

Investment Performance Review
Period Ending March 31, 2023

The Woodlands Firefighters' Retirement System



1st Quarter 2023 Market Environment



The Economy

- US GDP growth is expected to wane in the coming quarters as the impact from higher interest rates continues to spread through the broader economy. The final measure of 1st quarter GDP was revised downward to 1.7%. Global GDP growth also remains challenged with higher energy prices continuing to act as a headwind, especially in Europe. China has fully reopened after almost three years of COVID-19 restrictions, which boosted estimates and performance for the region.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with two successive 0.25% increases in the Fed Funds rate in January and February. While the Fed's policy remains hawkish on fighting high inflation, the press release from the February meeting took on a more dovish tone.
- The US labor market continues to show its resiliency, adding roughly 236 thousand jobs during the 1st quarter. As a result, the unemployment rate fell to 3.5% in March. Noticeably, the labor market is showing signs of declining growth which could soon signal an inflection point in economic output and the fight against inflation.
- The global banking sector came under duress in the 1st quarter of 2023, triggered by the second and third-largest regional bank failures in US history. The combination of aggressive Fed rate hikes and questionable capital deployment by Silicon Valley Bank led to a flurry of depositor withdrawals and rocked general confidence in the overall banking system.

Equity (Domestic and International)

- US equities moved broadly higher during the 1st quarter despite concerns regarding stubbornly high inflation, the potential for additional rate hikes, slowing global GDP growth, and shaken confidence in the global banking system. Large cap growth was the best performing domestic segment of the equity market during the period while small cap value performed the worst.
- International stocks also experienced strong returns during the 1st quarter. US Dollar (USD) and local currency (LCL) performance were both solid as the USD remained largely unchanged for the quarter. Non-US GDP growth, particularly in Europe, remained under pressure as restrictive central bank policies and elevated energy prices acted as a headwind. Finally, China's reopening from its restrictive COVID-19 policies is well underway and has proven to be a greater tailwind to the region than previously expected.

Fixed Income

- While inflation continues to decline quarter-over-quarter, the Fed maintained their inflation-fighting policy stance, increasing interest rates twice, totaling 0.50%. Despite the short-term increases, yields beyond 1-year actually fell during the quarter with the bellwether US 10-Year Treasury bond closing March at 3.48%, 0.40% lower than year-end.
- Performance across domestic bond market sectors was positive during the quarter, led by corporate investment grade bonds. Global bonds slightly outperformed domestic fixed income for the quarter.
- A combination of higher coupons and narrower credit spreads were the primary drivers of lower quality corporate results during the period.
- US Treasury bonds rebounded this quarter as yields at longer maturities fell and investors fled to safety amidst troubles in the banking sector.

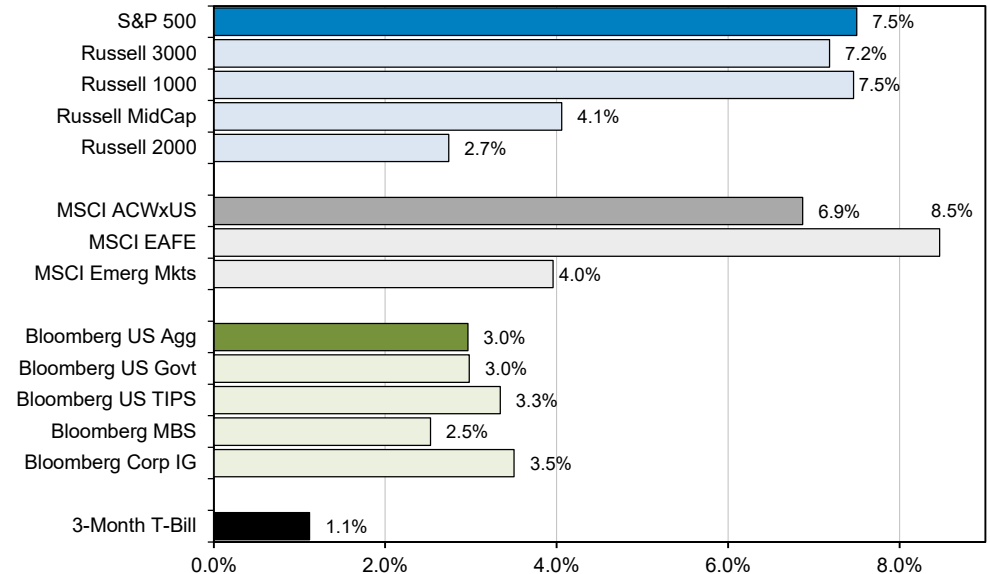
Market Themes

- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central Bank continuing on the path of raising interest rates during the quarter. However, recession fears and softening inflation readings led to a recovery in asset prices as market expectations grew there may be fewer, less drastic rate hikes going forward.
- The conflict in Ukraine continues as a major geopolitical event without a clear resolution in sight. Energy costs remain elevated, which continues to negatively impact the economic growth outlook for the region.
- Short-term interest rates rose across most developed markets as central banks continued to tighten. Despite concerns about the potential for slowing economic growth, lower-quality corporate bonds slightly outpaced higher-quality government bonds.
- 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 monetary tightening.

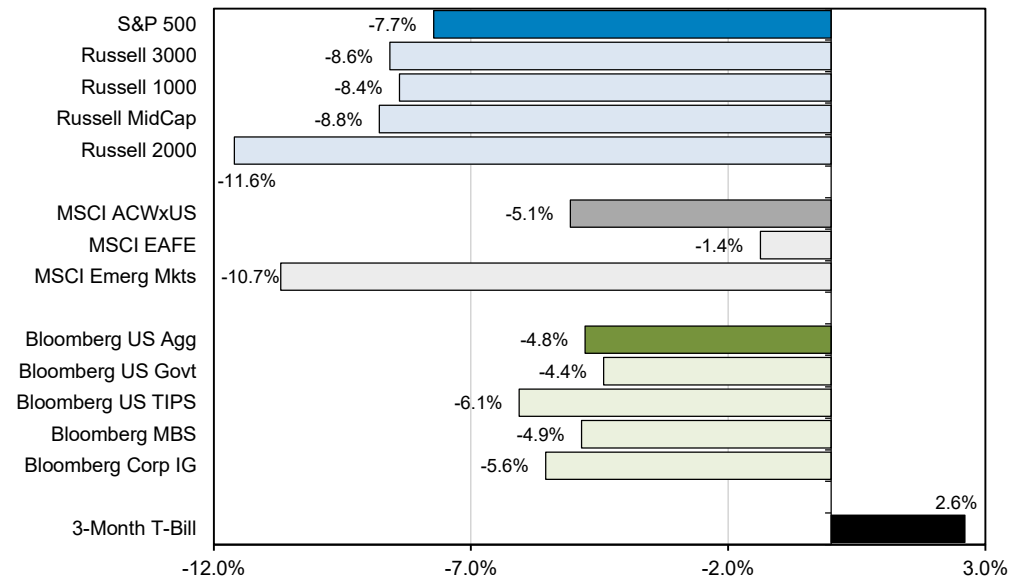


- Domestic equity markets started 2023 with solid results led by large cap companies, but each index remains negative over the trailing 1-year period. Factors contributing to the quarter's results include declining inflation readings, expectations the Fed would slow the pace of future interest rate increases, and China's economic reopening from its self-imposed COVID-19 restrictions. For the period, the S&P 500 large cap benchmark returned 7.5%, versus 4.1% for mid cap, and 2.7% for small cap benchmarks.
- Like domestic equities, international developed and emerging market equities delivered positive results for the 1st quarter. Europe continues to face headwinds from higher-than-expected inflation, elevated energy prices, geopolitical risks related to the conflict in Ukraine, and rising interest rates. Emerging markets benefited from China's return to the global economy. The developed market MSCI EAFE Index returned 8.5% for the quarter and the MSCI Emerging Markets Index rose by 4.0%.
- For the quarter, performance of the bond market was broadly positive due to lower inflation and falling yields beyond 1-year maturities. The Bloomberg (BB) US Aggregate Index returned 3.0% for the period while investment grade corporate bonds posted a moderately higher return of 3.5%.
- US equity markets were negative over the trailing 1-year period, though much of this weak performance occurred at the beginning of the timeframe and will continue to roll off in the coming quarters. The S&P 500 Index return of -7.7% for the year was largely driven by concerns related to rising inflation, tighter monetary policy, and recession fears. The weakest relative performance for the year was the Russell 2000 Index, which declined -11.6%.
- Over the trailing 1-year period, international markets also declined. The MSCI EAFE Index returned -1.4% while the MSCI Emerging Markets Index fell a much larger -10.7%. Continued concerns related to Ukraine, elevated inflation, and slowing global economic growth negatively impacted markets. However, USD weakness and easing energy prices acted as a tailwind to international performance in the second half of 2022.
- Bond markets followed a largely similar narrative to equities, finishing the trailing 1-year period in negative territory. While bond market performance was impacted by similar factors to equity market performance, the primary driver of results over the prior year was dramatically higher interest rates, which directly and immediately impact bond prices and index performance. US mortgage backed and Government issues were the least negative sectors returning -4.9% and -4.4%, respectively, for the year. US TIPS suffered the year's largest loss, falling -6.1%.

Quarter Performance



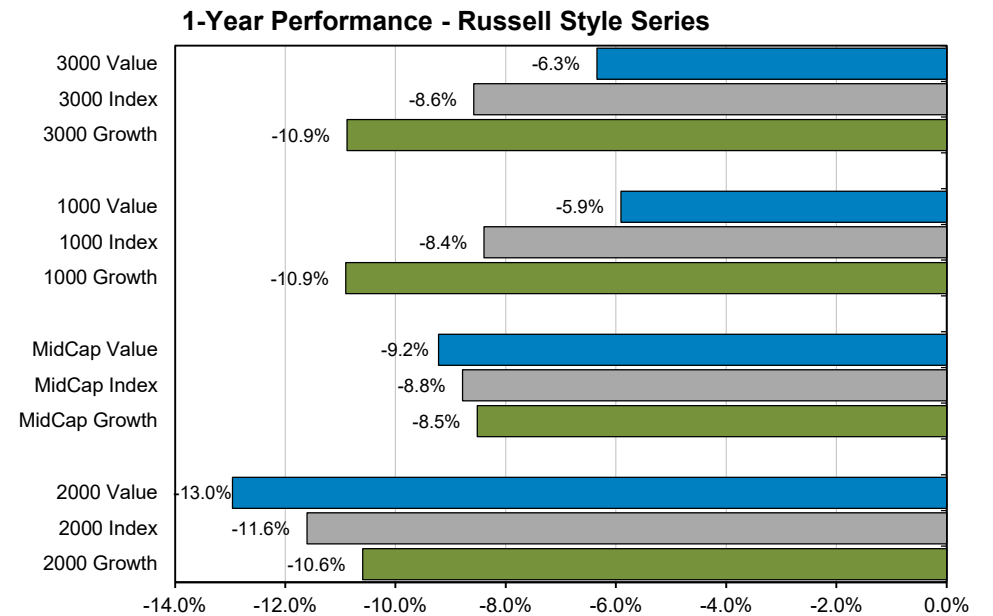
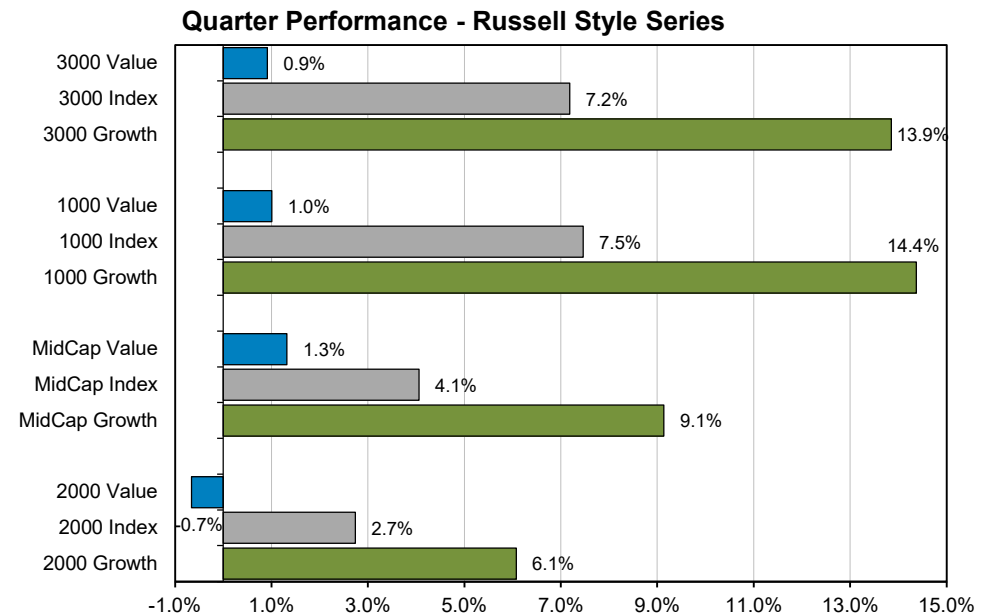
1-Year Performance



Source: Investment Metrics



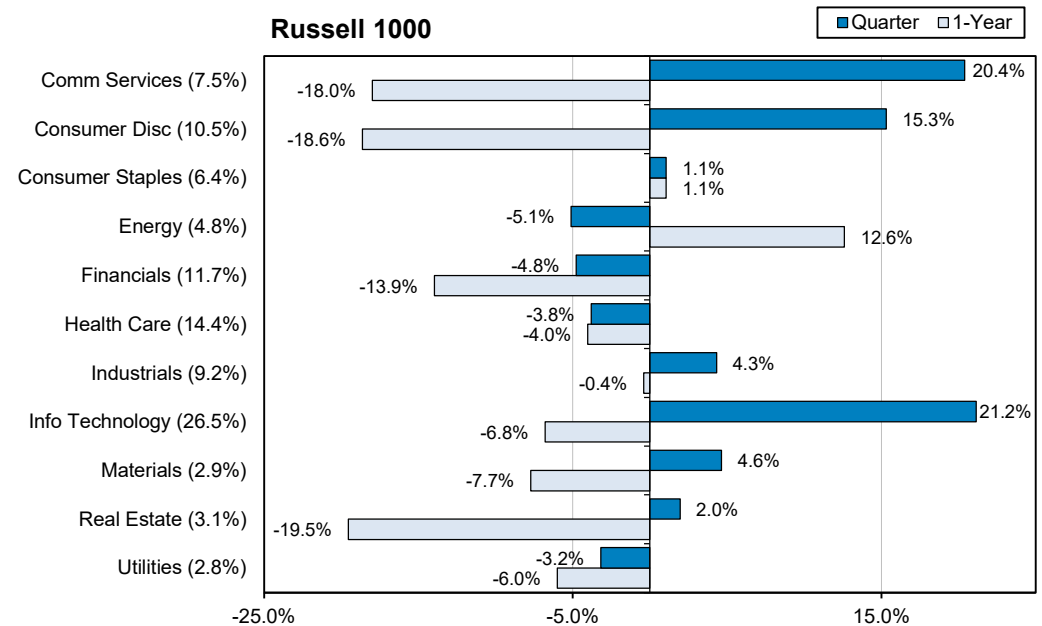
- Domestic equity core benchmarks pulled back from their February highs, but each finished the quarter with solid, positive results. Concerns regarding the regional banking sector and the financial sector's large weight in the value benchmarks weighed heavily on style-based index performance. Large cap stocks led results for the capitalization-based benchmarks and finished well ahead of both the mid cap and small cap indices for the quarter. Growth benchmarks, with their lower weight in the financial sector and larger weight in the information technology sector, produced the quarter's strongest results at all capitalization levels. The Russell 1000 Growth Index topped the quarter, returning 14.4% followed by the Russell Mid Cap Growth Index and the Russell 2000 Growth Index, which rose by 9.1% and 6.1%, respectively.
- Large, mid, and small cap growth stocks each outperformed their value counterparts by a wide margin for the quarter. While it is only a single quarter, this performance reversed 2022's dominant trend of value-based benchmarks outpacing their growth counterparts. Large and mid cap stocks managed small, positive returns of 1.0% and 1.3%, respectively, for the quarter while the Russell 2000 Value Index fell -0.7%.
- The 1st quarter's positive performance was not enough to offset the challenging performance experienced by domestic equity markets during 2022. All market capitalizations and styles remain in sizable negative territory over the trailing 1-year period. Within large cap stocks, the Russell 1000 Value Index returned a disappointing -5.9% but was down much less than the Russell Large Cap Growth Index, which fell -10.9% for the year.
- Outside of large cap issues, 2023's strong 1st quarter growth benchmark results were enough to push growth results over their value equivalents at both mid and small cap levels for the year. The Russell Mid Cap Value Index returned -9.2% and the small cap Russell 2000 Value Index returned -13.0% for the period. The growth benchmark counterparts at both capitalization levels were each down less than value.



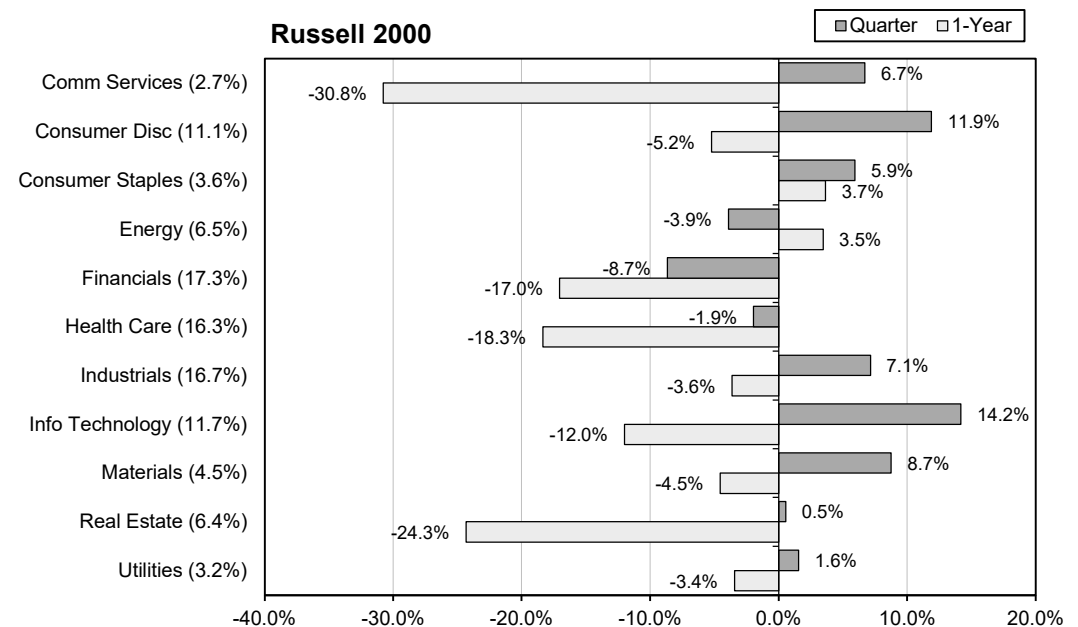
Source: Investment Metrics



- Economic sector performance was mixed during the quarter. Seven of 11 economic sectors posted positive absolute performance for the quarter but just three managed to outpace the return of the broad index.
- After a challenging 2022, the information technology sector rebounded during the quarter on hopes that inflation was softening, and that the Fed would soon end its rate hiking cycle. The sector returned an impressive 21.2% in the quarter. The other two sectors that outpaced the headline index's return for the quarter were communication services (20.4%) and consumer discretionary (15.3%). The energy (-5.1%), financials (-4.8%), health care (-3.8%), and utilities (-3.2%) sectors each posted negative performance for the quarter.
- Eight small cap economic sectors posted positive results during the quarter and six exceeded the 2.7% return of the broader Russell 2000 Index. The consumer discretionary (11.9%) and information technology (14.2%) sectors each posted double-digit gains for the quarter while the energy (-3.9%), financials (-8.7%), and health care (-18.3%) sectors posted negative returns.



- For the full year, seven economic sectors exceeded the return of the broad large cap benchmark, but only the energy (12.6%) and consumer staples (1.1%) sectors managed to post positive performance for the period. The weakest economic sector in the Russell 1000 for the year was Real Estate, which declined by -19.5% and was heavily impacted by rising interest rates.
- Similar to large cap sector performance, for the trailing 1-year period only two small cap sectors were positive. Energy was the best performing sector followed by consumer staples, which posted returns of 3.5% and 3.7%, respectively. Four of the 11 economic sectors were down less than the broad small cap benchmark's return of -11.6%. The worst performing sector for the year was communication services with a return of -30.8%. However, the information technology (-12.0%), financials (-17.0%), health care (-18.3%), and real estate (-24.3%) sectors were also down significantly for the year.



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 March 31, 2023

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.5%	27.1%	-5.0%	Information Technology
Microsoft Corp	5.7%	20.5%	-5.6%	Information Technology
Amazon.com Inc	2.4%	23.0%	-36.6%	Consumer Discretionary
NVIDIA Corp	1.7%	90.1%	1.9%	Information Technology
Alphabet Inc Class A	1.6%	17.6%	-25.4%	Communication Services
Berkshire Hathaway Inc Class B	1.5%	0.0%	-12.5%	Financials
Alphabet Inc Class C	1.4%	17.2%	-25.5%	Communication Services
Tesla Inc	1.4%	68.4%	-42.2%	Consumer Discretionary
Meta Platforms Inc Class A	1.2%	76.1%	-4.7%	Communication Services
Exxon Mobil Corp	1.2%	0.2%	37.5%	Energy

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Sotera Health Co Ordinary Shares	0.0%	115.0%	-17.3%	Health Care
Carvana Co Class A	0.0%	106.5%	-91.8%	Consumer Discretionary
Coinbase Global Inc Ordinary Shares	0.0%	90.9%	-64.4%	Financials
NVIDIA Corp	1.7%	90.1%	1.9%	Information Technology
Oak Street Health Inc Ordinary Shares	0.0%	79.8%	43.9%	Health Care
Meta Platforms Inc Class A	1.2%	76.1%	-4.7%	Communication Services
DraftKings Inc Ordinary Shs - Class A	0.0%	70.0%	-0.6%	Consumer Discretionary
Spotify Technology SA	0.0%	69.2%	-11.5%	Communication Services
Tesla Inc	1.4%	68.4%	-42.2%	Consumer Discretionary
Roku Inc Class A	0.0%	61.7%	-47.5%	Communication Services

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
First Republic Bank	0.0%	-88.5%	-91.3%	Financials
PacWest Bancorp	0.0%	-57.2%	-76.6%	Financials
Lumen Technologies Inc Ordinary Shs	0.0%	-49.2%	-75.4%	Communication Services
WeWork Inc	0.0%	-45.6%	-88.6%	Real Estate
Enviva Inc	0.0%	-44.4%	-61.2%	Energy
Western Alliance Bancorp	0.0%	-40.0%	-56.3%	Financials
Zions Bancorp NA	0.0%	-38.6%	-52.9%	Financials
Charles Schwab Corp	0.2%	-36.9%	-37.1%	Financials
Comerica Inc	0.0%	-34.0%	-49.8%	Financials
DISH Network Corp Class A	0.0%	-33.5%	-70.5%	Communication Services

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Iridium Communications Inc	0.3%	20.7%	53.9%	Communication Services
ShockWave Medical Inc	0.3%	5.5%	4.6%	Health Care
EMCOR Group Inc	0.3%	9.9%	45.0%	Industrials
Crocs Inc	0.3%	16.6%	65.5%	Consumer Discretionary
Texas Roadhouse Inc	0.3%	19.4%	31.8%	Consumer Discretionary
Saia Inc	0.3%	29.8%	11.6%	Industrials
Inspire Medical Systems Inc	0.3%	-7.1%	-8.8%	Health Care
RBC Bearings Inc	0.3%	11.2%	20.0%	Industrials
Kinsale Capital Group Inc	0.3%	14.8%	31.9%	Financials
Apellis Pharmaceuticals Inc	0.3%	27.6%	29.8%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Cipher Mining Inc	0.0%	316.1%	-36.0%	Information Technology
SelectQuote Inc Ordinary Shares	0.0%	223.0%	-22.2%	Financials
C3.ai Inc Ordinary Shares - Class A	0.1%	200.0%	47.9%	Information Technology
Riot Platforms Inc	0.1%	194.7%	-52.8%	Information Technology
Oscar Health Inc Class A	0.0%	165.9%	-34.4%	Financials
Marathon Digital Holdings Inc	0.0%	155.0%	-68.8%	Information Technology
Aurinia Pharmaceuticals Inc	0.1%	153.7%	-11.5%	Health Care
Reata Pharmaceuticals Inc Class A	0.1%	139.3%	177.5%	Health Care
Atlas Technical Consultants Inc	0.0%	136.7%	N/A	Industrials
Berkshire Grey Inc Ordinary Shares	0.0%	128.5%	-52.1%	Industrials

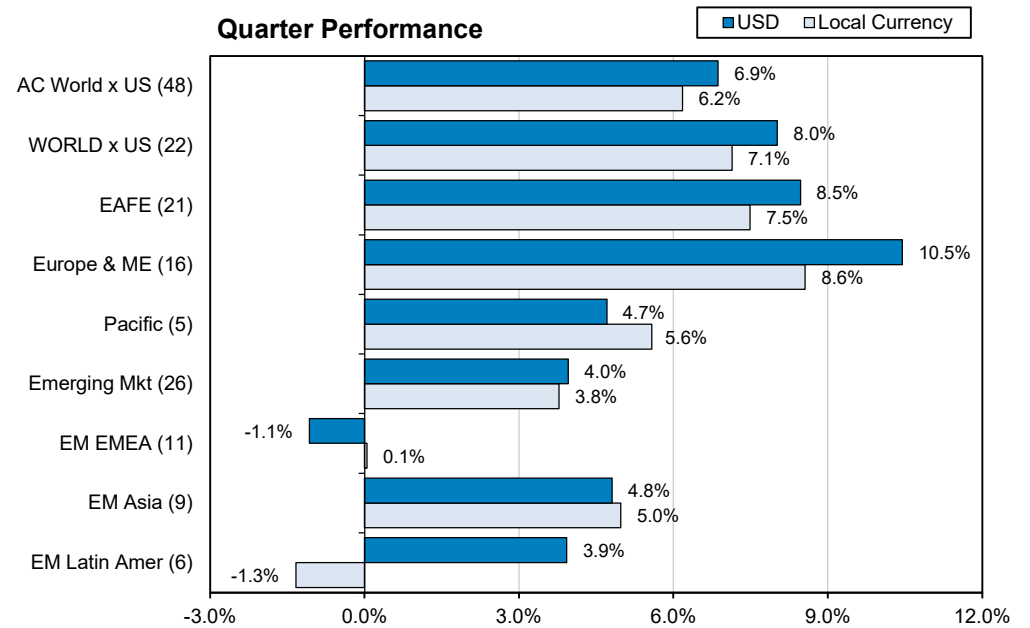
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Cerberus Cyber Sentinel Corp	0.0%	-86.7%	-93.6%	Information Technology
Cytera Technologies Inc	0.0%	-84.1%	-97.5%	Information Technology
Bed Bath & Beyond Inc	0.0%	-83.0%	-98.1%	Consumer Discretionary
Pear Therapeutics Inc Class A	0.0%	-78.4%	-95.0%	Health Care
Veru Inc	0.0%	-78.0%	-76.0%	Consumer Staples
Sunlight Financial Holdings Inc	0.0%	-75.8%	-93.8%	Financials
Esperion Therapeutics Inc	0.0%	-74.5%	-65.7%	Health Care
Nektar Therapeutics	0.0%	-68.9%	-87.0%	Health Care
Vintage Wine Estates Inc Ordinary Shs	0.0%	-67.2%	-89.2%	Consumer Staples
Bright Health Group Inc	0.0%	-66.1%	-88.6%	Financials

Source: Morningstar Direct

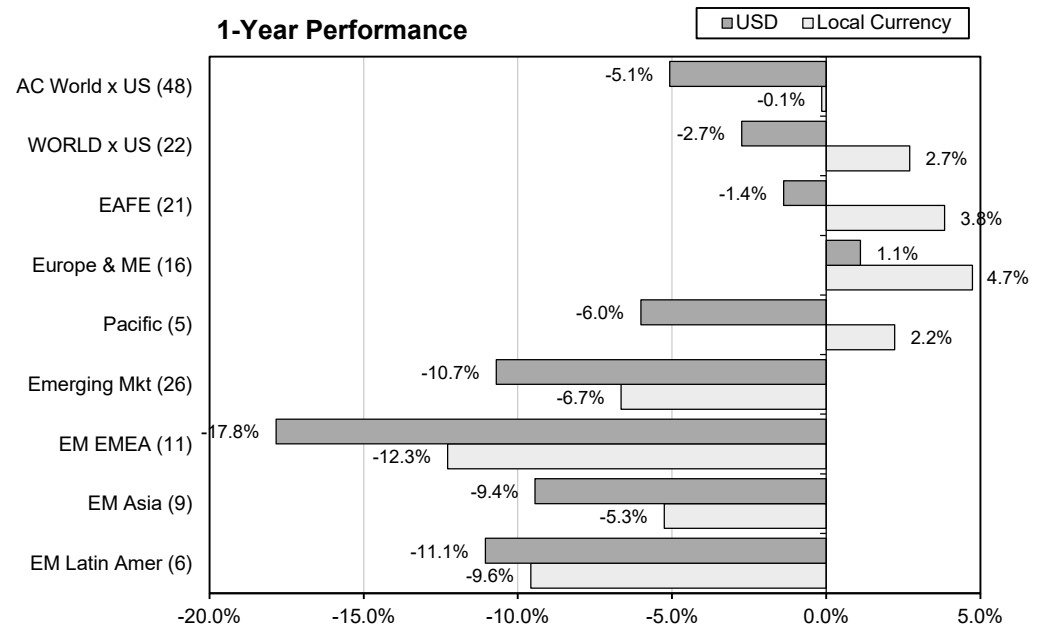


- Many of the International developed and emerging market benchmarks posted positive performance in both USD and LCL terms for the 1st quarter. A weakening USD acted as a slight tailwind for non-US index performance during the quarter. Higher energy prices and the reopening of China drove performance, especially in emerging markets. Europe and Middle East sub-index led results, returning a strong 10.5% in USD and 8.6% in LCL. The developed market MSCI EAFE Index returned a solid 8.5% in USD and 7.5% in LCL terms for the period, and the MSCI Emerging Markets Index rose by 4.0% in USD and 3.8% in LCL terms.

Quarter Performance



1-Year Performance



- The trailing 1-year results for international developed and emerging markets remain in negative territory in USD terms. A strong dollar over most of the trailing 1-year period was the dominant USD performance factor, shaving 5.2% off broad developed market performance and 4.0% from emerging market results. Developed market performance was positive in LCL terms with the MSCI EAFE Index returning -1.4% in USD and 3.8% in LCL terms for the year. The MSCI Emerging Markets Index declined by -10.7% in USD and -6.7% in LCL terms for the period. Performance in the EMEA (Europe, Middle East, and Africa) regional benchmark significantly detracted from emerging market index performance with a return of -17.8% in USD and -12.3% in LCL terms.

Source: MSCI Global Index Monitor (Returns are Net)



The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2023

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.5%	10.5%	-6.5%
Consumer Discretionary	12.0%	17.0%	5.0%
Consumer Staples	10.4%	7.6%	1.3%
Energy	4.5%	0.4%	9.6%
Financials	17.7%	2.5%	-1.1%
Health Care	13.2%	5.4%	-2.6%
Industrials	15.6%	11.9%	-0.5%
Information Technology	8.6%	19.0%	-4.1%
Materials	7.7%	7.6%	-6.5%
Real Estate	2.4%	-2.1%	-20.4%
Utilities	3.4%	8.2%	-1.2%
Total	100.0%	8.5%	-1.4%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.1%	11.2%	-7.1%
Consumer Discretionary	11.9%	11.3%	1.7%
Consumer Staples	8.9%	6.5%	1.1%
Energy	5.5%	-0.3%	0.8%
Financials	19.9%	1.4%	-7.5%
Health Care	9.6%	4.2%	-4.4%
Industrials	12.7%	10.0%	-1.8%
Information Technology	11.8%	17.2%	-9.5%
Materials	8.3%	5.9%	-10.5%
Real Estate	2.1%	-1.7%	-19.7%
Utilities	3.2%	3.3%	-5.9%
Total	100.0%	6.9%	-5.1%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.6%	12.6%	-7.4%
Consumer Discretionary	13.9%	1.5%	-3.9%
Consumer Staples	6.3%	2.4%	-0.6%
Energy	4.7%	-0.3%	-4.8%
Financials	21.0%	-0.9%	-13.6%
Health Care	3.8%	-4.9%	-15.4%
Industrials	6.0%	2.2%	-6.3%
Information Technology	20.5%	14.7%	-13.9%
Materials	8.7%	2.4%	-15.6%
Real Estate	1.9%	-1.6%	-18.7%
Utilities	2.6%	-10.5%	-14.4%
Total	100.0%	4.0%	-10.7%

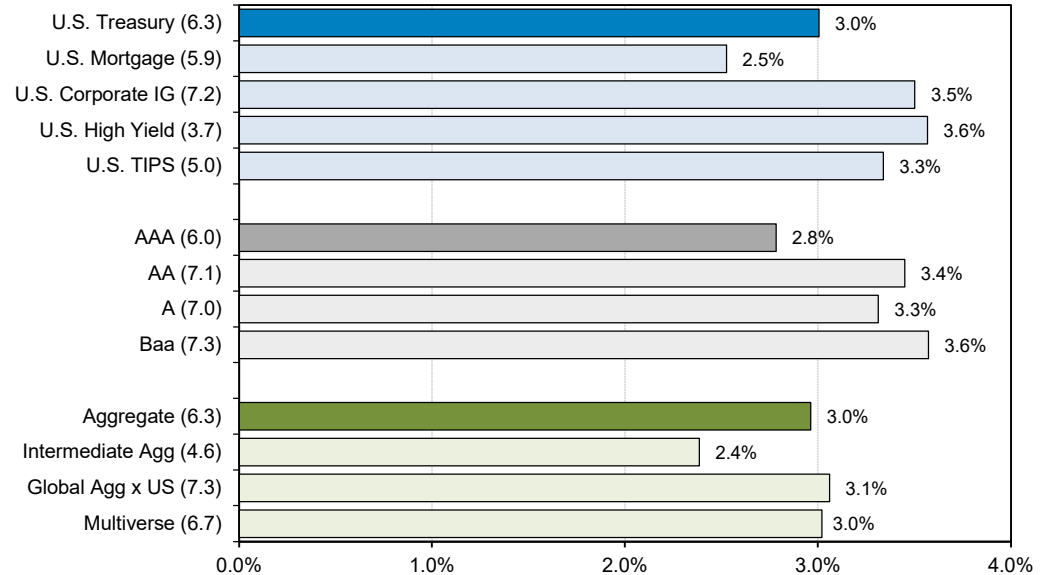
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	21.5%	13.9%	6.2%	-5.2%
United Kingdom	14.8%	9.6%	6.1%	-0.8%
France	12.5%	8.1%	14.6%	8.8%
Switzerland	10.0%	6.5%	6.7%	-6.8%
Germany	8.7%	5.6%	14.7%	2.2%
Australia	7.5%	4.8%	2.8%	-9.2%
Netherlands	4.6%	3.0%	16.6%	2.0%
Sweden	3.4%	2.2%	9.5%	-7.2%
Denmark	3.1%	2.0%	12.4%	14.2%
Hong Kong	2.7%	1.8%	-2.4%	-5.3%
Spain	2.6%	1.7%	15.7%	11.9%
Italy	2.5%	1.6%	14.7%	9.1%
Singapore	1.5%	1.0%	7.1%	-3.1%
Belgium	1.0%	0.7%	6.3%	-2.2%
Finland	1.0%	0.6%	-0.3%	-4.2%
Ireland	0.8%	0.5%	21.4%	12.1%
Israel	0.7%	0.4%	0.8%	-20.6%
Norway	0.7%	0.4%	-7.2%	-21.6%
Portugal	0.2%	0.1%	3.4%	1.3%
New Zealand	0.2%	0.1%	8.0%	2.1%
Austria	0.2%	0.1%	2.6%	-5.7%
Total EAFE Countries	100.0%	64.8%	17.3%	-14.5%
Canada		7.5%	4.3%	-13.1%
Total Developed Countries		72.3%	16.2%	-14.3%
China		9.1%	4.7%	-4.7%
Taiwan		4.2%	14.8%	-13.7%
India		3.6%	-6.4%	-12.2%
Korea		3.3%	9.6%	-14.4%
Brazil		1.4%	-3.2%	-18.7%
Saudi Arabia		1.1%	0.1%	-19.0%
South Africa		1.0%	-0.6%	-20.6%
Mexico		0.7%	20.3%	8.6%
Thailand		0.6%	-1.7%	-0.9%
Indonesia		0.5%	6.0%	0.2%
Malaysia		0.4%	-3.6%	-10.9%
United Arab Emirates		0.3%	-7.5%	-28.4%
Qatar		0.3%	-0.7%	-22.6%
Kuwait		0.2%	-3.7%	-11.3%
Philippines		0.2%	2.4%	-13.7%
Poland		0.2%	-1.0%	-20.1%
Turkey		0.2%	-9.4%	52.8%
Chile		0.2%	5.2%	-3.0%
Greece		0.1%	15.8%	14.8%
Peru		0.1%	8.3%	-12.2%
Czech Republic		0.1%	33.0%	10.3%
Hungary		0.1%	2.9%	-12.1%
Columbia		0.0%	-13.5%	-39.2%
Egypt		0.0%	-3.6%	-2.6%
Total Emerging Countries		27.7%	4.0%	-10.7%
Total ACWixUS Countries		100.0%	6.9%	-5.1%

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.

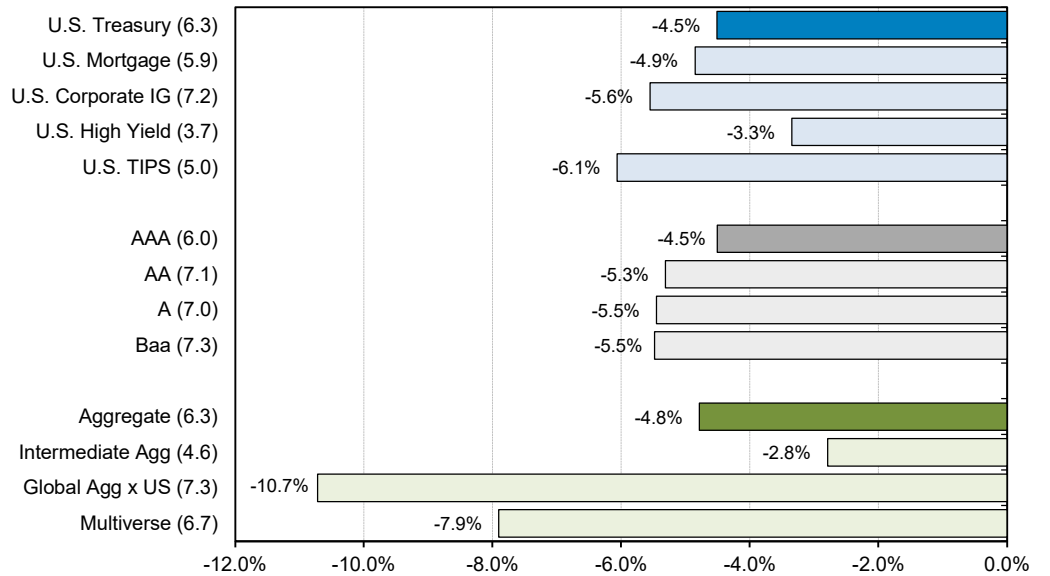


- After a challenging 2022 in fixed income markets brought on by the largest and most rapid increase in interest rates since the early 80's, the 1st quarter's positive bond benchmark results were a welcome relief. Despite two additional rate increases during the quarter, bond prices were aided by softening inflation and expectations that the Fed was nearing the end of its historic rate hiking cycle.
- The BB US Aggregate Bond Index, the bellwether US investment grade benchmark, returned a solid 3.0% for the period. Performance across the investment grade index's segments was also positive during the period with the US Corporate Investment Grade Index returning 3.5% and the US Mortgage Index component posting a return of 2.5%. Outside of the aggregate index's components, high yield bonds rose 3.6% and US TIPS posted a return of 3.3% for the quarter. The Bloomberg Global Aggregate ex US Index posted a similar return to the US bond benchmark with a return of 3.1% for the quarter.
- Over the trailing 1-year period, the BB US Aggregate Bond Index declined by -4.8% and each of 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 -6.1% for the year. Lower quality high yield corporate bonds, which have a much shorter duration, were down less than their investment grade counterparts with the Bloomberg US High Yield Index returning -3.3% for the year.
- Performance for non-US bonds was also negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -10.7%. The combination of rising interest rates, elevated inflation, geopolitical risks, and USD strength earlier in the year hindered non-US index performance.

Quarter Performance



1-Year Performance

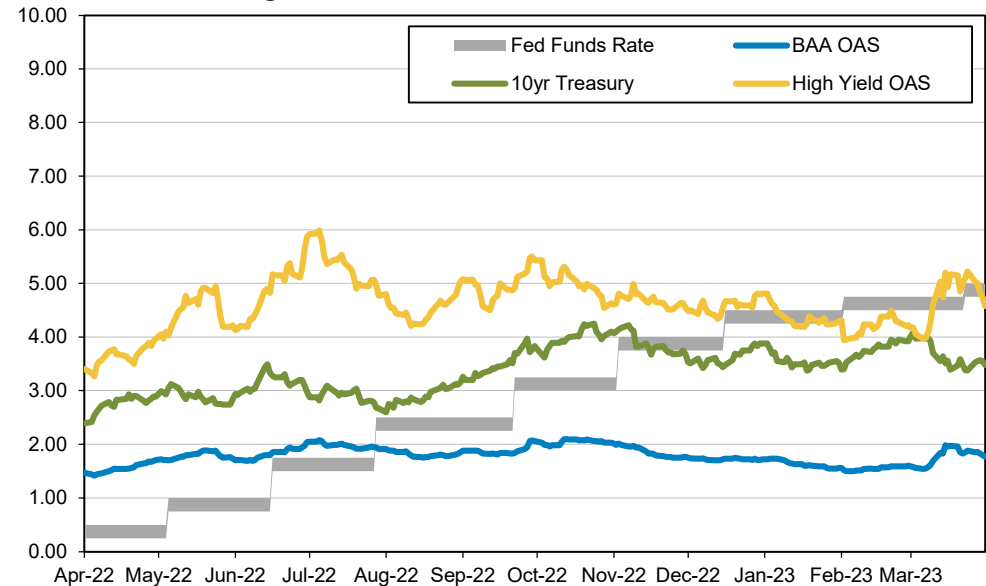


Source: Bloomberg

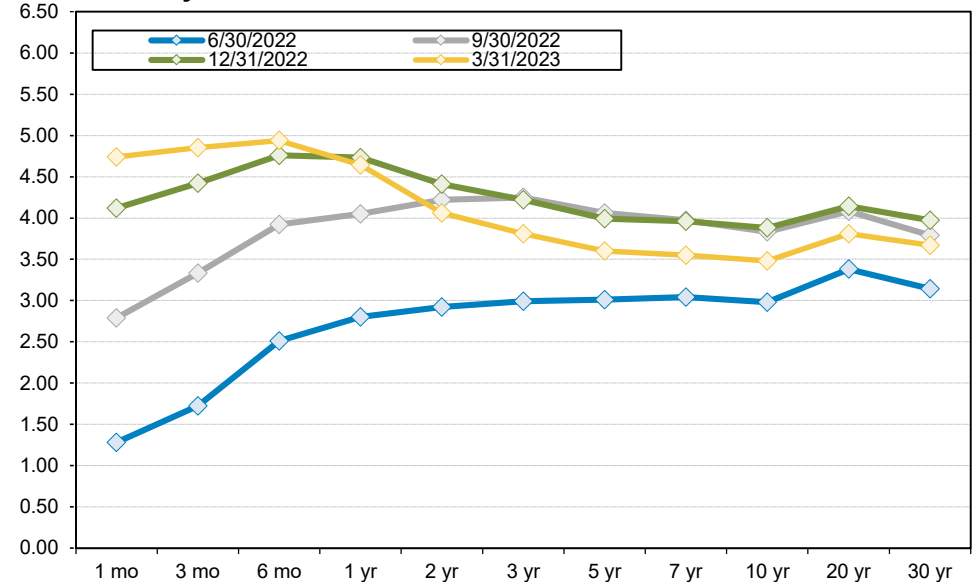


- The gray band across the graph illustrates the range of the current Fed Funds Rate. During the 1st quarter the Fed raised the lower end of its target rate range from 4.25% to 4.75% through two successive 0.25% increases in February and March. After its March meeting, the Federal Open Market Committee (FOMC) altered a phrase in its press release that had been included since the beginning of this rate increase cycle. Their revised release stated - "some additional policy firming may be appropriate" and it removed "ongoing increases in the target range will be appropriate." The FOMC also stated that it would continue its policy of removing liquidity from the market by allowing bonds held on its balance sheet to mature without reinvesting those proceeds. While subtle, the capital market interpreted this change favorably in terms of the future path of interest rates.
- The yield on the US 10-year Treasury (green line) ended the period slightly lower as concerns over the state of the economy and March's banking disruption drove yields. The closing yield on the 10-Year Treasury was 3.88% at year-end but finished the quarter 0.40% lower at 3.48%. The benchmark's rate peaked in October, 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). This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.42% to 1.80%. High Yield OAS spreads rose from roughly 3.27% at the beginning of the year to 4.74% at year-end. High yield spreads reached their highs in July 2022 at a level of 5.80% before trading lower the remainder of the year. A spike in both the BAA OAS and High Yield spreads is visible in March following a short-lived banking crisis of confidence 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 but were still elevated from pre-crisis levels at the end of the quarter.
- 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 1st quarter as the Fed increased interest rates twice to combat elevated 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 the 3rd quarter of 2022. The yield curve remains inverted (short-term rates higher than long-term rates) between 2-year and 10-year maturities. Historically, a persistent inversion of these two key rates has been a precursor of an economic recession within 6- to 24-months.

1-Year Trailing Market Rates



Treasury Yield Curve



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

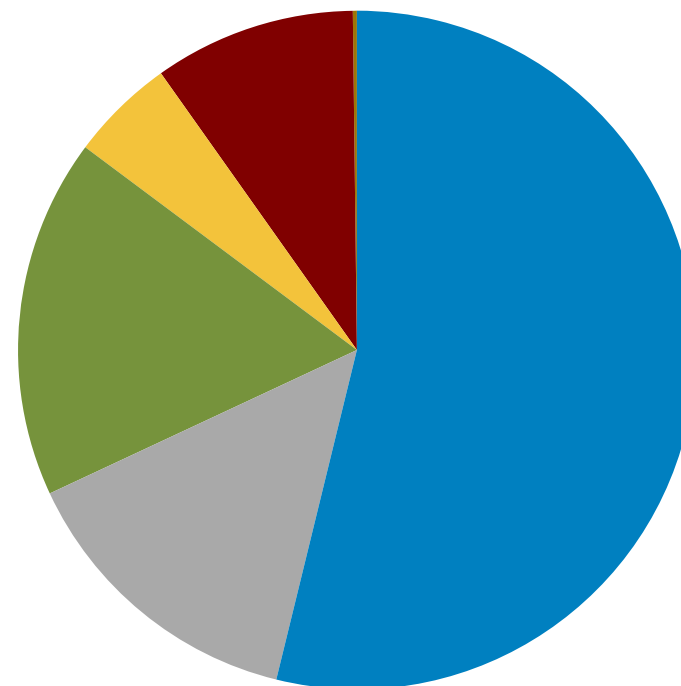
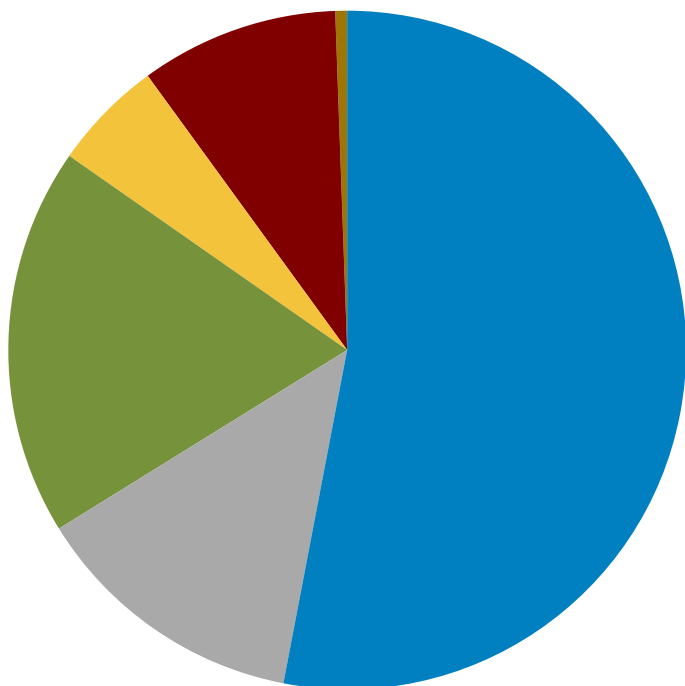


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Asset Allocation By Segment as of
 December 31, 2022 : \$56,224,827

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

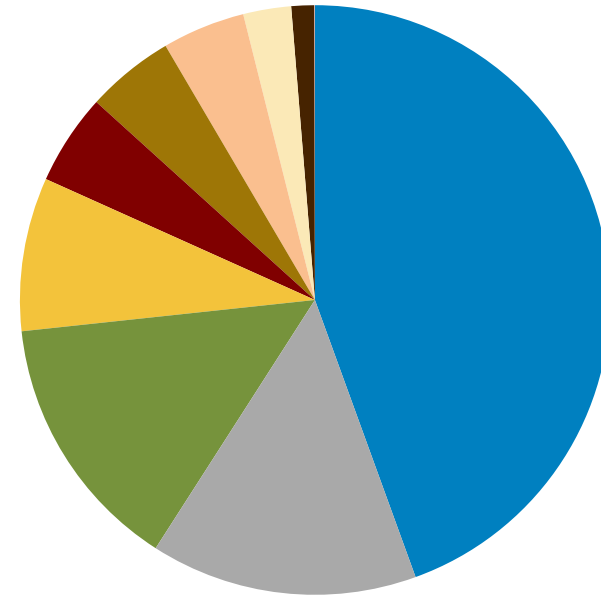
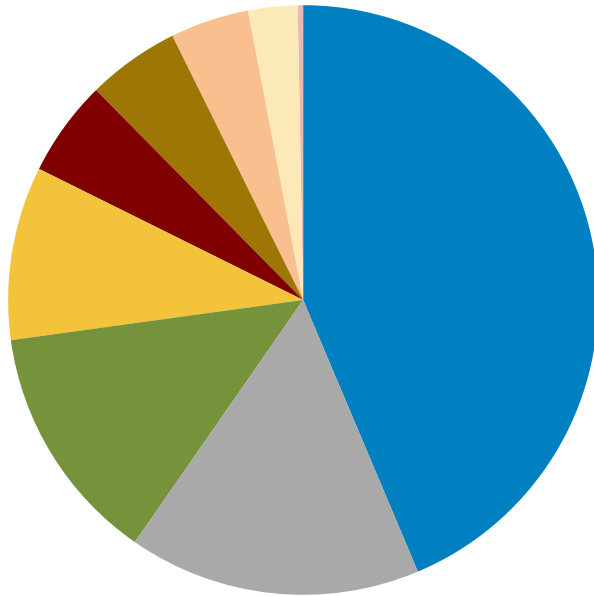


Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	29,810,099	53.0	Domestic Equity	32,329,946	53.8
International Equity	7,400,184	13.2	International Equity	8,546,197	14.2
Domestic Fixed Income	10,410,745	18.5	Domestic Fixed Income	10,293,645	17.1
Other Fixed Income	2,970,414	5.3	Other Fixed Income	2,995,316	5.0
Real Estate	5,315,341	9.5	Real Estate	5,777,734	9.6
Cash Equivalent	318,044	0.6	Cash Equivalent	119,203	0.2



Asset Allocation By Manager as of
 Dec-2022 : \$56,224,827

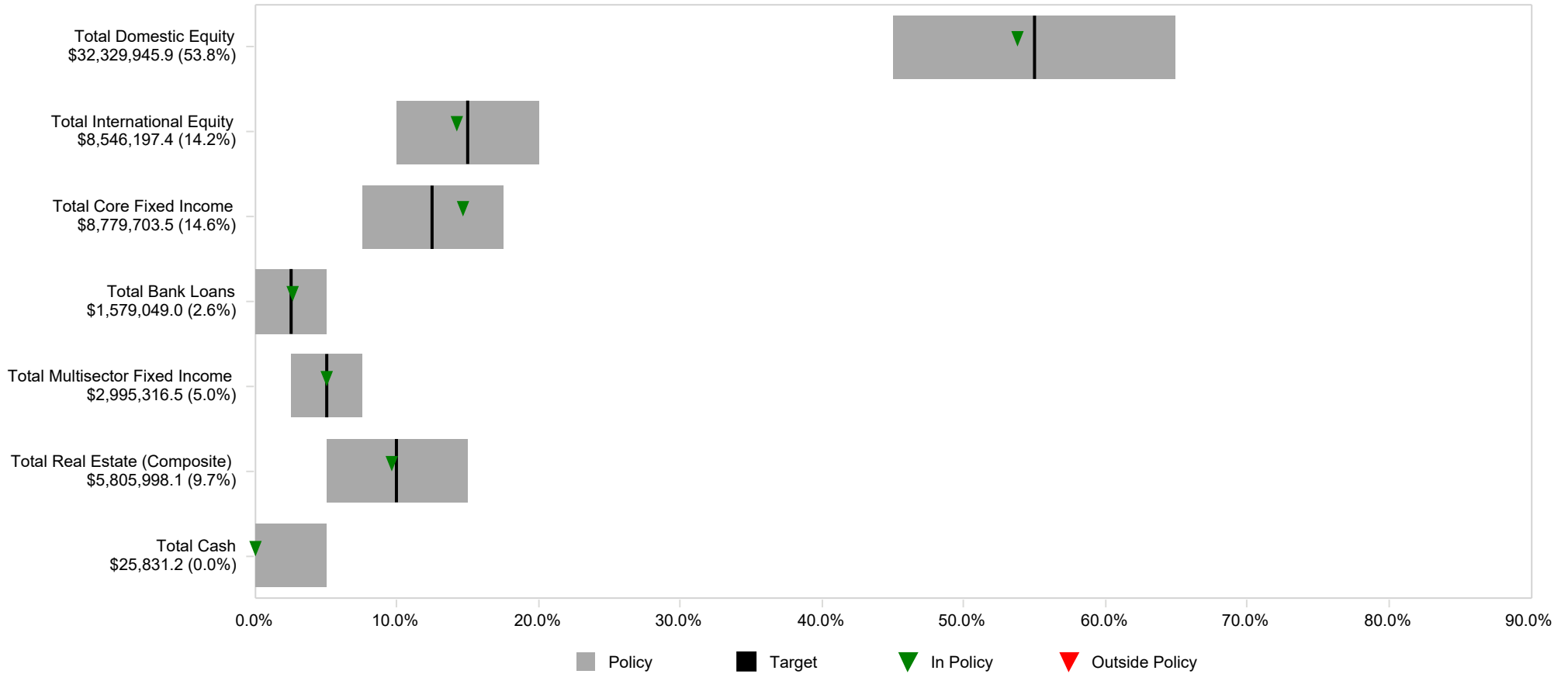
Asset Allocation By Manager as of
 Mar-2023 : \$60,062,042



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard Total Stock Index (VITSX)	24,539,780	43.6	Vanguard Total Stock Index (VITSX)	26,703,962	44.5
Garcia Hamilton	9,007,886	16.0	Garcia Hamilton	8,779,704	14.6
EuroPacific Growth R6 (RERGX)	7,400,184	13.2	EuroPacific Growth R6 (RERGX)	8,546,197	14.2
Clarion (Core Real Estate)	5,344,803	9.5	Clarion (Core Real Estate)	5,058,762	8.4
Apollo Total Return Fund	2,970,414	5.3	Apollo Total Return Fund	2,995,316	5.0
American Beacon SC Value R6 (AASRX)	2,848,229	5.1	American Beacon SC Value R6 (AASRX)	2,901,585	4.8
Conestoga Small Cap I (CCALX)	2,422,090	4.3	Conestoga Small Cap I (CCALX)	2,724,399	4.5
Aristotle Floating Rate (PLFRX)	1,524,492	2.7	Aristotle Floating Rate (PLFRX)	1,579,049	2.6
Mutual Fund Cash	163,522	0.3	Carlyle Property Investors	747,236	1.2
Frost Bank Cash Account	3,426	0.0	Mutual Fund Cash	23,511	0.0
Carlyle Property Investors	-	0.0	Frost Bank Cash Account	2,321	0.0



Executive Summary



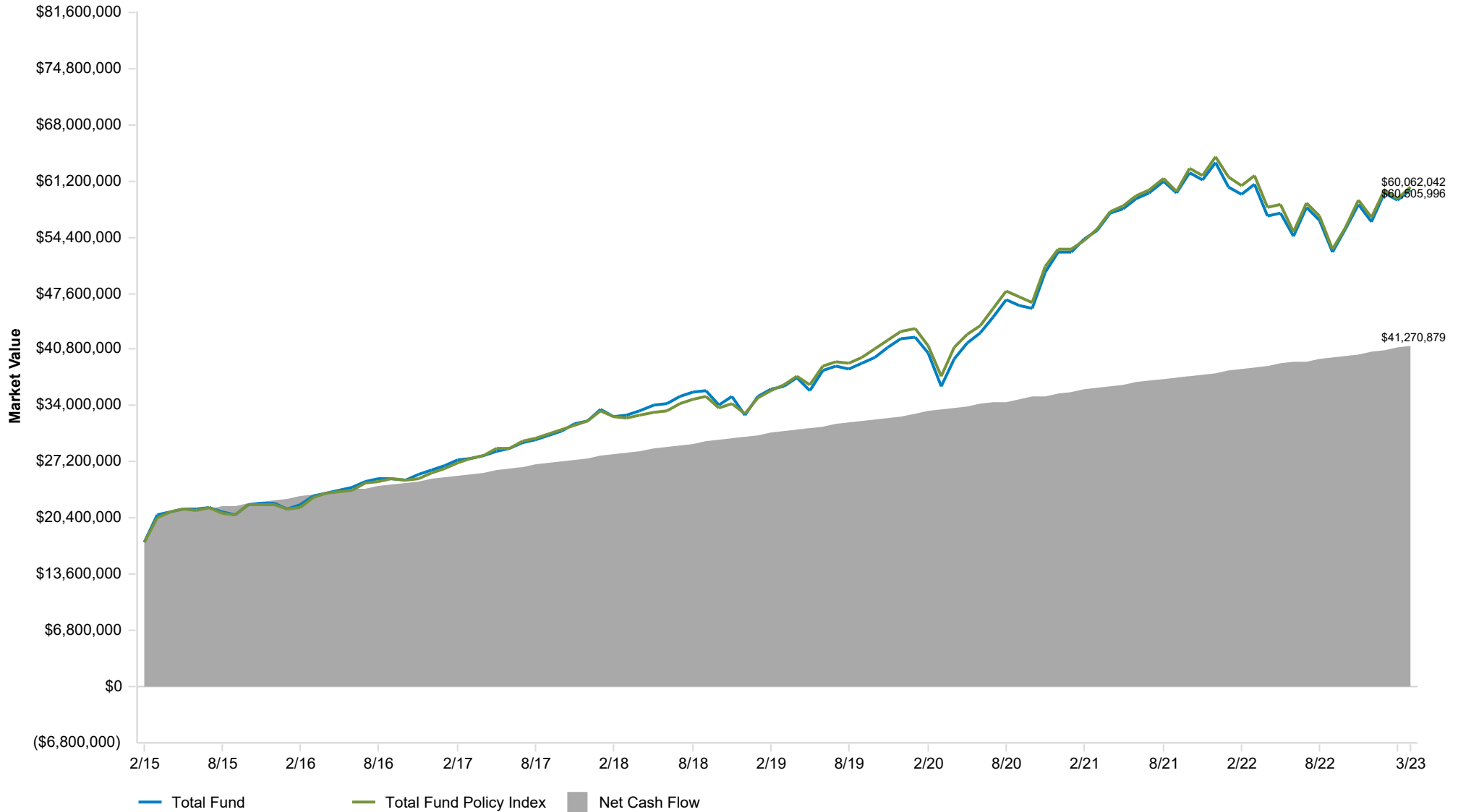
Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebal. (\$000)
Total Fund	60,062,042	100.0	N/A	N/A	100.0	-
Total Domestic Equity	32,329,946	53.8	45.0	65.0	55.0	704,177
Total International Equity	8,546,197	14.2	10.0	20.0	15.0	463,109
Total Core Fixed Income	8,779,704	14.6	7.5	17.5	12.5	-1,271,948
Total Bank Loans	1,579,049	2.6	0.0	5.0	2.5	-77,498
Total Multisector Fixed Income	2,995,316	5.0	2.5	7.5	5.0	7,786
Total Real Estate (Composite)	5,805,998	9.7	5.0	15.0	10.0	200,206
Total Cash	25,831	0.0	0.0	5.0	0.0	-25,831



Schedule of Investable Assets
Total Fund
 Since Inception Ending March 31, 2023

Schedule of Investable Assets



Schedule of Investable Assets

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Ending Market Value \$
Inception	17,541,325	23,729,554	60,062,042



The Woodlands Firefighters' Retirement System
Financial Reconciliation

1 Quarter Ending March 31, 2023

Financial Reconciliation One Quarter									
	Market Value 01/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2023
Total Fund	56,224,827	-	953,452	-80,099	-20,074	-64,951	257,111	2,791,775	60,062,042
Total Domestic Equity	29,810,099	400,000	-	-	-	-	102,546	2,017,301	32,329,946
Vanguard Total Stock Index (VITSX)	24,539,780	400,000	-	-	-	-	102,546	1,661,636	26,703,962
American Beacon SC Value R6 (AASRX)	2,848,229	-	-	-	-	-	-	53,357	2,901,585
Conestoga Small Cap I (CCALX)	2,422,090	-	-	-	-	-	-	302,308	2,724,399
Total International Developed Equity	7,400,184	400,000	-	-	-	-	-	746,013	8,546,197
EuroPacific Growth R6 (RERGX)	7,400,184	400,000	-	-	-	-	-	746,013	8,546,197
Total Core Fixed Income	9,007,886	-547,236	-	-	-5,613	-686	76,837	248,516	8,779,704
Garcia Hamilton	9,007,886	-547,236	-	-	-5,613	-686	76,837	248,516	8,779,704
Total Bank Loans	1,524,492	-	-	-	-	-	33,021	21,536	1,579,049
Aristotle Floating Rate (PLFRX)	1,524,492	-	-	-	-	-	33,021	21,536	1,579,049
Total Multisector Fixed Income	2,970,414	-46,892	-	-	-	-	-	71,794	2,995,316
Apollo Total Return Fund	2,970,414	-46,892	-	-	-	-	-	71,794	2,995,316
Total Real Estate	5,344,803	747,236	-	-	-14,461	-	41,805	-313,385	5,805,998
Clarion	5,344,803	-	-	-	-14,461	-	41,805	-313,385	5,058,762
Carlyle Property Investors	-	747,236	-	-	-	-	-	-	747,236
Total Cash	166,948	-953,108	953,452	-80,099	-	-64,265	2,903	-	25,831
Frost Bank Cash Account	3,426	80,000	-	-80,099	-	-1,313	307	-	2,321
Mutual Fund Cash	163,522	-1,033,108	953,452	-	-	-62,952	2,597	-	23,511



The Woodlands Firefighters' Retirement System
Financial Reconciliation

Year To Date Ending March 31, 2023

Financial Reconciliation Year to Date									
	Market Value 01/01/2023	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2023
Total Fund	56,224,827	-	953,452	-80,099	-20,074	-64,951	257,111	2,791,775	60,062,042
Total Domestic Equity	29,810,099	400,000	-	-	-	-	102,546	2,017,301	32,329,946
Vanguard Total Stock Index (VITSX)	24,539,780	400,000	-	-	-	-	102,546	1,661,636	26,703,962
American Beacon SC Value R6 (AASRX)	2,848,229	-	-	-	-	-	-	53,357	2,901,585
Conestoga Small Cap I (CCALX)	2,422,090	-	-	-	-	-	-	302,308	2,724,399
Total International Developed Equity	7,400,184	400,000	-	-	-	-	-	746,013	8,546,197
EuroPacific Growth R6 (RERGX)	7,400,184	400,000	-	-	-	-	-	746,013	8,546,197
Total Core Fixed Income	9,007,886	-547,236	-	-	-5,613	-686	76,837	248,516	8,779,704
Garcia Hamilton	9,007,886	-547,236	-	-	-5,613	-686	76,837	248,516	8,779,704
Total Bank Loans	1,524,492	-	-	-	-	-	33,021	21,536	1,579,049
Aristotle Floating Rate (PLFRX)	1,524,492	-	-	-	-	-	33,021	21,536	1,579,049
Total Multisector Fixed Income	2,970,414	-46,892	-	-	-	-	-	71,794	2,995,316
Apollo Total Return Fund	2,970,414	-46,892	-	-	-	-	-	71,794	2,995,316
Total Real Estate	5,344,803	747,236	-	-	-14,461	-	41,805	-313,385	5,805,998
Clarion	5,344,803	-	-	-	-14,461	-	41,805	-313,385	5,058,762
Carlyle Property Investors	-	747,236	-	-	-	-	-	-	747,236
Total Cash	166,948	-953,108	953,452	-80,099	-	-64,265	2,903	-	25,831
Frost Bank Cash Account	3,426	80,000	-	-80,099	-	-1,313	307	-	2,321
Mutual Fund Cash	163,522	-1,033,108	953,452	-	-	-62,952	2,597	-	23,511



The Woodlands Firefighters' Retirement System
Asset Allocation & Performance Trailing Returns
As of March 31, 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)	60,062,042	100.0	5.37 (13)	5.37 (13)	-5.72 (55)	-0.31 (48)	12.55 (9)	6.51 (27)	6.04 (42)	03/01/2015
Total Fund Policy Index			5.25 (15)	5.25 (15)	-6.69 (83)	0.10 (37)	11.89 (19)	7.05 (9)	6.21 (36)	
All Public Plans-Total Fund (Net)			4.36	4.36	-5.57	-0.42	10.64	5.96	5.87	
New Portfolio Structure 10/1/19	60,062,042	100.0	5.37	5.37	-5.72	-0.31	12.55	-	7.28	10/01/2019
Total Fund Policy Index			5.25	5.25	-6.69	0.10	11.89	7.05	7.16	
Total Equity	40,876,143	68.1	7.68	7.68	-7.11	-0.96	17.59	8.17	8.02	03/01/2015
Total Domestic Equity	32,329,946	53.8	7.11	7.11	-8.04	0.39	18.96	-	9.87	07/01/2019
Vanguard Total Stock Index (VITSX)	26,703,962	44.5	7.14 (30)	7.14 (30)	-8.78 (70)	0.93 (50)	18.36 (37)	-	10.34 (30)	07/01/2019
CRSP U.S. Total Market TR Index			7.15 (29)	7.15 (29)	-8.77 (69)	0.95 (49)	18.37 (37)	10.37 (-)	10.34 (30)	
IM U.S. Multi-Cap Core Equity (MF) Median			6.16	6.16	-7.58	0.90	17.76	-	9.35	
American Beacon SC Value R6 (AASRX)	2,901,585	4.8	1.87 (35)	1.87 (35)	-5.26 (26)	0.36 (33)	26.74 (38)	-	8.46 (43)	07/01/2019
Russell 2000 Value Index			-0.66 (75)	-0.66 (75)	-12.96 (89)	-5.17 (96)	21.01 (92)	4.55 (-)	5.67 (86)	
IM U.S. Small Cap Value Equity (MF) Median			0.68	0.68	-7.14	-1.01	25.68	-	8.18	
Conestoga Small Cap I (CCALX)	2,724,399	4.5	12.48 (3)	12.48 (3)	-4.52 (4)	-4.39 (15)	15.04 (55)	-	6.09 (43)	07/01/2019
Russell 2000 Growth Index			6.07 (54)	6.07 (54)	-10.60 (43)	-12.48 (67)	13.36 (70)	4.26 (-)	3.90 (73)	
IM U.S. Small Cap Growth Equity (MF) Median			6.24	6.24	-11.42	-10.18	15.45	-	5.41	
Total International Developed Equity	8,546,197	14.2	9.87	9.87	-3.29	-6.31	12.21	-	4.68	07/01/2019
EuroPacific Growth R6 (RERGX)	8,546,197	14.2	9.87 (25)	9.87 (25)	-3.29 (68)	-6.37 (97)	12.12 (56)	-	4.62 (45)	07/01/2019
MSCI AC World ex USA (Net)			6.87 (80)	6.87 (80)	-5.07 (83)	-3.29 (86)	11.80 (62)	2.47 (-)	3.69 (69)	
IM International Large Cap Core Equity (MF) Median			8.49	8.49	-1.25	-1.21	12.49	-	4.29	

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



The Woodlands Firefighters' Retirement System
Asset Allocation & Performance Trailing Returns

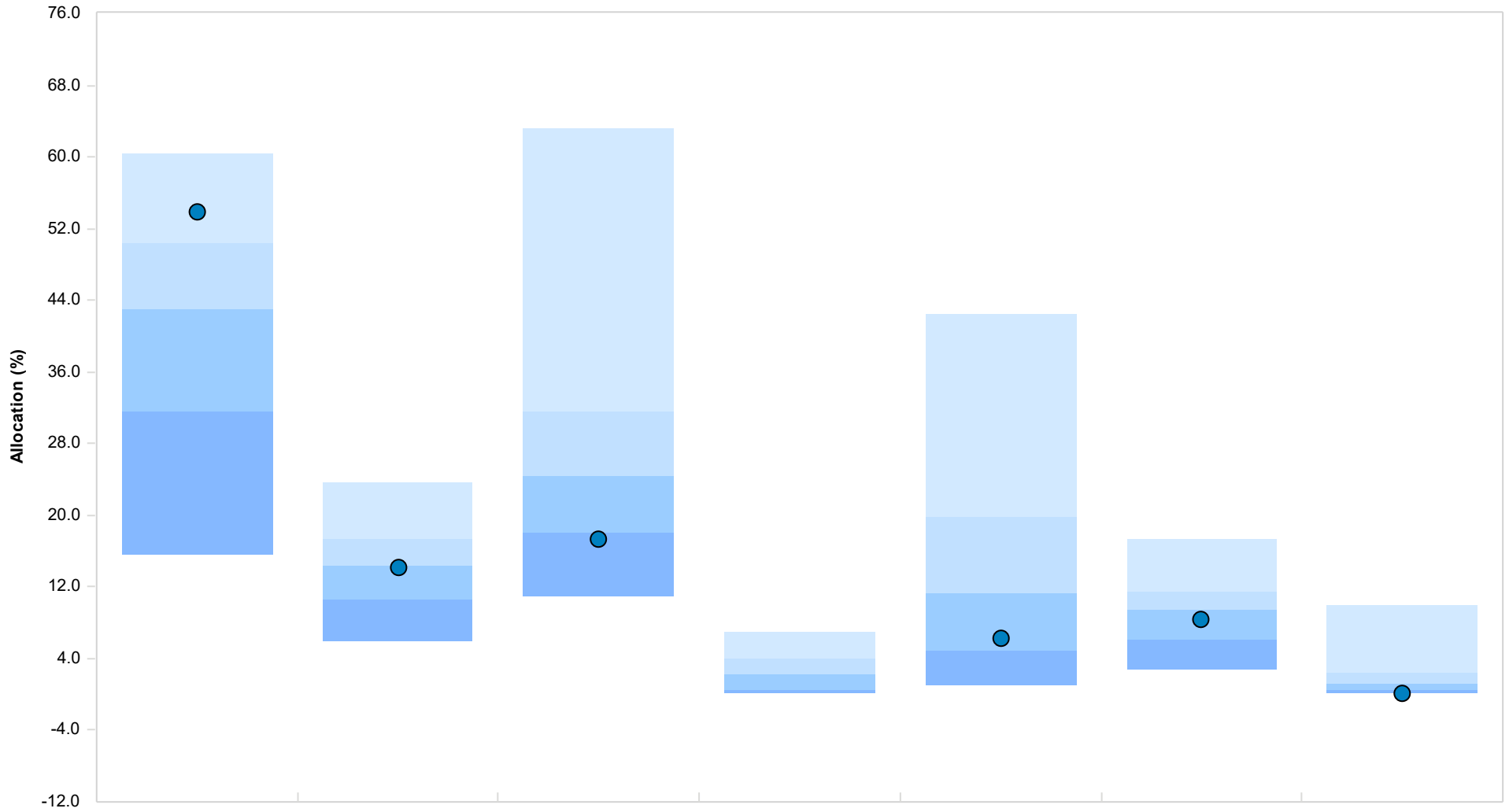
As of March 31, 2023

	Allocation		All Performance Data is Net of Fees(%)							
	Market Value	%	QTR	YTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
Total Fixed Income	13,354,069	22.2	3.31	3.31	-2.76	-2.78	-0.54	0.96	1.12	03/01/2015
Total Core Fixed Income	8,779,704	14.6	3.55	3.55	-4.01	-3.77	-1.60	-	-0.38	07/01/2019
Garcia Hamilton	8,779,704	14.6	3.61 (9)	3.61 (9)	-3.76 (10)	-3.52 (11)	-1.35 (33)	-	-0.14 (36)	07/01/2019
Blmbg. U.S. Aggregate Index			2.96 (77)	2.96 (77)	-4.78 (64)	-4.47 (80)	-2.77 (92)	0.90 (-)	-0.77 (95)	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			3.16	3.16	-4.67	-4.22	-1.82	-	-0.29	
Total Bank Loans	1,579,049	2.6	3.58	3.58	2.73	3.00	6.81	-	3.08	07/01/2019
Aristotle Floating Rate (PLFRX)	1,579,049	2.6	3.58 (9)	3.58 (9)	2.73 (9)	3.00 (9)	6.81 (54)	-	3.09 (13)	07/01/2019
Credit Suisse Leveraged Loan Index			3.11 (30)	3.11 (30)	2.12 (21)	2.67 (17)	8.38 (6)	3.55 (-)	3.41 (3)	
IM U.S. Bank Loans (MF) Median			2.95	2.95	1.12	1.65	6.95	-	2.27	
Total Multisector Fixed Income	2,995,316	5.0	2.43	2.43	1.00	-	-	-	1.00	04/01/2022
Apollo Total Return Fund	2,995,316	5.0	2.43	2.43	0.75	-	-	-	0.75	04/01/2022
Blmbg. Global Multiverse			3.02	3.02	-7.90	-7.06	-3.06	-1.23	-7.90	
Total Real Estate	5,805,998	9.7	-5.08 (84)	-5.08 (84)	-2.78 (44)	11.60 (45)	8.68 (49)	-	8.43 (40)	10/01/2019
NCREIF Fund Index-ODCE (VW)			-3.16 (63)	-3.16 (63)	-3.07 (54)	11.59 (45)	8.41 (52)	7.52 (-)	7.92 (47)	
IM U.S. Open End Private Real Estate (SA+CF) Median			-2.98	-2.98	-2.96	10.95	8.58	-	7.81	
Clarion	5,058,762	8.4	-5.08 (84)	-5.08 (84)	-2.78 (44)	11.60 (45)	8.68 (49)	-	8.43 (40)	10/01/2019
NCREIF Fund Index-ODCE (VW)			-3.16 (63)	-3.16 (63)	-3.07 (54)	11.59 (45)	8.41 (52)	7.52 (-)	7.92 (47)	
IM U.S. Open End Private Real Estate (SA+CF) Median			-2.98	-2.98	-2.96	10.95	8.58	-	7.81	
Carlyle Property Investors	747,236	1.2	-	-	-	-	-	-	-	04/01/2023
NCREIF Fund Index-ODCE (VW)			-3.16 (-)	-3.16 (-)	-3.07 (-)	11.59 (-)	8.41 (-)	7.52 (-)	-	
IM U.S. Open End Private Real Estate (SA+CF) Median			-	-	-	-	-	-	-	
Total Cash	25,831	0.0	1.17	1.17	2.85	1.43	1.06	-	1.21	07/01/2019
Frost Bank Cash Account	2,321	0.0	1.28	1.28	2.94	1.48	1.01	-	1.20	07/01/2019
Mutual Fund Cash	23,511	0.0	1.22	1.22	2.91	1.47	1.07	-	1.21	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	53.83 (14)	14.23 (51)	17.25 (79)	N/A	6.23 (65)	8.42 (60)	0.04 (97)
5th Percentile	60.32	23.71	63.17	6.89	42.46	17.41	9.87
1st Quartile	50.35	17.32	31.56	3.97	19.75	11.49	2.40
Median	42.93	14.28	24.32	2.17	11.28	9.36	1.24
3rd Quartile	31.59	10.73	18.05	0.53	4.92	6.11	0.52
95th Percentile	15.58	5.98	11.09	0.08	0.97	2.70	0.06

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



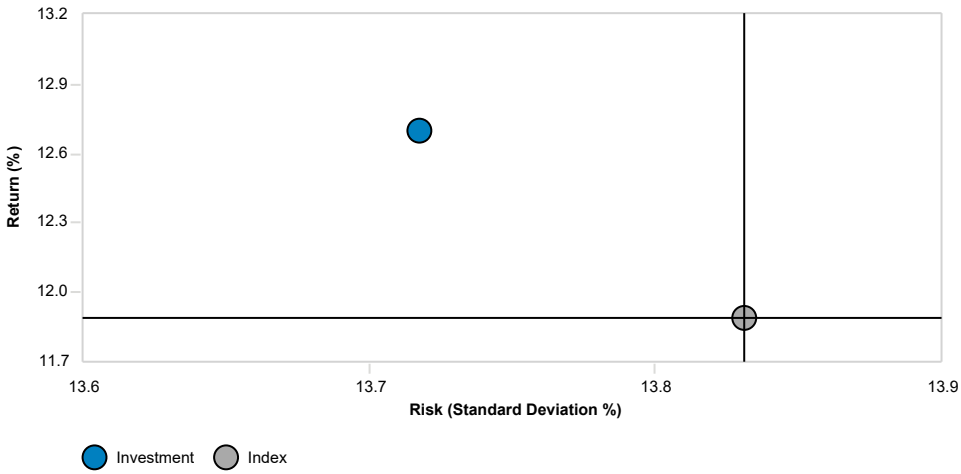
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	12.70	13.72	0.88	100.59	9	96.24	3
Index	11.89	13.83	0.82	100.00	9	100.00	3

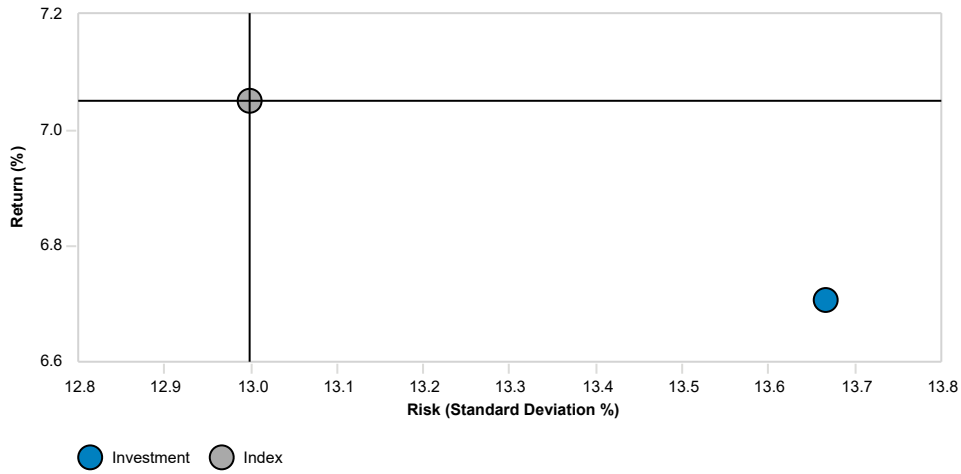
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.71	13.67	0.44	103.22	15	106.56	5
Index	7.05	13.00	0.48	100.00	15	100.00	5

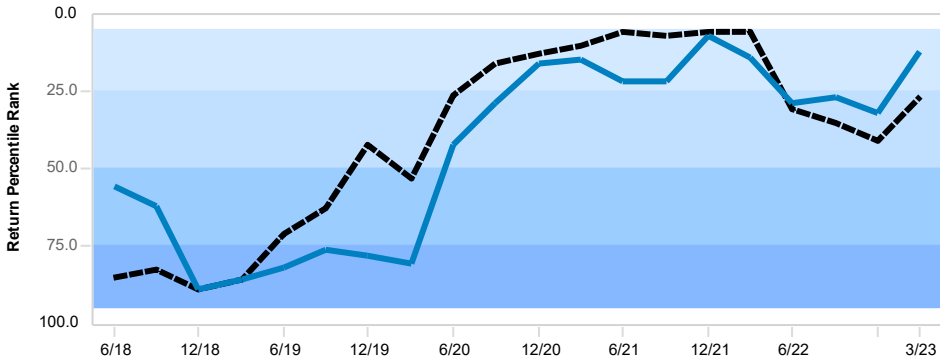
Risk and Return 3 Years



Risk and Return 5 Years

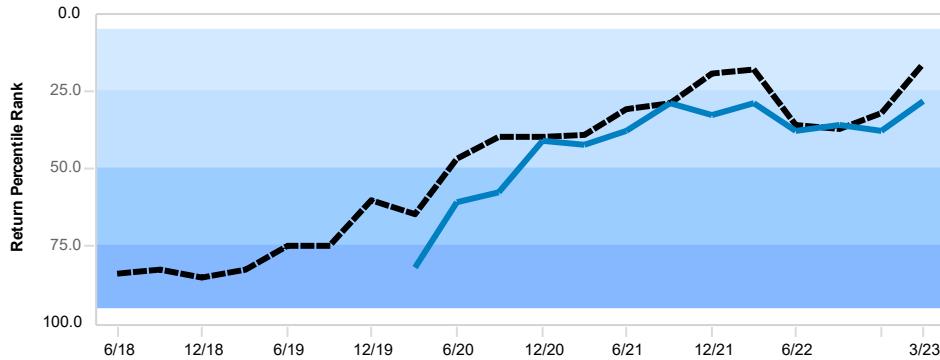


3 Year Rolling Percentile Rank All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	5 (25%)	2 (10%)	6 (30%)
Index	20	7 (35%)	6 (30%)	3 (15%)	4 (20%)

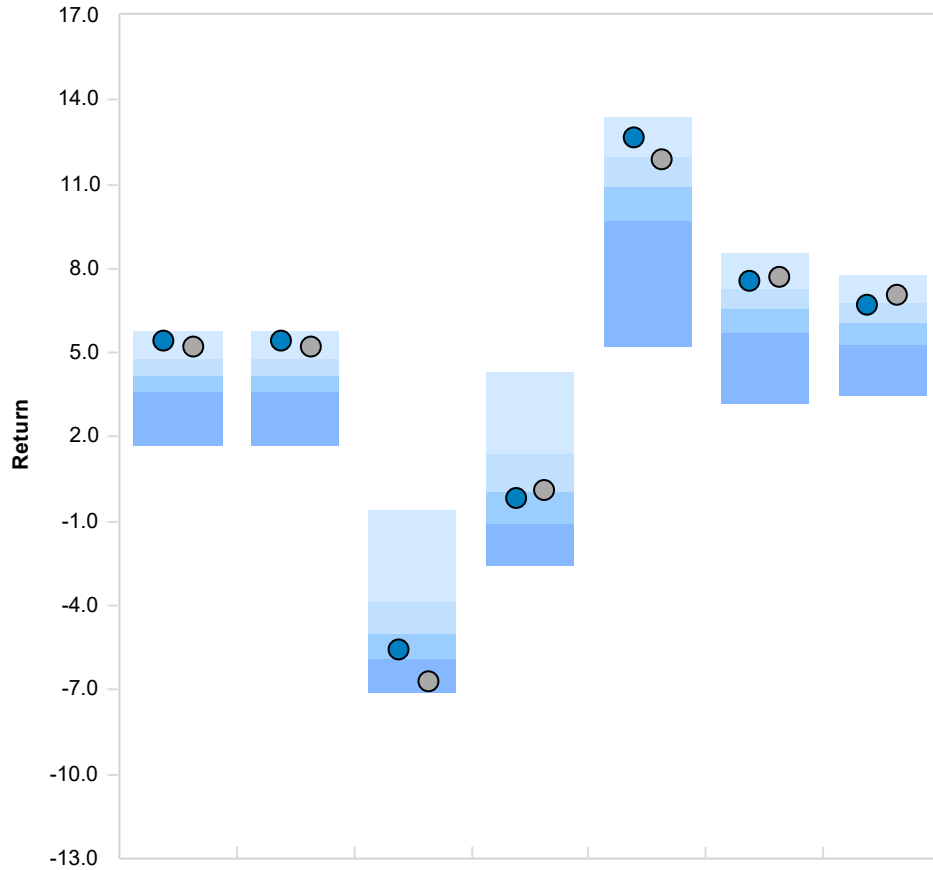
5 Year Rolling Percentile Rank All Public Plans-Total Fund



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	13	0 (0%)	10 (77%)	2 (15%)	1 (8%)
Index	20	3 (15%)	9 (45%)	4 (20%)	4 (20%)

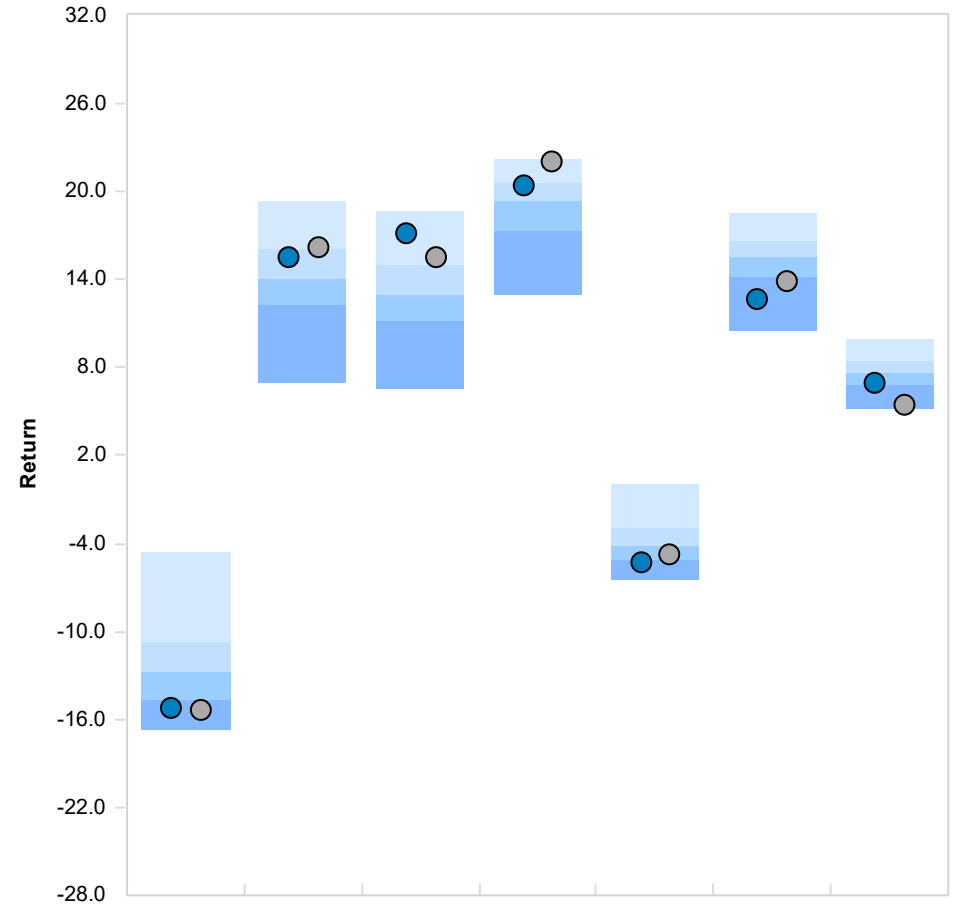


Peer Group Analysis - All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	5.41 (11)	5.41 (11)	-5.57 (67)	-0.18 (54)	12.70 (12)	7.53 (20)	6.71 (28)
● Index	5.25 (14)	5.25 (14)	-6.69 (91)	0.10 (50)	11.89 (27)	7.73 (16)	7.05 (16)
Median	4.18	4.18	-4.96	0.05	10.92	6.55	6.10

Peer Group Analysis - All Public Plans-Total Fund



	2022	2021	2020	2019	2018	2017	2016
● Investment	-15.16 (82)	15.48 (32)	17.15 (10)	20.46 (27)	-5.28 (78)	12.72 (90)	7.00 (70)
● Index	-15.33 (84)	16.24 (24)	15.50 (20)	22.02 (7)	-4.75 (64)	13.90 (80)	5.47 (94)
Median	-12.77	14.11	13.01	19.31	-4.16	15.50	7.63

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	5.60 (51)	-4.41 (54)	-11.25 (82)	-5.29 (77)	5.19 (21)	0.14 (44)
Index	6.01 (38)	-4.80 (70)	-12.16 (95)	-4.50 (57)	5.98 (7)	0.04 (50)
Median	5.60	-4.31	-9.88	-4.28	4.36	0.04



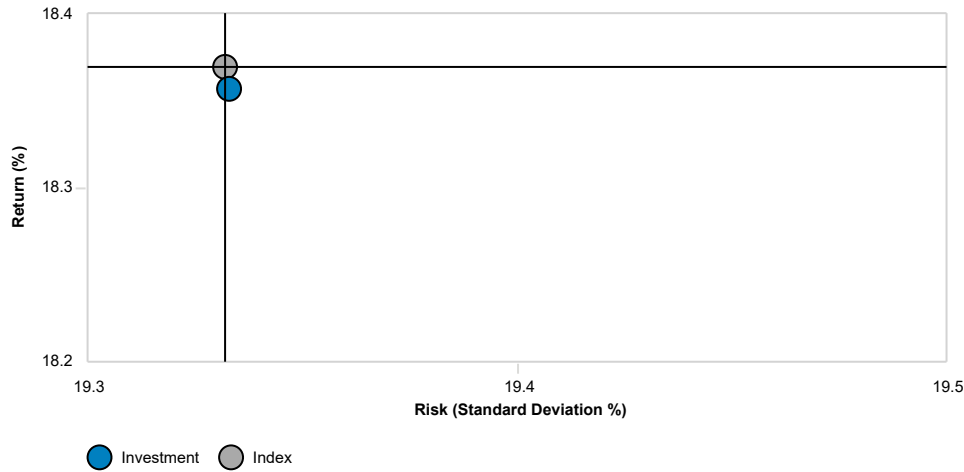
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	18.36	19.33	0.93	99.98	8	100.03	4
Index	18.37	19.33	0.93	100.00	8	100.00	4

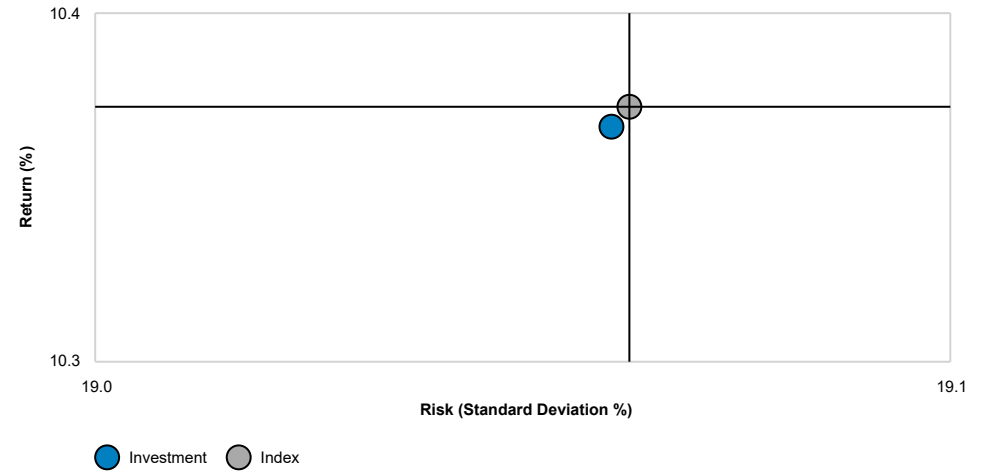
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.37	19.06	0.54	99.98	14	100.00	6
Index	10.37	19.06	0.54	100.00	14	100.00	6

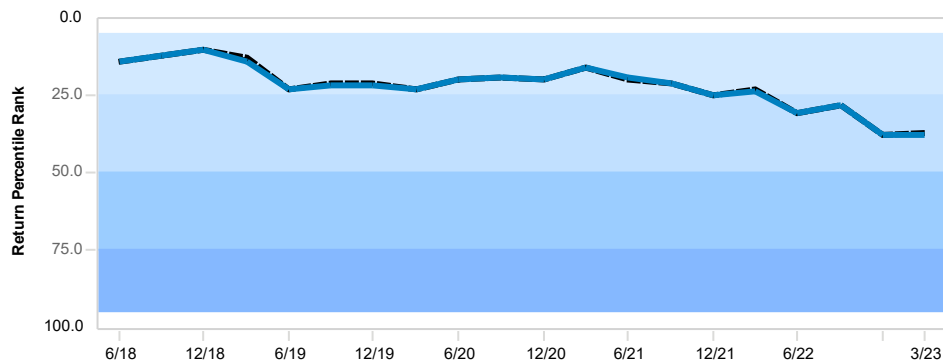
Risk and Return 3 Years



Risk and Return 5 Years

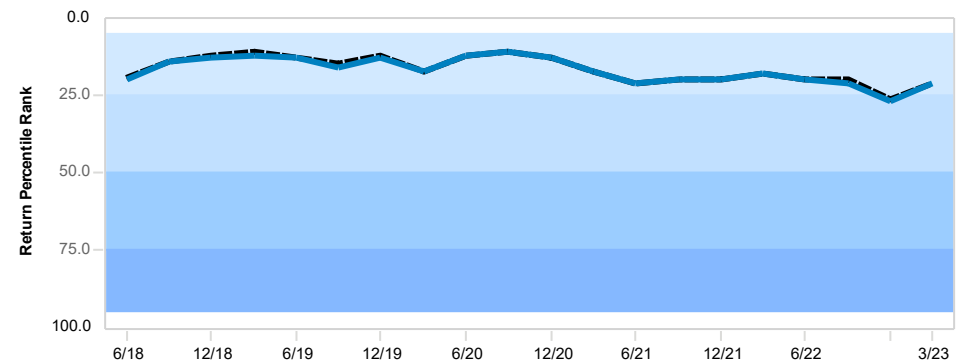


3 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)
Index	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)

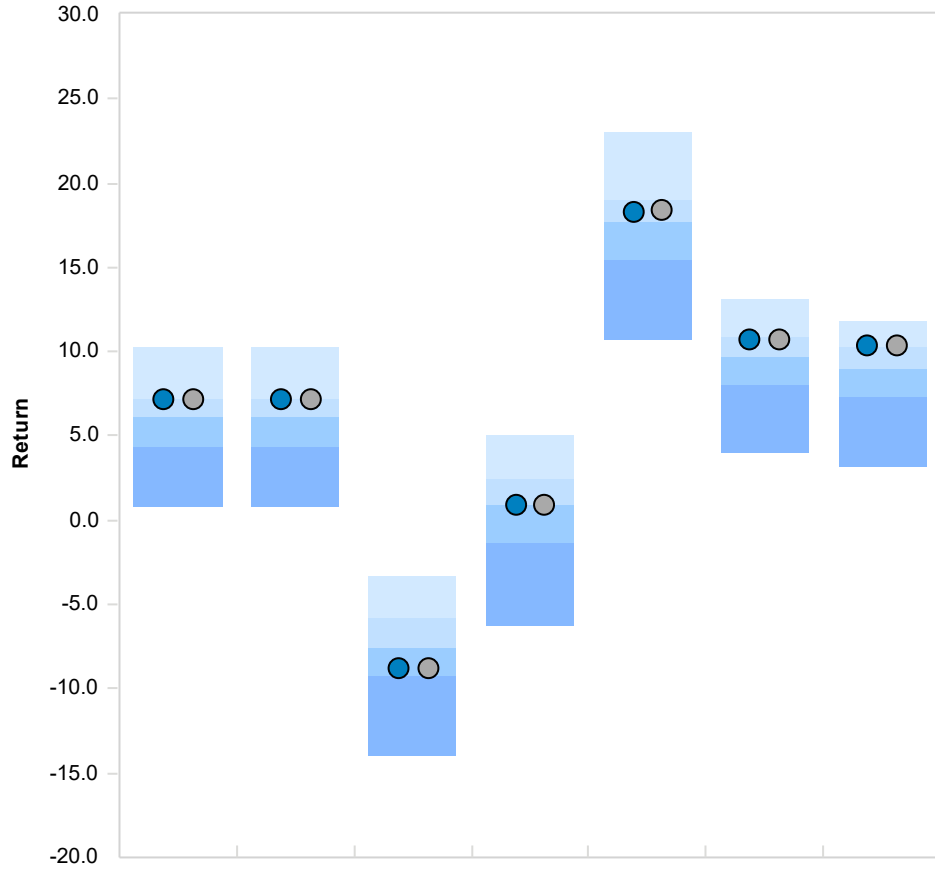
5 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)



	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%)

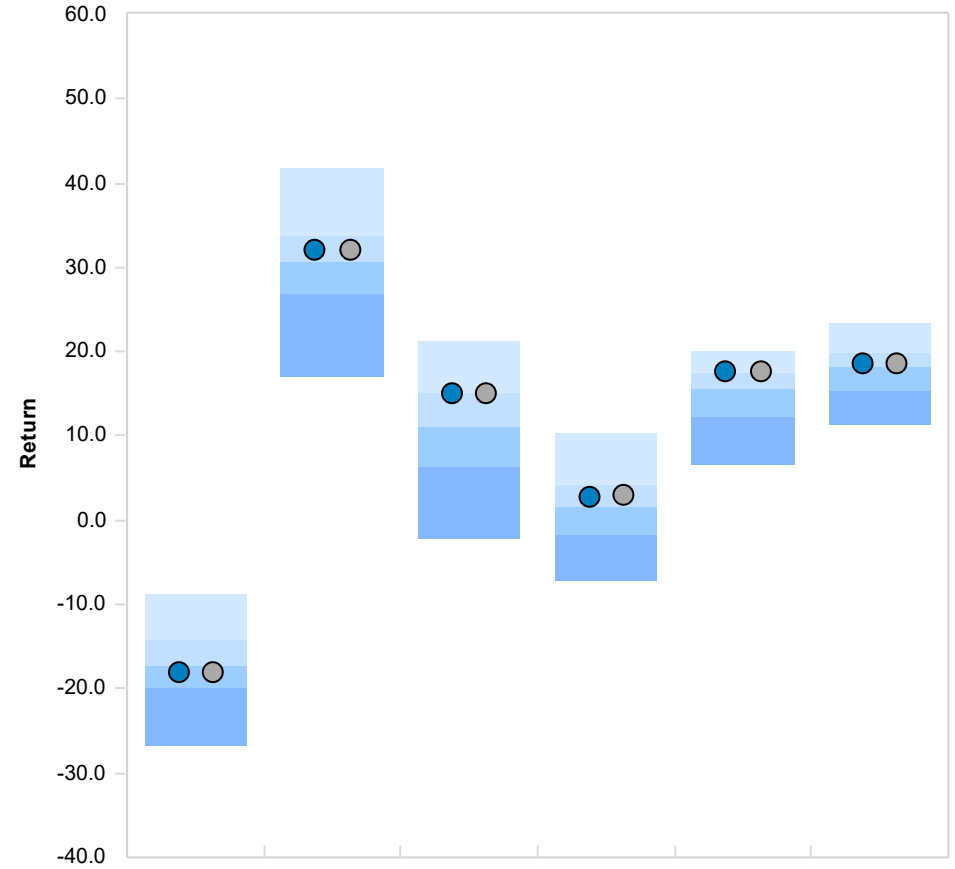


Peer Group Analysis - IM U.S. Multi-Cap Core Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	7.15 (29)	7.15 (29)	-8.77 (69)	0.94 (49)	18.36 (38)	10.76 (30)	10.37 (21)
● Index	7.15 (29)	7.15 (29)	-8.77 (69)	0.95 (49)	18.37 (37)	10.77 (29)	10.37 (21)
Median	6.16	6.16	-7.58	0.90	17.76	9.71	8.92

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



	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	-18.01 (60)	32.10 (35)	15.01 (24)	2.89 (38)	17.62 (22)	18.64 (43)
● Index	-17.98 (59)	32.11 (35)	14.99 (25)	2.92 (36)	17.62 (22)	18.64 (43)
Median	-17.30	30.66	11.15	1.49	15.61	18.24

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	7.16 (63)	-4.46 (41)	-16.84 (78)	-5.46 (43)	9.16 (49)	-0.06 (41)
Index	7.15 (64)	-4.44 (39)	-16.85 (79)	-5.44 (42)	9.16 (50)	-0.06 (41)
Median	8.06	-4.63	-15.83	-5.87	9.15	-0.23



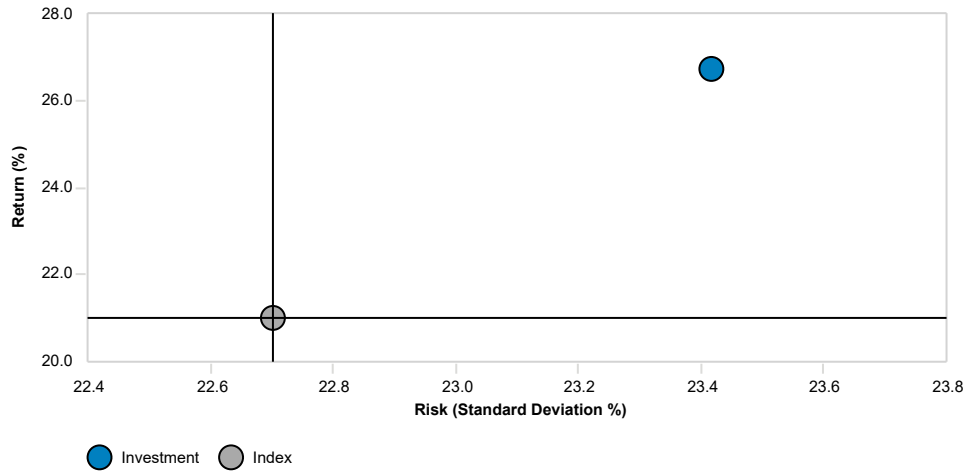
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	26.74	23.42	1.09	107.49	8	93.06	4
Index	21.01	22.70	0.91	100.00	7	100.00	5

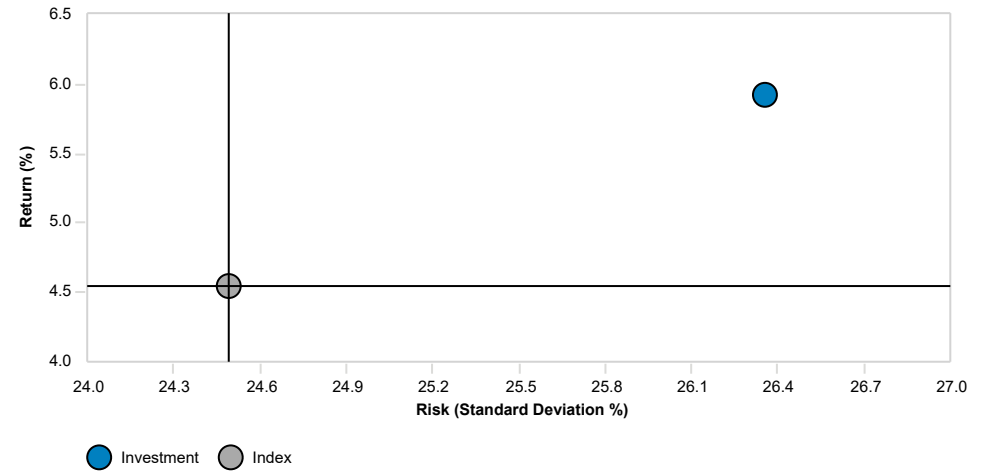
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.93	26.36	0.30	108.26	13	104.12	7
Index	4.55	24.49	0.25	100.00	12	100.00	8

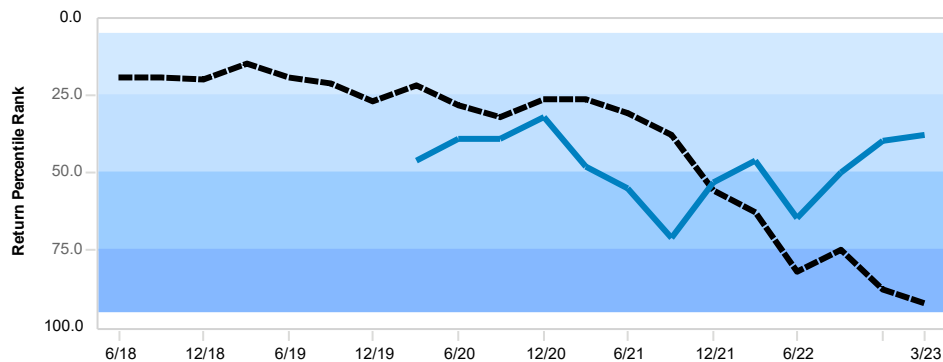
Risk and Return 3 Years



Risk and Return 5 Years

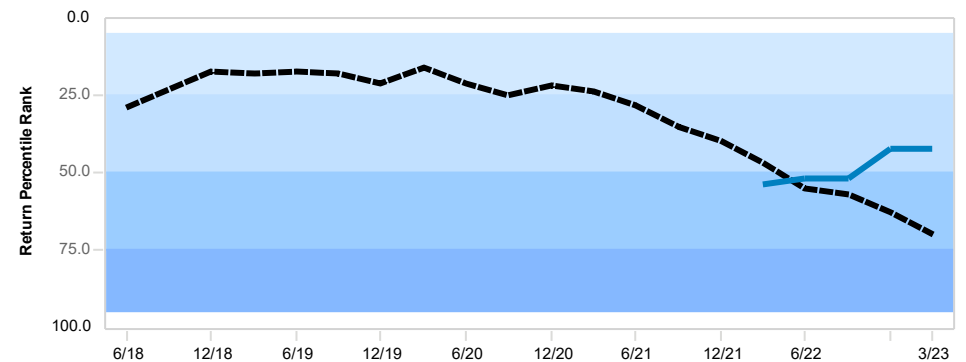


3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	13	0 (0%)	9 (69%)	4 (31%)	0 (0%)
Index	20	7 (35%)	7 (35%)	3 (15%)	3 (15%)

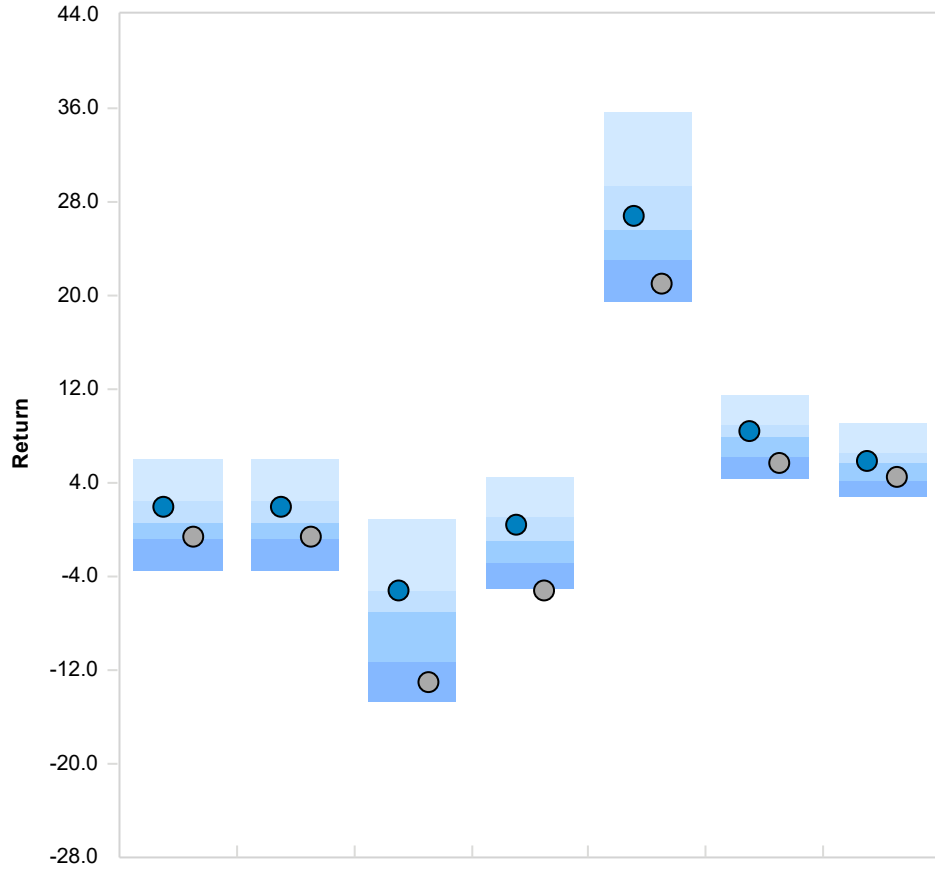
5 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	5	0 (0%)	2 (40%)	3 (60%)	0 (0%)
Index	20	11 (55%)	5 (25%)	4 (20%)	0 (0%)

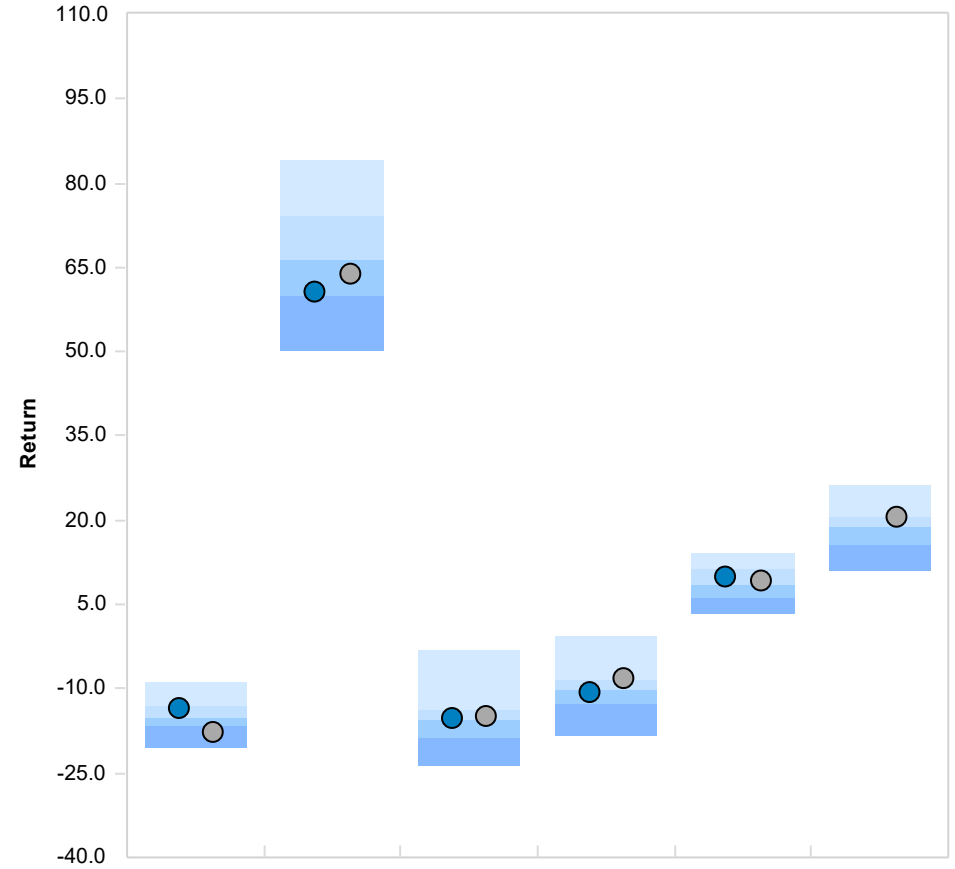


Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	1.87 (35)	1.87 (35)	-5.26 (26)	0.36 (33)	26.74 (38)	8.38 (40)	5.93 (42)
● Index	-0.66 (75)	-0.66 (75)	-12.96 (89)	-5.17 (96)	21.01 (92)	5.67 (84)	4.55 (70)
Median	0.68	0.68	-7.14	-1.01	25.68	7.98	5.66

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



	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	-13.40 (31)	60.78 (72)	-15.04 (43)	-10.56 (53)	10.00 (35)	N/A
● Index	-17.69 (86)	63.92 (59)	-14.88 (40)	-8.24 (22)	9.33 (45)	20.55 (26)
Median	-15.25	66.23	-15.41	-10.36	8.73	18.90

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	13.75 (16)	-4.24 (36)	-14.63 (69)	-0.77 (32)	6.75 (34)	-2.05 (53)
Index	8.42 (90)	-4.61 (42)	-15.28 (83)	-2.40 (63)	4.36 (72)	-2.98 (81)
Median	11.70	-5.41	-13.89	-1.70	5.80	-1.84



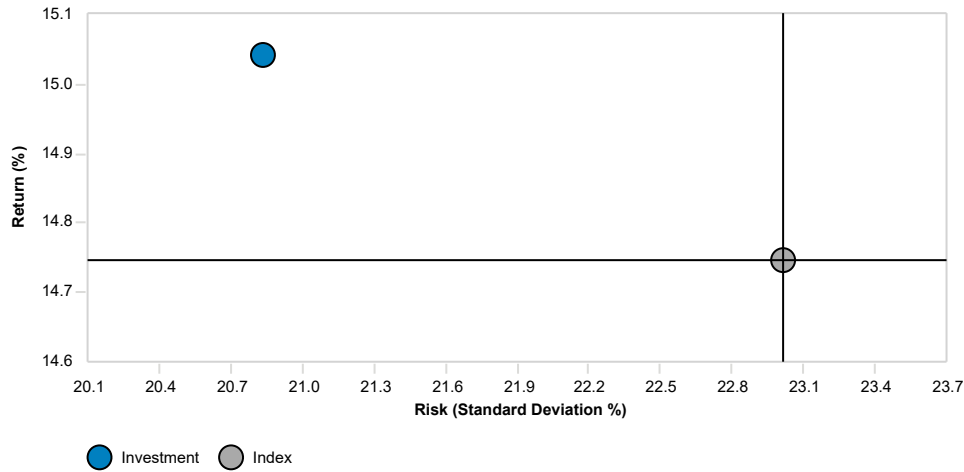
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.04	20.84	0.74	88.39	9	81.12	3
Index	14.75	23.01	0.67	100.00	8	100.00	4

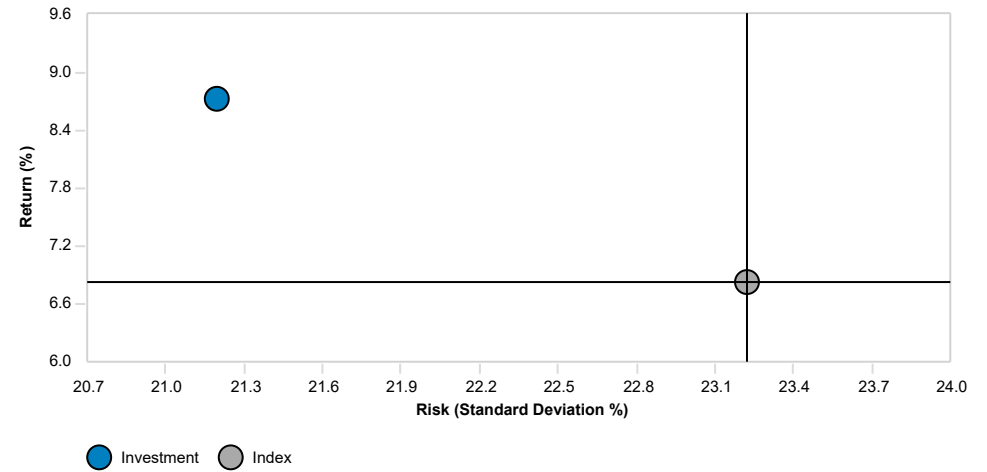
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.74	21.20	0.44	93.12	14	85.63	6
Index	6.82	23.22	0.34	100.00	13	100.00	7

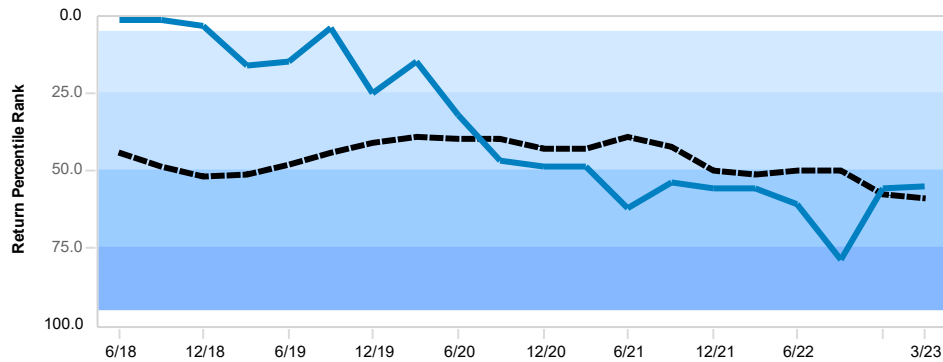
Risk and Return 3 Years



Risk and Return 5 Years

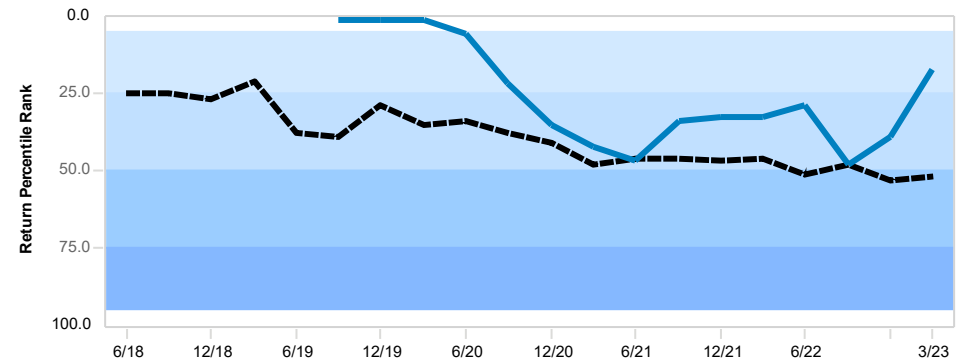


3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	8 (40%)	4 (20%)	7 (35%)	1 (5%)
Index	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)

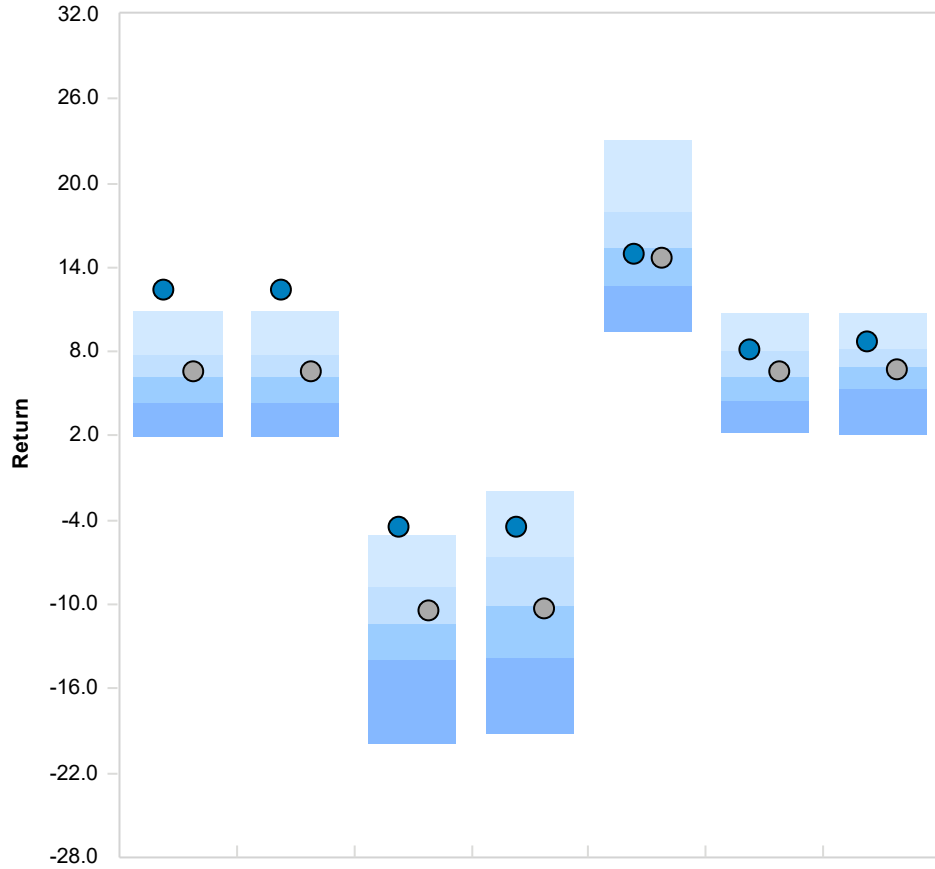
5 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	6 (40%)	9 (60%)	0 (0%)	0 (0%)
Index	20	3 (15%)	14 (70%)	3 (15%)	0 (0%)

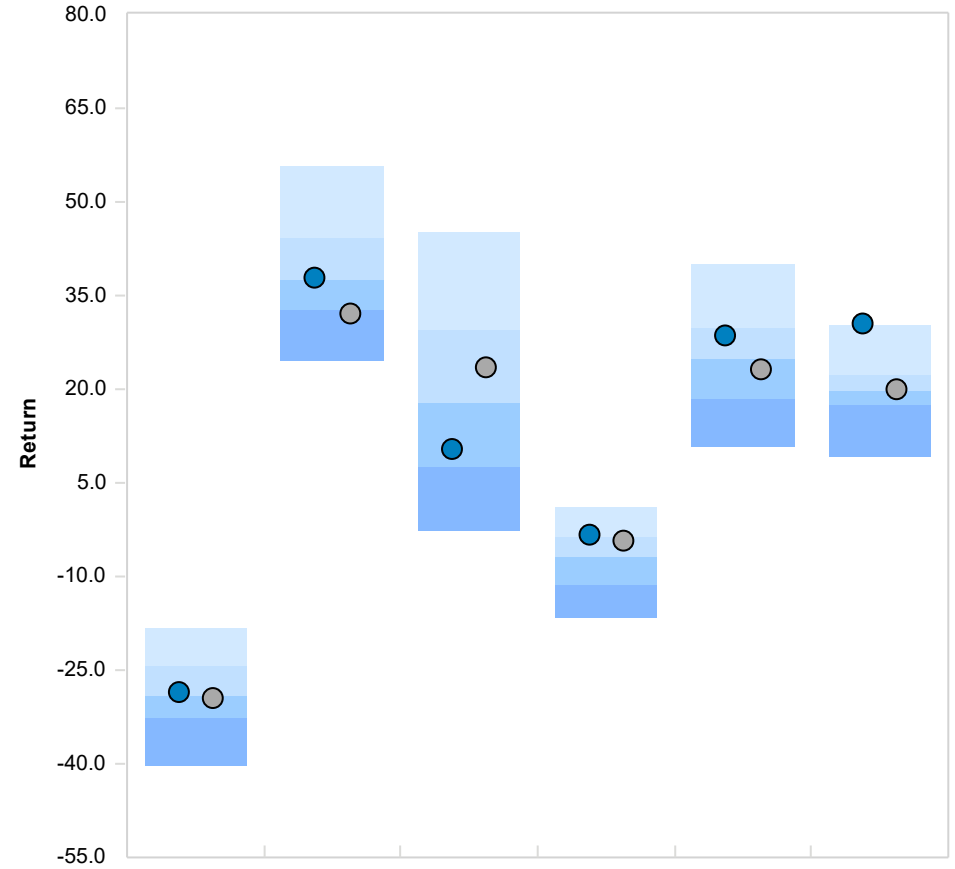


Peer Group Analysis - IM U.S. Small Cap Growth Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	12.48 (3)	12.48 (3)	-4.52 (4)	-4.39 (15)	15.04 (55)	8.10 (25)	8.74 (17)
● Index	6.54 (44)	6.54 (44)	-10.35 (41)	-10.23 (51)	14.75 (59)	6.64 (46)	6.82 (52)
Median	6.24	6.24	-11.42	-10.18	15.45	6.21	6.89

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



	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	-28.62 (43)	37.96 (48)	10.53 (67)	-3.39 (24)	28.75 (31)	30.43 (5)
● Index	-29.39 (56)	31.98 (80)	23.37 (38)	-4.11 (29)	23.13 (58)	20.07 (45)
Median	-29.12	37.60	17.66	-6.83	24.92	19.62

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	5.81 (36)	-4.23 (87)	-16.23 (20)	-15.28 (72)	5.02 (25)	4.02 (2)
Index	4.72 (47)	-0.12 (32)	-19.55 (56)	-12.30 (44)	0.20 (71)	-3.53 (75)
Median	4.46	-1.36	-19.15	-12.81	2.47	-1.97



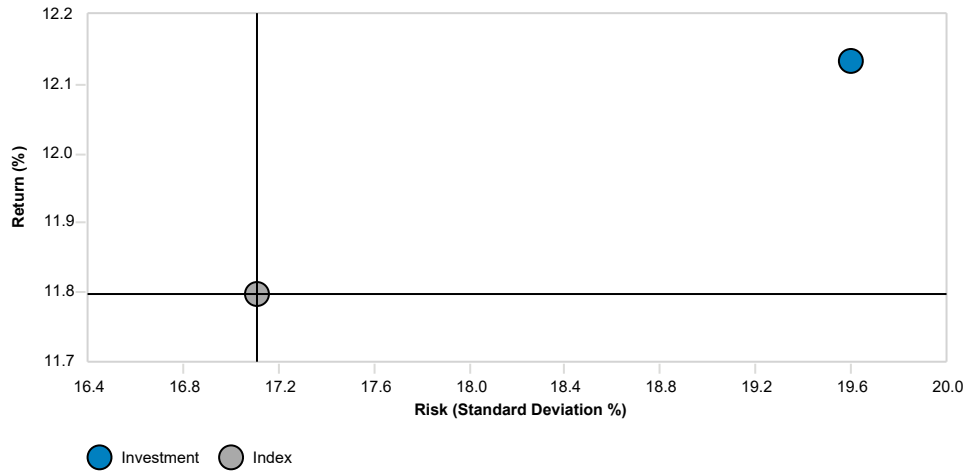
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	12.13	19.60	0.64	113.30	6	118.57	6
Index	11.80	17.11	0.69	100.00	8	100.00	4

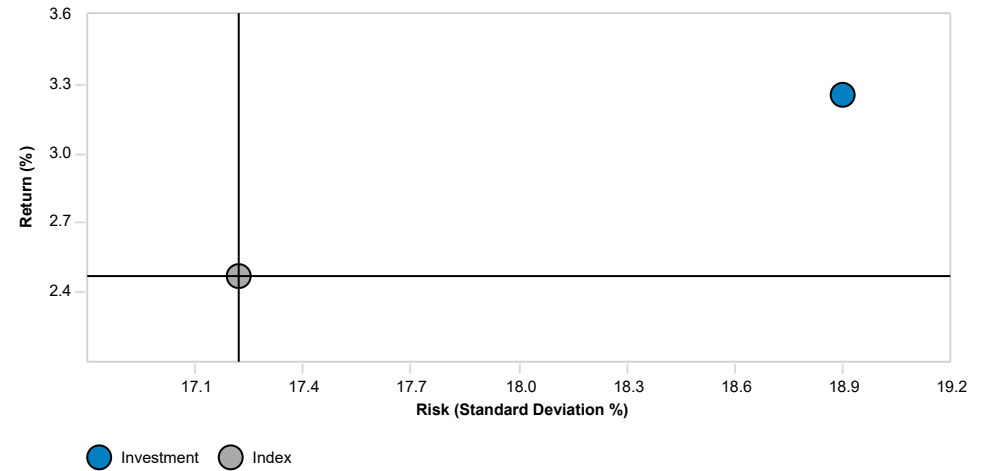
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.25	18.90	0.19	111.04	9	108.11	11
Index	2.47	17.22	0.15	100.00	12	100.00	8

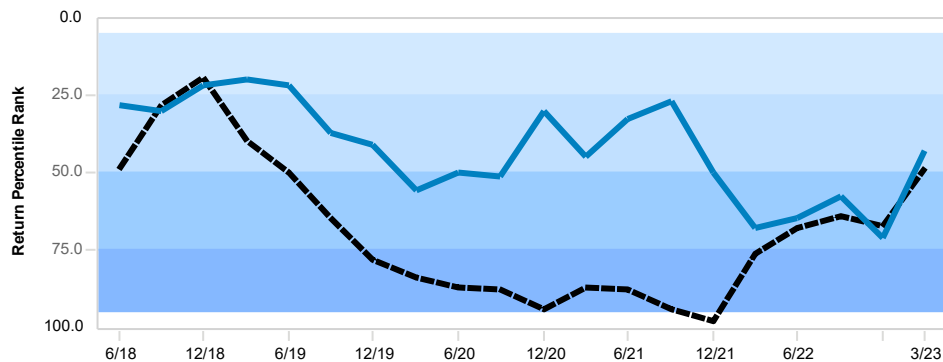
Risk and Return 3 Years



Risk and Return 5 Years

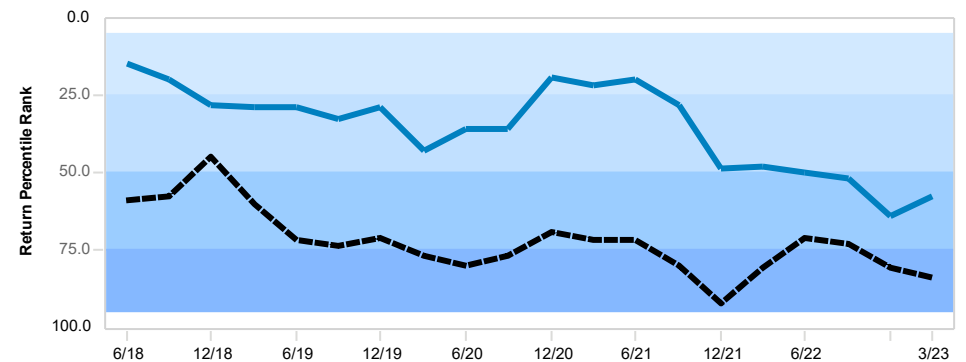


3 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	11 (55%)	6 (30%)	0 (0%)
Index	20	1 (5%)	5 (25%)	4 (20%)	10 (50%)

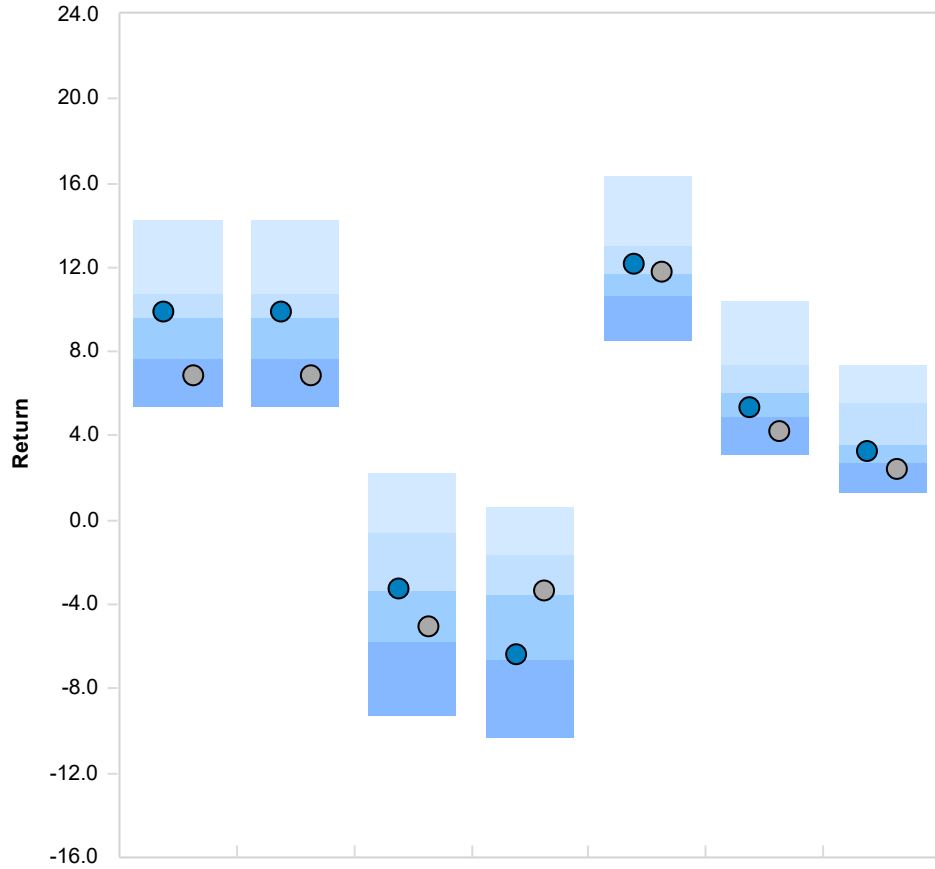
5 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	12 (60%)	3 (15%)	0 (0%)
Index	20	0 (0%)	1 (5%)	11 (55%)	8 (40%)

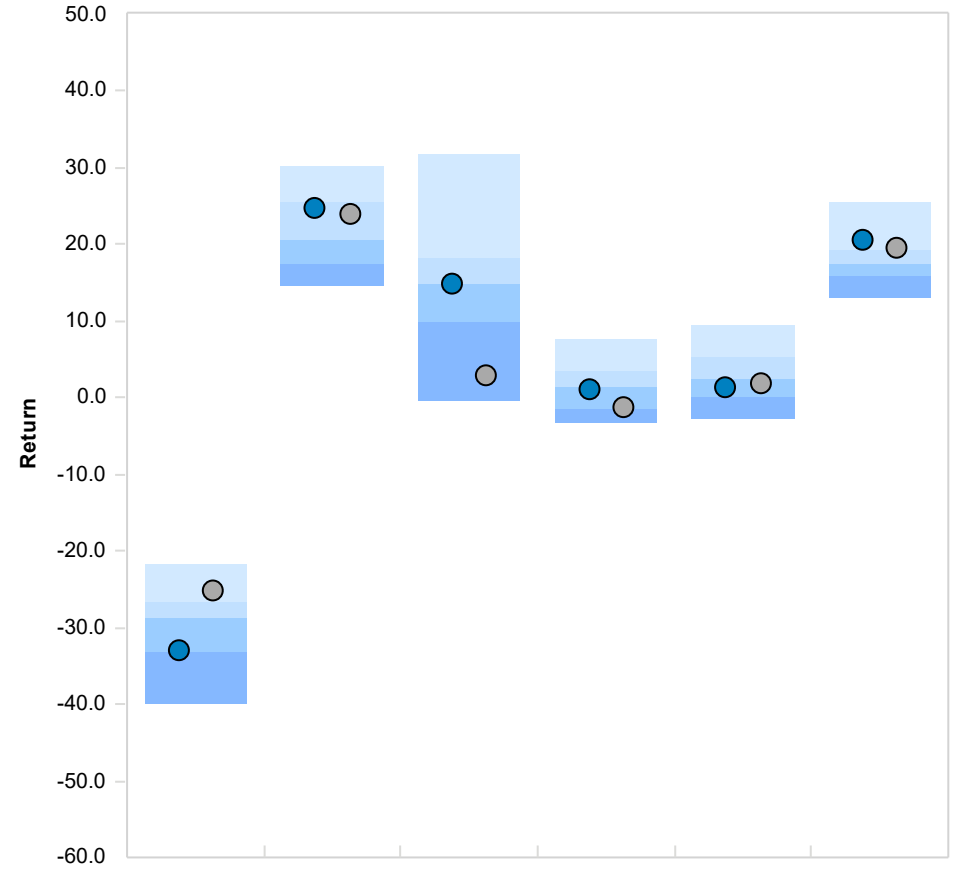


Peer Group Analysis - IM International Large Cap Growth Equity (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	9.87 (42)	9.87 (42)	-3.26 (49)	-6.36 (71)	12.13 (43)	5.33 (64)	3.25 (58)
● Index	6.87 (87)	6.87 (87)	-5.07 (70)	-3.29 (48)	11.80 (49)	4.22 (87)	2.47 (84)
Median	9.63	9.63	-3.35	-3.56	11.75	6.01	3.59

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



	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	-32.85 (73)	24.76 (27)	14.97 (50)	1.14 (54)	1.47 (62)	20.63 (8)
● Index	-25.17 (10)	23.92 (32)	3.00 (91)	-1.23 (73)	1.76 (59)	19.61 (20)
Median	-28.73	20.62	14.87	1.35	2.48	17.62

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	13.78 (65)	-9.33 (39)	-14.65 (49)	-12.24 (59)	-1.13 (92)	-2.35 (57)
Index	14.28 (53)	-9.91 (67)	-13.73 (32)	-5.44 (5)	1.82 (74)	-2.99 (68)
Median	14.64	-9.57	-14.68	-10.99	3.17	-1.61



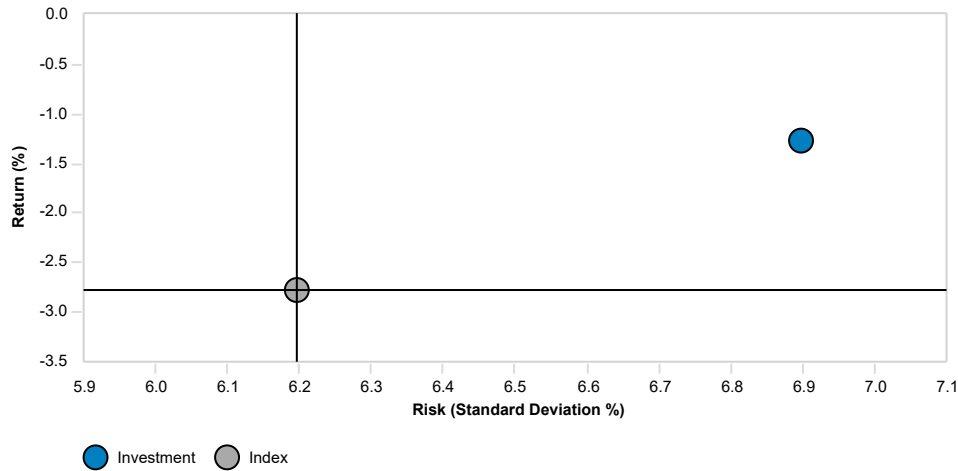
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.27	6.90	-0.28	119.56	6	97.89	6
Index	-2.77	6.20	-0.57	100.00	8	100.00	4

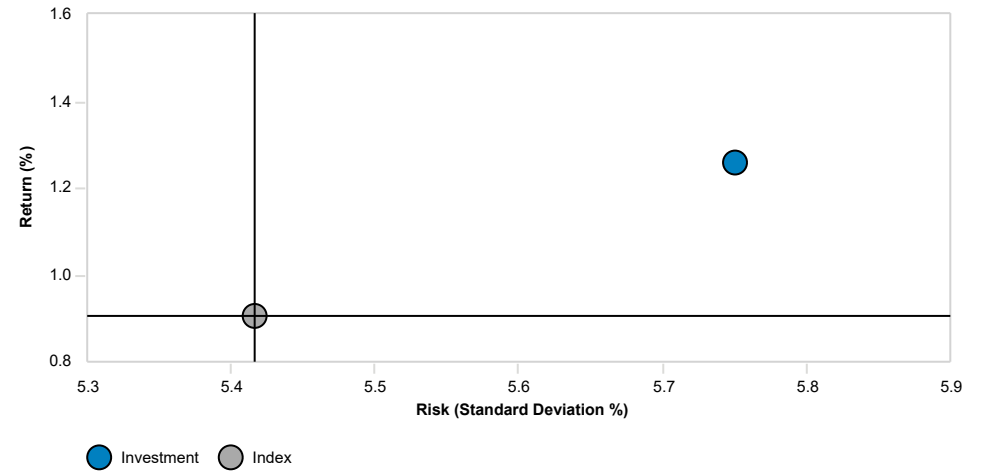
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.26	5.75	0.00	102.67	12	97.45	8
Index	0.90	5.42	-0.07	100.00	15	100.00	5

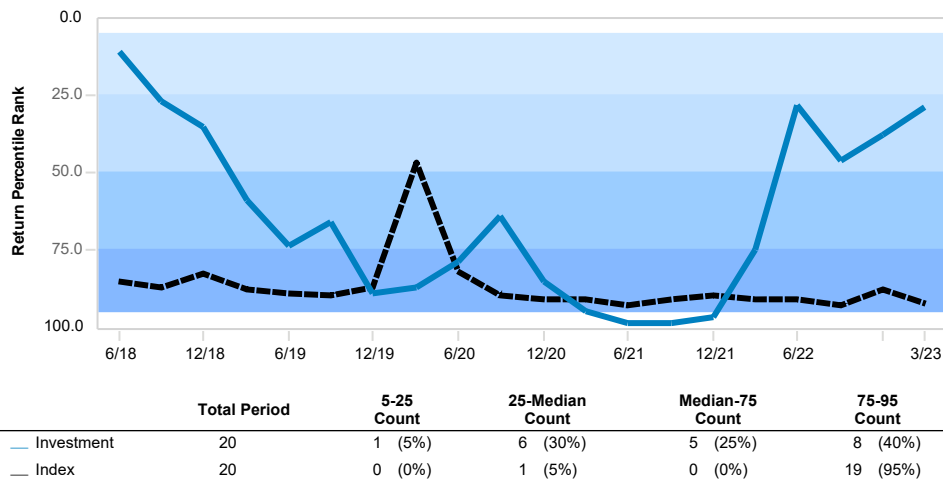
Risk and Return 3 Years



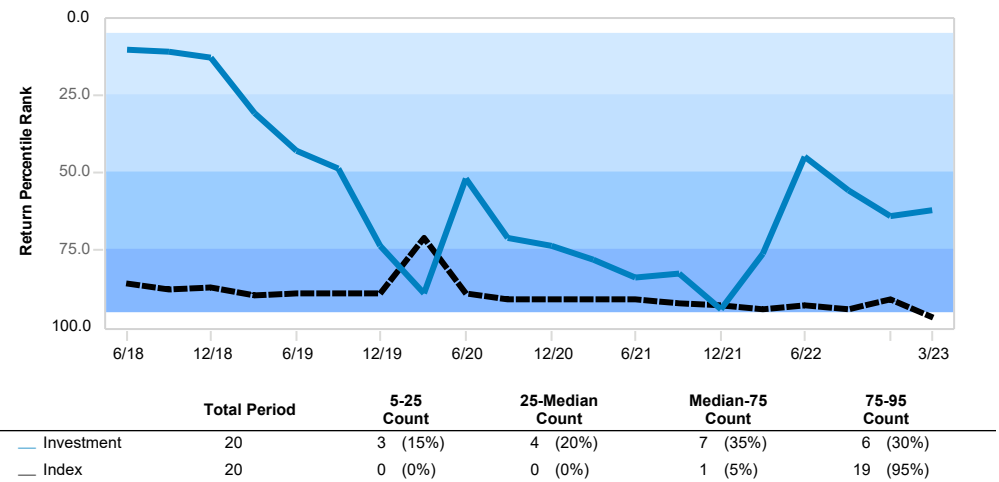
Risk and Return 5 Years



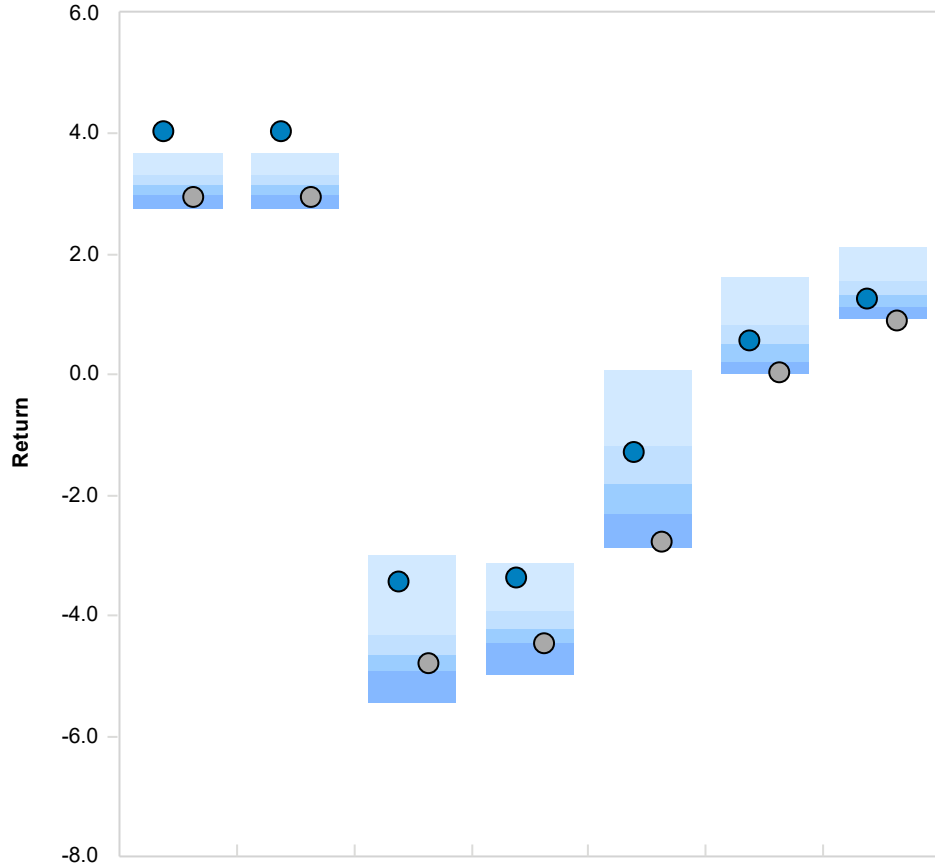
3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



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

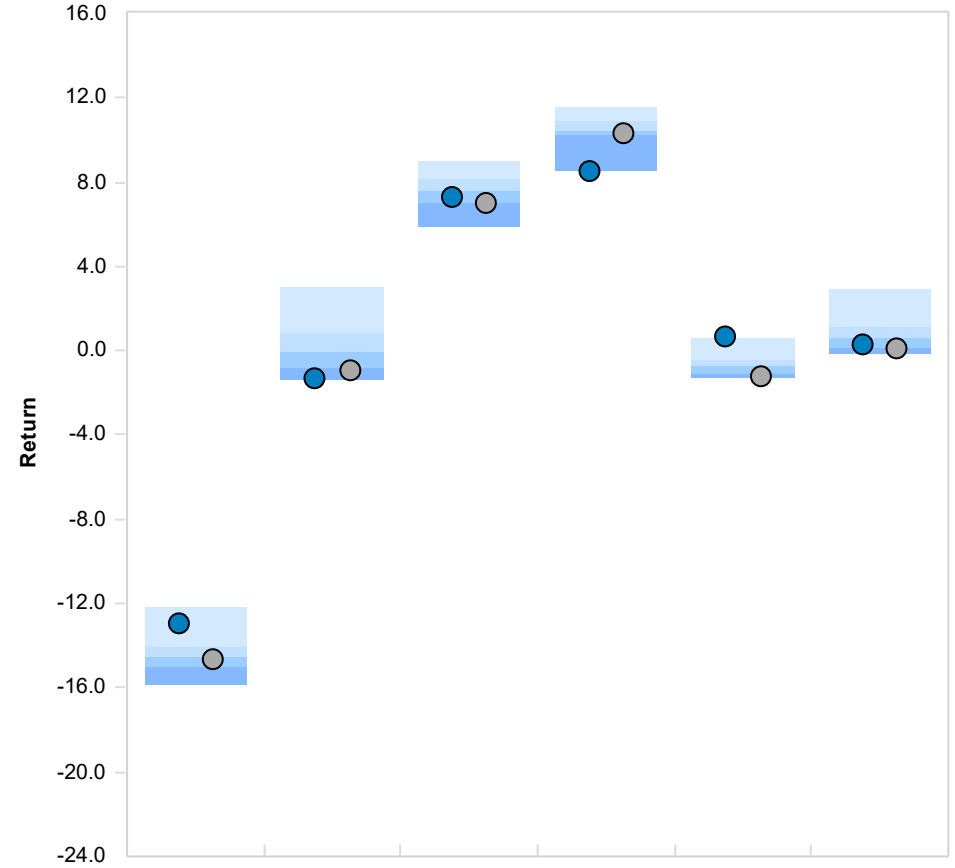


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	4.04 (3)	4.04 (3)	-3.43 (7)	-3.35 (8)	-1.27 (29)	0.57 (43)	1.26 (62)
● Index	2.96 (77)	2.96 (77)	-4.78 (64)	-4.47 (80)	-2.77 (92)	0.03 (95)	0.90 (97)
Median	3.16	3.16	-4.67	-4.22	-1.82	0.49	1.34

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 (59)	8.54 (95)	0.73 (4)	0.31 (67)
● Index	-14.60 (61)	-0.90 (84)	6.98 (77)	10.30 (69)	-1.22 (88)	0.07 (84)
Median	-14.51	-0.04	7.54	10.42	-0.74	0.62

Comparative Performance

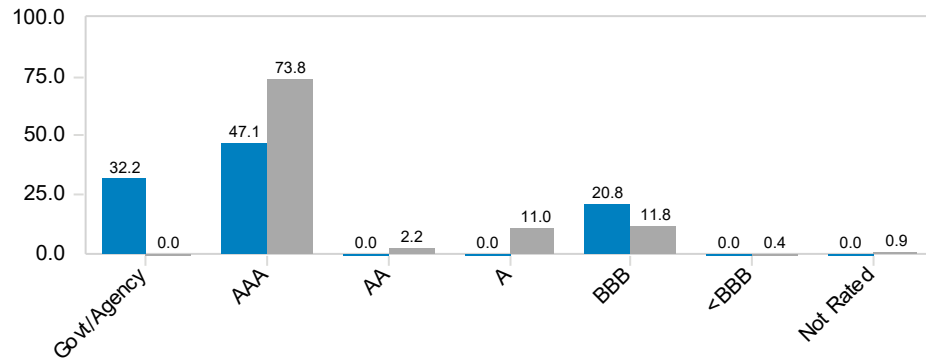
	1 Qtr Ending Dec-2022	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021
Investment	1.90 (37)	-5.20 (98)	-3.92 (7)	-4.38 (3)	-0.05 (54)	-0.06 (91)
Index	1.87 (42)	-4.75 (78)	-4.69 (38)	-5.93 (70)	0.01 (32)	0.05 (69)
Median	1.80	-4.60	-4.75	-5.82	-0.04	0.10



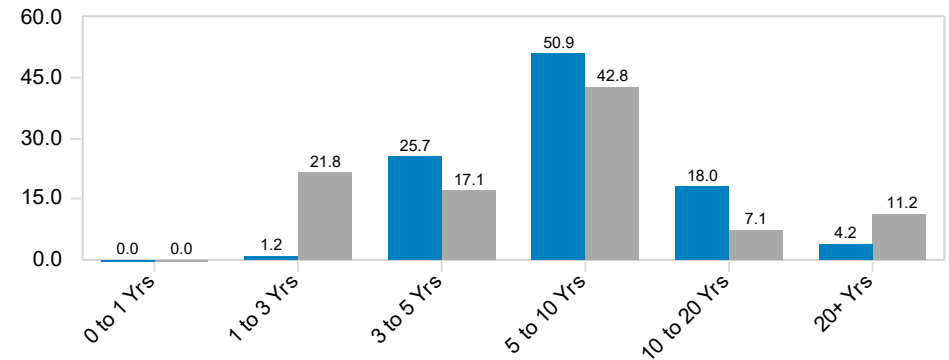
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.61	8.58
Avg. Quality	AA+	AA
Coupon Rate (%)	3.14	2.76
Current Yield	3.47	3.03
Effective Duration	6.92	6.20

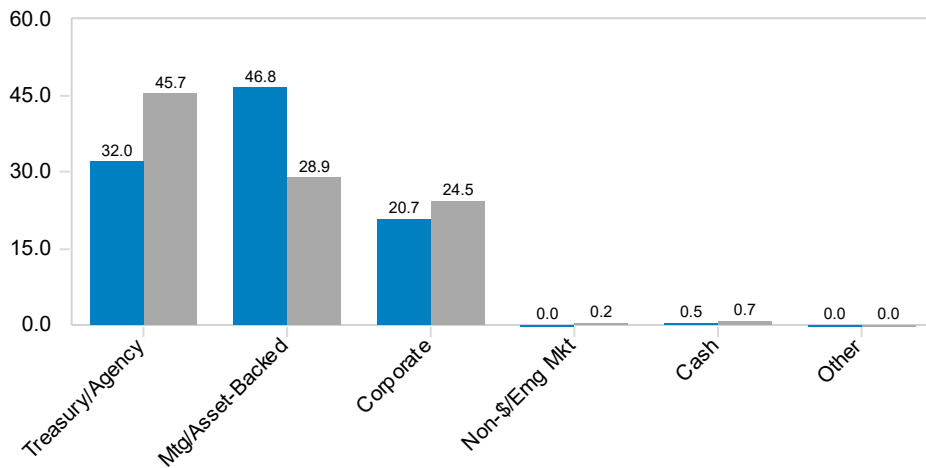
Credit Quality Distribution (%)



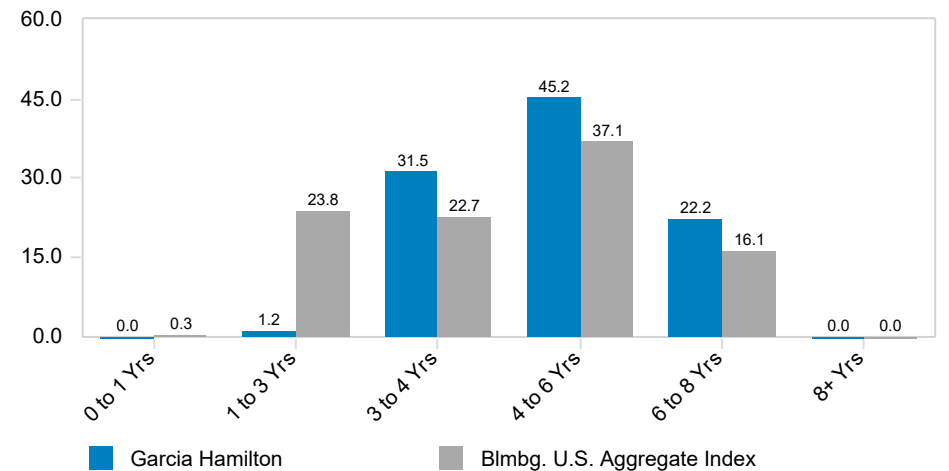
Maturity Distribution (%)



Sector Distribution (%)



Duration Distribution (%)



■ Garcia Hamilton ■ Blmbg. U.S. Aggregate Index



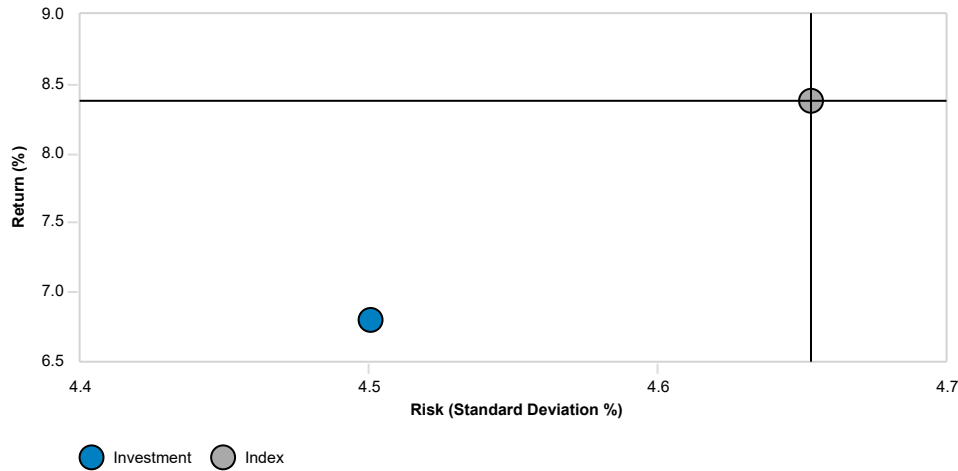
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.80	4.50	1.29	85.87	11	98.90	1
Index	8.38	4.65	1.55	100.00	10	100.00	2

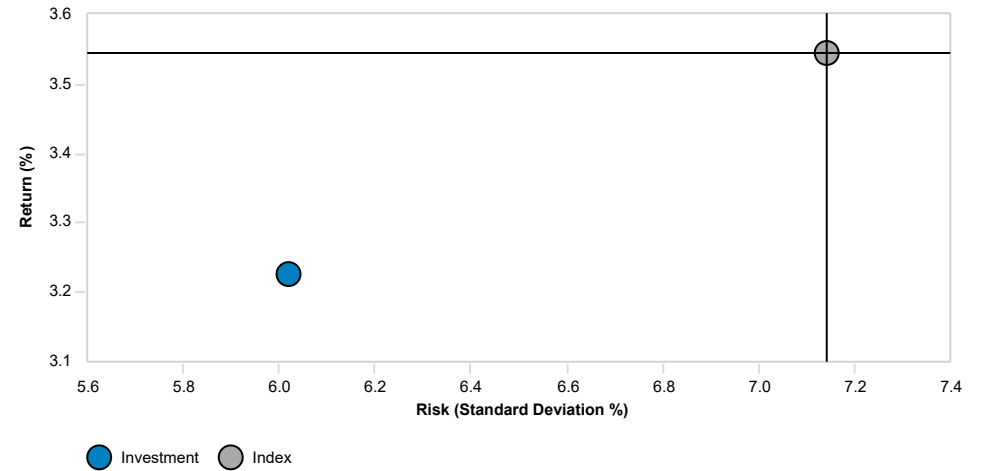
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.23	6.02	0.32	88.27	17	87.29	3
Index	3.55	7.14	0.33	100.00	16	100.00	4

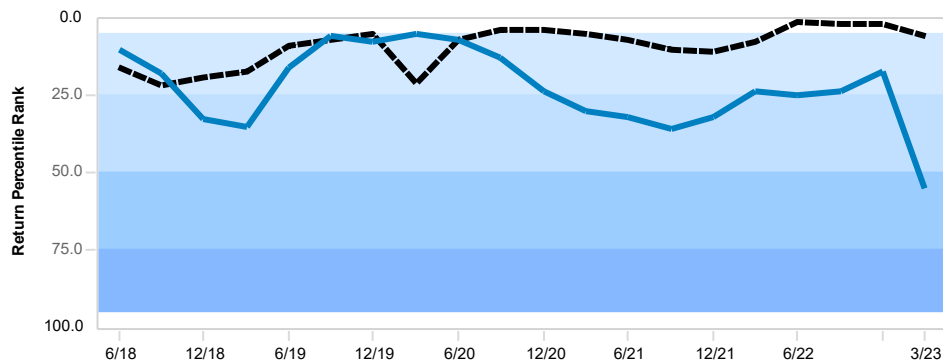
Risk and Return 3 Years



Risk and Return 5 Years

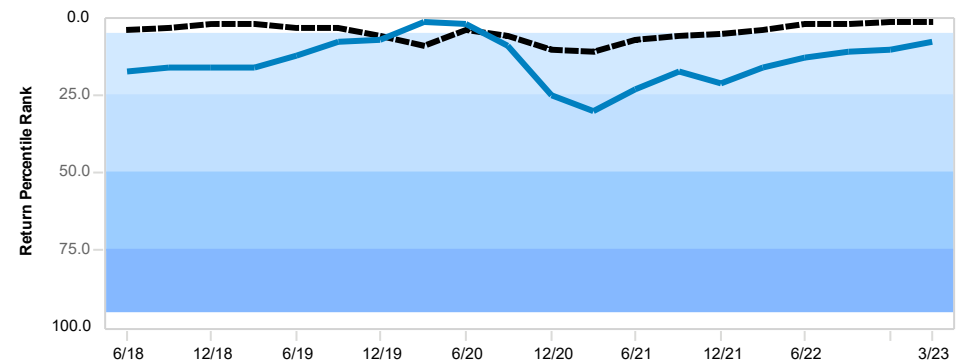


3 Year Rolling Percentile Rank IM U.S. Bank Loans (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

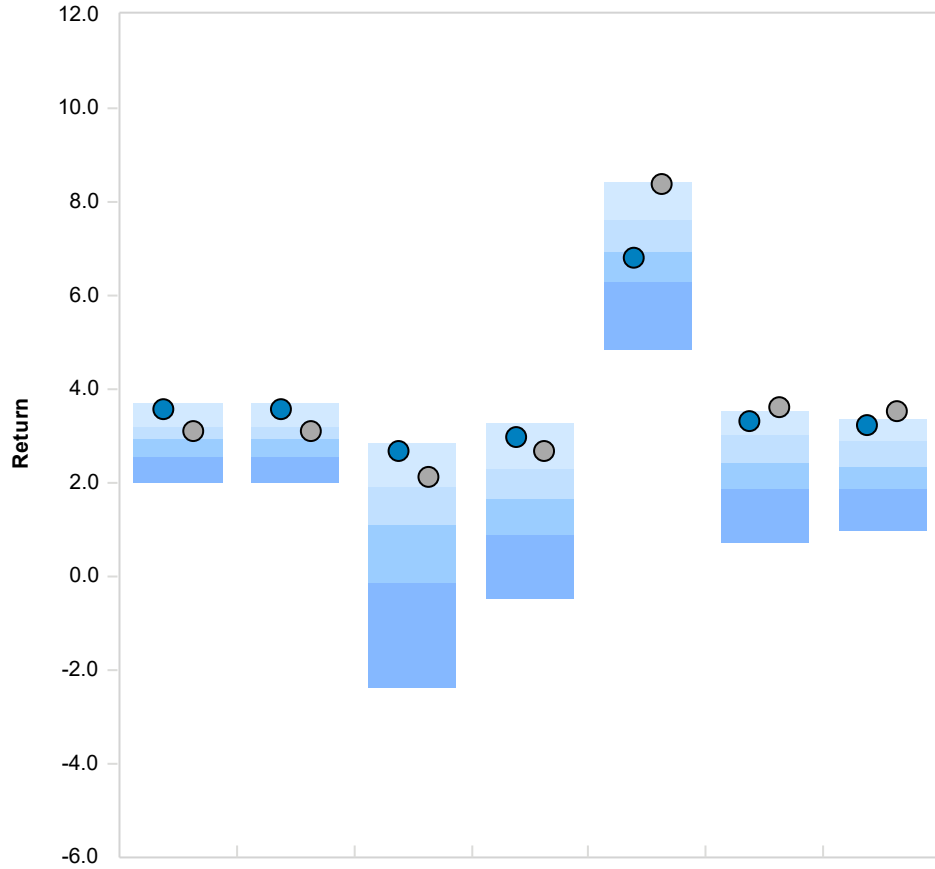
5 Year Rolling Percentile Rank IM U.S. Bank Loans (MF)



	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%)

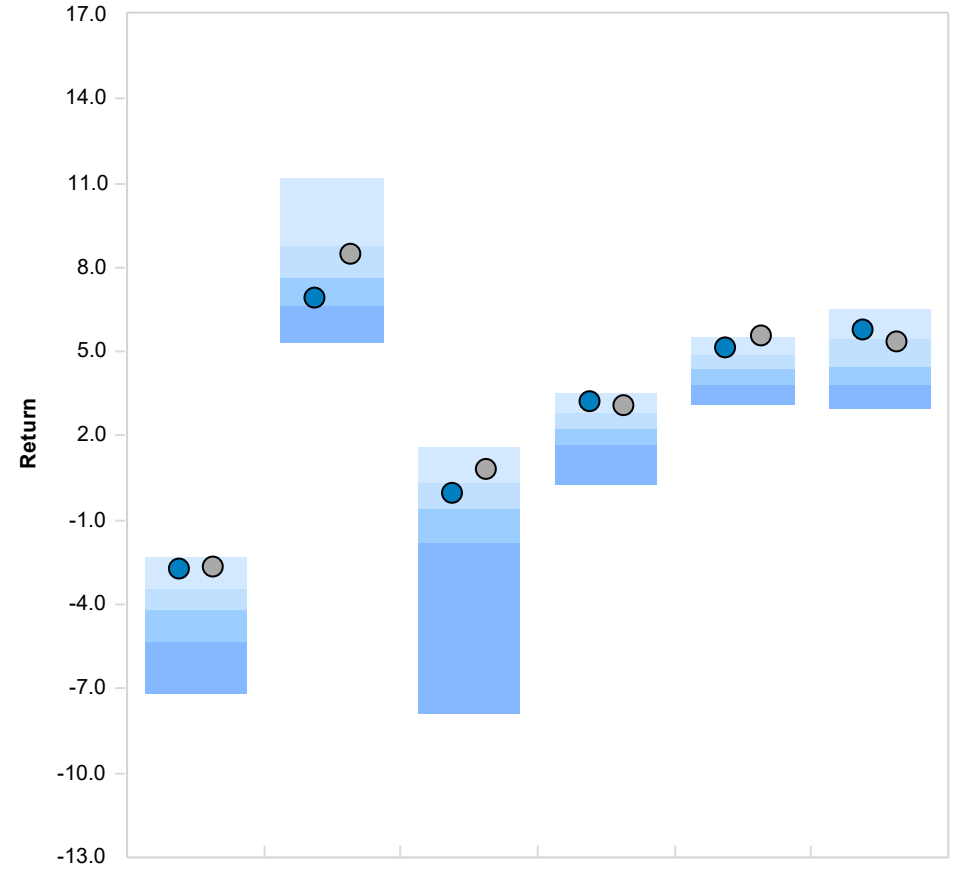


Peer Group Analysis - IM U.S. Bank Loans (MF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	3.58 (9)	3.58 (9)	2.69 (11)	2.99 (10)	6.80 (55)	3.31 (10)	3.23 (8)
● Index	3.11 (30)	3.11 (30)	2.12 (21)	2.67 (17)	8.38 (6)	3.60 (3)	3.55 (1)
Median	2.95	2.95	1.12	1.65	6.95	2.44	2.36

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



	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	-2.74 (12)	6.95 (69)	0.01 (32)	3.21 (15)	5.18 (13)	5.81 (17)
● Index	-2.63 (10)	8.46 (31)	0.83 (15)	3.11 (18)	5.58 (5)	5.36 (26)
Median	-4.19	7.64	-0.61	2.24	4.37	4.48

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	2.72 (45)	1.41 (19)	-4.82 (26)	0.02 (6)	0.74 (13)	0.93 (41)
Index	2.34 (66)	1.18 (37)	-4.36 (7)	-0.10 (11)	0.72 (15)	1.13 (15)
Median	2.63	1.05	-5.27	-0.52	0.49	0.87



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	-3.06	7.98	-0.46	100.00	6	100.00	6

Historical Statistics 5 Years

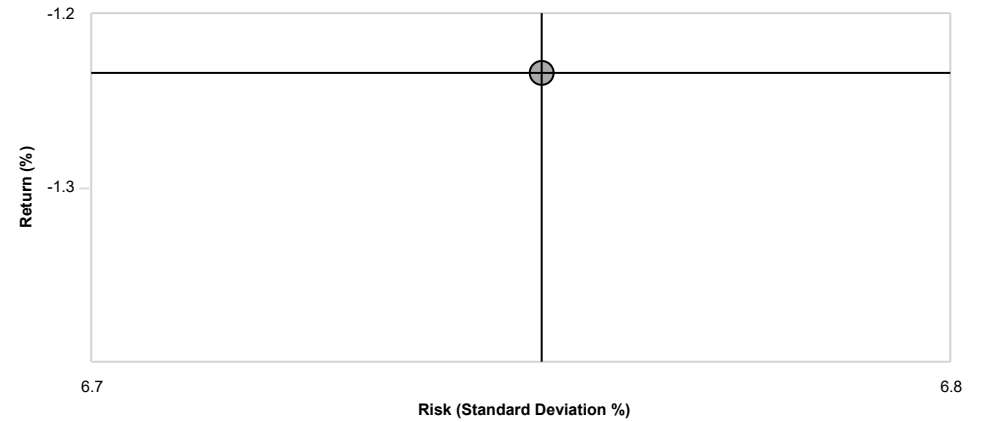
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-1.23	6.75	-0.36	100.00	11	100.00	9

Risk and Return 3 Years



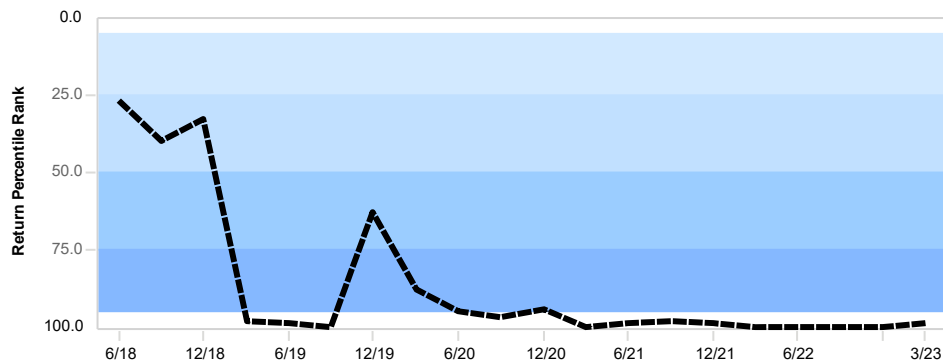
● Investment ● Index

Risk and Return 5 Years



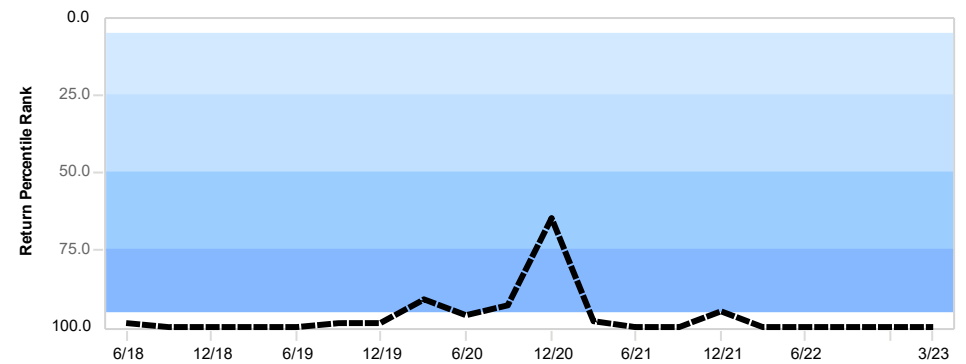
● Investment ● Index

3 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (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%)	3 (15%)	1 (5%)	16 (80%)

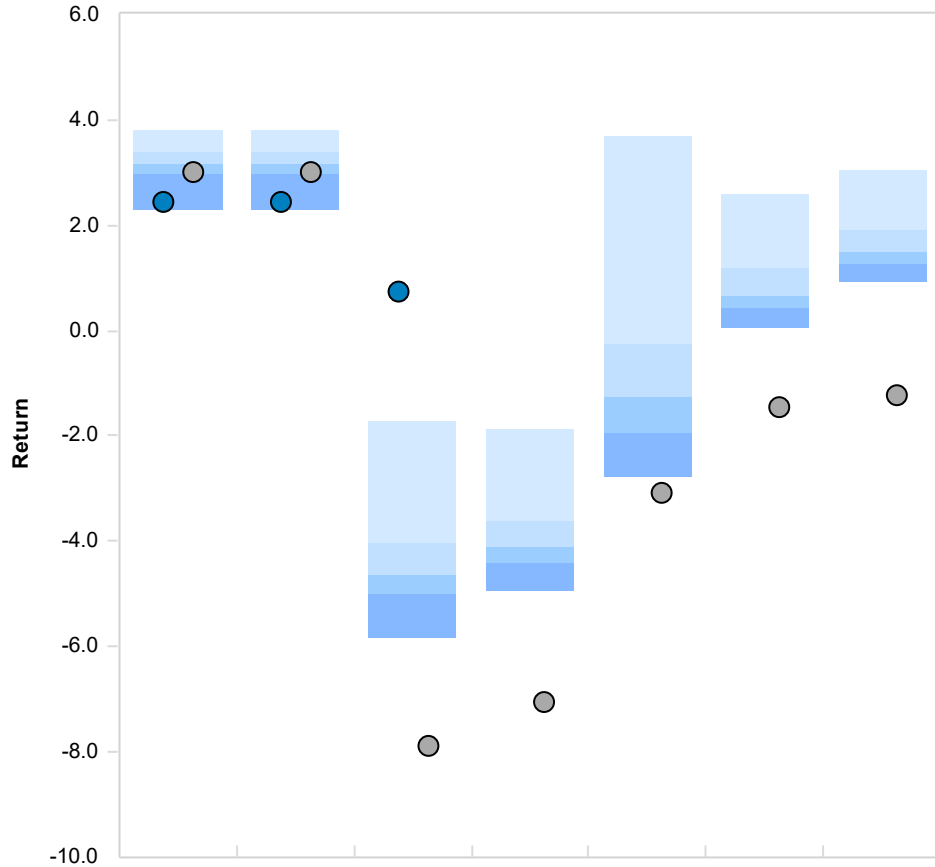
5 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)



	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%)	1 (5%)	19 (95%)

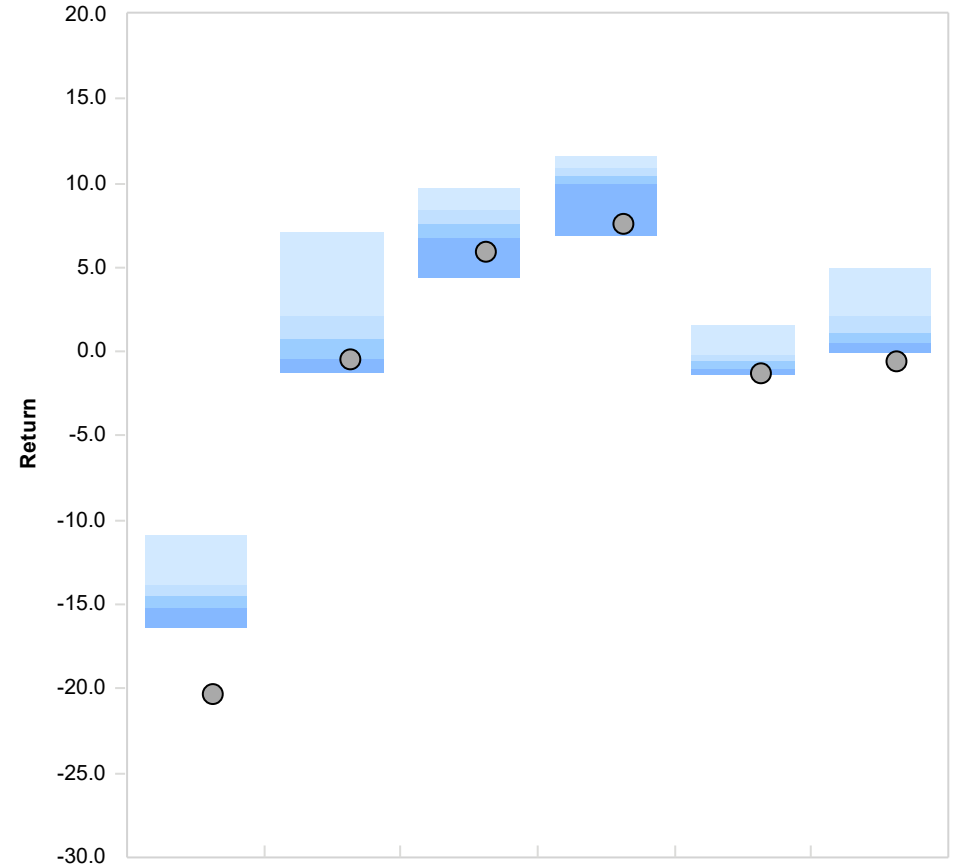


Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.43 (94)	2.43 (94)	0.75 (2)	N/A	N/A	N/A	N/A
● Index	3.02 (70)	3.02 (70)	-7.90 (100)	-7.06 (100)	-3.06 (99)	-1.47 (100)	-1.23 (100)
Median	3.17	3.17	-4.62	-4.09	-1.25	0.67	1.49

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	0.70	7.55	10.38	-0.60	1.06

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	2.30 (21)	0.41 (1)	-4.25 (14)	N/A	N/A	N/A
Index	4.71 (1)	-6.76 (100)	-8.43 (99)	-6.05 (78)	-0.70 (99)	-0.91 (100)
Median	1.92	-4.47	-5.01	-5.80	0.00	0.14



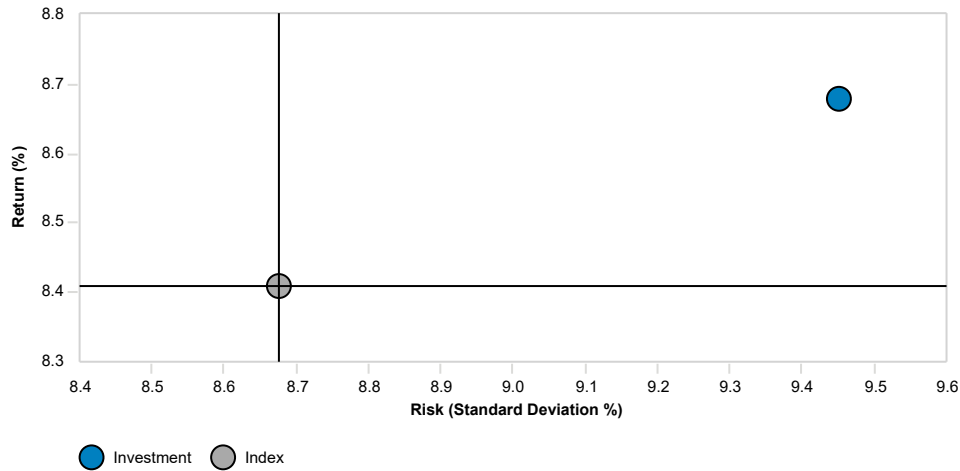
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.68	9.45	0.82	109.43	9	124.24	3
Index	8.41	8.67	0.86	100.00	9	100.00	3

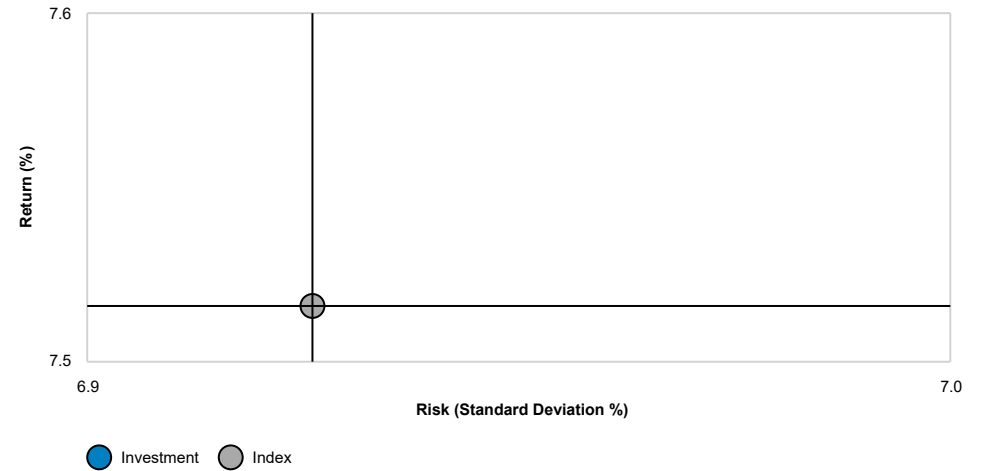
Historical Statistics 5 Years

	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	7.52	6.93	0.86	100.00	17	100.00	3

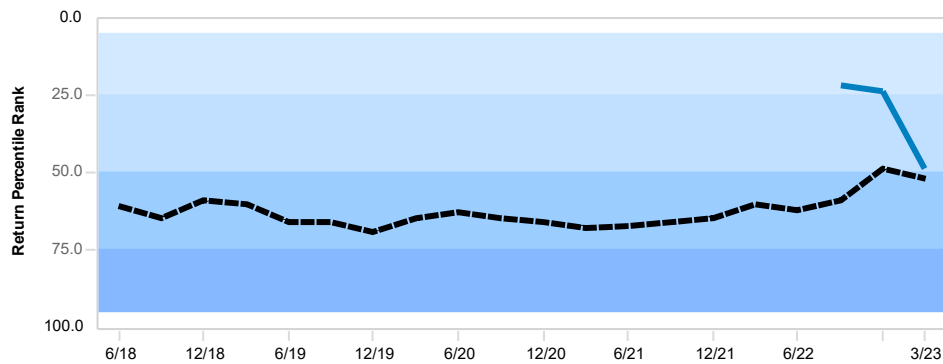
Risk and Return 3 Years



Risk and Return 5 Years

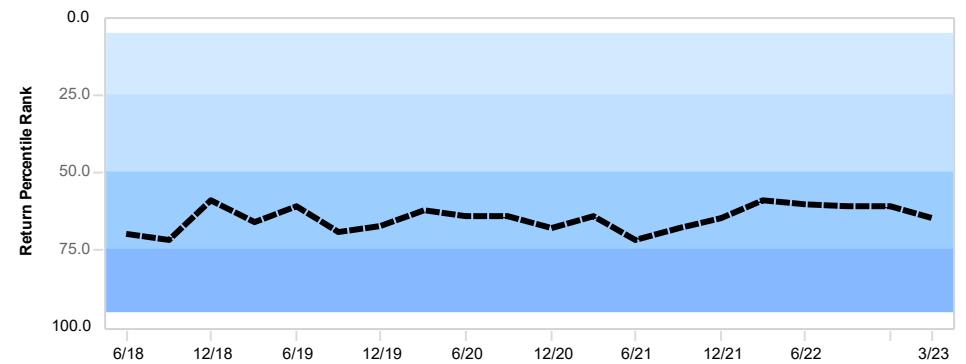


3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	3	2 (67%)	1 (33%)	0 (0%)	0 (0%)
Index	20	0 (0%)	1 (5%)	19 (95%)	0 (0%)

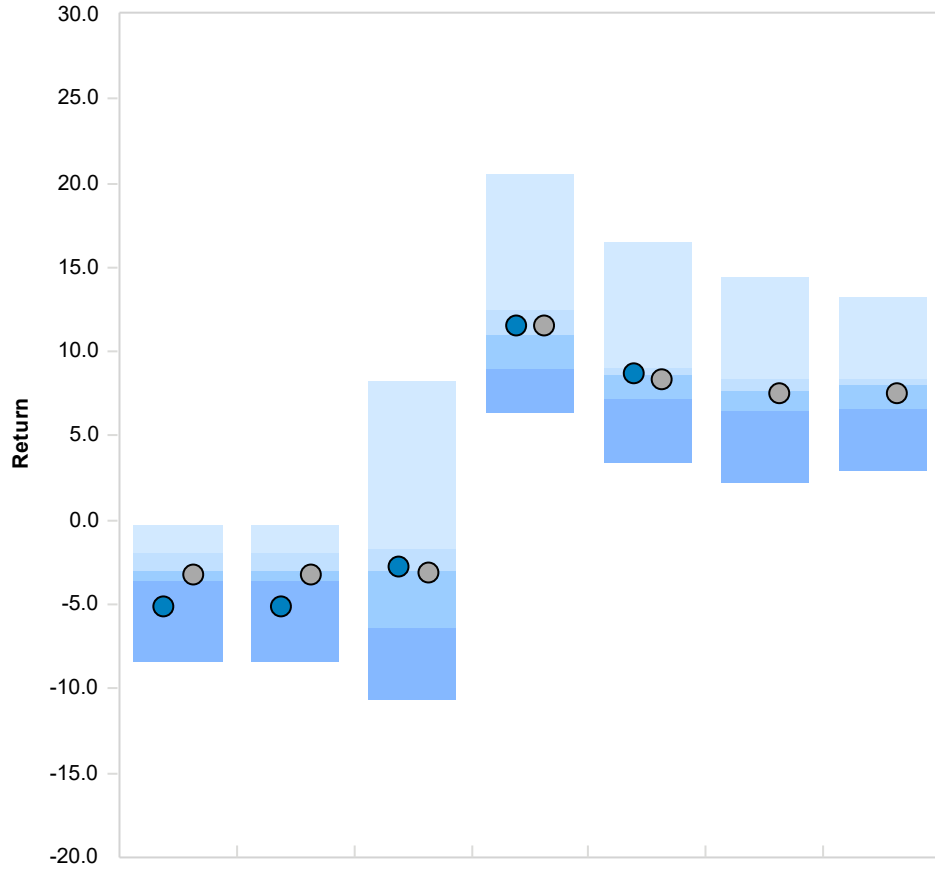
5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)



	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%)

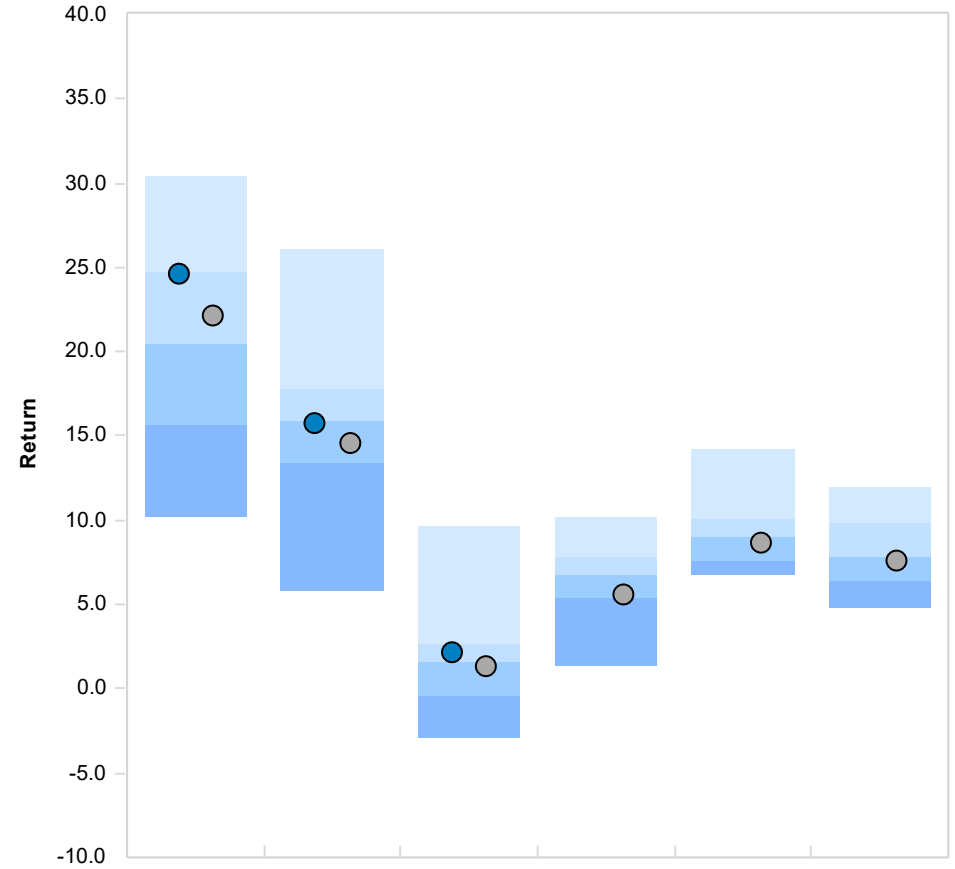


Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.08 (84)	-5.08 (84)	-2.78 (44)	11.60 (45)	8.68 (49)	N/A	N/A
● Index	-3.16 (63)	-3.16 (63)	-3.07 (54)	11.59 (45)	8.41 (52)	7.51 (57)	7.52 (65)
Median	-2.98	-2.98	-2.96	10.95	8.58	7.70	8.01

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 (27)	15.76 (52)	2.20 (36)	N/A	N/A	N/A
● Index	22.09 (45)	14.63 (55)	1.39 (59)	5.59 (74)	8.68 (61)	7.66 (53)
Median	20.46	15.91	1.62	6.80	8.98	7.83

Comparative Performance

	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	1 Qtr Ending Sep-2021
Investment	-5.13 (48)	0.65 (49)	7.27 (11)	7.04 (45)	7.82 (45)	6.08 (60)
Index	-4.97 (41)	0.52 (60)	4.77 (36)	7.37 (34)	7.97 (40)	6.63 (40)
Median	-5.18	0.63	4.39	6.86	7.58	6.33



The Woodlands Firefighters' Retirement System
Comparative Performance Trailing Performance Composite Returns
As of March 31, 2023

Comparative Performance								
	QTR	YTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
Domestic Equity								
Vanguard Total Stock Index (VITSX)	7.15	7.15	-8.77	0.94	18.36	10.37	8.00	08/01/1997
CRSP U.S. Total Market TR Index	7.15	7.15	-8.77	0.95	18.37	10.37	N/A	
American Beacon SC Value R6 (AASRX)	1.87	1.87	-5.26	0.36	26.74	5.93	5.70	03/01/2017
Russell 2000 Value Index	-0.66	-0.66	-12.96	-5.17	21.01	4.55	4.43	
Conestoga Small Cap I (CCALX)	12.48	12.48	-4.52	-4.39	15.04	8.74	11.58	09/01/2014
Russell 2000 Growth Index	6.07	6.07	-10.60	-12.48	13.36	4.26	6.81	
International Equity								
EuroPacific Growth R6 (REGRX)	9.87	9.87	-3.26	-6.36	12.13	3.25	7.01	06/01/2009
MSCI AC World ex USA (Net)	6.87	6.87	-5.07	-3.29	11.80	2.47	5.64	
Core Fixed Income								
Garcia Hamilton (Gross of Fees)	4.04	4.04	-3.43	-3.35	-1.27	1.26	5.45	01/01/1992
Blmbg. U.S. Aggregate Index	2.96	2.96	-4.78	-4.47	-2.77	0.90	4.70	
Bank Loans								
Aristotle Floating Rate (PLFRX)	3.58	3.58	2.69	2.99	6.80	3.23	4.13	07/01/2011
Credit Suisse Leveraged Loan Index	3.11	3.11	2.12	2.67	8.38	3.55	4.18	
Real Estate								
Clarion Lion Properties Fund	-5.08	-5.08	-2.80	12.07	8.99	8.52	7.89	04/01/2000
NCREIF Fund Index-ODCE (VW)	-3.16	-3.16	-3.07	11.59	8.41	7.52	8.11	

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 March 31, 2023

Comparative Performance	YTD	2022	2021	2020	2019	2018	2017	2016
Domestic Equity								
Vanguard Total Stock Index (VITSX)	7.15	-19.51	25.73	21.00	30.81	-5.16	21.17	12.67
CRSP U.S. Total Market TR Index	7.15	-19.49	25.72	20.99	30.84	-5.17	21.19	12.68
American Beacon SC Value R6 (AASRX)	1.87	-7.72	28.21	4.03	23.50	-15.59	N/A	N/A
Russell 2000 Value Index	-0.66	-14.48	28.27	4.63	22.39	-12.86	7.84	31.74
Conestoga Small Cap I (CCALX)	12.48	-28.09	16.37	30.59	25.42	0.81	28.74	14.30
Russell 2000 Growth Index	6.07	-26.36	2.83	34.63	28.48	-9.31	22.17	11.32
International Developed Equity								
EuroPacific Growth R6 (RERGX)	9.87	-22.72	2.84	25.27	27.40	-14.91	31.17	1.01
MSCI AC World ex USA (Net)	6.87	-16.00	7.82	10.65	21.51	-14.20	27.19	4.50
Core Fixed Income								
Garcia Hamilton (Gross of Fees)	4.04	-11.25	-2.11	8.10	7.25	0.97	3.81	3.17
Blmbg. U.S. Aggregate Index	2.96	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65
Bank Loans								
Aristotle Floating Rate (PLFRX)	3.58	-0.83	4.62	1.59	8.30	0.41	4.33	8.91
Credit Suisse Leveraged Loan Index	3.11	-1.06	5.41	2.78	8.16	1.14	4.25	9.87
Real Estate								
Clarion Lion Properties Fund	-5.08	9.62	23.38	2.24	7.26	9.66	8.99	9.09
NCREIF Fund Index-ODCE (VW)	-3.16	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 March 31, 2023

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Vanguard Total Stock Index (VITSX)	0.03	26,703,962	8,011	0.03 % of Assets
American Beacon SC Value R6 (AASRX)	0.78	2,901,585	22,632	0.78 % of Assets
Conestoga Small Cap I (CCALX)	0.90	2,724,399	24,520	0.90 % of Assets
Total Domestic Equity	0.17	32,329,946	55,163	
EuroPacific Growth R6 (RERGX)	0.49	8,546,197	41,876	0.49 % of Assets
Total International Equity	0.49	8,546,197	41,876	
Garcia Hamilton	0.25	8,779,704	21,949	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	1,579,049	11,369	0.72 % of Assets
Apollo Total Return Fund	0.80	2,995,316	23,963	0.80 % of First \$100 M 0.75 % of Next \$100 M 0.70 % Thereafter
Total Fixed Income	0.43	13,354,069	57,281	
Clarion (Core Real Estate)	1.25	5,058,762	63,235	1.25 % of Assets
Carlyle Property Investors	1.00	747,236	7,472	1.00 % of Assets
Total Real Estate	1.22	5,805,998	70,707	
Frost Bank Cash Account		2,321	-	
Mutual Fund Cash		23,511	-	
Total Cash		25,831	-	
Total Fund	0.37	60,062,042	225,027	

Total Fund Compliance:	Yes	No	N/A
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.			✓

Equity Compliance:	Yes	No	N/A
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.	✓		

Fixed Income Compliance:	Yes	No	N/A
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.	✓		

Manager Compliance*:	Vang. Total Stk**			Am. Beacon			Conestoga			EuroPacific			Garcia Hamilton			Pacific Funds		
	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



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.

This performance report is based on data obtained by the client's custodian(s), investment fund administrator, or other sources believed to be reliable. While these sources are believed to be reliable, the data providers are responsible for the accuracy and completeness of their statements. Clients are encouraged to compare the records of their custodian(s) to ensure this report fairly and accurately reflects their various asset positions.

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