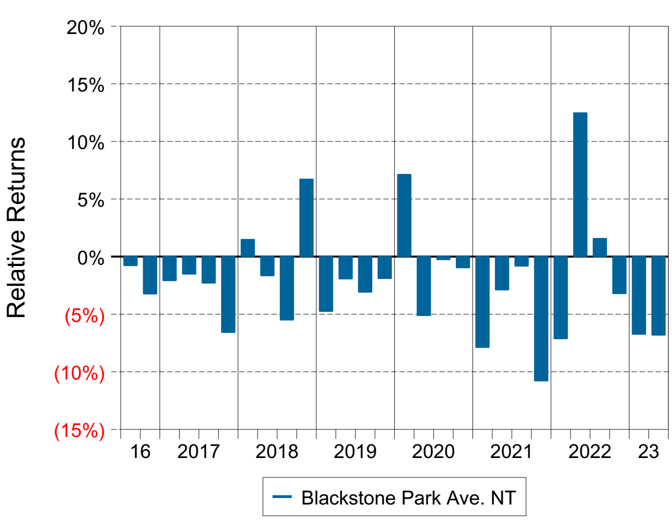
- Blackstone Park Ave. NT's portfolio posted a 1.34% return for the quarter placing it in the 80 percentile of the Callan Long/Short Equity Fund of Funds group for the quarter and in the 84 percentile for the last year.
- Blackstone Park Ave. NT's portfolio underperformed the S&P 500 Index by 7.40% for the quarter and underperformed the S&P 500 Index for the year by 17.40%.

Performance vs Callan Long/Short Equity Fund of Funds (Net)

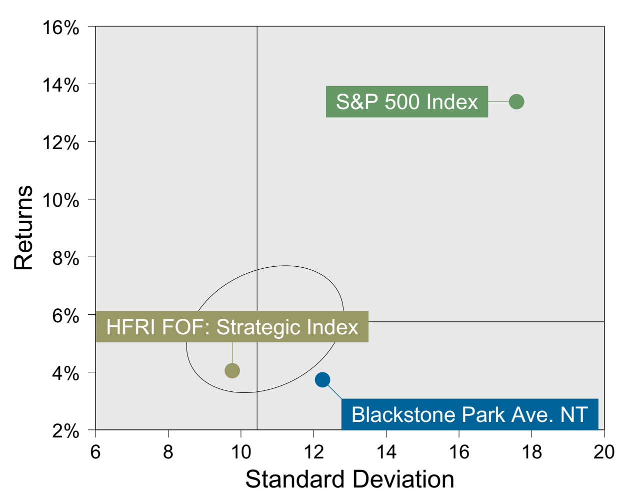


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 20-1/2 Years
10th Percentile	4.91	11.64	1.97	8.85	6.18	6.02	7.27
25th Percentile	3.25	9.82	(1.84)	7.56	4.96	5.80	6.62
Median	1.95	5.92	(4.73)	3.56	3.78	5.02	5.87
75th Percentile	1.46	3.79	(7.08)	2.42	1.79	3.50	5.17
90th Percentile	0.87	1.58	(7.78)	1.27	1.19	2.49	3.90
Blackstone Park Ave. NT ● A	1.34	2.20	(8.10)	1.67	2.59	3.65	5.47
HFRI FOF: Strategic Index ■ B	1.97	4.16	(4.22)	4.34	2.67	3.35	3.98
S&P 500 Index ▲	8.74	19.59	3.39	14.60	12.31	12.86	10.39

Relative Return vs S&P 500 Index



Callan Long/Short Equity Fund of Funds (Net)
Annualized Seven Year Risk vs Return

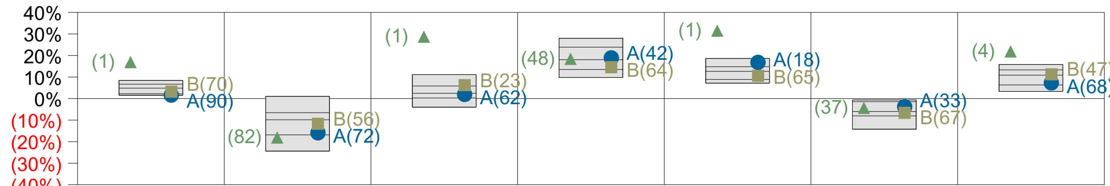


Blackstone Park Ave. NT
Return Analysis Summary

Return Analysis

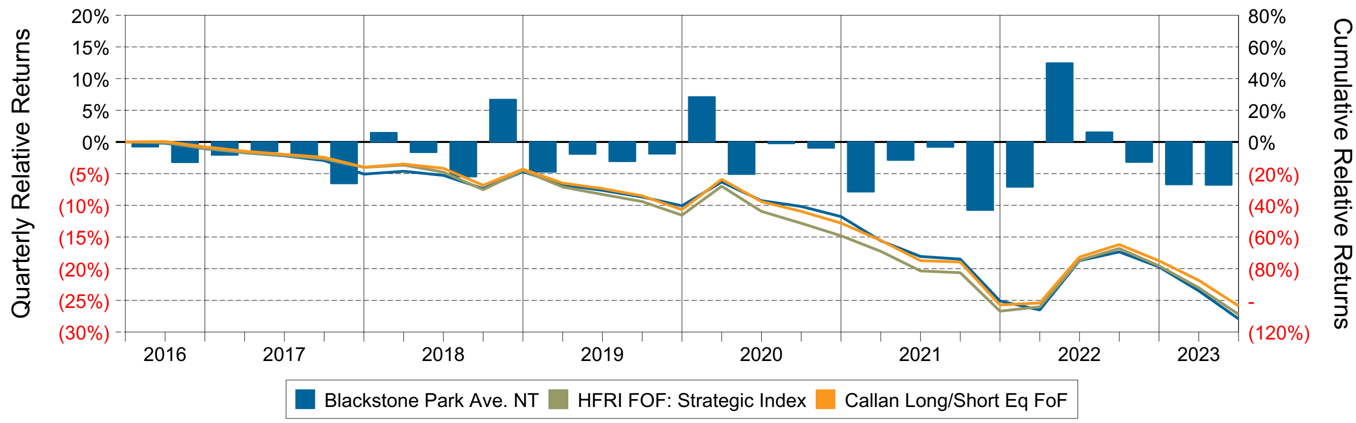
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Long/Short Equity Fund of Funds (Net)

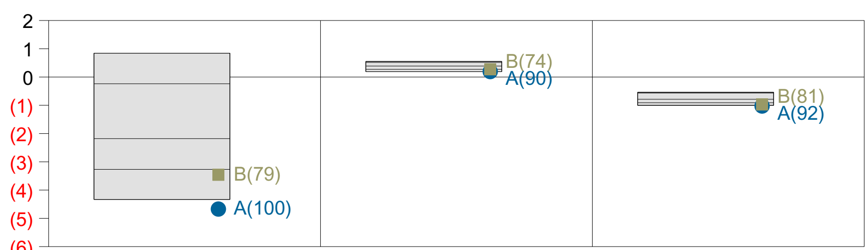


		12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile		8.42	1.02	11.14	28.00	18.61	(0.63)	15.82
25th Percentile		6.67	(6.54)	5.84	23.87	14.79	(1.42)	13.32
Median		4.83	(9.85)	2.44	18.05	12.63	(6.02)	10.86
75th Percentile		2.25	(16.85)	0.27	13.49	8.89	(8.04)	6.33
90th Percentile		1.53	(24.38)	(3.99)	9.78	7.17	(14.21)	3.30
Blackstone Park Ave. NT	● A	1.61	(15.90)	1.91	18.91	16.80	(3.76)	7.26
HFRI FOF: Strategic Index	■ B	3.25	(11.71)	6.26	14.62	10.52	(6.67)	11.22
S&P 500 Index	▲	16.89	(18.11)	28.71	18.40	31.49	(4.38)	21.83

Cumulative and Quarterly Relative Returns vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023



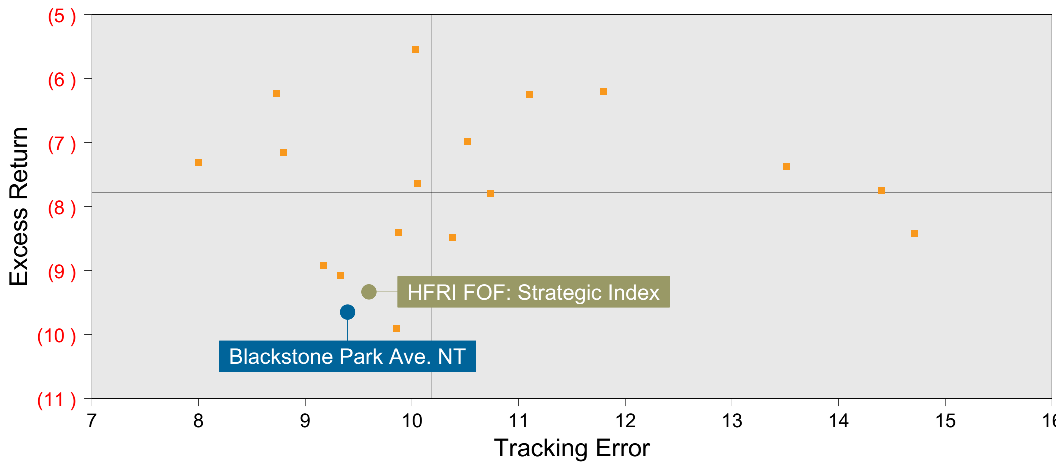
		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		0.84	0.55	(0.54)
25th Percentile		(0.24)	0.52	(0.57)
Median		(2.18)	0.39	(0.79)
75th Percentile		(3.27)	0.27	(0.91)
90th Percentile		(4.33)	0.19	(1.00)
Blackstone Park Ave. NT	● A	(4.67)	0.19	(1.03)
HFRI FOF: Strategic Index	■ B	(3.46)	0.27	(0.97)

Blackstone Park Ave. NT
Risk Analysis Summary

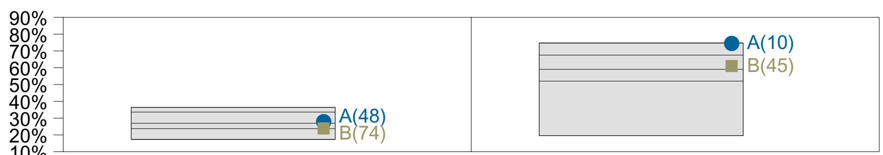
Risk Analysis

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 Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023

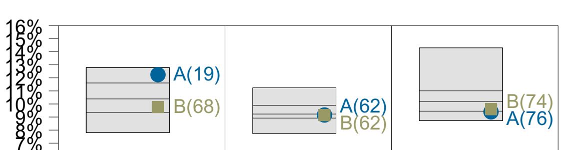


Market Capture vs S&P 500 Index
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023

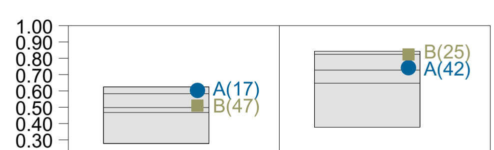


		Up Market Capture	Down Market Capture
10th Percentile		36.42	74.74
25th Percentile		33.60	67.51
Median		26.95	59.03
75th Percentile		23.75	52.04
90th Percentile		17.33	19.55
Blackstone Park Ave. NT	● A	27.87	74.46
HFRI FOF: Strategic Index	■ B	23.94	60.98

Risk Statistics Rankings vs S&P 500 Index
Rankings Against Callan Long/Short Equity Fund of Funds (Net)
Seven Years Ended June 30, 2023



		Standard Deviation	Downside Risk	Tracking Error
10th Percentile		12.79	11.24	14.30
25th Percentile		11.61	9.89	11.01
Median		10.39	9.23	10.19
75th Percentile		9.35	8.92	9.45
90th Percentile		7.81	7.72	8.72
Blackstone Park Ave. NT	● A	12.25	9.16	9.40
HFRI FOF: Strategic Index	■ B	9.76	9.14	9.60

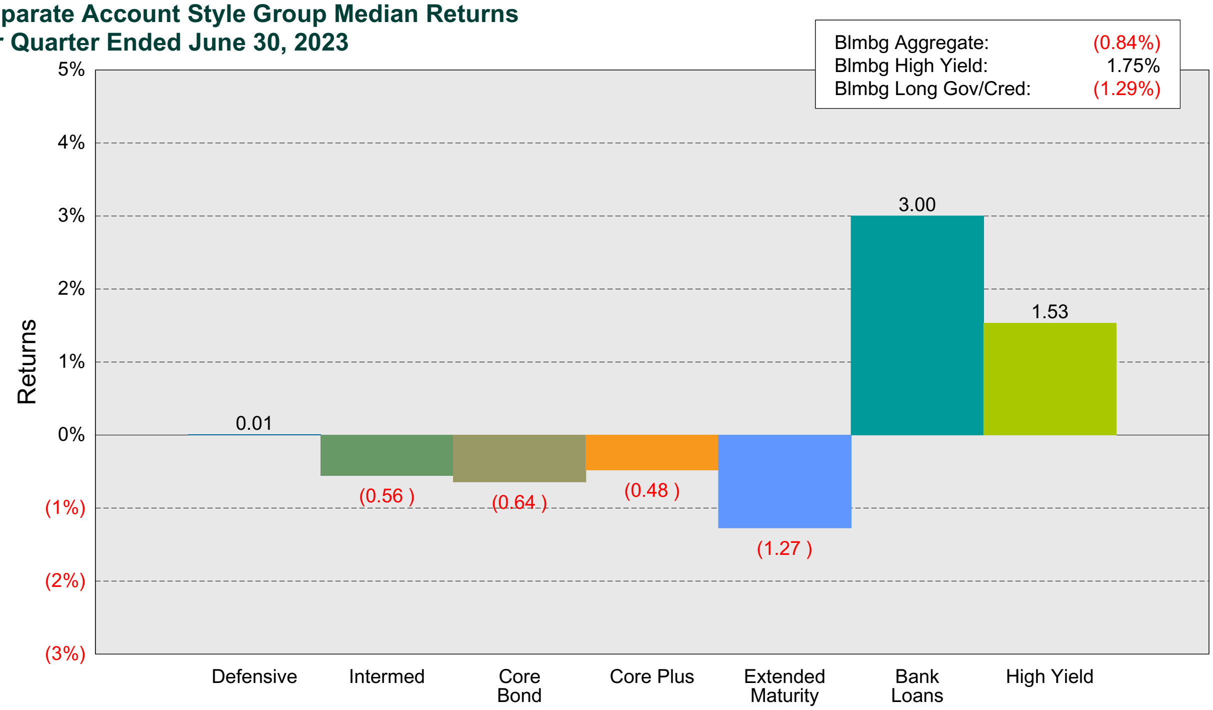


		Beta	R-Squared
10th Percentile		0.62	0.84
25th Percentile		0.58	0.82
Median		0.50	0.73
75th Percentile		0.47	0.65
90th Percentile		0.28	0.38
Blackstone Park Ave. NT	● A	0.60	0.74
HFRI FOF: Strategic Index	■ B	0.51	0.82

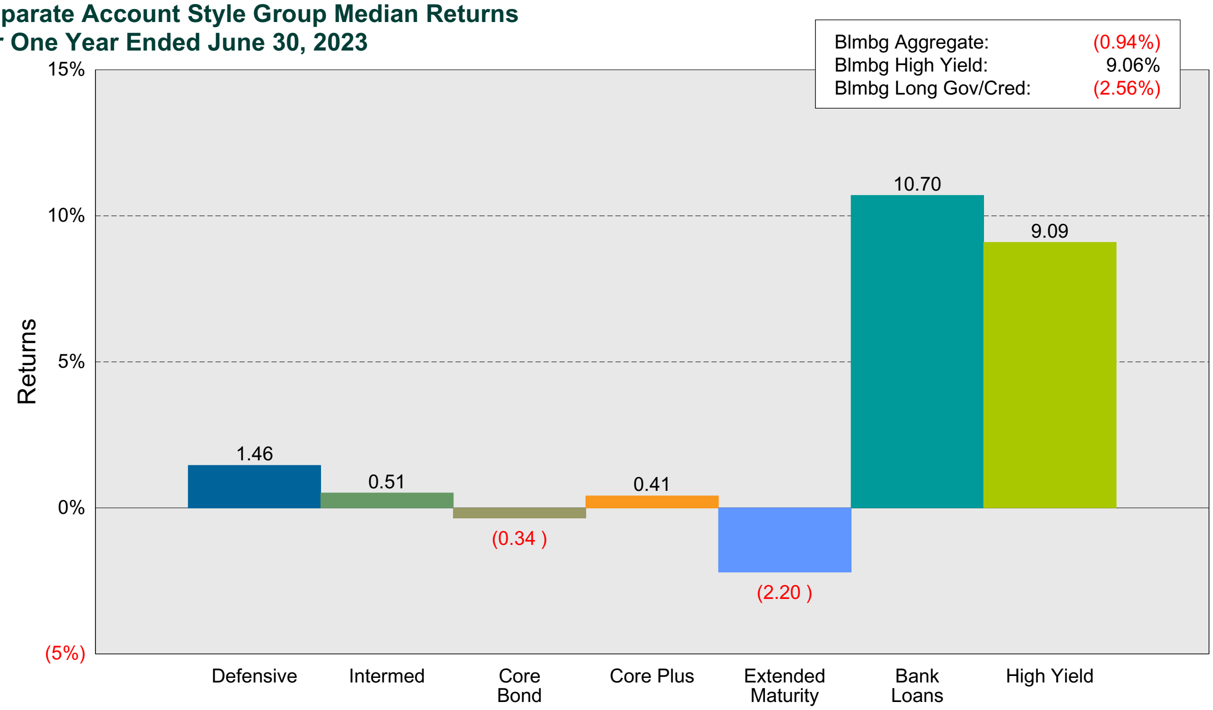
Domestic Fixed Income
Active Management Overview

The Bloomberg US Aggregate Bond Index fell 0.8% in 2Q as interest rates rose. A risk-on environment bolstered returns for credit and securitized sectors, both of which outperformed U.S. Treasuries on a duration-adjusted basis. The 10-year U.S. Treasury yield was 3.81% as of quarter-end, up from 3.48% as of 3/31. The yield curve was sharply inverted at quarter-end with the 2-year U.S. Treasury yielding 4.87%. High yield (Bloomberg High Yield Index: +1.8%) performed well amid robust risk appetite, muted issuance, and promising economic news.

Separate Account Style Group Median Returns for Quarter Ended June 30, 2023



Separate Account Style Group Median Returns for One Year Ended June 30, 2023

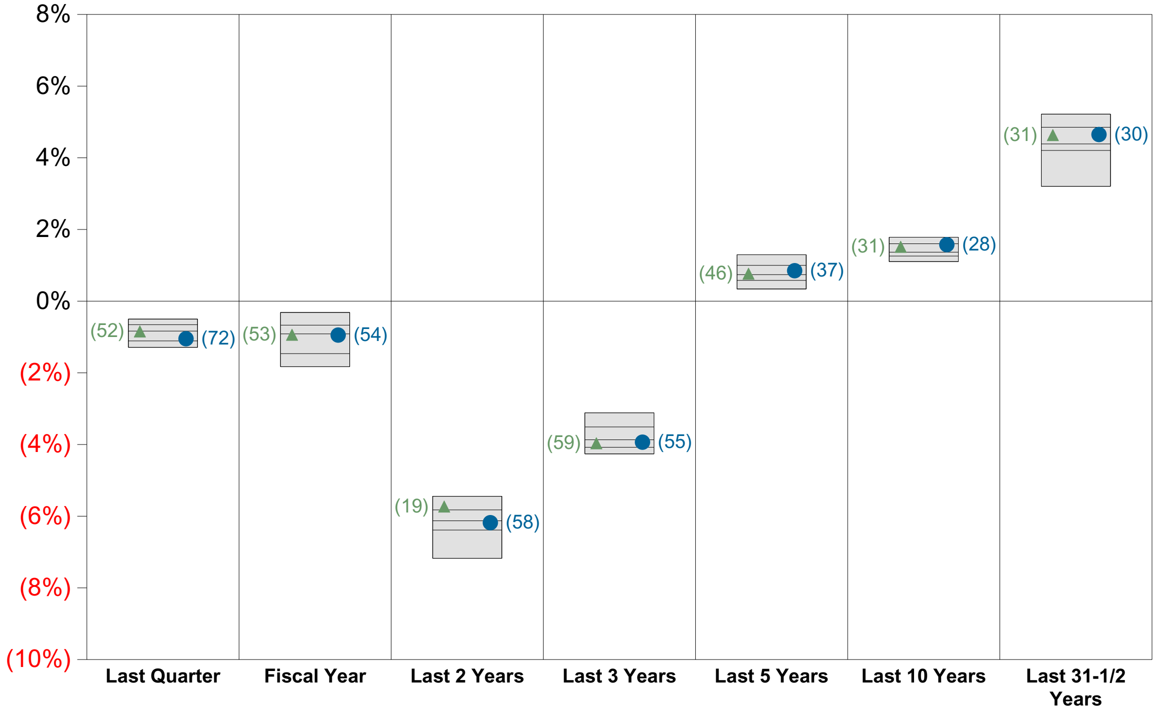


Domestic Fixed Income
Period Ended June 30, 2023

Quarterly Summary and Highlights

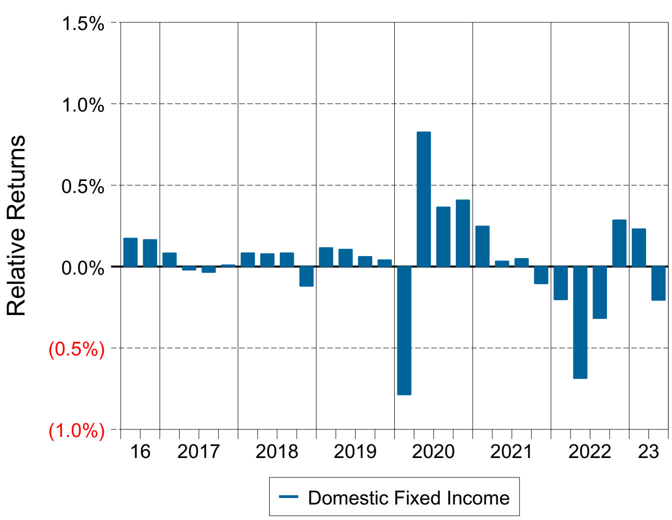
- Domestic Fixed Income's portfolio posted a (1.05)% return for the quarter placing it in the 72 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 54 percentile for the last year.
- Domestic Fixed Income's portfolio underperformed the Blmbg:Aggregate by 0.20% for the quarter and underperformed the Blmbg:Aggregate for the year by 0.01%.

Performance vs Callan Core Bond Mutual Funds (Net)

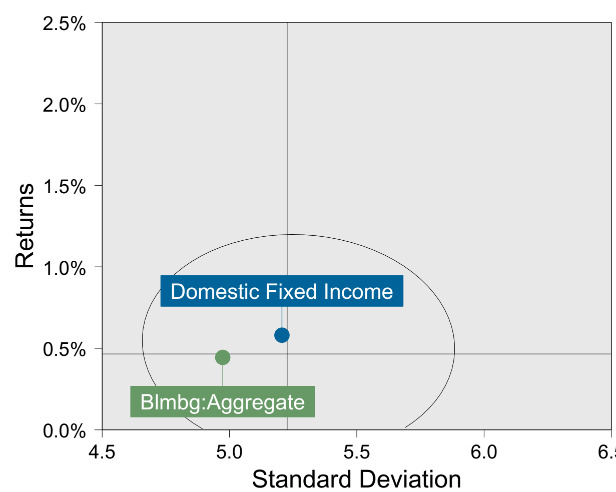


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 31-1/2 Years
10th Percentile	(0.50)	(0.31)	(5.45)	(3.12)	1.30	1.78	5.22
25th Percentile	(0.66)	(0.67)	(5.82)	(3.51)	1.00	1.60	4.85
Median	(0.83)	(0.91)	(6.13)	(3.87)	0.74	1.37	4.39
75th Percentile	(1.11)	(1.46)	(6.39)	(4.08)	0.58	1.26	4.21
90th Percentile	(1.29)	(1.83)	(7.17)	(4.26)	0.34	1.10	3.20
Domestic Fixed Income ●	(1.05)	(0.95)	(6.18)	(3.93)	0.85	1.58	4.65
Blmbg:Aggregate ▲	(0.84)	(0.94)	(5.73)	(3.96)	0.77	1.52	4.63

Relative Return vs Blmbg:Aggregate



Callan Core Bond Mutual Funds (Net)
Annualized Seven Year Risk vs Return

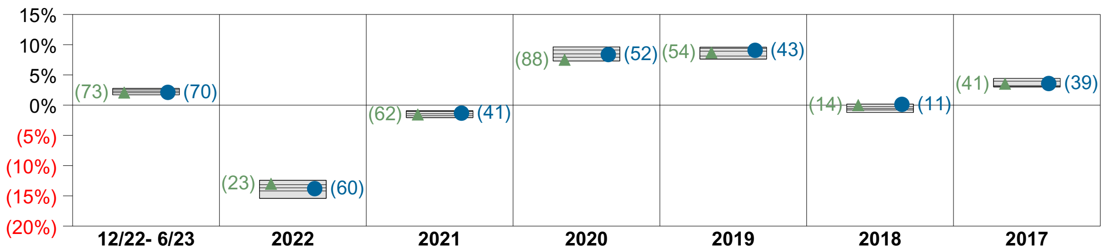


Domestic Fixed Income
Return Analysis Summary

Return Analysis

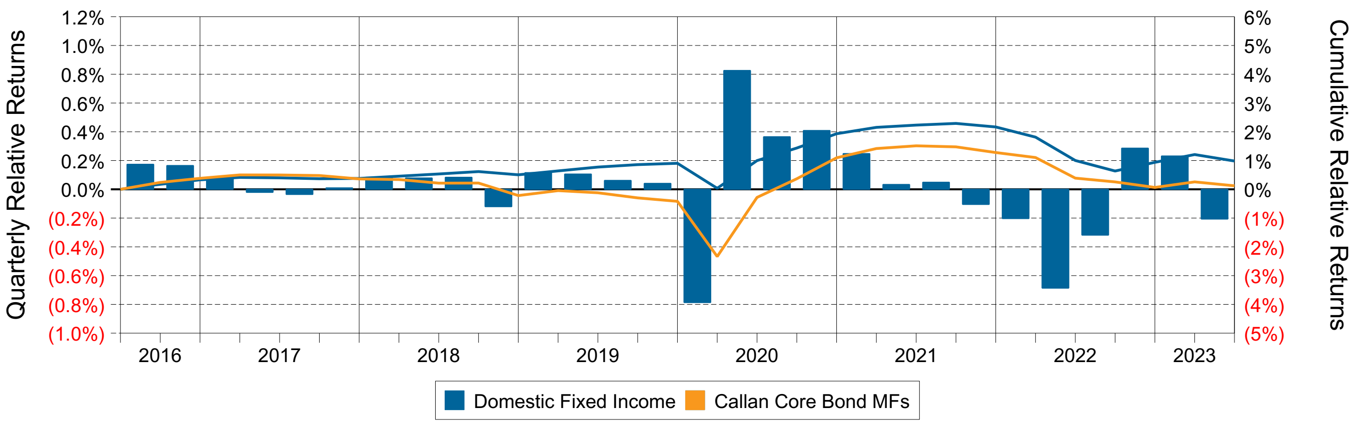
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Core Bond Mutual Funds (Net)

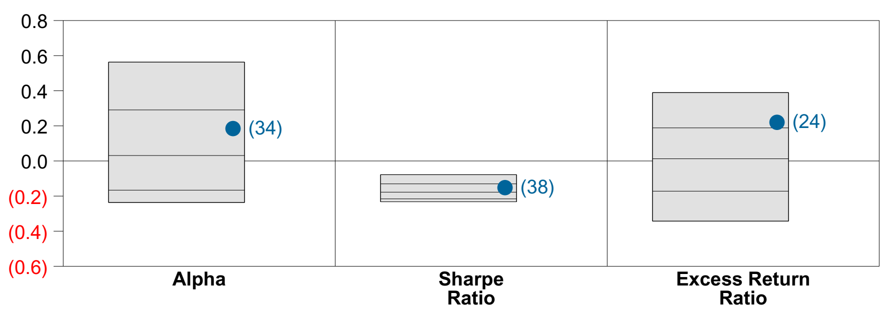


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	2.78	(12.43)	(0.91)	9.63	9.58	0.18	4.43
25th Percentile	2.62	(13.16)	(1.05)	9.12	9.40	(0.24)	3.96
Median	2.31	(13.67)	(1.41)	8.48	8.93	(0.57)	3.23
75th Percentile	2.07	(14.18)	(1.74)	7.92	8.12	(0.79)	3.08
90th Percentile	1.70	(15.42)	(2.07)	7.30	7.62	(1.21)	3.00
Domestic Fixed Income ●	2.12	(13.81)	(1.32)	8.37	9.07	0.14	3.58
Blmbg:Aggregate ▲	2.09	(13.01)	(1.54)	7.51	8.72	0.01	3.54

Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate
Rankings Against Callan Core Bond Mutual Funds (Net)
Seven Years Ended June 30, 2023



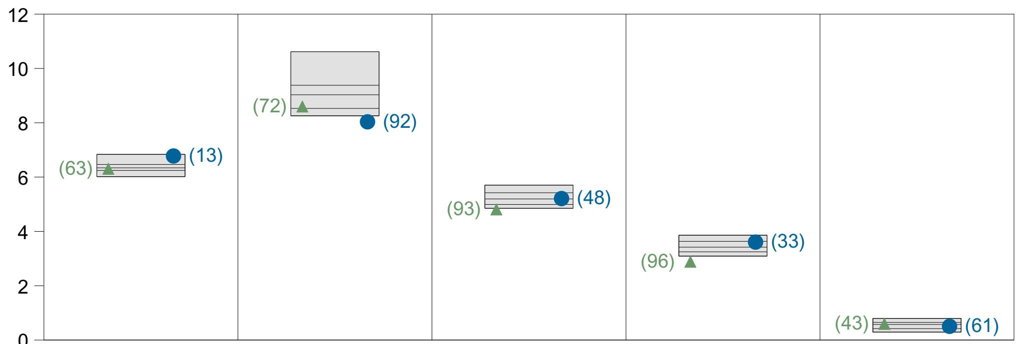
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.56	(0.08)	0.39
25th Percentile	0.29	(0.13)	0.19
Median	0.03	(0.18)	0.01
75th Percentile	(0.17)	(0.22)	(0.17)
90th Percentile	(0.24)	(0.23)	(0.34)
Domestic Fixed Income ●	0.18	(0.15)	0.22

Domestic Fixed Income
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 June 30, 2023

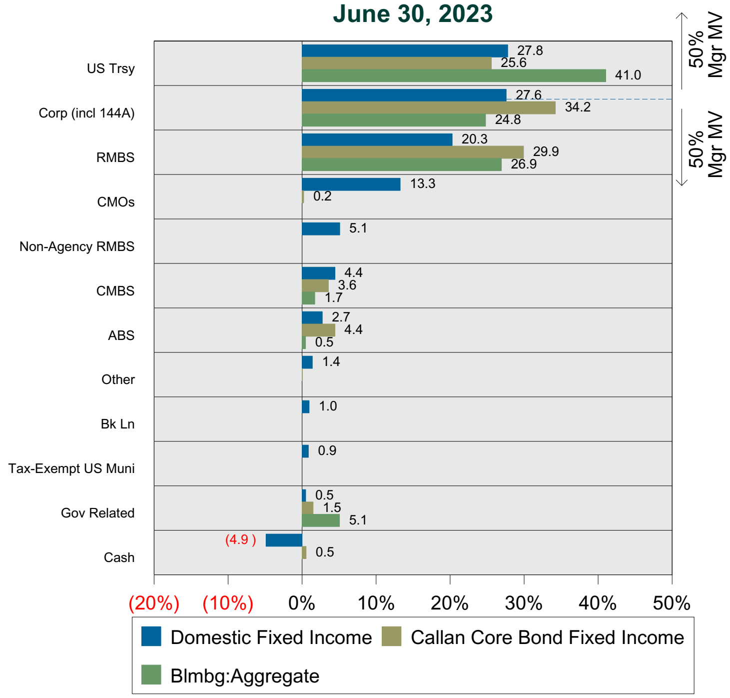


	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	6.84	10.62	5.70	3.86	0.80
25th Percentile	6.47	9.38	5.42	3.63	0.65
Median	6.34	9.03	5.20	3.42	0.57
75th Percentile	6.24	8.53	4.99	3.25	0.42
90th Percentile	6.02	8.26	4.85	3.09	0.29
Domestic Fixed Income ●	6.78	8.03	5.21	3.61	0.51
Blmbg:Aggregate ▲	6.31	8.60	4.81	2.88	0.60

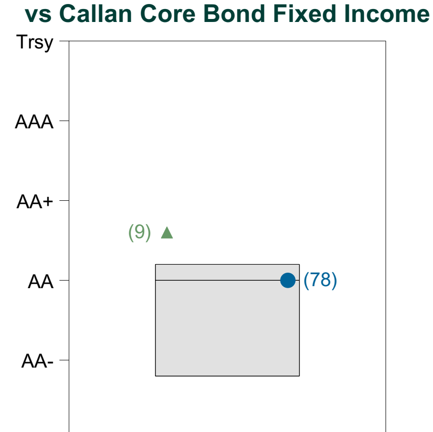
Sector Allocation and Quality Ratings

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.

Sector Allocation
June 30, 2023



Quality Ratings
vs Callan Core Bond Fixed Income



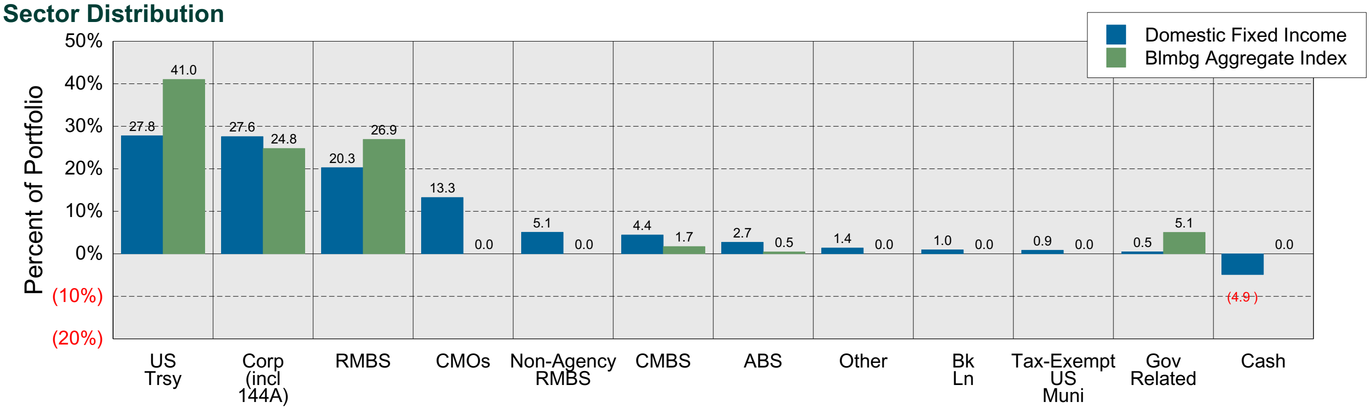
	Weighted Average Quality Rating
10th Percentile	AA
25th Percentile	AA
Median	AA
75th Percentile	AA
90th Percentile	AA-
Domestic Fixed Income ●	AA
Blmbg:Aggregate ▲	AA+

Domestic Fixed Income
Portfolio Characteristics Summary
As of June 30, 2023

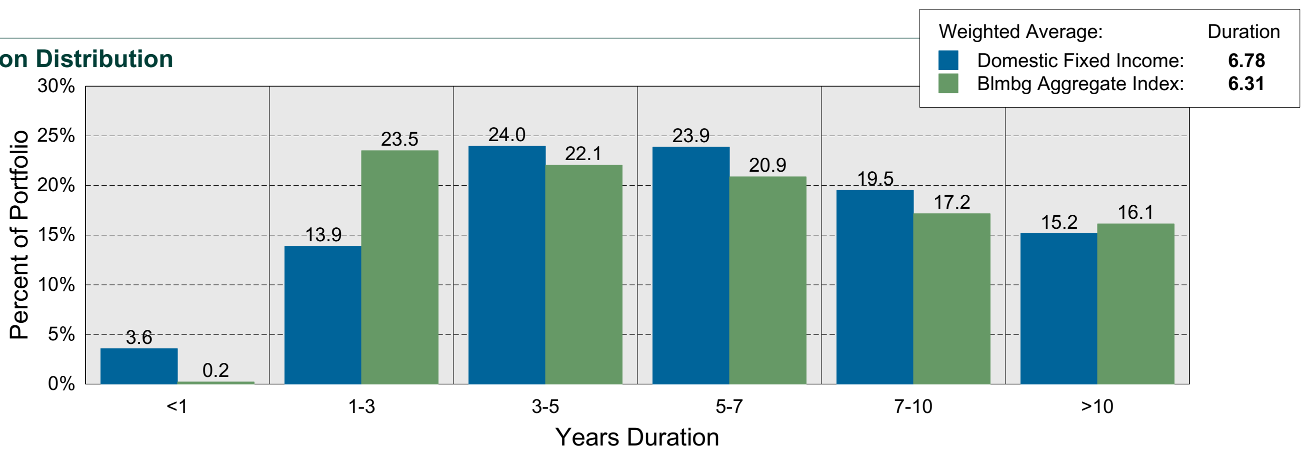
Portfolio Structure Comparison

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.

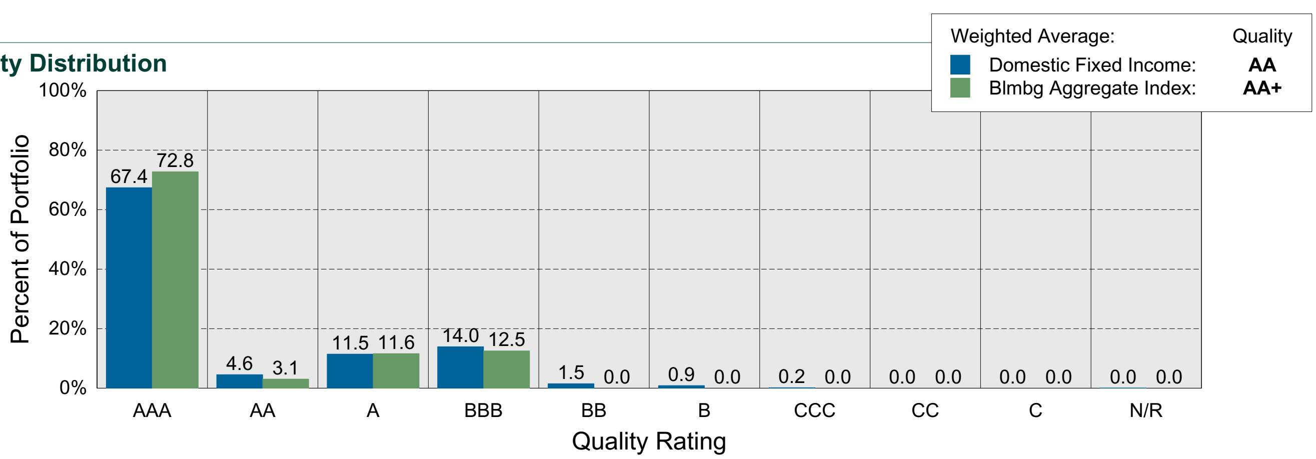
Sector Distribution



Duration Distribution



Quality Distribution



Prudential Cons Core Bond
Period Ended June 30, 2023

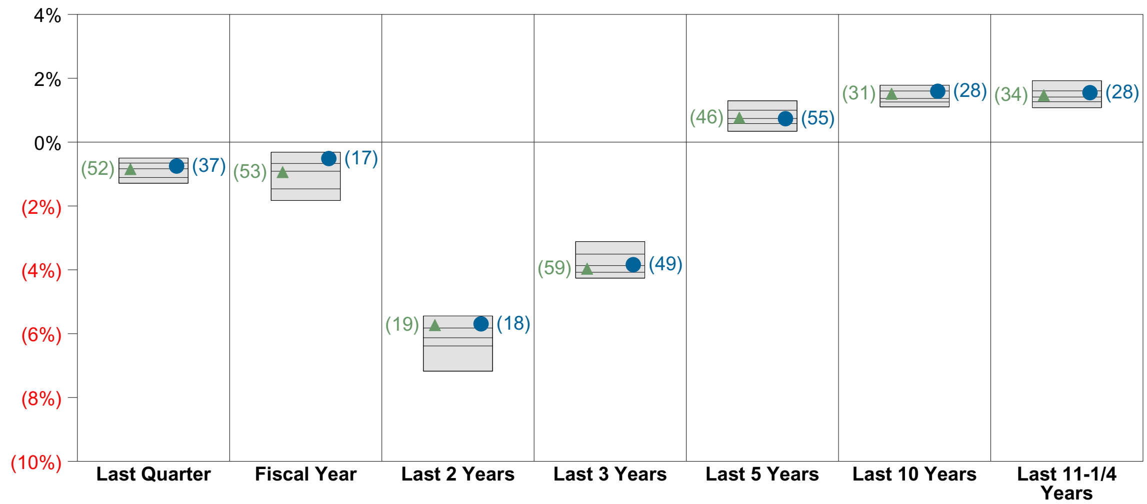
Investment Philosophy

PGIM Fixed Income's Core Conservative strategy is a benchmark-focused, investment grade-only, risk-controlled core strategy that seeks +25 bps over the Bloomberg Barclays Aggregate Index with index-like risk. The strategy seeks to generate virtually all of its excess return from just two activities: bottom-up subsector rotation within the corporate and mortgage/structured product sectors, and research-based security selection in all sectors. Top-down decisions such as duration, yield curve, and sector allocation are tightly constrained to benchmark weightings at all times.

Quarterly Summary and Highlights

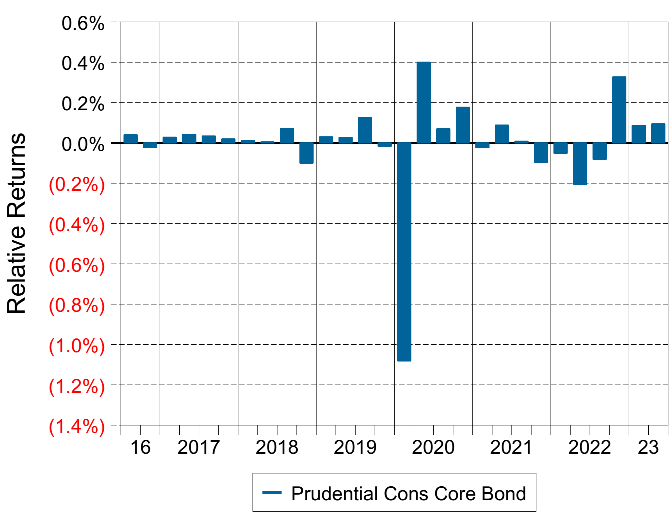
- Prudential Cons Core Bond's portfolio posted a (0.75)% return for the quarter placing it in the 37 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 17 percentile for the last year.
- Prudential Cons Core Bond's portfolio outperformed the Blmbg:Aggregate by 0.09% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.42%.

Performance vs Callan Core Bond Mutual Funds (Net)

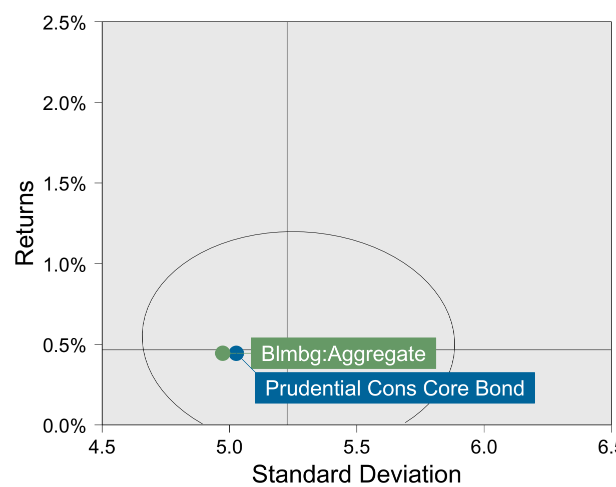


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 11-1/4 Years
10th Percentile	(0.50)	(0.31)	(5.45)	(3.12)	1.30	1.78	1.92
25th Percentile	(0.66)	(0.67)	(5.82)	(3.51)	1.00	1.60	1.61
Median	(0.83)	(0.91)	(6.13)	(3.87)	0.74	1.37	1.41
75th Percentile	(1.11)	(1.46)	(6.39)	(4.08)	0.58	1.26	1.26
90th Percentile	(1.29)	(1.83)	(7.17)	(4.26)	0.34	1.10	1.08
Prudential Cons Core Bond ●	(0.75)	(0.51)	(5.69)	(3.84)	0.73	1.59	1.55
Blmbg:Aggregate ▲	(0.84)	(0.94)	(5.73)	(3.96)	0.77	1.52	1.47

Relative Return vs Blmbg:Aggregate



Callan Core Bond Mutual Funds (Net)
Annualized Seven Year Risk vs Return

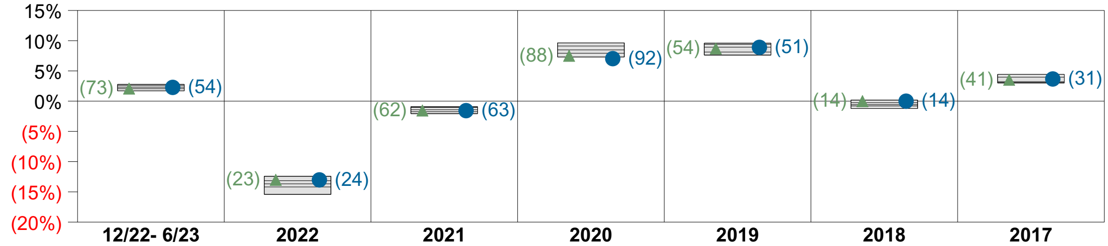


Prudential Cons Core Bond
Return Analysis Summary

Return Analysis

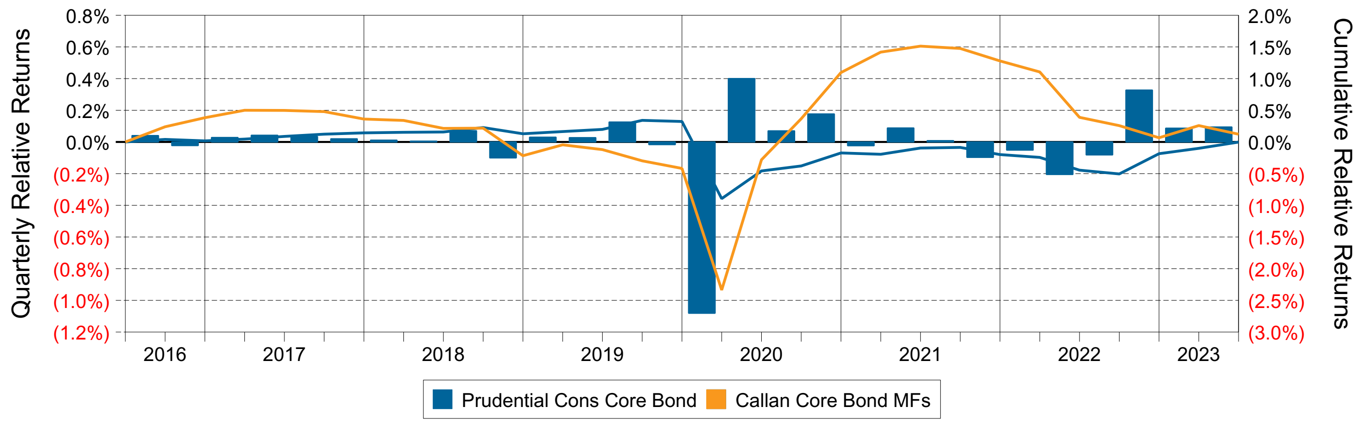
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

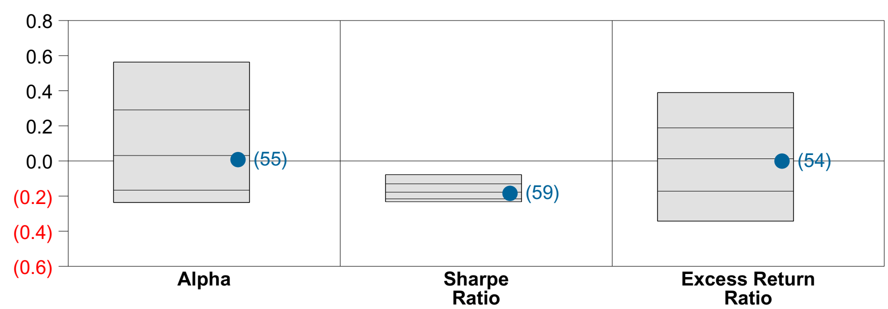


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	2.78	(12.43)	(0.91)	9.63	9.58	0.18	4.43
25th Percentile	2.62	(13.16)	(1.05)	9.12	9.40	(0.24)	3.96
Median	2.31	(13.67)	(1.41)	8.48	8.93	(0.57)	3.23
75th Percentile	2.07	(14.18)	(1.74)	7.92	8.12	(0.79)	3.08
90th Percentile	1.70	(15.42)	(2.07)	7.30	7.62	(1.21)	3.00
Prudential Cons Core Bond ●	2.28	(13.02)	(1.57)	7.03	8.90	(0.00)	3.67
Blmbg:Aggregate ▲	2.09	(13.01)	(1.54)	7.51	8.72	0.01	3.54

Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate
Rankings Against Callan Core Bond Mutual Funds (Net)
Seven Years Ended June 30, 2023



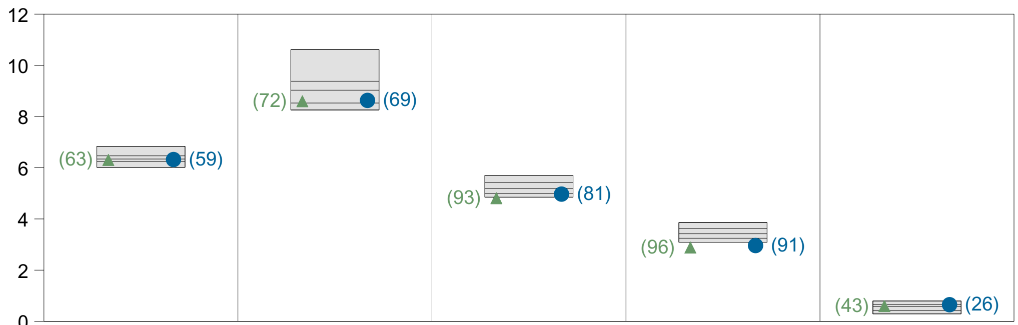
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.56	(0.08)	0.39
25th Percentile	0.29	(0.13)	0.19
Median	0.03	(0.18)	0.01
75th Percentile	(0.17)	(0.22)	(0.17)
90th Percentile	(0.24)	(0.23)	(0.34)
Prudential Cons Core Bond ●	0.01	(0.18)	(0.00)

Prudential Cons Core 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 Core Bond Fixed Income
as of June 30, 2023

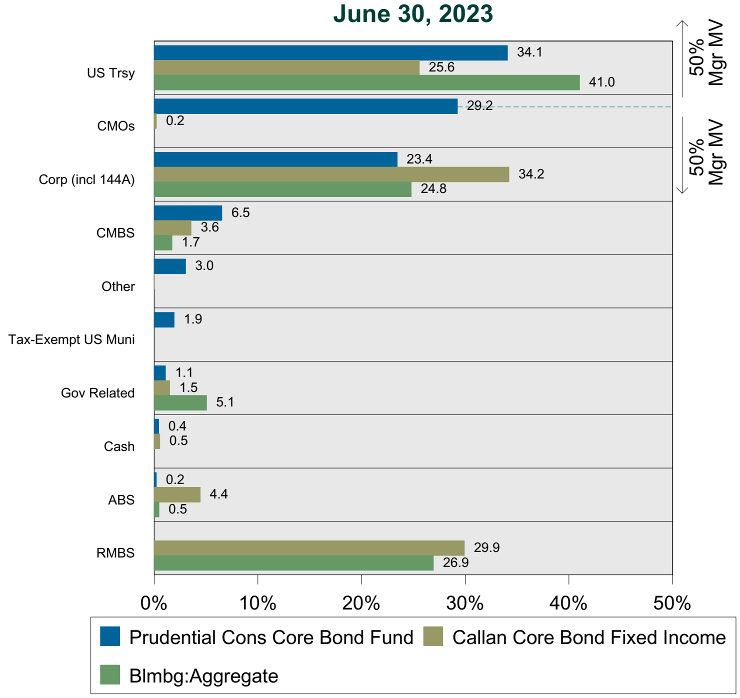


	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	6.84	10.62	5.70	3.86	0.80
25th Percentile	6.47	9.38	5.42	3.63	0.65
Median	6.34	9.03	5.20	3.42	0.57
75th Percentile	6.24	8.53	4.99	3.25	0.42
90th Percentile	6.02	8.26	4.85	3.09	0.29
Prudential Cons Core Bond Fund ●	6.32	8.63	4.97	2.96	0.65
Blmbg:Aggregate ▲	6.31	8.60	4.81	2.88	0.60

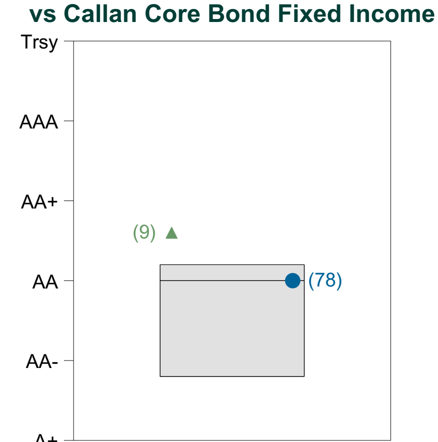
Sector Allocation and Quality Ratings

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.

Sector Allocation
June 30, 2023



Quality Ratings
vs Callan Core Bond Fixed Income



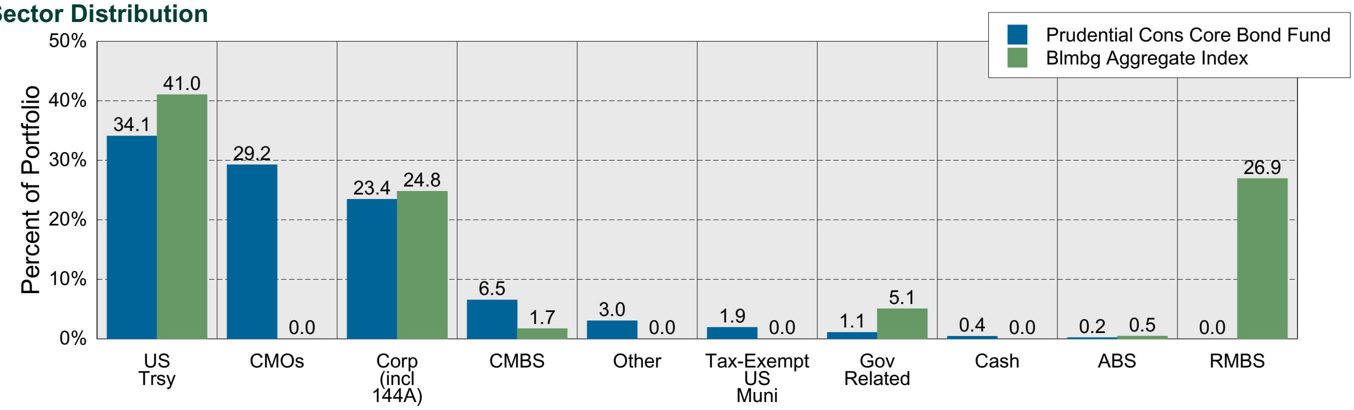
	Weighted Average Quality Rating
10th Percentile	AA
25th Percentile	AA
Median	AA
75th Percentile	AA
90th Percentile	AA-
Prudential Cons Core Bond Fund ●	AA
Blmbg:Aggregate ▲	AA+

Prudential Cons Core Bond Fund
Portfolio Characteristics Summary
As of June 30, 2023

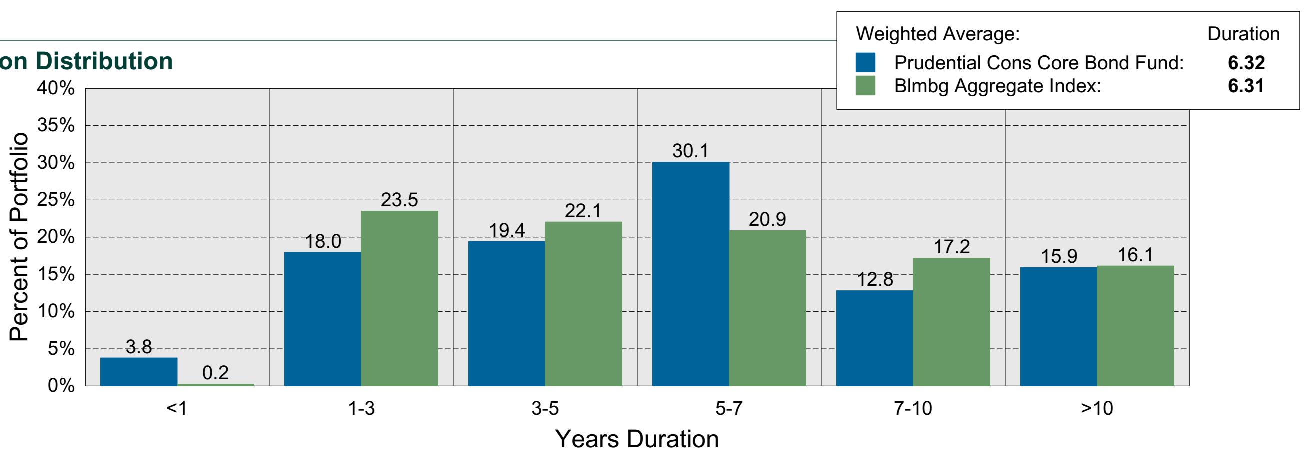
Portfolio Structure Comparison

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.

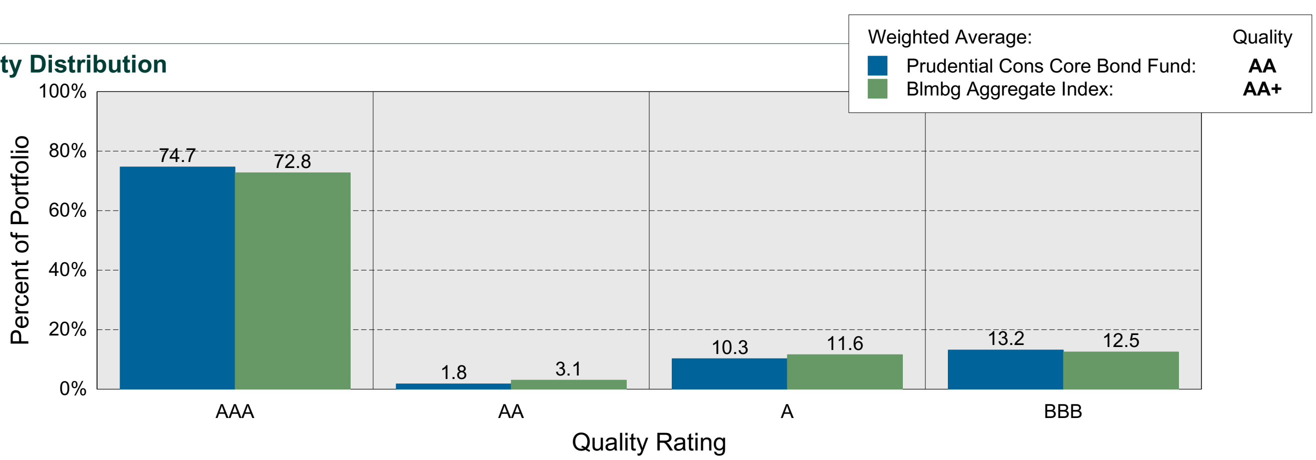
Sector Distribution



Duration Distribution



Quality Distribution

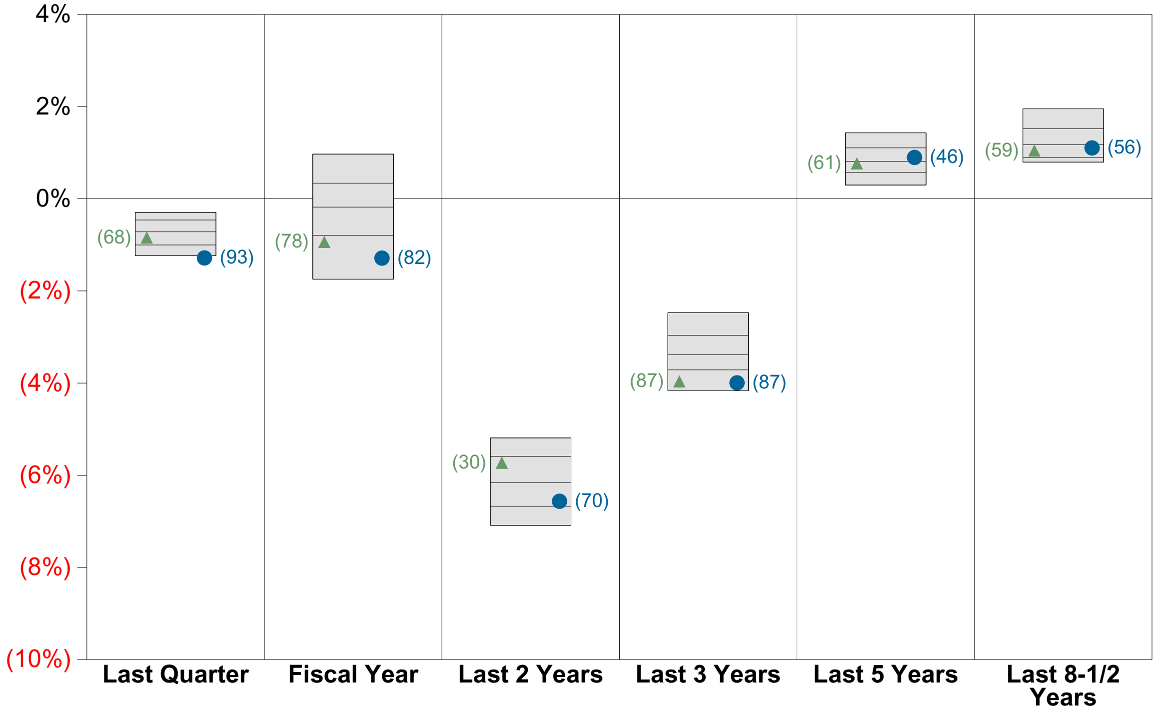


Metropolitan West Fund
Period Ended June 30, 2023

Quarterly Summary and Highlights

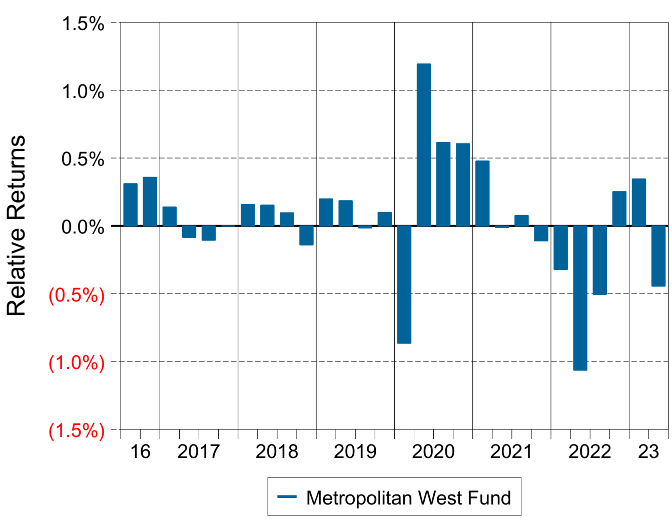
- Metropolitan West Fund's portfolio posted a (1.28)% return for the quarter placing it in the 93 percentile of the Callan Core Plus Mutual Funds group for the quarter and in the 82 percentile for the last year.
- Metropolitan West Fund's portfolio underperformed the Blmbg:Aggregate by 0.44% for the quarter and underperformed the Blmbg:Aggregate for the year by 0.35%.

Performance vs Callan Core Plus Mutual Funds (Net)

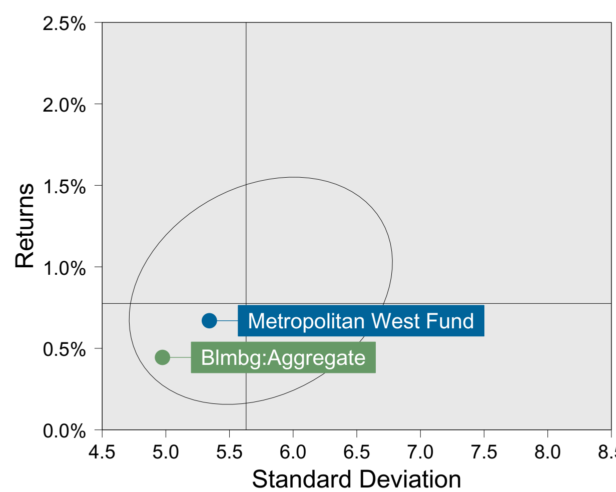


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 8-1/2 Years
10th Percentile	(0.30)	0.97	(5.19)	(2.47)	1.43	1.95
25th Percentile	(0.46)	0.34	(5.59)	(2.96)	1.10	1.52
Median	(0.72)	(0.18)	(6.16)	(3.38)	0.81	1.17
75th Percentile	(1.00)	(0.79)	(6.67)	(3.71)	0.57	0.89
90th Percentile	(1.24)	(1.75)	(7.09)	(4.17)	0.30	0.80
Metropolitan West Fund ●	(1.28)	(1.29)	(6.57)	(4.00)	0.90	1.10
Blmbg:Aggregate ▲	(0.84)	(0.94)	(5.73)	(3.96)	0.77	1.04

Relative Return vs Blmbg:Aggregate



Callan Core Plus Mutual Funds (Net) Annualized Seven Year Risk vs Return

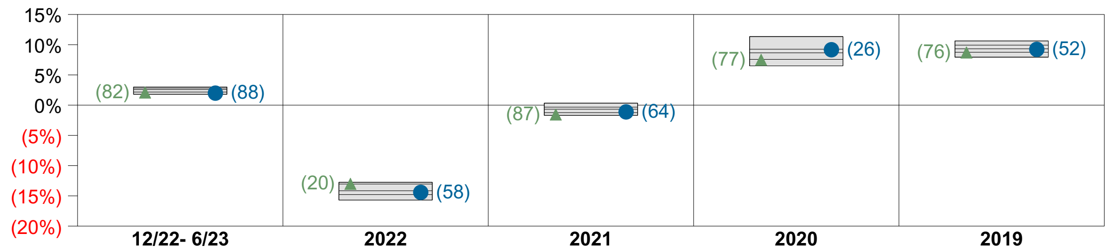


Metropolitan West Fund
Return Analysis Summary

Return Analysis

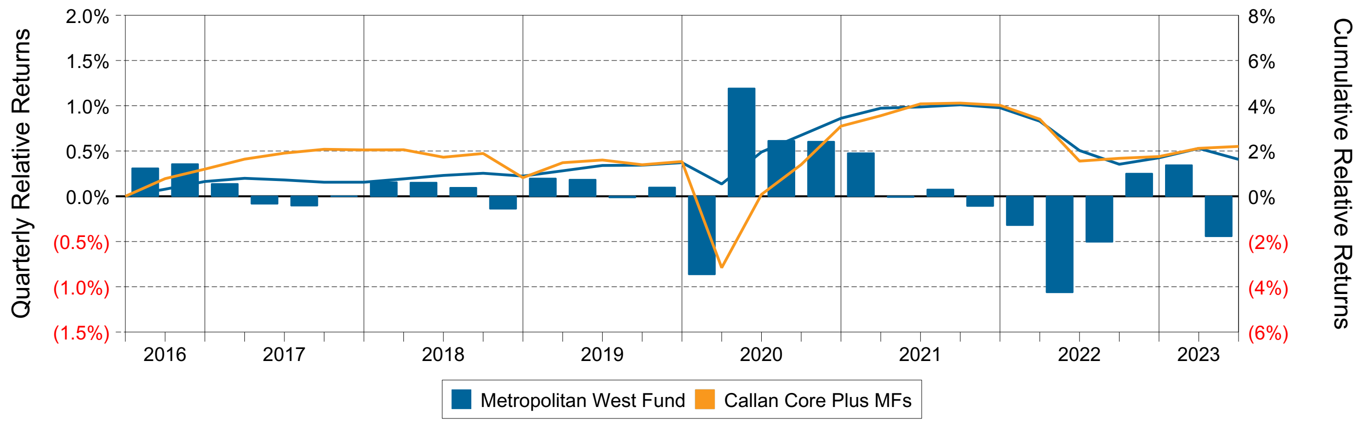
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Core Plus Mutual Funds (Net)

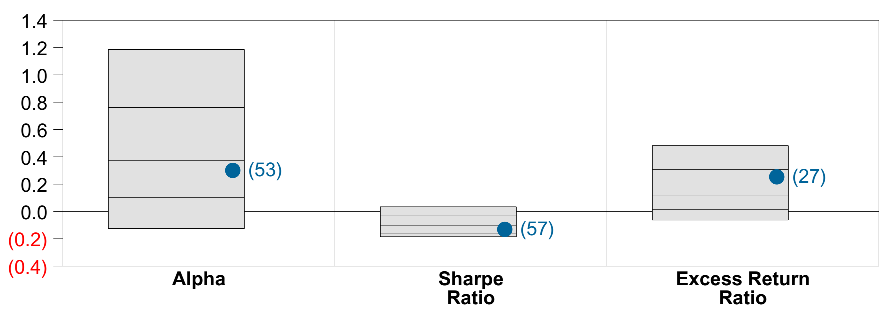


	12/22- 6/23	2022	2021	2020	2019
10th Percentile	3.01	(12.75)	0.34	11.34	10.63
25th Percentile	2.83	(13.04)	(0.33)	9.25	9.93
Median	2.59	(14.16)	(0.67)	8.65	9.32
75th Percentile	2.17	(14.79)	(1.24)	7.58	8.75
90th Percentile	1.79	(15.70)	(1.69)	6.50	7.94
Metropolitan West Fund ●	1.99	(14.43)	(1.12)	9.17	9.23
Blmbg:Aggregate ▲	2.09	(13.01)	(1.54)	7.51	8.72

Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate
Rankings Against Callan Core Plus Mutual Funds (Net)
Seven Years Ended June 30, 2023



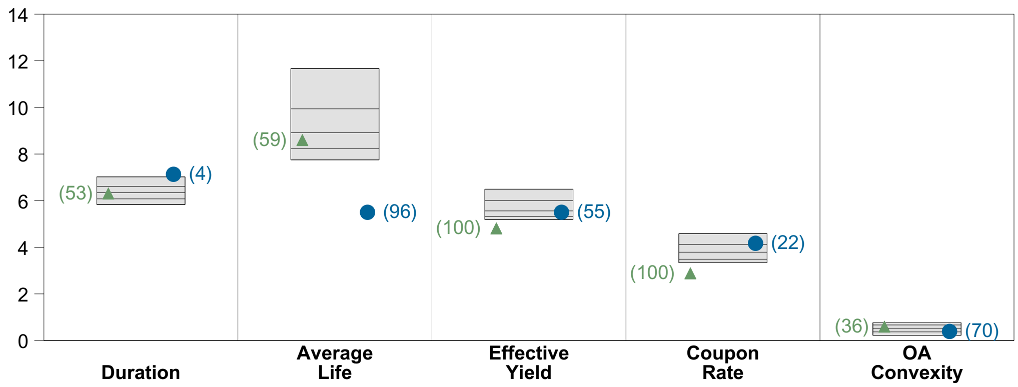
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.19	0.03	0.48
25th Percentile	0.76	(0.03)	0.31
Median	0.37	(0.10)	0.12
75th Percentile	0.10	(0.16)	0.02
90th Percentile	(0.13)	(0.19)	(0.06)
Metropolitan West Fund ●	0.30	(0.13)	0.25

Metropolitan West 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 Core Plus Fixed Income
as of June 30, 2023

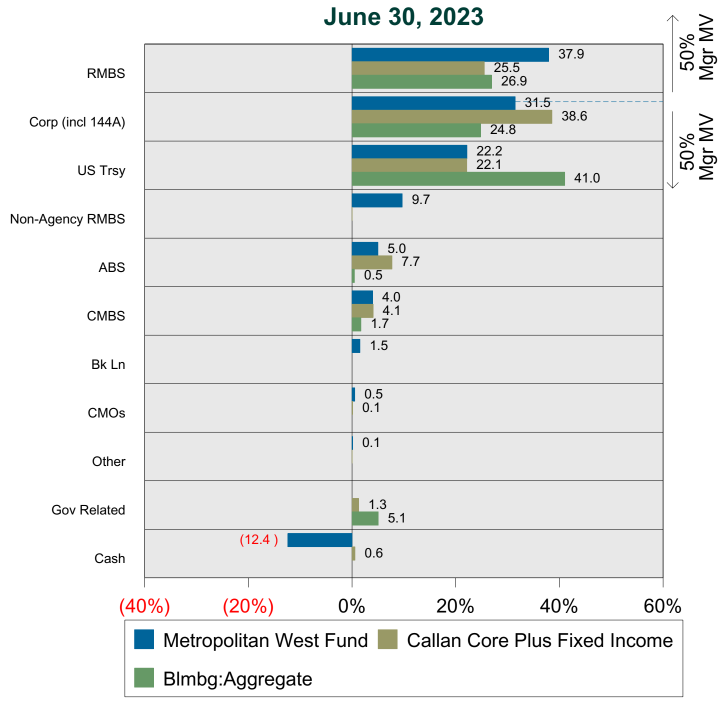


	Duration	Average Life	Effective Yield	Coupon Rate	OA Convexity
10th Percentile	7.02	11.67	6.49	4.59	0.76
25th Percentile	6.61	9.94	6.01	4.12	0.67
Median	6.34	8.91	5.56	3.79	0.53
75th Percentile	6.08	8.22	5.32	3.49	0.37
90th Percentile	5.83	7.75	5.19	3.34	0.23
Metropolitan West Fund ●	7.13	5.50	5.50	4.17	0.39
Blmbg:Aggregate ▲	6.31	8.60	4.81	2.88	0.60

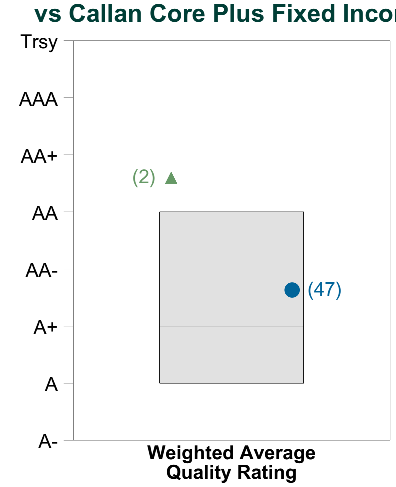
Sector Allocation and Quality Ratings

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.

Sector Allocation
June 30, 2023



Quality Ratings
vs Callan Core Plus Fixed Income



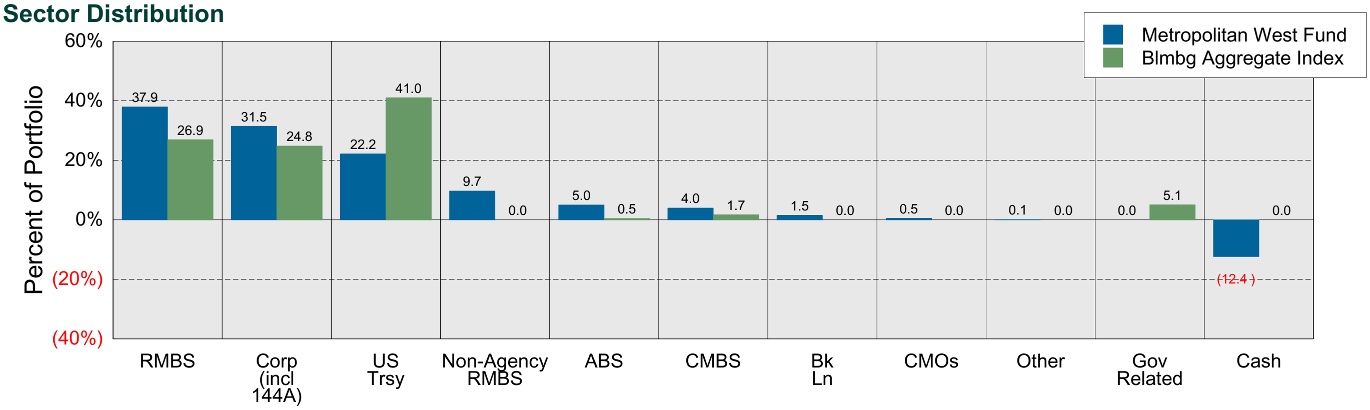
	Weighted Average Quality Rating
10th Percentile	AA
25th Percentile	AA
Median	A+
75th Percentile	A
90th Percentile	A
Metropolitan West Fund ●	AA-
Blmbg:Aggregate ▲	AA+

Metropolitan West Fund
Portfolio Characteristics Summary
As of June 30, 2023

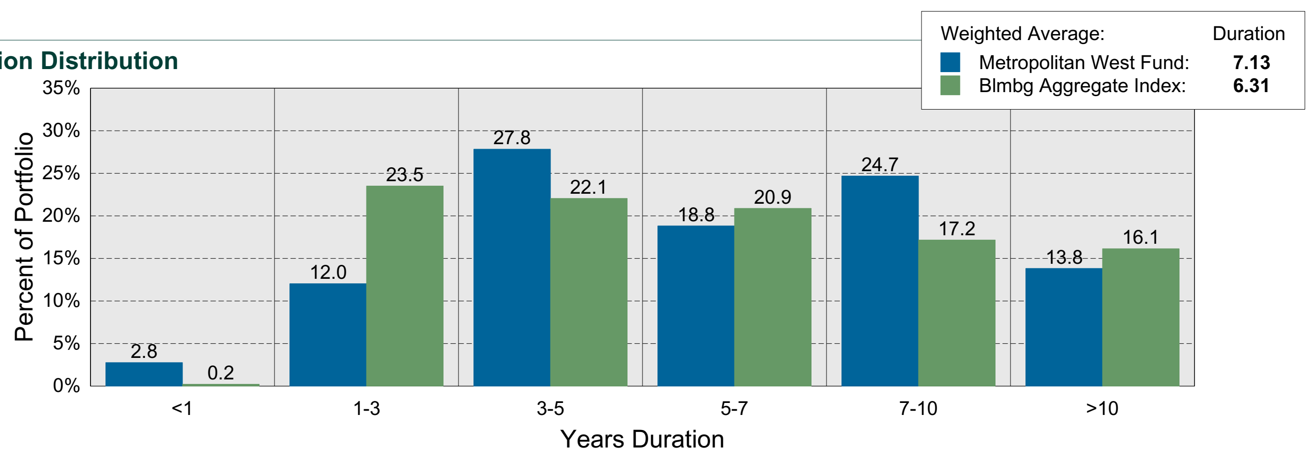
Portfolio Structure Comparison

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.

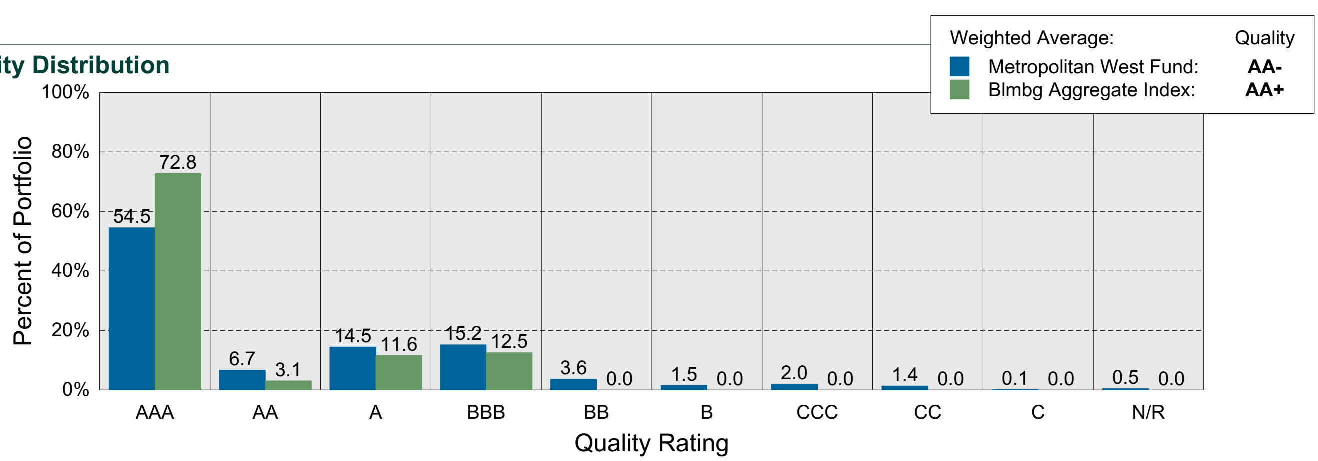
Sector Distribution



Duration Distribution



Quality Distribution



UBS AIS
Period Ended June 30, 2023

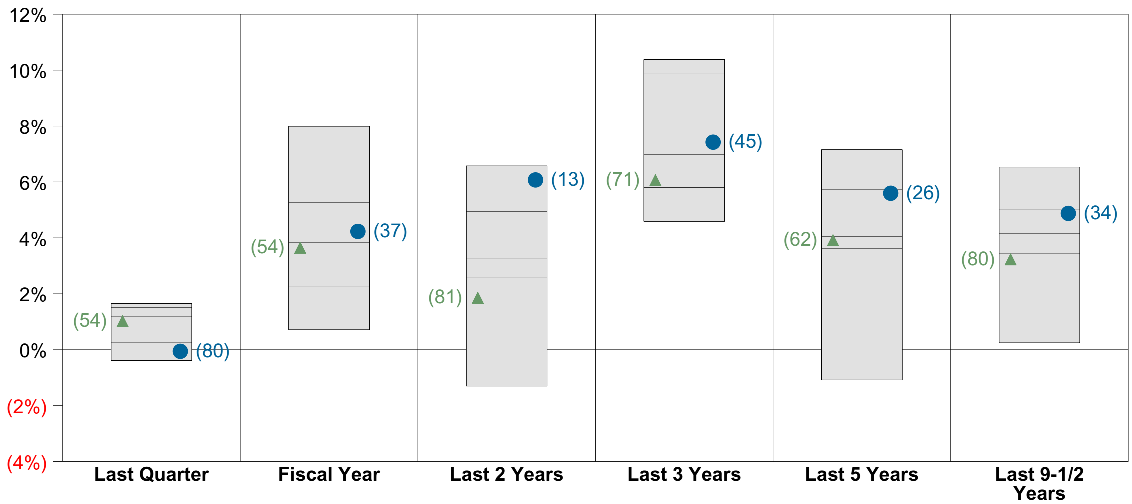
Investment Philosophy

UBS Neutral Alpha Strategies Limited is a broad based neutral fund of funds that seeks to achieve risk-adjusted capital appreciation over the long term while maintaining zero to low correlation to traditional asset classes and low volatility over an economic market cycle (3-5 years). The fund primarily invests in a diverse set of alternative investment funds employing a range of hedged strategies, including Credit/Income, conservative Equity Hedged, Multi-Strategy, Relative Value, and Trading.

Quarterly Summary and Highlights

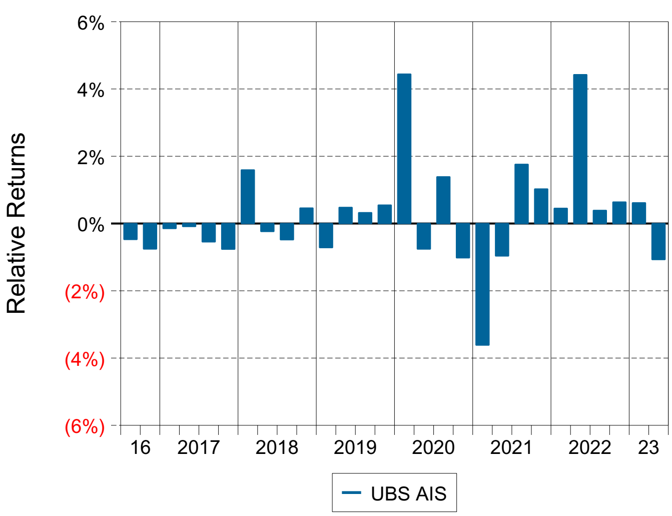
- UBS AIS's portfolio posted a (0.06)% return for the quarter placing it in the 80 percentile of the Callan Absolute Rtn Hedge Fund of Funds group for the quarter and in the 37 percentile for the last year.
- UBS AIS's portfolio underperformed the HFRI FOF: Conservative Index by 1.08% for the quarter and outperformed the HFRI FOF: Conservative Index for the year by 0.58%.

Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)

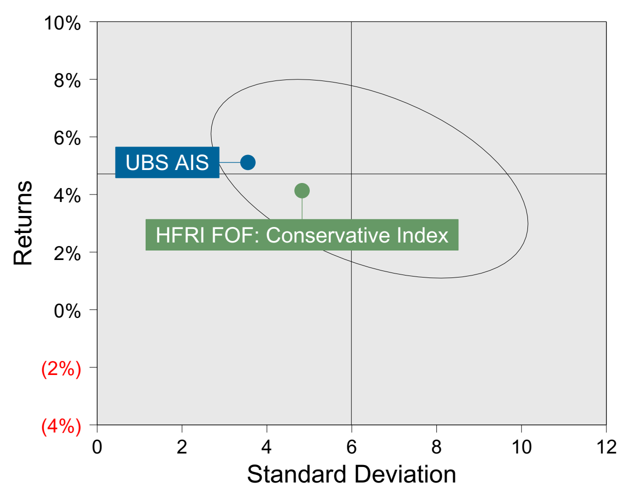


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-1/2 Years
10th Percentile	1.65	8.00	6.57	10.38	7.15	6.53
25th Percentile	1.50	5.27	4.95	9.90	5.74	5.00
Median	1.20	3.83	3.28	6.97	4.06	4.16
75th Percentile	0.27	2.24	2.60	5.80	3.63	3.43
90th Percentile	(0.39)	0.71	(1.30)	4.59	(1.08)	0.24
UBS AIS ●	(0.06)	4.23	6.07	7.42	5.60	4.88
HFRI FOF: Conservative Index ▲	1.03	3.65	1.86	6.07	3.92	3.23

Relative Returns vs HFRI FOF: Conservative Index



Callan Absolute Rtn Hedge Fund of Funds (Net) Annualized Seven Year Risk vs Return

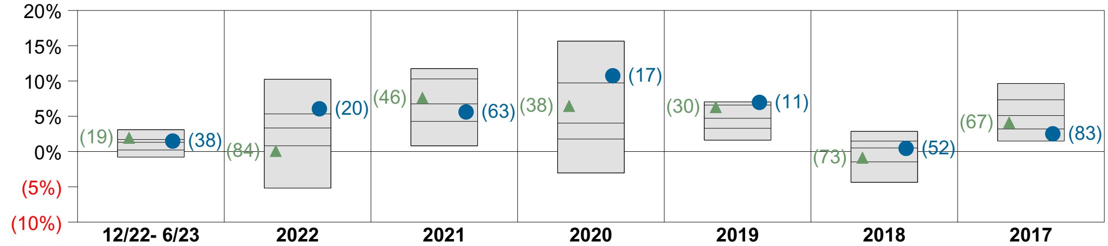


UBS AIS
Return Analysis Summary

Return Analysis

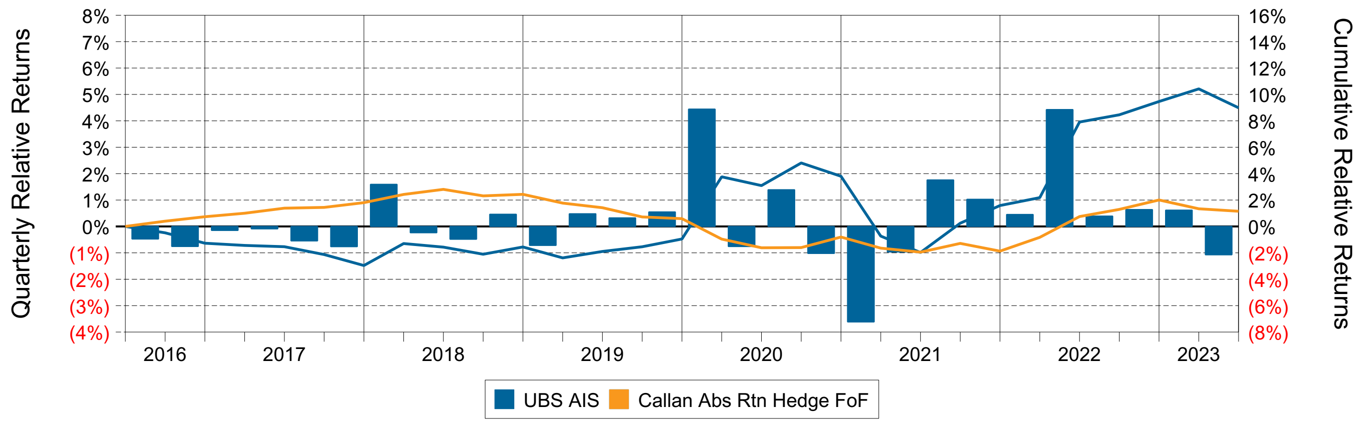
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Absolute Rtn Hedge Fund of Funds (Net)

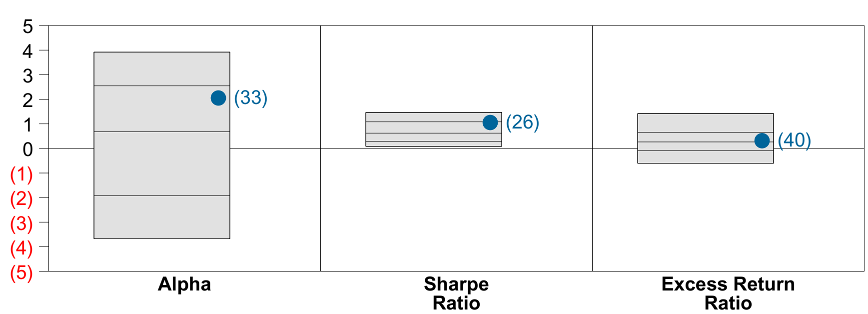


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	3.10	10.24	11.76	15.65	7.04	2.86	9.65
25th Percentile	1.71	5.34	10.30	9.73	6.59	1.48	7.34
Median	1.31	3.34	6.76	4.03	4.71	0.51	5.10
75th Percentile	0.23	0.82	4.28	1.78	3.30	(1.46)	3.20
90th Percentile	(0.79)	(5.18)	0.81	(3.03)	1.62	(4.36)	1.49
UBS AIS ●	1.48	6.06	5.61	10.74	6.97	0.45	2.52
HFRI FOF: Conservative Index ▲	1.96	0.08	7.62	6.47	6.30	(0.87)	4.12

Cumulative and Quarterly Relative Returns vs HFRI FOF: Conservative Index



Risk Adjusted Return Measures vs HFRI FOF: Conservative Index
Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net)
Seven Years Ended June 30, 2023



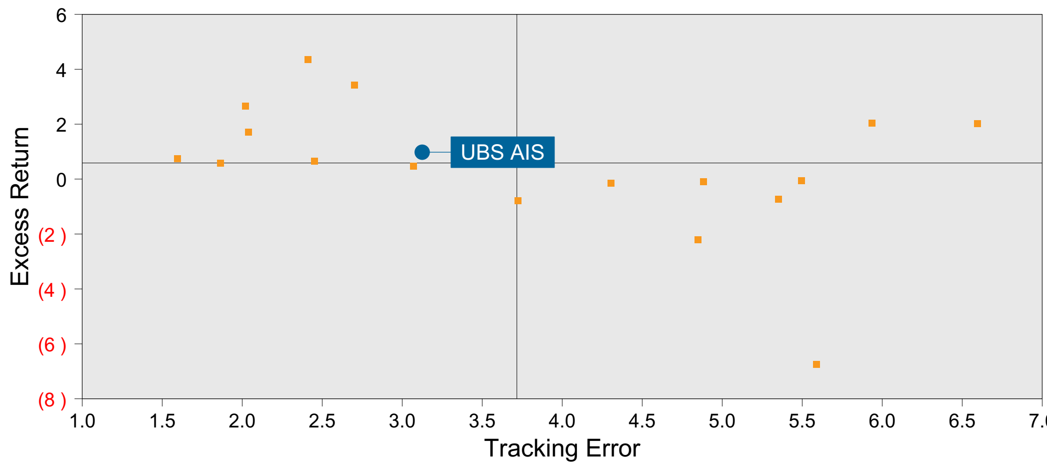
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.92	1.46	1.42
25th Percentile	2.55	1.08	0.65
Median	0.68	0.62	0.26
75th Percentile	(1.92)	0.29	(0.09)
90th Percentile	(3.67)	0.08	(0.61)
UBS AIS ●	2.05	1.05	0.31

UBS AIS
Risk Analysis Summary

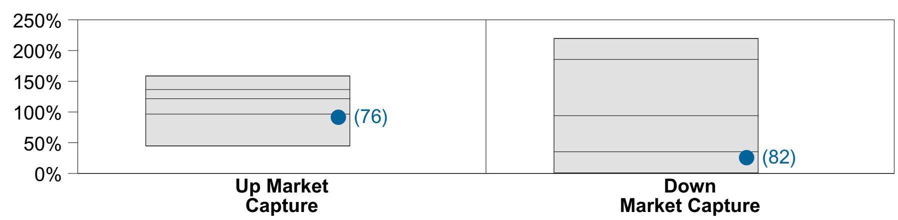
Risk Analysis

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 Absolute Rtn Hedge Fund of Funds (Net)
Seven Years Ended June 30, 2023

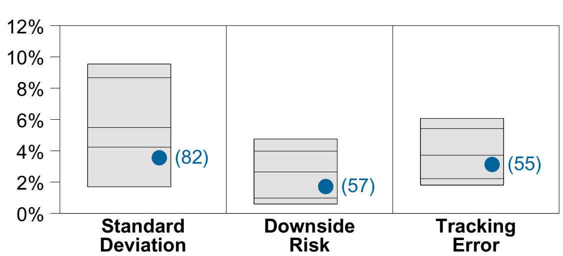


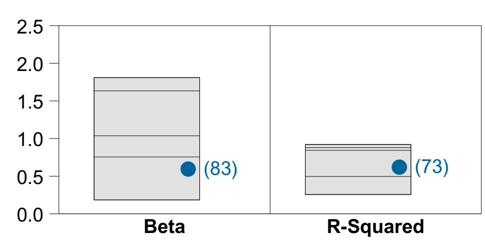
Market Capture vs HFRI FOF: Conservative Index
Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net)
Seven Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	158.68	219.68
25th Percentile	136.56	185.61
Median	121.61	94.00
75th Percentile	96.60	35.25
90th Percentile	44.80	0.68
UBS AIS ●	91.47	25.70

Risk Statistics Rankings vs HFRI FOF: Conservative Index
Rankings Against Callan Absolute Rtn Hedge Fund of Funds (Net)
Seven Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	9.54	4.75	6.06
25th Percentile	8.67	3.98	5.42
Median	5.48	2.65	3.72
75th Percentile	4.23	0.98	2.22
90th Percentile	1.69	0.60	1.81
UBS AIS ●	3.55	1.71	3.13

	Beta	R-Squared
10th Percentile	1.81	0.92
25th Percentile	1.63	0.88
Median	1.04	0.84
75th Percentile	0.76	0.50
90th Percentile	0.18	0.26
UBS AIS ●	0.59	0.62

PIMCO All Asset Fund
Period Ended June 30, 2023

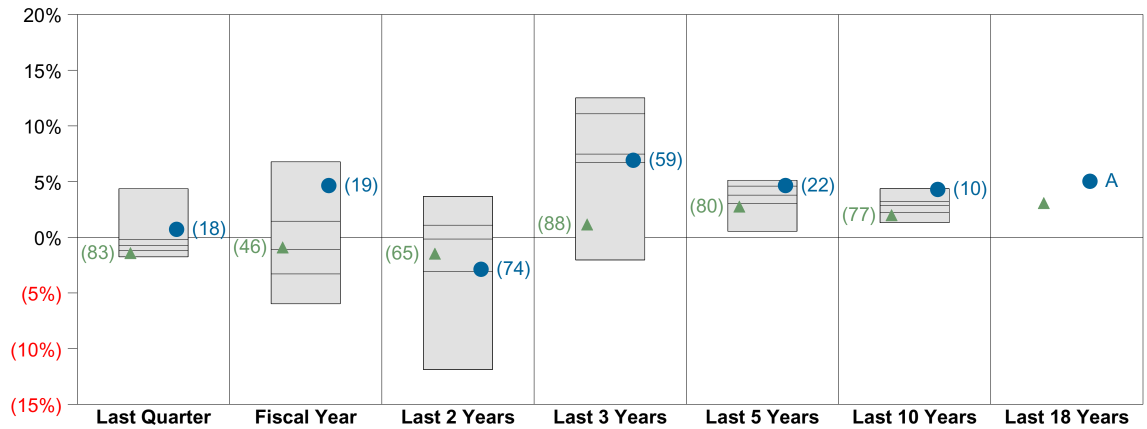
Investment Philosophy

The PIMCO All Asset Strategy is a real return-oriented, global tactical asset allocation strategy that seeks to provide three concurrent investor benefits: inflation protection, diversification and compelling long-term returns. Specifically, the All Asset Strategy has a primary benchmark of the Bloomberg Barclays Capital U.S. TIPS 1-10 Year Index and a secondary benchmark of the Consumer Price Index (CPI)+5%. PIMCO believes that this secondary benchmark reflects the Funds long-term investment strategy more accurately than the Bloomberg Barclays Capital U.S. TIPS 1-10 Year Index. As a result, the Strategy may be an attractive solution for investors seeking returns that track and meaningfully exceed inflation in a manner that also helps diversify equity risk.

Quarterly Summary and Highlights

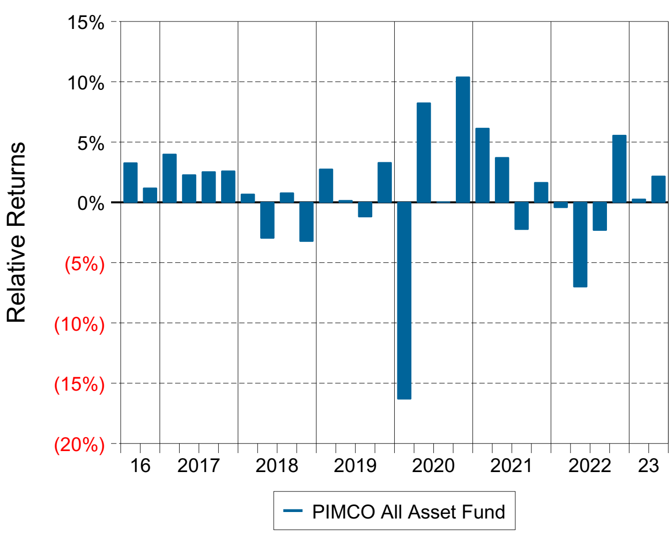
- PIMCO All Asset Fund's portfolio posted a 0.71% return for the quarter placing it in the 18 percentile of the Callan Real Assets Mutual Funds group for the quarter and in the 19 percentile for the last year.
- PIMCO All Asset Fund's portfolio outperformed the Blmbg TIPS 1-10 Yr by 2.13% for the quarter and outperformed the Blmbg TIPS 1-10 Yr for the year by 5.56%.

Performance vs Callan Real Assets Mutual Funds (Net)

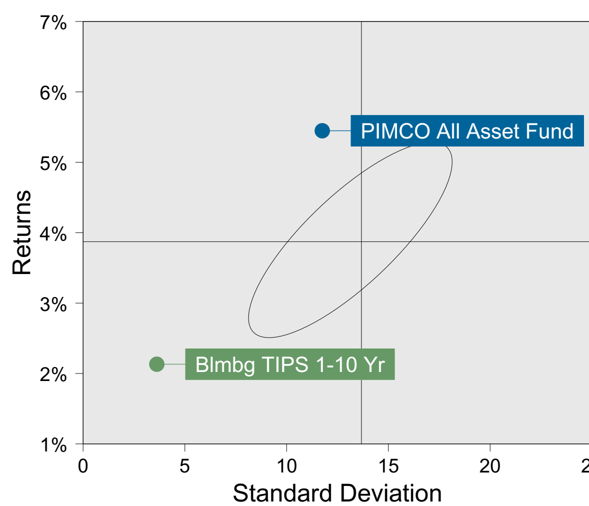


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 10 Years	Last 18 Years
10th Percentile	4.36	6.78	3.67	12.52	5.12	4.37	-
25th Percentile	(0.18)	1.44	1.08	11.09	4.59	3.19	-
Median	(0.72)	(1.10)	(0.16)	7.47	3.78	2.84	-
75th Percentile	(1.21)	(3.29)	(3.07)	6.70	3.03	2.21	-
90th Percentile	(1.76)	(5.98)	(11.88)	(2.04)	0.54	1.31	-
PIMCO All Asset Fund ●	0.71	4.64	(2.88)	6.91	4.65	4.29	5.03
Blmbg TIPS 1-10 Yr ▲	(1.42)	(0.91)	(1.47)	1.15	2.75	1.98	3.07

Relative Return vs Blmbg TIPS 1-10 Yr



Callan Real Assets Mutual Funds (Net)
Annualized Seven Year Risk vs Return

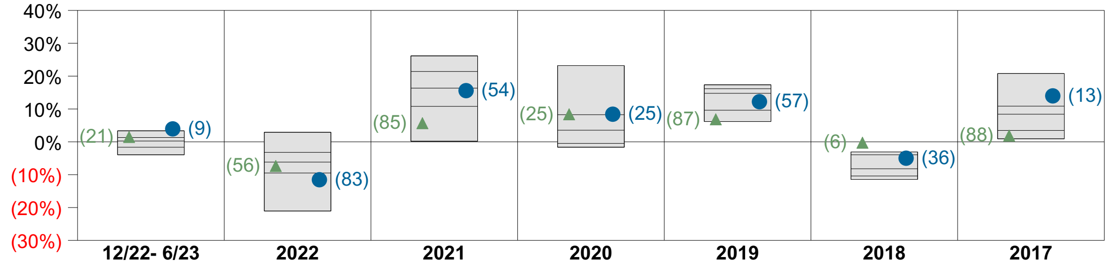


PIMCO All Asset Fund
Return Analysis Summary

Return Analysis

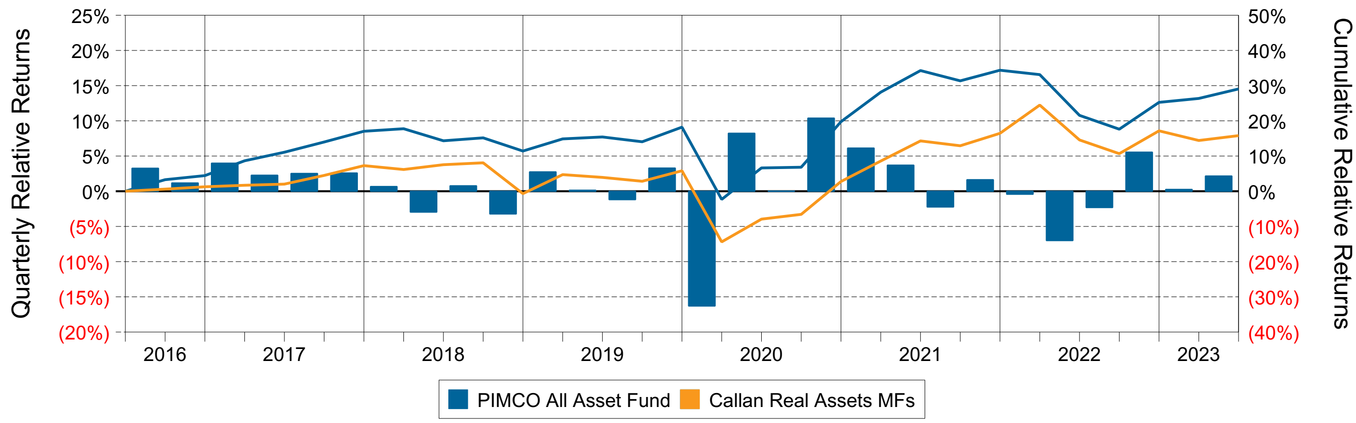
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Real Assets Mutual Funds (Net)

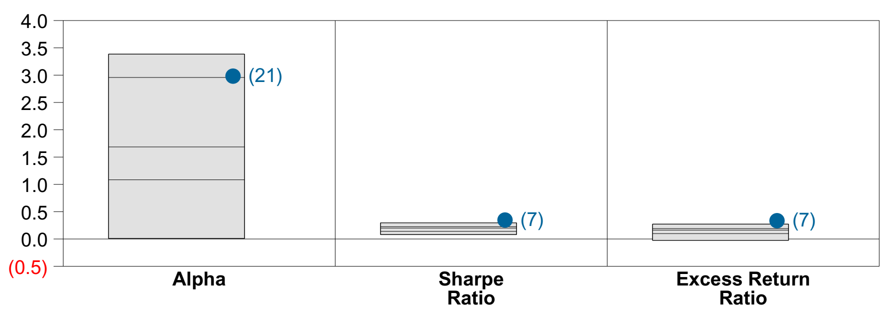


	12/22- 6/23	2022	2021	2020	2019	2018	2017
10th Percentile	3.36	2.90	26.16	23.20	17.37	(3.08)	20.79
25th Percentile	1.31	(3.21)	21.41	8.26	16.16	(3.93)	10.86
Median	0.25	(6.17)	16.34	3.54	14.76	(8.20)	8.40
75th Percentile	(1.65)	(9.49)	10.80	(0.48)	9.62	(10.41)	3.46
90th Percentile	(3.95)	(21.05)	0.18	(1.64)	6.17	(11.44)	0.91
PIMCO All Asset Fund ●	3.94	(11.53)	15.58	8.41	12.21	(4.98)	13.98
Blmbg TIPS 1-10 Yr ▲	1.48	(7.34)	5.69	8.39	6.85	(0.25)	1.90

Cumulative and Quarterly Relative Returns vs Blmbg TIPS 1-10 Yr



Risk Adjusted Return Measures vs Blmbg TIPS 1-10 Yr
Rankings Against Callan Real Assets Mutual Funds (Net)
Seven Years Ended June 30, 2023



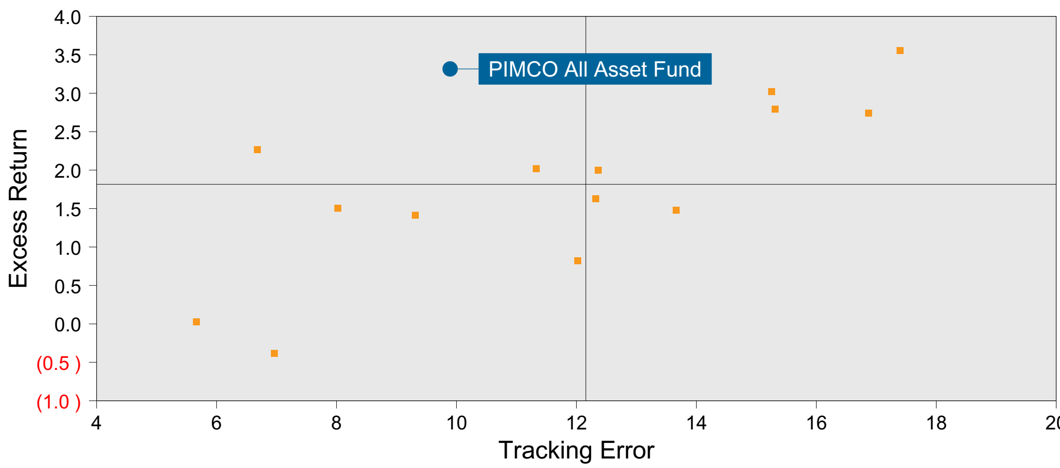
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.39	0.30	0.27
25th Percentile	2.96	0.22	0.19
Median	1.69	0.20	0.16
75th Percentile	1.08	0.14	0.10
90th Percentile	0.01	0.08	(0.03)
PIMCO All Asset Fund ●	2.98	0.35	0.34

PIMCO All Asset Fund
Risk Analysis Summary

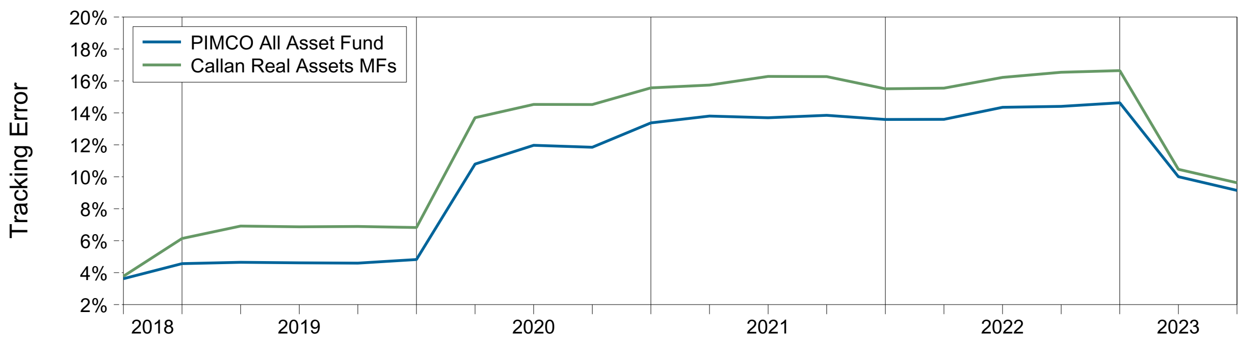
Risk Analysis

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.

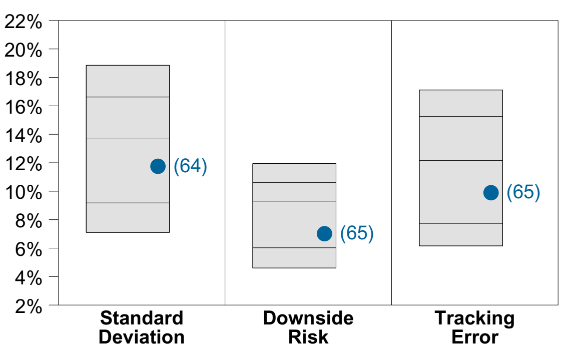
Risk Analysis vs Callan Real Assets Mutual Funds (Net)
Seven Years Ended June 30, 2023

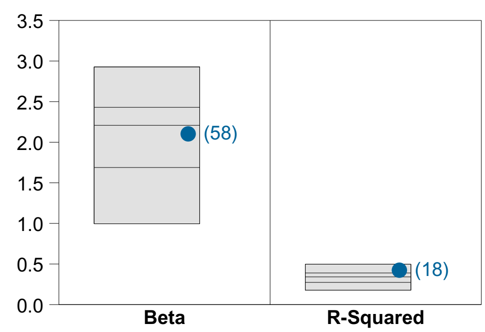


Rolling 12 Quarter Tracking Error vs Bloomberg TIPS 1-10 Yr



Risk Statistics Rankings vs Bloomberg TIPS 1-10 Yr
Rankings Against Callan Real Assets Mutual Funds (Net)
Seven Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	18.85	11.94	17.12
25th Percentile	16.62	10.61	15.25
Median	13.67	9.30	12.16
75th Percentile	9.18	6.03	7.74
90th Percentile	7.11	4.60	6.16
PIMCO All Asset Fund ●	11.75	7.01	9.89

	Beta	R-Squared
10th Percentile	2.93	0.50
25th Percentile	2.43	0.39
Median	2.21	0.34
75th Percentile	1.69	0.27
90th Percentile	1.00	0.18
PIMCO All Asset Fund ●	2.10	0.42

Pantheon USA IV
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
03/2001	0		750,000		8,223		12,836		(57,546)		0		0		687,841
06/2001	687,841		375,000		7,264		7,928		(1,589)		0		0		1,060,588
09/2001	1,060,588		0		14,367		5,285		(23,881)		0		0		1,045,789
12/2001	1,045,789		375,000		5,664		8,042		(33,262)		0		0		1,385,149
03/2002	1,385,149		1,200,000		927		11,558		4,096		0		0		2,578,614
06/2002	2,578,614		0		2,048		12,973		(20,185)		0		0		2,547,504
09/2002	2,547,504		600,000		1,070		13,889		22,215		0		0		3,156,900
12/2002	3,156,900		450,000		871		16,582		(5,101)		0		0		3,586,088
03/2003	3,586,088		600,000		3,153		17,442		135,495		0		0		4,307,294
06/2003	4,307,294		300,000		653		17,815		208,249		0		0		4,798,381
09/2003	4,798,381		300,000		419		18,961		52,584		0		0		5,132,423
12/2003	5,132,423		300,000		921		19,575		357,043		0		0		5,770,812
03/2004	5,770,812		450,000		846		22,549		52,740		0		0		6,251,849
06/2004	6,251,849		300,000		895		23,425		93,587		0		150,000		6,472,906
09/2004	6,472,906		450,000		993		24,526		(13,696)		0		375,000		6,510,677
12/2004	6,510,677		450,000		811		24,878		1,170,082		0		150,000		7,956,692
03/2005	7,956,692		0		835		24,282		(63,728)		30,885		119,115		7,719,517
06/2005	7,719,517		450,000		2,488		24,282		516,548		7,763		367,237		8,289,271
09/2005	8,289,271		0		976		24,282		574,952		0		0		8,840,917
12/2005	8,840,917		2,100,000		1,260		24,384		498,530		0		2,100,000		9,316,323
03/2006	9,316,323		150,000		2,979		24,384		201,583		0		0		9,646,501
06/2006	9,646,501		0		3,157		24,384		187,131		0		150,000		9,662,405
09/2006	9,662,405		0		3,266		24,384		709,466		0		150,000		10,200,753
12/2006	10,200,753		1,500,000		5,773		24,384		1,172,764		0		1,650,000		11,204,906
03/2007	11,204,906		1,200,000		5,197		24,384		479,152		964,950		385,050		11,514,871
06/2007	11,514,871		0		6,934		24,551		942,418		383,290		216,710		11,839,672
09/2007	11,839,672		0		8,818		24,467		919,210		800,726		399,274		11,543,233
12/2007	11,543,233		0		4,160		24,467		583,602		207,000		243,000		11,656,528
03/2008	11,656,528		450,000		1,635		24,467		(50,605)		551,547		123,453		11,358,091
06/2008	11,358,091		225,000		1,302		24,467		60,753		206,609		18,391		11,395,679
09/2008	11,395,679		0		804		24,467		(482,065)		0		0		10,889,951
12/2008	10,889,951		0		599		24,467		(2,149,996)		0		0		8,716,087
03/2009	8,716,087		0		47		24,467		(165,736)		0		0		8,525,931
06/2009	8,525,931		0		58		24,467		(20,009)		0		0		8,481,513
09/2009	8,481,513		0		72		24,312		477,125		32,763		267,237		8,634,398
12/2009	8,634,398		0		80		24,330		619,011		100,558		349,442		8,779,159
03/2010	8,779,159		0		74		24,330		234,076		90,713		134,287		8,763,979
06/2010	8,763,979		0		63		24,201		129,283		143,880		81,120		8,644,124
09/2010	8,644,124		0		62		24,201		557,239		133,289		316,711		8,727,224
12/2010	8,727,224		0		103		24,201		365,171		20,178		804,822		8,243,297
03/2011	8,243,297		0		99		24,201		325,215		315,833		434,167		7,794,410
06/2011	7,794,410		0		62		24,201		132,134		431,439		243,561		7,227,405
09/2011	7,227,405		0		47		24,201		(95,355)		122,728		102,272		6,882,896
12/2011	6,882,896		750,000		39		22,975		247,209		849,891		125,109		6,882,169
03/2012	6,882,169		0		29		24,232		265,220		165,104		59,896		6,898,186
06/2012	6,898,186		150,000		4,184		24,232		150,864		369,767		155,233		6,654,002
09/2012	6,654,002		0		26		24,232		201,349		191,505		138,495		6,501,145

Pantheon USA IV
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
12/2012	6,501,145		0		89		24,232		60,319		588,870		236,130		5,712,321
03/2013	5,712,321		0		0		24,232		140,571		185,387		114,613		5,528,660
06/2013	5,528,660		0		80		24,232		83,516		195,385		104,615		5,288,024
09/2013	5,288,024		0		242		24,232		170,149		43,998		106,002		5,284,183
12/2013	5,284,183		0		0		24,232		132,583		285,673		239,327		4,867,534
03/2014	4,867,534		0		13		24,232		169,254		24,407		125,593		4,862,569
06/2014	4,862,569		0		0		24,232		36,266		392,392		252,609		4,229,602
09/2014	4,229,602		0		0		24,044		(20,499)		269,803		195,198		3,720,058
12/2014	3,720,058		0		0		24,044		2,886		94,776		115,224		3,488,900
03/2015	3,488,900		0		0		24,044		22,598		0		0		3,487,454
06/2015	3,487,454		450,000		750		20,651		(64,559)		599,628		135,372		3,117,994
09/2015	3,117,994		0		(3,481)		20,651		49,747		76,324		73,676		2,993,609
12/2015	2,993,609		0		6,633		20,096		(27,481)		178,240		121,760		2,652,665
03/2016	2,652,665		0		(552)		19,628		(277,835)		121,741		28,259		2,204,650
06/2016	2,204,650		0		25,584		19,628		20,035		169,385		265,615		1,795,641
09/2016	1,795,641		330,000		(7,065)		(6,686)		13,288		27,065		1,427,935		683,550
12/2016	683,550		75,000		(1,928)		0		14,438		43		389,957		381,060
03/2017	381,060		0		(2,405)		0		16,159		0		0		394,814
06/2017	394,814		0		57		0		6,836		0		0		401,707
09/2017	401,707		0		(994)		0		12,477		0		0		413,190
12/2017	413,190		0		(1,574)		0		(11,422)		150,000		0		250,194
03/2018	250,194		0		(458)		0		(67)		0		0		249,669
06/2018	249,669		0		452		0		16,690		0		0		266,811
09/2018	266,811		0		0		0		81		0		0		266,892
12/2018	266,892		0		(2,137)		0		(7,976)		372		89,628		166,779
03/2019	166,779		0		0		0		914		0		0		167,693
06/2019	167,693		0		0		0		0		0		0		167,693
09/2019	167,693		0		0		0		0		0		0		167,693
12/2019	167,693		0		0		0		0		0		0		167,693
03/2020	167,693		0		0		0		0		0		0		167,693
06/2020	167,693		0		0		0		0		0		0		167,693
09/2020	167,693		0		0		0		0		0		0		167,693
12/2020	167,693		0		0		0		22,606		0		0		190,299
03/2021	190,299		0		0		0		0		0		0		190,299
06/2021	190,299		0		0		0		0		0		0		190,299
09/2021	190,299		0		0		0		0		0		0		190,299
12/2021	190,299		0		0		0		(9,289)		0		0		181,010
03/2022	181,010		0		0		0		0		0		0		181,010
06/2022	181,010		0		0		0		0		0		0		181,010
09/2022	181,010		0		0		0		0		0		0		181,010
12/2022	181,010		0		0		0		(2,248)		0		0		178,762
03/2023	178,762		0		0		0		0		0		0		178,762
06/2023	178,762		0		0		0		0		0		0		178,762
	0		14,730,000		117,659		1,347,274		10,033,379		9,523,907		13,831,095		178,762

Pantheon USA IV
Private Equity Investment Portfolio
Quarterly Changes in Market Value

Returns

Net Since Inception IRR = 10.17%

Ratios

Capital Account = $178,762

Total Value = $23,533,764

Paid In Capital = $14,730,000

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.60x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.59x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.01x

Pantheon USA VI
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
09/2004	0		300,000		21		10,598		(17,856)		0		0		271,567
12/2004	271,567		1,050,000		252		12,187		192,341		0		0		1,501,973
03/2005	1,501,973		0		1,031		12,187		(38,385)		0		0		1,452,432
06/2005	1,452,432		0		1,549		12,187		18,460		0		0		1,460,254
09/2005	1,460,254		0		2,314		17,487		(18,222)		0		0		1,426,859
12/2005	1,426,859		0		2,779		18,281		62,024		0		105,000		1,368,381
03/2006	1,368,381		0		2,879		18,281		(15,882)		0		0		1,337,097
06/2006	1,337,097		375,000		1,171		18,281		(19,654)		0		0		1,675,333
09/2006	1,675,333		675,000		2,408		23,580		82,649		0		0		2,411,810
12/2006	2,411,810		975,000		3,365		24,375		97,132		0		0		3,462,932
03/2007	3,462,932		750,000		3,577		24,375		10,601		0		0		4,202,735
06/2007	4,202,735		1,275,000		4,528		24,375		161,670		0		0		5,619,558
09/2007	5,619,558		975,000		4,320		24,375		132,610		0		0		6,707,113
12/2007	6,707,113		600,000		4,540		24,375		270,348		0		0		7,557,626
03/2008	7,557,626		1,575,000		3,508		24,375		(120,491)		73,041		226,959		8,691,268
06/2008	8,691,268		600,000		1,522		24,375		59,937		0		0		9,328,352
09/2008	9,328,352		600,000		2,056		24,375		(130,465)		0		0		9,775,568
12/2008	9,775,568		600,000		934		24,375		(1,545,047)		0		0		8,807,080
03/2009	8,807,080		0		97		24,375		(154,722)		0		0		8,628,080
06/2009	8,628,080		150,000		61		24,375		265,667		0		0		9,019,433
09/2009	9,019,433		150,000		43		24,375		523,871		0		0		9,668,972
12/2009	9,668,972		225,000		72		24,375		668,374		0		0		10,538,043
03/2010	10,538,043		150,000		78		24,375		358,692		0		0		11,022,438
06/2010	11,022,438		0		69		24,375		225,714		0		0		11,223,846
09/2010	11,223,846		450,000		74		24,375		454,607		99,882		470,118		11,534,152
12/2010	11,534,152		150,000		79		24,375		939,654		60,577		89,423		12,449,510
03/2011	12,449,510		0		97		24,375		618,092		57,566		392,434		12,593,324
06/2011	12,593,324		0		70		24,375		472,411		30,651		269,349		12,741,430
09/2011	12,741,430		75,000		72		24,375		(515,652)		2,782		297,218		11,976,475
12/2011	11,976,475		750,000		58		24,375		671,471		474,098		500,902		12,398,629
03/2012	12,398,629		225,000		60		24,375		798,160		292,030		82,970		13,022,474
06/2012	13,022,474		225,000		88		24,375		(72,923)		343,274		256,726		12,550,264
09/2012	12,550,264		0		28		24,375		214,474		71,839		228,161		12,440,391
12/2012	12,440,391		450,000		1,895		24,375		422,186		703,739		421,261		12,165,097
03/2013	12,165,097		0		12		24,375		539,068		261,847		413,153		12,004,802
06/2013	12,004,802		0		0		24,375		406,946		317,372		357,628		11,712,373
09/2013	11,712,373		0		0		24,375		580,758		167,452		207,548		11,893,756
12/2013	11,893,756		375,000		(2,322)		24,375		571,322		828,990		296,010		11,688,381
03/2014	11,688,381		0		(11,649)		24,375		371,626		313,728		286,273		11,423,982
06/2014	11,423,982		0		132		24,376		429,271		204,661		350,339		11,274,009
09/2014	11,274,009		0		3,016		24,375		(56,699)		220,317		244,682		10,730,952
12/2014	10,730,952		225,000		(1,063)		24,375		413,628		41,503		678,497		10,624,142
03/2015	10,624,142		150,000		3,089		21,937		22,870		462,168		227,832		10,088,164
06/2015	10,088,164		75,000		41,789		21,937		130,065		406,954		328,045		9,578,082
09/2015	9,578,082		0		23,994		21,937		(236,911)		423,601		446,399		8,473,228
12/2015	8,473,228		0		13,947		21,937		(65,411)		277,773		172,227		7,949,827
03/2016	7,949,827		0		7,243		19,744		(96,071)		138,014		296,986		7,406,255

Pantheon USA VI
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
06/2016	7,406,255		0		29,185		19,744		149,485		11,048		183,952		7,370,181
09/2016	7,370,181		0		254		19,744		133,111		290,751		294,249		6,898,802
12/2016	6,898,802		0		39,023		19,744		137,500		331,857		238,143		6,485,581
03/2017	6,485,581		0		70,303		17,526		72,286		163,693		151,307		6,295,644
06/2017	6,295,644		0		7,032		17,721		118,273		0		630,000		5,773,228
09/2017	5,773,228		0		10,125		17,915		161,228		178,561		181,440		5,566,665
12/2017	5,566,665		0		16,410		17,915		75,585		376,963		253,037		5,010,745
03/2018	5,010,745		0		29,951		15,773		41,058		257,342		447,658		4,360,981
06/2018	4,360,981		0		3,392		15,949		169,127		241,540		118,459		4,157,552
09/2018	4,157,552		0		2,153		16,124		54,877		248,746		154,681		3,795,031
12/2018	3,795,031		0		2,631		16,124		(142,588)		42,188		197,812		3,398,950
03/2019	3,398,950		0		0		14,196		185,560		89,999		0		3,480,315
06/2019	3,480,315		0		0		14,354		107,542		157,500		0		3,416,003
09/2019	3,416,003		0		0		14,511		6,000		464,999		0		2,942,493
12/2019	2,942,493		0		0		14,511		(552,511)		225,000		0		2,150,471
03/2020	2,150,471		0		0		12,883		(79,403)		315,000		0		1,743,185
06/2020	1,743,185		0		0		12,883		23,672		630,000		0		1,123,974
09/2020	1,123,974		0		0		1,699		(5,442)		0		0		1,116,833
12/2020	1,116,833		0		0		0		54,478		60,000		0		1,111,311
03/2021	1,111,311		0		0		0		(7,689)		660,000		0		443,622
06/2021	443,622		0		0		0		(22,663)		0		0		420,959
09/2021	420,959		0		0		0		(52,006)		0		0		368,953
12/2021	368,953		0		0		0		(17,770)		0		0		351,183
03/2022	351,183		0		0		0		(16,239)		75,000		0		259,944
06/2022	259,944		0		0		0		(2,840)		105,000		0		152,104
09/2022	152,104		0		0		0		(3,763)		0		0		148,341
12/2022	148,341		0		0		0		4,713		0		0		153,054
03/2023	153,054		0		0		0		(9,193)		0		0		143,861
06/2023	143,861		0		0		0		0		0		0		143,861
	0		14,175,000		334,342		1,334,253		8,664,696		11,199,046		10,496,878		143,861

Returns

Net Since Inception IRR = 6.68%

Ratios

Capital Account = $143,861

Total Value = $21,839,785

Paid In Capital = $14,175,000

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.54x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.53x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.01x

Pantheon USA VII
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri- butions	+	Accounting Income	-	Mgmt. Fees	+	Appre- ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
12/2006	0		100,000		738		12,672		(7,470)		0		0		80,596
03/2007	80,596		250,000		528		4,687		767		0		0		327,204
06/2007	327,204		100,000		534		6,336		20,148		0		0		441,550
09/2007	441,550		100,000		1,687		7,031		15,286		0		0		551,492
12/2007	551,492		100,000		1,005		7,031		(23,884)		0		0		621,582
03/2008	621,582		175,000		1,033		7,031		(5,589)		0		0		784,995
06/2008	784,995		200,000		447		8,680		(8,058)		0		0		968,704
09/2008	968,704		200,000		585		9,375		(26,070)		0		0		1,133,844
12/2008	1,133,844		200,000		495		9,375		(165,573)		0		0		1,159,391
03/2009	1,159,391		0		55		9,375		(31,122)		0		0		1,118,949
06/2009	1,118,949		50,000		86		9,375		16,176		0		0		1,175,836
09/2009	1,175,836		100,000		34		9,375		83,643		0		0		1,350,138
12/2009	1,350,138		100,000		53		9,375		67,252		0		0		1,508,068
03/2010	1,508,068		100,000		25		9,375		27,655		0		0		1,626,373
06/2010	1,626,373		150,000		19		9,375		17,193		0		0		1,784,210
09/2010	1,784,210		300,000		44		9,375		51,750		0		0		2,126,629
12/2010	2,126,629		150,000		78		9,375		170,613		0		0		2,437,945
03/2011	2,437,945		200,000		162		9,375		109,285		0		0		2,738,017
06/2011	2,738,017		50,000		36		9,375		169,157		0		0		2,947,835
09/2011	2,947,835		300,000		17		9,375		(46,460)		150,000		0		3,042,017
12/2011	3,042,017		275,000		16		9,375		95,371		75,000		0		3,328,029
03/2012	3,328,029		100,000		20		9,375		196,043		0		0		3,614,717
06/2012	3,614,717		50,000		19		9,375		18,351		0		0		3,673,712
09/2012	3,673,712		0		10		9,375		101,545		0		0		3,765,892
12/2012	3,765,892		225,000		0		9,375		107,364		200,000		0		3,888,881
03/2013	3,888,881		100,000		0		9,375		181,736		150,000		0		4,011,242
06/2013	4,011,242		0		0		9,375		152,474		75,000		0		4,079,341
09/2013	4,079,341		0		0		9,375		211,778		75,000		0		4,206,744
12/2013	4,206,744		400,000		(694)		9,375		241,094		475,000		0		4,362,769
03/2014	4,362,769		0		(117)		9,375		238,983		93,744		81,256		4,417,260
06/2014	4,417,260		0		431		9,375		282,770		57,266		62,734		4,571,086
09/2014	4,571,086		100,000		(205)		9,375		101,395		190,803		124,197		4,447,901
12/2014	4,447,901		175,000		(389)		9,375		197,539		226,324		188,676		4,395,676
03/2015	4,395,676		75,000		15,663		9,375		86,397		156,847		78,153		4,328,361
06/2015	4,328,361		75,000		18,453		9,375		144,103		184,166		140,833		4,231,543
09/2015	4,231,543		35,000		22,690		9,375		(65,730)		116,172		156,327		3,941,629
12/2015	3,941,629		0		14,498		9,375		67,684		118,590		81,409		3,814,437
03/2016	3,814,437		0		6,329		9,375		(8,262)		18,729		71,272		3,713,128
06/2016	3,713,128		35,000		23,508		9,375		61,190		125,298		79,703		3,618,450
09/2016	3,618,450		20,000		4,066		9,375		122,444		86,430		78,570		3,590,585
12/2016	3,590,585		30,000		37,440		9,375		50,091		141,216		108,784		3,448,741
03/2017	3,448,741		0		16,189		8,322		157,510		55,097		84,903		3,474,118
06/2017	3,474,118		0		19,356		8,414		109,999		300,000		0		3,295,059
09/2017	3,295,059		0		8,827		8,507		94,355		170,000		0		3,219,734
12/2017	3,219,734		0		8,964		8,507		72,800		171,614		148,859		2,972,518
03/2018	2,972,518		0		9,527		7,490		80,949		245,073		99,927		2,710,504
06/2018	2,710,504		0		11,047		7,573		121,502		85,609		74,391		2,675,480

Pantheon USA VII
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri- butions	+	Accounting Income	-	Mgmt. Fees	+	Appre- ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
09/2018	2,675,480		0		6,205		7,656		70,977		50,697		54,303		2,640,006
12/2018	2,640,006		0		9,057		7,656		(132,463)		108,215		141,786		2,258,943
03/2019	2,258,943		0		0		6,741		107,773		165,000		0		2,194,975
06/2019	2,194,975		0		0		6,816		48,175		200,000		0		2,036,334
09/2019	2,036,334		0		0		6,891		(32,180)		170,001		0		1,827,262
12/2019	1,827,262		0		0		6,891		16,758		154,999		0		1,682,130
03/2020	1,682,130		40,000		0		6,117		(188,589)		120,000		0		1,407,424
06/2020	1,407,424		0		0		6,117		170,744		125,000		0		1,447,051
09/2020	1,447,051		0		0		6,185		164,141		40,000		0		1,565,007
12/2020	1,565,007		0		0		6,185		121,576		160,000		0		1,520,398
03/2021	1,520,398		0		0		5,460		180,657		165,000		0		1,530,595
06/2021	1,530,595		0		0		5,521		118,990		230,001		0		1,414,063
09/2021	1,414,063		0		0		0		46,650		205,000		0		1,255,713
12/2021	1,255,713		0		0		5,581		12,635		195,001		0		1,067,766
03/2022	1,067,766		0		0		4,914		52,014		85,000		0		1,029,866
06/2022	1,029,866		0		0		1,529		(53,206)		65,000		0		910,131
09/2022	910,131		0		0		0		(20,692)		100,000		0		789,439
12/2022	789,439		0		0		0		(7,877)		40,000		0		741,562
03/2023	741,562		0		0		0		9,216		29,999		0		720,779
06/2023	720,779		0		0		0		0		30,000		0		690,779
	0		4,660,000		238,571		511,291		4,341,473		6,181,891		1,856,083		690,779

Returns

Net Since Inception IRR = 10.08%

Ratios

Capital Account = $690,779

Total Value = $8,728,753

Paid In Capital = $4,660,000

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.87x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.72x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.15x

Pantheon Europe Fund V A
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri- butions	+	Accounting Income	-	Mgmt. Fees	+	Appre- ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
12/2006	0		0		0		0		(36,905)		0		0		(36,905)
03/2007	(36,905)		0		(4,936)		0		(13,013)		0		0		(54,854)
06/2007	(54,854)		540,220		(4,497)		16,281		26,939		0		0		491,527
09/2007	491,527		113,772		(3,763)		7,426		7,154		0		0		601,264
12/2007	601,264		350,892		(2,961)		8,816		(5,527)		0		0		934,852
03/2008	934,852		190,146		8		8,897		55,056		0		0		1,171,165
06/2008	1,171,165		189,066		3,051		11,784		(68,387)		0		0		1,283,111
09/2008	1,283,111		421,395		(2,230)		10,621		(201,351)		0		0		1,490,304
12/2008	1,490,304		222,408		21,410		10,512		(319,183)		0		0		1,404,427
03/2009	1,404,427		0		2,886		9,737		(84,744)		0		0		1,312,832
06/2009	1,312,832		168,318		(612)		10,491		60,902		0		0		1,530,949
09/2009	1,530,949		292,340		102		10,985		112,039		0		0		1,924,445
12/2009	1,924,445		114,780		1,971		10,850		69,175		0		0		2,099,521
03/2010	2,099,521		162,372		4,387		10,009		(32,827)		0		0		2,223,444
06/2010	2,223,444		0		872		9,161		(55,632)		0		0		2,159,523
09/2010	2,159,523		436,864		1,482		10,324		199,240		0		0		2,786,785
12/2010	2,786,785		214,648		7,916		10,145		95,340		0		0		3,094,544
03/2011	3,094,544		0		26,259		10,497		224,192		0		0		3,334,498
06/2011	3,334,498		173,982		55,141		10,843		148,844		0		0		3,701,622
09/2011	3,701,622		134,170		61,038		10,146		(369,219)		0		0		3,517,465
12/2011	3,517,465		0		52,536		9,801		(78,617)		0		214,624		3,266,959
03/2012	3,266,959		106,536		46,832		9,933		183,790		0		0		3,594,184
06/2012	3,594,184		253,820		28,026		9,466		(59,794)		0		101,528		3,705,242
09/2012	3,705,242		0		95,623		9,701		51,508		0		102,920		3,739,752
12/2012	3,739,752		0		168,856		9,942		(4,547)		0		0		3,894,119
03/2013	3,894,119		205,456		36,117		9,499		(110,083)		0		154,092		3,862,018
06/2013	3,862,018		77,994		68,649		9,723		86,577		0		181,986		3,903,529
09/2013	3,903,529		108,296		98,404		10,236		71,353		0		297,814		3,873,532
12/2013	3,873,532		110,240		184,523		10,420		18,875		0		248,040		3,928,710
03/2014	3,928,710		110,264		9,778		10,196		140,285		0		165,396		4,013,445
06/2014	4,013,445		0		9,706		10,286		266,592		0		213,595		4,065,862
09/2014	4,065,862		50,532		15,103		10,795		65,337		0		389,096		3,796,943
12/2014	3,796,943		0		12,399		9,627		146,053		199,339		0		3,746,429
03/2015	3,746,429		0		29,256		8,798		207,557		0		351,573		3,622,871
06/2015	3,622,871		44,378		12,578		8,510		194,837		0		230,764		3,635,390
09/2015	3,635,390		193,043		12,578		8,510		56,596		0		501,467		3,387,630
12/2015	3,387,630		0		16,716		8,261		143,628		0		314,652		3,225,061
03/2016	3,225,061		18,100		11,270		8,438		(37,468)		248,871		0		2,959,654
06/2016	2,959,654		0		10,576		8,266		(455,285)		168,454		0		2,338,225
09/2016	2,338,225		0		5,431		8,462		(85,328)		170,571		0		2,079,294
12/2016	2,079,294		0		14,217		7,945		19,599		126,427		0		1,978,738
03/2017	1,978,738		0		(10,962)		6,658		54,293		256,000		0		1,759,411
06/2017	1,759,411		0		16,224		6,732		27,503		192,000		0		1,604,406
09/2017	1,604,406		0		10,694		6,805		10,668		48,000		0		1,570,963
12/2017	1,570,963		96,000		34,998		6,805		13,749		276,000		0		1,432,905
03/2018	1,432,905		0		3,235		5,992		10,842		140,000		0		1,300,990
06/2018	1,300,990		0		3,510		6,058		128,860		220,000		0		1,207,302

Pantheon Europe Fund V A
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri- butions	+	Accounting Income	-	Mgmt. Fees	+	Appre- ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
09/2018	1,207,302		0		7,071		6,125		72,338		180,000		0		1,100,586
12/2018	1,100,586		0		2,368		6,125		(18,189)		52,000		0		1,026,640
03/2019	1,026,640		0		0		5,393		67,525		48,000		0		1,040,772
06/2019	1,040,772		40,000		0		5,453		26,623		228,000		0		873,942
09/2019	873,942		0		0		5,512		16,950		84,000		0		801,380
12/2019	801,380		0		0		5,512		44,708		56,000		0		784,576
03/2020	784,576		0		0		4,894		(56,195)		76,000		0		647,487
06/2020	647,487		0		0		4,894		73,578		40,000		0		676,171
09/2020	676,171		0		0		4,947		204,283		64,000		0		811,507
12/2020	811,507		0		0		4,948		56,847		40,000		0		823,406
03/2021	823,406		0		0		4,368		44,229		132,000		0		731,267
06/2021	731,267		0		0		4,417		48,827		84,000		0		691,677
09/2021	691,677		0		0		4,465		23,185		12,000		0		698,397
12/2021	698,397		0		0		4,404		(10,332)		100,000		0		583,661
03/2022	583,661		0		0		3,931		(37,785)		32,000		0		509,945
06/2022	509,945		0		0		0		(27,101)		28,000		0		454,844
09/2022	454,844		0		0		0		(10,476)		0		0		444,368
12/2022	444,368		0		0		179		(7,446)		0		0		436,743
03/2023	436,743		0		0		0		(1,852)		28,000		0		406,891
06/2023	406,891		0		0		0		0		20,000		0		386,891
	0		5,140,032		1,173,836		498,958		1,389,190		3,349,662		3,467,547		386,891

Returns

Net Since Inception IRR = 5.65%

Ratios

Capital Account = $386,891

Total Value = $7,204,100

Paid In Capital = $5,140,032

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.40x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.33x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.08x

Pantheon Global Secondary Fund III
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
12/2006	0		500,000		110		23,699		3,896		0		0		480,307
03/2007	480,307		275,000		1,104		12,329		102,564		0		0		846,646
06/2007	846,646		175,000		434		12,466		107,117		0		0		1,116,731
09/2007	1,116,731		225,000		1,822		12,603		102,490		0		0		1,433,440
12/2007	1,433,440		300,000		1,068		12,603		12,221		0		0		1,734,126
03/2008	1,734,126		650,000		1,024		12,329		93,162		0		0		2,465,983
06/2008	2,465,983		499,999		1,107		12,466		3,134		0		0		2,957,757
09/2008	2,957,757		275,000		461		12,603		(103,497)		0		0		3,117,118
12/2008	3,117,118		300,000		656		12,603		(452,340)		0		0		2,952,831
03/2009	2,952,831		225,000		164		12,329		(281,889)		0		0		2,883,777
06/2009	2,883,777		0		394		12,466		118,124		0		0		2,989,829
09/2009	2,989,829		25,000		1,369		12,603		97,319		0		0		3,100,914
12/2009	3,100,914		0		5,221		12,603		92,261		0		0		3,185,793
03/2010	3,185,793		0		1,325		12,329		22,086		0		75,000		3,121,875
06/2010	3,121,875		0		3,110		12,466		(24,073)		0		0		3,088,446
09/2010	3,088,446		175,000		3,213		12,603		115,854		0		0		3,369,910
12/2010	3,369,910		525,000		4,765		12,603		209,627		0		450,000		3,646,699
03/2011	3,646,699		0		12,106		12,329		189,903		0		0		3,836,379
06/2011	3,836,379		0		2,346		12,466		194,920		0		250,000		3,771,179
09/2011	3,771,179		100,000		33,335		12,603		(206,828)		0		225,000		3,460,083
12/2011	3,460,083		0		4,855		12,603		(85,269)		0		50,000		3,317,066
03/2012	3,317,066		50,000		5,583		12,432		117,995		0		225,000		3,253,212
06/2012	3,253,212		75,000		9,659		12,432		17,991		0		225,000		3,118,430
09/2012	3,118,430		0		7,370		12,568		34,523		0		0		3,147,755
12/2012	3,147,755		50,000		6,769		10,921		15,973		0		300,000		2,909,576
03/2013	2,909,576		0		473		12,229		16,421		75,000		0		2,839,241
06/2013	2,839,241		75,000		8,943		12,417		67,416		225,000		0		2,753,183
09/2013	2,753,183		0		2,788		12,554		17,968		175,000		0		2,586,385
12/2013	2,586,385		0		3,222		12,543		97,445		0		100,000		2,574,509
03/2014	2,574,509		100,000		2,009		11,036		73,662		0		225,000		2,514,144
06/2014	2,514,144		0		3,542		11,159		88,000		0		50,000		2,544,527
09/2014	2,544,527		0		13,697		11,282		(119,579)		0		165,000		2,262,363
12/2014	2,262,363		90,000		363		11,282		10,232		0		245,000		2,106,676
03/2015	2,106,676		0		11,952		9,928		21,332		0		140,000		1,990,032
06/2015	1,990,032		0		9,289		10,039		53,366		0		150,000		1,892,648
09/2015	1,892,648		55,000		4,597		10,150		(44,306)		0		175,000		1,722,789
12/2015	1,722,789		0		16,812		283,849		276,455		190,000		0		1,542,207
03/2016	1,542,207		0		9,036		9,006		(22,573)		170,000		0		1,349,664
06/2016	1,349,664		0		5,448		9,006		(14,055)		45,000		0		1,287,051
09/2016	1,287,051		0		(1,715)		9,106		36,381		100,000		0		1,212,611
12/2016	1,212,611		0		7,917		9,106		(19,624)		90,000		0		1,101,798
03/2017	1,101,798		0		4,216		8,046		22,430		50,000		0		1,070,398
06/2017	1,070,398		0		3,349		8,179		46,637		95,000		0		1,017,205
09/2017	1,017,205		0		(7,445)		8,182		24,438		50,000		0		976,016
12/2017	976,016		0		4,437		8,014		(18,926)		210,000		0		743,513
03/2018	743,513		0		2,131		7,280		5,078		80,000		0		663,442
06/2018	663,442		0		284		7,361		88,505		35,000		0		709,870

Pantheon Global Secondary Fund III
Private Equity Investment Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
09/2018	709,870		0		4,396		7,442		29,299		10,000		0		726,123
12/2018	726,123		0		4,974		7,251		(47,122)		0		75,000		601,724
03/2019	601,724		0		0		6,552		51,506		35,000		0		611,678
06/2019	611,678		0		0		6,625		(4,058)		85,000		0		515,995
09/2019	515,995		0		0		5,242		6,394		50,000		0		467,147
12/2019	467,147		0		0		4,850		(49,110)		35,000		0		378,187
03/2020	378,187		0		0		9,352		(647)		40,000		0		328,188
06/2020	328,188		0		0		6,303		29,085		150,000		0		200,970
09/2020	200,970		0		0		3,739		3,736		40,000		0		160,967
12/2020	160,967		0		0		4,656		4,656		0		0		160,967
03/2021	160,967		0		0		0		(1,884)		0		0		159,083
06/2021	159,083		0		0		4,177		6,558		0		0		161,464
09/2021	161,464		0		0		0		(21,271)		0		0		140,193
12/2021	140,193		0		0		5,069		(702)		0		0		134,422
03/2022	134,422		0		0		7,604		(6,412)		25,000		0		95,406
06/2022	95,406		0		0		0		(586)		35,000		0		59,820
09/2022	59,820		0		0		79		(655)		0		0		59,086
12/2022	59,086		0		0		0		869		0		0		59,955
03/2023	59,955		0		0		0		0		0		0		59,955
06/2023	59,955		0		0		0		0		0		0		59,955
	0		4,744,999		224,085		892,752		1,203,623		2,095,000		3,125,000		59,955

Returns

Net Since Inception IRR = 1.90%

Ratios

Capital Account = $59,955

Total Value = $5,279,955

Paid In Capital = $4,744,999

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.11x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.10x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.01x

Pantheon US Select 2014
Real Estate Portfolio
Quarterly Changes in Market Value

	Beg. of Period Market	+	Capital Contri-butions	+	Accounting Income	-	Mgmt. Fees	+	Appre-ciation	-	Dist. of Income & Real. Gains	-	Return of Capital	=	End of Period Market
03/2015	(5,712)		188,000		(26,666)		647		0		0		0		154,975
06/2015	154,975		555,000		(9,672)		13,291		0		0		0		687,012
09/2015	687,012		463,937		8,765		15,008		0		0		0		1,144,706
12/2015	1,144,706		0		5,605		(10,332)		(4,032)		0		0		1,156,611
03/2016	1,156,611		0		126		6,517		(3,021)		0		0		1,147,199
06/2016	1,147,199		480,000		(7,766)		6,955		(7,136)		0		0		1,605,341
09/2016	1,605,341		225,000		91,201		11,340		(3,551)		0		0		1,906,651
12/2016	1,906,651		269,668		(22,646)		12,538		131,076		0		0		2,272,211
03/2017	2,272,211		585,000		(5,710)		13,969		66,210		0		0		2,903,742
06/2017	2,903,742		1,230,138		(25,941)		15,016		147,215		0		0		4,240,138
09/2017	4,240,138		645,159		22,338		15,084		50,560		0		0		4,943,111
12/2017	4,943,111		870,000		(3)		19,246		341,589		0		0		6,135,451
03/2018	6,135,451		510,221		(4,603)		19,351		333,322		0		0		6,955,040
06/2018	6,955,040		555,179		(100,389)		20,725		349,082		0		0		7,738,187
09/2018	7,738,187		975,000		14,485		22,154		528,429		90,192		74,808		9,068,947
12/2018	9,068,947		1,095,407		122,516		26,079		132,047		0		0		10,392,838
03/2019	10,392,838		0		0		22,095		444,609		0		0		10,815,352
06/2019	10,815,352		225,245		0		18,500		727,786		0		0		11,749,883
09/2019	11,749,883		240,000		0		23,150		346,200		0		0		12,312,933
12/2019	12,312,933		330,240		0		23,909		123,689		0		0		12,742,953
03/2020	12,742,953		0		0		22,108		(16,784)		330,457		0		12,373,604
06/2020	12,373,604		0		0		22,107		1,033,527		600,219		0		12,784,805
09/2020	12,784,805		330,233		0		22,303		1,696,452		0		0		14,789,187
12/2020	14,789,187		525,222		0		22,647		375,495		0		0		15,667,257
03/2021	15,667,257		0		0		21,951		3,591,662		150,000		0		19,086,968
06/2021	19,086,968		0		0		23,007		2,322,461		540,000		0		20,846,422
09/2021	20,846,422		0		0		23,396		1,807,892		945,000		0		21,685,918
12/2021	21,685,918		0		0		23,088		695,656		390,001		0		21,968,485
03/2022	21,968,485		0		0		22,964		1,538,367		254,547		0		23,229,341
06/2022	23,229,341		0		0		23,206		(284,830)		330,000		0		22,591,305
09/2022	22,591,305		0		0		23,458		(154,642)		210,000		0		22,203,205
12/2022	22,203,205		60,000		0		21,362		4,662		450,000		0		21,796,505
03/2023	21,796,505		0		0		22,948		63,306		254,781		0		21,582,082
06/2023	21,582,082		0		0		0		0		165,000		0		21,417,082
	(5,712)		10,358,649		61,640		589,788		16,377,299		4,710,197		74,808		21,417,082

Returns

Net Since Inception IRR = 284.55%

Ratios

Capital Account = $21,417,082

Total Value = $26,202,087

Paid In Capital = $10,358,649

TVPI Investment Multiple (Total Value/Paid In Capital) = 2.53x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.46x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 2.07x

Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit www.callan.com/research-library to see all of our publications, and www.callan.com/blog to view our blog. For more information contact Barb Gerraty at 415-274-3093 / institute@callan.com.

New Research from Callan's Experts

2023 Private Credit Fees and Terms Study | Catherine Beard and Jared Ungar assess private credit partnerships in our first fees and terms study for this asset class.

2Q23 Real Assets Reporter: Life Sciences Investments | Christine Mays describes life sciences investments and the role they can play in institutional portfolios.

The Critical Underlying Technology Behind Digital Assets: A Primer for Institutional Investors | This paper provides background on key concepts around digital assets: blockchains and distributed ledgers; cryptography; validation protocols; smart contracts; and tokenization.

Blog Highlights

Biodiversity: A Relatively New Theme for ESG-Focused Investors | Biodiversity investments include companies that support the sustainable use of natural resources and ecosystem services or technologies, or products or services that reduce biodiversity threats or restore natural habitats.

Higher Interest Rates Meet Lower Valuations: Implications for the CRE Industry | The commercial real estate (CRE) industry, already facing challenges with economic uncertainty, the shift to remote work, and recent layoffs by many major office tenants, now confronts higher interest rates and plummeting pricing.

How to Improve DC Plans with DEI | For defined contribution (DC) plan sponsors, understanding the diversity within the employee population supports inclusiveness and equality in access and opportunities.

Webinar Replays

Research Cafe: ESG Interview Series | During this interview, Aaron Quach, Callan ESG team member, interviews Jan Mende, Callan real assets specialist and author of our white paper on energy transition. They will discuss the growing opportunities for investment within the energy transition space and how they can be incorporated into the portfolios of institutional investors.

Quarterly Periodicals

Private Equity Update, 1Q23 | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 1Q23 | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse, 1Q23 | 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, 1Q23 | 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, 1Q23 | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Update, 1Q23 | A summary of market activity for real assets and private real estate during the quarter

Private Credit Update, 1Q23 | A review of performance and fundraising activity for private credit during the quarter

Events

A complete list of all upcoming events can be found on our website: callan.com/events-education.

Please mark your calendar and look forward to upcoming invitations:

Webinar: The End of the Low-Yield Environment
Aug 9, 2023 – Virtual

2023 October Workshops
Oct. 24, 2023 – New York
Oct. 26, 2023 – Chicago

2024 National Conference
April 8-10, 2024 – San Francisco

For more information about events, please contact Barb Gerraty: 415-274-3093 / 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
3,700	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.

Introduction to Investments
Sept. 26-28 – 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.

Alternative Investments
Aug. 23-24 – 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.

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

"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

List of Callan's Investment Manager Clients

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Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name
abrdn (Aberdeen Standard Investments)
ABS Global Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AllianceBernstein
Allspring Global Investments, LLC
AlphaSimplex Group, LLC
Altrinsic Global Advisors, LC
American Capital Management, Inc.
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

Manager Name
Atlanta Capital Management Co., LLC
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BentallGreenOak
Beutel, Goodman & Company Ltd.
Bissell Ballantyne LLC
BlackRock
Blackstone Group (The)
Blue Owl Capital, Inc.
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brightwood Capital Advisors, LLC

Manager Name
Brookfield Asset Management Inc.
Brown Brothers Harriman & Company
Capital Group
Cardinal Capital, LLC
CastleArk Management, LLC
CIBC Asset Management Inc.
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments North America
Comvest Partners
CQS
Credit Suisse Asset Management, LLC
D.E. Shaw Investment Management, LLC
DePrince, Race & Zollo, Inc.
Diamond Hill Capital, Inc.
Dimensional Fund Advisors L.P.
Doubleline
DWS
EARNEST Partners, LLC
Epoch Investment Partners , Inc. * (See new name)
Fayez Sarofim & 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.
Glenmede Investment Management, LP
GlobeFlex Capital, L.P.
GoldenTree Asset Management, LP
Goldman Sachs
Golub Capital
Great Lakes Advisors, LLC
Guggenheim Investments
GW&K Investment Management
Harbor Capital Advisors

Manager Name
Hardman Johnston Global Advisors LLC
Heitman LLC
Hotchkis & Wiley Capital Management, LLC
Impax Asset Management LLC
Income Research + Management
Insight Investment
Intech Investment Management LLC
Intercontinental Real Estate Corporation
Invesco
J.P. Morgan
Janus
Jarislowsky Fraser Global Investment Management
Jennison Associates LLC
Jobs Peak Advisors
KeyCorp
Kohlberg Kravis Roberts & Co. (KKR)
Lazard Asset Management
LGIM America
Lincoln National Corporation
Longview Partners
Loomis, Sayles & Company, L.P.
Lord, Abbett & Company
LSV Asset Management
MacKay Shields LLC
Macquarie Asset Management (MAM)
Manulife Investment Management
Marathon Asset Management, L.P.
MetLife Investment Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & 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.

Manager Name
P/E Investments
Pacific Investment Management Company
Pacific Ridge Capital Partners, LLC
Pantheon Ventures
Parametric Portfolio Associates LLC
Partners Group (USA) Inc.
Pathway Capital Management, LP
PFM Asset Management LLC
PGIM
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.
S&P Dow Jones Indices
Sands Capital Management
Schroder Investment Management North America Inc.
Segall Bryant & Hamill

Manager Name
Silvercrest Asset Management Group
SLC Management
Smith Graham & Co. Investment Advisors, L.P.
Sprucegrove Investment Management Ltd
State Street Global Advisors
Strategic Global Advisors, LLC
*TD Global Investment Solutions – TD Epoch
T. Rowe Price Associates, Inc.
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Tri-Star Trust Bank
UBS Asset Management
VanEck
Vanguard Group, Inc. (The)
Versus Capital Group
Victory Capital Management Inc.
Virtus Investment Partners, Inc.
Vontobel Asset Management
Voya
Walter Scott & Partners Limited
WCM Investment Management
Wellington Management Company, LLP
Western Asset Management Company LLC
Westfield Capital Management Company, LP
William Blair & Company LLC
Xponance, Inc.

Important Disclosures

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Callan

June 30, 2023

City of Norwalk
OPEB

Investment Measurement Service
Quarterly Review

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Equity Gains Power Positive Returns

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All investor types saw gains for the one year ended 2Q23 after equity gains in the quarter, but trailed a 60% stocks/40% bonds benchmark. Over the last 20 years, all investor types were within range of the 60%/40% benchmark, lagging U.S. equities but topping U.S. fixed income.

Large Cap Growth Leads Indices Higher

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All U.S. equity indices produced positive returns; large cap growth (led by big technology firms) helped power the gains. Global and global ex-U.S. indices also showed gains, while developed markets outperformed emerging markets, in part due to China.

Aggregate Falls with Rise in Interest Rates

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The Bloomberg Aggregate fell as interest rates increased, but investors' risk appetite and solid economic news spurred returns for spread sectors and lower quality bonds. The unhedged Global Aggregate fell but the hedged index showed gains.

Private RE Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS

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The NCREIF Property Index fell 2.0% during 2Q23. The NCREIF Open-End Diversified Core Equity Index fell 2.7%. Global REITs underperformed, up 0.2% compared to a 6.8% rise for global equities (MSCI World). U.S. REITs rose 2.6%, compared to 8.7% for the S&P 500.

Headwinds in Market Slow Deal Liquidity

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First-half private equity fundraising and deal activity continued a declining trend, with only IPOs increasing slightly. LPs are consolidating and upgrading portfolios, and GPs are focusing on existing portfolio management to increase exits and distributions.

IRRs Stay Steady and Range from 8%-10%

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Private credit has generated net IRRs of 8% to 10% for trailing periods ended 1Q23. Higher-risk strategies performed better than lower-risk strategies. Investors focused on relative value, downside protection, and managers' internal workout resources.

Hedge Funds Gain but Lag Equity Indices

HEDGE FUNDS/MACs

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Hedge funds ended 2Q higher but unable to keep up with soaring equity indices, as equity market volatility subsided from 1Q. For individual managers, equity hedge strategies, event-driven managers, and macro strategies all ended with gains for the quarter.

Index Starts off 2023 With a 5.3% Increase

DEFINED CONTRIBUTION

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The Callan DC Index gained 5.3% in 1Q23, and balances within the index rose by the same amount. Target date funds continued to see the largest net inflows. U.S. large cap saw big gains in participant allocations; capital preservation fund options saw a decline.

Broad Market Quarterly Returns

U.S. Equity
Russell 3000

8.4%

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

2.4%

U.S. Fixed Income
Bloomberg Agg

-0.8%

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

-2.2%

Sources: Bloomberg, FTSE Russell, MSCI

Is Recession Risk Really Off the Table?

ECONOMY | Jay Kloepfer

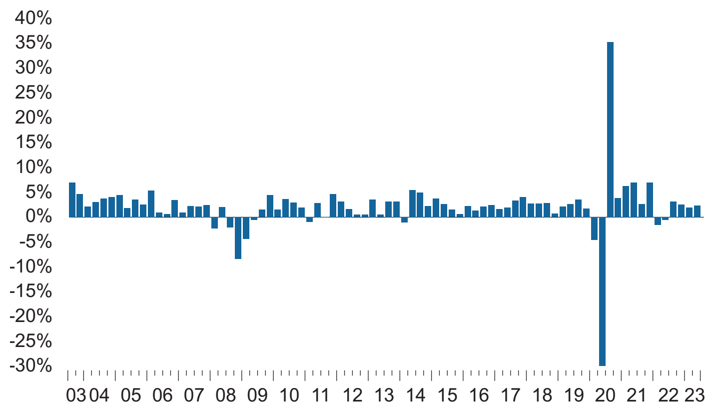
We saw a change in tone in economic forecasts coming in over the past six weeks, from one of certain recession in 2023 or at the least 2024, to one of “no recession here.” We see it in the tea leaves of the Fed’s releases after its last couple of meetings and in investment managers’ updates and strategy pieces, and now the professional forecasting community is, well, forecasting no recession this year or next.

What happened? First, the job market remains robust, with unemployment stuck at a generational low. Second, inflation dropped from an alarming 9% rate last June to 3% in just one year. In the broad economy, GDP rebounded from two quarters of decline in 2022 to log four consecutive quarters of solid growth, notching 2.4% in 2Q23. Expectations established just six months ago had a recession hitting in 2Q or 3Q of *this* year. Now it is rare to find a shorter-term outlook (12-18 months) with a recession as the base case; we’re back to the notion of a soft landing, with GDP gently declining to 1%-1.5% growth in 2024. Did recession risk really disappear?

Interest rates could rise more in the second half of 2023, even though inflation is now down at 3%. The Fed has suggested two more rate hikes are in their cards. The strength remaining in the economy after rates rose 5% in one year gives the Fed headroom to further flex its inflation-fighting chops. The bond market has been expecting a recession since last July, when the yield curve inverted, and there is growing sentiment that perhaps this time, bond investors just might be wrong. The argument is that the bond market got ahead of itself in the spring of 2022, when it immediately and (almost) fully priced in the expected Fed moves by June last year. Then almost as quickly as the market believed the Fed would execute as telegraphed, the market began doubting the resolve of the Fed and the ability of the economy to absorb the historic jump in interest rates, and hence the inversion of the yield curve.

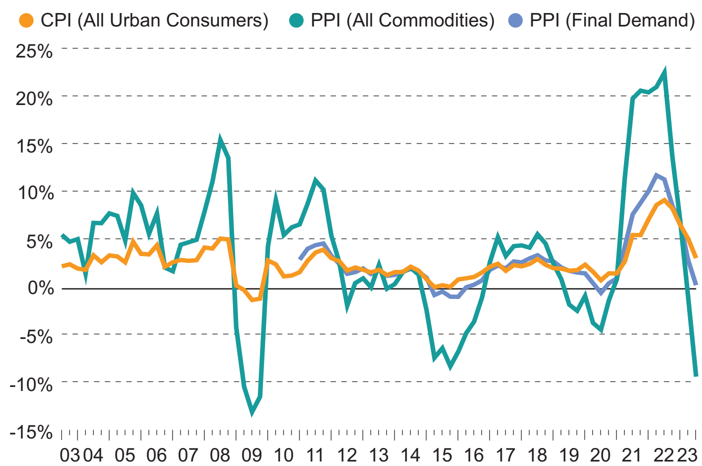
The strength of the job market has been Fed Chair Jerome Powell’s secret weapon, and we have been looking at the details of the job market with great interest. The U.S. economy recouped the nearly 20 million jobs lost in the first months of the pandemic by the middle of 2022, and now supports 4.3 million more non-farm jobs than at the end of 2019. However, some sectors are still woefully short of workers, and many observers believed a recession was necessary to convince people to take the jobs they no longer wanted in hospitality (hotels and restaurants), retail trade, and state and local government. These three sectors make up 34% of the U.S. job market, but all three have yet to surpass their pre-pandemic levels of employment; in fact, they are still 300,000 behind. That means only two-thirds of the job market has accounted for the 4.3 million new jobs. These lagging sectors have large concentrations

Quarterly Real GDP Growth (20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

of lower-paying jobs, so the differential growth in the job market is exacerbating pressure on lower-income workers.

Three threats that spurred recession fears earlier this year have not yet panned out: crypto, regional banks, and headline layoffs in technology. The collapse of FTX and the troubles across all manner of digital currencies have hurt investors but not taken a meaningful number of jobs, and the failure and takeover of three regional banks has not dented the exuberance of the stock market and the economic forecasters. The job cuts that made headlines at highly visible technology firms were large at the firm level, but small at the industry level, and the job-cutting was contained to technology.

So as recession fears fade, what does it mean for short interest rates, for long rates, and for the stock market? Longer term, the Fed telegraphs 2.5% as the anchor for the Federal Funds rate, but we may see 5%-5.5% for the next 18 months. The broad U.S. stock market (Russell 3000) dropped 24.6% in the first three quarters of 2022, but the index is up 24.5% in the three quarters through June 2023, and the total return since December 2021 is -3%. The backstory is that these gains came from just seven stocks; the rest of the stock market has been flat. Market expectations for stocks exclusive of these hot dots is subdued.

The risk of recession has not gone away, but the onset may have been delayed. One important economic rule of thumb to remember is that it takes about a year for a change in interest rates to work its way through the economy. The Fed started raising rates in March 2022, and has continued into 2023. We may be a year from seeing the full effect of higher rates on the economy.

The Long-Term View

Index	2Q23	Periods Ended 6/30/23 1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	8.4	19.0	11.4	12.3	7.7
S&P 500	8.7	19.6	12.3	12.9	7.6
Russell 2000	5.2	12.3	4.2	8.3	7.3
Global ex-U.S. Equity					
MSCI EAFE	3.0	18.8	4.4	5.4	4.3
MSCI ACWI ex USA	2.4	12.7	3.5	4.7	--
MSCI Emerging Markets	0.9	1.7	0.9	3.0	--
MSCI ACWI ex USA Small Cap	2.0	10.9	2.6	5.8	6.7
Fixed Income					
Bloomberg Agg	-0.8	-0.9	0.8	1.5	3.9
90-Day T-Bill	1.2	3.6	1.6	1.0	1.9
Bloomberg Long G/C	-1.3	-2.6	0.7	2.9	5.3
Bloomberg Gl Agg ex US	-2.2	-1.8	-2.7	-0.9	2.6
Real Estate					
NCREIF Property	-2.0	-6.6	5.9	7.8	8.5
FTSE Nareit Equity	2.6	-0.1	4.6	6.4	8.3
Alternatives					
CS Hedge Fund	2.2	5.0	5.0	4.7	6.1
Cambridge PE*	2.1	-4.6	16.0	15.0	13.8
Bloomberg Commodity	-2.6	-9.6	4.7	-1.0	2.0
Gold Spot Price	-2.9	6.8	9.0	4.7	7.8
Inflation – CPI-U	1.1	3.0	3.9	2.7	2.5

*Data for most recent period lags. Data as of 1Q23.
Sources: Bloomberg, Bureau of Economic Analysis, Credit Suisse, FTSE Russell, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

Recent Quarterly Economic Indicators

	2Q23	1Q23	4Q22	3Q22	2Q22	1Q22
Employment Cost: Total Compensation Growth	4.5%	4.8%	5.1%	5.0%	5.1%	4.5%
Nonfarm Business: Productivity Growth	3.7%	-1.2%	1.6%	1.2%	-3.7%	-6.0%
GDP Growth	2.4%	2.0%	2.6%	3.2%	-0.6%	-1.6%
Manufacturing Capacity Utilization	78.3%	78.2%	78.5%	79.4%	79.6%	79.2%
Consumer Sentiment Index (1966=100)	62.4	64.6	58.8	56.1	57.8	63.1

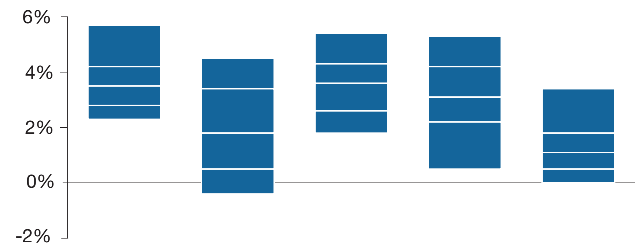
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

Equity Gains Power Positive Returns

INSTITUTIONAL INVESTORS

- Strong equity gains helped all investor types report gains for the trailing year, compared to single-digit losses in the year ending 1Q23.
- Nonprofits reported the best results for the trailing one year, followed closely by public defined benefit plans. Corporate plans and insurance assets, with their typically higher allocations to fixed income, saw the lowest gains.
- All investor types crushed bonds but lagged a benchmark consisting of 60% stocks/40% bonds.
- Over the last 20 years, all investor types were within range of the 60%/40% benchmark, lagging U.S. equities but topping U.S. fixed income and global ex-U.S. equities.
- After a disastrous 2022, the S&P 500 and Bloomberg Aggregate are both up through 2Q23.
  - S&P 500 up 16.9%
  - Aggregate up 2.1%
  - Nasdaq 100 is up almost 40%
- However, seven stocks are leading the charge with most others being flat to negative.
- The yield curve has remained inverted implying a recession is on the horizon
- Investors are focused on how much the world has changed, and whether it alters how they should view and implement portfolios.

Quarterly Returns, Callan Database Groups (6/30/23)



	Public	Corporate	Nonprofit	Taft-Hartley	Insurance Assets
10th Percentile	5.6	4.5	5.4	5.2	3.4
25th Percentile	4.2	3.4	4.3	4.1	1.8
Median	3.5	1.8	3.6	3.1	1.1
75th Percentile	2.7	0.5	2.6	2.2	0.5
90th Percentile	2.3	-0.4	1.8	0.5	0.0

Source: Callan

Callan Database Median and Index Returns* for Periods Ended 6/30/23

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	**3.5**	**9.3**	**8.0**	**6.7**	**7.5**	**7.5**
Corporate Database	**1.8**	**5.0**	**2.5**	**4.7**	**6.3**	**7.0**
Nonprofit Database	**3.6**	**9.6**	**8.1**	**6.4**	**7.1**	**7.4**
Taft-Hartley Database	**3.1**	**8.4**	**8.1**	**6.5**	**7.7**	**7.1**
Insurance Assets Database	**1.1**	**3.4**	**1.3**	**3.1**	**3.8**	**4.8**
All Institutional Investors	**3.1**	**8.5**	**7.5**	**6.2**	**7.2**	**7.2**
Large (>$1 billion)	**2.7**	**7.5**	**8.4**	**6.8**	**7.6**	**7.6**
Medium ($100mm - $1bn)	**3.3**	**8.7**	**7.6**	**6.3**	**7.3**	**7.2**
Small (<$100 million)	**3.5**	**9.3**	**7.2**	**6.0**	**6.9**	**6.9**
60% S&P 500/40% Bloomberg Agg	4.9	11.1	7.1	8.1	8.5	7.5

*Returns less than one year are not annualized.

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

Corporate DB Plans

– Liabilities decreased slightly, reflecting a small increase in discount rates, but assets (both LDI and equities) were up, offsetting any negative liability impact.
– Total return-oriented plans continued to see their funded status improve as the equity market kept rallying.
– Plans that were fully hedged experienced minimal, if any, funded status volatility over the quarter.
– There is a disconnect between hedging the accounting funding ratio and the rules for the ERISA minimum required contributions (MRCs). Callan's forecasted median ERISA rate (used for MRCs) lags the accounting rate by ~100 bps, which could trigger required contributions.

Public DB Plans

– The trend of "de-risking," moving to more fixed income, has somewhat abated.
– Plans have grown accustomed to their current level of risk; they lived through both the pandemic and 2022, and they would rather maintain this risk and collect a higher return.
– For plans that measure at 6/30, they should see a realized one-year return well in excess of their discount rate assumption. For those that smooth their assets, deferring the gains will help offset losses from FYE 2021, stabilizing future contribution requirements.

Insurers

– Insurance companies are some of the few investors that fared well following the spike in yields during 2022.
– Typically invested to match short-term liabilities, they are focused on investment income and use it to offset operating expenses.
– As interest rates rose, insurers sold bonds with lower book yields and took losses, then re-invested at much higher book yields.

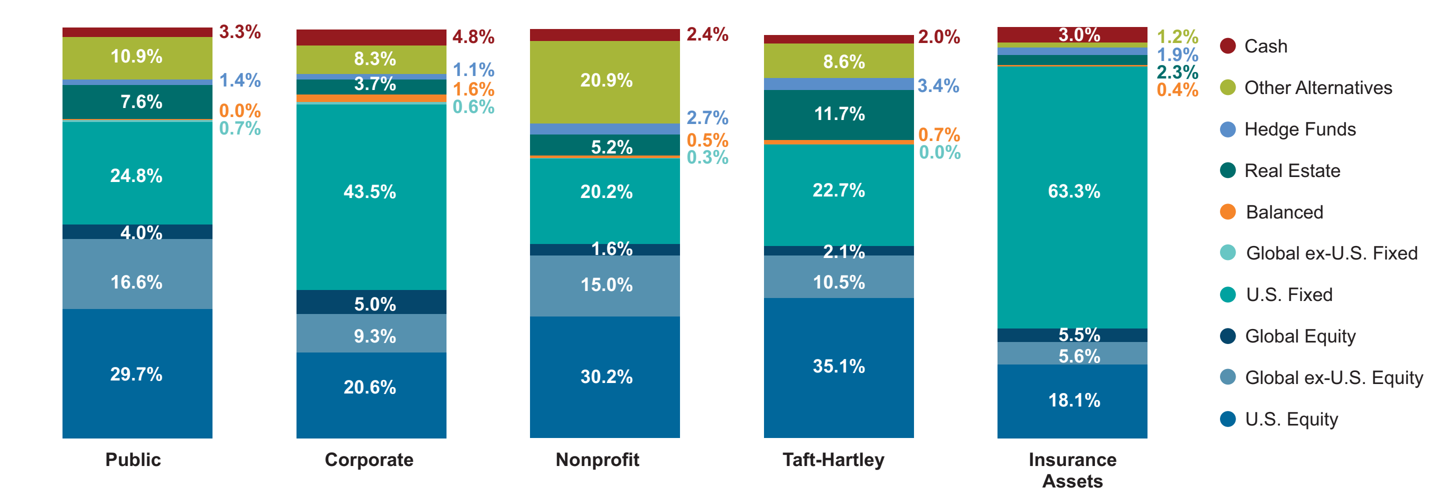
Nonprofits

– Foundations and endowments are seeing effective spending rates coming down, to reflect the losses in 2022 (since current spending rates don't yet reflect them, with lags and averages).

Defined Contribution Plans

– Sponsors focused on these significant new issues:
  - SECURE 2.0: Digesting the new provisions and learning what they mean for them
  - Rate environment: Helping participants with options to manage higher inflation
  - Managed accounts and retirement income: Keeping terminated participants and retirees in 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

Large cap growth stocks lead broad indices higher

- The S&P 500 posted a second straight quarter of positive performance, gaining 8.7%; large cap growth led all styles, advancing 12.8%.
- All U.S. equity indices produced positive returns; small value and low volatility produced the lowest 2Q returns.
- Nine of the 11 S&P Index sectors produced a positive 2Q23 return.
- Similar to 1Q23, small caps (Russell 2000) underperformed large caps (Russell 1000) and growth outperformed value during the quarter, a reversal of trend from 2022.
- Financials (-1.1%) detracted from returns for the Russell 2000 (+5.2%) while Health Care was the only small cap sector to produce double-digit returns (+11.2%).

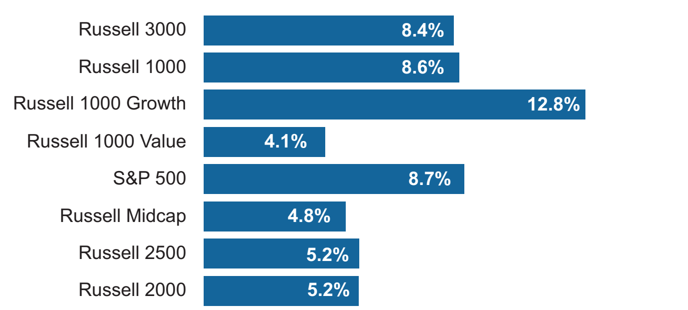
Index concentration is a significant 2Q theme

- 10 stocks within the S&P 500 Index contributed 80% of the 16.9% return YTD through 6/30; average appreciation is 82%, and these stocks had an average forward price/earnings ratio of 36x.
- 2Q return for the S&P 500 Index was 8.7%; the equal weight S&P 500 Index returned 4%.
- The YTD return difference is nearly 10 percentage points; if this gap holds through year-end, it would be the largest since 1998.

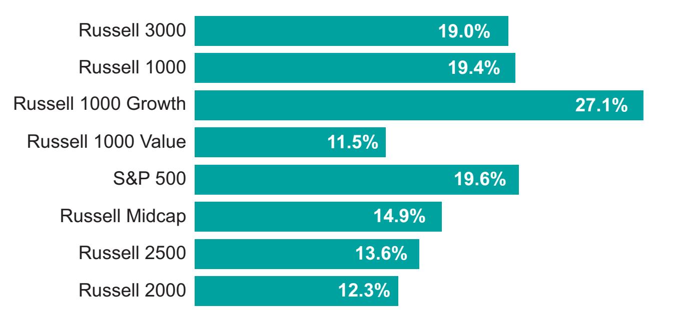
Small cap valuations point to potential opportunity

- Small cap continues to trade at a meaningful discount to its historical valuations; large cap (particularly growth) continues to trade at a premium to its historical valuations.
- Favorable developments in the inflation data could give the small cap market a boost in performance.
- One recent issue that caused this relative valuation gap is debt; on average, small cap companies have a higher exposure to variable rate debt than large cap counterparts.

U.S. Equity: Quarterly Returns (6/30/23)

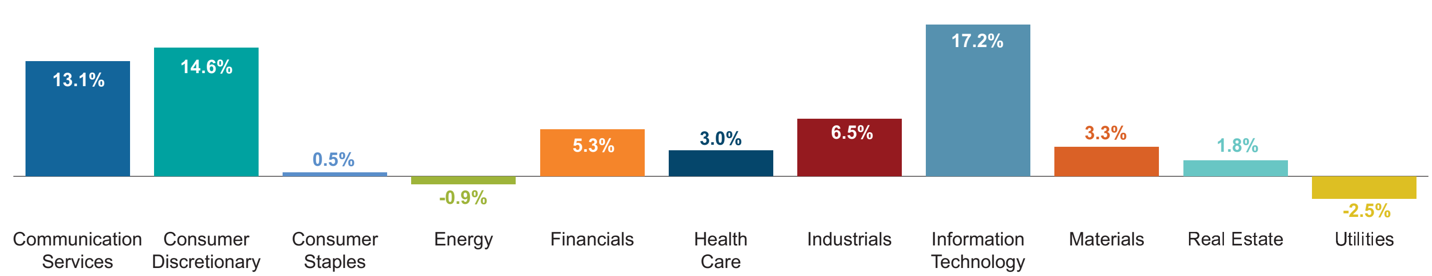


U.S. Equity: One-Year Returns (6/30/23)



Sources: FTSE Russell and S&P Dow Jones Indices

Quarterly Performance of Industry Sectors (6/30/23)



Source: S&P Dow Jones Indices

Global Equities

2Q23 continued global and global ex-U.S. equity markets' positive performance from the prior quarter.

Technology stocks lead markets higher

- 2Q23 saw global markets led higher by mega cap technology stocks, in part due to increased optimism around artificial intelligence advancements.
- Market expectations of a recession decreased as inflation showed signs of abating while the Fed kept rates unchanged in June.
- Japan outperformed other regions in local currency as valuations continued to be attractive alongside the Bank of Japan's easy monetary policy.

Developed vs. emerging markets

- Developed markets outperformed emerging markets as China weighed on EM indices.

Growth vs. value

- Mega cap technology companies, which are primarily U.S.-based, led markets higher and resulted in large dispersions between U.S. growth and value indices. However, outside of the U.S., growth and value index returns were relatively balanced.

Japan's turn

- Valuation below historical levels
- Economic recovery; in 1Q Japan transitioned out of a recession as GDP grew 2.7%.
- Next 12 months consensus earnings estimates show Japan outpacing China, EM, and Europe, and only trailing the U.S.

India vs. China

Economics

- Chinese geopolitical tensions have, in part, driven outside investment elsewhere compared to India, with Prime Minister Modi's visit to the U.S. highlighting its place in the world economy.
- China's New Espionage Law (effective July 2023) likely contributing to less foreign investment; $20 billion ended 1Q23 versus $100 billion ended 1Q22.

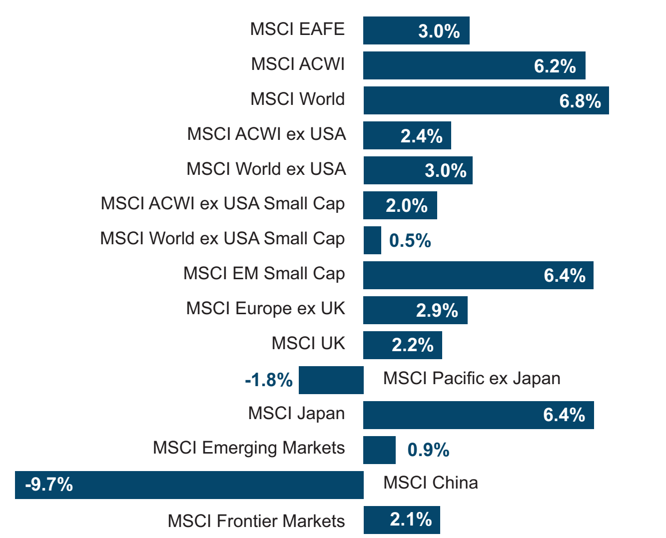
Asset flows

- India's equity market has more than doubled since 2010.

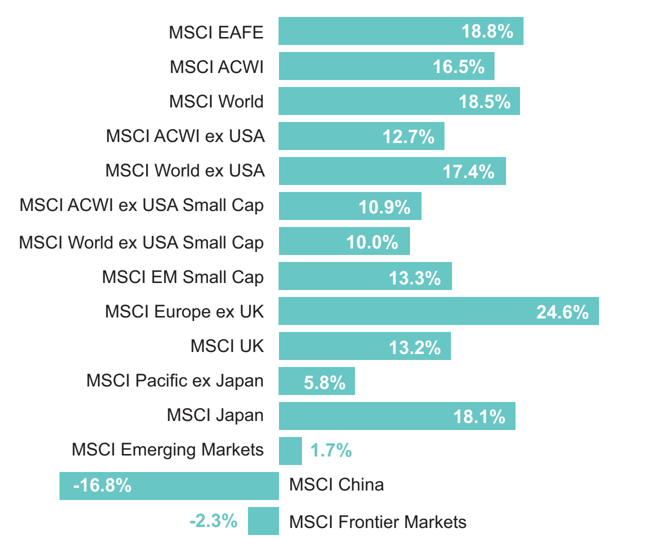
Growth

- India surpassing China with % of population in the middle class in 2030, and from 2023 to 2030 will contribute twice as much growth from this group than China in the Asia Pacific region.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 6/30/23)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 6/30/23)



Source: MSCI

Fixed Income

U.S. Fixed Income

Bloomberg Aggregate down as rates rose

Risk appetite and solid economic news spurred returns for spread sectors and lower quality.

- Corporate excess return: +131 bps
- Mortgage excess return: +76 bps
- High yield corporates excess return: +279 bps
- AA excess return: +84 bps
- BBB excess return: +157 bps

Yield curve inversion steepened

- 2-year U.S. Treasury: 4.87%; 10-year: 3.81%

TIPS performed in line with nominal U.S. Treasuries

- Five-year breakeven spreads narrowed to 2.18% from 2.40% on 3/31.
- Fed and markets expect inflation to trend down over longer periods.
- Fed Funds target raised to 5.00% - 5.25%
- Paused at June meeting but suggested that further hikes are likely
- Median expectation from Fed: 5.6% for year-end 2023
- Market expectations are similar at 5.4%; up sharply from expectations for cuts at the end of 1Q.

Valuations fair

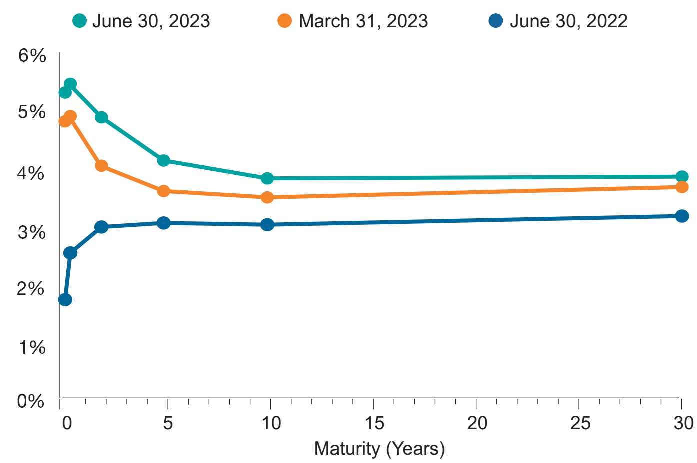
- Credit spreads have not widened materially and are close to historical averages.
- Demand has remained robust with muted issuance.

Municipal Bonds

Municipal bonds outperformed U.S. Treasuries in 2Q

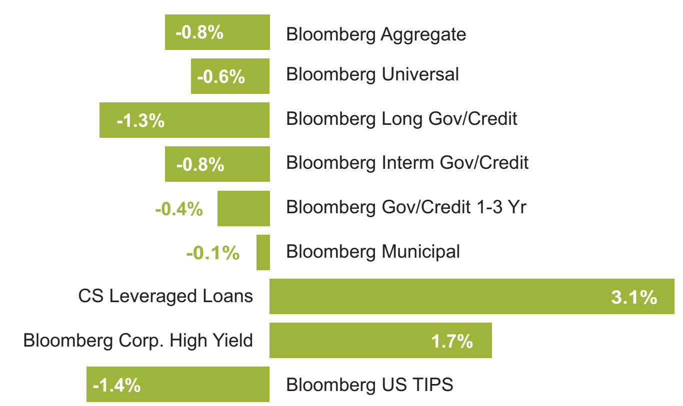
- Bloomberg Municipal Bond Index: -0.1%; Bloomberg U.S. Treasury Index: -1.4%
- Lower quality munis outperformed (AAA: -0.4%; AA: -0.2%; A: +0.2%; BBB: +0.7%)

U.S. Treasury Yield Curves



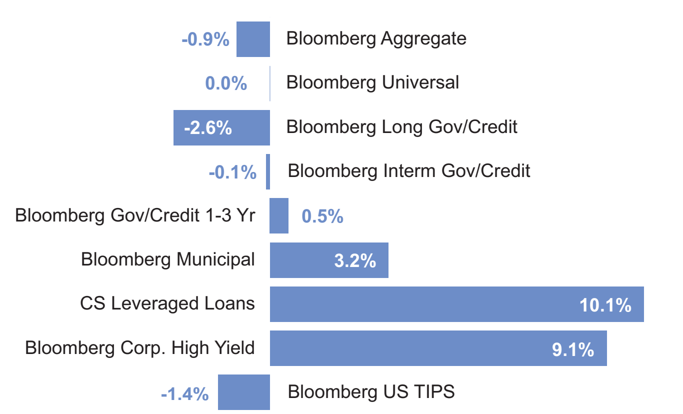
Source: Bloomberg

U.S. Fixed Income: Quarterly Returns (6/30/23)



Sources: Bloomberg and Credit Suisse

U.S. Fixed Income: One-Year Returns (6/30/23)



Muni curve inverted; less so than U.S. Treasury curve

- 2-year AAA Muni yield: 2.93%; 10-year AAA Muni yield: 2.56%

Valuations relative to U.S. Treasuries remain rich

- 10-year AAA Muni/10-year U.S. Treasury yield ratio 67%; below 10-year median of 87%
- After-tax yield 5.95% (Bloomberg Municipal Bond Index)

Supply/demand

- Outflows of roughly $8 billion YTD, mostly from short-term bond funds (record was $122 billion in 2022)
- Supply remained muted; YTD about 25% below 2022

Fundamentals remain sound

- "Rainy Day" fund balances and state tax revenues continued to be robust.
- Upgrades continued to significantly outpace downgrades in 1Q.

Global Fixed Income

Global Aggregate down unhedged but up hedged

- Rates mixed; up in the U.S., Great Britain, and Australia and flat to slightly down across other developed markets
- Japan (-8%) worst performer on sharp yen deprecation
- Bank of England surprised markets with 50 bps increase to combat sticky inflation.

U.S. dollar mixed

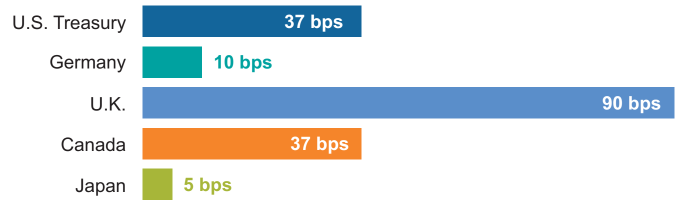
- Euro: +0.4% vs dollar
- British pound: +2.8% vs dollar
- Canadian dollar: +2.3% vs dollar
- Japanese yen: -7.9% vs dollar
- Australian dollar: -0.6% vs dollar
- Chinese yuan: -5.4% vs dollar
- Mexican peso: +5.3% vs dollar
- Brazilian real: +5.1% vs dollar

Emerging market debt delivered solid results

- Growth differentials have improved as inflation has peaked in many markets

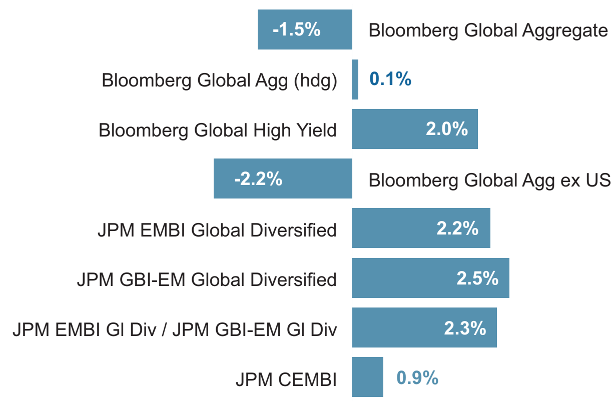
Change in 10-Year Global Government Bond Yields

1Q23 to 2Q23



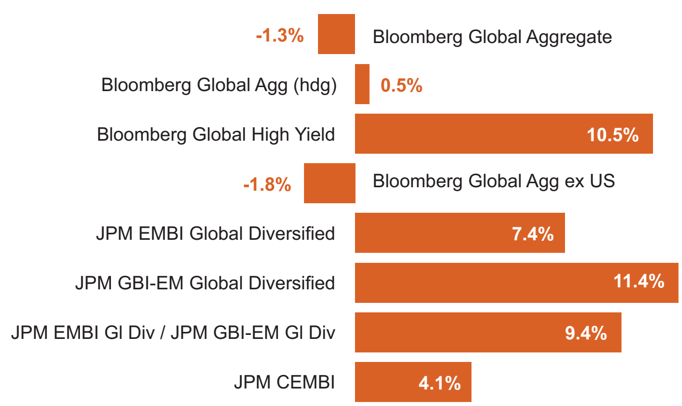
Source: Bloomberg

Global Fixed Income: Quarterly Returns (6/30/23)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns (6/30/23)



Sources: Bloomberg and JPMorgan Chase

Private Real Estate Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS | Kristin Bradbury, Munir Iman, and Aaron Quach

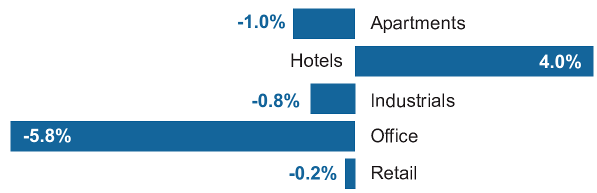
Private RE falls but income returns were positive

- The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 2.0% during 2Q23. The income return was 1.0% while the appreciation return was –3.0%.
- Hotels, which represent a small portion of the index, led property sector performance with a gain of 4.0%. Office finished last with a loss of 5.8%.
- Regionally, the South led with a loss of 0.8%, while the East was the worst performer with a loss of 2.7%.
- The NCREIF Open-End Diversified Core Equity Index, representing equity ownership positions in U.S. core real estate, fell 2.7% during 2Q, with an income return of 0.9% and an appreciation return of -3.6%.

REITs underperform equities

- Global REITs underperformed in 2Q23, rising 0.3% compared to a 6.8% rise for global equities (MSCI World).
- U.S. REITs rose 2.6% in 2Q23, in contrast with the S&P 500 Index, which rose 8.7%.
- The outperformance in the U.S. was driven by the resilient U.S. economy but continued to face headwinds due to higher interest rates and negative sentiment in the capital markets.

Sector Quarterly Returns by Property Type (6/30/23)



Source: NCREIF

Real Assets

- The S&P GSCI fell 2.7% in 2Q.
- WTI Crude ended the quarter at $70.64/barrel, down from $75.67/barrel on 3/31.
- Copper (-8%) fell on concerns over ebbing global demand and a slowdown in China, and gold (S&P Gold Spot Price: -2.9%) was hurt by lowered expectations for inflation and reduced safe-haven demand.
- TIPS (Bloomberg TIPS: -1.4%) were hurt by rising interest rates.

Callan Database Median and Index Returns* for Periods Ended 6/30/23

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
Real Estate ODCE Style	**-1.0**	**-4.9**	**-9.2**	**7.8**	**6.5**	**8.3**	**4.8**
NFI-ODCE (value-weighted, net)	-2.9	-6.2	-10.7	7.0	5.6	7.8	4.7
NCREIF Property	-2.0	-3.8	-6.6	6.8	5.9	7.8	6.1
NCREIF Farmland	0.8	2.9	8.2	7.6	6.5	8.3	9.9
NCREIF Timberland	1.7	3.5	11.1	8.7	5.8	5.9	4.6
Public Real Estate							
Global Real Estate Style	**0.8**	**2.8**	**-2.9**	**4.5**	**2.5**	**5.2**	**5.2**
FTSE EPRA Nareit Developed	0.3	1.0	-4.5	3.3	-0.1	2.9	3.2
Global ex-U.S. Real Estate Style	**-2.3**	**-2.5**	**-7.4**	**-1.1**	**-1.1**	**3.8**	**3.0**
FTSE EPRA Nareit Dev ex US	-3.1	-4.7	-9.3	-2.6	-3.8	0.6	1.2
U.S. REIT Style	**2.6**	**5.8**	**-0.7**	**8.6**	**6.0**	**7.3**	**7.7**
FTSE EPRA Nareit Equity REITs	2.6	5.4	-0.1	8.9	4.6	6.4	6.8

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

Headwinds Slow Liquidity

PRIVATE EQUITY | Gary Robertson

Fundraising ▶ Final closes for private equity partnerships in 2Q23 totaled $170 billion of commitments in 470 partnerships. (Unless otherwise noted, all data in this commentary come from PitchBook.) The dollar volume was down 2% from 1Q23, but the number of funds rose 7%. For the first half, commitments are running 31% behind those of a year ago, with the number of funds down by 51%, and with venture capital commitment volumes falling most notably from about 34% a year ago.

Buyouts ▶ New buyout transactions by count fell 13% from 1Q23 to 2,462, and disclosed deal value declined 18% to $122 billion. 1H23 numbers also saw declines of 30% in number of investments and 36% in disclosed value. YTD average buyout prices fell almost a turn (0.9x EBITDA) to 13.4x but remain high on an absolute basis. Average leverage levels YTD fell to only 31% of new deal capital structures, with interest costs rising and impinging company profitability.

VC Investments ▶ New rounds of financing in venture capital companies totaled 9,955, with $86 billion of announced value. The number of investments preliminarily fell 20% from 1Q23, but announced value fell only 1%. 1H23 numbers plunged 33% for rounds and 48% for disclosed value compared to 1H22.

Exits ▶ There were 472 private M&A exits of private equity-backed companies, with disclosed values totaling $90 billion. The preliminary private sale count fell 21% and the announced dollar volume dropped 13%. There were 46 private equity-backed IPOs in 2Q23 raising an aggregate $7 billion, up 15% by count, with issuance leaping 40% from 1Q23.

Venture-backed M&A exits totaled 541 transactions with disclosed value of $14 billion. The number of sales declined 18% from 1Q23, and announced value plunged 50%. There were 86 VC-backed IPOs in 2Q23 with a combined float of $12 billion; the count was up 19% and the issuance grew 71%.

Returns ▶ With an uptick in public equity markets in the last two quarters, private equity lagged in both periods but posted modestly positive returns in each.

Funds Closed 1/1/23 to 6/30/23

Strategy	No. of Funds	Amt ($mm)	Share
Venture Capital	554	59,101	17%
Growth Equity	53	47,704	14%
Buyouts	213	136,312	40%
Mezzanine Debt	11	29,663	9%
Distressed/Special Credit	15	24,043	7%
Energy	4	1,467	0%
Secondary and Other	53	42,486	12%
Fund-of-Funds	7	2,429	1%
Totals	**910**	**343,205**	**100%**

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

Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	-0.70	-16.37	24.98	20.43	18.73	13.20	12.62	19.35
Growth Equity	1.27	-9.26	21.28	16.51	15.11	12.70	14.39	14.17
All Buyouts	3.52	0.69	23.86	16.00	15.24	10.84	15.07	12.82
Mezzanine	3.49	6.08	14.91	10.88	11.08	10.34	11.38	10.02
Credit Opportunities	2.01	4.00	13.42	7.30	7.86	9.17	9.79	9.53
Control Distressed	1.60	2.59	26.00	13.90	12.14	10.72	11.85	11.51
All Private Equity	**2.12**	**-4.57**	**22.98**	**16.20**	**15.12**	**11.36**	**13.95**	**13.37**
S&P 500	8.74	19.59	14.60	12.31	12.86	10.88	10.04	7.61
Russell 3000	8.39	18.95	13.89	11.39	12.34	10.61	10.05	7.72

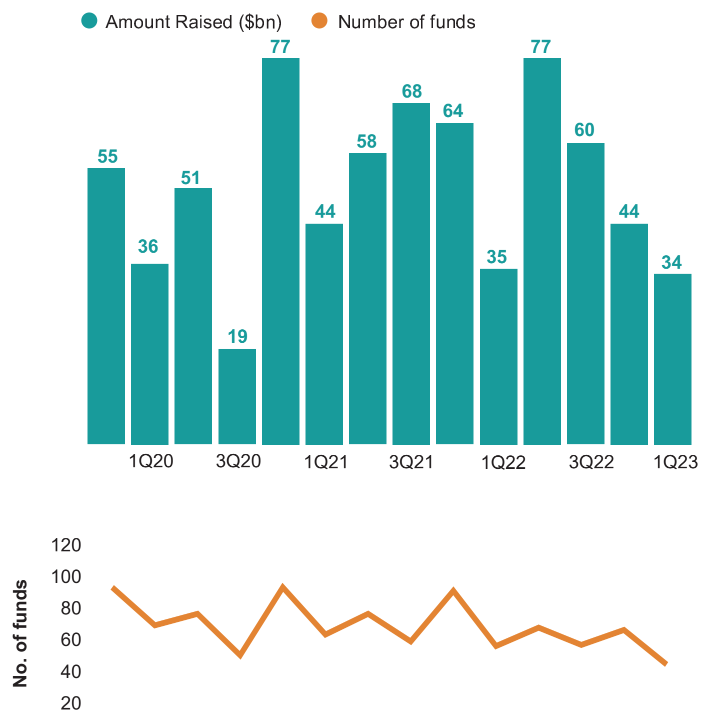
Note: Private equity returns are net of fees. Sources: Refinitiv/Cambridge and S&P Dow Jones Indices
*Most recent data available at time of publication

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.

IRRs Stay Steady and Range from 8%-10%

PRIVATE CREDIT | Catherine Beard

Private Credit Fundraising ($bn)



Source: Preqin

- Private credit performance varied across sub-asset class and underlying return drivers.
- On average, the asset class has generated net IRRs of 8% to 10% for trailing periods ended March 31, 2023.
- As interest rates declined after the GFC, private credit attracted increased interest from institutional investors.
- Private credit fundraising was robust leading into the COVID dislocation with a particular focus on direct lending, asset-based lending, and distressed strategies.
- Renewed focus on relative value, downside protection, and managers' internal workout resources
- Renewed interest in strategies with strong collateral protection such as asset-based lending as well as capital solutions and distressed/special situations strategies
- Larger sponsor-backed lending is seeing a new focus due to the high yield/broadly syndicated loans disintermediation by private credit.
- U.S. sub-investment grade corporate yields rose dramatically at the beginning of 2022 with yields peaking in September. This was a combination of higher interest rates due to tighter Fed policy and a widening of high yield spreads.
- Spreads widened during the first half of 2022 due to weaker credit conditions as the U.S. economic outlook worsened. This has since moderated.
- Default rates for U.S. corporate bonds ticked up in 2Q but remained well below the historical average of 3%-4%. Callan expects defaults to increase somewhat in coming months as economic growth slows and potentially turns negative.
- The Corporate Bond Market Distress Index (CMDI) rose rapidly during the first nine months of 2022, especially for investment grade bonds, highlighting market volatility and a drying up of liquidity, but has fallen since then.
- In 2023, as the IG distress index continued to fall, the HY bond indicator was roughly flat with the end of 2022. The CMDI incorporates a range of indicators, including new issuance and pricing for primary and secondary market bonds.
- During 2Q23, clients took a new look at upper-middle-market direct lending as all-in spreads have widened by over 500 bps and lenders are able to get tighter terms. Strong deal volume was driven partially by a shift from public to private market debt financings in the recent market environment.

Private Credit Performance (%) (Pooled Horizon IRRs through 3/31/23*)

Strategy	Quarter	1 Year	3 Years	5 Years	8 Years	10 Years	15 Years	20 Years
Senior Debt	2.8	4.3	8.8	5.9	7.0	6.8	7.0	6.9
Mezzanine	3.5	6.1	14.9	10.9	11.2	11	10.5	11.4
Credit Opportunities	2.0	4.0	13.4	7.3	7.3	7.9	9.2	9.4
Total Private Credit	2.5	4.5	12.8	7.9	8.2	8.4	9.2	9.6

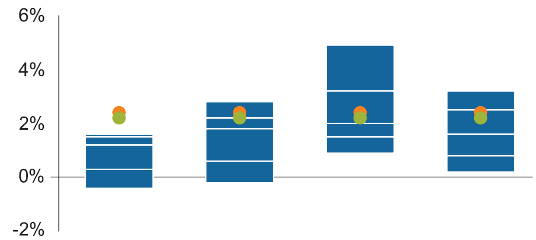
Source: Refinitiv/Cambridge
*Most recent data available at time of publication

Hedge Funds Gain but Lag Equity Indices

HEDGE FUNDS/MACs | Joe McGuane

Equity markets continued to march higher for the first half of this year, as growth equities surpassed expectations while the Federal Reserve paused the hiking cycle for the first time. Treasury yields moved higher across the curve and the spread between 2-year and 10-year Treasuries further inverted in 2Q23. Hedge funds ended 2Q higher but unable to keep up with soaring equity indices, as equity market volatility subsided from 1Q. Equity hedge strategies had another strong quarter, as managers focused on technology and biotechnology companies. Event-driven managers ended the quarter higher, aided by liquid corporate credit and equities. Macro strategies ended with gains, bouncing back from a difficult 1Q.

Hedge Fund Style Group Returns (6/30/23)



	Absolute Return FOF	Core Div. FOF	Long/Short Equity FOF	Institutional Hedge Funds
10th Percentile	1.6	2.8	4.9	3.2
25th Percentile	1.5	2.2	3.2	2.5
Median	1.2	1.8	2	1.6
75th Percentile	0.3	0.6	1.5	0.8
90th Percentile	-0.4	-0.2	0.9	0.2
HFRI Fund Wtd Index ●	2.2	2.2	2.2	2.2
90-Day T-Bills +5% ●	2.4	2.4	2.4	2.4

Sources: Callan, Credit Suisse, Federal Reserve

Callan Peer Group Median and Index Returns* for Periods Ended 6/30/23

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	**1.6**	**4.6**	**7.6**	**5.4**	**5.7**	**5.9**
Callan Fund-of-Funds Peer Group	**1.5**	**5.0**	**6.1**	**4.1**	**4.5**	**3.8**
Callan Absolute Return FOF Style	**1.2**	**3.8**	**7.0**	**4.1**	**4.6**	**3.7**
Callan Core Diversified FOF Style	**1.8**	**5.1**	**6.2**	**4.1**	**3.9**	**3.7**
Callan Long/Short Equity FOF Style	**2.0**	**5.9**	**3.6**	**3.8**	**5.0**	**4.2**
HFRI Fund-Weighted Index	2.2	5.0	8.1	5.0	4.7	4.0
HFRI Fixed Convertible Arbitrage	1.4	7.2	7.7	5.6	5.0	5.5
HFRI Distressed/Restructuring	1.4	1.6	9.3	4.5	4.3	4.5
HFRI Emerging Markets	2.6	3.4	4.6	2.5	3.4	2.2
HFRI Equity Market Neutral	0.6	2.9	4.1	2.0	2.9	1.9
HFRI Event-Driven	1.1	5.3	8.5	4.3	4.5	4.5
HFRI Relative Value	1.2	4.0	5.9	3.6	4.0	4.6
HFRI Macro	1.7	-0.4	7.3	5.0	3.1	2.4
HFRI Equity Hedge	3.1	7.6	9.0	5.5	5.7	4.3
HFRI Multi-Strategy	0.7	1.9	4.2	2.5	2.7	2.9
HFRI Merger Arbitrage	-1.0	1.9	7.4	4.6	4.2	3.9
90-Day T-Bill + 5%	2.4	8.6	6.3	6.6	6.0	5.8

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

Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group rose 1.6%. Within this style group of 50 peers, the average hedged credit manager gained 2.1% as high yield credit performed positively due to tightening credit spreads. Meanwhile, the average hedged equity manager added 1.7%, as managers with a focus on growth-oriented equities drove performance.

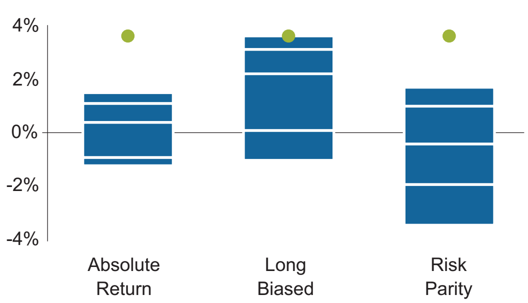
Within the HFRI indices, the best-performing strategy last quarter was the equity hedge index (3.1%), led by manager exposure to AI and growth-related sectors. Macro strategies finished up 1.7%, as managers went long equities and short rates across the U.S. and Europe.

Across the Callan Hedge FOF Database Group, the median Callan Long-Short Equity Fund-of-Funds (FOF) ended up 2.0%, as managers benefited from soaring large-cap technology companies. Meanwhile, the median Callan Core Diverse FOF gained 1.8%, as equity hedge, event-driven, and macro managers drove performance. The Callan Absolute Return FOF rose 1.2%, as a lower weight to equity hedge exposure led to a lower return compared to managers with more equity beta.

Within Callan's database, the median Callan Multi-Asset Class (MAC) Long Biased peer group gained 2.2%, the Callan MAC Absolute Return peer group was up 0.4%, and the Callan MAC Risk Parity peer group fell 0.4%.

The strong equity rally during the first half of this year has been hard for hedge funds to keep up with, as many managers came into 2023 more defensive. Throughout the second quarter we began to see managers taking on more risk to catch some of this broader market move higher. As the macro outlook appears to be more benign going into the second half of this year, we continue to think fundamental long/short equity managers are well positioned to profit from this current environment. Long/short credit managers will be able to opportunistically allocate capital to credits they believe are over- or undervalued in this current environment. We continue to believe macro managers are well positioned to allocate capital across the most attractive asset classes.

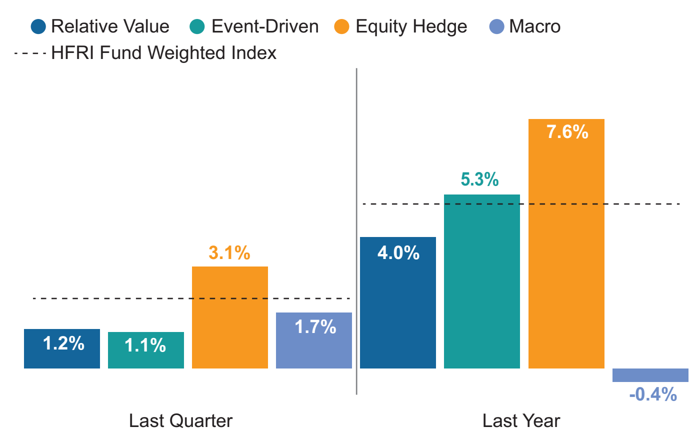
MAC Style Group Returns (6/30/23)



	Absolute Return	Long Biased	Risk Parity
10th Percentile	1.5	3.6	1.7
25th Percentile	1.1	3.1	1.0
Median	0.4	2.2	-0.4
75th Percentile	-0.9	0.1	-1.9
90th Percentile	-1.2	-1.0	-3.4
60% ACWI / 40% Blimmberg Agg	3.4	3.4	3.4

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

HFRI Hedge Fund-Weighted Strategy Returns (6/30/23)



Source: HFRI

Index Starts off 2023 With a Gain

DEFINED CONTRIBUTION | Scotty Lee

Performance: DC Index Rises 5.3% in 1Q23

- The Callan DC Index™ gained 5.3% in 1Q23, which brought the Index's trailing one-year loss to 5.2%.

Growth Sources: Investment Gains Lead to Rise in Balances

- Balances within the DC Index rose by 5.3% after a 5.8% increase in the previous quarter.
- Investment gains (+5.3%) were the sole driver of the gain, while net flows (+0.03%) had a negligible effect.

Turnover: Net Transfers Increase Again

- Turnover (i.e., net transfer activity levels within DC plans) jumped to 0.70% from the previous quarter's measure of 0.18%. The quarterly turnover figure marked the Index's highest level since 2020, when market volatility was heightened during the onset of the COVID-19 pandemic.

Net Cash Flow Analysis: TDFs Remain in Top Spot

- Target date funds (TDFs) received the largest net inflows in the DC Index, as the asset allocation funds garnered 90.6% of quarterly net flows.

Equity Allocation: Exposure Above Historical Average

- The Index's overall allocation to equity (70.8%) rose from the previous quarter's level (70.1%) and sits above the Index's historical average (68.4%).

Asset Allocation: Capital Preservation Declines

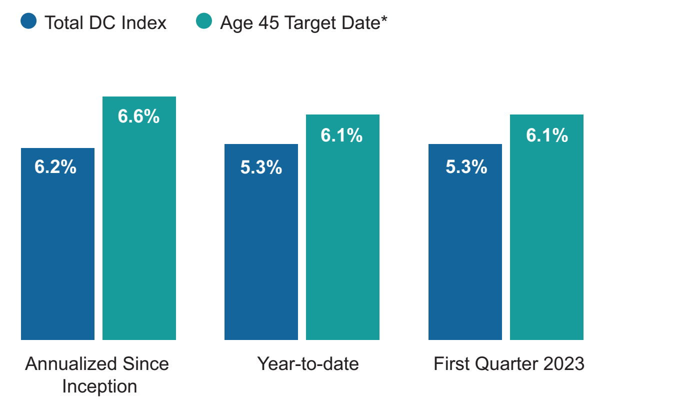
- U.S. large cap (25.7%) and global ex-U.S. equity (5.2%) were among the asset classes with the largest percentage increases in allocation.
- Within capital preservation, stable value (9.2%) had a decrease in allocation from the previous quarter's level (10.0%), which was exacerbated by investor outflows.

Prevalence of Asset Class: Balanced Funds Rise

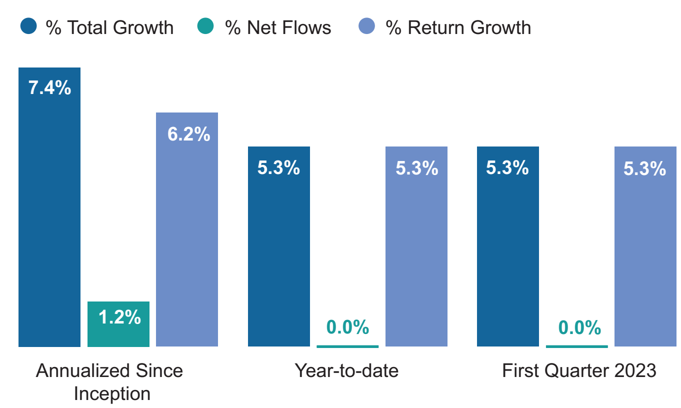
- The prevalence of a balanced fund (42.1%) rose by 1.3 percentage points, the first increase in two years.

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 (3/31/23)



Growth Sources (3/31/23)



Net Cash Flow Analysis (1Q23)
(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	90.6%
Brokerage Window	5.6%
U.S. Large Cap	-34.0%
Stable Value	-37.7%
Total Turnover**	**0.7%**

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

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

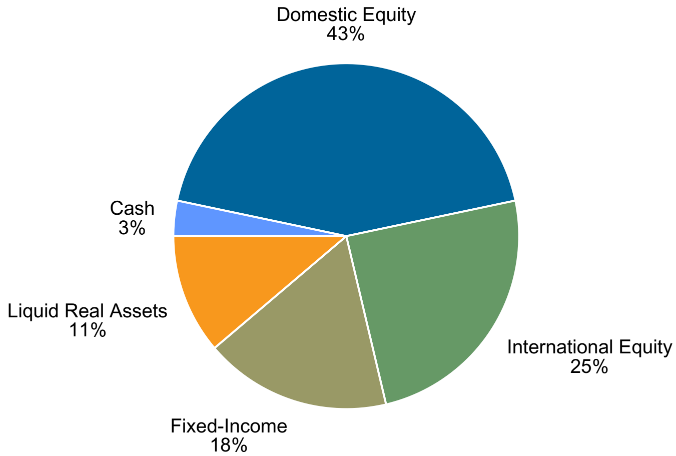
** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

Asset Allocation
and Performance

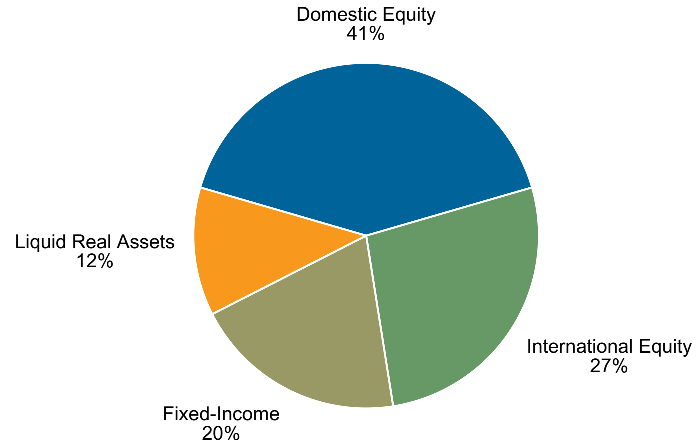
Actual vs Target Asset Allocation
As of June 30, 2023

The top left chart shows the Fund's asset allocation as of June 30, 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 - Sm DB (<100M).

Actual Asset Allocation

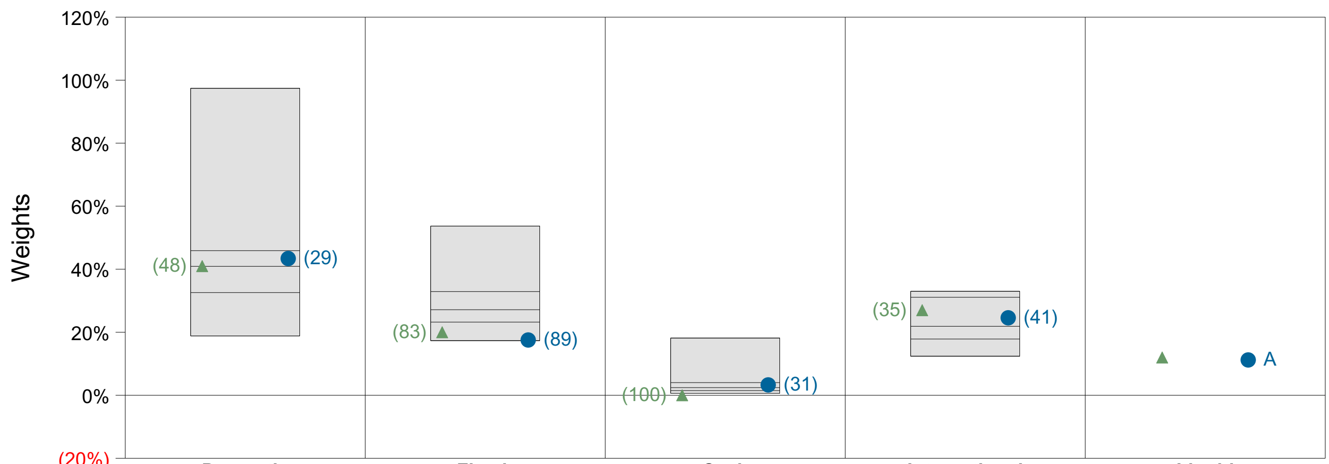


Target Asset Allocation



Asset Class	$000s Actual	Weight Actual	Target	Percent Difference	$000s Difference
Domestic Equity	55,856	43.4%	41.0%	2.4%	3,079
International Equity	31,639	24.6%	27.0%	(2.4%)	(3,116)
Fixed-Income	22,578	17.5%	20.0%	(2.5%)	(3,166)
Liquid Real Assets	14,426	11.2%	12.0%	(0.8%)	(1,021)
Cash	4,224	3.3%	0.0%	3.3%	4,224
Total	128,723	100.0%	100.0%		

Asset Class Weights vs Callan Public Fund Spons - Sm DB (<100M)



	Domestic Equity	Fixed-Income	Cash	International Equity	Liquid Real Assets
10th Percentile	97.42	53.70	18.16	32.99	-
25th Percentile	45.89	32.91	4.01	31.09	-
Median	40.91	27.15	2.42	21.88	-
75th Percentile	32.59	23.21	1.49	17.84	-
90th Percentile	18.82	17.33	0.61	12.39	-
Fund ●	43.39	17.54	3.28	24.58	11.21
Target ▲	41.00	20.00	0.00	27.00	12.00
% Group Invested	100.00%	88.89%	77.78%	88.89%	0.00%

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2023, with the distribution as of March 31, 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

	June 30, 2023				March 31, 2023	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Equity	**$87,495,094**	**67.97%**	**$0**	**$5,138,427**	**$82,356,667**	**65.61%**
Domestic Equity	**$55,855,731**	**43.39%**	**$0**	**$4,333,748**	**$51,521,983**	**41.04%**
Vanguard Total Stock Mrkt	55,855,731	43.39%	0	4,333,748	51,521,983	41.04%
International Equity	**$31,639,363**	**24.58%**	**$0**	**$804,679**	**$30,834,684**	**24.56%**
Vanguard Total Intl Stock	31,639,363	24.58%	0	804,679	30,834,684	24.56%
Fixed Income	**$22,578,242**	**17.54%**	**$(4,157)**	**$(214,861)**	**$22,797,260**	**18.16%**
Metropolitan West Fund	8,533,025	6.63%	0	(109,736)	8,642,761	6.88%
Prudential Cons Core Bond Fnd	14,045,217	10.91%	(4,157)	(105,125)	14,154,500	11.28%
Liquid Real Assets	**$14,425,977**	**11.21%**	**$0**	**$106,284**	**$14,319,692**	**11.41%**
PIMCO All Assets	14,425,977	11.21%	0	106,284	14,319,692	11.41%
Cash	**$4,223,646**	**3.28%**	**$(1,904,739)**	**$69,603**	**$6,058,782**	**4.83%**
Short Term Fund	4,223,646	3.28%	(1,904,739)	69,603	6,058,782	4.83%
Total Fund	**$128,722,959**	**100.0%**	**$(1,908,896)**	**$5,099,453**	**$125,532,401**	**100.0%**

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2023, with the distribution as of March 31, 2023.

Asset Distribution Across Investment Managers

	June 30, 2023					March 31, 2023		
	Market Value	Weight	(min)	Target	(max)	Market Value	Weight	Target
Total Equity	**$87,495,094**	**67.97%**	**53.00%**	**68.00%**	**83.00%**	**$82,356,667**	**65.61%**	**68.00%**
Domestic Equity	**$55,855,731**	**43.39%**	**31.00%**	**41.00%**	**51.00%**	**$51,521,983**	**41.04%**	**41.00%**
Vanguard Total Stock Mkt	55,855,731	43.39%				51,521,983	41.04%	
International Equity	**$31,639,363**	**24.58%**	**20.00%**	**27.00%**	**34.00%**	**$30,834,684**	**24.56%**	**27.00%**
Vanguard Total Int'l. Stock	31,639,363	24.58%				30,834,684	24.56%	
Fixed Income	**$22,578,242**	**17.54%**	**15.00%**	**20.00%**	**25.00%**	**$22,797,260**	**18.16%**	**20.00%**
Metropolitan West Fund	8,533,025	6.63%				8,642,761	6.88%	
Prudential Cons Core Bond	14,045,217	10.91%				14,154,500	11.28%	
Liquid Real Assets	**$14,425,977**	**11.21%**	**0.00%**	**12.00%**	**20.00%**	**$14,319,692**	**11.41%**	**12.00%**
PIMCO All Assets	14,425,977	11.21%				14,319,692	11.41%	
Cash	**$4,223,646**	**3.28%**	**0.00%**	**0.00%**	**0.00%**	**$6,058,782**	**4.83%**	**0.00%**
Short Term Fund	4,223,646	3.28%				6,058,782	4.83%	
Total Fund	**$128,722,959**	**100.0%**		**100.0%**		**$125,532,401**	**100.0%**	**100.0%**

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 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 June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
Total Equity	**6.24%**	**16.47%**	**11.35%**	**8.39%**	**10.34%**
Domestic Equity	**8.41%**	**18.93%**	**13.76%**	**11.31%**	**12.81%**
Vanguard Total Stock Market (1)	8.41%	18.93%	13.76%	11.31%	12.81%
Vanguard Total Stock Benchmark (2)	8.41%	18.94%	13.77%	11.31%	12.81%
Russell 3000 Index	8.39%	18.95%	13.89%	11.39%	12.86%
International Equity	**2.61%**	**12.34%**	**7.54%**	**3.72%**	**6.40%**
Vanguard Total Int'l. Stock (3)	2.61%	12.34%	7.54%	3.72%	6.40%
Vanguard International Benchmark (4)	2.68%	12.89%	7.94%	3.97%	6.78%
MSCI ACWI ex US	2.44%	12.72%	7.22%	3.52%	6.32%
Fixed-Income	**(0.94%)**	**(0.85%)**	**(3.92%)**	**0.86%**	**0.56%**
Prudential Conservative Core Bond (5)	(0.77%)	(0.68%)	(3.98%)	0.73%	0.39%
Metropolitan West Fund	(1.27%)	(1.36%)	(4.02%)	0.88%	0.66%
Blmbg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	0.44%
Liquid Real Assets	**0.74%**	**4.68%**	**6.92%**	**4.65%**	**5.45%**
PIMCO All Asset	0.74%	4.68%	6.92%	4.65%	5.45%
Blmbg US TIPS 1-10	(1.42%)	(0.91%)	1.15%	2.75%	2.13%
Cash	**1.23%**	**3.43%**	**1.22%**	**1.48%**	**1.33%**
Short Term Fund	1.23%	3.43%	1.22%	1.48%	1.33%
3-month Treasury Bill	1.17%	3.59%	1.27%	1.55%	1.37%
Total Fund	**4.09%**	**11.12%**	**7.77%**	**6.55%**	**7.63%**
Total Fund Benchmark*	3.74%	10.93%	7.07%	6.55%	7.38%

Annual Discount Rate:6.5%

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

(1) Vanguard Total Stock Market switched to Admiral Shares from Signal Shares in October 2014. In November 2014 switched to institutional shares.

(2) Vanguard Total Stock Market Benchmark was US Broad Market Index switched to CRSP U.S. Total Market Index Jun. 2013

(3) Vanguard Total Int'l. Stock switched to Institutional Shares from Investor Shares on November 30, 2014

(4) Vanguard Total International Benchmark was MSCI ACWI exUS IMI switched to FTSE Global All Cap exUS Index Jun. 2013.

(5) February 8, 2017 fund switched to Institutional Trust.

Investment Manager Returns

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

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
Total Equity	**16.47%**	**(16.08%)**	**41.24%**	**2.43%**	**5.80%**
Domestic Equity	**18.93%**	**(14.24%)**	**44.33%**	**6.47%**	**9.00%**
Vanguard Total Stock Market (1)	18.93%	(14.24%)	44.33%	6.47%	9.00%
Vanguard Total Stock Benchmark (2)	18.94%	(14.22%)	44.35%	6.47%	9.00%
Russell 3000 Index	18.95%	(13.87%)	44.16%	6.53%	8.98%
International Equity	**12.34%**	**(18.92%)**	**36.54%**	**(4.07%)**	**0.62%**
Vanguard Total Int’l. Stock (3)	12.34%	(18.92%)	36.54%	(4.07%)	0.62%
Vanguard International Benchmark (4)	12.89%	(19.01%)	37.55%	(4.16%)	0.81%
MSCI ACWI ex US	12.72%	(19.42%)	35.72%	(4.80%)	1.29%
Fixed-Income	**(0.85%)**	**(10.95%)**	**0.45%**	**8.94%**	**8.04%**
Prudential Cons Core Bond Fnd (5)	(0.68%)	(10.70%)	(0.16%)	8.65%	7.80%
Metropolitan West Fund	(1.36%)	(11.56%)	1.36%	9.18%	8.23%
Blmbg Aggregate Index	(0.94%)	(10.29%)	(0.33%)	8.74%	7.87%
Liquid Real Assets	**4.68%**	**(9.85%)**	**29.55%**	**(2.23%)**	**5.03%**
PIMCO All Asset	4.68%	(9.85%)	29.55%	(2.23%)	5.03%
Blmbg US TIPS 1-10	(0.91%)	(2.03%)	6.60%	5.75%	4.67%
Cash	**3.43%**	**0.16%**	**0.09%**	**1.78%**	**2.00%**
Short Term Fund	3.43%	0.16%	0.09%	1.78%	2.00%
3-month Treasury Bill	3.59%	0.17%	0.09%	1.63%	2.31%
Total Fund	**11.12%**	**(14.34%)**	**31.50%**	**3.26%**	**6.24%**
Total Fund Benchmark*	10.93%	(13.16%)	27.43%	4.85%	6.71%

Annual Discount Rate:6.5%

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.
(1) Vanguard Total Stock Market switched to Admiral Shares from Signal Shares in October 2014. In November 14th, 2014 switched to Institutional shares.
(2) Vanguard Total Stock Market Benchmark was US Broad Market Index switched to CRSP U.S. Total Market Index Jun. 2013
(3) Vanguard Total Int’l. Stock switched to Institutional Shares from Investor Shares in November 30, 2014
(4) Vanguard Total International Benchmark was MSCI ACWI exUS IMI switched to FTSE Global All Cap exUS Index Jun. 2013.
(5) February 8, 2017 fund switched to Institutional Trust.

Total Fund
Period Ended June 30, 2023

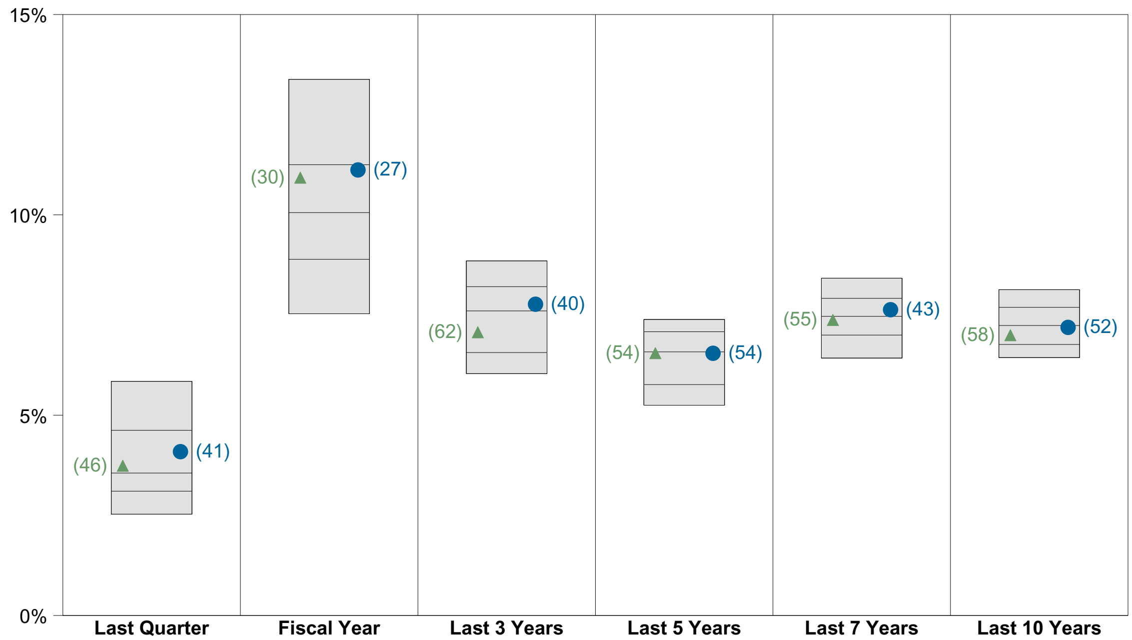
Quarterly Summary and Highlights

- Total Fund's portfolio posted a 4.09% return for the quarter placing it in the 41 percentile of the Callan Public Fund Spons - Sm DB (<100M) group for the quarter and in the 27 percentile for the last year.
- Total Fund's portfolio outperformed the Target Benchmark by 0.35% for the quarter and outperformed the Target Benchmark for the year by 0.19%.

Quarterly Asset Growth

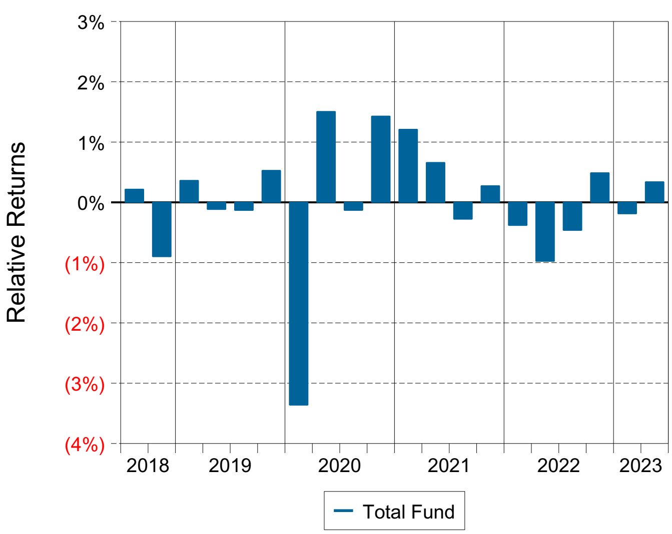
Beginning Market Value	$125,532,401
Net New Investment	$-1,908,896
Investment Gains/(Losses)	$5,099,453
Ending Market Value	$128,722,959

Performance vs Callan Public Fund Spons - Sm DB (<100M) (Gross)

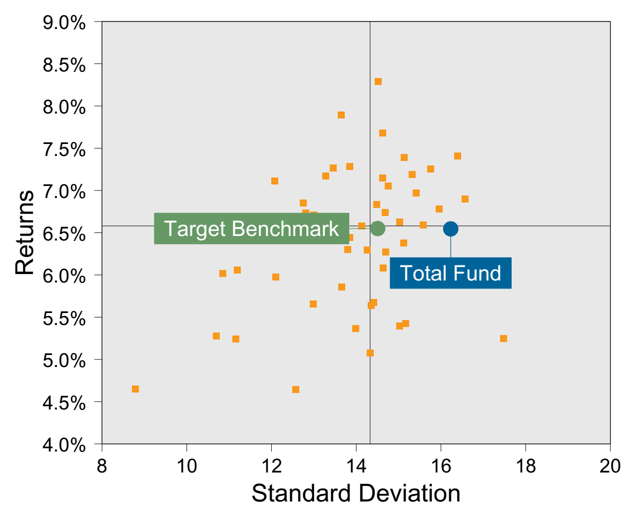


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	5.84	13.38	8.85	7.39	8.42	8.13
25th Percentile	4.62	11.25	8.21	7.08	7.92	7.69
Median	3.56	10.06	7.60	6.58	7.47	7.24
75th Percentile	3.10	8.89	6.56	5.76	7.00	6.77
90th Percentile	2.53	7.53	6.04	5.25	6.42	6.44
Total Fund ●	4.09	11.12	7.77	6.55	7.63	7.19
Target Benchmark ▲	3.74	10.93	7.07	6.55	7.38	7.00

Relative Return vs Target Benchmark



Callan Public Fund Spons - Sm DB (<100M) (Gross)
Annualized Five Year Risk vs Return

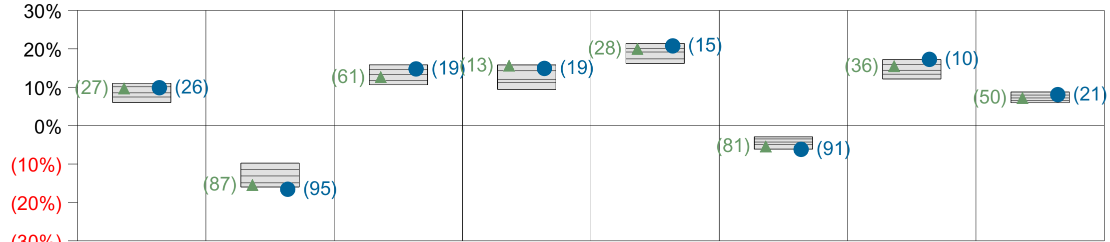


Total Fund
Return Analysis Summary

Return Analysis

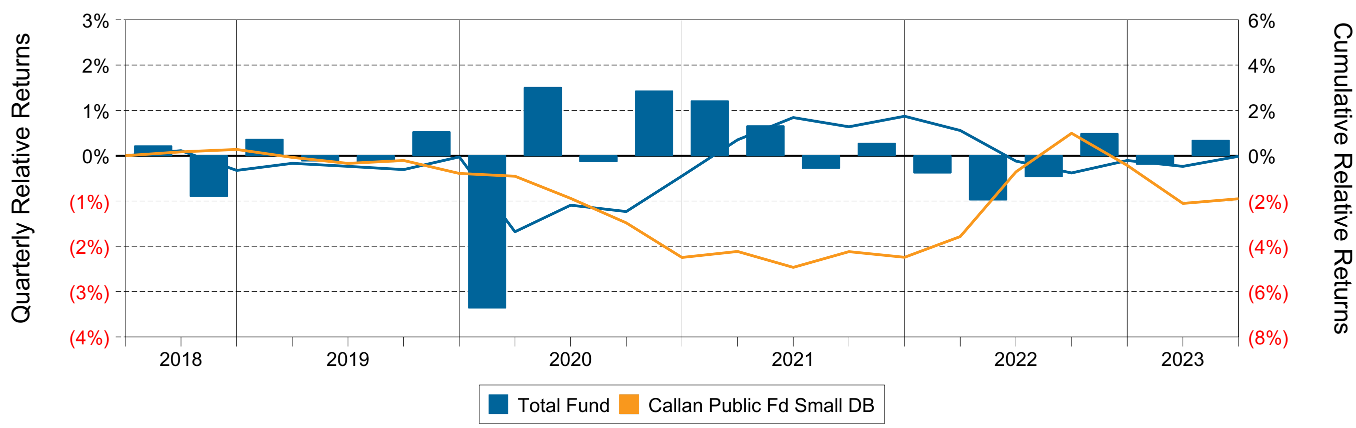
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Public Fund Spons - Sm DB (<100M) (Gross)

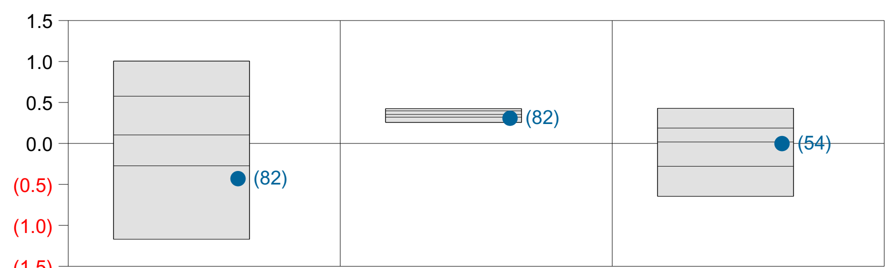


	12/22- 6/23	2022	2021	2020	2019	2018	2017	2016
10th Percentile	11.04	(9.76)	15.84	15.81	21.41	(2.92)	17.20	8.76
25th Percentile	10.11	(11.48)	14.57	14.29	20.12	(3.47)	15.97	7.97
Median	8.53	(13.10)	13.31	12.09	19.17	(4.27)	14.43	7.21
75th Percentile	7.46	(14.90)	11.71	11.19	17.38	(4.96)	13.41	6.53
90th Percentile	6.03	(15.99)	10.65	9.43	16.19	(6.11)	12.15	5.96
Total Fund ●	9.87	(16.57)	14.77	14.90	20.77	(6.18)	17.26	8.08
Total Fund Benchmark ▲	9.71	(15.44)	12.66	15.63	20.00	(5.40)	15.50	7.21

Cumulative and Quarterly Relative Returns vs Total Fund Benchmark



Risk Adjusted Return Measures vs Total Fund Benchmark
Rankings Against Callan Public Fund Spons - Sm DB (<100M) (Gross)
Five Years Ended June 30, 2023

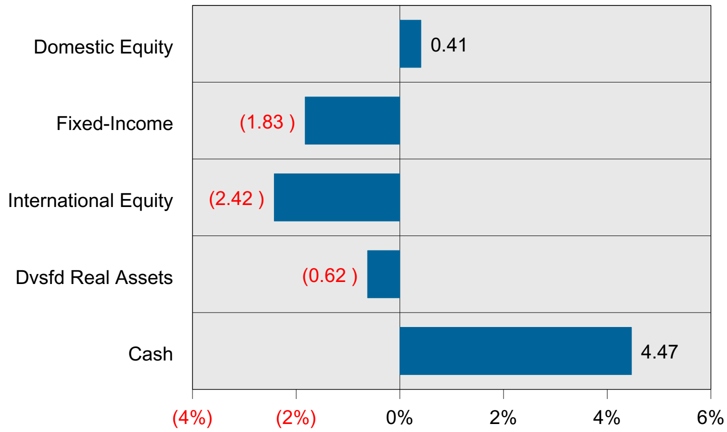


	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	1.00	0.42	0.43
25th Percentile	0.58	0.40	0.19
Median	0.10	0.35	0.02
75th Percentile	(0.27)	0.32	(0.28)
90th Percentile	(1.17)	0.26	(0.65)
Total Fund ●	(0.43)	0.31	(0.00)

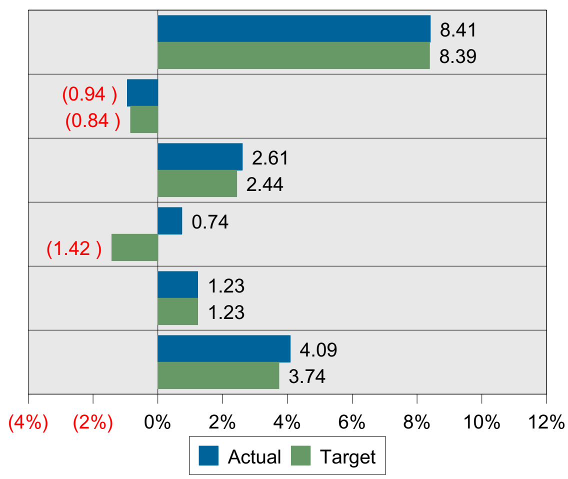
Quarterly Total Fund Relative Attribution - June 30, 2023

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.

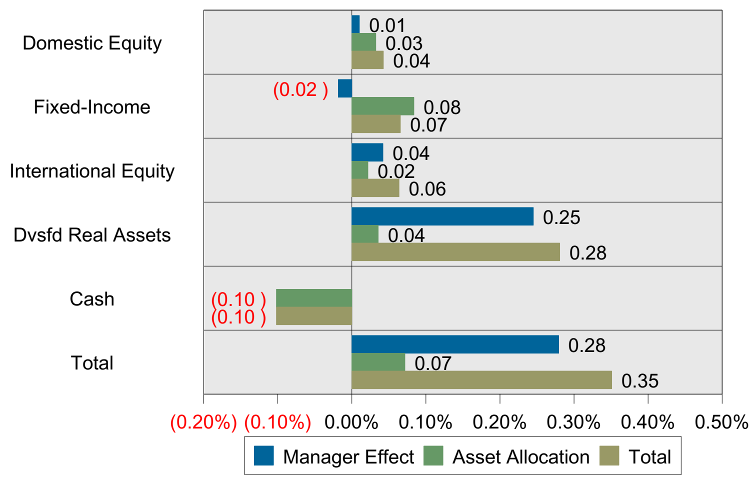
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended June 30, 2023

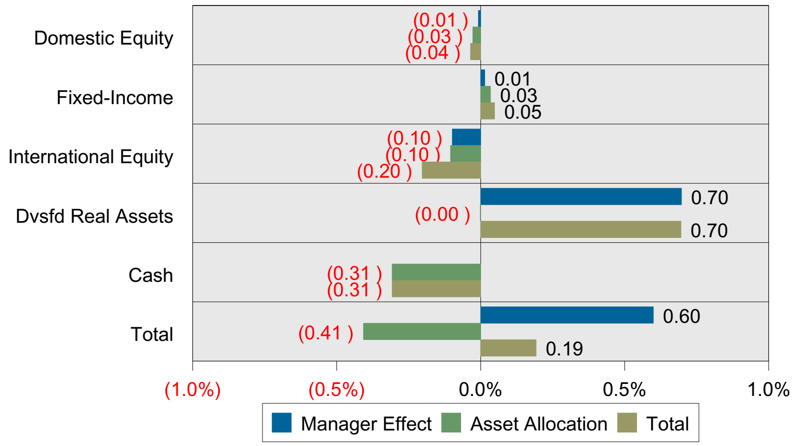
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	41%	41%	8.41%	8.39%	0.01%	0.03%	0.04%
Fixed-Income	18%	20%	(0.94%)	(0.84%)	(0.02%)	0.08%	0.07%
International Equity	25%	27%	2.61%	2.44%	0.04%	0.02%	0.06%
Dvsfd Real Assets	11%	12%	0.74%	(1.42%)	0.25%	0.04%	0.28%
Cash	4%	0%	1.23%	1.23%	0.00%	(0.10%)	(0.10%)
Total			**4.09% =**	**3.74% +**	**0.28% +**	**0.07%**	**0.35%**

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

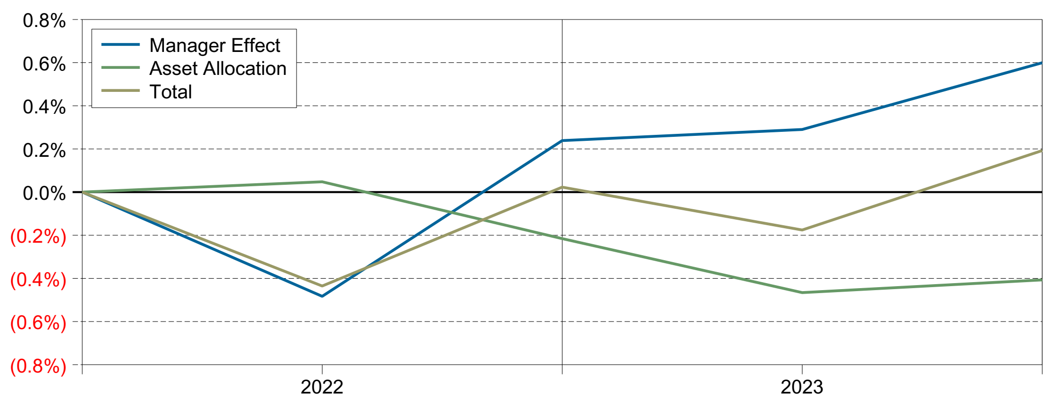
Cumulative Total Fund Relative Attribution - June 30, 2023

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

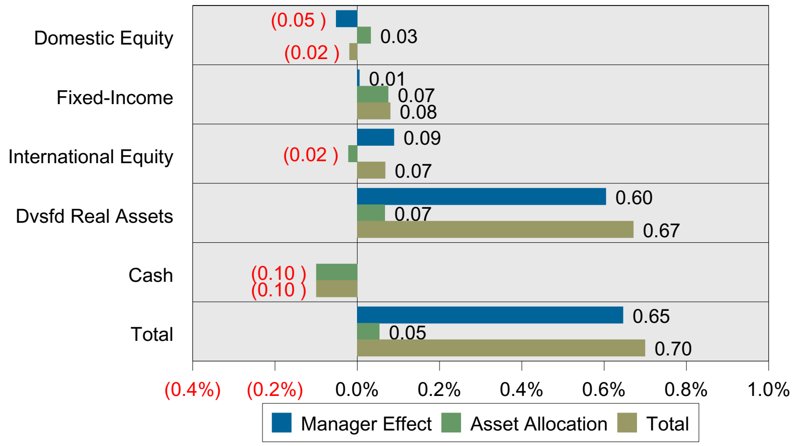
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	42%	41%	18.93%	18.95%	(0.01%)	(0.03%)	(0.04%)
Fixed-Income	19%	20%	(0.85%)	(0.94%)	0.01%	0.03%	0.05%
International Equity	25%	27%	12.34%	12.72%	(0.10%)	(0.10%)	(0.20%)
Dvsfd Real Assets	12%	12%	4.68%	(0.91%)	0.70%	(0.00%)	0.70%
Cash	2%	0%	3.43%	3.43%	0.00%	(0.31%)	(0.31%)
Total			**11.12%**	**= 10.93%**	**+ 0.60%**	**+ (0.41%)**	**0.19%**

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

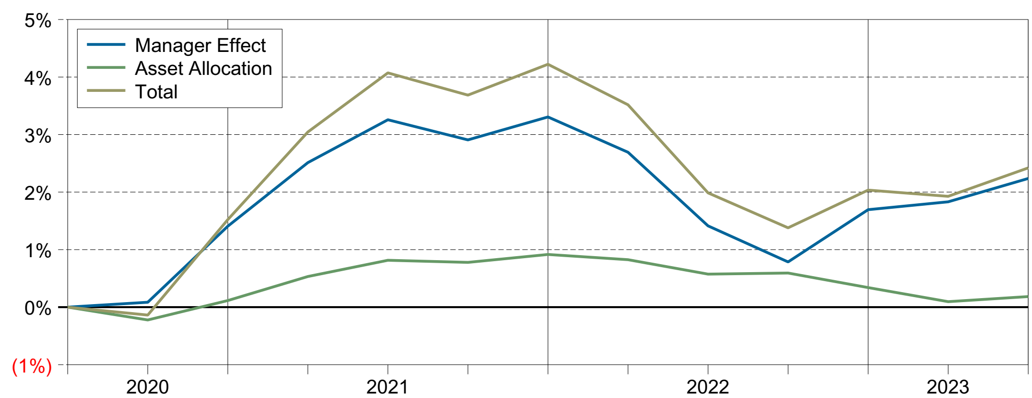
Cumulative Total Fund Relative Attribution - June 30, 2023

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

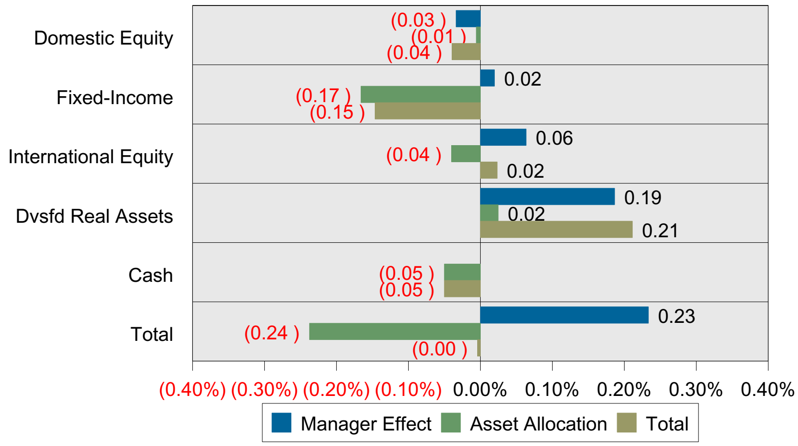
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	43%	41%	13.76%	13.89%	(0.05%)	0.03%	(0.02%)
Fixed-Income	19%	20%	(3.92%)	(3.96%)	0.01%	0.07%	0.08%
International Equity	26%	27%	7.54%	7.22%	0.09%	(0.02%)	0.07%
Dvsfd Real Assets	12%	12%	6.92%	1.15%	0.60%	0.07%	0.67%
Cash	1%	0%	1.22%	1.22%	0.00%	(0.10%)	(0.10%)
Total			**7.77% =**	**7.07% +**	**0.65% +**	**0.05%**	**0.70%**

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

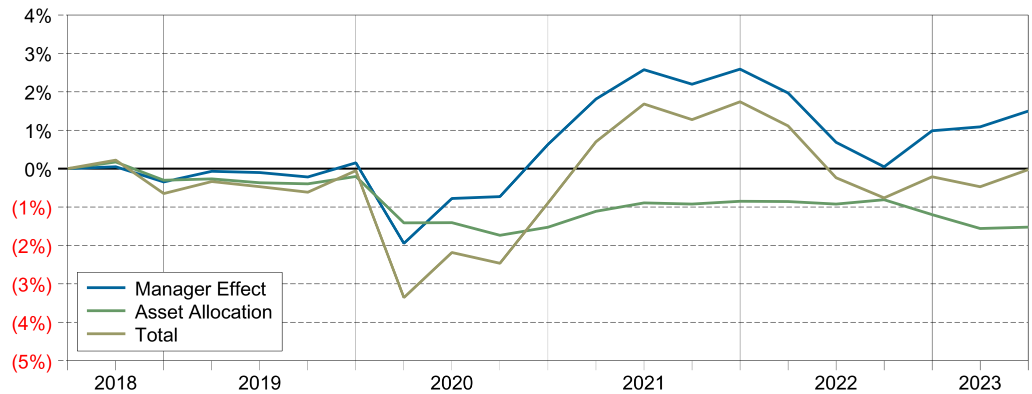
Cumulative Total Fund Relative Attribution - June 30, 2023

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	42%	40%	11.31%		11.39%		(0.03%)		(0.01%)	(0.04%)
Fixed-Income	21%	23%	0.86%		0.77%		0.02%		(0.17%)	(0.15%)
International Equity	25%	26%	3.72%		3.52%		0.06%		(0.04%)	0.02%
Dvsfd Real Assets	11%	11%	4.65%		2.75%		0.19%		0.02%	0.21%
Cash	1%	0%	1.48%		1.48%		0.00%		(0.05%)	(0.05%)
Total			**6.55%**	**=**	**6.55%**	**+**	**0.23%**	**+**	**(0.24%)**	**(0.00%)**

* Current Quarter Target = 41.0% Russell 3000 Index, 27.0% MSCI ACWI xUS, 20.0% Blmbg:Aggregate and 12.0% Blmbg TIPS 1-10 Yr.

Vanguard Total Stock Market
Period Ended June 30, 2023

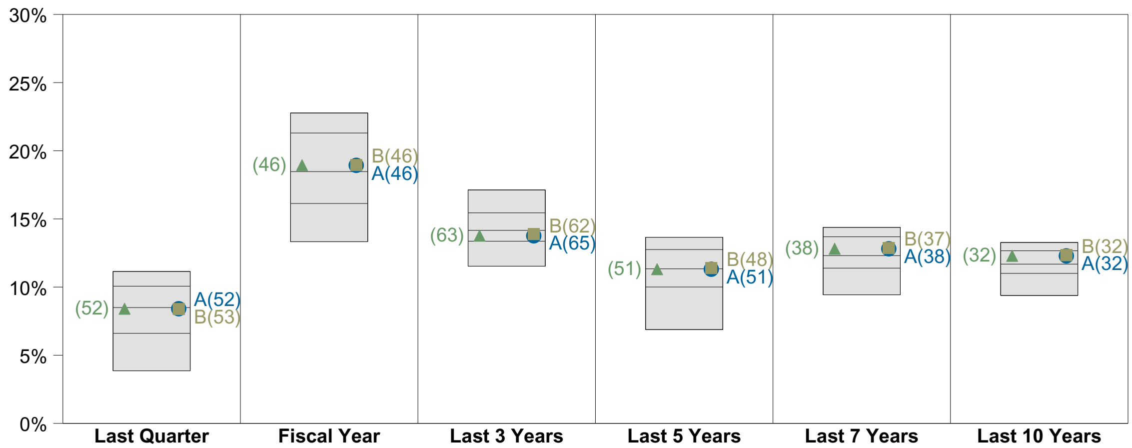
Investment Philosophy

The Vanguard Total Stock Market Index Fund is passively managed using index sampling. It seeks to replicate the performance of the CRSP US Total Market Index. The first full quarter of actual performance is the fourth quarter of 2009, prior returns reflect manager reported composite performance. June, 2013 Benchmark switched from MSCI Broad to CRSP. *Vanguard Total Stock Market switched to Admiral Shares from Signal Shares on October 27, 2014. On November 14, 2014 switched to Institutional Shares.

Quarterly Summary and Highlights

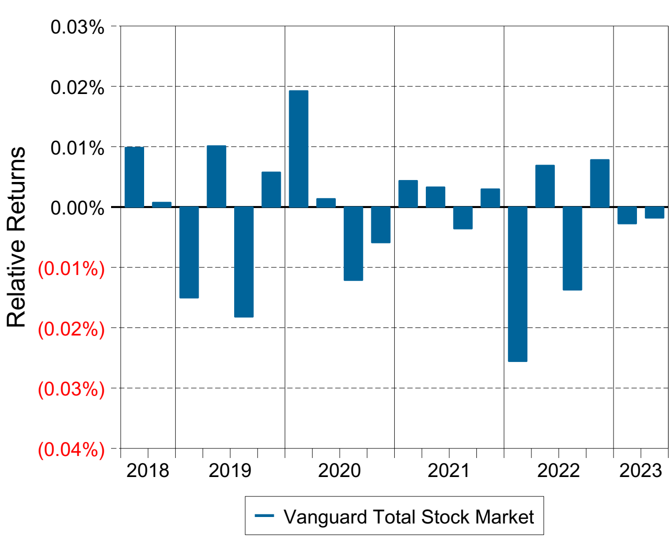
- Vanguard Total Stock Market's portfolio posted a 8.41% return for the quarter placing it in the 52 percentile of the Callan Large Cap Core Mutual Funds group for the quarter and in the 46 percentile for the last year.
- Vanguard Total Stock Market's portfolio underperformed the Vanguard Total Stk Mrkt Benchmrk by 0.00% for the quarter and underperformed the Vanguard Total Stk Mrkt Benchmrk for the year by 0.01%.

Performance vs Callan Large Cap Core Mutual Funds (Institutional Net)

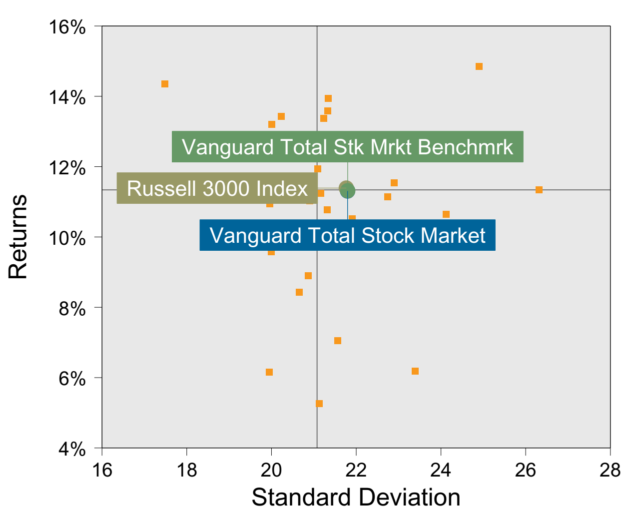


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	11.15	22.77	17.13	13.65	14.38	13.27
25th Percentile	10.06	21.30	15.45	12.75	13.69	12.66
Median	8.50	18.47	14.16	11.34	12.31	11.68
75th Percentile	6.61	16.13	13.36	10.01	11.39	11.00
90th Percentile	3.86	13.33	11.53	6.88	9.43	9.38
Vanguard Total Stock Market ● A	8.41	18.93	13.76	11.31	12.81	12.29
Russell 3000 Index ■ B	8.39	18.95	13.89	11.39	12.86	12.34
Vanguard Total Stk Mrkt Benchmrk ▲	8.41	18.94	13.77	11.31	12.81	12.29

Relative Returns vs Vanguard Total Stk Mrkt Benchmrk



Callan Large Cap Core Mutual Funds (Institutional Net) Annualized Five Year Risk vs Return

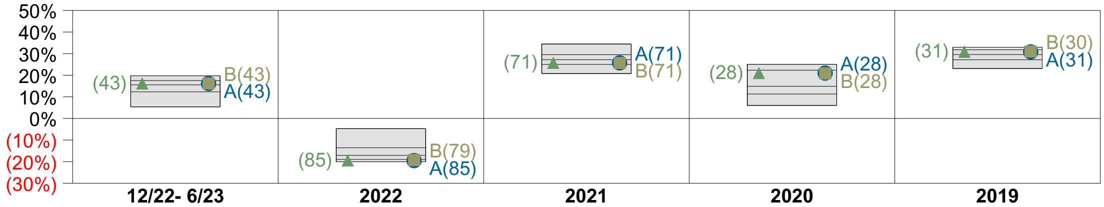


Vanguard Total Stock Market
Return Analysis Summary

Return Analysis

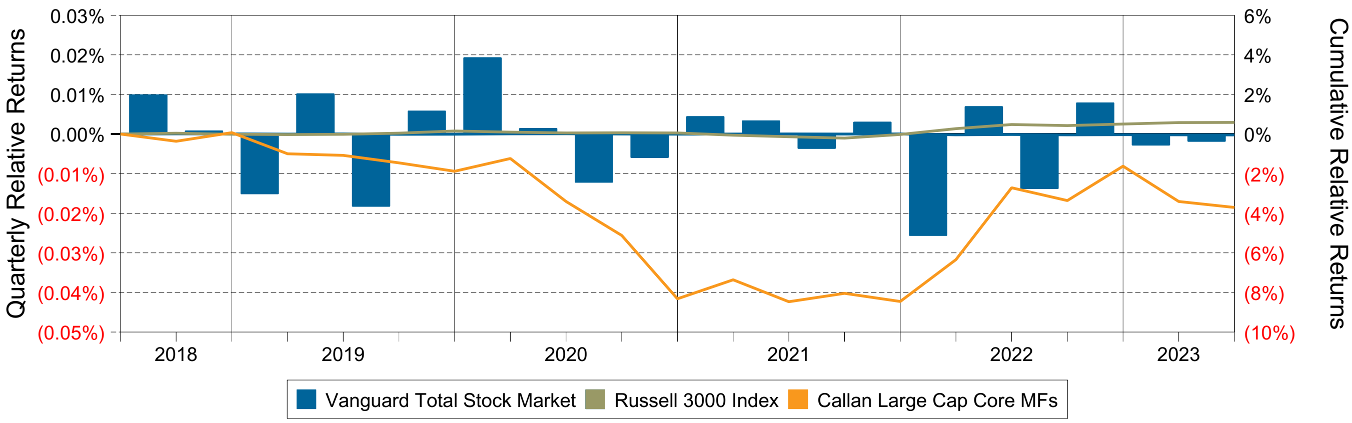
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

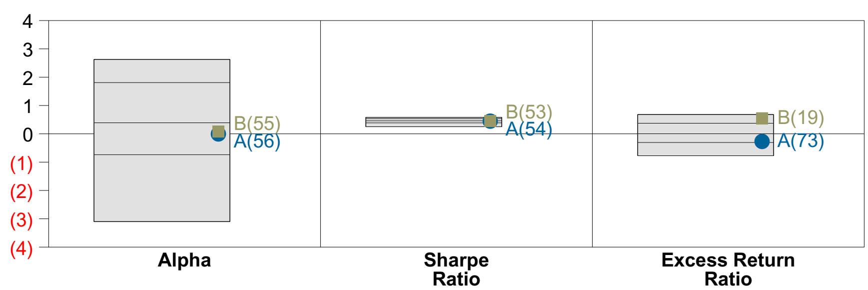


		12/22- 6/23	2022	2021	2020	2019
10th Percentile		19.75	(4.72)	34.46	25.07	32.96
25th Percentile		17.54	(13.58)	29.52	22.34	31.79
Median		15.54	(17.10)	27.20	14.87	29.58
75th Percentile		12.31	(18.99)	25.01	11.31	27.17
90th Percentile		5.36	(20.06)	20.78	6.01	23.12
Vanguard Total Stock Market	● A	16.17	(19.51)	25.73	21.00	30.81
Russell 3000 Index	■ B	16.17	(19.21)	25.66	20.89	31.02
Vanguard Total Stk Mrkt Benchmrk	▲	16.17	(19.49)	25.72	21.00	30.84

Cumulative and Quarterly Relative Returns vs Vanguard Total Stk Mrkt Benchmrk



Risk Adjusted Return Measures vs Vanguard Total Stk Mrkt Benchmrk
Rankings Against Callan Large Cap Core Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



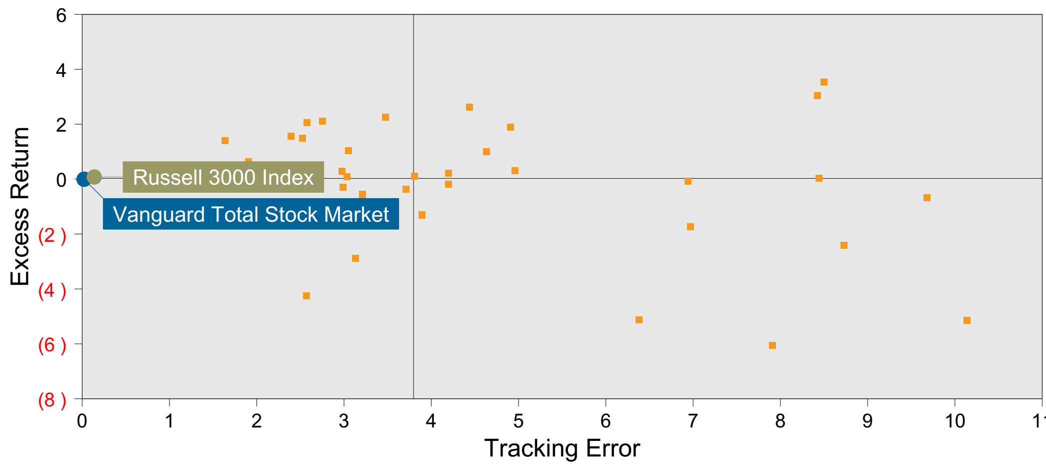
		Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile		2.63	0.58	0.68
25th Percentile		1.81	0.53	0.37
Median		0.39	0.46	0.00
75th Percentile		(0.74)	0.39	(0.31)
90th Percentile		(3.10)	0.25	(0.77)
Vanguard Total Stock Market	● A	(0.00)	0.45	(0.27)
Russell 3000 Index	■ B	0.08	0.45	0.55

Vanguard Total Stock Market
Risk Analysis Summary

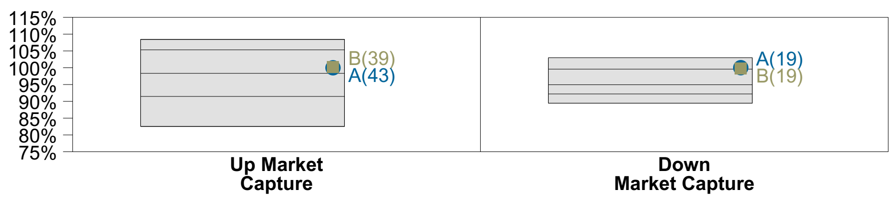
Risk Analysis

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 Large Cap Core Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

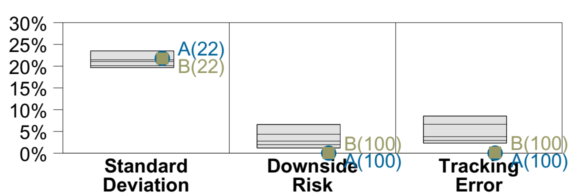


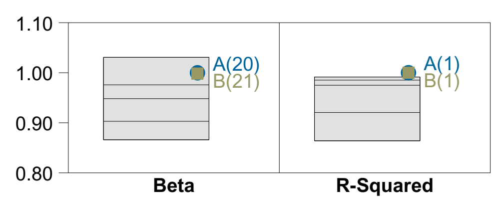
Market Capture vs Vanguard Total Stk Mrkt Benchmrk
Rankings Against Callan Large Cap Core Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	108.42	102.98
25th Percentile	105.32	99.59
Median	98.33	94.95
75th Percentile	91.46	92.20
90th Percentile	82.53	89.44
Vanguard Total Stock Market ● A	99.99	100.02
Russell 3000 Index ■ B	100.20	99.79

Risk Statistics Rankings vs Vanguard Total Stk Mrkt Benchmrk
Rankings Against Callan Large Cap Core Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	23.52	6.60	8.53
25th Percentile	21.46	4.36	6.65
Median	21.08	2.78	3.80
75th Percentile	20.10	1.96	2.93
90th Percentile	19.66	1.19	2.31
Vanguard Total Stock Market ● A	21.80	0.02	0.02
Russell 3000 Index ■ B	21.77	0.06	0.14

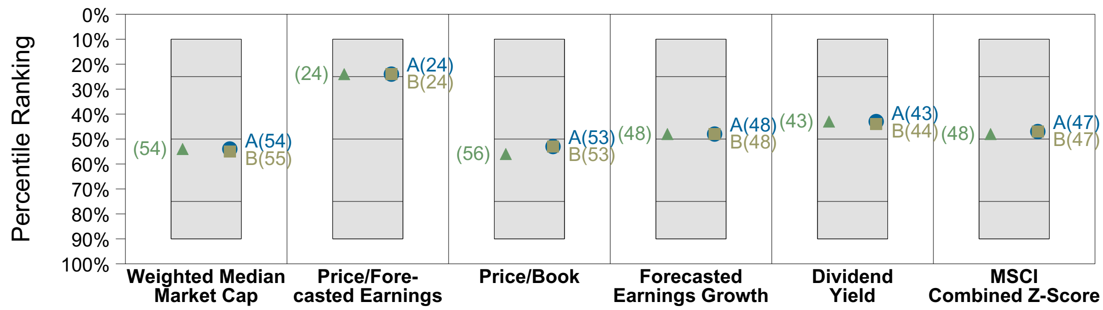
	Beta	R-Squared
10th Percentile	1.03	0.99
25th Percentile	0.98	0.99
Median	0.95	0.98
75th Percentile	0.90	0.92
90th Percentile	0.87	0.86
Vanguard Total Stock Market ● A	1.00	1.00
Russell 3000 Index ■ B	1.00	1.00

Vanguard Total Stock Market
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 Mutual Funds
as of June 30, 2023

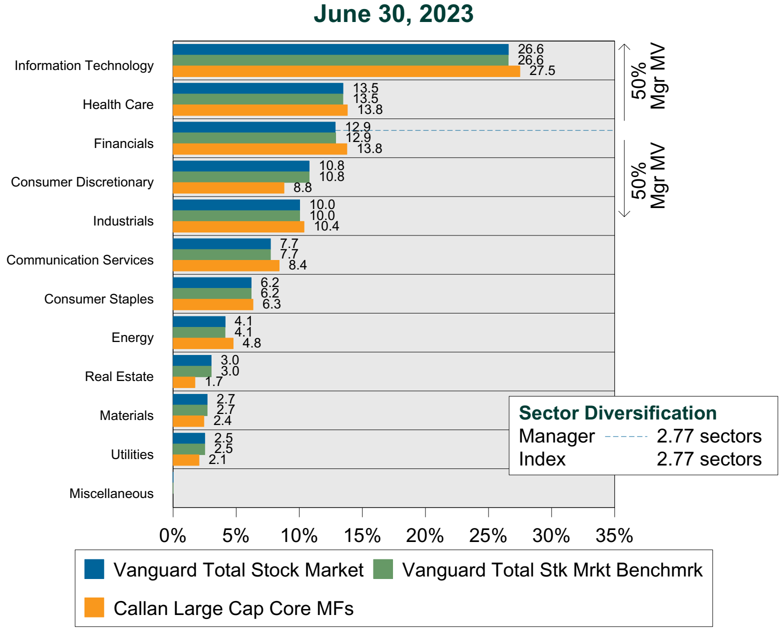


		Weighted Median Market Cap	Price/Fore-casted Earnings	Price/Book	Forecasted Earnings Growth	Dividend Yield	MSCI Combined Z-Score
10th Percentile		298.58	21.31	4.54	12.35	2.19	0.29
25th Percentile		205.66	19.49	4.22	11.28	1.72	0.07
Median		132.65	17.90	3.72	10.46	1.48	(0.04)
75th Percentile		99.51	15.18	2.97	9.61	1.31	(0.21)
90th Percentile		60.97	13.56	2.15	8.27	1.22	(0.62)
Vanguard Total Stock Market	● A	129.82	19.69	3.55	10.54	1.51	(0.01)
Russell 3000 Index	■ B	128.58	19.60	3.55	10.53	1.51	(0.01)
Vanguard Total Stk Mrkt Benchmrk	▲	129.80	19.68	3.49	10.54	1.51	(0.02)

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
June 30, 2023



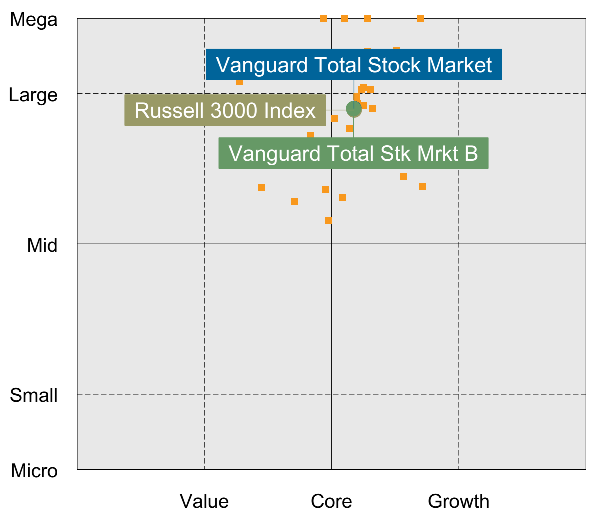
Diversification
June 30, 2023

		Number of Securities	Issue Diversification
10th Percentile		207	31
25th Percentile		139	23
Median		77	18
75th Percentile		48	15
90th Percentile		33	11
Vanguard Total Stock Market	●	3818	57
Vanguard Total Stk Mrkt Benchmrk	▲	3827	58

Current Holdings Based Style Analysis
Vanguard Total Stock Market
As of June 30, 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.

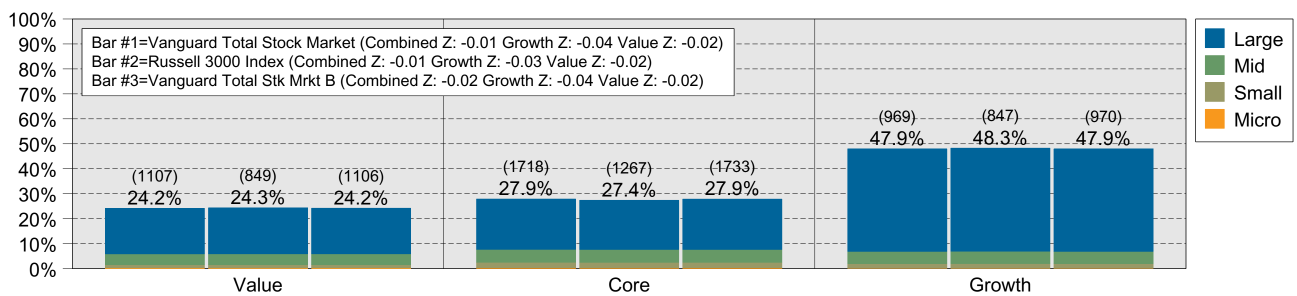
Style Map vs Callan Large Cap Core MFs
Holdings as of June 30, 2023



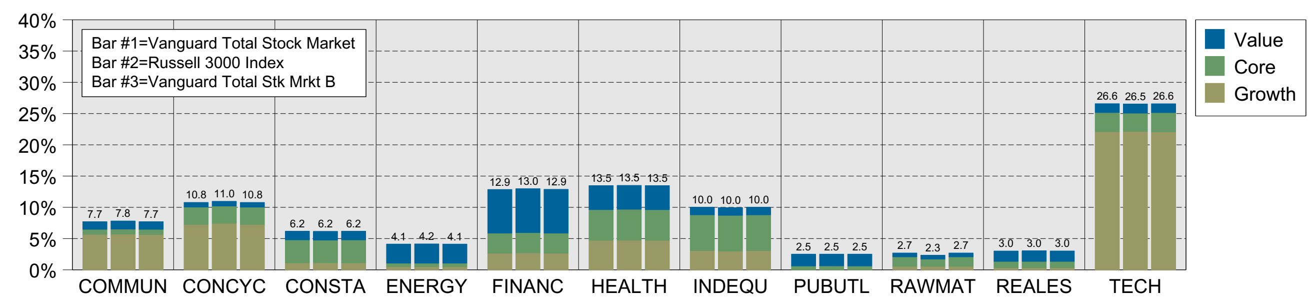
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Large	18.3% (91) 18.4% (90) 18.3% (91)	20.2% (100) 19.8% (98) 20.2% (100)	41.1% (106) 41.3% (108) 41.1% (106)	**79.6% (297)** **79.6% (296)** **79.6% (297)**
Mid	4.4% (157) 4.4% (159) 4.4% (157)	5.2% (218) 5.2% (219) 5.2% (218)	4.9% (214) 5.0% (215) 4.9% (213)	**14.4% (589)** **14.5% (593)** **14.4% (588)**
Small	1.3% (280) 1.3% (288) 1.3% (280)	2.2% (518) 2.2% (525) 2.1% (514)	1.8% (365) 1.8% (372) 1.8% (366)	**5.3% (1163)** **5.3% (1185)** **5.3% (1160)**
Micro	0.2% (579) 0.2% (312) 0.2% (578)	0.3% (882) 0.3% (425) 0.3% (901)	0.1% (284) 0.1% (152) 0.1% (285)	**0.7% (1745)** **0.6% (889)** **0.7% (1764)**
Total	**24.2% (1107)** **24.3% (849)** **24.2% (1106)**	**27.9% (1718)** **27.4% (1267)** **27.9% (1733)**	**47.9% (969)** **48.3% (847)** **47.9% (970)**	**100.0% (3794)** **100.0% (2963)** **100.0% (3809)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



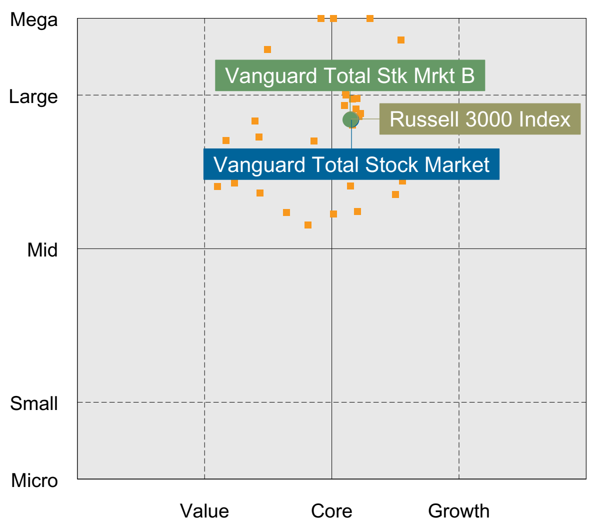
Sector Weights Distribution
Holdings as of June 30, 2023



Historical Holdings Based Style Analysis
Vanguard Total Stock Market
For Three Years Ended June 30, 2023

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average 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 average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The next two style exposure charts illustrate the actual quarterly cap/style and style only segment exposures of the portfolio through history.

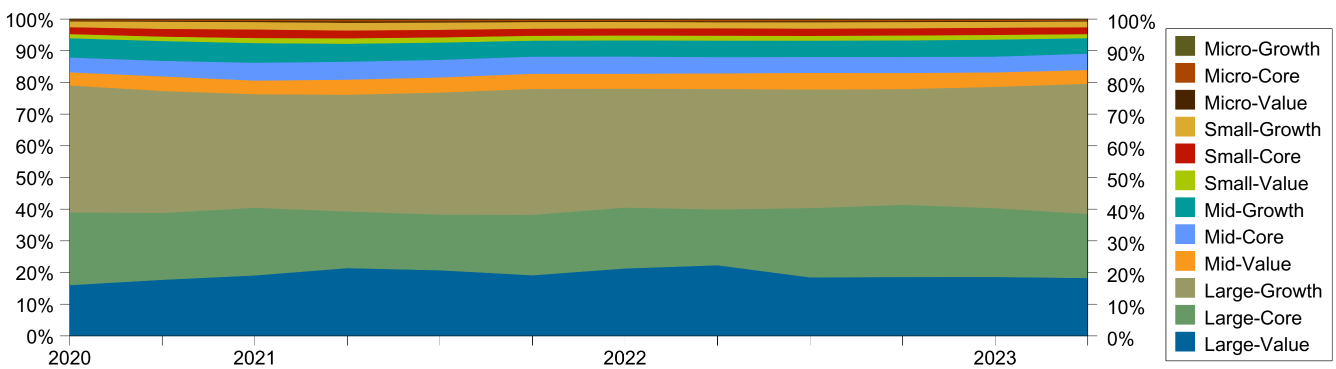
Average Style Map vs Callan Large Cap Core MFs
Holdings for Three Years Ended June 30, 2023



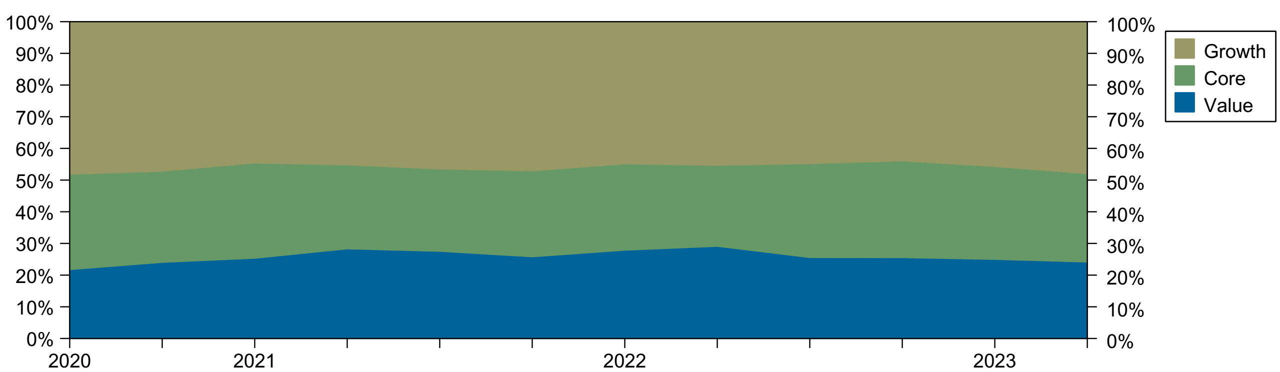
Average Style Exposure Matrix
Holdings for Three Years Ended June 30, 2023

	Value	Core	Growth	Total
Large	19.3% (99) 19.5% (97) 19.7% (99)	20.3% (99) 20.2% (97) 20.0% (99)	38.2% (104) 38.3% (104) 38.1% (104)	**77.8% (302)** **78.0% (298)** **77.8% (302)**
Mid	4.7% (163) 4.7% (165) 4.7% (163)	5.2% (215) 5.2% (213) 5.2% (213)	5.5% (218) 5.5% (219) 5.5% (218)	**15.4% (596)** **15.4% (597)** **15.4% (594)**
Small	1.5% (291) 1.5% (298) 1.5% (292)	2.3% (528) 2.3% (507) 2.3% (520)	2.1% (392) 2.1% (389) 2.1% (391)	**5.9% (1211)** **5.9% (1194)** **5.9% (1203)**
Micro	0.3% (642) 0.3% (311) 0.3% (659)	0.4% (848) 0.3% (427) 0.4% (858)	0.2% (256) 0.1% (157) 0.2% (259)	**0.9% (1746)** **0.7% (895)** **0.9% (1776)**
Total	**25.9% (1195)** **26.0% (871)** **26.2% (1213)**	**28.2% (1690)** **28.0% (1244)** **27.9% (1690)**	**45.9% (970)** **46.1% (869)** **45.8% (972)**	**100.0% (3855)** **100.0% (2984)** **100.0% (3875)**

Vanguard Total Stock Market Historical Cap/Style Exposures



Vanguard Total Stock Market Historical Style Only Exposures



Vanguard Total Int'l. Stock
Period Ended June 30, 2023

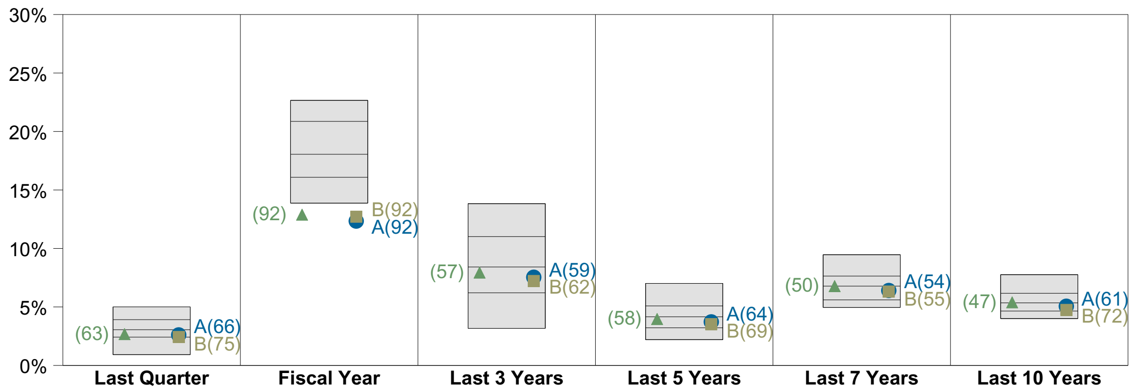
Investment Philosophy

The Vanguard Total International Stock open ended mutual fund is based on the FTSE Global All Cap ex U.S. Index. It contains more than 5,000 securities of both developed and emerging markets weighted by market capitalization and represents 98% of the universe. The fund's custom benchmark was the Total International Composite Index MSCI EAFE and MCSI Emerging Markets indices through December 15, 2010; MSCI ACWI ex US IMI Index until June 2013 and Global All Cap ex US Index thereafter. The first full quarter of actual performance is the fourth quarter of 2009, prior returns reflect manager reported composite performance. Vanguard Total Int'l. Stock switched to Institutional Shares from Investor Shares on November 30, 2014

Quarterly Summary and Highlights

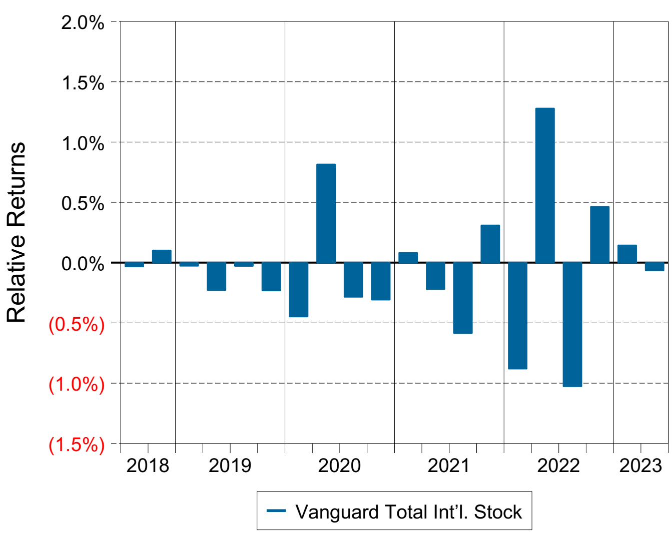
- Vanguard Total Int'l. Stock's portfolio posted a 2.61% return for the quarter placing it in the 66 percentile of the Callan Non US Equity Mutual Funds group for the quarter and in the 92 percentile for the last year.
- Vanguard Total Int'l. Stock's portfolio underperformed the Vanguard Intl Benchmark by 0.07% for the quarter and underperformed the Vanguard Intl Benchmark for the year by 0.55%.

Performance vs Callan Non US Equity Mutual Funds (Institutional Net)

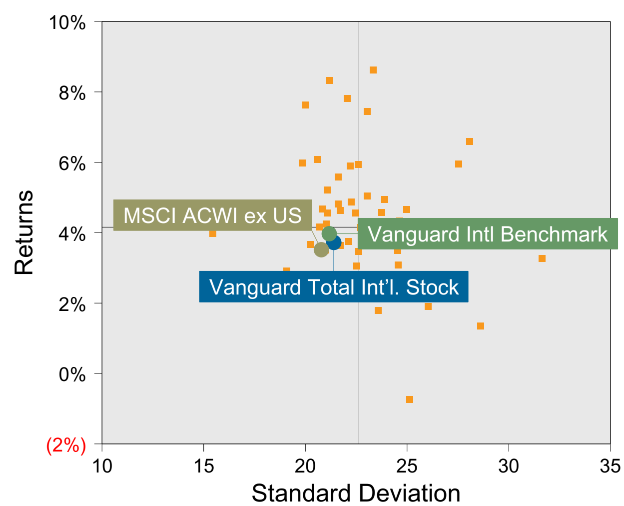


		Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile		5.01	22.66	13.83	7.01	9.46	7.76
25th Percentile		3.91	20.86	11.01	5.09	7.64	6.17
Median		3.05	18.05	8.42	4.16	6.78	5.35
75th Percentile		2.42	16.08	6.21	3.22	5.60	4.65
90th Percentile		0.92	13.88	3.17	2.20	4.96	4.01
Vanguard Total Int'l. Stock	● A	2.61	12.34	7.54	3.72	6.40	5.06
MSCI ACWI ex US	■ B	2.44	12.72	7.22	3.52	6.32	4.75
Vanguard Intl Benchmark	▲	2.68	12.89	7.94	3.97	6.78	5.40

Relative Return vs Vanguard Intl Benchmark



Callan Non US Equity Mutual Funds (Institutional Net)
Annualized Five Year Risk vs Return

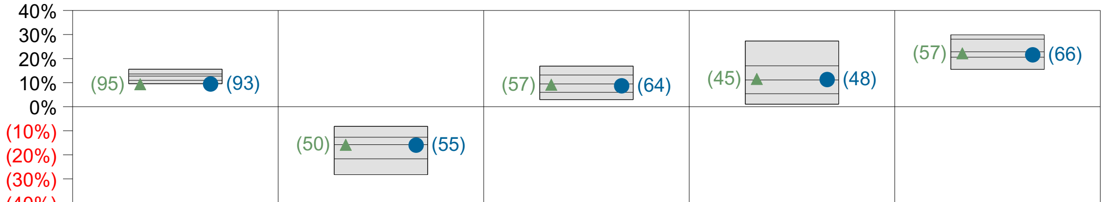


Vanguard Total Int'l. Stock
Return Analysis Summary

Return Analysis

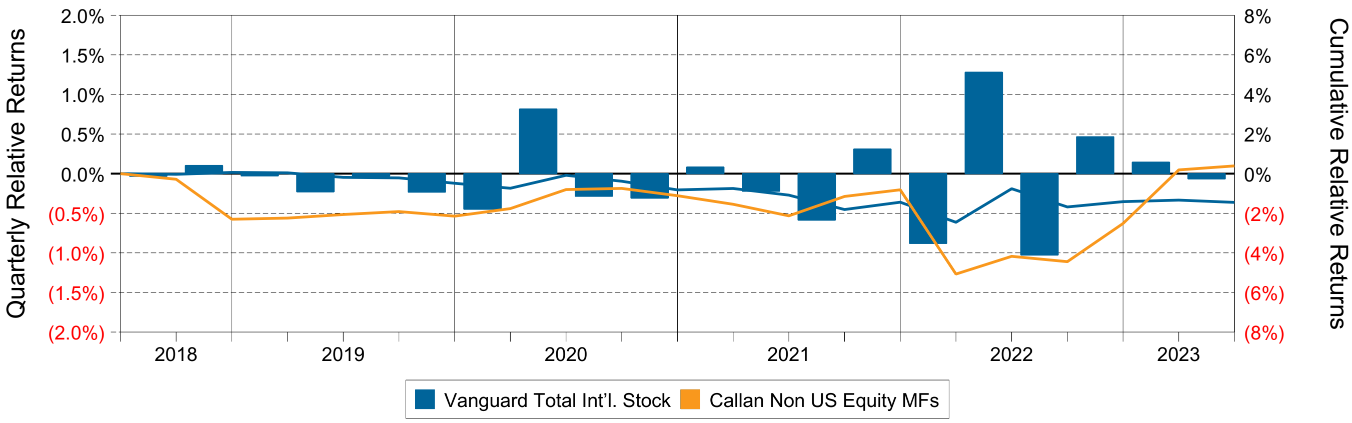
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Non US Equity Mutual Funds (Institutional Net)

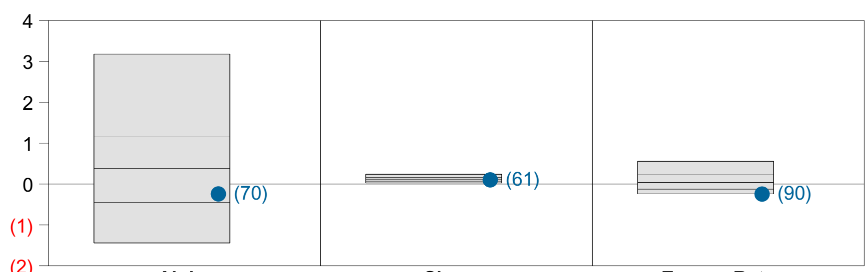


	12/22- 6/23	2022	2021	2020	2019
10th Percentile	15.58	(8.17)	16.88	27.31	29.86
25th Percentile	13.60	(12.68)	13.17	17.00	28.07
Median	12.71	(15.77)	9.47	11.12	22.83
75th Percentile	10.97	(21.67)	5.98	5.40	20.57
90th Percentile	9.54	(28.25)	2.94	1.05	15.53
Vanguard Total Int'l. Stock ●	9.43	(15.98)	8.68	11.28	21.56
Vanguard Intl Benchmark ▲	9.35	(15.83)	9.13	11.54	22.19

Cumulative and Quarterly Relative Returns vs Vanguard Intl Benchmark



Risk Adjusted Return Measures vs Vanguard Intl Benchmark
Rankings Against Callan Non US Equity Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



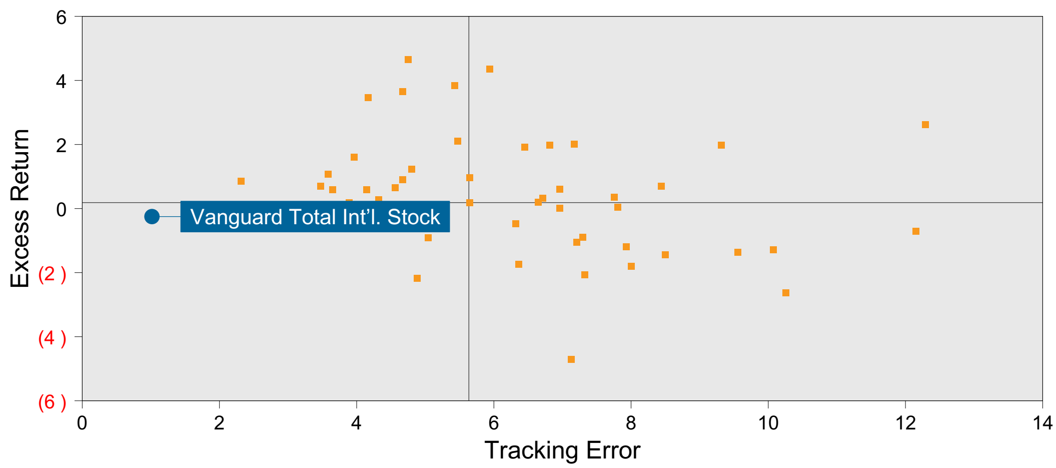
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	3.18	0.24	0.56
25th Percentile	1.15	0.16	0.22
Median	0.38	0.12	0.04
75th Percentile	(0.45)	0.07	(0.13)
90th Percentile	(1.44)	0.03	(0.24)
Vanguard Total Int'l. Stock ●	(0.24)	0.10	(0.25)

Vanguard Total Int'l. Stock
Risk Analysis Summary

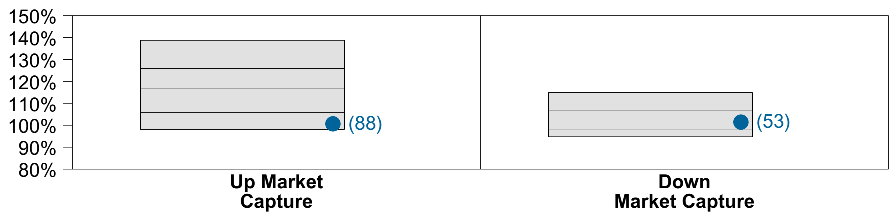
Risk Analysis

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 Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

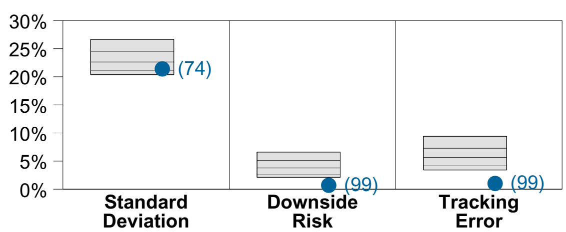


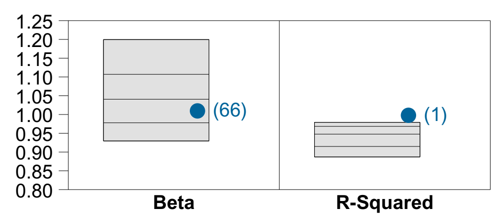
Market Capture vs Vanguard Intl Benchmark
Rankings Against Callan Non US Equity Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



	Up Market Capture	Down Market Capture
10th Percentile	138.76	114.90
25th Percentile	125.87	106.92
Median	116.60	102.88
75th Percentile	105.86	97.89
90th Percentile	98.14	94.76
Vanguard Total Int'l. Stock ●	100.67	101.44

Risk Statistics Rankings vs Vanguard Intl Benchmark
Rankings Against Callan Non US Equity Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023





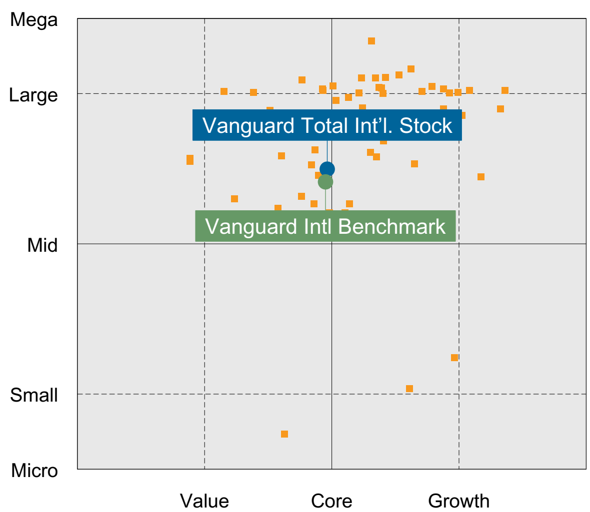
	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	26.66	6.60	9.42
25th Percentile	24.54	5.09	7.29
Median	22.63	3.78	5.64
75th Percentile	21.17	2.55	4.15
90th Percentile	20.38	2.11	3.42
Vanguard Total Int'l. Stock ●	21.40	0.69	1.02

	Beta	R-Squared
10th Percentile	1.20	0.98
25th Percentile	1.11	0.97
Median	1.04	0.95
75th Percentile	0.98	0.91
90th Percentile	0.93	0.89
Vanguard Total Int'l. Stock ●	1.01	1.00

Current Holdings Based Style Analysis
Vanguard Total Int'l. Stock
As of June 30, 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.

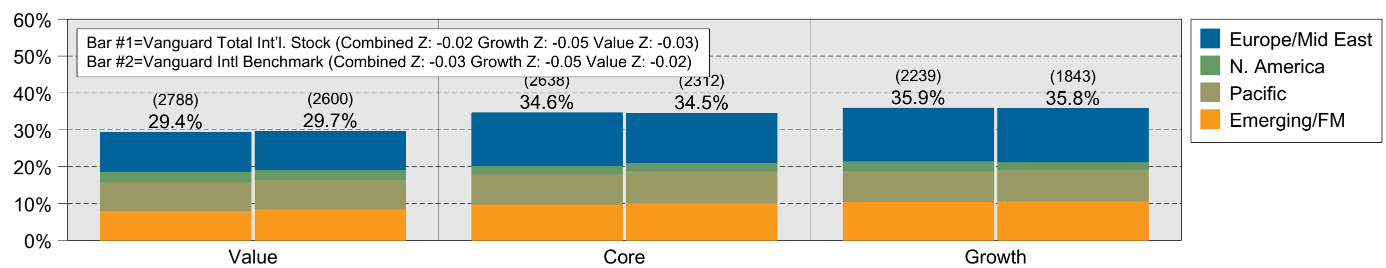
Style Map vs Callan Non US Equity MFs
Holdings as of June 30, 2023



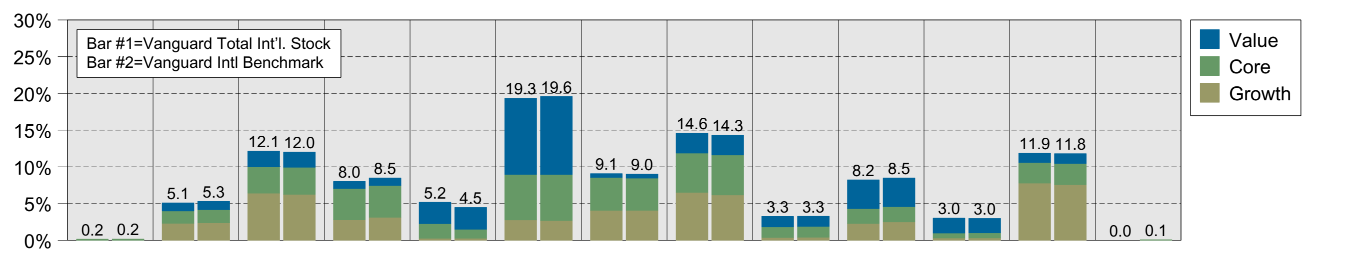
Style Exposure Matrix
Holdings as of June 30, 2023

	Value	Core	Growth	Total
Europe/ Mid East	10.7% (449)	14.4% (465)	14.4% (405)	**39.5% (1319)**
	10.5% (410)	13.5% (427)	14.6% (360)	**38.6% (1197)**
N. America	2.8% (64)	2.3% (74)	2.7% (56)	**7.7% (194)**
	2.6% (57)	2.2% (65)	2.0% (41)	**6.9% (163)**
Pacific	7.9% (804)	8.2% (627)	8.3% (536)	**24.4% (1967)**
	8.1% (792)	8.6% (621)	8.6% (526)	**25.2% (1939)**
Emerging/ FM	8.0% (1471)	9.8% (1472)	10.5% (1242)	**28.3% (4185)**
	8.5% (1341)	10.2% (1199)	10.6% (916)	**29.4% (3456)**
Total	**29.4% (2788)**	**34.6% (2638)**	**35.9% (2239)**	**100.0% (7665)**
	29.7% (2600)	**34.5% (2312)**	**35.8% (1843)**	**100.0% (6755)**

Combined Z-Score Style Distribution
Holdings as of June 30, 2023



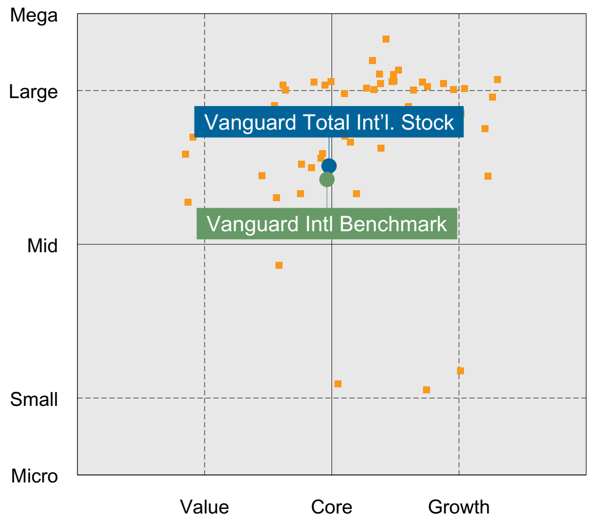
Sector Weights Distribution
Holdings as of June 30, 2023



Historical Holdings Based Style Analysis
Vanguard Total Int’l. Stock
For Three Years Ended June 30, 2023

This page analyzes the historical investment style of a portfolio utilizing a detailed holdings-based style analysis to determine average actual exposures to various region 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 average historical market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the average historical portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The next two style exposure charts illustrate the actual quarterly region/style and style only segment exposures of the portfolio through history.

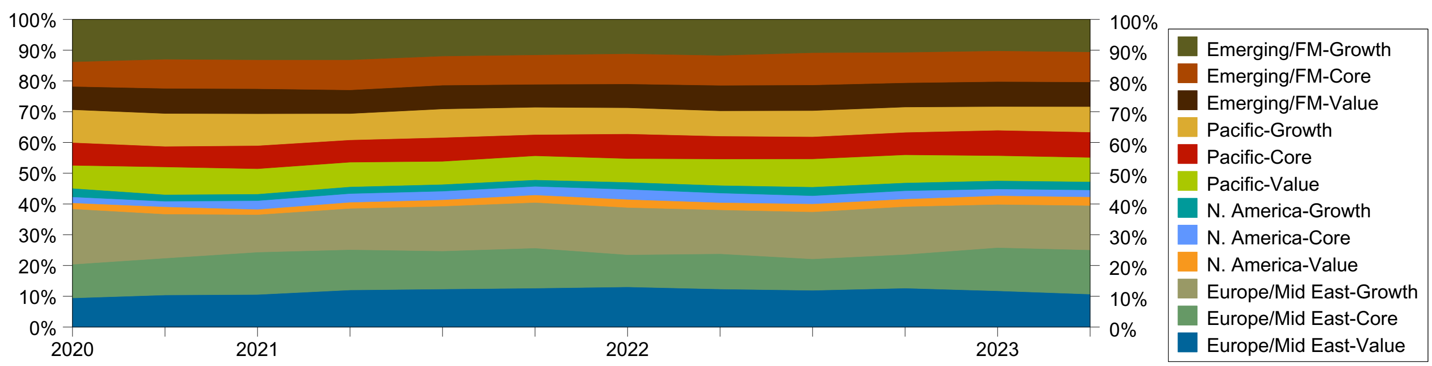
Average Style Map vs Callan Non US Equity MFs Holdings for Three Years Ended June 30, 2023



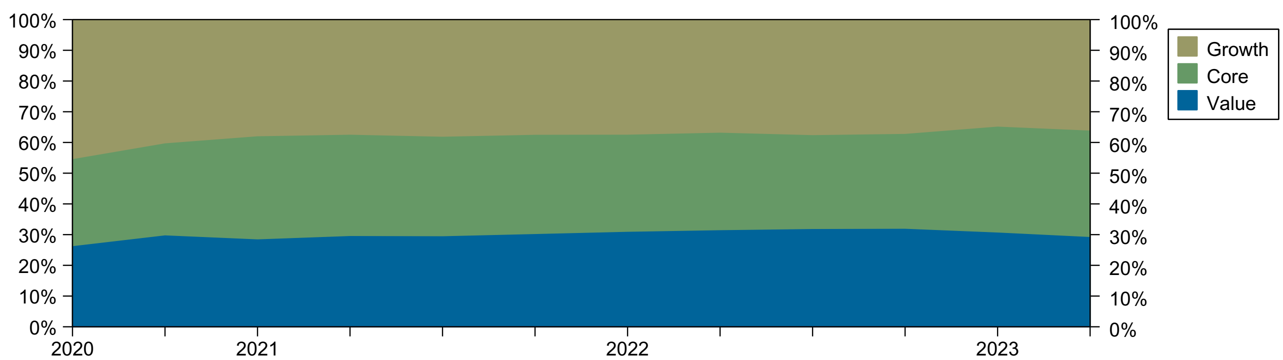
Average Style Exposure Matrix Holdings for Three Years Ended June 30, 2023

	Value	Core	Growth	Total
Europe/ Mid East	11.7% (452) 11.2% (417)	12.2% (459) 12.1% (431)	14.7% (406) 14.3% (366)	**38.6% (1317)** **37.7% (1214)**
N. America	2.4% (65) 2.4% (61)	2.6% (74) 2.5% (67)	2.4% (54) 2.0% (44)	**7.4% (193)** **6.8% (172)**
Pacific	8.2% (758) 8.4% (749)	7.5% (638) 7.8% (631)	9.0% (540) 9.3% (537)	**24.7% (1936)** **25.4% (1917)**
Emerging/ FM	7.9% (1438) 8.3% (1317)	9.6% (1353) 9.9% (1124)	11.8% (1094) 11.9% (866)	**29.3% (3885)** **30.1% (3307)**
Total	**30.2% (2713)** **30.3% (2544)**	**32.0% (2524)** **32.2% (2253)**	**37.9% (2094)** **37.5% (1813)**	**100.0% (7331)** **100.0% (6610)**

Vanguard Total Int’l. Stock Historical Region/Style Exposures



Vanguard Total Int’l. Stock Historical Style Only Exposures

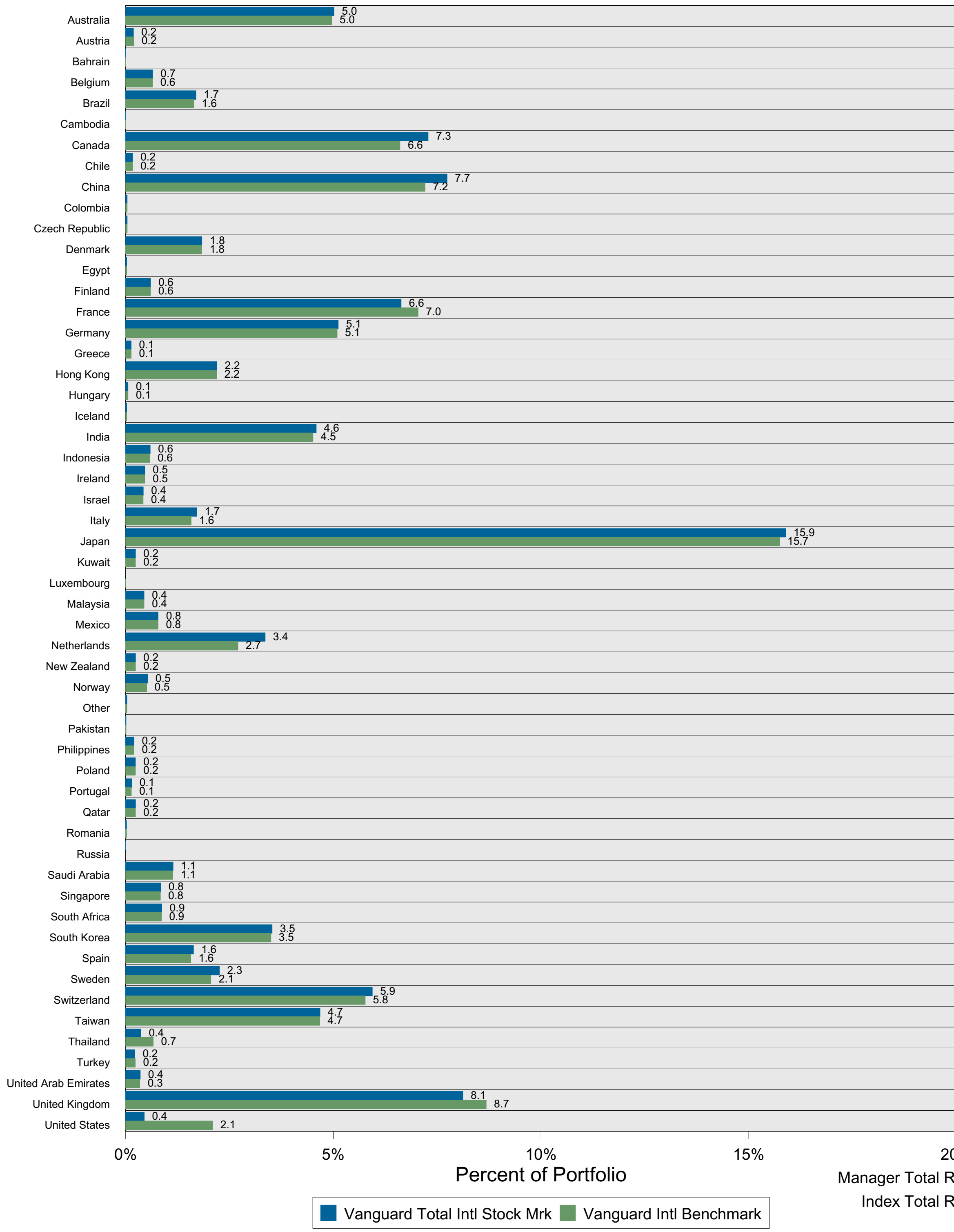


Country Allocation
Vanguard Total Intl Stock Mrk VS Vanguard Intl Benchmark

Country Allocation

The chart below contrasts the portfolio's country allocation with that of the index as of June 30, 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 June 30, 2023



Country	Index Rtns
Australia	0.28%
Austria	6.20%
Bahrain	8.83%
Belgium	(5.57%)
Brazil	20.81%
Cambodia	-
Canada	3.91%
Chile	4.12%
China	(10.56%)
Colombia	12.53%
Czech Republic	(0.91%)
Denmark	1.66%
Egypt	3.96%
Finland	(7.49%)
France	3.80%
Germany	3.52%
Greece	23.93%
Hong Kong	(5.05%)
Hungary	24.77%
Iceland	(10.59%)
India	12.36%
Indonesia	3.18%
Ireland	4.43%
Israel	(3.78%)
Italy	8.91%
Japan	6.50%
Kuwait	(0.92%)
Luxembourg	-
Malaysia	(8.37%)
Mexico	5.75%
Netherlands	4.28%
New Zealand	(5.96%)
Norway	0.12%
Other	-
Pakistan	2.50%
Philippines	(1.13%)
Poland	24.50%
Portugal	(0.41%)
Qatar	(2.40%)
Romania	9.86%
Russia	-
Saudi Arabia	6.34%
Singapore	(5.55%)
South Africa	(4.71%)
South Korea	4.52%
Spain	5.93%
Sweden	(0.70%)
Switzerland	4.53%
Taiwan	4.82%
Thailand	(8.14%)
Turkey	(10.59%)
United Arab Emirates	5.80%
United Kingdom	2.19%
United States	6.34%

Manager Total Return: 2.61%

Index Total Return: 2.68%

Prudential Conservative Core Bond
Period Ended June 30, 2023

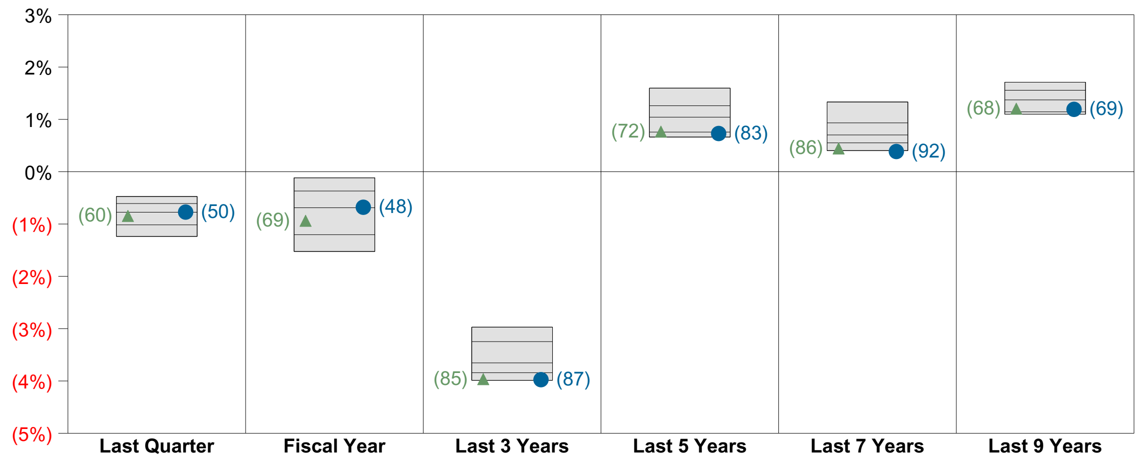
Investment Philosophy

PGIM Fixed Income's Core Conservative strategy is a benchmark-focused, investment grade-only, risk-controlled core strategy that seeks +25 bps over the Bloomberg Barclays Aggregate Index with index-like risk. The strategy seeks to generate virtually all of its excess return from just two activities: bottom-up subsector rotation within the corporate and mortgage/structured product sectors, and research-based security selection in all sectors. Top-down decisions such as duration, yield curve, and sector allocation are tightly constrained to benchmark weightings at all times. Initial investment in fund occured in June 2014. On February 8, 2017 fund switched to Institutional Trust.

Quarterly Summary and Highlights

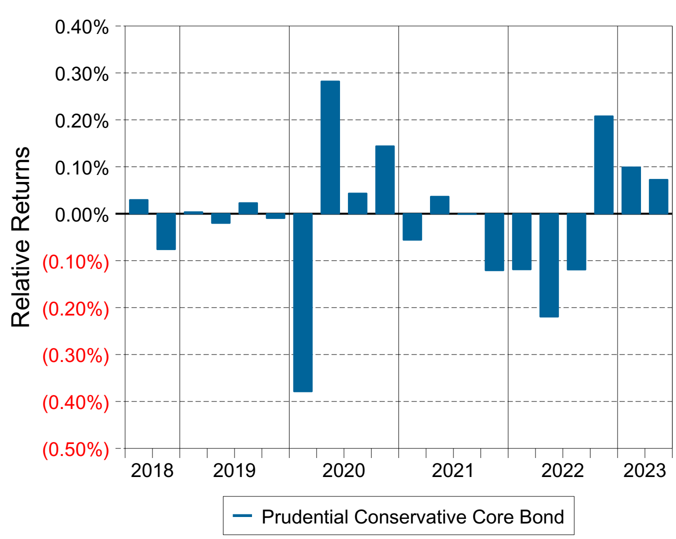
- Prudential Conservative Core Bond's portfolio posted a (0.77)% return for the quarter placing it in the 50 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 48 percentile for the last year.
- Prudential Conservative Core Bond's portfolio outperformed the Blmbg:Aggregate by 0.07% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.26%.

Performance vs Callan Core Bond Mutual Funds (Institutional Net)

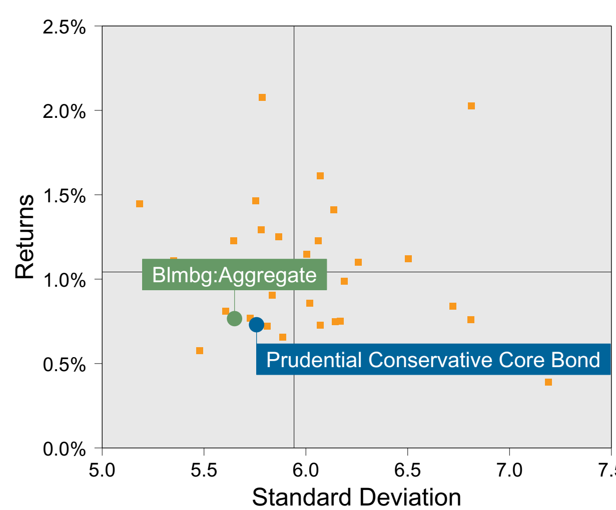


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 9 Years
10th Percentile	(0.47)	(0.12)	(2.97)	1.60	1.33	1.71
25th Percentile	(0.61)	(0.37)	(3.25)	1.26	0.93	1.56
Median	(0.77)	(0.69)	(3.65)	1.04	0.70	1.37
75th Percentile	(1.02)	(1.20)	(3.84)	0.76	0.55	1.14
90th Percentile	(1.24)	(1.52)	(3.99)	0.66	0.40	1.10
Prudential Conservative Core Bond ●	(0.77)	(0.68)	(3.98)	0.73	0.39	1.19
Blmbg:Aggregate ▲	(0.84)	(0.94)	(3.96)	0.77	0.44	1.20

Relative Return vs Blmbg:Aggregate



Callan Core Bond Mutual Funds (Institutional Net) Annualized Five Year Risk vs Return

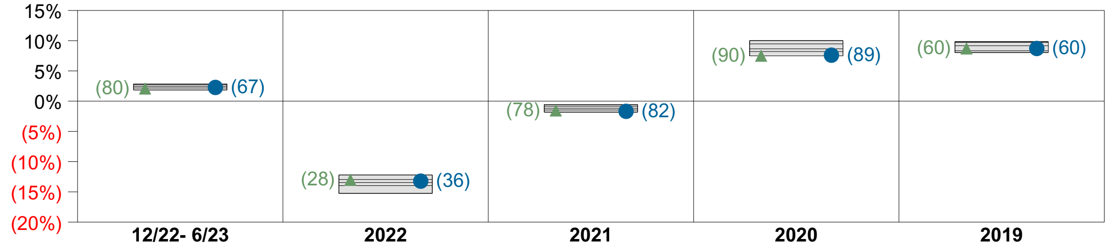


Prudential Cons Core Bond Fnd
Return Analysis Summary

Return Analysis

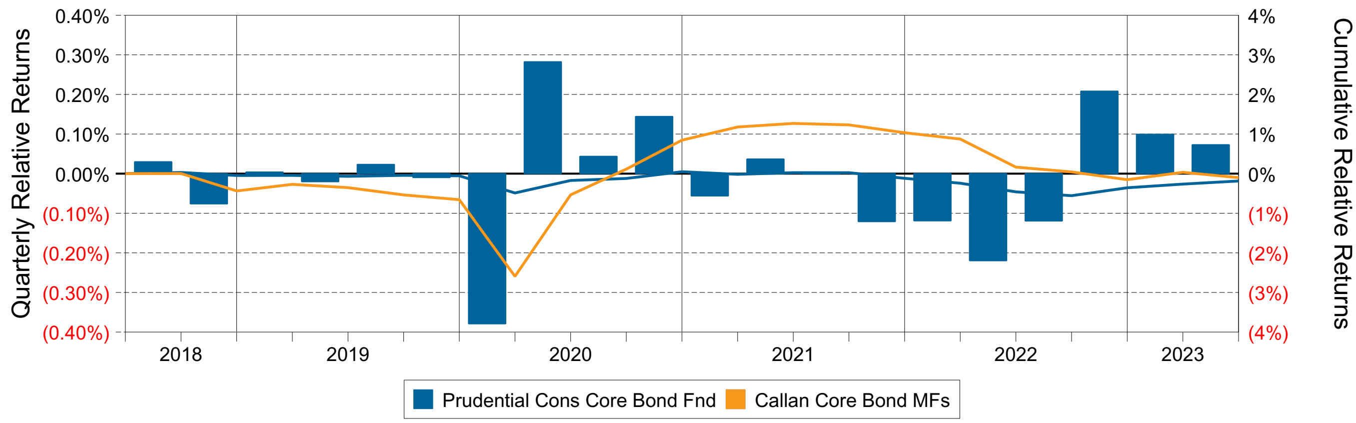
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

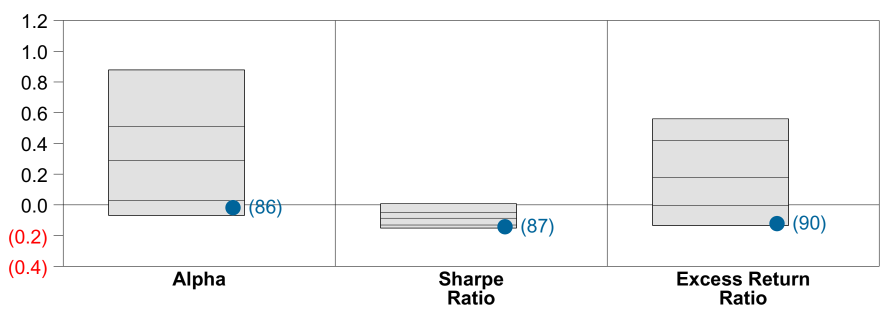


	12/22- 6/23	2022	2021	2020	2019
10th Percentile	2.84	(12.21)	(0.57)	10.01	9.85
25th Percentile	2.72	(12.96)	(0.84)	9.47	9.72
Median	2.45	(13.47)	(1.17)	8.65	9.17
75th Percentile	2.17	(13.97)	(1.46)	8.21	8.33
90th Percentile	1.85	(15.25)	(1.82)	7.49	8.04
Prudential Cons Core Bond Fnd ●	2.27	(13.23)	(1.68)	7.60	8.71
Blmbg:Aggregate ▲	2.09	(13.01)	(1.54)	7.51	8.72

Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate
Rankings Against Callan Core Bond Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



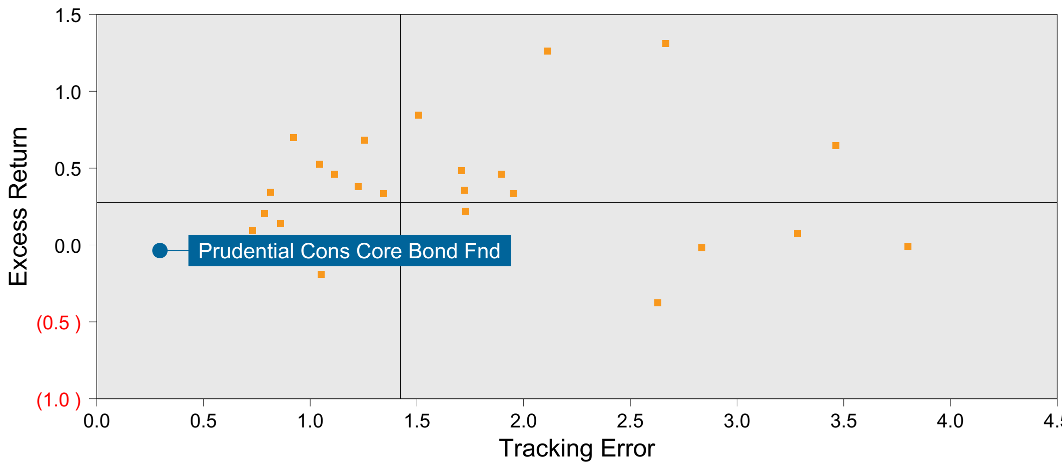
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.88	0.01	0.56
25th Percentile	0.51	(0.05)	0.42
Median	0.29	(0.09)	0.18
75th Percentile	0.03	(0.13)	(0.00)
90th Percentile	(0.07)	(0.15)	(0.13)
Prudential Cons Core Bond Fnd ●	(0.02)	(0.14)	(0.12)

Prudential Cons Core Bond Fnd
Risk Analysis Summary

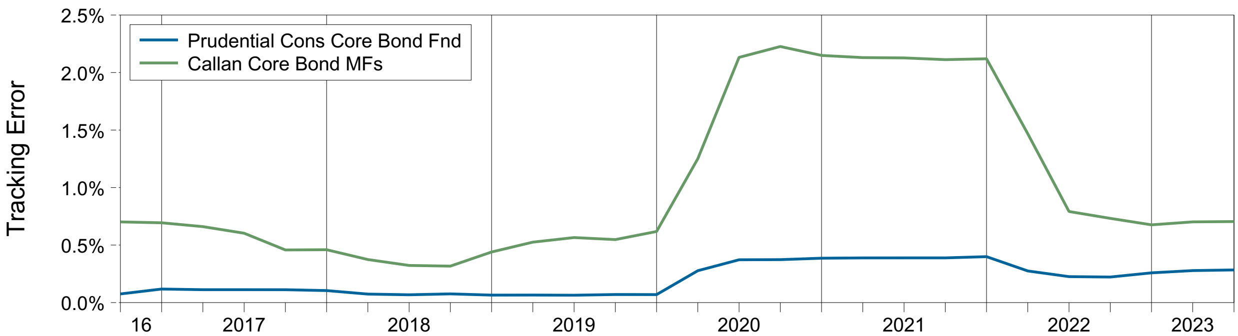
Risk Analysis

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.

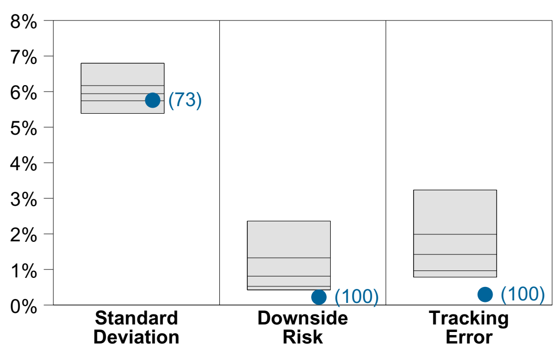
Risk Analysis vs Callan Core Bond Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

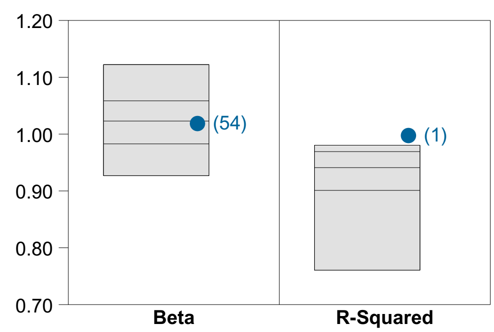


Rolling 8 Quarter Tracking Error vs Bloomberg Aggregate



Risk Statistics Rankings vs Bloomberg Aggregate
Rankings Against Callan Core Bond Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	6.80	2.36	3.23
25th Percentile	6.17	1.33	1.99
Median	5.94	0.81	1.42
75th Percentile	5.74	0.53	0.96
90th Percentile	5.39	0.43	0.78
Prudential Cons Core Bond Fnd ●	5.76	0.22	0.30

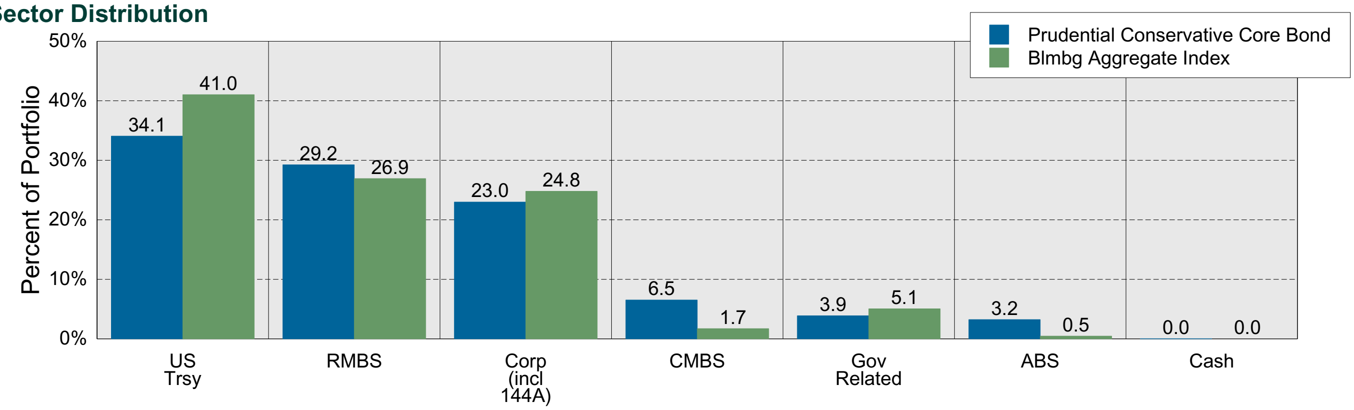
	Beta	R-Squared
10th Percentile	1.12	0.98
25th Percentile	1.06	0.97
Median	1.02	0.94
75th Percentile	0.98	0.90
90th Percentile	0.93	0.76
Prudential Cons Core Bond Fnd ●	1.02	1.00

Prudential Conservative Core Bond
Portfolio Characteristics Summary
As of June 30, 2023

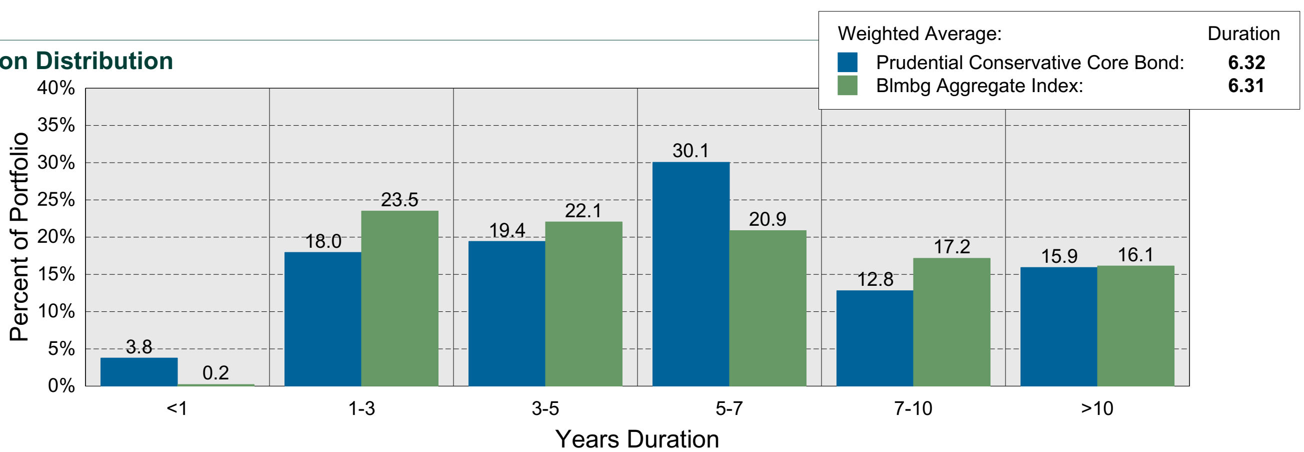
Portfolio Structure Comparison

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.

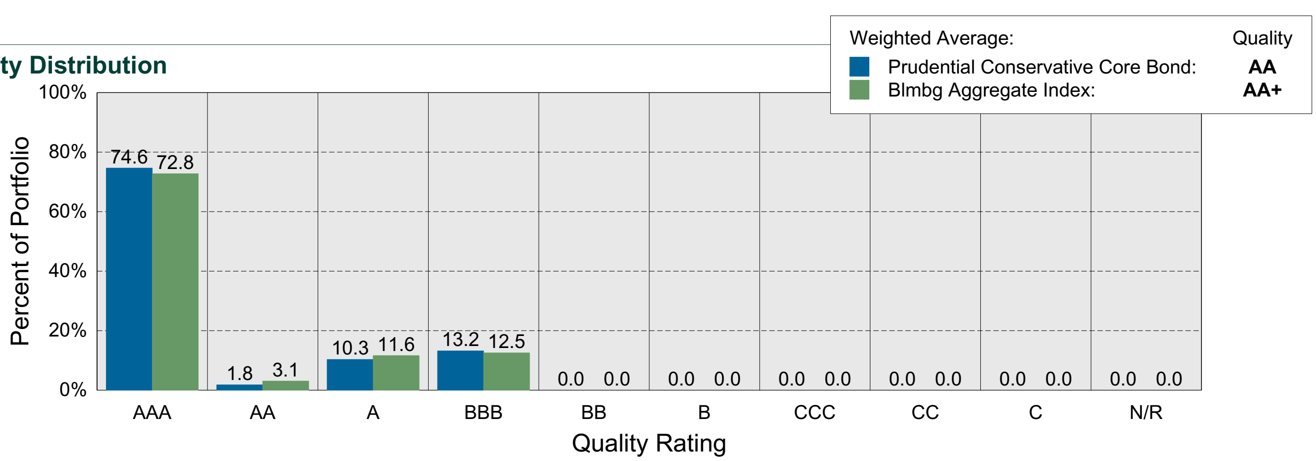
Sector Distribution



Duration Distribution



Quality Distribution

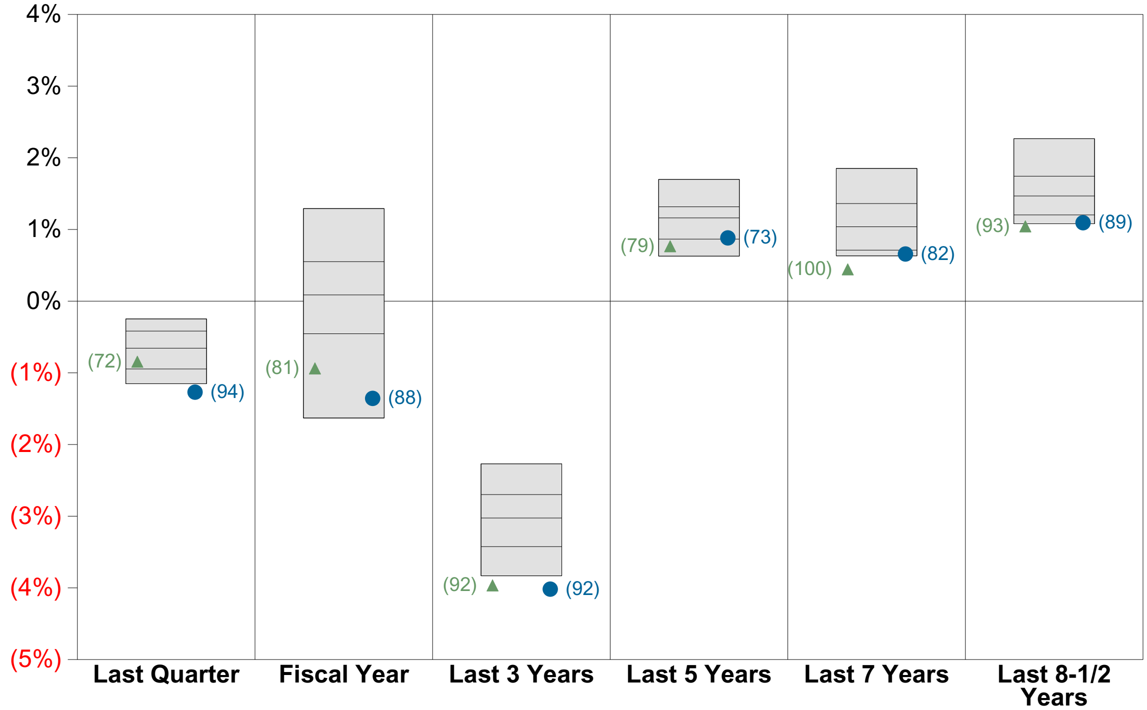


Metropolitan West Fund
Period Ended June 30, 2023

Quarterly Summary and Highlights

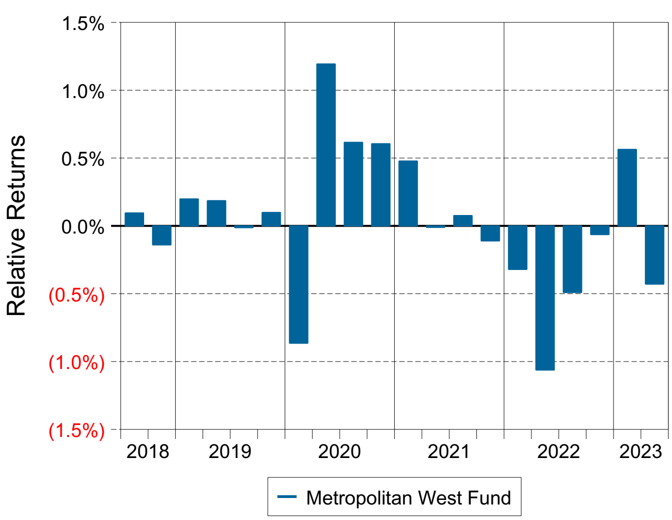
- Metropolitan West Fund's portfolio posted a (1.27)% return for the quarter placing it in the 94 percentile of the Callan Core Plus Mutual Funds group for the quarter and in the 88 percentile for the last year.
- Metropolitan West Fund's portfolio underperformed the Blmbg:Aggregate by 0.43% for the quarter and underperformed the Blmbg:Aggregate for the year by 0.42%.

Performance vs Callan Core Plus Mutual Funds (Institutional Net)

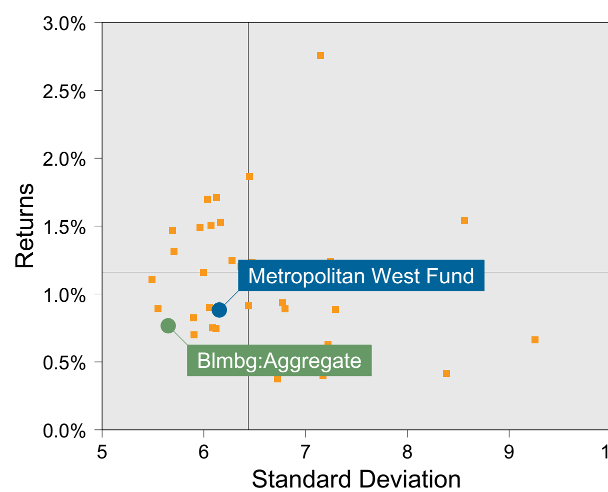


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 8-1/2 Years
10th Percentile	(0.25)	1.29	(2.27)	1.70	1.85	2.27
25th Percentile	(0.42)	0.55	(2.70)	1.32	1.36	1.74
Median	(0.66)	0.09	(3.03)	1.16	1.04	1.47
75th Percentile	(0.95)	(0.45)	(3.42)	0.87	0.71	1.20
90th Percentile	(1.15)	(1.63)	(3.83)	0.63	0.63	1.08
Metropolitan West Fund ●	(1.27)	(1.36)	(4.02)	0.88	0.66	1.09
Blmbg:Aggregate ▲	(0.84)	(0.94)	(3.96)	0.77	0.44	1.04

Relative Return vs Blmbg:Aggregate



Callan Core Plus Mutual Funds (Institutional Net) Annualized Five Year Risk vs Return

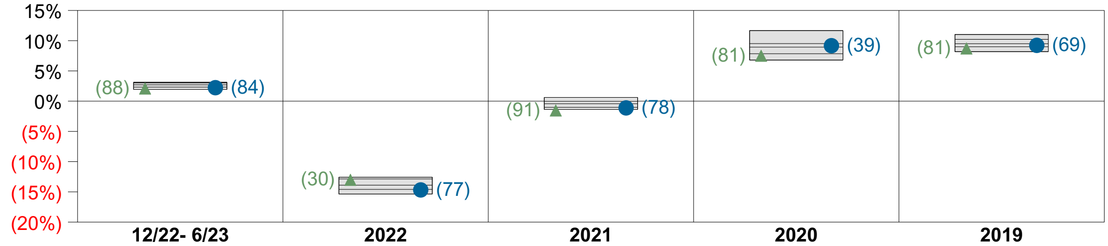


Metropolitan West Fund
Return Analysis Summary

Return Analysis

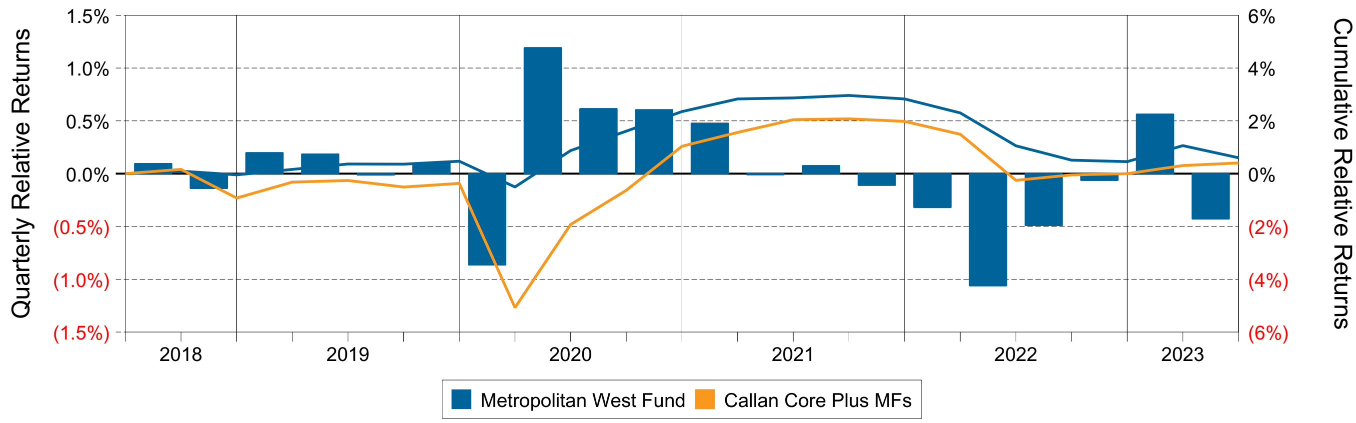
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Core Plus Mutual Funds (Institutional Net)

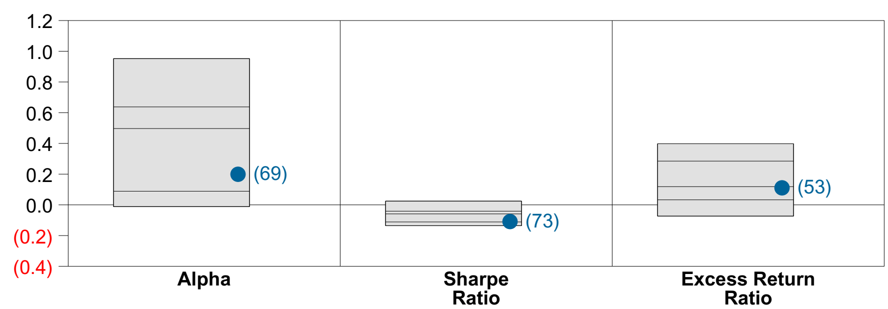


	12/22- 6/23	2022	2021	2020	2019
10th Percentile	3.13	(12.57)	0.62	11.67	11.02
25th Percentile	3.01	(12.86)	(0.02)	9.52	10.22
Median	2.71	(13.89)	(0.42)	8.94	9.50
75th Percentile	2.32	(14.59)	(1.02)	7.85	9.00
90th Percentile	1.94	(15.36)	(1.37)	6.80	8.18
Metropolitan West Fund ●	2.23	(14.69)	(1.12)	9.17	9.23
Blmbg:Aggregate ▲	2.09	(13.01)	(1.54)	7.51	8.72

Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate
Rankings Against Callan Core Plus Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



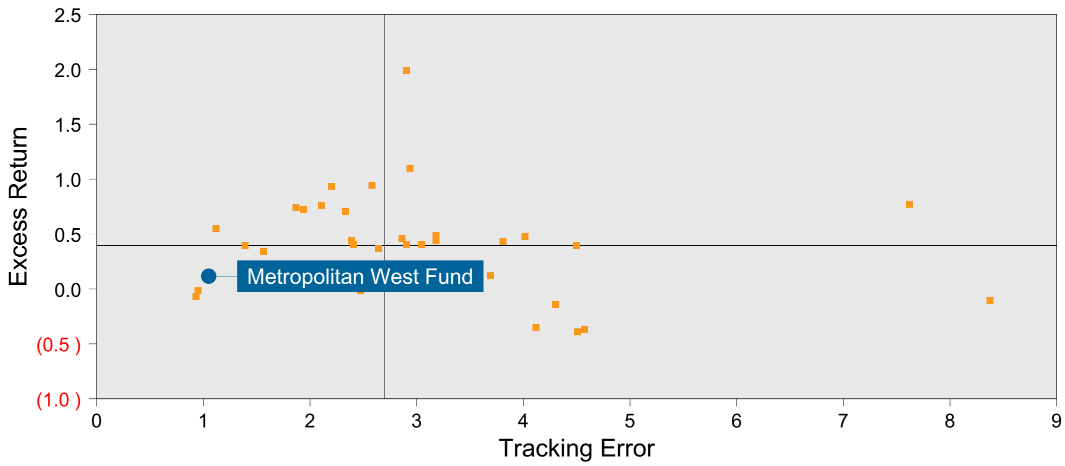
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.95	0.02	0.40
25th Percentile	0.64	(0.04)	0.28
Median	0.50	(0.06)	0.12
75th Percentile	0.09	(0.11)	0.03
90th Percentile	(0.01)	(0.14)	(0.07)
Metropolitan West Fund ●	0.20	(0.11)	0.11

Metropolitan West Fund
Risk Analysis Summary

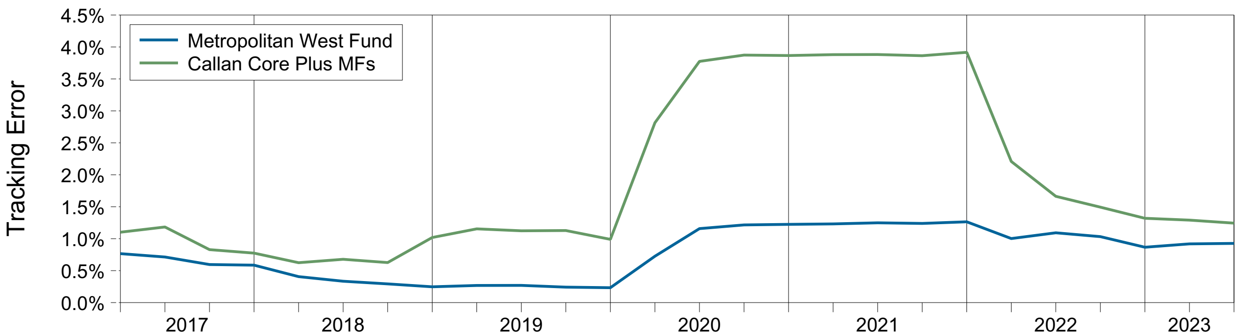
Risk Analysis

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.

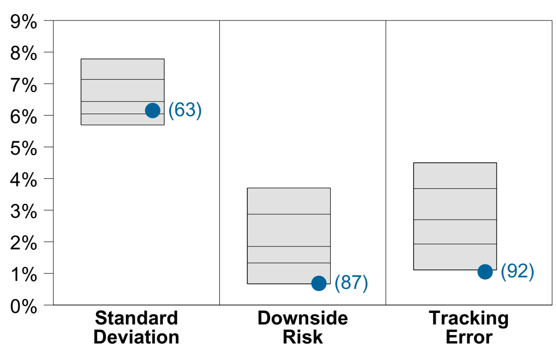
Risk Analysis vs Callan Core Plus Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

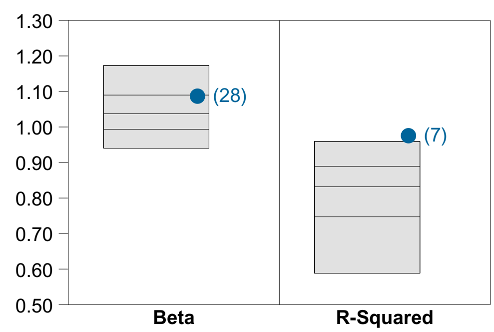


Rolling 8 Quarter Tracking Error vs Bloomberg Aggregate



Risk Statistics Rankings vs Bloomberg Aggregate
Rankings Against Callan Core Plus Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023





	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	7.78	3.70	4.50
25th Percentile	7.14	2.87	3.68
Median	6.44	1.85	2.70
75th Percentile	6.04	1.33	1.93
90th Percentile	5.70	0.67	1.11
Metropolitan West Fund ●	6.15	0.69	1.05

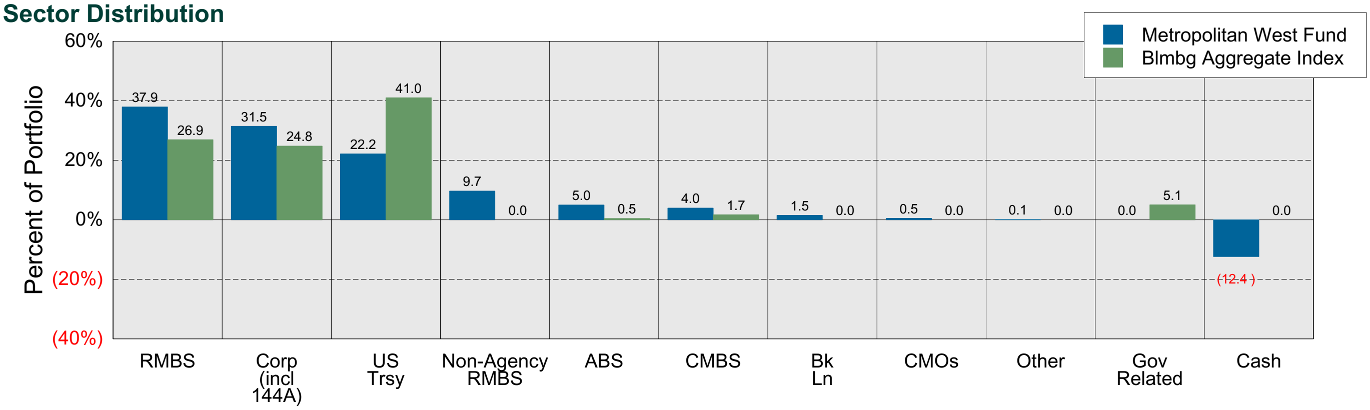
	Beta	R-Squared
10th Percentile	1.17	0.96
25th Percentile	1.09	0.89
Median	1.04	0.83
75th Percentile	0.99	0.75
90th Percentile	0.94	0.59
Metropolitan West Fund ●	1.09	0.98

Metropolitan West Fund
Portfolio Characteristics Summary
As of June 30, 2023

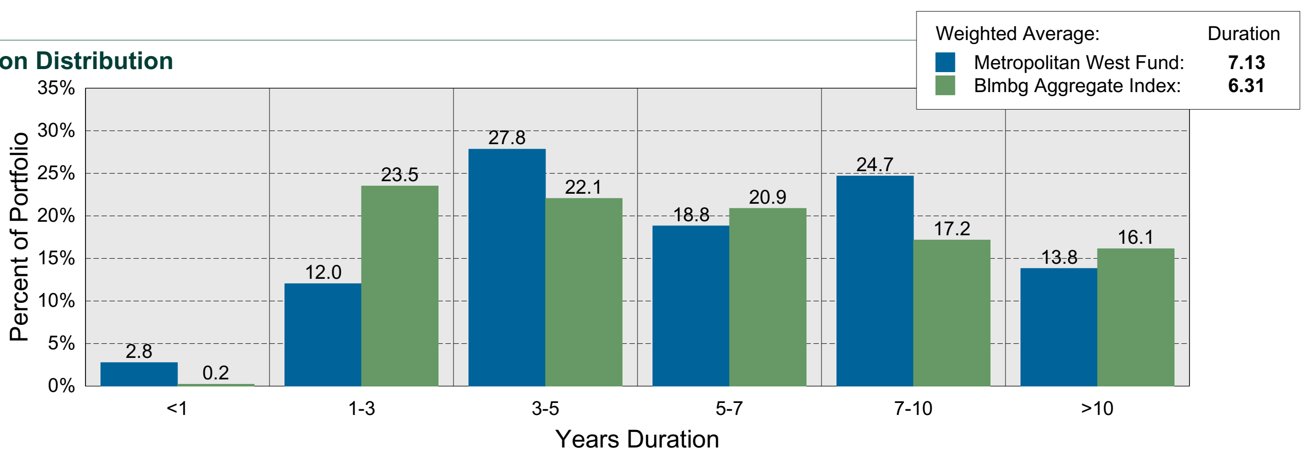
Portfolio Structure Comparison

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.

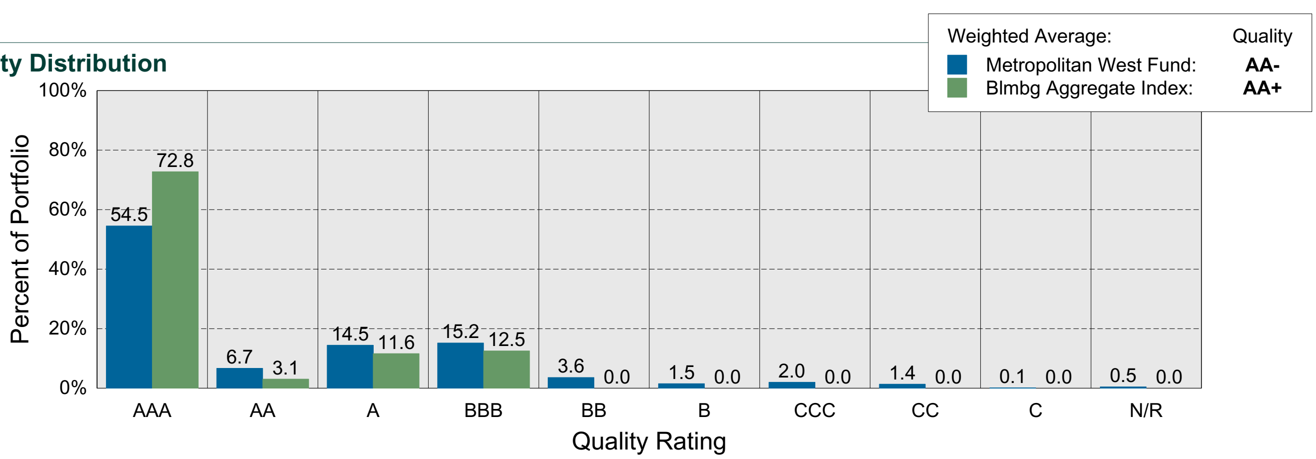
Sector Distribution



Duration Distribution



Quality Distribution

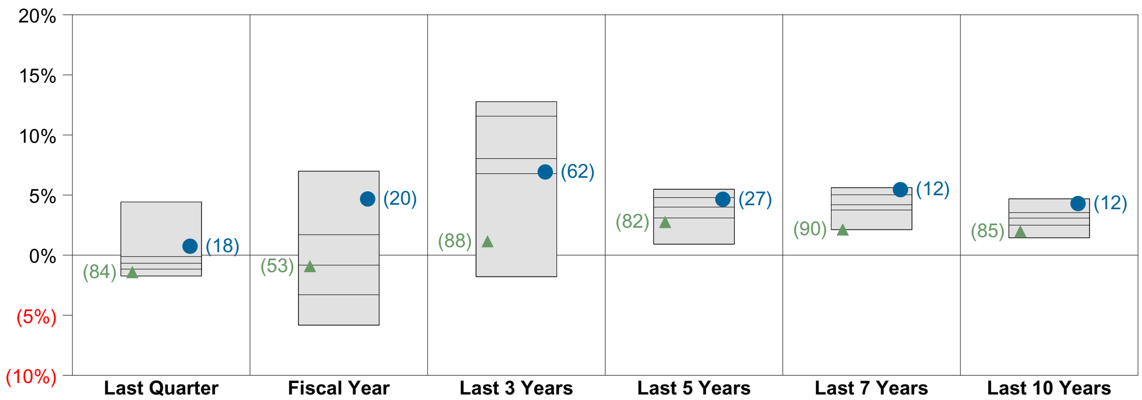


PIMCO All Asset Fund
Period Ended June 30, 2023

Investment Philosophy
The PIMCO All Asset Strategy is a real return-oriented, global tactical asset allocation strategy that seeks to provide three concurrent investor benefits: inflation protection, diversification and compelling long-term returns. Specifically, the All Asset Strategy has a primary benchmark of the Bloomberg Barclays Capital U.S. TIPS 1-10 Year Index and a secondary benchmark of the Consumer Price Index (CPI)+5%. PIMCO believes that this secondary benchmark reflects the Funds long-term investment strategy more accurately than the Bloomberg Barclays Capital U.S. TIPS 1-10 Year Index. As a result, the Strategy may be an attractive solution for investors seeking returns that track and meaningfully exceed inflation in a manner that also helps diversify equity risk. The first full quarter of actual performance is the first quarter of 2011, prior returns reflect manager reported composite performance.

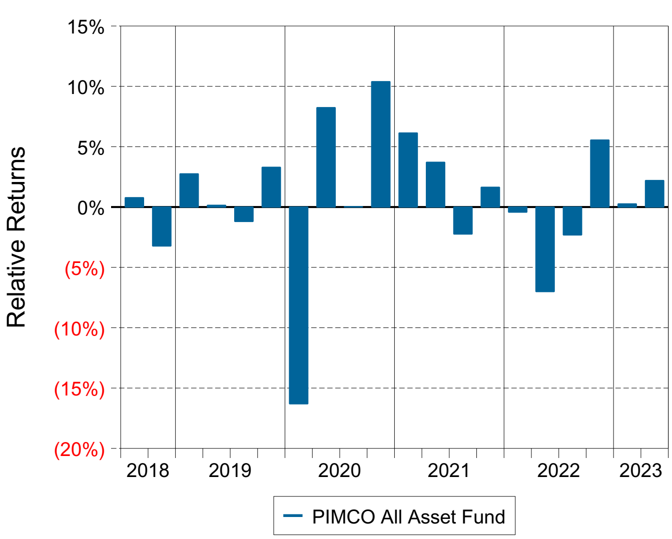
Quarterly Summary and Highlights
- PIMCO All Asset Fund’s portfolio posted a 0.74% return for the quarter placing it in the 18 percentile of the Callan Real Assets Mutual Funds group for the quarter and in the 20 percentile for the last year.
- PIMCO All Asset Fund’s portfolio outperformed the Blmbg TIPS 1-10 Yr by 2.16% for the quarter and outperformed the Blmbg TIPS 1-10 Yr for the year by 5.59%.

Performance vs Callan Real Assets Mutual Funds (Institutional Net)

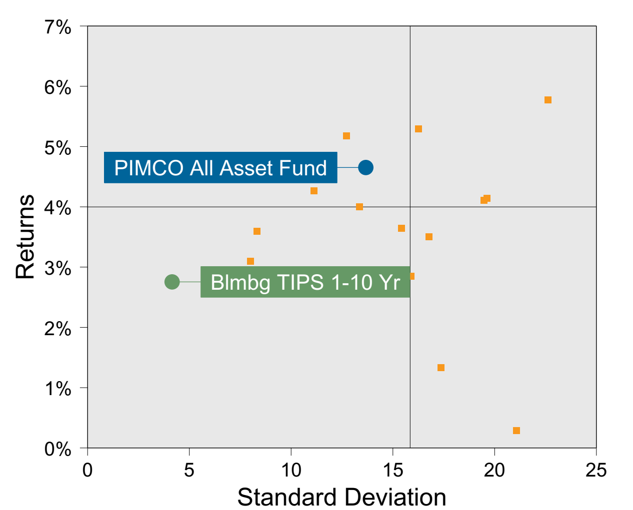


	Last Quarter	Fiscal Year	Last 3 Years	Last 5 Years	Last 7 Years	Last 10 Years
10th Percentile	4.43	6.99	12.77	5.48	5.62	4.69
25th Percentile	(0.12)	1.70	11.57	4.79	5.03	3.54
Median	(0.67)	(0.83)	8.04	4.00	4.20	3.08
75th Percentile	(1.16)	(3.29)	6.78	3.10	3.76	2.50
90th Percentile	(1.73)	(5.82)	(1.79)	0.92	2.13	1.44
PIMCO All Asset Fund ●	0.74	4.68	6.92	4.65	5.45	4.30
Blmbg TIPS 1-10 Yr ▲	(1.42)	(0.91)	1.15	2.75	2.13	1.98

Relative Return vs Blmbg TIPS 1-10 Yr



Callan Real Assets Mutual Funds (Institutional Net)
Annualized Five Year Risk vs Return

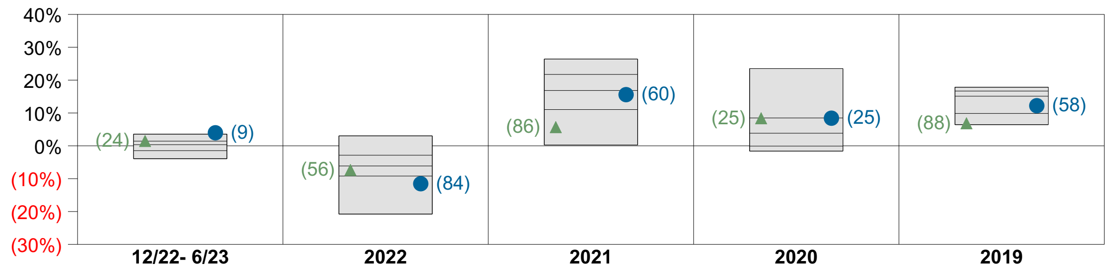


PIMCO All Asset Fund
Return Analysis Summary

Return Analysis

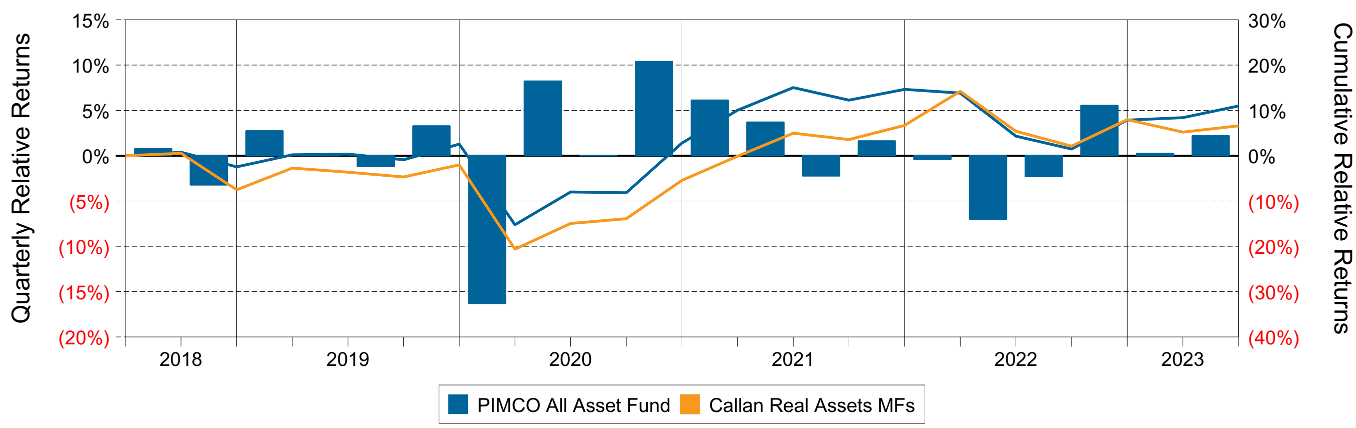
The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate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

Performance vs Callan Real Assets Mutual Funds (Institutional Net)

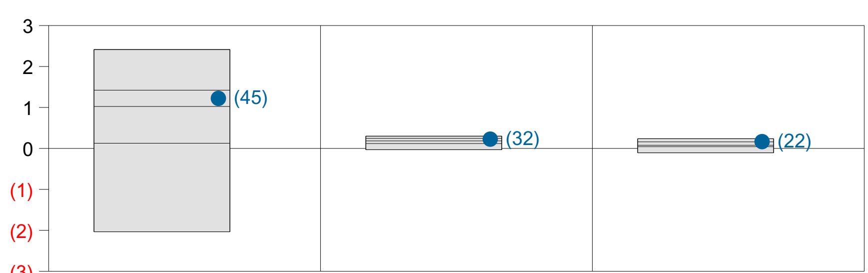


	12/22- 6/23	2022	2021	2020	2019
10th Percentile	3.56	3.03	26.41	23.51	17.84
25th Percentile	1.42	(2.86)	21.73	8.48	16.68
Median	0.35	(6.13)	16.83	3.84	15.10
75th Percentile	(1.46)	(9.20)	11.03	(0.09)	9.86
90th Percentile	(3.92)	(20.77)	0.26	(1.60)	6.44
PIMCO All Asset Fund ●	3.97	(11.53)	15.58	8.41	12.21
Blmbg TIPS 1-10 Yr ▲	1.48	(7.34)	5.69	8.39	6.85

Cumulative and Quarterly Relative Returns vs Blmbg TIPS 1-10 Yr



Risk Adjusted Return Measures vs Blmbg TIPS 1-10 Yr
Rankings Against Callan Real Assets Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



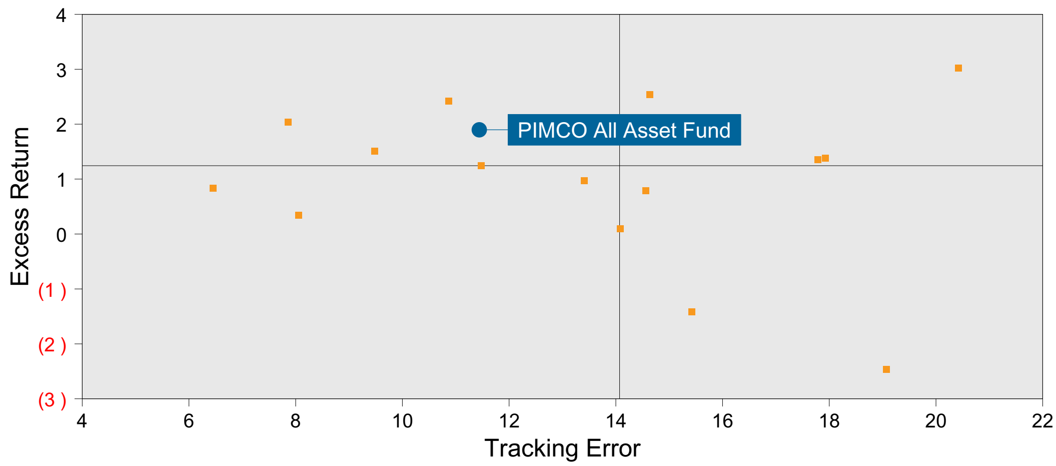
	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	2.41	0.30	0.24
25th Percentile	1.42	0.25	0.16
Median	1.02	0.18	0.08
75th Percentile	0.13	0.12	0.04
90th Percentile	(2.04)	(0.03)	(0.11)
PIMCO All Asset Fund ●	1.22	0.23	0.17

PIMCO All Asset Fund
Risk Analysis Summary

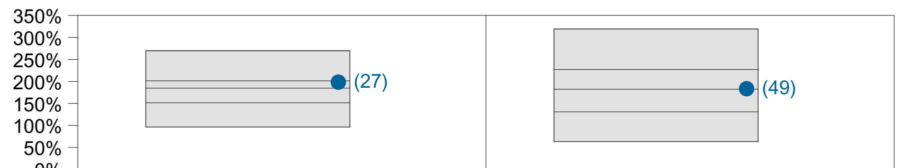
Risk Analysis

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 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 Real Assets Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

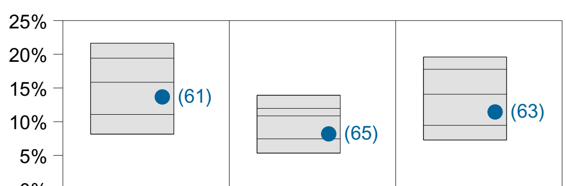


Market Capture vs Bloomberg TIPS 1-10 Yr
Rankings Against Callan Real Assets Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023

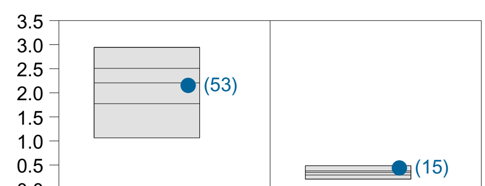


	Up Market Capture	Down Market Capture
10th Percentile	269.62	319.21
25th Percentile	201.37	227.03
Median	184.63	182.22
75th Percentile	151.41	130.89
90th Percentile	96.26	63.21
PIMCO All Asset Fund ●	198.31	183.41

Risk Statistics Rankings vs Bloomberg TIPS 1-10 Yr
Rankings Against Callan Real Assets Mutual Funds (Institutional Net)
Five Years Ended June 30, 2023



	Standard Deviation	Downside Risk	Tracking Error
10th Percentile	21.65	13.92	19.59
25th Percentile	19.42	11.97	17.77
Median	15.85	10.86	14.07
75th Percentile	11.07	7.46	9.46
90th Percentile	8.15	5.34	7.28
PIMCO All Asset Fund ●	13.67	8.19	11.44



	Beta	R-Squared
10th Percentile	2.94	0.49
25th Percentile	2.51	0.38
Median	2.21	0.35
75th Percentile	1.77	0.29
90th Percentile	1.06	0.21
PIMCO All Asset Fund ●	2.15	0.44

Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit www.callan.com/research-library to see all of our publications, and www.callan.com/blog to view our blog. For more information contact Barb Gerraty at 415-274-3093 / institute@callan.com.

New Research from Callan's Experts

2023 Private Credit Fees and Terms Study | Catherine Beard and Jared Ungar assess private credit partnerships in our first fees and terms study for this asset class.

2Q23 Real Assets Reporter: Life Sciences Investments | Christine Mays describes life sciences investments and the role they can play in institutional portfolios.

The Critical Underlying Technology Behind Digital Assets: A Primer for Institutional Investors | This paper provides background on key concepts around digital assets: blockchains and distributed ledgers; cryptography; validation protocols; smart contracts; and tokenization.

Blog Highlights

Biodiversity: A Relatively New Theme for ESG-Focused Investors | Biodiversity investments include companies that support the sustainable use of natural resources and ecosystem services or technologies, or products or services that reduce biodiversity threats or restore natural habitats.

Higher Interest Rates Meet Lower Valuations: Implications for the CRE Industry | The commercial real estate (CRE) industry, already facing challenges with economic uncertainty, the shift to remote work, and recent layoffs by many major office tenants, now confronts higher interest rates and plummeting pricing.

How to Improve DC Plans with DEI | For defined contribution (DC) plan sponsors, understanding the diversity within the employee population supports inclusiveness and equality in access and opportunities.

Webinar Replays

Research Cafe: ESG Interview Series | During this interview, Aaron Quach, Callan ESG team member, interviews Jan Mende, Callan real assets specialist and author of our white paper on energy transition. They will discuss the growing opportunities for investment within the energy transition space and how they can be incorporated into the portfolios of institutional investors.

Quarterly Periodicals

Private Equity Update, 1Q23 | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 1Q23 | A comparison of active managers alongside relevant benchmarks over the long term

Market Pulse, 1Q23 | 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, 1Q23 | 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, 1Q23 | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Update, 1Q23 | A summary of market activity for real assets and private real estate during the quarter

Private Credit Update, 1Q23 | A review of performance and fundraising activity for private credit during the quarter

Events

A complete list of all upcoming events can be found on our website: callan.com/events-education.

Please mark your calendar and look forward to upcoming invitations:

Webinar: The End of the Low-Yield Environment
Aug 9, 2023 – Virtual

2023 October Workshops
Oct. 24, 2023 – New York
Oct. 26, 2023 – Chicago

2024 National Conference
April 8-10, 2024 – San Francisco

For more information about events, please contact Barb Gerraty: 415-274-3093 / 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
3,700	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.

Introduction to Investments
Sept. 26-28 – 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.

Alternative Investments
Aug. 23-24 – 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.

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

"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

List of Callan's Investment Manager Clients

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Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name
abrdn (Aberdeen Standard Investments)
ABS Global Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AllianceBernstein
Allspring Global Investments, LLC
AlphaSimplex Group, LLC
Altrinsic Global Advisors, LC
American Capital Management, Inc.
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

Manager Name
Atlanta Capital Management Co., LLC
AXA Investment Managers
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
BentallGreenOak
Beutel, Goodman & Company Ltd.
Bissell Ballantyne LLC
BlackRock
Blackstone Group (The)
Blue Owl Capital, Inc.
BNY Mellon Asset Management
Boston Partners
Brandes Investment Partners, L.P.
Brandywine Global Investment Management, LLC
Brightwood Capital Advisors, LLC

Manager Name
Brookfield Asset Management Inc.
Brown Brothers Harriman & Company
Capital Group
Cardinal Capital, LLC
CastleArk Management, LLC
CIBC Asset Management Inc.
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments North America
Comvest Partners
CQS
Credit Suisse Asset Management, LLC
D.E. Shaw Investment Management, LLC
DePrince, Race & Zollo, Inc.
Diamond Hill Capital, Inc.
Dimensional Fund Advisors L.P.
Doubleline
DWS
EARNEST Partners, LLC
Epoch Investment Partners , Inc. * (See new name)
Fayez Sarofim & 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.
Glenmede Investment Management, LP
GlobeFlex Capital, L.P.
GoldenTree Asset Management, LP
Goldman Sachs
Golub Capital
Great Lakes Advisors, LLC
Guggenheim Investments
GW&K Investment Management
Harbor Capital Advisors

Manager Name
Hardman Johnston Global Advisors LLC
Heitman LLC
Hotchkis & Wiley Capital Management, LLC
Impax Asset Management LLC
Income Research + Management
Insight Investment
Intech Investment Management LLC
Intercontinental Real Estate Corporation
Invesco
J.P. Morgan
Janus
Jarislowsky Fraser Global Investment Management
Jennison Associates LLC
Jobs Peak Advisors
KeyCorp
Kohlberg Kravis Roberts & Co. (KKR)
Lazard Asset Management
LGIM America
Lincoln National Corporation
Longview Partners
Loomis, Sayles & Company, L.P.
Lord, Abbett & Company
LSV Asset Management
MacKay Shields LLC
Macquarie Asset Management (MAM)
Manulife Investment Management
Marathon Asset Management, L.P.
MetLife Investment Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & 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.

Manager Name
P/E Investments
Pacific Investment Management Company
Pacific Ridge Capital Partners, LLC
Pantheon Ventures
Parametric Portfolio Associates LLC
Partners Group (USA) Inc.
Pathway Capital Management, LP
PFM Asset Management LLC
PGIM
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.
S&P Dow Jones Indices
Sands Capital Management
Schroder Investment Management North America Inc.
Segall Bryant & Hamill

Manager Name
Silvercrest Asset Management Group
SLC Management
Smith Graham & Co. Investment Advisors, L.P.
Sprucegrove Investment Management Ltd
State Street Global Advisors
Strategic Global Advisors, LLC
*TD Global Investment Solutions – TD Epoch
T. Rowe Price Associates, Inc.
The TCW Group, Inc.
Thompson, Siegel & Walmsley LLC
Tri-Star Trust Bank
UBS Asset Management
VanEck
Vanguard Group, Inc. (The)
Versus Capital Group
Victory Capital Management Inc.
Virtus Investment Partners, Inc.
Vontobel Asset Management
Voya
Walter Scott & Partners Limited
WCM Investment Management
Wellington Management Company, LLP
Western Asset Management Company LLC
Westfield Capital Management Company, LP
William Blair & Company LLC
Xponance, Inc.

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Past performance is no guarantee of future results.

For professional / institutional / qualified investors only

City of Norwalk

Portfolio Review

UBS Hedge Fund Solutions ("HFS")

The views expressed are as of the date of this material and are a general guide to the views of UBS Hedge Fund Solutions LLC, a division within UBS Asset Management.

September 2023

Table of contents

Risk considerations

The Fund's investment program is speculative and entails substantial risks which may place your capital at risk. An investment in the Fund includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-US securities and illiquid investments. The Fund invests largely in other unregulated hedge funds. Such a portfolio of hedge funds may increase an investor's volatility for potential losses or gains.

One or more of the funds, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio (as well as the Fund's) may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that a fund's strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. The investment funds in which the Fund invests can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies. In addition, the overall performance of the Fund is dependent not only on the investment performance of individual managers, but also on the ability of the Fund's Adviser to effectively select and allocate the Fund's assets among such managers on an ongoing basis.

The Fund's portfolio may be highly leveraged and the volatility of the price of its interests may be great. The Fund's fees and expenses may substantially offset the Fund's trading profits. There is no secondary market for interests in the Fund and none is expected to develop. In addition, the ability to transfer one's interest in the Fund is restricted. It is possible that the Fund will be unable to provide tax information to investors without significant delays, and investors may need to seek extensions on the time to file their tax returns at the federal, state and local levels. Interests are not deposits or obligations of, or guaranteed or endorsed by any bank or other insured depository institution, and are not insured by the Federal Deposit Insurance Corporation, Financial Service Compensation Scheme or other relevant non-US governmental agency. Investors should consider the Fund as a supplement to an overall investment program and should invest only if they are willing to undertake the risks involved.

UBS

Section 1

Monthly Performance Report – July 2023

UBS

31 July 2023

A&Q Neutral Alpha Strategies Limited

Key information

Share class - currency	SN-USD	Master fund assets as at 1 Jul '23	USD 1,832 million
Share class inception date	01-Dec-13	Number of funds as at 1 Jul '23	29
Net asset value	USD 1,589.58	Number of funds added over the last 12 months	8
		Number of funds redeemed over the last 12 months	13

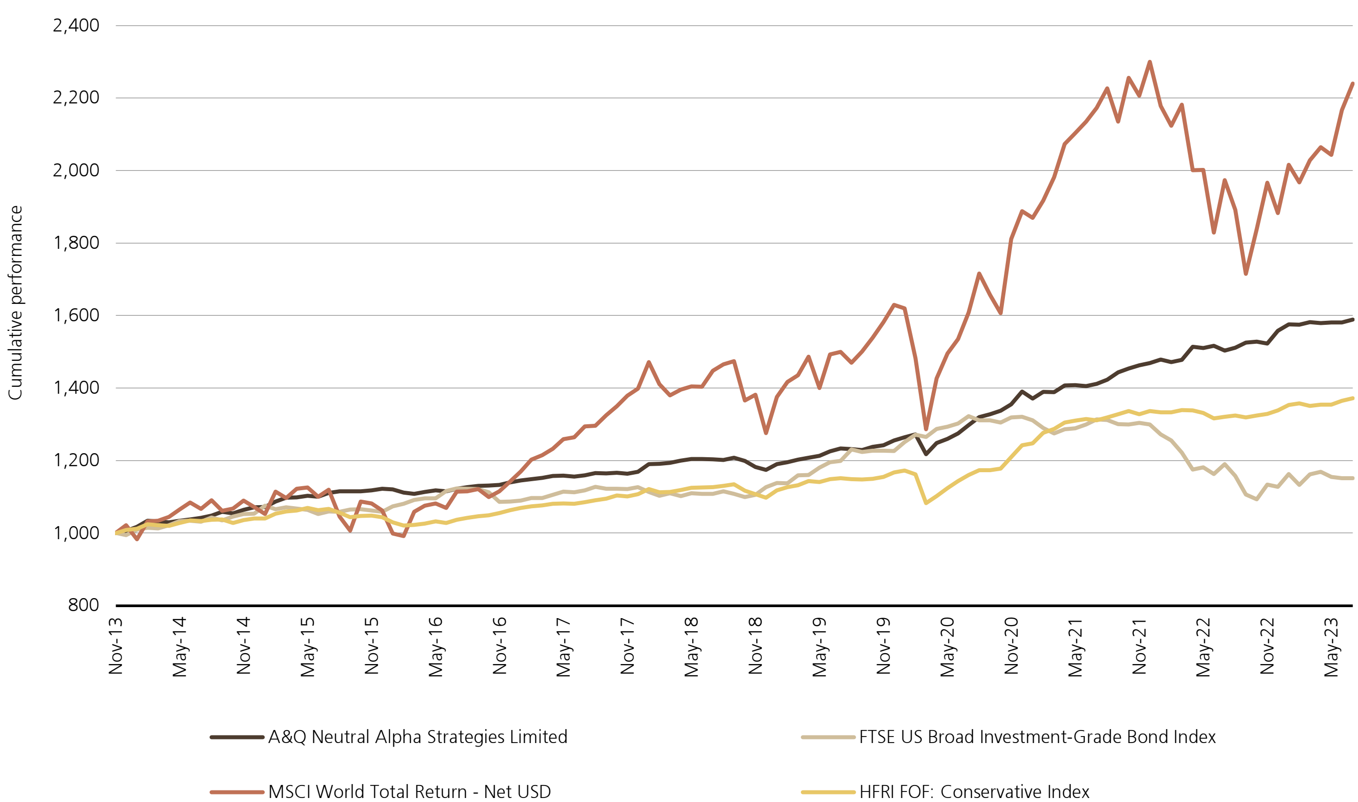
Historical monthly performance*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2023	1.18	-0.09	0.46	-0.15	0.08	0.01	0.56						2.05
2022	0.70	-0.51	0.42	2.44	-0.24	0.44	-0.90	0.55	0.96	0.15	-0.35	2.31	6.06
2021	-1.40	1.31	-0.05	1.35	0.08	-0.24	0.44	0.84	1.45	0.71	0.59	0.42	5.61
2020	0.65	0.67	-4.33	2.58	0.93	1.19	1.79	1.70	0.56	0.73	1.35	2.62	10.74
2019	1.36	0.44	0.58	0.45	0.49	1.00	0.60	-0.14	-0.19	0.69	0.39	1.08	6.97
2018	1.80	0.10	0.26	0.48	0.40	-0.03	-0.03	-0.19	0.52	-0.71	-1.43	-0.68	0.45
2017	0.44	0.31	0.31	0.44	0.10	-0.26	0.37	0.49	-0.10	0.18	-0.25	0.45	2.52
2016	-0.11	-0.76	-0.34	0.42	0.42	-0.23	0.61	0.41	0.33	0.08	0.14	0.64	1.62
2015	0.04	1.45	0.97	0.05	0.43	-0.25	0.95	0.36	0.01	0.04	0.25	0.34	4.72
2014	1.17	1.58	-0.10	-0.30	0.46	0.35	0.37	0.59	1.06	-0.40	0.85	0.72	6.52

*Note: Only the last ten years of performance history are shown on table above; see fund inception date on top left of page. The complete table of historical monthly performance for the Fund can be found at the end of the report.

A&Q Neutral Alpha Strategies Limited returns represent the profits and losses of the Fund's class SN shares net: (i) a 1.00% annualized management fee, (ii) a 0% performance fee deducted from monthly profits, and (iii) expenses charged to the Fund in the month shown. The returns are based on calculations and information provided to the Fund's Investment Manager, UBS Hedge Fund Solutions LLC, by the Fund's Administrator, MUFG Alternative Fund Services (Cayman) Limited. In addition to being unaudited, the returns have not been reviewed by an independent third party. Therefore, the returns are subject to change without notification to the recipient based on, amongst other things, an annual audit of the Fund. Any returns presented may or may not be indicative of the returns of the share class, series, and/or fund offered to you. Your actual returns may be different and can be determined from the NAV statements sent by the fund's administrator.

Performance of A&Q Neutral Alpha Strategies Limited and several indices



Each index shown as if the index was at 1,000 as of December 1, 2013. The chart displayed above is intended solely for illustrative purposes. Neither the Fund nor any of the other indices shown are intended to track each other as they follow different investment strategies/programs, and different results over similar periods can be expected.
Note: Data assumes re-investment of any dividend where applicable.

Source: UBS Hedge Fund Solutions, FTSE Russell, Morgan Stanley Capital International, Hedge Fund Research, Inc.. Indices are for illustrative purposes only.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Performance statistics

Time period	Statistic	A&Q Neutral Alpha Strategies Limited	FTSE US Broad Investment-Grade Bond Index	MSCI World Total Return - Net USD	HFRI FOF: Conservative Index
Month-to-date	Cumulative return	0.56%	-0.03%	3.36%	0.53%
Last full quarter	Cumulative return	-0.06%	-0.89%	6.83%	1.03%
Year-to-date	Cumulative return	2.05%	2.11%	18.95%	2.50%
Rolling 1 year	Annualized return	5.77%	-3.26%	13.48%	3.85%
	Annualized volatility	2.55%	8.51%	18.74%	1.64%
Rolling 3 years	Annualized return	6.99%	-4.54%	11.67%	5.75%
	Annualized volatility	3.04%	6.11%	17.78%	2.92%
	Sharpe ratio	1.69	-1.00	0.62	1.36
	Correlation	1.00	-0.20	-0.11	0.44
Rolling 5 years	Annualized return	5.72%	0.76%	9.12%	4.02%
	Annualized volatility	3.68%	5.51%	18.29%	4.43%
	Sharpe ratio	1.08	-0.14	0.48	0.53
	Correlation	1.00	-0.05	0.33	0.76
Rolling 10 years	Annualized return	-	-	-	-
	Annualized volatility	-	-	-	-
	Sharpe ratio	-	-	-	-
	Correlation	-	-	-	-
Since inception*	**Annualized return**	**4.91%**	**1.46%**	**8.70%**	**3.33%**
	Annualized volatility	**2.89%**	**4.38%**	**14.76%**	**3.48%**
	Sharpe ratio	**1.29**	**0.10**	**0.57**	**0.64**
	Sortino ratio	**2.91**	**0.48**	**0.86**	**1.31**
	Correlation	**1.00**	**-0.07**	**0.30**	**0.74**
	Beta	**1.00**	**-0.04**	**0.06**	**0.62**
	Highest 1 month loss	**-4.33%**	**-4.38%**	**-13.23%**	**-6.78%**
	Maximum draw-down	**-4.33%**	**-17.40%**	**-25.42%**	**-7.64%**
	% Positive months	**75.00%**	**53.45%**	**66.38%**	**71.55%**

*Note: See share class inception date on top left of front page.

Source: UBS Hedge Fund Solutions, FTSE Russell, Morgan Stanley Capital International, Hedge Fund Research, Inc.. Indices are for illustrative purposes only.

Please see Endnotes for selected statistics definitions and index descriptions.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Performance contribution and portfolio concentration summary

Strategy contribution (gross of fees)

Strategy	Month-to-date	Last full quarter	Year-to-date
Equity Hedged	0.00%	0.19%	0.58%
Relative Value	0.17%	0.54%	1.58%
Credit/Income	0.01%	-0.24%	0.12%
Multi-Strategy	0.11%	0.24%	0.62%
Trading	0.33%	-0.56%	-0.29%
Co-Investment	0.04%	0.09%	0.24%
Cash & Other Assets	0.00%	-0.07%	-0.20%
Total	**0.65%**	**0.19%**	**2.65%**
A&Q Neutral Alpha Strategies Limited Class SN-USD Net return	**0.56%**	**-0.06%**	**2.05%**

Month-to-date performance contribution by fund

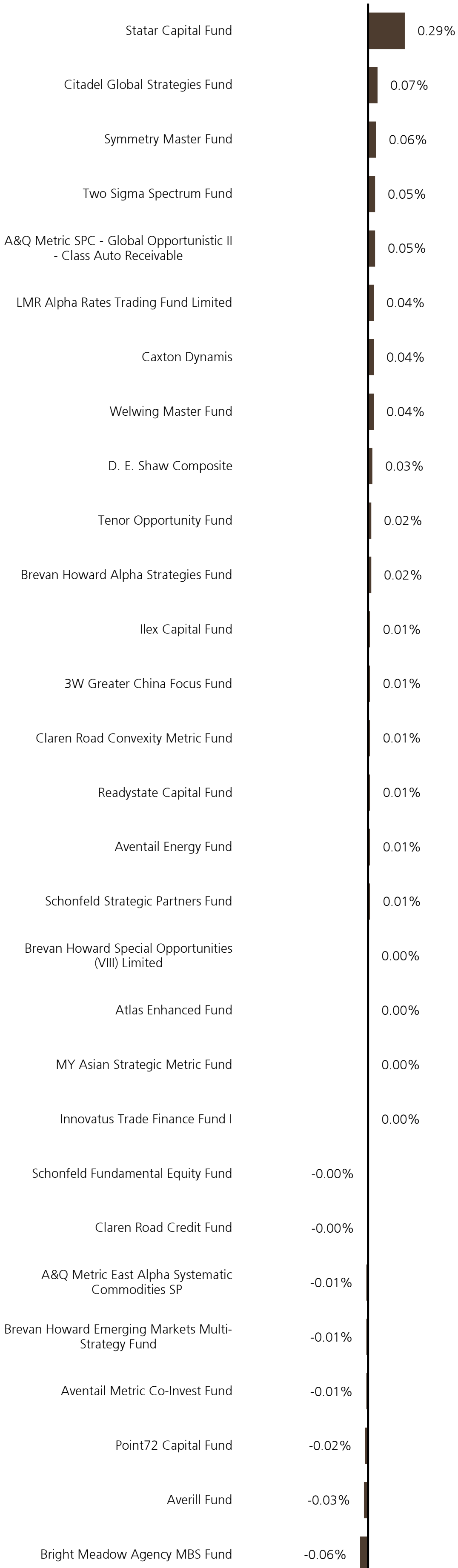
Largest positive contribution by a single fund	0.29%
Largest negative contribution by a single fund	-0.06%
Number of funds with positive contribution	21
Number of funds with negative contribution	8

Portfolio concentration

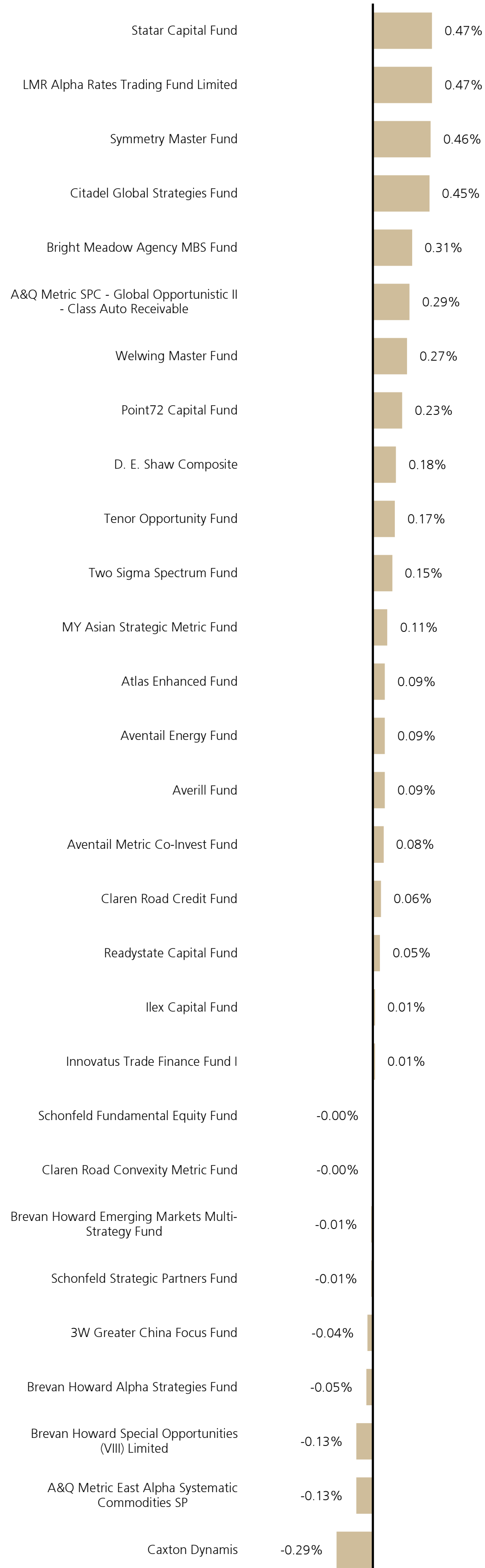
	Current	12 months ago
Largest single position	7.6%	6.3%
Top 5 positions	30.4%	26.4%
Top 10 positions	51.2%	47.1%
Top 75% of portfolio	17 funds	19 funds

Please see Endnotes for an explanation of the performance contribution calculation methodology.

Month-to-date (gross) performance contribution by fund*



Year-to-date (gross) performance contribution by fund*



*Note: includes funds held at any time during the month reported; net of fund management and performance fees.
Please see Endnotes for an explanation of the underlying performance contribution calculation methodology.
Source: UBS Hedge Fund Solutions
PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Performance contribution by fund

Strategy[1]	Fund name[2]	Investment date	Termination date[3]	Month-to-date Alloc.[4]	Month-to-date ROR	Month-to-date Cont.[5]	Last full quarter Alloc.[4]	Last full quarter ROR	Last full quarter Cont.[5]	Year-to-date Alloc.[4]	Year-to-date ROR	Year-to-date Cont.[5]
Equity Hedged	Atlas Enhanced Fund	Feb-21	--	5.33%	0.05%	0.00%	5.39%	0.91%	0.05%	5.38%	1.68%	0.09%
	Point72 Capital Fund	Feb-18	--	4.03%	-0.39%	-0.02%	3.99%	3.07%	0.12%	3.97%	5.75%	0.23%
	Aventail Energy Fund	Aug-22	--	2.83%	0.25%	0.01%	2.94%	-2.12%	-0.06%	2.91%	2.93%	0.09%
	MY Asian Strategic Metric Fund	Mar-20	--	2.26%	0.11%	0.00%	2.24%	1.51%	0.03%	2.24%	4.83%	0.11%
	Schonfeld Fundamental Equity Fund	Mar-21	--	2.18%	-0.02%	-0.00%	2.21%	-0.01%	0.00%	2.22%	-0.18%	-0.00%
	Averill Fund	Jan-22	--	2.15%	-1.21%	-0.03%	2.08%	4.66%	0.10%	2.08%	4.45%	0.09%
	3W Greater China Focus Fund	Apr-23	--	1.87%	0.54%	0.01%	1.90%	-2.32%	-0.05%	1.08%	-1.79%	-0.04%
	Ilex Capital Fund	Jul-23	--	1.76%	0.83%	0.01%	--	--	--	0.25%	0.83%	0.01%
			Equity Hedged total:	**22.41%**	**-0.02%**	**0.00%**	**20.74%**	**0.93%**	**0.19%**	**20.13%**	**2.98%**	**0.58%**
Relative Value	Symmetry Master Fund	Oct-14	--	7.61%	0.78%	0.06%	7.51%	3.06%	0.23%	7.50%	6.27%	0.46%
	LMR Alpha Rates Trading Fund Limited	Apr-21	--	5.85%	0.76%	0.04%	5.80%	2.56%	0.15%	5.75%	8.32%	0.47%
	Readystate Capital Fund	Feb-23	--	4.08%	0.18%	0.01%	4.08%	1.34%	0.05%	3.30%	1.66%	0.05%
	Welwing Master Fund	Sep-22	--	4.05%	1.00%	0.04%	4.00%	3.18%	0.13%	4.00%	6.71%	0.27%
	Bright Meadow Agency MBS Fund	Aug-21	--	4.02%	-1.38%	-0.06%	3.26%	1.10%	0.07%	3.17%	10.12%	0.31%
	Two Sigma Spectrum Fund	Sep-07	--	3.79%	1.31%	0.05%	3.79%	0.51%	0.02%	3.78%	4.11%	0.15%
	Tenor Opportunity Fund	Jun-20	--	3.77%	0.64%	0.02%	3.75%	2.19%	0.08%	3.75%	4.53%	0.17%
	Vatic Adventus Fund	Apr-22	Jun-23	--	--	--	1.37%	-5.70%	-0.08%	1.85%	-9.84%	-0.22%
	Barnegat Investments Limited	Mar-01	May-23	--	--	--	0.36%	3.44%	0.01%	0.52%	12.76%	0.08%
	A&Q Metric Fir Tree Opportunity SPAC Fund	Apr-21	Mar-23	--	--	--	0.00%	-0.35%	-0.01%	0.01%	8.11%	-0.01%
	PSquared Event Opportunities Fund	May-14	May-23	--	--	--	1.47%	-4.46%	-0.10%	1.74%	-5.70%	-0.14%
			Relative Value total:	**33.16%**	**0.51%**	**0.17%**	**35.39%**	**1.61%**	**0.54%**	**35.38%**	**4.59%**	**1.58%**
Credit/Income	Claren Road Credit Fund	Sep-20	--	5.95%	-0.01%	-0.00%	6.12%	-2.38%	-0.15%	6.05%	1.05%	0.06%
	Claren Road Convexity Metric Fund	Aug-21	--	0.77%	1.15%	0.01%	0.78%	-1.53%	-0.01%	0.78%	-0.40%	-0.00%
	Innovatus Trade Finance Fund I	Oct-18	--	0.61%	0.05%	0.00%	0.61%	0.50%	0.00%	0.61%	1.55%	0.01%
	L&R Asia Credit Alpha Fund	Nov-21	Jun-23	--	--	--	2.03%	-4.21%	-0.09%	1.80%	0.39%	0.02%
	Aeolus Keystone January 2017 Fund	Jan-17	Jan-23	--	--	--	--	--	--	0.00%	1.03%	0.00%
	Aeolus Keystone January 2019 Fund	Jan-19	May-23	--	--	--	0.00%	134.64%	0.00%	0.00%	342.27%	0.01%
	Axonic Special Opportunities SBL Fund	Nov-16	Mar-23	--	--	--	--	--	--	0.66%	1.39%	0.02%
			Credit/Income total:	**7.33%**	**0.12%**	**0.01%**	**9.55%**	**-2.47%**	**-0.24%**	**9.91%**	**0.64%**	**0.12%**
Multi-Strategy	Citadel Global Strategies Fund	Sep-14	--	5.65%	1.27%	0.07%	5.60%	2.77%	0.15%	5.56%	8.31%	0.45%
	D. E. Shaw Composite	Apr-13	--	3.67%	0.85%	0.03%	3.62%	2.88%	0.10%	3.63%	5.06%	0.18%
	Schonfeld Strategic Partners Fund	Aug-21	--	2.34%	0.23%	0.01%	2.37%	-0.79%	-0.02%	2.38%	-0.52%	-0.01%
			Multi-Strategy total:	**11.66%**	**0.93%**	**0.11%**	**11.58%**	**2.07%**	**0.24%**	**11.57%**	**5.42%**	**0.62%**
Trading	Caxton Dynamis	Apr-21	--	4.19%	1.06%	0.04%	4.29%	-2.56%	-0.11%	4.35%	-6.29%	-0.29%
	Brevan Howard Emerging Markets Multi-Strategy Fund	Jul-23	--	3.08%	-0.39%	-0.01%	--	--	--	0.44%	-0.39%	-0.01%
	Brevan Howard Alpha Strategies Fund	Apr-21	--	3.05%	0.52%	0.02%	3.10%	-1.01%	-0.03%	3.14%	-1.75%	-0.05%
	A&Q Metric East Alpha Systematic Commodities SP	Apr-21	--	2.99%	-0.32%	-0.01%	3.54%	-2.85%	-0.08%	3.60%	-4.30%	-0.13%
	Statar Capital Fund	Feb-21	--	2.58%	11.19%	0.29%	3.22%	-12.11%	-0.35%	3.60%	10.28%	0.47%
	Element Capital Fund	Feb-11	Apr-23	--	--	--	0.45%	0.35%	0.00%	1.36%	-8.89%	-0.28%
			Trading total:	**15.89%**	**2.06%**	**0.33%**	**14.60%**	**-4.08%**	**-0.56%**	**16.50%**	**-2.41%**	**-0.29%**
Co-Investment	A&Q Metric SPC - Global Opportunistic II - Class Auto Receivable	May-22	--	4.48%	1.07%	0.05%	4.10%	3.41%	0.14%	3.85%	7.83%	0.29%
	Aventail Metric Co-Invest Fund	Nov-22	--	0.88%	-1.47%	-0.01%	0.84%	7.99%	0.07%	0.85%	9.21%	0.08%
	Brevan Howard Special Opportunities (VIII) Limited	Dec-22	--	0.72%	0.32%	0.00%	0.86%	-13.03%	-0.11%	0.83%	-15.15%	-0.13%
			Co-Investment total:	**6.08%**	**0.62%**	**0.04%**	**5.80%**	**1.77%**	**0.09%**	**5.54%**	**4.50%**	**0.24%**
			Total:	96.53%	--	0.65%	97.66%	--	0.26%	99.03%	--	2.85%
			Cash & other assets:	3.47%	--	0.00%	2.34%	--	-0.07%	0.97%	--	-0.20%
			A&Q Neutral Alpha Strategies Limited Class SN-USD Total allocation and net return:	**100.0%**	**--**	**0.56%**	**100.0%**	**--**	**-0.06%**	**100.0%**	**--**	**2.05%**

Notes:
1. Strategy category assigned by investment manager based on the dominant strategy of the underlying fund.
2. Sorted in descending order, by allocation within strategy category.
3. Date when product is no longer subject to market value fluctuation in the underlying fund; termination dates are as of the end of the month.
4. Allocation as of the beginning of the period; hence, investments made during the month reported, but not held at the beginning of the month will show a 0% allocation. Quarter-to-date and year-to-date allocations show average allocation for the time period.
5. Last full quarter and year-to-date contribution of managers with current allocations of zero are calculated up to the date of termination.
Please see Endnotes for an explanation of the calculation methodology used for RORs (rates of return) of the component funds, as well as performance contribution.

Source: UBS Hedge Fund Solutions
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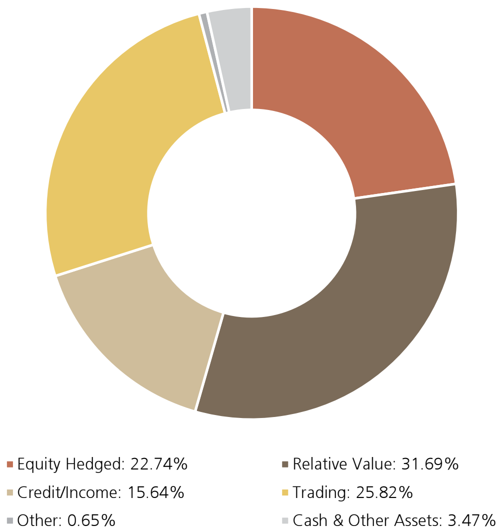
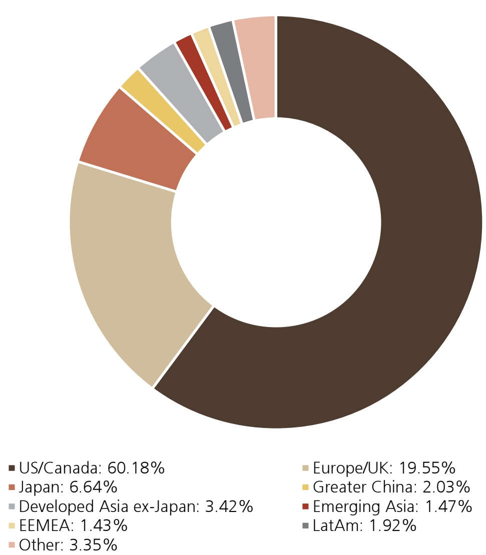
Portfolio strategy and exposure view (as of July 1, 2023)

Strategy exposure

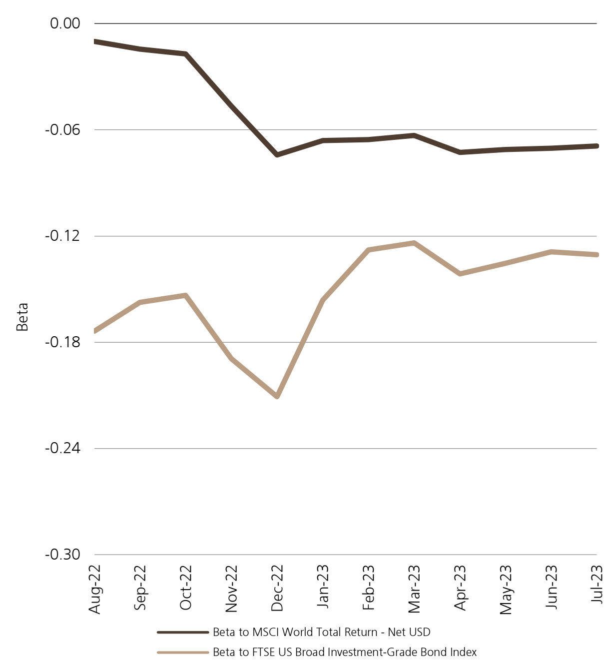


Strategy / sub-strategy	% Allocation
Equity Hedged	**22.74%**
Fundamental	8.47%
Equity Event	2.26%
Opportunistic Trading	12.01%
Relative Value	**31.69%**
Quantitative Equity	4.38%
Merger Arbitrage	0.92%
Cap Structure/Vol Arb	6.86%
Fixed Income Relative Value	15.51%
Agency MBS	4.02%
Credit/Income	**15.64%**
Distressed	0.00%
Corporate Long/Short	10.37%
Asset-Backed	0.18%
Reinsurance / ILS	0.00%
CLO/Corporate Lending	0.00%
Other Income	5.09%
Trading	**25.82%**
Systematic	2.32%
Discretionary	15.15%
Commodities	8.34%
Other	**0.65%**
Virtual Assets	0.28%
Niche	0.37%
Cash/MMF	0.00%
Liquidating/Side Pockets	0.00%

Geographic exposure



Rolling 2-year portfolio beta*



*Note: Based on monthly performance figures for the fund.

Note: All categorizations of Strategy and Geography of the Fund's holdings are determined by the Investment Manager based, in part, upon its investment experience, knowledge of the sub-funds or unaudited information provided by third parties. The data supporting the categorizations may be from different time periods and may not be the most recent information available from the sub-funds. Totals may not add up to 100% due to rounding.

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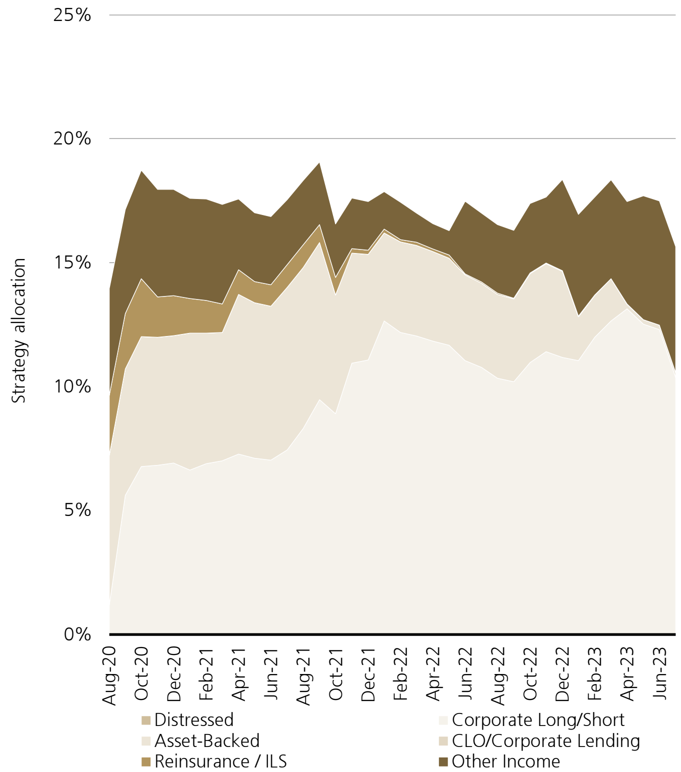
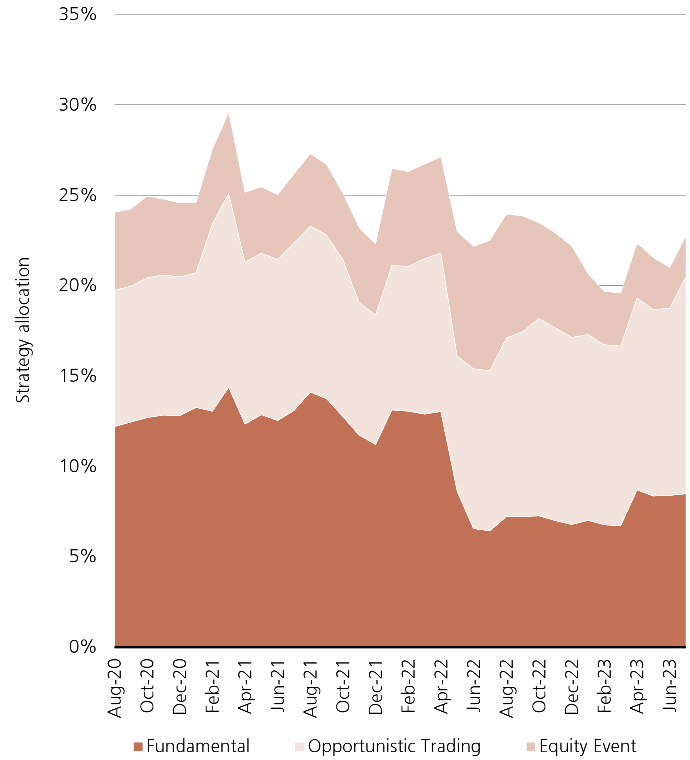
Portfolio strategy and exposure view (as of July 1, 2023)

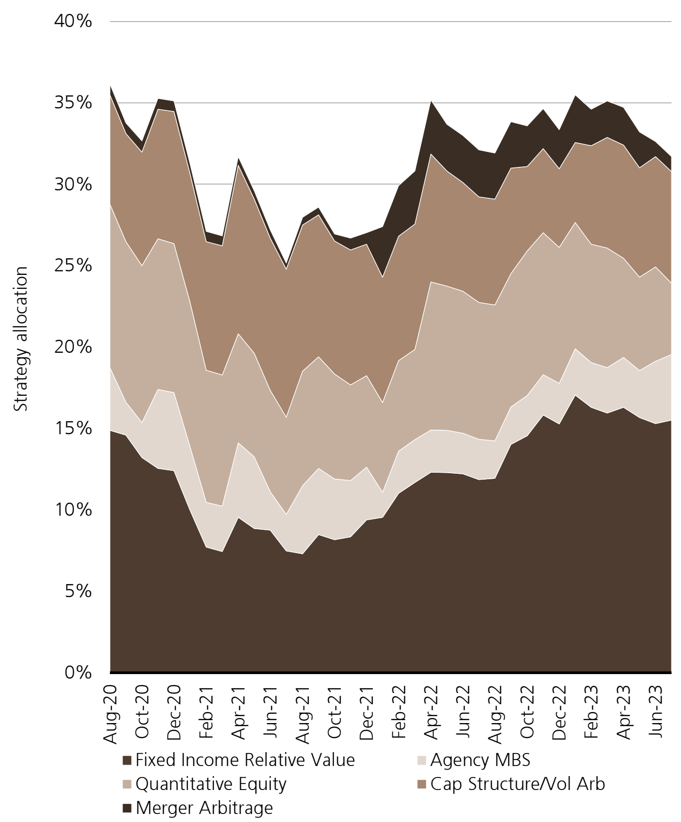
Monthly Credit/Income exposures over the last 3 years



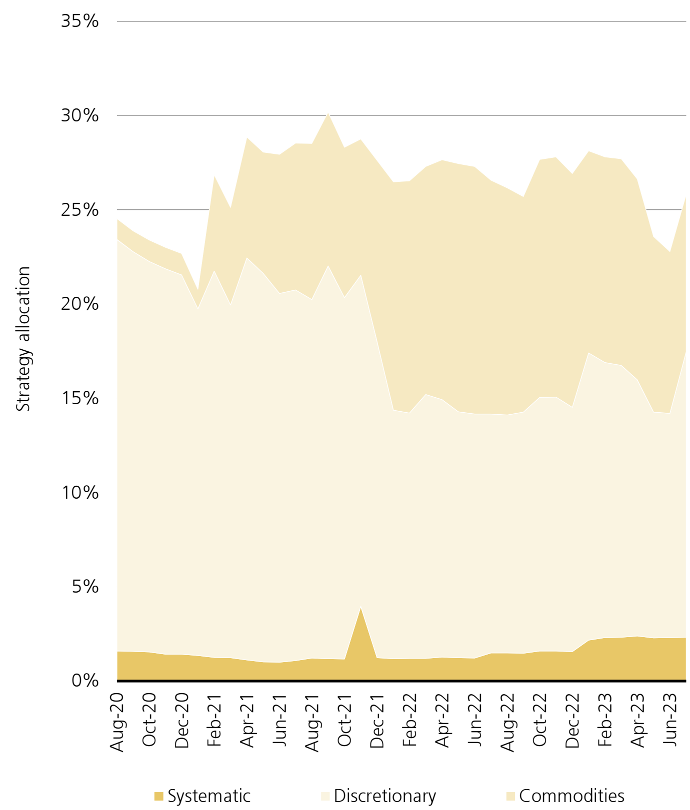
Monthly Equity Hedged exposures over the last 3 years



Monthly Relative Value exposures over the last 3 years



Monthly Trading exposures over the last 3 years



Note: The complete table historical monthly strategy allocations for the fund are available upon request. All categorizations of Strategy and Geography of the Fund's holdings are determined by the Investment Manager based, in part, upon its investment experience, knowledge of the sub-funds or unaudited information provided by third parties. The data supporting the categorizations may be from different time periods and may not be the most recent information available from the sub-funds. **Additionally, UBS Hedge Fund Solutions annually revisits our strategy and sub-strategy classifications. As such, some strategies and sub-strategies that existed in prior periods may not be consistent with the current classifications. Please see Endnotes regarding the changes to the strategy exposures during the period shown.**

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Market commentary for July 2023

General market overview

Risk assets generated broadly positive performance in July as inflation data suggested that the US Federal Reserve could be near the end of their tightening cycle. While the overall outlook remains favorable near term, the macro implications of higher interest rates for longer reinforced recession fears for later this year or in 2024. Asset pricing was supported by constructive market sentiment given strong employment and housing data, despite underperformance related to the China reopening. The Dow Jones Industrial Average, S&P500 and NASDAQ indices produced positive performance of 3.35%, 3.11% and 4.05%, respectively. Across Europe, equity market performance was also positive despite expectations for additional near term interest rate hikes, particularly from the Bank of England. The MSCI Europe, DAX and FTSE Indices generated positive performance of 1.90%, 1.85% and 2.48%, respectively. Asian developed markets produced essentially flat performance with the Nikkei 225 Index posting a loss of -0.05%, due to a stronger Japanese Yen and higher JGB yields. Emerging market nations generated positive results in July in line with the risk-on climate. Brazilian, Indian and Chinese equity markets produced gains of 3.27%, 2.80% and 2.78%, respectively. US interest rate markets were mixed despite expectations for another tightening move from the Fed and strong macro data. The two-year US Treasury yield fell to 4.88% from 4.90% while the ten-year US Treasury yield increased to 3.96% from 3.84%. The Barclays US Corporate Investment Grade Index rose 0.34% and the Barclays US Corporate High Yield Index rallied 1.38%, with carry income offsetting the slight back up in yields. Commodity prices were broadly higher in July with oil rising 15.8% while gold rallied another 4.1%. In currency markets, the Euro rose 0.79% against the US dollar from 1.0916 to 1.1002 while the US dollar fell 2.88% against the Japanese Yen from 144.51 to 140.34.

Portfolio commentary for July 2023

Portfolio commentary (by strategy)

The product generated a positive return in July. Performance was driven by Trading strategies, while Credit / Income, Multi-Strategy, and Relative Value strategies also contributed to returns. Equity Hedged approaches generated relatively flat returns. In Equity Hedged, equity event approaches added to gains. Fundamental and opportunistic trading approaches produced relatively flat returns. In Credit / Income, other income approaches added to gains. Corporate long / short approaches generated relatively flat returns. In Relative Value, capital structure / volatility arbitrage, fixed income relative value, and quantitative equity approaches produced positive performance, while agency MBS strategies detracted from returns. In Trading, discretionary and commodities approaches generated positive performance.

US Equity Hedged strategies produced relatively flat returns in July. While most managers posted positive performance during the month, which was largely driven by beta gains, there was variation within cohorts as a function of increased stock dispersion. Alpha generation was challenged in July, with negative long / short spread caused by episodic short squeezes and notable de-grossing across the industry. However, across HFS, exposure movements were more manager-specific with varying gross market value trends. In general, it was another risk-on month as signs of moderating inflation along with a resilient consumer continued to support the goldilocks soft landing narrative. Small capitalization stocks outperformed large capitalization stocks. Banks and energy sectors outperformed, while more defensive areas within healthcare lagged. Most earnings reports thus far have been ahead of expectations, but the market has rewarded these ‘earnings beats’ to a lesser degree than usual. Conversely, companies missing estimates have been penalized to a greater extent

Asian Equity Hedged strategies produced positive returns for the month. In Japan, the market was mixed as the BOJ announced their plans to increase the band on the 10-year JGB to 100 basis points. Despite this announcement, hedge funds in the space generated mostly muted returns. In Offshore China, markets were strong, driven by policy announcements and short covering, particularly at month-end, where the government set the stage for further stimulus. Equity markets reacted positively due to future expectations as well as extremely light position levels prior to the announcements. In Onshore China, markets were also positive but onshore investors appeared more cautious than offshore investors. July was a challenging month for China hedge funds overall. Most hedge funds in the space did not capture the sharp rally, as very few funds had conviction to increase long exposure at this juncture without seeing more details and commitment from the government. Funds with large short exposures generally incurred losses. However, there were a few positive outliers.

Corporate long / short strategies typically generated flat performance in July. Spreads tightened in both investment grade and high yield markets as there was a significant amount of outperformance in the lower-rated issuers. In corporate long / short sub-strategy, there were high levels of dispersion in July, although all but one fund’s performance ranged from flat to positive for the month. Those managers with lower net exposures underperformed relative to the funds positioned in a net long manner. Losses were incurred from the Chinese property sector. The corporate long-biased sub-strategy also performed well amid the rally in risk assets in July. Like last month, long positions drove performance, and funds capitalized on investments in high yield bonds and leveraged loans, which produced positive carry and mark-to-market gains.

Agency MBS strategies genereated negative returns. During the month, there were some variations in performance across managers. Investments in mortgage derivatives were additive to performance due to the positive carry and favorable fundamentals. Residential mortgage derivatives performed well as prepayment speeds continued to stay at low levels. However, relative value positions produced mixed results, and differences in basis positioning contributed to the dispersion in manager returns.

Capital structure / volatility arbitrage strategies generally produced positive performance in July. As equities rallied throughout the month, convertible bonds typically underperformed. In contrast, valuations of the rest of the universe expanded gradually throughout the month. A notable characteristic of July was the absence of any new convertible issuance in the US for the first time since August 2011. All of July’s new issuance came from Europe (approximately USD 1.10bn) and Asia excluding Japan (approximately USD 2.35bn). Year-to-date, global CB issuance now totals USD 42.9bn, led by the US (approximately USD 27.39bn), followed by Europe (approximately USD 7.81bn), Asia (approximately USD 6.65bn), and Japan (approximately USD 1.03bn). Lastly, some managers also participated in buybacks, which were additive to performance and expect the buyback trend to continue for the remainder of the year. During the month, non-investment grade convertible bond spreads decreased -40bps to 518bps, while the Bloomberg US HY ‘B’ Index spread decreased -32bps to 366bps, demonstrating some spread tightening. The implied volatility of investment-grade convertible bonds with at least one year of call protection ended the month at 25.3%, versus 26.4% in the prior month.

Fixed income relative value strategies produced positive returns for the month. Most of the gains were driven by cash / futures basis strategies across the US, and to a lesser extent Japan, with some managers succeeding in German basis. Swap spread trading in the US and Europe were also generally additive, although less so in Japan, while tenor basis produced more mixed results. Some funds with exposure to European front-end widening trades also underperformed, while some funds generated gains from US front-end tightening exposures. Macro trading was slightly positive from directional short positions in Japan, although currently, managers generally hold less directional risk.

Quantitative equity strategies generally produced positive returns in July. Quant risk premia widened as characterized by expanding residual volatility and increasing dispersion. The momentum factor was challenged, in addition to expected losses in low beta factor. Fundamental quants and equity extension funds, which typically are more exposed to momentum, value, and low beta factors, tended to underperform. Statistical arbitrage and machine learning strategies generally fared better as they were positioned to take advantage of technical reversals. Multi-strategy approaches featured more muted returns, mostly from diversifying macro trading strategies that rely less on traditional trend following and alternative markets. Short-term models produced modest gains in fixed income and commodities, which were offset by losses incurred in equities.

Discretionary strategies produced positive performance in July. Developed macro managers generated gains from short positions in Japanese rates. US rates trading was also generally positive with a mix of curve steepening trades, short volatility, and more tactical trading around expectations of the US Federal Reserve meetings. Equally, curve steepening trades in the UK were generally additive, while FX themes were more mixed across long positions in JPY, short positions in CNH and positive contribution from Latam carry trades. Macro relative value approaches generally outperformed more directional managers, with both cross-country and relative value trades being the primary driver of gains. Equity themes resulted in more mixed performance, with some managers benefitting from long positions in Japan and NDX, while others generated negative performance from having a short bias. Emerging markets macro managers generated positive performance, with a mix of EM rates receivers, both in Latam but also CEMEA (ZAR, Romania), as well long positions in credit (SSA, Latam, ZAR), while FX was more mixed, as managers incurred losses from CNH short exposure and negative carry in Zambia, Egypt and Nigeria. Overall, commodity managers produced positive performance, with gains from short exposure in natural gas. Long-biased metals specialists also benefitted from the rally in that space.

Manager commentary for 10 largest fund holdings

Fund	Strategy	Month-to-date Alloc.	Month-to-date ROR	Month-to-date Cont.	Monthly commentary
Symmetry Master Fund	Relative Value/ Fixed Income Relative Value	7.61%	0.78%	0.06%	Bond relative value, swap spreads and JPY rates short positions generated gains, while losses were incurred from equities and directional FX.
Claren Road Credit Fund	Credit/Income/ Corporate Long/Short	5.95%	-0.01%	0.00%	The fund produced a flat return in July. Risk assets continued to perform well as credit spreads tightened over the course of the month. Overall, this was a challenging backdrop for the fund given the net short bias of the portfolio. At the portfolio level, profits from the long portfolio were completely offset by losses on the short side. In addition, the carry of the portfolio was marginally negative. In terms of contributors, long investments in the European financial, energy, and high yield sovereign sectors contributed positively to performance. In terms of detractors, the single name loss-making positions were primarily attributable to shorts in autos, US financials, and IG sovereign debt.
LMR Alpha Rates Trading Fund Limited	Relative Value/ Fixed Income Relative Value	5.85%	0.76%	0.04%	The fund's positive performance was driven by European bond RV, particularly in Germany and the US. STIR strategies also added to performance, mostly in the US, as did short US rates volatility strategies that recovered losses from earlier in the year. UK inflation strategies incurred losses.
Citadel Global Strategies Fund	Multi-Strategy/ Multi-Strategy	5.65%	1.27%	0.07%	The fund's performance in July was primarily driven by the commodities and fixed income strategies. The credit portfolio generated modest returns for the month. The equities strategy was the top detractor, followed by quantitative strategies.
Atlas Enhanced Fund	Equity Hedged/ Opportunistic Trading	5.33%	0.05%	0.00%	Positive performance was attributable to the commodities and macro strategies, while the equities strategy was the largest detractor. Directional exposure was the top contributor within the macro strategy, while energy was the largest contributor within the commodities strategy. Within the equities strategy, positions within the industrials, TMT, consumer and financials sectors detracted.
A&Q Metric SPC - Global Opportunistic II - Class Auto Receivable	Co-Investment	4.48%	1.07%	0.05%	This investment vehicle holds receivables from an auto parts manufacturer. HFS began investing in the receivables in late 2019 and believes the yields are attractive given the duration and relative return versus the company's publicly traded debt. The position generated gains for the month in line with yield expectations.
Caxton Dynamis	Trading/ Discretionary	4.19%	1.06%	0.04%	The fund generated a positive return for the month, driven by rates strategies. Within rates, US steepeners, short positions in Japan, and flatteners in Japanese rates were key contributors. FX strategies incurred losses for the month.
Readystate Capital Fund	Relative Value/ Cap Structure/Vol Arb	4.08%	0.18%	0.01%	Performance attribution was led by positive performance from convertible arbitrage and distressed. The key detractor was a capital structure trade where the fund was short highly levered high yield corporates hedged with a long equity sliver. One equity relative value trade was challenged as an expected bid for a company never materialized.
Welwing Master Fund	Relative Value/ Fixed Income Relative Value	4.05%	1.00%	0.04%	Most of the gains were generated by US bond basis and shorts in US asset swap spreads. Cash management was also additive to performance. The manager reported that there were no material detractors from performance for the month.
Point72 Capital Fund	Equity Hedged/ Opportunistic Trading	4.03%	-0.39%	-0.02%	The fund's equity and quant strategies contributed negatively to performance, while the macro portfolios produced positive returns. Within the fundamental equity strategy, positions in TMT and healthcare sectors incurred losses, while positions in the energy sector were additive.

Please see Endnotes for an explanation of the calculation methodology used for RORs (rates of return) of the component funds.
PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS

Manager commentary for top 3 fund contributions

Fund	Strategy	Month-to-date Alloc.	ROR	Cont.	Monthly commentary
Statar Capital Fund	Trading/ Commodities	2.58%	11.19%	0.29%	The fund generated gains from having a short bias in natural gas. The manager reported that there were no material detractors from performance for the month.
Citadel Global Strategies Fund	Multi-Strategy/ Multi-Strategy	5.65%	1.27%	0.07%	The fund's performance in July was primarily driven by the commodities and fixed income strategies. The credit portfolio generated modest returns for the month. The equities strategy was the top detractor, followed by quantitative strategies.
Symmetry Master Fund	Relative Value/ Fixed Income Relative Value	7.61%	0.78%	0.06%	Bond relative value, swap spreads and JPY rates short positions generated gains, while losses were incurred from equities and directional FX.

Manager commentary for bottom 3 fund contributions

Fund	Strategy	Month-to-date Alloc.	ROR	Cont.	Monthly commentary
Bright Meadow Agency MBS Fund	Relative Value/ Agency MBS	4.02%	-1.38%	-0.06%	The fund generated a negative return in July. Overall, gains from carry were offset by spread widening and mark-to-market losses. However, the trends in prepayment remained supportive for the strategy. In particular, the fund was negatively impacted by the volatility of the mortgage basis RV position given the increase in rate volatility during the month.
Averill Fund	Equity Hedged/ Fundamental	2.15%	-1.21%	-0.03%	The fund generated a negative return driven by losses from a core long position that was negatively impacted by a regulatory update, as well as select short positions in AI-oriented healthcare companies. Conversely, a long position in a mid-cap eye-related company and a short position in an eye-related company were the top contributors to performance.
Point72 Capital Fund	Equity Hedged/ Opportunistic Trading	4.03%	-0.39%	-0.02%	The fund's equity and quant strategies contributed negatively to performance, while the macro portfolios produced positive returns. Within the fundamental equity strategy, positions in TMT and healthcare sectors incurred losses, while positions in the energy sector were additive.

Please see Endnotes for an explanation of the calculation methodology used for RORs (rates of return) of the component funds.
PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS

Appendix

A&Q Neutral Alpha Strategies Limited Class SN-USD

Key information

Net asset value	USD 1,589.58	Share class inception date	01-Dec-13

Historical monthly performance

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2023	1.18	-0.09	0.46	-0.15	0.08	0.01	0.56						2.05
2022	0.70	-0.51	0.42	2.44	-0.24	0.44	-0.90	0.55	0.96	0.15	-0.35	2.31	6.06
2021	-1.40	1.31	-0.05	1.35	0.08	-0.24	0.44	0.84	1.45	0.71	0.59	0.42	5.61
2020	0.65	0.67	-4.33	2.58	0.93	1.19	1.79	1.70	0.56	0.73	1.35	2.62	10.74
2019	1.36	0.44	0.58	0.45	0.49	1.00	0.60	-0.14	-0.19	0.69	0.39	1.08	6.97
2018	1.80	0.10	0.26	0.48	0.40	-0.03	-0.03	-0.19	0.52	-0.71	-1.43	-0.68	0.45
2017	0.44	0.31	0.31	0.44	0.10	-0.26	0.37	0.49	-0.10	0.18	-0.25	0.45	2.52
2016	-0.11	-0.76	-0.34	0.42	0.42	-0.23	0.61	0.41	0.33	0.08	0.14	0.64	1.62
2015	0.04	1.45	0.97	0.05	0.43	-0.25	0.95	0.36	0.01	0.04	0.25	0.34	4.72
2014	1.17	1.58	-0.10	-0.30	0.46	0.35	0.37	0.59	1.06	-0.40	0.85	0.72	6.52
2013												0.57	0.57

Month-to-date	Last full quarter	Year-to-date	Rolling 1 year		Rolling 3 years		Rolling 5 years		Rolling 10 years		Since inception	
Return	Return	Return	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility	Return	Volatility
0.56%	-0.06%	2.05%	5.77%	2.55%	6.99%	3.04%	5.72%	3.68%	-	-	4.91%	2.89%

Source: UBS Hedge Fund Solutions

A&Q Neutral Alpha Strategies Limited returns represent the profits and losses of the Fund's class SN shares net: (i) a 1.00% annualized management fee, (ii) a 0% performance fee deducted from monthly profits, and (iii) expenses charged to the Fund in the month shown. The returns are based on calculations and information provided to the Fund's Investment Manager, UBS Hedge Fund Solutions LLC, by the Fund's Administrator, MUFG Alternative Fund Services (Cayman) Limited. In addition to being unaudited, the returns have not been reviewed by an independent third party. Therefore, the returns are subject to change without notification to the recipient based on, amongst other things, an annual audit of the Fund. Any returns presented may or may not be indicative of the returns of the share class, series, and/or fund offered to you. Your actual returns may be different and can be determined from the NAV statements sent by the fund's administrator.

PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Risk considerations

The Fund's investment program is speculative and entails substantial risks which may place your capital at risk. An investment in the Fund includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-U.S. securities and illiquid investments. The Fund invests largely in other unregulated hedge funds. Such a portfolio of hedge funds may increase an investor's volatility for potential losses or gains.

One or more of the funds, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio (as well as the Fund's) may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that a fund's strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. The investment funds in which the Fund invests can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies. In addition, the overall performance of the Fund is dependent not only on the investment performance of individual managers, but also on the ability of the Fund's Adviser to effectively select and allocate the Fund's assets among such managers on an ongoing basis.

The Fund's portfolio may be highly leveraged and the volatility of the price of its interests may be great. The Fund's fees and expenses may substantially offset the Fund's trading profits. There is no secondary market for interests in the Fund and none is expected to develop. In addition, the ability to transfer one's interest in the Fund is restricted. It is possible that the Fund will be unable to provide tax information to investors without significant delays and investors may need to seek extensions on the time to file their tax returns at the federal, state and local levels. Interests are not deposits or obligations of, or guaranteed or endorsed by any bank or other insured depository institution, and are not insured by the Federal Deposit Insurance Corporation, Financial Service Compensation Scheme or other relevant non-U.S. governmental agency. Investors should consider the Fund as a supplement to an overall investment program and should invest only if they are willing to undertake the risks involved.

Endnotes

Strategy definitions

Equity Hedged

Equity Hedged managers generally use fundamental analysis to invest in publicly traded equities and seek to generate alpha through superior security selection. Portfolio construction is driven primarily by bottom-up fundamental research; top-down analysis may also be applied. Sub-strategies include: Fundamental, Equity Event, and Opportunistic Trading.

Trading

Trading strategies are generally top-down in nature and often driven by econometric and macroeconomic research. These strategies may utilize financial instruments, such as foreign exchange, equities, rates, sovereign debt, currencies, and commodities to express a manager's view. In executing different approaches, managers may use either fundamental or quantitative models or a combination of both. Sub-strategies include: Systematic, Discretionary (previously known as Global Macro) and Commodities.

Relative Value

Relative value is a broad category, generally encompassing strategies that are non-fundamental and non-directional, and often quantitatively driven. Managers in this strategy typically use arbitrage to exploit mispricings and other opportunities in various asset classes, geographies, and time horizons. Managers frequently focus on capturing the spread between two assets, while maintaining neutrality to other factors, for example to geography, changes in interest rates, equity market movement, and currencies, to name a few examples. Sub-strategies include: Fixed Income Relative Value, Agency MBS, Quantitative Equity, Cap Structure/Vol Arb and Merger Arbitrage.

Credit/Income

In Credit/Income strategies, managers utilize credit analysis to evaluate potential investments and use debt or debt-linked instruments to execute their investment theses. Their approach can be either fundamental, quantitative, or a combination of both. Sub-strategies include: Distressed, Corporate Long/Short, Asset-Backed (previously known as Structured Products), Reinsurance / ILS (previously known as Reinsurance), CLO/Corporate Lending (part of Structured Products prior to January 2016) and Other Income (previously known as Other).

Other

This category contains investment approaches that are outside of the mainstream hedge fund strategies (Equity Hedged, Credit/Income, Relative Value, and Trading). The category includes Virtual Assets and Niche investment approaches. Money Market funds and cash strategies are also included in this category, as are Liquidating/Side Pockets.

Risk Parity

Risk Parity generally focuses on the passive allocation of risk, rather than of capital, in an attempt to provide a higher Sharpe ratio alternative to the traditional 60% stock / 40% bond portfolio through the use of a wider range of uncorrelated assets, low leverage, and low equity risk. Please note, while an alternative to traditional asset allocation, Risk Parity is not a hedge fund Strategy.

Contribution Methodologies

Monthly sub-fund contributions: Monthly sub-fund contributions (gross) are determined by dividing the monthly profit and loss associated with each sub-fund by the product's net assets.

Monthly contribution by strategy: Monthly contribution by strategy is determined by aggregating sub-fund contribution values for each sub-fund mapped to a specific strategy.

Multi-Period Contributions (i.e. Last Full Quarter and Year-to-Date): The method used by the investment manager to calculate multi period contributions involves compounding monthly contribution values during subsequent periods by monthly Fund returns. The method provides a result whereby the sum of the period's contribution values is equal to the period's Fund (Gross) return determined by compounding monthly Fund returns. Net returns of the Fund reflect the deduction of 1.00% management and 0% performance fees, as well as applicable fund expenses.

Component Fund Returns

Note that as component funds typically offer multiple classes of shares with similar performance attributes, the investment manager has, where possible, sought to provide a "blended" return based on the returns of the respective share classes held by the product. When it was not possible to calculate a return for a share class, the investment manager utilized the primary share class return which may be different than the return actually generated by the share class for the period referenced in the report. These returns are net the respective management and performance fees of the underlying funds.

Statistics definitions

Volatility is measured using the standard deviation.The standard deviation is a statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The greater the degree of dispersion, the greater the risk.

Sharpe ratio measures the relationship of reward to risk in an investment strategy. It is generally interpreted that a higher ratio implies lower risk. The ratio is calculated as the arithmetic average of monthly relevant returns less the risk-free returns divided by the monthly standard deviation of the relevant returns; this figure is then annualized by multiplying by the square root of 12. The risk-free return is calculated as the monthly equivalent of the stated annual yield of a relevant short-term interest rate product corresponding to the currency of the share class presented.

Sortino ratio is a variation of the Sharpe ratio, which differentiates downside risk from general volatility to help measure the return relative to "harmful" volatility. The ratio is calculated as the monthly compound geometric relevant return divided by the downside deviation of those returns; this figure is then annualized by multiplying by the square root of 12. The downside deviation focuses on negative values in a distribution and equals the square root of the sum of squared negative returns divided by the total number of returns.

Index descriptions

The use of indices is for illustrative purposes only. Unlike the Fund, some indices are unmanaged, are not available for direct investment and are not subject to management fees and other fees and expenses. The Fund does not restrict its investments to securities in the indices described. No index is directly comparable to the investment strategy of the Fund. Information about the index is derived from sources that we believe to be reliable, but we have not independently verified them and do not warrant as to its accuracy or completeness.

FTSE US Broad Investment-Grade Bond Index
The FTSE US Broad Investment-Grade Bond Index is an unmanaged index generally representative of the performance of the investment-grade corporate and U.S. government bonds.

MSCI World Total Return - Net USD
The MSCI World Index is a free float-adjusted market capitalization weighted index that seeks to measure the equity market performance of developed markets. The Index includes large and mid-capitalization equities across 23 Developed Market countries. With 1,632 constituents, the Index covers approximately 85% of the free float-adjusted market capitalization in each country. The MSCI World Total Return (Net) USD Index includes reinvestment of net dividends. Index performance is translated into the feeder currency using the applicable daily currency exchange rate from Bloomberg.

HFRI FOF: Conservative Index
The HFRI Fund of Fund (FOF) Conservative Index seeks to track the performance of fund of fund strategies classified as "conservative". Conservative strategies exhibit one or more of the following characteristics: seeks consistent returns by primarily investing in funds that generally engage in more "conservative" strategies such as Equity Market Neutral and Fixed Income Arbitrage. Returns are denominated in USD.

Section 2

HFS Q3 2023 Strategy Outlook

UBS

Risk considerations

The strategies described herein are speculative and entail substantial risks which may place your capital at risk. An investment in these strategies includes the risks inherent in an investment in securities, as well as specific risks associated with limited liquidity, the use of leverage, short sales, options, futures, derivative instruments, investments in non-US securities and illiquid investments. The strategy invests largely in other unregulated hedge funds. Such a strategy of hedge funds may increase an investor's volatility for potential losses or gains.

A particular manager of any strategy, from time to time, may invest a substantial portion of the assets managed in an industry sector. As a result, the manager's investment portfolio may be subject to greater risk and volatility than if investments had been made in the securities of a broader range of issues. There can be no assurances that any particular strategy (hedging or otherwise) will be successful or that it will employ such strategies with respect to all or any portion of its portfolio. These strategies can be highly illiquid, are not required to provide periodic pricing or valuation to investors, and may involve complex tax strategies.

The strategies may be highly leveraged and the volatility of the price of its interests may be great. The fees and expenses charged by any individual manager of a strategy may substantially offset any trading profit.

Looking ahead in hedge fund investing

Macro thoughts and portfolio themes

With the soft June inflation print in the US, we expect policymakers to gradually shift their focus from inflation to growth. However, we believe that the "higher-for-longer" narrative will continue to dominate over the short-term, supported by a resilient global economy and tight labor market.

- Besides manufacturing activity, the last few months of economic data have demonstrated a remarkable ability for Western economies to absorb the impact of higher interest rates.
- Wage growth, however, while moderating remains elevated, indicative of more complex cyclical and structural imbalances. From a cyclical standpoint, buoyant demand for lower income jobs (e.g. construction and hospitality) contrasts with rising lay-offs in those industries that hired excessively during the pandemic. At the same time, demographic trends are pushing the ratio between dependents and workers on a long-term inflationary trajectory.
- As such, we continue to believe that a certain degree of unemployment is required to settle inflation back to target, resulting in some form of recession next year. For the time being, central banks will likely remain on hold, recognizing the restrictive power of positive real rates, while inflation continues to moderate and many consumers enjoy higher real disposable income.

With a seemingly more benign macro backdrop in Q3, we look to add to EM-focused discretionary macro, fundamental long / short equity and structured credit, while maintaining a generally modest beta profile in our portfolios.

- However, with inflation on a clear downward trajectory and weak demand from China, we plan to decrease our exposure to higher beta commodity strategies.
- In the current regime, we expect rates volatility to trend lower, but anticipate it will remain well above QE levels. As such, we maintain healthy (but marginally smaller relative to last quarter) allocations to fixed income relative value strategies as they are expected to continue to benefit from this environment.
- Finally, we continue to place emphasis on attractive, uncorrelated sources of carry from agency mortgages, diversified structured credit and short duration income.

The views expressed are as of July 2023 and are a general guide to the views of UBS Hedge Fund Solutions LLC (HFS), a division within UBS Asset Management. This document does not replace portfolio and fund-specific materials. Commentary is at a macro or strategy level.

Looking ahead in hedge fund investing

Strategy views and portfolio summary

Trading: With a more benign macro backdrop, we continue to add to EM-focused discretionary trading managers, while decreasing exposure to DM-focused strategies. In commodities, with inflation clearly on a downward trajectory and weak demand from China, we find the top-down rationale for an overweight allocation less compelling.

For EM-focused discretionary macro strategies, HFS prefers managers that have a relative value skew as we are conscious of adding EM beta at this juncture.

The near-term outlook for DM-focused discretionary macro strategies could remain somewhat challenged in the absence of clear trends in the macro data. However, managers that can trade more nimbly and tactically, and / or deploy more of an RV style could be well-positioned to capture short-term reversals.

In commodities, we will reduce exposure to more correlated oil-driven and metals strategies, but plan to maintain our allocation to more idiosyncratic opportunities in gas / power.

HFS holds a neutral outlook for systematic trading as a choppy market environment may prove challenging for these managers.

Equity Hedged: HFS is increasing our allocation to Equity Hedged. After several quarters of reductions, we are beginning to reallocate to more fundamentally-oriented strategies, using our allocation to opportunistic trading managers as a source of funding. We strive to limit beta exposure as markets seem richly priced relative to interest rate levels.

US equity markets have been dominated by macroeconomic sentiment and narrow market leadership, but we anticipate these trends will reverse which should bode well for fundamental stock picking.

In China, we plan to maintain our relatively low exposure to long / short equity managers. Compared to last quarter, our near-term outlook is less constructive given the weak economic rebound thus far, the government's lack of urgency to reignite the economy, and heavy outflows from the region.

In Japan, equity event remains a high conviction strategy as corporate change gains momentum. A weaker Yen and increased investor interest should also provide tailwinds.

Relative Value: We are taking some profits from fixed income relative value and increasing our target allocation to capital structure / volatility arbitrage strategies.

After strong performance from fixed income relative value over the past few years, we trim our allocation to reflect a more moderate volatility regime and increased tail risk (stemming from position crowding).

We believe that the opportunity set for capital structure / volatility arbitrage strategies will improve given that issuance is expected to increase as we approach a wall of debt maturing in 2025 and 2026. We expect more opportunities in Q4 than in Q3.

HFS maintains a negative outlook for merger arbitrage and event-driven strategies. Regulatory interference remains problematic, causing longer deal completion timelines and more extreme downside break levels.

We decrease our target allocation to quantitative equity strategies. While we observe several factors supportive of quantitative equity strategies, at the same time we acknowledge the limited capacity in the space and difficulty in launching a new standalone hedge fund.

Credit / Income: We continue to add to our allocations to agency MBS, while maintaining conviction in our core allocations to defensively positioned, trading-oriented corporate long / short managers. We remain underweight long-biased credit.

In corporate long / short, although the opportunity set was more muted in late Q2 as market volatility abated, corporate credit remains attractive given expectations for increasing technical and fundamentally driven volatility, as well as a growing frequency in corporate events (stress / distress, new issue, refi's, M&A).

We continue to increase exposure to agency MBS, which we think should benefit from more stable rates volatility, a lack of new supply and normalizing technicals as regional banks' balance sheet overhang gets absorbed.

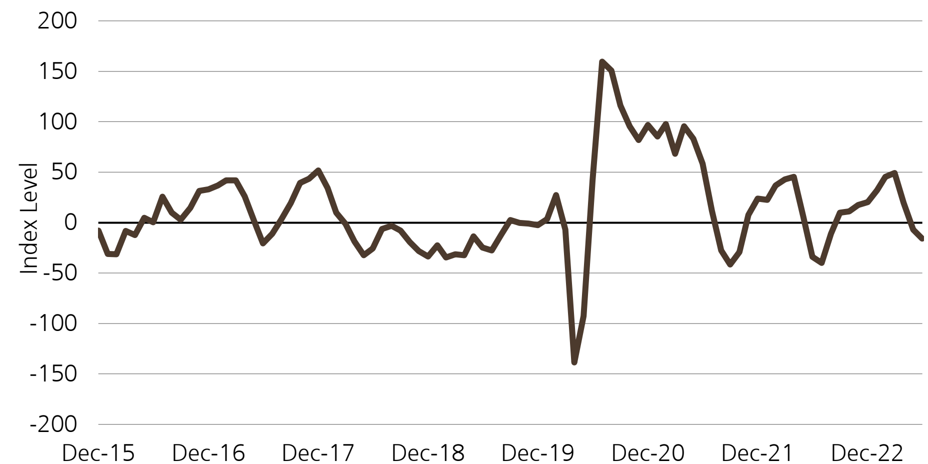
In asset-backed, HFS plans to increase allocations as we seek additional sources of carry. Structured credit markets remain attractive, given strong carry and potential for positive MTM with wider spreads following the 2022 sell off. Structured credit markets have also lagged the YTD rally in corporate credit and now offer more attractive relative yield and spread levels.

We remain patient in more liquid, long-biased credit as spreads tightened somewhat over the quarter.

Trading—Discretionary

- Following substantial losses in Q1, most managers struggled to re-risk their portfolios amid rangebound markets and heightened macroeconomic uncertainty. DM macro managers generally posted losses for Q2, although there were a few exceptions for those who managed to either capture the larger trades in UK rates or tactically trade the US front-end. In contrast, many EM macro managers had a strong recovery in Q2, benefitting from a mix of EM receiver trades, notably in LatAm and central Europe, as well as more idiosyncratic stories such as Turkey, FX devaluations in the likes of Nigeria, or distressed frontier names in Zambia and Tunisia. General spread compression was also a tailwind for performance in EM.
- Forward-looking, we believe that the near-term outlook for DM-focused discretionary trading strategies could remain somewhat challenged in the absence of clear trends in the macro data and very data-dependent markets. Managers that can trade more nimbly and tactically, and / or deploy more of an RV style could be well-positioned to capture short-term reversals. However, it may take some time for the next big trades, such as the re-steepening of the DM rates curves or the weakening of the USD, to materialize. Equally, widely held short positions in Japanese rates are taking longer than expected to play out. However, we believe that DM-focused managers should be able to perform in a recessionary environment by re-positioning the portfolio to be long in fixed income (where there is a significant amount of risk premium, particularly in the front-end) and adding to shorts in equities and credit.
- We expect to continue to add to our EM-focused exposure as we believe the opportunity set remains attractive, driven by the increasing macro divergence between emerging and developed markets. Inflation has continued to moderate and EM central banks are expected to initiate a cutting cycle in the second half of 2023, while the US hiking cycle is potentially nearing its end. Hence, we believe receiving opportunities in EM remain quite attractive, even if some of the adjustment has already occurred. In some cases, however, the current market pricing of cuts is more aggressive which may potentially warrant a rotation within EM.

Citi Economic Surprise G10 Index



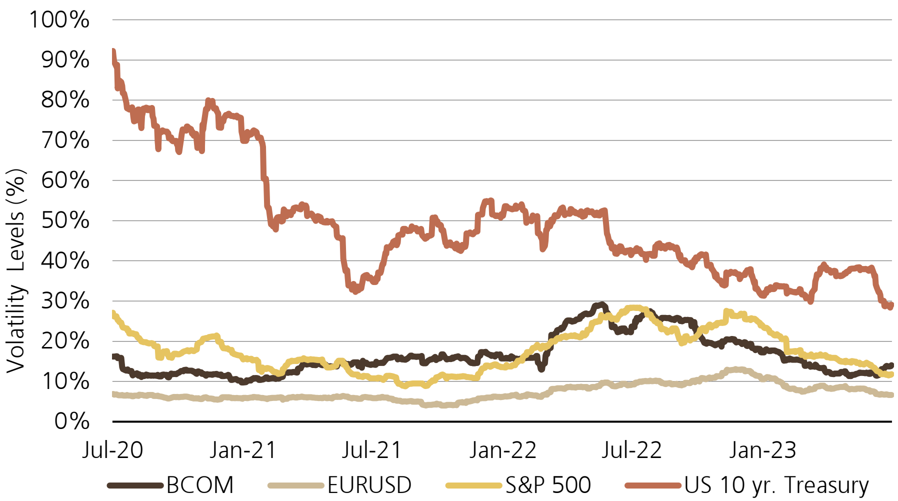
Discretionary trading strategies generally tend to underperform when the index is closer to zero, which indicates that economic data releases are generally in line with market expectations. Source: Bloomberg; Daily data; Dec 31, 2015-Jun 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- In FX, managers should be able to continue capturing high carry as real rates remain elevated with lower inflation, while the USD is expected to weaken with the Fed on pause. In addition, some of the devaluation plays in more distressed markets remain intact. Sovereign credit spreads are fairly tight, but within certain HY markets, there are select trades with compelling idiosyncratic stories and catalysts, such as a restructuring process.
- Recession risks remain a key headwind for EM assets, and longer-biased managers could be challenged in such a scenario. Therefore, we prefer managers that can trade in a more opportunistic or RV style, with less beta.

UBS

Trading—CTAs

Realized 60-day volatility across asset classes continues to decline

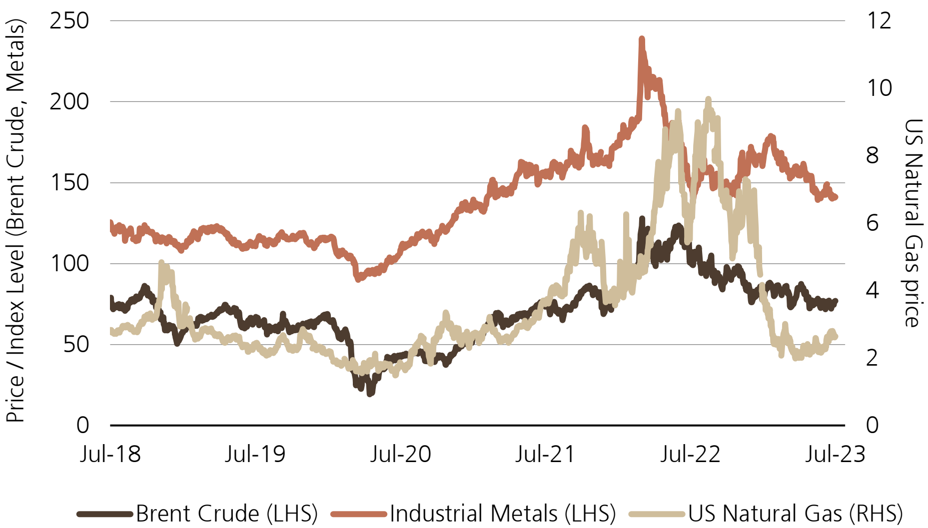


Source: Bloomberg; Monthly data; Jul 1, 2020-Jun 30, 2023. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS holds a **neutral** outlook for **systematic trading**. While high interest rates, lower volatility and increased dispersion in markets are generally supportive of systematic trading strategies, we believe that a lack of clear trends will prove challenging for these managers and therefore, expect mixed performance. That being said, we believe that systematic trading strategies have a place in portfolios as a liquid alternative to discretionary macro strategies.
- Many trend-following funds recovered from Q1 losses and is now mostly flat YTD, benefitting from a decrease in volatility and cross-asset correlations in Q2. Positive returns from commodities in April, followed by gains in equities and rates in later months forced many managers to maintain positioning almost identical to what they had at the start of the year: long equities, short bonds and short energy. In the more immediate future, as we near the end of the hiking cycle, central bank policy may no longer be supportive of previous trends which may adversely impact returns.

Trading—Commodities

US Natural Gas, Brent Crude and Industrial Metals



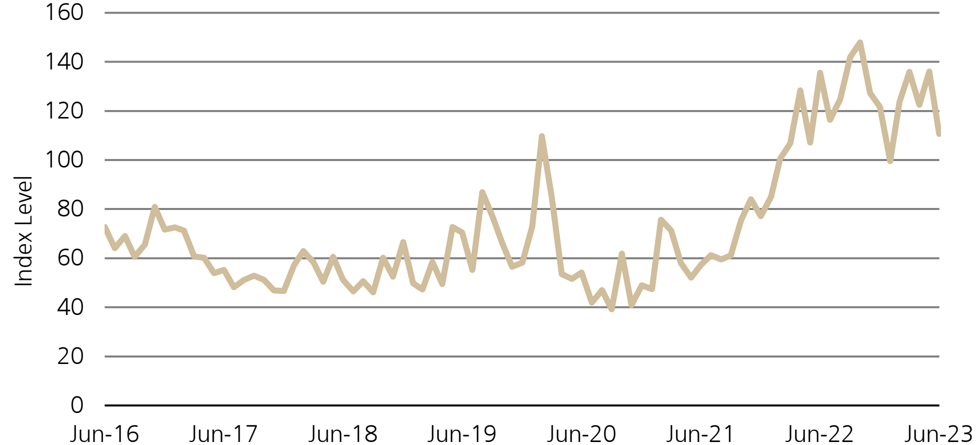
Source: Bloomberg; Daily data; Jul 9, 2018-Jul 7, 2023. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- While inflation is likely to remain above central bank targets for some time, it appears inflation is beginning to moderate as we near the end of the cycle; as such, the top-down rationale for holding a large allocation to **commodities** is less compelling. We plan to maintain our allocation to gas / power-focused strategies but are trimming our overall allocation to commodities further by reducing oil-driven and metals strategies. This allocation decision is also partly driven by manager-specific considerations as we review AUM growth, capacity and risk allocations to specific markets.
- Commodities remained challenged in Q2, where oil and metals trading, both directionally and RV, continued to be negatively impacted by risk on / risk off dynamics in the macro environment. Meanwhile, summer price volatility has been difficult for fundamental trading in natural gas, although it may provide a chance to build risk.
- Looking ahead, opportunities in natural gas remain plentiful over the medium-term, with a lack of storage capacity, changes in producer behavior, the energy transition and LNG dynamics bringing various calendar spread, cross-market and directional trading themes into play. For oil and metals, demand in these markets is generally more sensitive to economic growth conditions (aside from rare materials specific to the green energy transition theme). Therefore, trading is likely to remain challenged as price action could continue to be dominated by macro uncertainty and CTA flows, with a lack of clear direction until we transition to the next stage of the economic cycle.

Relative Value—Fixed Income Relative Value

- While HFS maintain a positive outlook for **fixed income relative value (FIRV)**, we believe it makes sense to take some profits from what is currently the historical peak size of our allocation. Note that US agency mortgage basis and mortgage derivatives RV trading continues to be an additive sub-strategy for FIRV in the current environment. While we do not have exposure to these strategies via our core FIRV managers, we have separate allocations to mortgage specialists that we have been adding to.
- FIRV managers have generally produced strong performance over the last couple of years since the "Fed pivot" to a more hawkish stance in June 2021 catalyzed a move higher in rates volatility and yields. Traditional micro-arbitrage trades such as cash / futures basis and bond RV have been able to deliver higher returns per unit of leverage as dislocations have been much wider (this has also offset the impact of higher margin requirements to some extent). In addition, larger issuance needs and the quantitative tightening (QT) process, together with volatile macro risk sentiment, have made swap spread trading in both the US and Europe a decent two-way opportunity for FIRV managers, whereas in the past, these opportunities were only defined by seasonal trends. In 2022, FIRV managers also benefited from opportunistic macro trades and inflation trading strategies given the structural underpricing of inflation markets versus realized inflation prints.
- More recently in 2023, cash / futures basis trading in the US has opened up further, although cash / futures basis in Europe has become less interesting due to changes in structural futures flow dynamics at higher yield levels. Japanese cash / futures basis was a notable return driver in the first half of 2023, but managers have now had to reduce exposures somewhat due to the lack of repo availability. Swap spreads also remain a key opportunity, however the risk / reward from macro and inflation strategies are no longer as asymmetric. Concentration of FIRV manager positioning in US cash / futures basis, bond RV and swap spread trading reduces the number of return drivers and may increase the magnitude of losses (due to crowding) in a deleveraging environment. Therefore, all else equal, we expect FIRV returns in the second half of 2023 to be lower than in 2022 and the first half of 2023.

MOVE Index



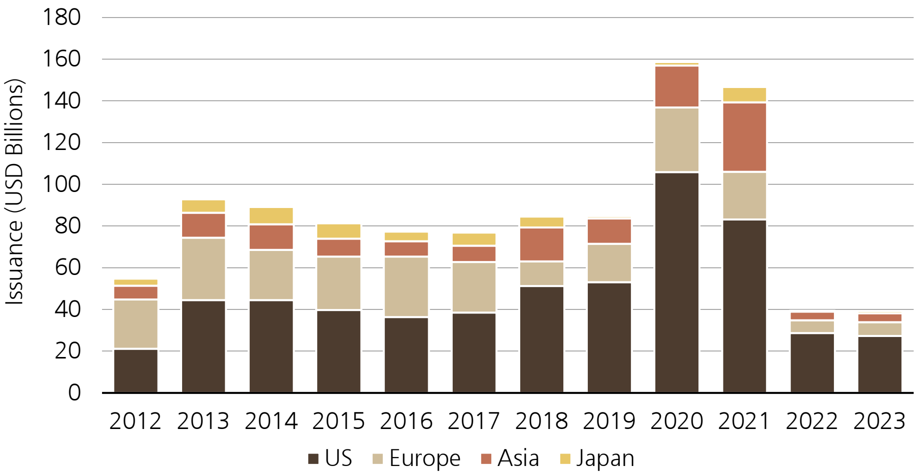
Source: Bloomberg; Daily data; June 30, 2016-Jun 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- That said, a high risk-free rate provides an additional boost to returns given the high cash levels held in most FIRV portfolios (an estimate of 5% yield from 3-month US T-bills on 60% of the portfolio held in cash adds roughly 3% to returns). And with the FOMC effectively on hold now, rates volatility can continue to moderate somewhat from today's levels, but we do not expect yields and volatility to decline to ZIRP-era levels.
- There is also the potential for further volatility shocks given the heightened financial stability risks at this level of policy rates, which may allow FIRV managers to add to cash / futures trades on temporary dislocations. The potential for steepening yield curves is another positive, as is the continuing QT process given increased bond supply into the market.

UBS

Relative Value—Capital Structure / Volatility Arbitrage

Convertible bond issuance



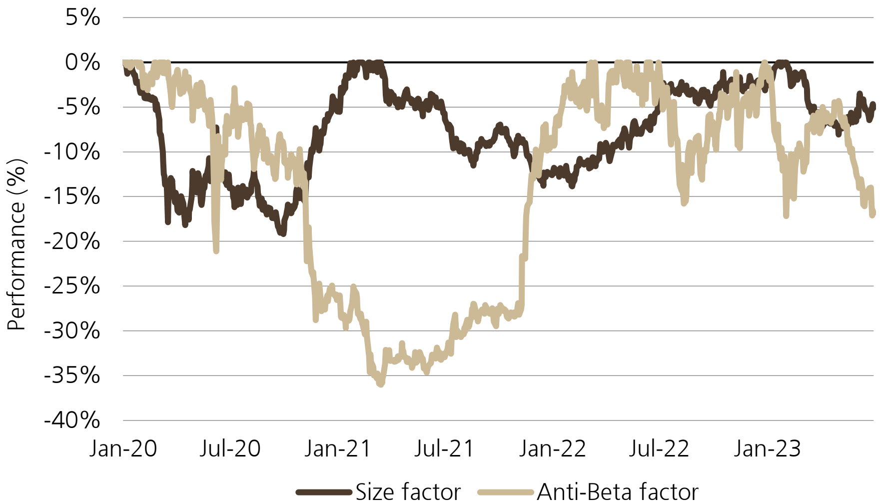
Source: Bank of America Merrill Lynch Global Research. Data is from Jan 1, 2012-Jun 30, 2023. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS plans to increase our allocation to **capital structure / volatility arbitrage** strategies. We believe the opportunity set for the strategy should benefit as issuers approach a wall of debt maturing in 2025 and 2026. However, we anticipate this may bring more opportunities in Q4 of this year than in Q3.
- With the macro environment appearing to normalize, we have seen more stability in credit spreads and interest rates which has proved beneficial for capital structure relative value strategies.
- As it relates to convertible arbitrage specifically, refinancing-oriented corporate actions continue to gather steam and should a surge of new issuance arise in Q4, this "one-two punch" should be supportive of returns for managers at the size and scale required to take advantage this opportunity.

UBS

Relative Value—Quantitative Equity

Drawdowns in Size and Anti-Beta factors

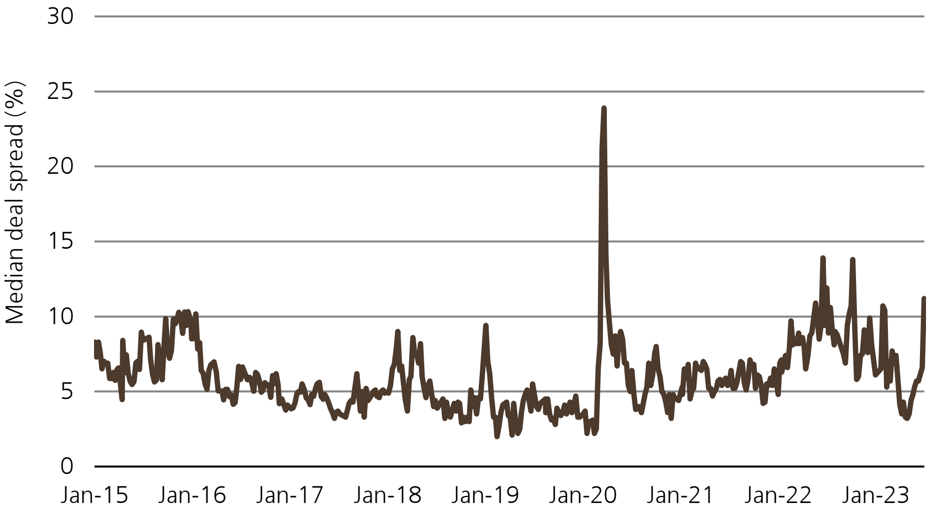


Source: Bloomberg, HFS; Daily data; Jan 2, 2020-Jun 30, 2023. Data illustrates maximum drawdowns, which are computed within 12 months moving window. Quant equity performance is negatively affected by drawdowns in Size and Anti-Beta factors. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS continues to hold a slightly positive outlook for **quantitative equity** strategies, particularly statistical arbitrage. While we observe several factors supportive of quantitative equity strategies, at the same time we acknowledge the limited capacity in the space and difficulty in launching a new standalone hedge fund. Therefore, we plan to decrease our target allocation to quantitative equity.
- In Q2, the narrow market leadership led by AI-related companies caused underperformance of the size and anti-beta factors which negatively impacted quantitative equity performance. Residual volatility compression resulted from the expansion of sector driven stock returns.
- Our base case and risk-on scenarios both assume a decrease in market volatility, which we believe would benefit fundamental quants more than statistical arbitrageurs. However, in risk-off and tail scenarios, we expect fundamental quants to underperform relative to statistical arbitrage strategies.
- High interest rates should remain supportive of fundamental alphas and liquidity in the stock market remains healthy. We believe that volatility and residual volatility are still supportive of statistical arbitrage strategies at their current levels.

Relative Value—Merger Arbitrage

Median annualized merger arbitrage spreads



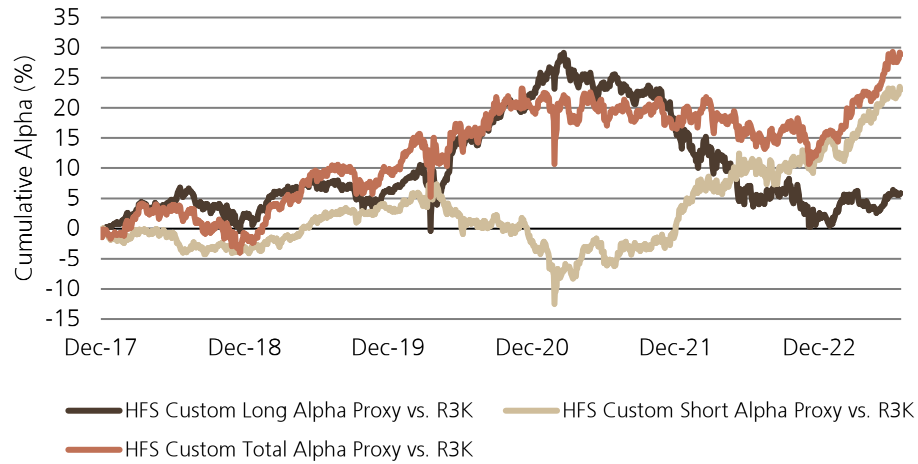
Source: UBS Special Situations, Bloomberg; Weekly data; Jan 2, 2015-Jun 30, 2023. Data includes definitive deals with median spreads ranging from 0% to 50% and have more than five days to closing. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- HFS maintains a negative outlook on **merger arbitrage** and event-driven strategies. Regulatory interference remains problematic, causing longer deal completion timelines and more extreme downside break levels.
- As a result, deal flow for mega-cap companies (the type that arbitrageurs typically prefer to pursue) is down significantly on a year-over-year basis. However, we believe there continues to be a potential opportunity in a collection of broken / implied broken deal trades with attractive risk / reward. Although the timing for these trades is uncertain and the market pricing implies a high probability of deal break, some managers appear to be looking to take advantage of these situations. On the positive side, the hung deal log jam looks to be clearing with banks having cut their hung debt exposure by more than half since May 2022.

Equity Hedged

- Within **Equity Hedged**, after several quarters of reductions, we are beginning to reallocate to fundamentally-oriented strategies, using our allocation to opportunistic trading managers as a source of funding. Overall, our allocation to Equity Hedged will still maintain a low-beta profile. We believe that with more clarity on inflation / peak rates, moderating factor volatility and alpha tailwinds, the forward-looking environment for fundamental stock-picking should improve.
- Industry alpha has generally trended higher this year, driven by successes in both the long and short portfolios, but particularly from the short side as this year's rise in rates has provided a meaningful tailwind for short alpha. Despite some episodic short squeezes, we remain constructive on the outlook here. We expect the high cost of capital will begin to challenge the prospects of less viable companies, creating a healthy opportunity set for short positions. In addition, for some managers, the enhanced rebates on short holdings may also provide a supplementary source of income. While the long alpha this year has mostly been driven by technology-related holdings, we expect returns from stock selection to improve as market leadership broadens and reverts to historical levels.
- As we contemplate adding back risk, two themes that appear interesting to us today are the energy transition and AI. Both themes offer promising long-tailed growth that should be less correlated to macroeconomic conditions. With respect to the energy transition, the economic benefits related are now being outlined by the Treasury, which should create new growth opportunities for the industry. Also, while the AI story is in its early days, market enthusiasm has been quite strong, which in some cases may imply aggressive valuations, creating the potential for two-sided opportunities.
- HFS plans to maintain our equity long / short exposure in **China,** although we are less constructive relative to last quarter given the weak economic rebound thus far and the government's lack of urgency to reignite the economy. In addition, negative sentiment in China equities and outflows from the region is also a concern. We expect the market to remain rangebound with limited upside until we see more commitment from the government to support the economy. However, the absolute downside seems limited due to light positioning and low valuations (both absolute and relative). HFS believes that China is still "tradeable", but we remain cautious over the medium- to long-term due to the risks arising from overall policy direction (common prosperity, regulatory, etc.) and geopolitics.

HFS Custom Proxies for Industry Alpha (vs. R3K)

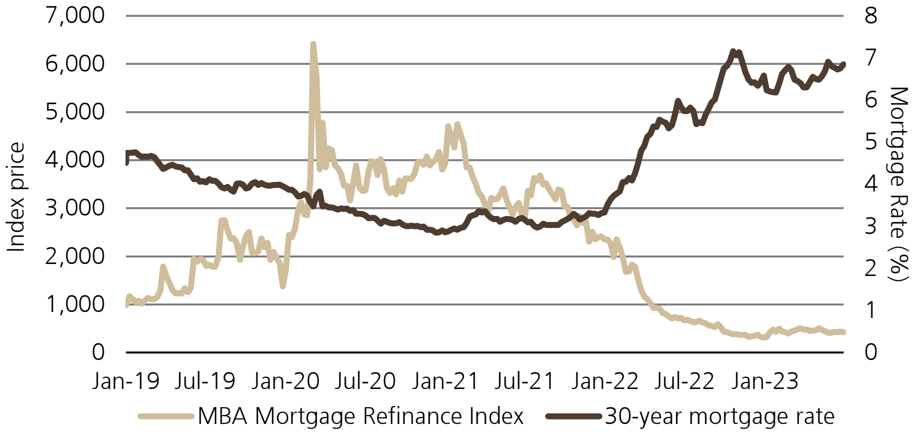


Source: UBS HFS, Bloomberg; Daily data; Dec 1, 2017-Jun 26, 2023. HFS Custom Long Alpha is a proxy for long alpha captured by long / short equity hedge fund managers using 11 long GS VIP Sector specific indices with a weighting scheme consistent with industry exposures. UBS Custom Short Alpha is a proxy for short alpha captured by long / short equity hedge fund managers using multiple short indexes including GSTHVISP Index, GSCBMSAL Index, MSSHRTUS Index and MSXXSHRT Index with a weighting scheme consistent with industry exposures. HFS Custom Total Alpha Proxy is a proxy for the total alpha captured by long / short equity hedge fund managers and is equivalent to the sum of the HFS Custom Long Alpha Proxy and the HFS Custom Short Alpha Proxy. These three HFS Custom proxies for industry alpha are measured against the Russell 3000. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- In contrast, Japanese equity markets are improving as a result of rising inflation, a relatively weaker Yen, and shareholder activism. From a valuation perspective, we believe that Japan is more attractive relative to other DM countries. **Japan equity event** remains a high conviction strategy as corporate change is gaining more momentum.

Credit / Income

Prepayment speeds and mortgage rates



Source: Mortgage Bankers Association, Bloomberg; Weekly Data; Jan 3, 2019-Jun 30, 2023. Indices are for illustrative purposes only. Please see end notes for index descriptions. **PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.**

- We believe that **corporate long / short** strategies remain well-positioned to benefit from increased dispersion and volatility as companies grapple with deteriorating fundamentals, rising rates and a looming recession. Allocations remain focused on defensively positioned, trading-oriented managers that may take advantage of dislocations or event-driven opportunities. Though the opportunity set has been more muted in late Q2 as market volatility abated, the space remains attractive given expectations for increasing technical and fundamentally driven volatility, as well as a growing frequency in corporate events (stress /distress, new issue, refi's, M&A). Dispersion also remains high, resulting in an improved environment for credit selection. Rising rates have also led to more attractive yields and price discounts, resulting in better carry, improved convexity and pull-to-par, as well as downside protection.
- In **corporate long-biased** and **distressed**, HFS remains underweight as the distressed opportunity set, while growing, remains in its earlier stages and high yield spreads remain tight. While companies face higher cost of funding, squeezed margins and slowing demand, high yield spreads remain well below historical averages for recessionary environments, ending Q2 at 405 bps. However, distressed activity has increased, with defaults ticking above 2.41% and 2.82% for bonds and loans, respectively. HFS continues to monitor the space for increasing distress and widening spreads, which will likely provide a more attractive opportunity set and better entry point.
- In **asset-backed**, HFS plans to increase allocations as we seek additional sources of carry. Structured credit markets remain attractive, given strong carry and potential for positive MTM with wider spreads following the 2022 sell off. Structured credit markets have also lagged the YTD rally in corporate credit and now offer more attractive relative yield and spread levels. HFS allocations are concentrated in high conviction strategies with a focus on high quality assets with stable fundamentals and attractive carry including multifamily CMBS, RMBS and consumer-oriented ABS. HFS also maintains tactical allocations to other segments, such as CLOs.
- HFS plans to increase current **agency MBS** allocations, with a focus on derivatives strategies. Managers are now enjoying attractive carry at approximately 75-100 bps per month. While IO derivatives have experienced some spread tightening from recent wides, they may continue to offer upside as prepayment speeds slow, with more than 95% of US borrowers now out of the money for refinancing. Managers also continue to see attractive trading opportunities in derivatives and the mortgage basis as macro events continue to create rate volatility.

Endnotes

Index descriptions
The use of indices is for illustrative purposes only.

Citi Economic Surprise G10 Index
The Citi Economic Surprise Indices measure data surprises relative to market expectations. A positive reading means that data releases have been stronger than expected and a negative reading means that data releases have been worse than expected.

Bloomberg Industrial Metals SubIndex (BCOMIN Index)
Formerly known as Dow Jones-UBS Industrial Metals Subindex (DJUBSIN index), the index is composed of futures contracts on aluminum, copper, nickel and zinc. It reflects the return of underlying commodity futures price movements only. It is quoted in USD.

US Generic Government 10-year yield (USGG10YR Index)
Reflects the generic government 10-year yield for US issues of treasuries.

S&P 500 (SPX Index)
The Standard and Poor's 500 Index (S&P500) is a capitalization-weighted index of 500 stocks. The index is designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

EURUSD Spot Exchange Rate (EURUSD Curncy)
Price of 1 EUR in USD.

Brent Crude (CO1 Comdty)
Current pipeline export quality Brent blend as supplied at Sullom Voe. ICE Brent Futures is a deliverable contract based on EFP delivery with an option to cash settle.

US Natural Gas (NG1 Comdty)
First month futures contract on Henry Hub Natural Gas.

MOVE Index
This is a yield curve weighted index of the normalized implied volatility on 1-month Treasury options. It is the weighted average of 1m2y, 1m5y, 1m10y and 1m30y Treasury implied vols with weights 0.2/0.2/0.4/0.2, with volatilities on the CT2, CT5, CT10, and CT30.

Size factor (DJTMNSS Index)
Dow Jones U.S. Thematic Market Neutral Size Index intends to reflect the performance of a strategy whereby an investor would express a long position on small-cap companies and a short position on large-cap companies.

Anti-Beta factor (DJTMNAB Index)
Dow Jones U.S. Thematic Market Neutral Anti-Beta Index intends to reflect the performance of a strategy whereby an investor would express a short position on high beta companies and a long position on low beta companies.

MBA Mortgage Refinance Index
The MBA refinancing index is a gauge of requests for mortgage loan refinancings. The MBA Mortgage Refinance index is a leading indicator of prepayment speeds and mortgage loan production volatility. It reflects loan applications, so changes in actual refinance fundings tend to lag changes in the index by about 45 days.

Endnotes

Index descriptions
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HFS Custom Long Alpha Proxy
HFS Custom Long Alpha is a custom proxy for the long alpha (measured against the Russell 3000) captured by long / short equity hedge funds using 11 long GS VIP Sector specific indices with a weighting scheme consistent with industry exposures.

HFS Custom Short Alpha Proxy
HFS Custom Short Alpha is a custom proxy for the short alpha (measured against the Russell 3000) captured by long / short equity hedge funds using multiple short indexes including GSTHVISP Index, GSCBMSAL Index, MSSHRTUS Index and MSXXSHRT Index with a weighting scheme consistent with industry exposures.

HFS Custom Total Alpha Proxy
HFS Custom Total Alpha is a custom proxy for the total alpha (measured against the Russell 3000) captured by long / short equity hedge fund managers and is equivalent to the sum of the HFS Custom Long Alpha Proxy and HFS Custom Short Alpha Proxy.

GSTHVISP Index
The GS Very Important Short Position (VISP) list tracks short exposure of hedge funds. The equal-weighted basket consists of 50 S&P 500 constituents with the highest total dollar value of short interest outstanding. The VISP basket is designed as a short hedge for the Hedge Fund VIP List (GSTHHVIP) to replicate the performance and long / short nature of hedge fund holdings.

GSCBMSAL Index
An equally weighted basket of the 50 highest short interest names in the Russell 3000. Names in the basket have a market cap greater than $1billion. This basket is updated on a monthly basis.

MSSHRTUS Index
MSSHRTUS is an informational index that represents an equally weighted basket of 50 conviction shorts in the US, as defined by Morgan Stanley's proprietary Crowding Factor. It provides a gauge of short alpha performance within this focus universe, rather than through traditional short interest lenses.

MSXXSHRT Index
The Morgan Stanley High Short Interest basket consists of 150 names within the Russell 3000 that have a float-adjusted market cap greater than $1bn and rank high on several metrics including short interest % of float, days-to-cover, and short interest variability. The basket systematically rebalances each month when new data becomes publicly available and is liquidity weighted with a 2.0% cap.

Russell 3000 Index
The Russell 3000 Index measures the performance of the largest 3000 US companies representing approximately 98% of the investable US equity market. The index is reconstituted annually to ensure new and growing equities are reflected. Dividends are not reinvested.

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