

Investment Performance Review
Period Ending June 30, 2023

The Woodlands Firefighters' Retirement System



2nd Quarter 2023 Market Environment



The Economy

- Though the Atlanta Fed GDPNow model forecasted weak GDP growth in 2023 as the impact from higher interest rates continued to spread through the broader economy, the first quarter GDP final revision of 2% was markedly higher than the 1.3% first reported.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with an additional 0.25% increase in the Fed Funds rate in May, followed by a pause in June. The Fed continues to prioritize fighting high inflation with the press release from the June meeting detailing the extent that additional policy firming (i.e., rate increases) will consider the cumulative tightening of monetary policy, the lags with which monetary policy affects economic activity and inflation, and economic and financial developments.
- June brought some weakness in the US labor market as nonfarm payrolls increased by 209,000, below the expected 240,000 new jobs. This represented the slowest month for job creation since December 2020. Initial jobless also rose for the week ending July 1st.
- The global banking sector came under duress in the first quarter of 2023, triggered by the second and third-largest regional bank failures in US history. Fears of deterioration in the banking sector have waned, likely helped by aggressive intervention from the FDIC and Federal Reserve.

Equity (Domestic and International)

- US equities moved broadly higher during the second quarter led by growth-oriented sectors. The S&P 500 Benchmark rose 8.7% for the quarter, its best-performing quarter since Q4-2021. Large-cap growth was the best-performing domestic segment of the equity market during the period while small-cap value, while positive, was the weakest relative performer for the quarter.
- International stocks experienced modest returns during the quarter. Local currency (LCL) performance outpaced US Dollar (USD) performance in most regions though both benchmarks were positive as the USD traded higher during the quarter.
- Global GDP growth continues to face challenges despite falling energy prices. European growth remained under pressure amid hawkish central bank policies. While China has fully reopened after almost three years of COVID-19 restrictions, there have been challenges associated with the region re-integrating with the global economy.

Fixed Income

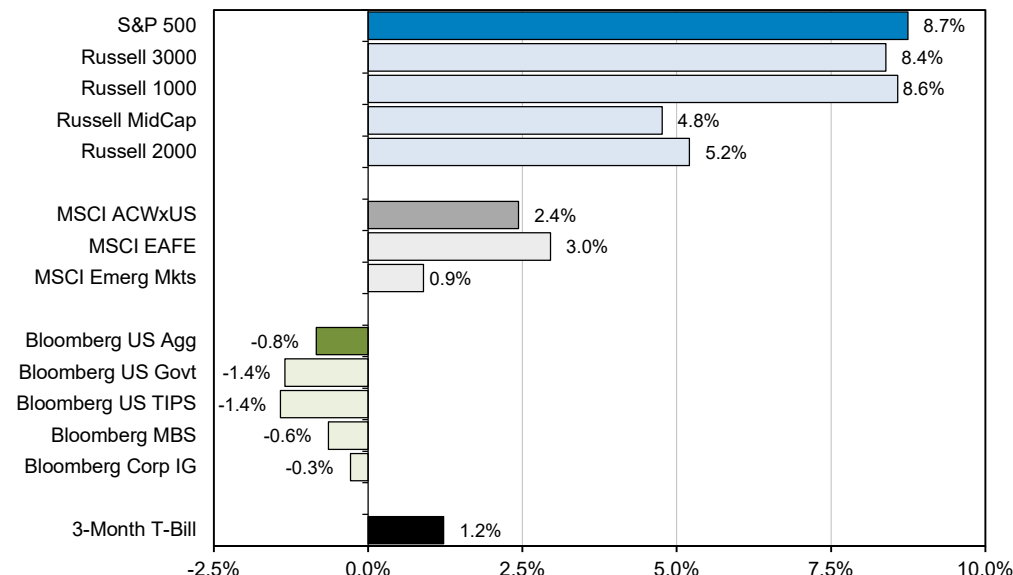
- While inflation continues to decline, the Fed maintained their inflation-fighting policy stance, increasing interest rates by 0.25% in May but opting to pause in June. The additional rate hike in May along with the possibility that additional rate hikes could occur in this tightening cycle, drove intermediate and long-term rates slightly higher during the quarter.
- US Government securities were the worst-performing sector during the quarter. US Treasuries lagged the corporate and securitized sectors as yields at longer maturities rose slightly and credit conditions were considered more favorable than the previous quarter.
- Corporate bonds with lower credit ratings held up better than higher quality issues, aided by narrowing credit spreads as well as their higher coupons. High-yield bonds were the best-performing segment of the domestic bond market, echoing the equity market's positive sentiment during the quarter.
- Global bonds underperformed US issues during the quarter and the trailing one-year period.

Market Themes

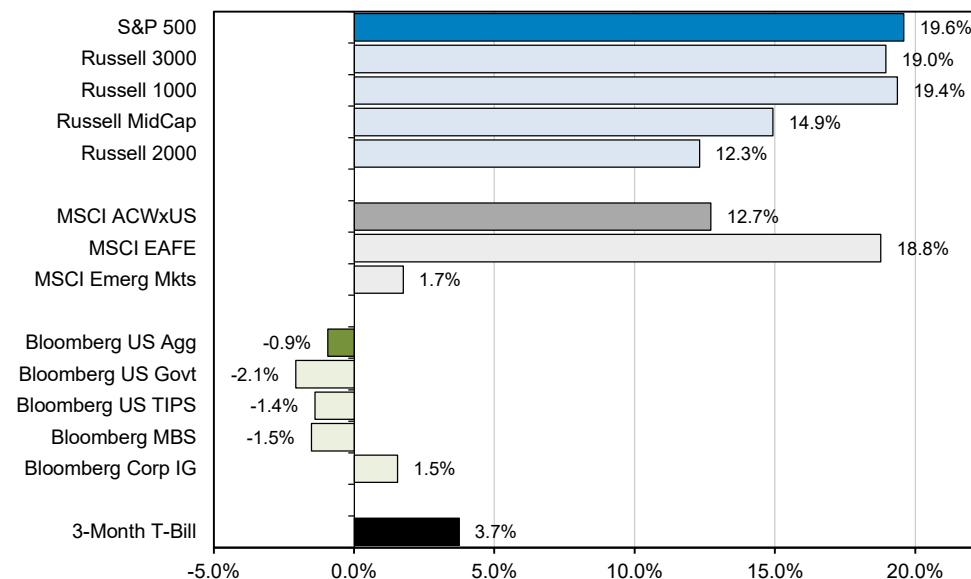
- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central foreshadowing the potential for further tightening with additional rate hikes in the coming months. GDP contraction in the Eurozone for the previous two quarters has been met with recovering asset prices in the most recent quarter as investors remain hopeful of future growth.
- The conflict in Ukraine continues without expectations of any resolution in the near future. Energy costs have subsided in recent months attributed to a mild winter in the Eurozone region and an increase in fossil fuel production in the US.
- Short-term interest rates rose across most developed markets as central banks continued to tighten policy stances. Despite previous concerns about the potential for slowing economic growth, lower-quality corporate bonds outpaced higher-quality government bonds as credit spreads narrowed.
- Both US and international equity markets continued to recover from the disappointing year that was 2022 on expectations that inflation would continue to moderate and central banks would slow the pace of their monetary tightening cycles. Growth has significantly outpaced value in the previous two quarters.

- Domestic equity markets started 2023 with solid results, led mostly by the large-cap names. The poor performance posted by domestic equities in the first half of 2022 has rolled off and now each index has turned positive on a trailing one-year basis. Factors contributing to the quarter's results include strong economic data in the face of higher benchmark rates and the expectation that the Fed would slow the pace of future interest rate increases. For the period, the S&P 500 large-cap benchmark returned 8.7% versus 4.8% for mid-cap and 5.2% for small-cap benchmarks.
- International developed and emerging market equities also delivered positive results, albeit lagging behind their domestic counterparts. Europe continues to face geopolitical risks related to the conflict in Ukraine and rising interest rates, though inflation has eased somewhat due to higher rates and more manageable energy prices. Performance in the emerging market index was led by the Latin America region whose regional index posted a strong 14.0% return in USD terms. The developed market MSCI EAFE Index returned 3.0% for the quarter and the MSCI Emerging Markets Index rose by 0.9%.
- The domestic bond market ebbed during the quarter due to higher rates from the Federal Reserve's decision to hike policy rates an additional 0.25%. The Bloomberg (BB) US Aggregate Index returned -0.8% for the period while investment-grade corporate bonds were down less with a return of -0.3%.
- During the one-year trailing period, US equity markets were positive as the weak performance from the first half of 2022 rolled off. The S&P 500 Index returned 19.6% for the year. The weakest relative performance for the year was the Russell 2000 Index, which still climbed 12.3% over the last 12-months.
- International markets also rolled off their poor performance in 2022. Over the trailing one-year period, the MSCI EAFE Index returned 18.8% while the MSCI Emerging Markets Index added a much more modest 1.7%. Concerns relating to the conflict in Ukraine continued to emanate throughout the region and globally. Elevated inflation and slowing global economic growth continue to be an additional headwind for global markets.
- Bond markets softened further, posting negative returns over the previous 1-year period for most indices. The primary driver of results during the first half of 2023 continues to be higher interest rates, which directly impact bond prices and index performance. Investment-grade corporate bonds were the only sector to post positive performance over the previous 12-months, adding 1.5%. The US Government sector suffered the most for the period, posting a return of -2.1%.

Quarter Performance



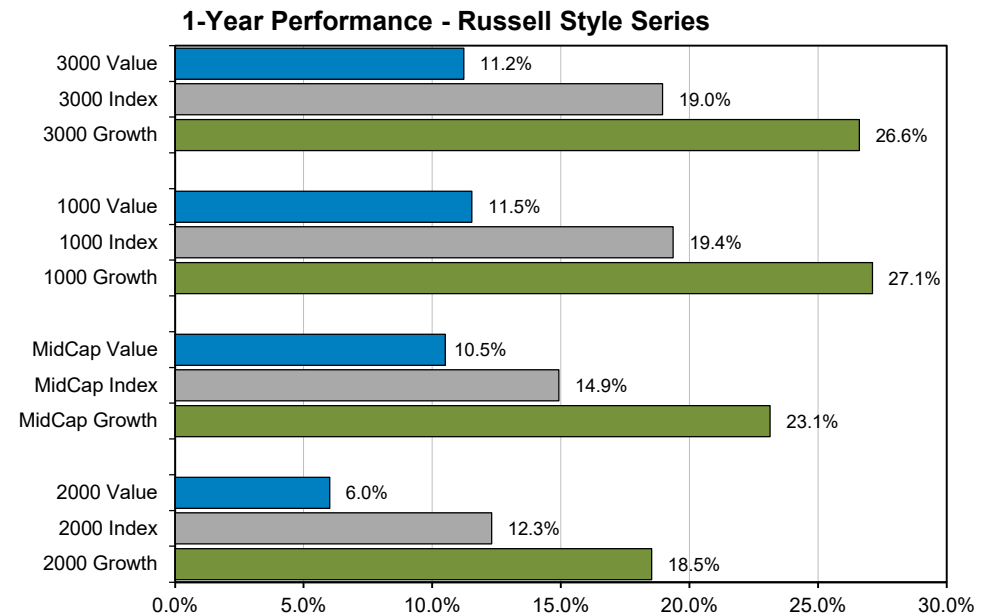
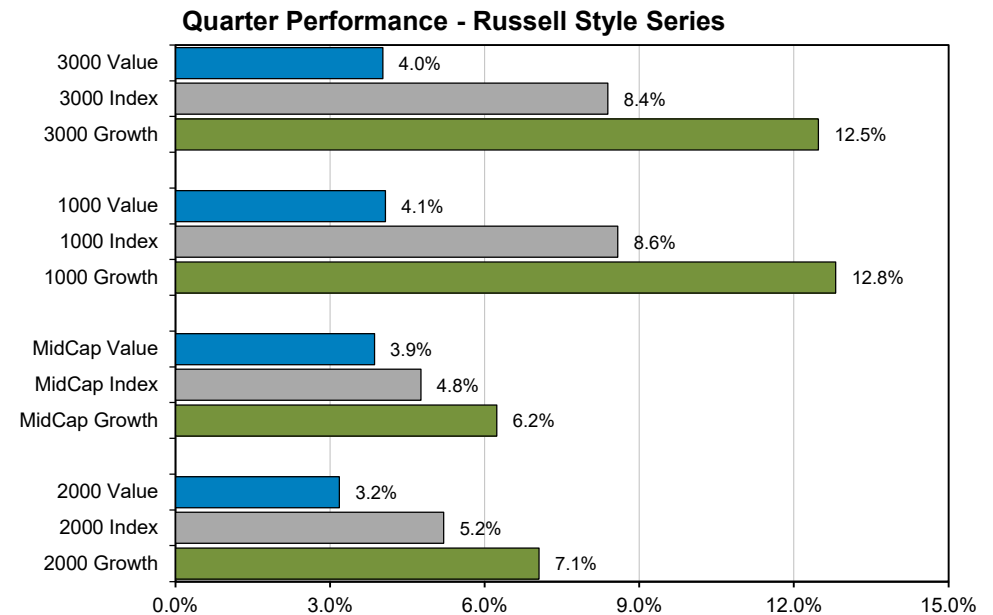
1-Year Performance



Source: Investment Metrics



- Core domestic equity benchmarks posted positive results for the second quarter in a row. However, concerns regarding the regional banking sector and the financial sector's large weight in the value benchmarks weighed heavily on the broad value indices' performance in the first half of 2023. Large-cap stocks once again led results for the capitalization-based benchmarks, besting both the mid-cap and small-cap indices for the quarter. Growth benchmarks posted the strongest results as economic data continues to show favorable conditions for growth stocks. The Russell 1000 Growth Index topped the quarter, returning 12.8% followed by the Russell 2000 Growth Index and the Russell Midcap Growth Index, which rose by 7.1% and 6.2%, respectively.
- As previously stated, Growth stocks at all capitalization ranges outperformed their value counterparts by a wide margin for the quarter. This continued the 2023 theme of growth-based benchmark outperformance. Among the value benchmarks Large cap, mid-cap and small-cap value each posted positive performance for the quarter with the Russell 1000 Value Index leading the way at 4.1%.
- The second quarter's continued positive performance in tandem with the poor performance from the first half of 2022 rolling off the various benchmark returns turned the Russell indices positive on a trailing 12-month basis. Within large-cap stocks, the Russell 1000 Growth Index returned a strong 27.1%, leading the way among style and market capitalization classifications. The worst-performing index was the Russell 2000 Value, which posted a modest 6.0% return for the trailing 12-months.
- Growth rebounded from disappointing results in early 2022 and led value-based benchmarks in all market capitalization ranges during the trailing year. The Russell 2000 Growth Index returned 18.5%, outpacing the Russell 2000 Value index return of 6.0% by a span of 12.5%. The Russell 1000 Growth and Russell Midcap Growth benchmarks gained 27.1% and 23.1%, respectively, while their corresponding value index counterparts returned solid, but lagging, performance of 11.5% and 10.5%, respectively.

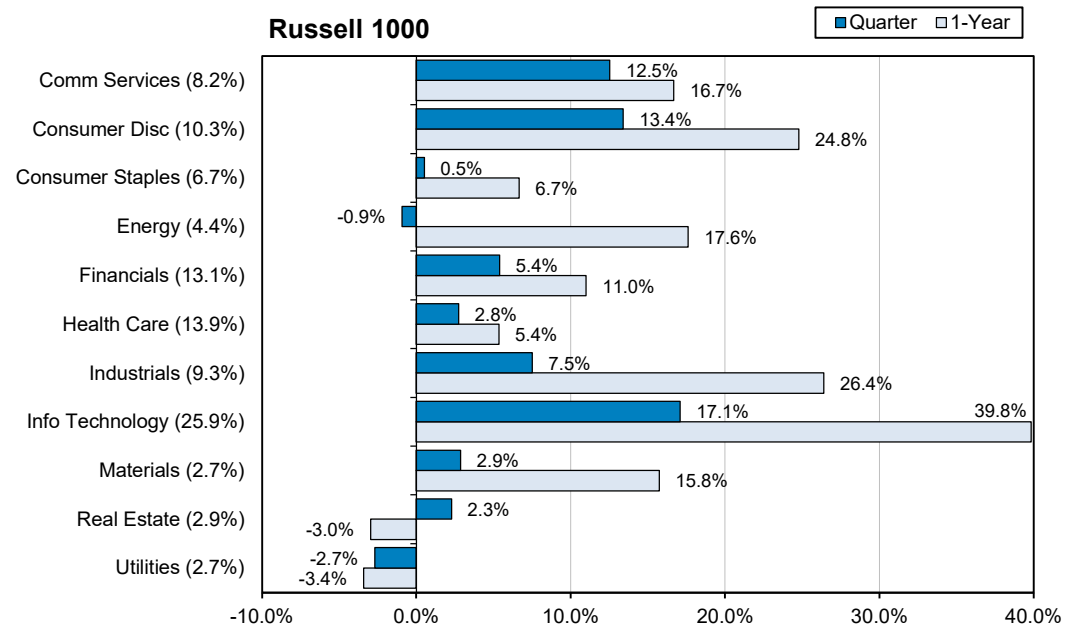


Source: Investment Metrics



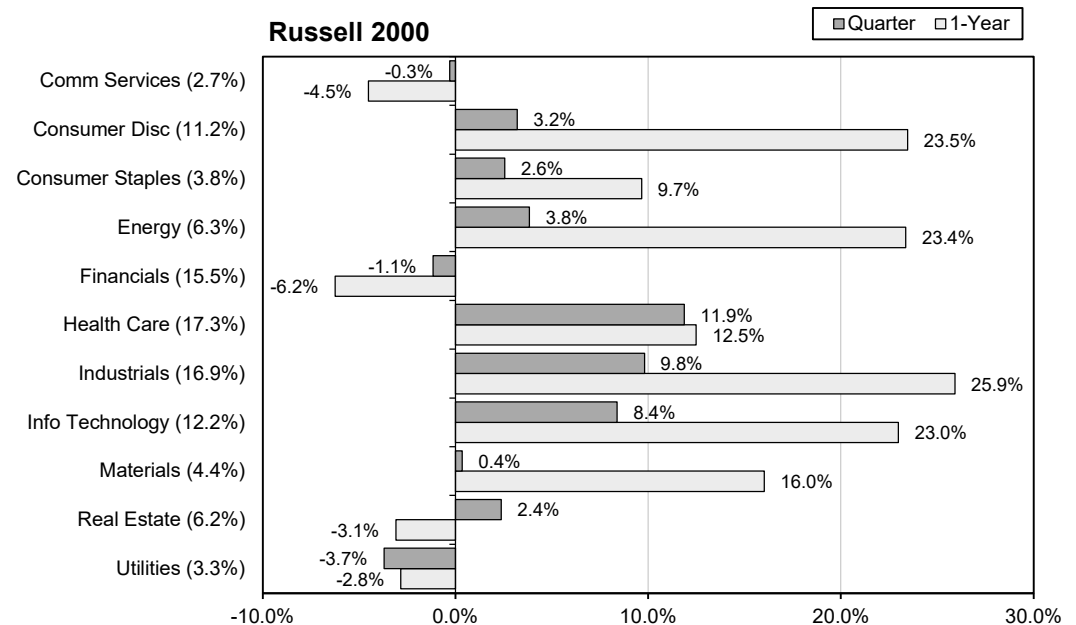
- Large Cap sector performance was mostly positive for the second quarter. Nine of 11 economic sectors posted positive absolute performance for the quarter, but just three managed to outpace the return of the Russell 1000 index.
- After a challenging 2022, the information technology sector continued its dominating rebound, amassing an impressive 17.1% return for the quarter. The other two sectors that outpaced the headline index's return for the quarter were communication services (12.5%) and consumer discretionary (13.4%). Energy (-0.9%), and utilities (-2.7%) were the two sectors that lost ground for the quarter.
- For the full year, four economic sectors exceeded the return of the broad large-cap benchmark and seven of the eleven sectors posted positive performance. The weakest economic sector in the Russell 1000 for the year was utilities, which declined by -3.4% and was heavily impacted by rising energy costs and a market rotation away from defensive names.

Russell 1000



- Eight small-cap economic sectors posted positive results during the quarter while just three exceeded the 5.2% return of the Russell 2000 Index. The health care (11.9%), industrials (9.8%), and information technology (8.4%) sectors led the way, outpacing the broad benchmark for the quarter while the utilities (-3.7%), financials (-1.1%), and communication services (-0.3%) sectors posted negative returns.
- Like large cap sector performance over the trailing year, seven small cap sectors were positive. Industrials posted the strongest sector results (25.9%) but the consumer discretionary, energy, and information technology sectors each also returned in excess of 20% for the last 12-months. Five of the 11 economic sectors fell short of core small-cap benchmark's return of 12.3% over the trailing year. The worst-performing sector for the year was financials with a return of -6.2%. The communication services (-4.5%), real estate (-3.1%), and utilities (-2.8%) sectors also posted negative results for the year.

Russell 2000



Source: Morningstar Direct
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.



The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of June 30, 2023

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	7.0%	17.8%	42.7%	Information Technology
Microsoft Corp	6.2%	18.4%	33.9%	Information Technology
Amazon.com Inc	2.9%	26.2%	22.7%	Consumer Discretionary
NVIDIA Corp	2.4%	52.3%	179.3%	Information Technology
Tesla Inc	1.8%	26.2%	16.6%	Consumer Discretionary
Alphabet Inc Class A	1.7%	15.4%	9.9%	Communication Services
Meta Platforms Inc Class A	1.5%	35.4%	78.0%	Communication Services
Berkshire Hathaway Inc Class B	1.5%	10.4%	24.9%	Financials
Alphabet Inc Class C	1.5%	16.3%	10.6%	Communication Services
UnitedHealth Group Inc	1.1%	2.1%	-5.1%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
XP Inc Class A	0.0%	97.6%	30.6%	Financials
Wayfair Inc Class A	0.0%	89.3%	49.2%	Consumer Discretionary
Carnival Corp	0.0%	85.5%	117.7%	Consumer Discretionary
XPO Inc	0.0%	85.0%	95.0%	Industrials
Palantir Technologies Inc	0.1%	81.4%	69.0%	Information Technology
MongoDB Inc Class A	0.1%	76.3%	58.4%	Information Technology
Vertiv Holdings Co Class A	0.0%	73.1%	201.6%	Industrials
Nu Holdings Ltd Ordinary Shares	0.0%	65.8%	111.0%	Financials
AppLovin Corp Ordinary Shares -	0.0%	63.4%	-25.3%	Information Technology
Norwegian Cruise Line Holdings Ltd	0.0%	61.9%	95.8%	Consumer Discretionary

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Victoria's Secret & Co	0.0%	-49.0%	-37.7%	Consumer Discretionary
Advance Auto Parts Inc	0.0%	-41.5%	-58.1%	Consumer Discretionary
Tandem Diabetes Care Inc	0.0%	-39.6%	-58.5%	Health Care
First Horizon Corp	0.0%	-35.8%	-46.6%	Financials
Ubiquiti Inc	0.0%	-35.1%	-28.5%	Information Technology
Catalent Inc	0.0%	-34.0%	-59.6%	Health Care
Concentrix Corp Ordinary Shares	0.0%	-33.4%	-39.9%	Industrials
MarketAxess Holdings Inc	0.0%	-33.0%	3.1%	Financials
Mercury Systems Inc	0.0%	-32.3%	-46.2%	Industrials
Peloton Interactive Inc	0.0%	-32.2%	-16.2%	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Super Micro Computer Inc	0.5%	133.9%	517.7%	Information Technology
SPS Commerce Inc	0.3%	26.1%	69.9%	Information Technology
Rambus Inc	0.3%	25.2%	198.6%	Information Technology
Chart Industries Inc	0.3%	27.4%	-4.5%	Industrials
Novanta Inc	0.3%	15.7%	51.8%	Information Technology
Chord Energy Corp Ordinary Shares	0.3%	16.9%	38.0%	Energy
Light & Wonder Inc Ordinary Shares	0.3%	14.5%	46.3%	Consumer Discretionary
ChampionX Corp	0.3%	14.8%	57.8%	Energy
Atkore Inc	0.3%	11.0%	87.9%	Industrials
Commercial Metals Co	0.3%	8.0%	61.2%	Materials

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
CXApp Inc Ordinary Shares - Class A	0.0%	503.3%	9.2%	Information Technology
Immunogen Inc	0.2%	391.4%	319.3%	Health Care
Applied Digital Corp	0.0%	317.4%	790.5%	Information Technology
Presto Automation Inc	0.0%	230.4%	N/A	Information Technology
EyePoint Pharmaceuticals Inc	0.0%	195.9%	10.5%	Health Care
CARISMA Therapeutics Inc	0.0%	182.9%	N/A	Health Care
P3 Health Partners Inc Class A	0.0%	182.1%	-19.6%	Health Care
Nano X Imaging Ltd Ordinary Shares	0.0%	168.5%	37.1%	Health Care
Carvana Co Class A	0.1%	164.8%	14.8%	Consumer Discretionary
Bit Digital Inc Ordinary Shares	0.0%	163.6%	209.9%	Information Technology

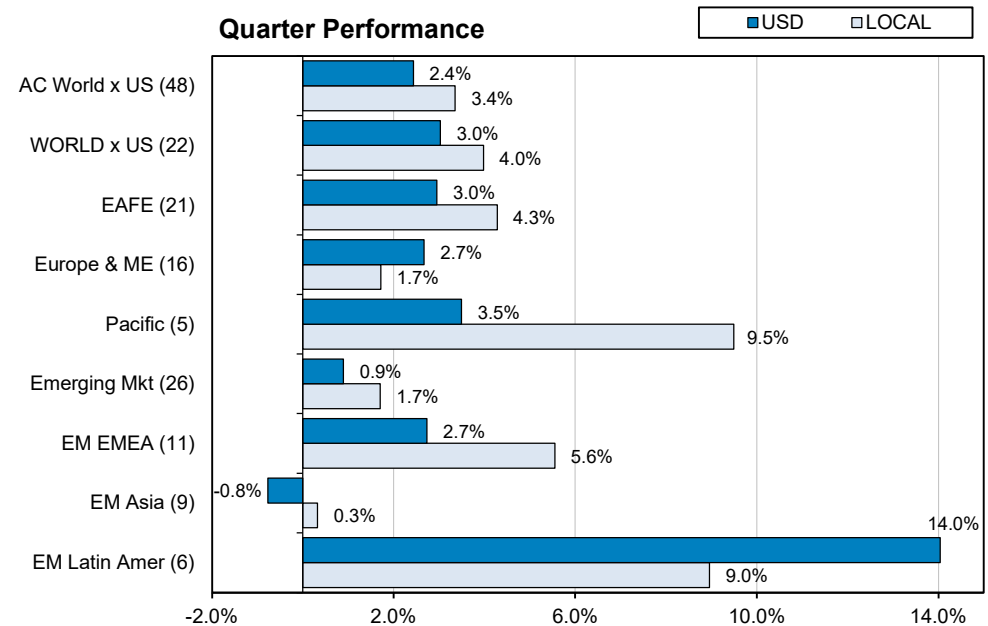
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Babylon Holdings Ltd Ordinary Shares	0.0%	-98.6%	-99.7%	Health Care
ViewRay Inc	0.0%	-89.8%	-86.7%	Health Care
Rain Oncology Inc	0.0%	-86.3%	-78.4%	Health Care
FibroGen Inc	0.0%	-85.5%	-74.4%	Health Care
HomeStreet Inc	0.0%	-66.6%	-82.0%	Financials
BioXcel Therapeutics Inc	0.0%	-64.3%	-49.5%	Health Care
Orchestra BioMed Holdings Inc	0.0%	-64.2%	N/A	Health Care
PolyMet Mining Corp	0.0%	-63.2%	-68.6%	Materials
Enviva Inc	0.0%	-62.4%	-80.1%	Energy
NanoString Technologies Inc	0.0%	-59.1%	-68.1%	Health Care

Source: Morningstar Direct

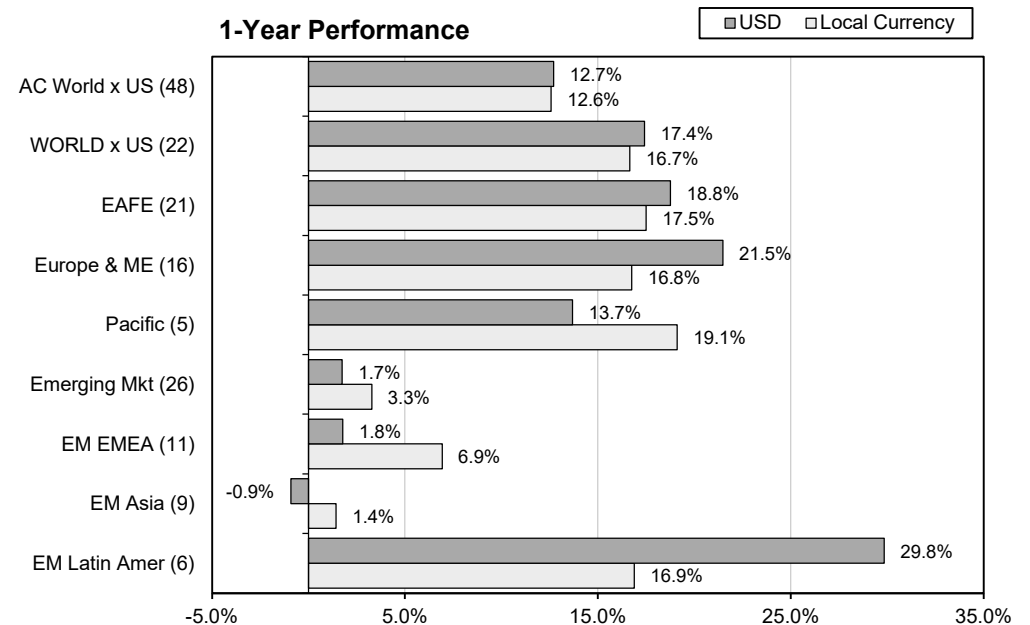


- Many of the international developed and emerging market benchmarks posted positive performance in both USD and LCL terms for the second quarter. While the strengthening of the USD chilled non-US index performance in USD during the quarter, the developed market MSCI EAFE Index still returned a solid 3.0% in USD and 4.3% in LCL terms for the period. The MSCI Emerging Markets Index rose by 0.9% in USD and 1.7% in LCL terms.
- Latin America (LATAM) dramatically outpaced other emerging markets for the quarter with the regional index earning a solid 14.0% in USD and 9.0% in LCL terms. Performance in the region was driven by strong demand for commodity exports from growing worldwide production along with a USD performance boost due to local currency strength in the region.
- The largest weighted country in the emerging market index (China, 8.2%) lagged during the quarters. Investors have struggled to accurately forecast the pace of China's recovery after its grand economic reopening from COVID-19 lockdowns, which led to a flurry of spending that has since cooled.
- Much like domestic markets, trailing one-year results for international developed and emerging markets rolled off their poor performance from early 2022 which resulted in strong results for the trailing year. Much of the strong USD performance in late 2022 has been reversed in 2023 with the MSCI EAFE Index returning 18.8% in USD for the year and 17.5% in LCL terms.
- Annual returns across emerging markets were more bifurcated. Latin American results led the way with returns of 29.8% in USD and 16.9% in LC terms. Performance in the EM Asia regional benchmark detracted from emerging market index with the EM Asia Index posting returns of -0.9% in USD and 1.4% in LCL terms. As a result, the broad MSCI Emerging Markets Index returned a muted 1.7% in USD and 3.3% in LCL terms for the year.

Quarter Performance



1-Year Performance



Source: MSCI Global Index Monitor (Returns are Net)



The Market Environment
US Dollar International Index Attribution & Country Detail
As of June 30, 2023

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.1%	-2.6%	2.2%
Consumer Discretionary	12.6%	5.0%	30.6%
Consumer Staples	10.1%	-0.6%	9.9%
Energy	4.2%	0.1%	14.3%
Financials	18.3%	4.6%	20.2%
Health Care	13.2%	2.0%	9.8%
Industrials	16.2%	6.2%	29.6%
Information Technology	8.2%	5.9%	32.7%
Materials	7.4%	-1.7%	16.4%
Real Estate	2.3%	-2.0%	-7.4%
Utilities	3.5%	4.0%	16.5%
Total	100.0%	3.0%	18.8%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.5%	-4.6%	-0.7%
Consumer Discretionary	12.1%	1.5%	12.6%
Consumer Staples	8.6%	-0.4%	9.0%
Energy	5.4%	3.4%	9.4%
Financials	20.6%	4.9%	13.2%
Health Care	9.6%	1.5%	7.4%
Industrials	13.2%	5.4%	24.9%
Information Technology	11.9%	6.1%	24.1%
Materials	7.9%	-2.7%	10.7%
Real Estate	2.0%	-2.5%	-9.5%
Utilities	3.2%	3.7%	7.8%
Total	100.0%	2.4%	12.7%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.8%	-6.8%	-3.6%
Consumer Discretionary	13.2%	-6.3%	-15.3%
Consumer Staples	6.4%	0.3%	4.4%
Energy	5.0%	12.1%	13.5%
Financials	21.9%	5.7%	6.4%
Health Care	3.8%	-2.5%	-9.6%
Industrials	6.3%	1.8%	5.3%
Information Technology	21.2%	5.1%	14.1%
Materials	8.1%	-4.2%	1.8%
Real Estate	1.8%	-4.9%	-17.7%
Utilities	2.6%	4.2%	-6.7%
Total	100.0%	0.9%	1.7%

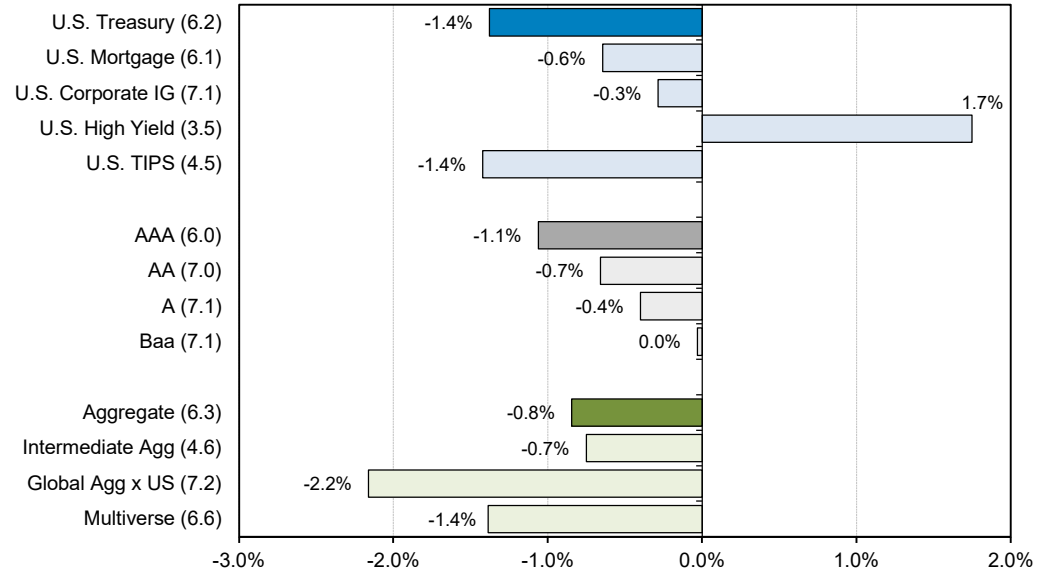
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.4%	14.5%	6.4%	18.1%
United Kingdom	14.7%	9.5%	2.2%	13.2%
France	12.4%	8.0%	3.2%	31.7%
Switzerland	10.1%	6.5%	4.0%	13.3%
Germany	8.6%	5.6%	2.8%	28.4%
Australia	7.3%	4.7%	0.3%	11.2%
Netherlands	4.6%	3.0%	4.1%	31.2%
Sweden	3.3%	2.1%	-1.2%	16.6%
Denmark	3.1%	2.0%	1.7%	31.9%
Spain	2.6%	1.7%	5.6%	29.0%
Italy	2.5%	1.6%	8.2%	43.4%
Hong Kong	2.5%	1.6%	-5.1%	-9.0%
Singapore	1.4%	0.9%	-5.6%	10.0%
Belgium	0.9%	0.6%	-6.1%	6.1%
Finland	0.9%	0.6%	-8.1%	-1.2%
Ireland	0.8%	0.5%	4.3%	45.3%
Norway	0.6%	0.4%	-1.0%	-9.0%
Israel	0.6%	0.4%	-4.0%	-4.7%
Portugal	0.2%	0.1%	-1.1%	6.7%
New Zealand	0.2%	0.1%	-6.0%	15.5%
Austria	0.2%	0.1%	4.4%	18.9%
Total EAFE Countries	100.0%	64.6%	3.0%	18.8%
Canada		7.6%	3.7%	7.0%
Total Developed Countries		72.2%	3.0%	17.4%
China		8.2%	-9.7%	-16.8%
Taiwan		4.3%	4.5%	12.5%
India		4.1%	12.2%	14.2%
Korea		3.4%	4.4%	13.0%
Brazil		1.5%	20.7%	29.8%
Saudi Arabia		1.2%	6.3%	-1.7%
South Africa		0.9%	-4.9%	-1.9%
Mexico		0.8%	5.6%	35.1%
Indonesia		0.6%	2.8%	13.2%
Thailand		0.5%	-8.2%	1.7%
Malaysia		0.4%	-8.4%	-6.4%
United Arab Emirates		0.4%	5.8%	-6.1%
Qatar		0.3%	-2.4%	-15.4%
Poland		0.2%	24.5%	36.4%
Kuwait		0.2%	-0.9%	-4.7%
Philippines		0.2%	-1.3%	5.8%
Chile		0.2%	2.4%	18.1%
Turkey		0.2%	-10.7%	53.3%
Greece		0.1%	23.9%	71.3%
Peru		0.1%	6.5%	34.0%
Hungary		0.1%	24.8%	48.8%
Czech Republic		0.0%	-5.1%	8.7%
Colombia		0.0%	11.7%	-5.7%
Egypt		0.0%	3.9%	27.0%
Total Emerging Countries		27.8%	0.9%	1.7%
Total ACWixUS Countries		100.0%	2.4%	12.7%

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency, post creation of the Communication Services sector.

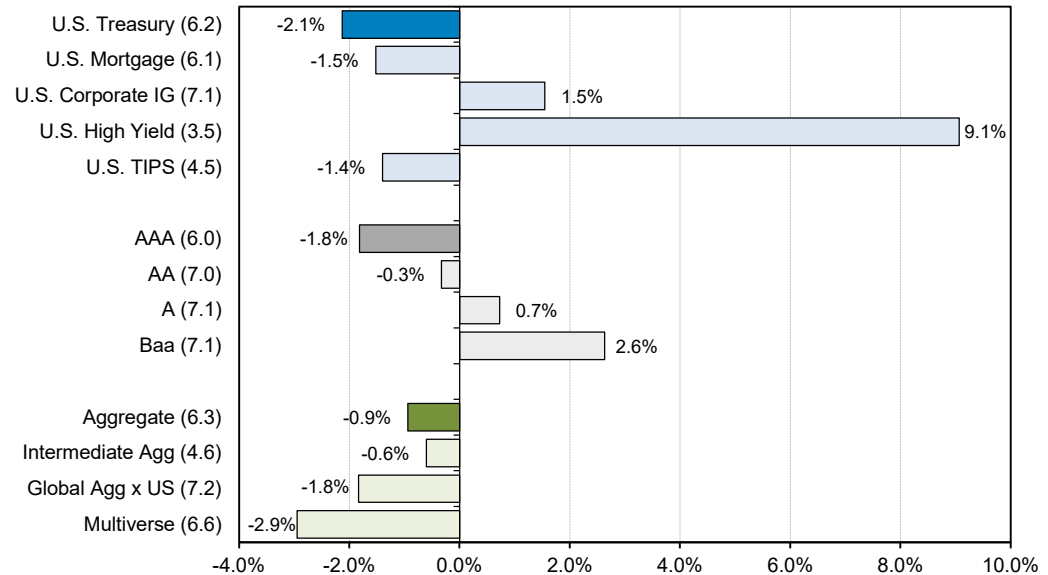


- Fixed income markets started 2023 strong but performance stalled during the second quarter. Yields remain elevated on the back of the Federal Reserve's decision to hike policy rates an additional 0.25% in May. After a challenging 2022 in fixed-income markets brought on by the largest and most rapid increase in interest rates since the early 1980s, higher yields and an expected slower pace of rate increase led investors to expect better outcomes in 2023. That expectation was at least temporarily frustrated during the second quarter, as the quarter's 0.25% rate hike and increased expectations for future rate hikes weighed on the asset class and many of the major domestic fixed-income indices posted negative absolute returns.
- The Bloomberg US Aggregate Bond Index, the bellwether US investment grade benchmark, returned a mild negative result, returning -0.8% for the quarter. Performance across the investment grade index's segments soured during the period with the Bloomberg US Corporate Investment Grade Index returning -0.3% and the US Mortgage Index sliding -0.6%.
- Outside of the aggregate index's sub-components, high-yield bonds continued to rise with a return of 1.7% as credit spreads narrowed during the quarter. US TIPS lost -1.4% for the quarter. The Bloomberg Global Aggregate ex-US Index lagged most domestic fixed-income indexes and the multiverse benchmark, posting a loss of -2.2% for the quarter.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index declined by -0.9%. The benchmark's sub-components fell in a narrow band above and below the broad index's return. US TIPS, which are excluded from the aggregate index, dropped by -1.4% for the year. High-yield corporate bonds, which have a much shorter duration, have outpaced their investment grade counterparts with the Bloomberg US High Yield Index returning a strong 9.1% for the last year.
- Performance for non-US bonds was also negative for the year with the Bloomberg Global Aggregate ex-US Index falling by -1.8%. The combination of rising interest rates, elevated inflation, and geopolitical risks were a hindrance for non-US index performance.

Quarter Performance



1-Year Performance

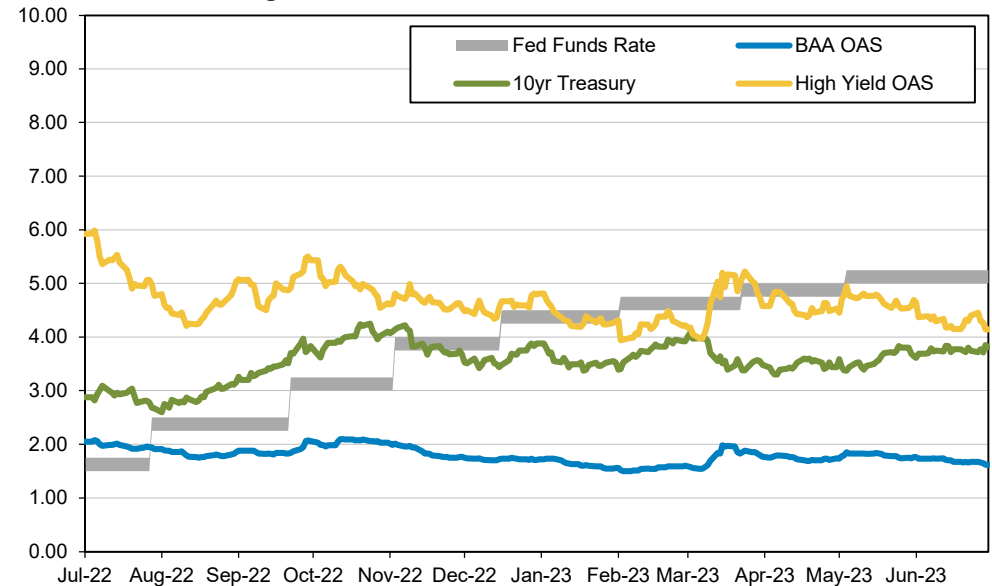


Source: Bloomberg

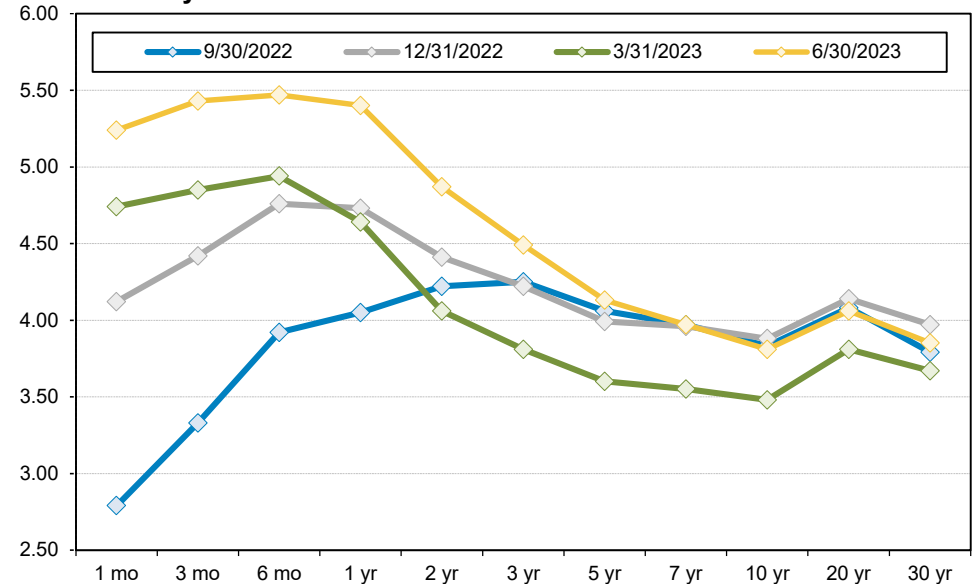


- The gray band across the graph illustrates the range of the current Fed Funds target rate. During the second quarter, the Federal Open Market Committee (FOMC) raised the lower end of its target rate range from 4.75% to 5.00% at their May meeting. While the FOMC pushed pause on a rate increase at their June meeting, several speeches and public comments since that meeting have made it clear that additional rate hikes should not be ruled out. The FOMC is continuing its policy of removing liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting those proceeds. Despite the potential for further rate increases, market participants appear to believe the Fed may be nearing the end of its rate hiking cycle.
- The yield on the US 10-year Treasury (green line) rose a modest 0.33% partially due to increases in the policy rate and renewed prospects for future growth. The closing yield on the 10-Year Treasury was 3.81% as of June 30, 2023, down just 7 basis points from its 3.88% yield at year-end. The benchmark's rate peaked in October 2022, cresting at just over 4.00% before pulling back to its current level.
- The blue line illustrates changes in the BAA OAS (Option Adjusted Spread) for BAA-rated corporate bonds. This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues with the lowest investment grade rating. For the full year, the spread has narrowed from 2.05% to 1.62%, signaling a lower premium for credit risk than was the case a year prior. High Yield OAS spreads have narrowed from 5.92% in July 2022 to 4.14% as of the end of Q2. High-yield spreads reached their highs in July 2022 before trading lower the remainder of the year and have continued to tighten in 2023. A spike in both the BAA OAS and High Yield spreads is visible in March following a short-lived crisis of confidence in the banking sector, which was addressed quickly by the FDIC and supported further by the Fed's aggressive short-term par loan program. Both spread measures traded lower on the news of the Government's intervention, and as fears of possible contagion waned, credit spreads returned to their levels prior to February.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates continued to rise during the second quarter as the Fed increased interest rates to continue combatting inflation. Despite these short-term rate increases, at the end of the quarter, both intermediate and longer-term yields were slightly lower than they were at the end of 2022. The yield curve has further inverted (short-term rates higher than long-term rates) between two- and 10-year maturities. Historically, a persistent inversion of these two key rates has been a precursor of an economic recession within six- to 24 months.

1-Year Trailing Market Rates



Treasury Yield Curve

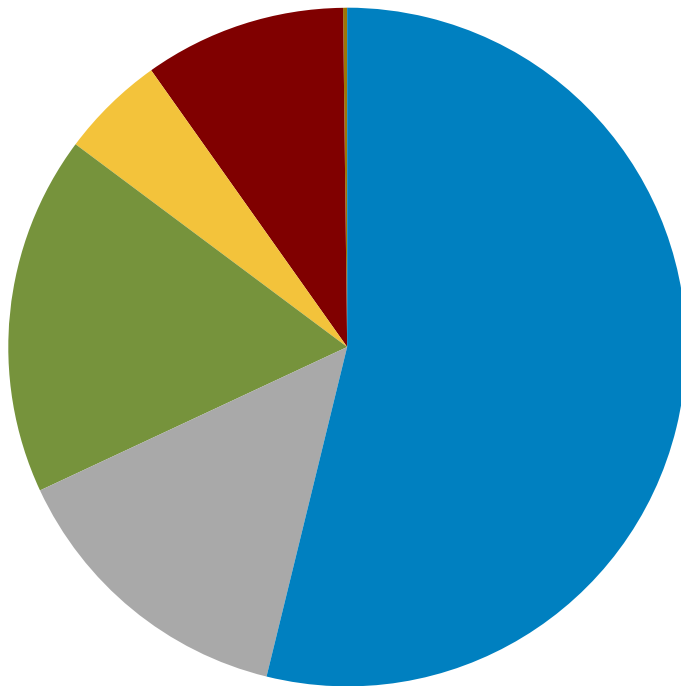


Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)

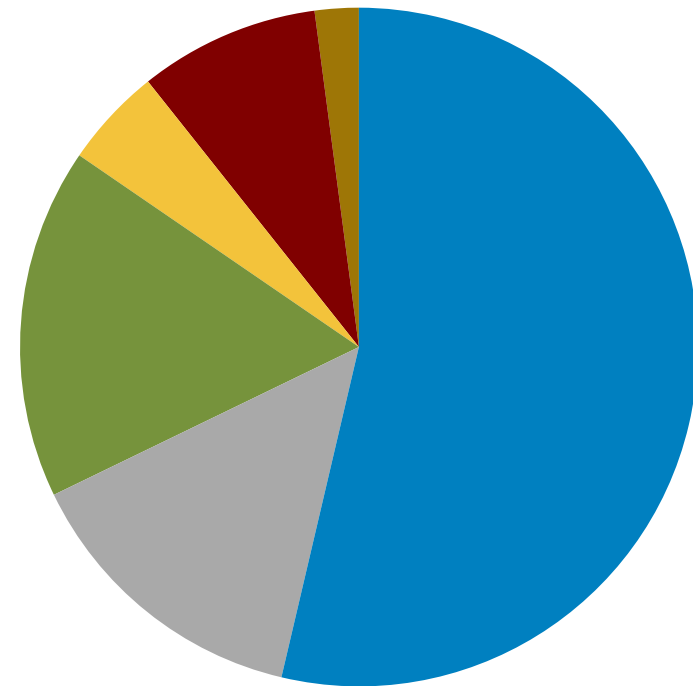
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**Asset Allocation By Segment as of
March 31, 2023 : \$60,062,042**

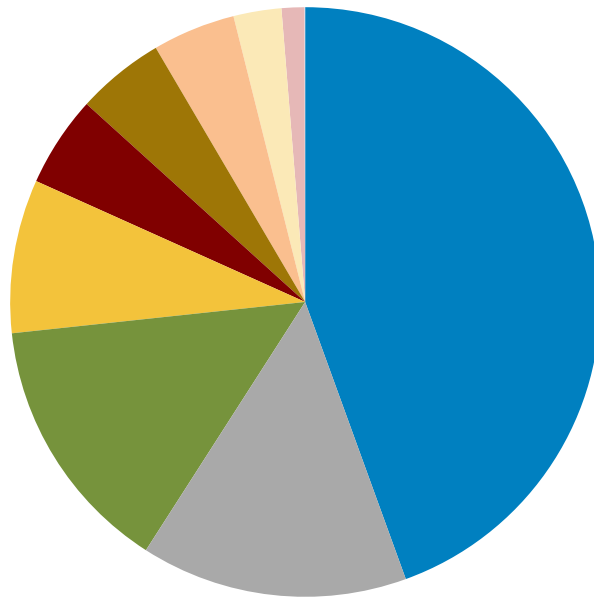


**Asset Allocation By Segment as of
June 30, 2023 : \$63,299,529**

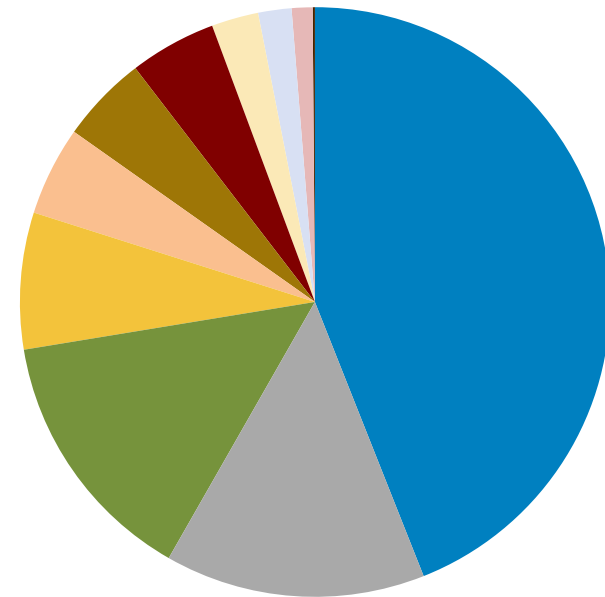


Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	32,329,946	53.8	Domestic Equity	33,975,048	53.7
International Equity	8,546,197	14.2	International Equity	8,960,855	14.2
Domestic Fixed Income	10,293,645	17.1	Domestic Fixed Income	10,585,299	16.7
Other Fixed Income	2,995,316	5.0	Other Fixed Income	3,005,455	4.7
Real Estate	5,777,734	9.6	Real Estate	5,444,076	8.6
Cash Equivalent	119,203	0.2	Cash Equivalent	1,328,796	2.1

Asset Allocation By Manager as of
Mar-2023 : \$60,062,042

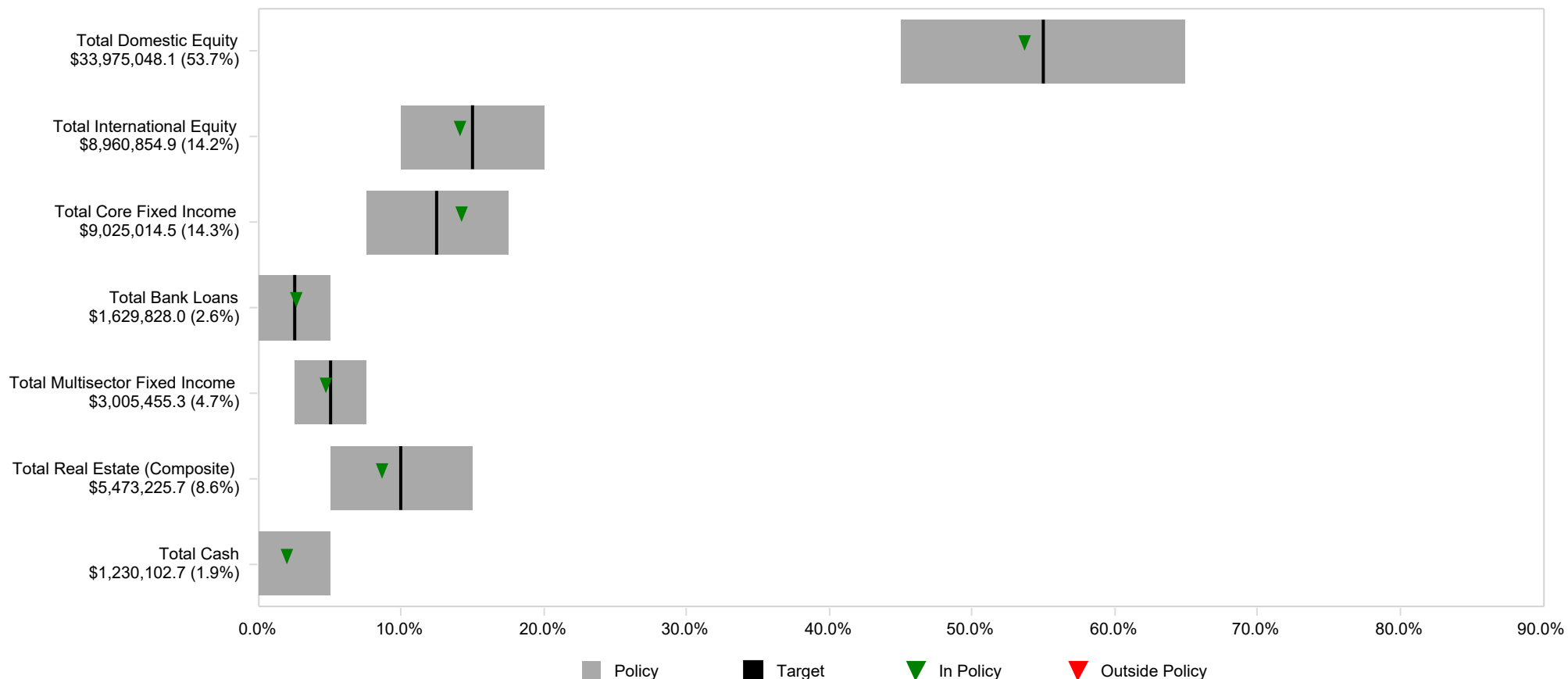


Asset Allocation By Manager as of
Jun-2023 : \$63,299,529



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard Total Stock Index (VITSX)	26,703,962	44.5	Vanguard Total Stock Index (VITSX)	27,850,153	44.0
Garcia Hamilton	8,779,704	14.6	Garcia Hamilton	9,025,014	14.3
EuroPacific Growth R6 (RERGX)	8,546,197	14.2	EuroPacific Growth R6 (RERGX)	8,960,855	14.2
Clarion (Core Real Estate)	5,058,762	8.4	Clarion (Core Real Estate)	4,745,410	7.5
Apollo Total Return Fund	2,995,316	5.0	Conestoga Small Cap I (CCALX)	3,096,270	4.9
American Beacon SC Value R6 (AASRX)	2,901,585	4.8	American Beacon SC Value R6 (AASRX)	3,028,625	4.8
Conestoga Small Cap I (CCALX)	2,724,399	4.5	Apollo Total Return Fund	3,005,455	4.7
Aristotle Floating Rate (PLFRX)	1,579,049	2.6	Aristotle Floating Rate (PLFRX)	1,629,828	2.6
Carlyle Property Investors	747,236	1.2	Mutual Fund Cash	1,153,276	1.8
Mutual Fund Cash	23,511	0.0	Carlyle Property Investors	727,816	1.1
Frost Bank Cash Account	2,321	0.0	Frost Bank Cash Account	76,827	0.1

Executive Summary

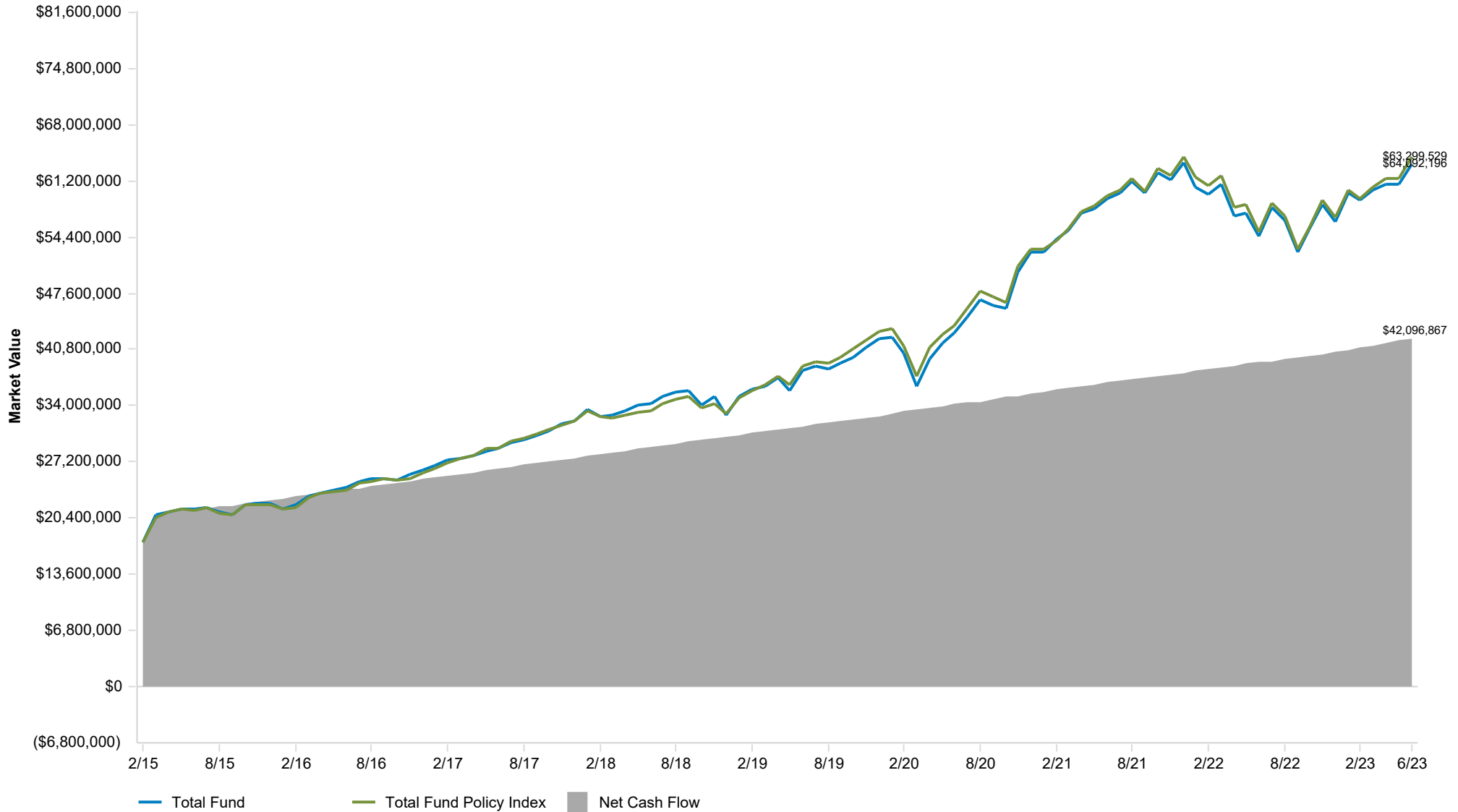


Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebal. (\$000)
Total Fund	63,299,529	100.0	N/A	N/A	100.0	-
Total Domestic Equity	33,975,048	53.7	45.0	65.0	55.0	839,693
Total International Equity	8,960,855	14.2	10.0	20.0	15.0	534,074
Total Core Fixed Income	9,025,014	14.3	7.5	17.5	12.5	-1,112,573
Total Bank Loans	1,629,828	2.6	0.0	5.0	2.5	-47,340
Total Multisector Fixed Income	3,005,455	4.7	2.5	7.5	5.0	159,521
Total Real Estate (Composite)	5,473,226	8.6	5.0	15.0	10.0	856,727
Total Cash	1,230,103	1.9	0.0	5.0	0.0	-1,230,103



Schedule of Investable Assets



Schedule of Investable Assets

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Ending Market Value \$
Inception	17,541,325	24,555,543	63,299,529



The Woodlands Firefighters' Retirement System

Financial Reconciliation

1 Quarter Ending June 30, 2023

Financial Reconciliation One Quarter									
	Market Value 04/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 06/30/2023
Total Fund	60,062,042	-	975,482	-89,471	-21,134	-38,888	198,158	2,213,341	63,299,529
Total Domestic Equity	32,329,946	-875,000	-	-	-	-	108,127	2,411,975	33,975,048
Vanguard Total Stock Index (VITSX)	26,703,962	-1,100,000	-	-	-	-	108,127	2,138,064	27,850,153
American Beacon SC Value R6 (AASRX)	2,901,585	-	-	-	-	-	-	127,040	3,028,625
Conestoga Small Cap I (CCALX)	2,724,399	225,000	-	-	-	-	-	146,871	3,096,270
Total International Developed Equity	8,546,197	225,000	-	-	-	-	33,426	156,231	8,960,855
EuroPacific Growth R6 (RERGX)	8,546,197	225,000	-	-	-	-	33,426	156,231	8,960,855
Total Core Fixed Income	8,779,704	350,000	-	-	-5,494	-665	14,428	-112,958	9,025,014
Garcia Hamilton	8,779,704	350,000	-	-	-5,494	-665	14,428	-112,958	9,025,014
Total Bank Loans	1,579,049	-	-	-	-	-	36,962	13,817	1,629,828
Aristotle Floating Rate (PLFRX)	1,579,049	-	-	-	-	-	36,962	13,817	1,629,828
Total Multisector Fixed Income	2,995,316	-52,495	-	-	-	-	-	62,634	3,005,455
Apollo Total Return Fund	2,995,316	-52,495	-	-	-	-	-	62,634	3,005,455
Total Real Estate	5,805,998	-	-	-	-15,640	-	1,226	-318,358	5,473,226
Clarion	5,058,762	-	-	-	-13,821	-	-	-299,531	4,745,410
Carlyle Property Investors	747,236	-	-	-	-1,819	-	1,226	-18,827	727,816
Total Cash	25,831	352,495	975,482	-89,471	-	-38,223	3,988	-	1,230,103
Frost Bank Cash Account	2,321	165,000	-	-89,471	-	-1,313	290	-	76,827
Mutual Fund Cash	23,511	187,495	975,482	-	-	-36,910	3,698	-	1,153,276



The Woodlands Firefighters' Retirement System
Financial Reconciliation
Year To Date Ending June 30, 2023

Financial Reconciliation Year to Date									
	Market Value 01/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 06/30/2023
Total Fund	56,224,827	-	1,928,934	-169,570	-41,208	-103,838	455,269	5,005,116	63,299,529
Total Domestic Equity	29,810,099	-475,000	-	-	-	-	210,673	4,429,277	33,975,048
Vanguard Total Stock Index (VITSX)	24,539,780	-700,000	-	-	-	-	210,673	3,799,701	27,850,153
American Beacon SC Value R6 (AASRX)	2,848,229	-	-	-	-	-	-	180,396	3,028,625
Conestoga Small Cap I (CCALX)	2,422,090	225,000	-	-	-	-	-	449,180	3,096,270
Total International Developed Equity	7,400,184	625,000	-	-	-	-	33,426	902,244	8,960,855
EuroPacific Growth R6 (RERGX)	7,400,184	625,000	-	-	-	-	33,426	902,244	8,960,855
Total Core Fixed Income	9,007,886	-197,236	-	-	-11,107	-1,351	91,264	135,558	9,025,014
Garcia Hamilton	9,007,886	-197,236	-	-	-11,107	-1,351	91,264	135,558	9,025,014
Total Bank Loans	1,524,492	-	-	-	-	-	69,983	35,353	1,629,828
Aristotle Floating Rate (PLFRX)	1,524,492	-	-	-	-	-	69,983	35,353	1,629,828
Total Multisector Fixed Income	2,970,414	-99,387	-	-	-	-	-	134,428	3,005,455
Apollo Total Return Fund	2,970,414	-99,387	-	-	-	-	-	134,428	3,005,455
Total Real Estate	5,344,803	747,236	-	-	-30,101	-	43,031	-631,743	5,473,226
Clarion	5,344,803	-	-	-	-28,282	-	41,805	-612,916	4,745,410
Carlyle Property Investors	-	747,236	-	-	-1,819	-	1,226	-18,827	727,816
Total Cash	166,948	-600,613	1,928,934	-169,570	-	-102,487	6,892	-	1,230,103
Frost Bank Cash Account	3,426	245,000	-	-169,570	-	-2,626	597	-	76,827
Mutual Fund Cash	163,522	-845,613	1,928,934	-	-	-99,861	6,295	-	1,153,276



The Woodlands Firefighters' Retirement System
Asset Allocation & Performance Trailing Returns
As of June 30, 2023

Asset Allocation & Performance

	Allocation		All Performance Data is Net of Fees(%)														
	Market Value	%	QTR		YTD		1 YR		2 YR		3 YR		5 YR		Inception	Inception Date	
Total Fund (Net)	63,299,529	100.0	3.87	(25)	9.45	(16)	10.39	(24)	-1.20	(49)	8.55	(19)	6.77	(31)	6.34	(40)	03/01/2015
Total Fund Policy Index			4.52	(9)	10.01	(10)	11.02	(14)	-0.63	(34)	8.42	(21)	7.78	(6)	6.58	(28)	
All Public Plans-Total Fund (Net)			3.30		7.81		9.03		-1.25		7.27		6.38		6.10		
New Portfolio Structure 10/1/19	63,299,529	100.0	3.87		9.45		10.39		-1.20		8.55		-		7.86		10/01/2019
Total Fund Policy Index			4.52		10.01		11.02		-0.63		8.42		7.78		7.93		
Total Equity	42,935,903	67.8	6.56		14.74		18.10		-1.23		12.20		8.78		8.59		03/01/2015
Total Domestic Equity	33,975,048	53.7	7.74		15.41		18.74		0.65		13.94		-		11.28		07/01/2019
Vanguard Total Stock Index (VITSX)	27,850,153	44.0	8.41	(23)	16.16	(25)	18.92	(31)	0.99	(44)	13.76	(35)	-		11.90	(27)	07/01/2019
CRSP U.S. Total Market TR Index			8.41	(23)	16.17	(25)	18.94	(31)	1.01	(43)	13.77	(34)	11.31	(-)	11.90	(27)	
IM U.S. Multi-Cap Core Equity (MF) Median			7.16		13.65		17.38		0.64		12.87		-		10.61		
American Beacon SC Value R6 (AASRX)	3,028,625	4.8	4.38	(33)	6.33	(28)	15.83	(24)	1.29	(21)	20.26	(36)	-		9.07	(37)	07/01/2019
Russell 2000 Value Index			3.18	(64)	2.50	(76)	6.01	(83)	-5.79	(93)	15.43	(89)	3.54	(-)	6.14	(87)	
IM U.S. Small Cap Value Equity (MF) Median			3.67		4.42		9.71		-1.27		19.10		-		8.54		
Conestoga Small Cap I (CCALX)	3,096,270	4.9	4.78	(59)	17.86	(6)	19.43	(14)	-3.78	(12)	8.05	(42)	-		6.94	(42)	07/01/2019
Russell 2000 Growth Index			7.05	(17)	13.55	(25)	18.53	(22)	-11.17	(63)	6.10	(60)	4.22	(-)	5.44	(69)	
IM U.S. Small Cap Growth Equity (MF) Median			5.05		11.51		14.92		-9.52		7.19		-		6.40		
Total International Developed Equity	8,960,855	14.2	2.12		12.20		15.75		-8.46		5.49		-		4.93		07/01/2019
EuroPacific Growth R6 (RERGX)	8,960,855	14.2	2.12	(88)	12.20	(50)	15.75	(70)	-8.52	(100)	5.45	(92)	-		4.88	(50)	07/01/2019
MSCI AC World ex USA (Net)			2.44	(83)	9.47	(80)	12.72	(82)	-4.70	(87)	7.22	(70)	3.52	(-)	4.08	(73)	
IM International Large Cap Core Equity (MF) Median			3.20		12.17		17.77		-1.82		8.52		-		4.86		

Returns for periods greater than one year are annualized. Returns are expressed as percentages.



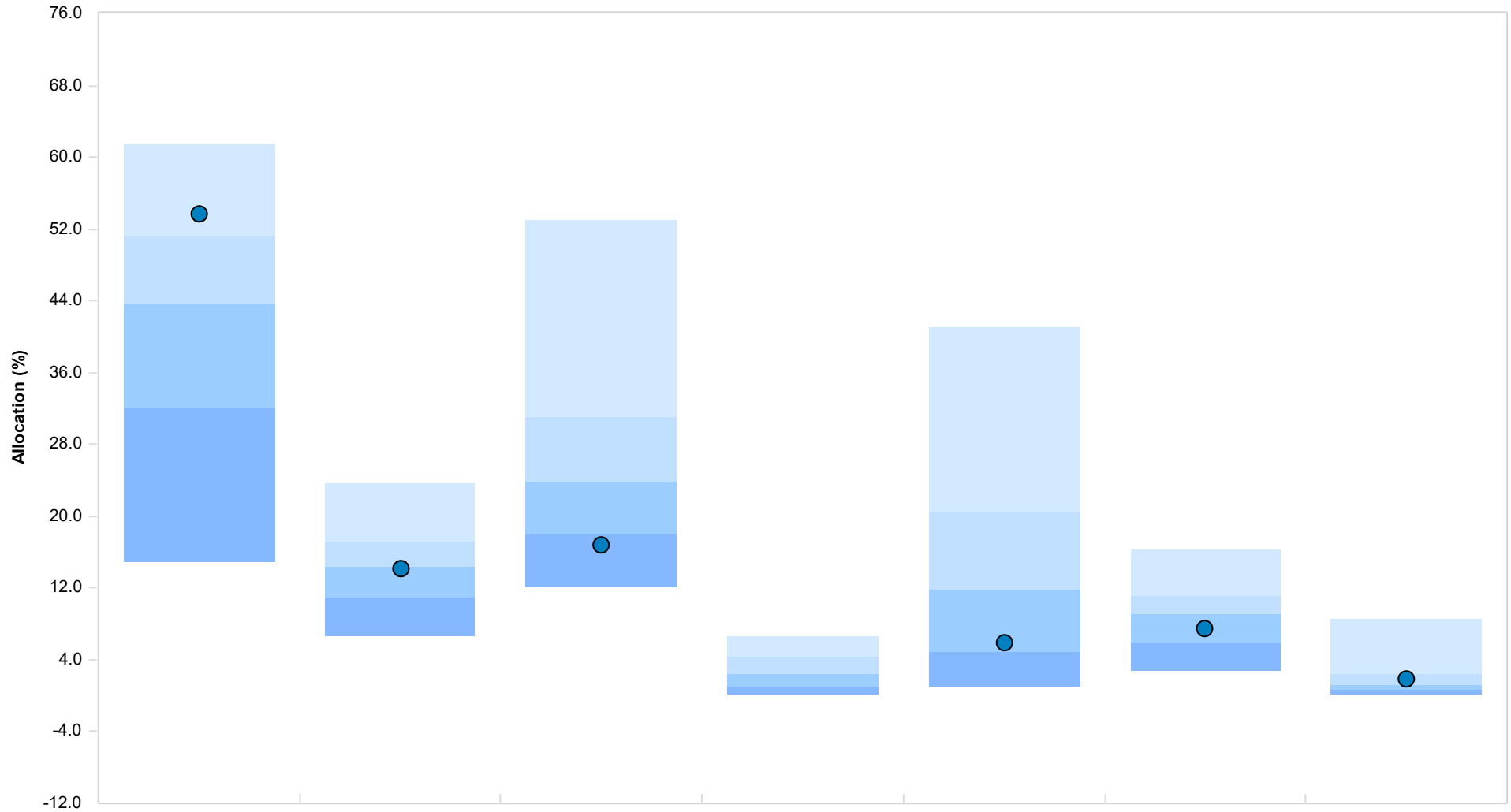
The Woodlands Firefighters' Retirement System
Asset Allocation & Performance Trailing Returns
As of June 30, 2023

	Allocation		All Performance Data is Net of Fees(%)								Inception Date
	Market Value	%	QTR	YTD	1 YR	2 YR	3 YR	5 YR	Inception		
Total Fixed Income	13,660,298	21.6	0.07	3.38	1.25	-3.34	-2.17	0.91	1.10	03/01/2015	
Total Core Fixed Income	9,025,014	14.3	-1.18	2.33	-1.48	-4.91	-3.57	-	-0.65	07/01/2019	
Garcia Hamilton	9,025,014	14.3	-1.12 (96)	2.46 (48)	-1.22 (92)	-4.67 (11)	-3.30 (40)	-	-0.42 (49)	07/01/2019	
Blmbg. U.S. Aggregate Index			-0.84 (79)	2.09 (83)	-0.94 (82)	-5.73 (76)	-3.97 (89)	0.77 (-)	-0.94 (95)		
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			-0.72	2.42	-0.41	-5.54	-3.43	-	-0.43		
Total Bank Loans	1,629,828	2.6	3.22	6.91	11.41	3.84	5.56	-	3.71	07/01/2019	
Aristotle Floating Rate (PLFRX)	1,629,828	2.6	3.22 (14)	6.91 (8)	11.41 (4)	3.84 (7)	5.56 (28)	-	3.71 (10)	07/01/2019	
Credit Suisse Leveraged Loan Index			3.12 (20)	6.33 (20)	10.10 (34)	3.52 (13)	6.16 (14)	4.02 (-)	3.99 (2)		
IM U.S. Bank Loans (MF) Median			2.84	5.75	9.62	2.31	4.99	-	2.77		
Total Multisector Fixed Income	3,005,455	4.7	2.12	4.60	7.71	-	-	-	2.50	04/01/2022	
Apollo Total Return Fund	3,005,455	4.7	2.12	4.60	7.45	-	-	-	2.30	04/01/2022	
Blmbg. Global Multiverse			-1.38	1.60	-0.81	-8.37	-4.67	-0.94	-7.40		
Total Real Estate	5,473,226	8.6	-5.46 (91)	-10.27 (89)	-14.32 (83)	6.08 (60)	7.32 (64)	-	6.24 (60)	10/01/2019	
NCREIF Fund Index-ODCE (VW)			-2.68 (70)	-5.76 (66)	-9.97 (53)	7.98 (38)	7.99 (53)	6.50 (-)	6.60 (57)		
IM U.S. Open End Private Real Estate (SA+CF) Median			-1.80	-4.60	-9.86	6.95	8.17	-	6.78		
Clarion	4,745,410	7.5	-5.92 (93)	-10.70 (93)	-14.73 (84)	5.82 (61)	7.14 (69)	-	6.10 (61)	10/01/2019	
NCREIF Fund Index-ODCE (VW)			-2.68 (70)	-5.76 (66)	-9.97 (53)	7.98 (38)	7.99 (53)	6.50 (-)	6.60 (57)		
IM U.S. Open End Private Real Estate (SA+CF) Median			-1.80	-4.60	-9.86	6.95	8.17	-	6.78		
Carlyle Property Investors	727,816	1.1	-2.36 (69)	-	-	-	-	-	-2.36 (69)	04/01/2023	
NCREIF Fund Index-ODCE (VW)			-2.68 (70)	-5.76 (-)	-9.97 (-)	7.98 (-)	7.99 (-)	6.50 (-)	-2.68 (70)		
IM U.S. Open End Private Real Estate (SA+CF) Median			-1.80	-	-	-	-	-	-1.80		
Total Cash	1,230,103	1.9	0.85	2.02	3.59	1.86	1.33	-	1.35	07/01/2019	
Frost Bank Cash Account	76,827	0.1	1.33	2.63	4.17	2.15	1.44	-	1.46	07/01/2019	
Mutual Fund Cash	1,153,276	1.8	0.84	2.07	3.64	1.89	1.34	-	1.35	07/01/2019	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.



Plan Sponsor TF Asset Allocation vs. All Public Plans-Total Fund



	US Equity	Global ex-US Equity	US Fixed	Global ex-US Fixed	Alternatives	Total Real Estate	Cash & Equivalents
● Total Fund	53.67 (17)	14.16 (53)	16.83 (80)	N/A	5.90 (71)	7.50 (63)	1.94 (33)
5th Percentile	61.46	23.66	53.04	6.68	40.99	16.32	8.63
1st Quartile	51.32	17.16	31.02	4.25	20.49	11.24	2.43
Median	43.62	14.34	23.83	2.45	11.87	9.00	1.26
3rd Quartile	32.01	10.95	17.97	0.92	4.94	5.93	0.60
95th Percentile	14.88	6.57	12.15	0.04	1.01	2.83	0.08

Parentheses contain percentile rankings.
Calculation based on <Periodicity> periodicity.



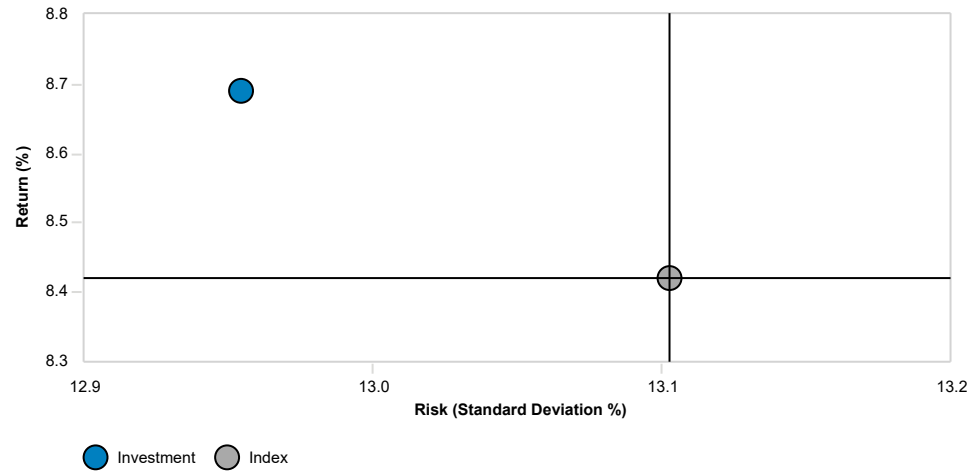
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.69	12.95	0.61	98.69	9	96.36	3
Index	8.42	13.10	0.59	100.00	9	100.00	3

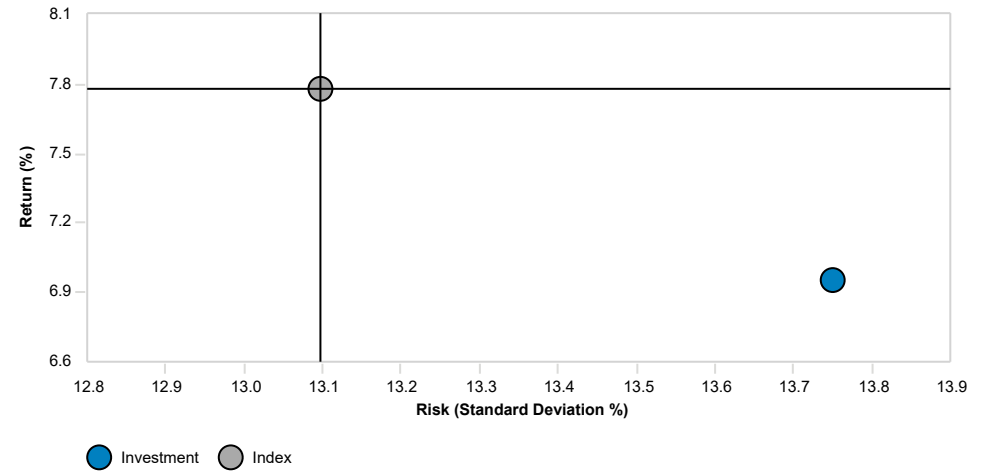
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.96	13.75	0.45	101.50	15	107.05	5
Index	7.78	13.10	0.52	100.00	15	100.00	5

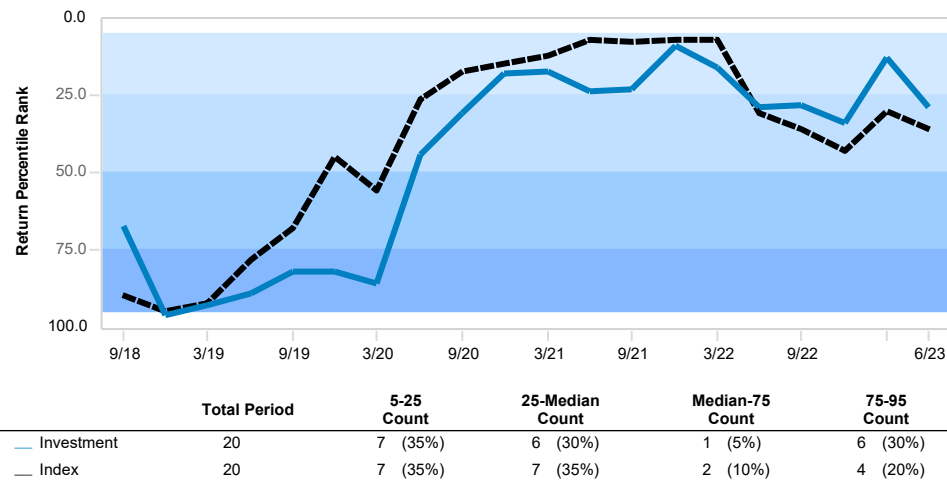
Risk and Return 3 Years



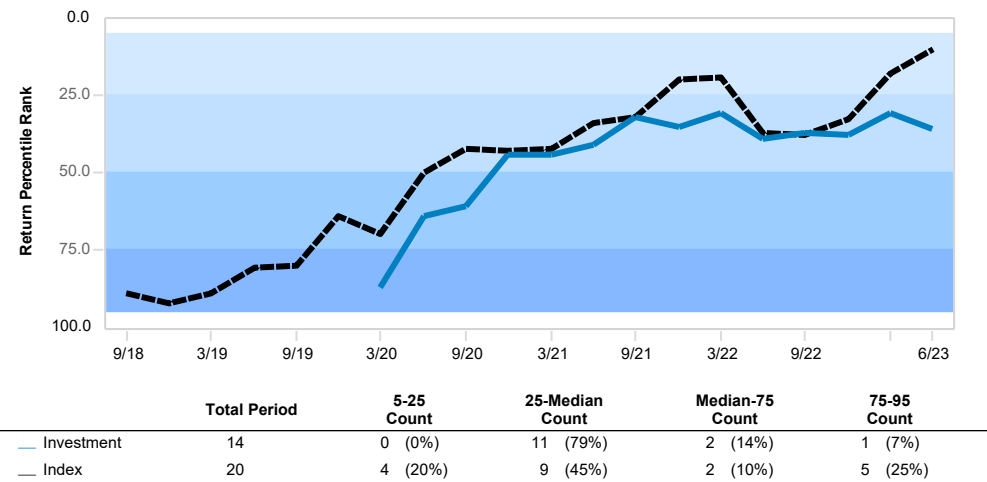
Risk and Return 5 Years



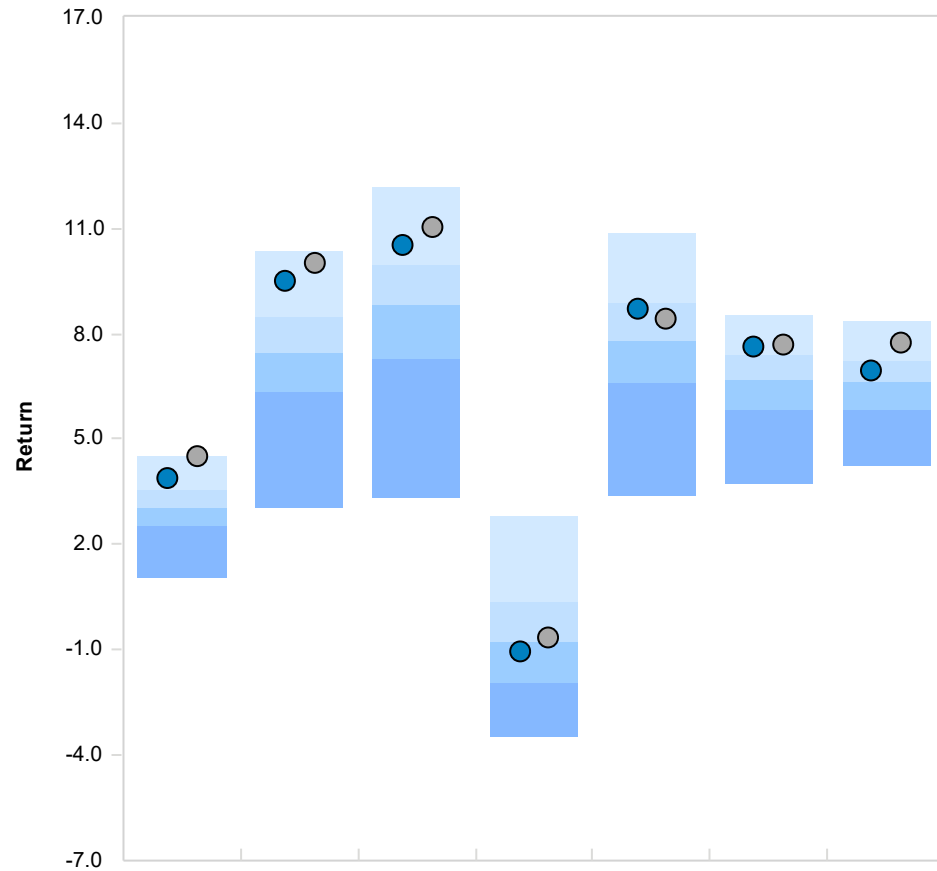
3 Year Rolling Percentile Rank All Public Plans-Total Fund



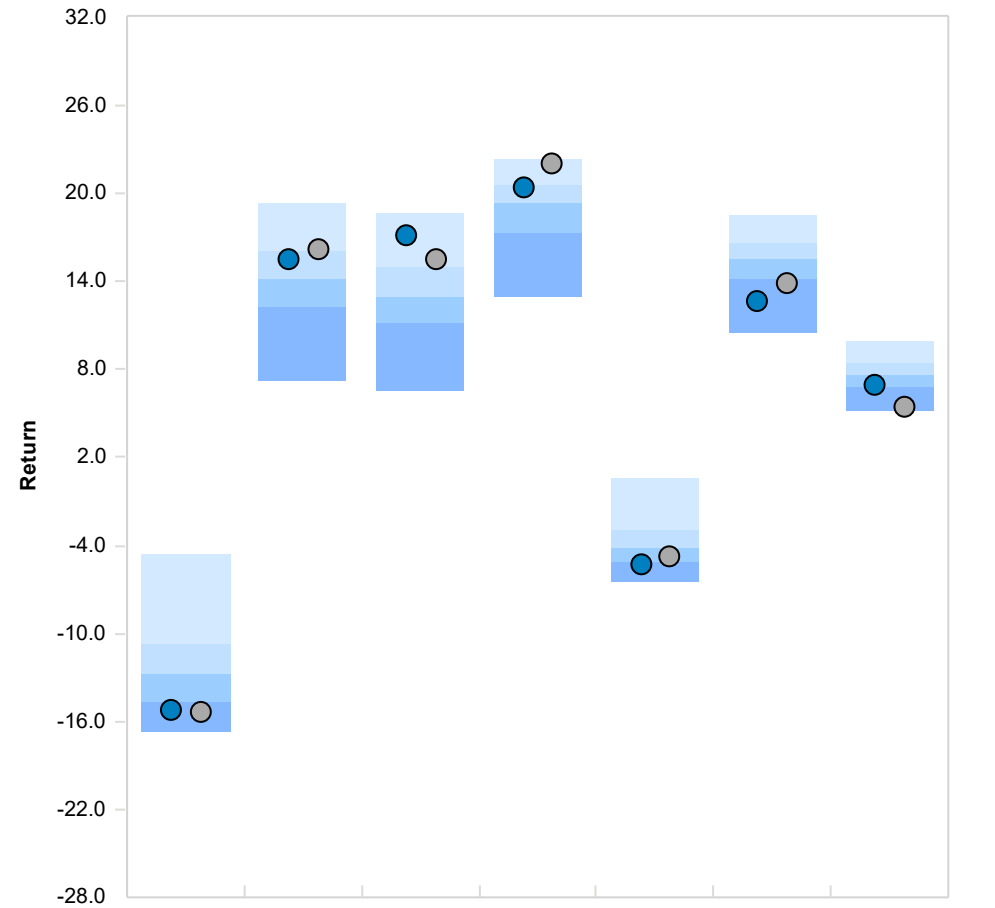
5 Year Rolling Percentile Rank All Public Plans-Total Fund



Peer Group Analysis - All Public Plans-Total Fund



Peer Group Analysis - All Public Plans-Total Fund



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	5.41 (10)	5.60 (51)	-4.41 (54)	-11.25 (81)	-5.29 (77)	5.19 (21)
Index	5.25 (12)	6.01 (39)	-4.80 (70)	-12.16 (95)	-4.50 (57)	5.98 (7)
Median	4.16	5.63	-4.31	-9.88	-4.27	4.36

Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.76	18.21	0.73	99.99	8	100.03	4
Index	13.77	18.21	0.73	100.00	8	100.00	4

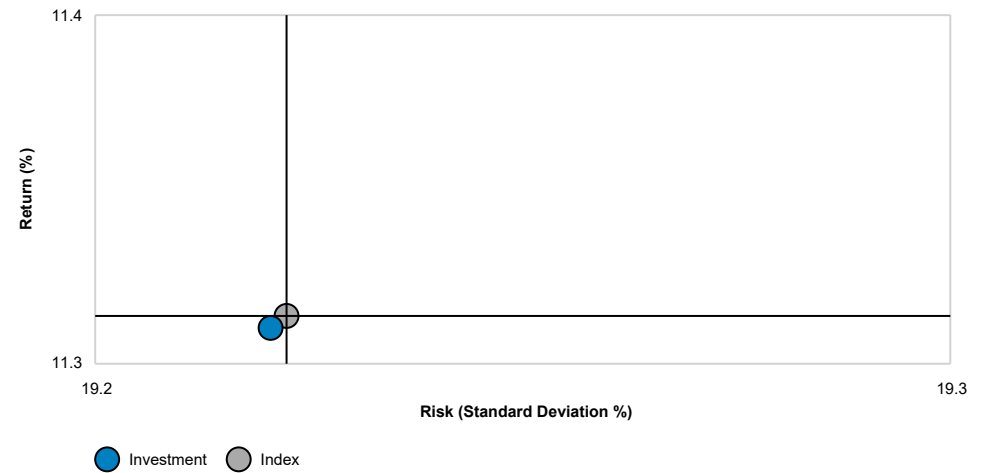
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.31	19.22	0.58	99.99	14	100.00	6
Index	11.31	19.22	0.58	100.00	14	100.00	6

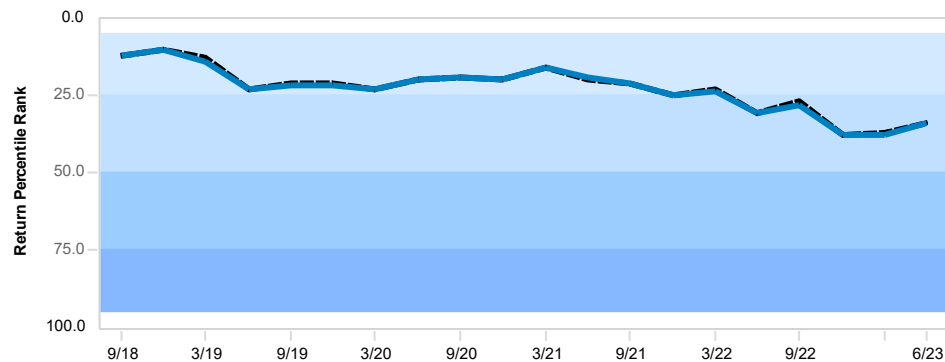
Risk and Return 3 Years



Risk and Return 5 Years

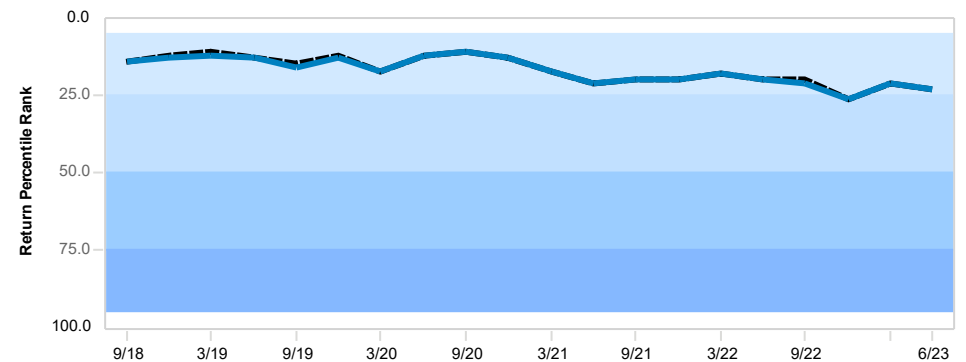


3 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)



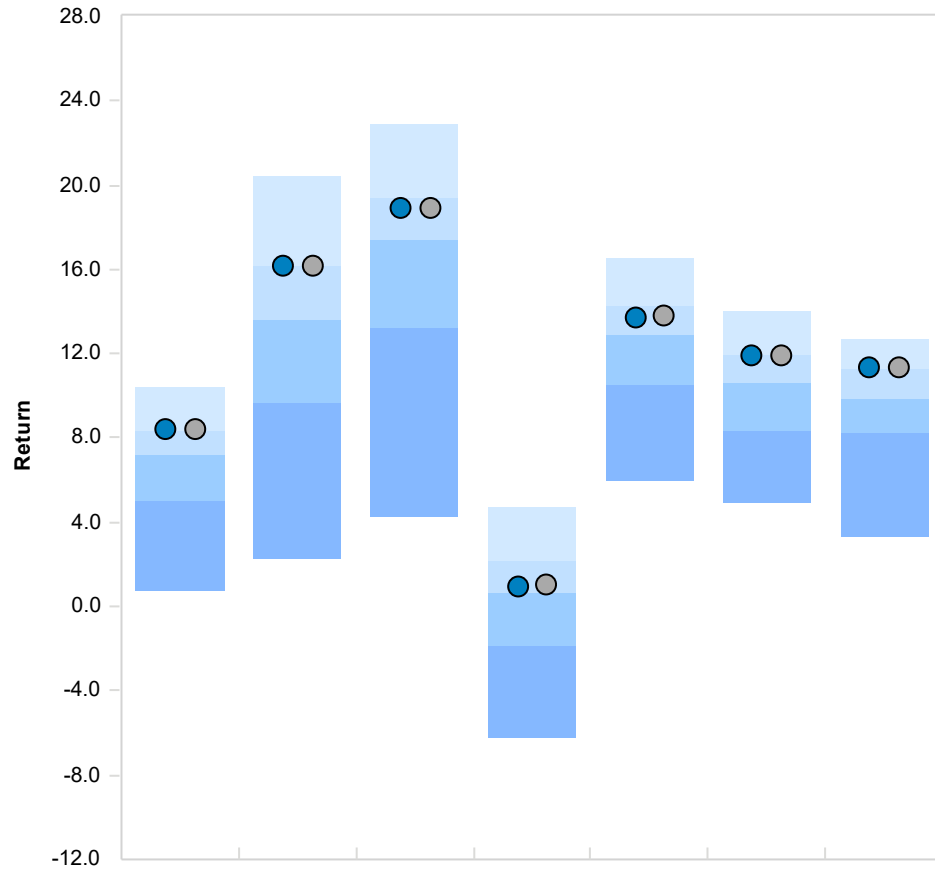
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)
Index	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)

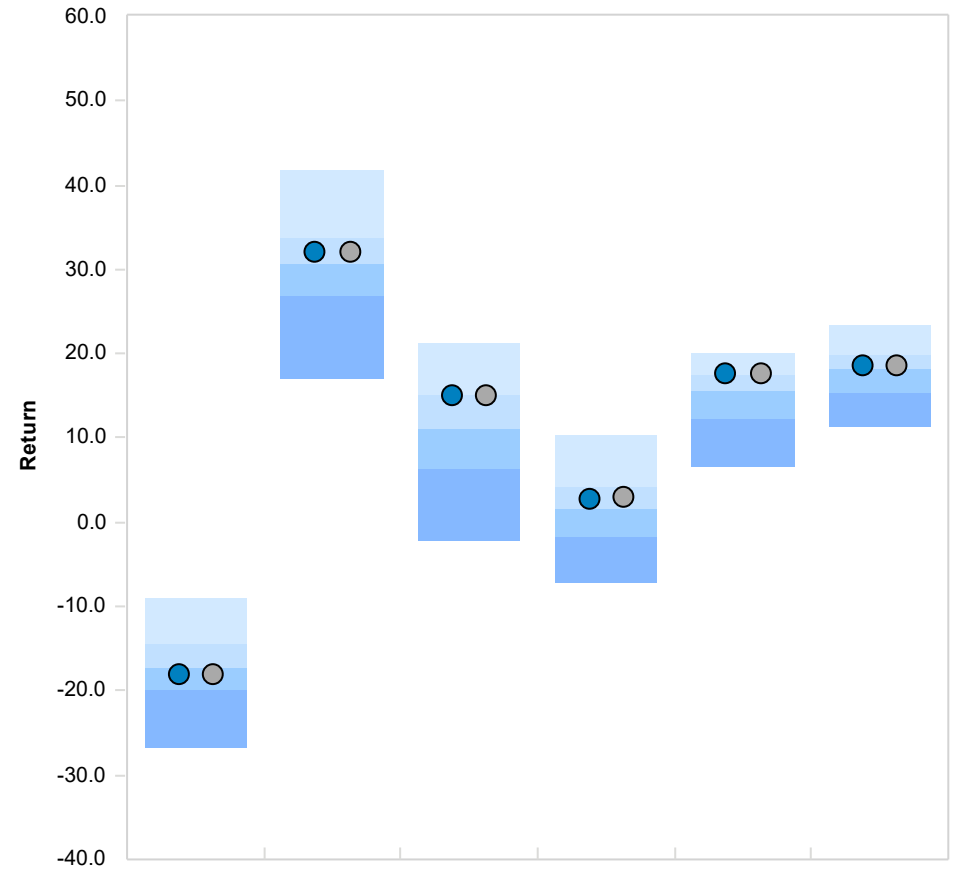


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)
Index	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)

Peer Group Analysis - IM U.S. Multi-Cap Core Equity (MF)



Peer Group Analysis - IM U.S. Multi-Cap Core Equity (MF)



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	7.15 (29)	7.16 (63)	-4.46 (41)	-16.84 (78)	-5.46 (43)	9.16 (49)
Index	7.15 (29)	7.15 (64)	-4.44 (39)	-16.85 (79)	-5.44 (42)	9.16 (50)
Median	6.16	8.06	-4.63	-15.83	-5.87	9.15

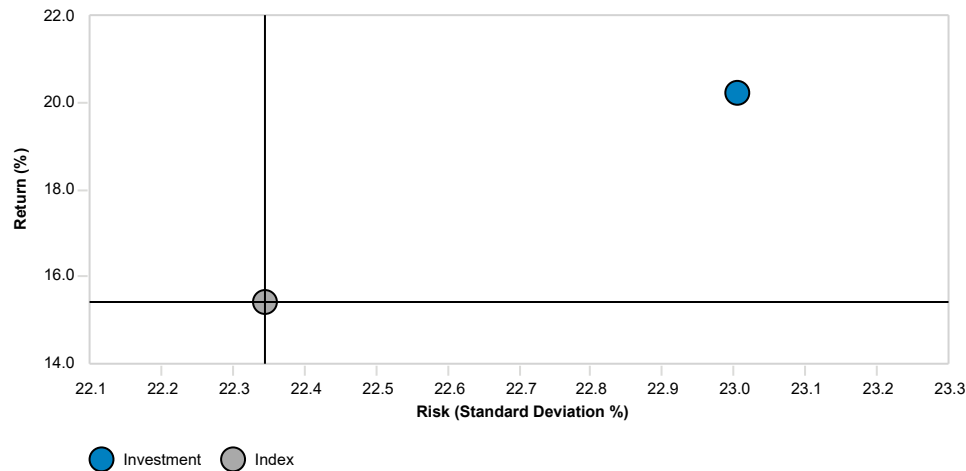
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	20.26	23.01	0.86	107.20	8	94.26	4
Index	15.43	22.34	0.70	100.00	7	100.00	5

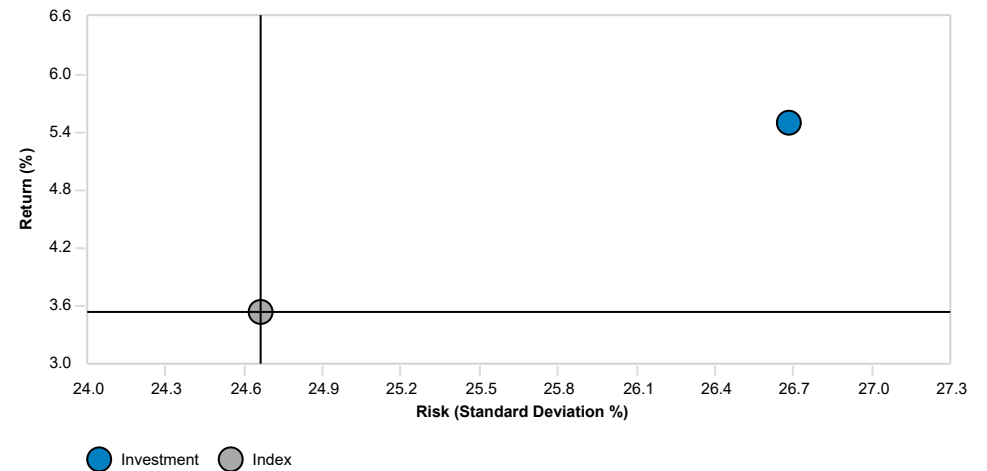
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.51	26.68	0.28	110.23	13	104.37	7
Index	3.54	24.66	0.20	100.00	12	100.00	8

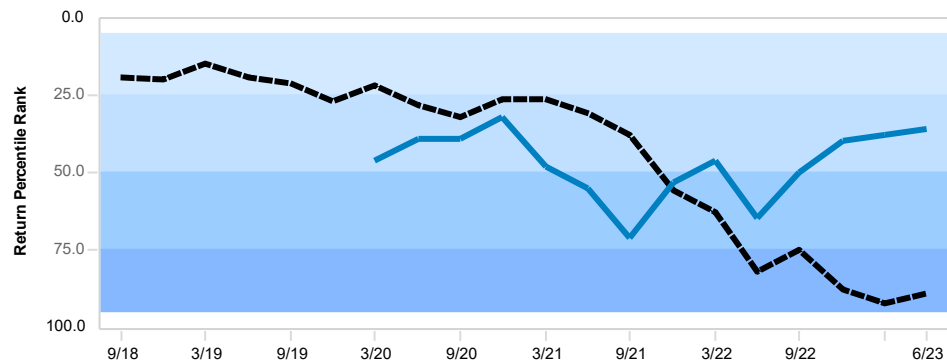
Risk and Return 3 Years



Risk and Return 5 Years

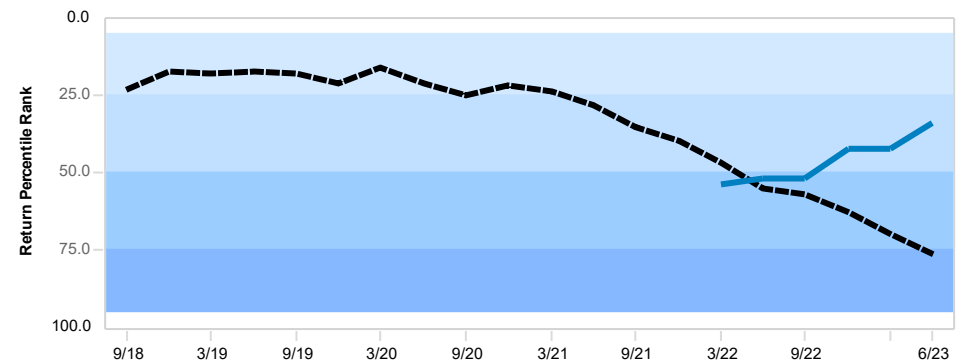


3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)



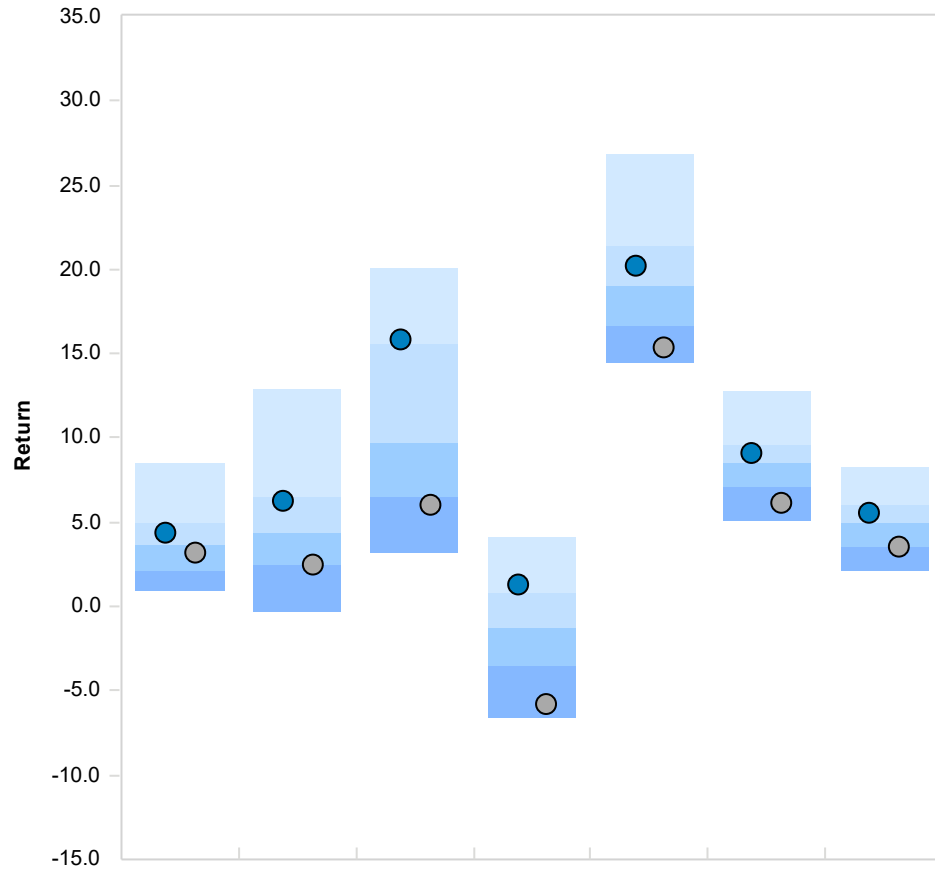
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	14	0 (0%)	10 (71%)	4 (29%)	0 (0%)
Index	20	6 (30%)	7 (35%)	3 (15%)	4 (20%)

5 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)

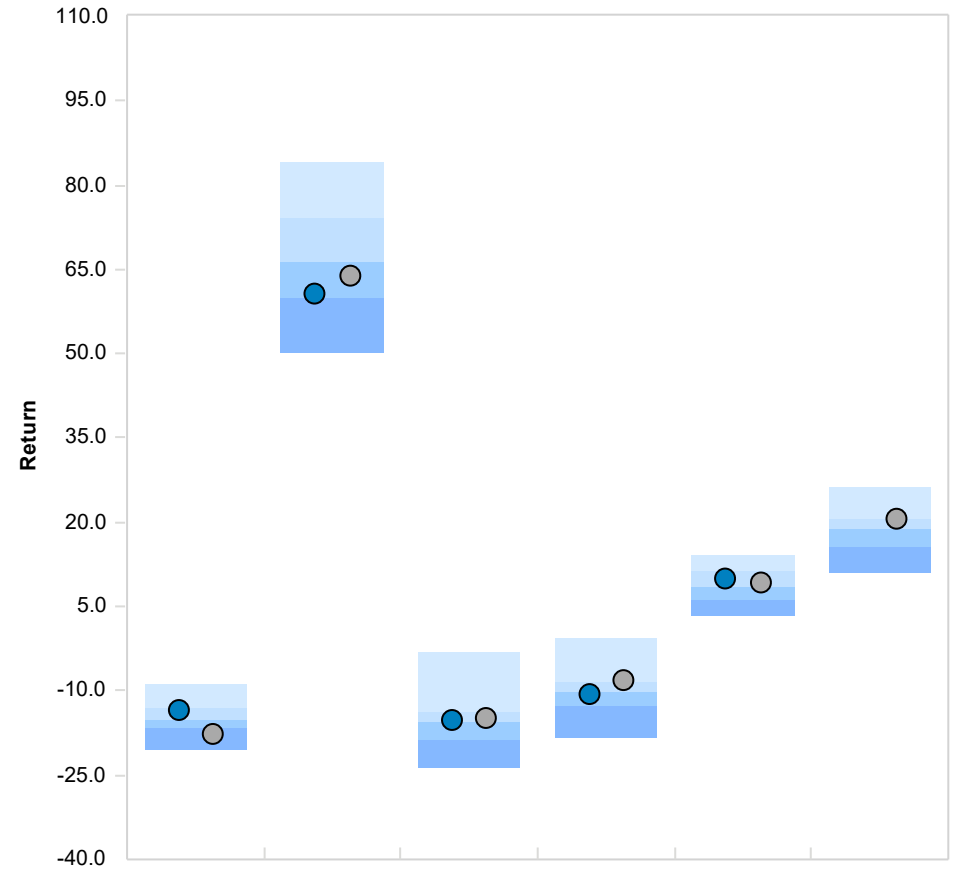


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	6	0 (0%)	3 (50%)	3 (50%)	0 (0%)
Index	20	11 (55%)	4 (20%)	4 (20%)	1 (5%)

Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)



Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	1.87 (35)	13.75 (16)	-4.24 (36)	-14.63 (69)	-0.77 (32)	6.75 (34)
Index	-0.66 (75)	8.42 (91)	-4.61 (42)	-15.28 (83)	-2.40 (63)	4.36 (72)
Median	0.68	11.70	-5.41	-13.89	-1.70	5.80



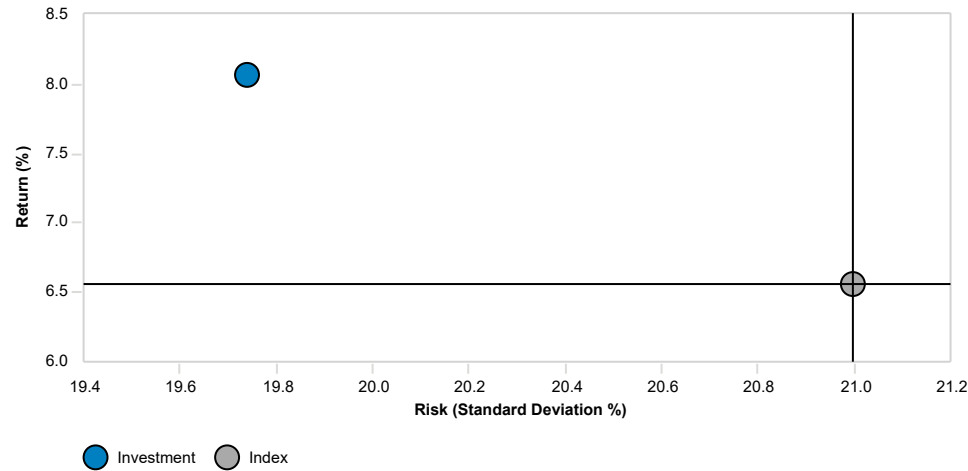
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.08	19.74	0.43	91.24	9	83.28	3
Index	6.56	21.00	0.35	100.00	8	100.00	4

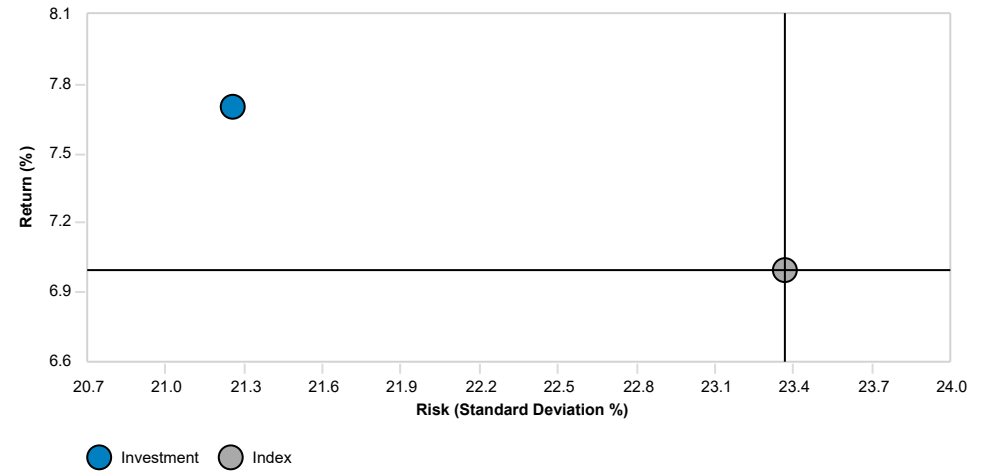
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.70	21.26	0.38	90.69	14	86.63	6
Index	7.00	23.36	0.34	100.00	13	100.00	7

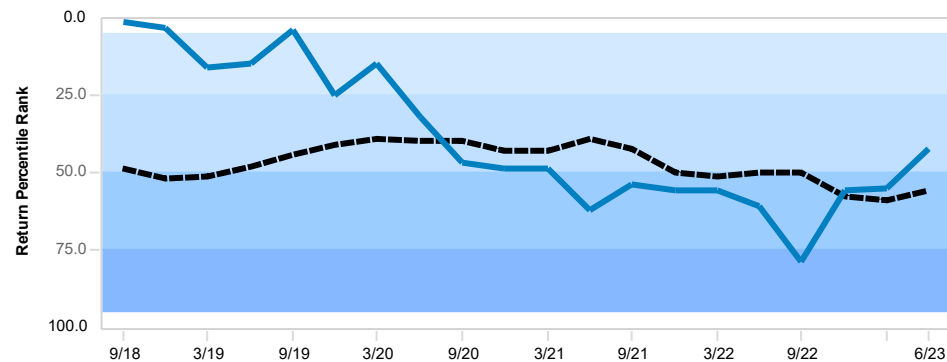
Risk and Return 3 Years



Risk and Return 5 Years

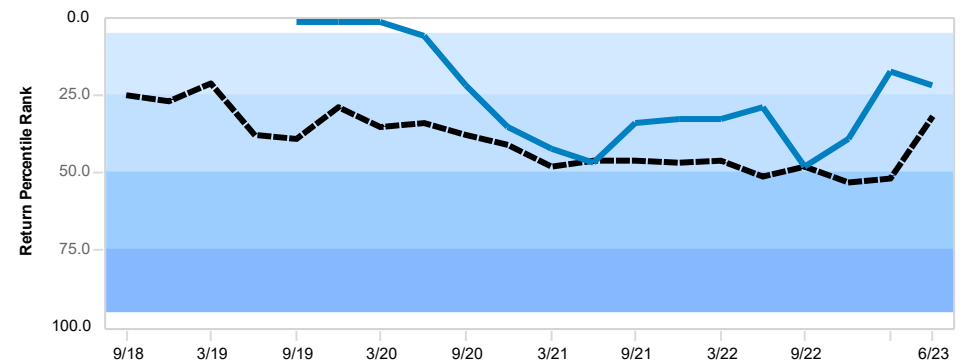


3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)



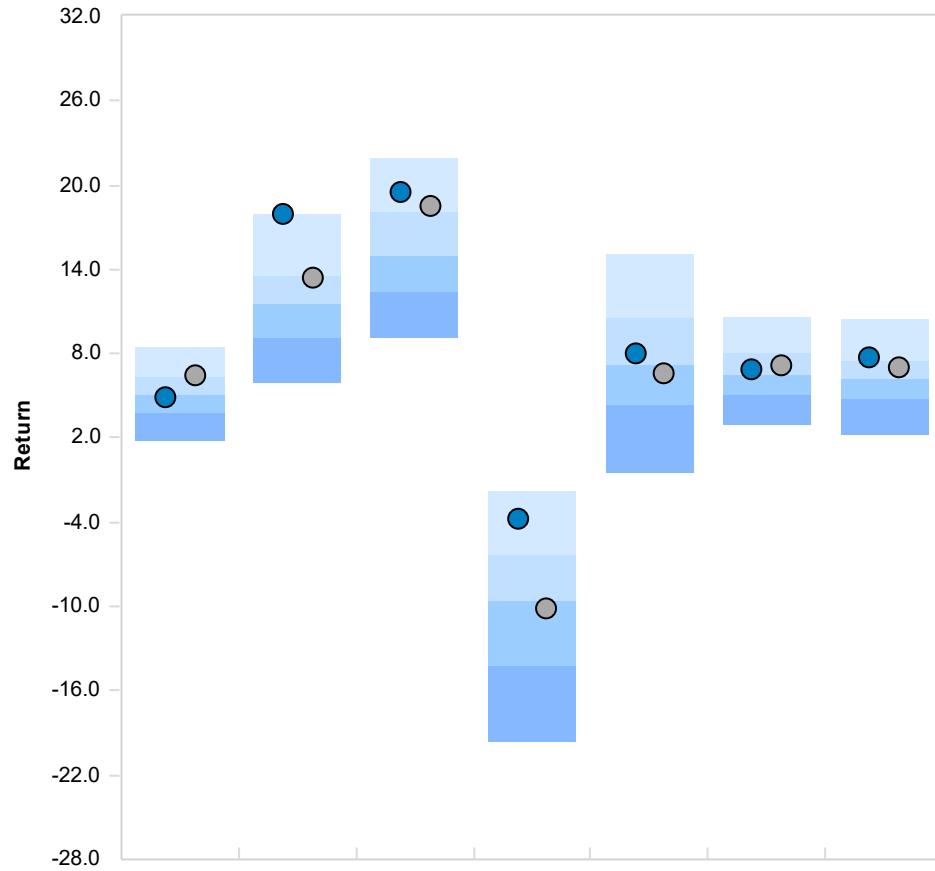
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	5 (25%)	7 (35%)	1 (5%)
Index	20	0 (0%)	14 (70%)	6 (30%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)

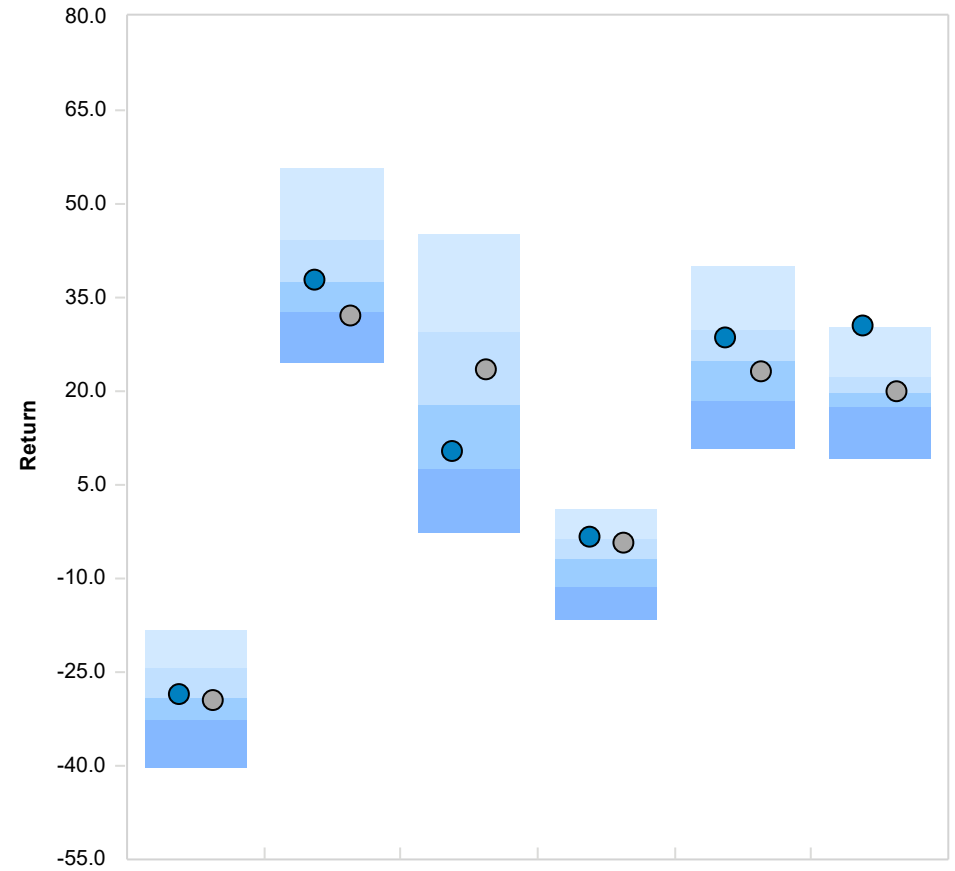


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	7 (44%)	9 (56%)	0 (0%)	0 (0%)
Index	20	2 (10%)	15 (75%)	3 (15%)	0 (0%)

Peer Group Analysis - IM U.S. Small Cap Growth Equity (MF)



Peer Group Analysis - IM U.S. Small Cap Growth Equity (MF)



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	12.48 (3)	5.81 (36)	-4.23 (87)	-16.23 (20)	-15.28 (72)	5.02 (25)
Index	6.54 (44)	4.72 (47)	-0.12 (32)	-19.55 (56)	-12.30 (44)	0.20 (71)
Median	6.24	4.46	-1.36	-19.15	-12.81	2.47

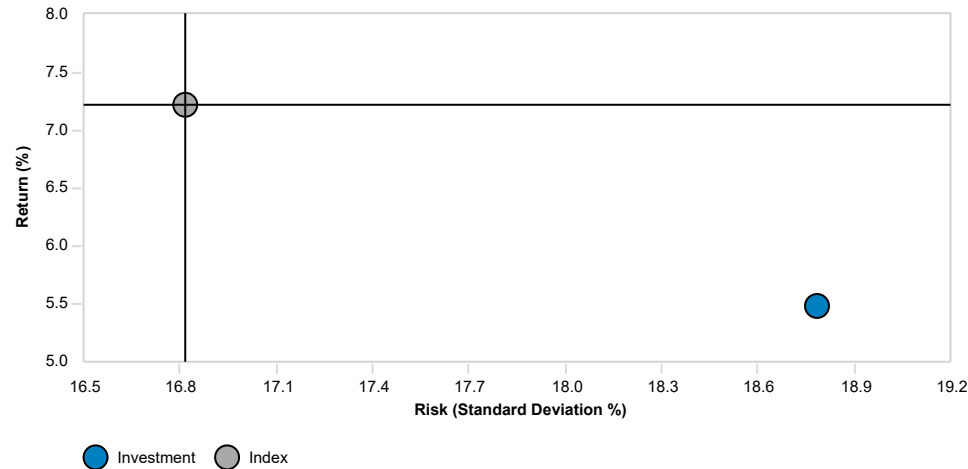
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.47	18.79	0.31	106.64	6	116.56	6
Index	7.22	16.81	0.42	100.00	8	100.00	4

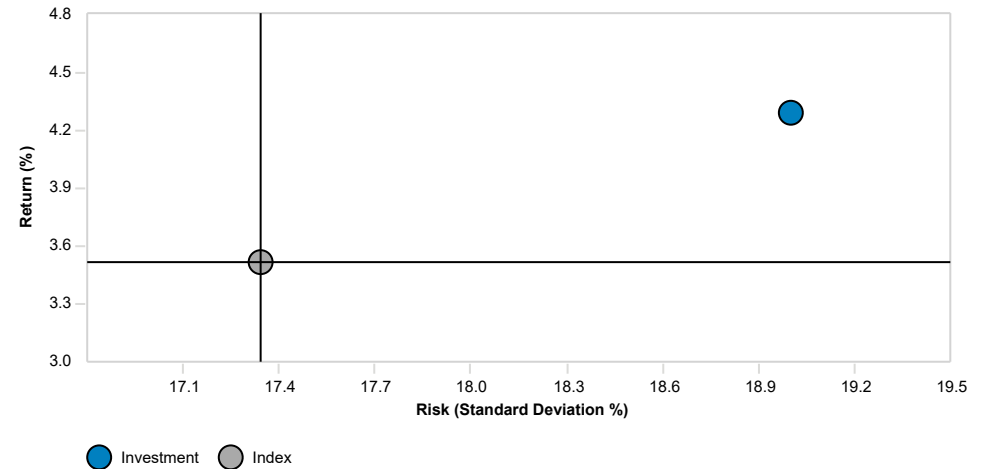
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.29	19.00	0.24	111.09	10	108.75	10
Index	3.52	17.34	0.20	100.00	13	100.00	7

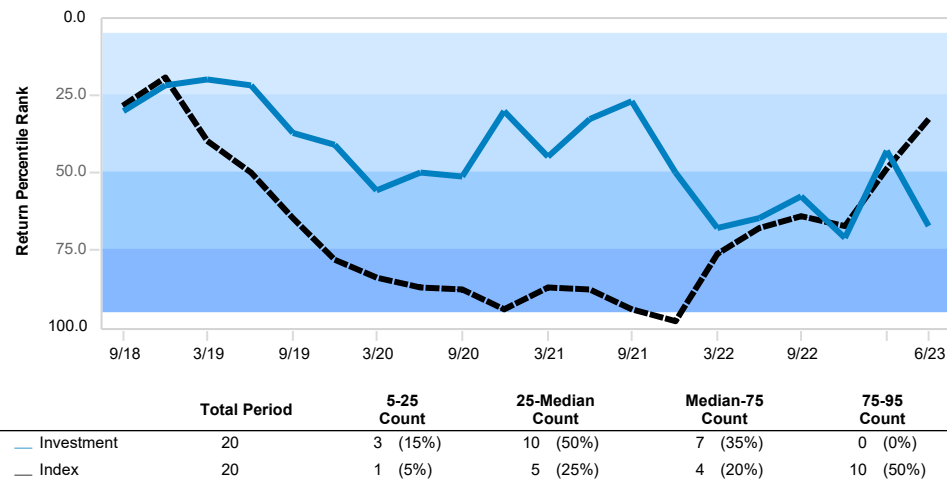
Risk and Return 3 Years



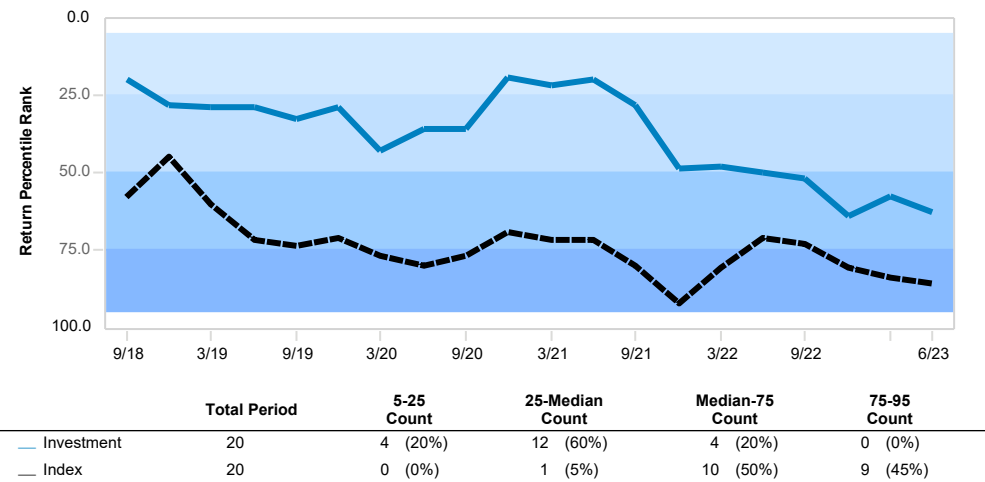
Risk and Return 5 Years



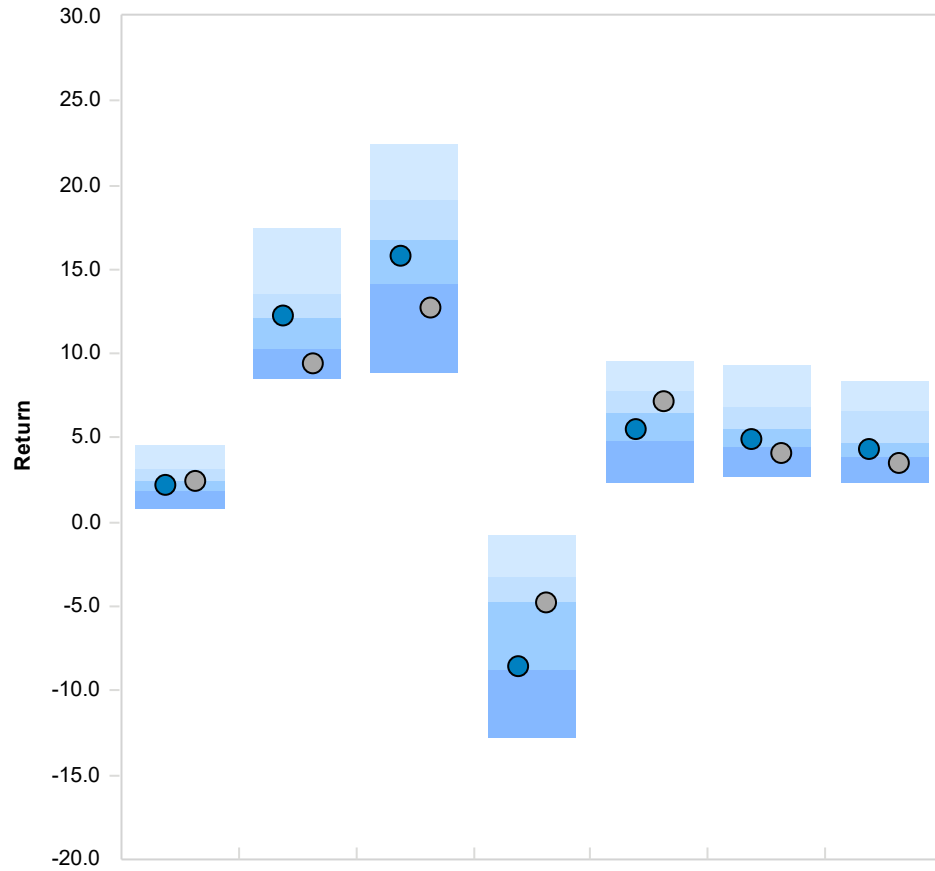
3 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



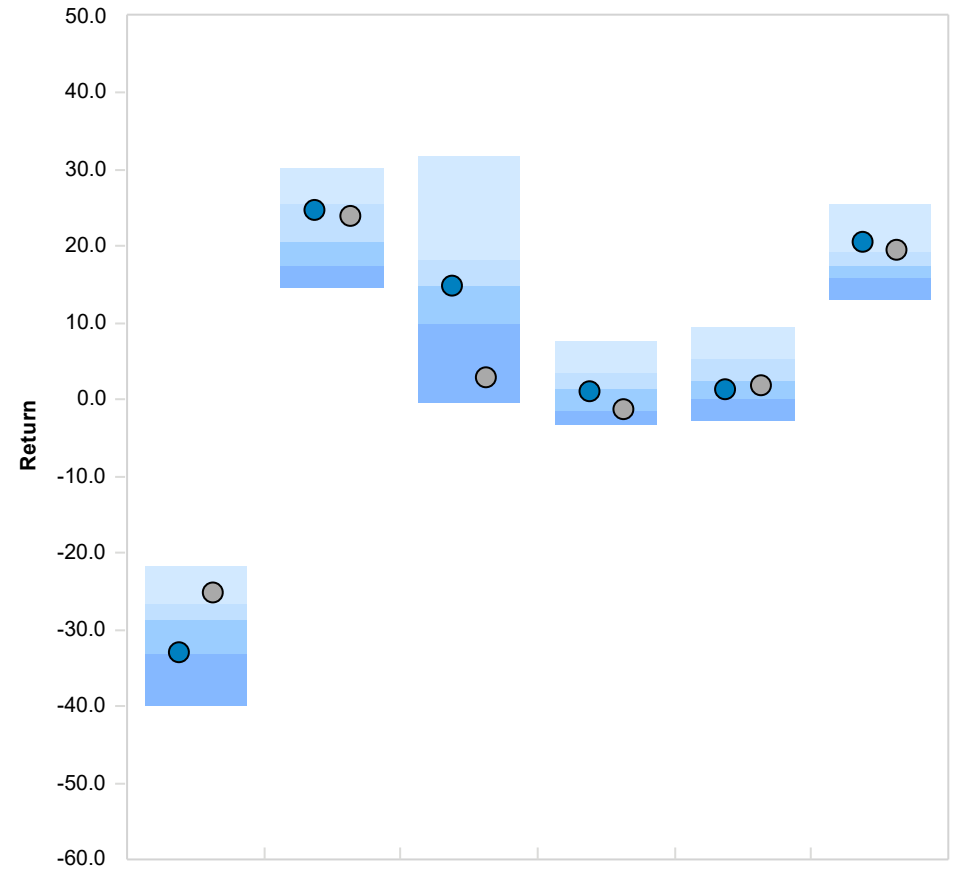
5 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



Peer Group Analysis - IM International Large Cap Growth Equity (MF)



Peer Group Analysis - IM International Large Cap Growth Equity (MF)



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	9.87 (42)	13.78 (65)	-9.33 (39)	-14.65 (49)	-12.24 (59)	-1.13 (92)
Index	6.87 (87)	14.28 (53)	-9.91 (67)	-13.73 (32)	-5.44 (5)	1.82 (74)
Median	9.63	14.64	-9.57	-14.68	-10.99	3.17



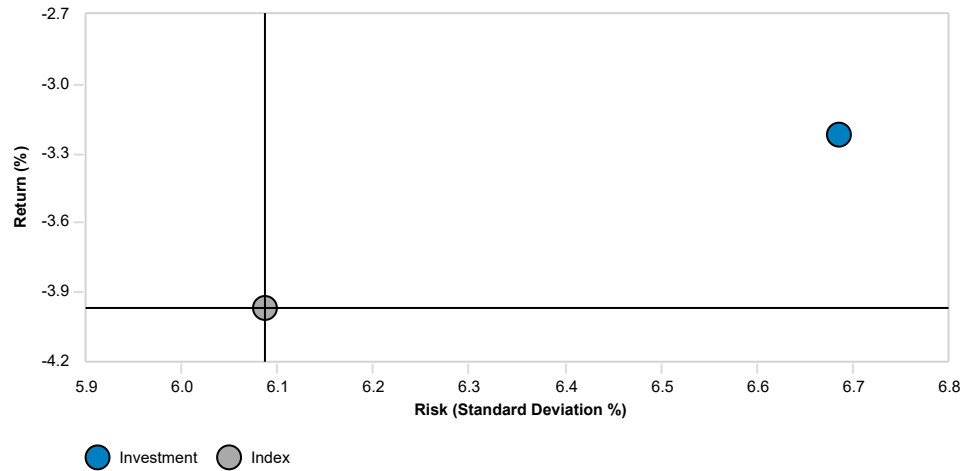
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-3.22	6.69	-0.65	111.55	5	99.16	7
Index	-3.97	6.09	-0.85	100.00	7	100.00	5

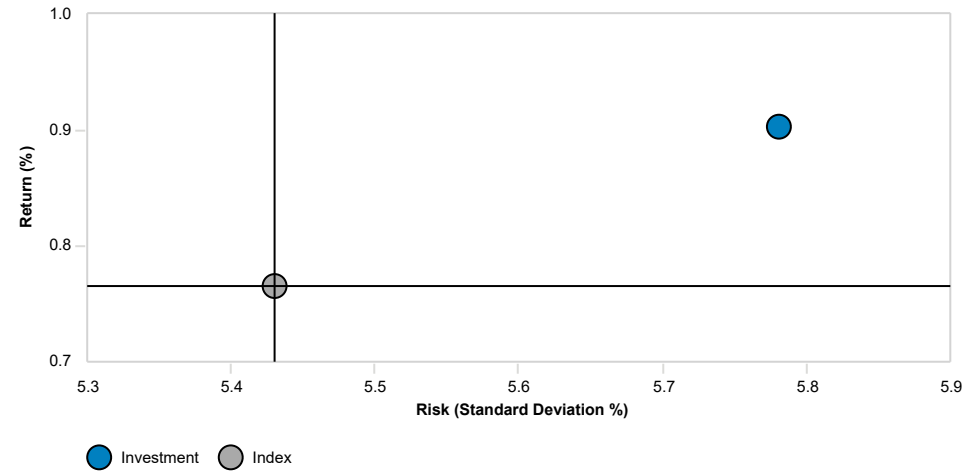
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.90	5.78	-0.08	102.43	11	100.42	9
Index	0.77	5.43	-0.12	100.00	15	100.00	5

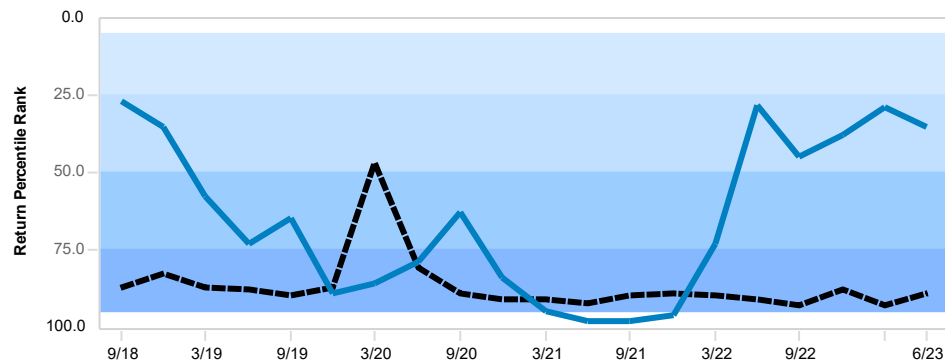
Risk and Return 3 Years



Risk and Return 5 Years

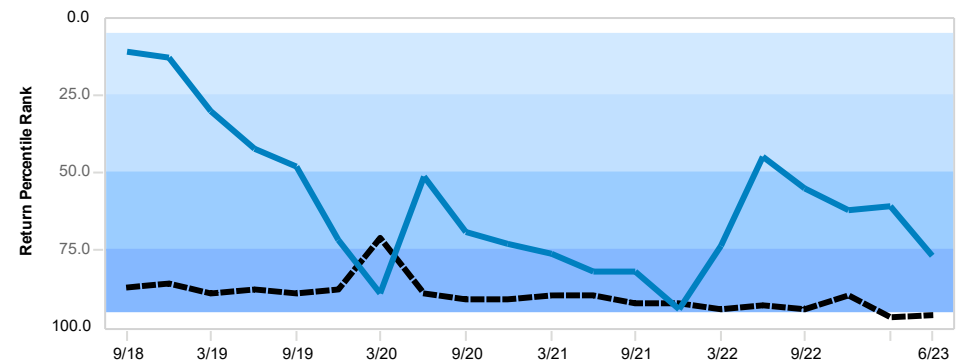


3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



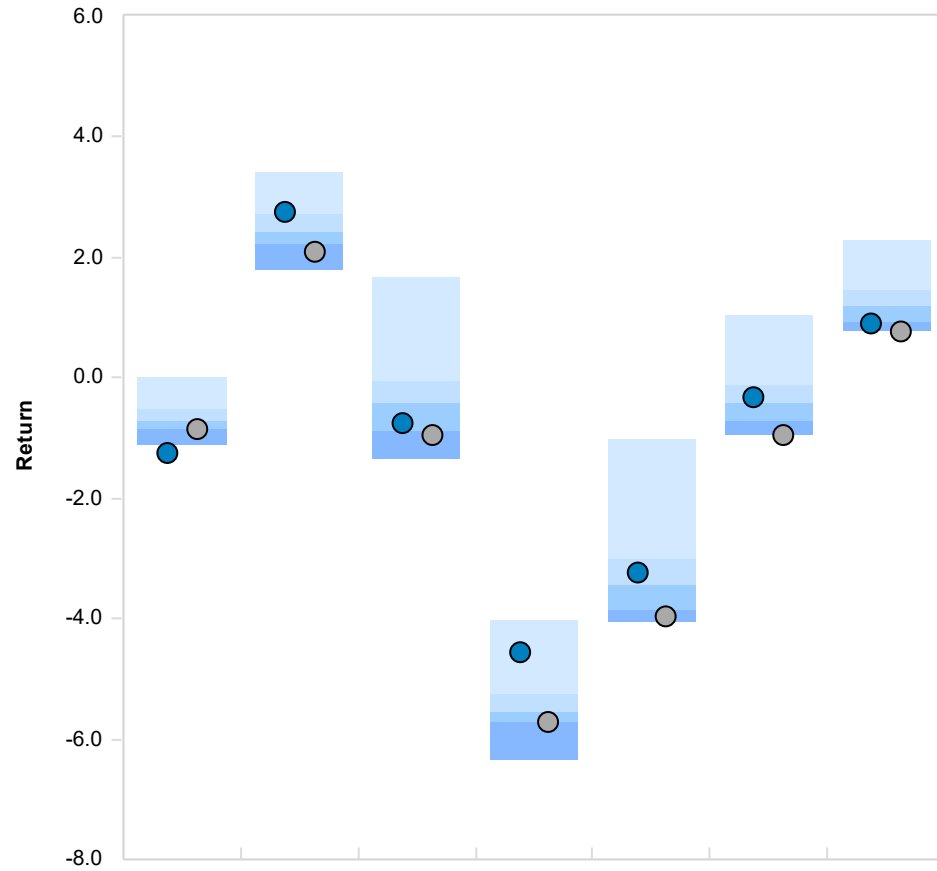
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	7 (35%)	5 (25%)	8 (40%)
Index	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



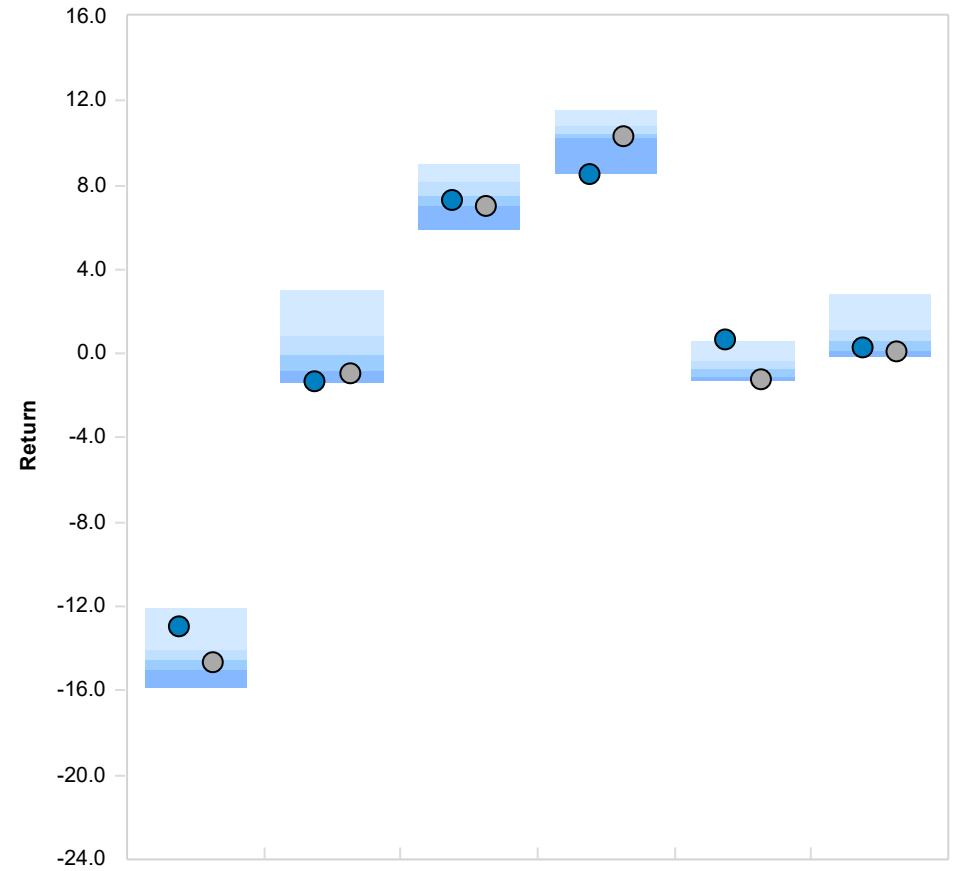
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	4 (20%)	8 (40%)	6 (30%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-1.24 (99)	2.75 (24)	-0.74 (66)	-4.56 (10)	-3.22 (35)	-0.31 (35)	0.90 (77)
● Index	-0.84 (79)	2.09 (83)	-0.94 (82)	-5.73 (76)	-3.97 (89)	-0.94 (95)	0.77 (96)
Median	-0.72	2.42	-0.41	-5.54	-3.43	-0.43	1.20

Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017
● Investment	-12.95 (8)	-1.34 (95)	7.25 (58)	8.54 (95)	0.73 (4)	0.31 (66)
● Index	-14.60 (61)	-0.90 (83)	6.98 (77)	10.30 (69)	-1.22 (88)	0.07 (83)
Median	-14.51	-0.05	7.52	10.42	-0.75	0.61

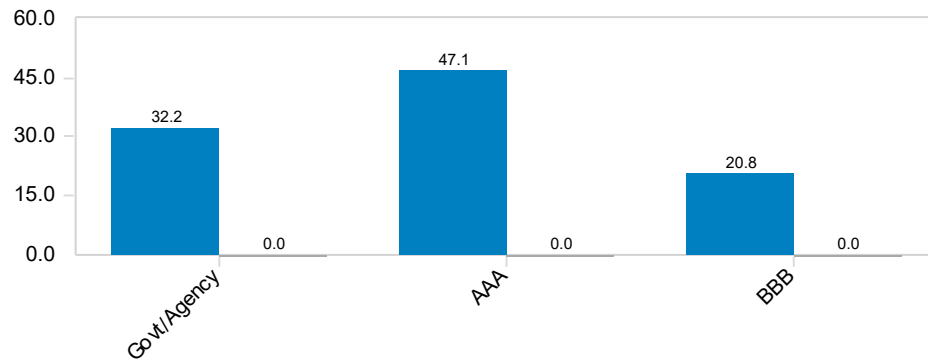
Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	4.04 (3)	1.90 (37)	-5.20 (98)	-3.92 (8)	-4.38 (4)	-0.05 (55)
Index	2.96 (77)	1.87 (42)	-4.75 (78)	-4.69 (39)	-5.93 (71)	0.01 (31)
Median	3.16	1.80	-4.59	-4.73	-5.81	-0.04

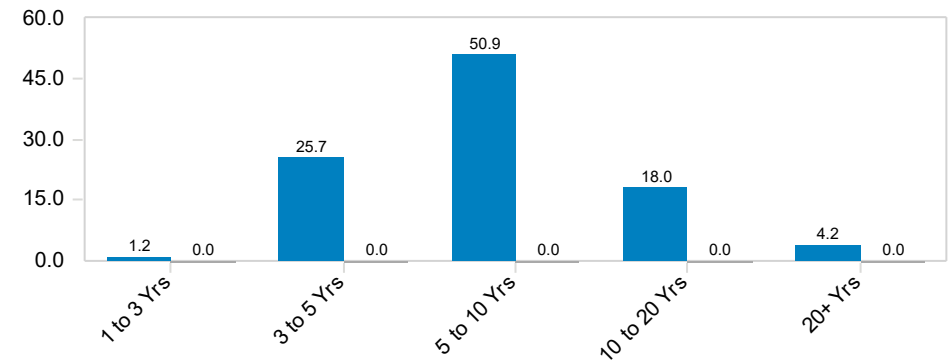
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.61	4.81
Avg. Quality	AA+	AA1/AA2
Coupon Rate (%)	3.14	2.88
Current Yield	3.47	3.21
Effective Duration	6.92	6.25

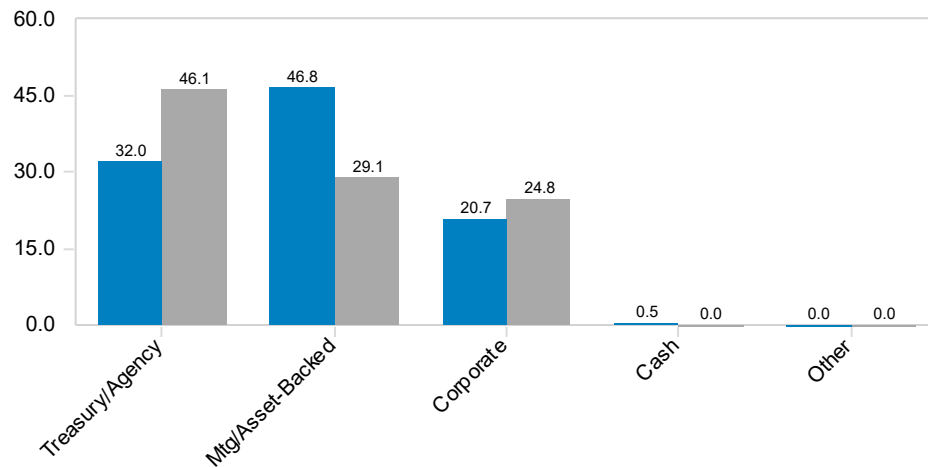
Credit Quality Distribution (%)



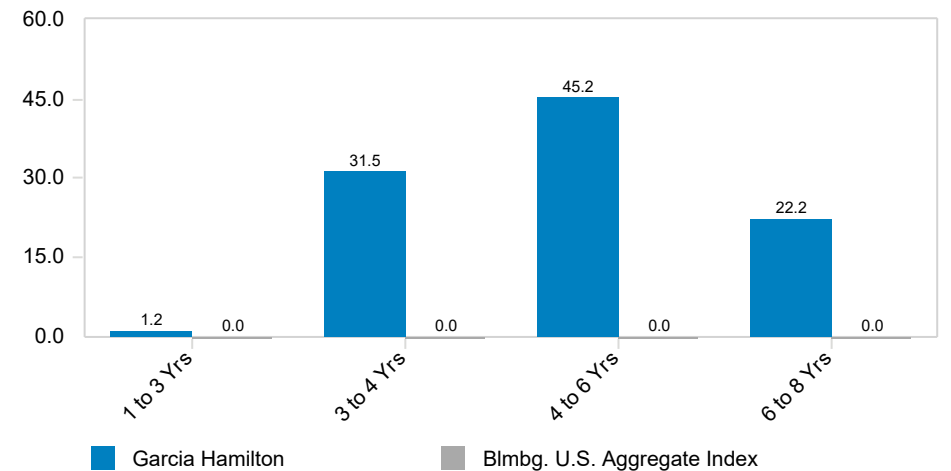
Maturity Distribution (%)



Sector Distribution (%)



Duration Distribution (%)



Garcia Hamilton

Blmbg. U.S. Aggregate Index

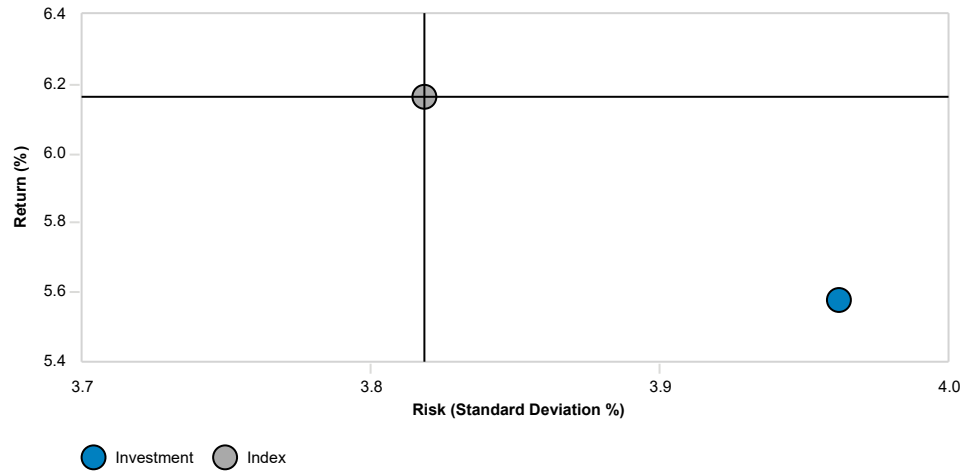
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.58	3.96	1.09	93.92	11	101.14	1
Index	6.16	3.82	1.26	100.00	10	100.00	2

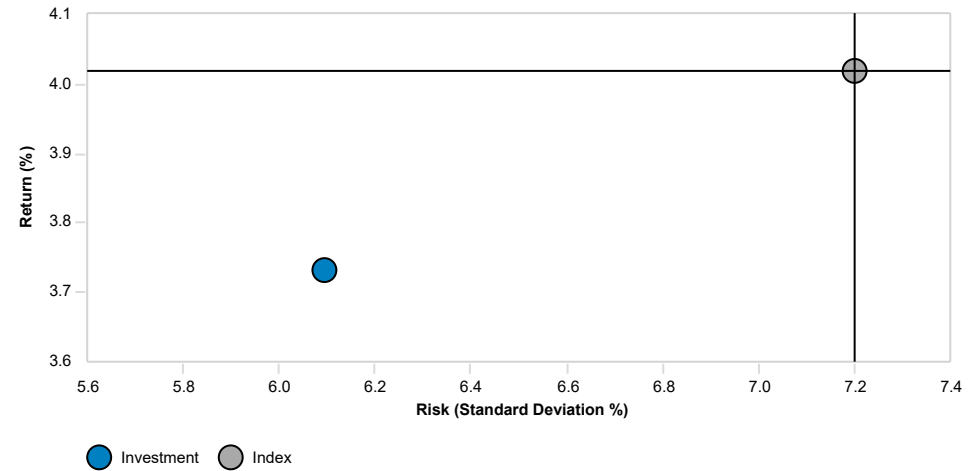
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.73	6.10	0.38	89.58	17	88.00	3
Index	4.02	7.20	0.37	100.00	16	100.00	4

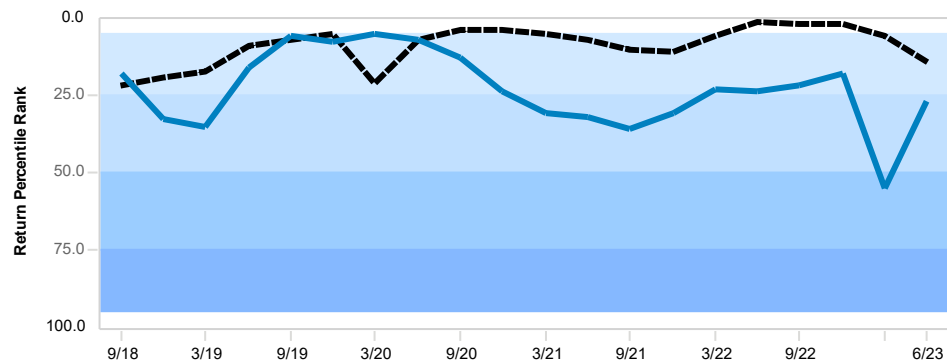
Risk and Return 3 Years



Risk and Return 5 Years

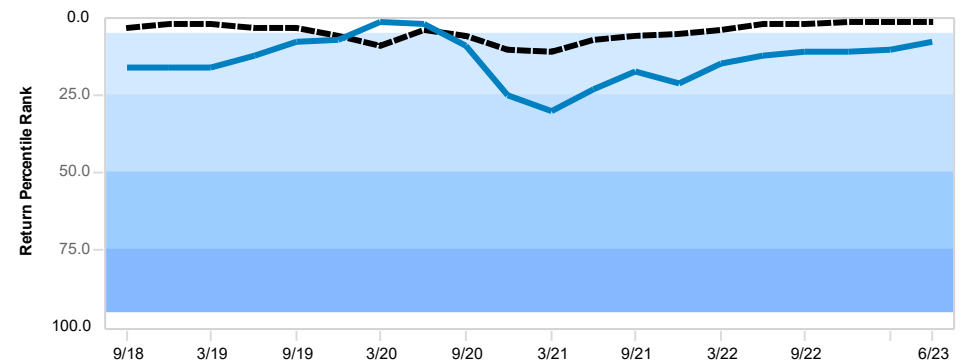


3 Year Rolling Percentile Rank IM U.S. Bank Loans (MF)



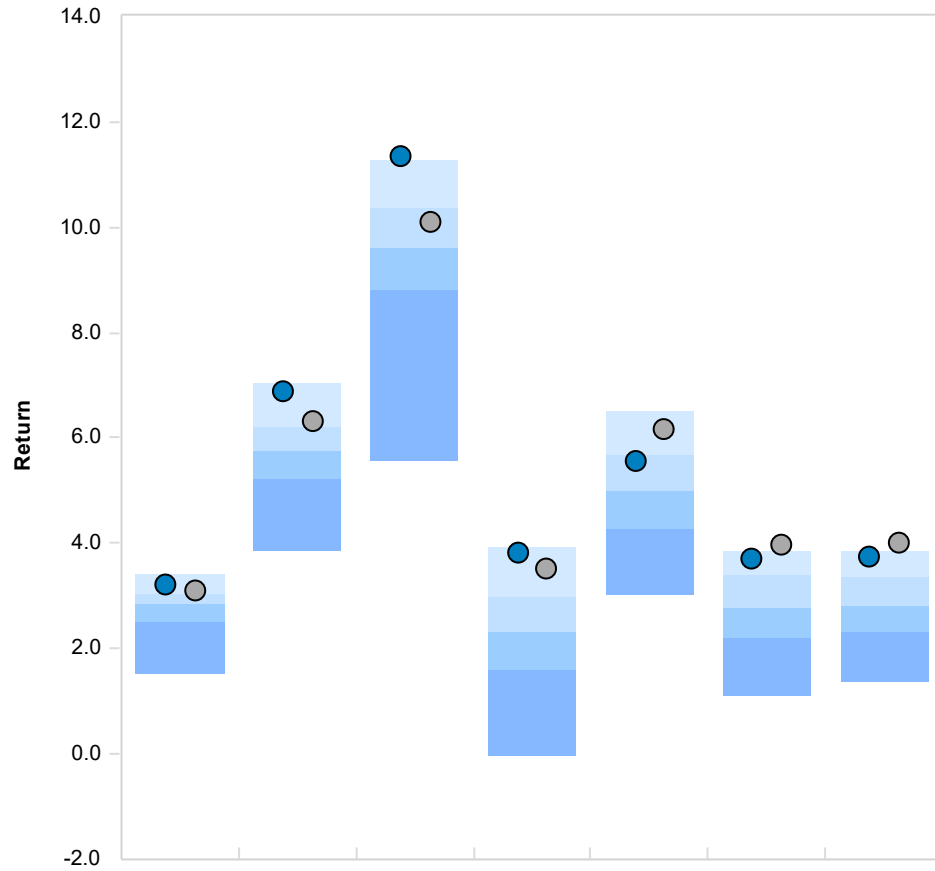
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	12 (60%)	7 (35%)	1 (5%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Bank Loans (MF)

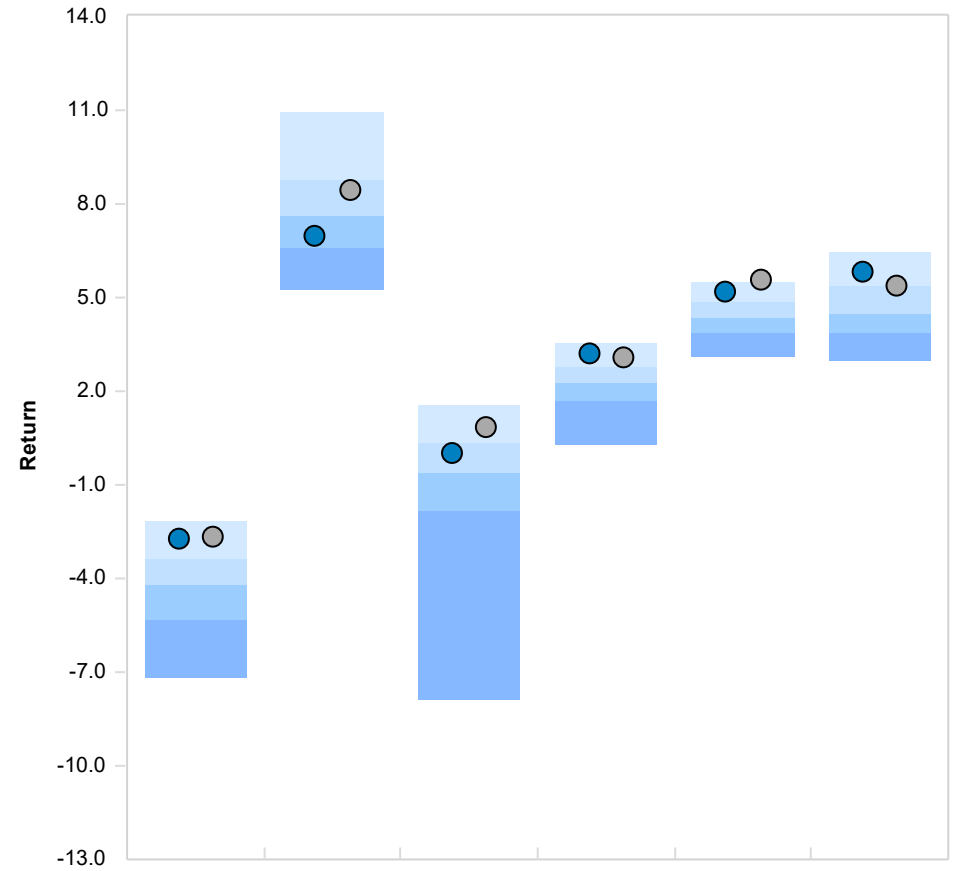


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

Peer Group Analysis - IM U.S. Bank Loans (MF)



Peer Group Analysis - IM U.S. Bank Loans (MF)



Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	3.58 (8)	2.72 (45)	1.41 (19)	-4.82 (26)	0.02 (6)	0.74 (10)
Index	3.11 (31)	2.34 (67)	1.18 (38)	-4.36 (7)	-0.10 (11)	0.72 (13)
Median	2.95	2.63	1.05	-5.27	-0.53	0.49

Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-4.67	7.89	-0.73	100.00	5	100.00	7

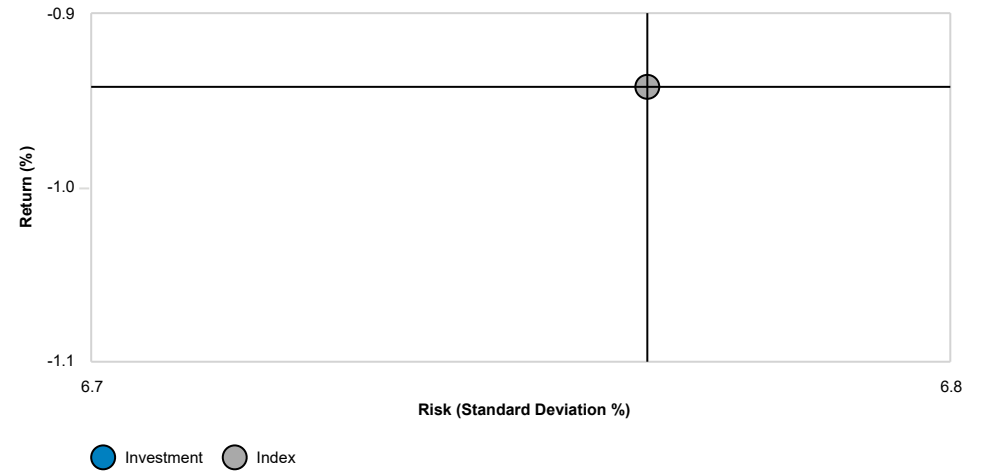
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-0.94	6.76	-0.34	100.00	11	100.00	9

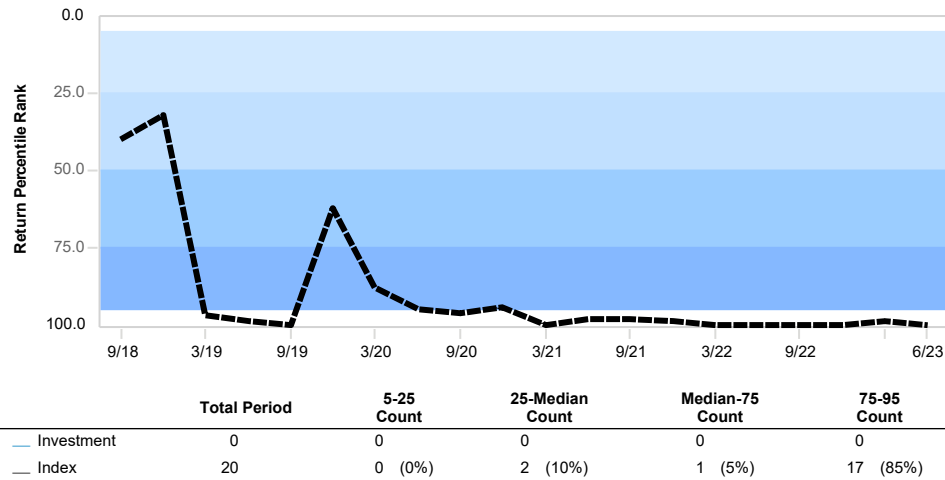
Risk and Return 3 Years



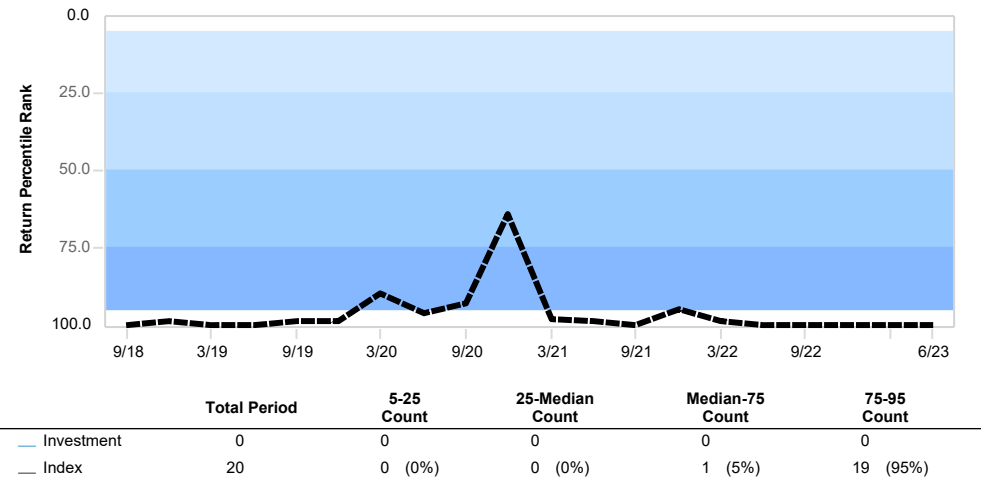
Risk and Return 5 Years



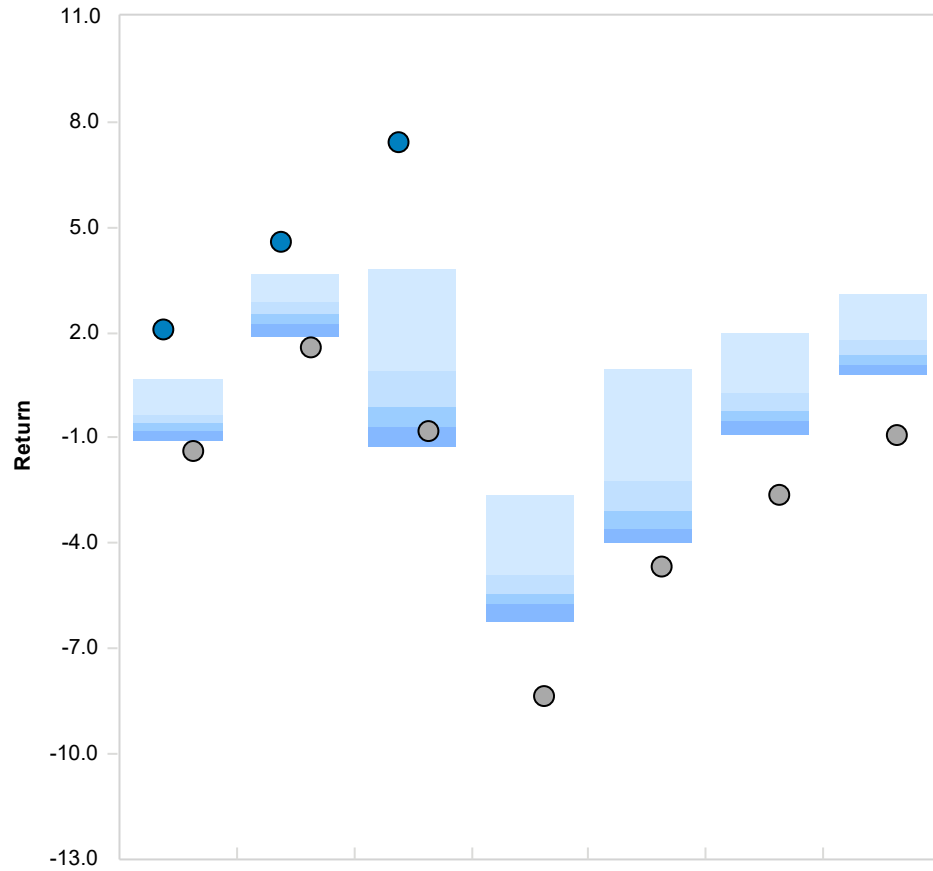
3 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)



5 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)

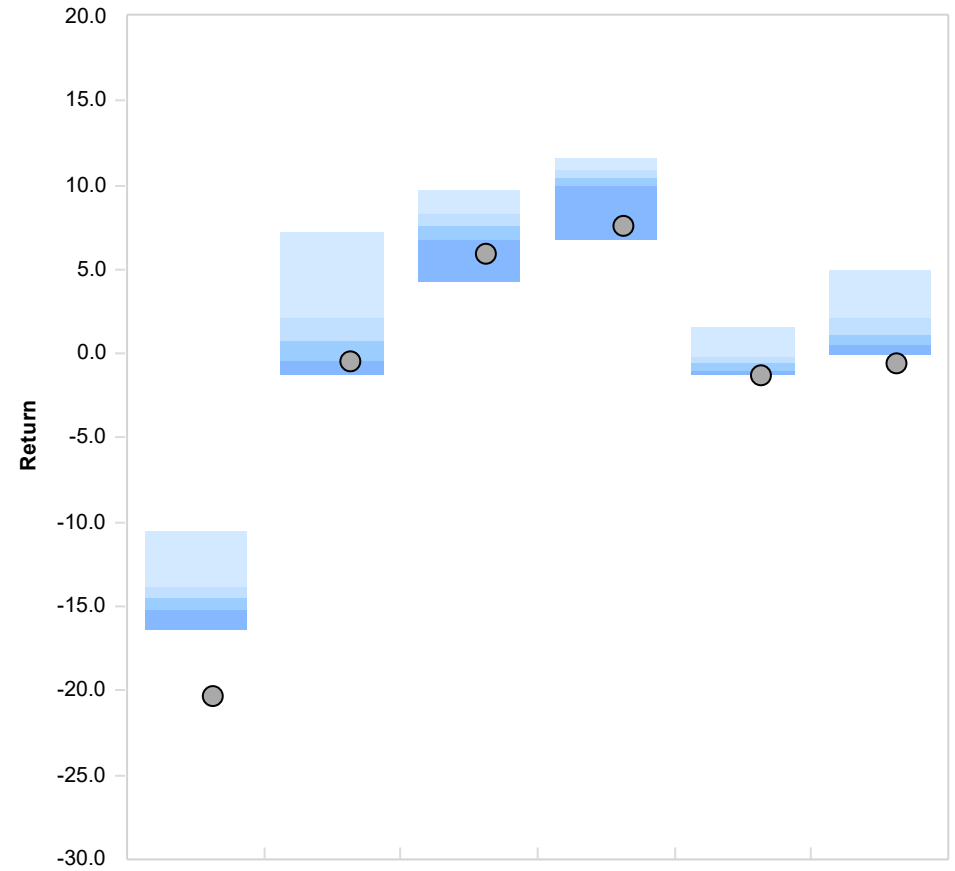


Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	2.12 (1)	4.60 (2)	7.45 (1)	N/A	N/A	N/A	N/A
Index	-1.38 (100)	1.60 (98)	-0.81 (82)	-8.37 (100)	-4.67 (100)	-2.61 (100)	-0.94 (100)
Median	-0.58	2.57	-0.14	-5.44	-3.07	-0.24	1.37

Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF)



	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017
Investment	N/A	N/A	N/A	N/A	N/A	N/A
Index	-20.34 (100)	-0.45 (77)	5.99 (89)	7.54 (92)	-1.32 (95)	-0.56 (100)
Median	-14.51	0.69	7.54	10.38	-0.61	1.05

Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	2.43 (94)	2.30 (21)	0.41 (1)	-4.25 (14)	N/A	N/A
Index	3.02 (69)	4.71 (1)	-6.76 (100)	-8.43 (99)	-6.05 (78)	-0.70 (99)
Median	3.17	1.92	-4.48	-5.00	-5.80	0.00

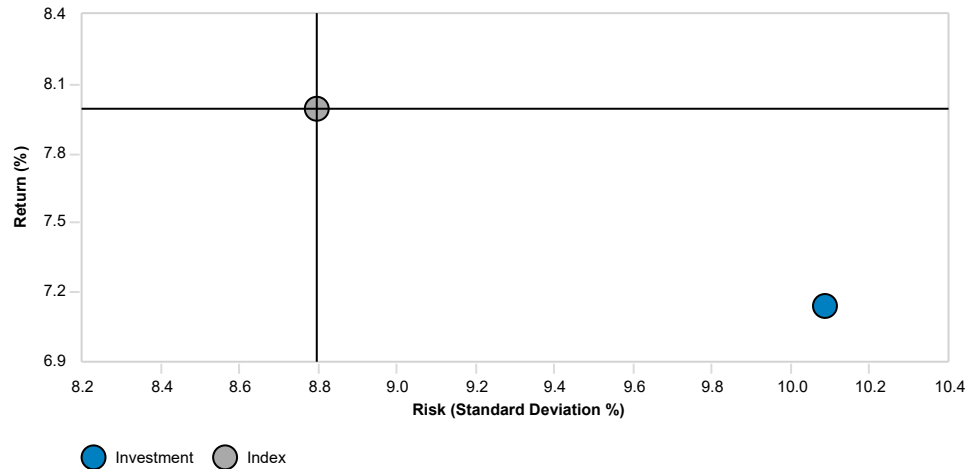
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.14	10.09	0.59	109.43	9	149.17	3
Index	7.99	8.80	0.75	100.00	9	100.00	3

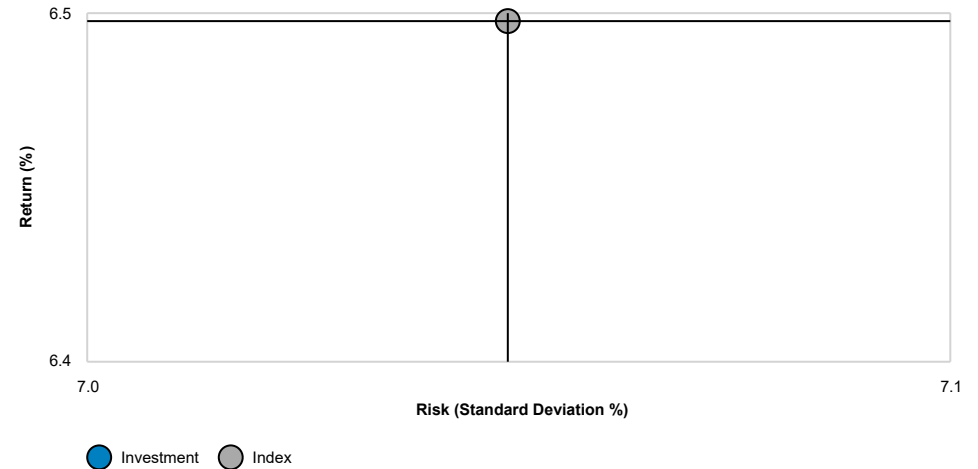
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	6.50	7.05	0.69	100.00	16	100.00	4

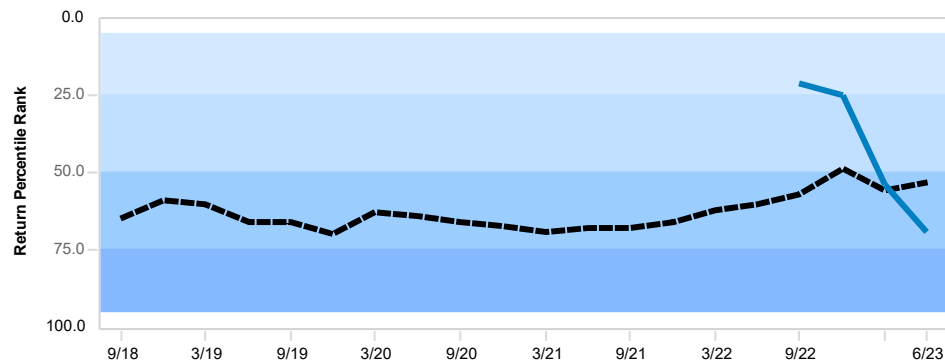
Risk and Return 3 Years



Risk and Return 5 Years

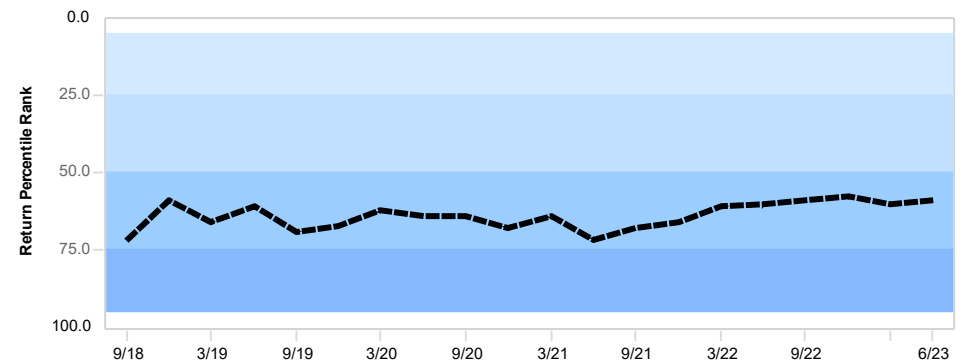


3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



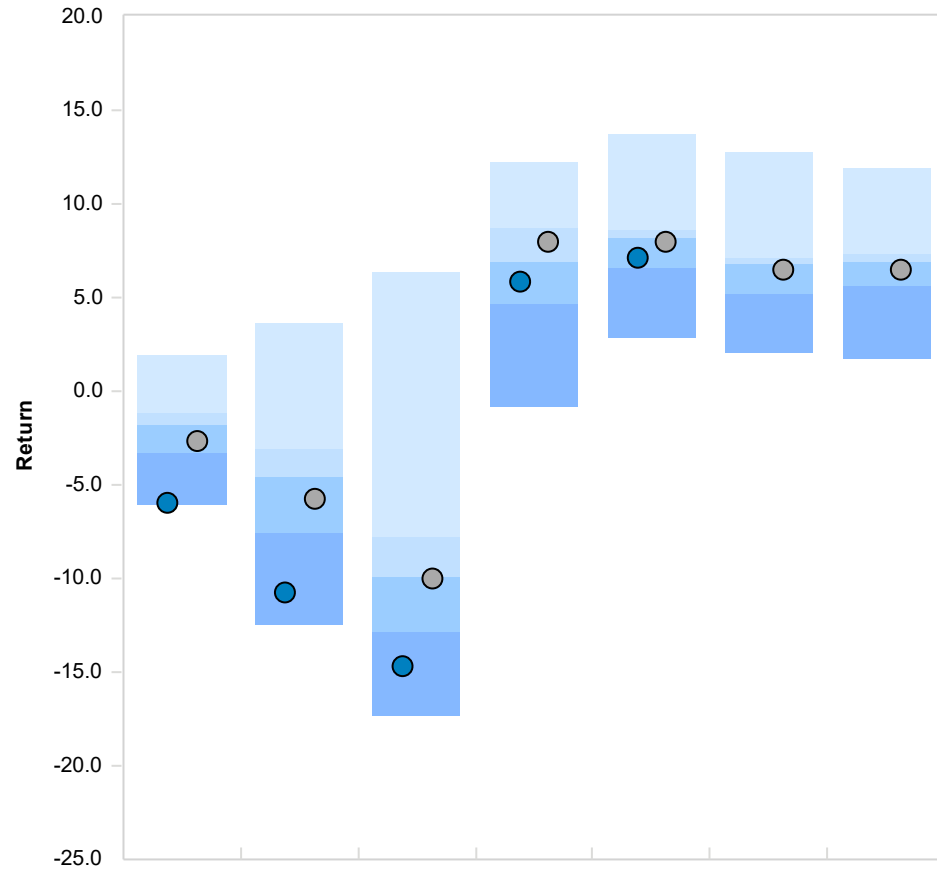
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	4	2 (50%)	0 (0%)	2 (50%)	0 (0%)
Index	20	0 (0%)	1 (5%)	19 (95%)	0 (0%)

5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	0 (0%)	0 (0%)	20 (100%)	0 (0%)

Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)

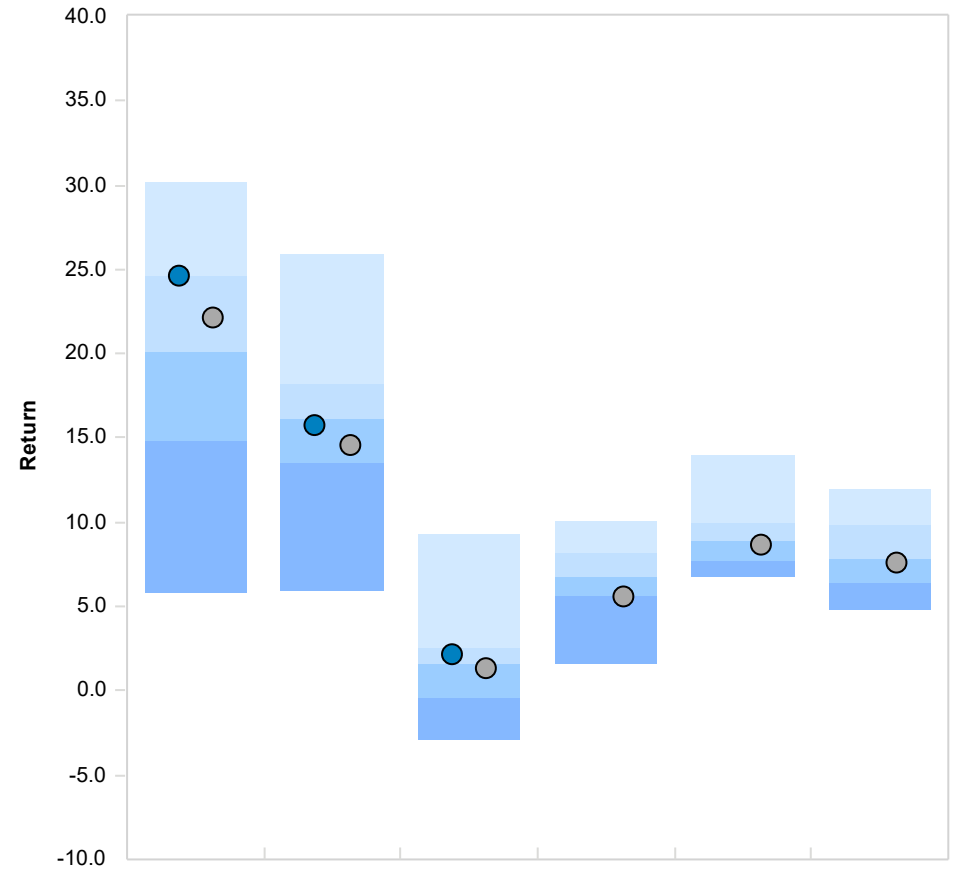


	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	-5.92 (93)	-10.70 (93)	-14.73 (84)	5.82 (61)	7.14 (69)	N/A	N/A
Index	-2.68 (70)	-5.76 (66)	-9.97 (53)	7.98 (38)	7.99 (53)	6.52 (58)	6.50 (59)
Median	-1.80	-4.60	-9.86	6.95	8.17	6.84	6.97

Comparative Performance

	1 Qtr Ending Mar-2023	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021
Investment	-5.08 (86)	-5.13 (55)	0.65 (48)	7.27 (10)	7.04 (42)	7.82 (41)
Index	-3.17 (61)	-4.97 (49)	0.52 (57)	4.77 (34)	7.37 (32)	7.97 (37)
Median	-2.98	-4.97	0.60	4.02	6.68	7.58

Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	Oct-2021 To Sep-2022	Oct-2020 To Sep-2021	Oct-2019 To Sep-2020	Oct-2018 To Sep-2019	Oct-2017 To Sep-2018	Oct-2016 To Sep-2017
Investment	24.59 (26)	15.76 (54)	2.20 (35)	N/A	N/A	N/A
Index	22.09 (42)	14.63 (57)	1.39 (57)	5.59 (75)	8.68 (59)	7.66 (53)
Median	20.19	16.09	1.58	6.80	8.93	7.83

The Woodlands Firefighters' Retirement System
Comparative Performance Trailing Performance Composite Returns
As of June 30, 2023

Comparative Performance								
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
Domestic Equity								
Vanguard Total Stock Index (VITSX)	8.42	16.18	18.94	1.00	13.76	11.31	8.25	08/01/1997
CRSP U.S. Total Market TR Index	8.41	16.17	18.94	1.01	13.77	11.31	N/A	
American Beacon SC Value R6 (AASRX)	4.38	6.33	15.83	1.29	20.26	5.51	6.18	03/01/2017
Russell 2000 Value Index	3.18	2.50	6.01	-5.79	15.43	3.54	4.77	
Conestoga Small Cap I (CCALX)	4.85	17.93	19.51	-3.75	8.08	7.70	11.83	09/01/2014
Russell 2000 Growth Index	7.05	13.55	18.53	-11.17	6.10	4.22	7.44	
International Equity								
EuroPacific Growth R6 (RERGX)	2.16	12.25	15.80	-8.48	5.47	4.29	7.04	06/01/2009
MSCI AC World ex USA (Net)	2.44	9.47	12.72	-4.70	7.22	3.52	5.71	
Core Fixed Income								
Garcia Hamilton (Gross of Fees)	-1.24	2.75	-0.74	-4.56	-3.22	0.90	5.37	01/01/1992
Blmbg. U.S. Aggregate Index	-0.84	2.09	-0.94	-5.73	-3.97	0.77	4.63	
Bank Loans								
Aristotle Floating Rate (PLFRX)	3.21	6.90	11.35	3.82	5.58	3.73	4.32	07/01/2011
Credit Suisse Leveraged Loan Index	3.12	6.33	10.10	3.51	6.16	4.02	4.36	
Real Estate								
Clarion Lion Properties Fund	-5.92	-10.70	-14.79	5.81	7.45	6.65	7.52	04/01/2000
NCREIF Fund Index-ODCE (VW)	-2.68	-5.76	-9.97	7.98	7.99	6.50	7.90	

Returns for periods greater than one year are annualized. Returns are expressed as percentages.



The Woodlands Firefighters' Retirement System
Comparative Performance Calendar Year Composite Returns
As of June 30, 2023

Comparative Performance								
	YTD	2022	2021	2020	2019	2018	2017	2016
Domestic Equity								
Vanguard Total Stock Index (VITSX)	16.18	-19.51	25.73	21.00	30.81	-5.16	21.17	12.67
CRSP U.S. Total Market TR Index	16.17	-19.49	25.72	20.99	30.84	-5.17	21.19	12.68
American Beacon SC Value R6 (AASRX)	6.33	-7.72	28.21	4.03	23.50	-15.59	N/A	N/A
Russell 2000 Value Index	2.50	-14.48	28.27	4.63	22.39	-12.86	7.84	31.74
Conestoga Small Cap I (CCALX)	17.93	-28.09	16.37	30.59	25.42	0.81	28.74	14.30
Russell 2000 Growth Index	13.55	-26.36	2.83	34.63	28.48	-9.31	22.17	11.32
International Developed Equity								
EuroPacific Growth R6 (RERGX)	12.25	-22.72	2.84	25.27	27.40	-14.91	31.17	1.01
MSCI AC World ex USA (Net)	9.47	-16.00	7.82	10.65	21.51	-14.20	27.19	4.50
Core Fixed Income								
Garcia Hamilton (Gross of Fees)	2.75	-11.25	-2.11	8.10	7.25	0.97	3.81	3.17
Blmbg. U.S. Aggregate Index	2.09	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65
Bank Loans								
Aristotle Floating Rate (PLFRX)	6.90	-0.83	4.62	1.59	8.30	0.41	4.33	8.91
Credit Suisse Leveraged Loan Index	6.33	-1.06	5.41	2.78	8.16	1.14	4.25	9.87
Real Estate								
Clarion Lion Properties Fund	-10.70	9.62	23.38	2.24	7.26	9.66	8.99	9.09
NCREIF Fund Index-ODCE (VW)	-5.76	7.47	22.17	1.19	5.34	8.35	7.62	8.77

Returns for periods greater than one year are annualized. Returns are expressed as percentages.



Woodlands Fire Retirement System

Fee Analysis

As of June 30, 2023

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Vanguard Total Stock Index (VITSX)	0.03	27,850,153	8,355	0.03 % of Assets
American Beacon SC Value R6 (AASRX)	0.78	3,028,625	23,623	0.78 % of Assets
Conestoga Small Cap I (CCALX)	0.90	3,096,270	27,866	0.90 % of Assets
Total Domestic Equity	0.18	33,975,048	59,845	
EuroPacific Growth R6 (RERGX)	0.49	8,960,855	43,908	0.49 % of Assets
Total International Equity	0.49	8,960,855	43,908	
Garcia Hamilton	0.25	9,025,014	22,563	0.25 % of First \$25 M 0.20 % of Next \$25 M 0.18 % of Next \$50 M 0.15 % of Next \$100 M 0.12 % Thereafter
Aristotle Floating Rate (PLFRX)	0.72	1,629,828	11,735	0.72 % of Assets
Apollo Total Return Fund	0.80	3,005,455	24,044	0.80 % of First \$100 M 0.75 % of Next \$100 M 0.70 % Thereafter
Total Fixed Income	0.43	13,660,298	58,341	
Clarion (Core Real Estate)	1.25	4,745,410	59,318	1.25 % of Assets
Carlyle Property Investors	1.00	727,816	7,278	1.00 % of Assets
Total Real Estate	1.22	5,473,226	66,596	
Frost Bank Cash Account		76,827	-	
Mutual Fund Cash		1,153,276	-	
Total Cash		1,230,103	-	
Total Fund	0.36	63,299,529	228,690	

AndCo Consulting fees are \$45,000/year (8 bps as of 3/31/2021).

Fee information on this page is an illustrative estimate of management fees based on current reported portfolio values. Fee estimates do not reflect actual calculation methodologies or applicable carried interest.



Total Fund Compliance:

1. The Total Plan return equaled or exceeded the 7% actuarial earnings assumption over the trailing three year period.
2. The Total Plan return equaled or exceeded the 7% actuarial earnings assumption over the trailing five year period.
3. The Total Plan return equaled or exceeded the 7% actuarial earnings assumption over the trailing ten year period.
4. The Total Plan return equaled or exceeded the total plan benchmark over the trailing three year period.
5. The Total Plan return equaled or exceeded the total plan benchmark over the trailing five year period.
6. The Total Plan return equaled or exceeded the total plan benchmark over the trailing ten year period.
7. The Total Plan return ranked within the top 50th percentile of its peer group over the trailing three year period.
8. The Total Plan return ranked within the top 50th percentile of its peer group over the trailing five year period.
9. The Total Plan return ranked within the top 50th percentile of its peer group over the trailing ten year period.

Yes	No	N/A
✓		
	✓	
		✓
✓		
	✓	
		✓
✓		
✓		
		✓

Equity Compliance:

1. All investments are U.S. dollar denominated except for certain equities and sovereign foreign bonds as delineated in Permitted Asset Classes.
2. Less than or equal to 5% of the voting securities of any corporation are owned.
3. Securities have not been purchased on margin or leverage excluding alternative investments.
4. Short sale transactions have not been executed except by approved alternative investment managers.
5. Transactions in financial futures have not been executed unless used to equitize cash, reduce risk, or by approved alternative investment managers.
6. Less than or equal to 30% of the aggregated equity portfolio is invested in any one sector of the MSCI World at market.
7. Less than or equal to 5% of the aggregated equity portfolio is invested in securities of any one company at market.
8. Privately held securities are not included in the Plan except by approved alternative investment managers.
9. Options have not been traded except for covered calls or put hedges on a one to one ratio.

Yes	No	N/A
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		

Fixed Income Compliance:

1. All investments are U.S. dollar denominated except for certain equities and sovereign foreign bonds as delineated in Permitted Asset Classes.
2. Commercial paper rated P1 by Moody's or A1 or A2 by Standard & Poor's.
3. Privately held securities are not included in the Plan except by approved alternative investment managers.

Yes	No	N/A
✓		
		✓
✓		

Manager Compliance*:

1. Manager outperformed the index over the trailing three year period.
2. Manager outperformed the index over the trailing five year period.
3. Manager ranked above the 50th percentile over the trailing three year period.
4. Manager ranked above the 50th percentile over the trailing five year period.
5. Less than four consecutive quarters of under performance relative to the benchmark.
6. Three year volatility less than the index, as measured by standard deviation.
7. Five year volatility less than the index, as measured by standard deviation.

Vang. Total Stk**			Am. Beacon			Conestoga			EuroPacific			Garcia Hamilton			Aristotle		
Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
		✓	✓			✓				✓		✓				✓	
		✓	✓			✓			✓			✓				✓	
		✓	✓			✓				✓		✓			✓		
		✓	✓			✓				✓		✓			✓		
		✓	✓			✓			✓			✓			✓		
		✓		✓		✓				✓			✓			✓	
		✓		✓		✓				✓			✓		✓		

*Historical manager data was used to complete this portion of the questionnaire being that funds have performance history of less than 3 years.

** Index Fund



Manager Compliance:	Clarion			Apollo														
	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A	Yes	No	N/A
1. Manager outperformed the index over the trailing three year period.		✓				✓												
2. Manager outperformed the index over the trailing five year period.			✓			✓												
3. Manager ranked above the 50th percentile over the trailing three year period.		✓				✓												
4. Manager ranked above the 50th percentile over the trailing five year period.			✓			✓												
5. Less than four consecutive quarters of under performance relative to the benchmark.	✓			✓		✓												
6. Three year volatility less than the index, as measured by standard deviation.		✓				✓												
7. Five year volatility less than the index, as measured by standard deviation.			✓			✓												

*Historical manager data was used to complete this portion of the questionnaire being that funds have performance history of less than 3 years.

** Index Fund



Historical Hybrid Composition

Allocation Mandate	Weight (%)
Jan-1973	
MSCI World (net)	60.00
Bloomberg Intermediate US Govt/Credit Idx	40.00
Jun-2019	
Russell 3000 Index	62.50
MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	22.50
Oct-2019	
Russell 3000 Index	55.00
MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	22.50
NCREIF Fund Index-ODCE (VW)	7.50
Mar-2022	
Russell 3000 Index	55.00
MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	20.00
NCREIF Fund Index-ODCE (VW)	7.50
Blmbg. Global Multiverse	2.50
Sep-2022	
Russell 3000 Index	55.00
MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	20.00
NCREIF Fund Index-ODCE (VW)	10.00

- Historical data through April 2019 was provided by South Texas Money Management.
- Assets were transferred to Frost Bank as the new custodian in the months of May, June and July 2019.
- Performance and cash flow data as of May 2019 is calculated by AndCo using custodial statements from Pershing and Frost Bank.

Active Return	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
Alpha	- A measure of the difference between a portfolio's actual performance and its expected return based on its level of risk as determined by beta. It determines the portfolio's non-systemic return, or its historical performance not explained by movements of the market.
Beta	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
Consistency	- The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. Higher consistency indicates the manager has contributed more to the product's performance.
Distributed to Paid In (DPI)	- The ratio of money distributed to Limited Partners by the fund, relative to contributions. It is calculated by dividing cumulative distributions by paid in capital. This multiple shows the investor how much money they got back. It is a good measure for evaluating a fund later in its life because there are more distributions to measure against.
Down Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
Downside Risk	- A measure similar to standard deviation that utilizes only the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. A higher factor is indicative of a riskier product.
Excess Return	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
Excess Risk	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
Information Ratio	- This calculates the value-added contribution of the manager and is derived by dividing the active rate of return of the portfolio by the tracking error. The higher the Information Ratio, the more the manager has added value to the portfolio.
Public Market Equivalent (PME)	- Designs a set of analyses used in the Private Equity Industry to evaluate the performance of a Private Equity Fund against a public benchmark or index.
R-Squared	- The percentage of a portfolio's performance that can be explained by the behavior of the appropriate benchmark. A high R-Squared means the portfolio's performance has historically moved in the same direction as the appropriate benchmark.
Return	- Compounded rate of return for the period.
Sharpe Ratio	- Represents the excess rate of return over the risk free return divided by the standard deviation of the excess return. The result is an absolute rate of return per unit of risk. A higher value demonstrates better historical risk-adjusted performance.
Standard Deviation	- A statistical measure of the range of a portfolio's performance. It represents the variability of returns around the average return over a specified time period.
Total Value to Paid In (TVPI)	- The ratio of the current value of remaining investments within a fund, plus the total value of all distributions to date, relative to the total amount of capital paid into the fund to date. It is a good measure of performance before the end of a fund's life
Tracking Error	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
Treynor Ratio	- Similar to Sharpe ratio but utilizes beta rather than excess risk as determined by standard deviation. It is calculated by taking the excess rate of return above the risk free rate divided by beta to derive the absolute rate of return per unit of risk. A higher value indicates a product has achieved better historical risk-adjusted performance.
Up Market Capture	- The ratio of average portfolio performance over the designated benchmark during periods of positive returns. A higher value indicates better product performance.

AndCo compiled this report for the sole use of the client for which it was prepared. AndCo is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. AndCo uses the results from this evaluation to make observations and recommendations to the client.

AndCo uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. AndCo analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides AndCo with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides AndCo with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause AndCo to believe that the information presented is significantly misstated.

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