

June 30, 2022



## North Dakota State Investment Board Pension Funds

Investment Measurement Service  
Quarterly Review

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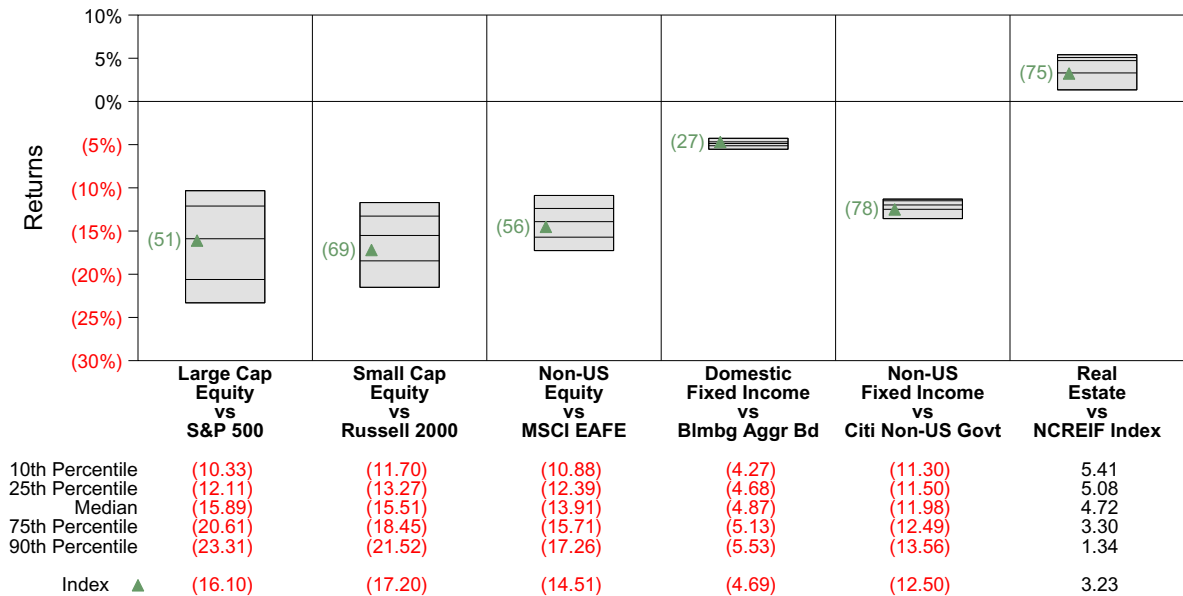
## Market Overview

### Active Management vs Index Returns

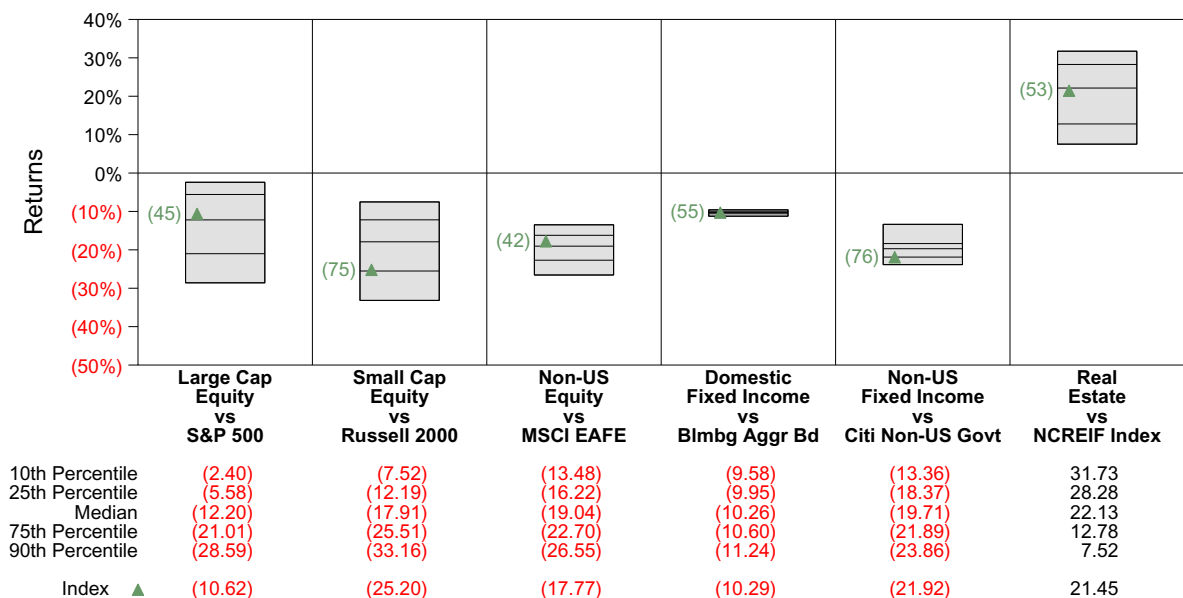
#### Market Overview

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, 2022



#### Range of Separate Account Manager Returns by Asset Class One Year Ended June 30, 2022



## Recession Call Waits For NBER Committee

### ECONOMY

**2** Despite two consecutive quarters of a decline in GDP, the United States is not officially in a recession—until a committee of the National Bureau of Economic Research determines that we are. The stock market, however, is not waiting and has already priced one in.

## Pain Is Widespread For Bond Investors

### FIXED INCOME

**8** The Bloomberg US Aggregate Bond Index posted its worst six-month return in its history. Market pricing reflects a Fed Funds rate of 3.4% at year-end. Double-digit negative returns were widespread across developed markets, and all EM indices saw losses as well.

## Illiquidity Premium Slowly Adjusting

### PRIVATE CREDIT

**12** The illiquidity premium between public and private credit had been whittled down close to zero, but we are seeing a slow adjustment. Fundraising slowed in the first half of 2022 as interest rate hikes and market volatility led to investor uncertainty.

## Challenges Galore As Stocks, Bonds Fall

### INSTITUTIONAL INVESTORS

**4** All investor types saw returns fall over the last year ending 2Q22, given the drops in both stocks and bonds. Uncertainty in 2022 creates challenges for planning. Investors have to factor in the invasion of Ukraine, inflation, market declines, higher rates, and recession concerns.

## Private RE Delivers; REITs Underperform

### REAL ESTATE/REAL ASSETS

**10** Core real estate delivered another robust quarter, although returns are expected to moderate for the rest of this year and into next. REITs both globally and in the United States lagged equities. Real assets saw widespread losses, with the notable exception of energy.

## Tough Environment Leads to Losses

### HEDGE FUNDS/MACs

**13** Hedge funds mostly fell in 2Q22 amid a confluence of major macroeconomic forces. Macro managers remained the best-performing strategy for the first half of 2022. Most of the managers in the Callan Multi-Asset Class (MAC) Style Groups generated negative returns, gross of fees.

## Most Major Indices Fall by Double Digits

### EQUITY

**6** The S&P 500 plunged 16.1% in 2Q22; all major U.S. indices across styles and market cap ranges also fell. Global indices followed suit; slowing global growth became clearer toward quarter-end, leading investors toward higher-quality and lower-volatility areas of the market.

## Persistence Amid Volatile Environment

### PRIVATE EQUITY

**11** First-half private equity fundraising and deal activity declined from last year's frenzied levels but volumes remained strong. With the public equity sell-off in 2Q, distributions have been the largest casualty as the strong seller's market has receded.

## DC Index Falls in 1Q22, After 4Q21 Gain

### DEFINED CONTRIBUTION

**15** The Callan DC Index™ fell 5.3% in 1Q22; the Age 45 Target Date Fund dropped 5.9%. Target date funds (TDFs) received the largest net inflows during the quarter. U.S. large cap had the largest percentage decrease in allocation; TDFs saw the largest increase.

## Broad Market Quarterly Returns

### U.S. Equity Russell 3000

  
**-16.7%**

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

  
**-13.7%**

### U.S. Fixed Income Bloomberg Agg

  
**-4.7%**

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

  
**-11.0%**

Sources: Bloomberg, FTSE Russell, MSCI

# Recession—Are We There Yet?

ECONOMY | Jay Kloepper

GDP in 2Q22 fell 0.9%, after declining 1.6% in 1Q—so are we already in a recession? If so, that was fast; growth in 4Q21 was a rockin' 6.9%. The stock market already thinks so; investors fully priced in a recession during the first half of 2022, with particularly large declines in April and June and a bear market by midyear. Over history, the stock market moves to price in a recession well before the economic data begin to show a decline.

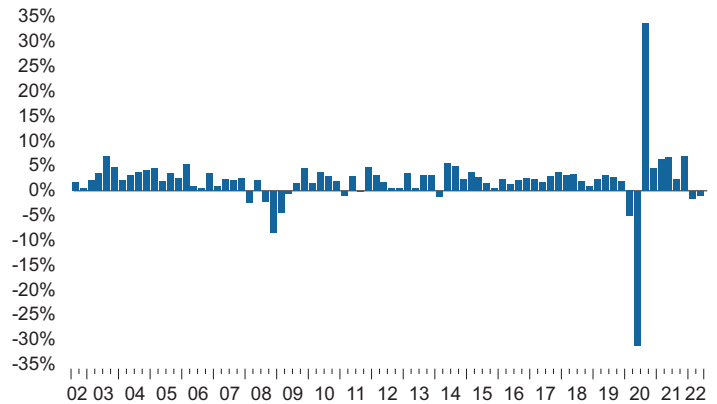
It turns out two consecutive quarters of falling GDP is a nice rule of thumb, but it is not the official definition of recession. So what is, and who gets to decide? First, the decider: the rather grandly named National Bureau of Economic Research Business Cycle Dating Committee. Second, the definition: "a significant decline in economic activity that is spread across the country and lasts more than a few months." The committee uses a number of measures of economic activity, and leans particularly hard on real personal income and nonfarm payroll employment. Interestingly, GDP is used sparingly; the focus of recession dating is typically on a monthly determination of peaks and troughs, while GDP is reported only quarterly.

Data preferences from this arcane Dating Committee aside, two consecutive quarters of GDP decline is still news, even if it does not necessarily indicate recession. The sources of the decline in 2Q GDP included a large decrease in private inventory investment, which subtracted 2 percentage points from GDP. The inventory drop was led by a decrease in retail trade, mainly general merchandise stores, along with motor vehicle dealers. Other detractors to growth were both residential and non-residential fixed investment; and federal, state, and local government spending.

Offsetting the declines were increases in exports and personal consumption expenditures (PCE). The rise in PCE reflected an increase in services (food services, accommodations, and health care) that was partly offset by a decrease in spending on goods (led by food and beverages). So ... more spending

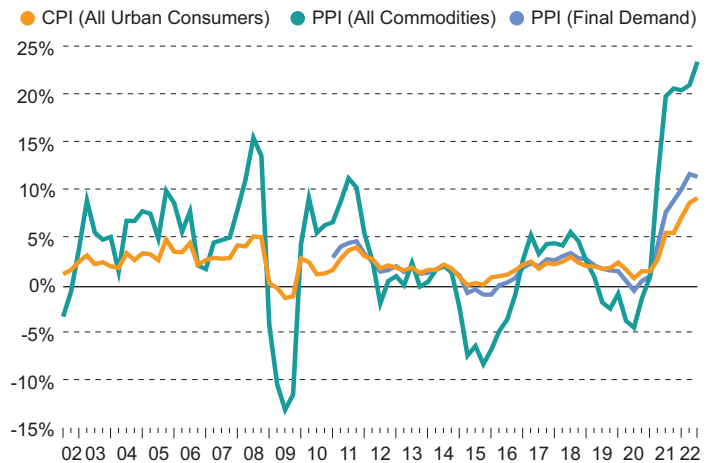
Quarterly Real GDP Growth

(20 Years)



Source: Bureau of Economic Analysis

Inflation Year-Over-Year



Source: Bureau of Labor Statistics

on restaurants and hotels and Airbnbs, and less food at home, even with the sharp rise in prices at the grocery store.

What is especially interesting is that the rise in the dollar helped imports and didn't seem to hurt exports, which is very weird, since that rise makes our exports more expensive and our imports cheaper. Exports fell sharply in 1Q as Russia invaded Ukraine, yet as the war intensified, exports shot back up in 2Q, growing by 18% and contributing almost 2 percentage points to GDP growth. Returning to the premise of the Dating Committee, that much more than GDP growth



should define a recession, somewhat anomalous components of GDP accounted for the declines in 1Q and 2Q. Both quarters were driven by huge changes in exports and inventories, neither of which are usually so important to a given quarter's GDP growth, and do not often reverse the course of growth coming from the rest of the economy. Other data on the broad economy during the first half of 2022 do not necessarily point to a recession, at least not yet. The job market was very robust through both 1Q and 2Q, as the U.S. economy added more than 2.7 million new jobs; since the invasion of Ukraine in February, the job market averaged almost 400,000 new jobs per month, substantially above the 200,000-250,000 rate that indicates an expanding economy. We still have room to recover from the pandemic, however, as we are half a million jobs short of the level set in February 2020.

Disposable personal income increased 6.6% in 2Q, in contrast to a decline of 1.3% in 1Q. Despite this robust growth, incomes could not keep up with inflation, which began ramping up in April 2021. After kicking off the year at 7.5% in January, inflation as measured by the CPI-U index has only gone up each month, reaching 9.1% in the June report. As a result, real disposable personal income (take-home pay, adjusted for inflation) decreased 0.5% in 2Q; while disappointing, this report was substantially better than in 1Q, when real disposable income fell an alarming 7.8%.

The mayhem in the capital markets continued during 2Q, as both stocks and bonds responded to the Fed and the ECB aggressively raising interest rates, Russia's war in Ukraine, concerns about an incipient recession, another COVID surge, and global economic weakness. However, the U.S. economy is still growing robustly. There may be something to this Dating

### The Long-Term View

Index	2Q22	Periods Ended 6/30/22			
		1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	-16.7	-13.9	10.6	12.6	8.1
S&P 500	-16.1	-10.6	11.3	13.0	8.0
Russell 2000	-17.2	-25.2	5.2	9.4	7.4
Global ex-U.S. Equity					
MSCI EAFE	-14.5	-17.8	2.2	5.4	3.9
MSCI ACWI ex USA	-13.7	-19.4	2.5	4.8	--
MSCI Emerging Markets	-11.4	-25.3	2.2	3.1	--
MSCI ACWI ex USA Small Cap	-17.5	-22.4	2.6	6.2	5.7
Fixed Income					
Bloomberg Agg	-4.7	-10.3	0.9	1.5	4.4
90-Day T-Bill	0.1	0.2	1.1	0.6	2.0
Bloomberg Long G/C	-12.3	-20.1	1.0	2.6	6.1
Bloomberg GI Agg ex US	-11.0	-18.8	-1.8	-1.1	2.8
Real Estate					
NCREIF Property	3.2	21.5	8.9	9.7	9.5
FTSE Nareit Equity	-17.0	-6.3	5.3	7.4	8.7
Alternatives					
CS Hedge Fund	-2.3	1.9	4.8	4.7	6.3
Cambridge PE*	-1.5	22.0	20.7	16.5	15.4
Bloomberg Commodity	-5.7	24.3	8.4	-0.8	1.8
Gold Spot Price	-7.5	2.0	7.8	1.2	7.0
Inflation – CPI-U	3.1	9.1	3.9	2.6	2.5

\*Data for most recent period lags. Data as of 3/31/22.

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

Committee's methodical approach. The caveat to its work is that calling turning points relies on government data reported with lags, so the Committee can only designate a recession after it starts. We may be "there," but we will not know until the Committee decides.

### Recent Quarterly Economic Indicators

	2Q22	1Q22	4Q21	3Q21	2Q21	1Q21	4Q20	3Q20
Employment Cost–Total Compensation Growth	5.1%	4.5%	4.0%	3.7%	2.9%	2.6%	2.5%	2.4%
Nonfarm Business–Productivity Growth	-6.2%*	-7.3%	6.3%	-3.9%	3.2%	2.2%	-2.8%	6.2%
GDP Growth	-0.9%	-1.6%	6.9%	2.3%	6.7%	6.3%	4.5%	33.8%
Manufacturing Capacity Utilization	79.8%	79.2%	78.6%	77.5%	76.8%	75.7%	75.0%	73.3%
Consumer Sentiment Index (1966=100)	57.8	63.1	69.9	74.8	85.6	80.2	79.8	75.6

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

\*Estimate

# Returns Fall Amid Challenging Environment

## INSTITUTIONAL INVESTORS

### Investors' performance holds up relatively well

- All investor types saw returns decline over the last year ending 2Q22, given the drops in both stocks and bonds over the same period.
- Relatively, their returns held up well, with all investor types outperforming broad U.S. equities and most topping the Bloomberg US Aggregate Bond Index. The sole exception was corporate defined benefit (DB) plans, not surprising given their typically heavy allocations to fixed income.
- Over much longer periods, all institutional investor types have seen returns roughly in line with a 60% S&P 500/40% Aggregate mix.

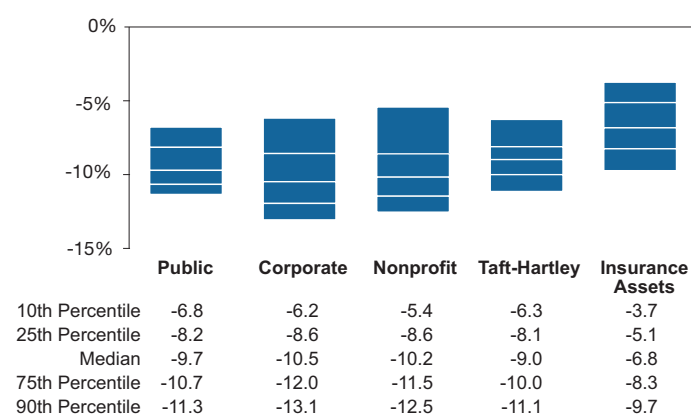
### Strategic planning focus alters

- Drops in both stocks and bonds YTD have changed discussions about asset allocation.
- The questions that investors are focused on now include:
  - How does a yield of 4% change the demand for yield substitutes: investment grade credit, bank loans, high yield, private credit—maybe even real estate and infrastructure?
  - How should investors handle rebalancing, which is a natural outcome of a market downturn, except when everything goes down?

- What should they do about alternatives, which are now over target allocations?
- Uncertainty in the first half of 2022 creates new challenges for planning. Investors are trying to factor in the invasion of Ukraine, inflation, market declines, higher rates, and recession concerns into their decision-making.
- Geopolitical uncertainty has lessened the enthusiasm for emerging market overweights, and raised questions with a number of investors about the value of global ex-U.S. equity broadly to a U.S.-based investor.

### Quarterly Returns, Callan Database Groups

(6/30/22)



Source: Callan

### Callan Database Median and Index Returns\* for Periods Ended 6/30/22

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	-9.7	-9.4	5.9	6.4	7.8	7.1
Corporate Database	-10.5	-13.1	3.6	5.0	6.8	6.6
Nonprofit Database	-10.2	-10.6	5.2	5.9	7.3	6.9
Taft-Hartley Database	-9.0	-7.7	6.1	6.8	8.1	6.8
Insurance Assets Database	-6.8	-8.6	2.2	3.3	3.9	4.9
All Institutional Investors	-9.9	-10.1	5.2	6.0	7.5	6.9
Large (>\$1 billion)	-8.8	-7.9	6.1	6.7	7.8	7.2
Medium (\$100mm - \$1bn)	-10.1	-10.4	5.2	6.0	7.5	6.8
Small (<\$100 million)	-10.1	-10.7	4.8	5.6	7.1	6.6
60% S&P 500/40% Bloomberg Agg	-11.5	-10.2	6.5	7.5	8.6	7.2

\*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.

- Real assets are under review with growing inflation concerns.
  - Renewed interest in inflation-sensitive investments that many investors had grown weary of such as energy, commodities, and other natural resources
  - Steadily growing interest in infrastructure among public plans

### Corporate DB plan priorities

- In general, strong interest in de-risking continues despite rise in yields. Higher yields make for a better entry point into long duration, but how much higher can long-term yields go? Plans on a glidepath tied to funded status are adhering to de-risking their portfolio as funded status improves.
- Total return-oriented plans enjoyed a strong 1Q22 as rates rose, but most of these plans gave back some funded status improvement as equities continued their decline in June.
- We are having some discussions about pension risk transfer.

### Public DB plan priorities

- 2020-21 gains drove improvements in funded status.
- Low projected returns mean downward pressure on actuarial discount rates. Moving to lower discount rates has not typically led to substantial changes in asset allocation, but perhaps greater comfort that the current risk posture has a better chance of achieving the plan discount rate.

- How will inflation impact large public plans?
- U.S. equity studies in 2Q22 saw large public plans examining fewer active managers and increasing the allocation to passive in an effort to increase net-of-fee returns. Global ex-U.S. equity studies recognize that foreign markets continue to lag but active managers, especially style-focused managers, are beating the indices net of fees.

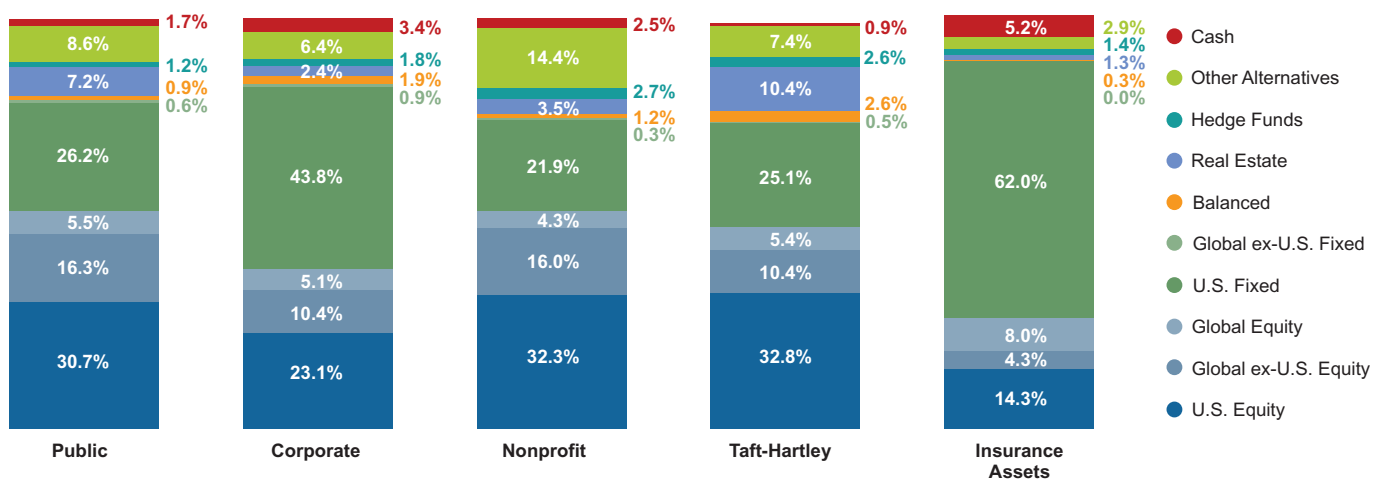
### Defined contribution (DC) plan priorities

- House passed SECURE 2.0 Act; Senate has two versions moving through committees.
- Final version uncertain, but may include allowing CITs in 403(b) plans and pushing RMDs back to age 75
- Target date funds have been adding allocations to growth assets across the spectrum of retirement cohorts to increase income replacement ratios in light of low expected returns across asset classes. Fee sensitivity has led to more passive in large cap U.S. equity.

### Nonprofit priorities

- They continue to expand the depth and breadth of their private markets investments in light of both high valuations in public markets growth assets and the potential for high inflation to erode the real values of their assets and distributions.

### 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

### All major indices fall

- The S&P 500 plunged 16.1% in 2Q22; all major U.S. indices across styles and market cap ranges fell in the quarter.
- All sectors posted negative returns in the quarter. Energy continued to be the best-performing sector, and the only sector that has posted a gain year-to-date (YTD).
- Large cap stocks nominally outpaced smaller cap stocks. The performance spread between the Russell 1000 and the Russell 2000 Index was around 50 basis points.
- Value stocks have outperformed growth stocks across the market capitalization spectrum.
- Consumer Discretionary (-26%), Communication Services (-21%), and Information Technology (-20%) were the worst-performing sectors.

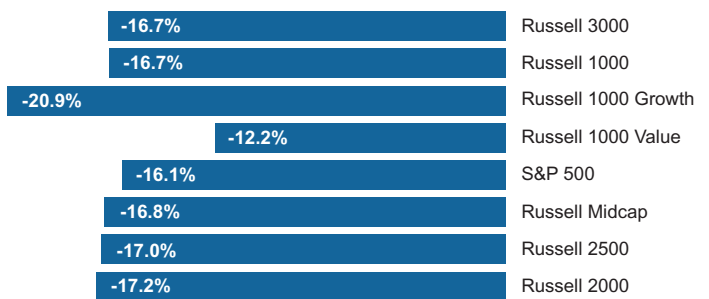
### Volatile environment hits equity markets

- Rising interest rates and inflation along with geopolitical headlines all contributed to a volatile and risk-averse environment.
- Macroeconomic headlines and data releases will continue to impact equity markets.
- Inflation, rising interest rates, and supply-chain disruptions are all headwinds for equity markets.
- Active large cap growth managers have underperformed the Russell 1000 Growth Index meaningfully recently.
- Large tech firms that have sold-off (e.g., Meta) have become an increasingly large proportion of the value index.

- Federal Reserve interest rate hikes may derail the economy, resulting in lower corporate earnings in the near- to intermediate-term.
- With a potential economic slowdown, sell-side analysts have been cutting corporate earnings estimates.
- Longer-duration growth assets, such as growth stocks, are vulnerable during periods of high inflation because of higher interest rates discounting way-out future earnings.

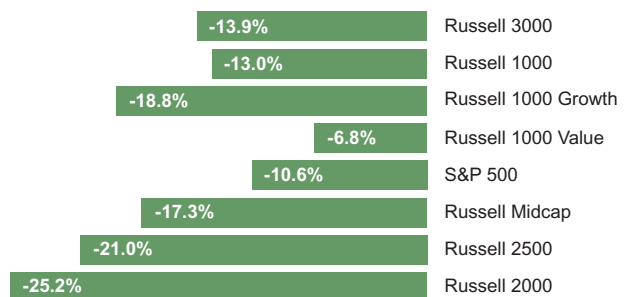
### U.S. Equity: Quarterly Returns

(6/30/22)



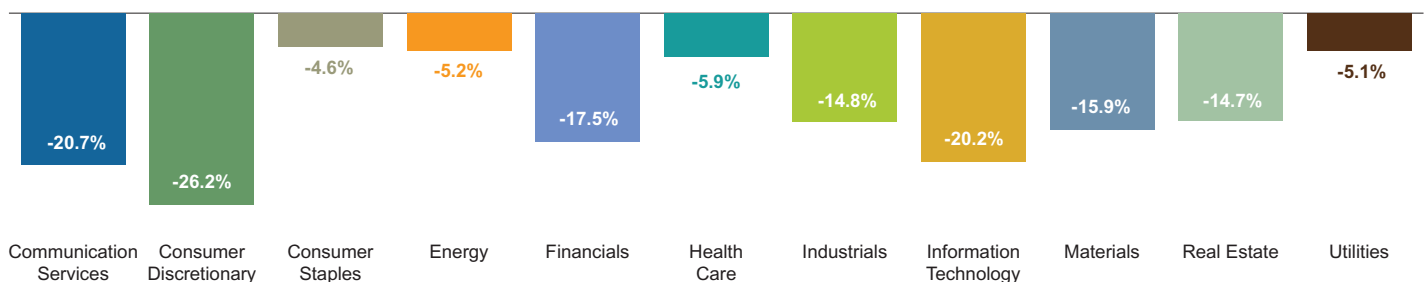
### U.S. Equity: One-Year Returns

(6/30/22)



Sources: FTSE Russell and S&P Dow Jones Indices

### Quarterly Performance of Industry Sectors (6/30/22)



Source: S&P Dow Jones Indices

## Global Equity

- The war in Ukraine tested an already fragile supply chain, led to energy demand/supply imbalances, and created an inflationary environment that sparked fears of a recession.
- Slowing global growth and recession risk became clearer toward quarter-end, leading investors toward higher-quality and lower-volatility areas of the market to offer protection.

## Wide divergence in country returns

- Optimism that the worst is behind China's COVID-19 lockdown buoyed the country to the only gain in 2Q22.
- Japan suffered from a weak yen, slowing growth, and continued supply chain disruptions.

## Growth vs. value

- Value continued to outperform growth as most monetary policies focus on tightening.
- Energy was the only sector with positive YTD results.
- Information Technology had the worst sector return as interest rate increases dampened long duration growth attractiveness.

## U.S. dollar vs. other currencies

- The U.S. dollar strengthened further against other major currencies given its global dominance and perceived safety.

## The rise of the dollar

- The dollar hit a 20-year high after rising roughly 10% YTD.
- The dollar hit parity with the euro; first time since 2002.
- The yen dipped to a 24-year low against the dollar.
- Strong dollar may burden global ex-U.S. markets.

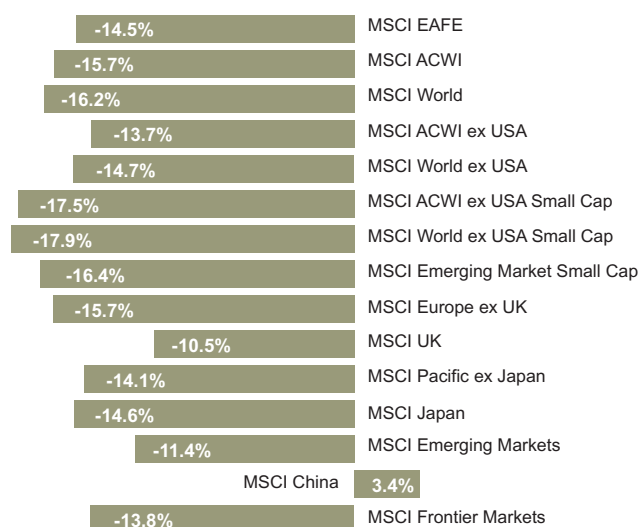
## Strong currency yields purchasing power

- Dollar-denominated debt compounded by depreciating local currencies weighed on the economy.
- The dollar and global ex-U.S. equity have exhibited negative correlation over the past four decades.

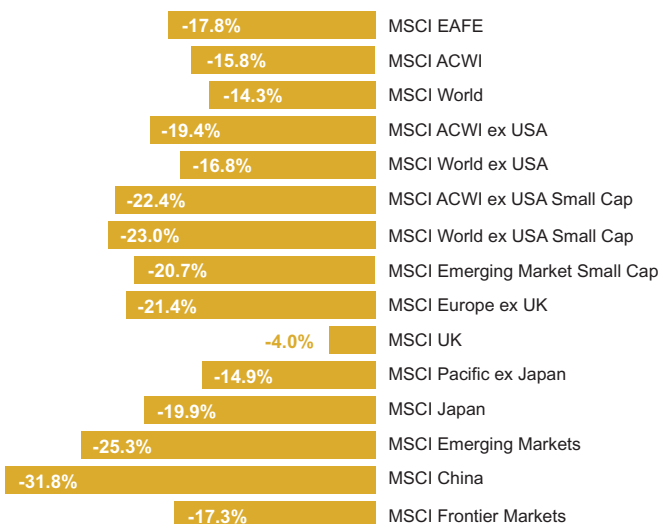
## EM has fared better relative to prior downturns

- EM historically declined 26% during prior S&P 500 drawdowns greater than 10%.
- As of 2Q22, EM has corrected by 18% YTD.

## Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 6/30/22)



## Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 6/30/22)



Source: MSCI

## China presents upside opportunity

- Although divergence of China and EM ex-China is notable, China may support EM should fears of a U.S. recession fuel further drawdown.
- China offers favorable growth and valuation relative to other emerging markets.

# Fixed Income

## U.S. Fixed Income

### Bonds hit hard as rates rise sharply (again)

- Bloomberg US Aggregate Bond Index posted its worst six-month return in its history.
- Yield curve flirted with inversion, but 2-year/10-year yield spread was slightly positive at quarter-end.
- TIPS underperformed nominal Treasuries, and 10-year breakeven spreads fell to 2.33% from 2.84% at 3/31/22.
- Fed raised rates by 75 bps, the largest increase since 1994, with further hikes expected.
- Market pricing reflects Fed Funds rate of 3.4% at year-end.

### Spread sectors underperformed

- Investment grade corporates underperformed like-duration U.S. Treasuries by 205 bps; RMBS by 98 bps.
- High yield underperformed as spreads widened; excess return vs. U.S. Treasuries was -792 bps, hurt by equity market performance and worries over the impact of higher rates on the economy.
- Leveraged loans held up relatively well with lower-quality credits generally underperforming.

### Securitized sectors continue to hang in

- Agency RMBS spreads widened in response to increased rate volatility.
- ABS spreads tightened, led by credit cards.

## Municipal Bonds

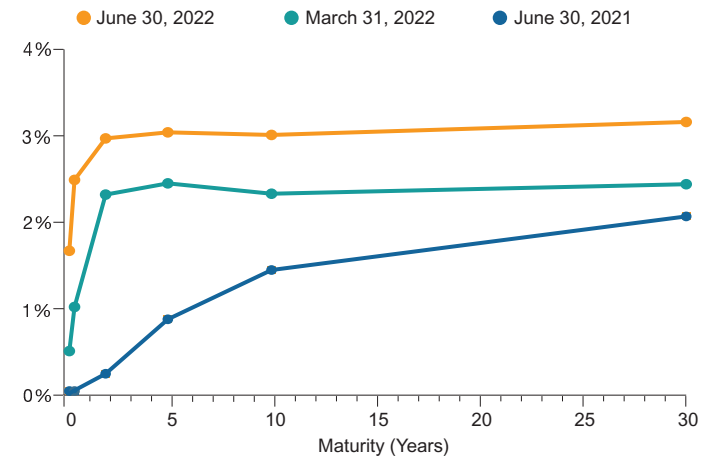
### Returns hurt by rising rates

- Lower quality continued to underperform
- BBB: -4.5%; AAA: -2.5% (YTD BBB: -11.3%; AAA: -8.5%)
- Munis outperformed U.S. Treasuries (Bloomberg US Treasury: -3.8%)

### Valuations relative to U.S. Treasuries at fair value

- 10-year AAA Muni/10-year U.S. Treasury yield ratio roughly 90%; in line with 10-year average
- Municipal Bond Index after-tax yield = 5.4% (source: Eaton Vance)

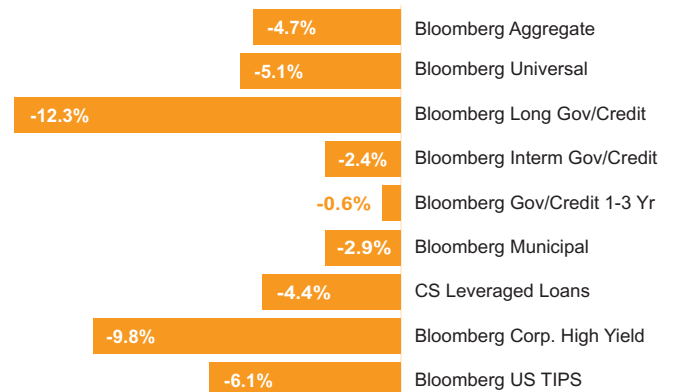
## U.S. Treasury Yield Curves



Source: Bloomberg

## U.S. Fixed Income: Quarterly Returns

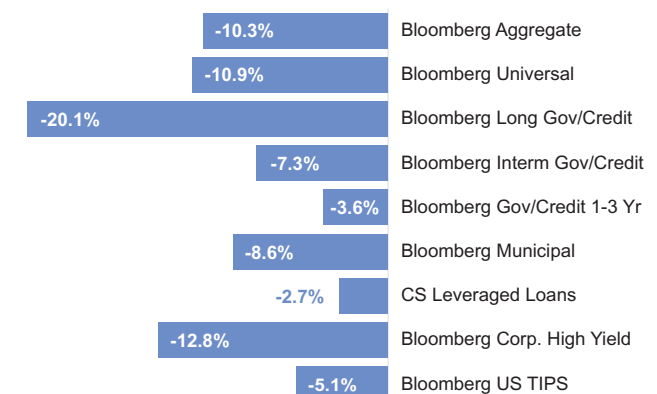
(6/30/22)



Sources: Bloomberg and Credit Suisse

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

(6/30/22)



Sources: Bloomberg and Credit Suisse

### Supply/demand

- Outflows of \$76 billion YTD; highest cycle outflow since data series began in 1992
- YTD supply down 14% vs. last year

### Global Fixed Income

#### Negative returns driven by broad interest rate increases

- U.S. dollar continued to appreciate vs. yen, euro, and pound.
- Double-digit negative returns were widespread across developed markets.

#### Inflation and global recession fears drag on EMD

- All countries in the USD-denominated JPM EMBI Global Diversified Index posted negative returns, hurt by rising rates in the U.S.
- Local currency markets across the JPM GBI-EM Global Diversified were down only slightly, but USD strength eroded returns for U.S. investors.

#### Interest rates significantly increased

- First-half returns worst since inflation of 1970s
- Global phenomenon driven by recent inflationary pressure
- All fixed income asset classes negatively impacted
- Developed market duration becoming more compelling after broad repricing

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

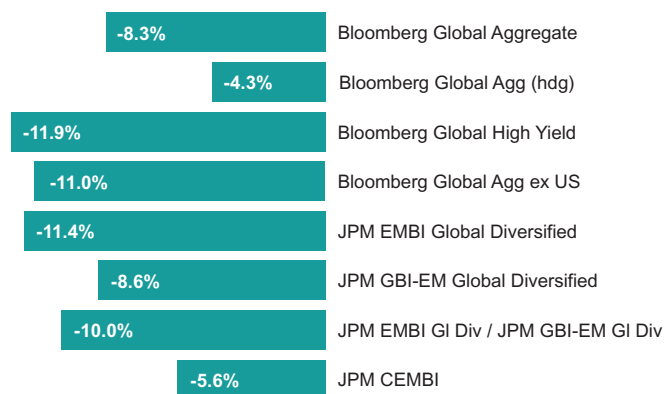
1Q22 to 2Q22



Source: Bloomberg

### Global Fixed Income: Quarterly Returns

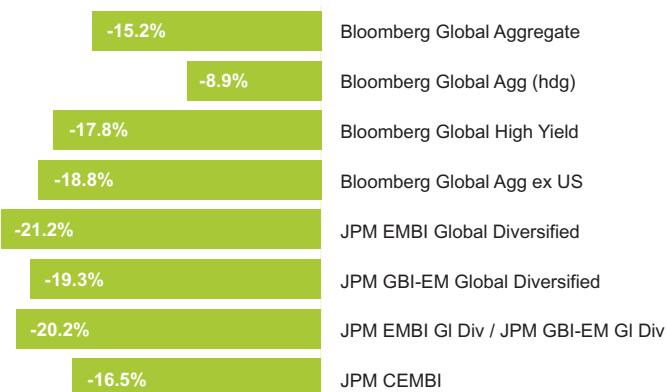
(6/30/22)



Sources: Bloomberg and JPMorgan Chase

### Global Fixed Income: One-Year Returns

(6/30/22)



Sources: Bloomberg and JPMorgan Chase



# Private RE Delivers; REITs Underperform

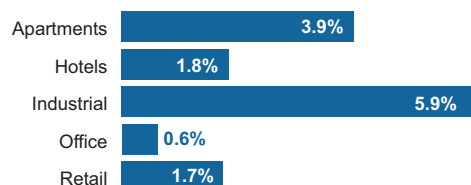
REAL ESTATE/REAL ASSETS | Munir Iman

## Robust quarter for private real estate

Core real estate delivered another robust quarter, with strong fundamentals in the Industrial and Multifamily sectors; the NFI-ODCE Index (value-weighted, net of fees) gained 4.5% in 2Q22 and 12.0% year-to-date (YTD). Real estate returns are expected to moderate to 10% in 2022 and 8% in 2023.

- Income returns were positive across all sectors.
- Transaction volumes are slowing as interest rates rise and economic uncertainty increases.
- Industrial and Multifamily sectors are expected to see continued rent growth.
- Office vacancy is expected to stay above long-term averages for the near term.
- Property types with steady cash flows are experiencing cap rate compression due to the demand for logistics facilities coupled with the housing shortage.

## Sector Quarterly Returns by Property Type (6/30/22)



Source: NCREIF

## Public real estate lags

REITs, both in the United States and globally, underperformed in 2Q22.

- The FTSE EPRA Nareit Developed Index, a measure of global REITs, fell 17.4% in 2Q22 compared to a 15.8% drop for global equities (MSCI World).
- The FTSE Nareit Equity REITs index, measuring U.S. REITs, dropped 17.0%, in contrast with the S&P 500 Index, which lost 16.1%.
- REITs are now trading at a discount to NAV and offer relative value given the strength of underlying fundamentals

## Real assets see widespread drops

Following very strong 1Q results, real assets as a group posted negative returns in 2Q as concerns over slowing global growth mounted.

- A lone exception was the energy-heavy S&P GSCI Index, which eked out a 2.0% gain during the quarter while the Bloomberg Commodity TR Index fell 5.7%.
- WTI Crude closed the quarter at \$106/barrel, up from \$100 on 3/31/22 and \$76 at year-end. Gold (S&P Gold Spot Price Index: -7.5%), listed infrastructure (DJB Global Infrastructure: -7.1%), REITs (MSCI US REIT: -16.9%), and TIPS (Bloomberg TIPS: -6.1%) declined.

## Callan Database Median and Index Returns\* for Periods Ended 6/30/22

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	15 Years
<b>Real Estate ODCE Style</b>	<b>5.0</b>	<b>12.2</b>	<b>27.9</b>	<b>12.3</b>	<b>10.2</b>	<b>10.6</b>	<b>6.2</b>
NFI-ODCE (value-weighted, net)	4.5	12.0	28.3	11.7	9.6	10.2	6.0
NCREIF Property	3.2	8.7	21.5	10.2	8.9	9.7	7.2
NCREIF Farmland	2.6	5.3	11.0	6.6	6.4	9.6	10.6
NCREIF Timberland	1.9	5.1	12.0	5.0	4.3	5.7	5.1
<b>Public Real Estate</b>							
<b>Global Real Estate Style</b>	<b>-17.2</b>	<b>-20.6</b>	<b>-12.2</b>	<b>1.9</b>	<b>5.0</b>	<b>6.9</b>	<b>3.9</b>
FTSE EPRA Nareit Developed	-17.4	-20.7	-13.5	-1.1	1.9	4.7	2.0
<b>Global ex-U.S. Real Estate Style</b>	<b>-18.5</b>	<b>-21.5</b>	<b>-20.6</b>	<b>-1.2</b>	<b>3.7</b>	<b>6.2</b>	<b>1.4</b>
FTSE EPRA Nareit Dev ex US	-17.7	-20.4	-21.1	-5.0	-0.2	3.3	0.1
<b>U.S. REIT Style</b>	<b>-16.7</b>	<b>-20.0</b>	<b>-6.3</b>	<b>6.0</b>	<b>7.0</b>	<b>8.4</b>	<b>6.8</b>
FTSE EPRA Nareit Equity REITs	-17.0	-20.2	-6.3	4.0	5.3	7.4	5.8

\*Returns less than one year are not annualized.

Sources: Callan, FTSE Russell, NCREIF



# Persistence Amid Volatility

## PRIVATE EQUITY | Gary Robertson

**Fundraising** ► Based on preliminary data, final closes for private equity partnerships in 2Q22 totaled \$233 billion of commitments in 486 partnerships. (Unless otherwise noted, all data in this commentary come from PitchBook.) The dollar volume was up 3% from 1Q22, but the number of funds fell 11%. For the first half, 2022 commitments are running 13% behind those of a year ago, with the number of funds down by 39%. While the figures point to a decline from 2021, the first-half results are in fact tracking to match last year's total because the second half of 2021 weakened as public equity markets grew volatile.

**Buyouts** ► New buyout transactions by count fell 12% from 1Q22 to 2,668, and disclosed deal value dropped 42% to \$125 billion. YTD numbers also saw declines of 16% in number of investments and 7% in disclosed value. Average buyout prices remained comparable to 2021, with a similar pattern in average leverage multiples.

**VC Investments** ► New rounds of financing in venture capital companies totaled 10,244, with \$125 billion of announced value. The number of investments preliminarily fell 24% from 1Q22, and announced value fell 25%. YTD numbers held up stronger, down only 15% for rounds and 13% for disclosed value.

**Exits** ► There were 522 private M&A exits of private equity-backed companies, with disclosed values totaling \$122 billion.

### Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/22\*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years	20 Years	25 Years
All Venture	-3.6	22.2	35.0	27.5	20.3	14.9	12.1	24.6
Growth Equity	-3.9	17.9	26.5	22.5	16.8	14.3	14.5	15.9
All Buyouts	-0.5	24.6	22.9	20.1	15.7	11.7	14.7	13.6
Mezzanine	1.5	17.2	13.3	12.7	11.9	10.5	11.0	10.3
Credit Opportunities	2.0	12.4	8.4	8.0	8.9	8.8	9.8	9.8
Control Distressed	3.0	33.5	20.8	15.6	13.3	11.1	12.3	12.3
<b>All Private Equity</b>	<b>-1.5</b>	<b>22.6</b>	<b>24.9</b>	<b>21.0</b>	<b>16.1</b>	<b>12.4</b>	<b>13.6</b>	<b>14.6</b>
S&P 500	-4.6	15.7	18.9	16.0	14.6	10.3	9.3	9.4
Russell 3000	-5.3	11.9	18.2	15.4	14.3	10.1	9.4	9.5

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

The preliminary private sale count fell 18% and the announced dollar volume dropped 26%. There were 42 private equity-backed IPOs in 2Q22 raising an aggregate \$7 billion, down 7% by count, with issuance being unchanged from 1Q22.

Venture-backed M&A exits totaled 680 transactions with disclosed value of \$23 billion. The number of sales declined 12% from 1Q22, and announced value plunged 56%. There were 67 VC-backed IPOs in 2Q22 with a combined float of \$10 billion; the count was down 9% and the issuance grew 25%.

**Returns** ► With the strong downturn in public equity markets, private equity outperformance has widened given private equity's more gradual quarterly mark-to-market valuation methodology.

### Funds Closed 1/1/22 to 6/30/22

Strategy	No. of Funds	Amt (\$mm)	Share
Venture Capital	650	156,559	34%
Growth Equity	79	61,601	13%
Buyouts	205	185,235	40%
Mezzanine Debt	7	11,021	2%
Distressed	18	26,353	6%
Energy	5	1,930	0%
Secondary and Other	58	11,743	3%
Fund-of-Funds	12	4,325	1%
<b>Totals</b>	<b>1,034</b>	<b>458,767</b>	<b>100%</b>

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

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

# Appealing to Investors in Low-Yield Climate

PRIVATE CREDIT | Catherine Beard

## Illiquidity premium close to zero

- U.S. corporate yields rose dramatically at the end of 2021 and the first six months of 2022, due to higher interest rates from tighter Fed policy and a widening of high yield spreads. Spreads widened because of weaker credit conditions as the U.S. economic outlook worsened.
- The illiquidity premium between public and private credit had been whittled down close to zero, but we are seeing a slow adjustment with SOFR widening out 200 bps and new private loan pricing at a 75-100 bps wider spread. A full adjustment between the public and private markets may take several quarters.
- Private credit fundraising was robust leading into the COVID dislocation, with a particular focus on direct lending and distressed strategies.
- Fundraising slowed in the first half of 2022 as rate hikes and market volatility led to investor uncertainty.
- For mature private credit programs, demand for diversifying strategies is increasing to capture opportunities outside of traditional sponsor-backed direct lending.

## A permanent part of portfolios

- Core yield and income-generating characteristics remain attractive in private credit portfolios, in spite of the shrinking illiquidity premium.
- Despite the shift from a low-yield environment, private credit has become a permanent asset class in many portfolios.

## Attractive inflation-resistant characteristics

- Many direct lending assets are floating rate, which can add protection against rising rates.

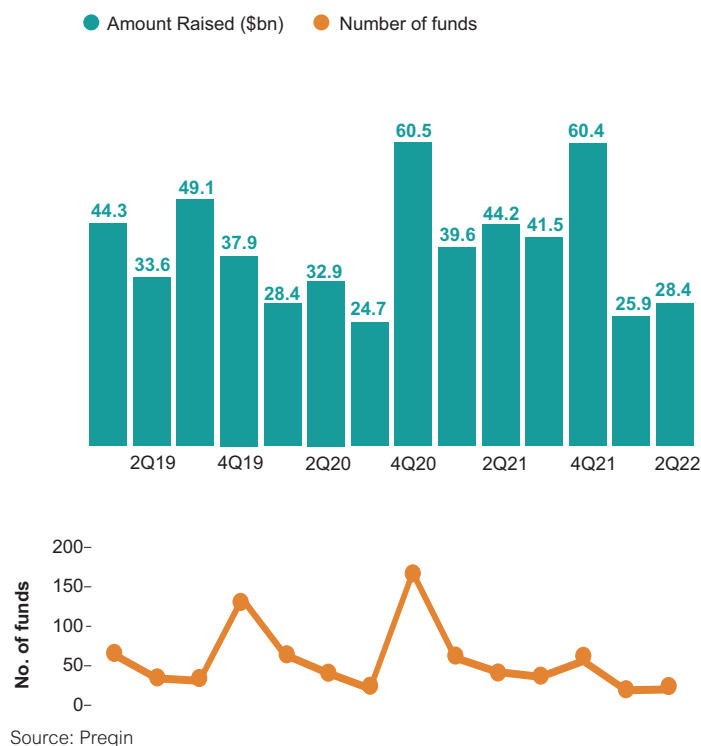
## Distressed cycle on horizon a growing opportunity

- Distressed opportunities in U.S. and Europe are expected to increase across both corporate and non-corporate assets.
  - Enhances importance of seasoned workout talent across sub-strategy types
  - Brings the need for increased underwriting discipline

## Continued evolution of pockets of opportunity

- Opportunities include those that offer diversification through differentiated collateral and/or low correlation to public markets, including specialty finance, asset-backed lending, and niche areas.

## Private Credit Fundraising (\$bn)



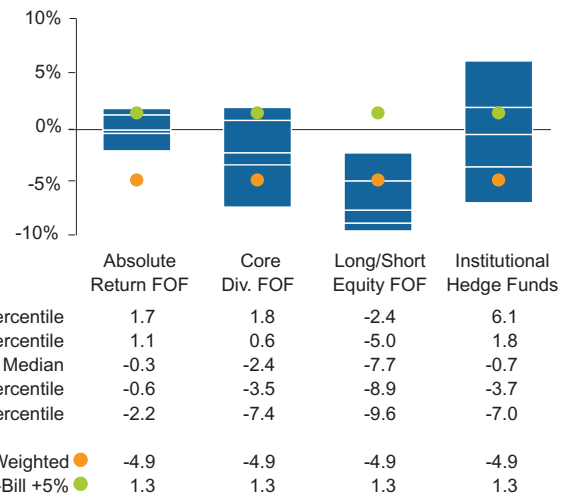
# Tough Environment Leads to Losses

HEDGE FUNDS/MACs | Joe McGuane

Global markets sold off significantly in 2Q22 amid pressure from high inflation, rising interest rates, and Russia's invasion of Ukraine. In this challenging environment, hedge funds as a whole declined during 2Q, as equity hedge managers had a second quarter of disappointing returns. Event-driven strategies continued to struggle, as their deep value equity positions were the main detractor during the first half of the year while their credit positions held up fairly well. Relative value strategies remained in positive territory, as some managers continued to profit off a rising rate environment while others have been successful in capital structure arbitrage given the volatility in credit and equity markets. Macro managers remained the best-performing strategy for the first half of 2022, as commodity trading was the biggest driver of performance. Strong contributions also came from quantitative strategies.

## Hedge Fund Style Group Returns

(6/30/22)



Sources: Callan, Credit Suisse, Federal Reserve

## Callan Peer Group Median and Index Returns\* for Periods Ended 6/30/22

Hedge Fund Universe	Quarter	Year to Date	1 Years	3 Years	5 Years	10 Years
Callan Institutional Hedge Fund Peer Group	-0.7	0.7	3.7	5.6	5.5	6.3
Callan Fund-of-Funds Peer Group	-2.8	-4.5	-4.5	4.8	4.4	5.0
Callan Absolute Return FOF Style	-0.3	1.1	3.4	5.4	4.9	5.0
Callan Core Diversified FOF Style	-2.4	-4.1	-3.9	4.8	4.0	4.7
Callan Long/Short Equity FOF Style	-7.7	-11.5	-12.3	3.2	3.9	5.2
BB GS Cross Asset Risk Premia 6% Vol Idx	4.4	5.0	3.4	-0.1	2.6	4.2
HFRI Fund Weighted Index	-4.9	-5.8	-5.7	6.1	5.1	5.0
HFRI Fixed Convertible Arbitrage	-4.4	-5.0	-2.1	6.1	4.9	5.1
HFRI Distressed/Restructuring	-3.7	-2.5	-1.6	7.4	5.6	5.7
HFRI Emerging Markets	-6.7	-13.0	-15.3	2.6	2.6	3.8
HFRI Equity Market Neutral	0.7	0.2	2.1	2.6	2.5	3.1
HFRI Event-Driven	-6.4	-7.6	-7.1	5.0	4.3	5.2
HFRI Relative Value	-2.6	-1.9	-1.0	3.6	3.6	4.5
HFRI Macro	1.8	8.6	8.0	7.8	5.3	3.1
HFRI Equity Hedge	-8.0	-12.0	-12.2	6.5	5.5	5.9
HFRI Multi-Strategy	-7.0	-8.8	-12.1	4.3	2.0	3.5
HFRI Merger Arbitrage	-2.9	-1.6	0.5	5.8	5.0	4.3
90-Day T-Bill + 5%	1.3	2.6	5.2	5.6	6.1	5.6

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

The median manager in the Callan Institutional Hedge Fund Peer Group fell 0.7%. Within this style group of 50 peers, the average rates manager gained 1.5%, driven by interest rate volatility. Meanwhile, hedged credit managers lost 4.6% from both performing and distressed credit.

Within the HFRI indices, the best-performing strategy last quarter was again macro (+1.8%), aided by its exposure to commodities and rates trading. Equity hedge strategies had another difficult quarter (-8.0%), as growth-heavy managers experienced a sell-off.

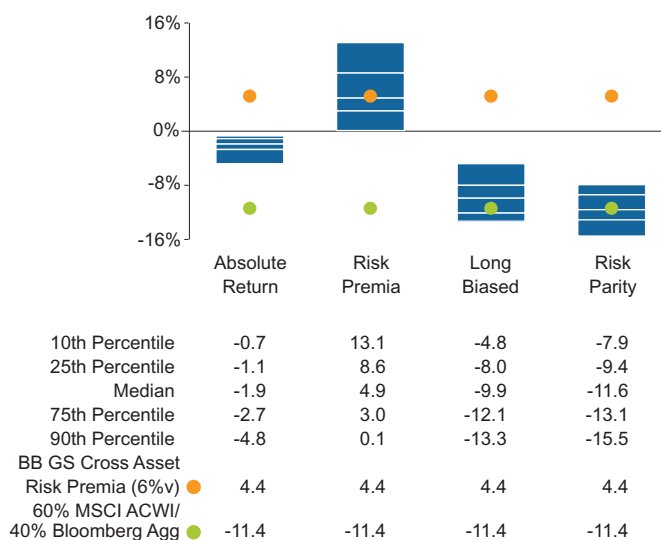
Across the Callan Hedge FOF Database, the median Absolute Return FOF fell 0.3%, as a focus on lower beta strategies held up during the quarter. Meanwhile, the median Callan Long-Short Equity FOF dropped 7.7%, as a growth bias among

managers continued to be a drag on performance. The median Callan Core Diversified FOF declined 2.4%, as macro strategies were able to offset some of the negative performance from equity hedge and event-driven managers.

Measuring the quarter's performance of alternative risk premia, the Bloomberg GSAM Risk Premia Index increased 4.4% based upon a 6% volatility target. The median manager of the Callan Multi-Asset Class (MAC) Style Groups generated negative returns, gross of fees, consistent with their underlying risk exposures. For example, the median Callan Long Biased MAC manager fell 9.9%, as exposure to equity and fixed income continued to be a drag on performance. The Callan Risk Parity MAC index, which typically targets an equal risk-weighted allocation to the major asset classes with leverage, was down 11.6%. The Callan Risk Premia MAC held up the best during the quarter, up 4.9%.

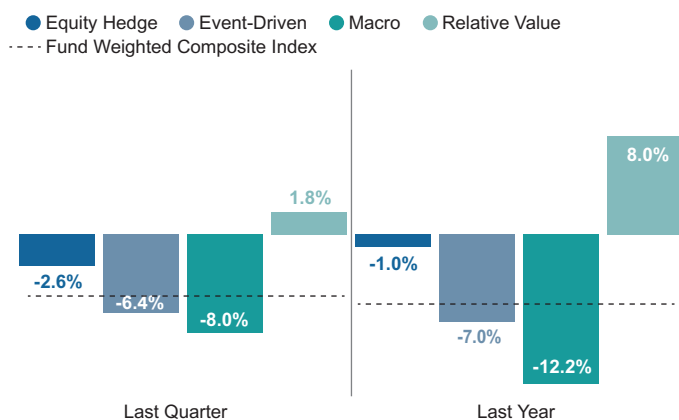
## MAC Style Group Returns

(6/30/22)



## HFRI Hedge Fund Strategy Returns

(6/30/22)



Source: HFRI

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

# DC Index Falls in 1Q22, Reversing 4Q21 Gain

DEFINED CONTRIBUTION | Patrick Wisdom

## Performance: Index falls to begin year

- The Callan DC Index™ fell 5.3% in 1Q22, a reversal from its 4Q21 gain (5.0%).
- The Age 45 Target Date Fund dropped 5.9%.

## Growth Sources: Losses drive decline in balances

- Balances within the DC Index declined by 5.4% after a 4.4% increase the previous quarter.
- Investment returns (-5.3%) primarily drove the decline.

## Turnover: Net transfers rise

- Turnover (i.e., net transfer activity levels within DC plans) increased to 0.42% from the previous quarter's 0.19%.
- The Index's historical average (0.57%) remained unchanged and signaled that most participants have not drastically altered their allocations.

## Net Cash Flow Analysis: TDFs stay atop leaderboard

- Target date funds (TDFs) received the largest net inflows in the Index, followed closely by stable value.
- Investors transferred assets out of U.S. large-cap equity (-47.4%), U.S. small/mid-cap equity (-16.5%), and global ex-U.S. equity (-3.1%).

## Equity Allocation: Exposure falls slightly

- The Index's overall allocation to equity (72.0%) fell from the previous quarter's level (72.8%), driven by both investor outflows and declines in equity markets.

## Asset Allocation: U.S. equity falls; target date funds gain

- U.S. large cap (26.9%) and U.S. small/mid cap (8.3%) had the largest percentage decreases in allocation.
- Target date funds (32.6%) and stable value (8.6%) had the largest percentage increases.

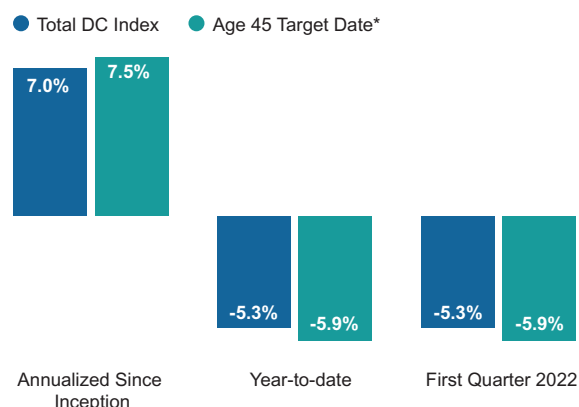
## Prevalance of Asset Class: Balanced funds dip again

- The prevalence of a balanced fund (43.2%) decreased again to its lowest level since the inception of the Index in 2006.

*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.*

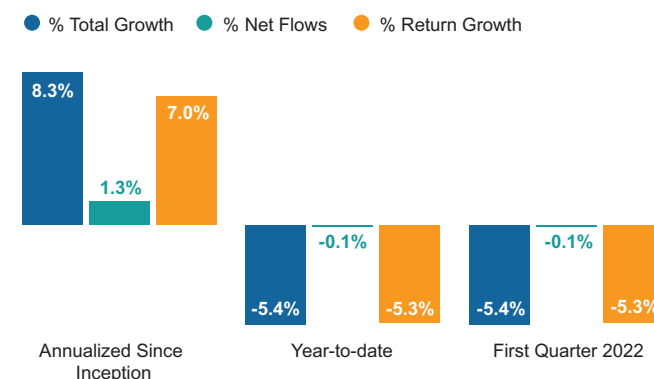
## Investment Performance

(3/31/22)



## Growth Sources

(3/31/22)



## Net Cash Flow Analysis (1Q22)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	48.4%
Stable Value	42.2%
U.S. Fixed Income	-17.1%
U.S. Large Cap	-47.4%
<b>Total Turnover**</b>	<b>0.42%</b>

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

Source: Callan DC Index

Note: DC Index inception date is January 2006.

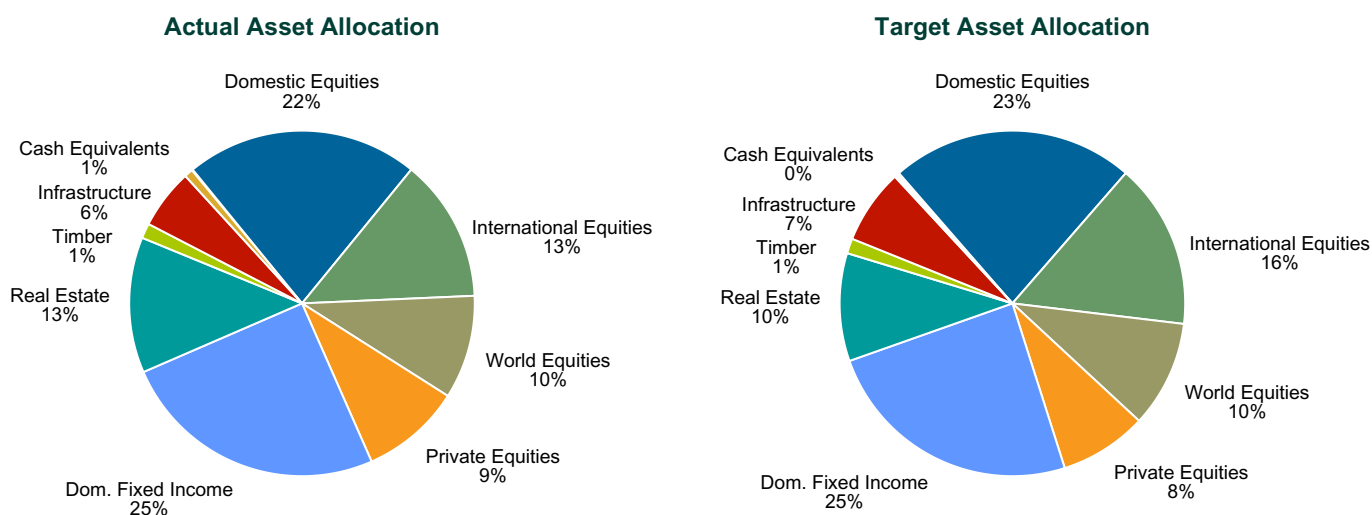
\* The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.

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



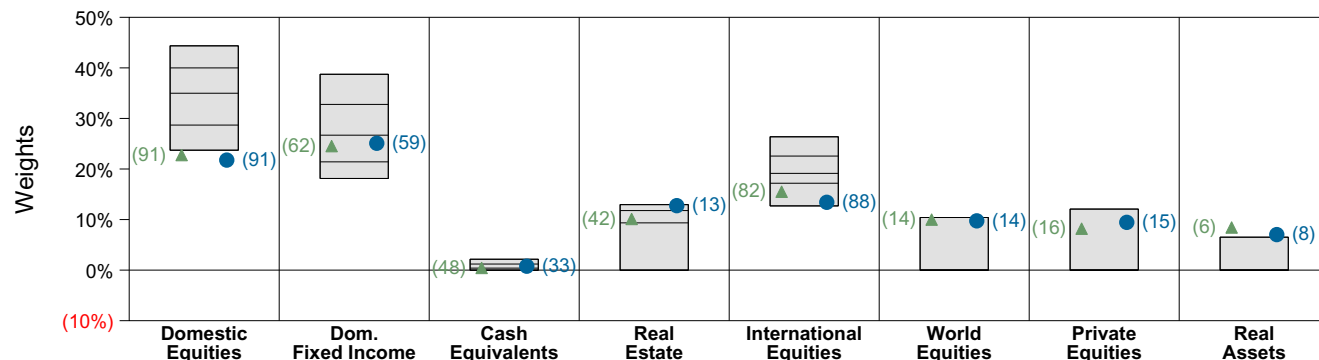
## Actual vs Target Asset Allocation As of June 30, 2022

The top left chart shows the Fund's asset allocation as of June 30, 2022. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	1,506,168	21.8%	22.8%	(1.0%)	(68,792)
International Equities	928,052	13.4%	15.5%	(2.1%)	(145,521)
World Equities	674,271	9.7%	10.0%	(0.3%)	(17,776)
Private Equities	653,615	9.4%	8.2%	1.2%	85,943
Dom. Fixed Income	1,736,304	25.1%	24.5%	0.6%	38,544
Real Estate	882,220	12.7%	10.1%	2.6%	181,752
Timber	100,336	1.4%	1.4%	(0.0%)	(0)
Infrastructure	385,796	5.6%	7.0%	(1.4%)	(97,402)
Cash Equivalents	53,707	0.8%	0.4%	0.3%	23,254
Total	6,920,469	100.0%	100.0%		

## Asset Class Weights vs Callan Public Fund Sponsor Database



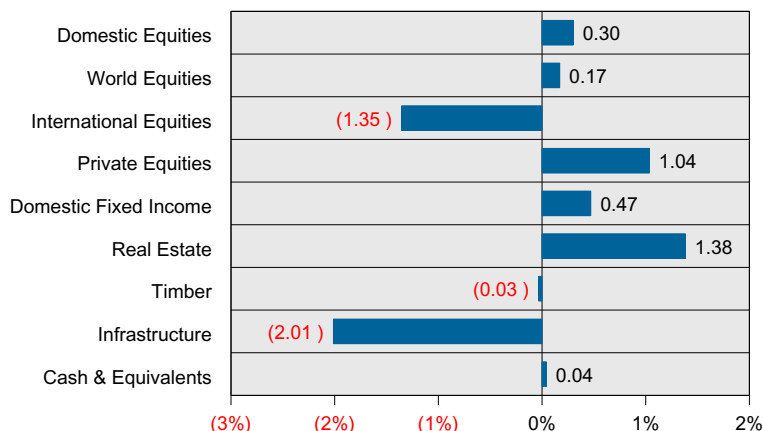
	Domestic Equities	Dom. Fixed Income	Cash Equivalents	Real Estate	International Equities	World Equities	Private Equities	Real Assets
10th Percentile	44.36	38.74	2.15	12.95	26.37	10.40	12.07	6.51
25th Percentile	40.00	32.77	1.20	11.78	22.56	0.00	0.00	0.00
Median	34.98	26.69	0.40	9.35	19.13	0.00	0.00	0.00
75th Percentile	28.69	21.41	0.00	0.00	17.18	0.00	0.00	0.00
90th Percentile	23.72	18.13	0.00	0.00	12.70	0.00	0.00	0.00
Fund	21.76	25.09	0.78	12.75	13.41	9.74	9.44	7.02
Target	22.76	24.53	0.44	10.12	15.51	10.00	8.20	8.43
% Group Invested	91.46%	98.78%	69.51%	71.95%	90.24%	17.07%	24.39%	24.39%

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmgb Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmgb HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

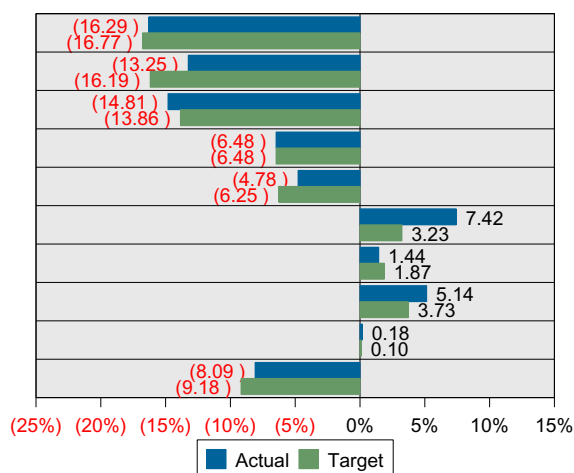
## Quarterly Total Fund Relative Attribution - June 30, 2022

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.

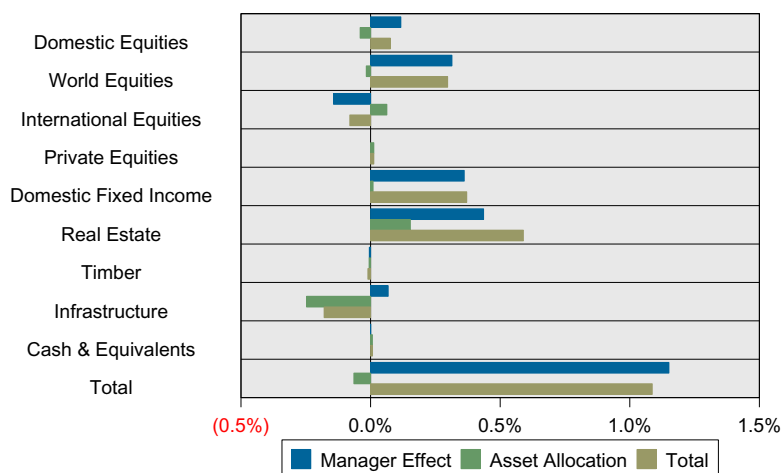
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended June 30, 2022

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	23%	(16.29%)	(16.77%)	0.12%	(0.04%)	0.08%
World Equities	10%	10%	(13.25%)	(16.19%)	0.31%	(0.02%)	0.30%
International Equities	14%	16%	(14.81%)	(13.86%)	(0.14%)	0.06%	(0.08%)
Private Equities	9%	8%	(6.48%)	(6.48%)	0.00%	0.01%	0.01%
Domestic Fixed Income	25%	25%	(4.78%)	(6.25%)	0.36%	0.01%	0.37%
Real Estate	12%	10%	7.42%	3.23%	0.44%	0.15%	0.59%
Timber	1%	1%	1.44%	1.87%	(0.00%)	(0.01%)	(0.01%)
Infrastructure	5%	7%	5.14%	3.73%	0.07%	(0.25%)	(0.18%)
Cash & Equivalents	0%	0%	0.18%	0.10%	0.00%	0.01%	0.01%
<b>Total</b>			<b>(8.09%)</b>	<b>(9.18%)</b>	<b>+ 1.15%</b>	<b>+ (0.06%)</b>	<b>1.09%</b>

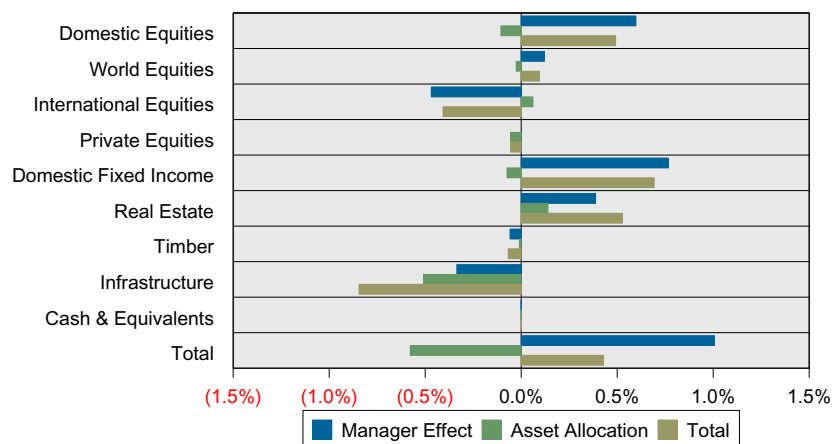
\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.



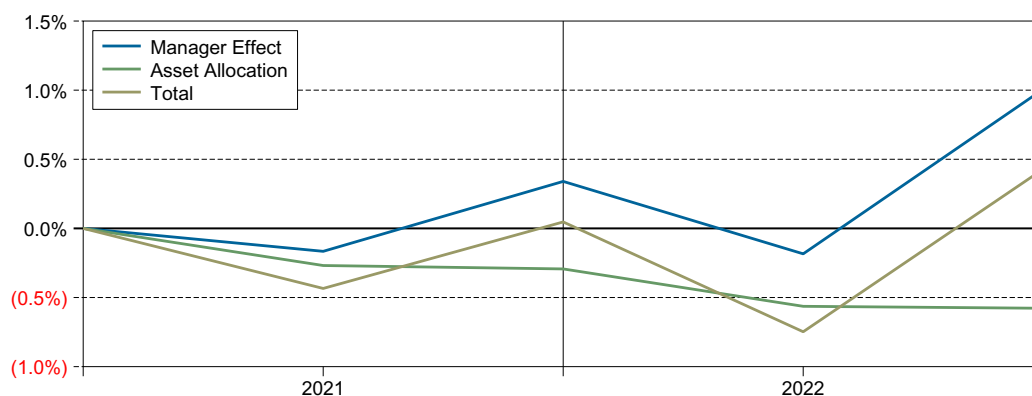
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

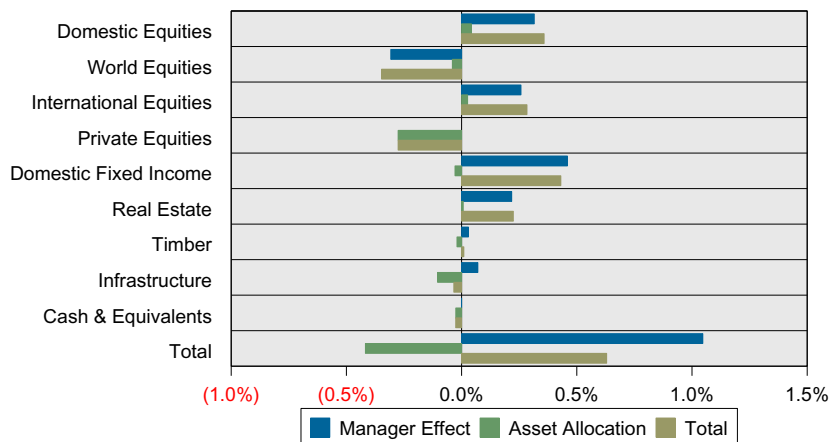
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	23%	(13.32%)	(15.55%)	0.60%	(0.11%)	0.49%
World Equities	11%	10%	(12.91%)	(14.34%)	0.12%	(0.03%)	0.09%
International Equities	15%	16%	(21.76%)	(18.90%)	(0.47%)	0.06%	(0.41%)
Private Equities	8%	8%	11.73%	11.73%	0.00%	(0.06%)	(0.06%)
Domestic Fixed Income	25%	25%	(8.10%)	(11.03%)	0.77%	(0.07%)	0.69%
Real Estate	10%	10%	25.59%	21.45%	0.39%	0.14%	0.53%
Timber	1%	1%	7.35%	12.01%	(0.06%)	(0.01%)	(0.07%)
Infrastructure	5%	7%	8.50%	18.33%	(0.34%)	(0.51%)	(0.84%)
Cash & Equivalents	1%	0%	0.22%	0.17%	0.00%	0.00%	0.00%
<b>Total</b>			<b>(6.27%)</b>	<b>(6.70%)</b>	<b>+ 1.01%</b>	<b>+ (0.58%)</b>	<b>0.43%</b>

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

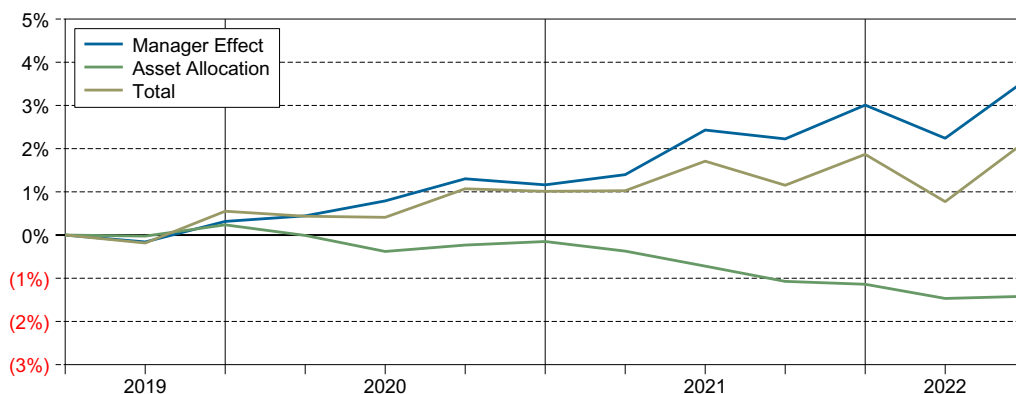
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

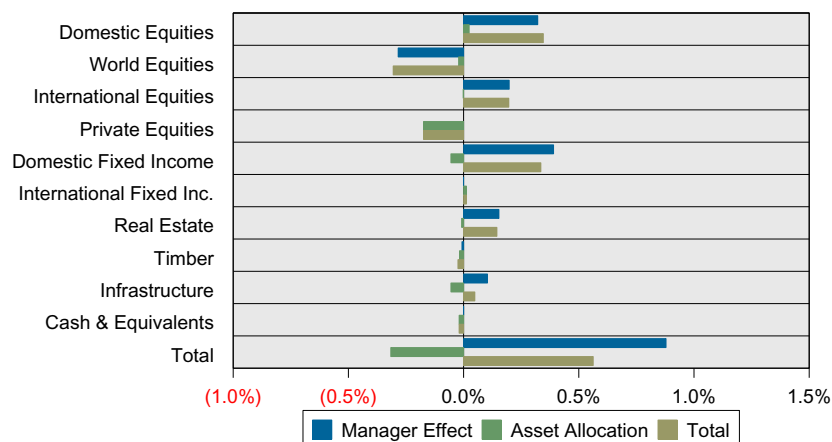
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	10.44%	8.96%	0.32%	0.04%	0.36%
World Equities	13%	13%	5.29%	7.00%	(0.31%)	(0.04%)	(0.35%)
International Equities	15%	15%	3.06%	1.45%	0.26%	0.03%	0.28%
Private Equities	6%	7%	19.66%	19.66%	0.00%	(0.28%)	(0.28%)
Domestic Fixed Income	24%	24%	1.20%	(0.51%)	0.46%	(0.03%)	0.43%
Real Estate	11%	10%	12.20%	10.22%	0.22%	0.01%	0.22%
Timber	2%	2%	6.16%	5.03%	0.03%	(0.02%)	0.01%
Infrastructure	5%	6%	9.35%	8.17%	0.07%	(0.10%)	(0.03%)
Cash & Equivalents	1%	0%	0.60%	0.63%	(0.00%)	(0.03%)	(0.03%)
<b>Total</b>			<b>7.27%</b>	<b>6.64%</b>	<b>+ 1.05%</b>	<b>+ (0.42%)</b>	<b>0.63%</b>

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

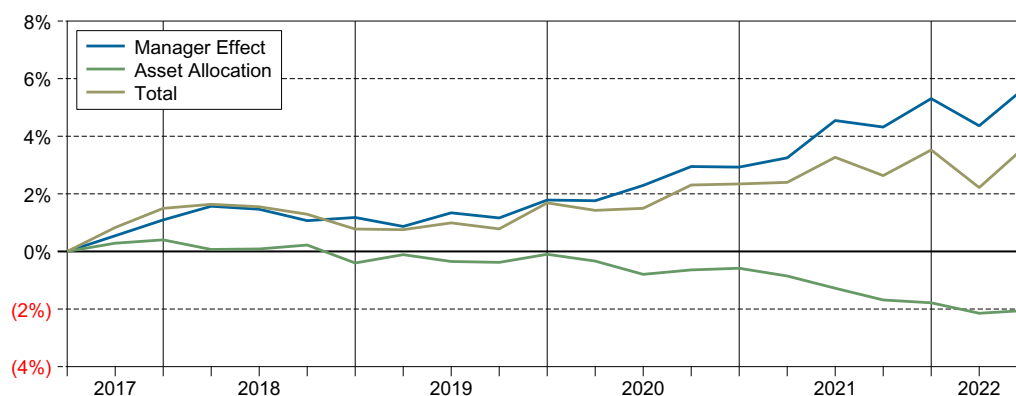
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

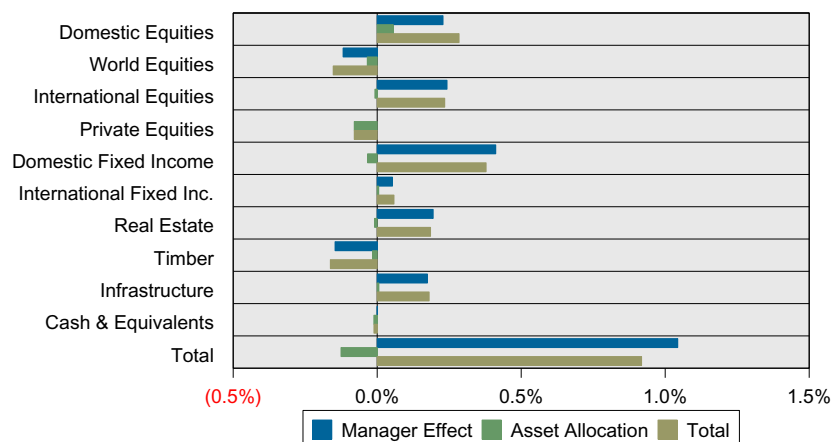
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	11.25%	9.76%	0.32%	0.02%	0.35%
World Equities	15%	14%	6.01%	7.67%	(0.28%)	(0.02%)	(0.31%)
International Equities	15%	15%	3.77%	2.57%	0.20%	(0.00%)	0.20%
Private Equities	5%	7%	14.39%	14.39%	0.00%	(0.17%)	(0.17%)
Domestic Fixed Income	23%	23%	2.85%	1.28%	0.39%	(0.06%)	0.34%
International Fixed Inc.	1%	1%	-	-	(0.00%)	0.01%	0.01%
Real Estate	11%	10%	10.25%	8.86%	0.15%	(0.01%)	0.14%
Timber	2%	2%	3.96%	4.32%	(0.01%)	(0.02%)	(0.02%)
Infrastructure	5%	6%	8.29%	6.28%	0.10%	(0.05%)	0.05%
Cash & Equivalents	1%	0%	1.10%	1.11%	(0.00%)	(0.02%)	(0.02%)
<b>Total</b>			<b>7.39%</b>	<b>6.83%</b>	<b>+ 0.88%</b>	<b>+ (0.32%)</b>	<b>0.56%</b>

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

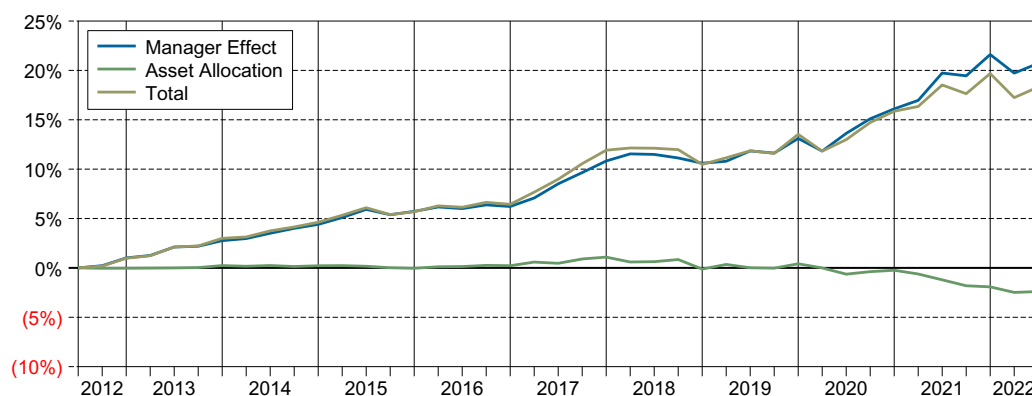
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

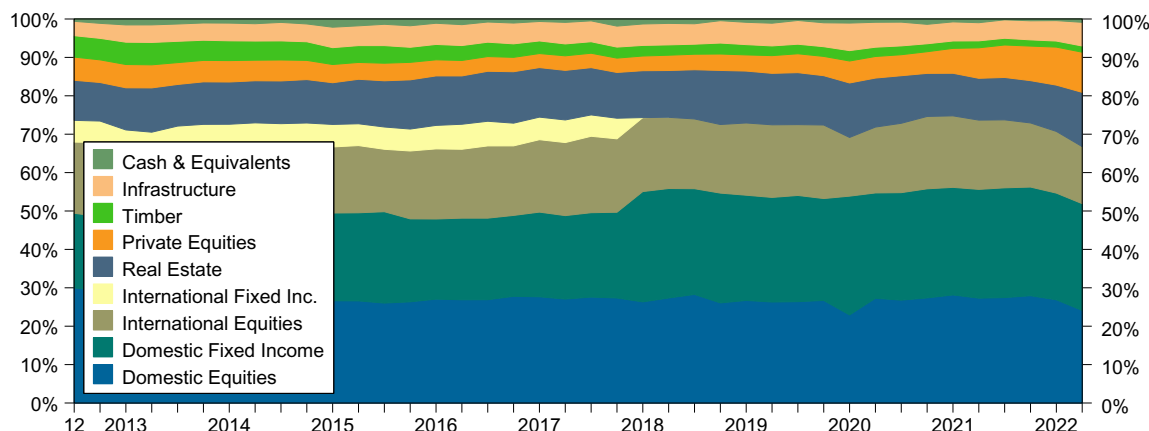
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	13.18%	12.11%	0.23%	0.06%	0.28%
World Equities	15%	15%	8.63%	9.51%	(0.12%)	(0.03%)	(0.15%)
International Equities	15%	15%	6.64%	5.07%	0.24%	(0.01%)	0.23%
Private Equities	5%	6%	7.82%	7.82%	0.00%	(0.08%)	(0.08%)
Domestic Fixed Income	21%	20%	4.30%	2.38%	0.41%	(0.03%)	0.38%
International Fixed Inc.	3%	3%	-	-	0.05%	0.01%	0.06%
Real Estate	10%	10%	11.60%	9.67%	0.19%	(0.01%)	0.19%
Timber	3%	3%	2.10%	5.73%	(0.15%)	(0.02%)	(0.16%)
Infrastructure	4%	6%	7.74%	3.66%	0.17%	0.01%	0.18%
Cash & Equivalents	1%	1%	0.67%	0.64%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>8.43%</b>	<b>7.52%</b>	<b>+ 1.04%</b>	<b>+ (0.13%)</b>	<b>0.92%</b>

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

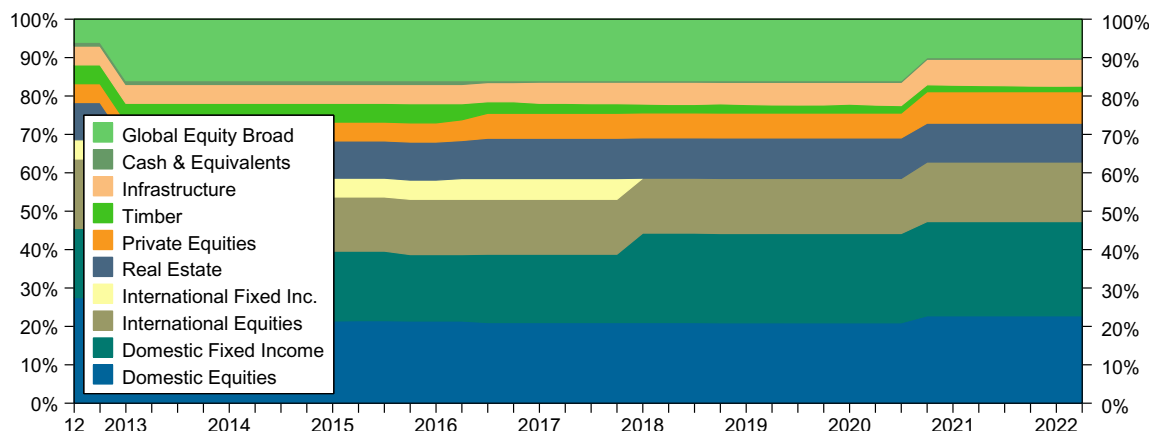
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

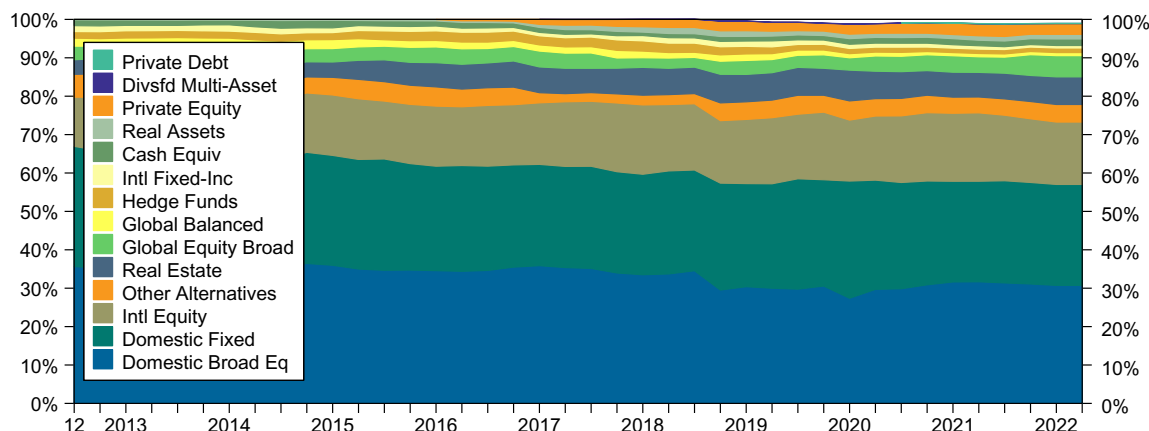
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation

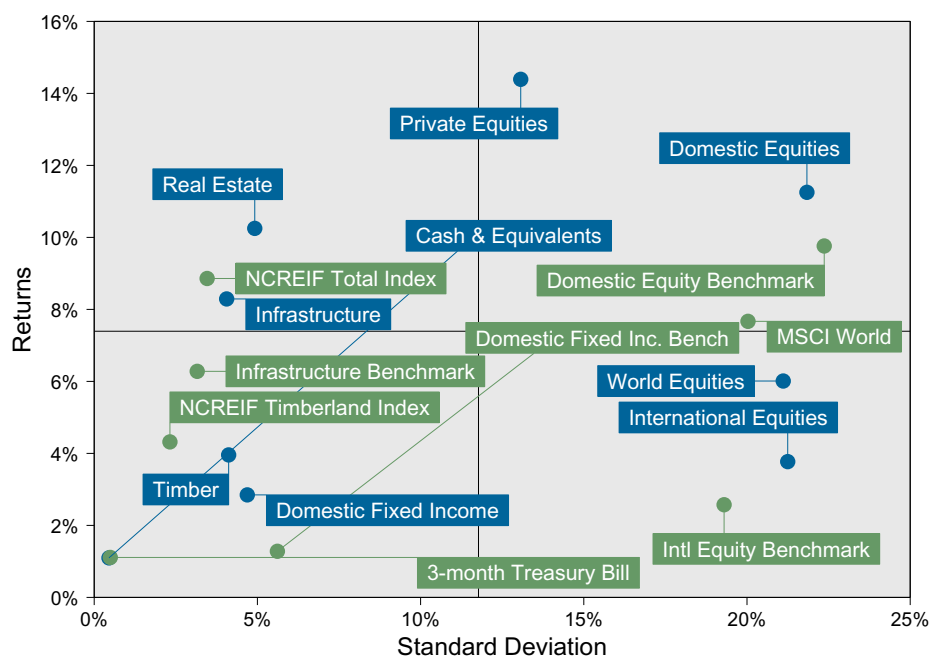


\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

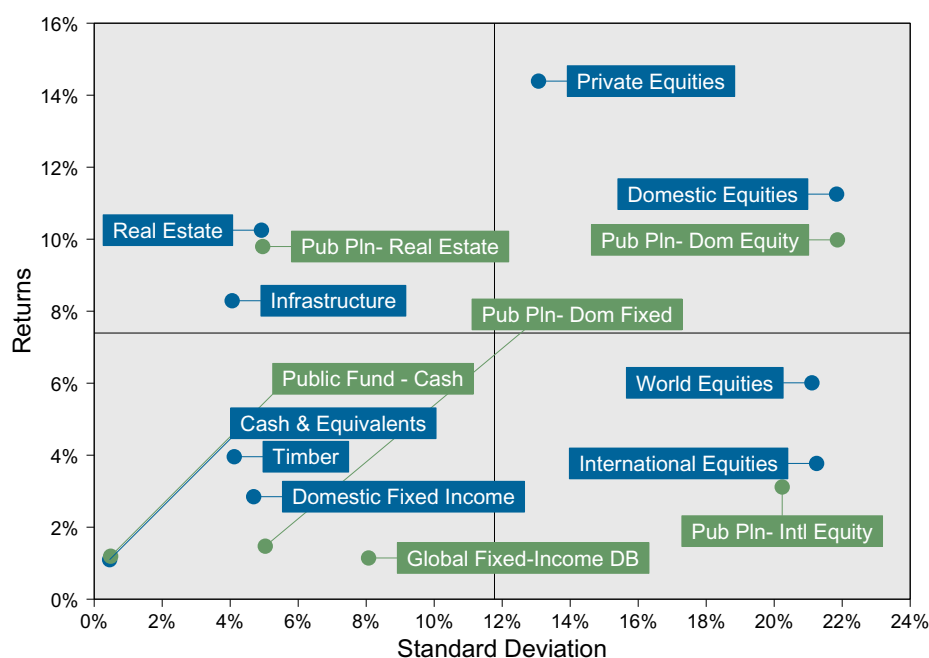
## Asset Class Risk and Return

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

**Five Year Annualized Risk vs Return  
Asset Classes vs Benchmark Indices**



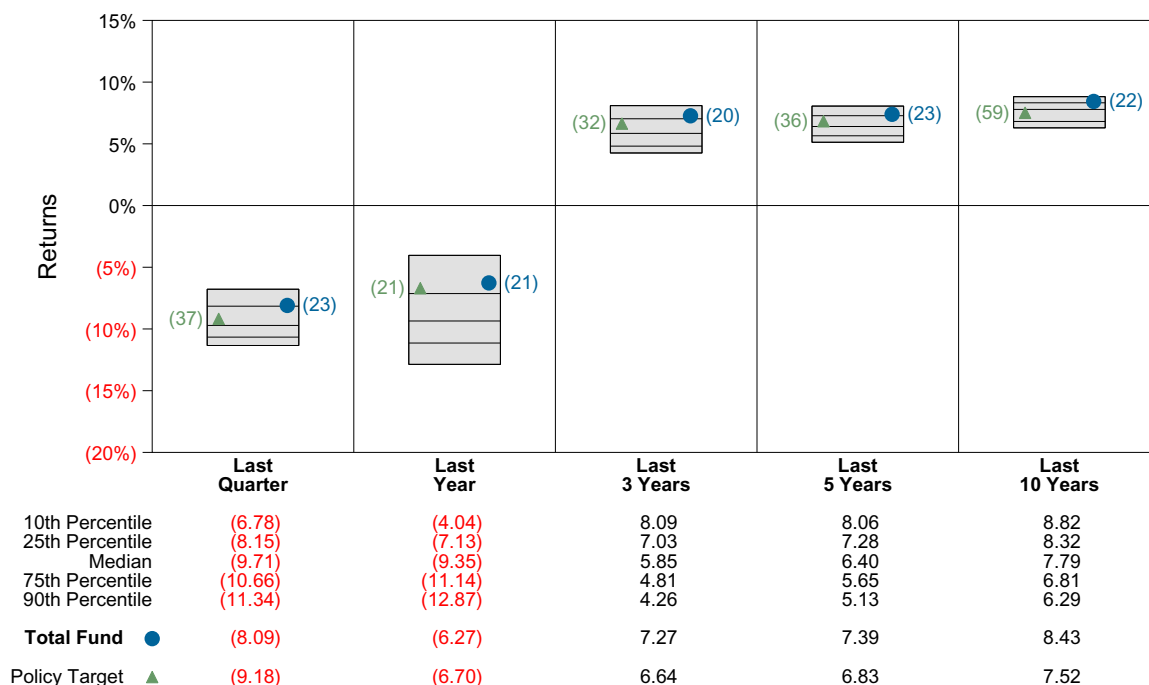
**Five Year Annualized Risk vs Return  
Asset Classes vs Asset Class Median**



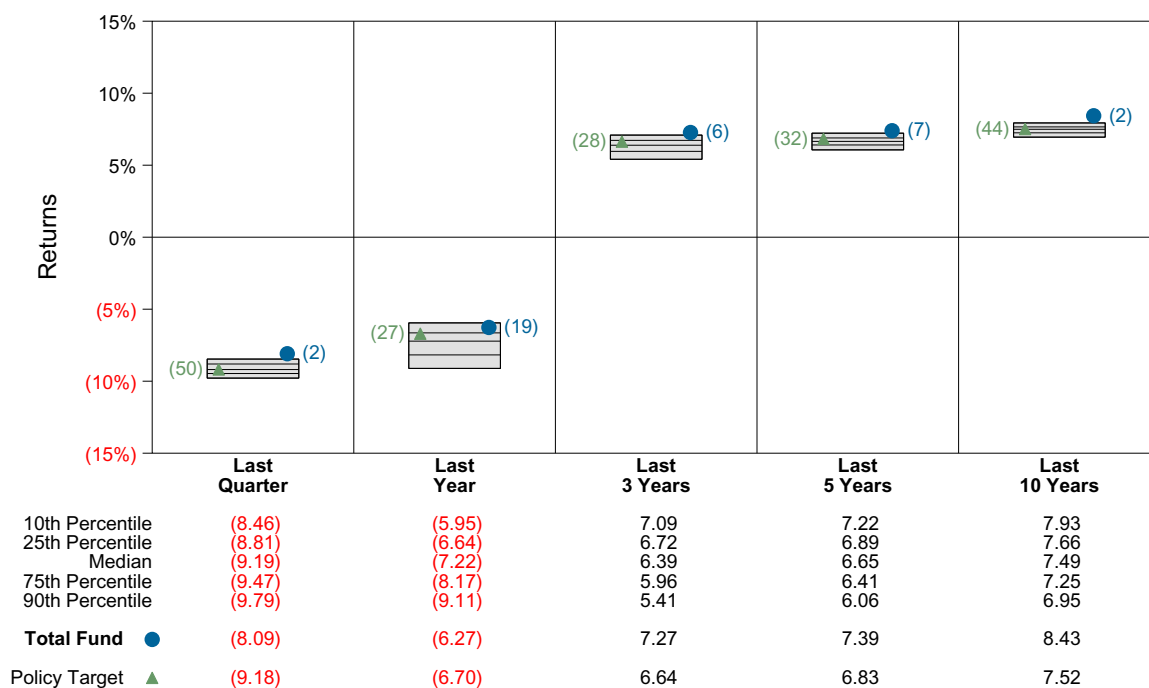
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended June 30, 2022. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

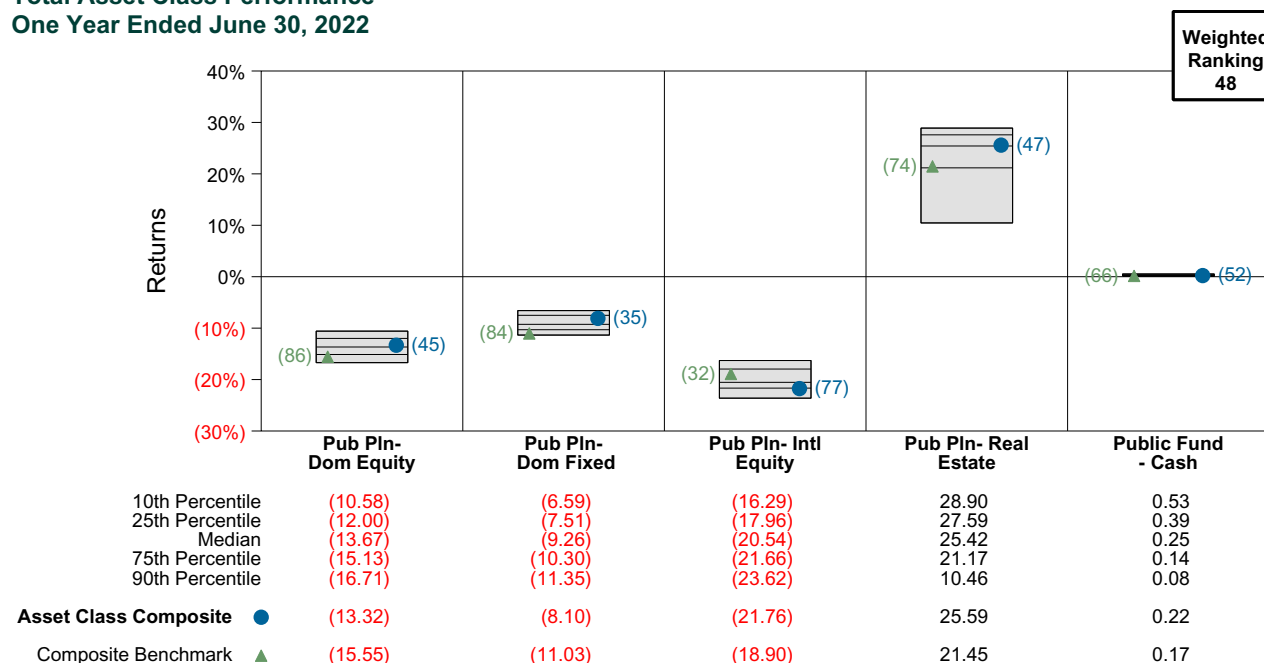


\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

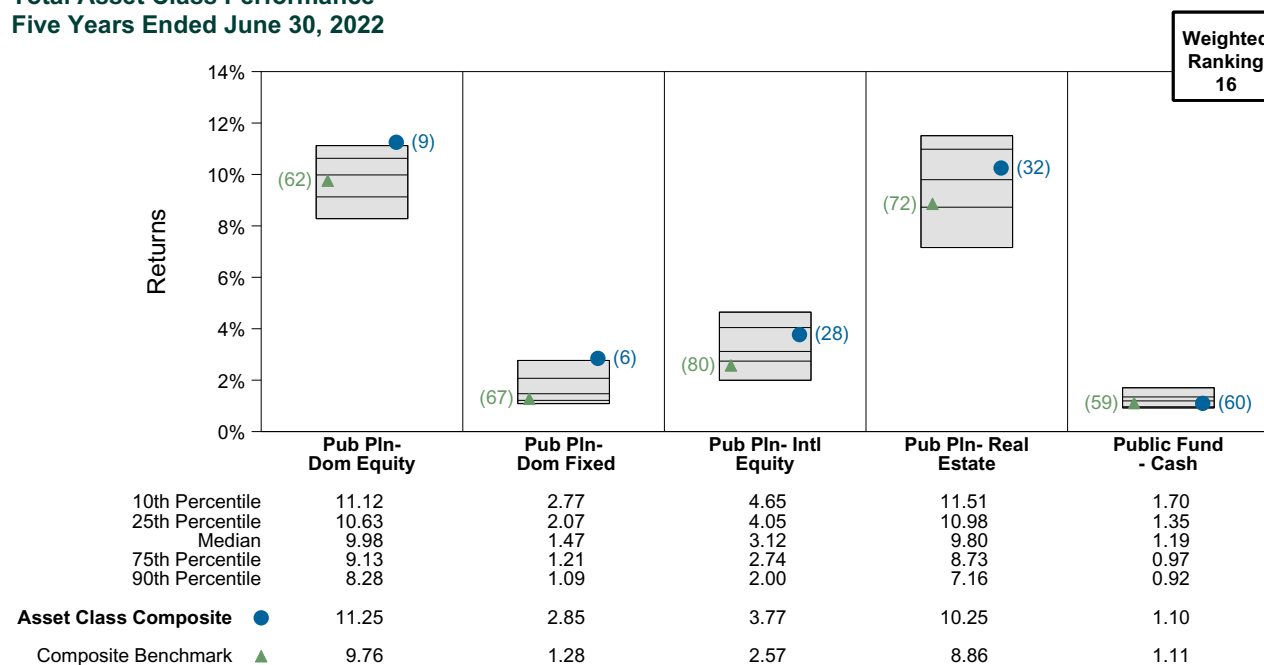
## Asset Class Rankings

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, 2022



### Total Asset Class Performance Five Years Ended June 30, 2022



\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.



## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2022, with the distribution as of March 31, 2022. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	June 30, 2022		Net New Inv.	Inv. Return	March 31, 2022	
	Market Value	Weight			Market Value	Weight
<b>Global Equities</b>	<b>\$3,762,105,257</b>	<b>54.36%</b>	<b>\$1,636,287</b>	<b>\$(601,812,153)</b>	<b>\$4,362,281,123</b>	<b>57.69%</b>
<b>Public Equities</b>	<b>\$3,108,490,333</b>	<b>44.92%</b>	<b>\$(25,045,562)</b>	<b>\$(557,640,887)</b>	<b>\$3,691,176,782</b>	<b>48.81%</b>
<b>World Equities</b>	<b>\$674,270,533</b>	<b>9.74%</b>	<b>\$(505,182)</b>	<b>\$(103,039,783)</b>	<b>\$777,815,499</b>	<b>10.29%</b>
EPOCH Investment Partners	279,970,187	4.05%	(395,431)	(49,679,690)	330,045,308	4.36%
LSV Asset Management	394,300,346	5.70%	(109,751)	(53,360,094)	447,770,190	5.92%
<b>Domestic Equities</b>	<b>\$1,506,168,081</b>	<b>21.76%</b>	<b>\$(23,925,537)</b>	<b>\$(293,149,511)</b>	<b>\$1,823,243,129</b>	<b>24.11%</b>
<b>Large Cap</b>	<b>\$1,203,010,794</b>	<b>17.38%</b>	<b>\$(23,372,856)</b>	<b>\$(250,823,637)</b>	<b>\$1,477,207,287</b>	<b>19.53%</b>
L.A. Capital	443,639,730	6.41%	(23,291,952)	(107,501,271)	574,432,953	7.60%
LA Capital Enhanced	259,215,497	3.75%	(80,905)	(46,874,983)	306,171,384	4.05%
Northern Trust AM Enh S&P 500	253,658,131	3.67%	0	(45,700,972)	299,359,102	3.96%
Parametric Enh S&P 500	246,497,436	3.56%	0	(50,746,412)	297,243,847	3.93%
<b>Small Cap</b>	<b>\$303,157,287</b>	<b>4.38%</b>	<b>\$(552,681)</b>	<b>\$(42,325,874)</b>	<b>\$346,035,842</b>	<b>4.58%</b>
Atlanta Capital	110,335,454	1.59%	(180,397)	(11,023,087)	121,538,937	1.61%
Riverbridge Small Cap Growth	78,482,139	1.13%	(181,698)	(19,698,587)	98,362,424	1.30%
Sycamore Small Cap Value	114,339,694	1.65%	(190,585)	(11,604,200)	126,134,480	1.67%
<b>International Equities</b>	<b>\$928,051,719</b>	<b>13.41%</b>	<b>\$(614,842)</b>	<b>\$(161,451,593)</b>	<b>\$1,090,118,154</b>	<b>14.42%</b>
<b>Developed</b>	<b>\$722,947,247</b>	<b>10.45%</b>	<b>\$(431,258)</b>	<b>\$(128,736,956)</b>	<b>\$852,115,460</b>	<b>11.27%</b>
Arrowstreet ACWI ex US	269,715,813	3.90%	0	(37,182,511)	306,898,324	4.06%
DFA Int'l Small Cap	78,210,719	1.13%	0	(12,362,453)	90,573,172	1.20%
Northern Trust AM World Ex US	112,160,444	1.62%	(34,540)	(17,542,996)	129,737,980	1.72%
Wellington Management Co.	74,578,658	1.08%	(189,877)	(14,730,477)	89,499,012	1.18%
William Blair	188,281,614	2.72%	(206,841)	(46,918,518)	235,406,972	3.11%
<b>Emerging Markets</b>	<b>\$205,104,472</b>	<b>2.96%</b>	<b>\$(183,584)</b>	<b>\$(32,714,638)</b>	<b>\$238,002,694</b>	<b>3.15%</b>
Axiom	146,683,893	2.12%	(183,584)	(24,991,426)	171,858,904	2.27%
DFA	58,420,579	0.84%	0	(7,723,211)	66,143,790	0.87%

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2022, with the distribution as of March 31, 2022. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	June 30, 2022			March 31, 2022		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Private Equities</b>	<b>\$653,614,924</b>	<b>9.44%</b>	<b>\$26,681,849</b>	<b>\$(44,171,266)</b>	<b>\$671,104,341</b>	<b>8.87%</b>
Adams St 1998 Partnership	12,972	0.00%	0	(82)	13,054	0.00%
Adams St 1999 Partnership	128,828	0.00%	0	(3,147)	131,975	0.00%
Adams St 2000 Partnership	75,503	0.00%	0	(4,270)	79,773	0.00%
Adams St 2001 Partnership	106,759	0.00%	0	(10,363)	117,122	0.00%
Adams St 2002 Partnership	35,108	0.00%	0	(939)	36,047	0.00%
Adams St 2003 Partnership	38,201	0.00%	0	(2,303)	40,504	0.00%
Adams St 2000 Non-US	38,581	0.00%	0	(3,243)	41,824	0.00%
Adams St 2001 Non-US	23,246	0.00%	0	(23)	23,269	0.00%
Adams St 2002 Non-US	25,270	0.00%	0	(73)	25,343	0.00%
Adams St 2003 Non-US	51,911	0.00%	0	(3,848)	55,759	0.00%
Adams St 2004 Non-US	34,487	0.00%	0	(3,137)	37,624	0.00%
Adams St 2006 Direct Co-Invest Fund	15,730	0.00%	0	3,631	12,099	0.00%
Adams St 2008 Fund	4,527,215	0.07%	(337,313)	(934,029)	5,798,557	0.08%
Adams St 2010 Direct Fund	802,667	0.01%	0	(184,033)	986,700	0.01%
Adams St 2010 Partnership	5,526,174	0.08%	(472,866)	(1,094,235)	7,093,275	0.09%
Adams St 2010 Non-US	2,241,272	0.03%	(200,273)	(428,001)	2,869,546	0.04%
Adams St 2010 Non-US Emg	1,458,366	0.02%	(50,209)	(393,852)	1,902,427	0.03%
Adams St 2015 Global Fund	42,679,041	0.62%	(1,229,744)	(5,970,514)	49,879,299	0.66%
Adams St 2016 Global Fund	36,093,659	0.52%	(730,293)	(3,691,442)	40,515,394	0.54%
Adams St 2017 Global Fund	75,742,884	1.09%	(1,514,886)	(4,629,032)	81,886,802	1.08%
Adams St 2018 Global Fund	60,452,088	0.87%	2,275,000	(7,198,706)	65,375,794	0.86%
Adams St 2019 Global Fund	46,648,072	0.67%	4,550,000	(6,121,675)	48,219,747	0.64%
Adams St 2020 Global Fund	25,401,910	0.37%	2,996,996	(4,037,991)	26,442,905	0.35%
Adams St 2021 Global Fund	4,521,423	0.07%	1,800,000	(1,619,749)	4,341,172	0.06%
BlackRock	203,793,607	2.94%	5,464,595	(5,424,474)	203,753,486	2.69%
Blackrock PEP 2020	45,296,914	0.65%	6,054,226	(1,152,028)	40,394,716	0.53%
Sixth Street TAO	59,613,501	0.86%	9,142,916	539,289	49,931,296	0.66%
Remaining Misc. Funds*	38,229,535	0.55%	(1,066,300)	(1,802,997)	41,098,832	0.54%

\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.

## Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2022, with the distribution as of March 31, 2022. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

### Asset Distribution Across Investment Managers

	June 30, 2022				March 31, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Global Fixed Income</b>	<b>\$1,736,303,740</b>	<b>25.09%</b>	<b>\$(58,307,847)</b>	<b>\$(90,311,637)</b>	<b>\$1,884,923,224</b>	<b>24.93%</b>
<b>Domestic Fixed Income</b>	<b>\$1,736,303,740</b>	<b>25.09%</b>	<b>\$(58,307,847)</b>	<b>\$(90,311,637)</b>	<b>\$1,884,923,224</b>	<b>24.93%</b>
<b>Investment Grade</b>	<b>\$1,242,582,312</b>	<b>17.96%</b>	<b>\$(55,590,724)</b>	<b>\$(77,967,084)</b>	<b>\$1,376,140,120</b>	<b>18.20%</b>
Declaration Total Return	148,672,147	2.15%	(100,346)	(4,352,939)	153,125,432	2.02%
PIMCO DiSCO II	100,497,621	1.45%	0	(1,594,120)	102,091,741	1.35%
PIMCO Core Plus Constrained	430,759,904	6.22%	(22,249,287)	(26,128,561)	479,137,753	6.34%
Prudential Core	433,352,096	6.26%	(22,234,844)	(26,494,418)	482,081,359	6.38%
SSgA Long US Treas Index	129,300,543	1.87%	(11,006,246)	(19,397,045)	159,703,834	2.11%
<b>Below Investment Grade</b>	<b>\$493,721,428</b>	<b>7.13%</b>	<b>\$(2,717,124)</b>	<b>\$(12,344,553)</b>	<b>\$508,783,104</b>	<b>6.73%</b>
Ares ND Credit Strategies Fd	156,115,483	2.26%	0	5,704,366	150,411,117	1.99%
Cerberus ND Private Credit Fd	167,585,199	2.42%	0	2,607,036	164,978,163	2.18%
Goldman Sachs 2006 Offshore	49,654	0.00%	0	709	48,945	0.00%
Goldman Sachs Offshore V	118,929	0.00%	0	(2,104)	121,033	0.00%
Loomis Sayles	162,511,508	2.35%	(214,759)	(20,047,586)	182,773,853	2.42%
PIMCO Bravo II Fund	7,340,655	0.11%	(2,502,364)	(606,975)	10,449,994	0.14%
<b>Global Real Assets</b>	<b>\$1,368,352,144</b>	<b>19.77%</b>	<b>\$1,281,715</b>	<b>\$81,101,820</b>	<b>\$1,285,968,608</b>	<b>17.01%</b>
<b>Real Estate</b>	<b>\$882,219,637</b>	<b>12.75%</b>	<b>\$3,371,766</b>	<b>\$60,839,501</b>	<b>\$818,008,369</b>	<b>10.82%</b>
Invesco Core Real Estate	445,065,364	6.43%	(668,225)	46,783,154	398,950,434	5.28%
Invesco Fund III	0	0.00%	(2)	(1)	3	0.00%
Invesco Asia RE Fund III	17,400,021	0.25%	0	(1,844,359)	19,244,381	0.25%
Invesco Value Added Fd IV	5,077,569	0.07%	0	(266,817)	5,344,386	0.07%
Invesco Value Added Fd V	72,589,900	1.05%	4,039,993	2,607,650	65,942,257	0.87%
JP Morgan	341,520,035	4.93%	0	13,629,159	327,890,876	4.34%
JP Morgan Greater European Opp Fd	566,747	0.01%	0	(69,285)	636,032	0.01%
<b>Other Real Assets</b>	<b>\$486,132,507</b>	<b>7.02%</b>	<b>\$(2,090,051)</b>	<b>\$20,262,319</b>	<b>\$467,960,239</b>	<b>6.19%</b>
<b>Infrastructure</b>	<b>\$385,796,167</b>	<b>5.57%</b>	<b>\$6,269,949</b>	<b>\$18,840,876</b>	<b>\$360,685,342</b>	<b>4.77%</b>
ISQ Global Infrastructure II	68,940,528	1.00%	850,490	6,030,338	62,059,700	0.82%
ISQ Global Infrastructure III	3,756,632	0.05%	0	(957,369)	4,714,001	0.06%
The Rohatyn Group	15,872,694	0.23%	239,489	(394,355)	16,027,560	0.21%
JP Morgan IIF Infrastructure	124,576,611	1.80%	(1,512,839)	(1,893,921)	127,983,372	1.69%
Grosvenor CIS Fund	11,187,728	0.16%	0	291,048	10,896,680	0.14%
Grosvenor CIS Fund II	22,718,632	0.33%	206,805	1,514,226	20,997,601	0.28%
Grosvenor CIS Fund III	16,693,451	0.24%	1,961,870	434,306	14,297,275	0.19%
Macquarie Infrastructure Fund IV	75,574,881	1.09%	(549,306)	8,923,925	67,200,262	0.89%
Macquarie Infrastructure Fund V	46,475,010	0.67%	5,073,441	4,892,678	36,508,891	0.48%
<b>Timber</b>	<b>\$100,336,340</b>	<b>1.45%</b>	<b>\$(8,360,000)</b>	<b>\$1,421,443</b>	<b>\$107,274,897</b>	<b>1.42%</b>
TIR Teredo	20,272,958	0.29%	0	(455,950)	20,728,908	0.27%
TIR Springbank	80,063,382	1.16%	(8,360,000)	1,877,393	86,545,989	1.14%
<b>Cash</b>	<b>\$53,707,439</b>	<b>0.78%</b>	<b>\$24,931,086</b>	<b>\$68,915</b>	<b>\$28,707,438</b>	<b>0.38%</b>
Northern Trust Cash Account	43,090,120	0.62%	24,931,086	51,133	18,107,901	0.24%
Bank of ND	10,617,319	0.15%	0	17,782	10,599,537	0.14%
<b>Total Fund</b>	<b>\$6,920,468,579</b>	<b>100.0%</b>	<b>\$(30,458,759)</b>	<b>\$(610,953,055)</b>	<b>\$7,561,880,393</b>	<b>100.0%</b>

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	(13.85%)	(12.35%)	8.45%	8.49%	10.08%
Net	(13.90%)	(12.59%)	8.19%	8.25%	9.77%
Weighted Benchmark	(14.39%)	(12.61%)	8.52%	8.46%	9.63%
<b>Public Equities</b>					
Gross	(15.21%)	(15.93%)	6.64%	-	-
Net	(15.26%)	(16.19%)	6.35%	-	-
Weighted Benchmark	(15.72%)	(16.35%)	6.17%	-	-
<b>World Equities</b>					
Gross	(13.25%)	(12.91%)	5.29%	6.01%	8.63%
Net	(13.31%)	(13.20%)	4.92%	5.64%	8.10%
MSCI World	(16.19%)	(14.34%)	7.00%	7.67%	9.51%
EPOCH Investment - Gross(1)	(15.06%)	(15.60%)	3.74%	6.62%	9.00%
EPOCH Investment - Net	(15.17%)	(16.14%)	3.08%	5.95%	8.29%
MSCI World	(16.19%)	(14.34%)	7.00%	7.67%	9.51%
LSV Asset Management - Gross(2)	(11.92%)	(10.99%)	6.28%	5.36%	-
LSV Asset Management - Net	(11.94%)	(11.08%)	6.18%	5.24%	-
Benchmark(4)	(15.83%)	(16.52%)	5.98%	7.09%	-
<b>Domestic Equities</b>					
Gross	(16.29%)	(13.32%)	10.44%	11.25%	13.18%
Net	(16.34%)	(13.58%)	10.21%	11.04%	12.94%
Weighted Benchmark	(16.77%)	(15.55%)	8.96%	9.76%	12.11%
<b>Large Cap</b>					
Gross	(17.25%)	(12.55%)	12.13%	12.52%	14.01%
Net	(17.28%)	(12.72%)	11.99%	12.40%	13.85%
Large Cap Benchmark(3)	(16.67%)	(13.04%)	10.17%	11.00%	12.82%
L.A. Capital - Gross	(19.50%)	(16.03%)	13.87%	14.67%	15.09%
L.A. Capital - Net	(19.55%)	(16.20%)	13.65%	14.44%	14.85%
Russell 1000 Growth Index	(20.92%)	(18.77%)	12.58%	14.29%	14.80%
LACM Enhanced Index - Gross	(15.31%)	(10.78%)	11.31%	11.48%	13.21%
LACM Enhanced Index - Net	(15.34%)	(10.88%)	11.20%	11.36%	13.08%
Russell 1000 Index	(16.67%)	(13.04%)	10.17%	11.00%	12.82%
Northern Tr AM Enh S&P500 - Gross	(15.27%)	(7.61%)	10.18%	10.26%	12.41%
Northern Tr AM Enh S&P500 - Net	(15.27%)	(7.73%)	10.13%	10.23%	12.24%
S&P 500 Index	(16.10%)	(10.62%)	10.60%	11.31%	12.96%
Parametric Enh S&P500 - Gross	(17.07%)	(12.79%)	10.08%	10.81%	12.77%
Parametric Enh S&P500 - Net	(17.07%)	(13.08%)	10.04%	10.79%	12.70%
S&P 500 Index	(16.10%)	(10.62%)	10.60%	11.31%	12.96%
<b>Small Cap</b>					
Gross	(12.23%)	(16.36%)	4.31%	6.75%	10.11%
Net	(12.39%)	(16.92%)	3.74%	6.24%	9.61%
Russell 2000 Index	(17.20%)	(25.20%)	4.21%	5.17%	9.35%
Atlanta Capital - Gross	(9.07%)	(7.04%)	7.43%	10.20%	-
Atlanta Capital - Net	(9.22%)	(7.60%)	6.76%	9.48%	-
S&P 600 Small Cap Index	(14.11%)	(16.81%)	7.30%	7.20%	11.26%
Riverbridge Small Cap Growth - Gross	(20.02%)	(34.53%)	-	-	-
Riverbridge Small Cap Growth - Net	(20.21%)	(35.06%)	-	-	-
Russell 2000 Growth Index	(19.25%)	(33.43%)	1.40%	4.80%	9.30%
Sycamore Small Cap Value - Gross	(9.20%)	(7.68%)	-	-	-
Sycamore Small Cap Value - Net	(9.35%)	(8.25%)	-	-	-
Russell 2000 Value Index	(15.28%)	(16.28%)	6.18%	4.89%	9.05%

(1) EPOCH Investment was removed from the Domestic Equities Composite to the World Equities Composite as of 1/1/2012.

(3) LSV Asset Management was removed from the Domestic Equities and Intl Equities Composites to the World Equities Composite as of February 1, 2013.

(3) S&P 500 Index through 12/31/2011 and Russell 1000 Index thereafter.

(4) MSCI ACWI Gross through 6/30/2019 and MSCI ACWI IMI 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, 2022. 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, 2022					
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equities</b>					
Gross	(14.81%)	(21.76%)	3.06%	3.77%	6.64%
Net	(14.87%)	(22.02%)	2.77%	3.53%	6.37%
Weighted Benchmark	(13.86%)	(18.90%)	1.45%	2.57%	5.07%
<b>Developed</b>					
Gross	(15.11%)	(19.81%)	3.22%	3.85%	7.19%
Net	(15.16%)	(19.98%)	3.00%	3.63%	6.93%
Benchmark(1)	(14.66%)	(16.76%)	1.70%	2.66%	5.56%
Arrowstreet ACWI ex US - Net	(12.12%)	-	-	-	-
MSCI ACWI ex US IMI	(14.28%)	(19.86%)	1.55%	2.50%	5.01%
DFA Int'l Small Cap Value - Net	(13.65%)	(13.72%)	3.00%	0.37%	6.85%
World ex US SC Value	(15.64%)	(17.41%)	1.99%	1.43%	6.34%
Northern Tr AM World ex US - Gross	(13.52%)	(16.20%)	2.19%	3.10%	-
Northern Tr AM World ex US - Net	(13.55%)	(16.26%)	2.14%	3.06%	-
MSCI World ex US	(14.66%)	(16.76%)	1.70%	2.66%	5.37%
Wellington Management - Gross	(16.47%)	(27.13%)	1.37%	1.19%	7.89%
Wellington Management - Net	(16.67%)	(27.77%)	0.52%	0.34%	6.99%
Benchmark(3)	(17.69%)	(25.53%)	0.83%	0.40%	6.04%
William Blair - Gross	(19.94%)	(28.26%)	2.58%	5.71%	-
William Blair - Net	(20.02%)	(28.52%)	2.22%	5.34%	-
MSCI ACWI ex US IMI	(14.28%)	(19.86%)	1.55%	2.50%	5.01%
<b>Emerging Markets</b>					
Gross	(13.75%)	(27.73%)	2.66%	3.52%	4.38%
Net	(13.82%)	(28.22%)	2.16%	3.22%	4.08%
Emerging Mkts - Net	(11.45%)	(25.28%)	0.57%	2.18%	3.07%
Axiom - Gross(2)	(14.55%)	(30.92%)	1.84%	3.38%	-
Axiom - Net	(14.65%)	(31.58%)	1.17%	2.98%	-
Emerging Mkts - Net	(11.45%)	(25.28%)	0.57%	2.18%	3.07%
DFA - Net	(11.68%)	(18.29%)	4.87%	3.72%	5.28%
Emerging Mkts - Net	(11.45%)	(25.28%)	0.57%	2.18%	3.07%

(1) MSCI EAFE through 12/31/1996; 50% Hedged EAFE through 3/31/2011; MSCI EAFE again through 6/30/2016; MSCI World ex-US thereafter.

(2) Axiom's performance are reported net of fees through 6/30/2020.

(3) EPAC, Developed World, <\$2B through 2/28/2022; MSCI EAFE Small Cap 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, 2022. 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, 2022					
	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Private Equities*</b>					
Net	(6.48%)	11.73%	19.66%	14.39%	7.80%
Adams St 1998 Partnership	(0.63%)	(2.05%)	(1.37%)	0.82%	2.46%
Adams St 1999 Partnership	(2.38%)	(0.76%)	2.55%	0.35%	1.84%
Adams St 2000 Partnership	(5.35%)	(10.31%)	(7.30%)	(0.24%)	0.23%
Adams St 2001 Partnership	(8.85%)	(17.89%)	0.36%	1.92%	3.60%
Adams St 2002 Partnership	(2.60%)	(5.65%)	(2.03%)	(2.92%)	1.44%
Adams St 2003 Partnership	(5.69%)	(31.63%)	(15.21%)	(5.93%)	2.39%
Adams St 2000 Non-US	(7.75%)	(18.86%)	(9.25%)	(2.25%)	(0.82%)
Adams St 2001 Non-US	(0.10%)	(0.86%)	0.30%	4.32%	9.46%
Adams St 2002 Non-US	(0.29%)	6.38%	0.18%	0.76%	3.07%
Adams St 2003 Non-US	(6.90%)	(17.14%)	(8.79%)	(7.47%)	4.57%
Adams St 2004 Non-US	(8.34%)	(11.35%)	7.80%	7.78%	7.42%
Adams St 2006 Direct Co-Invest Fund	30.01%	(8.29%)	(24.25%)	(24.23%)	(8.46%)
Adams St 2008 Fund	(17.10%)	(15.96%)	10.59%	13.18%	13.02%
Adams St 2010 Direct Fund	(18.65%)	(7.76%)	10.28%	13.03%	12.48%
Adams St 2010 Partnership	(15.69%)	10.63%	32.39%	26.40%	19.67%
Adams St 2010 Non-US	(15.18%)	(5.55%)	17.43%	18.27%	14.32%
Adams St 2010 Non-US Emg	(20.98%)	(9.82%)	12.04%	13.63%	10.73%
Adams St 2015 Global Fund	(11.99%)	11.91%	27.78%	23.59%	-
Adams St 2016 Global Fund	(9.12%)	19.13%	25.05%	19.70%	-
Adams St 2017 Global Fund	(5.66%)	28.72%	28.53%	-	-
Adams St 2018 Global Fund	(10.96%)	21.47%	29.97%	-	-
Adams St 2019 Global Fund	(12.57%)	28.10%	-	-	-
Adams St 2020 Global Fund	(15.15%)	28.68%	-	-	-
Adams St 2021 Global Fund	(26.38%)	-	-	-	-
BlackRock	(2.62%)	8.55%	20.54%	14.53%	-
Blackrock PEP 2020	(2.55%)	7.00%	-	-	-
Sixth Street TAO	1.14%	6.80%	-	-	-
Remaining Misc. Funds**	(4.41%)	(14.39%)	(4.27%)	(1.73%)	(3.11%)

\* Corsair III was taken out from the Private Equity Composite on July 1, 2009. It was then added back into the Private Equity Composite on October 1, 2011. At this time Corsair IV, Capital Intl and EIG were also added to this composite.

\*\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	(4.78%)	(8.10%)	1.20%	3.02%	3.95%
Net	(4.80%)	(8.23%)	1.07%	2.87%	3.76%
Weighted Benchmark	(6.25%)	(11.03%)	(0.51%)	1.59%	2.14%
<b>Domestic Fixed Income</b>					
Gross	(4.78%)	(8.10%)	1.20%	2.85%	4.30%
Net	(4.80%)	(8.23%)	1.07%	2.70%	4.12%
Weighted Benchmark	(6.25%)	(11.03%)	(0.51%)	1.28%	2.38%
<b>Investment Grade</b>					
Gross	(5.63%)	(10.53%)	(0.07%)	1.90%	3.27%
Net	(5.65%)	(10.64%)	(0.18%)	1.79%	3.16%
Bimbg Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
Declaration Total Return - Net	(2.84%)	(5.18%)	1.50%	2.84%	3.98%
Libor-3 Month	0.43%	0.66%	0.81%	1.35%	0.91%
PIMCO Core Plus Cons. - Gross(1)	(5.38%)	(10.93%)	(0.34%)	1.74%	2.25%
PIMCO Core Plus Cons. - Net	(5.41%)	(11.15%)	(0.51%)	1.58%	2.04%
Blended Benchmark(2)	(4.69%)	(10.29%)	(0.93%)	1.31%	0.90%
PIMCO DiSCO II - Net	(1.56%)	1.64%	4.33%	5.76%	9.66%
Bimbg Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
Prudential Core - Gross	(5.52%)	(11.41%)	(0.69%)	-	-
Prudential Core - Net	(5.55%)	(11.51%)	(0.80%)	-	-
Bimbg Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
SSgA Long US Treas Idx - Gross	(11.93%)	(18.46%)	(2.88%)	0.54%	-
SSgA Long US Treas Idx - Net	(11.94%)	(18.47%)	(2.90%)	0.52%	-
Bimbg Long Treas	(11.93%)	(18.45%)	(2.94%)	0.51%	1.63%
<b>Below Investment Grade</b>					
Gross	(2.43%)	(1.03%)	4.74%	5.39%	7.02%
Net	(2.47%)	(1.20%)	4.53%	5.14%	6.67%
Bimbg HY Corp 2% Issue	(9.84%)	(12.82%)	0.18%	2.09%	4.47%
Ares ND Credit Strategies Fd - Net	3.79%	8.95%	7.96%	-	-
Cerberus ND Private Credit Fd - Net	1.58%	7.08%	9.02%	-	-
S&P/LSTA Leveraged Loan B	(4.91%)	(2.97%)	2.32%	3.12%	3.91%
Goldman Sachs 2006 Offshore - Net	1.45%	6.99%	6.44%	7.79%	16.17%
Goldman Sachs Offshore V - Net	(1.74%)	(12.02%)	22.53%	23.92%	13.49%
PIMCO Bravo II Fund - Net	(7.71%)	(1.13%)	1.35%	2.62%	-
Bimbg HY Corp 2% Issue	(9.84%)	(12.82%)	0.18%	2.09%	4.47%
Loomis Sayles - Gross	(10.98%)	(15.12%)	(0.44%)	1.76%	4.80%
Loomis Sayles - Net	(11.09%)	(15.52%)	(0.93%)	1.26%	4.29%
Bimbg HY Corp 2% Issue	(9.84%)	(12.82%)	0.18%	2.09%	4.47%

(1) The product changed from Commingled Fund to Separate Account in March 2014.

(2) Libor-3 month through Feb. 28, 2014; Fund's performance through March 31, 2014; Libor-3 month through June 30, 2018; Bimbg Aggregate 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, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Real Assets</b>					
Gross	6.31%	18.97%	10.89%	9.03%	8.89%
Net	6.17%	18.52%	10.44%	8.58%	8.44%
Weighted Benchmark	3.32%	19.50%	9.02%	7.55%	7.41%
<b>Real Estate</b>					
Gross	7.42%	25.59%	12.20%	10.25%	11.60%
Net	7.25%	24.96%	11.63%	9.70%	11.05%
NCREIF Total Index	3.23%	21.45%	10.22%	8.86%	9.67%
Invesco Core Real Estate - Gross	11.73%	27.19%	11.58%	10.00%	10.99%
Invesco Core Real Estate - Net	11.56%	26.79%	11.22%	9.63%	10.61%
Invesco Asia RE Fund III - Net	(9.58%)	(9.77%)	5.07%	19.80%	-
Invesco Value Added Fd IV - Net	(4.99%)	3.60%	6.86%	8.91%	-
Invesco Value Added Fd V - Net	3.92%	18.37%	13.64%	-	-
JP Morgan - Gross	4.16%	28.76%	12.75%	10.60%	11.75%
JP Morgan - Net	3.93%	27.63%	11.71%	9.59%	10.70%
JPM Greater European Opp Fd - Net	(10.89%)	(12.90%)	(13.33%)	(17.43%)	(6.95%)
NCREIF Total Index	3.23%	21.45%	10.22%	8.86%	9.67%
<b>Other Real Assets</b>					
Gross	4.35%	8.33%	8.50%	-	-
Net	4.28%	8.14%	8.24%	-	-
Weighted Benchmark	3.42%	17.21%	7.56%	-	-
<b>Infrastructure</b>					
Gross	5.14%	8.50%	9.35%	8.29%	7.74%
Net	5.05%	8.26%	8.99%	7.88%	7.20%
ISQ Global Infrastructure II - Net	9.69%	12.90%	12.85%	-	-
ISQ Global Infrastructure III - Net	(20.31%)	-	-	-	-
The Rohatyn Group - Net	(2.43%)	1.33%	(7.02%)	(9.18%)	(0.54%)
JP Morgan IIF - Gross	(1.48%)	1.85%	6.27%	7.39%	7.03%
JP Morgan IIF - Net	(1.74%)	1.23%	5.52%	6.65%	6.15%
Grosvenor CIS Fund - Net	2.67%	6.18%	8.30%	7.10%	8.02%
Grosvenor CIS Fund II - Net	7.14%	10.66%	13.37%	12.86%	-
Grosvenor CIS Fund III - Net	2.73%	-	-	-	-
Benchmark(1)	3.73%	18.33%	8.17%	6.28%	3.66%
Macquarie Infrastructure Fd IV - Net	13.29%	15.50%	14.97%	-	-
Macquarie Infrastructure Fd V - Net	11.66%	18.12%	-	-	-
Benchmark(2)	3.73%	18.33%	8.17%	-	-
<b>Timber</b>					
Net	1.44%	7.35%	6.16%	3.96%	2.10%
TIR Teredo - Net	(2.20%)	15.73%	7.54%	5.13%	5.44%
TIR Springbank - Net	2.39%	5.24%	5.93%	3.69%	0.61%
NCREIF Timberland Index	1.87%	12.01%	5.03%	4.32%	5.73%
<b>Cash &amp; Cash Equivalents - Net</b>	<b>0.18%</b>	<b>0.22%</b>	<b>0.60%</b>	<b>1.10%</b>	<b>0.67%</b>
Cash Account - Net	0.18%	0.22%	0.60%	1.09%	0.67%
Bank of ND - Net	0.17%	0.22%	0.60%	1.10%	-
3-month Treasury Bill	0.10%	0.17%	0.63%	1.11%	0.64%
<b>Total Fund</b>					
Gross	(8.09%)	(6.27%)	7.27%	7.39%	8.43%
Net	(8.15%)	(6.51%)	7.01%	7.14%	8.13%
Target*	(9.18%)	(6.70%)	6.64%	6.83%	7.52%

\* Current Quarter Target = 18.2% Russell 1000 Index, 17.1% Blmbg Aggregate, 11.6% MSCI World xUS, 10.1% NCREIF Total Index, 10.0% MSCI World, 8.2% Private Equity, 7.4% Blmbg HY Corp 2% Iss Cap, 4.6% Russell 2000 Index, 3.9% MSCI EM, 3.5% CPI All Urban Cons lagged 3 months, 3.5% NCREIF NFI-ODCE Eq Wt Net, 1.4% NCREIF Timberland Index and 0.4% 3-month Treasury Bill.

(1) CPI-W through June 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.

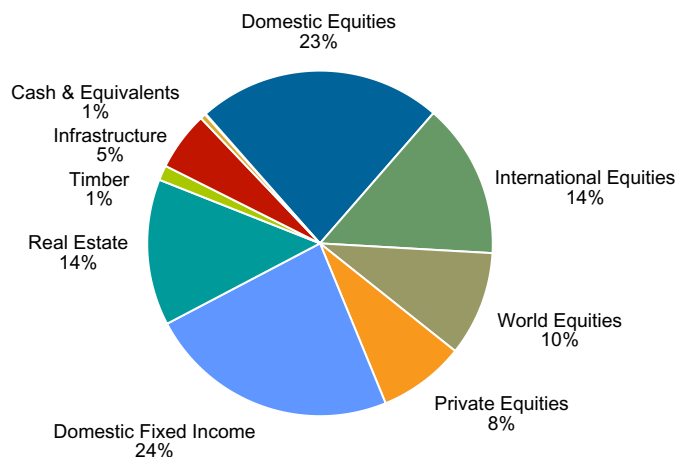




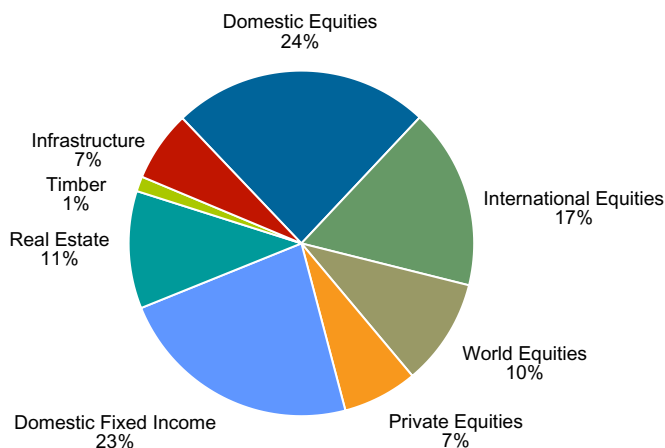
## Actual vs Target Asset Allocation As of June 30, 2022

The top left chart shows the Fund's asset allocation as of June 30, 2022. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.

**Actual Asset Allocation**

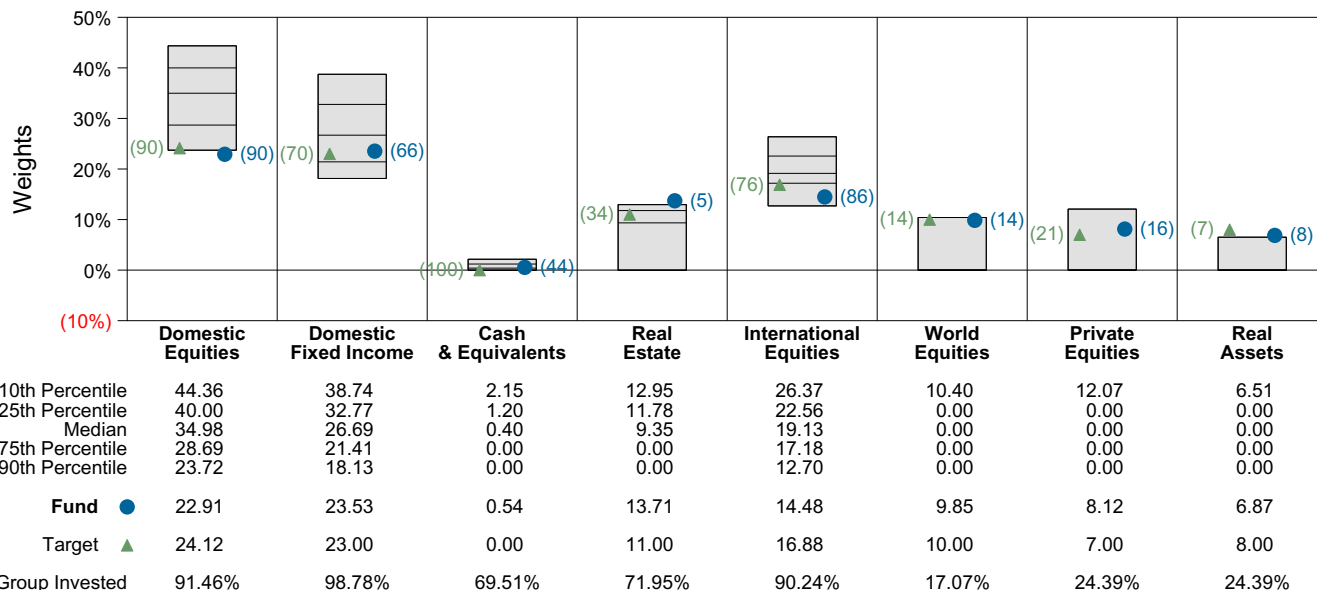


**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	847,751	22.9%	24.1%	(1.2%)	(44,539)
International Equities	535,542	14.5%	16.9%	(2.4%)	(89,056)
World Equities	364,349	9.8%	10.0%	(0.2%)	(5,626)
Private Equities	300,283	8.1%	7.0%	1.1%	41,300
Domestic Fixed Income	870,557	23.5%	23.0%	0.5%	19,616
Real Estate	507,289	13.7%	11.0%	2.7%	100,317
Timber	50,739	1.4%	1.4%	(0.0%)	0
Infrastructure	203,272	5.5%	6.6%	(1.1%)	(41,969)
Cash & Equivalents	19,964	0.5%	0.0%	0.5%	19,964
Total	3,699,747	100.0%	100.0%		

### Asset Class Weights vs Callan Public Fund Sponsor Database

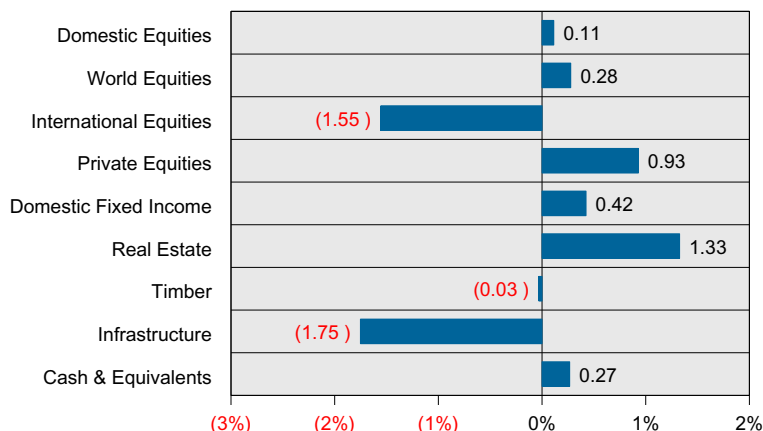


\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

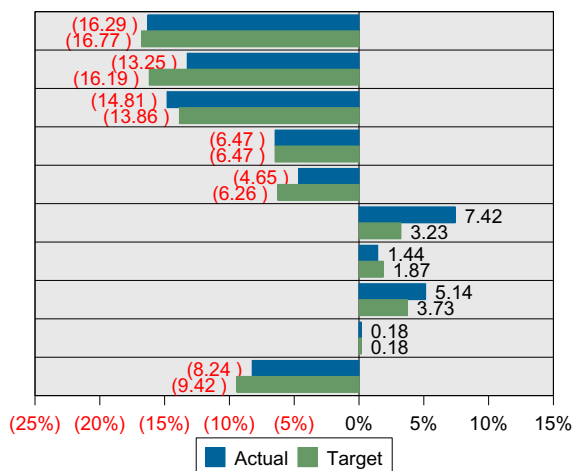
## Quarterly Total Fund Relative Attribution - June 30, 2022

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.

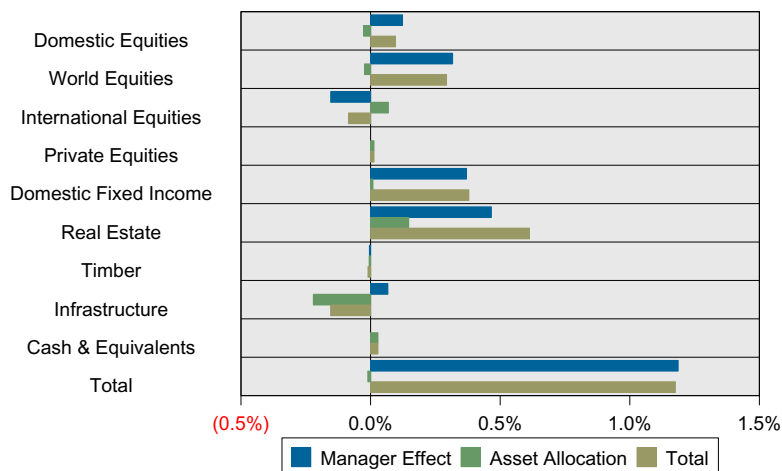
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended June 30, 2022

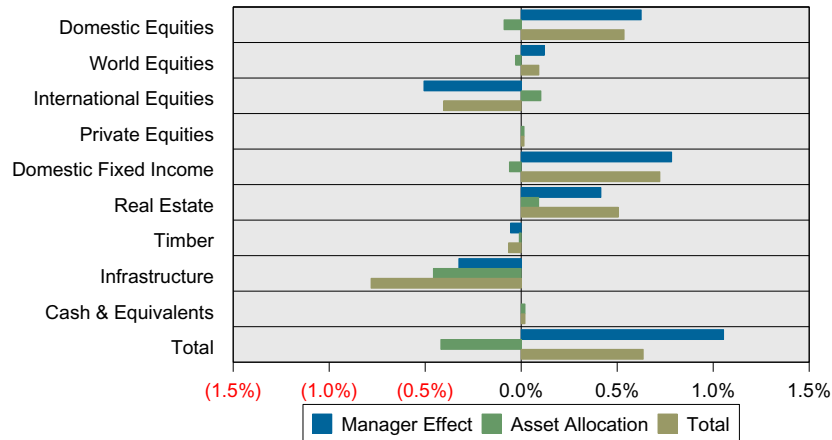
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	24%	(16.29%)	(16.77%)	0.12%	(0.03%)	0.10%
World Equities	10%	10%	(13.25%)	(16.19%)	0.32%	(0.02%)	0.29%
International Equities	15%	17%	(14.81%)	(13.86%)	(0.15%)	0.07%	(0.09%)
Private Equities	8%	7%	(6.47%)	(6.47%)	0.00%	0.01%	0.01%
Domestic Fixed Income	23%	23%	(4.65%)	(6.26%)	0.37%	0.01%	0.38%
Real Estate	12%	11%	7.42%	3.23%	0.47%	0.15%	0.61%
Timber	1%	1%	1.44%	1.87%	(0.00%)	(0.01%)	(0.01%)
Infrastructure	5%	7%	5.14%	3.73%	0.07%	(0.22%)	(0.15%)
Cash & Equivalents	0%	0%	0.18%	0.18%	0.00%	0.03%	0.03%
<b>Total</b>			<b>(8.24%)</b>	<b>(9.42%)</b>	<b>+ 1.19%</b>	<b>+ (0.01%)</b>	<b>1.18%</b>

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

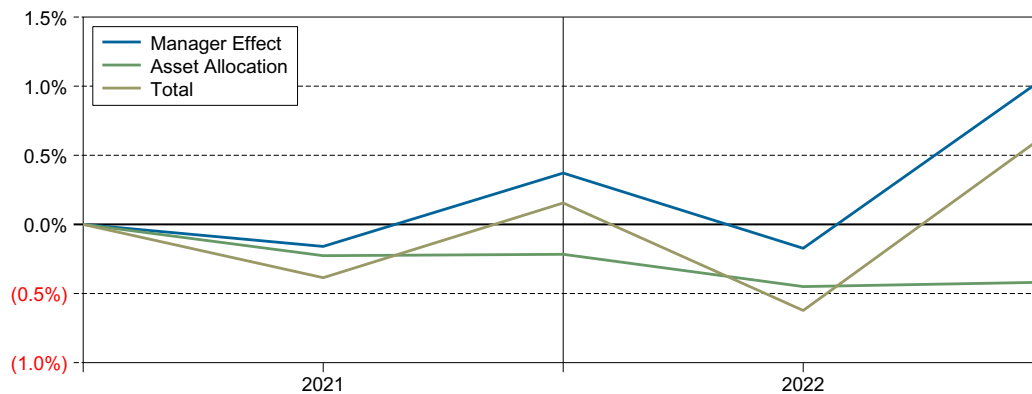
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

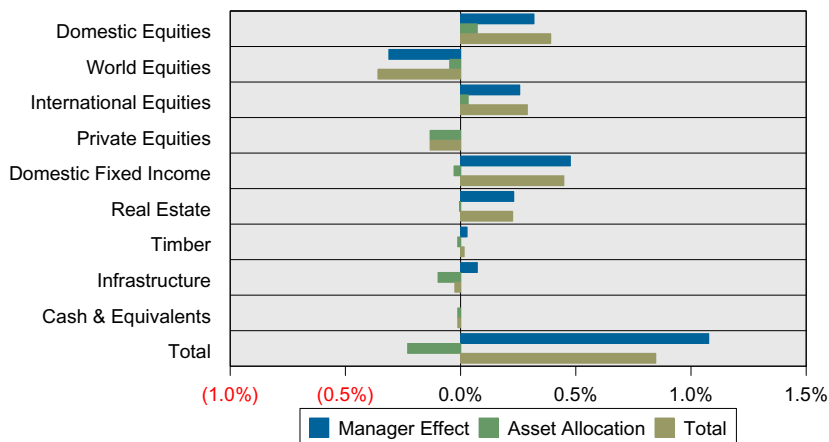
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	25%	24%	(13.32%)	(15.55%)	0.63%	(0.09%)	0.54%
World Equities	11%	10%	(12.91%)	(14.34%)	0.12%	(0.03%)	0.09%
International Equities	16%	17%	(21.79%)	(18.90%)	(0.51%)	0.10%	(0.40%)
Private Equities	7%	7%	11.73%	11.73%	0.00%	0.01%	0.01%
Domestic Fixed Income	24%	23%	(7.83%)	(11.03%)	0.78%	(0.06%)	0.72%
Real Estate	11%	11%	25.58%	21.45%	0.41%	0.09%	0.51%
Timber	1%	1%	7.37%	12.01%	(0.06%)	(0.01%)	(0.07%)
Infrastructure	4%	7%	8.50%	18.33%	(0.32%)	(0.46%)	(0.78%)
Cash & Equivalents	0%	0%	0.22%	0.22%	0.00%	0.02%	0.02%
<b>Total</b>			<b>(6.41%)</b>	<b>(7.05%)</b>	<b>1.05%</b>	<b>(0.42%)</b>	<b>0.64%</b>

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

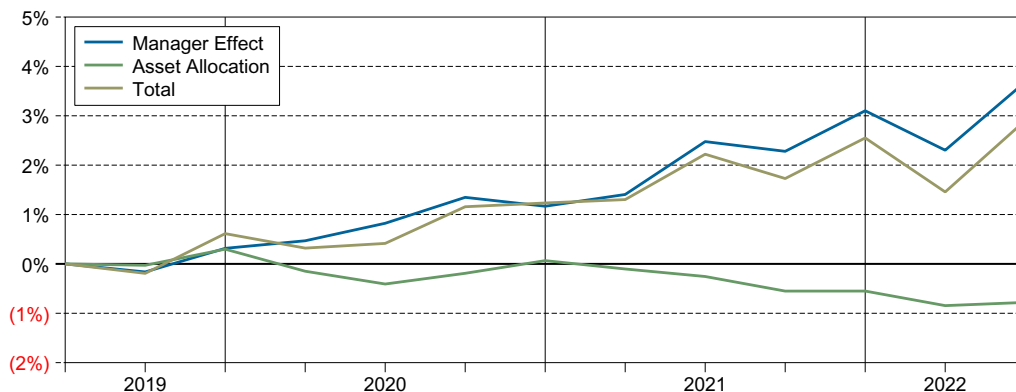
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

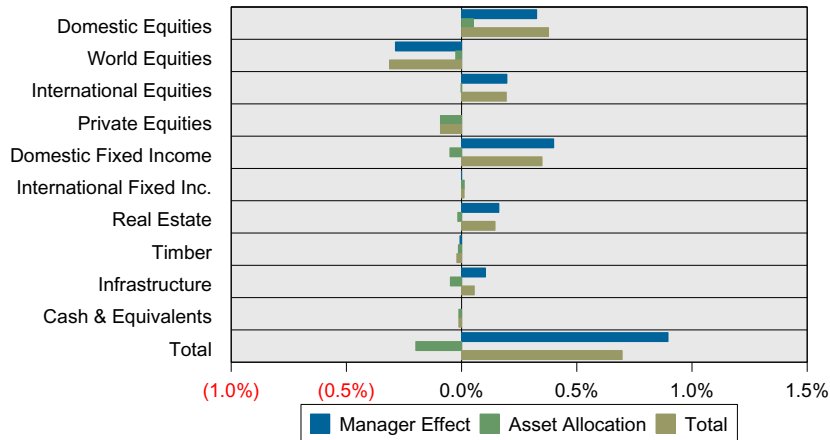
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	24%	22%	10.44%	8.97%	0.32%	0.07%	0.39%
World Equities	13%	13%	5.30%	7.00%	(0.31%)	(0.05%)	(0.36%)
International Equities	16%	16%	3.13%	1.49%	0.26%	0.03%	0.29%
Private Equities	5%	7%	19.66%	19.66%	0.00%	(0.13%)	(0.13%)
Domestic Fixed Income	23%	23%	1.36%	(0.51%)	0.48%	(0.03%)	0.45%
Real Estate	11%	11%	12.20%	10.22%	0.23%	(0.00%)	0.23%
Timber	2%	2%	6.17%	5.03%	0.03%	(0.01%)	0.02%
Infrastructure	5%	6%	9.35%	8.17%	0.07%	(0.10%)	(0.03%)
Cash & Equivalents	0%	0%	0.61%	0.61%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>7.33%</b>	<b>6.48%</b>	<b>+ 1.08%</b>	<b>+ (0.23%)</b>	<b>0.85%</b>

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

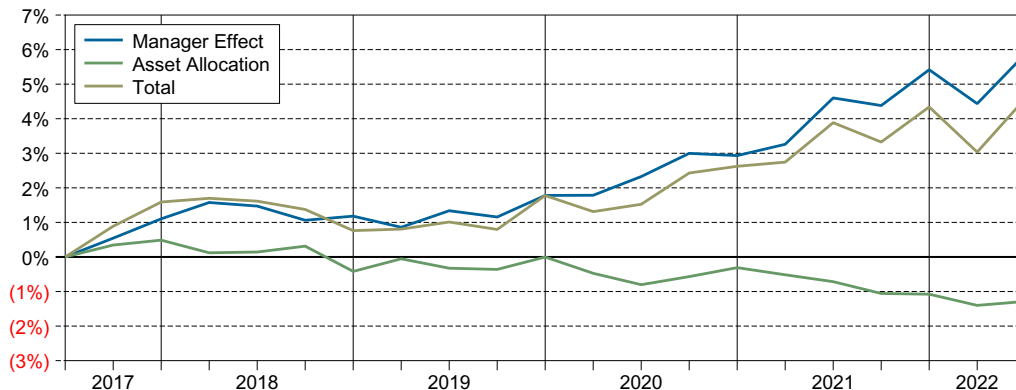
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

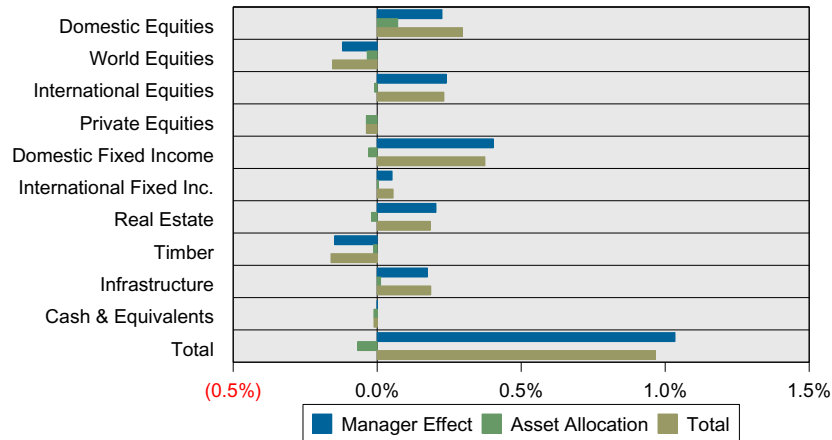
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	11.26%	9.77%	0.33%	0.05%	0.38%
World Equities	15%	14%	6.01%	7.67%	(0.29%)	(0.03%)	(0.31%)
International Equities	16%	15%	3.81%	2.61%	0.20%	(0.00%)	0.19%
Private Equities	4%	7%	14.40%	14.40%	0.00%	(0.09%)	(0.09%)
Domestic Fixed Income	23%	22%	2.96%	1.29%	0.40%	(0.05%)	0.35%
International Fixed Inc.	1%	1%	-	-	(0.00%)	0.01%	0.01%
Real Estate	11%	11%	10.25%	8.86%	0.16%	(0.02%)	0.15%
Timber	2%	2%	3.96%	4.32%	(0.01%)	(0.01%)	(0.02%)
Infrastructure	5%	6%	8.29%	6.28%	0.10%	(0.05%)	0.06%
Cash & Equivalents	1%	0%	1.12%	1.12%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>7.43%</b>	<b>6.74%</b>	<b>+ 0.90%</b>	<b>+ (0.20%)</b>	<b>0.70%</b>

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

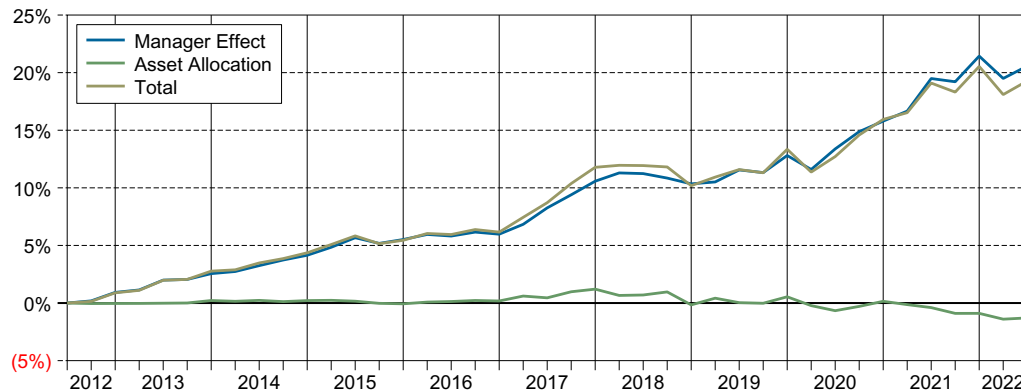
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

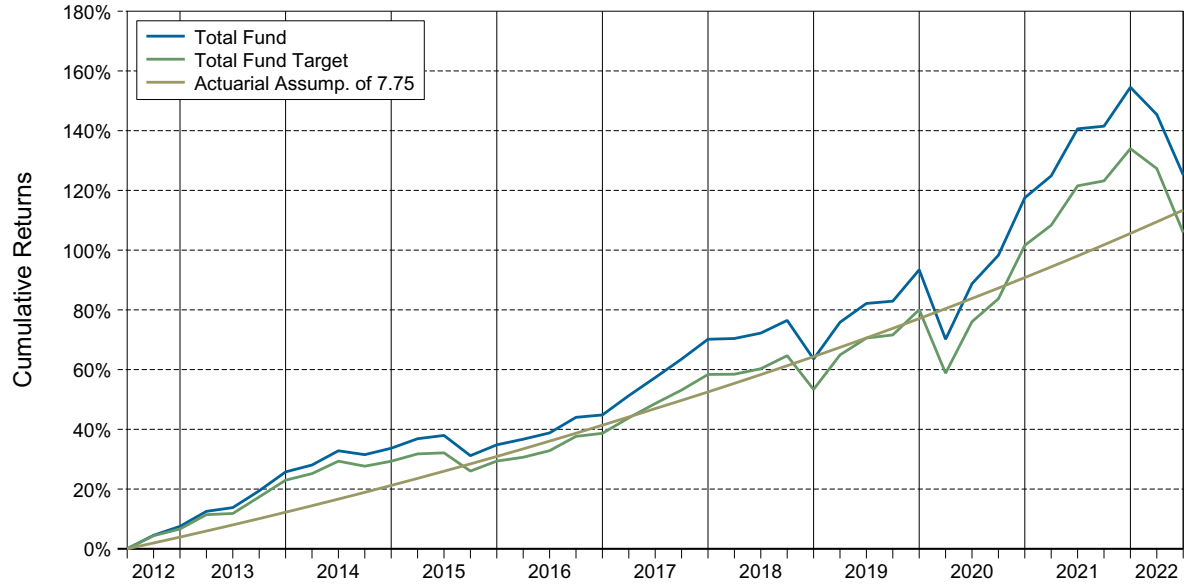
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	13.15%	12.12%	0.22%	0.07%	0.30%
World Equities	15%	15%	8.63%	9.51%	(0.12%)	(0.03%)	(0.16%)
International Equities	16%	15%	6.59%	5.03%	0.24%	(0.01%)	0.23%
Private Equities	4%	6%	7.80%	7.80%	0.00%	(0.04%)	(0.04%)
Domestic Fixed Income	20%	20%	4.38%	2.43%	0.40%	(0.03%)	0.37%
International Fixed Inc.	3%	3%	-	-	0.05%	0.00%	0.06%
Real Estate	11%	11%	11.62%	9.67%	0.20%	(0.02%)	0.18%
Timber	3%	3%	2.10%	5.73%	(0.15%)	(0.01%)	(0.16%)
Infrastructure	4%	6%	7.76%	3.66%	0.17%	0.01%	0.19%
Cash & Equivalents	1%	0%	0.68%	0.67%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>8.46%</b>	<b>7.49%</b>	<b>+ 1.03%</b>	<b>+ (0.07%)</b>	<b>0.97%</b>

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

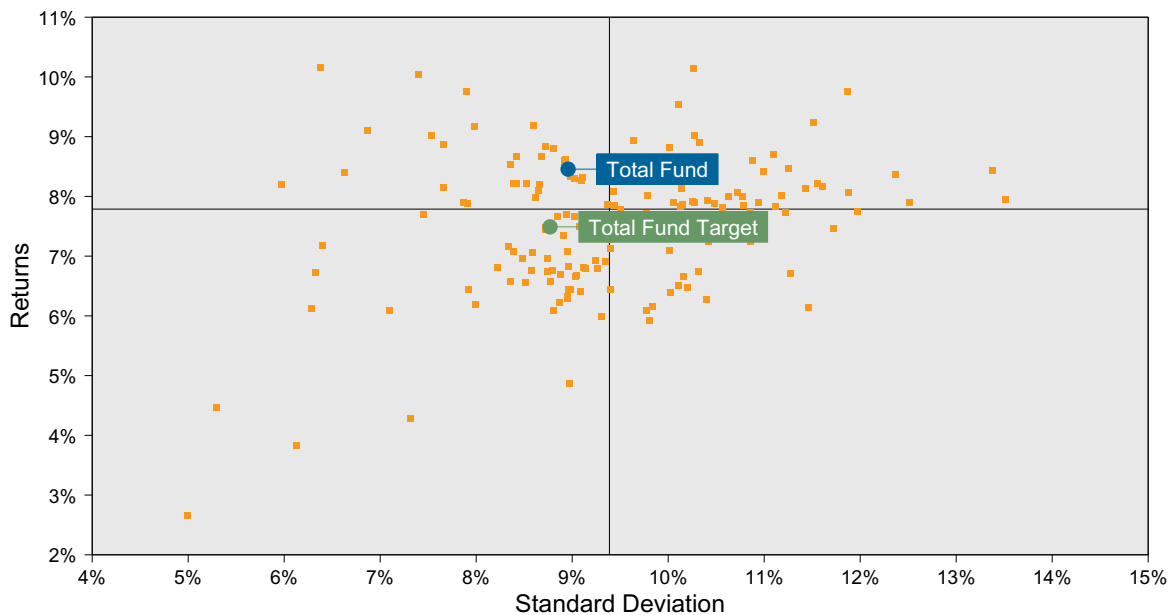
## Cumulative Performance Relative to Target

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

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



Squares represent membership of the Callan Public Fund Sponsor Database

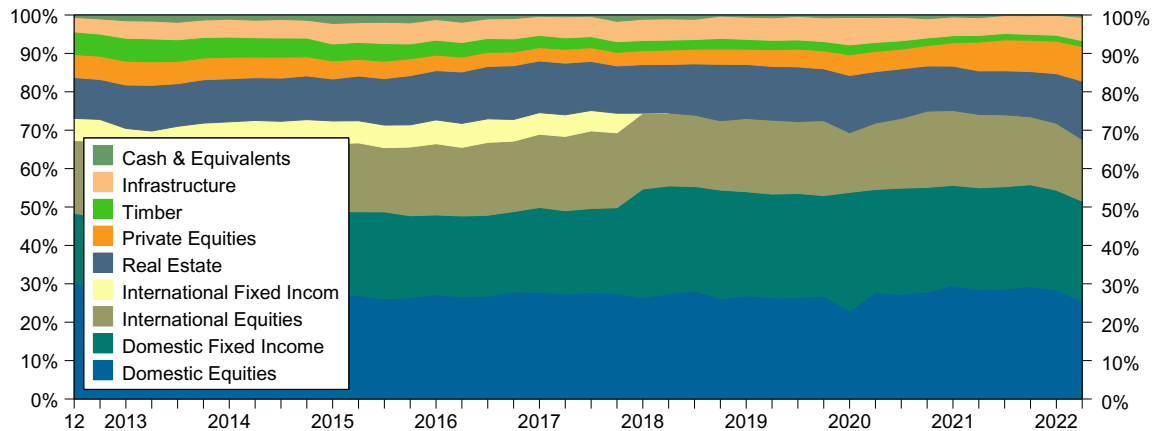
\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.



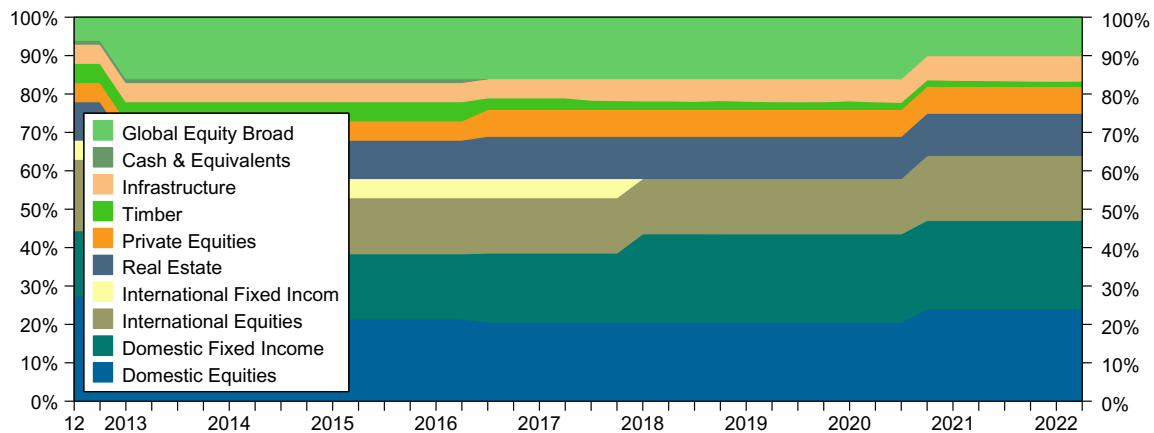
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

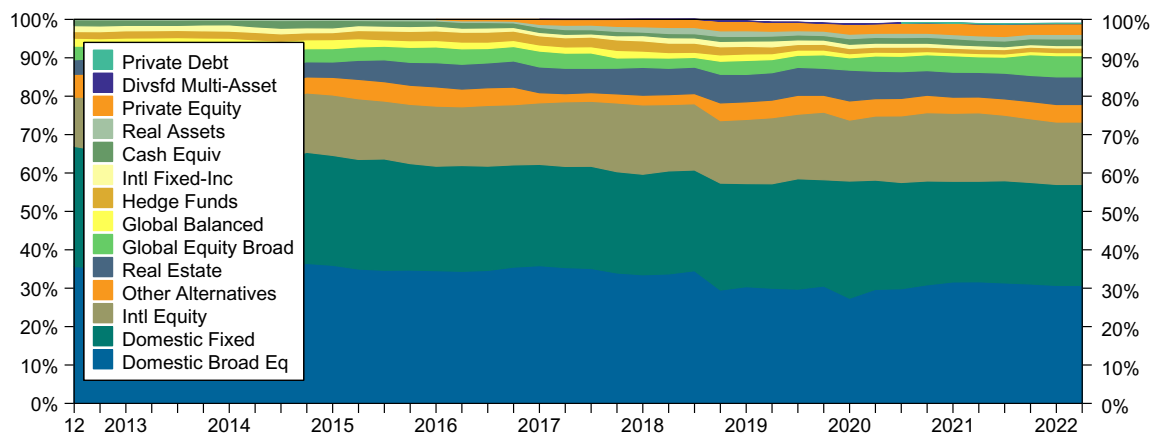
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation

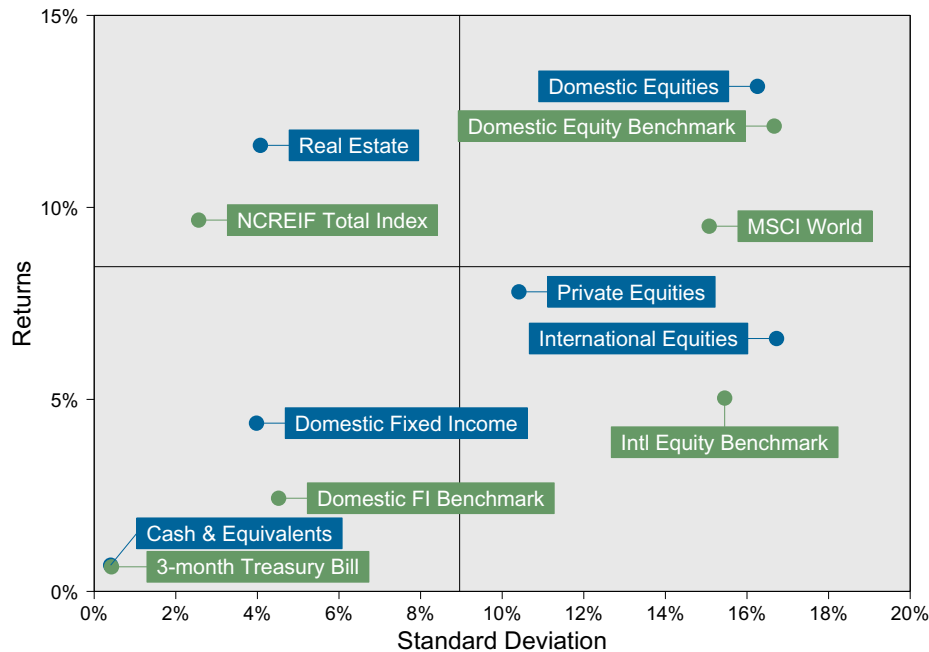


\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

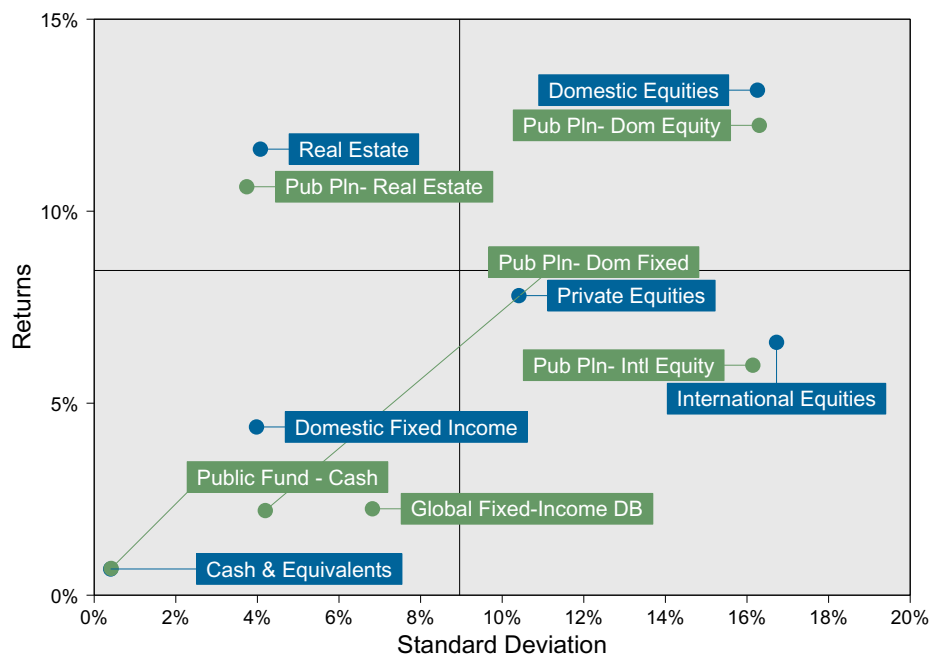
## Asset Class Risk and Return

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

Ten Year Annualized Risk vs Return  
Asset Classes vs Benchmark Indices



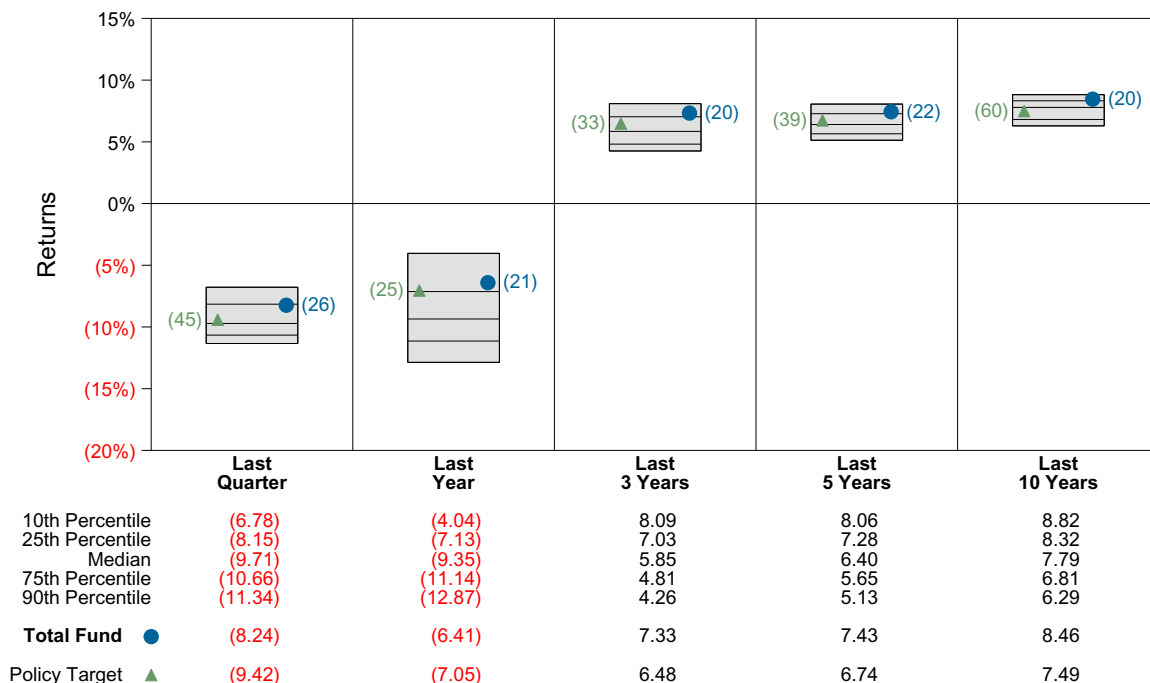
Ten Year Annualized Risk vs Return  
Asset Classes vs Asset Class Median



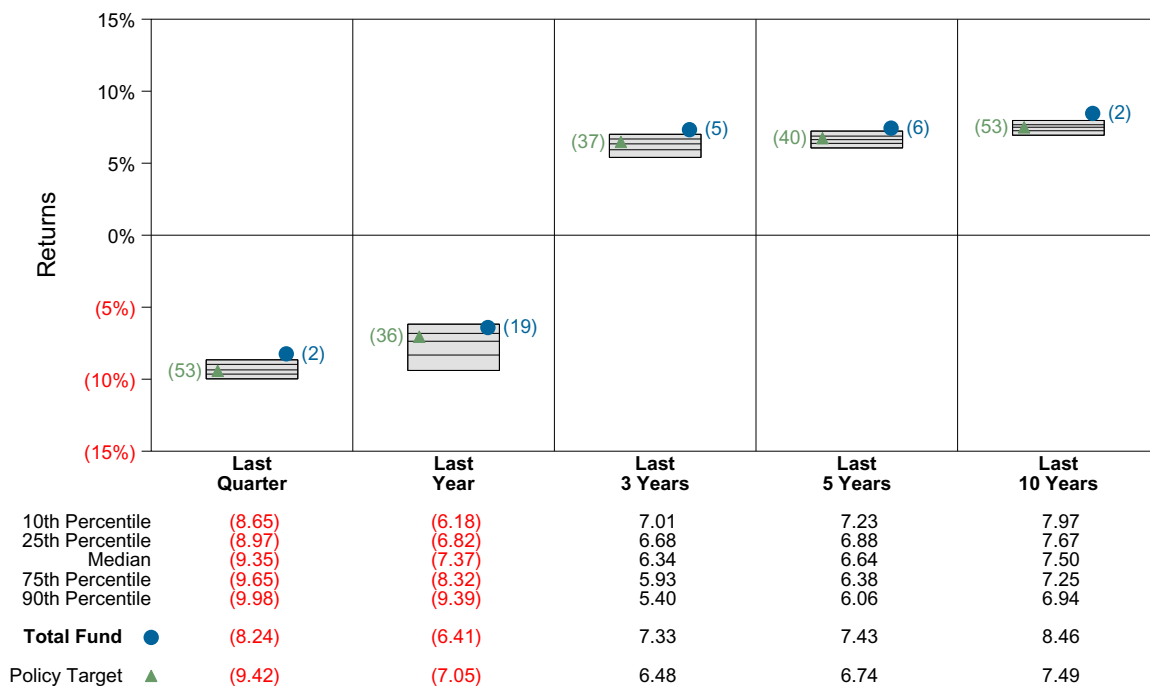
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended June 30, 2022. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

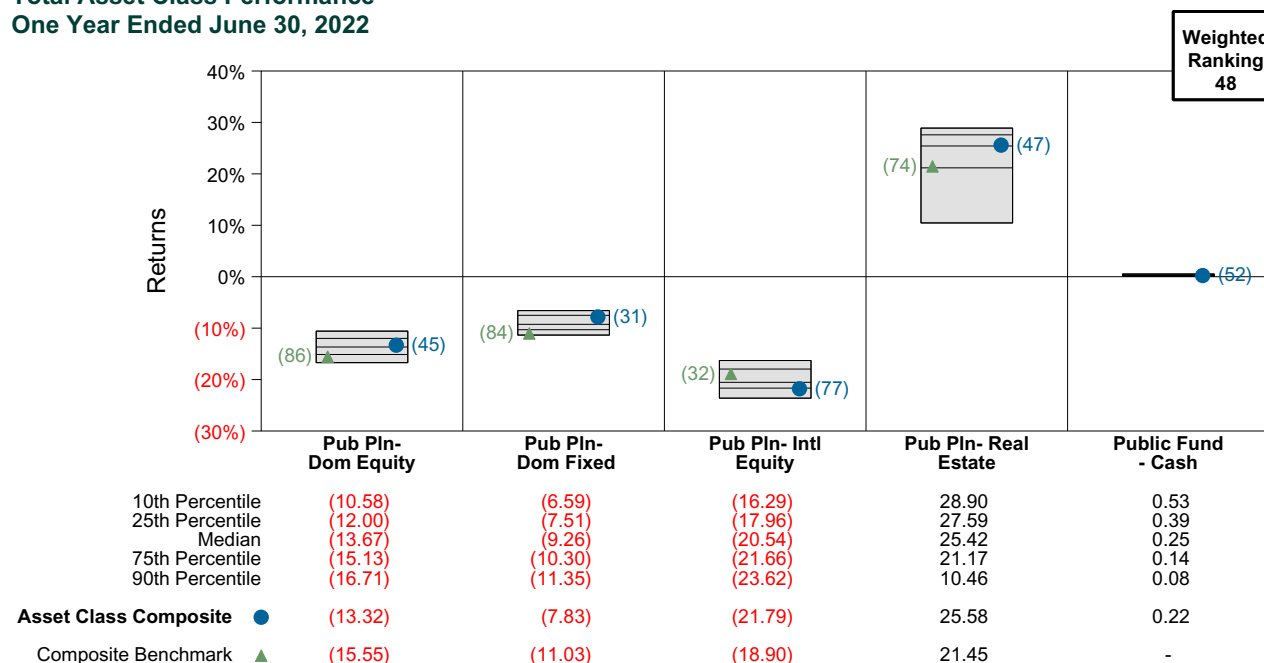


\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Bimbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Bimbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

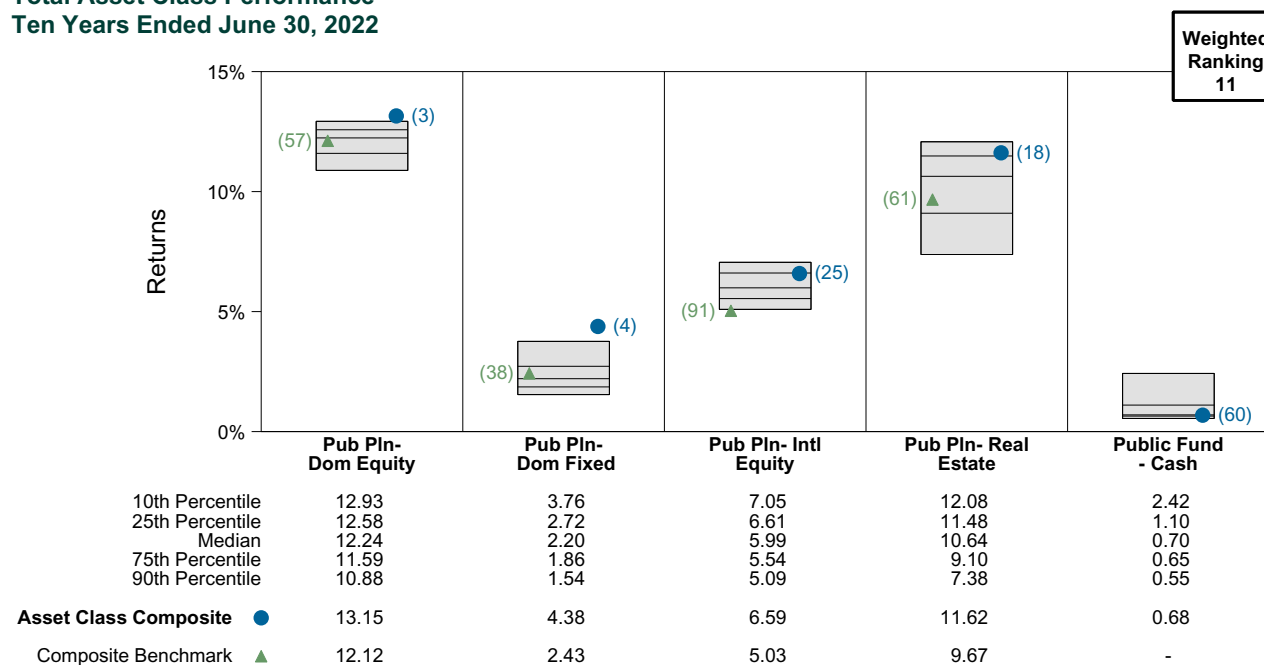
## Asset Class Rankings

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, 2022



### Total Asset Class Performance Ten Years Ended June 30, 2022



\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2022, with the distribution as of March 31, 2022. 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, 2022				March 31, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Global Equities</b>	<b>\$2,047,924,456</b>	<b>55.35%</b>	<b>\$(8,328,390)</b>	<b>\$(334,799,073)</b>	<b>\$2,391,051,919</b>	<b>59.03%</b>
<b>Public Equities</b>	<b>\$1,747,641,836</b>	<b>47.24%</b>	<b>\$(20,586,518)</b>	<b>\$(314,505,987)</b>	<b>\$2,082,734,341</b>	<b>51.42%</b>
<b>World Equities</b>	<b>\$364,348,571</b>	<b>9.85%</b>	<b>\$(1,248,392)</b>	<b>\$(55,790,410)</b>	<b>\$421,387,373</b>	<b>10.40%</b>
<b>Domestic Equities</b>	<b>\$847,750,945</b>	<b>22.91%</b>	<b>\$(15,835,451)</b>	<b>\$(165,073,536)</b>	<b>\$1,028,659,932</b>	<b>25.40%</b>
Large Cap	677,219,950	18.30%	(16,663,604)	(141,429,926)	835,313,480	20.62%
Small Cap	170,530,995	4.61%	828,153	(23,643,610)	193,346,452	4.77%
<b>International Equities</b>	<b>\$535,542,321</b>	<b>14.48%</b>	<b>\$(3,502,675)</b>	<b>\$(93,642,041)</b>	<b>\$632,687,037</b>	<b>15.62%</b>
Developed	414,526,444	11.20%	(3,922,495)	(74,429,238)	492,878,177	12.17%
Emerging Markets	121,015,877	3.27%	419,820	(19,212,803)	139,808,860	3.45%
<b>Private Equities</b>	<b>\$300,282,620</b>	<b>8.12%</b>	<b>\$12,258,128</b>	<b>\$(20,293,085)</b>	<b>\$308,317,578</b>	<b>7.61%</b>
<b>Global Fixed Income</b>	<b>\$870,557,392</b>	<b>23.53%</b>	<b>\$(30,369,477)</b>	<b>\$(44,062,753)</b>	<b>\$944,989,621</b>	<b>23.33%</b>
<b>Domestic Fixed Income</b>	<b>\$870,557,392</b>	<b>23.53%</b>	<b>\$(30,369,477)</b>	<b>\$(44,062,753)</b>	<b>\$944,989,621</b>	<b>23.33%</b>
Investment Grade	605,334,861	16.36%	(29,469,133)	(38,096,002)	672,899,996	16.61%
Below Investment Grade	265,222,531	7.17%	(900,344)	(5,966,750)	272,089,625	6.72%
<b>Global Real Assets</b>	<b>\$761,300,534</b>	<b>20.58%</b>	<b>\$3,878,930</b>	<b>\$45,510,032</b>	<b>\$711,911,571</b>	<b>17.58%</b>
<b>Real Estate</b>	<b>\$507,289,369</b>	<b>13.71%</b>	<b>\$3,829,439</b>	<b>\$34,893,151</b>	<b>\$468,566,778</b>	<b>11.57%</b>
<b>Other Real Assets</b>	<b>\$254,011,164</b>	<b>6.87%</b>	<b>\$49,491</b>	<b>\$10,616,881</b>	<b>\$243,344,793</b>	<b>6.01%</b>
Infrastructure	203,272,027	5.49%	4,277,064	9,898,071	189,096,892	4.67%
Timber	50,739,138	1.37%	(4,227,573)	718,810	54,247,900	1.34%
<b>Cash</b>	<b>\$19,964,267</b>	<b>0.54%</b>	<b>\$17,385,991</b>	<b>\$18,818</b>	<b>\$2,559,458</b>	<b>0.06%</b>
<b>Total Fund</b>	<b>\$3,699,746,649</b>	<b>100.0%</b>	<b>\$(17,432,945)</b>	<b>\$(333,332,975)</b>	<b>\$4,050,512,569</b>	<b>100.0%</b>

PLEASE REFER TO PAGES 29-31 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	(14.09%)	(12.89%)	8.19%	8.33%	9.96%
Net	(14.13%)	(13.13%)	7.94%	8.09%	9.67%
Weighted Benchmark	(14.60%)	(13.29%)	8.01%	8.19%	9.42%
<b>Public Equities</b>					
Gross	(15.22%)	(15.98%)	6.62%	-	-
Net	(15.27%)	(16.24%)	6.35%	-	-
Weighted Benchmark	(15.69%)	(16.38%)	6.16%	-	-
<b>World Equities</b>					
Gross	(13.25%)	(12.91%)	5.30%	6.01%	8.63%
Net	(13.31%)	(13.21%)	4.93%	5.64%	8.10%
MSCI World	(16.19%)	(14.34%)	7.00%	7.67%	9.51%
<b>Domestic Equities</b>					
Gross	(16.29%)	(13.32%)	10.44%	11.26%	13.15%
Net	(16.33%)	(13.57%)	10.23%	11.05%	12.94%
Weighted Benchmark	(16.77%)	(15.55%)	8.97%	9.77%	12.12%
<b>Large Cap</b>					
Gross	(17.23%)	(12.54%)	12.16%	12.55%	14.02%
Net	(17.26%)	(12.72%)	12.03%	12.42%	13.86%
Benchmark(1)	(16.67%)	(13.04%)	10.17%	11.00%	12.82%
<b>Small Cap Equity</b>					
Gross	(12.24%)	(16.38%)	4.34%	6.77%	10.08%
Net	(12.39%)	(16.93%)	3.77%	6.25%	9.66%
Russell 2000 Index	(17.20%)	(25.20%)	4.21%	5.17%	9.35%
<b>International Equities</b>					
Gross	(14.81%)	(21.79%)	3.13%	3.81%	6.59%
Net	(14.86%)	(22.05%)	2.84%	3.57%	6.34%
Weighted Benchmark	(13.86%)	(18.90%)	1.49%	2.61%	5.03%
<b>Developed</b>					
Gross	(15.11%)	(19.82%)	3.24%	3.86%	7.17%
Net	(15.16%)	(20.00%)	3.03%	3.64%	6.92%
Benchmark(2)	(14.66%)	(16.76%)	1.70%	2.66%	5.56%
<b>Emerging Markets</b>					
Gross	(13.75%)	(27.73%)	2.67%	3.53%	4.35%
Net	(13.82%)	(28.22%)	2.17%	3.23%	4.10%
Benchmark(3)	(11.45%)	(25.28%)	0.57%	2.18%	3.07%
<b>Private Equities</b>					
Net	(6.47%)	11.73%	19.66%	14.40%	7.78%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011, MSCI EAFE through 6/30/2016; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	(4.65%)	(7.83%)	1.36%	3.13%	4.01%
Net	(4.67%)	(7.95%)	1.24%	2.98%	3.81%
Weighted Benchmark	(6.26%)	(11.03%)	(0.51%)	1.57%	2.13%
<b>Domestic Fixed Income</b>					
Gross	(4.65%)	(7.83%)	1.36%	2.96%	4.38%
Net	(4.67%)	(7.95%)	1.24%	2.82%	4.20%
Weighted Benchmark	(6.26%)	(11.03%)	(0.51%)	1.29%	2.43%
<b>Inv. Grade Fixed Income</b>					
Gross	(5.63%)	(10.55%)	(0.08%)	1.89%	3.27%
Net	(5.65%)	(10.66%)	(0.18%)	1.79%	3.16%
Blmbg Aggregate Index	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
<b>Below Inv. Grade Fixed Income</b>					
Gross	(2.20%)	(0.61%)	4.89%	5.48%	7.06%
Net	(2.24%)	(0.78%)	4.70%	5.25%	6.72%
Blmbg HY Corp 2% Issue	(9.84%)	(12.82%)	0.18%	2.09%	4.47%
<b>Global Real Assets</b>					
Gross	6.39%	19.30%	10.98%	9.10%	8.97%
Net	6.25%	18.84%	10.52%	8.65%	8.52%
Weighted Benchmark	3.32%	19.66%	9.10%	7.61%	7.45%
<b>Real Estate</b>					
Gross	7.42%	25.58%	12.20%	10.25%	11.62%
Net	7.25%	24.96%	11.63%	9.70%	11.07%
NCREIF Total Index	3.23%	21.45%	10.22%	8.86%	9.67%
<b>Other Real Assets</b>					
Gross	4.37%	8.33%	8.53%	-	-
Net	4.30%	8.15%	8.27%	-	-
Weighted Benchmark	3.42%	17.22%	7.57%	-	-
<b>Infrastructure</b>					
Gross	5.14%	8.50%	9.35%	8.29%	7.76%
Net	5.05%	8.26%	8.99%	7.88%	7.20%
Benchmark(1)	3.73%	18.33%	8.17%	6.28%	3.66%
<b>Timber</b>					
Net	1.44%	7.37%	6.17%	3.96%	2.10%
NCREIF Timberland Index	1.87%	12.01%	5.03%	4.32%	5.73%
<b>Cash &amp; Equivalents - Net</b>	<b>0.18%</b>	<b>0.22%</b>	<b>0.61%</b>	<b>1.12%</b>	<b>0.68%</b>
3-month Treasury Bill	0.10%	0.17%	0.63%	1.11%	0.64%
<b>Total Fund</b>					
Gross	(8.24%)	(6.41%)	7.33%	7.43%	8.46%
Net	(8.30%)	(6.66%)	7.07%	7.18%	8.16%
Target*	(9.42%)	(7.05%)	6.48%	6.74%	7.49%

\* Current Quarter Target = 19.3% Russell 1000 Index, 16.0% Blmbg Aggregate, 12.7% MSCI World xUS, 11.0% NCREIF Total Index, 10.0% MSCI World, 7.0% Blmbg HY Corp 2% Iss Cap, 7.0% Private Equity, 4.8% Russell 2000 Index, 4.2% MSCI EM, 3.3% NCREIF NFI-ODCE Eq Wt Net, 3.3% CPI All Urban Cons lagged 3 months and 1.4% NCREIF Timberland Index.  
(1) CPI-W through June 30, 2018; 50% CPI-U lagged one quarter and 50% NFI-ODCE Equal Weight Net thereafter.

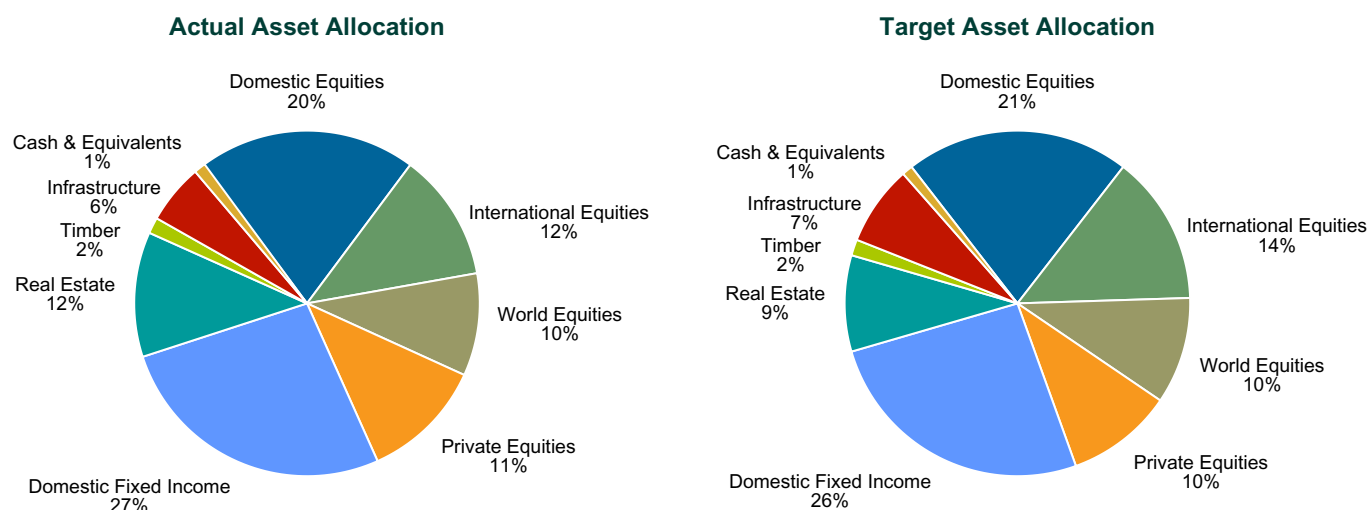
PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.





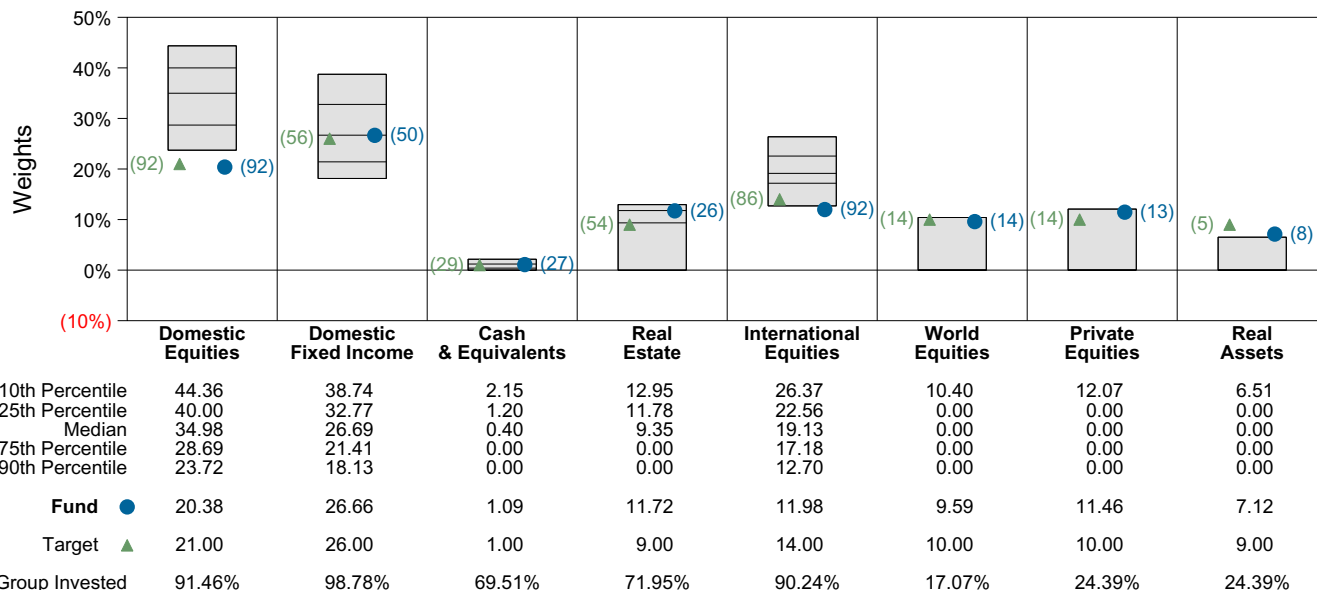
## Actual vs Target Asset Allocation As of June 30, 2022

The top left chart shows the Fund's asset allocation as of June 30, 2022. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Sponsor Database.



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equities	605,783	20.4%	21.0%	(0.6%)	(18,440)
International Equities	355,980	12.0%	14.0%	(2.0%)	(60,169)
World Equities	285,126	9.6%	10.0%	(0.4%)	(12,123)
Private Equities	340,640	11.5%	10.0%	1.5%	43,391
Domestic Fixed Income	792,421	26.7%	26.0%	0.7%	19,574
Real Estate	348,310	11.7%	9.0%	2.7%	80,786
Timber	45,291	1.5%	1.5%	(0.0%)	(0)
Infrastructure	166,438	5.6%	7.5%	(1.9%)	(55,794)
Cash & Equivalents	32,500	1.1%	1.0%	0.1%	2,775
Total	2,972,489	100.0%	100.0%		

## Asset Class Weights vs Callan Public Fund Sponsor Database

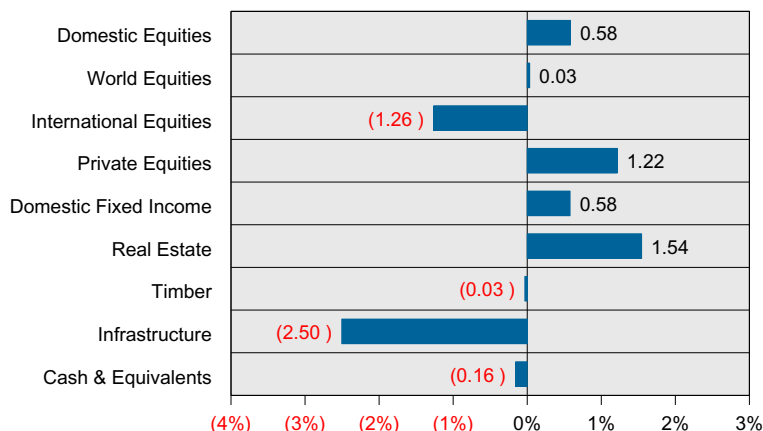


\* Current Quarter Target = 18.0% Bmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Bmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

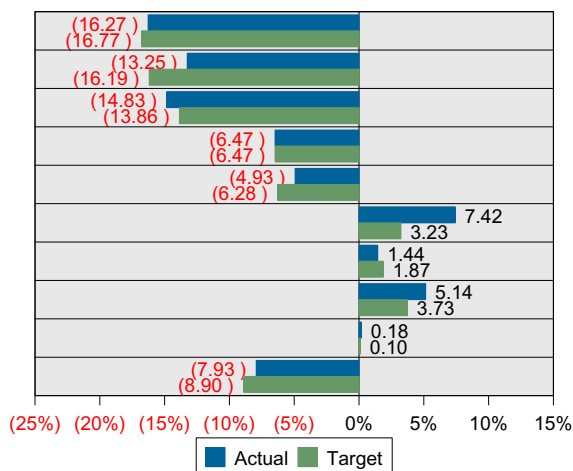
## Quarterly Total Fund Relative Attribution - June 30, 2022

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.

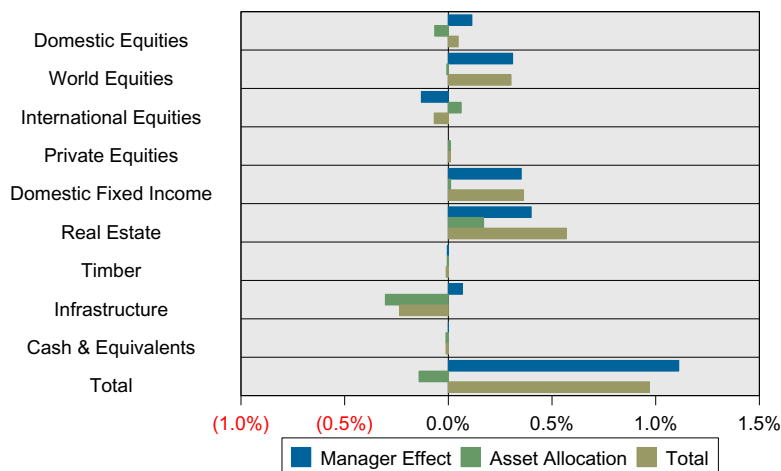
### Asset Class Under or Overweighting



### Actual vs Target Returns



### Relative Attribution by Asset Class



### Relative Attribution Effects for Quarter ended June 30, 2022

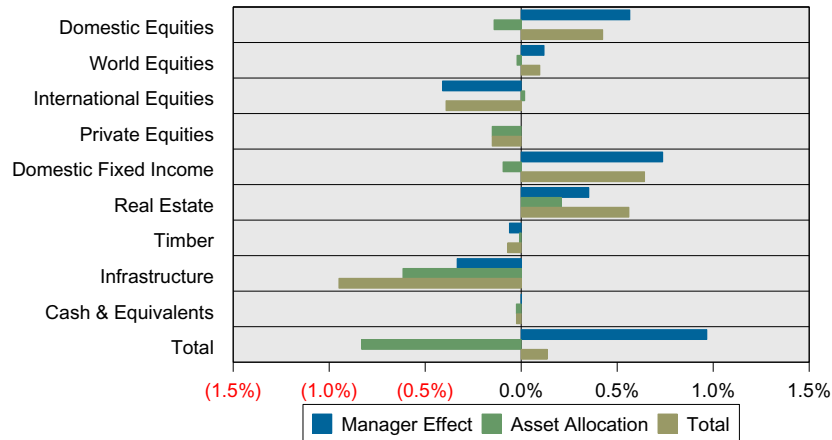
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	22%	21%	(16.27%)	(16.77%)	0.11%	(0.07%)	0.05%
World Equities	10%	10%	(13.25%)	(16.19%)	0.31%	(0.01%)	0.30%
International Equities	13%	14%	(14.83%)	(13.86%)	(0.13%)	0.06%	(0.07%)
Private Equities	11%	10%	(6.47%)	(6.47%)	0.00%	0.01%	0.01%
Domestic Fixed Income	27%	26%	(4.93%)	(6.28%)	0.35%	0.01%	0.36%
Real Estate	11%	9%	7.42%	3.23%	0.40%	0.17%	0.57%
Timber	1%	1%	1.44%	1.87%	(0.01%)	(0.01%)	(0.01%)
Infrastructure	5%	8%	5.14%	3.73%	0.07%	(0.30%)	(0.24%)
Cash & Equivalents	1%	1%	0.18%	0.10%	0.00%	(0.01%)	(0.01%)
<b>Total</b>			<b>(7.93%)</b>	<b>(8.90%)</b>	<b>+ 1.11%</b>	<b>+ (0.14%)</b>	<b>0.97%</b>

\* Current Quarter Target = 18.0% Blmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

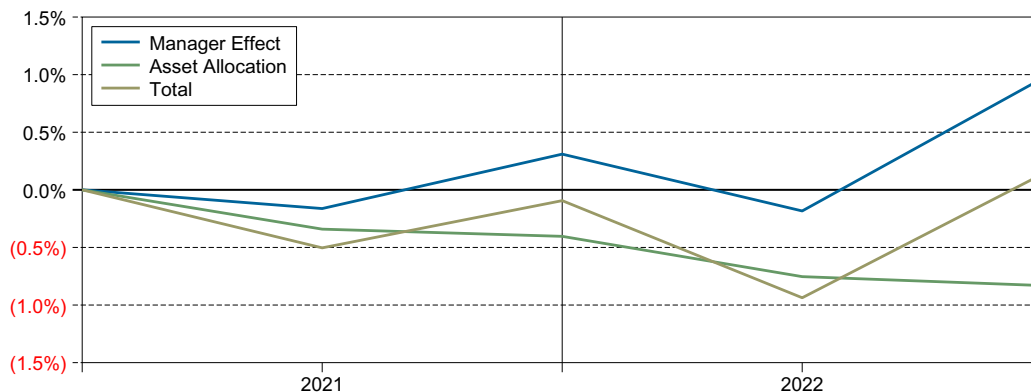
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### One Year Relative Attribution Effects



### Cumulative Relative Attribution Effects



### One Year Relative Attribution Effects

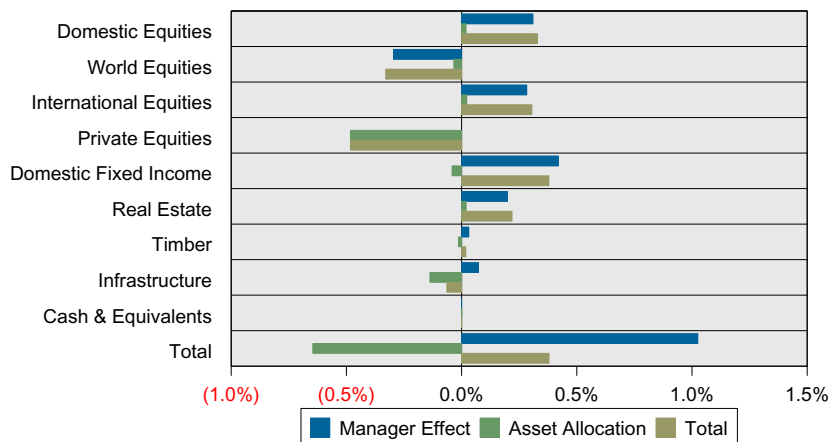
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	(13.34%)	(15.55%)	0.57%	(0.14%)	0.42%
World Equities	10%	10%	(12.90%)	(14.34%)	0.12%	(0.02%)	0.10%
International Equities	14%	14%	(21.62%)	(18.90%)	(0.41%)	0.02%	(0.39%)
Private Equities	9%	10%	11.73%	11.73%	0.00%	(0.15%)	(0.15%)
Domestic Fixed Income	27%	26%	(8.41%)	(11.04%)	0.74%	(0.09%)	0.64%
Real Estate	10%	9%	25.58%	21.45%	0.35%	0.21%	0.56%
Timber	2%	2%	7.37%	12.01%	(0.06%)	(0.01%)	(0.07%)
Infrastructure	5%	7%	8.50%	18.33%	(0.33%)	(0.62%)	(0.95%)
Cash & Equivalents	1%	1%	0.22%	0.17%	0.00%	(0.03%)	(0.02%)
<b>Total</b>			<b>(6.08%)</b>	<b>(6.22%)</b>	<b>+ 0.97%</b>	<b>+ (0.83%)</b>	<b>0.14%</b>

\* Current Quarter Target = 18.0% Blmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

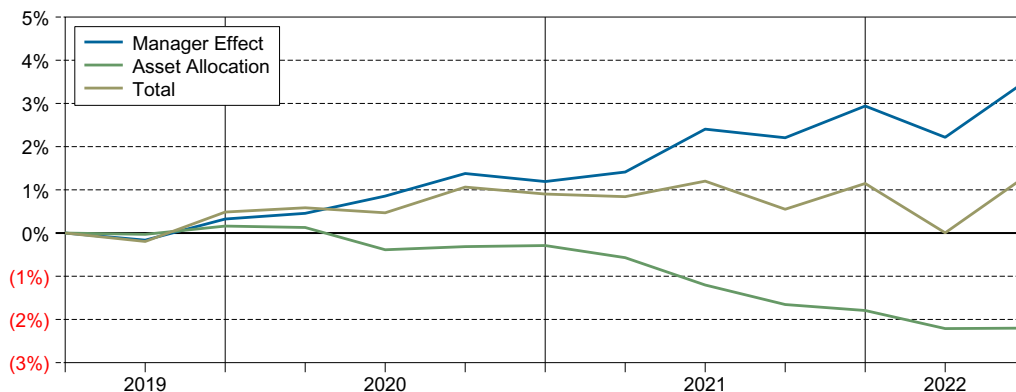
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Three Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Three Year Annualized Relative Attribution Effects

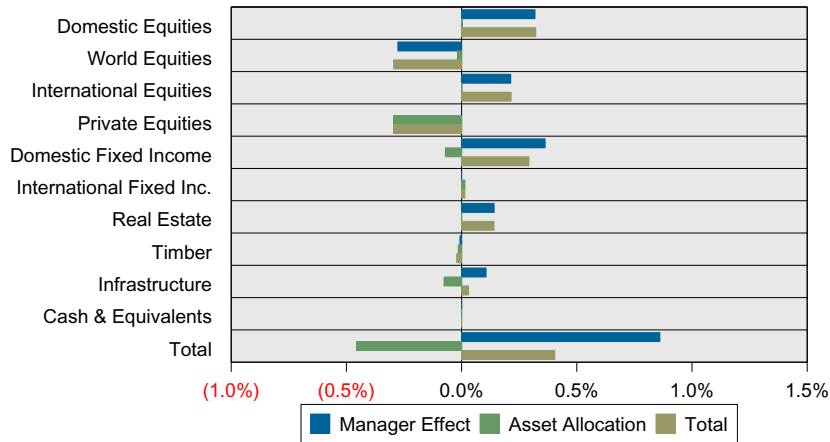
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	10.47%	8.99%	0.31%	0.02%	0.33%
World Equities	13%	13%	5.30%	7.00%	(0.30%)	(0.03%)	(0.33%)
International Equities	15%	14%	3.05%	1.37%	0.28%	0.02%	0.30%
Private Equities	6%	8%	19.66%	19.66%	0.00%	(0.48%)	(0.48%)
Domestic Fixed Income	25%	25%	0.97%	(0.50%)	0.42%	(0.04%)	0.38%
Real Estate	10%	9%	12.20%	10.22%	0.20%	0.02%	0.22%
Timber	2%	2%	6.17%	5.03%	0.03%	(0.01%)	0.02%
Infrastructure	5%	7%	9.35%	8.17%	0.07%	(0.14%)	(0.06%)
Cash & Equivalents	1%	1%	0.61%	0.63%	(0.00%)	0.00%	0.00%
<b>Total</b>			<b>7.29%</b>	<b>6.91%</b>	<b>+ 1.03%</b>	<b>+ (0.65%)</b>	<b>0.38%</b>

\* Current Quarter Target = 18.0% Blmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

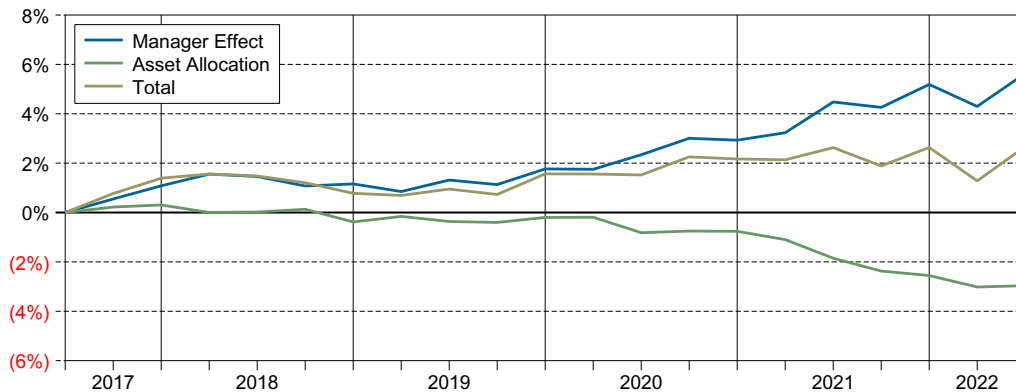
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Five Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Five Year Annualized Relative Attribution Effects

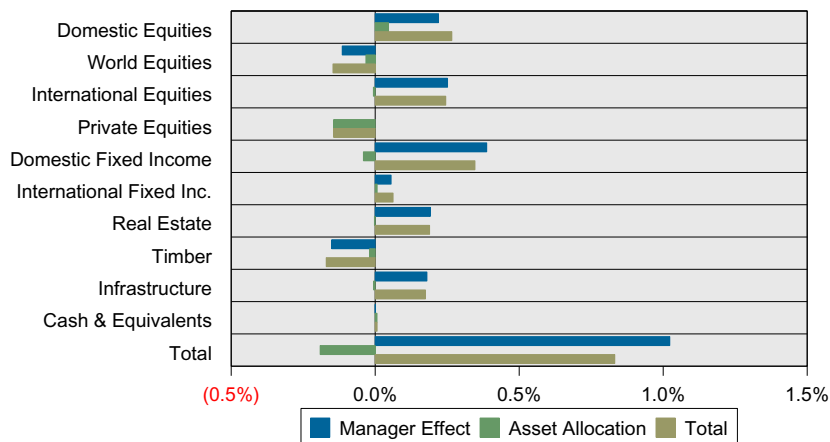
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	21%	11.28%	9.80%	0.32%	0.00%	0.32%
World Equities	15%	14%	6.02%	7.67%	(0.28%)	(0.02%)	(0.29%)
International Equities	15%	14%	3.75%	2.52%	0.21%	0.00%	0.21%
Private Equities	5%	7%	14.40%	14.40%	0.00%	(0.30%)	(0.30%)
Domestic Fixed Income	24%	23%	2.69%	1.27%	0.36%	(0.07%)	0.29%
International Fixed Inc.	1%	1%	-	-	(0.00%)	0.01%	0.01%
Real Estate	10%	10%	10.25%	8.86%	0.14%	(0.00%)	0.14%
Timber	2%	2%	3.96%	4.32%	(0.01%)	(0.01%)	(0.02%)
Infrastructure	5%	6%	8.29%	6.28%	0.11%	(0.08%)	0.03%
Cash & Equivalents	1%	1%	1.12%	1.11%	0.00%	(0.00%)	(0.00%)
<b>Total</b>			<b>7.40%</b>	<b>6.99%</b>	<b>+ 0.86%</b>	<b>+ (0.46%)</b>	<b>0.40%</b>

\* Current Quarter Target = 18.0% Blmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

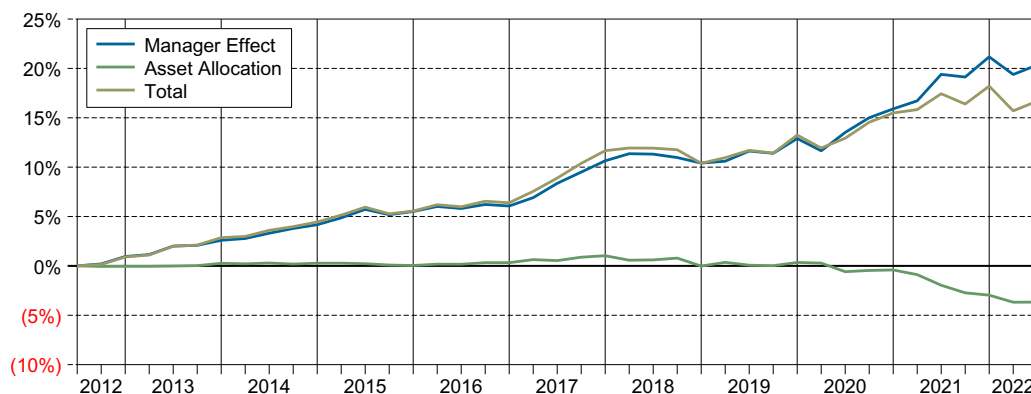
## Cumulative Total Fund Relative Attribution - June 30, 2022

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

### Ten Year Annualized Relative Attribution Effects



### Cumulative Relative Attribution Effects



### Ten Year Annualized Relative Attribution Effects

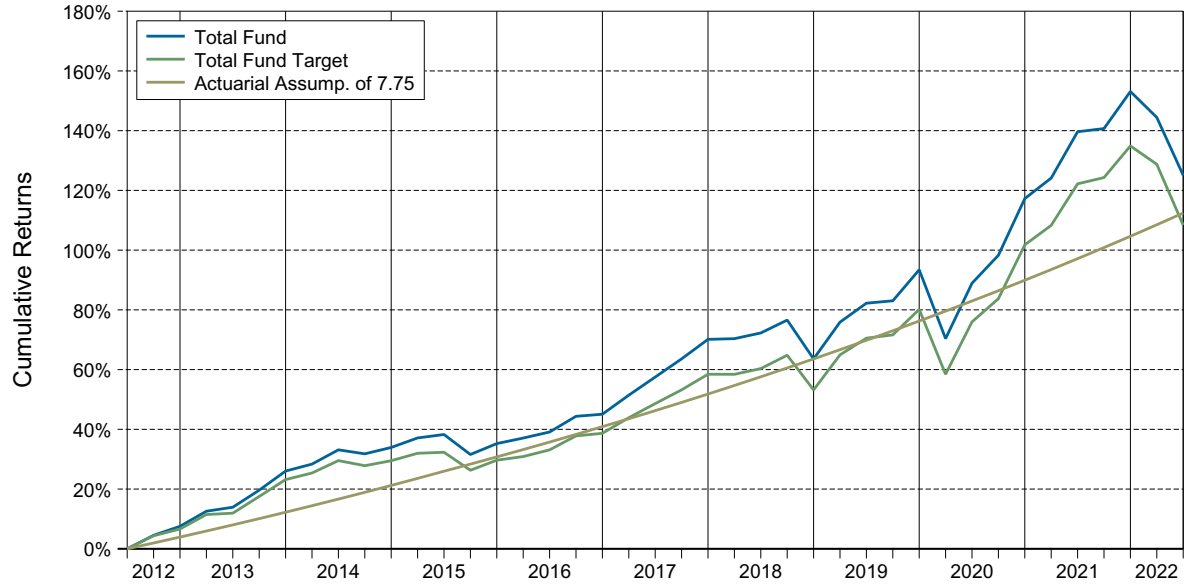
Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equities	23%	22%	13.16%	12.13%	0.22%	0.05%	0.27%
World Equities	15%	15%	8.63%	9.51%	(0.11%)	(0.03%)	(0.15%)
International Equities	15%	15%	6.67%	5.09%	0.25%	(0.01%)	0.24%
Private Equities	5%	6%	7.81%	7.81%	0.00%	(0.14%)	(0.14%)
Domestic Fixed Income	21%	20%	4.22%	2.36%	0.39%	(0.04%)	0.35%
International Fixed Inc.	3%	3%	-	-	0.06%	0.01%	0.06%
Real Estate	10%	10%	11.62%	9.67%	0.19%	(0.00%)	0.19%
Timber	3%	3%	2.10%	5.73%	(0.15%)	(0.02%)	(0.17%)
Infrastructure	5%	6%	7.76%	3.66%	0.18%	(0.01%)	0.17%
Cash & Equivalents	1%	1%	0.68%	0.64%	0.00%	0.01%	0.01%
<b>Total</b>			<b>8.45%</b>	<b>7.62%</b>	<b>+ 1.02%</b>	<b>+ (0.19%)</b>	<b>0.83%</b>

\* Current Quarter Target = 18.0% Bimbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Bimbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

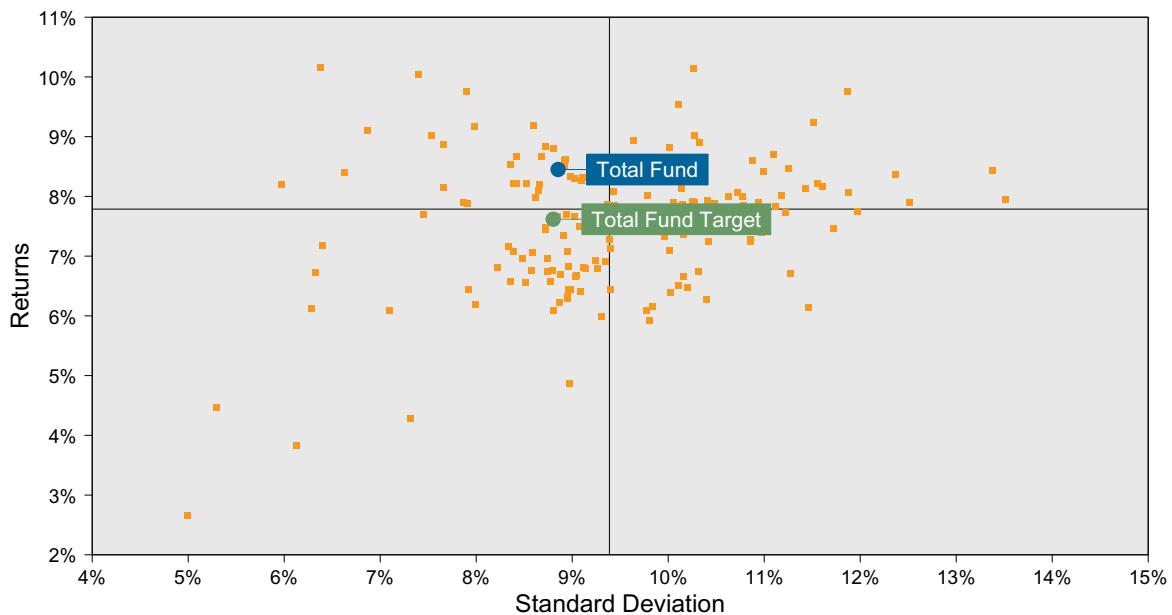
## Cumulative Performance Relative to Target

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

### Cumulative Returns Actual vs Target



### Ten Year Annualized Risk vs Return



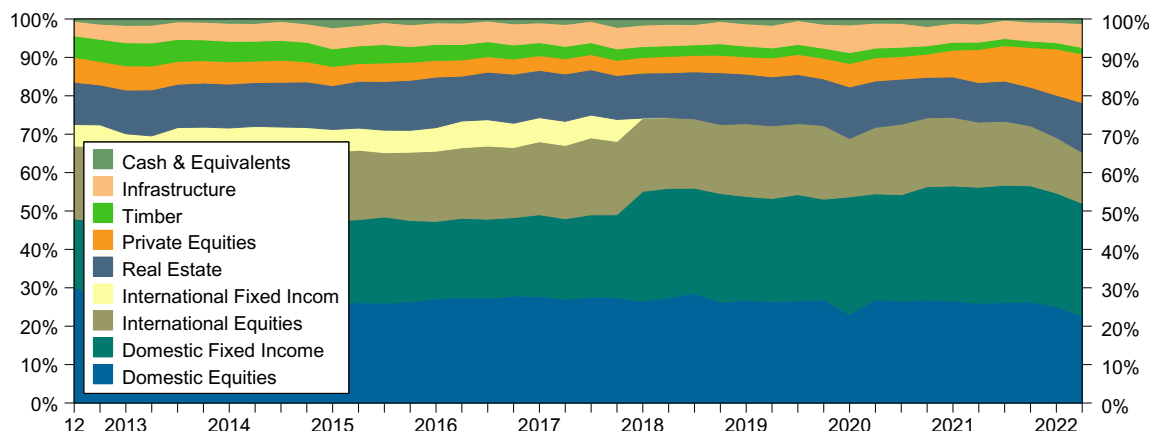
Squares represent membership of the Callan Public Fund Sponsor Database

\* Current Quarter Target = 18.0% Blmbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

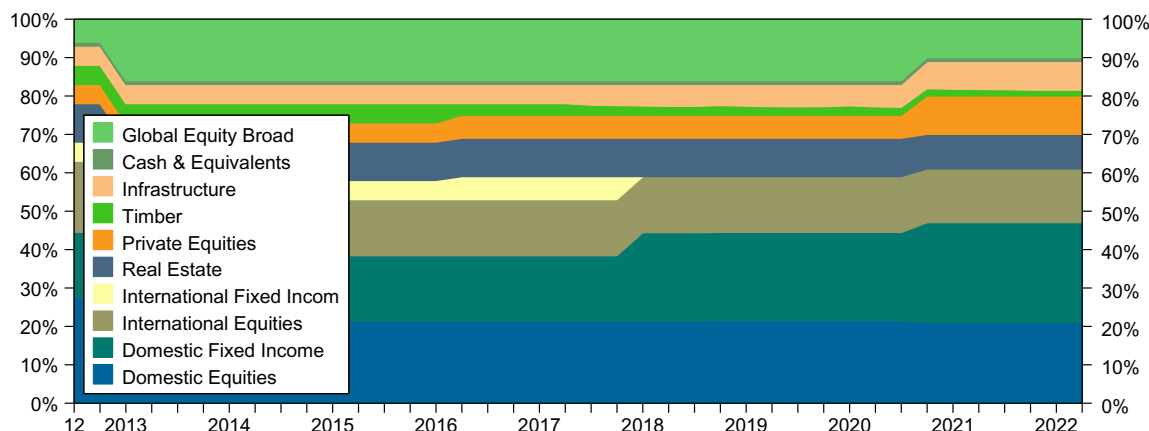
## Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

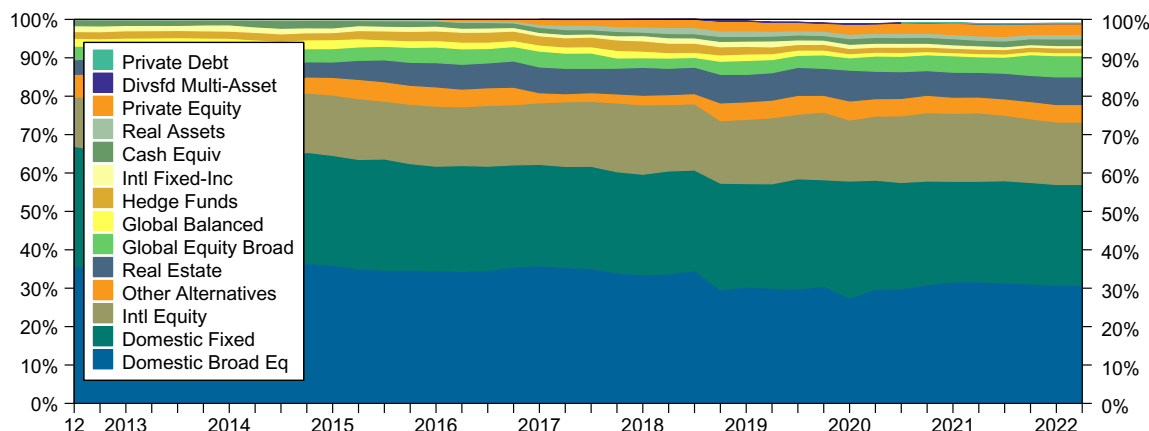
### Actual Historical Asset Allocation



### Target Historical Asset Allocation



### Average Callan Public Fund Sponsor Database Historical Asset Allocation



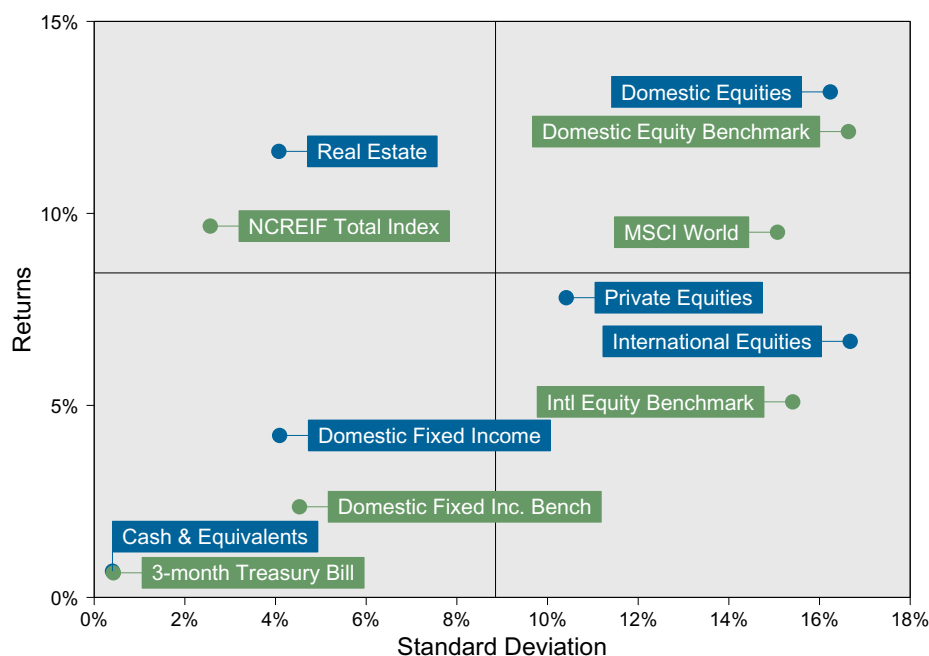
\* Current Quarter Target = 18.0% Blmgb Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Blmgb HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.



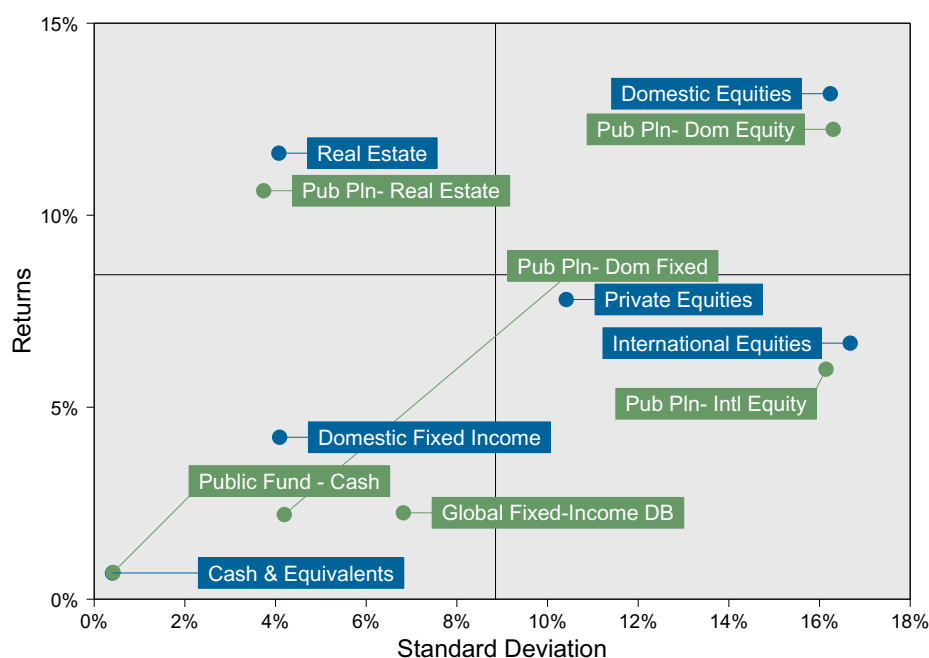
## Asset Class Risk and Return

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

**Ten Year Annualized Risk vs Return  
Asset Classes vs Benchmark Indices**



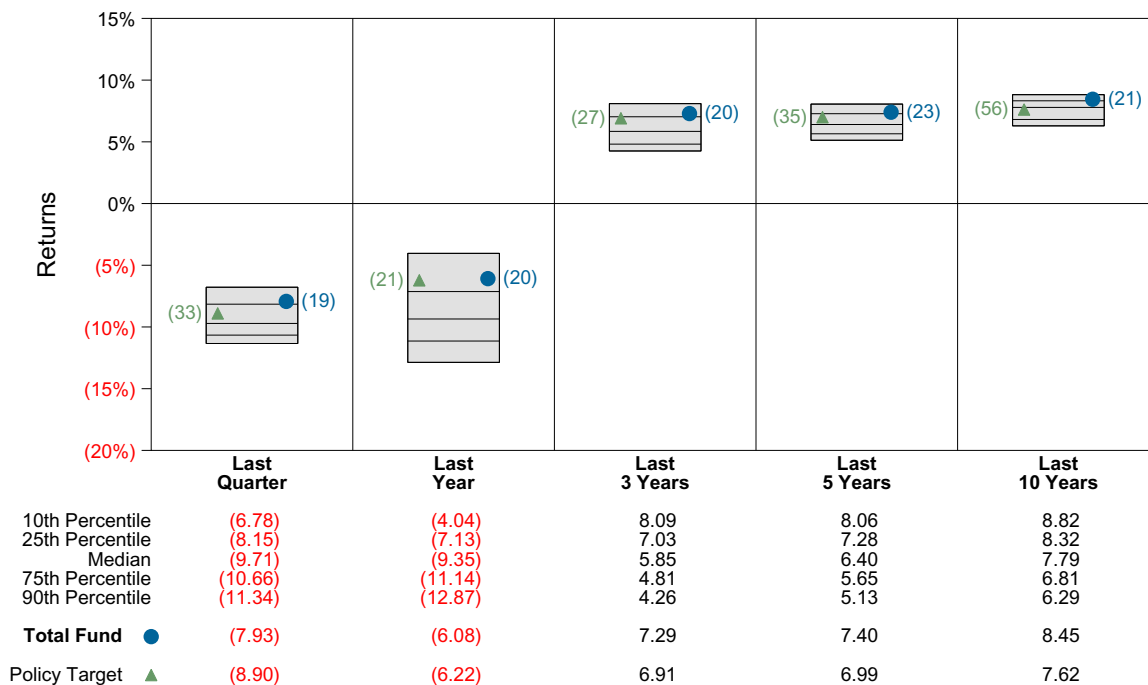
**Ten Year Annualized Risk vs Return  
Asset Classes vs Asset Class Median**



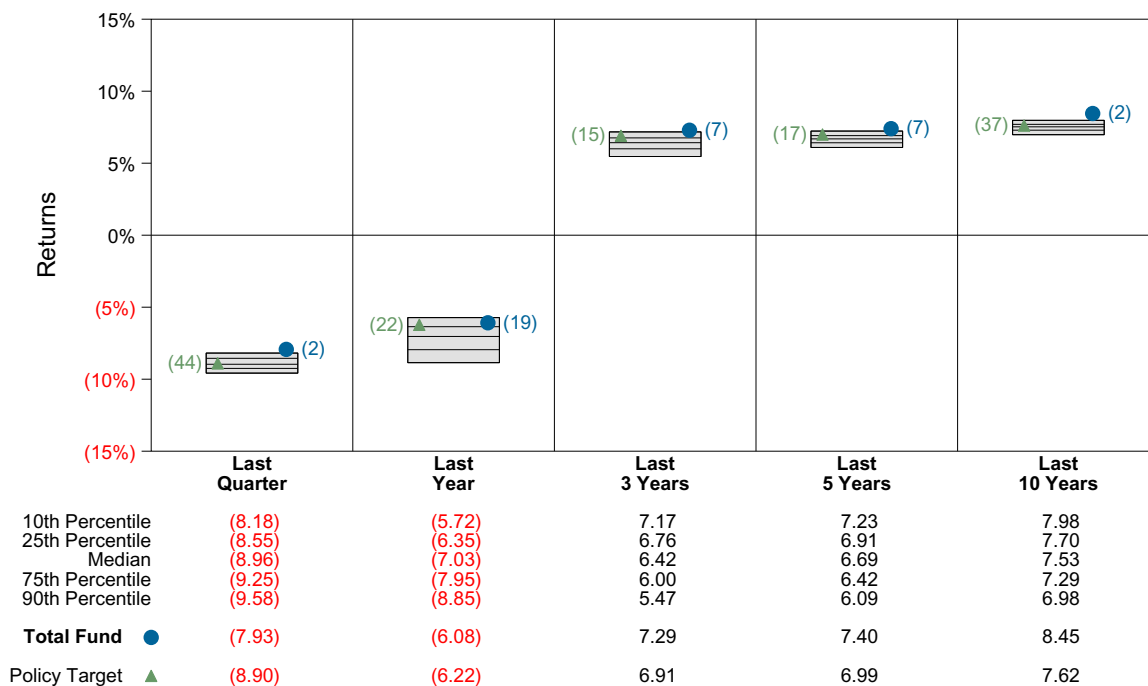
## Total Fund Ranking

The first two charts show the ranking of the Total Fund's performance relative to that of the Callan Public Fund Sponsor Database for periods ended June 30, 2022. The first chart is a standard unadjusted ranking. In the second chart each fund in the database is adjusted to have the same historical asset allocation as that of the Total Fund.

### Callan Public Fund Sponsor Database



### Asset Allocation Adjusted Ranking

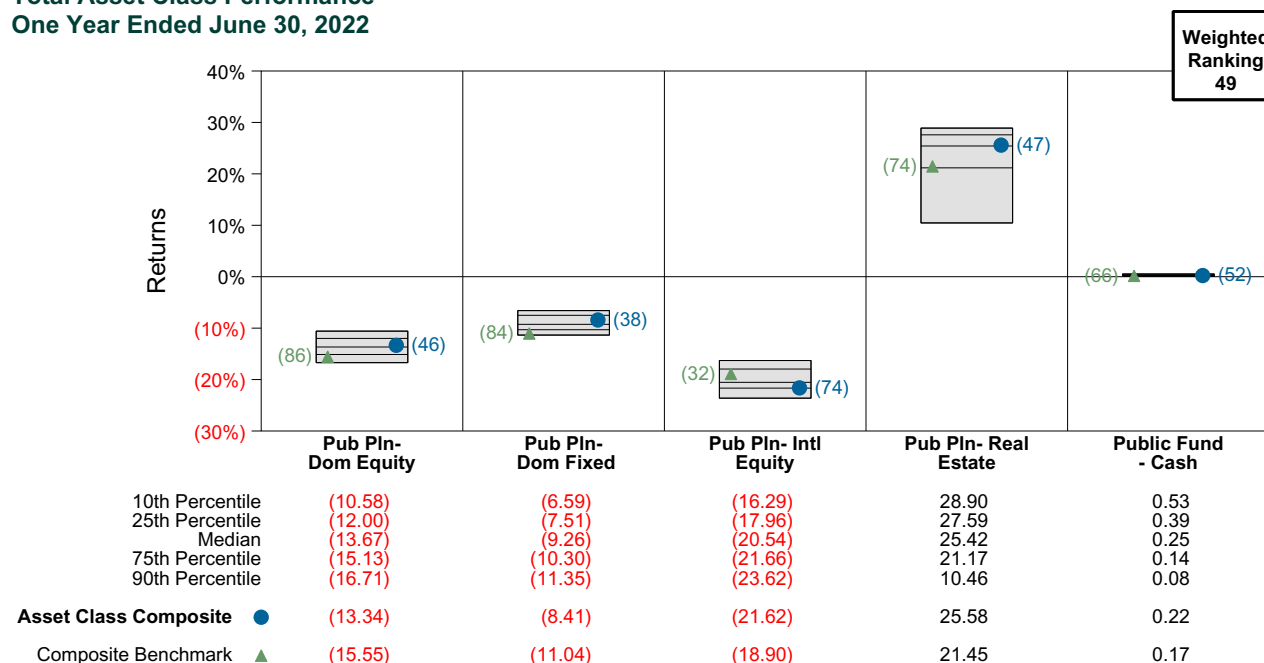


\* Current Quarter Target = 18.0% Bimbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Bimbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

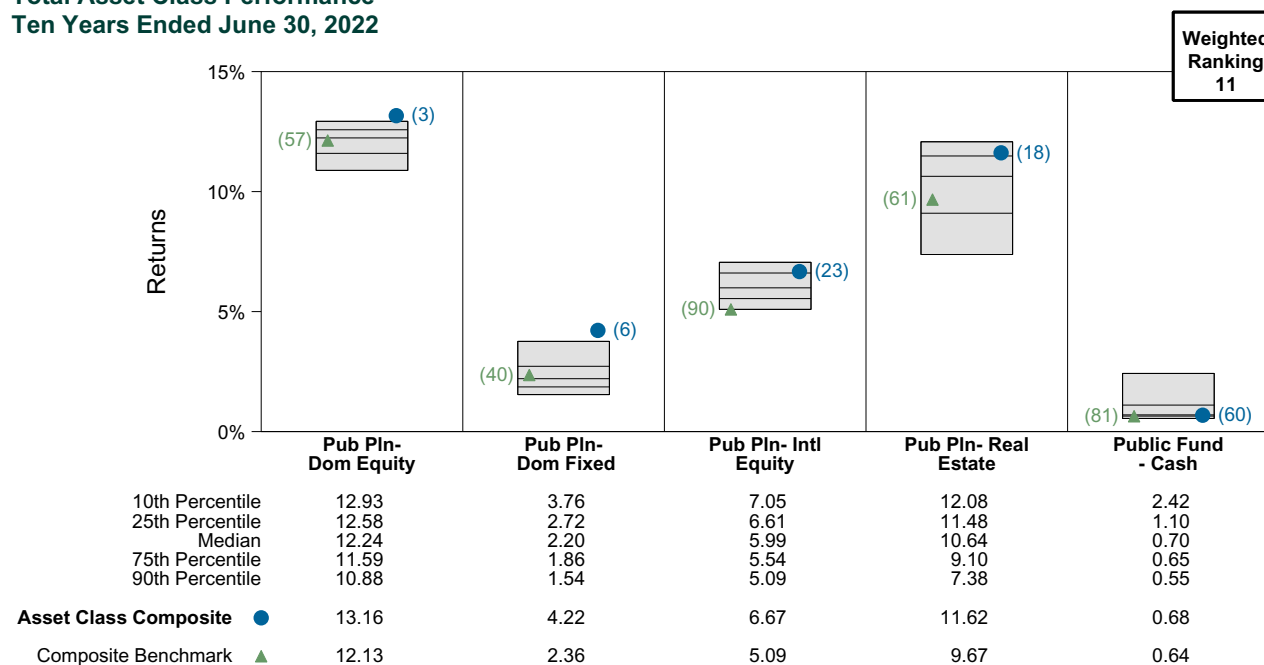
## Asset Class Rankings

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, 2022



### Total Asset Class Performance Ten Years Ended June 30, 2022



\* Current Quarter Target = 18.0% Bimbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Bimbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

## Asset Class Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2022, with the distribution as of March 31, 2022. 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, 2022				March 31, 2022	
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Global Equities</b>	<b>\$1,587,529,342</b>	<b>53.41%</b>	<b>\$644,090</b>	<b>\$(246,971,625)</b>	<b>\$1,833,856,877</b>	<b>56.54%</b>
<b>Public Equities</b>	<b>\$1,246,888,945</b>	<b>41.95%</b>	<b>\$(13,261,522)</b>	<b>\$(223,951,163)</b>	<b>\$1,484,101,630</b>	<b>45.76%</b>
<b>World Equities</b>	<b>\$285,126,120</b>	<b>9.59%</b>	<b>\$(1,189,037)</b>	<b>\$(43,683,897)</b>	<b>\$329,999,054</b>	<b>10.17%</b>
<b>Domestic Equities</b>	<b>\$605,782,913</b>	<b>20.38%</b>	<b>\$(8,690,023)</b>	<b>\$(117,785,462)</b>	<b>\$732,258,397</b>	<b>22.58%</b>
Large Cap	481,798,870	16.21%	(9,603,035)	(100,640,592)	592,042,497	18.25%
Small Cap	123,984,043	4.17%	913,012	(17,144,870)	140,215,900	4.32%
<b>International Equities</b>	<b>\$355,979,913</b>	<b>11.98%</b>	<b>\$(3,382,462)</b>	<b>\$(62,481,804)</b>	<b>\$421,844,179</b>	<b>13.01%</b>
Developed	278,845,029	9.38%	(3,841,558)	(50,268,122)	332,954,708	10.27%
Emerging Markets	77,134,884	2.59%	459,096	(12,213,682)	88,889,470	2.74%
<b>Private Equities</b>	<b>\$340,640,397</b>	<b>11.46%</b>	<b>\$13,905,612</b>	<b>\$(23,020,462)</b>	<b>\$349,755,247</b>	<b>10.78%</b>
<b>Global Fixed Income</b>	<b>\$792,420,864</b>	<b>26.66%</b>	<b>\$(25,430,567)</b>	<b>\$(42,586,792)</b>	<b>\$860,438,223</b>	<b>26.53%</b>
<b>Domestic Fixed Income</b>	<b>\$792,420,864</b>	<b>26.66%</b>	<b>\$(25,430,567)</b>	<b>\$(42,586,792)</b>	<b>\$860,438,223</b>	<b>26.53%</b>
Investment Grade	581,405,317	19.56%	(24,660,759)	(36,430,289)	642,496,365	19.81%
Below Investment Grade	211,015,547	7.10%	(769,808)	(6,156,503)	217,941,858	6.72%
<b>Global Real Assets</b>	<b>\$560,039,203</b>	<b>18.84%</b>	<b>\$3,126,560</b>	<b>\$32,670,558</b>	<b>\$524,242,085</b>	<b>16.16%</b>
<b>Real Estate</b>	<b>\$348,309,645</b>	<b>11.72%</b>	<b>\$3,221,832</b>	<b>\$23,929,615</b>	<b>\$321,158,197</b>	<b>9.90%</b>
<b>Other Real Assets</b>	<b>\$211,729,559</b>	<b>7.12%</b>	<b>\$(95,273)</b>	<b>\$8,740,943</b>	<b>\$203,083,888</b>	<b>6.26%</b>
Infrastructure	166,438,351	5.60%	3,678,380	8,099,312	154,660,659	4.77%
Timber	45,291,207	1.52%	(3,773,653)	641,631	48,423,229	1.49%
<b>Cash</b>	<b>\$32,499,740</b>	<b>1.09%</b>	<b>\$7,436,803</b>	<b>\$47,632</b>	<b>\$25,015,306</b>	<b>0.77%</b>
<b>Total Fund</b>	<b>\$2,972,489,150</b>	<b>100.0%</b>	<b>\$(14,223,115)</b>	<b>\$(256,840,227)</b>	<b>\$3,243,552,492</b>	<b>100.0%</b>

PLEASE REFER TO PAGES 29-31 FOR INVESTMENT MANAGER LEVEL ASSET ALLOCATION.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Equities</b>					
Gross	(13.52%)	(11.54%)	8.88%	8.77%	10.19%
Net	(13.56%)	(11.77%)	8.63%	8.53%	9.90%
Weighted Benchmark	(14.08%)	(11.61%)	9.30%	8.93%	9.82%
<b>Public Equities</b>					
Gross	(15.19%)	(15.82%)	6.74%	-	-
Net	(15.24%)	(16.08%)	6.46%	-	-
Weighted Benchmark	(15.74%)	(16.31%)	6.19%	-	-
<b>World Equities</b>					
Gross	(13.25%)	(12.90%)	5.30%	6.02%	8.63%
Net	(13.31%)	(13.19%)	4.93%	5.64%	8.10%
MSCI World	(16.19%)	(14.34%)	7.00%	7.67%	9.51%
<b>Domestic Equities</b>					
Gross	(16.27%)	(13.34%)	10.47%	11.28%	13.16%
Net	(16.32%)	(13.59%)	10.25%	11.08%	12.95%
Weighted Benchmark	(16.77%)	(15.55%)	8.99%	9.80%	12.13%
<b>Large Cap</b>					
Gross	(17.23%)	(12.55%)	12.14%	12.54%	14.00%
Net	(17.26%)	(12.72%)	12.01%	12.41%	13.84%
Benchmark(1)	(16.67%)	(13.04%)	10.17%	11.00%	12.82%
<b>Small Cap</b>					
Gross	(12.24%)	(16.36%)	4.34%	6.77%	10.08%
Net	(12.39%)	(16.92%)	3.76%	6.25%	9.66%
Russell 2000 Index	(17.20%)	(25.20%)	4.21%	5.17%	9.35%
<b>International Equities</b>					
Gross	(14.83%)	(21.62%)	3.05%	3.75%	6.67%
Net	(14.88%)	(21.87%)	2.77%	3.51%	6.42%
Weighted Benchmark	(13.86%)	(18.90%)	1.37%	2.52%	5.09%
<b>Developed</b>					
Gross	(15.11%)	(19.83%)	3.23%	3.85%	7.17%
Net	(15.16%)	(20.00%)	3.01%	3.63%	6.92%
Benchmark(2)	(14.66%)	(16.76%)	1.70%	2.66%	5.56%
<b>Emerging Markets</b>					
Gross	(13.75%)	(27.73%)	2.66%	3.53%	4.35%
Net	(13.82%)	(28.23%)	2.16%	3.23%	4.10%
Benchmark(3)	(11.45%)	(25.28%)	0.57%	2.18%	3.07%
<b>Private Equities</b>					
Net	(6.47%)	11.73%	19.66%	14.40%	7.79%

(1) S&P 500 Index through 12/31/2011 and the Russell 1000 Index thereafter.

(2) 50% Hedged EAFE through 3/31/2011; MSCI EAFE through 6/30/16; MSCI World ex-US thereafter.

(3) MSCI Emerging Mkts Idx (Gross) through 6/30/2011 and MSCI Emerging Mkts Idx Net thereafter.

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Global Fixed Income</b>					
Gross	(4.93%)	(8.41%)	0.97%	2.88%	3.85%
Net	(4.96%)	(8.54%)	0.84%	2.73%	3.65%
Weighted Benchmark	(6.28%)	(11.04%)	(0.50%)	1.61%	2.09%
<b>Domestic Fixed Income</b>					
Gross	(4.93%)	(8.41%)	0.97%	2.69%	4.22%
Net	(4.96%)	(8.54%)	0.84%	2.55%	4.04%
Weighted Benchmark	(6.28%)	(11.04%)	(0.50%)	1.27%	2.36%
<b>Inv. Grade Fixed Income</b>					
Gross	(5.63%)	(10.54%)	(0.08%)	1.89%	3.27%
Net	(5.65%)	(10.66%)	(0.18%)	1.79%	3.16%
Bimbg Aggregate	(4.69%)	(10.29%)	(0.93%)	0.88%	1.54%
<b>Below Inv. Grade Fixed Income</b>					
Gross	(2.83%)	(1.69%)	4.52%	5.26%	6.95%
Net	(2.88%)	(1.88%)	4.31%	5.01%	6.60%
Bimbg HY Corp 2% Issue	(9.84%)	(12.82%)	0.18%	2.09%	4.47%
<b>Global Real Assets</b>					
Gross	6.23%	18.64%	10.79%	8.95%	8.84%
Net	6.09%	18.20%	10.34%	8.51%	8.40%
Weighted Benchmark	3.33%	19.33%	8.93%	7.47%	7.38%
<b>Real Estate</b>					
Gross	7.42%	25.58%	12.20%	10.25%	11.62%
Net	7.25%	24.96%	11.63%	9.70%	11.07%
NCREIF Total Index	3.23%	21.45%	10.22%	8.86%	9.67%
<b>Other Real Assets</b>					
Gross	4.32%	8.32%	8.48%	-	-
Net	4.25%	8.14%	8.22%	-	-
Weighted Benchmark	3.43%	17.22%	7.56%	-	-
<b>Infrastructure</b>					
Gross	5.14%	8.50%	9.35%	8.29%	7.76%
Net	5.05%	8.26%	8.99%	7.88%	7.20%
Benchmark(1)	3.73%	18.33%	8.17%	6.28%	3.66%
<b>Timber</b>					
Net	1.44%	7.37%	6.17%	3.96%	2.10%
NCREIF Timberland Index	1.87%	12.01%	5.03%	4.32%	5.73%
<b>Cash &amp; Equivalents - Net</b>	<b>0.18%</b>	<b>0.22%</b>	<b>0.61%</b>	<b>1.12%</b>	<b>0.68%</b>
3-month Treasury Bill	0.10%	0.17%	0.63%	1.11%	0.64%
<b>Total Fund</b>					
Gross	(7.93%)	(6.08%)	7.29%	7.40%	8.45%
Net	(7.98%)	(6.31%)	7.04%	7.15%	8.16%
Target*	(8.90%)	(6.22%)	6.91%	6.99%	7.62%

\* Current Quarter Target = 18.0% Bimbg Aggregate, 16.8% Russell 1000 Index, 10.5% MSCI World xUS, 10.0% Private Equity, 10.0% MSCI World, 9.0% NCREIF Total Index, 8.0% Bimbg HY Corp 2% Iss Cap, 4.2% Russell 2000 Index, 3.7% NCREIF NFI-ODCE Eq Wt Net, 3.7% CPI All Urban Cons lagged 3 months, 3.5% MSCI EM, 1.5% NCREIF Timberland Index and 1.0% 3-month Treasury Bill.

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

PLEASE REFER TO PAGES 32-36 FOR INVESTMENT MANAGER LEVEL RETURNS.



## Domestic Equities Period Ended June 30, 2022

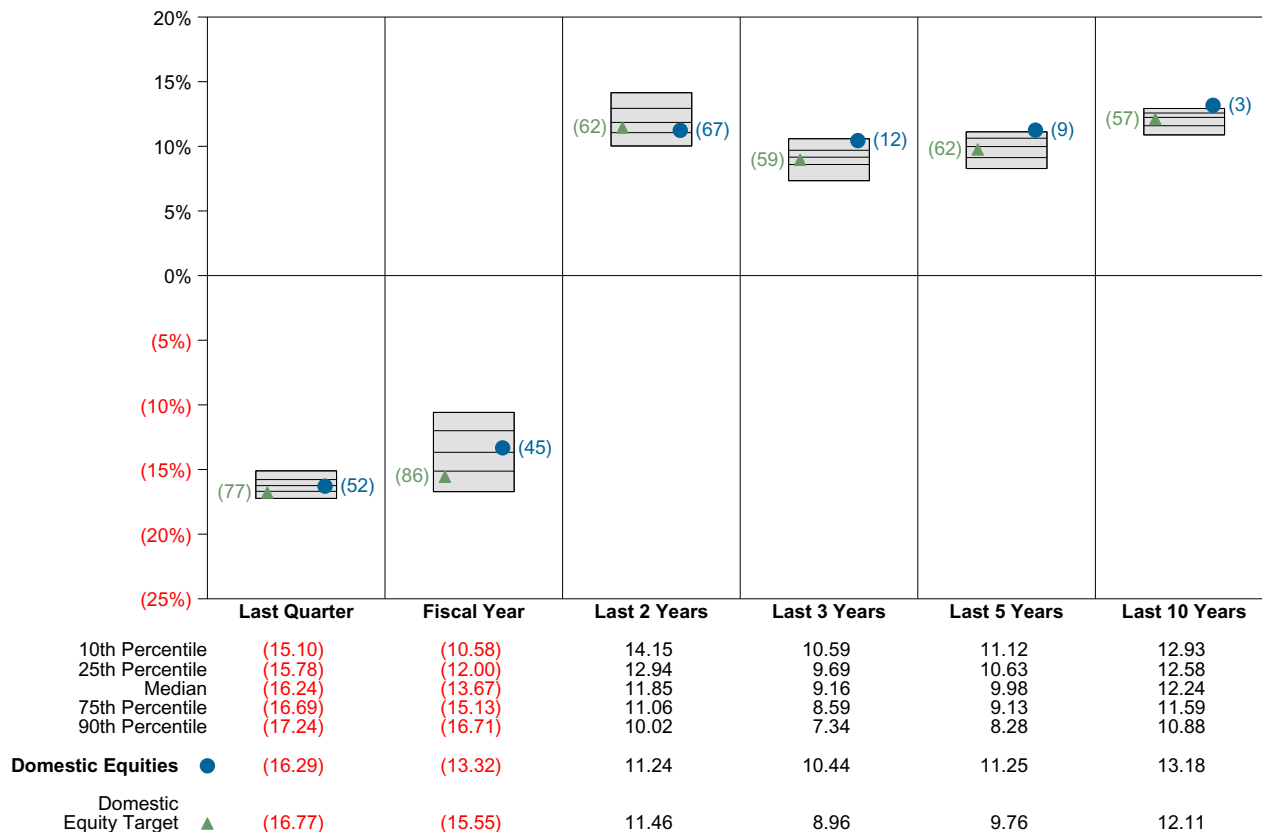
### Quarterly Summary and Highlights

- Domestic Equities's portfolio posted a (16.29)% return for the quarter placing it in the 52 percentile of the Public Fund - Domestic Equity group for the quarter and in the 45 percentile for the last year.
- Domestic Equities's portfolio outperformed the Domestic Equity Target by 0.48% for the quarter and outperformed the Domestic Equity Target for the year by 2.23%.

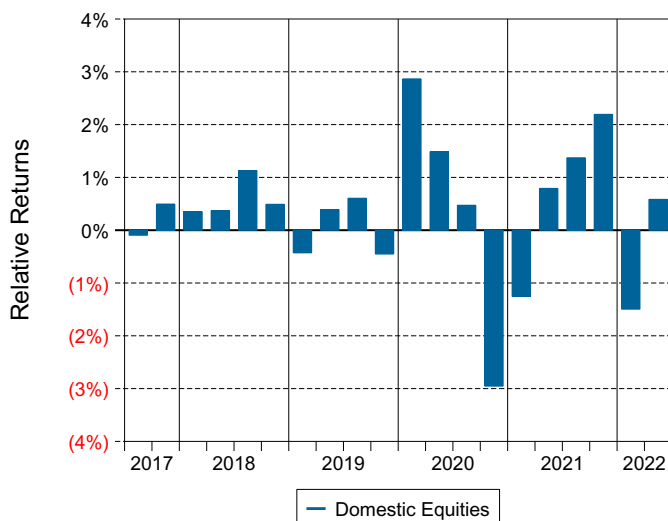
### Quarterly Asset Growth

Beginning Market Value	\$1,823,243,129
Net New Investment	\$-23,925,537
Investment Gains/(Losses)	\$-293,149,511
Ending Market Value	\$1,506,168,081

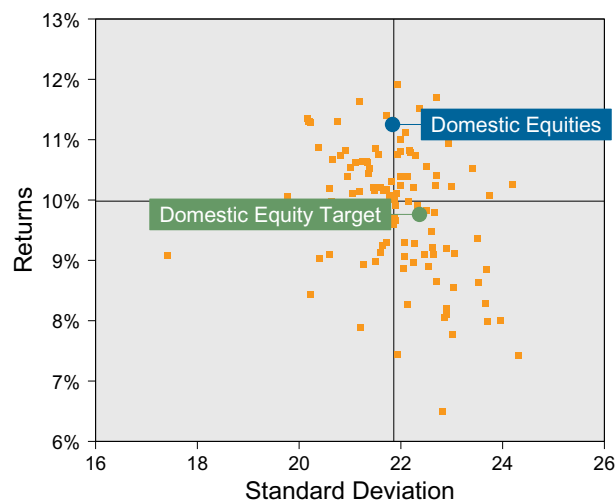
### Performance vs Public Fund - Domestic Equity (Gross)



### Relative Return vs Domestic Equity Target



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





## L.A. Capital Period Ended June 30, 2022

### 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.

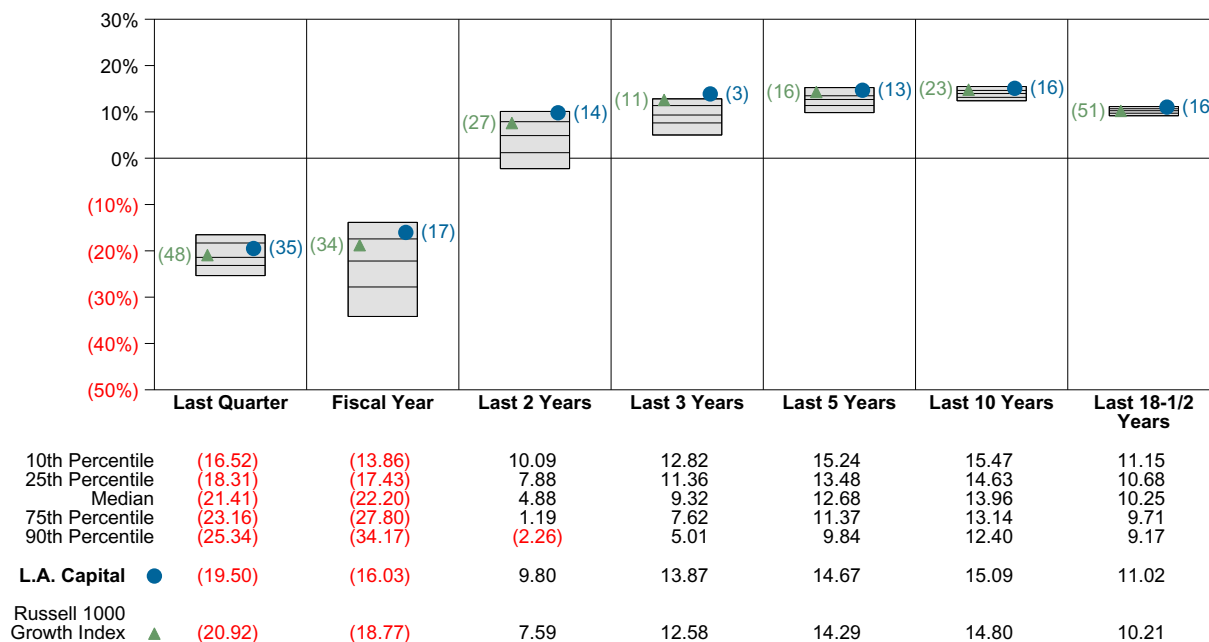
### Quarterly Summary and Highlights

- L.A. Capital's portfolio posted a (19.50)% return for the quarter placing it in the 35 percentile of the Callan Large Cap Growth group for the quarter and in the 17 percentile for the last year.
- L.A. Capital's portfolio outperformed the Russell 1000 Growth Index by 1.42% for the quarter and outperformed the Russell 1000 Growth Index for the year by 2.75%.

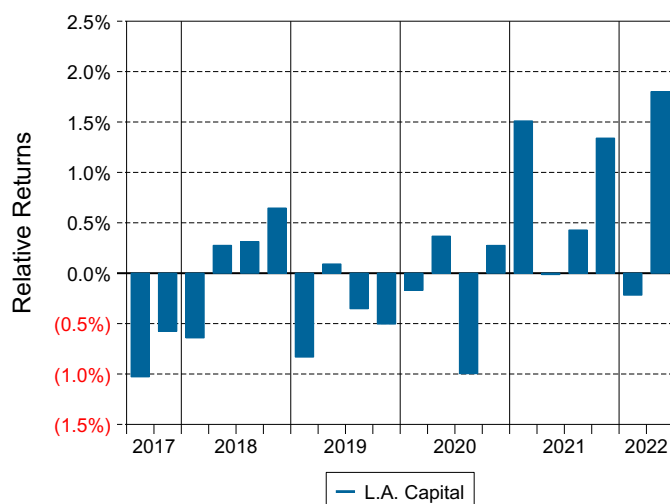
### Quarterly Asset Growth

Beginning Market Value	\$574,432,953
Net New Investment	\$-23,291,952
Investment Gains/(Losses)	\$-107,501,271
Ending Market Value	\$443,639,730

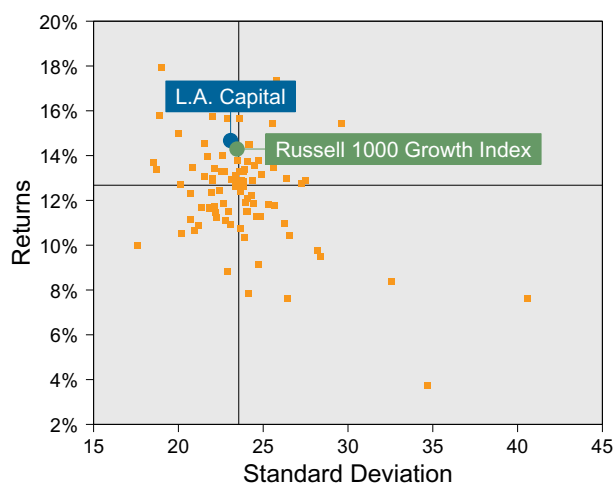
### Performance vs Callan Large Cap Growth (Gross)



### Relative Return vs Russell 1000 Growth Index



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



## L.A. Capital Management Enhanced Index Period Ended June 30, 2022

### 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.

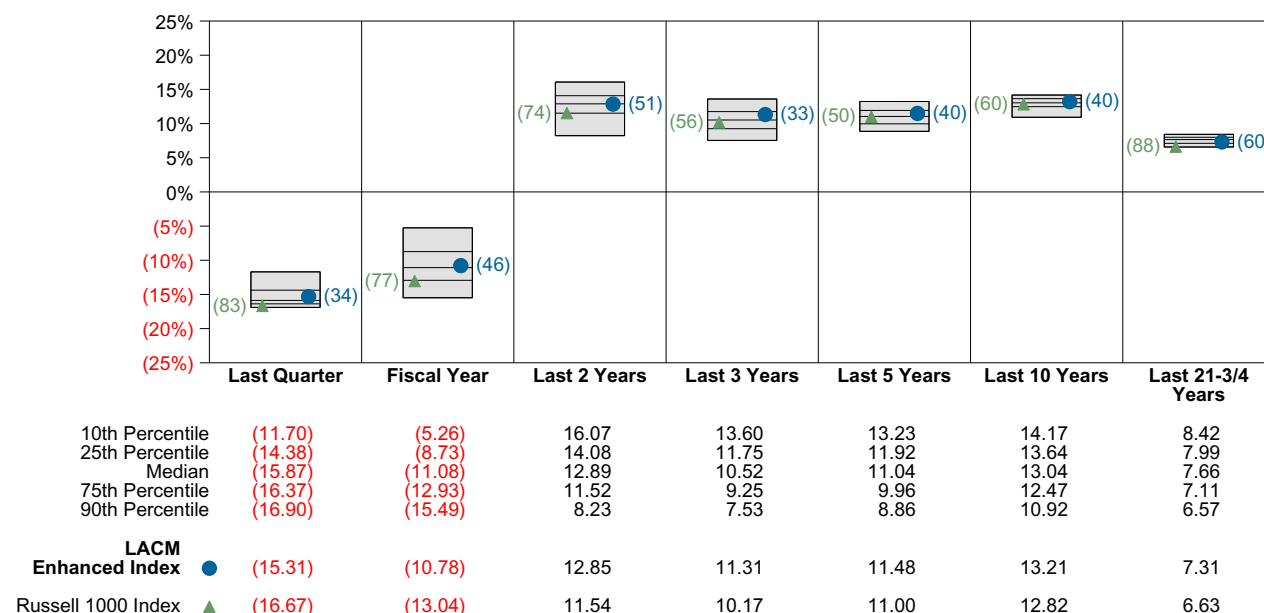
### Quarterly Summary and Highlights

- LACM Enhanced Index's portfolio posted a (15.31)% return for the quarter placing it in the 34 percentile of the Callan Large Cap Core group for the quarter and in the 46 percentile for the last year.
- LACM Enhanced Index's portfolio outperformed the Russell 1000 Index by 1.36% for the quarter and outperformed the Russell 1000 Index for the year by 2.25%.

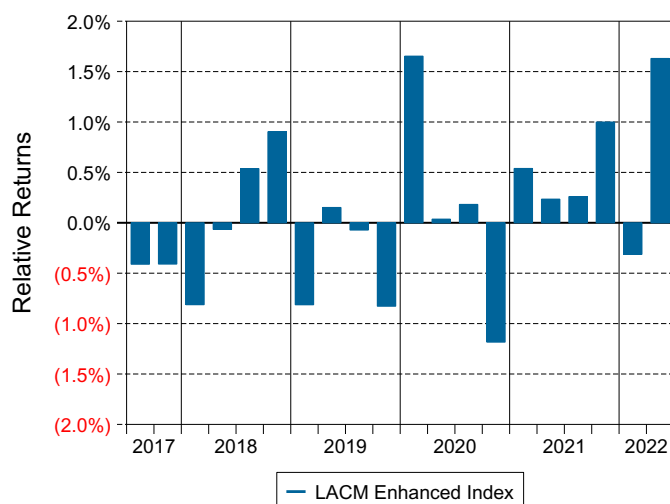
### Quarterly Asset Growth

Beginning Market Value	\$306,171,384
Net New Investment	\$-80,905
Investment Gains/(Losses)	\$-46,874,983
Ending Market Value	\$259,215,497

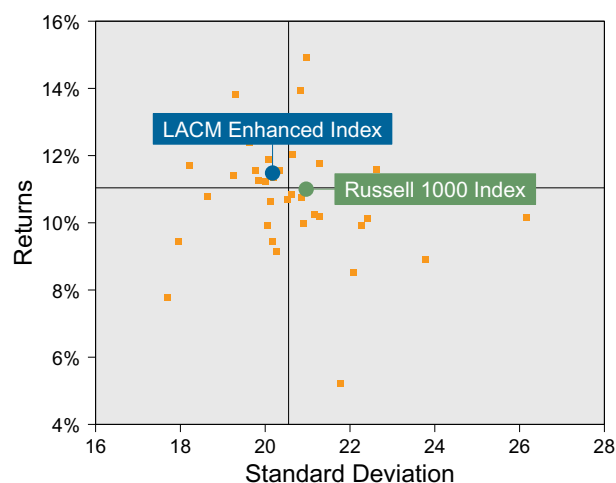
### Performance vs Callan Large Cap Core (Gross)



### Relative Return vs Russell 1000 Index



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



## Northern Trust AM Enh S&P500 Period Ended June 30, 2022

### Investment Philosophy

Northern Trust AM Enhanced S&P 500 employs a quantitative investment approach, focusing on the stock selection process as the principal source of value added. The account invests primarily in a broadly diversified portfolio of equity securities that include securities convertible into equity securities (including common stock), warrants, rights and units or shares in trusts, exchange traded funds and investment companies. The Investment Manager intends to use futures and options to manage market risk associated with the account's investments.

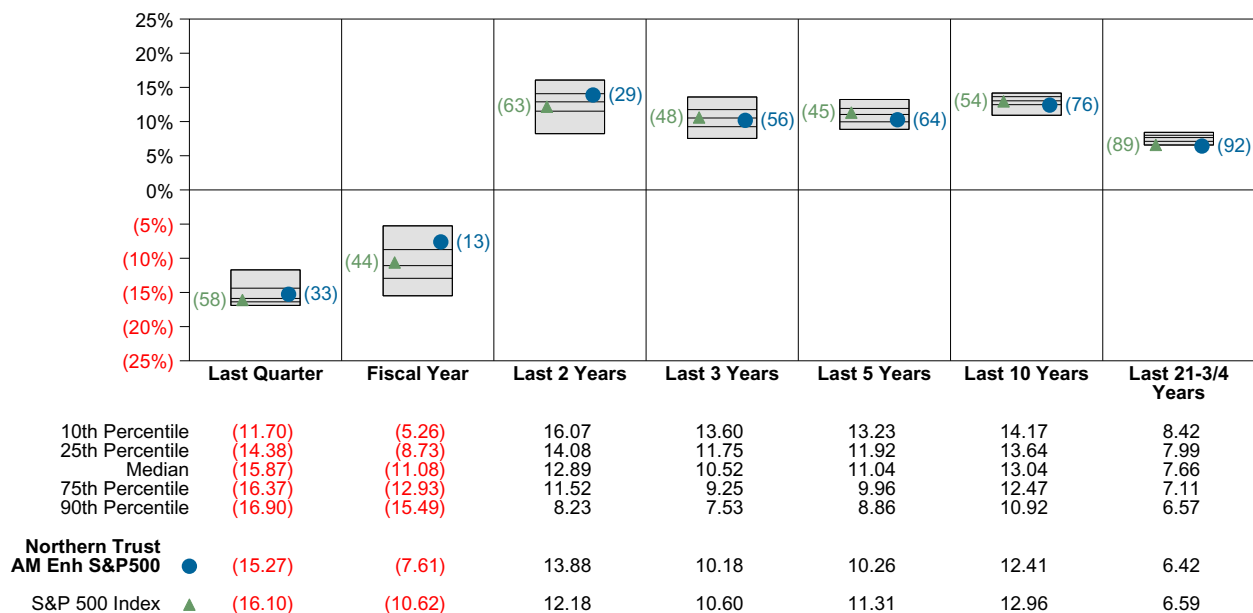
### Quarterly Summary and Highlights

- Northern Trust AM Enh S&P500's portfolio posted a (15.27)% return for the quarter placing it in the 33 percentile of the Callan Large Cap Core group for the quarter and in the 13 percentile for the last year.
- Northern Trust AM Enh S&P500's portfolio outperformed the S&P 500 Index by 0.83% for the quarter and outperformed the S&P 500 Index for the year by 3.01%.

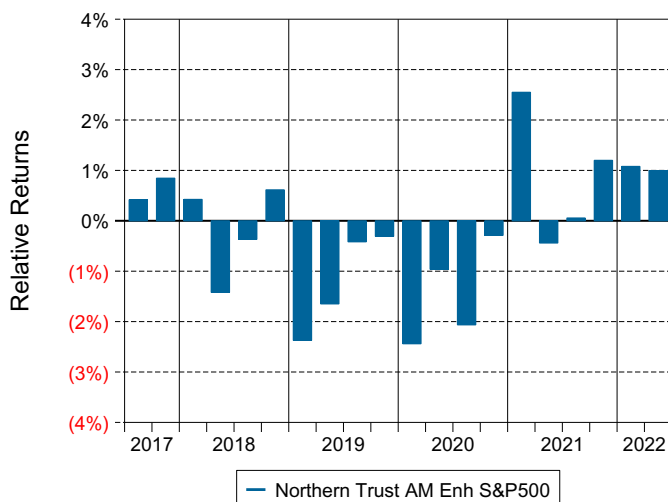
### Quarterly Asset Growth

Beginning Market Value	\$299,359,102
Net New Investment	\$-0
Investment Gains/(Losses)	\$-45,700,972
Ending Market Value	\$253,658,131

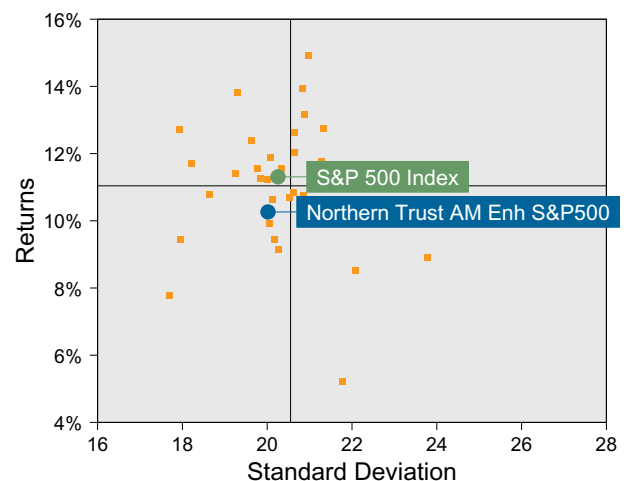
### Performance vs Callan Large Cap Core (Gross)



### Relative Return vs S&P 500 Index



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



## Parametric Enh S&P 500 Period Ended June 30, 2022

### Investment Philosophy

Parametric Clifton utilizes equity futures to gain benchmark exposure in constructing the portfolio it believes provides the greatest likelihood of outperforming the index. In this construction the underlying cash portfolio is invested in a liquid, high quality short duration fixed income portfolio. Over market cycles excess return generated by the short duration portfolio, when added to the performance of futures is expected to allow the strategy to achieve 0.50% to 1.00% of gross excess annual performance.

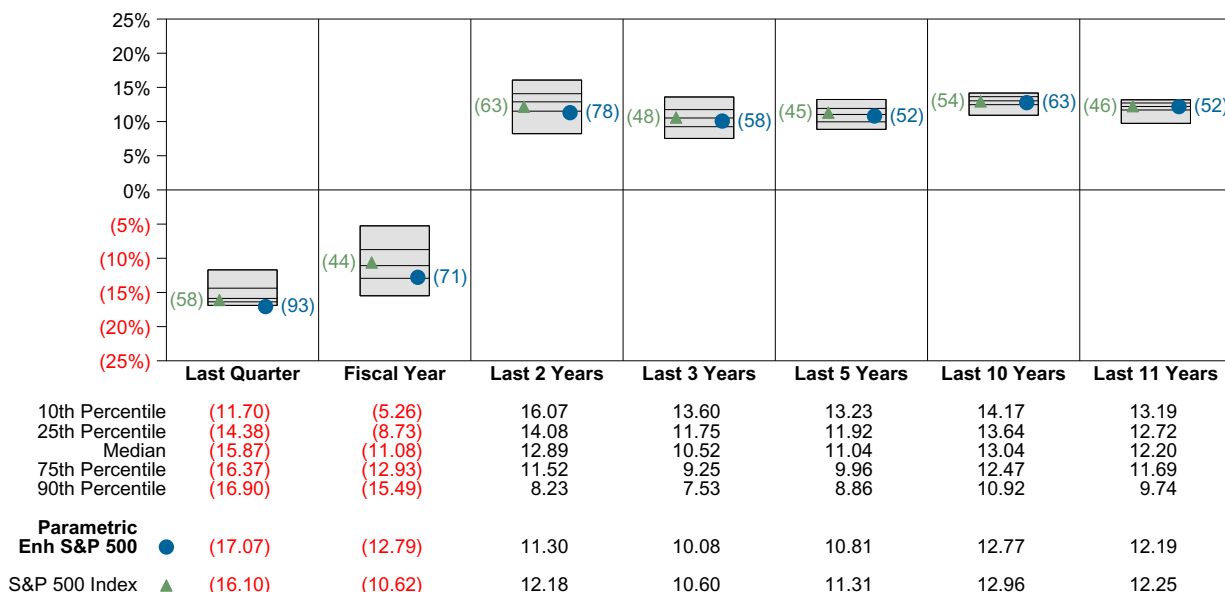
### Quarterly Summary and Highlights

- Parametric Enh S&P 500's portfolio posted a (17.07)% return for the quarter placing it in the 93 percentile of the Callan Large Cap Core group for the quarter and in the 71 percentile for the last year.
- Parametric Enh S&P 500's portfolio underperformed the S&P 500 Index by 0.97% for the quarter and underperformed the S&P 500 Index for the year by 2.17%.

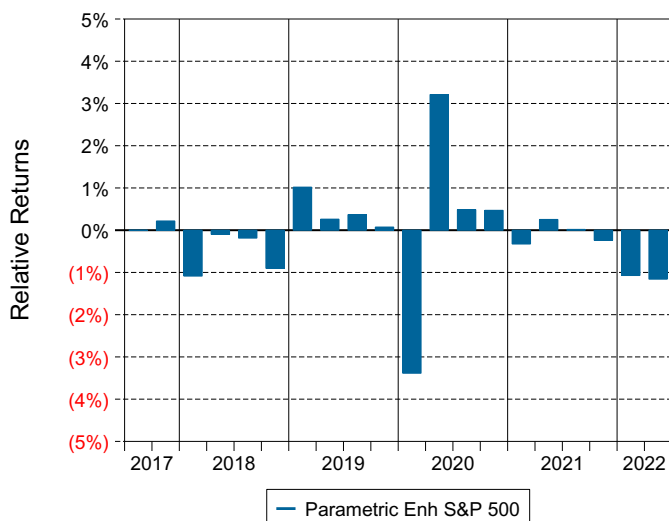
### Quarterly Asset Growth

Beginning Market Value	\$297,243,847
Net New Investment	\$0
Investment Gains/(Losses)	\$-50,746,412
Ending Market Value	\$246,497,436

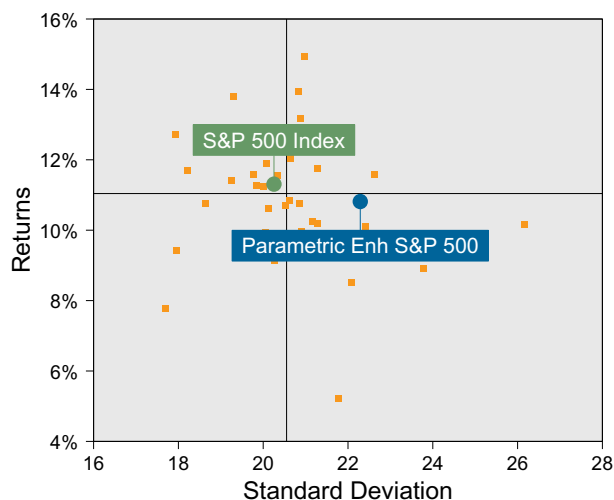
### Performance vs Callan Large Cap Core (Gross)



### Relative Return vs S&P 500 Index



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



# Atlanta Capital

## Period Ended June 30, 2022

### Investment Philosophy

Atlanta Capital Managements approach with its small cap product is to focus on high quality companies with an overall portfolio risk exposure tied to the Russell 2000 Index. Key characteristics of this portfolio include: (1) stocks rated B+ or better by S&P, (2) equally weighting 75 stocks, (3) sector concentrations similar to that of the benchmark. A group of ten analysts is in charge of screening the Russell 2000 to identify companies they believe have strong price appreciation potential and good business fundamentals. These analysts present the ideas to the portfolio management team, led by Chip Reed, who makes the final decisions on the inclusion of stocks. In general, stocks are sold from the portfolio if the B+ or better financial rating is no longer met, there is an adverse change in the fundamental business, or because of regular portfolio maintenance to ensure broad diversification.

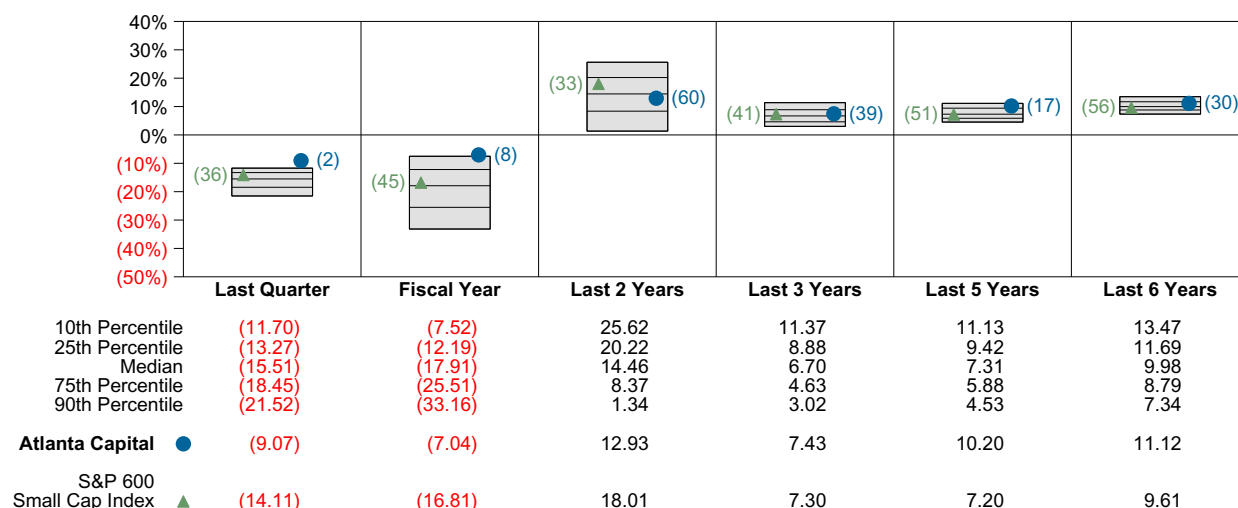
### Quarterly Summary and Highlights

- Atlanta Capital's portfolio posted a (9.07)% return for the quarter placing it in the 2 percentile of the Callan Small Capitalization group for the quarter and in the 8 percentile for the last year.
- Atlanta Capital's portfolio outperformed the S&P 600 Small Cap Index by 5.04% for the quarter and outperformed the S&P 600 Small Cap Index for the year by 9.77%.

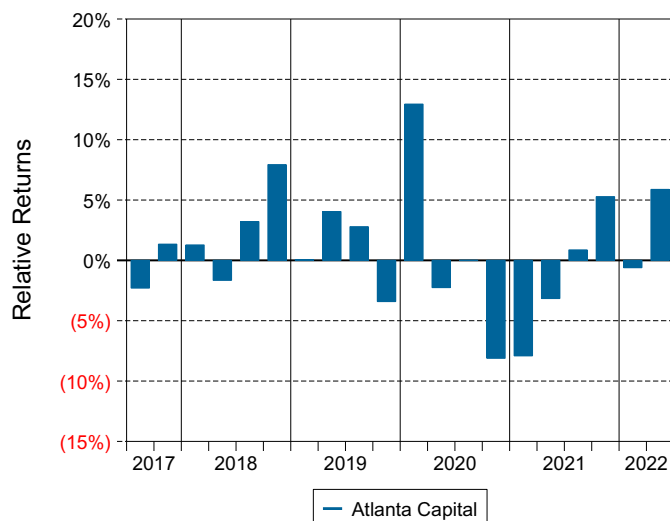
### Quarterly Asset Growth

Beginning Market Value	\$121,538,937
Net New Investment	\$-180,397
Investment Gains/(Losses)	\$-11,023,087
Ending Market Value	\$110,335,454

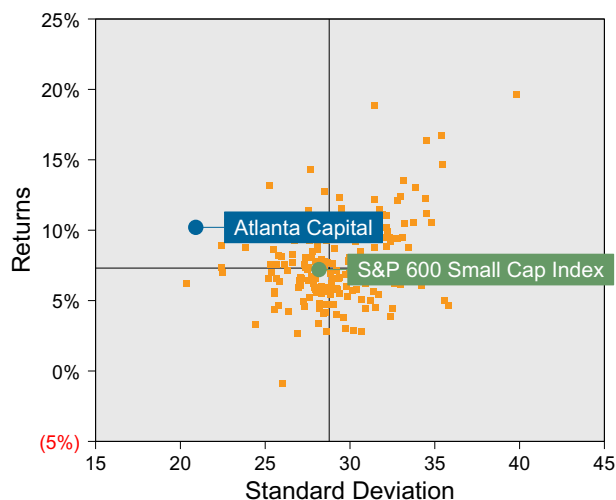
### Performance vs Callan Small Capitalization (Gross)



### Relative Return vs S&P 600 Small Cap Index



### Callan Small Capitalization (Gross) Annualized Five Year Risk vs Return



## Riverbridge Small Cap Growth Period Ended June 30, 2022

### 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.

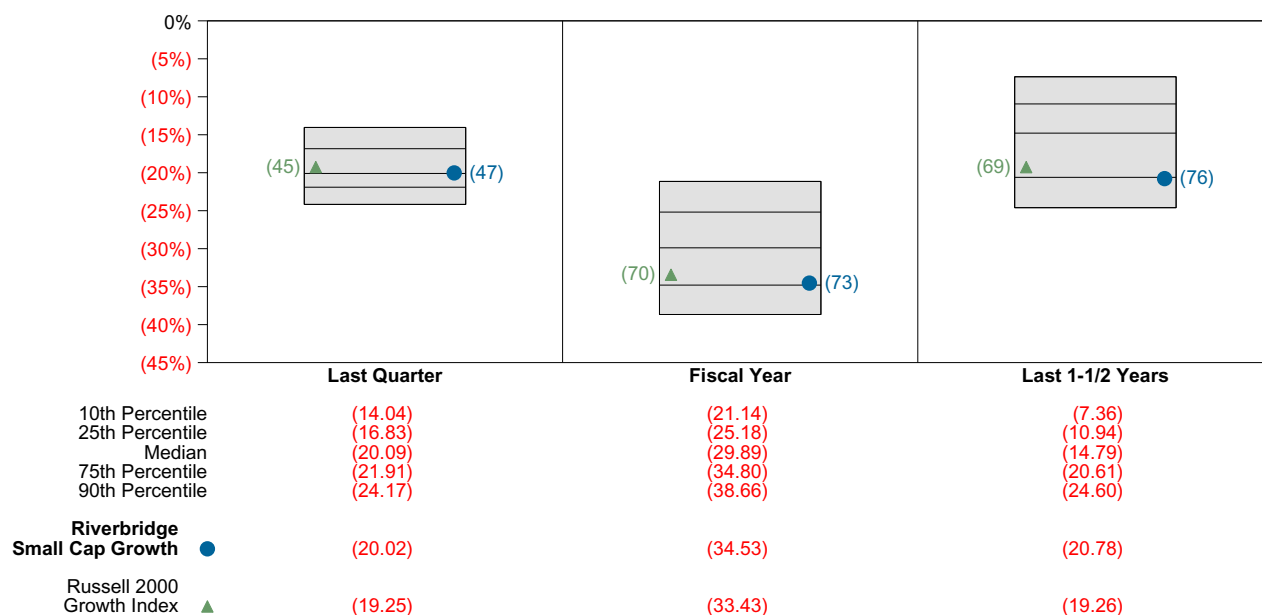
### Quarterly Summary and Highlights

- Riverbridge Small Cap Growth's portfolio posted a (20.02)% return for the quarter placing it in the 47 percentile of the Callan Small Cap Growth group for the quarter and in the 73 percentile for the last year.
- Riverbridge Small Cap Growth's portfolio underperformed the Russell 2000 Growth Index by 0.77% for the quarter and underperformed the Russell 2000 Growth Index for the year by 1.10%.

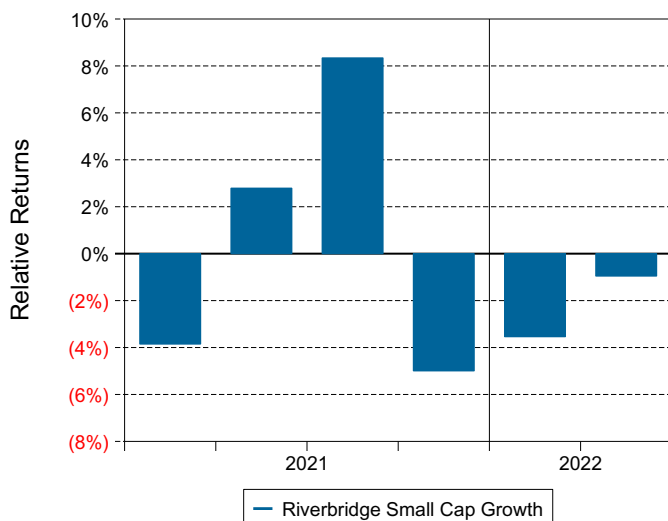
### Quarterly Asset Growth

Beginning Market Value	\$98,362,424
Net New Investment	\$-181,698
Investment Gains/(Losses)	\$-19,698,587
Ending Market Value	\$78,482,139

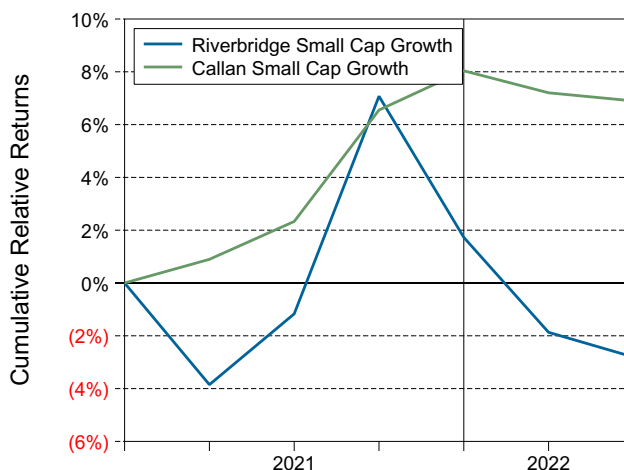
### Performance vs Callan Small Cap Growth (Gross)



### Relative Return vs Russell 2000 Growth Index



### Cumulative Returns vs Russell 2000 Growth Index



## Sycamore Small Cap Value Period Ended June 30, 2022

### 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.

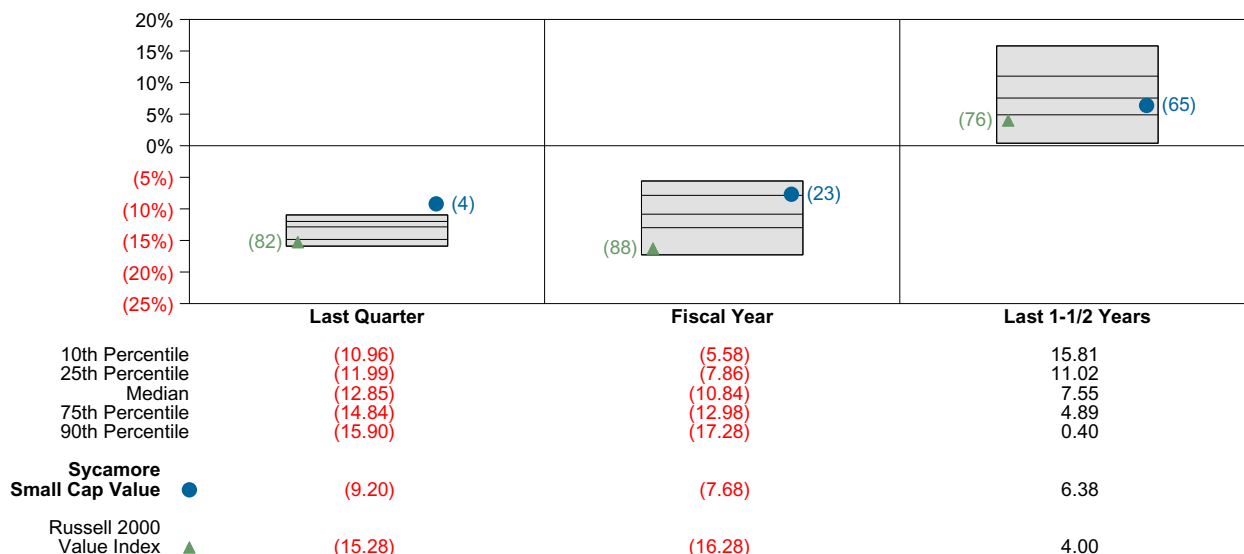
### Quarterly Summary and Highlights

- Sycamore Small Cap Value's portfolio posted a (9.20)% return for the quarter placing it in the 4 percentile of the Callan Small Cap Value group for the quarter and in the 23 percentile for the last year.
- Sycamore Small Cap Value's portfolio outperformed the Russell 2000 Value Index by 6.07% for the quarter and outperformed the Russell 2000 Value Index for the year by 8.60%.

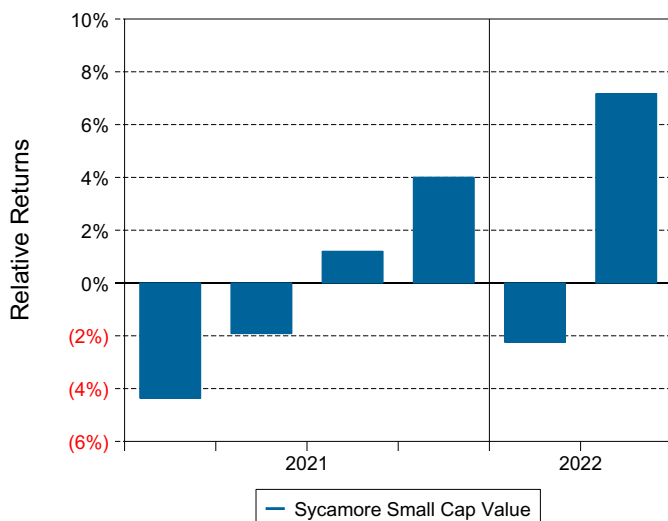
### Quarterly Asset Growth

Beginning Market Value	\$126,134,480
Net New Investment	\$-190,585
Investment Gains/(Losses)	\$-11,604,200
Ending Market Value	\$114,339,694

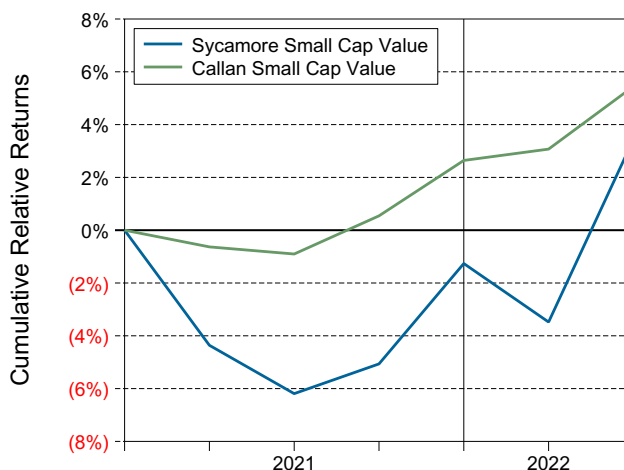
### Performance vs Callan Small Cap Value (Gross)



### Relative Return vs Russell 2000 Value Index



### Cumulative Returns vs Russell 2000 Value Index







## International Equities Period Ended June 30, 2022

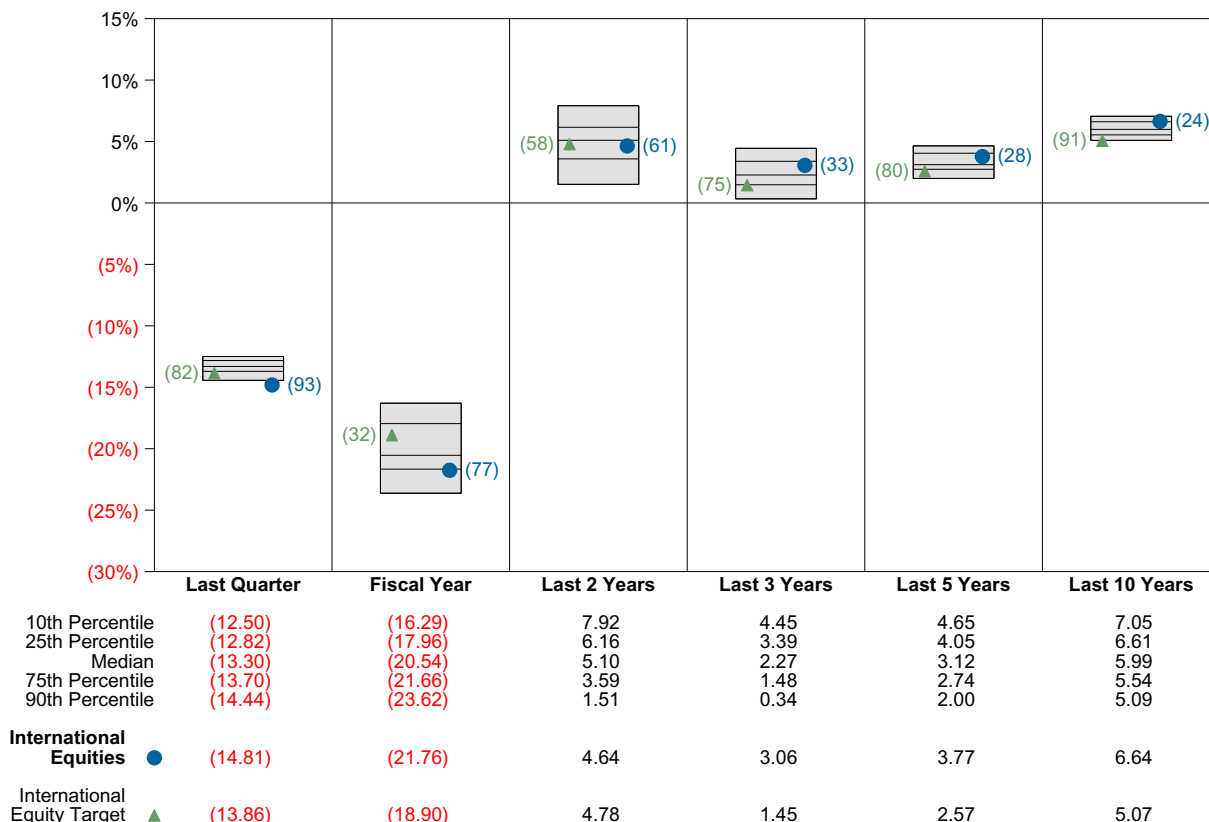
### Quarterly Summary and Highlights

- International Equities's portfolio posted a (14.81)% return for the quarter placing it in the 93 percentile of the Public Fund - International Equity group for the quarter and in the 77 percentile for the last year.
- International Equities's portfolio underperformed the International Equity Target by 0.96% for the quarter and underperformed the International Equity Target for the year by 2.86%.

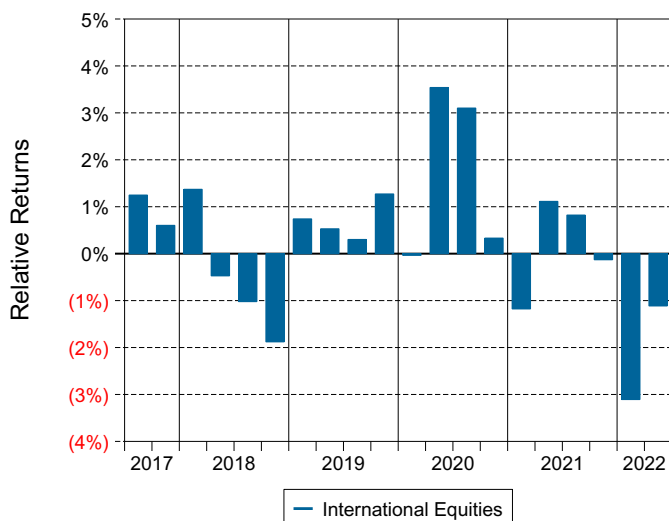
### Quarterly Asset Growth

Beginning Market Value	\$1,090,118,154
Net New Investment	\$-614,842
Investment Gains/(Losses)	\$-161,451,593
Ending Market Value	\$928,051,719

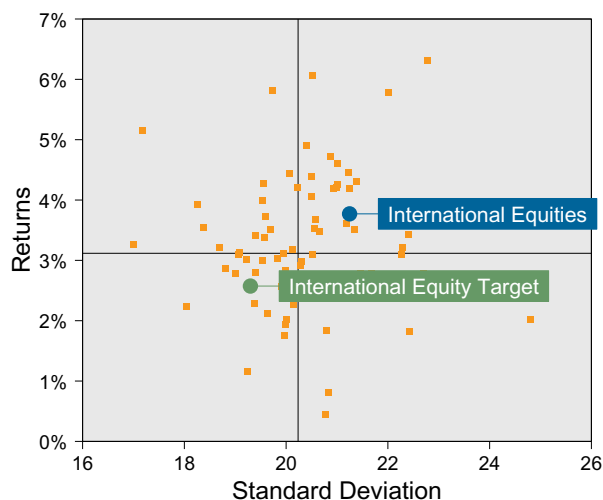
### Performance vs Public Fund - International Equity (Gross)



### Relative Return vs International Equity Target



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



## Arrowstreet ACWI ex US Period Ended June 30, 2022

### 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.

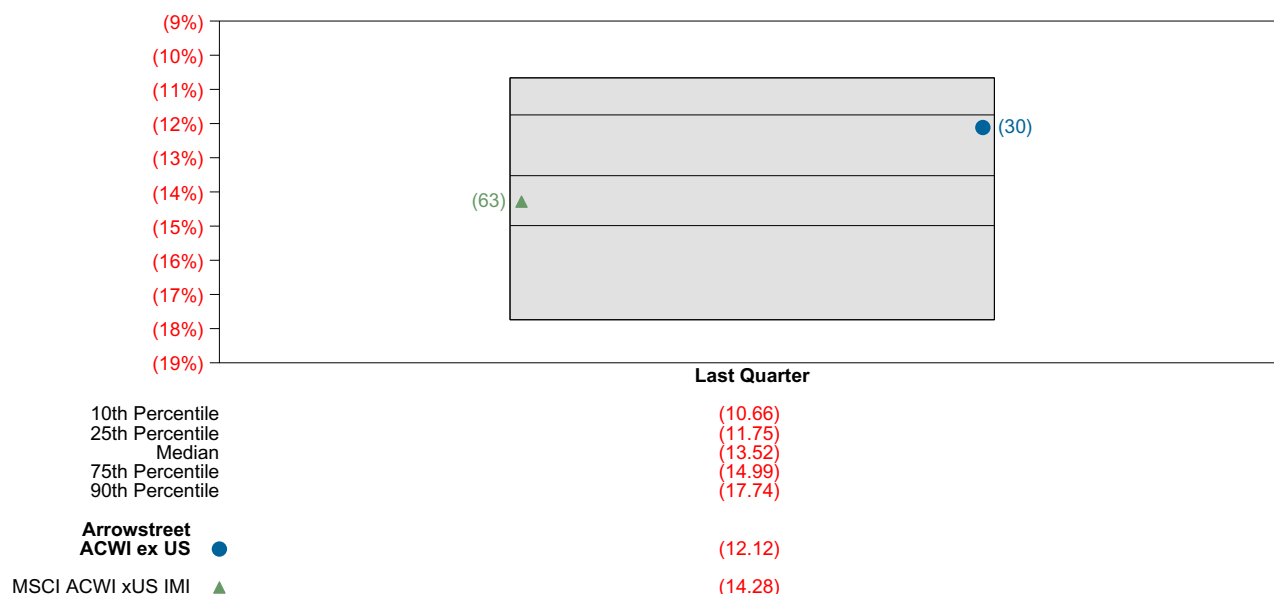
### Quarterly Summary and Highlights

- Arrowstreet ACWI ex US's portfolio posted a (12.12)% return for the quarter placing it in the 30 percentile of the Callan Non US Equity Mutual Funds group for the quarter.
- Arrowstreet ACWI ex US's portfolio outperformed the MSCI ACWI xUS IMI by 2.17% for the quarter.

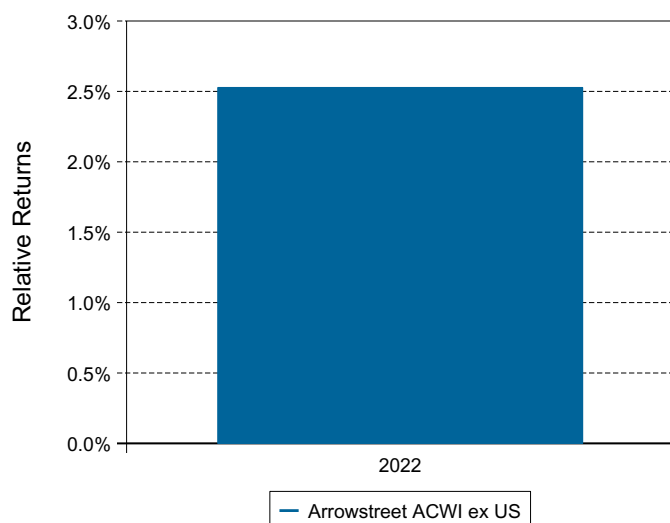
### Quarterly Asset Growth

Beginning Market Value	\$306,898,324
Net New Investment	\$0
Investment Gains/(Losses)	\$-37,182,511
Ending Market Value	\$269,715,813

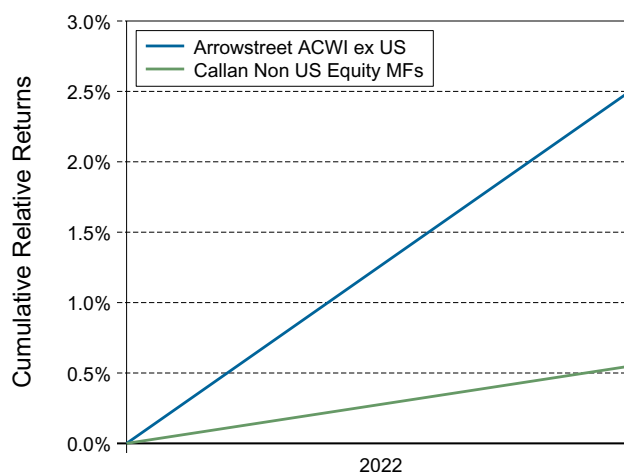
### Performance vs Callan Non US Equity Mutual Funds (Net)



### Relative Return vs MSCI ACWI xUS IMI



### Cumulative Returns vs MSCI ACWI xUS IMI



## DFA International Small Cap Value Fund

### Period Ended June 30, 2022

#### 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.

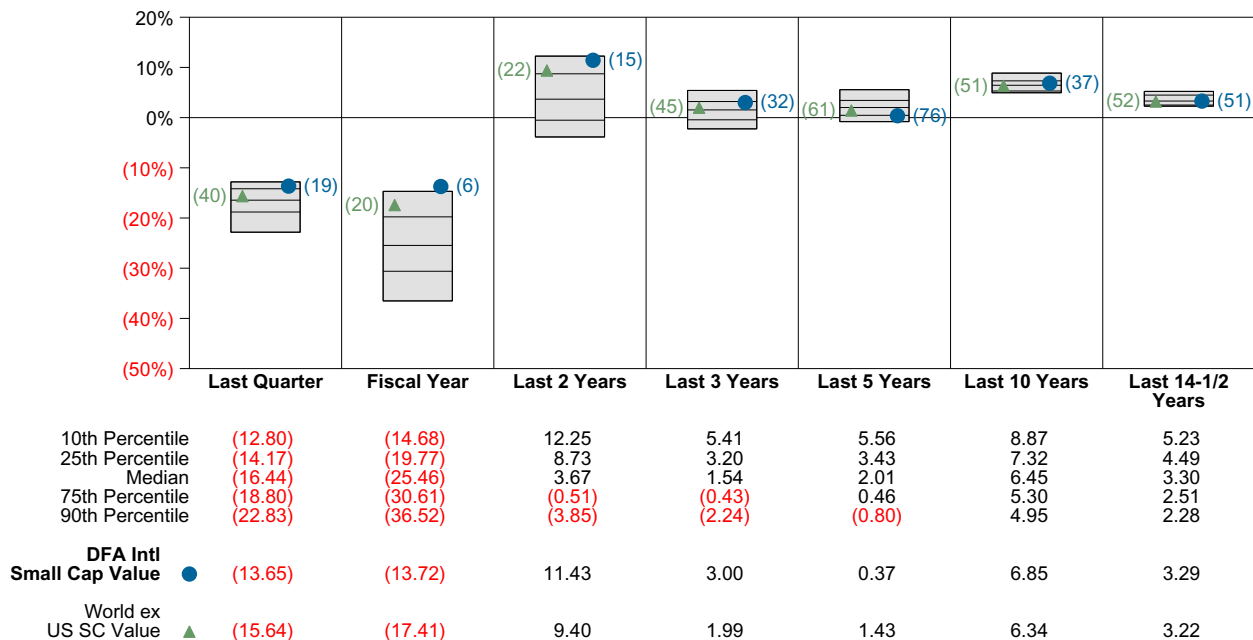
#### Quarterly Summary and Highlights

- DFA Intl Small Cap Value's portfolio posted a (13.65)% return for the quarter placing it in the 19 percentile of the Callan International Small Cap Mut Funds group for the quarter and in the 6 percentile for the last year.
- DFA Intl Small Cap Value's portfolio outperformed the World ex US SC Value by 1.99% for the quarter and outperformed the World ex US SC Value for the year by 3.69%.

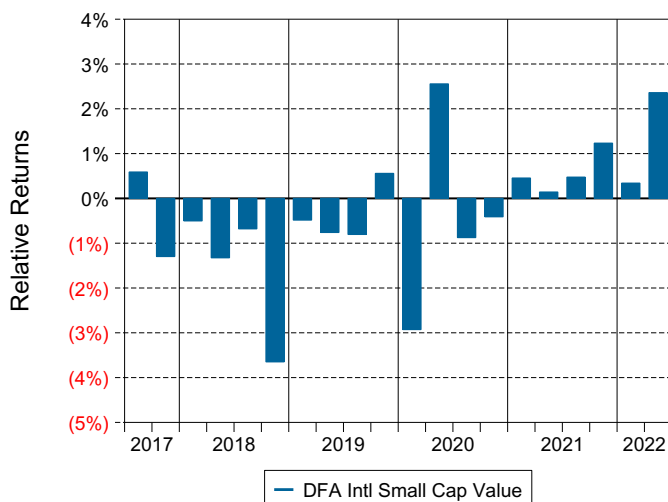
#### Quarterly Asset Growth

Beginning Market Value	\$90,573,172
Net New Investment	\$0
Investment Gains/(Losses)	\$-12,362,453
Ending Market Value	\$78,210,719

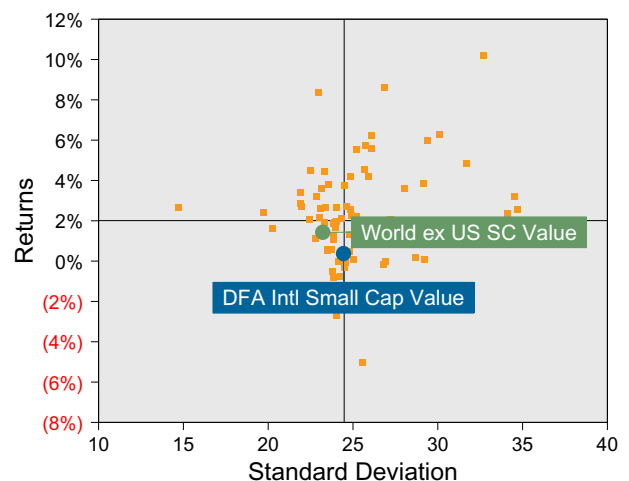
#### Performance vs Callan International Small Cap Mut Funds (Net)



#### Relative Return vs World ex US SC Value



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



## Northern Tr AM Wrld ex US Period Ended June 30, 2022

### Investment Philosophy

The Fund's objective is to provide investment results that approximate the overall performance of the MSCI World ex-US Equity Index.

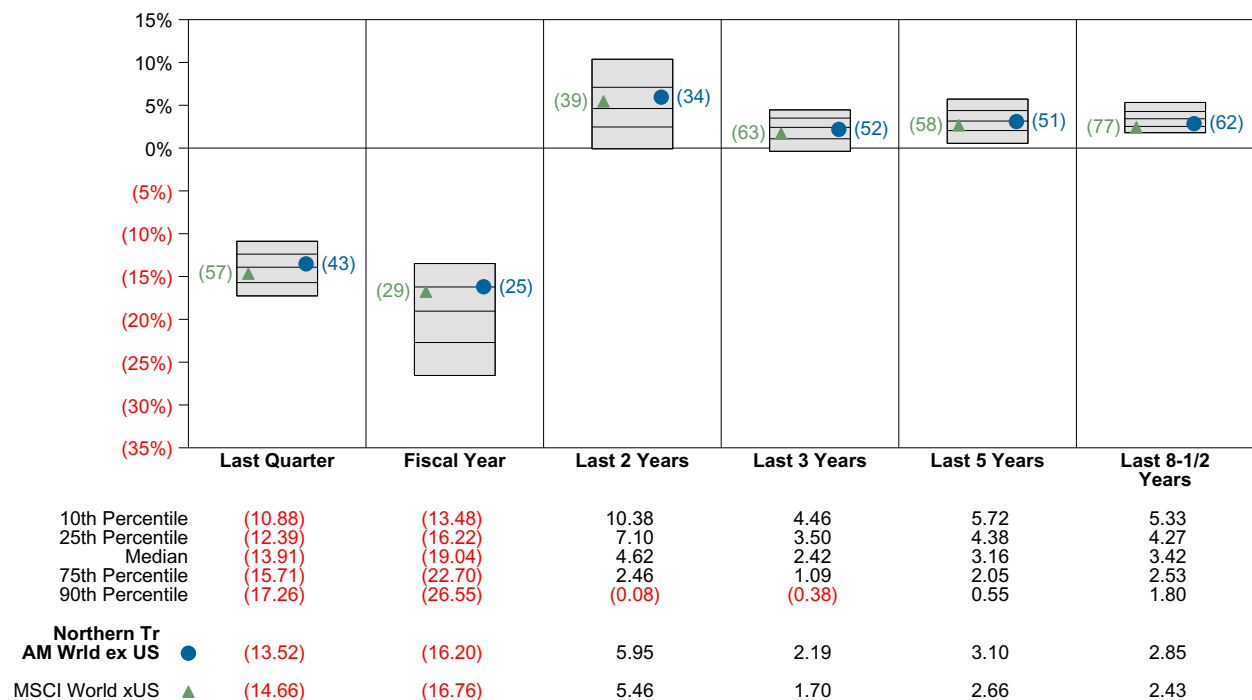
### Quarterly Summary and Highlights

- Northern Tr AM Wrld ex US's portfolio posted a (13.52)% return for the quarter placing it in the 43 percentile of the Callan Non-US Equity group for the quarter and in the 25 percentile for the last year.
- Northern Tr AM Wrld ex US's portfolio outperformed the MSCI World xUS by 1.13% for the quarter and outperformed the MSCI World xUS for the year by 0.56%.

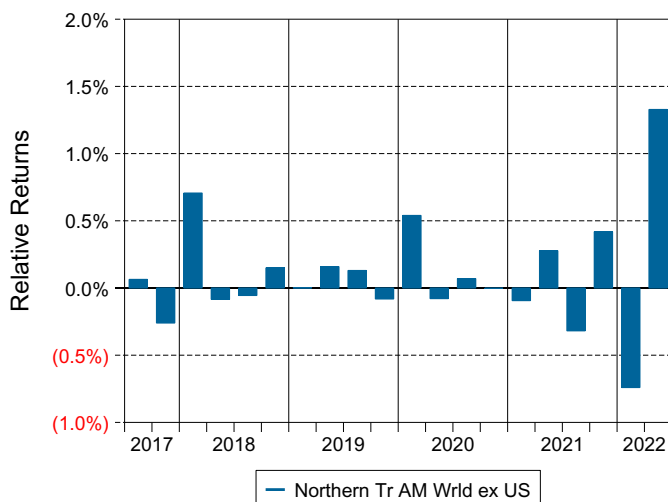
### Quarterly Asset Growth

Beginning Market Value	\$129,737,980
Net New Investment	\$-34,540
Investment Gains/(Losses)	\$-17,542,996
Ending Market Value	\$112,160,444

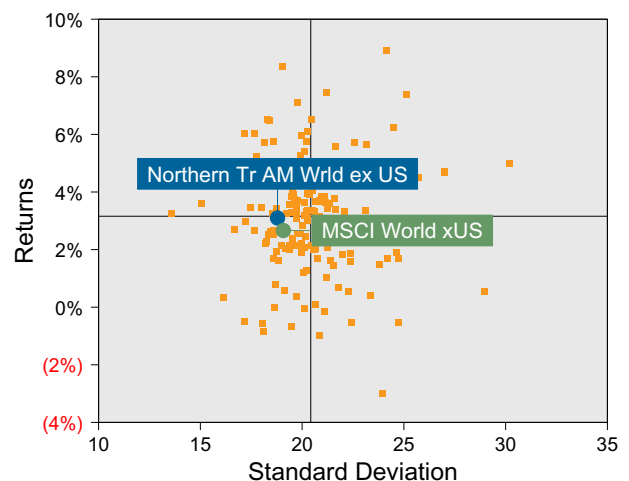
### Performance vs Callan Non-US Equity (Gross)



### Relative Return vs MSCI World xUS



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



## Wellington Management Period Ended June 30, 2022

### 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"). **The Benchmark is comprised of EPAC, Developed World, <\$2B through 2/28/2022 and MSCI EAFE Small Cap Index thereafter.**

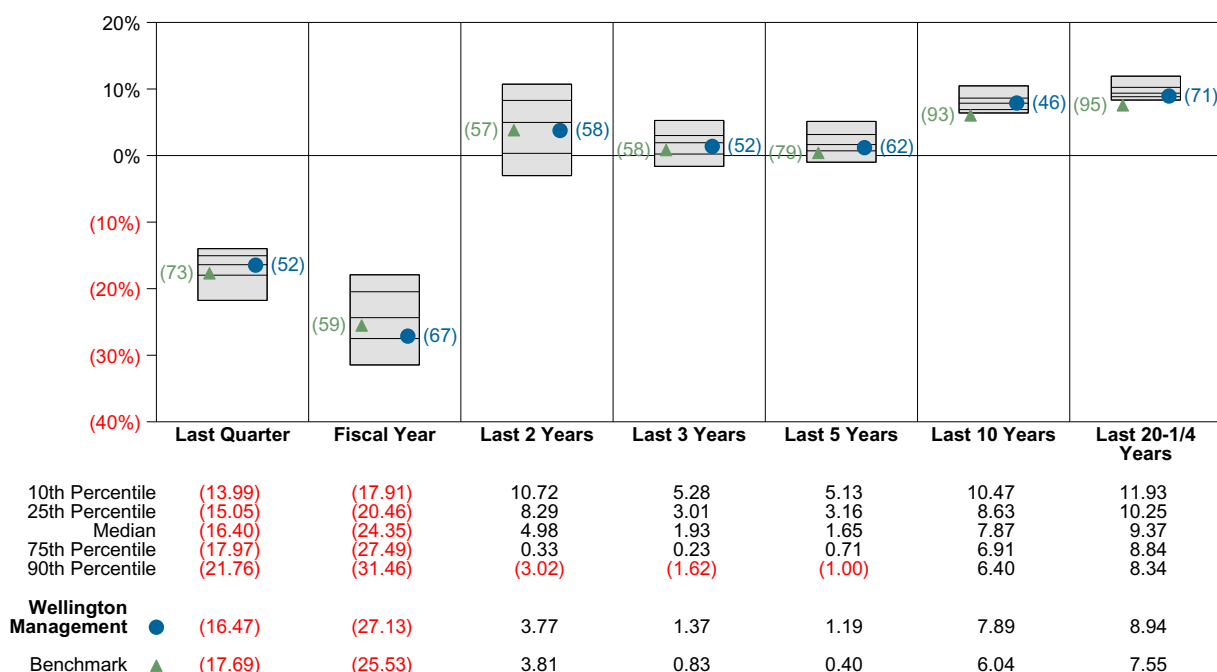
### Quarterly Summary and Highlights

- Wellington Management's portfolio posted a (16.47)% return for the quarter placing it in the 52 percentile of the Callan International Small Cap group for the quarter and in the 67 percentile for the last year.
- Wellington Management's portfolio outperformed the Benchmark by 1.22% for the quarter and underperformed the Benchmark for the year by 1.60%.

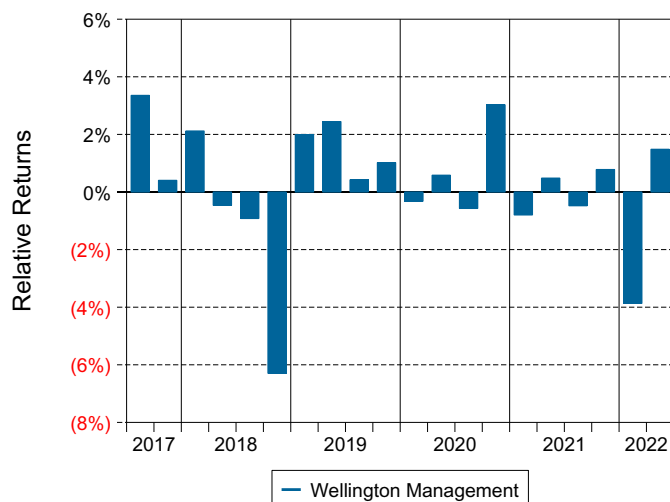
### Quarterly Asset Growth

Beginning Market Value	\$89,499,012
Net New Investment	\$-189,877
Investment Gains/(Losses)	\$-14,730,477
Ending Market Value	\$74,578,658

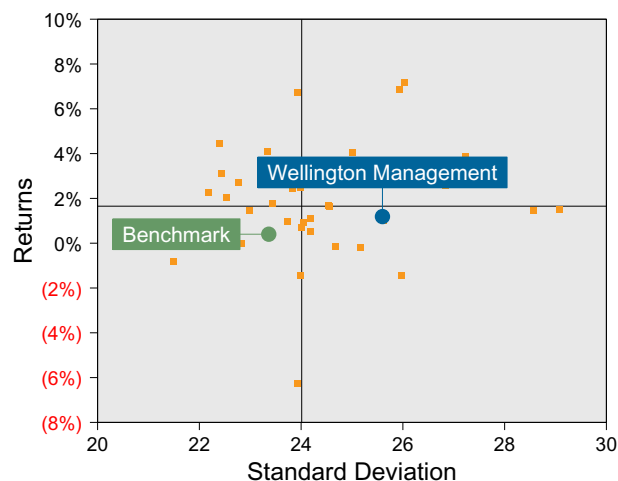
### Performance vs Callan International Small Cap (Gross)



### Relative Return vs Benchmark



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



## William Blair Period Ended June 30, 2022

### 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.

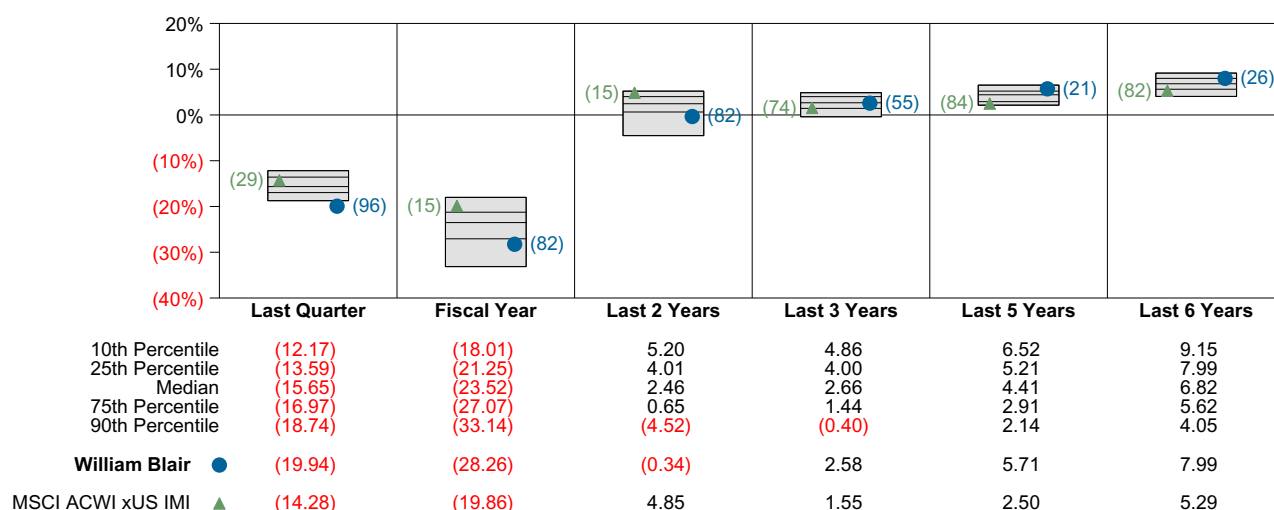
### Quarterly Summary and Highlights

- William Blair's portfolio posted a (19.94)% return for the quarter placing it in the 96 percentile of the Callan Non-US All Country Growth Equity group for the quarter and in the 82 percentile for the last year.
- William Blair's portfolio underperformed the MSCI ACWI xUS IMI by 5.66% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 8.40%.

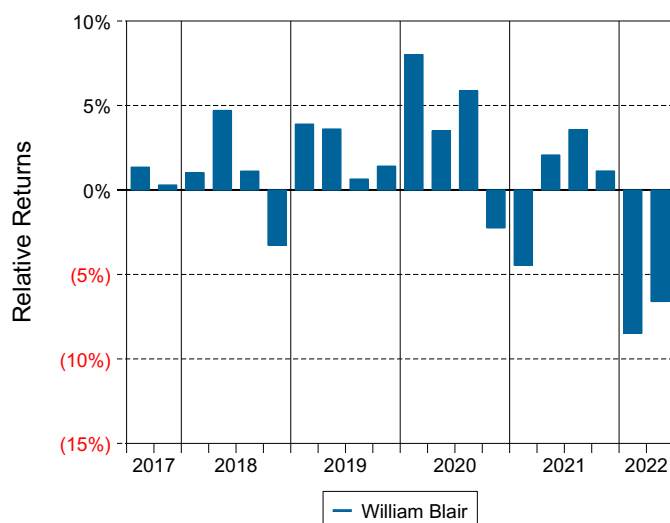
### Quarterly Asset Growth

Beginning Market Value	\$235,406,972
Net New Investment	\$-206,841
Investment Gains/(Losses)	\$-46,918,518
Ending Market Value	\$188,281,614

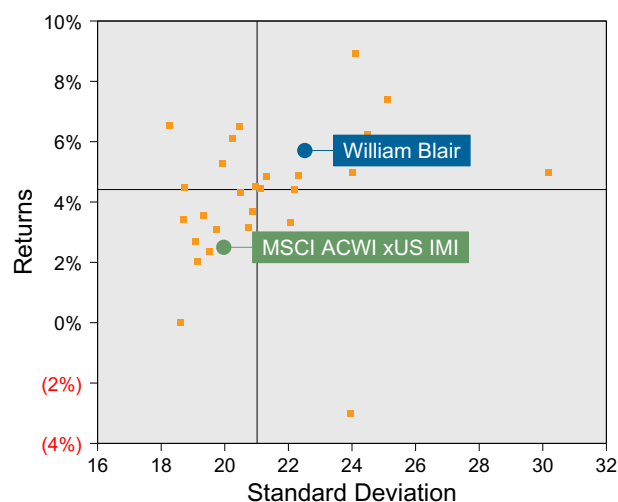
### Performance vs Callan Non-US All Country Growth Equity (Gross)



### Relative Return vs MSCI ACWI xUS IMI



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



## Axiom Emerging Markets Period Ended June 30, 2022

### Investment Philosophy

The Emerging Markets Equity strategy seeks to invest in emerging market securities issued by companies whose key business drivers are both improving and exceeding expectations, as determined by Axiom's stock selection techniques focused on fundamental company analysis. The strategy considers companies either (i) located in countries that are not included in the MSCI Developed Markets Index series or (ii) that derive a majority of their revenues or assets from a country or countries not included in the MSCI Developed Markets Index series, in each case at the time of investment. Although the Manager generally expects the strategy's investment portfolio to be geographically diverse, there are no prescribed limits on geographic distribution of the strategy's investments and the strategy has the authority to invest in securities traded in securities markets or any country in the world.

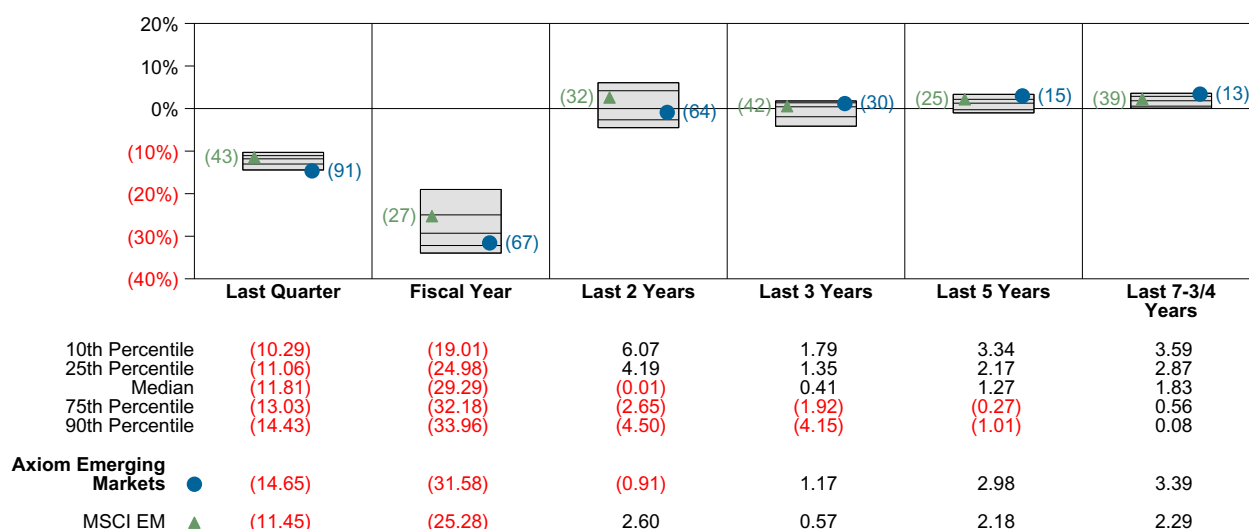
### Quarterly Summary and Highlights

- Axiom Emerging Markets's portfolio posted a (14.65)% return for the quarter placing it in the 91 percentile of the Callan Emerging Markets Equity Mut Funds group for the quarter and in the 67 percentile for the last year.
- Axiom Emerging Markets's portfolio underperformed the MSCI EM by 3.20% for the quarter and underperformed the MSCI EM for the year by 6.29%.

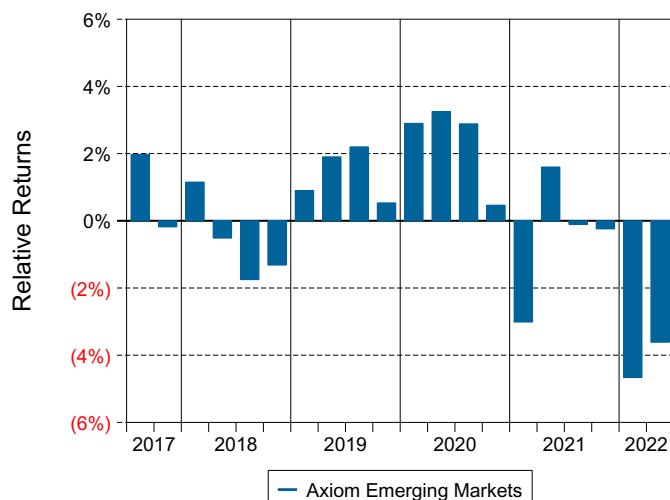
### Quarterly Asset Growth

Beginning Market Value	\$171,858,904
Net New Investment	\$0
Investment Gains/(Losses)	\$-25,175,011
Ending Market Value	\$146,683,893

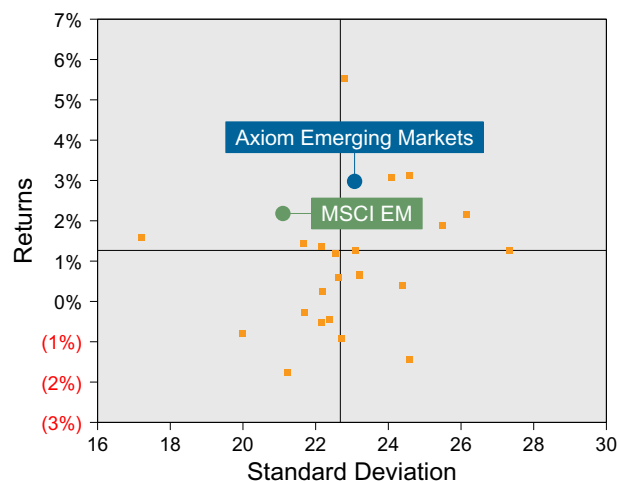
### Performance vs Callan Emerging Markets Equity Mut Funds (Net)



### Relative Return vs MSCI EM



### Callan Emerging Markets Equity Mut Funds (Net) Annualized Five Year Risk vs Return



## DFA Emerging Markets Period Ended June 30, 2022

### Investment Philosophy

The Emerging Markets Small Cap Portfolio invests in small cap emerging markets companies. Presently, this means investment in companies whose market capitalization is less than \$2.3 billion at the time of purchase. Dimensional considers, among other things, information disseminated by the International Finance Corporation in determining and approving emerging market countries.

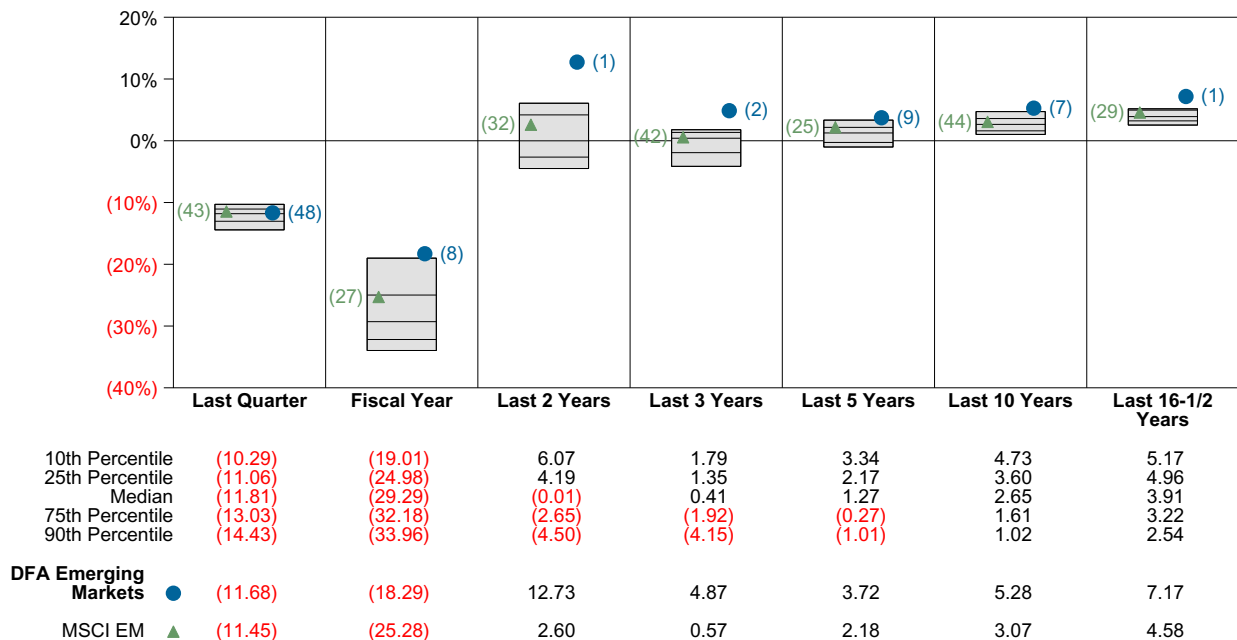
### Quarterly Summary and Highlights

- DFA Emerging Markets's portfolio posted a (11.68)% return for the quarter placing it in the 48 percentile of the Callan Emerging Markets Equity Mut Funds group for the quarter and in the 8 percentile for the last year.
- DFA Emerging Markets's portfolio underperformed the MSCI EM by 0.23% for the quarter and outperformed the MSCI EM for the year by 6.99%.

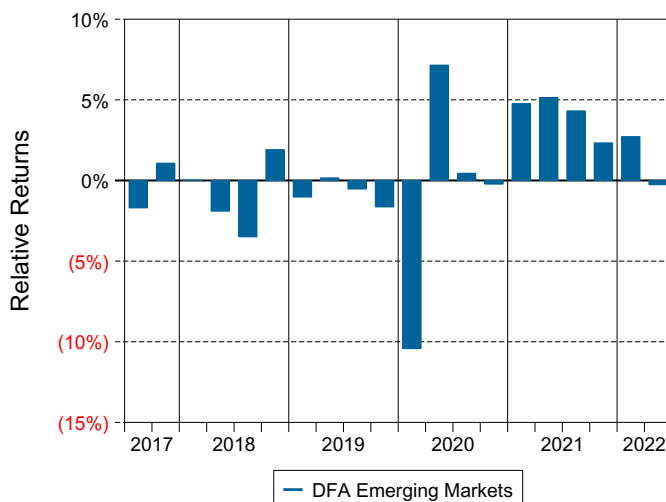
### Quarterly Asset Growth

Beginning Market Value	\$66,143,790
Net New Investment	\$0
Investment Gains/(Losses)	\$-7,723,211
Ending Market Value	\$58,420,579

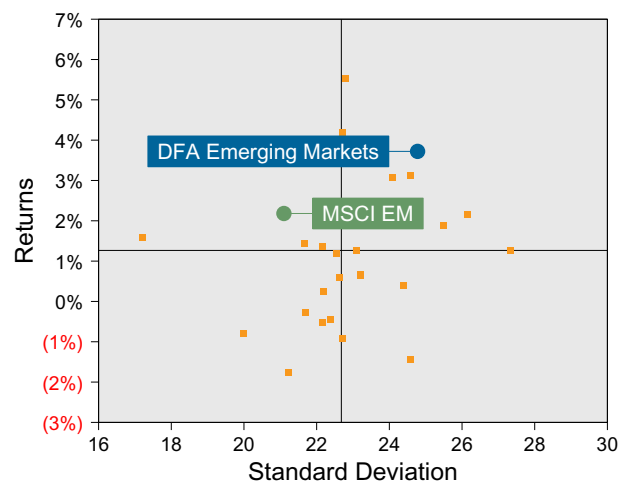
### Performance vs Callan Emerging Markets Equity Mut Funds (Net)



### Relative Return vs MSCI EM



### Callan Emerging Markets Equity Mut Funds (Net) Annualized Five Year Risk vs Return







## EPOCH Investment Period Ended June 30, 2022

### Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm.

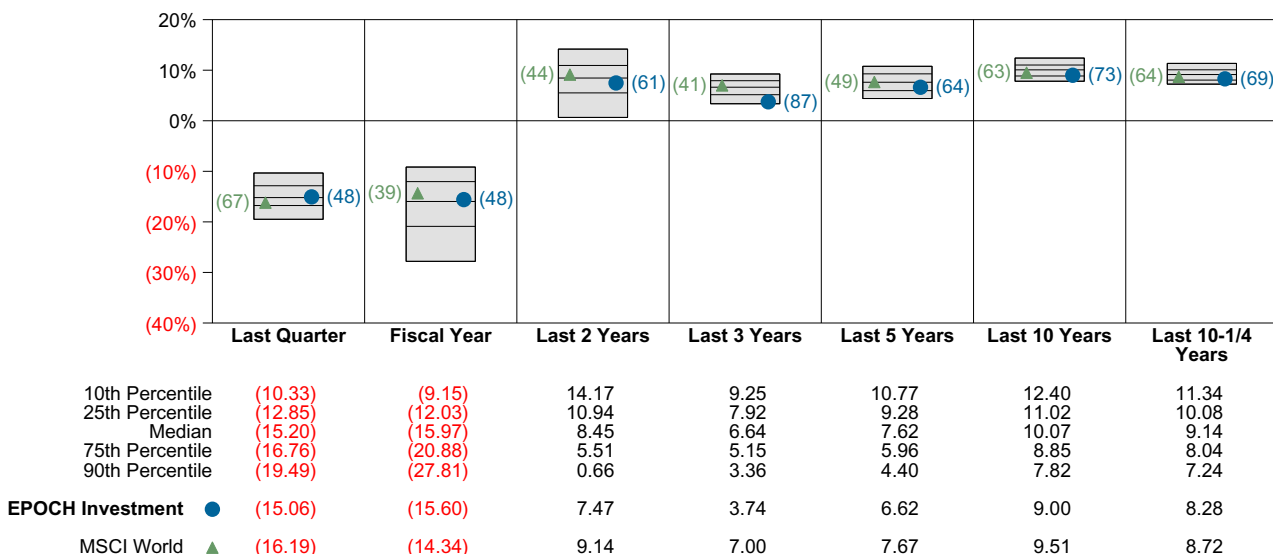
### Quarterly Summary and Highlights

- EPOCH Investment's portfolio posted a (15.06)% return for the quarter placing it in the 48 percentile of the Callan Global Equity group for the quarter and in the 48 percentile for the last year.
- EPOCH Investment's portfolio outperformed the MSCI World by 1.13% for the quarter and underperformed the MSCI World for the year by 1.26%.

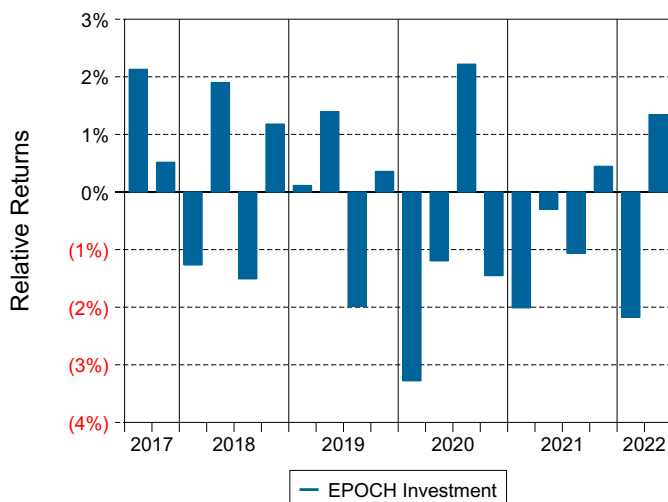
### Quarterly Asset Growth

Beginning Market Value	\$330,045,308
Net New Investment	\$-395,431
Investment Gains/(Losses)	\$-49,679,690
Ending Market Value	\$279,970,187

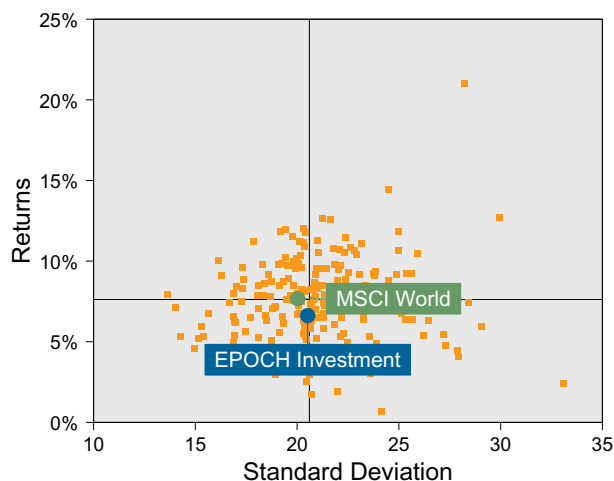
### Performance vs Callan Global Equity (Gross)



### Relative Return vs MSCI World



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



## LSV Asset Management Period Ended June 30, 2022

### Investment Philosophy

The Global Value (ACWI) Equity strategy is managed using quantitative techniques to select individual securities in a risk-controlled, bottom-up approach. Value factors and security selection dominate sector/industry factors as explanators of performance. **The Benchmark is comprised of MSCI ACWI through June 30, 2019; MSCI ACWI IMI Index thereafter.**

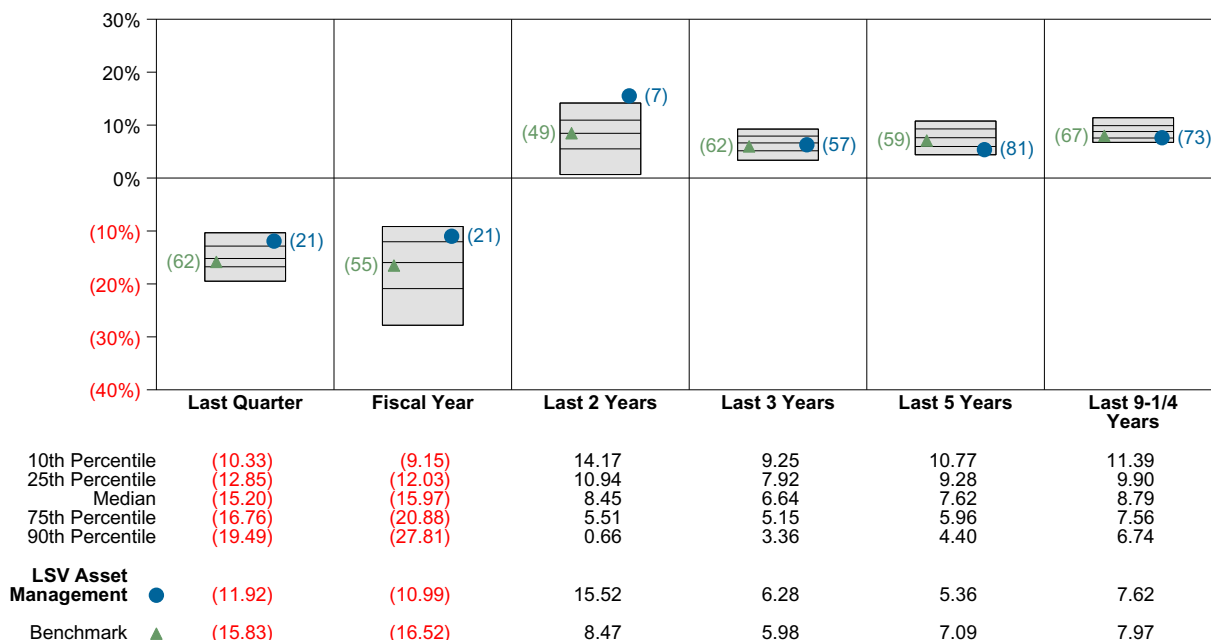
### Quarterly Summary and Highlights

- LSV Asset Management's portfolio posted a (11.92)% return for the quarter placing it in the 21 percentile of the Callan Global Equity group for the quarter and in the 21 percentile for the last year.
- LSV Asset Management's portfolio outperformed the Benchmark by 3.92% for the quarter and outperformed the Benchmark for the year by 5.53%.

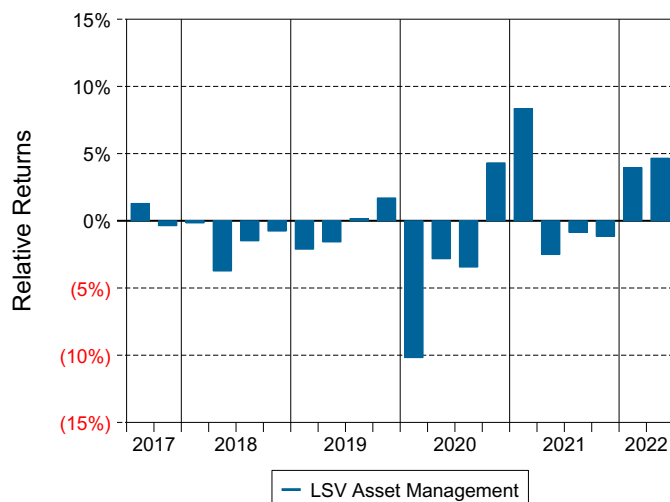
### Quarterly Asset Growth

Beginning Market Value	\$447,770,190
Net New Investment	\$-109,751
Investment Gains/(Losses)	\$-53,360,094
Ending Market Value	\$394,300,346

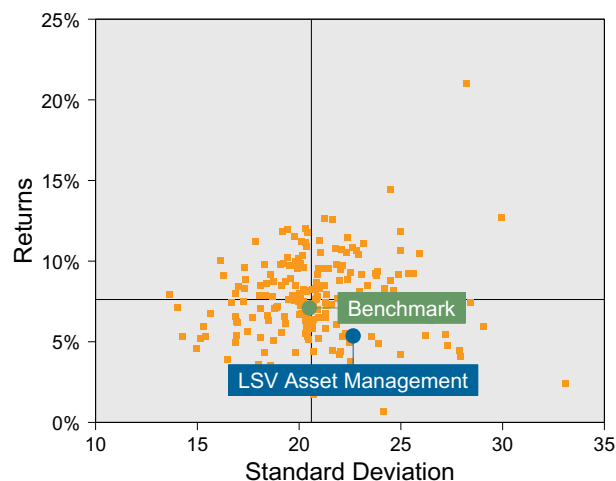
### Performance vs Callan Global Equity (Gross)



### Relative Return vs Benchmark



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





## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2022. 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, 2022

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 21-1/2 Years
<b>Private Equity</b>	<b>(6.48%)</b>	<b>11.73%</b>	<b>19.66%</b>	<b>14.39%</b>	<b>5.05%</b>
Adams St 1998 Partnership	(0.63%)	(2.05%)	(1.37%)	0.82%	1.47%
Adams St 1999 Partnership	(2.38%)	(0.76%)	2.55%	0.35%	2.18%
Adams St 2000 Partnership	(5.35%)	(10.31%)	(7.30%)	(0.24%)	2.40%
Adams St 2001 Partnership	(8.85%)	(17.89%)	0.36%	1.92%	3.29%
Adams St 2002 Partnership	(2.60%)	(5.65%)	(2.03%)	(2.92%)	-
Adams St 2003 Partnership	(5.69%)	(31.63%)	(15.21%)	(5.93%)	-
Adams St 2000 Non-US	(7.75%)	(18.86%)	(9.25%)	(2.25%)	1.86%
Adams St 2001 Non-US	(0.10%)	(0.86%)	0.30%	4.32%	-
Adams St 2002 Non-US	(0.29%)	6.38%	0.18%	0.76%	-
Adams St 2003 Non-US	(6.90%)	(17.14%)	(8.79%)	(7.47%)	-
Adams St 2004 Non-US	(8.34%)	(11.35%)	7.80%	7.78%	-
Adams St 2006 Direct Co-Invest Fund	30.01%	(8.29%)	(24.25%)	(24.23%)	-
Adams St 2008 Fund	(17.10%)	(15.96%)	10.59%	13.18%	-
Adams St 2010 Direct Fund	(18.65%)	(7.76%)	10.28%	13.03%	-
Adams St 2010 Partnership	(15.69%)	10.63%	32.39%	26.40%	-
Adams St 2010 Non-US	(15.18%)	(5.55%)	17.43%	18.27%	-
Adams St 2010 NonUS Emg	(20.98%)	(9.82%)	12.04%	13.63%	-
Adams St 2015 Global Fund	(11.99%)	11.91%	27.78%	23.59%	-
Adams St 2016 Global Fund	(9.12%)	19.13%	25.05%	19.70%	-
Adams St 2017 Global Fund	(5.66%)	28.72%	28.53%	-	-
Adams St 2018 Global Fund	(10.96%)	21.47%	29.97%	-	-
Adams St 2019 Global Fund	(12.57%)	28.10%	-	-	-
Adams St 2020 Global Fund	(15.15%)	28.68%	-	-	-
Adams St 2021 Global Fund	(26.38%)	-	-	-	-
BlackRock	(2.62%)	8.55%	20.54%	14.53%	-
Blackrock PEP 2020	(2.55%)	7.00%	-	-	-
Sixth Street TAO	1.14%	6.80%	-	-	-
Remaining Misc. Funds*	(4.41%)	(14.39%)	(4.27%)	(1.73%)	-
Russell 1000 Index	(16.67%)	(13.04%)	10.17%	11.00%	7.19%
Russell 2000 Index	(17.20%)	(25.20%)	4.21%	5.17%	7.46%

\* Comprised of Matlin Patterson II, Matlin Patterson III, InvestAmerica Lewis & Clark, InvestAmerica L&C II, Corsair III, Capital Intl Fd V, Capital Intl Fd VI, EIG, Quantum Energy Partners, Hearthstone MSII, Hearthstone MSIII.



## Domestic Fixed Income Period Ended June 30, 2022

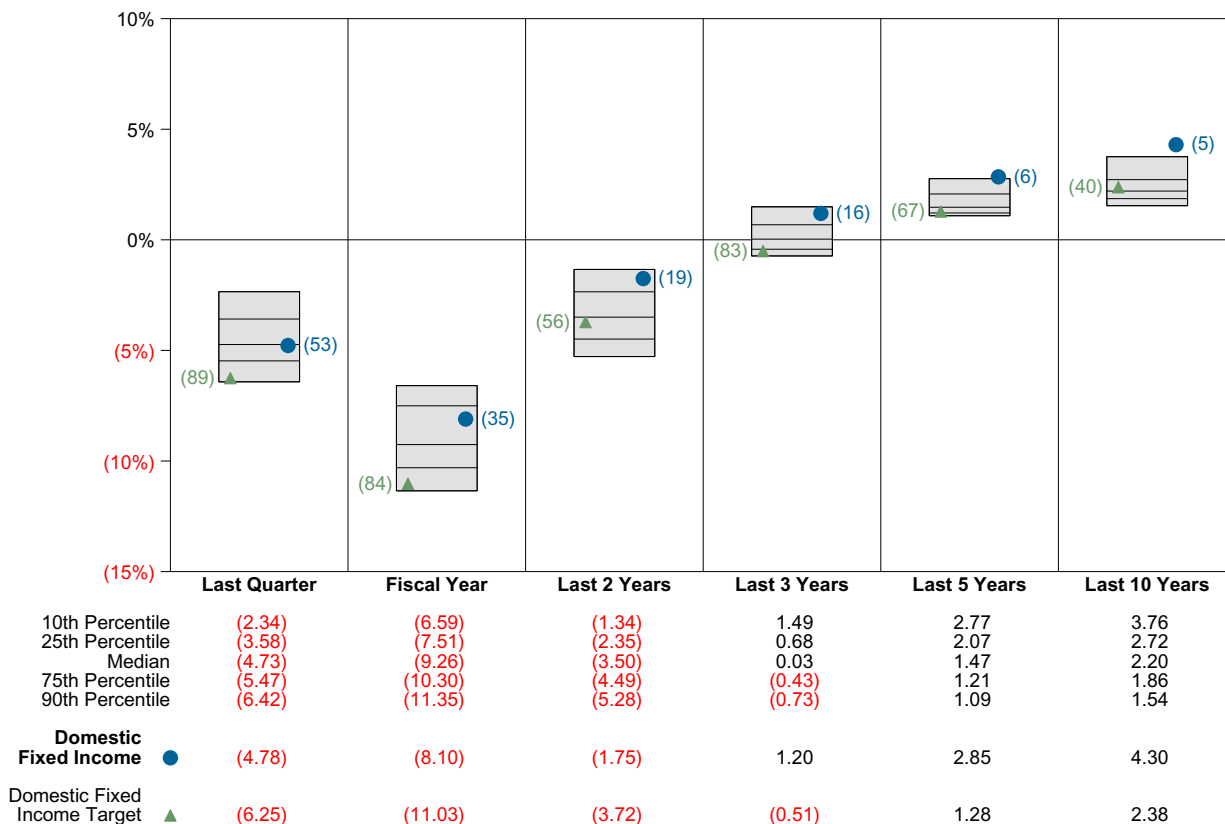
### Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a (4.78)% return for the quarter placing it in the 53 percentile of the Public Fund - Domestic Fixed group for the quarter and in the 35 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Domestic Fixed Income Target by 1.48% for the quarter and outperformed the Domestic Fixed Income Target for the year by 2.92%.

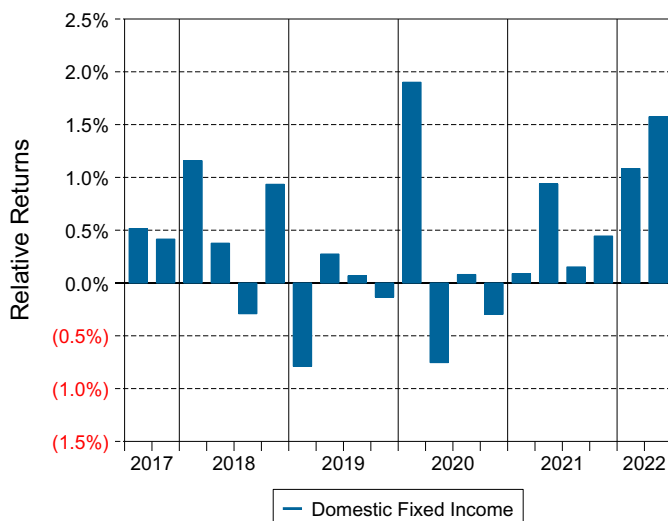
### Quarterly Asset Growth

Beginning Market Value	\$1,884,923,224
Net New Investment	\$-58,307,847
Investment Gains/(Losses)	\$-90,311,637
Ending Market Value	\$1,736,303,740

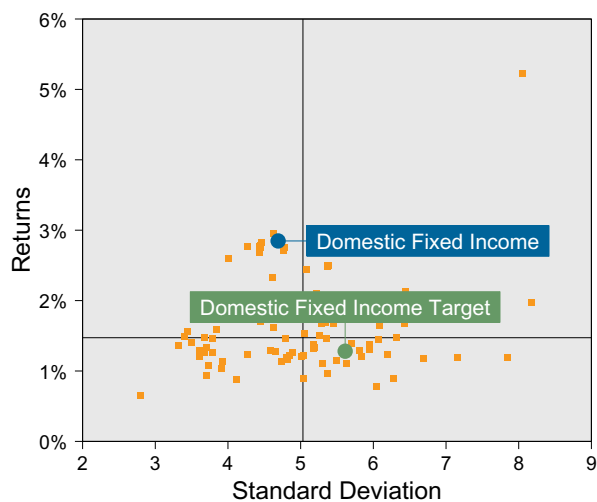
### Performance vs Public Fund - Domestic Fixed (Gross)



### Relative Returns vs Domestic Fixed Income Target



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



## Declaration Total Return Period Ended June 30, 2022

### 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.

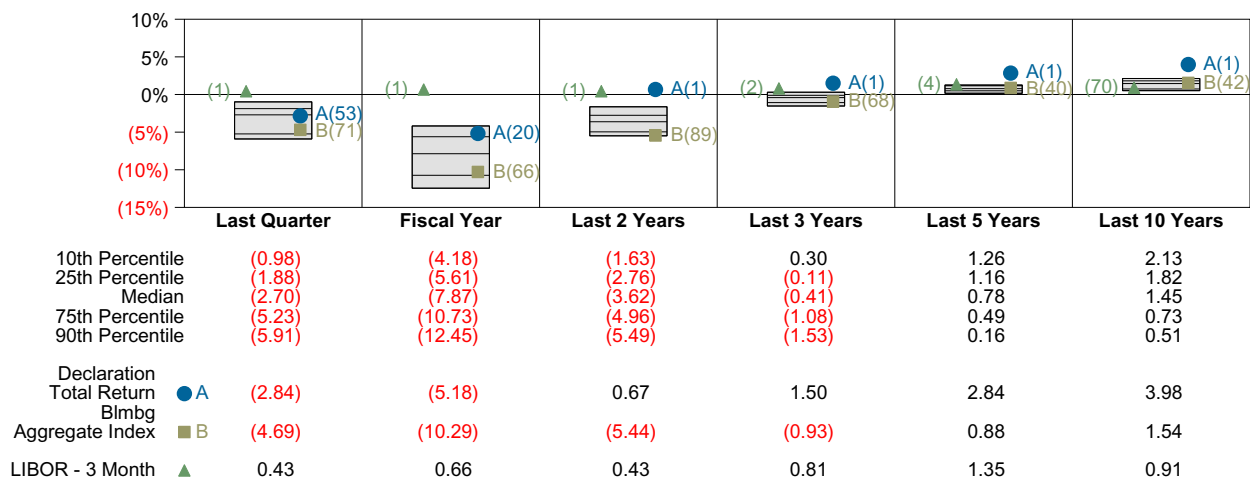
### Quarterly Summary and Highlights

- Declaration Total Return's portfolio posted a (2.84)% return for the quarter placing it in the 53 percentile of the Callan Intermediate Fixed Inc Mut Funds group for the quarter and in the 20 percentile for the last year.
- Declaration Total Return's portfolio underperformed the LIBOR - 3 Month by 3.28% for the quarter and underperformed the LIBOR - 3 Month for the year by 5.84%.

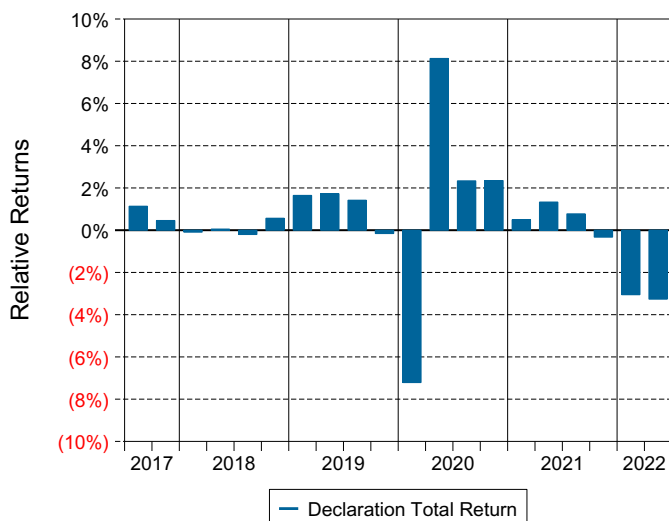
### Quarterly Asset Growth

Beginning Market Value	\$153,125,432
Net New Investment	\$-100,346
Investment Gains/(Losses)	\$-4,352,939
Ending Market Value	\$148,672,147

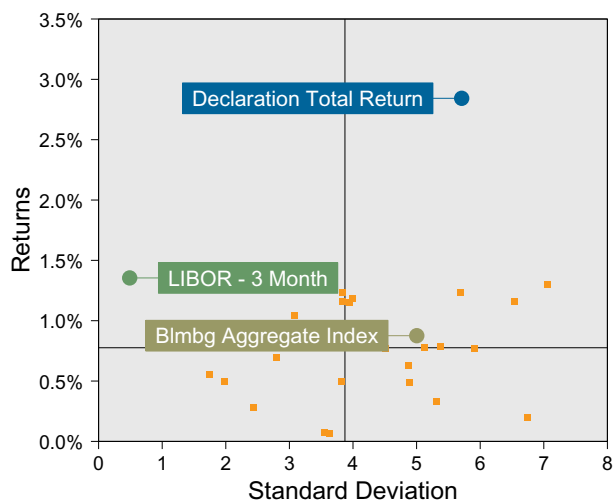
### Performance vs Callan Intermediate Fixed Inc Mut Funds (Net)



### Relative Return vs LIBOR - 3 Month



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





## PIMCO DiSCO II

### Period Ended June 30, 2022

#### 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.

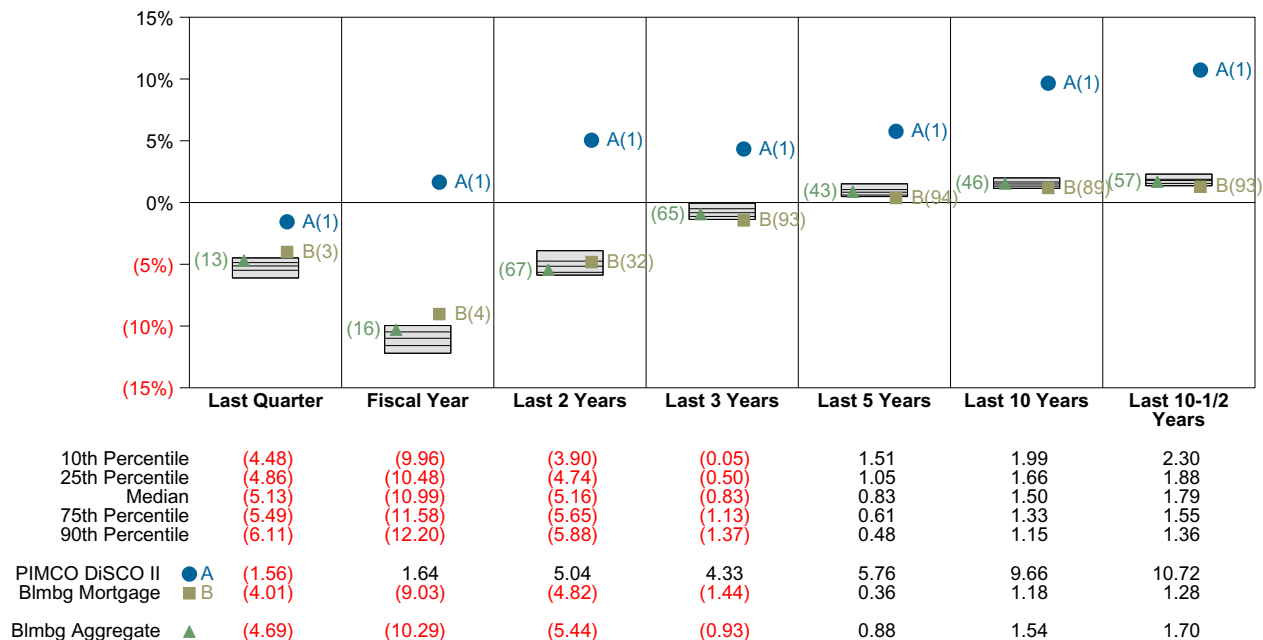
#### Quarterly Summary and Highlights

- PIMCO DiSCO II's portfolio posted a (1.56)% 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 3.13% for the quarter and outperformed the Blmbg Aggregate for the year by 11.94%.

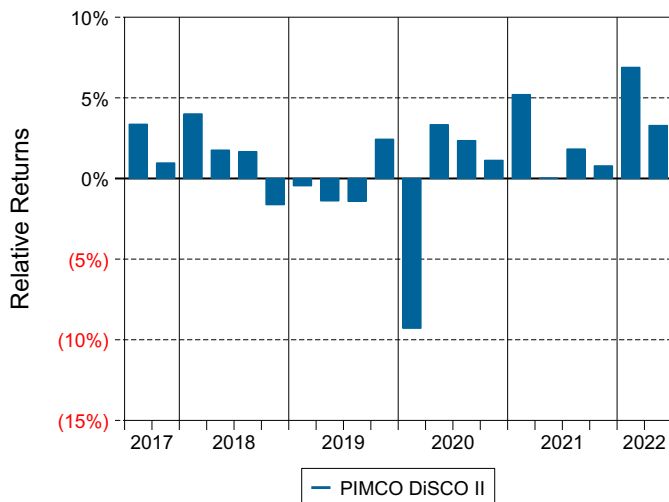
#### Quarterly Asset Growth

Beginning Market Value	\$102,091,741
Net New Investment	\$0
Investment Gains/(Losses)	\$-1,594,120
Ending Market Value	\$100,497,621

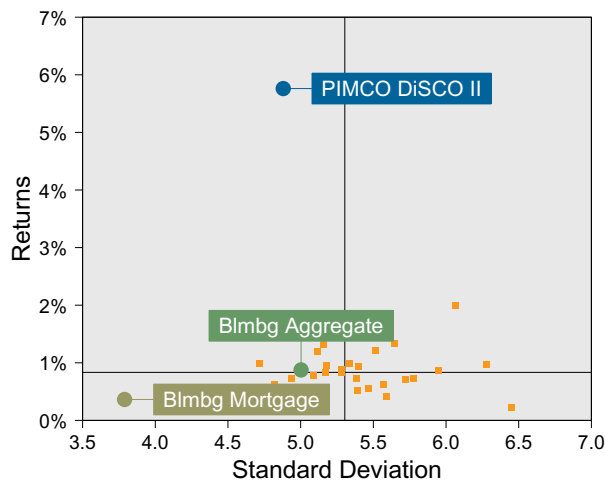
#### Performance vs Callan Core Bond Mutual Funds (Net)



#### Relative Return vs Blmbg Aggregate



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



## PIMCO Core Plus Constrained Period Ended June 30, 2022

### 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. **The product changed from Commingled Fund to Separate Account in March 2014. \*Libor-3 month through February 28, 2017; Fund's performance through March 31, 2014; Libor-3 month through June 30, 2018; Bloomberg Aggregate thereafter.**

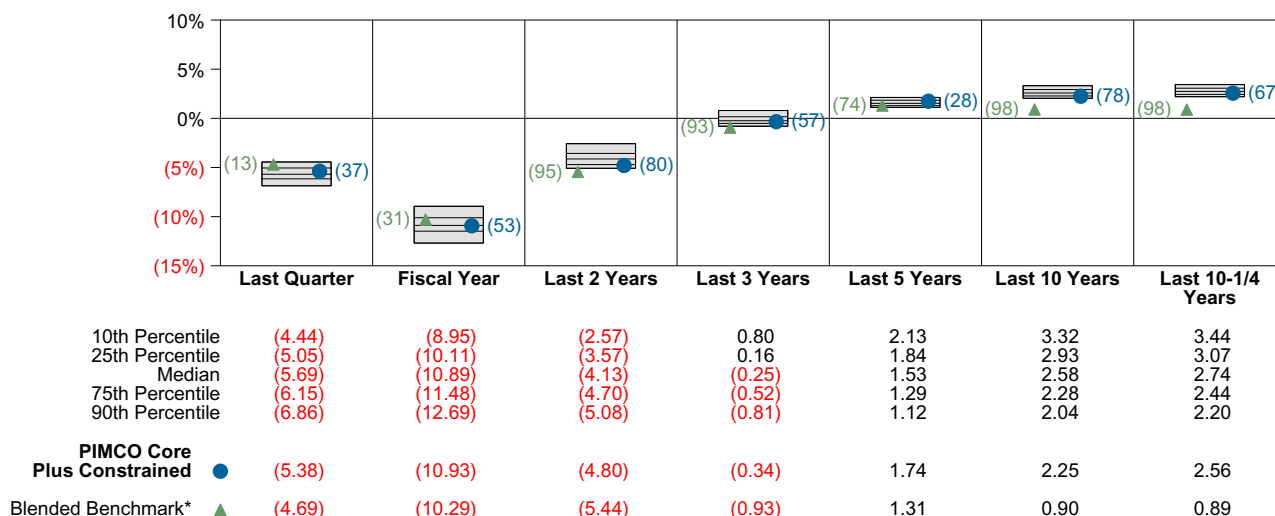
### Quarterly Summary and Highlights

- PIMCO Core Plus Constrained's portfolio posted a (5.38)% return for the quarter placing it in the 37 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 53 percentile for the last year.
- PIMCO Core Plus Constrained's portfolio underperformed the Blended Benchmark\* by 0.69% for the quarter and underperformed the Blended Benchmark\* for the year by 0.64%.

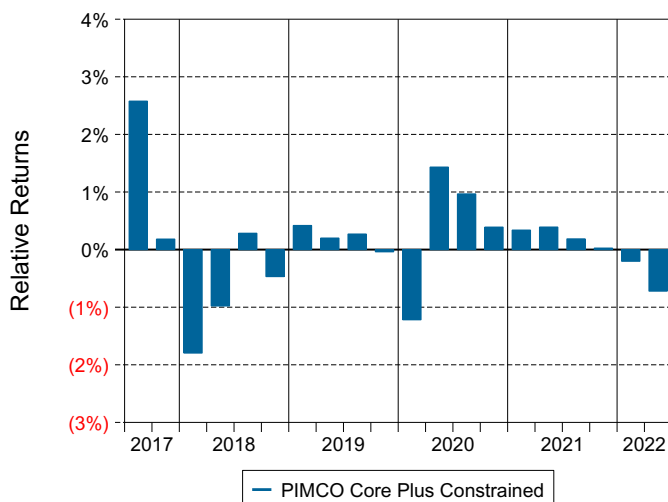
### Quarterly Asset Growth

Beginning Market Value	\$479,137,753
Net New Investment	\$-22,249,287
Investment Gains/(Losses)	\$-26,128,561
Ending Market Value	\$430,759,904

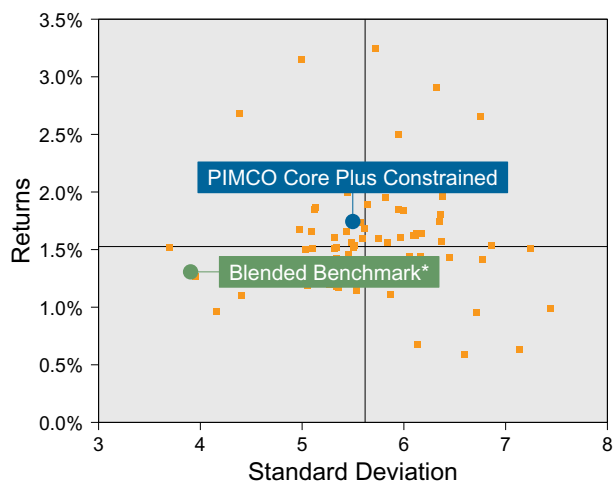
### Performance vs Callan Core Plus Fixed Income (Gross)



### Relative Return vs Blended Benchmark\*



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



## Prudential Core Period Ended June 30, 2022

### Investment Philosophy

The PGIM Fixed Income Core Fixed Income strategy seeks to provide +60 bps over the Bloomberg Barclays Aggregate Index over a market cycle. The strategy tends to generate its excess return from fairly equal increments of both sector allocation and subsector/security allocation. Duration and yield curve positioning is generally de-emphasized, but will be considered when market opportunities dictate. The primary way they add value is through intensive research-based sector, industry, and security selection. The strategy is predominately investment grade, but may also invest nominally in crossover/high yield bonds and emerging markets debt, when guidelines permit.

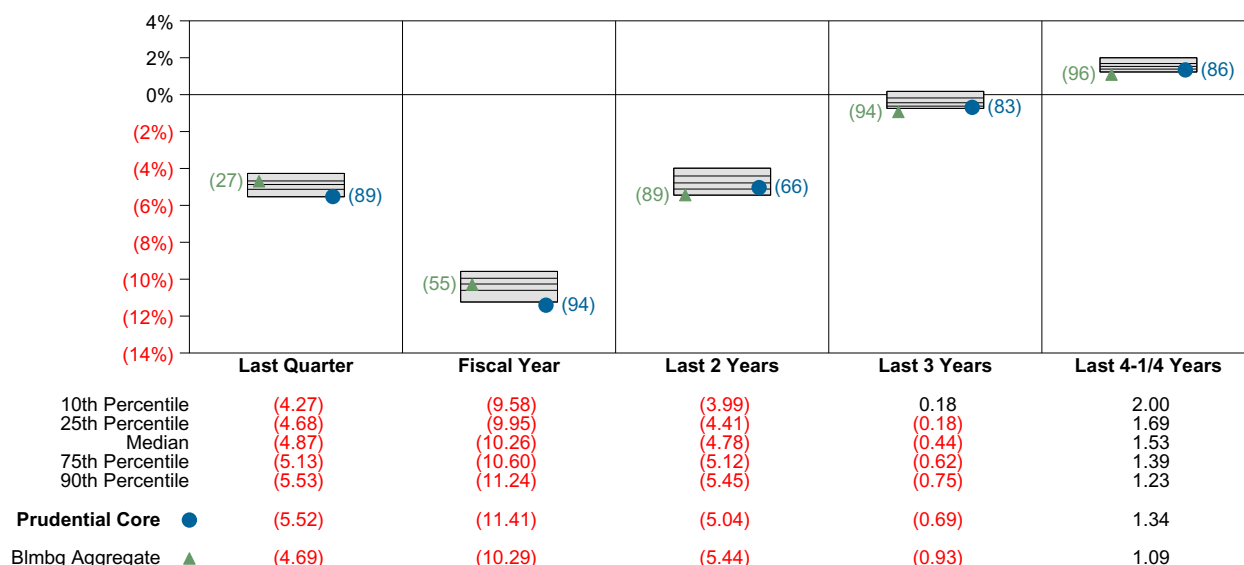
### Quarterly Summary and Highlights

- Prudential Core's portfolio posted a (5.52)% return for the quarter placing it in the 89 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 94 percentile for the last year.
- Prudential Core's portfolio underperformed the Blmbg Aggregate by 0.83% for the quarter and underperformed the Blmbg Aggregate for the year by 1.12%.

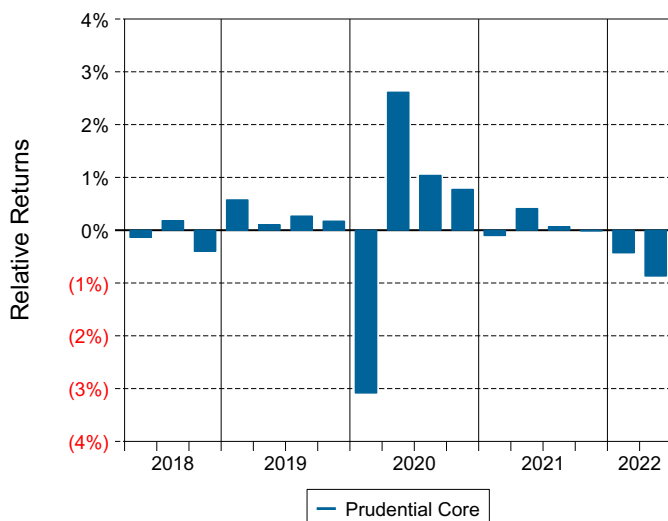
### Quarterly Asset Growth

Beginning Market Value	\$482,081,359
Net New Investment	\$-22,234,844
Investment Gains/(Losses)	\$-26,494,418
Ending Market Value	\$433,352,096

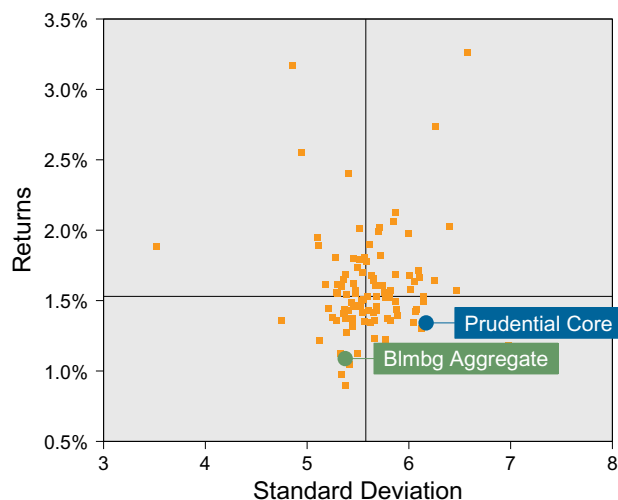
### Performance vs Callan Core Bond Fixed Income (Gross)



### Relative Return vs Blmbg Aggregate



### Callan Core Bond Fixed Income (Gross) Annualized Four and One-Quarter Year Risk vs Return



## SSgA Long US Treas Index Period Ended June 30, 2022

### Investment Philosophy

The Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Bloomberg Capital U.S. Long Treasury Bond Index over the long term.

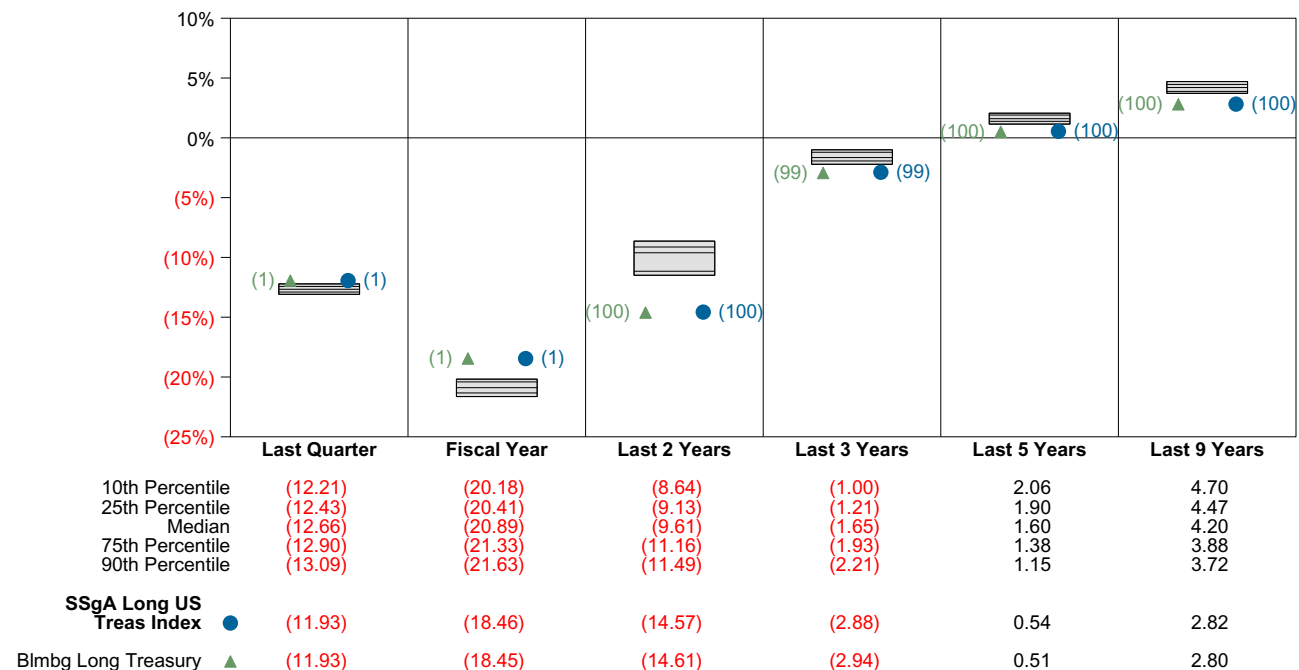
### Quarterly Summary and Highlights

- SSgA Long US Treas Index's portfolio posted a (11.93)% return for the quarter placing it in the 1 percentile of the Callan Extended Maturity Fixed Income group for the quarter and in the 1 percentile for the last year.
- SSgA Long US Treas Index's portfolio outperformed the Blmbg Long Treasury by 0.00% for the quarter and underperformed the Blmbg Long Treasury for the year by 0.01%.

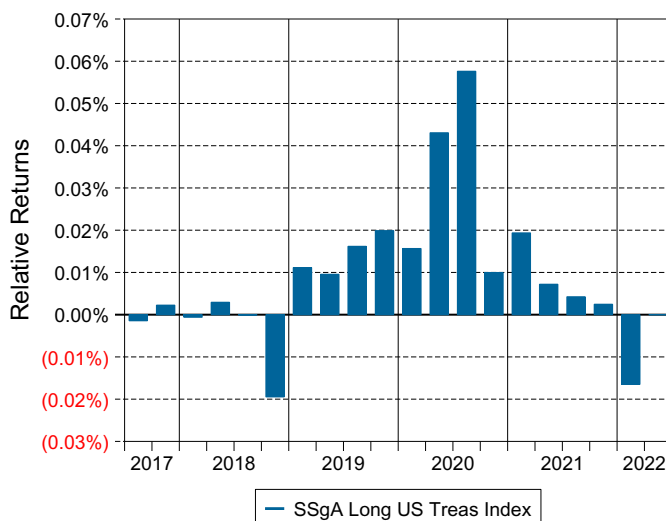
### Quarterly Asset Growth

Beginning Market Value	\$159,703,834
Net New Investment	\$-11,006,246
Investment Gains/(Losses)	\$-19,397,045
Ending Market Value	\$129,300,543

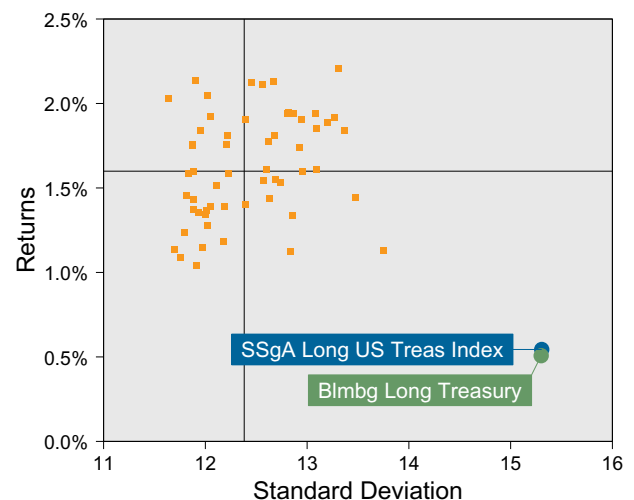
### Performance vs Callan Extended Maturity Fixed Income (Gross)



### Relative Return vs Blmbg Long Treasury



### Callan Extended Maturity Fixed Income (Gross) Annualized Five Year Risk vs Return



## Ares ND Credit Strategies Fd Period Ended June 30, 2022

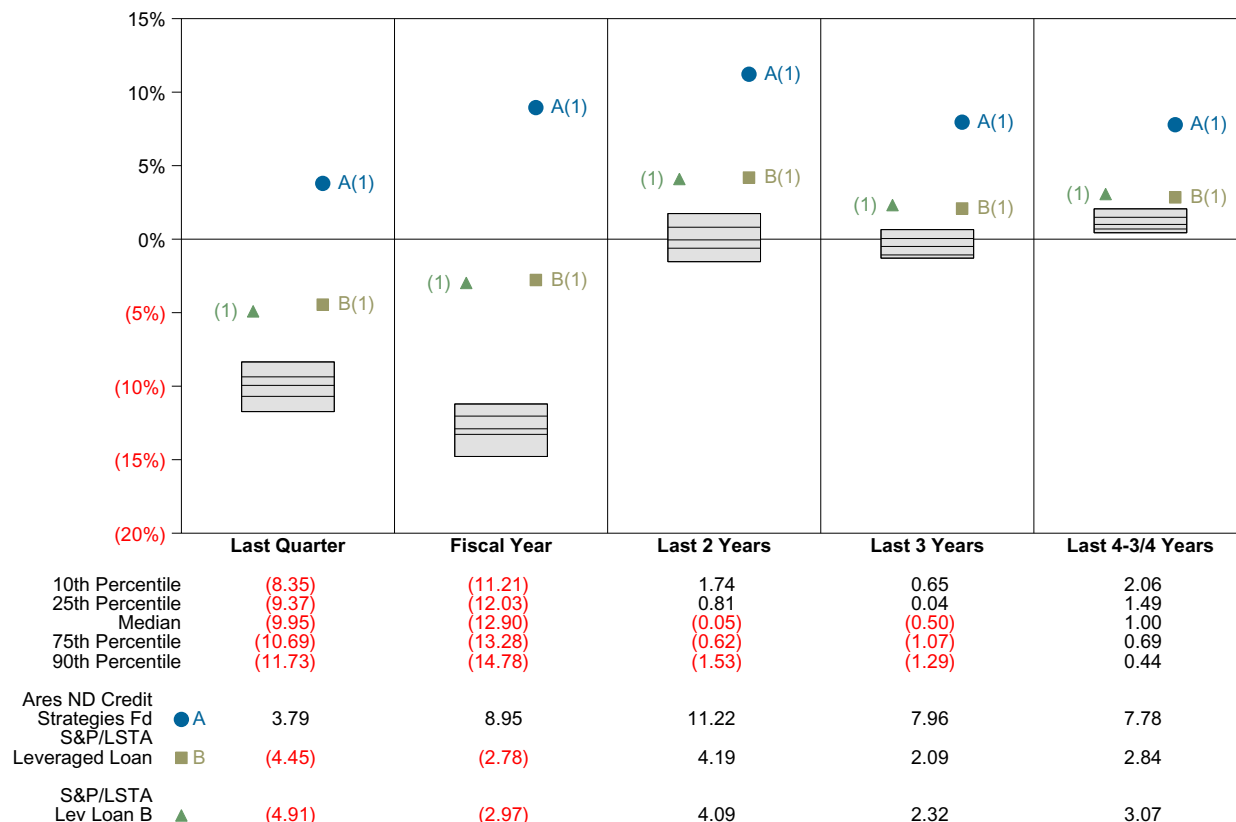
### Quarterly Summary and Highlights

- Ares ND Credit Strategies Fd's portfolio posted a 3.79% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Ares ND Credit Strategies Fd's portfolio outperformed the S&P/LSTA Lev Loan B by 8.70% for the quarter and outperformed the S&P/LSTA Lev Loan B for the year by 11.92%.

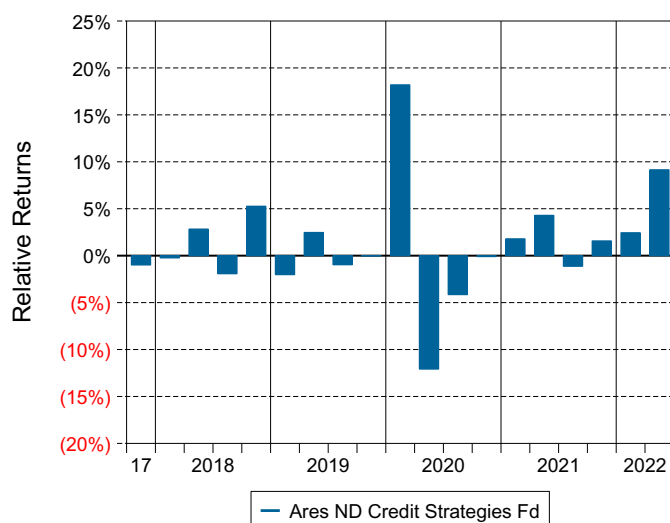
### Quarterly Asset Growth

Beginning Market Value	\$150,411,117
Net New Investment	\$0
Investment Gains/(Losses)	\$5,704,366
Ending Market Value	\$156,115,483

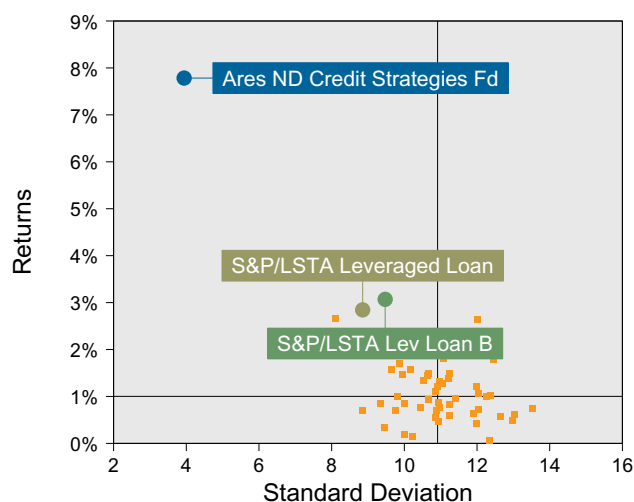
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs S&P/LSTA Lev Loan B



### Callan High Yield Mutual Funds (Net) Annualized Four and Three-Quarter Year Risk vs Return



# Cerberus ND Private Credit Fd

## Period Ended June 30, 2022

### 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.

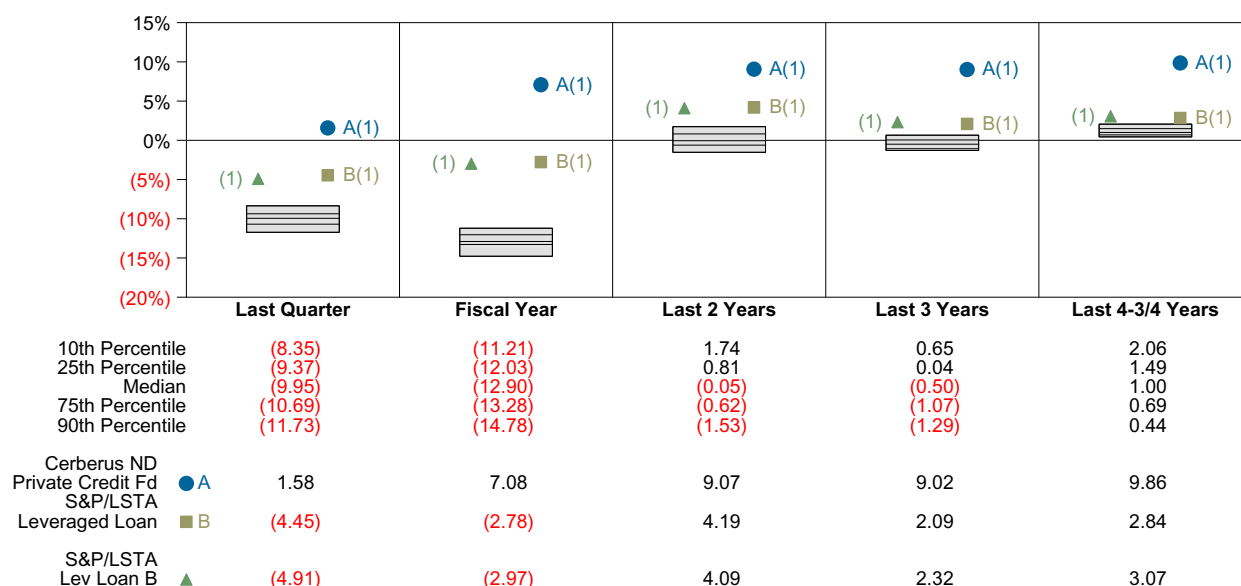
### Quarterly Summary and Highlights

- Cerberus ND Private Credit Fd's portfolio posted a 1.58% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Cerberus ND Private Credit Fd's portfolio outperformed the S&P/LSTA Lev Loan B by 6.49% for the quarter and outperformed the S&P/LSTA Lev Loan B for the year by 10.06%.

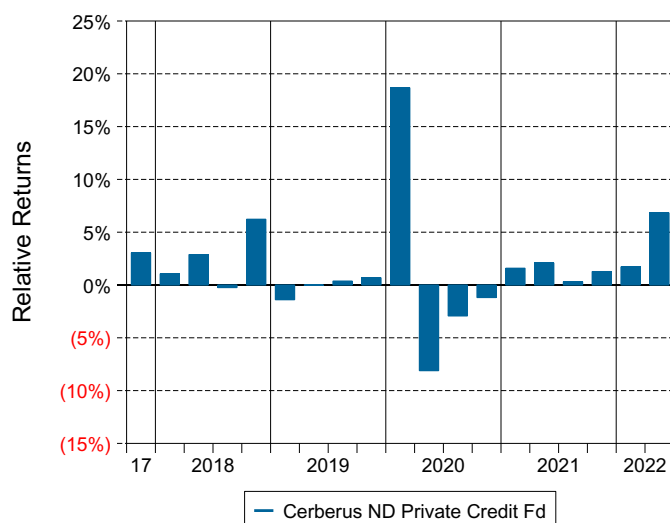
### Quarterly Asset Growth

Beginning Market Value	\$164,978,163
Net New Investment	\$0
Investment Gains/(Losses)	\$2,607,036
Ending Market Value	\$167,585,199

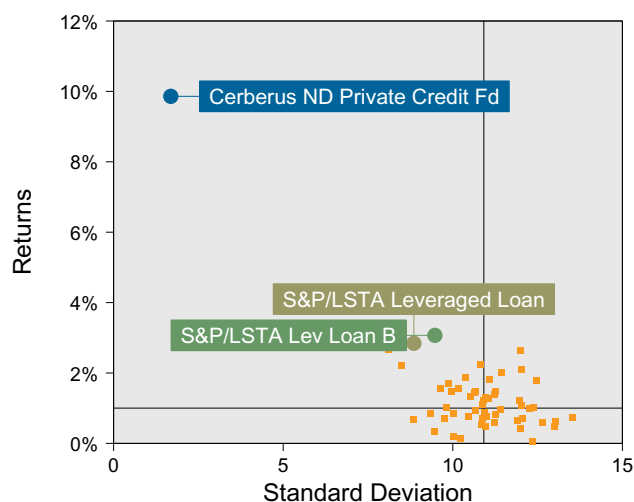
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs S&P/LSTA Lev Loan B



### Callan High Yield Mutual Funds (Net) Annualized Four and Three-Quarter Year Risk vs Return



## Goldman Sachs 2006 Offshore Period Ended June 30, 2022

### Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

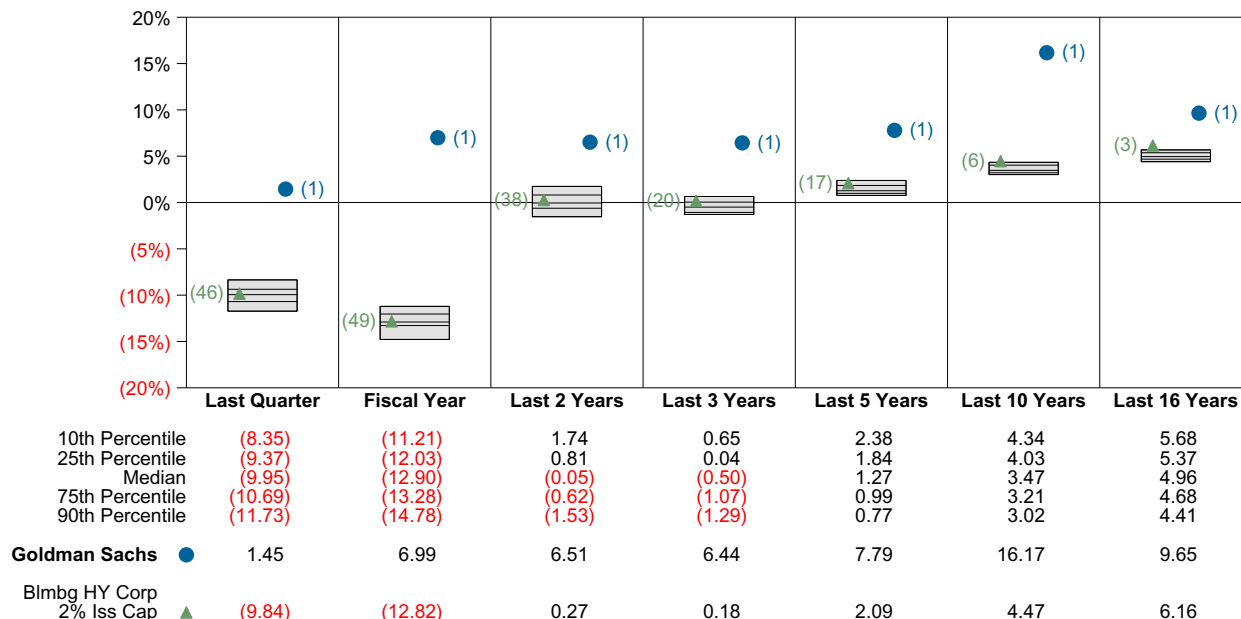
### Quarterly Summary and Highlights

- Goldman Sachs's portfolio posted a 1.45% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- Goldman Sachs's portfolio outperformed the Blmbg HY Corp 2% Iss Cap by 11.29% for the quarter and outperformed the Blmbg HY Corp 2% Iss Cap for the year by 19.81%.

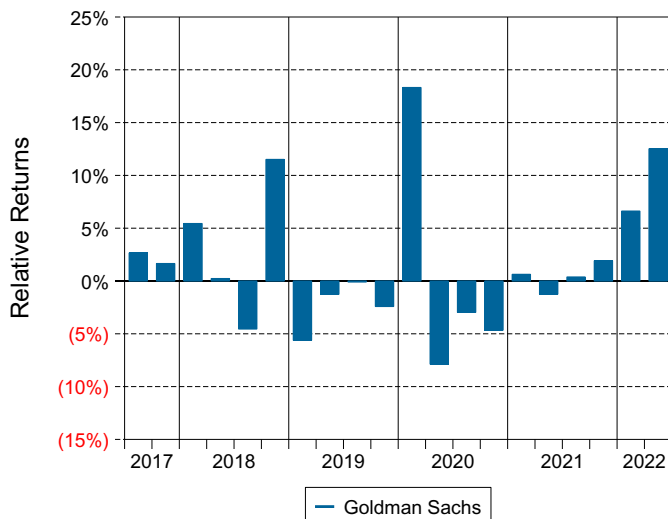
### Quarterly Asset Growth

Beginning Market Value	\$48,945
Net New Investment	\$0
Investment Gains/(Losses)	\$709
Ending Market Value	\$49,654

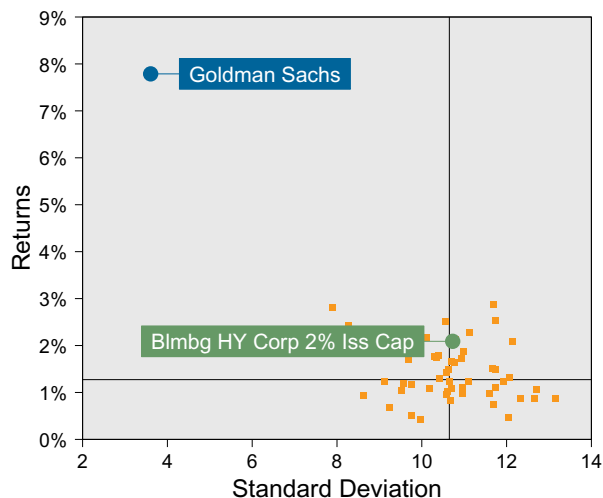
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs Blmbg HY Corp 2% Iss Cap



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



## Goldman Sachs Offshore Fund V Period Ended June 30, 2022

### Investment Philosophy

GS Mezzanine Partners seeks large-sized mezzanine investments comprised generally of fixed income securities and an associated equity component. They focus on providing "private high yield" capital for mid- to large-sized leveraged and management buyout transactions, recapitalizations, financings, re-financings, acquisitions and restructurings for private equity firms, private family companies and corporate issuers.

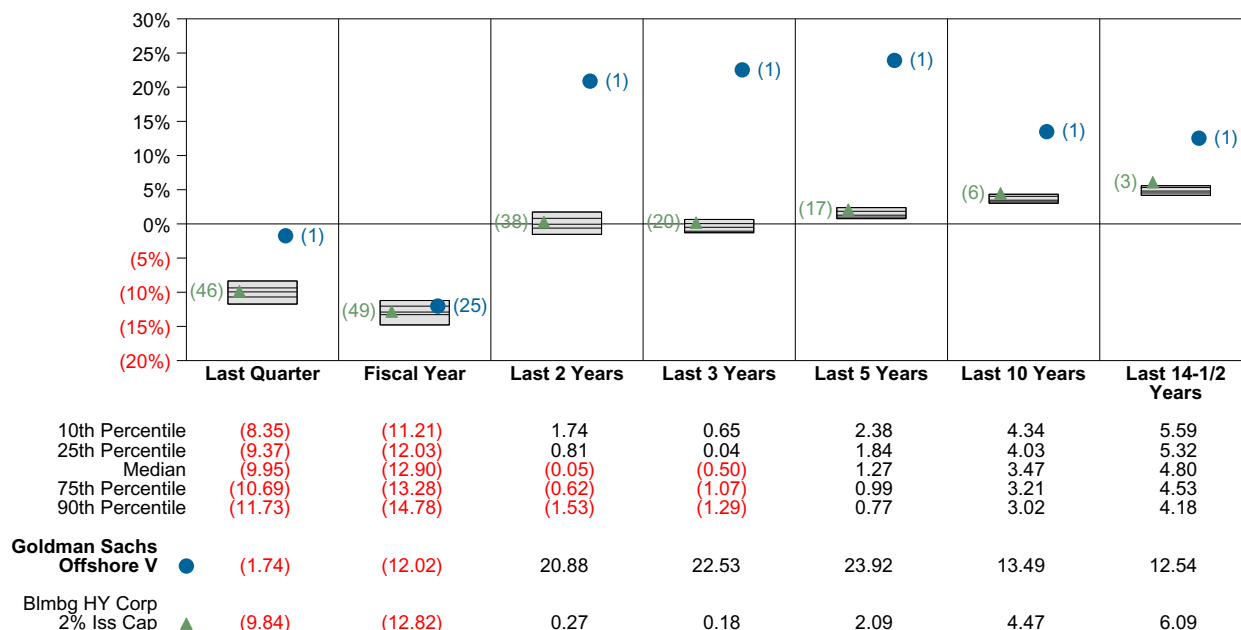
### Quarterly Summary and Highlights

- Goldman Sachs Offshore V's portfolio posted a (1.74)% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 25 percentile for the last year.
- Goldman Sachs Offshore V's portfolio outperformed the Blmbg HY Corp 2% Iss Cap by 8.10% for the quarter and outperformed the Blmbg HY Corp 2% Iss Cap for the year by 0.80%.

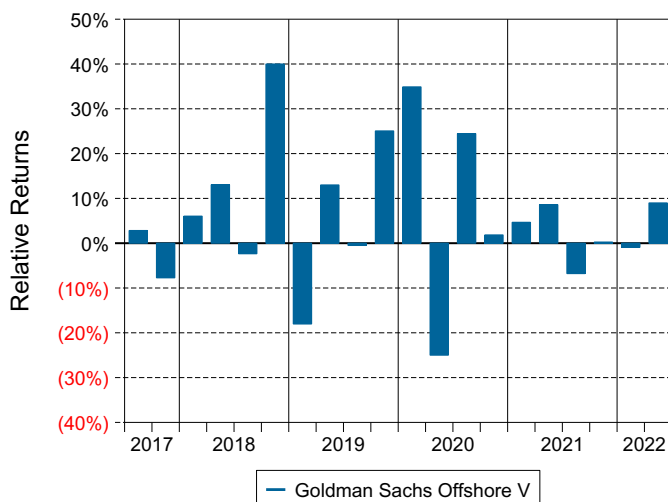
### Quarterly Asset Growth

Beginning Market Value	\$121,033
Net New Investment	\$0
Investment Gains/(Losses)	\$-2,104
Ending Market Value	\$118,929

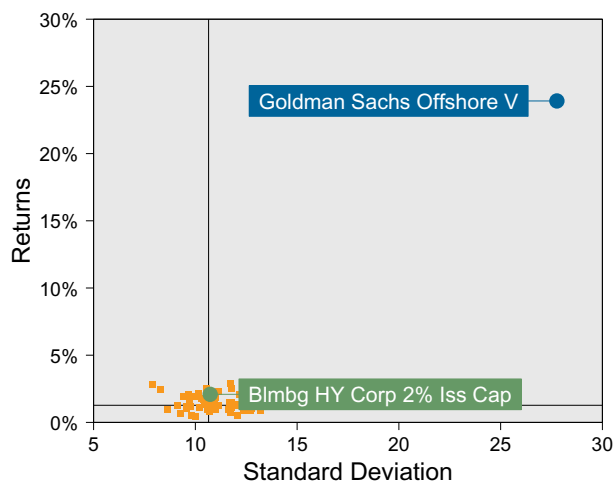
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs Blmbg HY Corp 2% Iss Cap



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





# Loomis Sayles

## Period Ended June 30, 2022

### Investment Philosophy

The High Yield Full Discretion Strategy seeks to identify attractive sectors and specific investment opportunities primarily within the global fixed income market through a global economic and interest rate framework. Portfolio managers incorporate a long-term macroeconomic view along with a stringent bottom-up investment evaluation process that drives security selection and resulting sector allocations. Opportunistic investments in non-benchmark sectors including investment grade corporate, emerging market, and non-US dollar debt and convertible bonds help to manage overall portfolio risk and enhance total return potential.

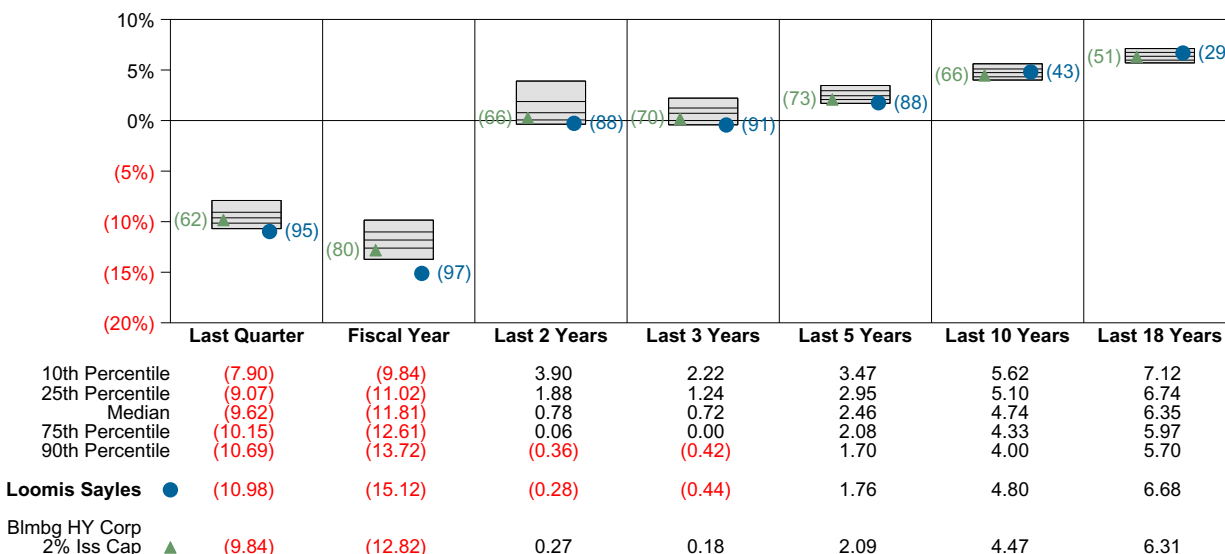
### Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a (10.98)% return for the quarter placing it in the 95 percentile of the Callan High Yield Fixed Income group for the quarter and in the 97 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Blmbg HY Corp 2% Iss Cap by 1.14% for the quarter and underperformed the Blmbg HY Corp 2% Iss Cap for the year by 2.29%.

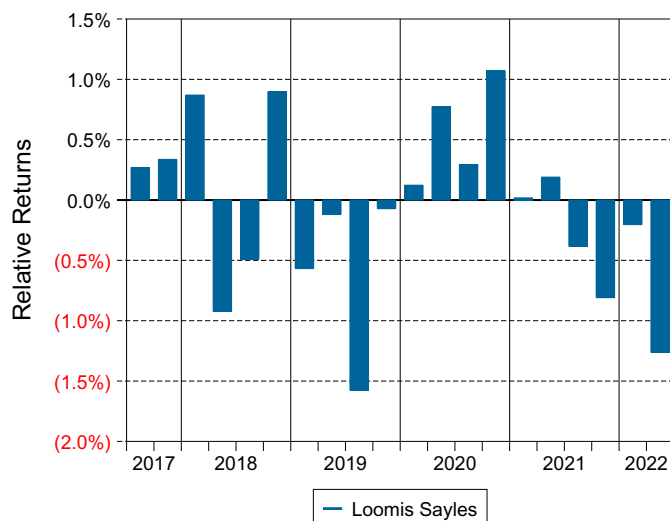
### Quarterly Asset Growth

Beginning Market Value	\$182,773,853
Net New Investment	\$-214,759
Investment Gains/(Losses)	\$-20,047,586
Ending Market Value	\$162,511,508

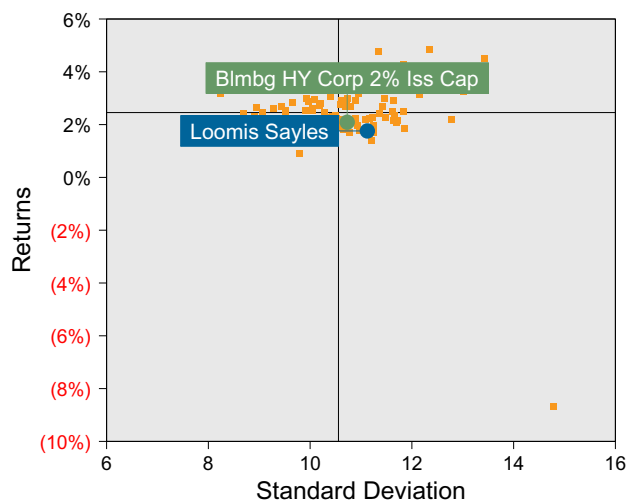
### Performance vs Callan High Yield Fixed Income (Gross)



### Relative Return vs Blmbg HY Corp 2% Iss Cap



### Callan High Yield Fixed Income (Gross) Annualized Five Year Risk vs Return



## PIMCO Bravo II Fund Period Ended June 30, 2022

### 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.

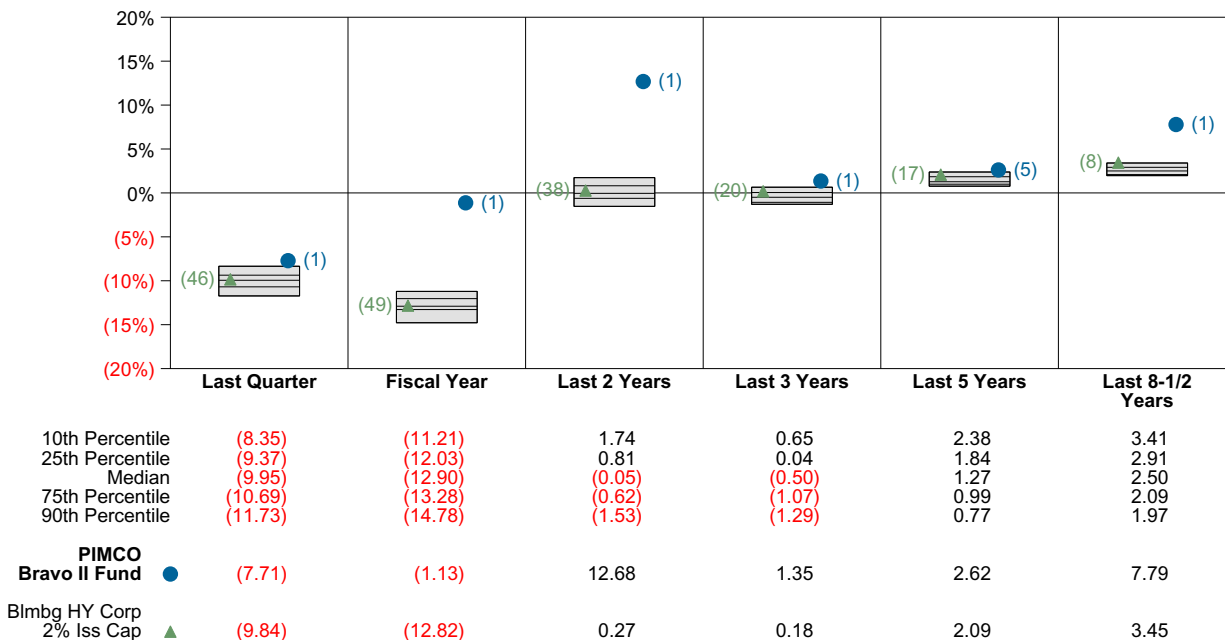
### Quarterly Summary and Highlights

- PIMCO Bravo II Fund's portfolio posted a (7.71)% return for the quarter placing it in the 1 percentile of the Callan High Yield Mutual Funds group for the quarter and in the 1 percentile for the last year.
- PIMCO Bravo II Fund's portfolio outperformed the Blmbg HY Corp 2% Iss Cap by 2.13% for the quarter and outperformed the Blmbg HY Corp 2% Iss Cap for the year by 11.69%.

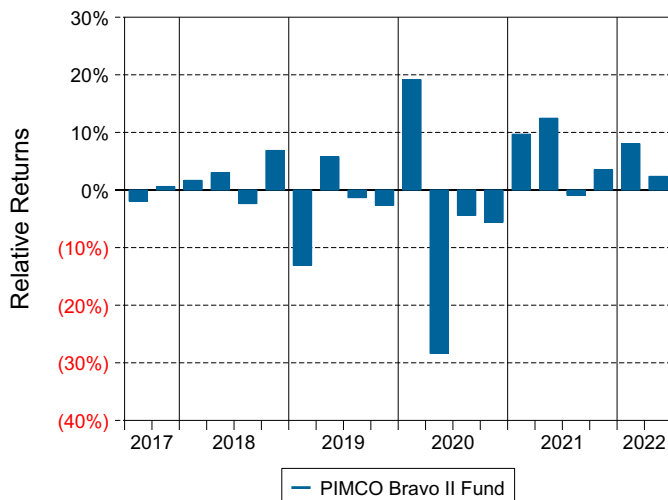
### Quarterly Asset Growth

Beginning Market Value	\$10,449,994
Net New Investment	\$-2,502,364
Investment Gains/(Losses)	\$-606,975
Ending Market Value	\$7,340,655

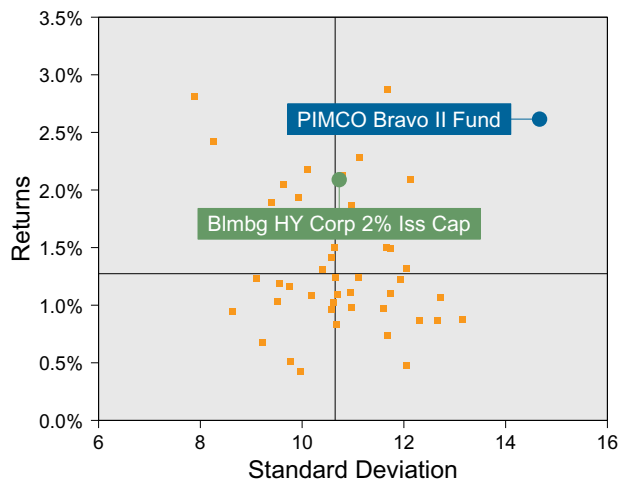
### Performance vs Callan High Yield Mutual Funds (Net)



### Relative Return vs Blmbg HY Corp 2% Iss Cap



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





## Real Estate Period Ended June 30, 2022

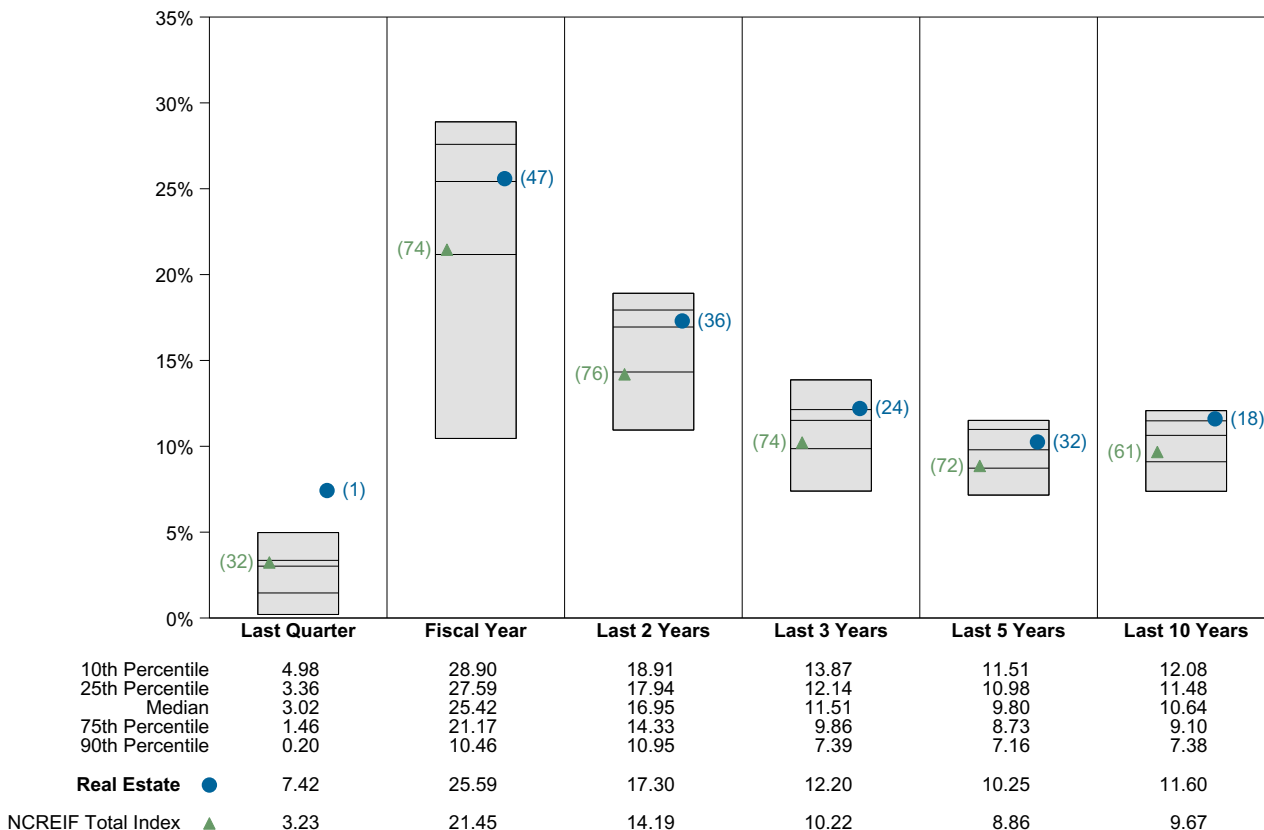
### Quarterly Summary and Highlights

- Real Estate's portfolio posted a 7.42% return for the quarter placing it in the 1 percentile of the Public Fund - Real Estate group for the quarter and in the 47 percentile for the last year.
- Real Estate's portfolio outperformed the NCREIF Total Index by 4.19% for the quarter and outperformed the NCREIF Total Index for the year by 4.13%.

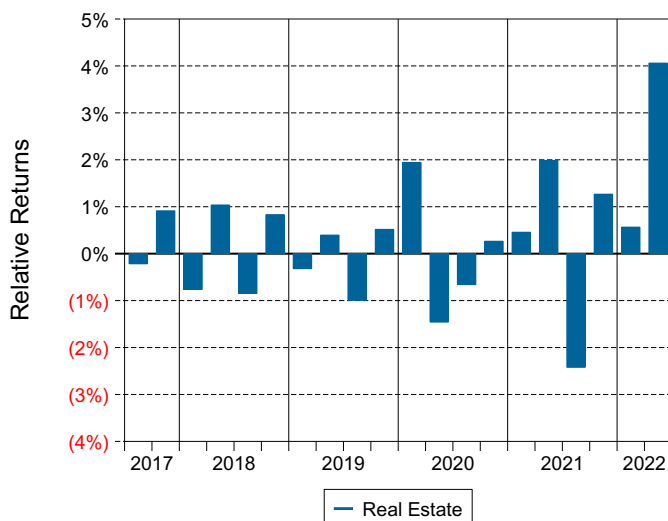
### Quarterly Asset Growth

Beginning Market Value	\$818,008,369
Net New Investment	\$3,371,766
Investment Gains/(Losses)	\$60,839,501
Ending Market Value	\$882,219,637

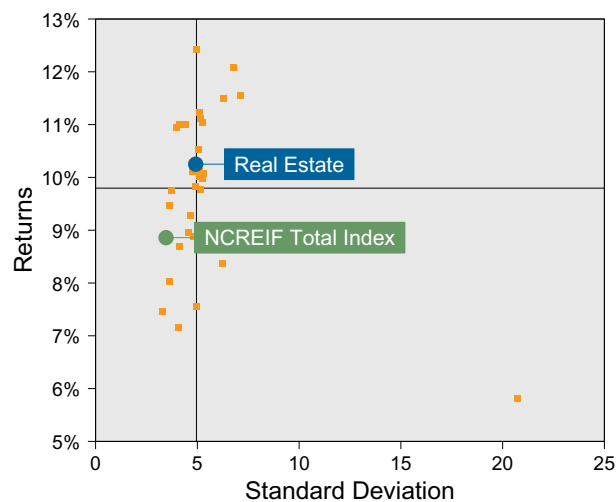
### Performance vs Public Fund - Real Estate (Gross)



### Relative Return vs NCREIF Total Index



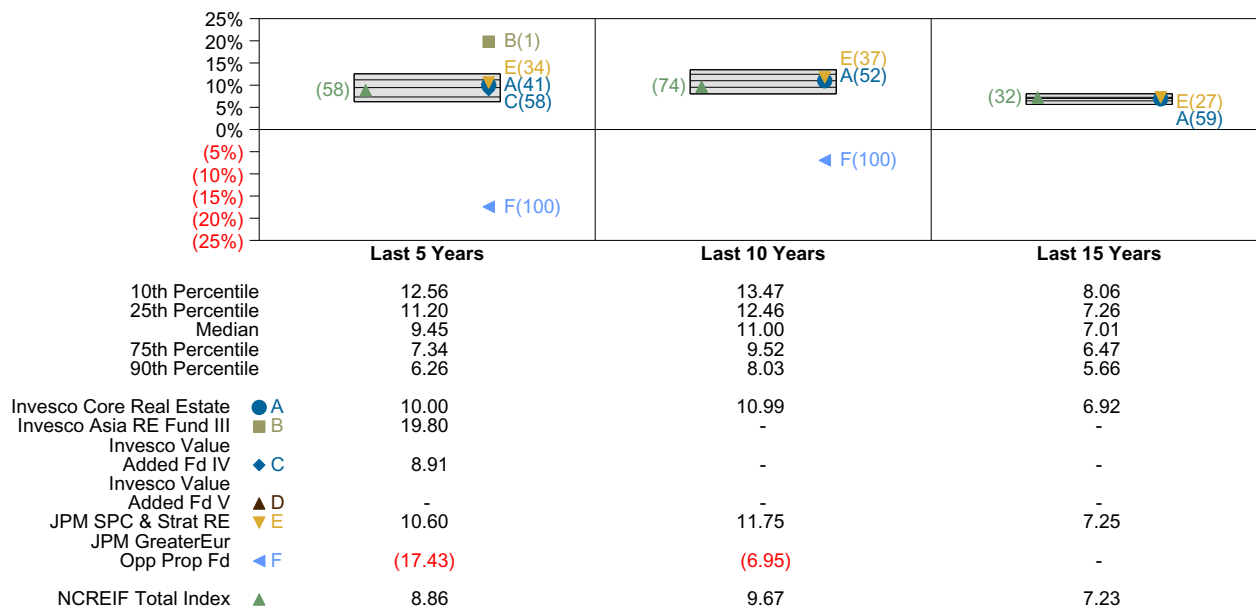
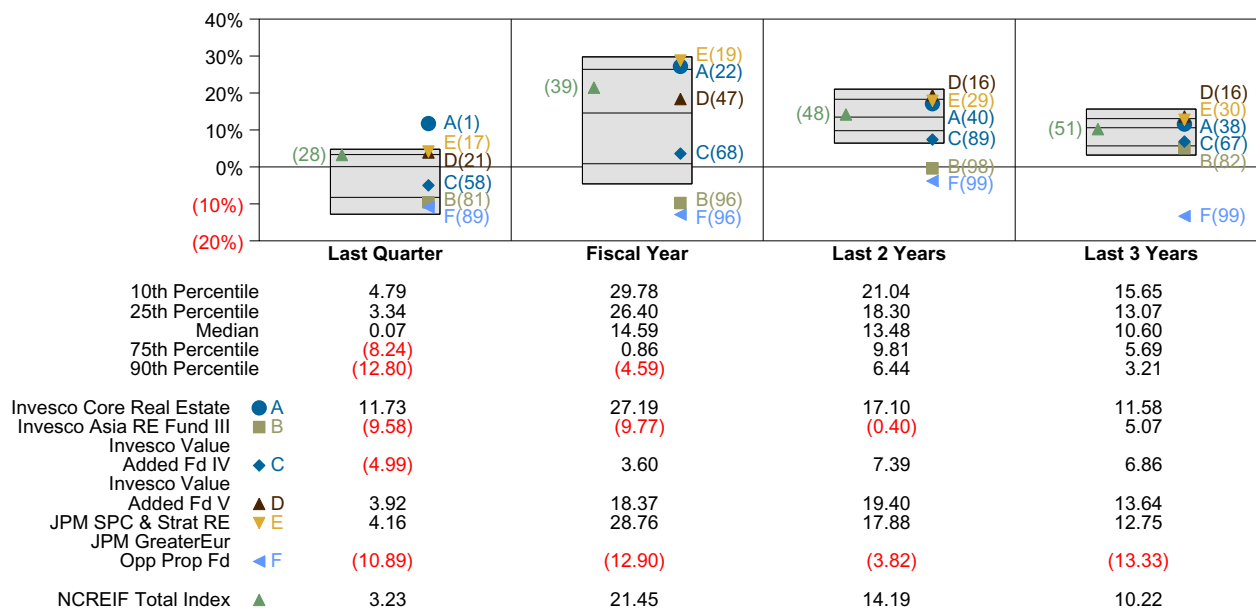
### Public Fund - Real Estate (Gross) Annualized Five Year Risk vs Return



# North Dakota State Investment Board Pension Funds Performance vs Callan Total Domestic Real Estate DB Periods Ended June 30, 2022

## Return Ranking

The chart below illustrates fund rankings over various periods versus the Callan Total Domestic Real Estate DB. The bars represent the range of returns from the 10th percentile to the 90th percentile for each period for all funds in the Callan Total Domestic Real Estate DB. The numbers to the right of the bar represent the percentile rankings of the funds being analyzed. The table below the chart details the rates of return plotted in the graph above.





## TIR Teredo Period Ended June 30, 2022

### Investment Philosophy

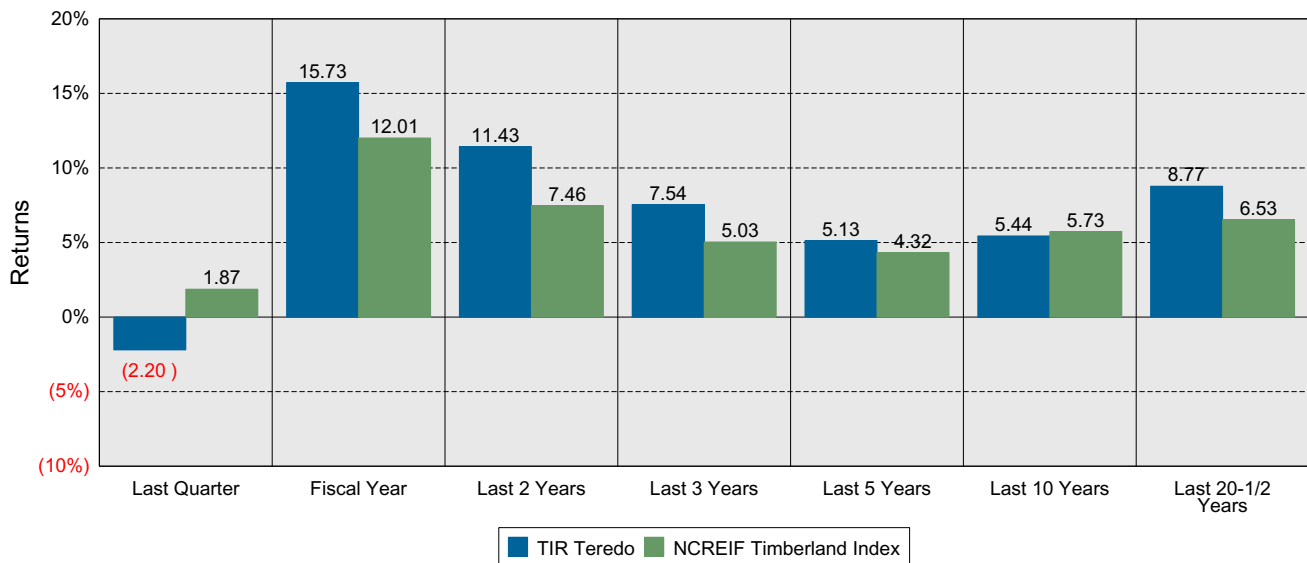
Teredo Timber LLC - The investment objective of Teredo is to provide competitive investment returns from increasing saw timber production through the 20 year term of the partnership. TIR's management strategy is to maximize saw timber volume by applying intensive forest management techniques which accelerate growth through the diameter class distribution. Periodic cash flows are produced from thinning and final harvests of the individual timber stands.

### Quarterly Summary and Highlights

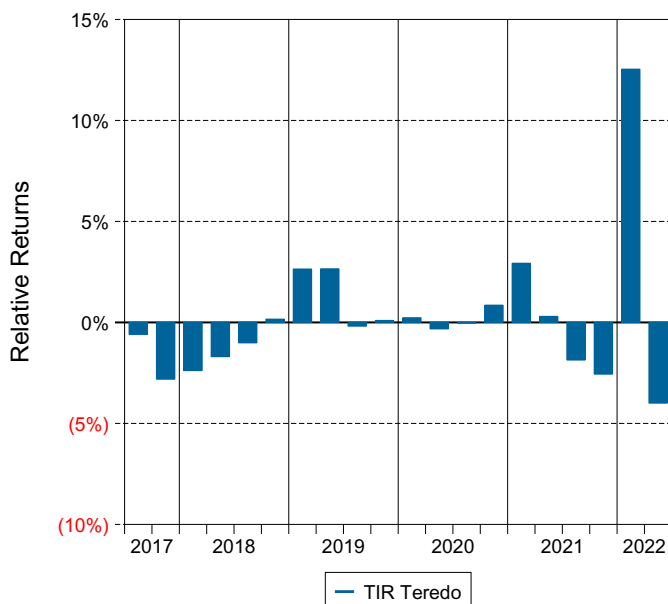
- TIR Teredo's portfolio underperformed the NCREIF Timberland Index by 4.07% for the quarter and outperformed the NCREIF Timberland Index for the year by 3.72%.

### Quarterly Asset Growth

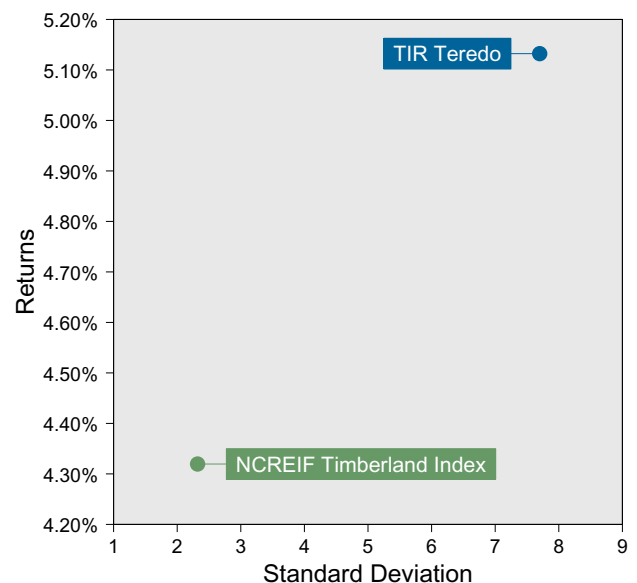
Beginning Market Value	\$20,728,908
Net New Investment	\$0
Investment Gains/(Losses)	\$-455,950
Ending Market Value	\$20,272,958



### Relative Return vs NCREIF Timberland Index



### Annualized Five Year Risk vs Return



## TIR Springbank Period Ended June 30, 2022

### Investment Philosophy

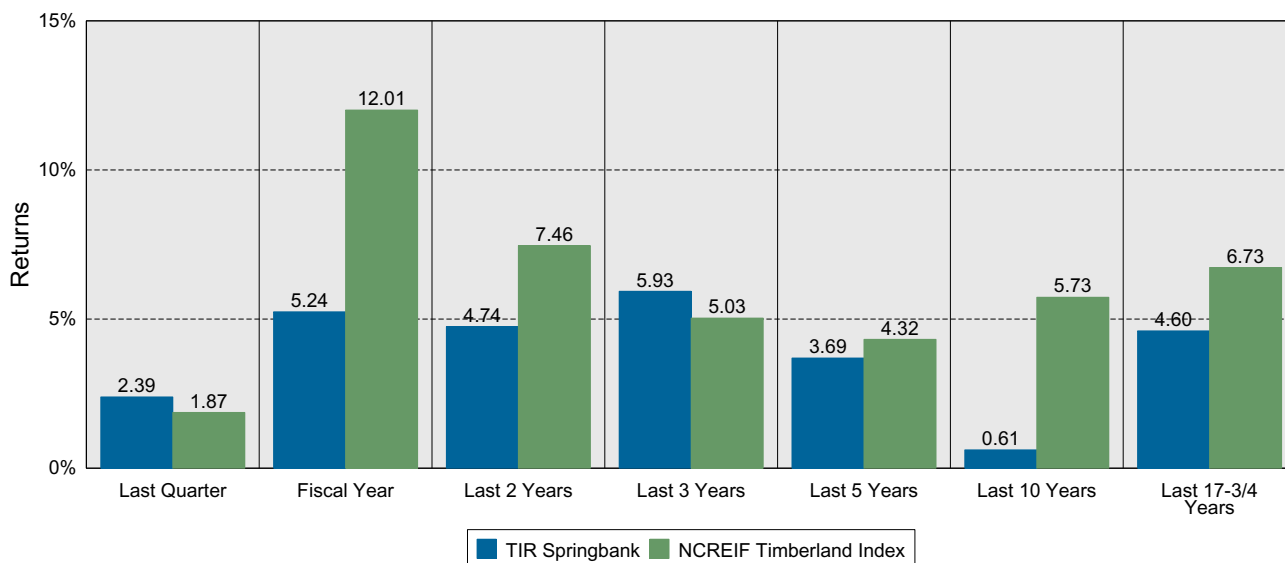
Springbank LLC - The investment objective of Springbank is to maximize long-term investment potential by means of the formation of a dedicated land management group, intensive timber management to increase timber production, the coordination of timber harvesting with land management activities and direct marketing and selective real estate partnerships.

### Quarterly Summary and Highlights

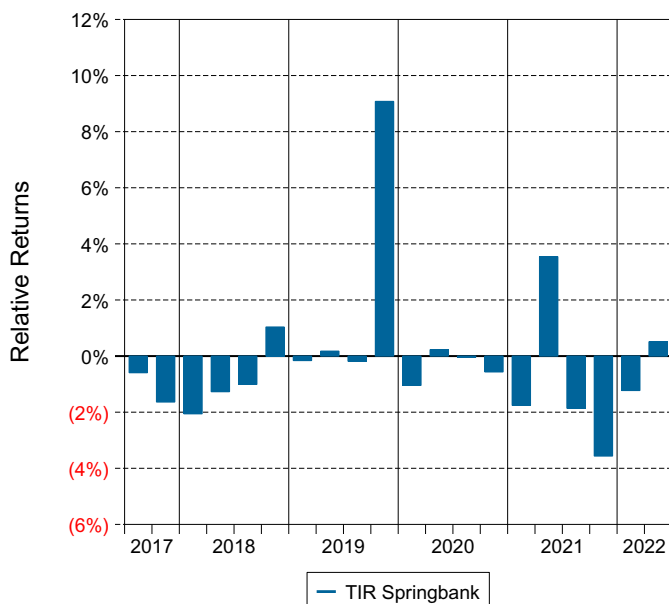
- TIR Springbank's portfolio outperformed the NCREIF Timberland Index by 0.52% for the quarter and underperformed the NCREIF Timberland Index for the year by 6.77%.

### Quarterly Asset Growth

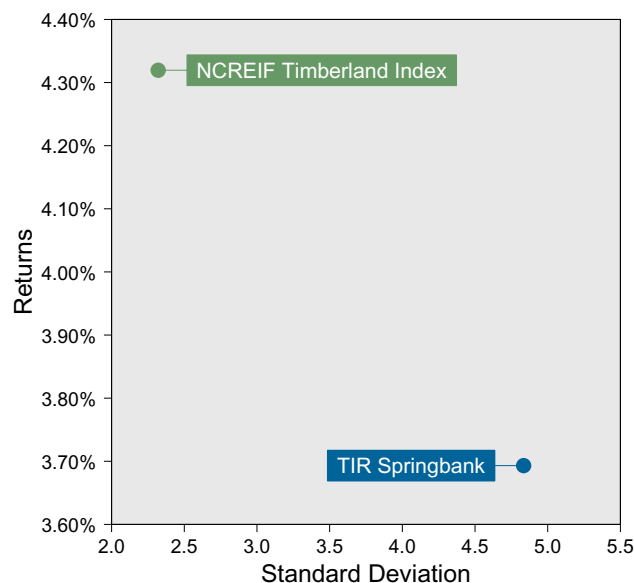
Beginning Market Value	\$86,545,989
Net New Investment	\$-8,360,000
Investment Gains/(Losses)	\$1,877,393
Ending Market Value	\$80,063,382



### Relative Return vs NCREIF Timberland Index



### Annualized Five Year Risk vs Return







## ISQ Global Infrastructure II Period Ended June 30, 2022

### Investment Philosophy

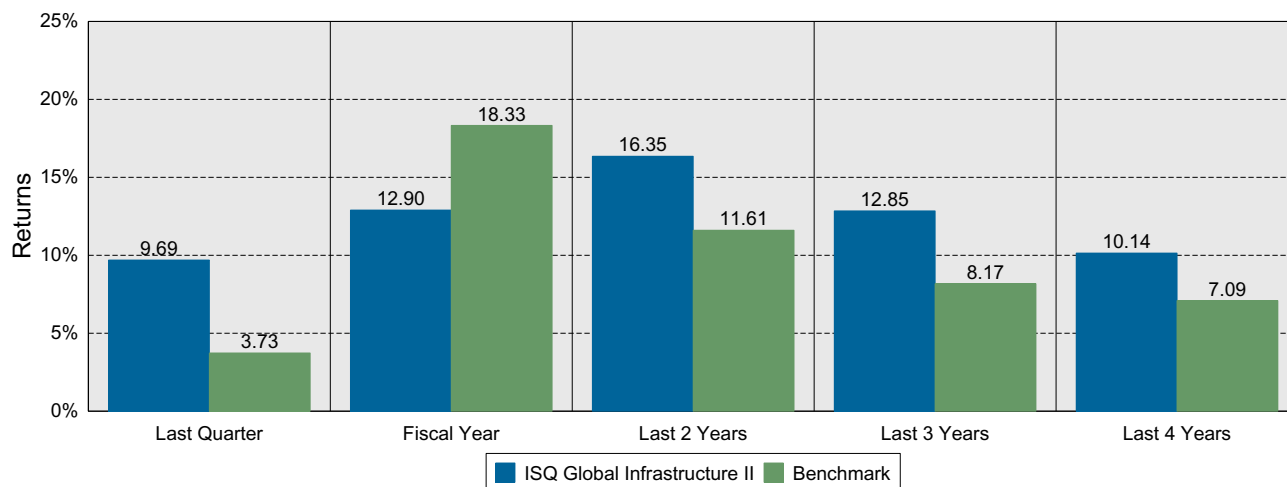
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia 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

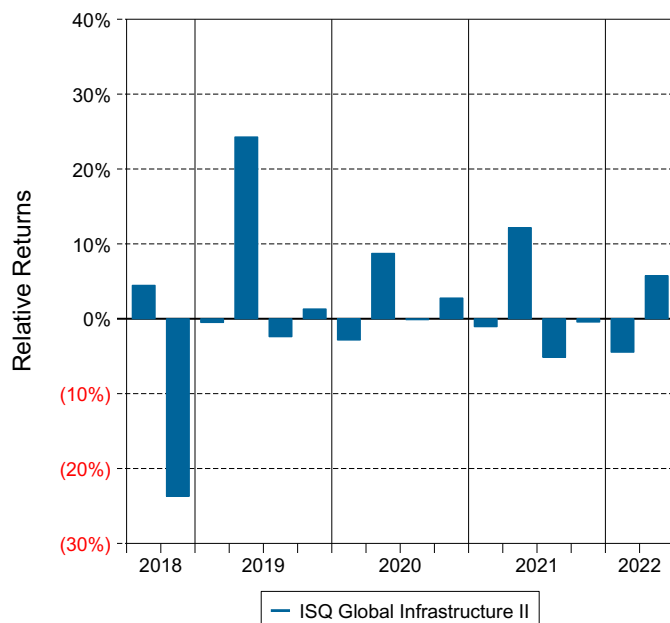
- ISQ Global Infrastructure II's portfolio outperformed the Benchmark by 5.96% for the quarter and underperformed the Benchmark for the year by 5.43%.

### Quarterly Asset Growth

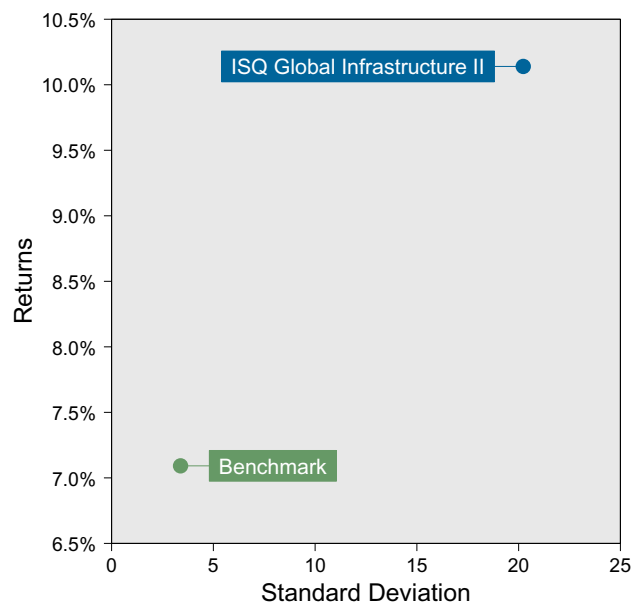
Beginning Market Value	\$62,059,700
Net New Investment	\$850,490
Investment Gains/(Losses)	\$6,030,338
Ending Market Value	\$68,940,528



### Relative Return vs Benchmark



### Annualized Four Year Risk vs Return



## ISQ Global Infrastructure III Period Ended June 30, 2022

### Investment Philosophy

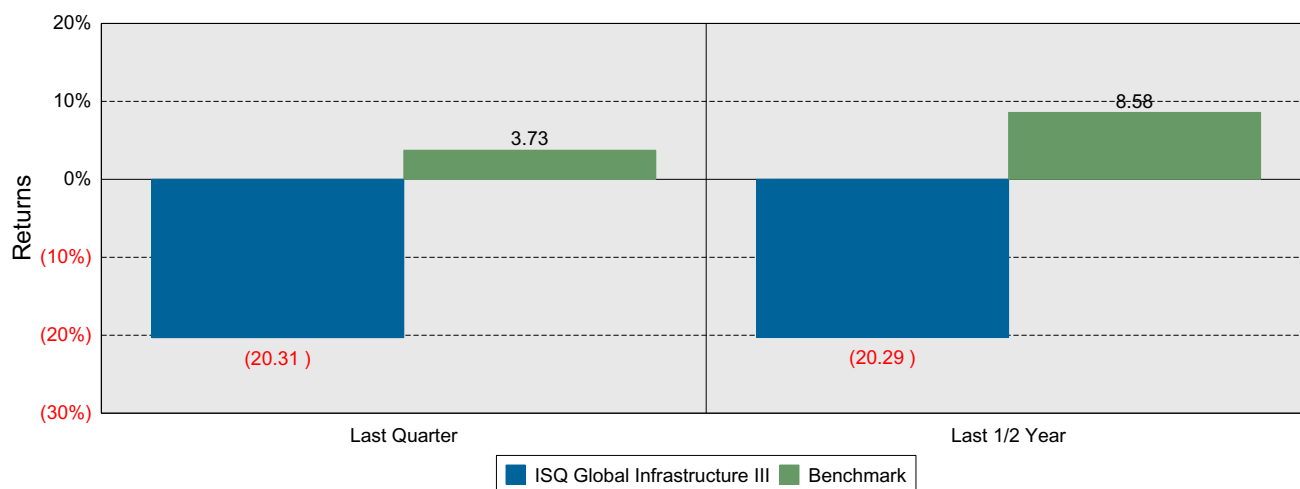
The ISQ Global Infrastructure Fund II seeks to achieve long-term capital appreciation as well as current income through equity and equity related investments in infrastructure and infrastructure related assets located globally, with a focus on North America, Europe, and selected growth economies in Asia 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

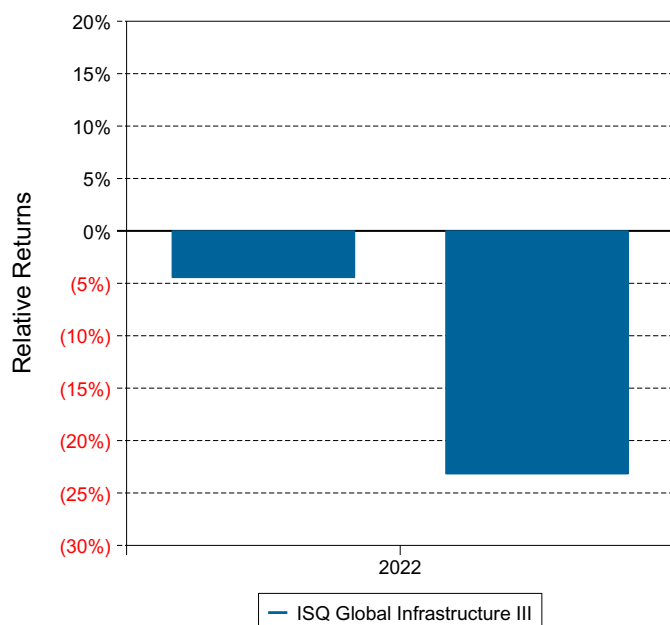
- ISQ Global Infrastructure III's portfolio underperformed the Benchmark by 24.04% for the quarter and underperformed the Benchmark for the one-half year by 28.87%.

### Quarterly Asset Growth

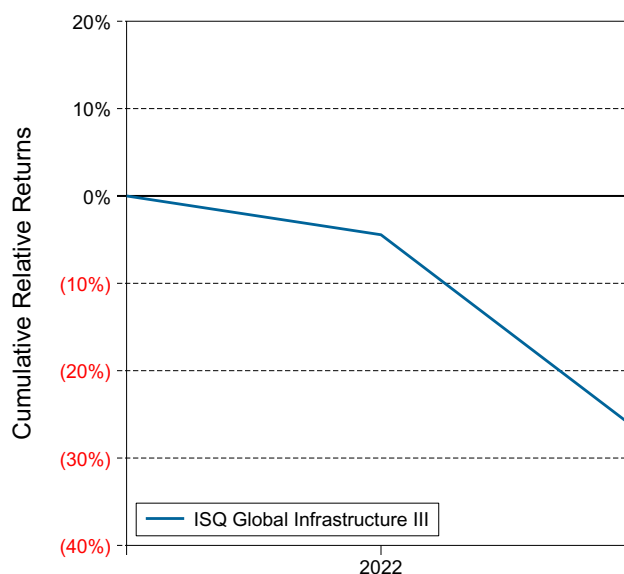
Beginning Market Value	\$4,714,001
Net New Investment	\$0
Investment Gains/(Losses)	\$-957,369
Ending Market Value	\$3,756,632



### Relative Return vs Benchmark



### Cumulative Returns vs Benchmark



## The Rohatyn Group Period Ended June 30, 2022

### Investment Philosophy

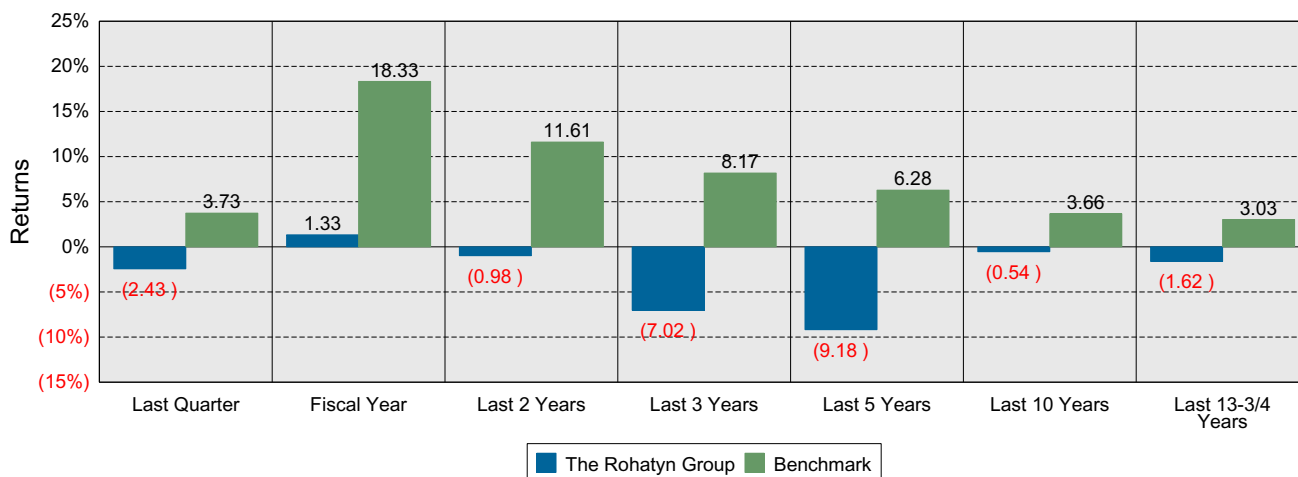
The Rohatyn Group's Asian Infrastructure & Related Resources Opportunity (AIRRO) Fund seeks to invest in infrastructure and related resources opportunities across the greater Asia Pacific region. The Fund seeks to invest in a broad range of assets, including: core infrastructure, power both from conventional and renewable sources, communications, water and waste-water, public works, urban development and other "social" infrastructure assets and related resources. The management of the AIRRO Fund was transferred from JP Morgan to The Rohatyn Group in May, 2018. **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

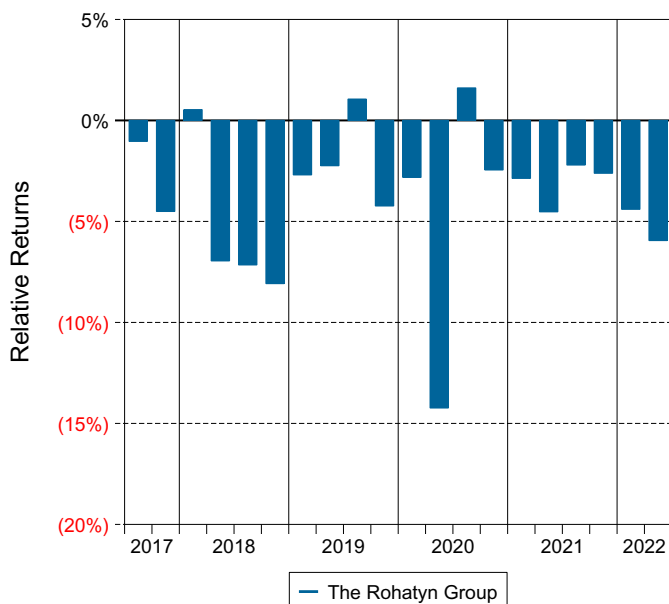
- The Rohatyn Group's portfolio underperformed the Benchmark by 6.17% for the quarter and underperformed the Benchmark for the year by 17.00%.

### Quarterly Asset Growth

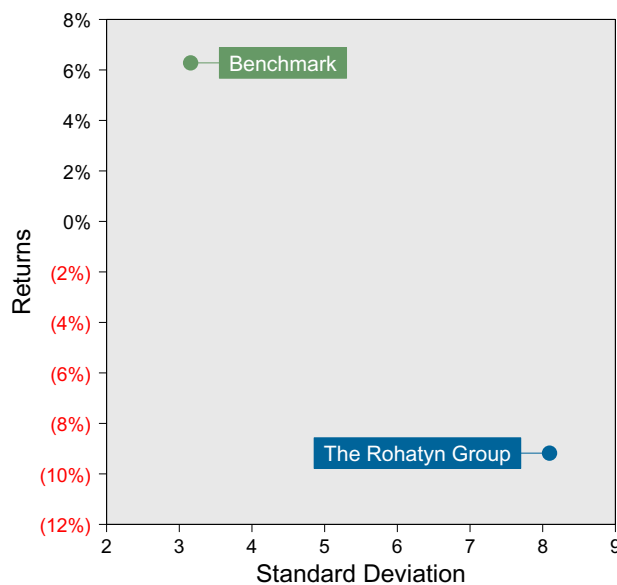
Beginning Market Value	\$16,027,560
Net New Investment	\$239,489
Investment Gains/(Losses)	\$-394,355
Ending Market Value	\$15,872,694



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



## JP Morgan IIF Infrastructure Period Ended June 30, 2022

### Investment Philosophy

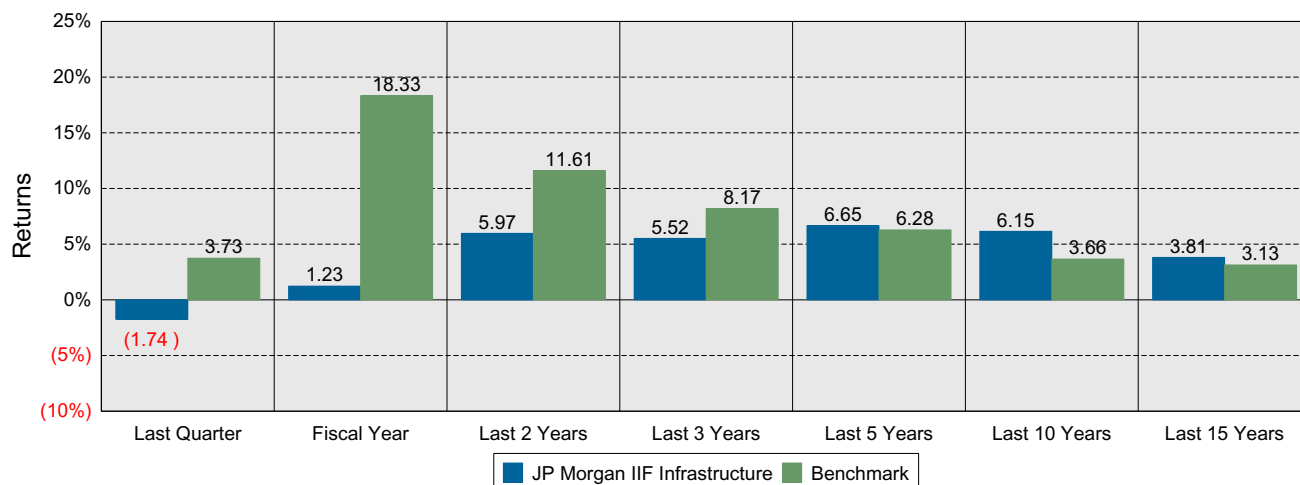
The only open-ended private commingled infrastructure fund in the U.S, the JPMorgan Infrastructure Investments Fund invests in stabilized assets in OECD countries with selected value-added opportunities, across infrastructure industry sub-sectors, including: toll roads, bridges and tunnels; oil and gas 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

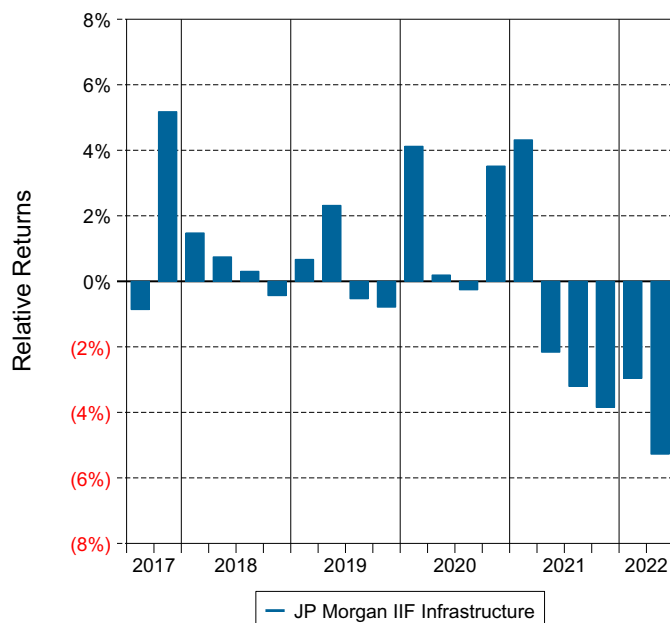
- JP Morgan IIF Infrastructure's portfolio underperformed the Benchmark by 5.47% for the quarter and underperformed the Benchmark for the year by 17.10%.

### Quarterly Asset Growth

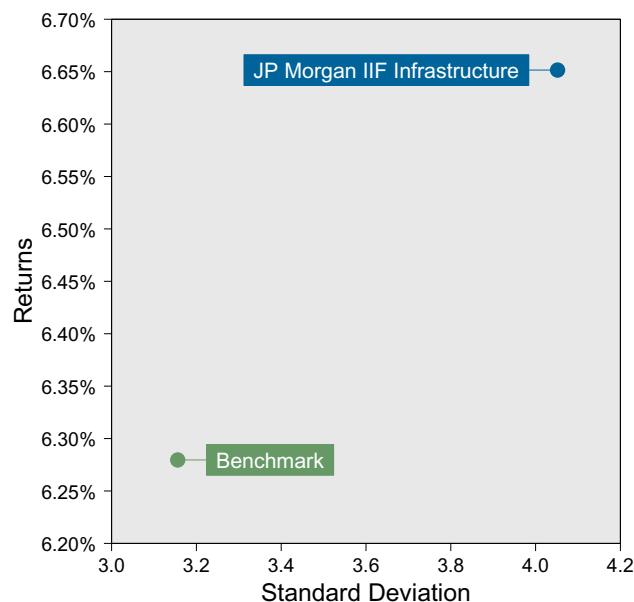
Beginning Market Value	\$127,983,372
Net New Investment	\$-1,183,025
Investment Gains/(Losses)	\$-2,223,736
Ending Market Value	\$124,576,611



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



## Grosvenor CIS Fund Period Ended June 30, 2022

### Investment Philosophy

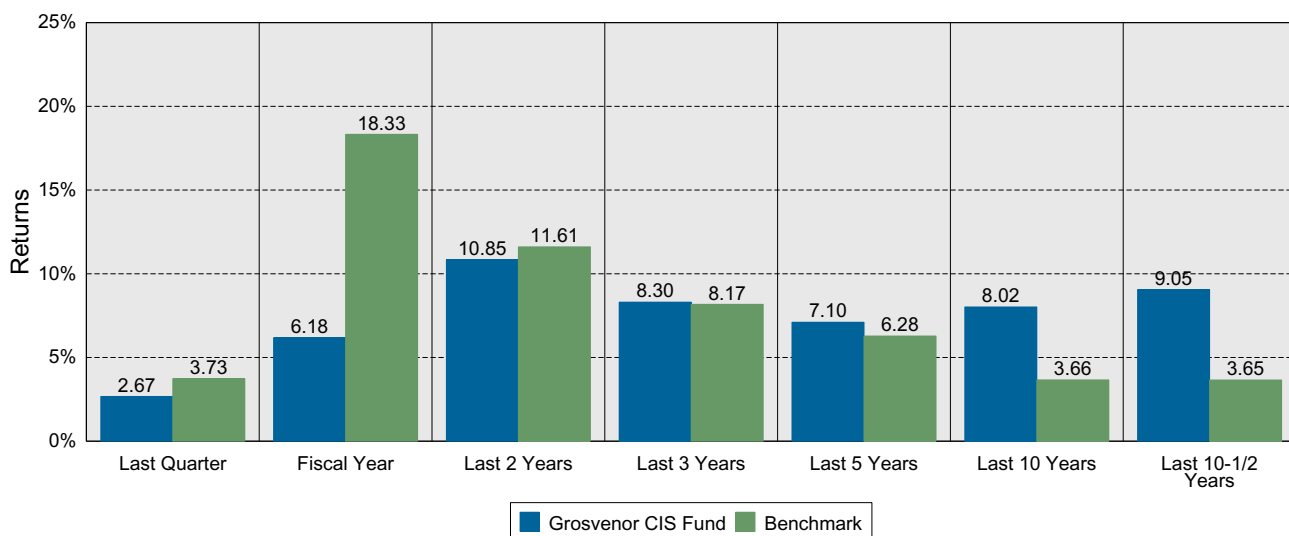
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified 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

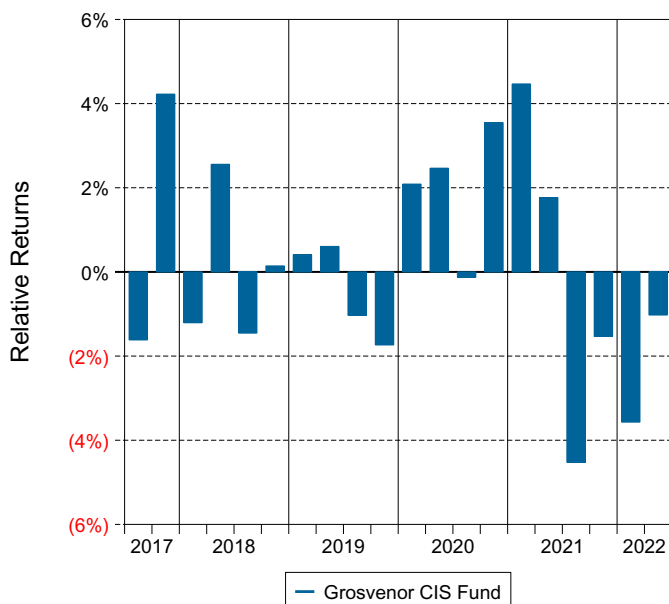
- Grosvenor CIS Fund's portfolio underperformed the Benchmark by 1.06% for the quarter and underperformed the Benchmark for the year by 12.15%.

### Quarterly Asset Growth

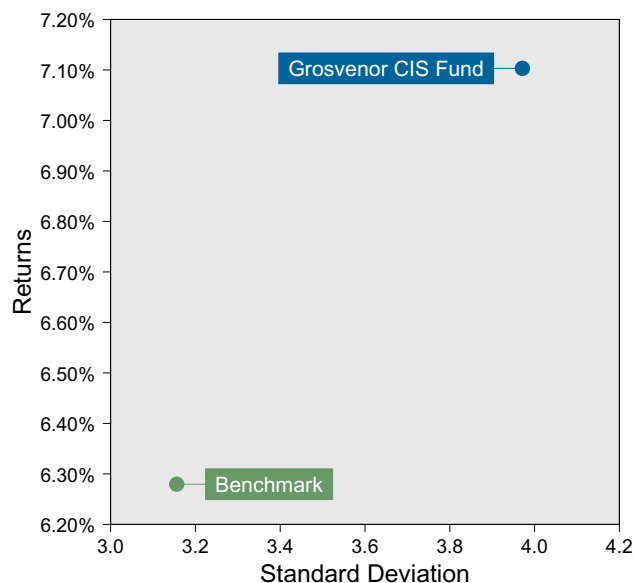
Beginning Market Value	\$10,896,680
Net New Investment	\$0
Investment Gains/(Losses)	\$291,048
Ending Market Value	\$11,187,728



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



## Grosvenor CIS Fund II Period Ended June 30, 2022

### Investment Philosophy

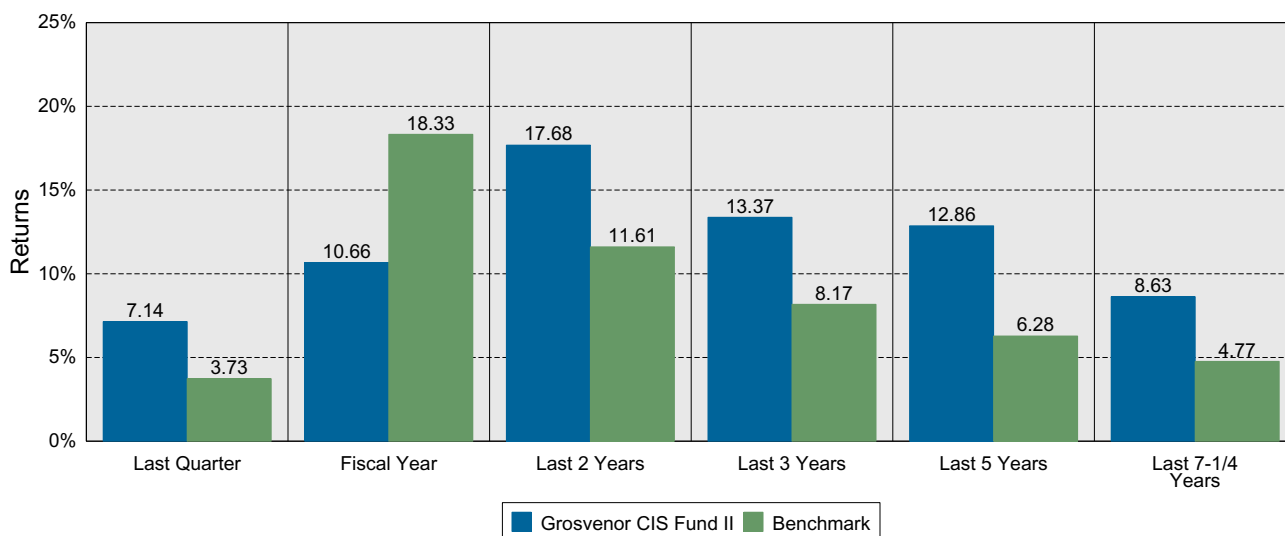
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified 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

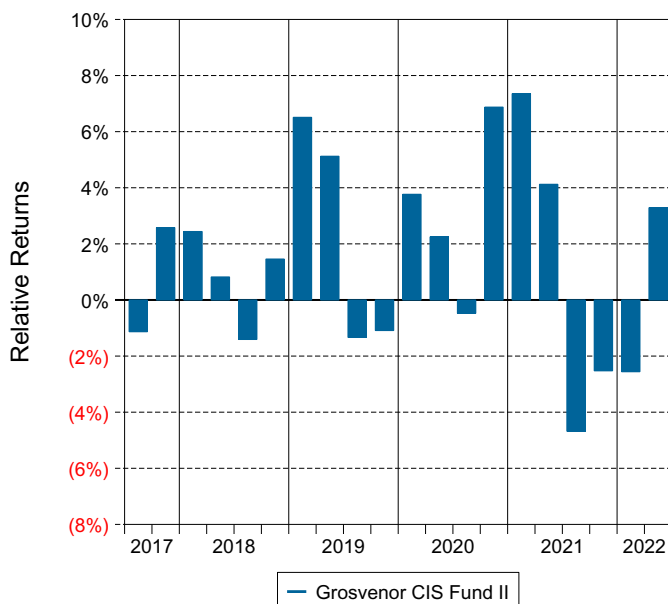
- Grosvenor CIS Fund II's portfolio outperformed the Benchmark by 3.41% for the quarter and underperformed the Benchmark for the year by 7.67%.

### Quarterly Asset Growth

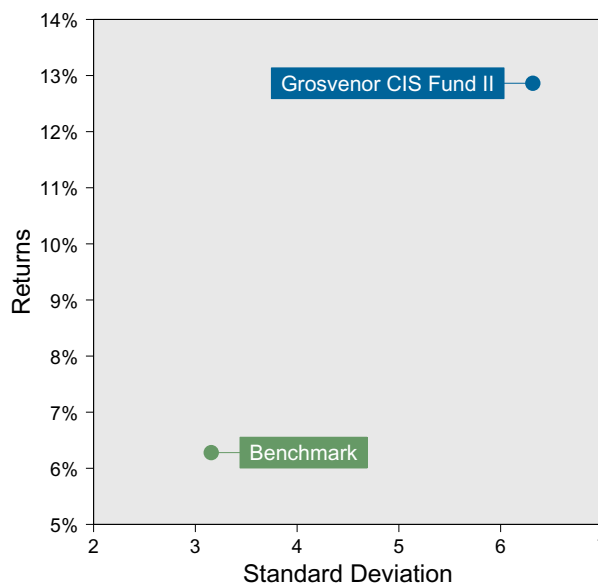
Beginning Market Value	\$20,997,601
Net New Investment	\$206,805
Investment Gains/(Losses)	\$1,514,226
Ending Market Value	\$22,718,632



### Relative Return vs Benchmark



### Annualized Five Year Risk vs Return



## Grosvenor CIS Fund III Period Ended June 30, 2022

### Investment Philosophy

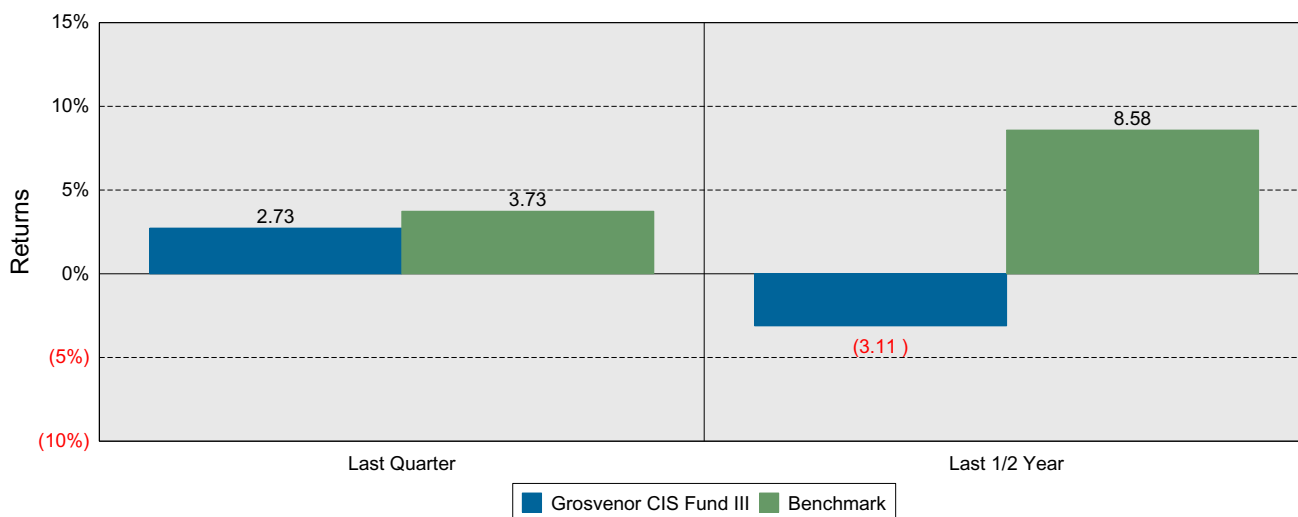
The Customized Infrastructure Strategies LP is a commingled fund focused on providing a comprehensive, diversified solution for investors looking to access the infrastructure asset class. The Fund seeks to generate stable, long-term yield and attractive risk-adjusted returns by investing in a diversified 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

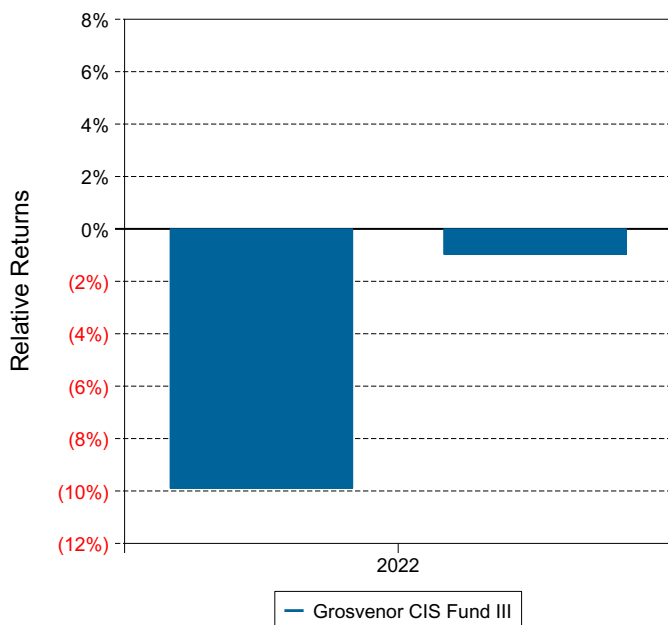
- Grosvenor CIS Fund III's portfolio underperformed the Benchmark by 1.01% for the quarter and underperformed the Benchmark for the one-half year by 11.69%.

### Quarterly Asset Growth

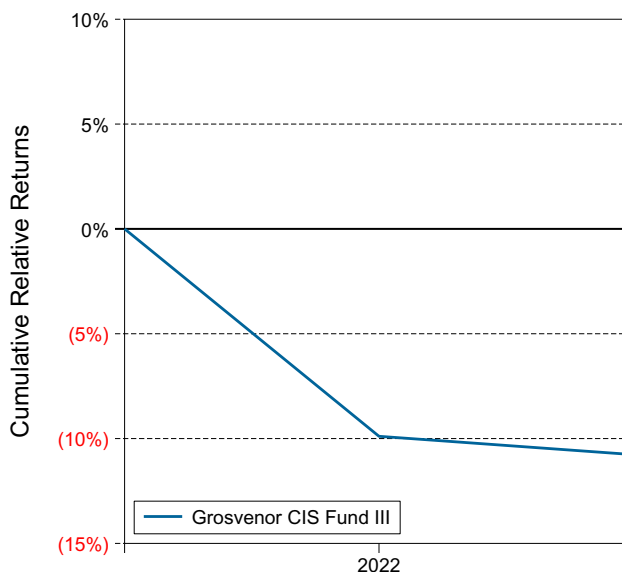
Beginning Market Value	\$14,297,275
Net New Investment	\$1,961,870
Investment Gains/(Losses)	\$434,306
Ending Market Value	\$16,693,451



### Relative Return vs Benchmark



### Cumulative Returns vs Benchmark





## Macquarie Infrastructure Fund IV Period Ended June 30, 2022

### Investment Philosophy

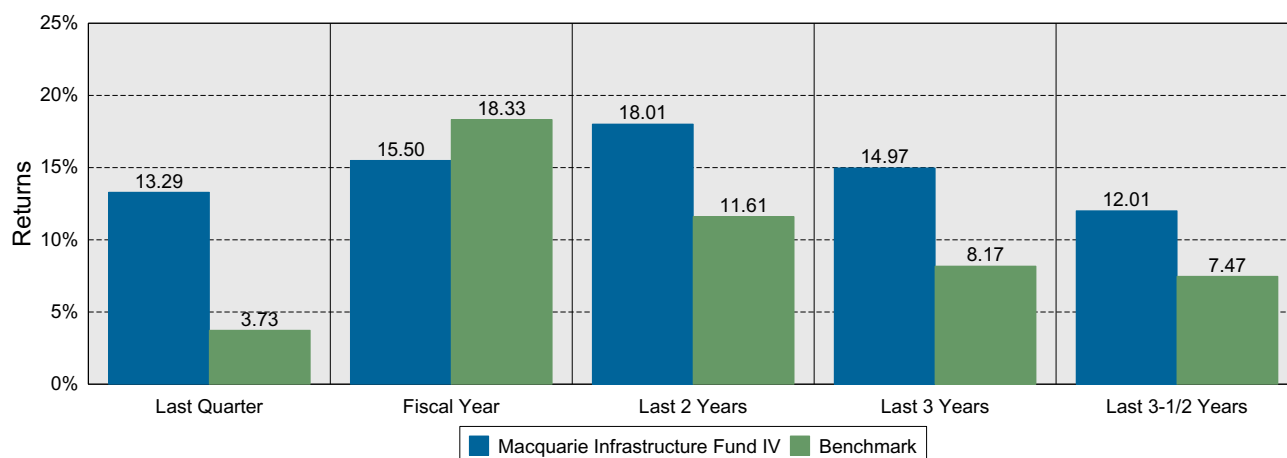
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience 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

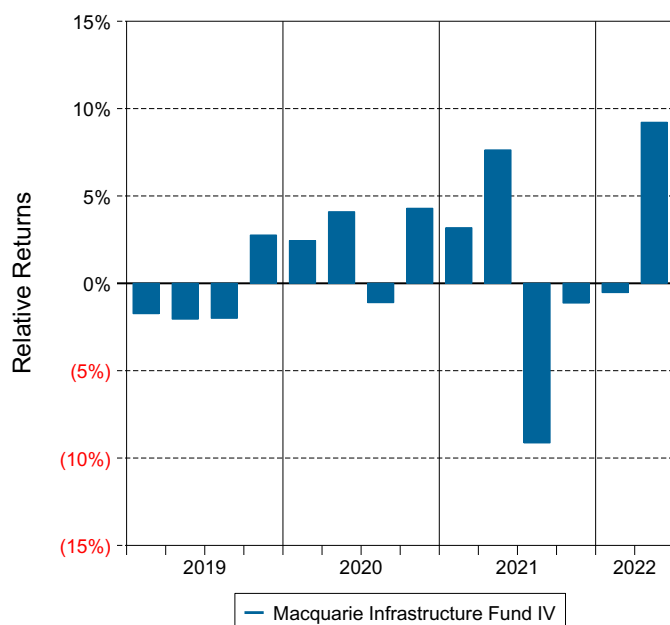
- Macquarie Infrastructure Fund IV's portfolio outperformed the Benchmark by 9.56% for the quarter and underperformed the Benchmark for the year by 2.83%.

### Quarterly Asset Growth

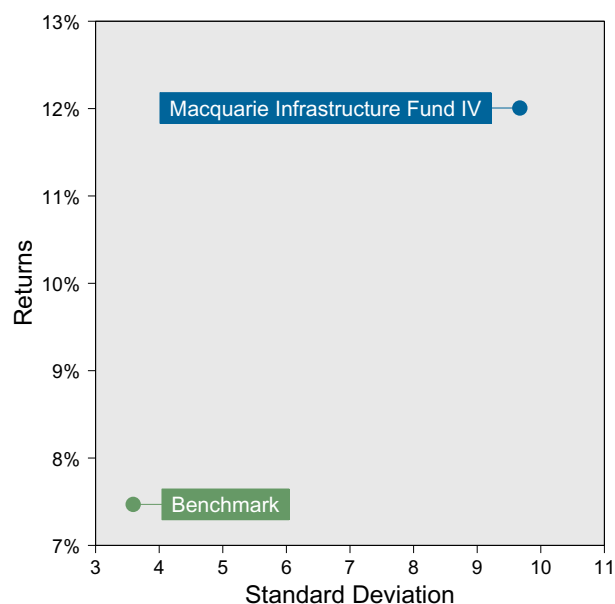
Beginning Market Value	\$67,200,262
Net New Investment	\$-549,306
Investment Gains/(Losses)	\$8,923,925
Ending Market Value	\$75,574,881



### Relative Return vs Benchmark



### Annualized Three and One-Half Year Risk vs Return



## Macquarie Infrastructure Fund V Period Ended June 30, 2022

### Investment Philosophy

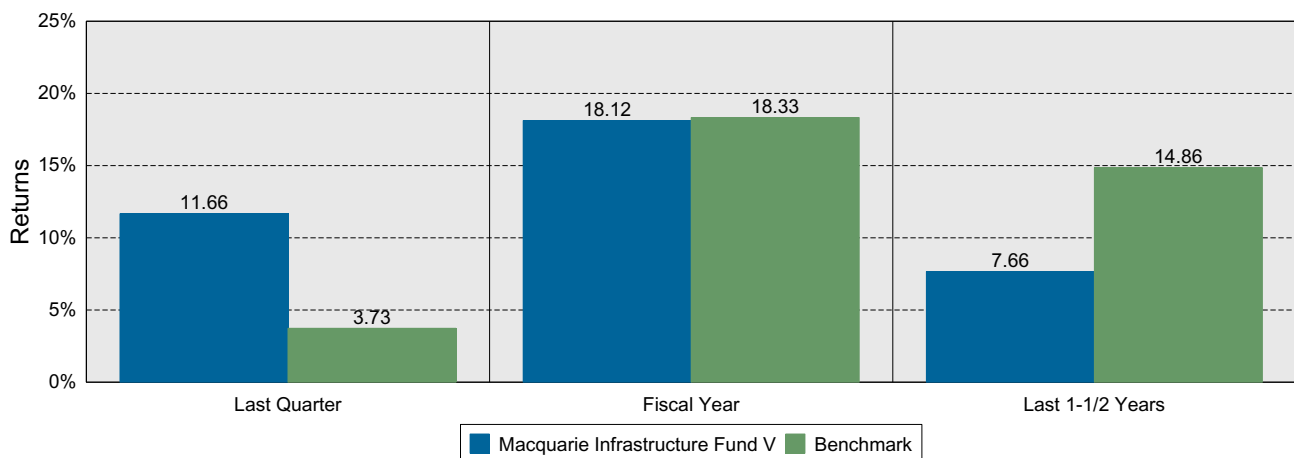
Macquarie's principal investment philosophy is to invest in infrastructure assets that exhibit monopolistic and/or contractual revenue drivers, limited substitution risk and high barriers to entry. The manager has continued to focus on investments where the team's sector expertise and operating experience 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

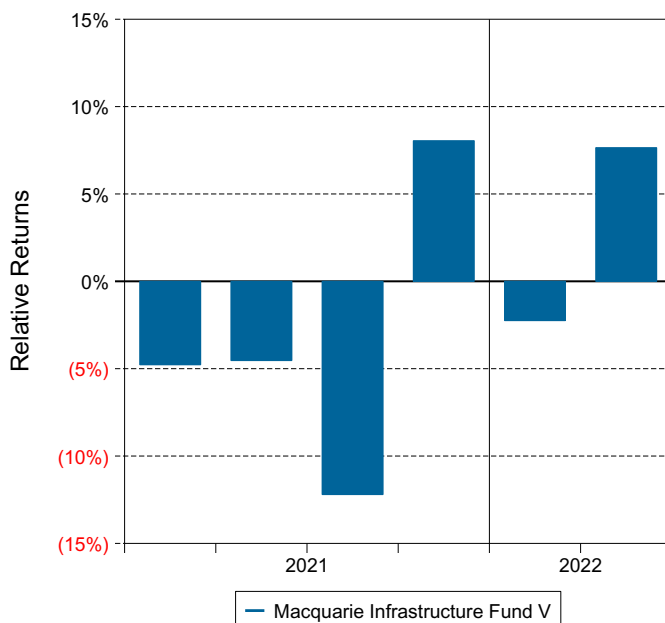
- Macquarie Infrastructure Fund V's portfolio outperformed the Benchmark by 7.93% for the quarter and underperformed the Benchmark for the year by 0.21%.

### Quarterly Asset Growth

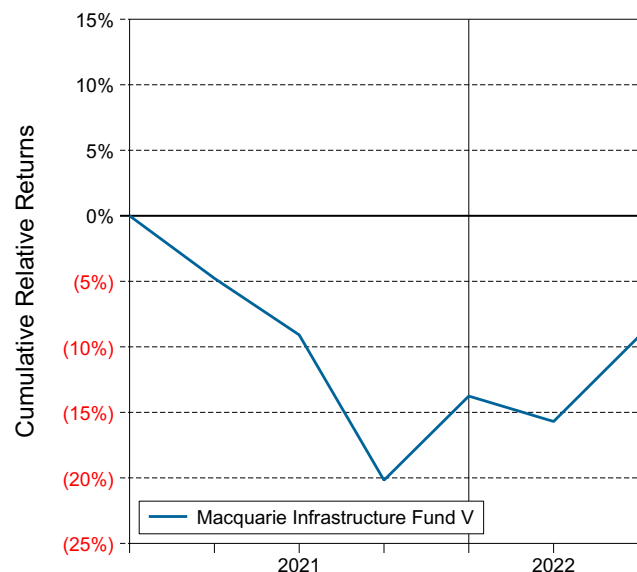
Beginning Market Value	\$36,508,891
Net New Investment	\$5,073,441
Investment Gains/(Losses)	\$4,892,678
Ending Market Value	\$46,475,010



### 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](http://www.callan.com/research-library) to see all of our publications, and [www.callan.com/blog](http://www.callan.com/blog) to view our blog. For more information contact Barb Gerraty at 415-274-3093 / [institute@callan.com](mailto:institute@callan.com).

## New Research from Callan's Experts

**Research Cafe: ESG Interview Series** | Mark Wood of Callan discusses with Jon Hale, Director of ESG Strategy at Morningstar, the evolving definition of sustainable investments.

**Research Cafe: Private Equity** | In this session, private equity experts Ashley Kahn and Jonathan Farr provide actionable insights for institutional investors to help them negotiate with private equity managers, and offer private equity managers crucial information about how their peers determine fees and terms. This session also includes a special feature on credit line usage.

**Investing in Data Centers: The Real Assets of the Digital Age** | Lauren Sertich discusses investing in data centers, a growing sector in which institutional investors have more investment options as the universe of qualified managers/operators rapidly expands.

**Do Active Fixed Income Managers Add Value With Sector Rotation?** | Kevin Machiz analyzes whether institutional investors could take a DIY approach to strategic sector allocations and forego sector rotation within fixed income and still achieve results comparable to active managers. Our study found that the average manager has added value with sector rotation.

## Blog Highlights

**SEC Proposes Rule to Enhance and Standardize Climate-Related Disclosures** | The U.S. Securities and Exchange Commission unveiled its proposed rule amendments designed to improve and standardize disclosures around climate change risks for public companies.

**Unprecedented Territory—and the Inherent Limits of Diversification** | Stock and bond markets around the globe were down together for the first four months of 2022. How often does that happen? Did diversification fail us?

**Rising Interest Rates Spur Look at Structured Credit** | Structured credit has seen increased interest from institutional investors as they explore ways to adapt their fixed income portfolios for an expected environment of rising rates.

**Hedge Fund Strategies: A Guide for Institutional Investors** | Hedge fund strategies are beginning to see renewed interest from institutional investors seeking diversification benefits and downside protection. But these strategies can be complex; this explainer educates investors about investing in these strategies.

## Quarterly Periodicals

**Private Equity Update, 1Q22** | A high-level summary of private equity activity in the quarter through all the investment stages

**Active vs. Passive Charts, 1Q22** | A comparison of active managers alongside relevant benchmarks over the long term

**Market Pulse Flipbook, 1Q22** | 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, 1Q22** | 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, 1Q22** | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

**Real Assets Update, 1Q22** | A summary of market activity for real assets and private real estate during the quarter

**Private Credit Update, 1Q22** | A review of performance and fundraising activity for private credit during the quarter

## Events

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

*Please mark your calendar and look forward to upcoming invitations:*

### October Regional Workshop

Oct. 18, 2022 – Denver, CO

Oct. 20, 2022 – San Francisco, CA

### 2023 National Conference

April 2-4, 2023 – Scottsdale, AZ

For more information about events, please contact Barb Gerraty: 415-274-3093 / [gerraty@callan.com](mailto:gerraty@callan.com)

## Education: By the Numbers

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**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

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Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

### Introduction to Investments

September 20-22 – Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. Our virtual session is held over three days with virtual modules of 2.5-3 hours, while the in-person session lasts one-and-a-half days. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. 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/](https://callan.com/events/)



"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

Confidential – For Callan Client Use Only

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

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

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

### Manager Name

abrdn (Aberdeen Standard Investments)  
Acadian Asset Management LLC  
Adams Street Partners, LLC  
AEGON USA Investment Management Inc.  
AllianceBernstein  
Allianz  
Allspring Global Investments  
American Century Investments  
Amundi US, Inc.  
Antares Capital LP  
AQR Capital Management  
Ares Management LLC  
Ariel Investments, LLC  
Aristotle Capital Management, LLC  
Atlanta Capital Management Co., LLC  
AXA Investment Managers  
Baillie Gifford International, LLC  
Baird Advisors

### Manager Name

Barings LLC  
Baron Capital Management, Inc.  
Barrow, Hanley, Mewhinney & Strauss, LLC  
BentallGreenOak  
Black Creek Investment Management Inc.  
BlackRock  
Blackstone Group (The)  
Blue Vista Capital Management, LLC  
BNY Mellon Asset Management  
Boston Partners  
Brandes Investment Partners, L.P.  
Brandywine Global Investment Management, LLC  
Brookfield Asset Management  
Brown Brothers Harriman & Company  
Brown Investment Advisory & Trust Company  
Capital Group  
Carillon Tower Advisers  
CastleArk Management, LLC

Manager Name
Chartwell Investment Partners
CIBC Asset Management Inc,
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments North America
Credit Suisse Asset Management, LLC
Crescent Capital Group LP
DePrince, Race & Zollo, Inc.
Dimensional Fund Advisors L.P.
Doubleline
Duff & Phelps Investment Management Co.
DWS
EARNEST Partners, LLC
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Hermes, Inc.
Fidelity Institutional Asset Management
Fiera Capital Corporation
First Hawaiian Bank Wealth Management Division
First Sentier Investors
Fisher Investments
Franklin Templeton
Fred Alger Management, LLC
GAM (USA) Inc.
GlobeFlex Capital, L.P.
GoldenTree Asset Management, LP
Goldman Sachs
Golub Capital
Guggenheim Investments
GW&K Investment Management
Harbor Capital Group Trust
Hardman Johnston Global Advisors LLC
Heitman LLC
Hotchkis & Wiley Capital Management, LLC
Impax Asset Management LLC
Income Research + Management Inc.
Insight Investment
Intech Investment Management LLC
Intercontinental Real Estate Corporation
Invesco

Manager Name
J.P. Morgan
Janus
Jennison Associates LLC
Jobs Peak Advisors
KeyCorp
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
Manning & Napier Advisors, LLC
Manulife Investment Management
Marathon Asset Management, L.P.
McKinley Capital Management, LLC
Mellon
MetLife Investment Management
MFS Investment Management
MidFirst Bank
MLC Asset Management
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
MUFG Union Bank, N.A.
Natixis Investment Managers
Neuberger Berman
Newton Investment Management
Ninety One North America, Inc.
Nomura Asset Management U.S.A. Inc.
Northern Trust Asset Management
Nuveen
P/E Investments
Pacific Investment Management Company
Pantheon Ventures
Parametric Portfolio Associates LLC
Partners Group (USA) Inc.
Pathway Capital Management, LP



**Manager Name**

Peregrine Capital Management, LLC

PFM Asset Management LLC

PGIM Fixed Income

PGIM Quantitative Solutions LLC

Pictet Asset Management

PineBridge Investments

Polen Capital Management, LLC

Principal Global Investors

Putnam Investments, LLC

RBC Global Asset Management

Regions Financial Corporation

Richard Bernstein Advisors LLC

Robeco Institutional Asset Management, US Inc.

Rothschild &amp; Co. Asset Management US

S&amp;P Dow Jones Indices

Schroder Investment Management North America Inc.

Segall Bryant &amp; Hamill

SLC Management

Smith Graham &amp; Co. Investment Advisors, L.P.

State Street Global Advisors

Strategic Global Advisors, LLC

**Manager Name**

T. Rowe Price Associates, Inc.

The TCW Group, Inc.

Thompson, Siegel &amp; Walmsley LLC

Thornburg Investment Management, Inc.

Tri-Star Trust Bank

UBS Asset Management

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management

Voya

Walter Scott &amp; Partners Limited

Washington Capital Management, Inc.

WCM Investment Management

Wellington Management Company, LLP

Western Asset Management Company LLC

Westfield Capital Management Company, LP

Westwood Holdings Group, Inc.

William Blair &amp; Company LLC