

June 30, 2023



North Dakota State Investment Board Legacy Fund

Investment Measurement Service
Quarterly Review

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June 30, 2023

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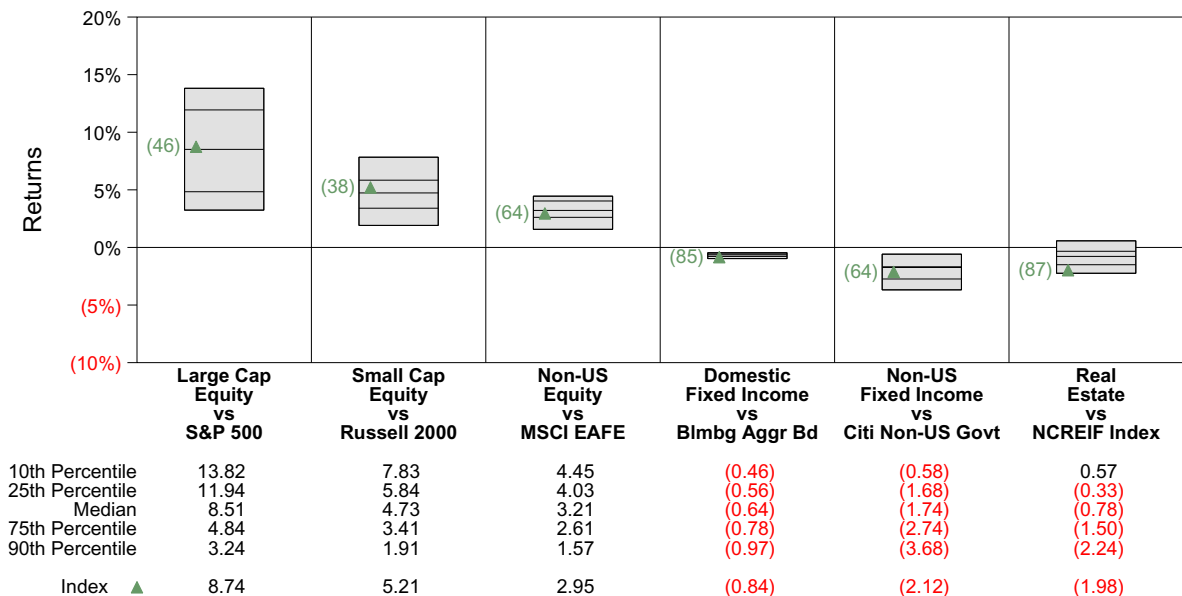
Market Overview

Active Management vs Index Returns

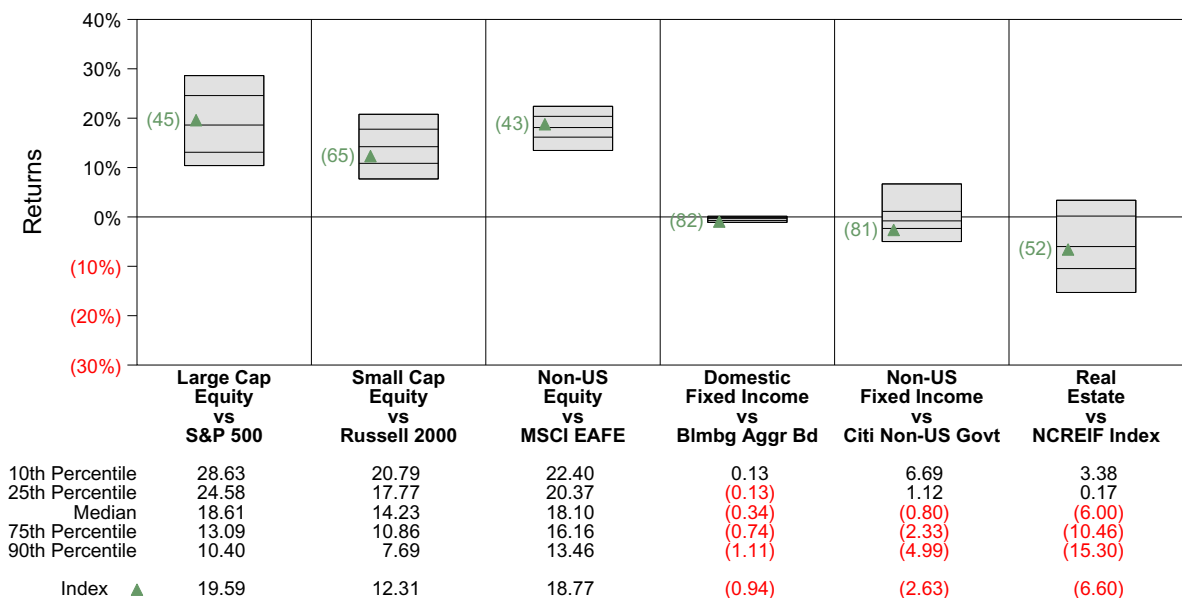
Market Overview

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



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



Is Recession Risk Really Off the Table?

ECONOMY

2 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.

Aggregate Falls with Rise in Interest Rates

FIXED INCOME

8 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.

IRRs Stay Steady and Range from 8%-10%

PRIVATE CREDIT

12 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 work-out resources.

Equity Gains Power Positive Returns

INSTITUTIONAL INVESTORS

4 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.

Private RE Falls While REITs Lag Equities

REAL ESTATE/REAL ASSETS

10 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.

Hedge Funds Gain but Lag Equity Indices

HEDGE FUNDS/MACs

13 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.

Large Cap Growth Leads Indices Higher

EQUITY

6 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.

Headwinds in Market Slow Deal Liquidity

PRIVATE EQUITY

11 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.

Index Starts off 2023 With a 5.3% Increase

DEFINED CONTRIBUTION

15 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.

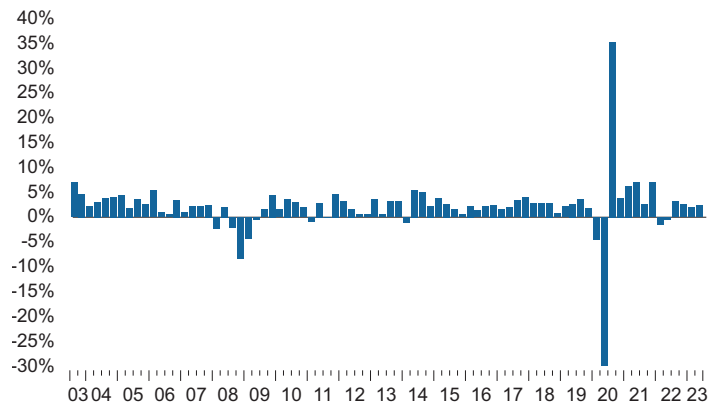
What happened? First, the job market remains robust, with unemployment stuck at a generational low. Second, inflation dropped from an alarming 9% rate last June to 3% in just one year. In the broad economy, GDP rebounded from two quarters of decline in 2022 to log four consecutive quarters of solid growth, 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

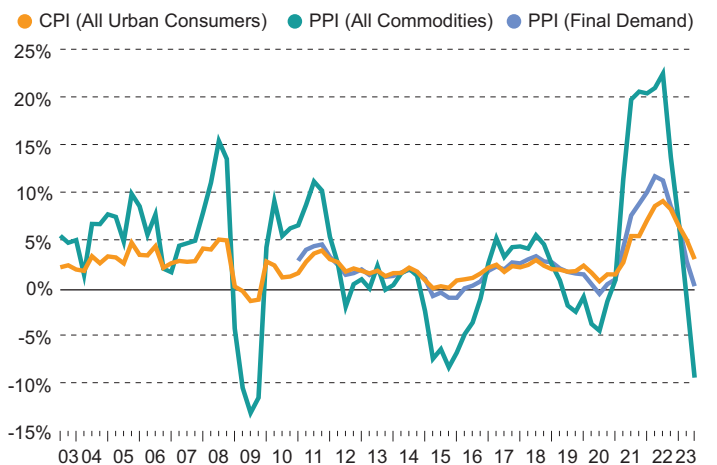
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

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

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 GI 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

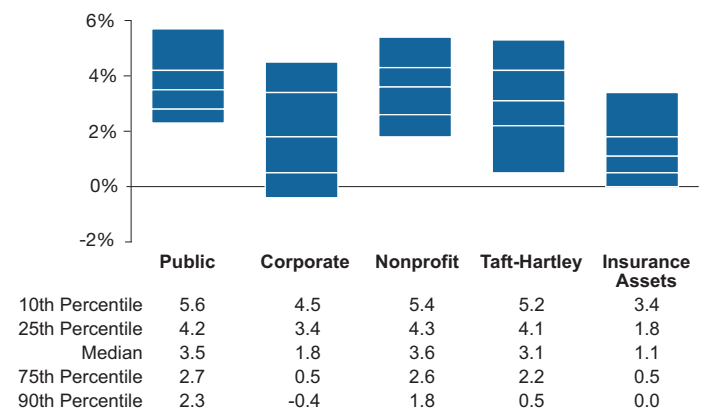
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

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)



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.

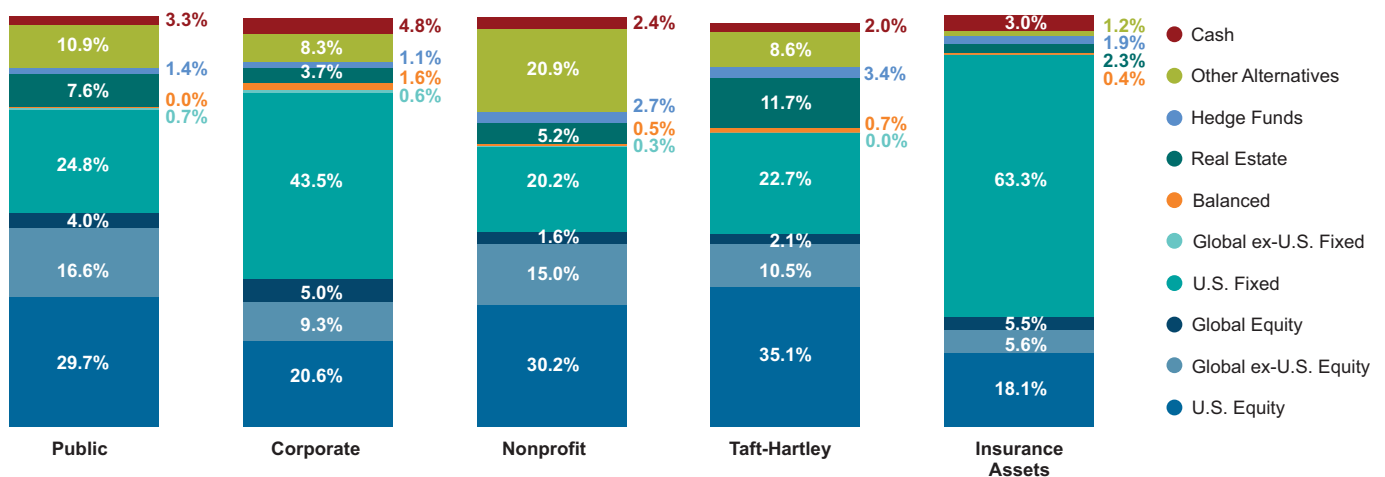
Nonprofits

- 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

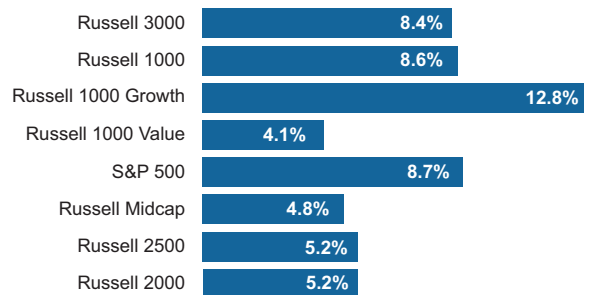
- 10 stocks within the S&P 500 Index contributed 80% of the 16.9% return YTD through 6/30; average appreciation is 82%, and these stocks had an average forward price/earnings ratio of 36x.
- 2Q return for the S&P 500 Index was 8.7%; the equal weight S&P 500 Index returned 4%.
- The YTD return difference 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.

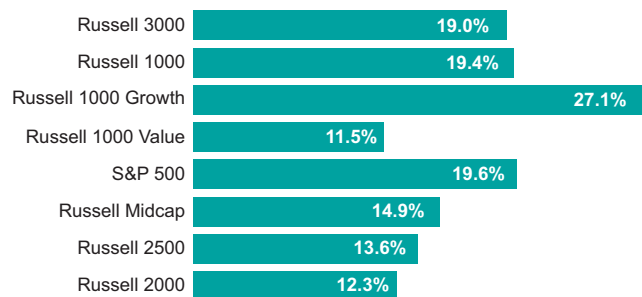
U.S. Equity: Quarterly Returns

(6/30/23)



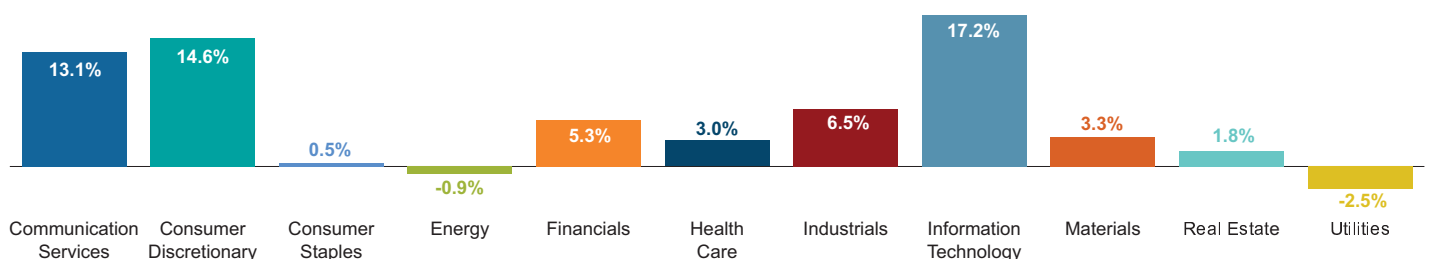
U.S. Equity: One-Year Returns

(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.

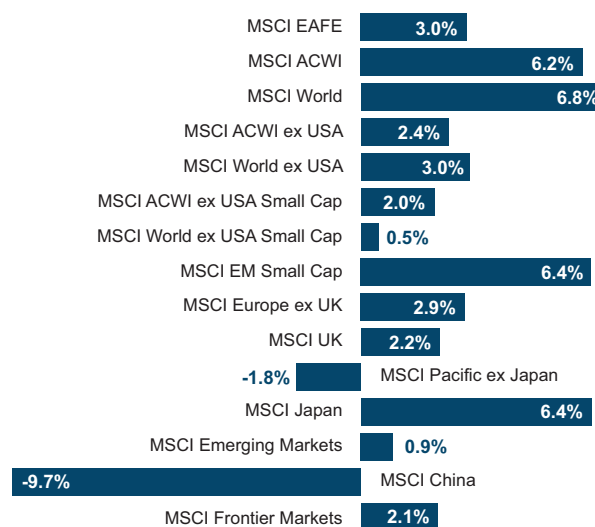
Asset flows

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

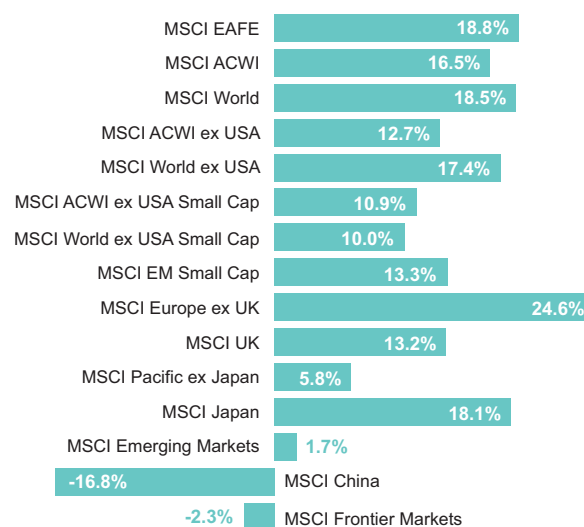
Growth

- 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

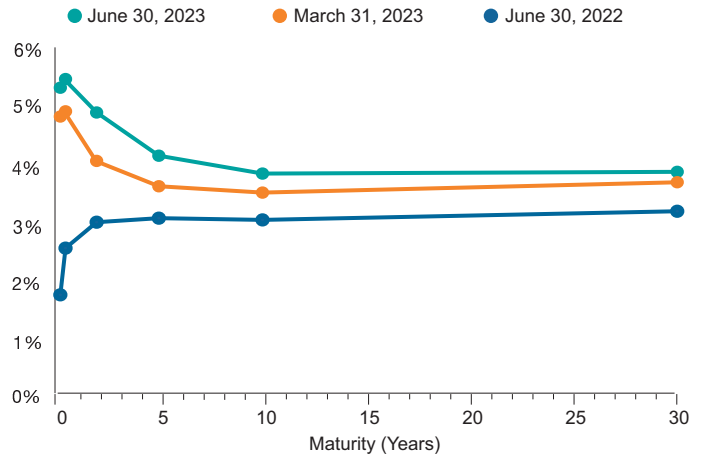
- Credit spreads have not widened materially and are close to historical averages.
- Demand has remained robust with muted issuance.

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%)

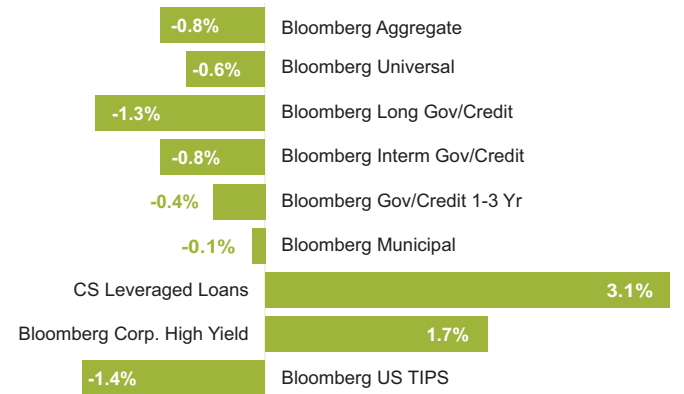
U.S. Treasury Yield Curves



Source: Bloomberg

U.S. Fixed Income: Quarterly Returns

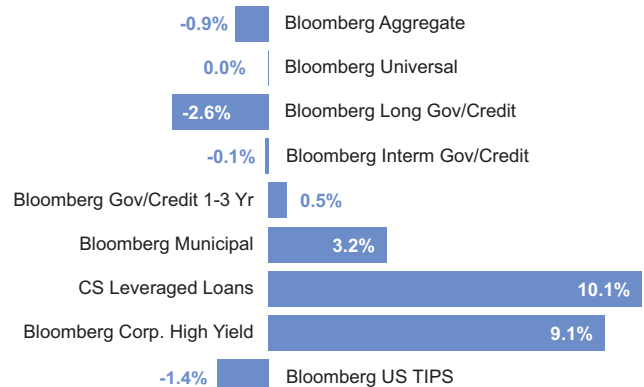
(6/30/23)



Sources: Bloomberg and Credit Suisse

U.S. Fixed Income: One-Year Returns

(6/30/23)



FIXED INCOME (Continued)

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 depreciation
- Bank of England surprised markets with 50 bps increase to combat sticky inflation.

U.S. dollar mixed

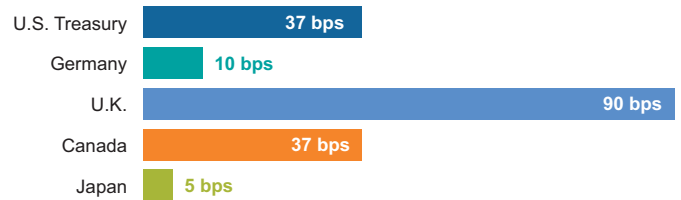
- Euro: +0.4% vs dollar
- British pound: +2.8% vs dollar
- Canadian dollar: +2.3% vs dollar
- Japanese yen: -7.9% vs dollar
- Australian dollar: -0.6% vs dollar
- Chinese yuan: -5.4% vs dollar
- Mexican peso: +5.3% vs dollar
- Brazilian real: +5.1% vs dollar

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

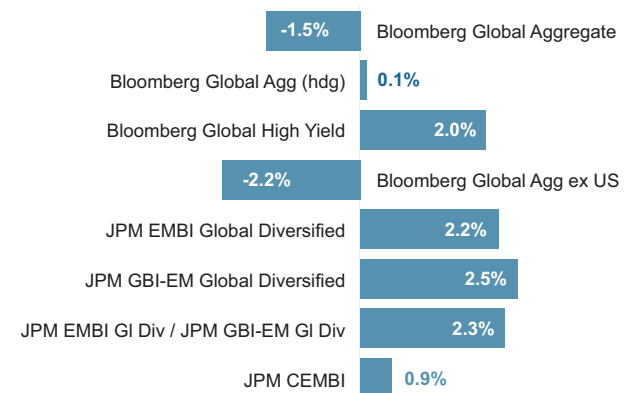
1Q23 to 2Q23



Source: Bloomberg

Global Fixed Income: Quarterly Returns

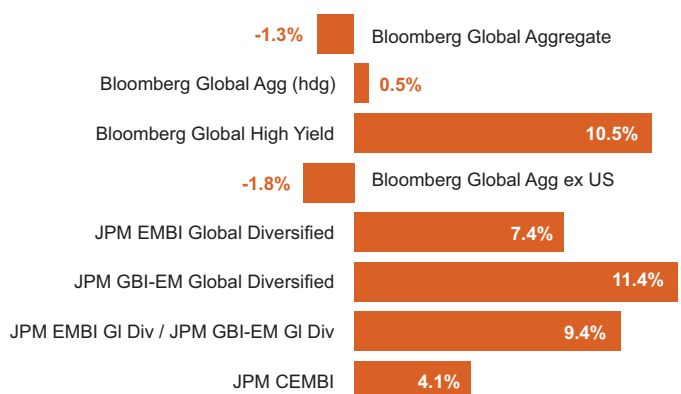
(6/30/23)



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

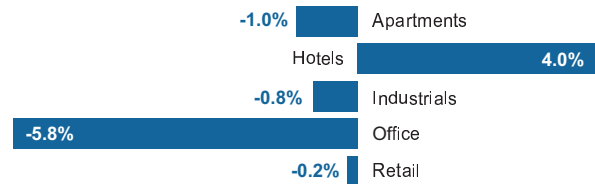
- The NCREIF Property Index, a measure of U.S. institutional real estate assets, fell 2.0% during 2Q23. The income return was 1.0% while the appreciation return was –3.0%.
- Hotels, which represent a small portion of the index, led property sector performance with a gain of 4.0%. Office finished last 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

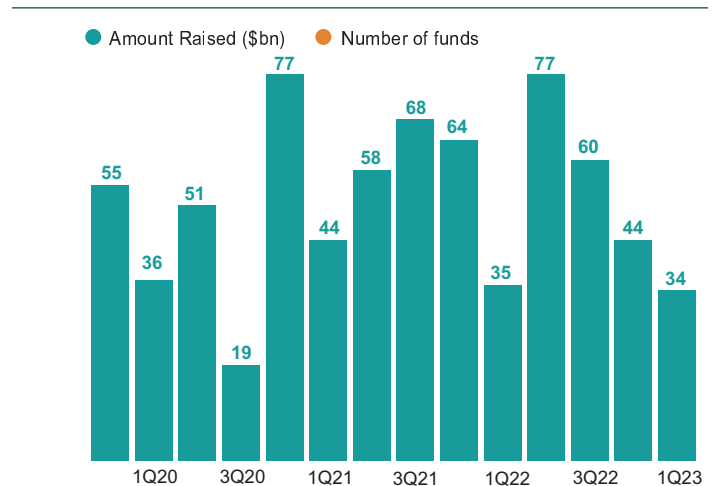
Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of the *Capital Markets Review* and other Callan publications.

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

Private Credit Fundraising (\$bn)



Source: Preqin

- 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

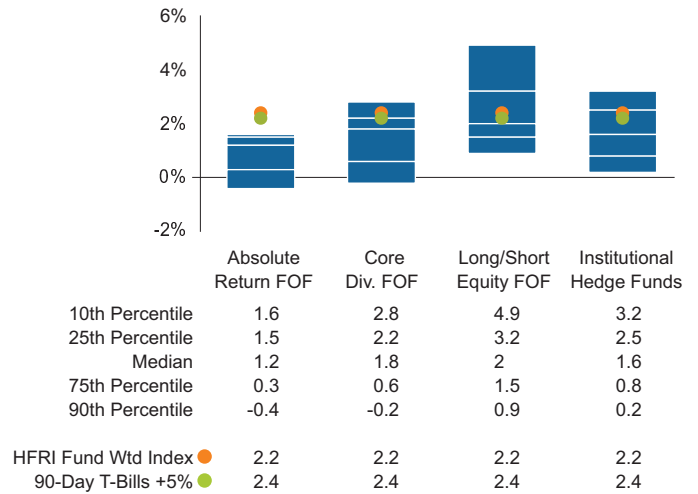
Hedge Funds Gain but Lag Equity Indices

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)



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.

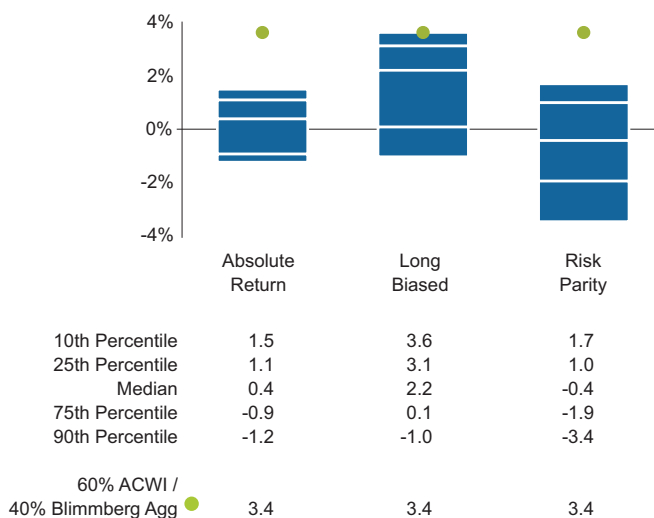
Within the HFRI indices, the best-performing strategy last quarter was the equity hedge index (3.1%), led by manager exposure to AI and growth-related sectors. Macro strategies finished up 1.7%, as managers went long equities and short rates across the U.S. and Europe.

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.

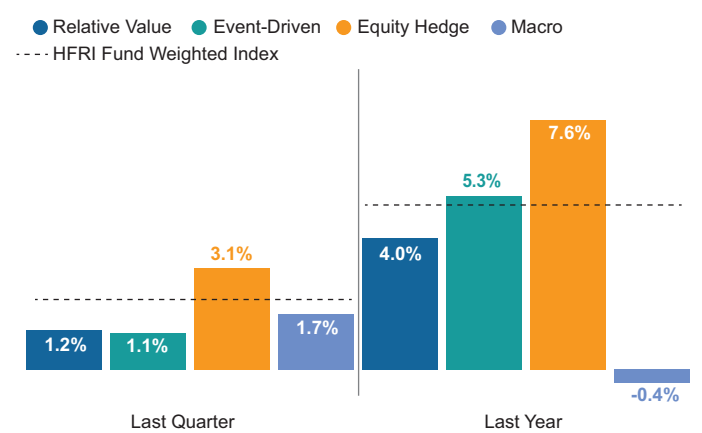
Within Callan's database, the median Callan Multi-Asset Class (MAC) Long Biased peer group gained 2.2%, the Callan MAC Absolute Return peer group was up 0.4%, and the Callan MAC Risk Parity peer group fell 0.4%.

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)



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



Source: HFRI

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

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.

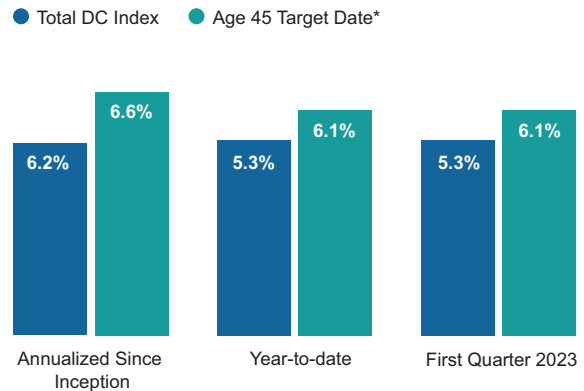
Prevalence of Asset Class: Balanced Funds Rise

- 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.

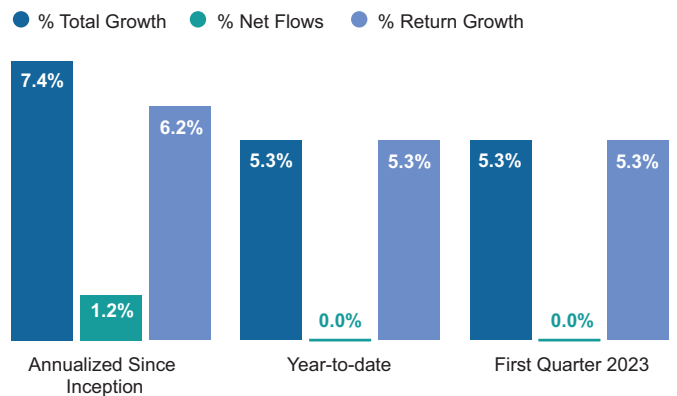
Investment Performance

(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.

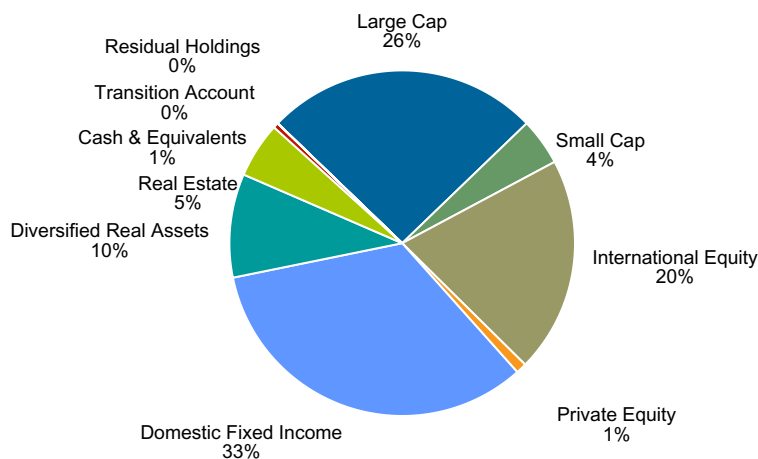
* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

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

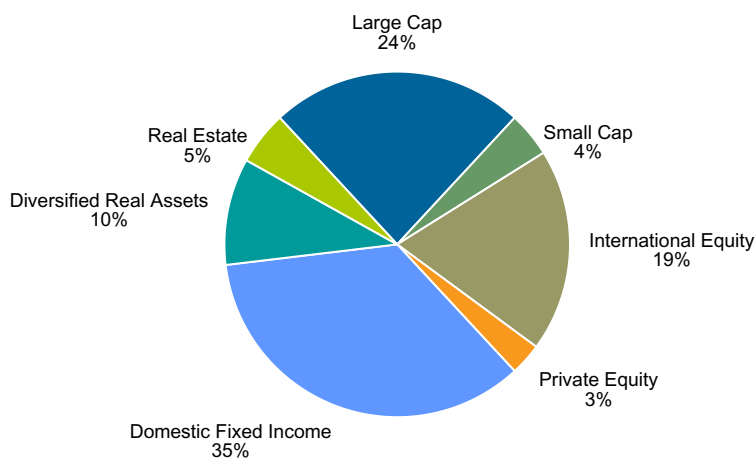
Actual vs Target Asset Allocation As of June 30, 2023

The first chart below shows the Fund's asset allocation as of June 30, 2023. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



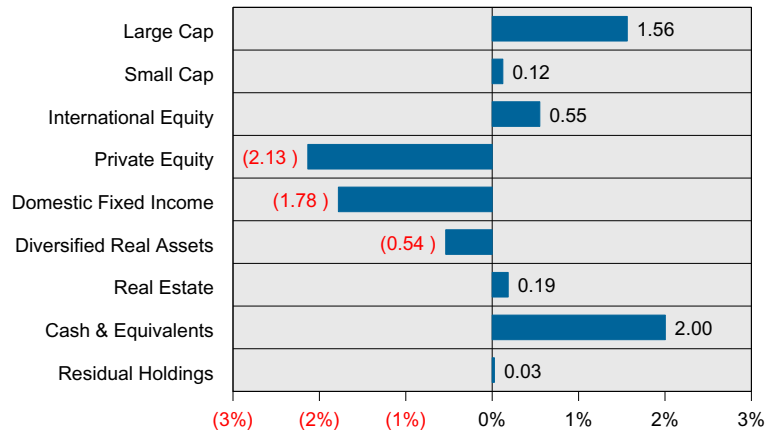
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Large Cap	2,303,931	25.6%	23.8%	1.8%	160,825
Small Cap	395,233	4.4%	4.2%	0.2%	17,038
International Equity	1,816,250	20.2%	19.0%	1.2%	105,367
Private Equity	89,987	1.0%	3.0%	(2.0%)	(180,152)
Domestic Fixed Income	3,008,785	33.4%	35.0%	(1.6%)	(142,840)
Diversified Real Assets	875,809	9.7%	10.0%	(0.3%)	(24,656)
Real Estate	464,014	5.2%	5.0%	0.2%	13,781
Cash & Equivalents	48,368	0.5%	0.0%	0.5%	48,368
Transition Account	45	0.0%	0.0%	0.0%	45
Residual Holdings	2,223	0.0%	0.0%	0.0%	2,223
Total	9,004,645	100.0%	100.0%		

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

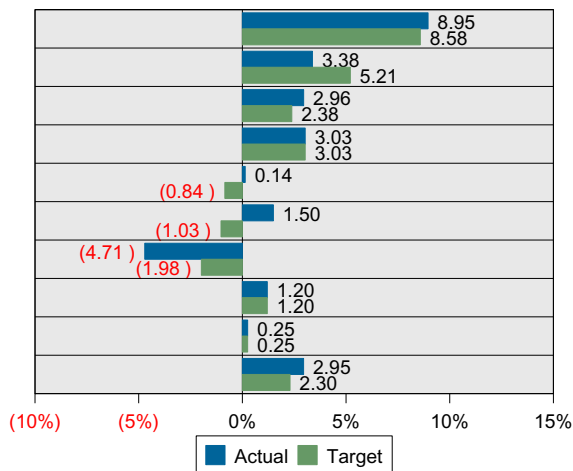
Quarterly Total Fund Relative Attribution - June 30, 2023

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.

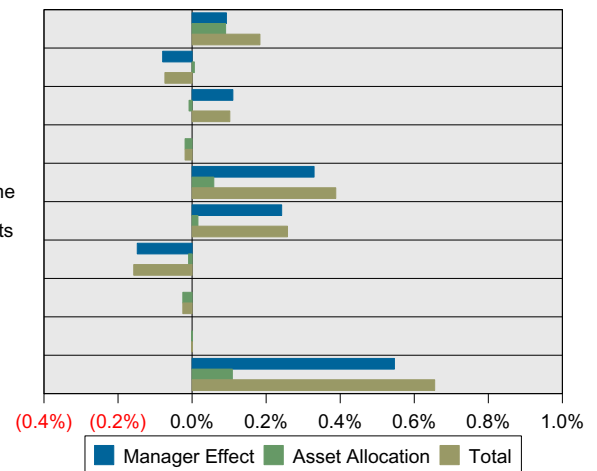
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended June 30, 2023

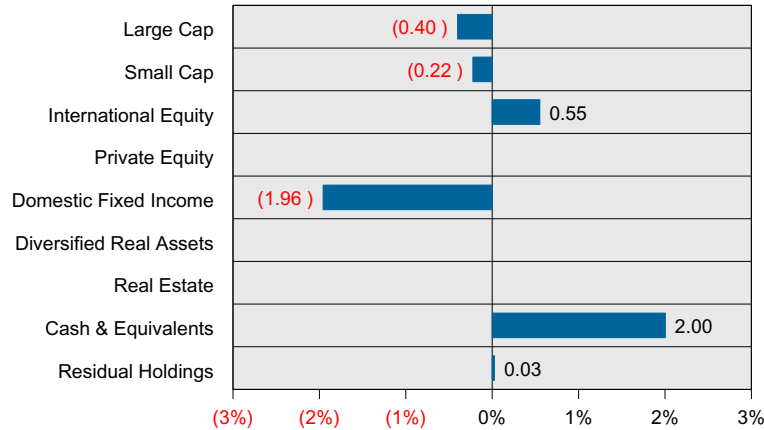
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	25%	24%	8.95%	8.58%	0.09%	0.09%	0.18%
Small Cap	4%	4%	3.38%	5.21%	(0.08)%	0.01%	(0.07)%
International Equity	20%	19%	2.96%	2.38%	0.11%	(0.01)%	0.10%
Private Equity	1%	3%	3.03%	3.03%	0.00%	(0.02)%	(0.02)%
Domestic Fixed Income	33%	35%	0.14%	(0.84)%	0.33%	0.06%	0.39%
Diversified Real Assets	9%	10%	1.50%	(1.03)%	0.24%	0.02%	0.26%
Real Estate	5%	5%	(4.71)%	(1.98)%	(0.15)%	(0.01)%	(0.16)%
Cash & Equivalents	2%	0%	1.20%	1.20%	0.00%	(0.03)%	(0.03)%
Residual Holdings	0%	0%	0.25%	0.25%	0.00%	(0.00)%	(0.00)%
Total			2.95%	2.30%	+ 0.55%	+ 0.11%	0.66%

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

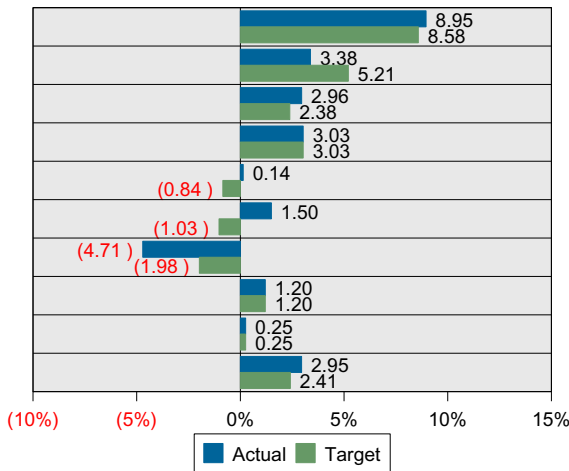
Quarterly Total Fund Relative Attribution - Corridor Target - June 30, 2023

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.

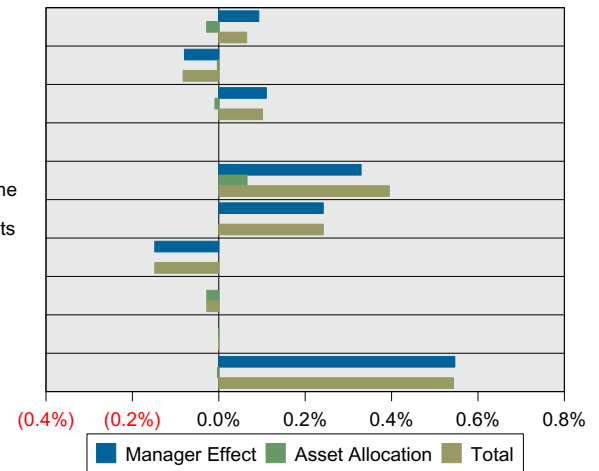
Asset Class Under or Overweighting



Actual vs Target Returns



Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended June 30, 2023

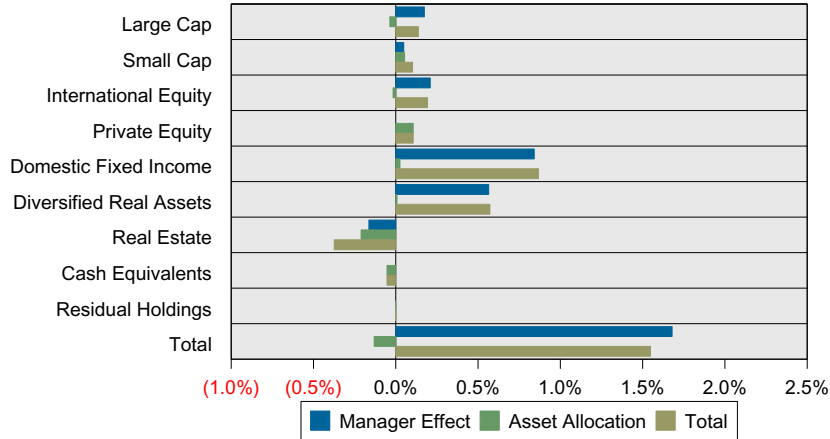
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	25%	26%	8.95%	8.58%	0.09%	(0.03%)	0.06%
Small Cap	4%	5%	3.38%	5.21%	(0.08%)	(0.00%)	(0.08%)
International Equity	20%	19%	2.96%	2.38%	0.11%	(0.01%)	0.10%
Private Equity	1%	1%	3.03%	3.03%	0.00%	0.00%	0.00%
Domestic Fixed Income	33%	35%	0.14%	(0.84%)	0.33%	0.07%	0.39%
Diversified Real Assets	9%	9%	1.50%	(1.03%)	0.24%	0.00%	0.24%
Real Estate	5%	5%	(4.71%)	(1.98%)	(0.15%)	0.00%	(0.15%)
Cash & Equivalents	2%	0%	1.20%	1.20%	0.00%	(0.03%)	(0.03%)
Residual Holdings	0%	0%	0.25%	0.25%	0.00%	(0.00%)	(0.00%)
Total			2.95%	2.41%	+ 0.55%	+ (0.00%)	0.54%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

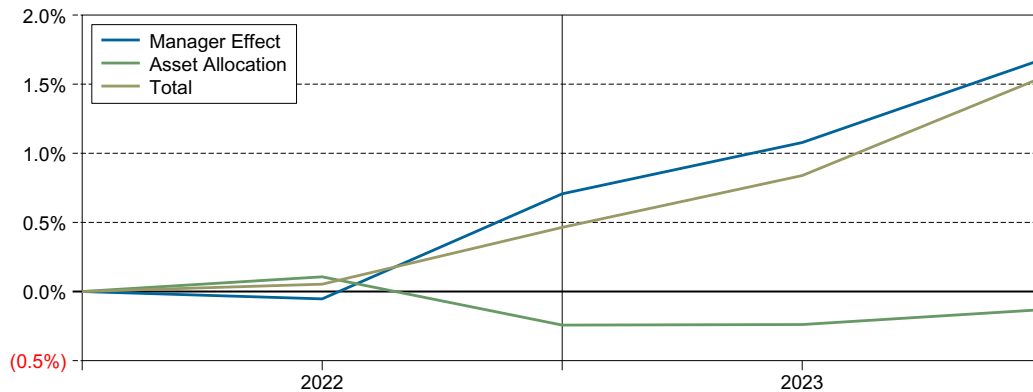
Cumulative Total Fund Relative Attribution - June 30, 2023

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

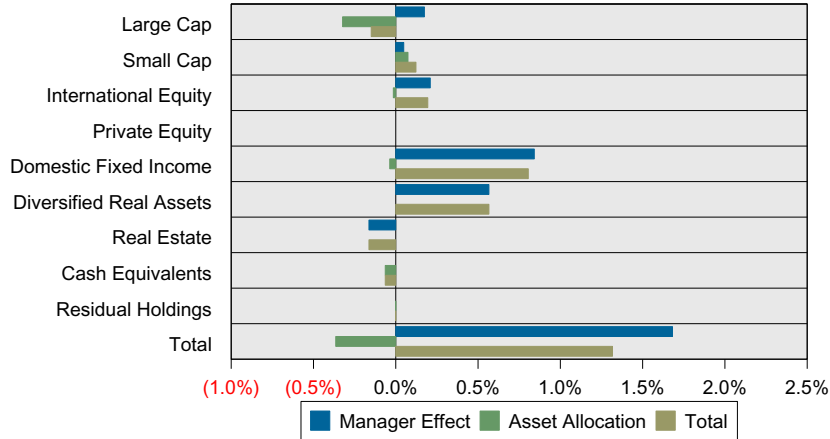
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	25%	24%	20.11%	19.36%	0.17%	(0.04%)	0.14%
Small Cap	5%	4%	15.09%	12.31%	0.05%	0.05%	0.10%
International Equity	19%	19%	14.30%	13.08%	0.21%	(0.02%)	0.19%
Private Equity	1%	2%	4.30%	4.30%	0.00%	0.11%	0.11%
Domestic Fixed Income	34%	35%	1.40%	(0.94%)	0.84%	0.03%	0.87%
Diversified Real Assets	10%	10%	4.33%	(1.52%)	0.56%	0.01%	0.57%
Real Estate	6%	5%	(9.57%)	(6.60%)	(0.16%)	(0.21%)	(0.37%)
Cash Equivalents	1%	0%	3.58%	3.58%	0.00%	(0.05%)	(0.05%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			8.37%	6.82%	+ 1.68%	+ (0.13%)	1.55%

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

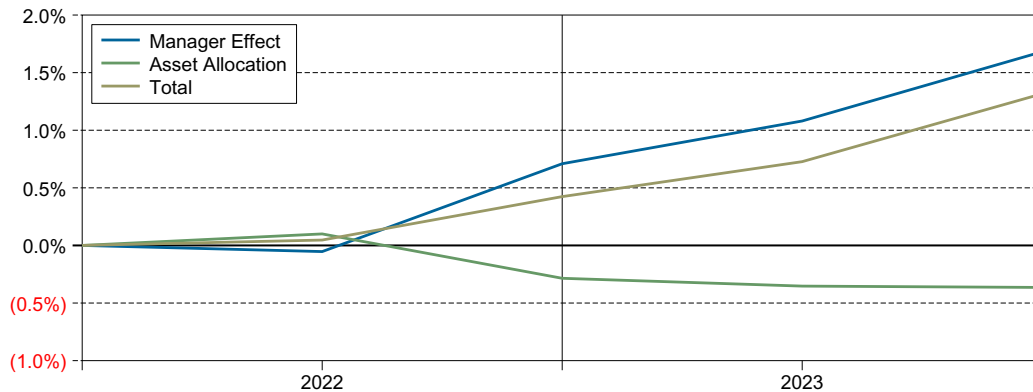
Cumulative Total Fund Relative Attribution - Corridor Target - June 30, 2023

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

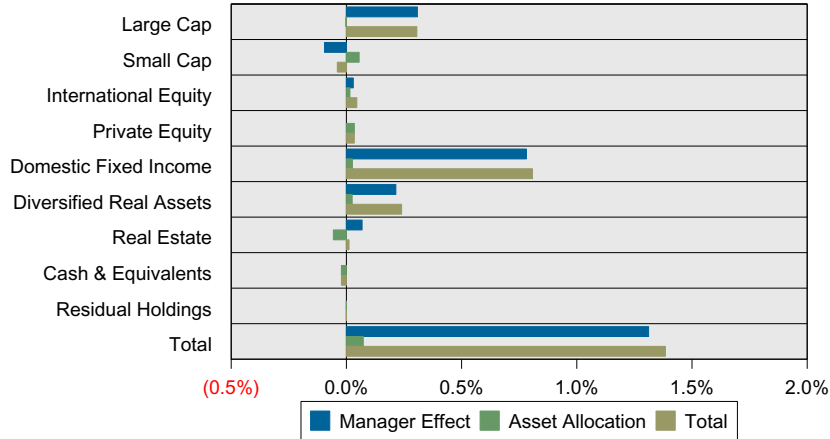
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	25%	25%	20.11%	19.36%	0.17%	(0.32%)	(0.15%)
Small Cap	5%	4%	15.09%	12.31%	0.05%	0.07%	0.12%
International Equity	19%	19%	14.30%	13.08%	0.21%	(0.01%)	0.19%
Private Equity	1%	1%	4.30%	4.30%	0.00%	0.00%	0.00%
Domestic Fixed Income	34%	35%	1.40%	(0.94%)	0.84%	(0.04%)	0.81%
Diversified Real Assets	10%	10%	4.33%	(1.52%)	0.57%	0.00%	0.57%
Real Estate	6%	6%	(9.57%)	(6.60%)	(0.16%)	0.00%	(0.16%)
Cash Equivalents	1%	0%	3.58%	3.58%	0.00%	(0.06%)	(0.06%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			8.37%	7.05%	+ 1.68%	+ (0.36%)	1.32%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

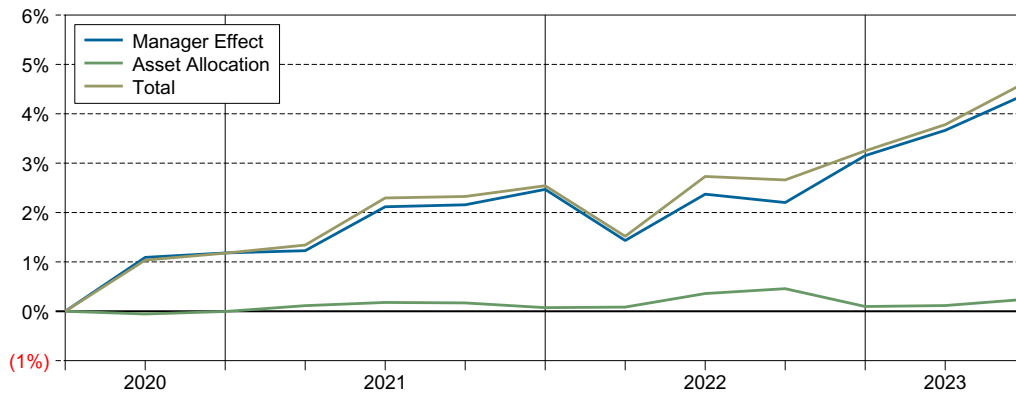
Cumulative Total Fund Relative Attribution - June 30, 2023

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

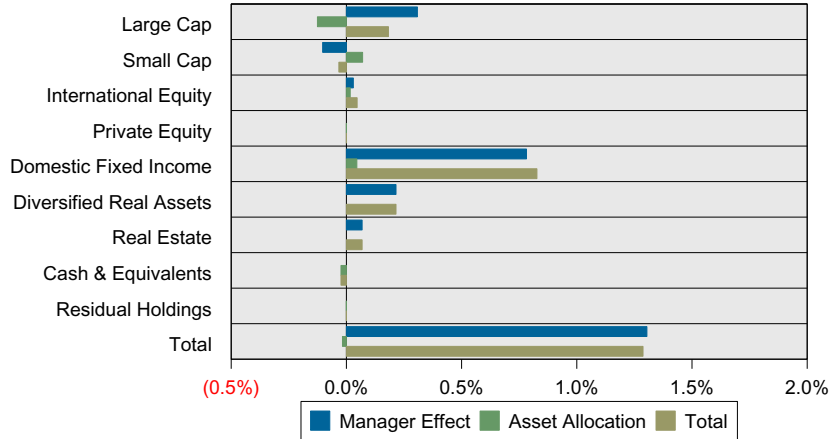
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	23%	15.57%	14.09%	0.31%	(0.00%)	0.31%
Small Cap	7%	7%	10.87%	10.82%	(0.09%)	0.06%	(0.04%)
International Equity	20%	20%	8.01%	7.94%	0.03%	0.02%	0.05%
Private Equity	0%	1%	6.39%	6.39%	0.00%	0.03%	0.03%
Domestic Fixed Income	34%	35%	(1.81%)	(3.96%)	0.78%	0.03%	0.81%
Diversified Real Assets	10%	10%	5.28%	2.89%	0.21%	0.03%	0.24%
Real Estate	5%	5%	7.68%	6.79%	0.07%	(0.06%)	0.01%
Cash & Equivalents	1%	0%	1.24%	1.24%	0.00%	(0.02%)	(0.02%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			6.28%	4.89%	+ 1.31%	+ 0.07%	1.38%

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

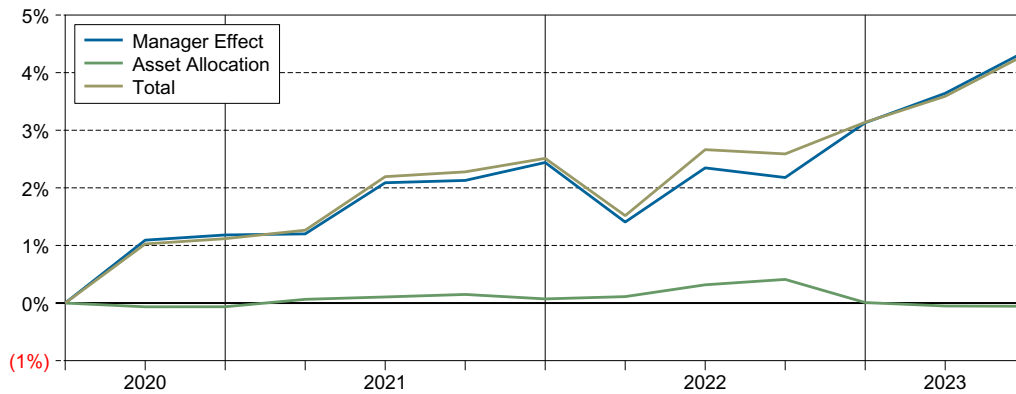
Cumulative Total Fund Relative Attribution - Corridor Target - June 30, 2023

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

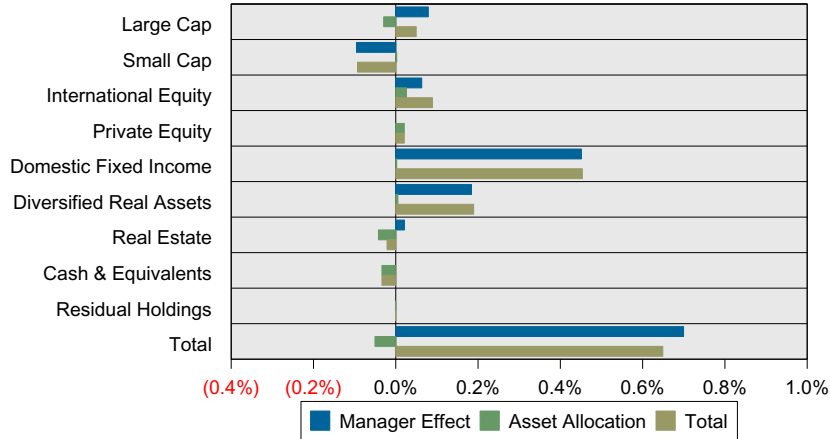
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	23%	15.57%	14.09%	0.31%	(0.13%)	0.18%
Small Cap	7%	7%	10.87%	10.82%	(0.10%)	0.07%	(0.03%)
International Equity	20%	20%	8.01%	7.94%	0.03%	0.02%	0.05%
Private Equity	0%	0%	6.39%	6.39%	0.00%	0.00%	0.00%
Domestic Fixed Income	34%	35%	(1.81%)	(3.96%)	0.78%	0.05%	0.83%
Diversified Real Assets	10%	10%	5.28%	2.89%	0.22%	0.00%	0.22%
Real Estate	5%	5%	7.68%	6.79%	0.07%	0.00%	0.07%
Cash & Equivalents	1%	0%	1.24%	1.24%	0.00%	(0.02%)	(0.02%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			6.28%	4.99%	+ 1.30%	+ (0.02%)	1.29%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

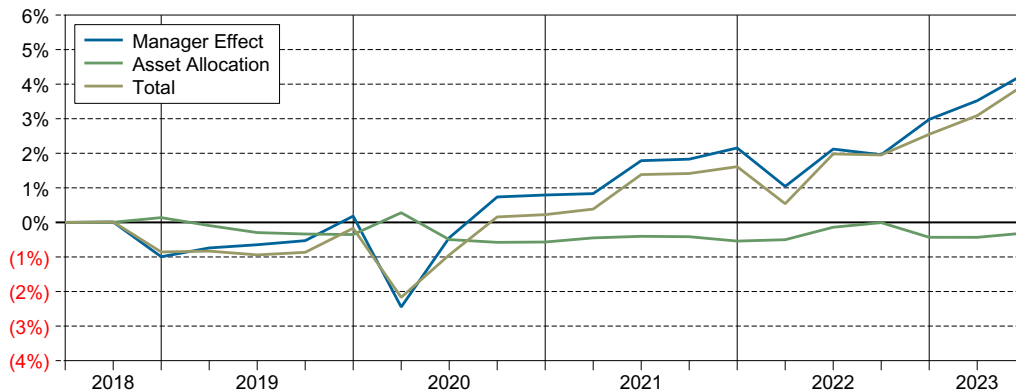
Cumulative Total Fund Relative Attribution - June 30, 2023

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

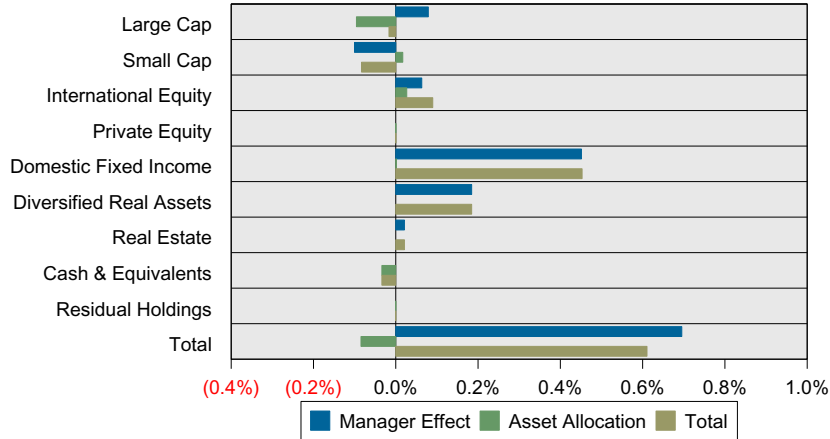
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	22%	12.23%	11.92%	0.08%	(0.03%)	0.05%
Small Cap	7%	7%	3.76%	4.21%	(0.10%)	0.00%	(0.09%)
International Equity	20%	20%	3.99%	3.80%	0.06%	0.03%	0.09%
Private Equity	0%	1%	-	-	0.00%	0.02%	0.02%
Domestic Fixed Income	35%	35%	2.19%	0.77%	0.45%	0.00%	0.45%
Diversified Real Assets	10%	10%	5.80%	3.77%	0.18%	0.01%	0.19%
Real Estate	5%	5%	5.97%	5.90%	0.02%	(0.04%)	(0.02%)
Cash & Equivalents	1%	0%	1.45%	1.45%	0.00%	(0.03%)	(0.03%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			5.68%	5.03%	+ 0.70%	+ (0.05%)	0.65%

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

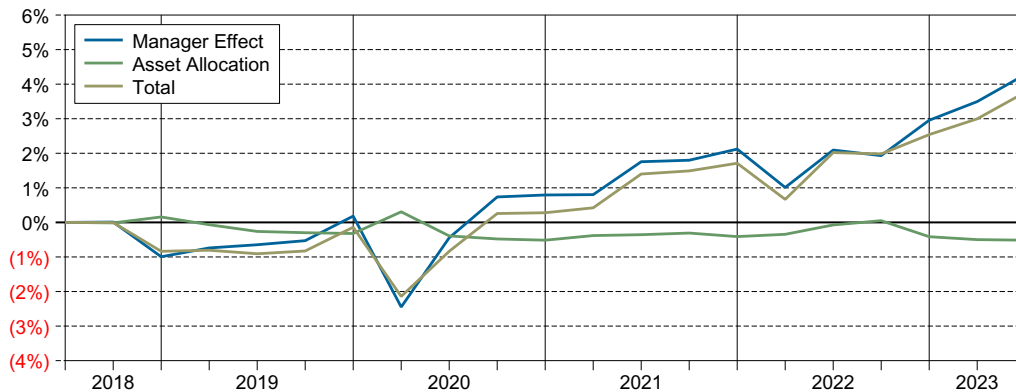
Cumulative Total Fund Relative Attribution - Corridor Target - June 30, 2023

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

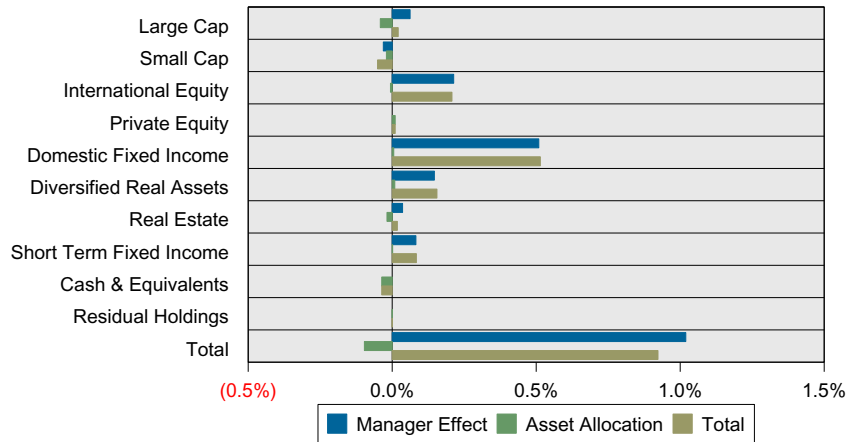
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	23%	23%	12.23%	11.92%	0.08%	(0.10%)	(0.02%)
Small Cap	7%	7%	3.76%	4.21%	(0.10%)	0.02%	(0.08%)
International Equity	20%	20%	3.99%	3.80%	0.06%	0.03%	0.09%
Private Equity	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income	35%	35%	2.19%	0.77%	0.45%	0.00%	0.45%
Diversified Real Assets	10%	10%	5.80%	3.77%	0.18%	0.00%	0.18%
Real Estate	5%	5%	5.97%	5.90%	0.02%	0.00%	0.02%
Cash & Equivalents	1%	0%	1.45%	1.45%	0.00%	(0.03%)	(0.03%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			5.68%	5.07%	+ 0.70%	+ (0.08%)	0.61%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

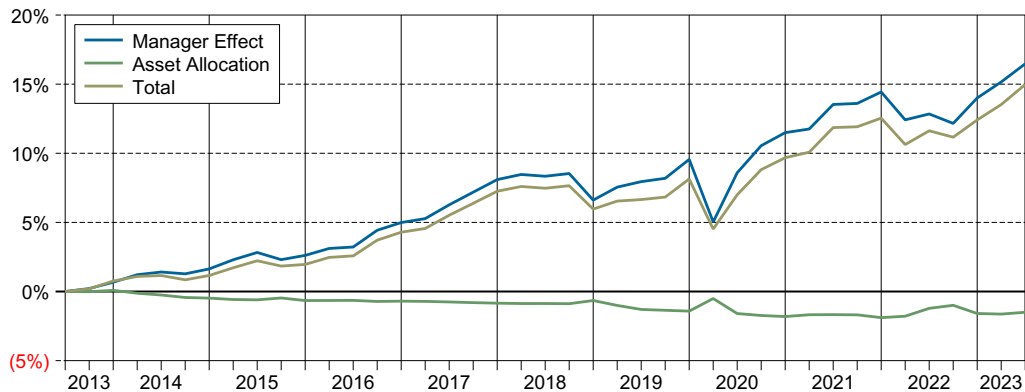
Cumulative Total Fund Relative Attribution - June 30, 2023

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.

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

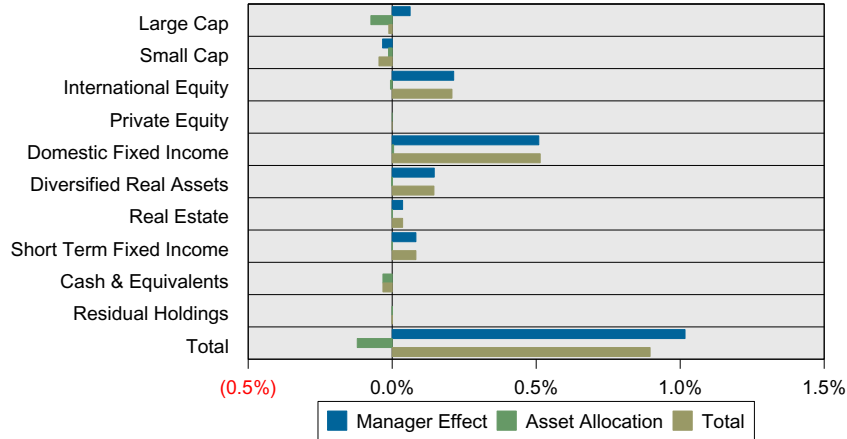
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	21%	21%	12.68%	12.35%	0.06%	(0.04%)	0.02%
Small Cap	7%	7%	7.95%	7.85%	(0.03%)	(0.02%)	(0.05%)
International Equity	19%	19%	5.73%	4.65%	0.21%	(0.01%)	0.21%
Private Equity	0%	0%	-	-	0.00%	0.01%	0.01%
Domestic Fixed Income	32%	33%	-	-	0.51%	0.01%	0.51%
Diversified Real Assets	9%	9%	-	-	0.15%	0.01%	0.16%
Real Estate	5%	5%	8.31%	7.64%	0.04%	(0.02%)	0.02%
Short Term Fixed Income	7%	7%	-	-	0.08%	0.00%	0.08%
Cash & Equivalents	1%	0%	0.90%	0.90%	0.00%	(0.04%)	(0.04%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			5.98%	5.06%	+ 1.02%	+ (0.10%)	0.92%

* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

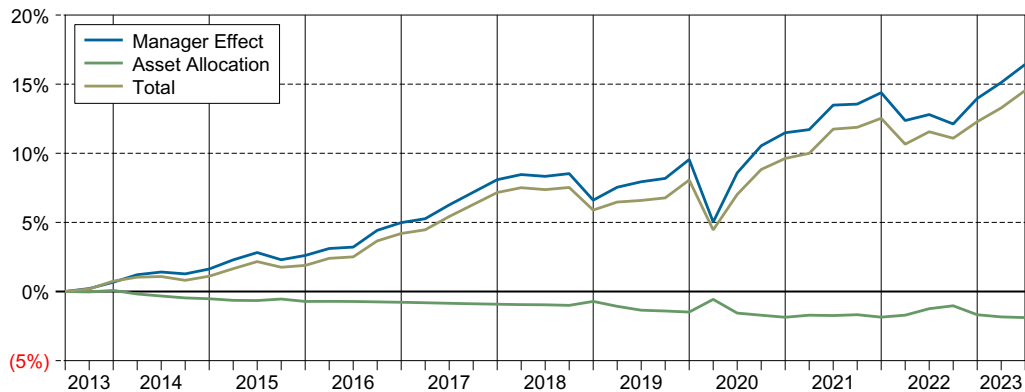
Cumulative Total Fund Relative Attribution - Corridor Target - June 30, 2023

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.

Ten Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Ten Year Annualized Relative Attribution Effects

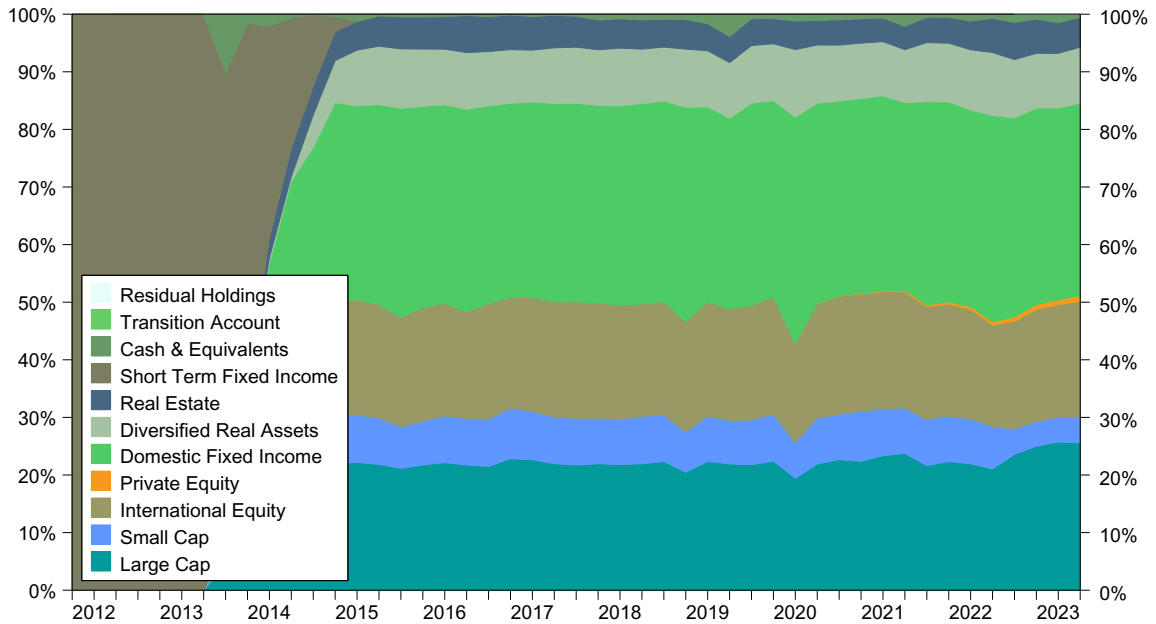
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Large Cap	21%	21%	12.68%	12.35%	0.06%	(0.07%)	(0.01%)
Small Cap	7%	7%	7.95%	7.85%	(0.03%)	(0.01%)	(0.05%)
International Equity	19%	19%	5.73%	4.65%	0.21%	(0.01%)	0.21%
Private Equity	0%	0%	-	-	0.00%	0.00%	0.00%
Domestic Fixed Income	32%	33%	-	-	0.51%	0.00%	0.51%
Diversified Real Assets	9%	9%	-	-	0.15%	(0.00%)	0.14%
Real Estate	5%	5%	8.31%	7.64%	0.04%	0.00%	0.04%
Short Term Fixed Income	7%	7%	-	-	0.08%	(0.00%)	0.08%
Cash & Equivalents	1%	0%	0.90%	0.90%	0.00%	(0.03%)	(0.03%)
Residual Holdings	0%	0%	-	-	0.00%	(0.00%)	(0.00%)
Total			5.98%	5.09%	+ 1.02%	+ (0.12%)	0.90%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

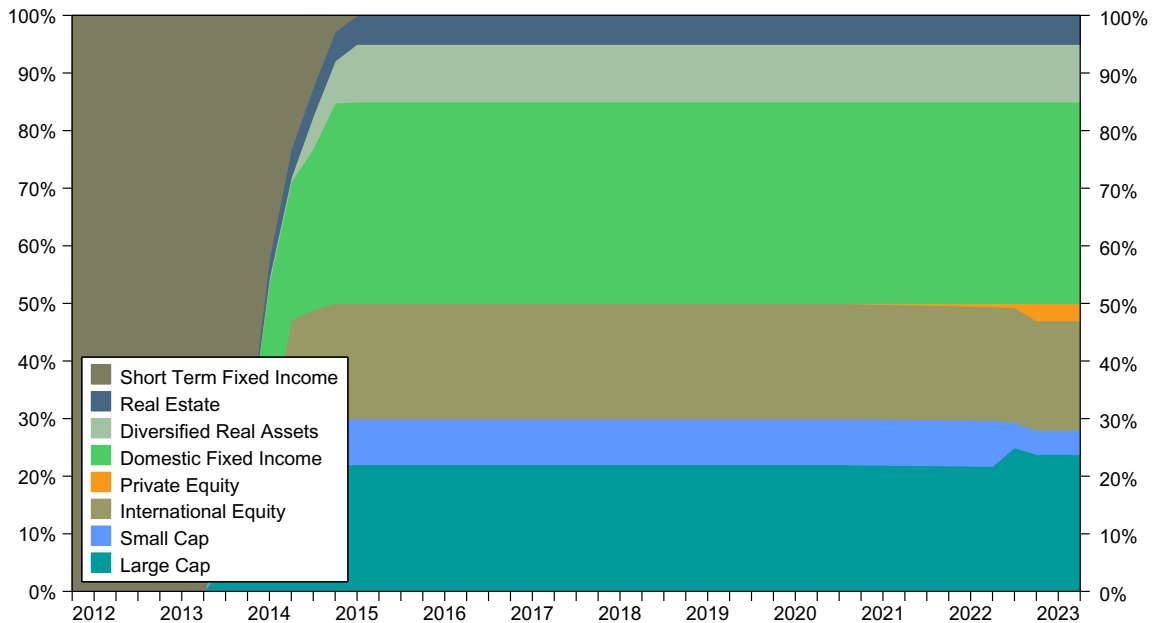
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, and the fund's historical target asset allocation.

Actual Historical Asset Allocation



Target Historical Asset Allocation

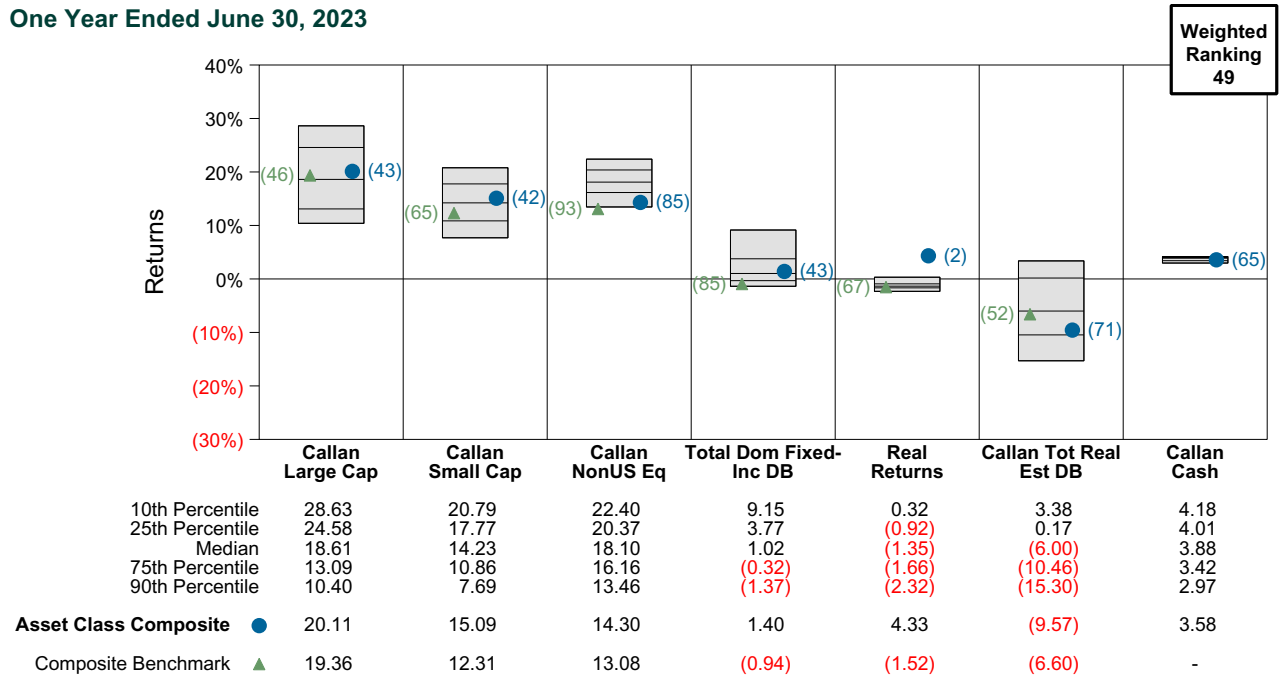


* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

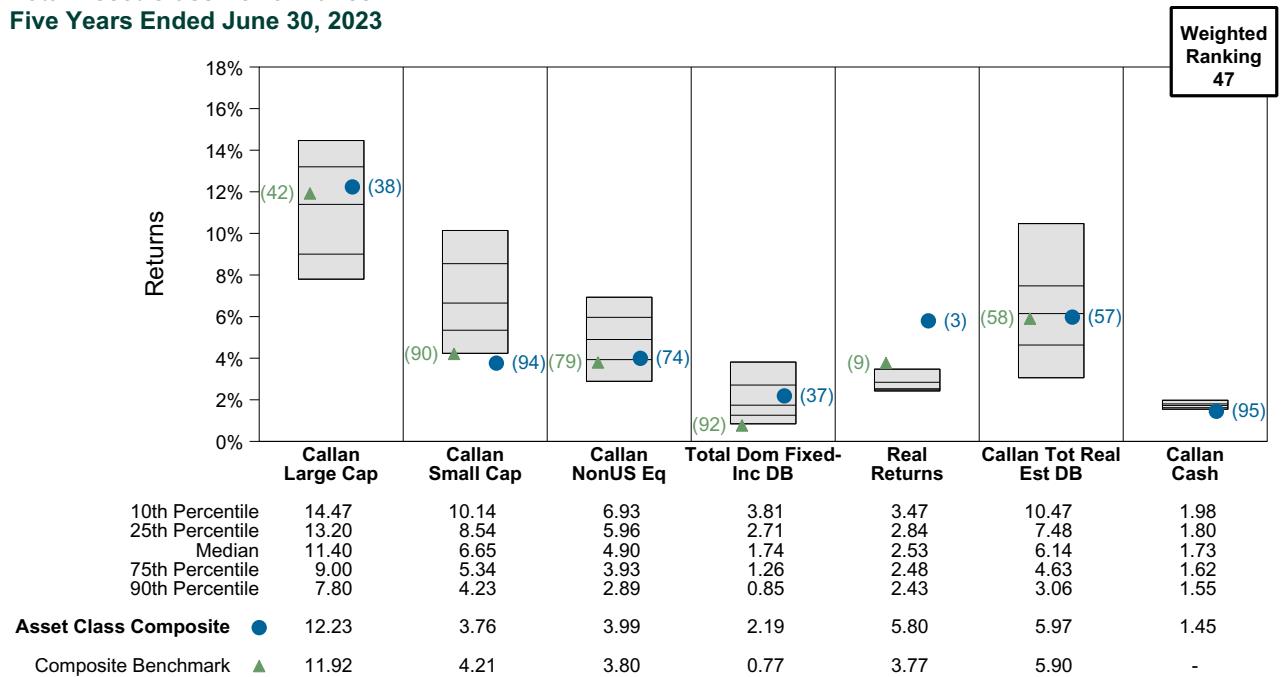
Asset Class Rankings

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

Total Asset Class Performance One Year Ended June 30, 2023



Total Asset Class Performance Five Years Ended June 30, 2023



* Current Quarter Target = 35.0% Blmbg:Aggregate, 23.8% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 10.0% DRA Weighted Benchmark, 5.0% NCREIF Total Index, 4.2% Russell 2000 Index and 3.0% Private Equity.

Asset Class 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 Class Allocation

	June 30, 2023			Inv. Return	March 31, 2023	
	Market Value	Weight	Net New Inv.		Market Value	Weight
Global Equity	\$4,605,445,690	51.15%	\$(226,714,033)	\$271,157,944	\$4,561,001,780	50.40%
Public Equity	\$4,515,458,824	50.15%	\$(239,231,725)	\$268,749,259	\$4,485,941,291	49.57%
Domestic Equity	\$2,699,164,300	29.98%	\$(234,249,899)	\$216,315,780	\$2,717,098,420	30.03%
Large Cap	\$2,303,930,884	25.59%	\$(224,600,000)	\$202,092,450	\$2,326,438,434	25.71%
LA Capital Large Cap Growth	78,455,288	0.87%	0	9,388,121	69,067,166	0.76%
L.A. Capital Enhanced	1,051,156,972	11.67%	0	92,760,832	958,396,140	10.59%
Parametric-Clifton Enh R1000	392,630,491	4.36%	0	30,924,381	361,706,110	4.00%
NTAM R1000 Index	394,966,754	4.39%	(224,600,000)	41,633,507	577,933,247	6.39%
NTAM Quant Enh R1000	386,721,380	4.29%	0	27,385,607	359,335,774	3.97%
Small Cap	\$395,233,416	4.39%	\$(9,649,899)	\$14,223,330	\$390,659,985	4.32%
Atlanta Capital SmallCap	130,655,704	1.45%	0	3,052,050	127,603,654	1.41%
Riverbridge Small Cap Growth	128,822,748	1.43%	(456,931)	7,937,663	121,342,017	1.34%
Sycamore Small Cap Value	123,389,397	1.37%	(192,968)	1,569,608	122,012,757	1.35%
NTAM Russell 2000 Index	12,365,567	0.14%	(9,000,000)	1,664,009	19,701,558	0.22%
Total International Equity	\$1,816,249,716	20.17%	\$(4,981,826)	\$52,432,249	\$1,768,799,293	19.55%
International All Cap	\$696,099,226	7.73%	\$(23,458,630)	\$30,105,461	\$689,452,395	7.62%
William Blair Int'l Leaders	286,848,807	3.19%	(285,061)	8,454,888	278,678,981	3.08%
Arrowstreet ACWI ex US	409,250,419	4.54%	(466,614)	21,413,678	388,303,355	4.29%
State St MSCI ACWI exUS	0	0.00%	(22,706,955)	236,896	22,470,059	0.25%
Developed Intl Large Cap	\$678,243,645	7.53%	\$(32,034,126)	\$20,351,538	\$689,926,233	7.62%
LSV Intl LargeCap Value	7,466	0.00%	(29)	234	7,261	0.00%
State St MSCI World exUS	678,236,179	7.53%	(32,034,097)	20,351,304	689,918,972	7.62%
Developed Intl Small Cap	\$109,010,799	1.21%	\$(8,706,118)	\$723,995	\$116,992,922	1.29%
DFA Intl SmallCap Value	49,580,078	0.55%	0	429,955	49,150,123	0.54%
Wellington Intl SM Cap	36,922,893	0.41%	(8,703,294)	192,640	45,433,547	0.50%
State St MSCI exUS Small	22,507,828	0.25%	(2,824)	101,400	22,409,252	0.25%
Emerging Markets	\$332,896,047	3.70%	\$59,217,047	\$1,251,256	\$272,427,743	3.01%
Axiom Emerging Markets	183,722,953	2.04%	(229,942)	(2,063,214)	186,016,110	2.06%
DFA EM All Cap Core	96,358,843	1.07%	96,358,843	0	-	-
DFA Emerging Mkts SmallCap	0	0.00%	(67,908,843)	2,608,451	65,300,392	0.72%
State St MSCI Em Mkts	0	0.00%	(21,817,304)	706,063	21,111,242	0.23%
State St MSCI EM China	15,844,288	0.18%	15,844,288	0	-	-
State St MSCI EM ex China	36,969,962	0.41%	36,970,006	(44)	-	-
Transition Account	\$44,808	0.00%	\$0	\$1,230	\$43,578	0.00%
Private Equity	\$89,986,866	1.00%	\$12,517,692	\$2,408,685	\$75,060,489	0.83%
50 South Capital	22,464,534	0.25%	6,950,000	(1,904,874)	17,419,408	0.19%
Sixth Street TAO	67,522,332	0.75%	5,567,692	4,313,559	57,641,081	0.64%

Asset Class 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 Class Allocation

	June 30, 2023			March 31, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Fixed Income	\$3,008,785,248	33.41%	\$(10,317,709)	\$4,139,024	\$3,014,963,933	33.32%
Allspring Med Quality Credit	209,142,080	2.32%	(29,896,428)	445,027	238,593,481	2.64%
Ares ND Credit Strategies Fd	118,050,022	1.31%	0	5,676,494	112,373,528	1.24%
BND CDs	181,333,625	2.01%	(9,824,149)	1,401,418	189,756,357	2.10%
Cerberus ND Private Credit Fd	150,461,213	1.67%	(13,500,000)	3,288,932	160,672,281	1.78%
Manulife-Declaration TRBF	161,901,412	1.80%	(134,964)	1,385,847	160,650,529	1.78%
PIMCO Core Plus Constrained	536,191,895	5.95%	(26,510)	(3,945,743)	540,164,147	5.97%
PIMCO Bravo II	1,126,746	0.01%	0	(126,070)	1,252,816	0.01%
PIMCO DiSCO II	104,110,927	1.16%	43,470,720	4,605,540	56,034,667	0.62%
Prudential Core Plus	677,708,121	7.53%	(398,519)	(3,153,695)	681,260,334	7.53%
State Street US Govt Credit Bd Idx	0	0.00%	(1,668)	6	1,662	0.00%
State Street Gov Index	108,698,650	1.21%	(1,118)	(1,482,216)	110,181,984	1.22%
State Street Credit Index	82,514,703	0.92%	(843)	(236,104)	82,751,650	0.91%
Western Asset Core Plus	677,545,854	7.52%	0	(3,557,700)	681,103,554	7.53%
Fixed Income Transition	0	0.00%	(4,232)	(162,712)	166,944	0.00%
Global Real Assets	\$1,339,822,332	14.88%	\$9,557,982	\$(9,852,899)	\$1,340,117,250	14.81%
Real Estate	\$464,013,634	5.15%	\$4,404,994	\$(22,727,875)	\$482,336,515	5.33%
Invesco Core Real Estate	211,489,999	2.35%	(353,936)	(14,505,303)	226,349,237	2.50%
Invesco RE Fund VI	42,710,901	0.47%	5,663,546	(1,594,892)	38,642,247	0.43%
JP Morgan RE Inc & Growth	209,812,735	2.33%	(904,616)	(6,627,680)	217,345,031	2.40%
Diversified	\$875,808,698	9.73%	\$5,152,988	\$12,874,976	\$857,780,734	9.48%
Western Asset TIPS	383,079,092	4.25%	0	(5,120,764)	388,199,857	4.29%
ISQ Global Infrastructure II	78,837,174	0.88%	(3,380,342)	2,443,200	79,774,316	0.88%
ISQ Global Infrastructure III	26,678,283	0.30%	4,872,697	1,895,502	19,910,084	0.22%
JP Morgan IIF Infrastructure	107,235,985	1.19%	(1,642,637)	5,462,155	103,416,467	1.14%
Grosvenor CIS Fund II	53,473,443	0.59%	(7,288,077)	3,940,614	56,820,906	0.63%
Grosvenor CIS Fund III	42,664,146	0.47%	3,580,695	420,254	38,663,197	0.43%
Macquarie Infrastructure Fund IV	91,879,327	1.02%	(42,534)	1,234,917	90,686,944	1.00%
Macquarie Infrastructure Fund V	91,961,248	1.02%	9,053,186	2,599,098	80,308,964	0.89%
Cash	\$48,368,152	0.54%	\$(84,113,041)	\$2,127,310	\$130,353,883	1.44%
Northern Trust Cash Account	39,467,603	0.44%	(62,037,190)	1,713,815	99,790,978	1.10%
Bank of ND	8,900,549	0.10%	(22,075,851)	413,495	30,562,905	0.34%
Residual Holdings Account	\$2,223,124	0.02%	\$(230,581)	\$5,009	\$2,448,696	0.03%
Total Fund	\$9,004,644,546	100.0%	\$(311,817,383)	\$267,576,387	\$9,048,885,542	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 10 Years
Global Equity					
Gross	6.00%	16.74%	11.85%	7.59%	-
Net	5.96%	16.51%	11.54%	7.32%	-
Weighted Benchmark	5.61%	15.37%	11.13%	7.46%	-
Public Equity					
Gross	6.06%	-	-	-	-
Net	6.02%	-	-	-	-
Weighted Benchmark	5.76%	-	-	-	-
Domestic Equity					
Gross	8.13%	19.08%	14.45%	10.02%	-
Net	8.12%	18.89%	14.14%	9.77%	-
Weighted Benchmark	8.08%	18.36%	13.59%	10.07%	-
Large Cap					
Gross	8.95%	20.11%	15.57%	12.23%	-
Net	8.95%	20.01%	15.39%	12.06%	-
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	12.64%
L.A. Capital Enhanced - Gross	9.68%	19.82%	15.21%	12.85%	-
L.A. Capital Enhanced - Net	9.68%	19.74%	15.09%	12.72%	-
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	12.64%
L.A. Capital LargeCap Growth - Gross	13.59%	26.06%	14.86%	15.60%	-
L.A. Capital LargeCap Growth - Net	13.59%	25.34%	14.48%	15.28%	-
Russell 1000 Growth Index	12.81%	27.11%	13.73%	15.14%	15.74%
Parametric-Clifton Enh R1000 - Gross	8.55%	19.33%	14.21%	12.03%	-
Parametric-Clifton Enh R1000 - Net	8.55%	19.33%	14.11%	11.97%	-
Benchmark(1)	8.58%	19.36%	14.53%	12.26%	12.84%
NTAM R1000 Index - Gross	8.58%	-	-	-	-
NTAM R1000 Index - Net	8.58%	-	-	-	-
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	12.64%
NTAM Quant Enh R1000 - Gross	7.62%	-	-	-	-
NTAM Quant Enh R1000 - Net	7.62%	-	-	-	-
Russell 1000 Index	8.58%	19.36%	14.09%	11.92%	12.64%
Small Cap					
Gross	3.38%	15.09%	10.87%	3.76%	-
Net	3.27%	14.42%	10.13%	3.30%	-
Russell 2000 Index	5.21%	12.31%	10.82%	4.21%	8.26%
Atlanta Capital - Gross	2.39%	16.57%	14.08%	-	-
Atlanta Capital - Net	2.39%	15.91%	13.41%	-	-
S&P 600 Small Cap Index	3.38%	9.75%	15.19%	5.22%	9.81%
Riverbridge Small Cap Growth - Gross	6.56%	16.91%	-	-	-
Riverbridge Small Cap Growth - Net	6.16%	15.92%	-	-	-
Russell 2000 Growth Index	7.05%	18.53%	6.10%	4.22%	8.83%
Sycamore Small Cap Value - Gross	1.29%	13.22%	-	-	-
Sycamore Small Cap Value - Net	1.13%	12.58%	-	-	-
Russell 2000 Value Index	3.18%	6.01%	15.43%	3.54%	7.29%
NTAM R2000 Index - Gross	5.23%	-	-	-	-
NTAM R2000 Index - Net	5.23%	-	-	-	-
Russell 2000 Index	5.21%	12.31%	10.82%	4.21%	8.26%

(1) S&P 500 Index through 6/30/2022 and Russell 1000 Index thereafter.

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 10 Years
Total International Equity					
Gross	2.96%	14.30%	8.01%	3.99%	-
Net	2.89%	14.01%	7.72%	3.70%	-
Benchmark(1)	2.38%	13.08%	7.94%	3.80%	5.06%
International All Cap					
Gross	4.41%	-	-	-	-
Net	4.30%	-	-	-	-
MSCI ACWI xUS IMI	2.38%	12.47%	7.33%	3.38%	4.88%
William Blair Int'l Leaders - Gross	3.04%	17.15%	5.03%	5.89%	-
William Blair Int'l Leaders - Net	2.93%	16.73%	4.65%	5.50%	-
MSCI ACWI xUS IMI	2.38%	12.47%	7.33%	3.38%	4.88%
Arrowstreet ACWI ex US - Gross	5.52%	17.76%	-	-	-
Arrowstreet ACWI ex US - Net	5.40%	17.26%	-	-	-
MSCI ACWI xUS IMI	2.38%	12.47%	7.33%	3.38%	4.88%
Developed Intl Large Cap					
Gross	3.03%	-	-	-	-
Net	3.02%	-	-	-	-
MSCI World xUS	3.03%	17.41%	9.30%	4.58%	5.40%
State St MSCI World exUS - Gross	3.03%	-	-	-	-
State St MSCI World exUS - Net	3.02%	-	-	-	-
MSCI World xUS	3.03%	17.41%	9.30%	4.58%	5.40%
Developed Intl Small Cap					
Gross	0.72%	-	-	-	-
Net	0.64%	-	-	-	-
MSCI World xUS Small	0.49%	10.05%	6.42%	1.83%	5.97%
DFA Intl Small Cap Value - Net	0.87%	15.25%	12.69%	2.19%	-
MSCI World xUS Sm Value	0.71%	10.58%	9.79%	1.88%	5.36%
State St MSCI exUS Small - Gross	0.45%	-	-	-	-
State St MSCI exUS Small - Net	0.44%	-	-	-	-
MSCI World xUS Small	0.49%	10.05%	6.42%	1.83%	5.97%
Wellington Intl SM Cap - Gross	0.78%	-	-	-	-
Wellington Intl SM Cap - Net	0.56%	-	-	-	-
MSCI EAFE Small	0.58%	10.18%	5.70%	1.31%	6.19%
Emerging Markets					
Gross	0.10%	-	-	-	-
Net	0.02%	-	-	-	-
MSCI EM	0.90%	1.75%	2.32%	0.93%	2.95%
Axiom Emerging Markets - Gross	(1.11%)	-	-	-	-
Axiom Emerging Markets - Net	(1.23%)	-	-	-	-
MSCI EM	0.90%	1.75%	2.32%	0.93%	2.95%
Private Equity					
Net	3.03%	4.30%	-	-	-
50 South Capital - Net	(8.68%)	(14.24%)	-	-	-
Sixth Street TAO - Net	7.36%	11.52%	-	-	-
Benchmark(2)	2.50%	10.33%	-	-	-

(1) MSCI EAFE through 6/30/2016; MSCI World ex-US through 9/30/2022; MSCI ACWI xUS IMI(Net) thereafter.

(2) 50% S&P/LSTA Leveraged Loan B and 50% Blmbg HY Corp 2% Issue.

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 10 Years
Domestic Fixed Income					
Gross	0.14%	1.40%	(1.81%)	2.19%	-
Net	0.12%	1.32%	(1.90%)	2.08%	-
Blmbg Aggregate	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
Allspring Med Quality Credit - Gross	0.15%	3.11%	(1.41%)	3.16%	-
Allspring Med Quality Credit - Net	0.15%	2.97%	(1.58%)	2.98%	-
Blmbg Credit Baa	(0.03%)	2.64%	(2.71%)	2.10%	2.95%
Ares ND Credit Strategies Fd - Net	5.05%	7.74%	10.03%	7.92%	-
Cerberus ND Private Credit Fd - Net	2.12%	7.89%	8.81%	8.88%	-
S&P/LSTA Leveraged Loan B	3.25%	11.48%	6.50%	4.47%	4.34%
BND CDs - Net	0.74%	3.03%	2.79%	2.95%	-
Manulife-Declaration TRBF - Net	0.86%	1.18%	0.84%	2.41%	-
Libor-3 Month	1.38%	4.53%	1.73%	1.91%	1.32%
PIMCO Core Plus Cons. - Gross	(0.73%)	-	-	-	-
PIMCO Core Plus Cons. - Net	(0.74%)	-	-	-	-
Blmbg:Aggregate	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
PIMCO Bravo II - Net(1)	(10.06%)	(35.97%)	(6.50%)	(7.12%)	-
PIMCO DiSCO II - Net (1)	2.14%	5.07%	5.03%	4.77%	-
Blmbg Aggregate	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
Prudential Core Plus - Gross	(0.46%)	0.62%	(3.22%)	1.60%	-
Prudential Core Plus - Net	(0.52%)	0.45%	(3.40%)	1.40%	-
Blmbg Aggregate	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
State Street Gov Index - Gross	(1.35%)	-	-	-	-
State Street Gov Index - Net	(1.35%)	-	-	-	-
Blmbg Government	(1.35%)	(2.08%)	(4.71%)	0.46%	0.97%
State Street Credit Index - Gross	(0.29%)	-	-	-	-
State Street Credit Index - Net	(0.29%)	-	-	-	-
Blmbg Credit	(0.31%)	1.39%	(3.38%)	1.65%	2.51%
Western Asset Core Plus - Gross	(0.52%)	(0.55%)	(4.18%)	0.91%	-
Western Asset Core Plus - Net	(0.52%)	(0.64%)	(4.28%)	0.80%	-
Blmbg Aggregate	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%

(1) Prior to 7/1/2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning 7/1/2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.

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 10 Years
Global Real Assets					
Gross	(0.74%)	(0.98%)	5.85%	5.77%	-
Net	(0.85%)	(1.24%)	5.58%	5.48%	-
Weighted Benchmark	(1.35%)	(3.22%)	4.20%	4.49%	-
Real Estate					
Gross	(4.71%)	(9.57%)	7.68%	5.97%	-
Net	(4.95%)	(9.99%)	7.21%	5.48%	-
NCREIF Total Index	(1.98%)	(6.60%)	6.79%	5.90%	7.82%
Invesco Core Real Estate - Gross	(6.41%)	(9.83%)	7.33%	6.05%	-
Invesco Core Real Estate - Net	(6.56%)	(10.10%)	6.99%	5.70%	-
NCREIF Total Index	(1.98%)	(6.60%)	6.79%	5.90%	7.82%
Invesco RE Fund VI - Net	(4.07%)	-	-	-	-
NCREIF Total Index	(1.98%)	(6.60%)	6.79%	5.90%	7.82%
JP Morgan RE Inc & Growth - Gross	(3.05%)	(10.47%)	7.57%	5.65%	-
JP Morgan RE Inc & Growth - Net	(3.43%)	(11.10%)	6.94%	4.99%	-
NCREIF Total Index	(1.98%)	(6.60%)	6.79%	5.90%	7.82%
Diversified					
Gross	1.50%	4.33%	5.28%	5.80%	-
Net	1.45%	4.16%	5.10%	5.61%	-
Weighted Benchmark	(1.03%)	(1.52%)	2.89%	3.77%	-
Western Asset TIPS - Gross	(1.32%)	(0.91%)	(0.20%)	2.28%	-
Western Asset TIPS - Net	(1.32%)	(1.00%)	(0.30%)	2.17%	-
Benchmark(3)	(1.41%)	(1.33%)	(0.31%)	2.42%	2.45%
JP Morgan IIF Infrastructure - Gross	5.29%	12.50%	8.43%	7.62%	-
JP Morgan IIF Infrastructure - Net	4.92%	11.49%	7.56%	6.82%	-
Grosvenor CIS Fund II - Net	7.78%	16.30%	17.22%	14.55%	-
Grosvenor CIS Fund III - Net	0.99%	5.19%	-	-	-
Benchmark(1)	(0.69%)	(3.04%)	6.49%	4.98%	3.16%
ISQ Global Infrastructure II - Net	3.19%	10.04%	14.21%	10.33%	-
ISQ Global Infrastructure III - Net	7.94%	1.78%	-	-	-
Macquarie Infrastructure Fd IV - Net	1.36%	2.67%	12.66%	-	-
Macquarie Infrastructure Fd V - Net	2.92%	6.21%	-	-	-
Benchmark(2)	(0.69%)	(3.04%)	6.49%	4.98%	-
Cash & Equivalents - Net					
NT Cash Account - Net	1.20%	3.58%	1.24%	1.45%	0.90%
Bank of ND - Net	1.18%	3.42%	1.17%	-	-
Bank of ND - Net	1.23%	3.82%	1.37%	-	-
90 Day Treasury Bills	1.17%	3.59%	1.27%	1.55%	0.98%
Total Fund					
Gross	2.95%	8.37%	6.28%	5.68%	5.98%
Net	2.91%	8.19%	6.06%	5.47%	5.77%
Target*	2.30%	6.82%	4.89%	5.03%	5.06%
Corridor Benchmark	2.41%	7.05%	4.99%	5.07%	5.09%

* Current Quarter Target = 35.1% Blmbg:Aggregate, 25.7% Russell 1000 Index, 19.0% MSCI ACWI xUS IMI, 9.6% DRA Weighted Benchmark, 5.2% NCREIF Total Index, 4.5% Russell 2000 Index and 0.9% Private Equity.

(1) CPI-W through 6/30/2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

(2) 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.

(3) Blmbg Global Inflation-Linked through 10/31/2018 and Blmbg US Govt Inflation Linked Bond Index thereafter.

Domestic Equity Period Ended June 30, 2023

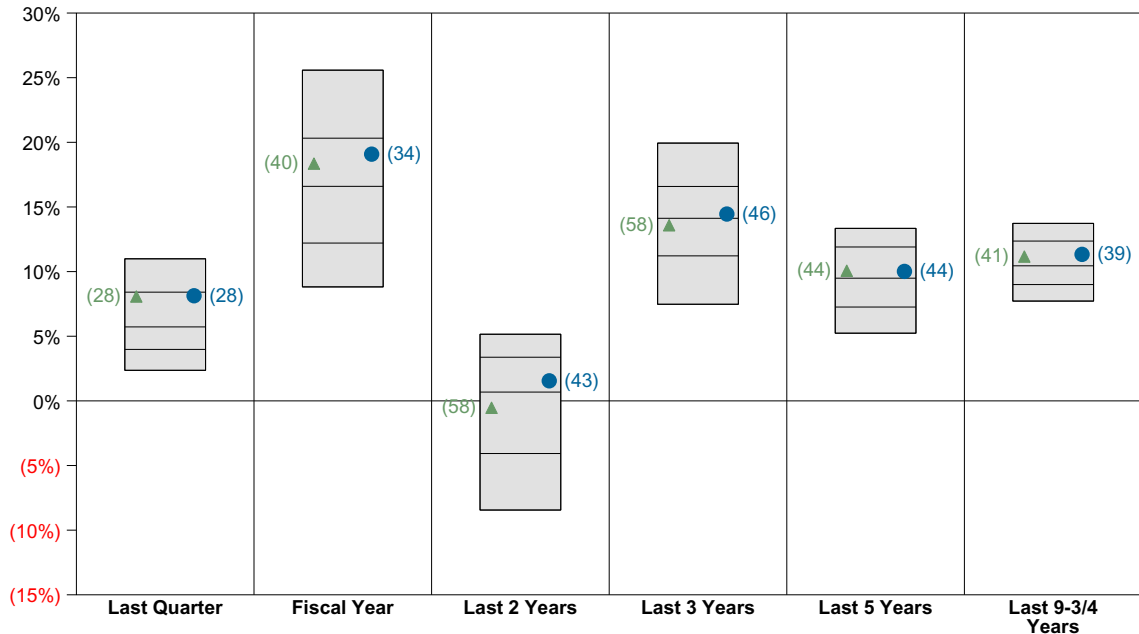
Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a 8.13% return for the quarter placing it in the 28 percentile of the Total Domestic Equity Database group for the quarter and in the 34 percentile for the last year.
- Domestic Equity's portfolio outperformed the Domestic Equity Target by 0.06% for the quarter and outperformed the Domestic Equity Target for the year by 0.73%.

Quarterly Asset Growth

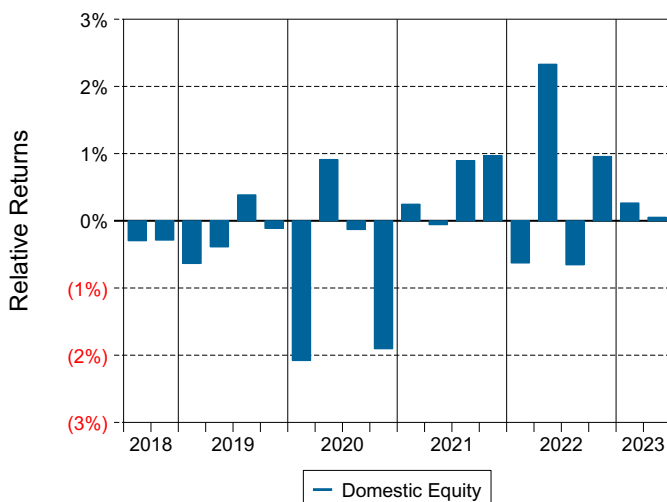
Beginning Market Value	\$2,717,098,420
Net New Investment	\$-234,249,899
Investment Gains/(Losses)	\$216,315,780
Ending Market Value	\$2,699,164,300

Performance vs Total Domestic Equity Database (Gross)

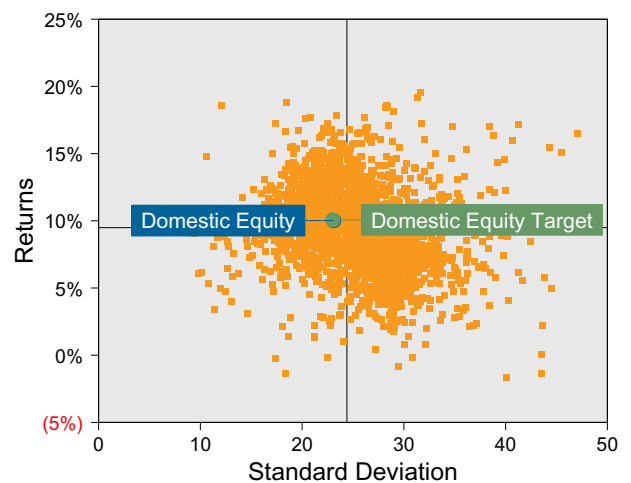


10th Percentile	10.99	25.58	5.15	19.94	13.34	13.73
25th Percentile	8.41	20.32	3.38	16.59	11.90	12.36
Median	5.72	16.59	0.68	14.12	9.49	10.45
75th Percentile	3.98	12.21	(4.07)	11.22	7.26	9.00
90th Percentile	2.36	8.82	(8.44)	7.47	5.23	7.72
Domestic Equity ●	8.13	19.08	1.55	14.45	10.02	11.33
Domestic Equity Target ▲	8.08	18.36	(0.53)	13.58	10.07	11.17

Relative Return vs Domestic Equity Target



Total Domestic Equity Database (Gross) Annualized Five Year Risk vs Return



Parametric-Clifton Enh R1000

Period Ended June 30, 2023

Investment Philosophy

The Enhanced US Large Cap strategy seeks to outperform the Russell 1000 Index by 50-100 basis points annually. The strategy seeks to exhibit risk levels similar to the Russell Index and achieve a modest level of outperformance consistency relative to the Russell Index. **Effective July 1, 2022, the strategy benchmark changed from S&P500 to Russell 1000. Benchmark returns for the S&P500 Index are linked to Russell 1000 Index.**

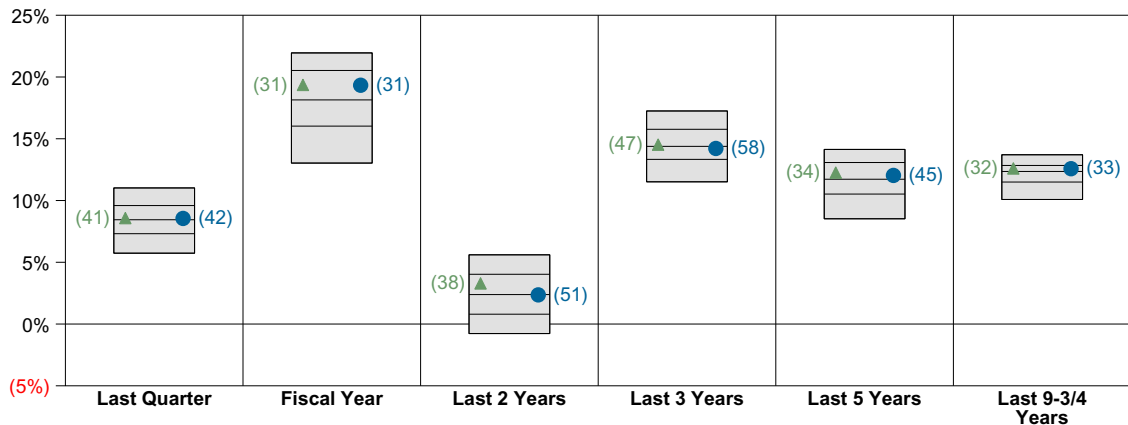
Quarterly Summary and Highlights

- Parametric-Clifton Enh R1000's portfolio posted a 8.55% return for the quarter placing it in the 42 percentile of the Callan Large Cap Core group for the quarter and in the 31 percentile for the last year.
- Parametric-Clifton Enh R1000's portfolio underperformed the Benchmark by 0.03% for the quarter and underperformed the Benchmark for the year by 0.03%.

Quarterly Asset Growth

Beginning Market Value	\$361,706,110
Net New Investment	\$0
Investment Gains/(Losses)	\$30,924,381
Ending Market Value	\$392,630,491

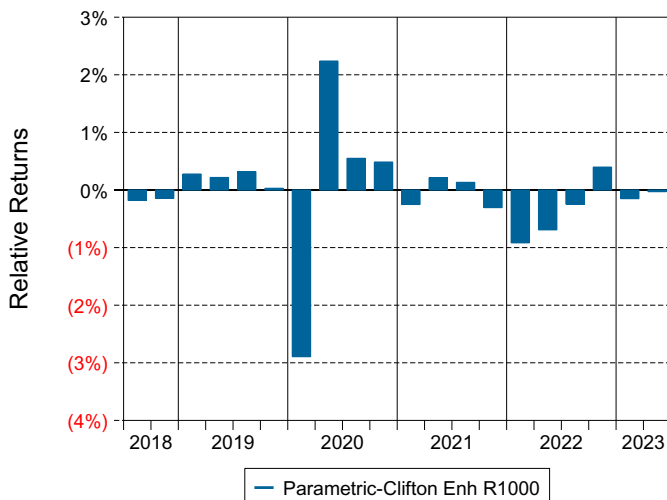
Performance vs Callan Large Cap Core (Gross)



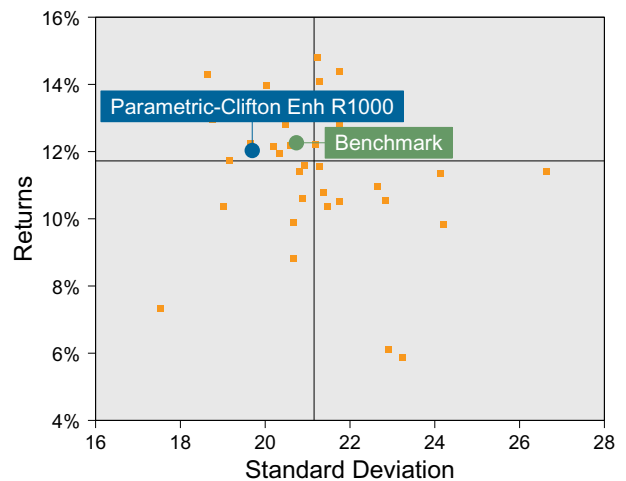
	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-3/4 Years
10th Percentile	11.02	21.95	5.60	17.25	14.14	13.70
25th Percentile	9.59	20.53	4.03	15.77	13.08	12.84
Median	8.44	18.14	2.39	14.38	11.72	12.35
75th Percentile	7.31	16.02	0.80	13.33	10.52	11.50
90th Percentile	5.74	13.03	(0.77)	11.51	8.52	10.08

	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-3/4 Years
Parametric-Clifton Enh R1000 ●	8.55	19.33	2.36	14.21	12.03	12.58
Benchmark ▲	8.58	19.36	3.29	14.53	12.26	12.60

Relative Return vs Benchmark



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



L.A. Capital Period Ended June 30, 2023

Investment Philosophy

The LA Capital Structured portfolio is a large growth portfolio benchmarked to the Russell 1000 Growth Index. It is an active assignment meaning that it targets a 2% alpha and constrains its risk budget (tracking error) to 4% relative to the benchmark. LA Capital believes that investment results are driven by Investor Preferences and thus recognize that when preferences shift a different posture related to that factor is warranted.

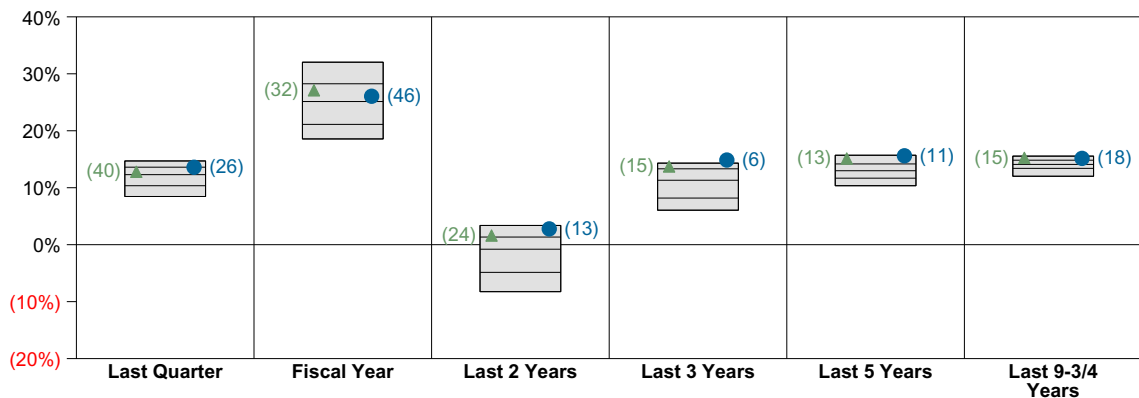
Quarterly Summary and Highlights

- L.A. Capital Large Cap Growth's portfolio posted a 13.59% return for the quarter placing it in the 26 percentile of the Callan Large Cap Growth group for the quarter and in the 46 percentile for the last year.
- L.A. Capital Large Cap Growth's portfolio outperformed the Russell 1000 Growth Index by 0.78% for the quarter and underperformed the Russell 1000 Growth Index for the year by 1.05%.

Quarterly Asset Growth

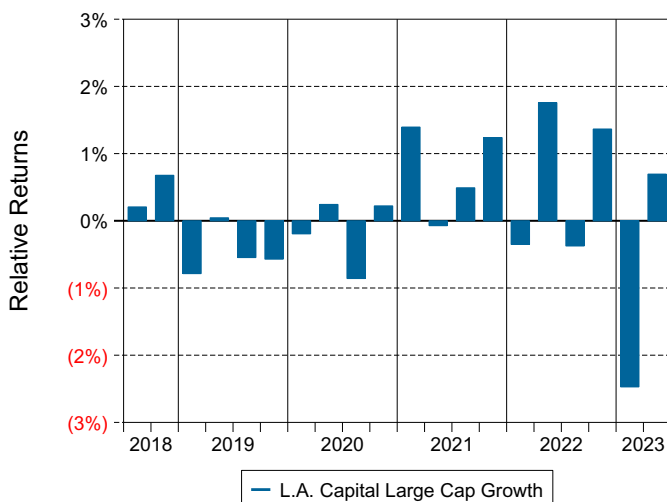
Beginning Market Value	\$69,067,166
Net New Investment	\$0
Investment Gains/(Losses)	\$9,388,121
Ending Market Value	\$78,455,288

Performance vs Callan Large Cap Growth (Gross)

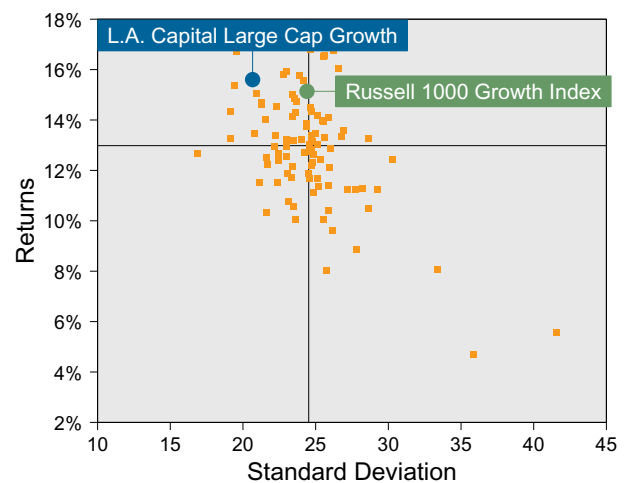


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 9-3/4 Years
10th Percentile	14.70	32.04	3.38	14.32	15.70	15.55
25th Percentile	13.60	28.25	1.34	13.32	14.18	14.83
Median	12.29	25.13	(0.80)	11.31	12.98	14.09
75th Percentile	10.35	21.12	(4.86)	8.18	11.67	13.40
90th Percentile	8.46	18.56	(8.25)	6.06	10.35	12.01
L.A. Capital Large Cap Growth	● 13.59	26.06	2.77	14.86	15.60	15.15
Russell 1000 Growth Index	▲ 12.81	27.11	1.61	13.73	15.14	15.25

Relative Return vs Russell 1000 Growth Index



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



L.A. Capital Enhanced Period Ended June 30, 2023

Investment Philosophy

The LA Capital Enhanced portfolio is a large core portfolio benchmarked to the Russell 1000 Index. Characterized as an enhanced index assignment, its objective is to track the benchmark with lower variability. The pension portfolio began in August of 2000 and the insurance portfolio was initiated in April of 2004. Since October of 2006 a small portion of each of the two core accounts was allocated into the Large Cap Alpha Fund with intent to add incremental alpha to the assignment given that the information ratio was expected to be higher.

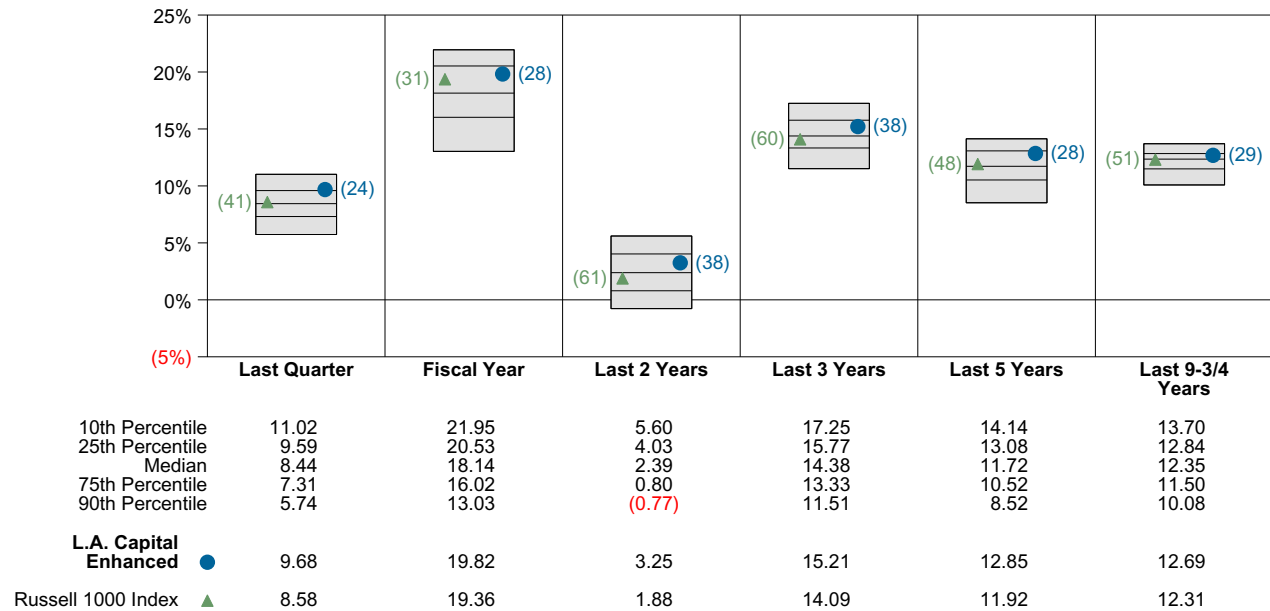
Quarterly Summary and Highlights

- L.A. Capital Enhanced's portfolio posted a 9.68% return for the quarter placing it in the 24 percentile of the Callan Large Cap Core group for the quarter and in the 28 percentile for the last year.
- L.A. Capital Enhanced's portfolio outperformed the Russell 1000 Index by 1.10% for the quarter and outperformed the Russell 1000 Index for the year by 0.46%.

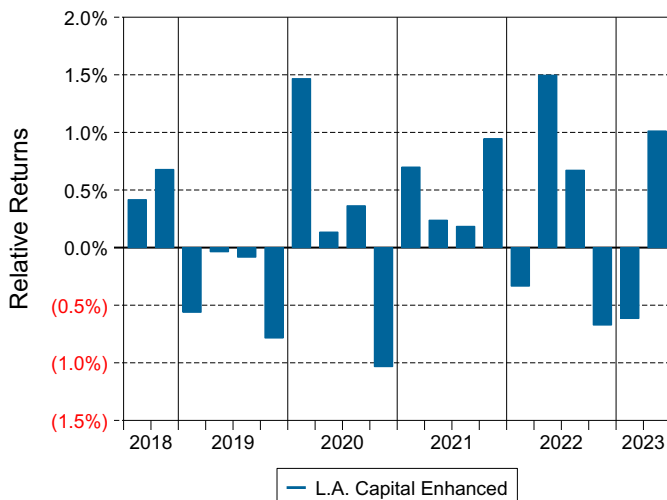
Quarterly Asset Growth

Beginning Market Value	\$958,396,140
Net New Investment	\$0
Investment Gains/(Losses)	\$92,760,832
Ending Market Value	\$1,051,156,972

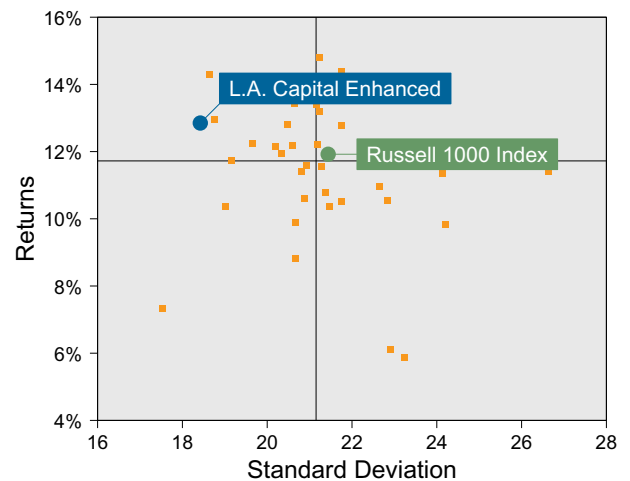
Performance vs Callan Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



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



NTAM R1000 Index Period Ended June 30, 2023

Investment Philosophy

The primary objective of the Northern Trust Russell 1000 Index Fund is to approximate the risk and return characteristics of the Russell 1000 Index.

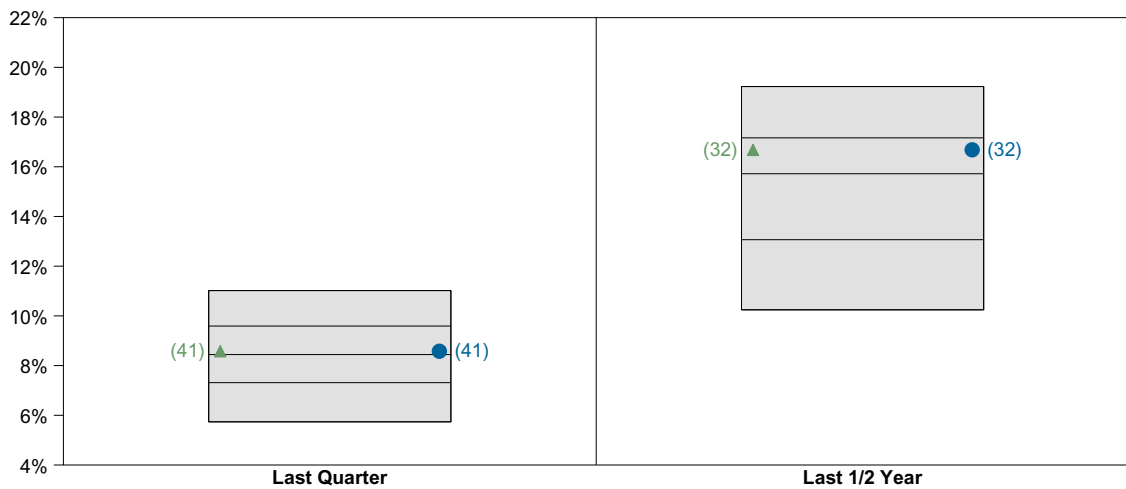
Quarterly Summary and Highlights

- NTAM R1000 Index's portfolio posted a 8.58% return for the quarter placing it in the 41 percentile of the Callan Large Cap Core group for the quarter and in the 32 percentile for the last one-half year.
- NTAM R1000 Index's portfolio underperformed the Russell 1000 Index by 0.00% for the quarter and outperformed the Russell 1000 Index for the one-half year by 0.00%.

Quarterly Asset Growth

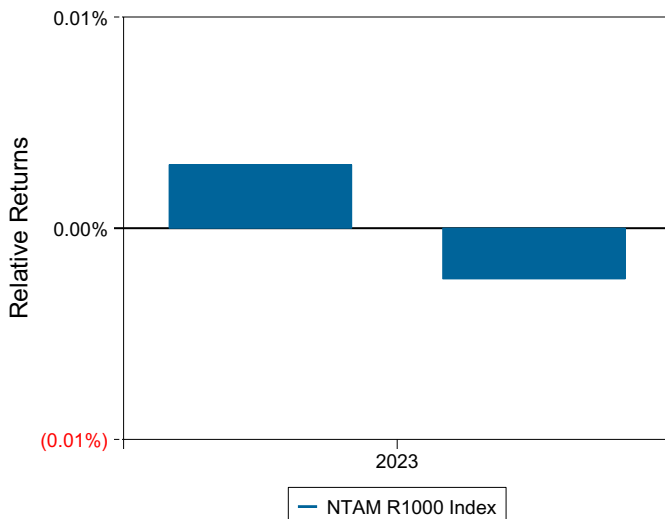
Beginning Market Value	\$577,933,247
Net New Investment	\$-224,600,000
Investment Gains/(Losses)	\$41,633,507
Ending Market Value	\$394,966,754

Performance vs Callan Large Cap Core (Gross)

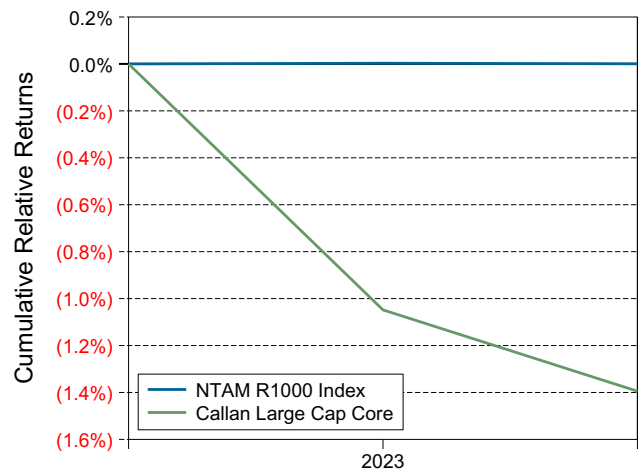


10th Percentile	11.02	19.23
25th Percentile	9.59	17.16
Median	8.44	15.72
75th Percentile	7.31	13.07
90th Percentile	5.74	10.24
NTAM R1000 Index	8.58	16.68
Russell 1000 Index	8.58	16.68

Relative Return vs Russell 1000 Index



Cumulative Returns vs Russell 1000 Index



NTAM Quant Enhanced R1000

Period Ended June 30, 2023

Investment Philosophy

The Fund's Investment Objective is to exceed the total return of the Russell 1000 Index* (the Benchmark) by 150 basis points on a gross of fee basis while targeting expected tracking error of no greater than 150-200 basis points.

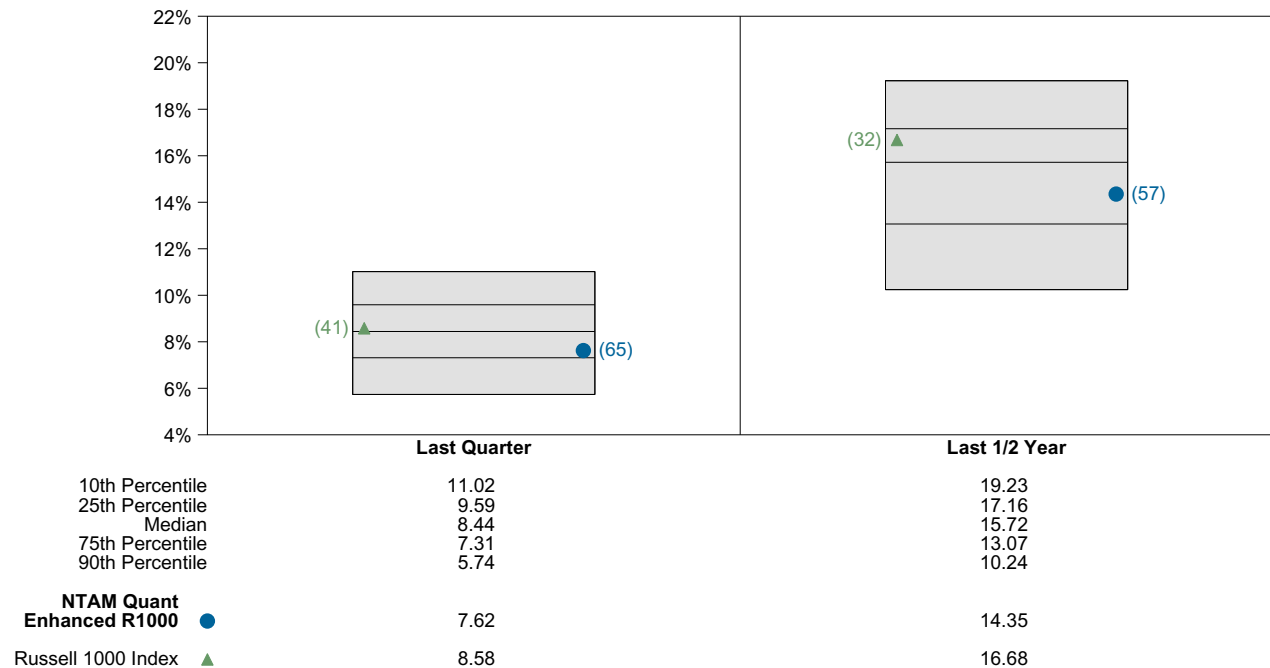
Quarterly Summary and Highlights

- NTAM Quant Enhanced R1000's portfolio posted a 7.62% return for the quarter placing it in the 65 percentile of the Callan Large Cap Core group for the quarter and in the 57 percentile for the last one-half year.
- NTAM Quant Enhanced R1000's portfolio underperformed the Russell 1000 Index by 0.96% for the quarter and underperformed the Russell 1000 Index for the one-half year by 2.33%.

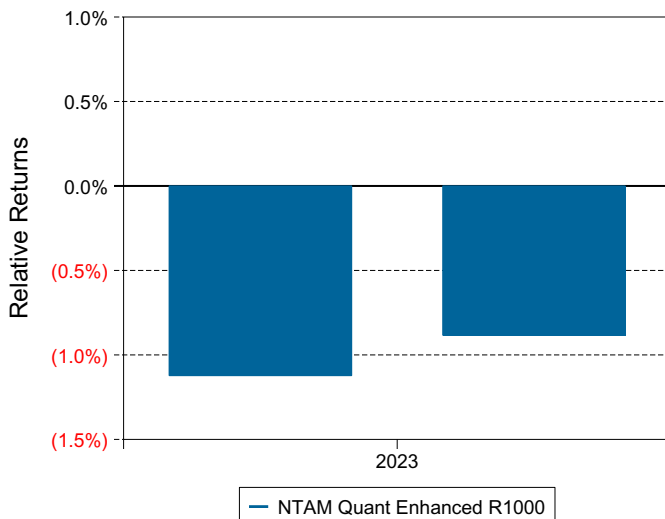
Quarterly Asset Growth

Beginning Market Value	\$359,335,774
Net New Investment	\$0
Investment Gains/(Losses)	\$27,385,607
Ending Market Value	\$386,721,380

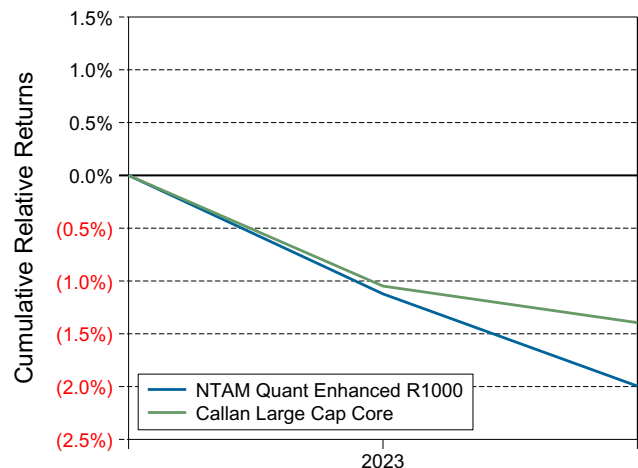
Performance vs Callan Large Cap Core (Gross)



Relative Return vs Russell 1000 Index



Cumulative Returns vs Russell 1000 Index



NTAM R2000 Index Period Ended June 30, 2023

Investment Philosophy

The primary objective of the Northern Trust Russell 2000 Equity Index Fund is to approximate the risk and return characteristics of the Russell 2000 Index.

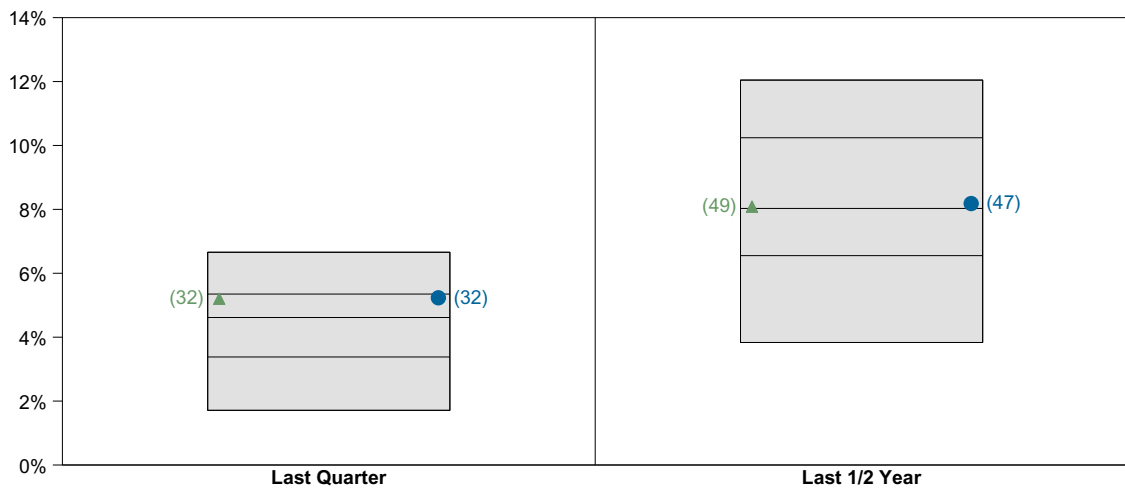
Quarterly Summary and Highlights

- NTAM R2000 Index's portfolio posted a 5.23% return for the quarter placing it in the 32 percentile of the Callan Small Cap Core group for the quarter and in the 47 percentile for the last one-half year.
- NTAM R2000 Index's portfolio outperformed the Russell 2000 Index by 0.03% for the quarter and outperformed the Russell 2000 Index for the one-half year by 0.10%.

Quarterly Asset Growth

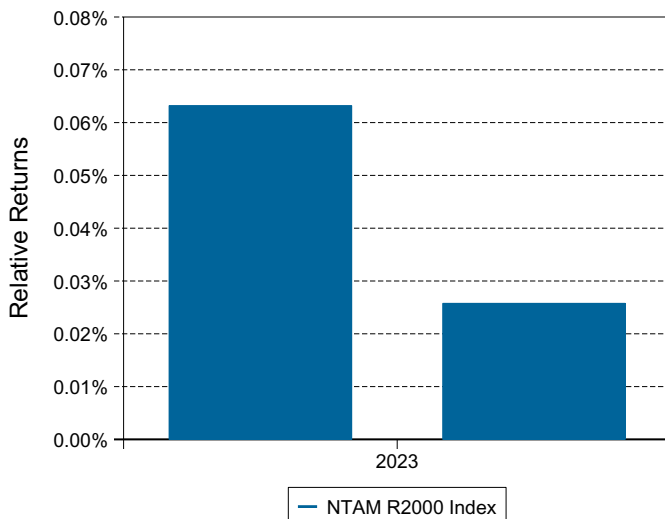
Beginning Market Value	\$19,701,558
Net New Investment	\$-9,000,000
Investment Gains/(Losses)	\$1,664,009
Ending Market Value	\$12,365,567

Performance vs Callan Small Cap Core (Gross)

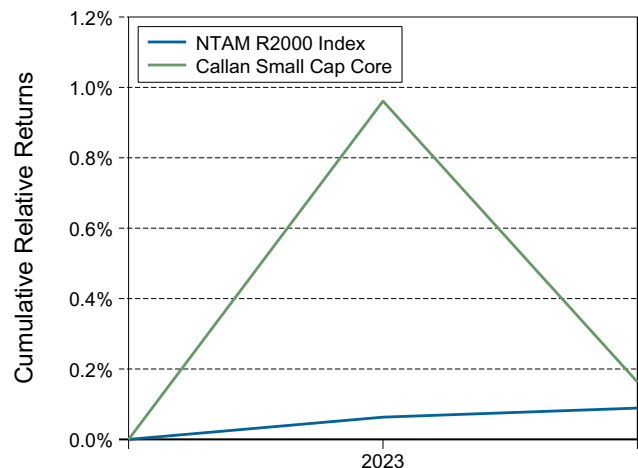


10th Percentile	6.66	12.05
25th Percentile	5.35	10.24
Median	4.62	8.03
75th Percentile	3.38	6.55
90th Percentile	1.71	3.83
NTAM R2000 Index	5.23	8.18
Russell 2000 Index	5.21	8.09

Relative Return vs Russell 2000 Index



Cumulative Returns vs Russell 2000 Index



Atlanta Capital Period Ended June 30, 2023

Investment Philosophy

Atlanta Capital Management focuses on high quality companies and seeks to develop portfolios with an overall risk profile similar to the Russell 2000 Index. Atlanta screens for stocks rated B+ or better by S&P and with at least five years of financial history. Portfolio managers screen stocks, primarily those in the Russell 2000 Index, to identify companies based on what Atlanta considers a favorable combination of valuation and stable earnings and dividend growth. Atlanta's analyst team also strives to identify companies with a "purchase catalyst" or something that differentiates the company from its industry peers.

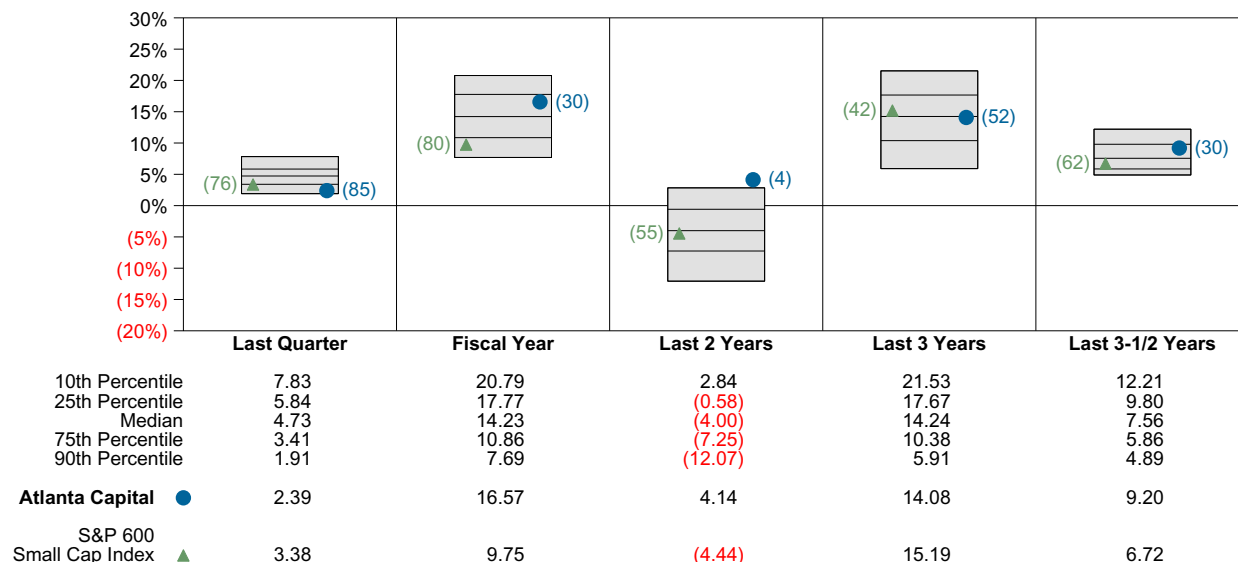
Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a 2.39% return for the quarter placing it in the 85 percentile of the Callan Small Capitalization group for the quarter and in the 30 percentile for the last year.
- Atlanta Capital's portfolio underperformed the S&P 600 Small Cap Index by 0.99% for the quarter and outperformed the S&P 600 Small Cap Index for the year by 6.82%.

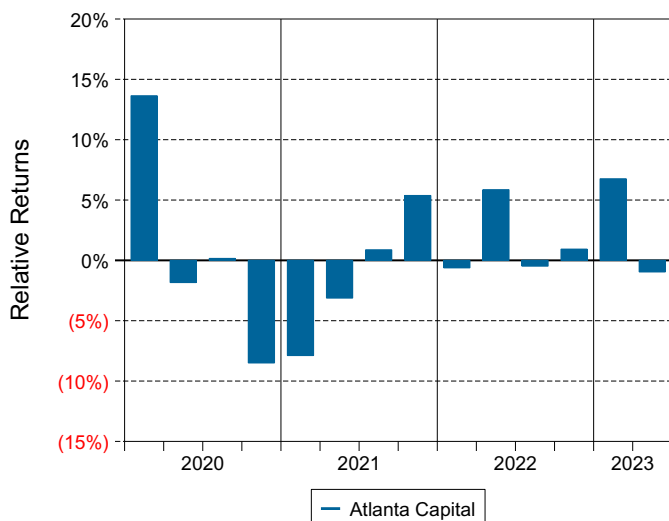
Quarterly Asset Growth

Beginning Market Value	\$127,603,654
Net New Investment	\$0
Investment Gains/(Losses)	\$3,052,050
Ending Market Value	\$130,655,704

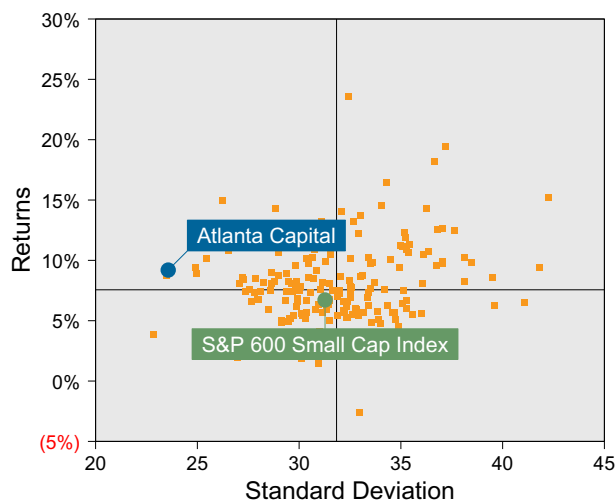
Performance vs Callan Small Capitalization (Gross)



Relative Return vs S&P 600 Small Cap Index



Callan Small Capitalization (Gross) Annualized Three and One-Half Year Risk vs Return



Riverbridge Small Cap Growth Period Ended June 30, 2023

Investment Philosophy

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

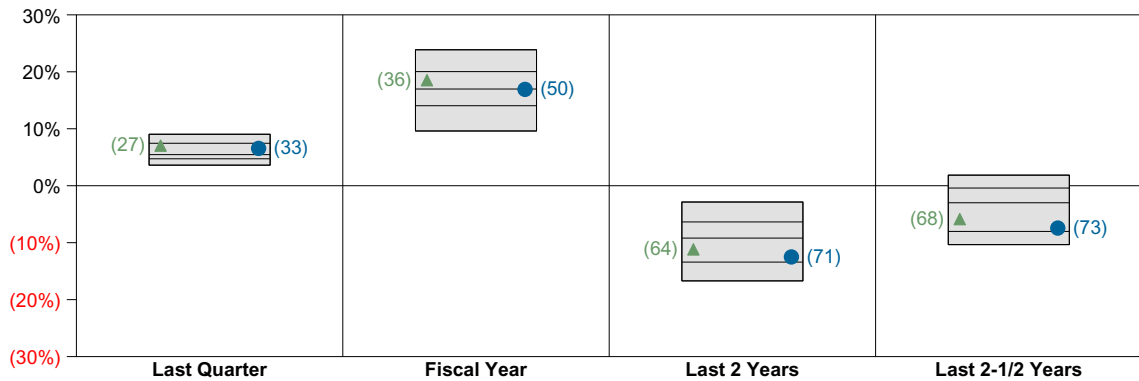
Quarterly Summary and Highlights

- Riverbridge Small Cap Growth's portfolio posted a 6.56% return for the quarter placing it in the 33 percentile of the Callan Small Cap Growth group for the quarter and in the 50 percentile for the last year.
- Riverbridge Small Cap Growth's portfolio underperformed the Russell 2000 Growth Index by 0.50% for the quarter and underperformed the Russell 2000 Growth Index for the year by 1.62%.

Quarterly Asset Growth

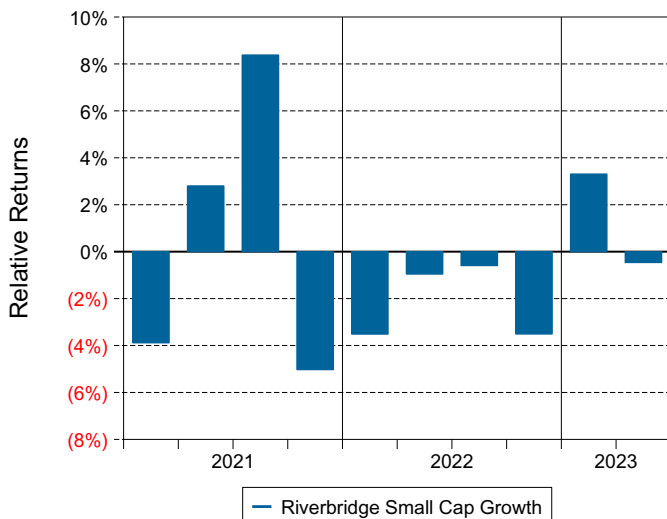
Beginning Market Value	\$121,342,017
Net New Investment	\$-456,931
Investment Gains/(Losses)	\$7,937,663
Ending Market Value	\$128,822,748

Performance vs Callan Small Cap Growth (Gross)

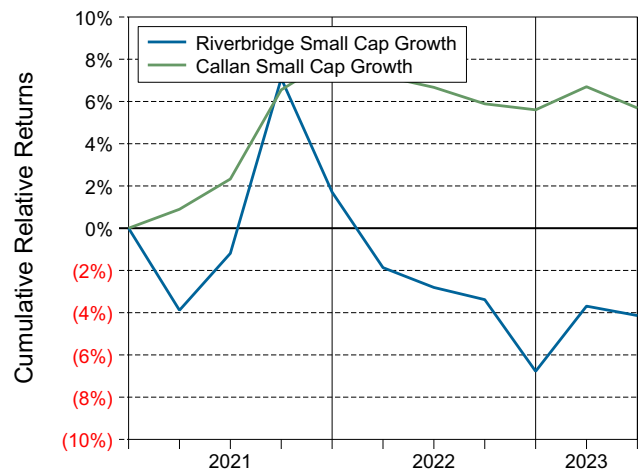


	Last Quarter	Fiscal Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	9.04	23.87	(2.86)	1.86
25th Percentile	7.45	20.03	(6.36)	(0.41)
Median	5.46	16.97	(9.19)	(2.99)
75th Percentile	4.73	14.04	(13.41)	(8.02)
90th Percentile	3.61	9.61	(16.71)	(10.34)
Riverbridge Small Cap Growth ●	6.56	16.91	(12.51)	(7.43)
Russell 2000 Growth Index ▲	7.05	18.53	(11.17)	(5.86)

Relative Return vs Russell 2000 Growth Index



Cumulative Returns vs Russell 2000 Growth Index



Sycamore Small Cap Value Period Ended June 30, 2023

Investment Philosophy

The Victory Small Cap Value Equity investment approach focuses on companies with market capitalizations between \$100 million and \$2 billion that are believed offer above-average total return potential with limited risk. The Small Cap Value Equity investment process seeks to identify high quality, low expectation small cap companies that appear poised for continued or improved earnings. Portfolios typically hold 100-125 stocks with average annual portfolio turnover of 40%. The team will begin to sell when a company's market capitalization exceeds \$4 billion, however they focus on the weighted average market capitalization of the total portfolio and thus may retain exposure to some mid cap companies.

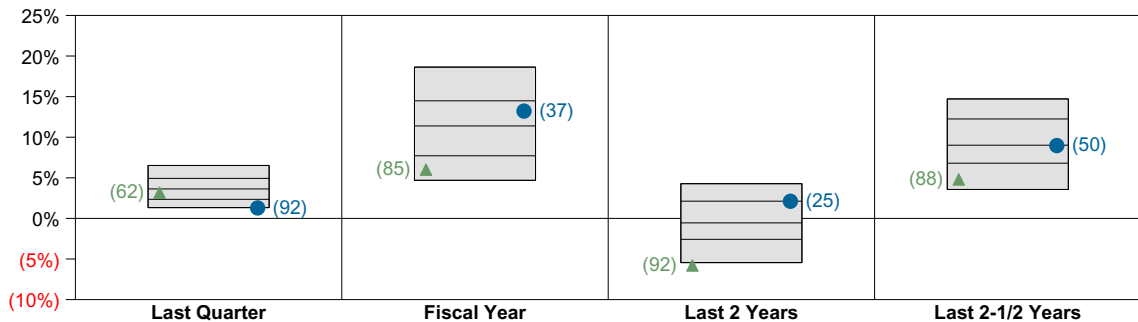
Quarterly Summary and Highlights

- Sycamore Small Cap Value's portfolio posted a 1.29% return for the quarter placing it in the 92 percentile of the Callan Small Cap Value group for the quarter and in the 37 percentile for the last year.
- Sycamore Small Cap Value's portfolio underperformed the Russell 2000 Value Index by 1.89% for the quarter and outperformed the Russell 2000 Value Index for the year by 7.21%.

Quarterly Asset Growth

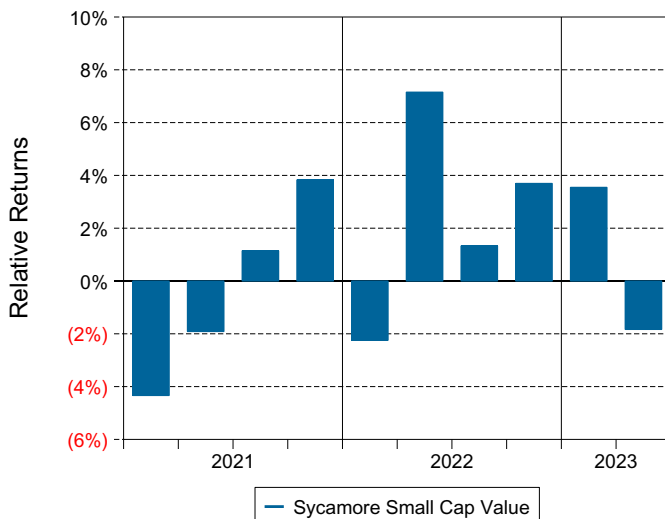
Beginning Market Value	\$122,012,757
Net New Investment	\$-192,968
Investment Gains/(Losses)	\$1,569,608
Ending Market Value	\$123,389,397

Performance vs Callan Small Cap Value (Gross)

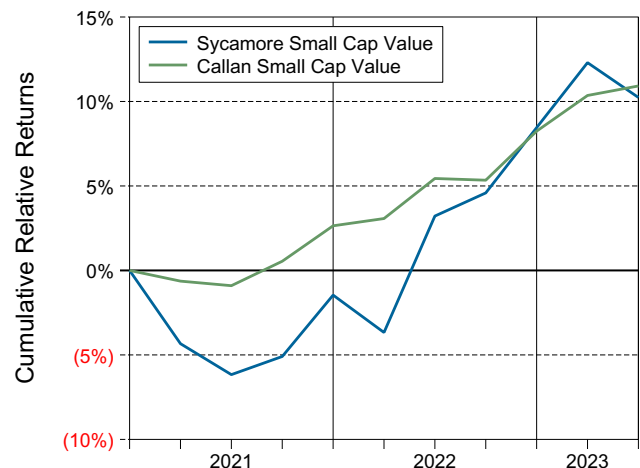


	Last Quarter	Fiscal Year	Last 2 Years	Last 2-1/2 Years
10th Percentile	6.52	18.63	4.28	14.72
25th Percentile	4.93	14.48	2.12	12.25
Median	3.63	11.39	(0.55)	9.02
75th Percentile	2.35	7.71	(2.58)	6.80
90th Percentile	1.33	4.69	(5.44)	3.57
Sycamore Small Cap Value ●	1.29	13.22	2.11	8.97
Russell 2000 Value Index ▲	3.18	6.01	(5.79)	4.80

Relative Return vs Russell 2000 Value Index



Cumulative Returns vs Russell 2000 Value Index



International Equity Period Ended June 30, 2023

Quarterly Summary and Highlights

- International Equity's portfolio posted a 2.96% return for the quarter placing it in the 64 percentile of the Callan Non-US Equity group for the quarter and in the 85 percentile for the last year.
- International Equity's portfolio outperformed the International Equity Target by 0.57% for the quarter and outperformed the International Equity Target for the year by 1.22%.

Quarterly Asset Growth

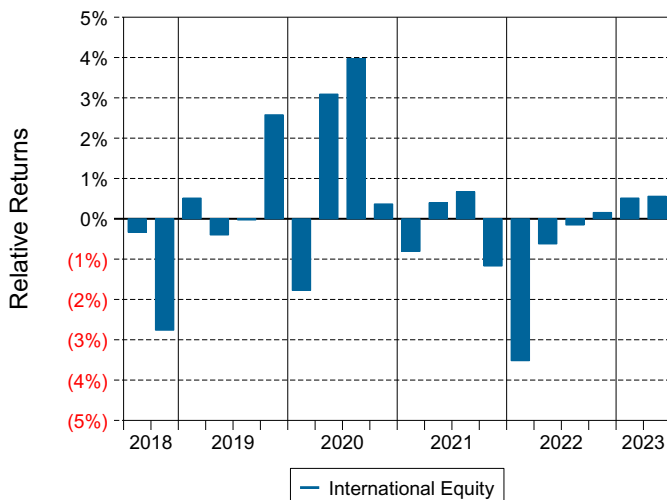
Beginning Market Value	\$1,768,799,293
Net New Investment	\$-4,981,826
Investment Gains/(Losses)	\$52,432,249
Ending Market Value	\$1,816,249,716

Performance vs Callan Non-US Equity (Gross)

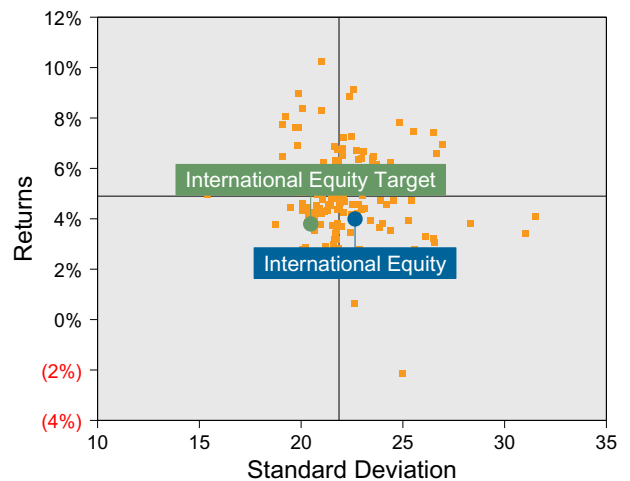


10th Percentile	4.45	22.40	1.51	13.03	6.93	7.04
25th Percentile	4.03	20.37	0.19	10.81	5.96	6.04
Median	3.21	18.10	(1.96)	9.01	4.90	5.45
75th Percentile	2.61	16.16	(4.92)	7.32	3.93	4.73
90th Percentile	1.57	13.46	(8.15)	5.02	2.89	3.96
International Equity	● 2.96	14.30	(4.73)	8.01	3.99	5.10
International Equity Target	▲ 2.38	13.08	(2.98)	7.94	3.80	4.02

Relative Return vs International Equity Target



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



William Blair Int'l Leaders Period Ended June 30, 2023

Investment Philosophy

One of the basic investment tenets of William Blair & Company has been its focus on quality growth companies. They believe that investing in quality growth companies will generate above average results with generally less risk than the market. This opportunity exists because they believe the market underestimates the durability and rate of growth in companies that have the following characteristics: strong management with a unique vision, competitive advantages that prolong the duration and size of earnings growth, and conservative financing. Internationally, they believe that this philosophy can be combined with strategic flexibility in managing geographic exposure, capitalization, sector emphasis, and relative growth and valuation at the portfolio level in order to provide an appropriate degree of adaptability to cyclical conditions.

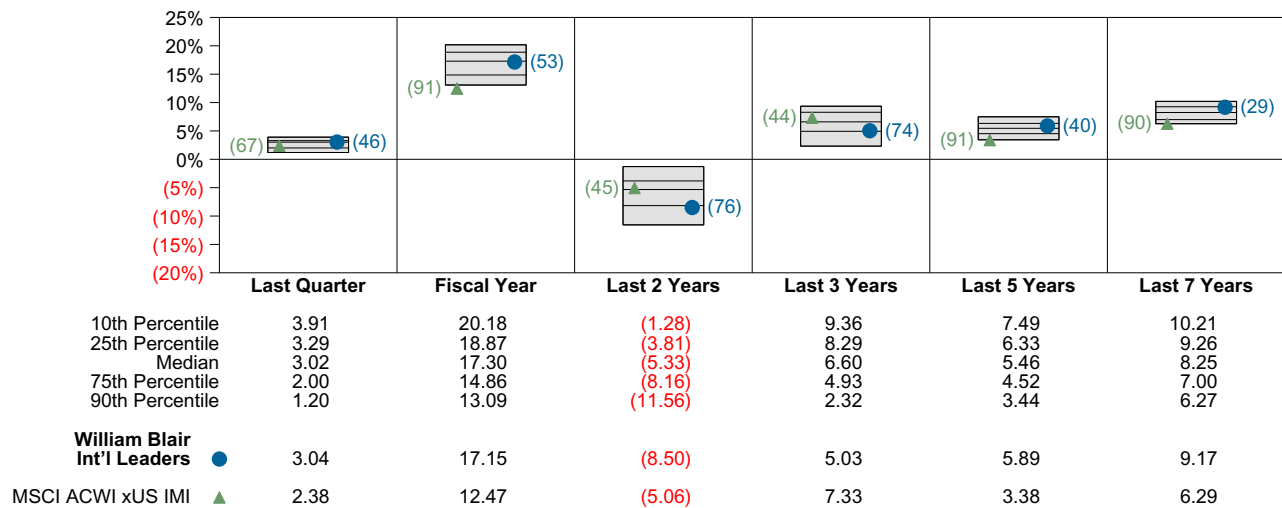
Quarterly Summary and Highlights

- William Blair Int'l Leaders's portfolio posted a 3.04% return for the quarter placing it in the 46 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 53 percentile for the last year.
- William Blair Int'l Leaders's portfolio outperformed the MSCI ACWI xUS IMI by 0.65% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 4.68%.

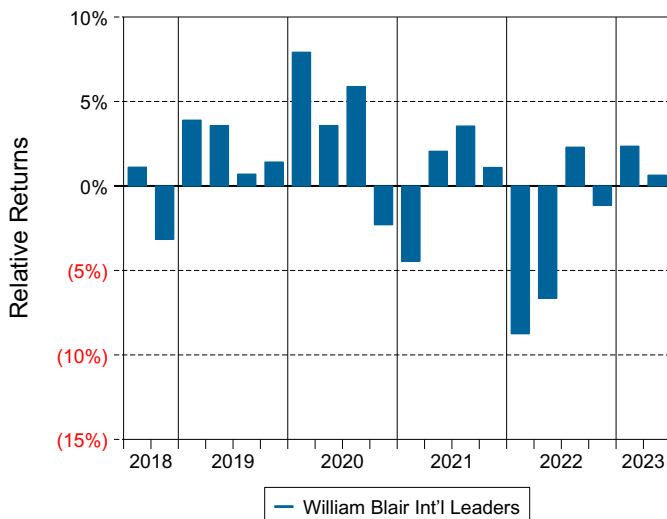
Quarterly Asset Growth

Beginning Market Value	\$278,678,981
Net New Investment	\$-285,061
Investment Gains/(Losses)	\$8,454,888
Ending Market Value	\$286,848,807

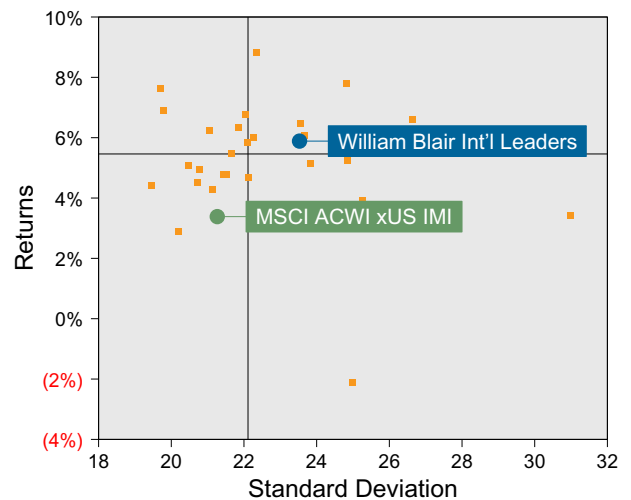
Performance vs Callan Non-US All Country Growth Equity (Gross)



Relative Return vs MSCI ACWI xUS IMI



Callan Non-US All Country Growth Equity (Gross) Annualized Five Year Risk vs Return



Arrowstreet ACWI ex US Period Ended June 30, 2023

Investment Philosophy

Arrowstreet is a 100% employed-owned firm whose strategies are team-managed by a deep and experienced team. The firm employs a quantitative process that identifies direct and indirect relationships to forecast stock price returns. The investment approach seeks to provide a risk controlled, core exposure to Non-US developed and emerging countries. The portfolio is diversified with 150 to 775 holdings (typically 307-467) across countries and sectors. The firm's dedication to research has led to a model that has adapted to multiple market environments and provided consistent results over time.

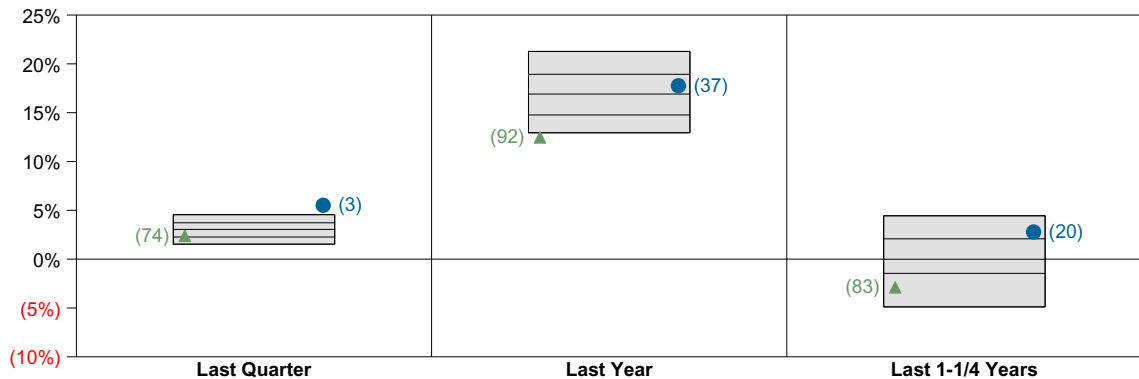
Quarterly Summary and Highlights

- Arrowstreet ACWI ex US's portfolio posted a 5.52% return for the quarter placing it in the 3 percentile of the Callan Non-US All Country Broad Equity group for the quarter and in the 37 percentile for the last year.
- Arrowstreet ACWI ex US's portfolio outperformed the MSCI ACWI xUS IMI by 3.13% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 5.29%.

Quarterly Asset Growth

Beginning Market Value	\$388,303,355
Net New Investment	\$-466,614
Investment Gains/(Losses)	\$21,413,678
Ending Market Value	\$409,250,419

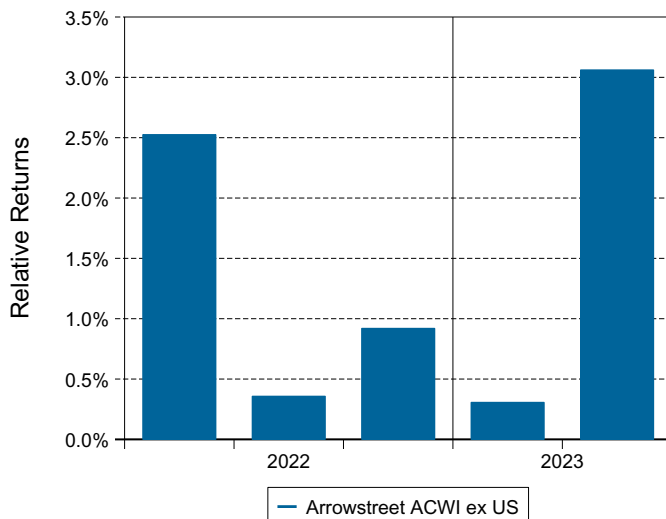
Performance vs Callan Non-US All Country Broad Equity (Gross)



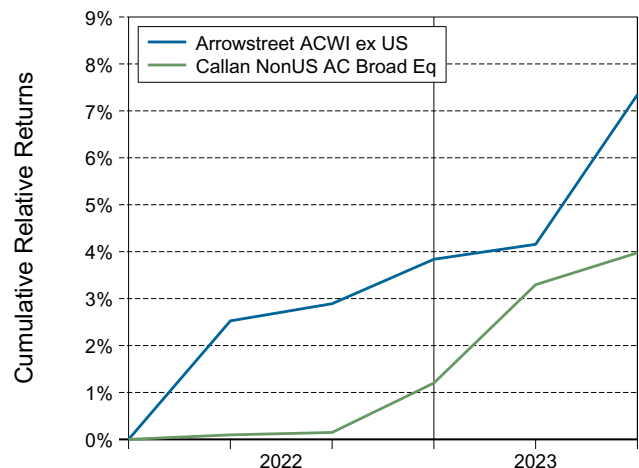
	Last Quarter	Last Year	Last 1-1/4 Years
10th Percentile	4.56	21.27	4.44
25th Percentile	3.72	18.93	2.08
Median	3.05	16.91	(0.01)
75th Percentile	2.27	14.77	(1.46)
90th Percentile	1.53	12.94	(4.89)

Arrowstreet ACWI ex US ●	5.52	17.76	2.78
MSCI ACWI xUS IMI ▲	2.38	12.47	(2.88)

Relative Return vs MSCI ACWI xUS IMI



Cumulative Returns vs MSCI ACWI xUS IMI



State St MSCI World exUS Period Ended June 30, 2023

Investment Philosophy

SSGA's investment process is built on meeting the clients objectives, minimizing transaction costs and making decisions through a team framework. To determine which indexing methodology to use, they begin by considering the following factors: size of the portfolio, breadth of the benchmark, liquidity of constituents, custody costs, tracking error tolerance, availability of data, and the seasoning of the portfolio. Most often, full replication is used due to their belief in efficient markets.

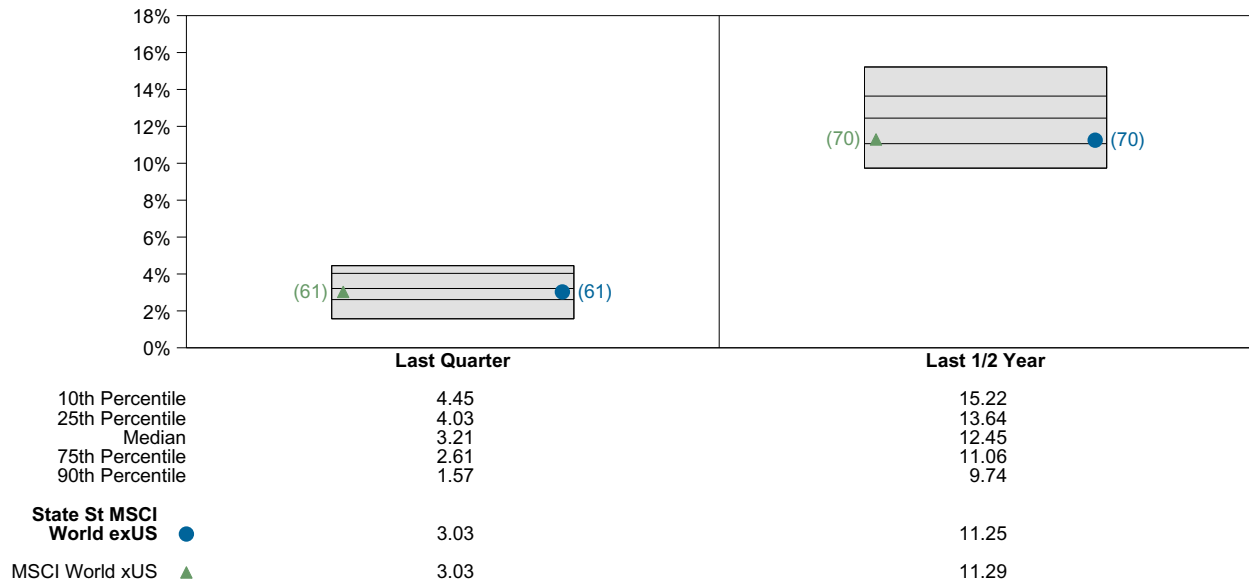
Quarterly Summary and Highlights

- State St MSCI World exUS's portfolio posted a 3.03% return for the quarter placing it in the 61 percentile of the Callan Non-US Equity group for the quarter and in the 70 percentile for the last one-half year.
- State St MSCI World exUS's portfolio underperformed the MSCI World xUS by 0.00% for the quarter and underperformed the MSCI World xUS for the one-half year by 0.04%.

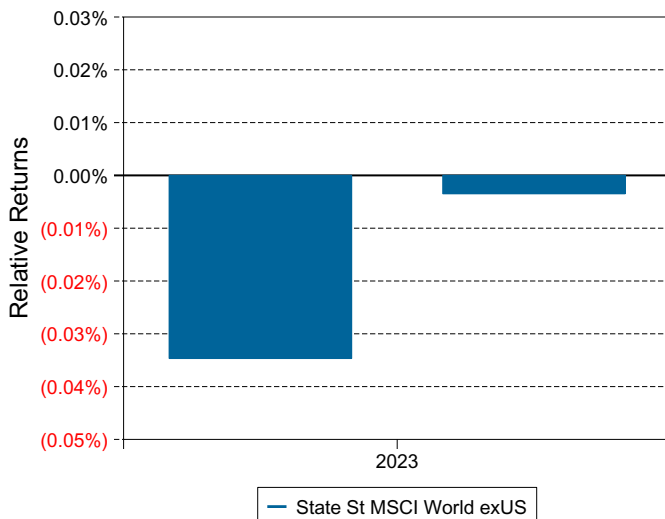
Quarterly Asset Growth

Beginning Market Value	\$689,918,972
Net New Investment	\$-32,034,097
Investment Gains/(Losses)	\$20,351,304
Ending Market Value	\$678,236,179

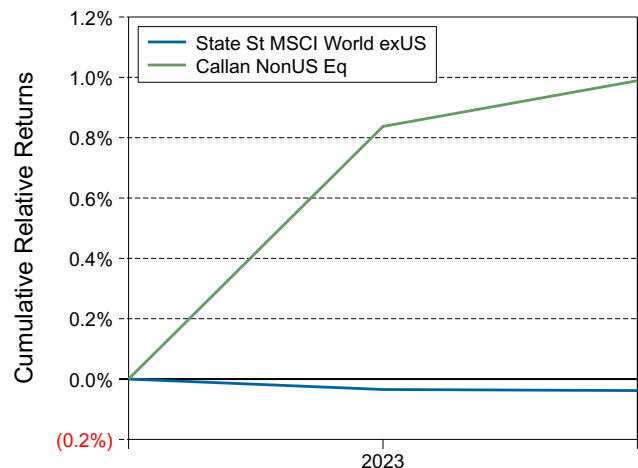
Performance vs Callan Non-US Equity (Gross)



Relative Return vs MSCI World xUS



Cumulative Returns vs MSCI World xUS



DFA Intl Small Cap Value Period Ended June 30, 2023

Investment Philosophy

The International Small Cap Value Portfolio invests in the stocks of small, non-US developed markets companies that Dimensional believes to be value stocks at the time of purchase. Specifically, it looks at companies that fall within the smallest 8-10% of each country's market capitalization, and who's shares have a high book value in relation to their market value (BtM). It does not invest in emerging markets.

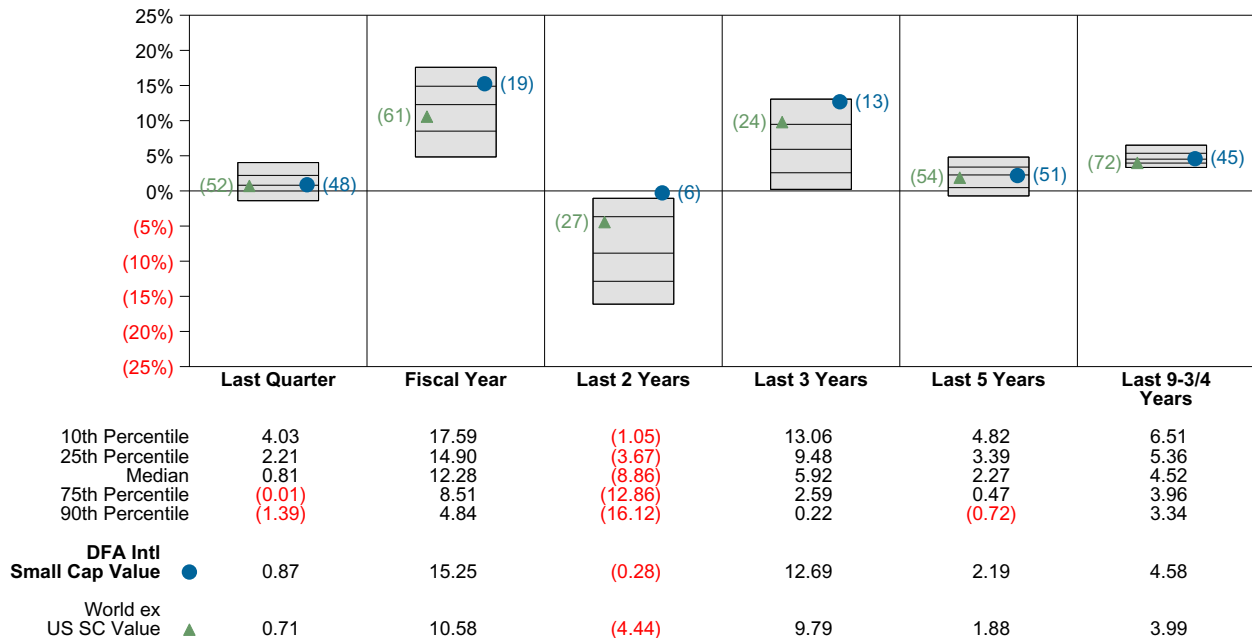
Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a 0.87% return for the quarter placing it in the 48 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 19 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 0.16% for the quarter and outperformed the World ex US SC Value for the year by 4.68%.

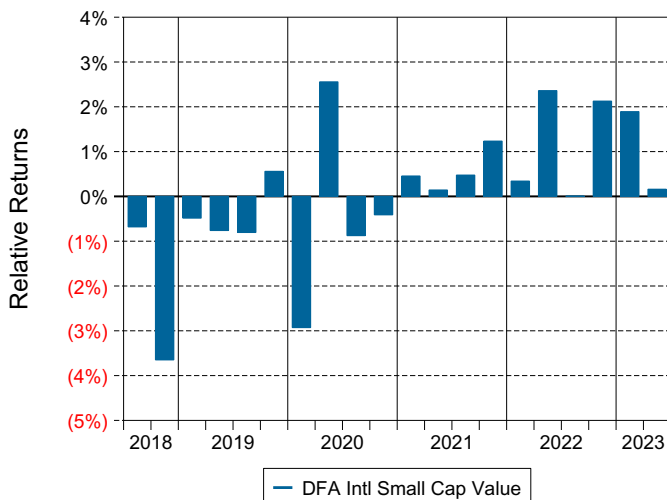
Quarterly Asset Growth

Beginning Market Value	\$49,150,123
Net New Investment	\$0
Investment Gains/(Losses)	\$429,955
Ending Market Value	\$49,580,078

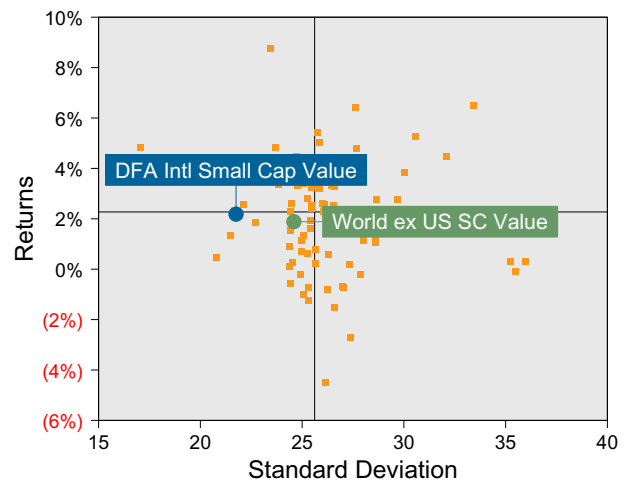
Performance vs Callan International Small Cap Mut Funds (Net)



Relative Return vs World ex US SC Value



Callan International Small Cap Mut Funds (Net) Annualized Five Year Risk vs Return



State St MSCI exUS Small Period Ended June 30, 2023

Investment Philosophy

SSGA's objective is to provide the most cost-effective implementation with stringent risk control and tracking requirements.

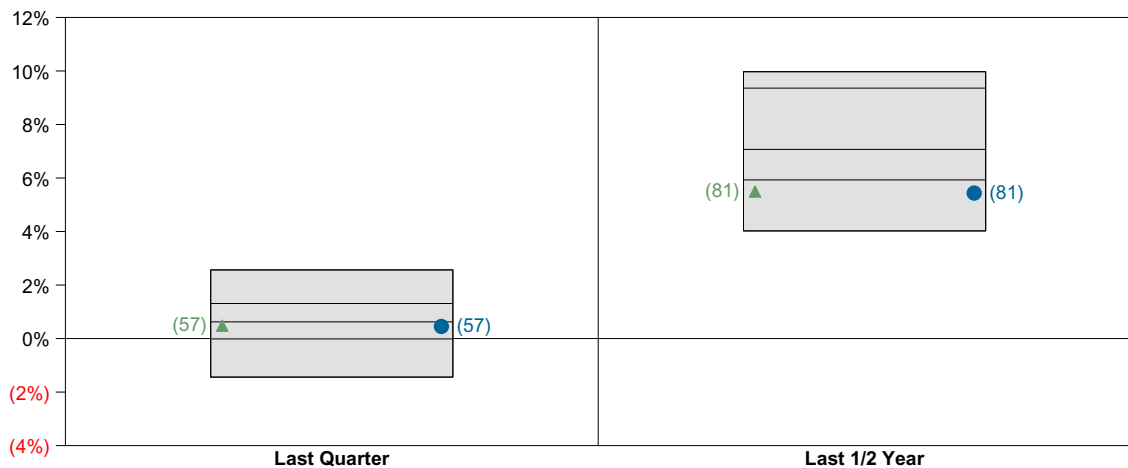
Quarterly Summary and Highlights

- State St MSCI exUS Small's portfolio posted a 0.45% return for the quarter placing it in the 57 percentile of the Callan International Small Cap group for the quarter and in the 81 percentile for the last one-half year.
- State St MSCI exUS Small's portfolio underperformed the MSCI World xUS Small by 0.03% for the quarter and underperformed the MSCI World xUS Small for the one-half year by 0.06%.

Quarterly Asset Growth

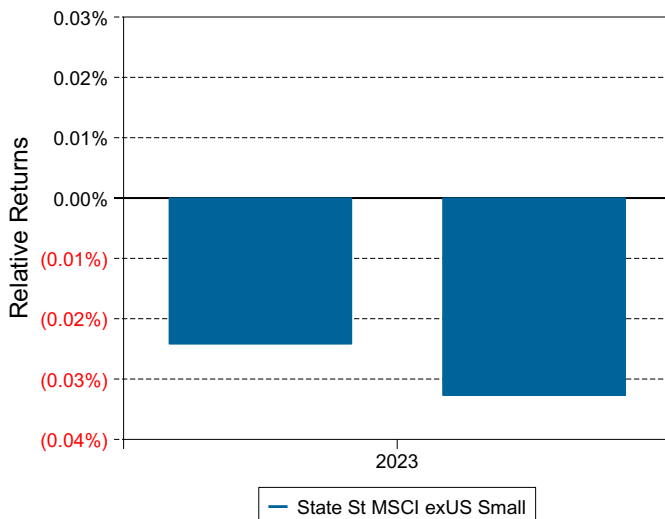
Beginning Market Value	\$22,409,252
Net New Investment	\$-2,824
Investment Gains/(Losses)	\$101,400
Ending Market Value	\$22,507,828

Performance vs Callan International Small Cap (Gross)

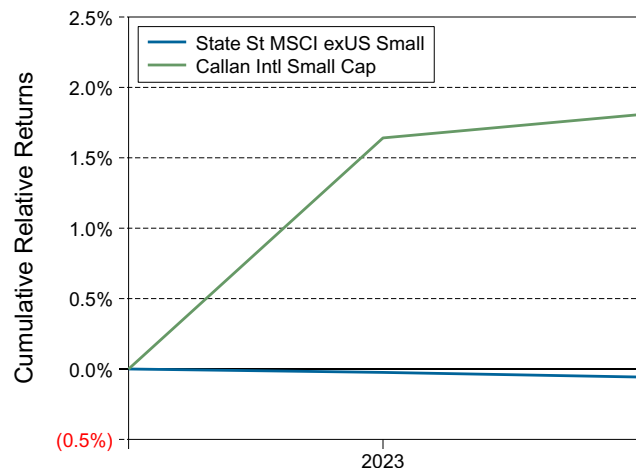


10th Percentile	2.57	9.97
25th Percentile	1.31	9.36
Median	0.62	7.07
75th Percentile	(0.01)	5.93
90th Percentile	(1.44)	4.02
State St MSCI exUS Small	0.45	5.44
MSCI World xUS Small	0.49	5.50

Relative Return vs MSCI World xUS Small



Cumulative Returns vs MSCI World xUS Small



Wellington Intl SM Cap Period Ended June 30, 2023

Investment Philosophy

The objective of the International Small Cap Opportunities Portfolio (the "Portfolio") is to provide long-term total return in excess of the MSCI EAFE Small Cap Index (the "Index").

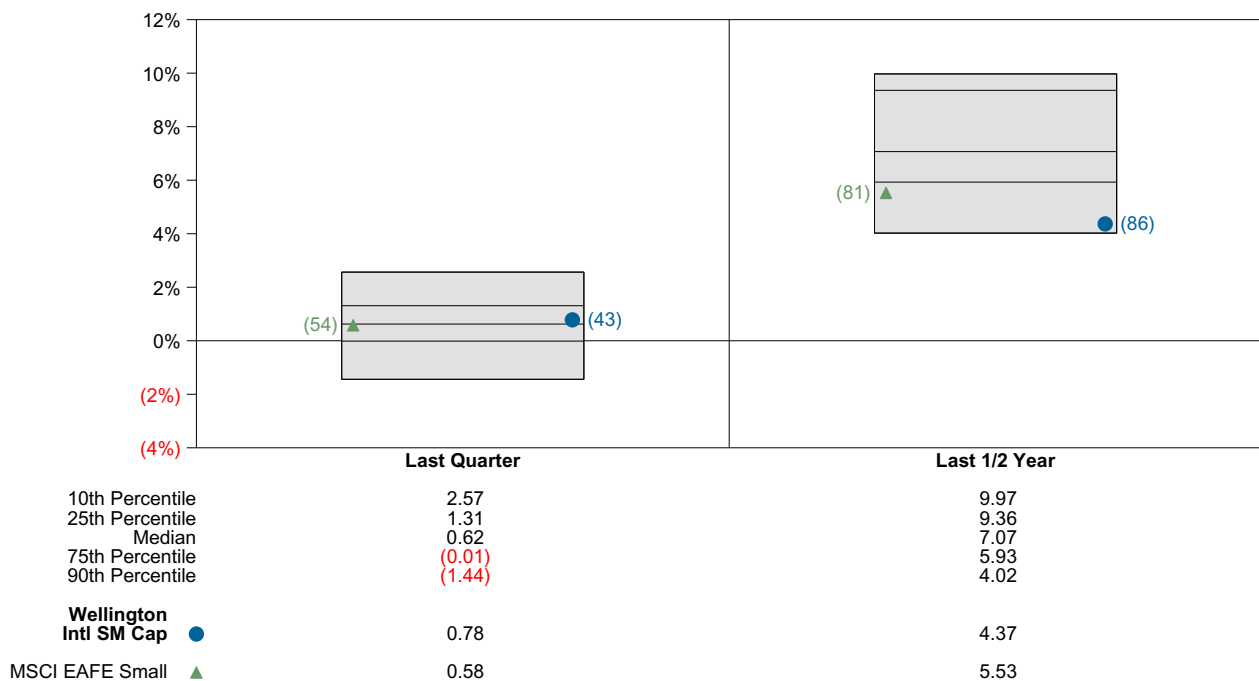
Quarterly Summary and Highlights

- Wellington Intl SM Cap's portfolio posted a 0.78% return for the quarter placing it in the 43 percentile of the Callan International Small Cap group for the quarter and in the 86 percentile for the last one-half year.
- Wellington Intl SM Cap's portfolio outperformed the MSCI EAFE Small by 0.20% for the quarter and underperformed the MSCI EAFE Small for the one-half year by 1.16%.

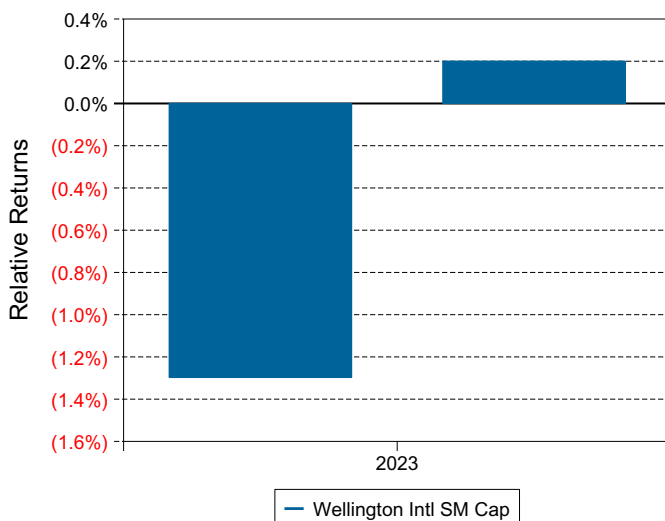
Quarterly Asset Growth

Beginning Market Value	\$45,433,547
Net New Investment	\$-8,703,294
Investment Gains/(Losses)	\$192,640
Ending Market Value	\$36,922,893

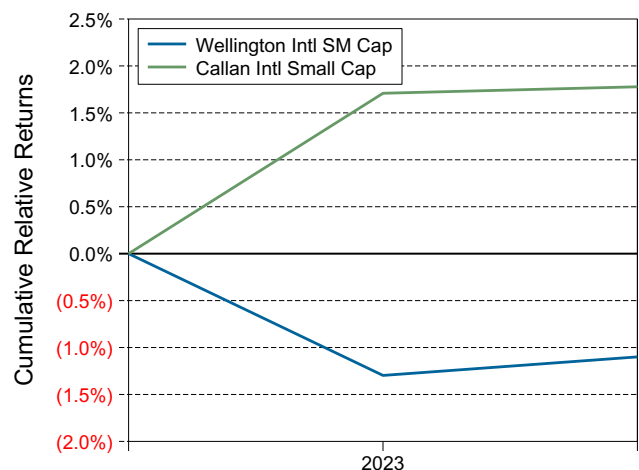
Performance vs Callan International Small Cap (Gross)



Relative Return vs MSCI EAFE Small



Cumulative Returns vs MSCI EAFE Small



Axiom Emerging Markets

Period Ended June 30, 2023

Investment Philosophy

Axiom employs a bottom-up, growth-oriented investment discipline. The process relies on detailed fundamental stock analysis to identify companies that are improving more rapidly than is generally expected and where positive changes are not yet reflected in expectations or valuation.

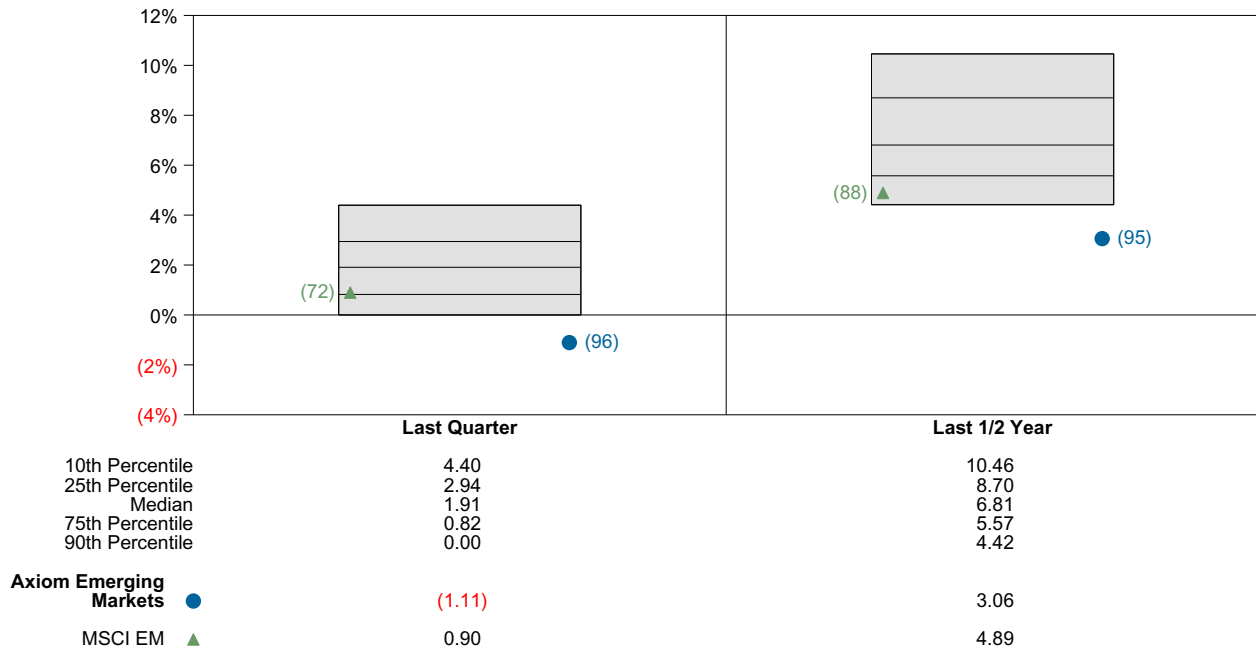
Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a (1.11)% return for the quarter placing it in the 96 percentile of the Callan Emerging Broad group for the quarter and in the 95 percentile for the last one-half year.
- Axiom Emerging Markets's portfolio underperformed the MSCI EM by 2.00% for the quarter and underperformed the MSCI EM for the one-half year by 1.83%.

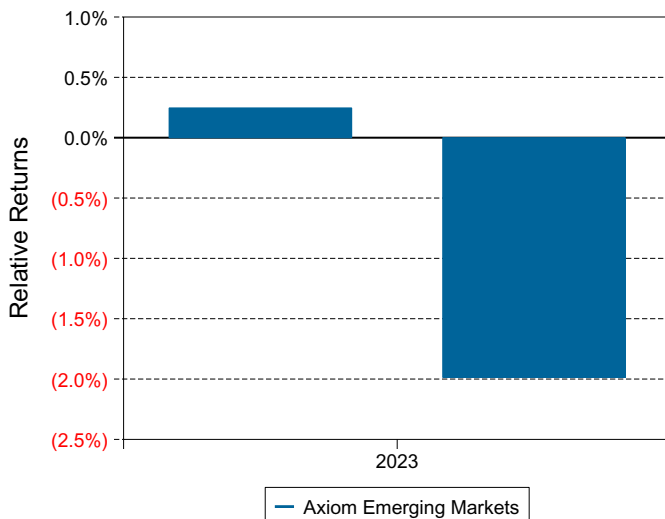
Quarterly Asset Growth

Beginning Market Value	\$186,016,110
Net New Investment	\$-229,942
Investment Gains/(Losses)	\$-2,063,214
Ending Market Value	\$183,722,953

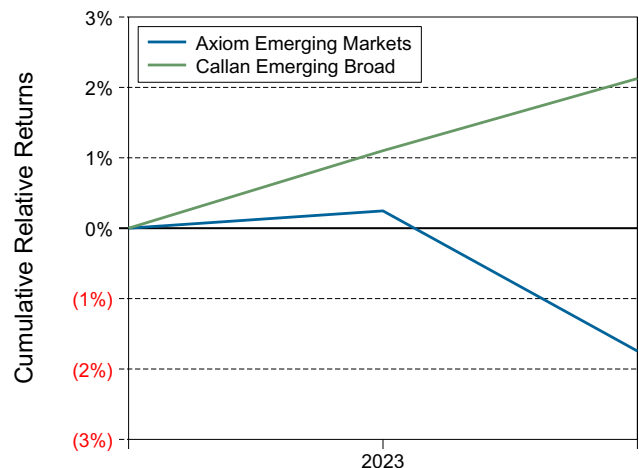
Performance vs Callan Emerging Broad (Gross)



Relative Return vs MSCI EM



Cumulative Returns vs MSCI EM



Sixth Street TAO

Period Ended June 30, 2023

Investment Philosophy

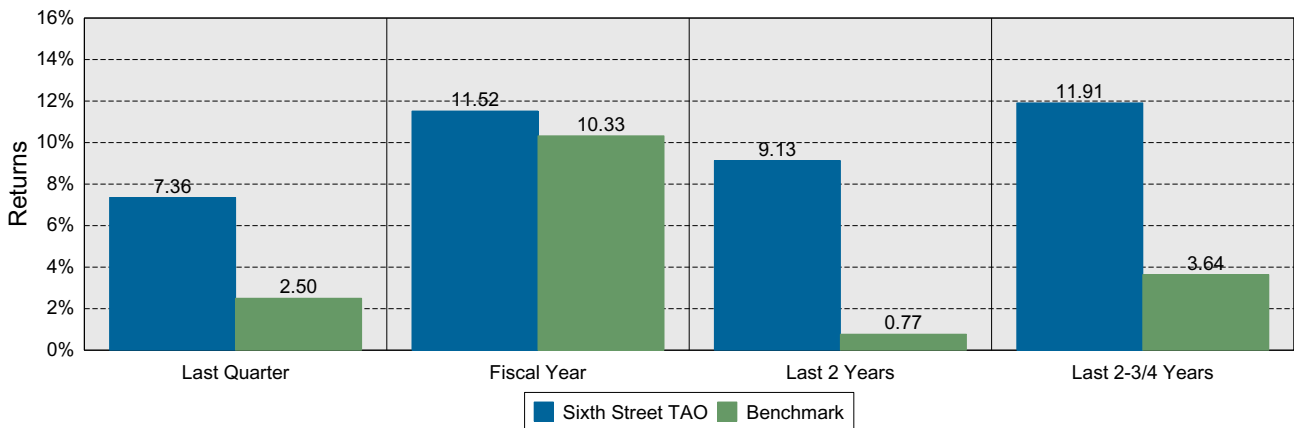
Sixth Street Partners' TAO strategy is an opportunistic, theme-driven multi-strategy credit mandate that seeks to leverage the firm's entire credit platform by investing in theme-driven liquid and less liquid investments across a broad array of credit-oriented opportunities. The strategy invests in opportunities sourced across the firm that feature attractive risk/reward profiles but do not fit the investment mandates of SSP's Special Situations, Direct Lending and Fundamental Strategies platforms, thereby carrying the moniker "Adjacent Opportunities". These opportunities can be an outgrowth of certain conditions: non-control positions with attractive risk-reward profiles; higher return, low money multiples due to short duration situations; and longer duration opportunities with low macroeconomic correlations. **The Benchmark is comprised of 50% S&P/LSTA Leveraged Loan B and 50% Blmbg HY Corp 2% Issue.**

Quarterly Summary and Highlights

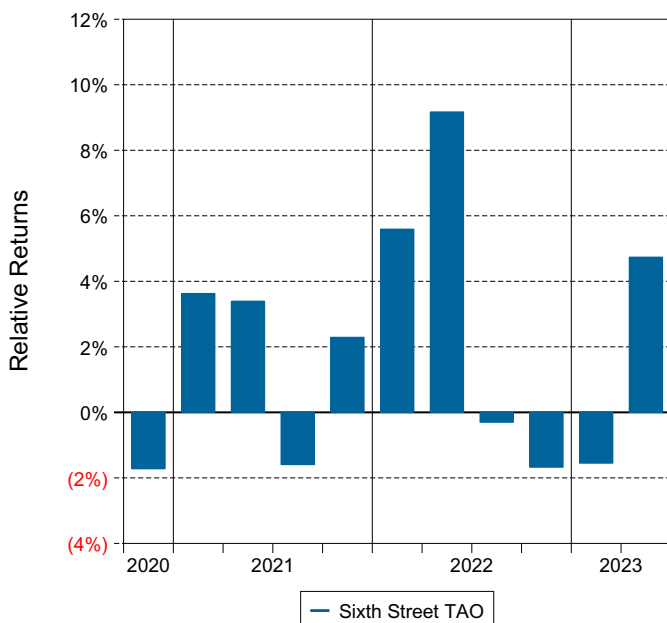
- Sixth Street TAO's portfolio outperformed the Benchmark by 4.85% for the quarter and outperformed the Benchmark for the year by 1.19%.

Quarterly Asset Growth

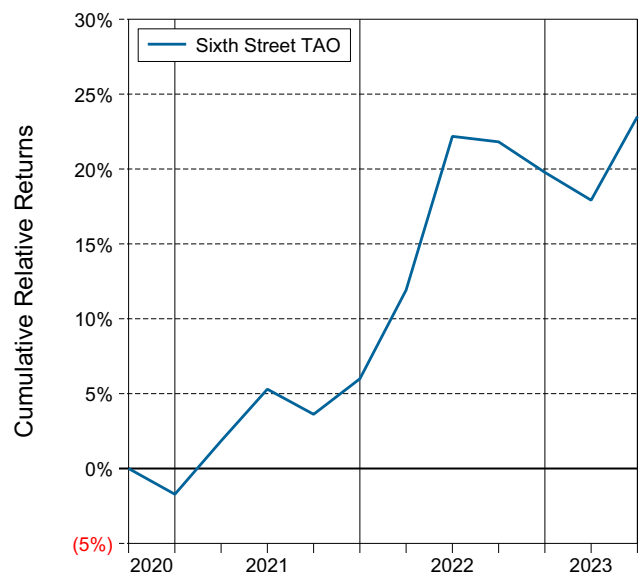
Beginning Market Value	\$57,641,081
Net New Investment	\$5,567,692
Investment Gains/(Losses)	\$4,313,559
Ending Market Value	\$67,522,332



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



Domestic Fixed Income Period Ended June 30, 2023

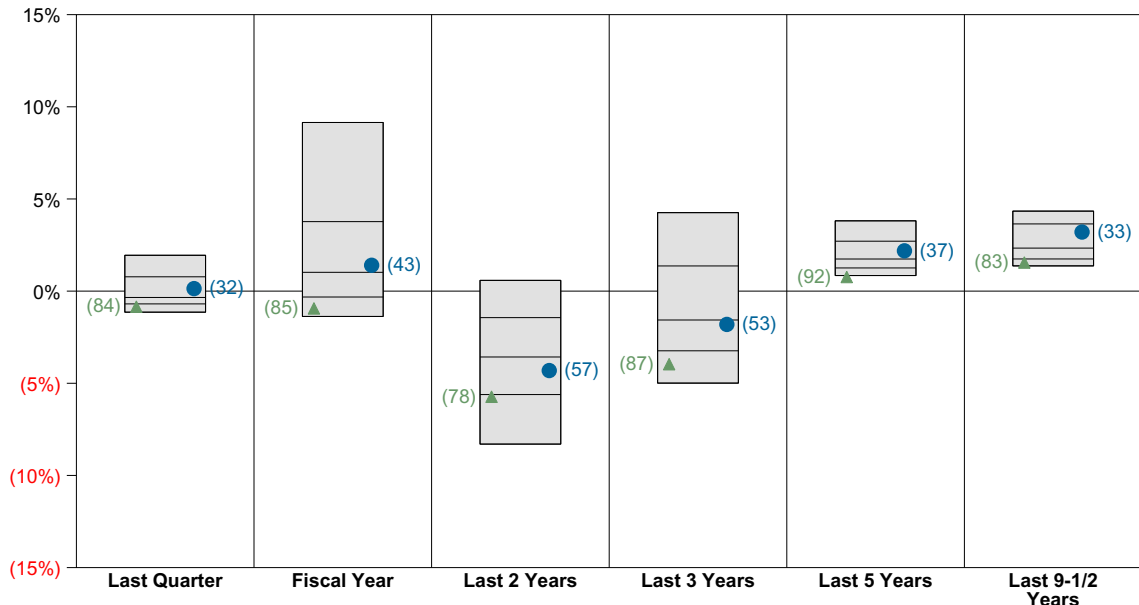
Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 0.14% return for the quarter placing it in the 32 percentile of the Total Domestic Fixed-Inc Database group for the quarter and in the 43 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Domestic Fixed Income Target by 0.98% for the quarter and outperformed the Domestic Fixed Income Target for the year by 2.34%.

Quarterly Asset Growth

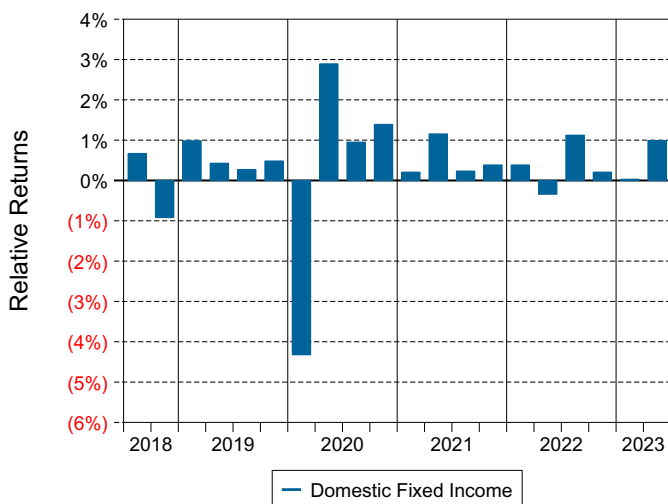
Beginning Market Value	\$3,014,963,933
Net New Investment	\$-10,317,709
Investment Gains/(Losses)	\$4,139,024
Ending Market Value	\$3,008,785,248

Performance vs Total Domestic Fixed-Inc Database (Gross)

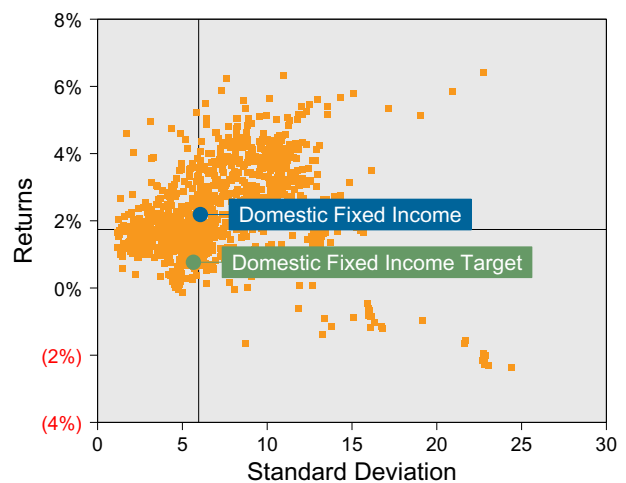


10th Percentile	1.94	9.15	0.58	4.26	3.81	4.34
25th Percentile	0.78	3.77	(1.44)	1.37	2.71	3.65
Median	(0.34)	1.02	(3.57)	(1.57)	1.74	2.33
75th Percentile	(0.69)	(0.32)	(5.61)	(3.24)	1.26	1.74
90th Percentile	(1.14)	(1.37)	(8.30)	(4.99)	0.85	1.37
Domestic Fixed Income	● 0.14	1.40	(4.31)	(1.81)	2.19	3.20
Domestic Fixed Income Target	▲ (0.84)	(0.94)	(5.73)	(3.96)	0.77	1.55

Relative Returns vs Domestic Fixed Income Target



Total Domestic Fixed-Inc Database (Gross) Annualized Five Year Risk vs Return



Allspring Med Quality Credit

Period Ended June 30, 2023

Investment Philosophy

The Medium Quality Credit fixed income strategy is designed to maximize total return from the high-grade corporate bond market while maintaining a strategic allocation to the BBB portion of the high yield market. The investment process for this fund starts with a "top-down" strategy. Security selection is determined by in-depth credit research, holding that in-depth knowledge of industries, companies, and their management teams can help identify credit trends that can lead to investment opportunities. Furthermore, a disciplined relative value framework is applied to help determine the optimal position to invest within an industry and within an individual issuer's capital structure.

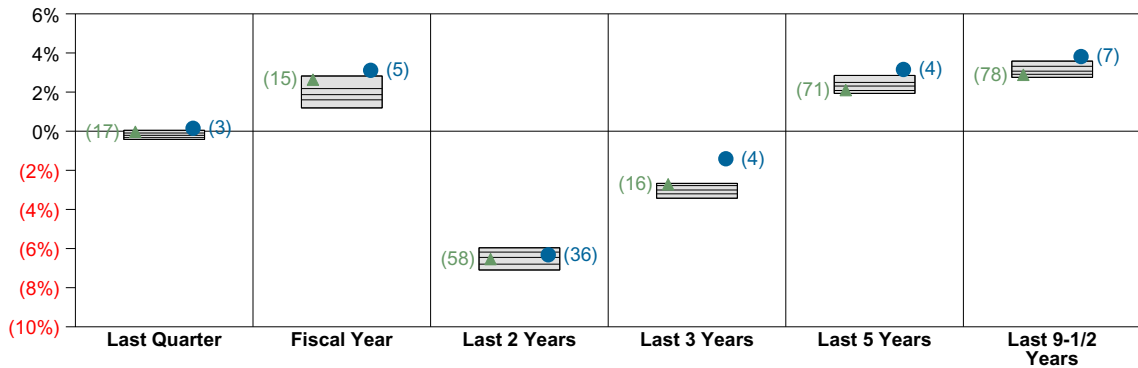
Quarterly Summary and Highlights

- Allspring Med Quality Credit's portfolio posted a 0.15% return for the quarter placing it in the 3 percentile of the Callan Investment Grade Credit Fixed Inc group for the quarter and in the 5 percentile for the last year.
- Allspring Med Quality Credit's portfolio outperformed the Blmbg Credit Baa by 0.18% for the quarter and outperformed the Blmbg Credit Baa for the year by 0.48%.

Quarterly Asset Growth

Beginning Market Value	\$238,593,481
Net New Investment	\$-29,896,428
Investment Gains/(Losses)	\$445,027
Ending Market Value	\$209,142,080

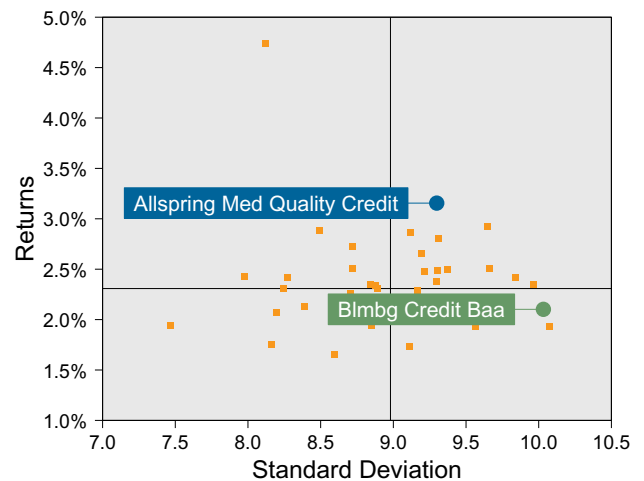
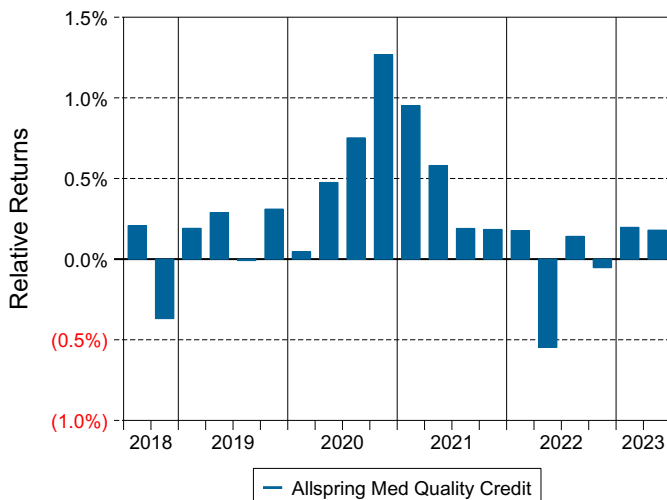
Performance vs Callan Investment Grade Credit Fixed Inc (Gross)



10th Percentile	0.05	2.82	(5.96)	(2.67)	2.85	3.58
25th Percentile	(0.09)	2.18	(6.18)	(2.78)	2.49	3.32
Median	(0.21)	1.87	(6.45)	(3.01)	2.31	3.07
75th Percentile	(0.33)	1.60	(6.80)	(3.20)	2.08	2.91
90th Percentile	(0.42)	1.19	(7.10)	(3.43)	1.93	2.75
Allspring Med Quality Credit	0.15	3.11	(6.32)	(1.41)	3.16	3.82
Blmbg Credit Baa	(0.03)	2.64	(6.54)	(2.71)	2.10	2.88

Callan Investment Grade Credit Fixed Inc (Gross) Annualized Five Year Risk vs Return

Relative Return vs Blmbg Credit Baa



Ares ND Credit Strategies Fd Period Ended June 30, 2023

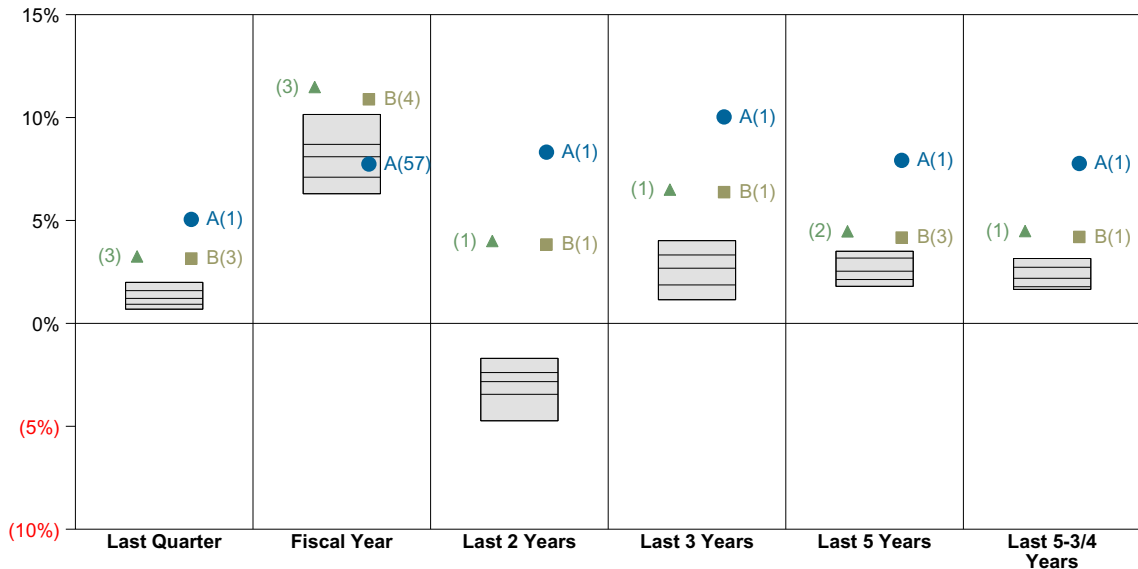
Quarterly Summary and Highlights

- Ares ND Credit Strategies Fd's portfolio posted a 5.05% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 57 percentile for the last year.
- Ares ND Credit Strategies Fd's portfolio outperformed the Mstar LSTA Lev Loan B by 1.80% for the quarter and underperformed the Mstar LSTA Lev Loan B for the year by 3.74%.

Quarterly Asset Growth

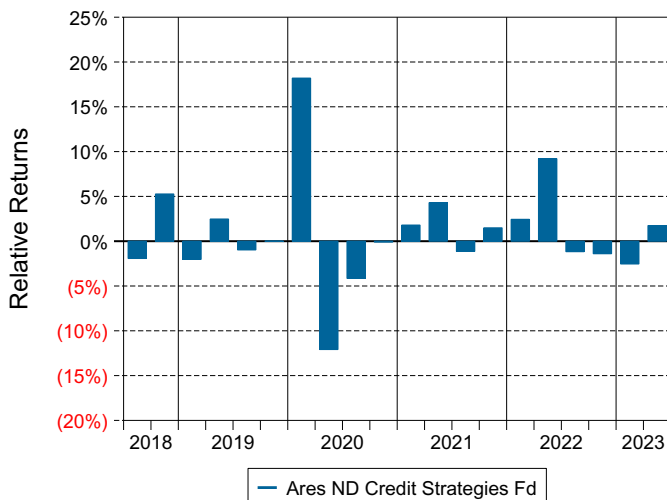
Beginning Market Value	\$112,373,528
Net New Investment	\$0
Investment Gains/(Losses)	\$5,676,494
Ending Market Value	\$118,050,022

Performance vs Callan High Yield Mutual Funds (Net)

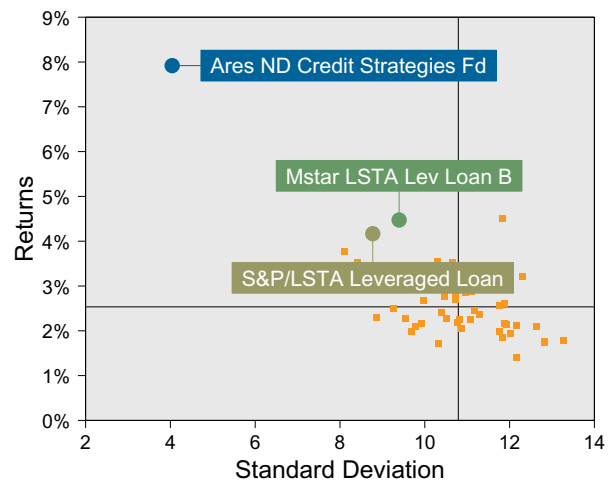


10th Percentile	1.99	10.15	(1.70)	4.02	3.50	3.15	
25th Percentile	1.59	8.70	(2.39)	3.32	3.17	2.73	
Median	1.21	8.10	(2.83)	2.68	2.53	2.19	
75th Percentile	0.93	7.10	(3.45)	1.87	2.13	1.78	
90th Percentile	0.69	6.30	(4.73)	1.15	1.80	1.65	
Ares ND Credit Strategies Fd	● A	5.05	7.74	8.32	10.03	7.92	7.77
S&P/LSTA Leveraged Loan	■ B	3.15	10.89	3.83	6.37	4.17	4.20
Mstar LSTA Lev Loan B	▲	3.25	11.48	4.00	6.50	4.47	4.49

Relative Return vs Mstar LSTA Lev Loan B



Callan High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



Cerberus ND Private Credit Fd Period Ended June 30, 2023

Investment Philosophy

The investment objective of the LLC is to achieve superior risk-adjusted rates of return primarily through origination of, and investment in, secured debt assets consistent with the Loan Opportunities Strategy of the Cerberus Business Finance lending platform ("CBF", "Cerberus Business Finance" or the "Cerberus Lending Platform"). The Cerberus Lending Platform is a direct origination and lending business focused on providing secured debt primarily to U.S. middle-market companies. The LLC expects to generate both current income and capital appreciation.

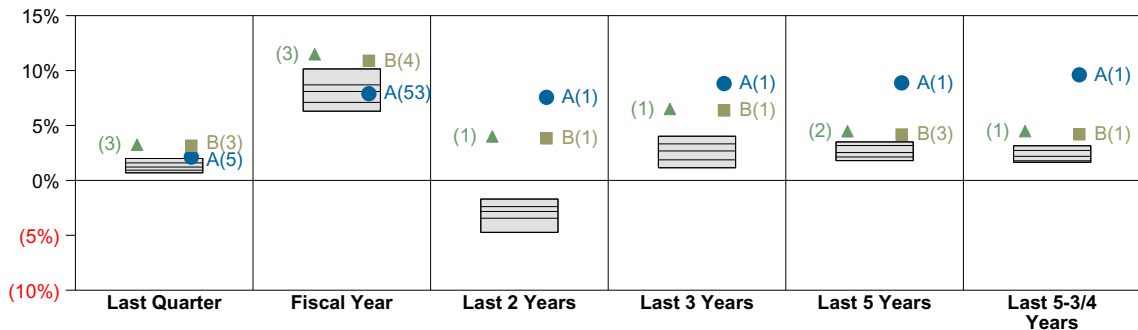
Quarterly Summary and Highlights

- Cerberus ND Private Credit Fd's portfolio posted a 2.12% return for the quarter placing it in the 5 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 53 percentile for the last year.
- Cerberus ND Private Credit Fd's portfolio underperformed the Mstar LSTA Lev Loan B by 1.13% for the quarter and underperformed the Mstar LSTA Lev Loan B for the year by 3.59%.

Quarterly Asset Growth

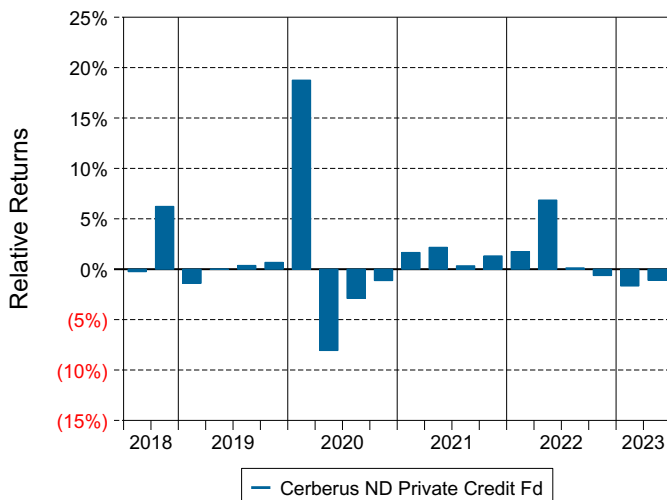
Beginning Market Value	\$160,672,281
Net New Investment	\$-13,500,000
Investment Gains/(Losses)	\$3,288,932
Ending Market Value	\$150,461,213

Performance vs Callan High Yield Mutual Funds (Net)

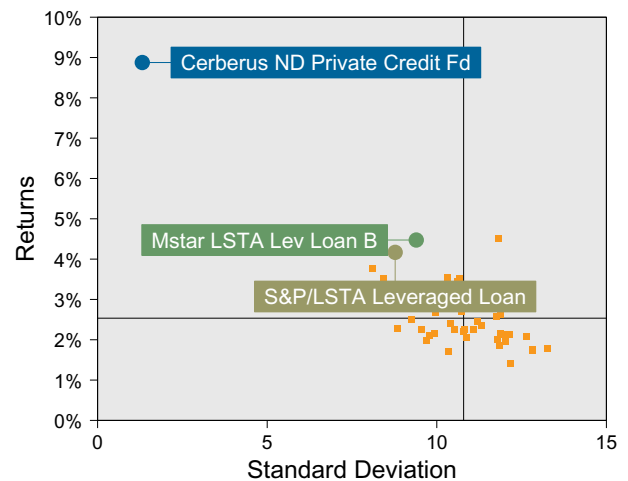


	Last Quarter	Fiscal Year	Last 2 Years	Last 3 Years	Last 5 Years	Last 5-3/4 Years
10th Percentile	1.99	10.15	(1.70)	4.02	3.50	3.15
25th Percentile	1.59	8.70	(2.39)	3.32	3.17	2.73
Median	1.21	8.10	(2.83)	2.68	2.53	2.19
75th Percentile	0.93	7.10	(3.45)	1.87	2.13	1.78
90th Percentile	0.69	6.30	(4.73)	1.15	1.80	1.65
Cerberus ND Private Credit Fd S&P/LSTA Leveraged Loan	● A 2.12	7.89	7.56	8.81	8.88	9.61
Mstar LSTA Lev Loan B	▲ 3.25	11.48	4.00	6.50	4.47	4.49

Relative Return vs Mstar LSTA Lev Loan B



Callan High Yield Mutual Funds (Net) Annualized Five Year Risk vs Return



Manulife-Declaration TRBF Period Ended June 30, 2023

Investment Philosophy

The Fund's portfolio holdings consist primarily of RMBS issued by private sector companies (Non-Agency RMBS) and government agencies (Agency MBS) and CMBS issued by private sector companies. Agency MBS includes securities issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Government National Mortgage Association (Ginnie Mae). Portfolio holdings may range from short tenure senior classes to stressed issues or subordinated securities with substantial risk of non-payment and correspondingly higher yields. Smaller portfolio allocations may include consumer asset-backed securities (ABS), or other structured credit securities and corporate bonds. As a diversification strategy and a potential hedge to credit risk, the Fund may invest in securities which tend to benefit from slow mortgage prepayments and economic growth, such as interest only (IO) MBS.

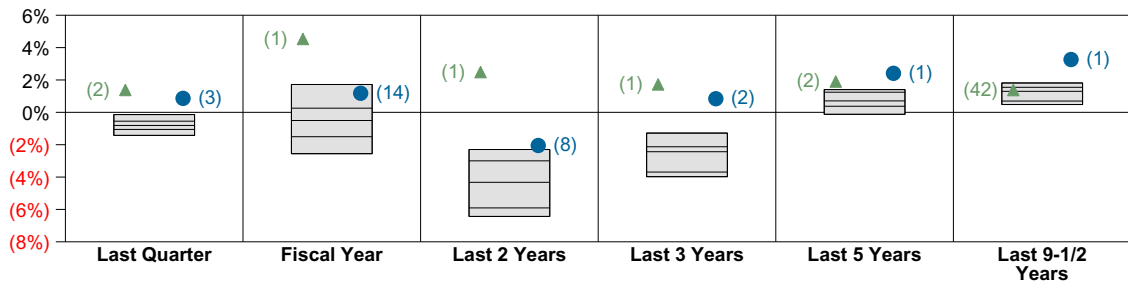
Quarterly Summary and Highlights

- Manulife-Declaration TRBF's portfolio posted a 0.86% return for the quarter placing it in the 3 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 14 percentile for the last year.
- Manulife-Declaration TRBF's portfolio underperformed the LIBOR - 3 Month by 0.52% for the quarter and underperformed the LIBOR - 3 Month for the year by 3.36%.

Quarterly Asset Growth

Beginning Market Value	\$160,650,529
Net New Investment	\$-134,964
Investment Gains/(Losses)	\$1,385,847
Ending Market Value	\$161,901,412

Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)

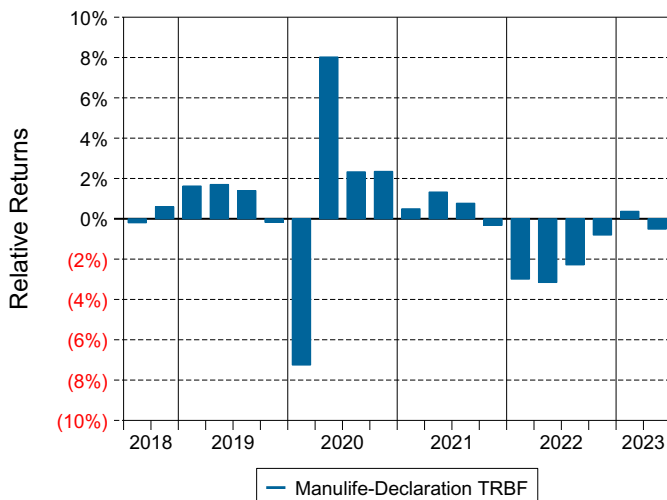


10th Percentile	(0.14)	1.72	(2.30)	(1.28)	1.41	1.81
25th Percentile	(0.55)	0.26	(3.00)	(2.13)	1.24	1.55
Median	(0.81)	(0.50)	(4.32)	(2.43)	0.71	1.30
75th Percentile	(1.06)	(1.51)	(5.91)	(3.69)	0.38	0.70
90th Percentile	(1.43)	(2.56)	(6.43)	(3.98)	(0.12)	0.48

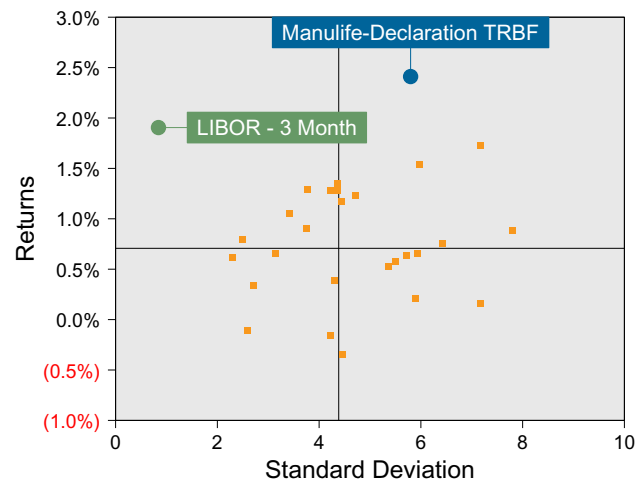
Manulife-Declaration TRBF

●	0.86	1.18	(2.05)	0.84	2.41	3.26
▲	1.38	4.53	2.49	1.73	1.91	1.38

Relative Return vs LIBOR - 3 Month



Callan Intermediate Fixed Inc Mut Funds (Net) Annualized Five Year Risk vs Return



PIMCO Core Plus Constrained Period Ended June 30, 2023

Investment Philosophy

PIMCO's investment process utilizes both "top-down" and "bottom-up" strategies. Top-down strategies focus on duration, yield curve positioning, volatility, and sector rotation. These strategies are deployed from a macro view of the portfolio driven by their secular outlook of the forces likely to influence the economy and financial markets over the next three to five years and their cyclical views of two- to four-quarter trends. Implementation in portfolios is effected by selecting securities that achieve the designated objectives. Bottom-up strategies drive their security selection process and facilitate the identification and analysis of undervalued securities.

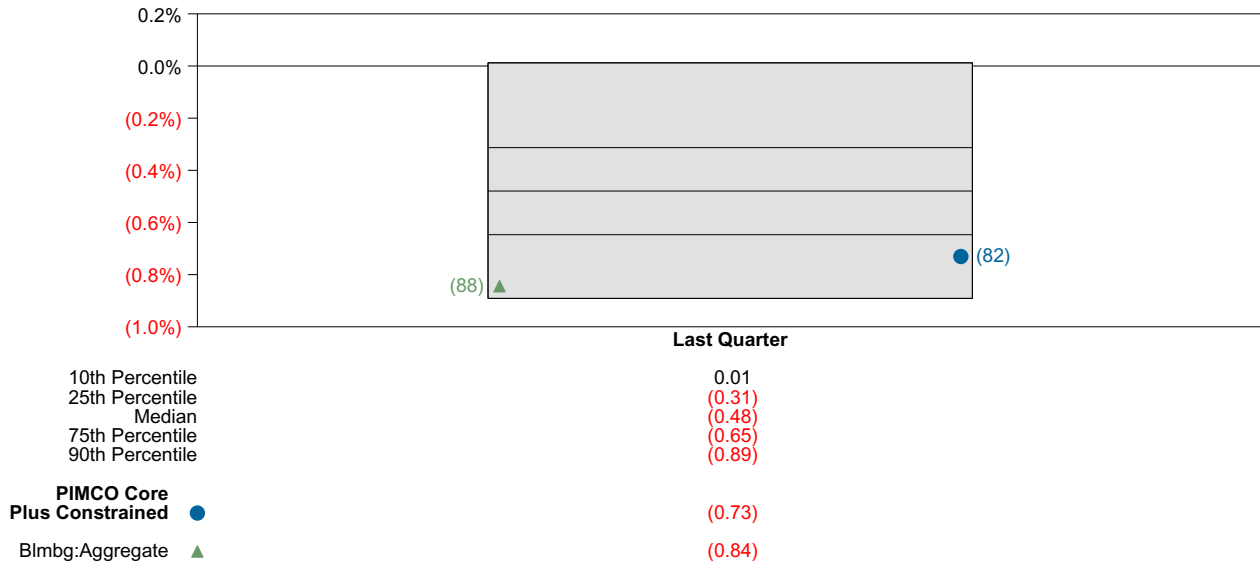
Quarterly Summary and Highlights

- PIMCO Core Plus Constrained's portfolio posted a (0.73)% return for the quarter placing it in the 82 percentile of the Callan Core Plus Fixed Income group for the quarter.
- PIMCO Core Plus Constrained's portfolio outperformed the Blmbg:Aggregate by 0.11% for the quarter.

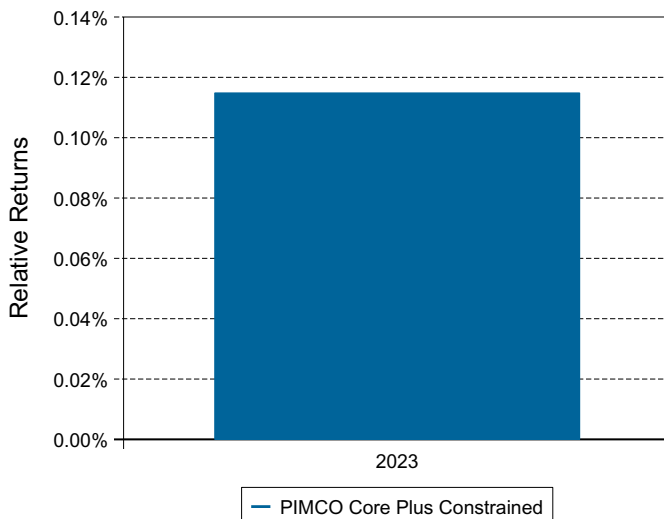
Quarterly Asset Growth

Beginning Market Value	\$540,164,147
Net New Investment	\$-26,510
Investment Gains/(Losses)	\$-3,945,743
Ending Market Value	\$536,191,895

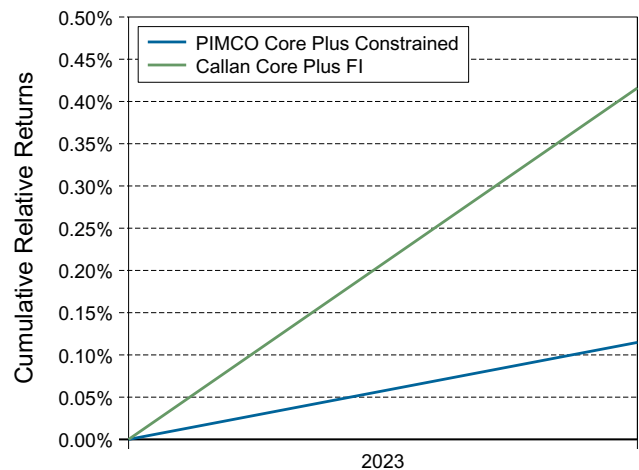
Performance vs Callan Core Plus Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Cumulative Returns vs Blmbg:Aggregate



PIMCO Bravo II

Period Ended June 30, 2023

Investment Philosophy

The BRAVO II Fund is a private equity style fund targeting an annualized IRR of 15-20% and multiple of 1.8-2x, net of fees and carried interest with an initial 5-year term. The fund will seek to capitalize on non-economic asset sale decisions by global financial institutions. The fund will have the flexibility to acquire attractively discounted, less liquid loans, structured credit and other assets tied to residential or commercial real estate markets in the U.S. and Europe. **Prior to July 1, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.**

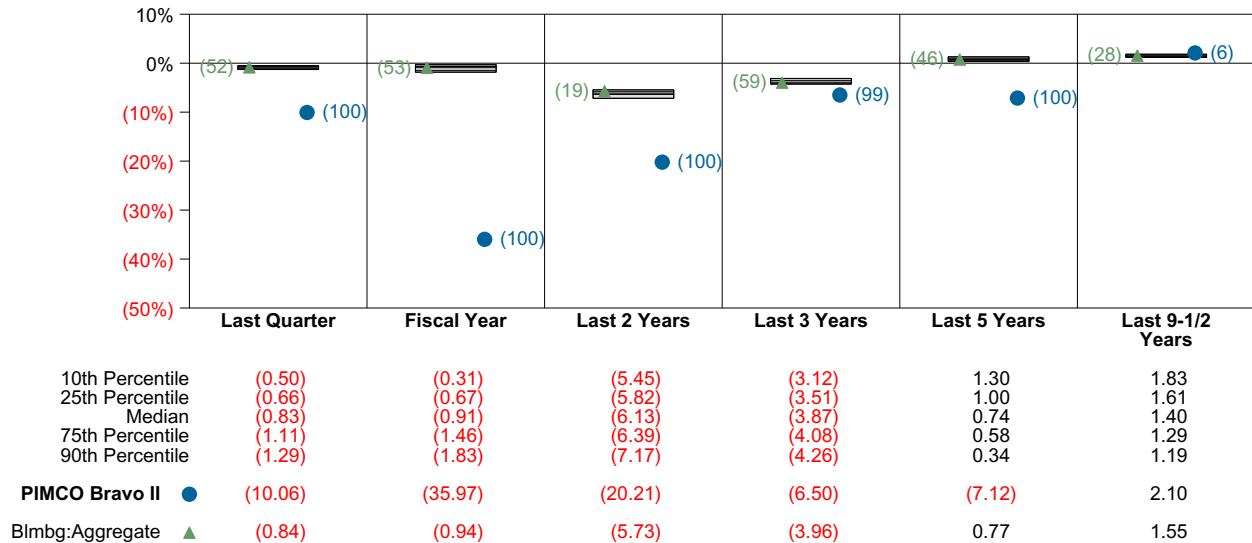
Quarterly Summary and Highlights

- PIMCO Bravo II's portfolio posted a (10.06)% return for the quarter placing it in the 100 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 100 percentile for the last year.
- PIMCO Bravo II's portfolio underperformed the Blmbg:Aggregate by 9.22% for the quarter and underperformed the Blmbg:Aggregate for the year by 35.04%.

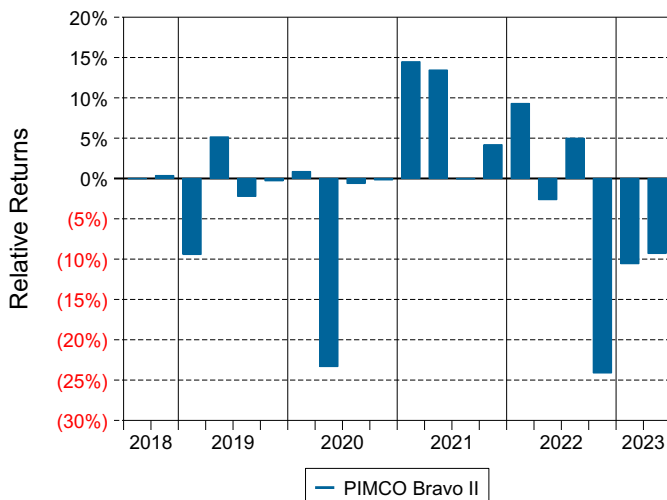
Quarterly Asset Growth

Beginning Market Value	\$1,252,816
Net New Investment	\$0
Investment Gains/(Losses)	\$-126,070
Ending Market Value	\$1,126,746

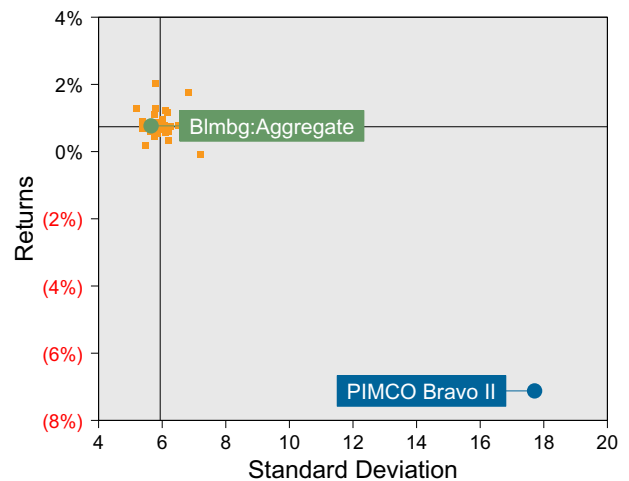
Performance vs Callan Core Bond Mutual Funds (Net)



Relative Return vs Blmbg:Aggregate



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



PIMCO DiSCO II

Period Ended June 30, 2023

Investment Philosophy

The PIMCO Distressed Senior Credit Opportunities Fund is an opportunistic private-equity style Fund which seeks to provide investors enhanced returns principally through long-biased investments in undervalued senior and super senior structured credit securities that are expected to produce attractive levels of current income and that may also appreciate in value over the long term. The fund will look to capitalize on forced sales by liquidity constrained investors. **Prior to July 1, 2019, the Legacy Fund participated in these portfolios via the Insurance Pool. Beginning July 1, 2019, its portion of the pool was segregated into its own portfolios. Returns prior to that date reflect the data from the Insurance pool.**

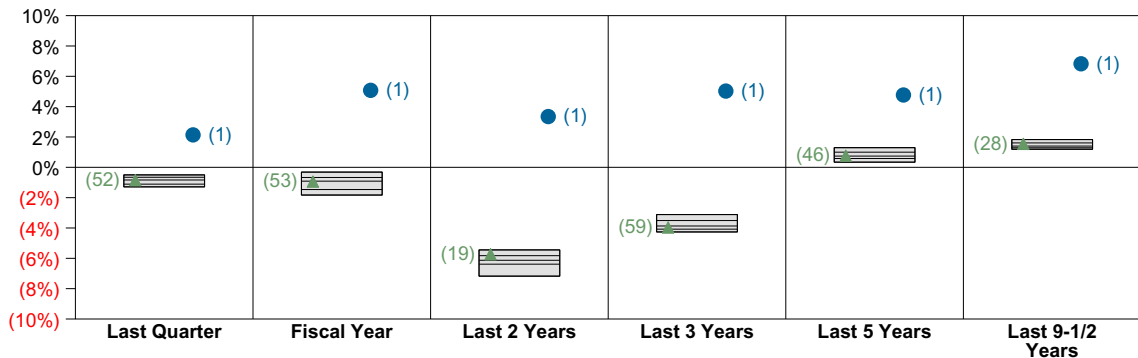
Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a 2.14% return for the quarter placing it in the 1 percentile of the Callan Core Bond Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO DiSCO II's portfolio outperformed the Blmbg:Aggregate by 2.98% for the quarter and outperformed the Blmbg:Aggregate for the year by 6.01%.

Quarterly Asset Growth

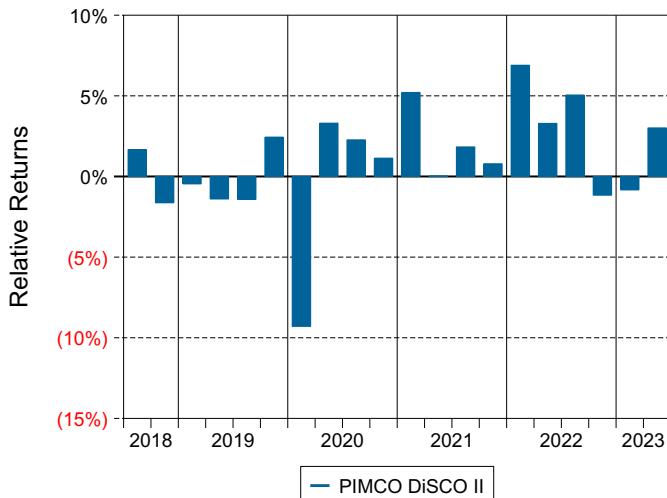
Beginning Market Value	\$56,034,667
Net New Investment	\$43,470,720
Investment Gains/(Losses)	\$4,605,540
Ending Market Value	\$104,110,927

Performance vs Callan Core Bond Mutual Funds (Net)

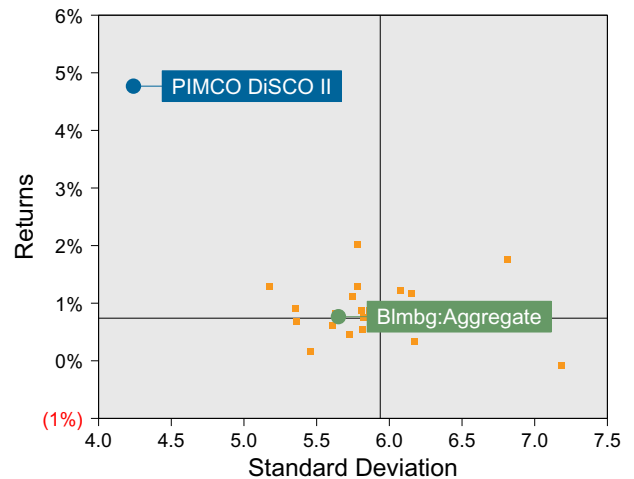


10th Percentile	(0.50)	(0.31)	(5.45)	(3.12)	1.30	1.83
25th Percentile	(0.66)	(0.67)	(5.82)	(3.51)	1.00	1.61
Median	(0.83)	(0.91)	(6.13)	(3.87)	0.74	1.40
75th Percentile	(1.11)	(1.46)	(6.39)	(4.08)	0.58	1.29
90th Percentile	(1.29)	(1.83)	(7.17)	(4.26)	0.34	1.19
PIMCO DiSCO II ●	2.14	5.07	3.34	5.03	4.77	6.82
Blmbg:Aggregate ▲	(0.84)	(0.94)	(5.73)	(3.96)	0.77	1.55

Relative Return vs Blmbg:Aggregate



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



Prudential Core Plus Period Ended June 30, 2023

Investment Philosophy

The Core Plus strategy is an actively managed strategy that seeks +150 bps over the Bloomberg U.S. Aggregate Bond Index. Portfolio duration is kept within +/- 20% of benchmark. The lead portfolio managers are Mike Collins, Rich Piccirillo and Greg Peters.

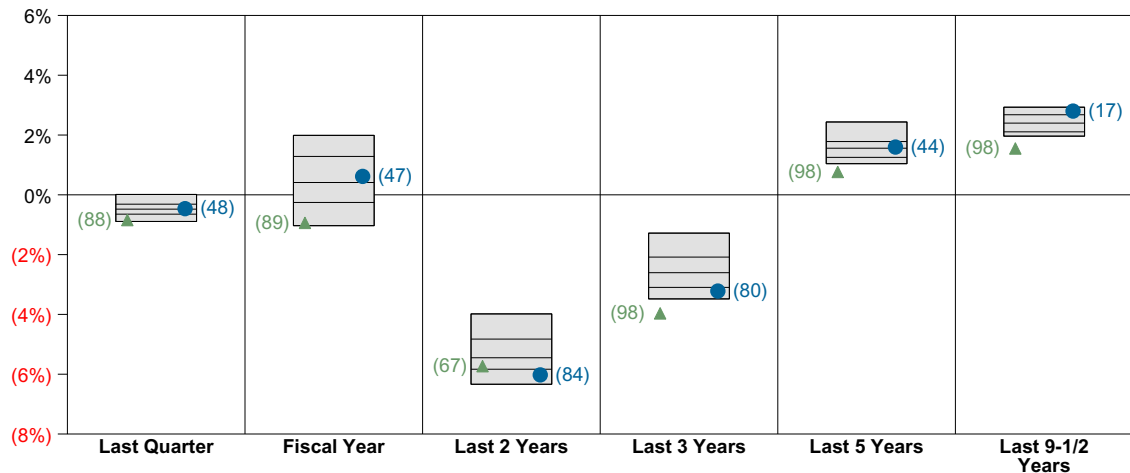
Quarterly Summary and Highlights

- Prudential Core Plus's portfolio posted a (0.46)% return for the quarter placing it in the 48 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 47 percentile for the last year.
- Prudential Core Plus's portfolio outperformed the Blmbg:Aggregate by 0.38% for the quarter and outperformed the Blmbg:Aggregate for the year by 1.55%.

Quarterly Asset Growth

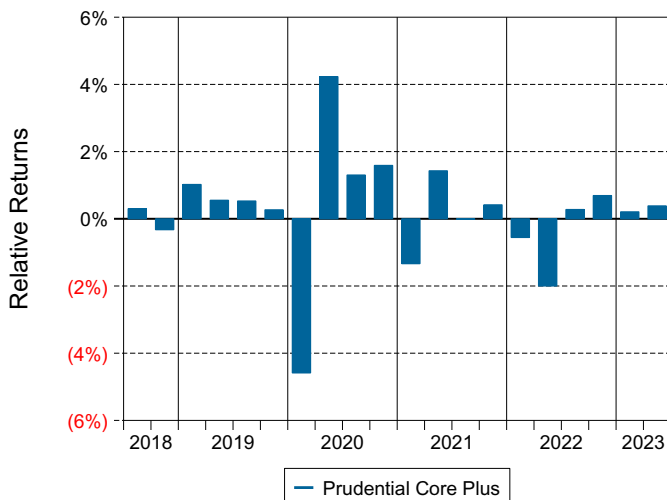
Beginning Market Value	\$681,260,334
Net New Investment	\$-398,519
Investment Gains/(Losses)	\$-3,153,695
Ending Market Value	\$677,708,121

Performance vs Callan Core Plus Fixed Income (Gross)

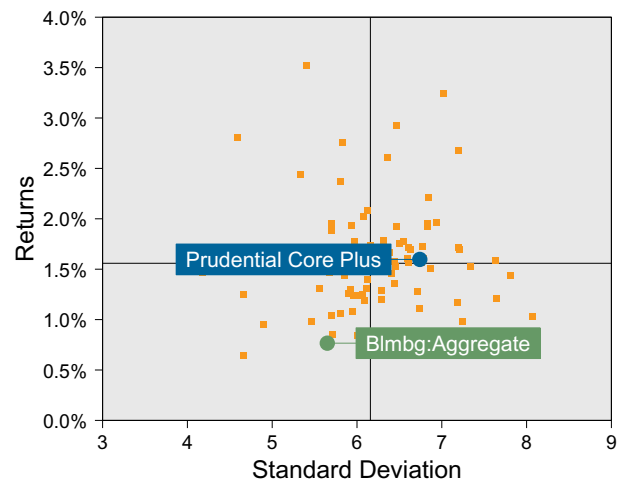


10th Percentile	0.01	1.99	(3.98)	(1.28)	2.44	2.93
25th Percentile	(0.31)	1.28	(4.83)	(2.08)	1.78	2.68
Median	(0.48)	0.41	(5.45)	(2.60)	1.56	2.40
75th Percentile	(0.65)	(0.26)	(5.83)	(3.10)	1.25	2.11
90th Percentile	(0.89)	(1.03)	(6.34)	(3.48)	1.04	1.96
Prudential Core Plus ●	(0.46)	0.62	(6.02)	(3.22)	1.60	2.80
Blmbg:Aggregate ▲	(0.84)	(0.94)	(5.73)	(3.96)	0.77	1.55

Relative Return vs Blmbg:Aggregate



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



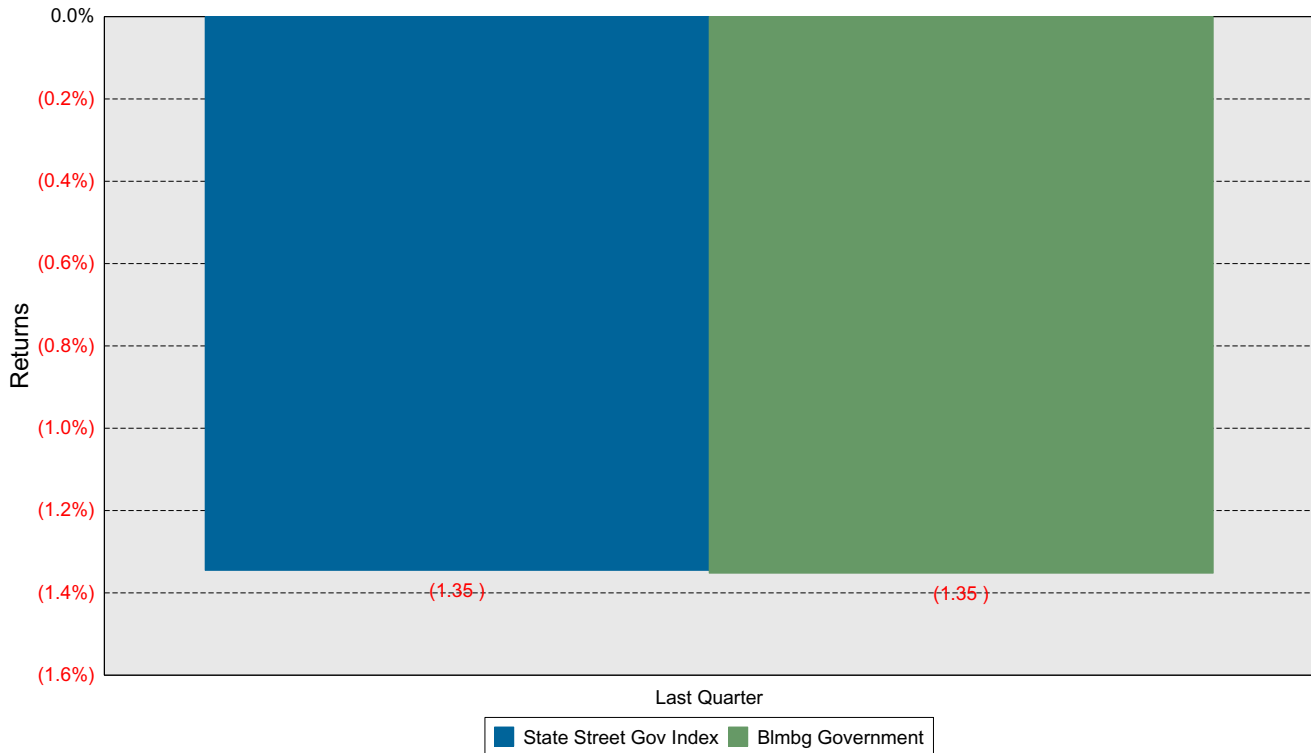
State Street Gov Index Period Ended June 30, 2023

Quarterly Summary and Highlights

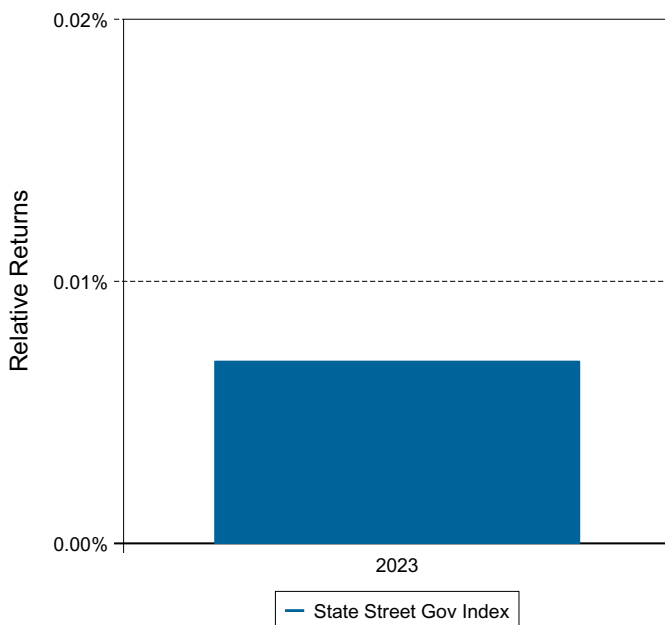
- State Street Gov Index's portfolio posted a (1.35)% return for the quarter placing it in the 100 percentile of the Callan Core Plus Fixed Income group for the quarter.
- State Street Gov Index's portfolio outperformed the Blmbg Government by 0.01% for the quarter.

Quarterly Asset Growth

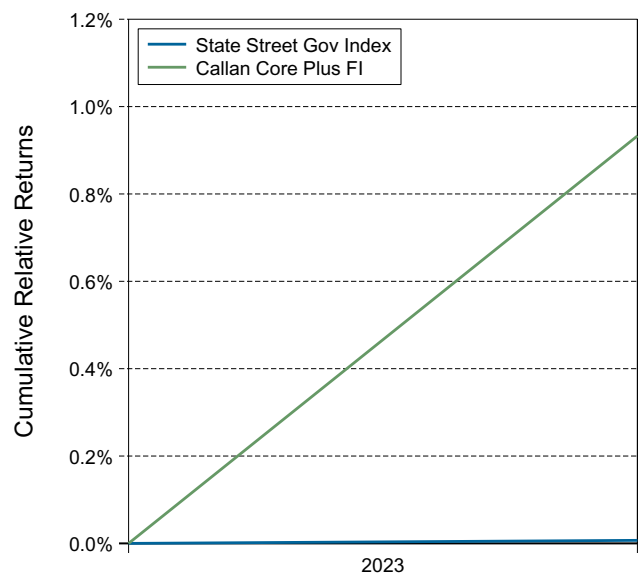
Beginning Market Value	\$110,181,984
Net New Investment	\$-1,118
Investment Gains/(Losses)	\$-1,482,216
Ending Market Value	\$108,698,650



Relative Return vs Blmbg Government



Cumulative Returns vs Blmbg Government



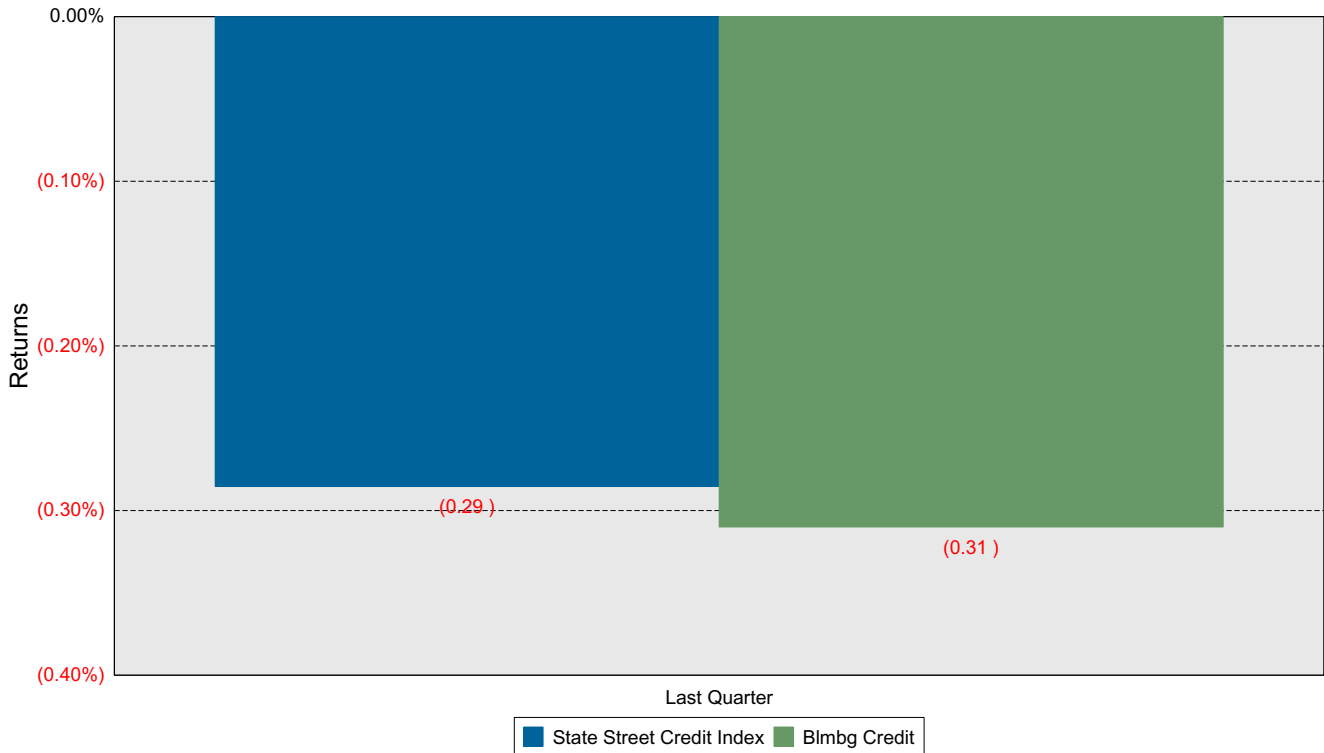
State Street Credit Index Period Ended June 30, 2023

Quarterly Summary and Highlights

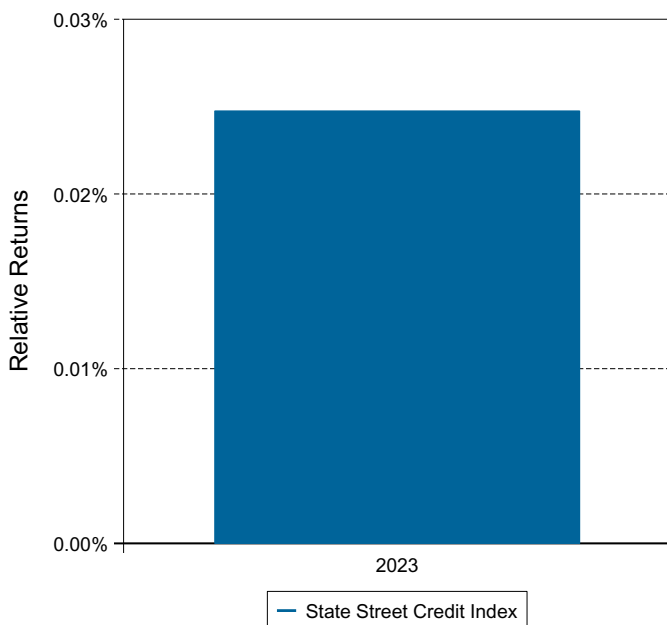
- State Street Credit Index's portfolio posted a (0.29)% return for the quarter placing it in the 24 percentile of the Callan Core Plus Fixed Income group for the quarter.
- State Street Credit Index's portfolio outperformed the Blmbg Credit by 0.02% for the quarter.

Quarterly Asset Growth

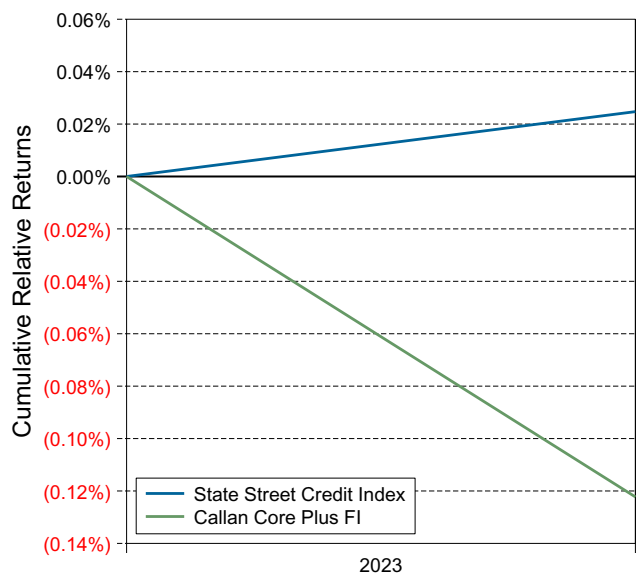
Beginning Market Value	\$82,751,650
Net New Investment	\$-843
Investment Gains/(Losses)	\$-236,104
Ending Market Value	\$82,514,703



Relative Return vs Blmbg Credit



Cumulative Returns vs Blmbg Credit



Western Asset Management Company

Period Ended June 30, 2023

Investment Philosophy

Western Asset designs this portfolio using all major fixed-income sectors with a bias towards non-Treasuries, especially corporate, mortgage-backed and asset-backed securities. Value can be added through sector rotation, issue selection, duration and term structure weighting.

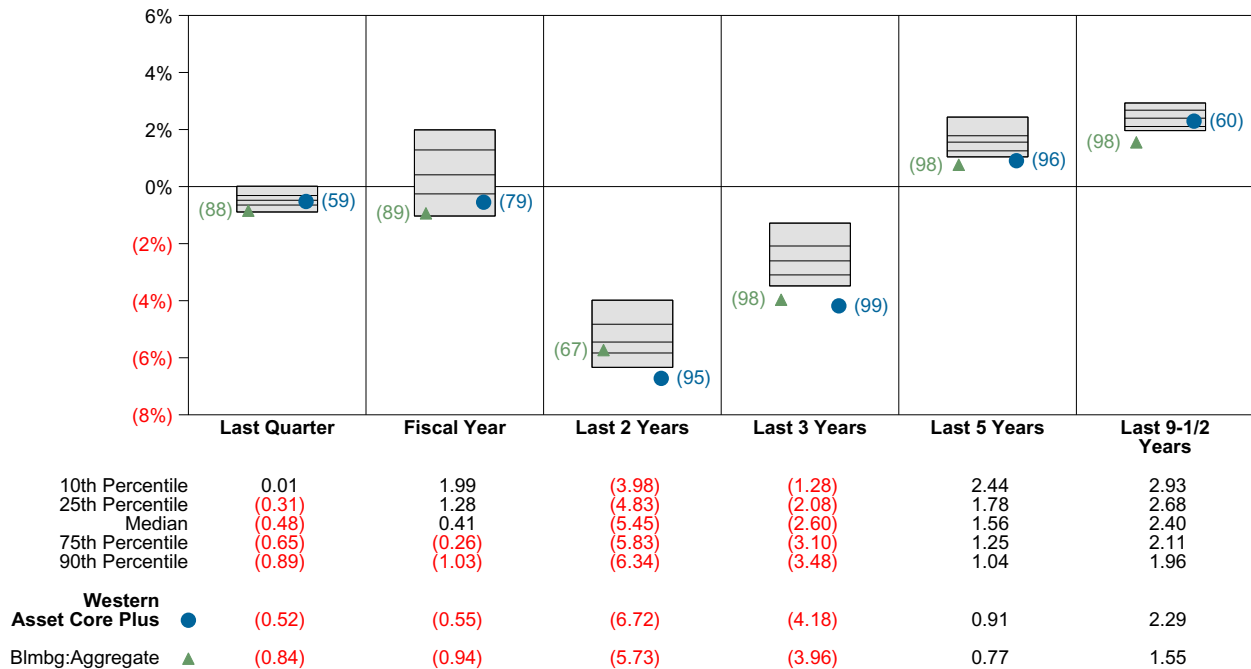
Quarterly Summary and Highlights

- Western Asset Core Plus's portfolio posted a (0.52)% return for the quarter placing it in the 59 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 79 percentile for the last year.
- Western Asset Core Plus's portfolio outperformed the Blmbg:Aggregate by 0.32% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.39%.

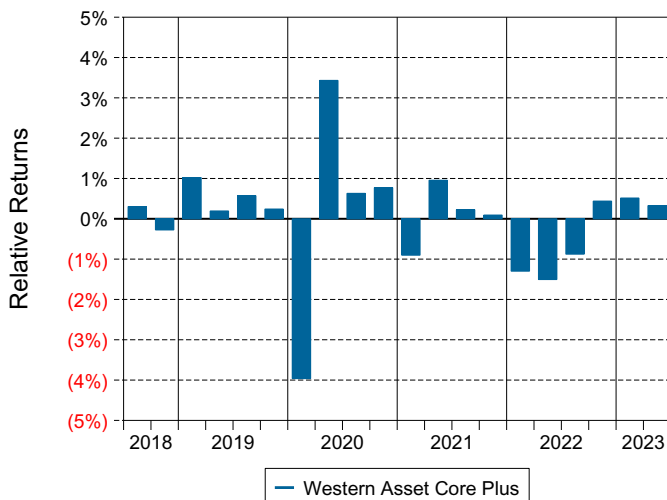
Quarterly Asset Growth

Beginning Market Value	\$681,103,554
Net New Investment	\$0
Investment Gains/(Losses)	\$-3,557,700
Ending Market Value	\$677,545,854

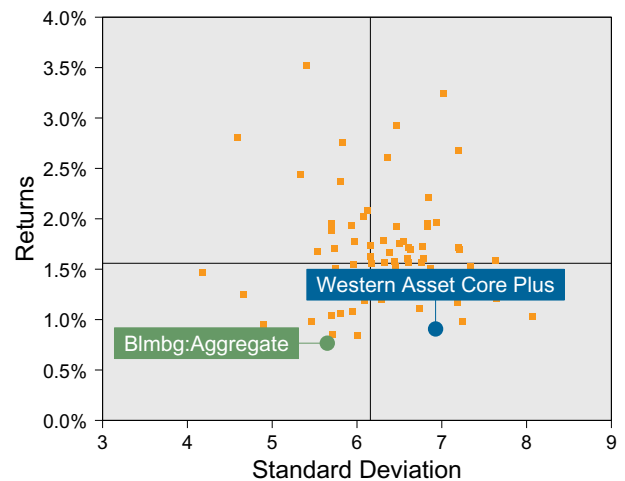
Performance vs Callan Core Plus Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



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



Invesco Core Real Estate Period Ended June 30, 2023

Investment Philosophy

Invesco will invest in core properties with a focus on investments with stable income and quality locations. Core style investments include existing, substantially leased (typically 70% or greater occupancy at the time of investment) income-producing industrial, multifamily, retail and office properties located principally in metropolitan areas that exhibit reasonable economic diversification

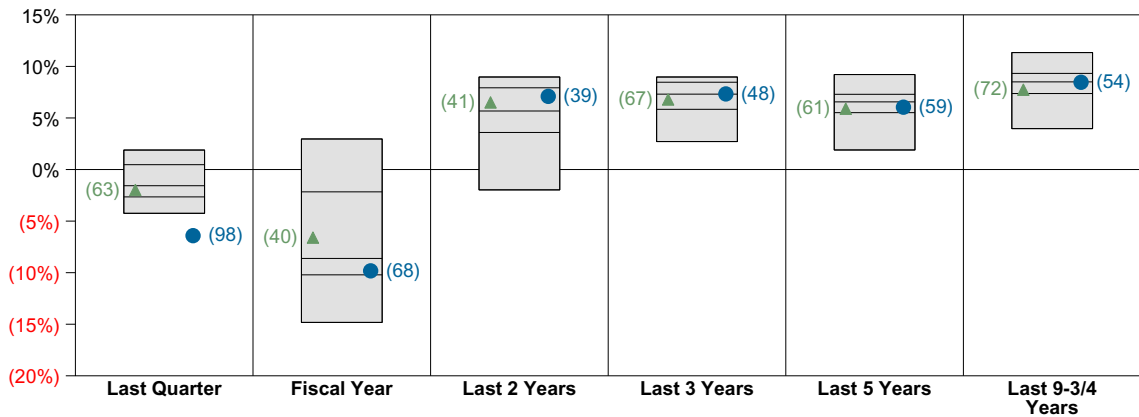
Quarterly Summary and Highlights

- Invesco Core Real Estate's portfolio posted a (6.41)% return for the quarter placing it in the 98 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 68 percentile for the last year.
- Invesco Core Real Estate's portfolio underperformed the NCREIF Total Index by 4.43% for the quarter and underperformed the NCREIF Total Index for the year by 3.23%.

Quarterly Asset Growth

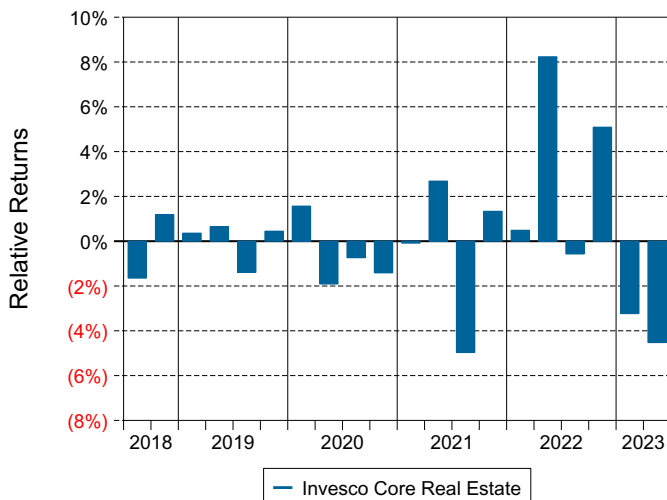
Beginning Market Value	\$226,349,237
Net New Investment	\$-353,936
Investment Gains/(Losses)	\$-14,505,303
Ending Market Value	\$211,489,999

Performance vs Callan Total Domestic Real Estate DB (Gross)

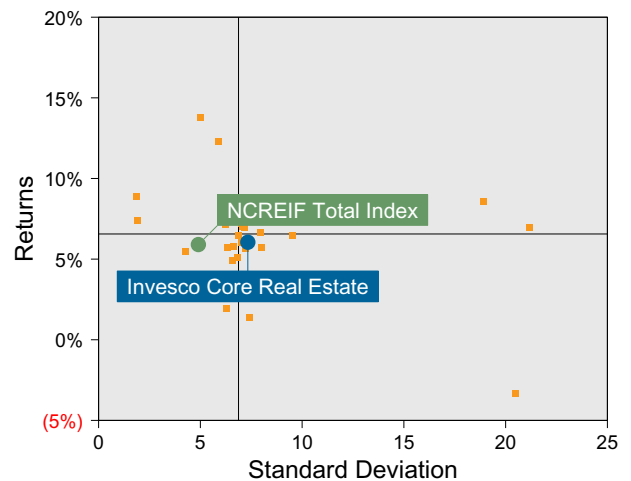


10th Percentile	1.89	2.96	8.97	8.97	9.21	11.34
25th Percentile	0.47	(2.16)	7.92	8.47	7.30	9.32
Median	(1.57)	(8.62)	5.68	7.31	6.56	8.50
75th Percentile	(2.65)	(10.21)	3.60	5.84	5.52	7.37
90th Percentile	(4.25)	(14.82)	(1.97)	2.71	1.90	3.97
Invesco Core Real Estate	● (6.41)	(9.83)	7.10	7.33	6.05	8.46
NCREIF Total Index	▲ (1.98)	(6.60)	6.51	6.79	5.90	7.75

Relative Return vs NCREIF Total Index



Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return



JP Morgan RE Inc & Growth Period Ended June 30, 2023

Investment Philosophy

The J.P. Morgan U.S. Real Estate Income and Growth Fund seeks to construct and opportunistically manage a portfolio of core direct real estate investments, complemented by other real estate and real estate-related assets. The Fund pursues a broadly diversified absolute-return strategy and pursues all property investments on an opportunistic basis. The majority of the Fund's investments will be in direct core properties in the office, industrial, retail and residential sectors.

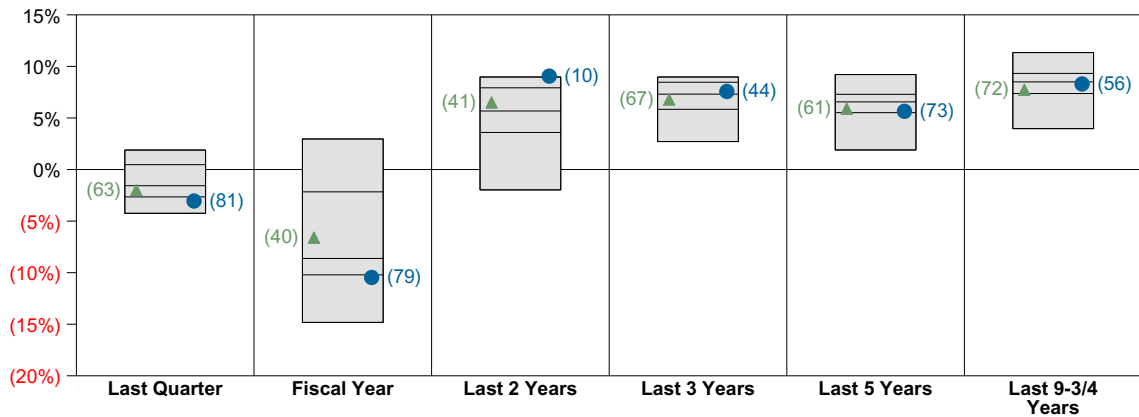
Quarterly Summary and Highlights

- JP Morgan RE Inc & Growth's portfolio posted a (3.05)% return for the quarter placing it in the 81 percentile of the Callan Total Domestic Real Estate DB group for the quarter and in the 79 percentile for the last year.
- JP Morgan RE Inc & Growth's portfolio underperformed the NCREIF Total Index by 1.07% for the quarter and underperformed the NCREIF Total Index for the year by 3.87%.

Quarterly Asset Growth

Beginning Market Value	\$217,345,031
Net New Investment	\$-904,616
Investment Gains/(Losses)	\$-6,627,680
Ending Market Value	\$209,812,735

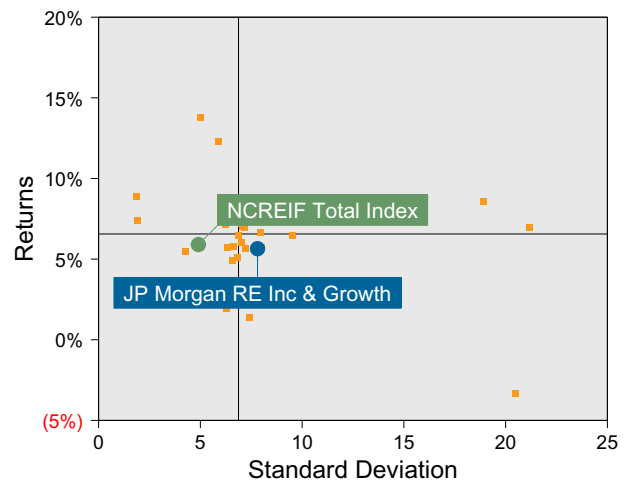
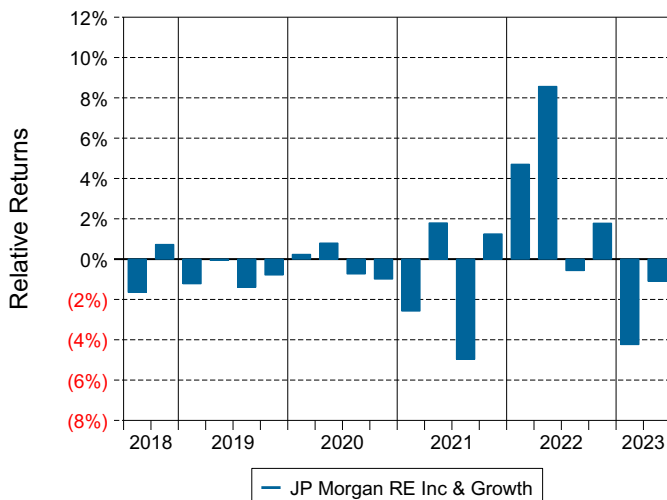
Performance vs Callan Total Domestic Real Estate DB (Gross)



10th Percentile	1.89	2.96	8.97	8.97	9.21	11.34
25th Percentile	0.47	(2.16)	7.92	8.47	7.30	9.32
Median	(1.57)	(8.62)	5.68	7.31	6.56	8.50
75th Percentile	(2.65)	(10.21)	3.60	5.84	5.52	7.37
90th Percentile	(4.25)	(14.82)	(1.97)	2.71	1.90	3.97
JP Morgan RE Inc & Growth	(3.05)	(10.47)	9.06	7.57	5.65	8.30
NCREIF Total Index	(1.98)	(6.60)	6.51	6.79	5.90	7.75

Callan Total Domestic Real Estate DB (Gross) Annualized Five Year Risk vs Return

Relative Return vs NCREIF Total Index



Western Asset TIPS Period Ended June 30, 2023

Investment Philosophy

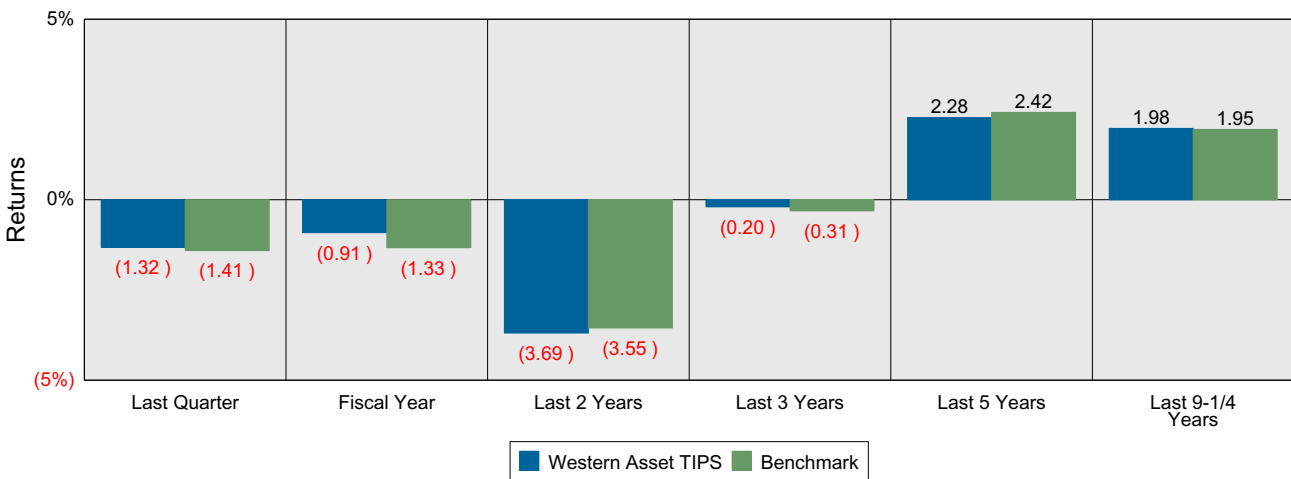
The Western Asset US TIPS Full Discretion strategy is an inflation-protected strategy that aims to maximize total return and add value through duration and curve positioning, sector allocation, and security selection, while approximating benchmark risk. The strategy invests in a diversified portfolio using higher-yielding inflation-protected instruments with a bias toward Treasury Inflation-Protected Securities (TIPS). Opportunistic investments include high-yield, emerging markets, non-dollar securities, commodities and bank loans that may also be employed using derivatives. **Benchmark: Bloomberg US TIPS through 12/31/2009; Bloomberg Global Inflation-Linked through 10/31/2018; Bloomberg US Govt Inflation Linked Bond Index thereafter.**

Quarterly Summary and Highlights

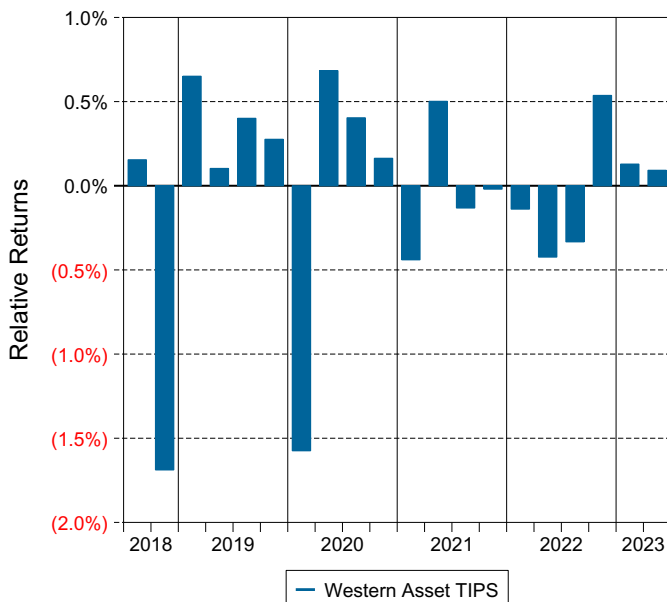
- Western Asset TIPS's portfolio outperformed the Benchmark by 0.09% for the quarter and outperformed the Benchmark for the year by 0.42%.

Quarterly Asset Growth

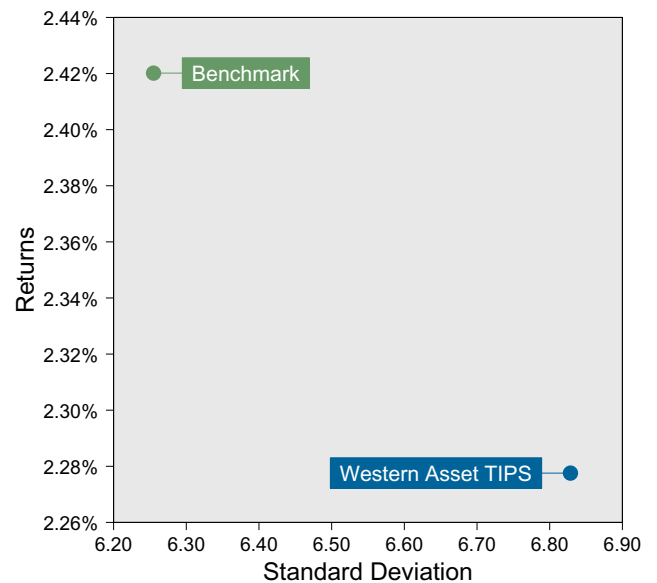
Beginning Market Value	\$388,199,857
Net New Investment	\$0
Investment Gains/(Losses)	\$-5,120,764
Ending Market Value	\$383,079,092



Relative Return vs Benchmark



Annualized Five Year Risk vs Return



JP Morgan IIF Infrastructure Period Ended June 30, 2023

Investment Philosophy

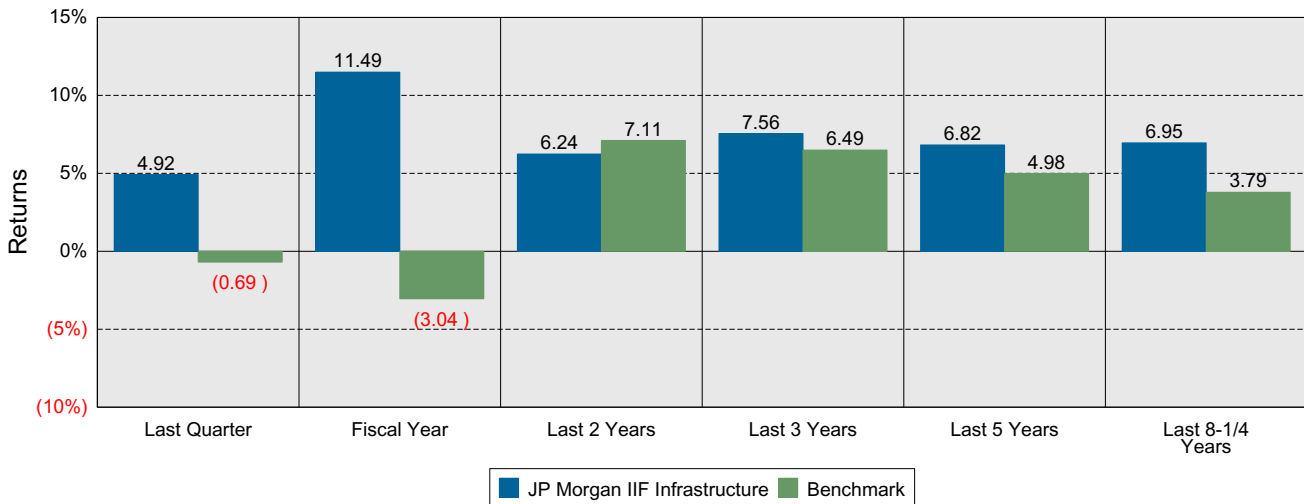
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas pipelines; electricity transmission and distribution facilities; contracted power generation assets; water distribution; waste-water collection and processing; railway lines and rapid rail links; and seaports and airports. **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

Quarterly Summary and Highlights

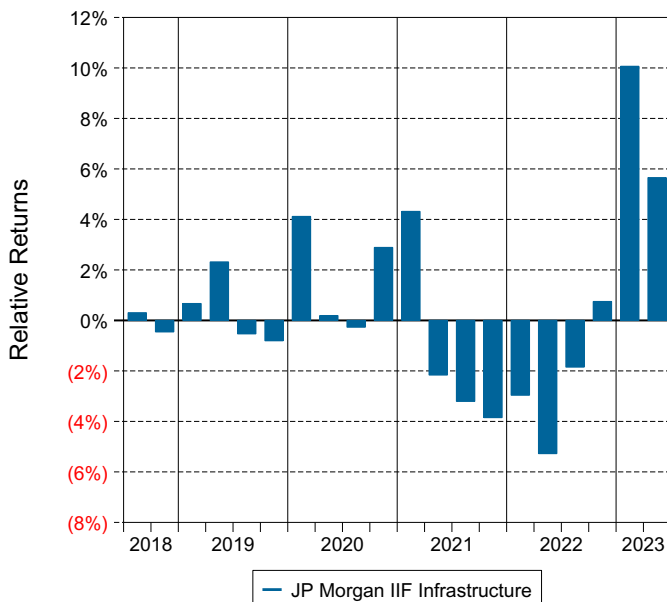
- JP Morgan IIF Infrastructure's portfolio outperformed the Benchmark by 5.62% for the quarter and outperformed the Benchmark for the year by 14.54%.

Quarterly Asset Growth

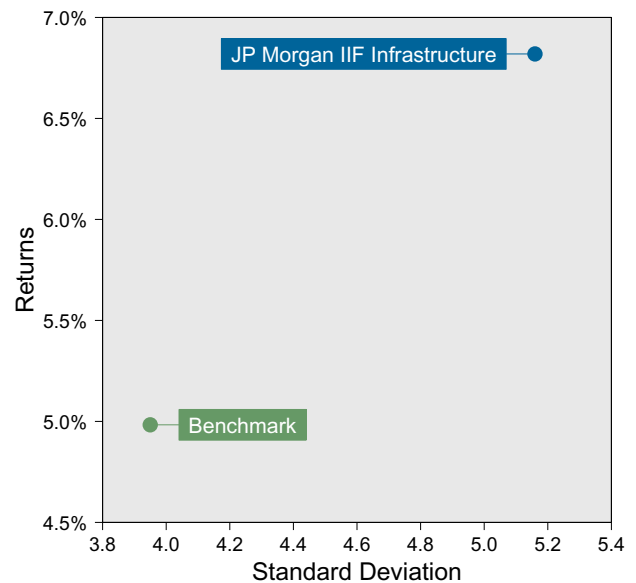
Beginning Market Value	\$103,416,467
Net New Investment	\$-1,268,005
Investment Gains/(Losses)	\$5,087,523
Ending Market Value	\$107,235,985



Relative Return vs Benchmark



Annualized Five Year Risk vs Return



Grosvenor CIS Fund II

Period Ended June 30, 2023

Investment Philosophy

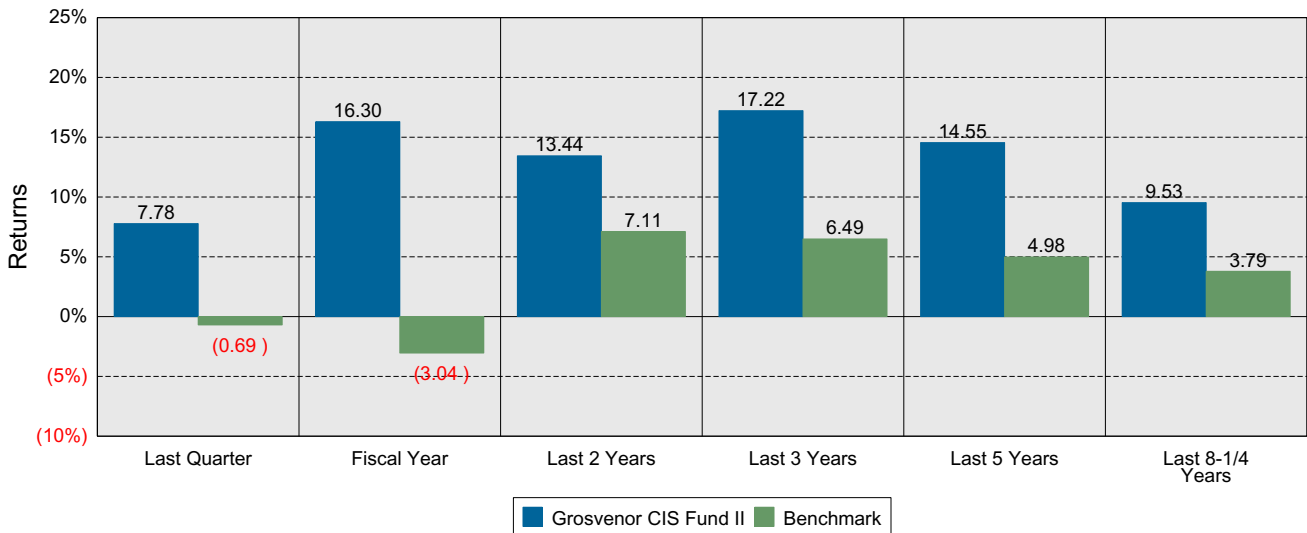
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.**

Quarterly Summary and Highlights

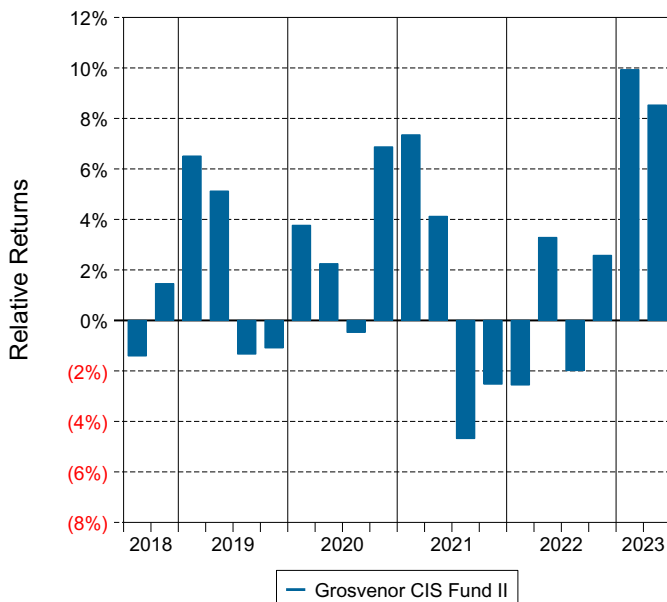
- Grosvenor CIS Fund II's portfolio outperformed the Benchmark by 8.47% for the quarter and outperformed the Benchmark for the year by 19.35%.

Quarterly Asset Growth

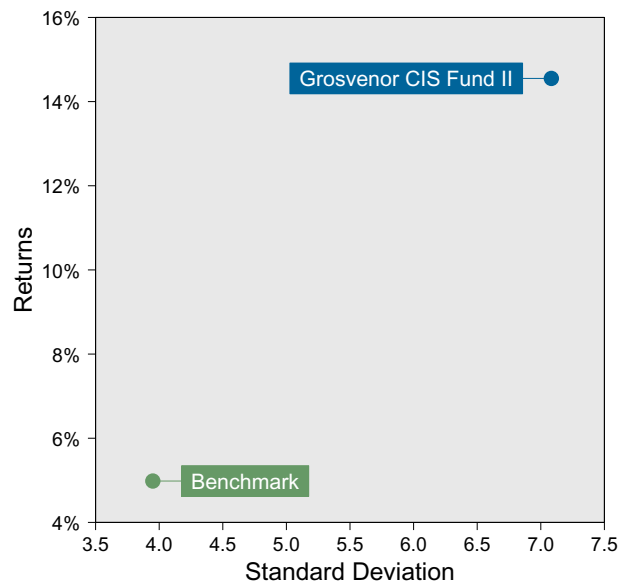
Beginning Market Value	\$56,820,906
Net New Investment	\$-7,288,077
Investment Gains/(Losses)	\$3,940,614
Ending Market Value	\$53,473,443



Relative Return vs Benchmark



Annualized Five Year Risk vs Return



Grosvenor CIS Fund III

Period Ended June 30, 2023

Investment Philosophy

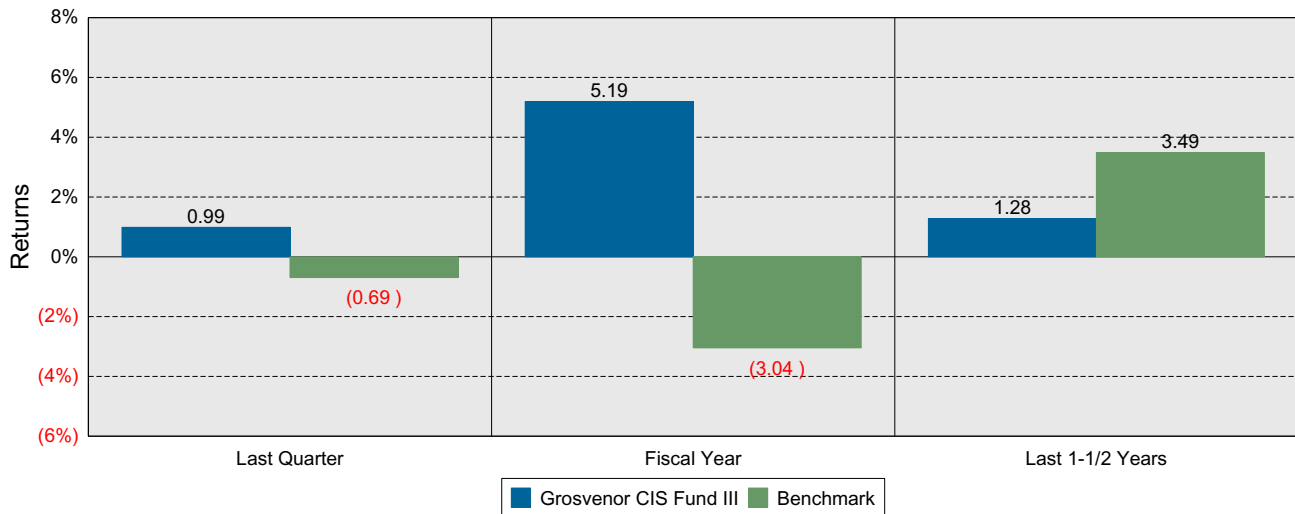
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified portfolio of primary core and core plus infrastructure funds (30%), co-investments (40%) and opportunistic secondary fund purchases (30%). **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

Quarterly Summary and Highlights

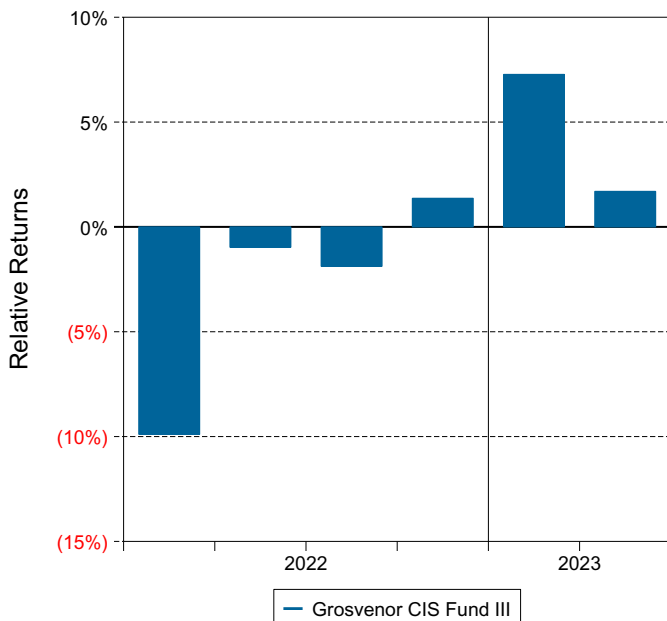
- Grosvenor CIS Fund III's portfolio outperformed the Benchmark by 1.68% for the quarter and outperformed the Benchmark for the year by 8.24%.

Quarterly Asset Growth

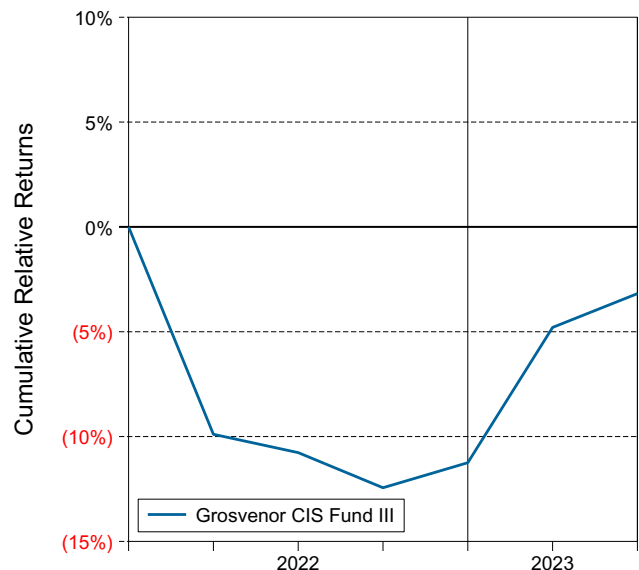
Beginning Market Value	\$38,663,197
Net New Investment	\$3,580,695
Investment Gains/(Losses)	\$420,254
Ending Market Value	\$42,664,146



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



ISQ Global Infrastructure II

Period Ended June 30, 2023

Investment Philosophy

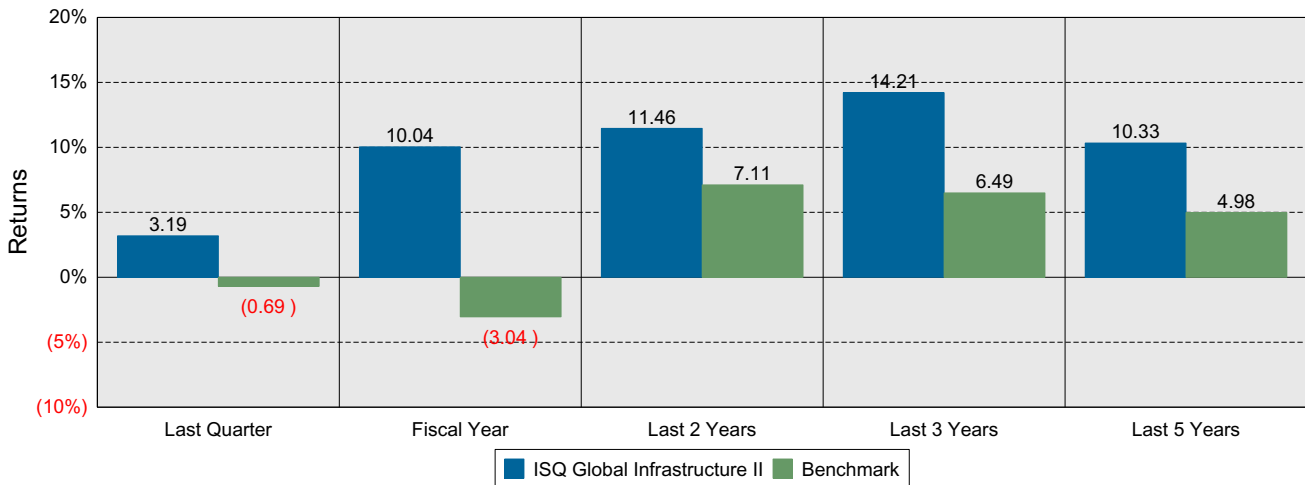
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia and Latin America. The Fund may also invest in debt Securities that have equity-like returns or an equity component, or are related to its equity investments, including without limitation convertible debt, bank loans and participations and other similar instruments. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

Quarterly Summary and Highlights

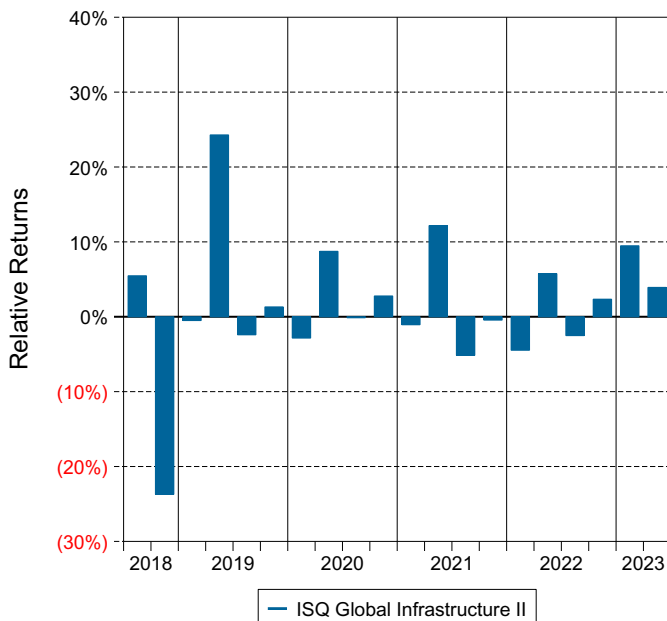
- ISQ Global Infrastructure II's portfolio outperformed the Benchmark by 3.88% for the quarter and outperformed the Benchmark for the year by 13.08%.

Quarterly Asset Growth

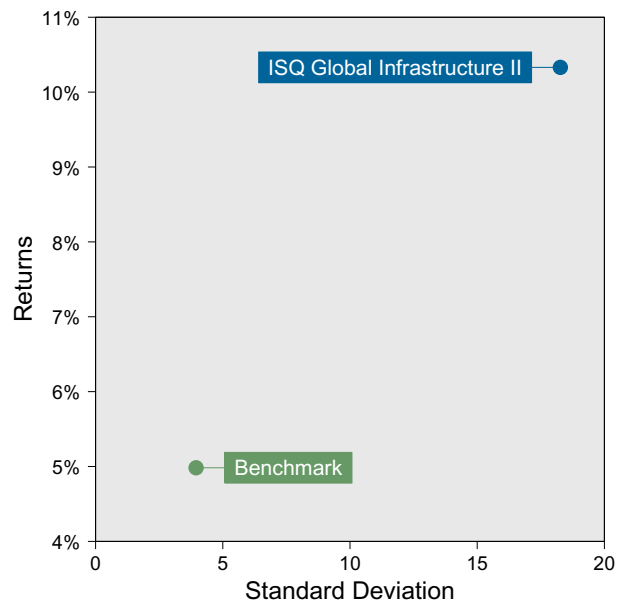
Beginning Market Value	\$79,774,316
Net New Investment	\$-3,380,342
Investment Gains/(Losses)	\$2,443,200
Ending Market Value	\$78,837,174



Relative Return vs Benchmark



Annualized Five Year Risk vs Return



ISQ Global Infrastructure III Period Ended June 30, 2023

Investment Philosophy

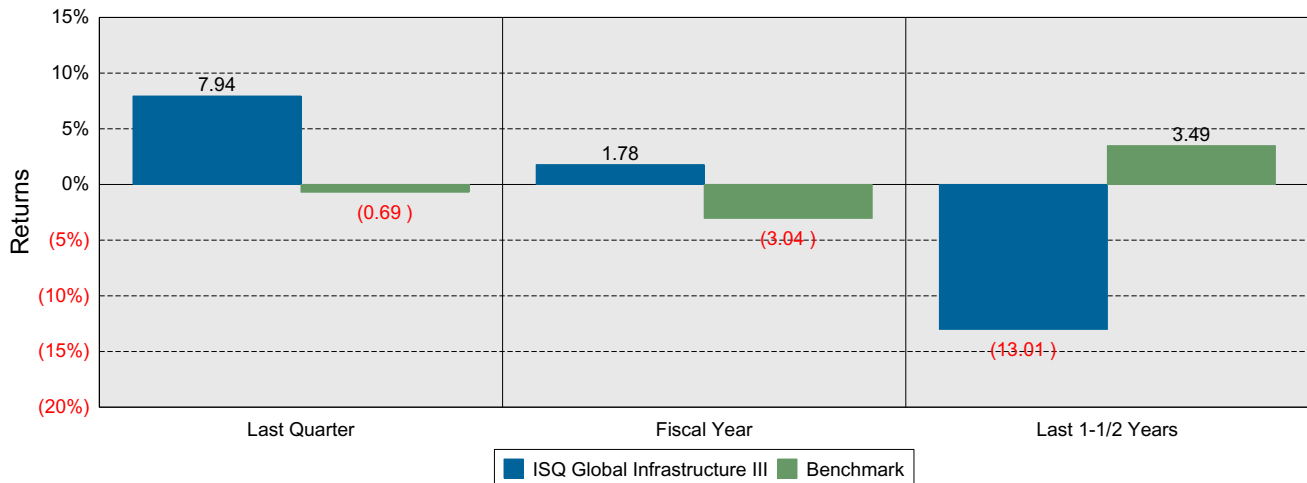
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia and Latin America. The Fund may also invest in debt Securities that have equity-like returns or an equity component, or are related to its equity investments, including without limitation convertible debt, bank loans and participations and other similar instruments. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

Quarterly Summary and Highlights

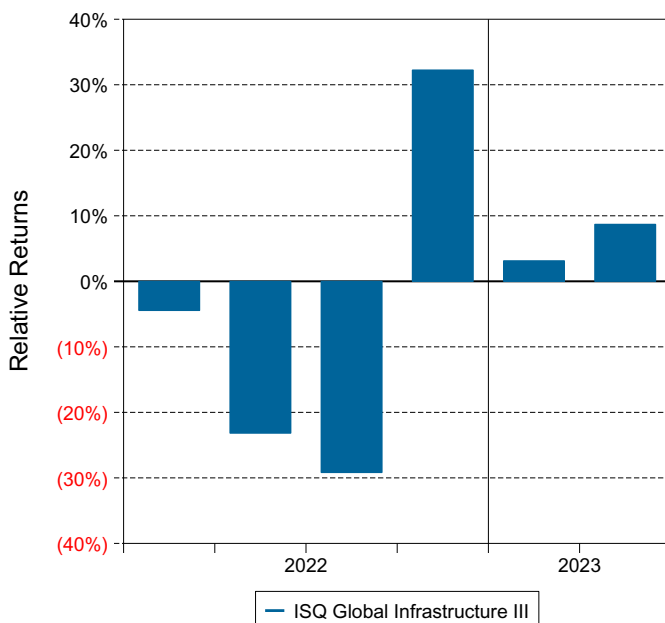
- ISQ Global Infrastructure III's portfolio outperformed the Benchmark by 8.63% for the quarter and outperformed the Benchmark for the year by 4.83%.

Quarterly Asset Growth

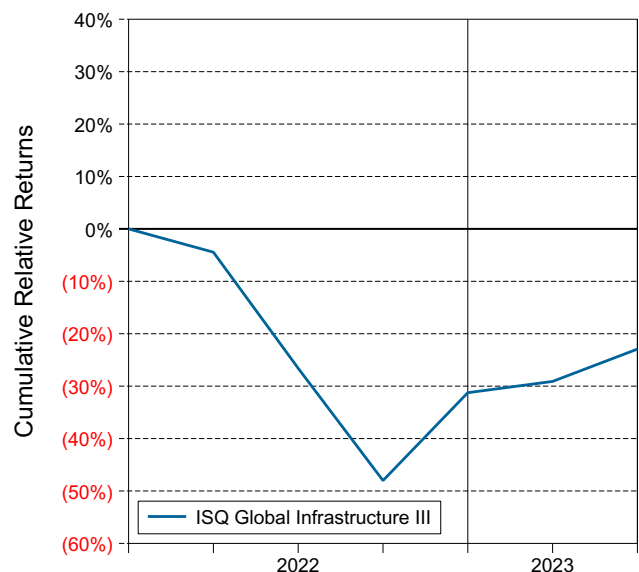
Beginning Market Value	\$19,910,084
Net New Investment	\$4,872,697
Investment Gains/(Losses)	\$1,895,502
Ending Market Value	\$26,678,283



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



Macquarie Infrastructure Fund IV

Period Ended June 30, 2023

Investment Philosophy

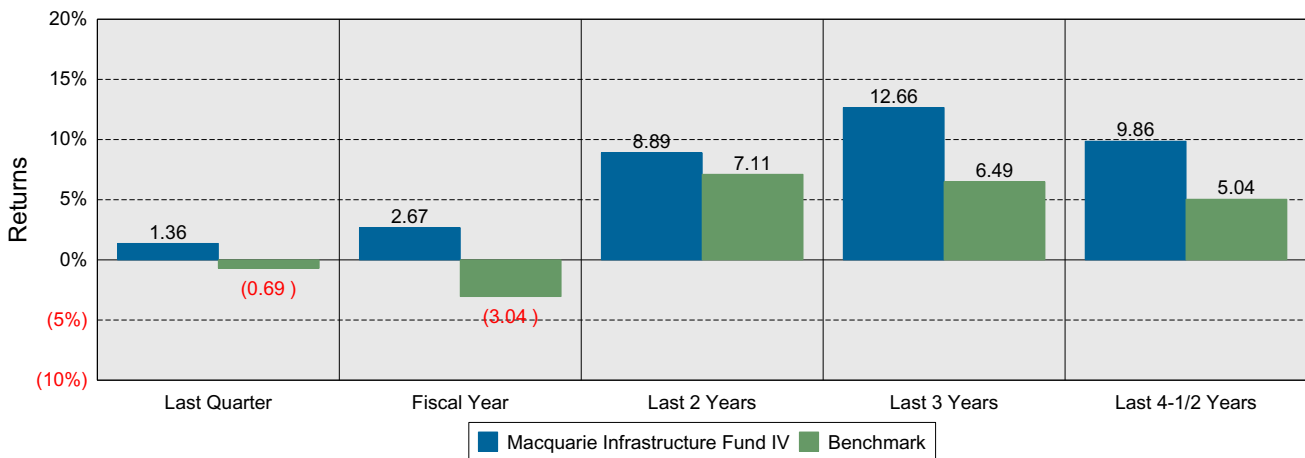
Macquarie’s principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team’s sector expertise and operating experience will provide a competitive advantage in sourcing and due diligence. Furthermore, the manager will also continue to focus on opportunities where its active management capabilities can add value for investors in terms of enhancing returns and the substantial mitigation and/or elimination of material operational risks. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

Quarterly Summary and Highlights

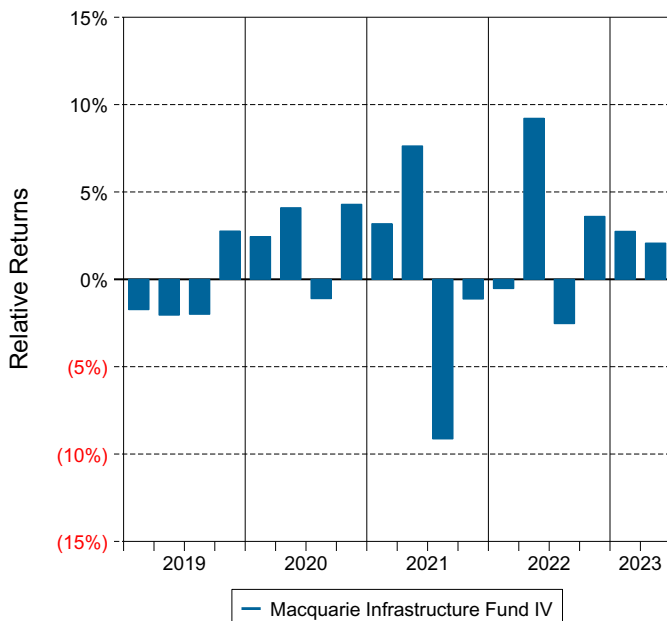
- Macquarie Infrastructure Fund IV’s portfolio outperformed the Benchmark by 2.06% for the quarter and outperformed the Benchmark for the year by 5.72%.

Quarterly Asset Growth

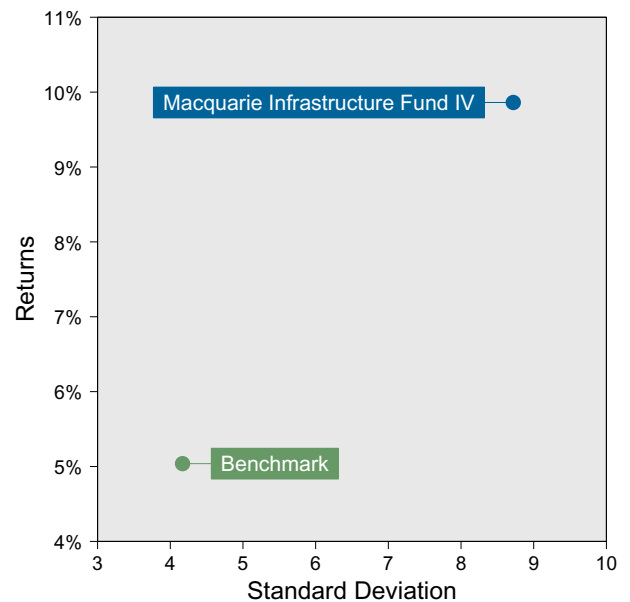
Beginning Market Value	\$90,686,944
Net New Investment	\$-42,534
Investment Gains/(Losses)	\$1,234,917
Ending Market Value	\$91,879,327



Relative Return vs Benchmark



Annualized Four and One-Half Year Risk vs Return



Macquarie Infrastructure Fund V

Period Ended June 30, 2023

Investment Philosophy

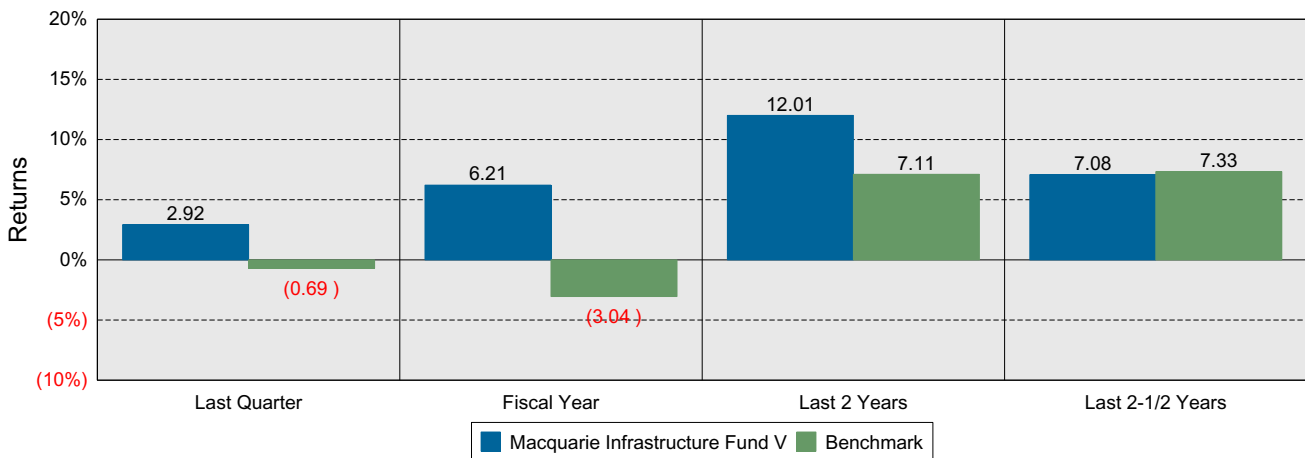
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience will provide a competitive advantage in sourcing and due diligence. Furthermore, the manager will also continue to focus on opportunities where its active management capabilities can add value for investors in terms of enhancing returns and the substantial mitigation and/or elimination of material operational risks. **The Benchmark is comprised of 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net.**

Quarterly Summary and Highlights

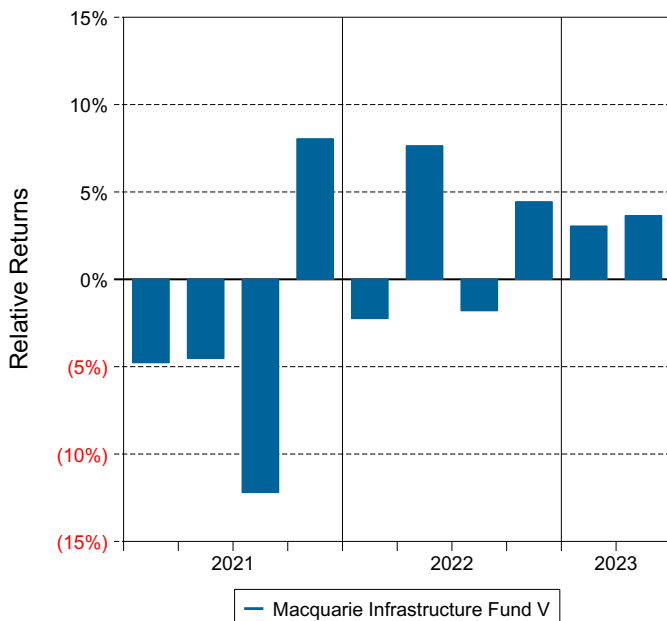
- Macquarie Infrastructure Fund V's portfolio outperformed the Benchmark by 3.62% for the quarter and outperformed the Benchmark for the year by 9.25%.

Quarterly Asset Growth

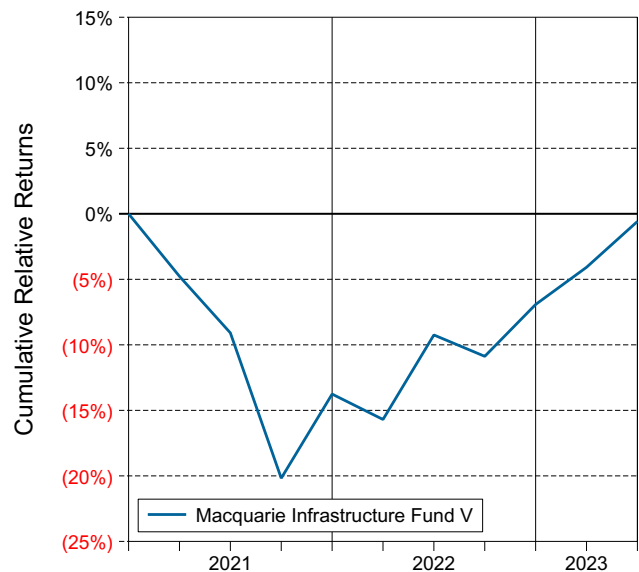
Beginning Market Value	\$80,308,964
Net New Investment	\$9,053,186
Investment Gains/(Losses)	\$2,599,098
Ending Market Value	\$91,961,248



Relative Return vs Benchmark



Cumulative Returns vs Benchmark



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

abrdrn (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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