

Investment Performance Review  
Period Ending December 31, 2022

# The Woodlands Firefighters' Retirement System

---



On behalf of everyone at AndCo, we want to Thank You for the opportunity to serve you and for the trust you place in us! We take our role as your consultant and trusted advisor seriously and will continue working hard to maintain your confidence.

Looking back at the year, we would like to provide a brief update on where we stand as a firm. 2022 marked the 22nd straight year of revenue growth for the firm and we advise on approximately \$90 billion in client assets as of December 31st. We reinvested 100% of our net profits back into the organization so we can continue to evolve and adapt within a market environment that is constantly changing and challenging. As we have stated in previous updates, we do not believe the “status quo” is an effective strategy and we are convicted in our belief that a firm not focused on moving forward in our industry is moving backward.

To execute on our commitment to evolve and continue to enhance the organization, we made additional personnel and technology investments in 2022. Specifically, we hired a Chief Information Officer (Bharat Kumta) after a national search led by a specialized executive recruiting firm. We believe technology is going to drive successful firms in our industry and we plan to invest heavily within this business function to support digital transformation. We also integrated a new Chief Human Resources Officer (Stacie Runion) through a national search led by an executive recruiter. We believe our firm's most important asset is our people, so we need to ensure we have the right leadership team in HR to focus on that asset. We also hired team members in Finance, Human Resources, Consulting, Research, Solutions & Growth, Technology and Performance & Reporting. These personnel investments focused on further enhancing functional areas, departmental service levels, and narrowing potential gaps. We also continued to invest in our proprietary software system to compile and share information firmwide to better serve our clients more effectively and efficiently. Finally, we engaged several outside consulting firms to help us better assess and invest in areas within our firm we believe will drive value for our clients going forward. Some examples include working with an outside group to evaluate and enhance our Operational Due Diligence efforts with investment managers and a separate group to help us review and analyze our current Discretionary Services offerings and how to make this service stronger for our clients.

As we start 2023, we are 93 team members strong with plans to grow. We are targeting several new positions for the year as we thoughtfully continue to invest in our firm to provide the quality services you expect from AndCo. These talent enhancements cover multiple functions and departments at AndCo including Consulting, Research, Performance & Reporting, Marketing, Technology and Compliance. While adding additional resources to a firm our size is a significant investment, it is one we embrace due to the impact we believe it will have on our ability to continue serving our clients at a high level and will push us closer to our vision of being a transformational organization viewed as the leader in our industry. We thoughtfully grow while helping to ensure that service will not suffer at AndCo at the expense of growth. Rather, we utilize growth to enhance our value proposition and overall service to our valued clients.

At the beginning of each year, we also discuss the AndCo partnership and, when earned, announce new partners.

This year I am thrilled to share three new team members were named partners at AndCo – Jon Breth, Tyler Grumbles and Brooke Wilson. Jon has been with AndCo for 11-years and Tyler has been with AndCo for 15-years. Jon and Tyler are both members of our Consulting Department. Brooke was recently promoted to Executive Director of our Performance & Reporting Department and has been with AndCo 7-years. We could not be happier for Jon, Tyler, and Brooke or more grateful for the contributions they have made to AndCo since joining the firm. Jon, Tyler, and Brooke represent what it means to be an AndCo team member, and we are honored and fortunate to have them as partners at our firm.

While three new members will be added to the partnership in 2023, we will also be losing one valuable team member. Donna Sullivan retired on December 31, 2022. Donna joined AndCo at its inception in September of 2000. Donna has been integral in the success of the firm and for many years was the glue that held everything together. Her contributions and sacrifices are too many to reference in this letter. While we are extraordinarily excited for her and the next chapter of her life, she will be greatly missed as a partner and team member. We will be honoring Donna and her legacy with the Donna Sullivan Believe Award. This award will be given each year to the team member at AndCo that best demonstrates their belief in AndCo's Mission, Vision, and Values. Donna believed in what AndCo stood for before anyone else did, and she carried that belief for 23 years. Thank you, Donna!

With the addition of Jon, Tyler, and Brooke, and Donna's retirement, we now have 15 partners representing various functions and departments at AndCo. Our growing partnership group provides great perspective and insight which continues to strengthen AndCo and reaffirm our belief that 100% employee management is vital to the long-term success of our organization. We have great team members at AndCo and this partnership group will continue to expand as we move forward.

In closing, we know that 2022 was a dramatically different environment for investing as compared to 2021, with record high inflation and double-digit losses in both equity AND fixed income assets - all resulting in challenging client portfolio results. Please know our team works tirelessly to provide the advice and guidance you need regardless of the market environment. Our name, AndCo, reminds us of who we work for every day - “Our Client” &Co. You are first in our service model. As we continue to discuss strategic decisions and reinvestments regarding our firm, please know that our decisions are filtered through the following question: “How does this keep our clients' interests first?” If it doesn't meet this standard, we don't do it - it's that simple.

Thank you again for your valued partnership and the opportunity to serve you.  
Happy New Year!



Mike Welker, CFA®  
CEO



# Organizational Chart



## PARTNERSHIP

**Mike Welker, CFA®**  
**Brian Green**  
**Brooke Wilson, CIPM®**  
**Bryan Bakardjiev, CFA®**  
**Dan Johnson**  
**Dan Osika, CFA®**  
**Evan Scussel, CFA®, CAIA®**  
**Jacob Peacock, CPFA**

**Jason Purdy**  
**Jon Breth, CFP®**  
**Kerry Richardville, CFA®**  
**Kim Spurlin, CPA**  
**Steve Gordon**  
**Troy Brown, CFA®**  
**Tyler Grumbles, CFA®, CIPM®, CAIA®**

## LEADERSHIP & MANAGEMENT

**Mike Welker, CFA®**  
 CEO

**Bharat Kumta**  
 CIO

**Bryan Bakardjiev, CFA®**  
 COO

**Evan Scussel, CFA®, CAIA®**  
 Executive Director of Research

**Kim Spurlin, CPA**  
 CFO

**Sara Searle**  
 CCO

**Stacie Runion**  
 CHRO

**Steve Gordon**  
 Solutions & Growth Director

**Troy Brown, CFA®**  
 Executive Director of Consulting

**Brooke Wilson, CIPM®**  
 Executive Director of Performance Reporting

**Dan Johnson**  
 Consulting Director

**Jack Evatt**  
 Consulting Director

**Jacob Peacock, CPFA**  
 Consulting Director

**Jason Purdy**  
 I.T. Director

**Molly Halcom**  
 Solutions & Growth Director

**Philip Schmitt**  
 Research Director

**Rachel Brignoni, MHR**  
 People & Culture Director

## INVESTMENT POLICY COMMITTEE

**Bryan Bakardjiev, CFA®**  
**Mike Welker, CFA®**

**Sara Searle**  
**Troy Brown, CFA®**

## CONSULTING

**Annette Bidart**  
**Brad Hess, CFA®, CPFA**  
**Brendon Vavrica, CFP®**  
**Brian Green**  
**Chris Kuhn, CFA®, CAIA®**  
**Christiaan Brokaw, CFA®**  
**Dave West, CFA®**  
**Doug Anderson, CPFA**  
**Frank Burnette**  
**Gwelda Swilley**  
**Ian Jones**

**James Ross**  
**Jeff Kuchta, CFA®, CPFA**  
**Jennifer Brozstek**  
**Jennifer Gainfort, CFA®, CPFA**  
**John Mellinger**  
**John Thinnis, CFA®, CAIA®, CPFA**  
**Jon Breth, CFP®**  
**Jorge Friguls, CPFA**  
**Justin Lauver, Esq.**  
**Kerry Richardville, CFA®**

**Mary Nye**  
**Michael Fleiner**  
**Michael Holycross**  
**Mike Bostler**  
**Oleg Sydyak, CFA®, FSA, EA**  
**Paul Murray, CPFA**  
**Peter Brown**  
**Tim Walters**  
**Tony Kay**  
**Tyler Grumbles, CFA®, CIPM®, CAIA®**

## PERFORMANCE REPORTING

**Albert Sauerland**  
**Amy Steele**  
**Bob Bulas**  
**David Gough, CPFA**  
**Don Delaney**  
**Donnell Lehrer, CPFA**

**Edward Cha**  
**Grace Niebrzydowski**  
**James Culpepper**  
**James Reno**  
**Jeff Pruniski**  
**Joe Carter, CPFA**

**Julio Garcia Rengifo**  
**Kim Hummel**  
**Rotchild Dorson**  
**Yoon Lee-Choi**

## OPERATIONS

**FINANCE**  
**Kahjeelia Pope**  
**Michelle Boff**  
**Robert Marquetti**

**HUMAN RESOURCES**  
**Kelly Pearce**  
**Shelley Berthold**

**I.T. & OPERATIONS**  
**Geoffrey Granger**  
**Jerry Camel**  
**Kenneth Day**

**COMPLIANCE**  
**Allen Caldwell**  
**Thay Arroyo**

**MARKETING**  
**Lauren Kaufmann**

**SOLUTIONS & GROWTH**  
**Dan Osika, CFA®**  
**John Rodak, CIPM®**  
**Paola Gervasi**

## RESEARCH

**Andrew Mulhall**  
 Public Equity & Fixed Income

**Ben Baldrige, CFA®, CAIA®**  
 Private & Hedged Fixed Income

**Chester Wyche**  
 Real Estate & Real Assets

**Dan Lomelino, CFA®**  
 Fixed Income

**David Julier**  
 Real Estate & Real Assets

**Elizabeth Wolfe**  
 Capital Markets & Asset Allocation

**Evan Scussel, CFA®, CAIA®**  
 Private & Public Equity

**Joseph Ivaszuk**  
 Operational Due Diligence

**Josue Christiansen, CFA®, CIPM®**  
 Public Equity

**Julie Baker, CFA®, CAIA®**  
 Private & Hedged Equity

**Justin Ellsesser, CFA®, CAIA®**  
 Private Equity

**Kevin Laake, CFA®, CAIA®**  
 Private Equity

**Michael Kosoff**  
 Hedge Funds

**Philip Schmitt**  
 Fixed Income & Capital Markets

**Ryan McCuskey**  
 Real Estate & Real Assets

**Xinxin Liu, CFA®, FRM**  
 Private Equity and Private Debt

**Zac Chichinski, CFA®, CIPM®**  
 Public Equity



93  
EMPLOYEES

37 ADVANCED  
DEGREES

23 CFA®

8 CAIA®

11 CPFA 5 CIPM®

Employee counts are as of 1/1/2023 and reflect only full time employees and do not include any who are part time, temporary or independent contractors.



## 4th Quarter 2022 Market Environment



## The Economy

- US GDP growth is expected to remain strong in the 4th quarter. While the final measure of 3rd quarter GDP was revised upward to 3.2%, global GDP growth remains challenged with higher energy prices continuing to act as a headwind, especially in Europe. However, China is beginning the process of reopening its economy which should boost emerging markets.
- The US Federal Reserve Bank (the Fed) continued to increase interest rates during the quarter with a 0.75% increase in November and a 0.50% increase in December. Importantly, the Fed signaled it remains committed to fighting inflation through additional rate hikes if needed.
- The US labor market continued to show its resiliency by adding roughly 680 thousand jobs during the 4th quarter. As a result, the unemployment rate fell to 3.5% in December. Despite these gains, the number of announced layoffs during the quarter increased, which could impact labor markets in the future periods.
- Global markets were broadly positive during the 4th quarter. Despite persistent inflation, tighter central bank monetary policy, slowing GDP growth, and continuing geopolitical risks investors were focused on the potential of central banks slowing the pace of tightening as inflation moderated.

## Equity (Domestic and International)

- US equities moved higher during the 4th quarter despite concerns regarding inflation, the potential for higher interest rates, and a slowing global GDP growth. Large cap value was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while large cap growth performed the worst.
- International stocks also experienced strong returns during the 4th quarter. While local currency performance was solid, the primary catalyst for outsized returns was a weakening USD, which fell against most major and emerging market currencies. GDP growth, especially in Europe, remained under pressure as central bank policies remained restrictive and elevated energy prices acted as a headwind. Finally, China began to relax its zero-tolerance policy regarding Covid-19, which positively contributed to both global GDP growth and equity market performance.

## Fixed Income

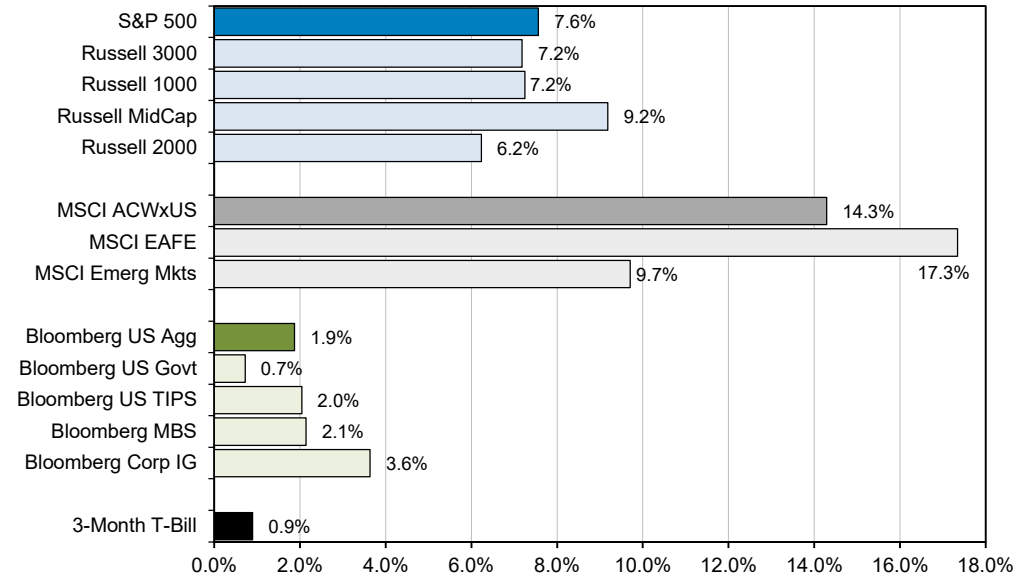
- While inflation declined during the 4th quarter, the Fed continued increasing interest rates with two increases totaling 1.25%. Despite the short-term increases, long-term interest rates remained relatively stable during the period. US interest rates moved slightly higher during the quarter with the US 10-Year Treasury bond rising 0.08% to close the year at a yield of 3.88%.
- Performance across domestic bond market sectors was positive during the quarter, led by US high yield and corporate investment grade bonds. Much like equities, global bonds outperformed their domestic peers mainly due to a weaker USD.
- The combination of higher coupons, a shorter maturity profile relative to high quality government bonds, and narrower credit spreads were the primary drivers of relative return during the period.
- US Treasury bonds lagged their corporate bond peers during the quarter as investors' concerns about rising interest rates and the need for safety subsided.

## Market Themes

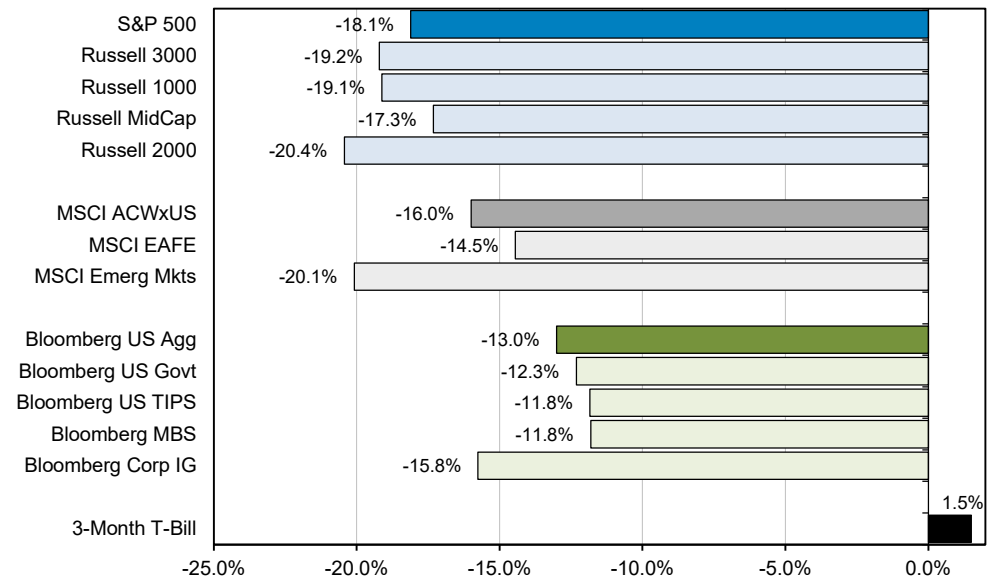
- Central banks remained vigilant in their fight against inflation with the Fed, the Bank of England, and the European Central Bank all raising interest rates during the quarter. Additionally, the Bank of Japan relaxed their targeting of interest rates, allowing the 10-Year Japanese Government Bond to float to 0.50%, above the previous 0.25% level.
- The conflict in Ukraine continues to disrupt global energy markets, in addition to the ongoing humanitarian crisis. Energy costs remain elevated which could further negatively impact economic growth.
- Both US and international equity markets rebounded during the quarter on expectations that inflation would continue to moderate, which could lead central banks to begin the process of slowing the pace of monetary tightening. Value-oriented stocks outperformed growth stocks as investors remained concerned about the pace of future growth.
- 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 outperformed higher quality government bonds and USD weakness acted as a tailwind for global bonds during the quarter.

- Equity markets moved higher during the 4th quarter, but it was not sufficient to offset prior quarter pullbacks. Factors that contributed to performance included declining inflation, expectations that the Fed would slow the pace of future interest rate increases, and expectations that China would begin to open its economy. For the period, the S&P 500 large cap benchmark returned 7.6%, compared to 9.2% for mid-cap and 6.2% for small cap benchmarks.
- Like domestic equities, developed markets international and emerging market equities delivered positive results for the 4th 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 were positively impacted by China's decision to loosen restrictions related to the pandemic. Importantly, global equities were positively impacted by a decline in the USD. For the quarter, the MSCI EAFE Index returned 17.3% while the MSCI Emerging Markets Index rose by 9.7%.
- For the quarter, performance of the bond market was broadly positive due to lower inflation and lower interest rate volatility. The Bloomberg (BB) US Aggregate Index returned 1.9%, for the period while investment grade corporate bonds posted a return of 3.6%.
- Performance for developed equity markets was strongly negative over the trailing 1-year period. The bellwether S&P 500 Index dropped -18.1% for the year. The primary drivers of return during the period were concerns related to rising inflation, tighter monetary policy from global central banks, and slowing global economic growth. The weakest relative performance outlier was the Russell 2000 Index which declined by -20.4% for the year.
- Over the trailing 1-year period, international markets declined similarly to domestic markets. The MSCI EAFE Index returned -14.5% while the MSCI Emerging Markets Index fell by -20.1%. Continued concerns related to Ukraine, elevated inflation, and slowing global economic growth negatively impacted markets. However, a weakening USD acted as a tailwind to international performance in the second half of the year.
- Bond market returns were widely negative over the trailing 1-year period due primarily to concerns about persistently high inflation and the expectation of higher future interest rates. US TIPS and mortgage-backed bonds were the least negative sectors with both returning -11.6% for the year. Investment grade corporate bonds suffered the year's largest loss, falling -15.8%.

### Quarter Performance



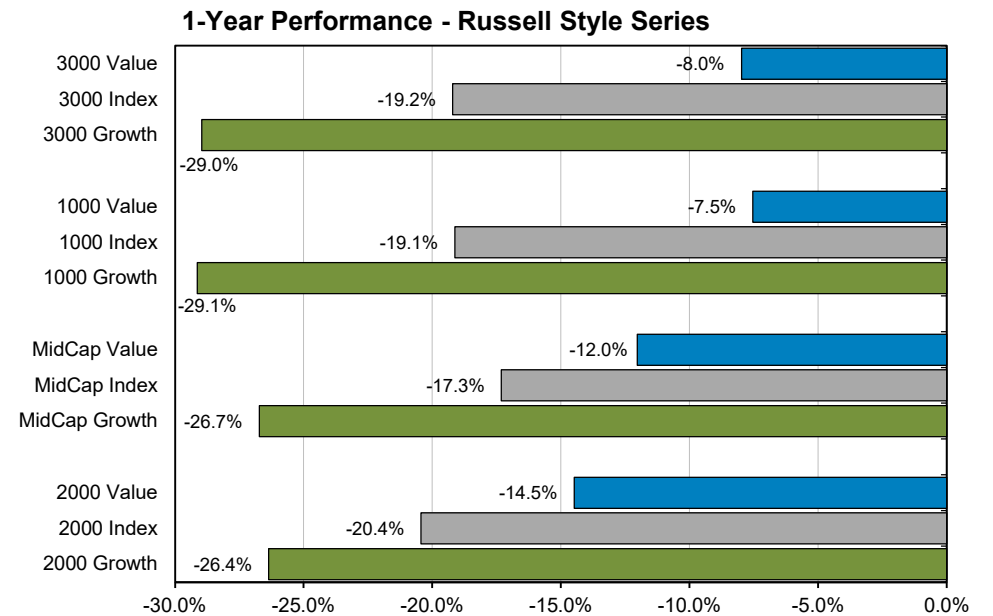
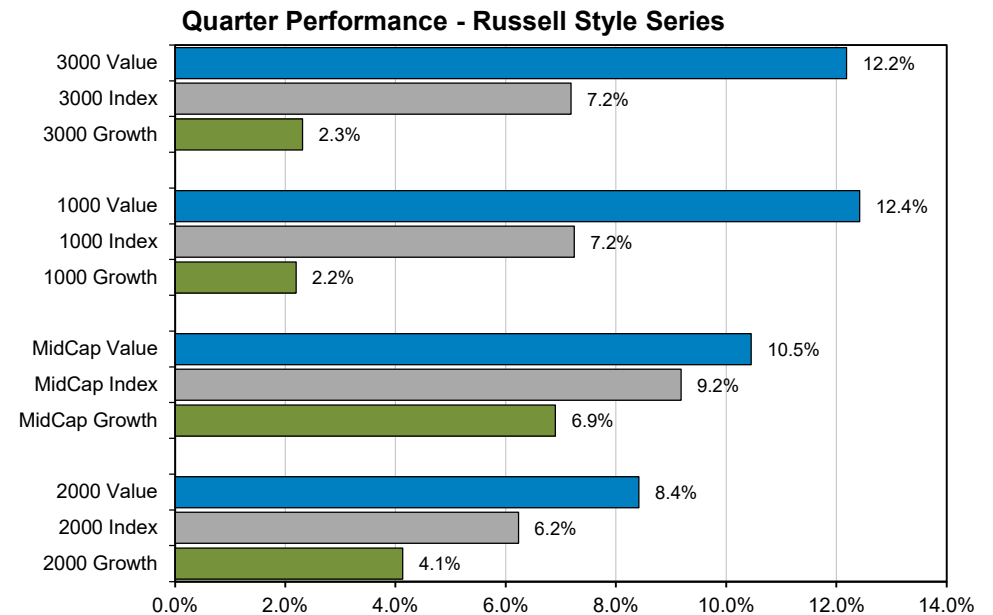
### 1-Year Performance



Source: Investment Metrics



- Despite a pullback in December, equity markets broadly experienced strong absolute returns during the 4th quarter across both the style and market capitalization spectrums. With concerns about the potential for slowing economic conditions, large cap stocks resumed their leadership, followed by mid and small cap stocks. The Russell 1000 Value Index delivered 12.4% for the quarter, followed by while the Russell Mid Cap Value Index and the Russell 2000 Index, which rose by 10.5% and 8.4%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, mid, and small cap value stocks all outperformed their growth counterparts. For the period, the Russell 1000 Value Index was the best relative performing style index, posting a return of 12.4%. Large and small cap growth stocks were the laggards during the period with the Russell Large Cap Growth Index and Russell 2000 Growth Index returning 2.2% and 4.1%, respectively.
- In contrast to the 4th quarter's positive performance, there was a wide range of negative results across market capitalizations over the trailing 1-year period. The Russell 2000 Index returned a disappointing -20.4% for the year, which underperformed both its large and mid cap index counterparts.
- There was also a wide performance dispersion across the style-based indexes for the year with growth stocks down significantly more than their value counterparts at all capitalization ranges. Within large cap stocks, the Russell 1000 Value Index returned -7.5% compared to much larger -29.1% decline for the Russell Large Cap Growth benchmark. The Russell Mid Cap Value Index returned -12.0% while the Russell 2000 Value Index returned -14.5% for the period. While these value benchmark results represented double-digit losses for the year, the Russell Mid Cap Growth Index fell a much larger -26.7% and the Russell 2000 Growth Index declined by a similar -26.4%.

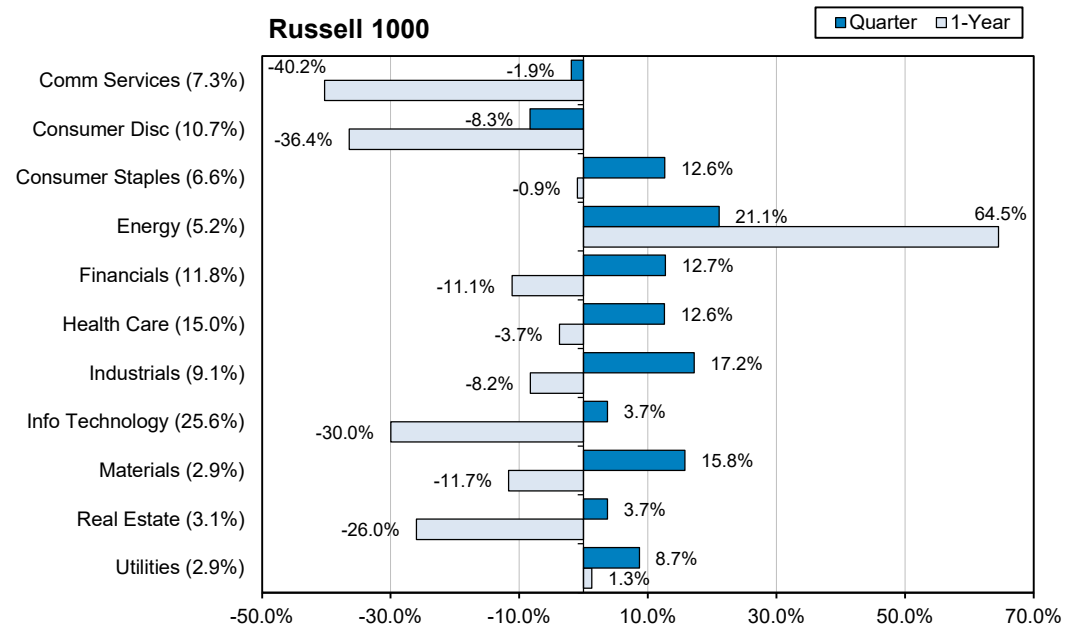


Source: Investment Metrics

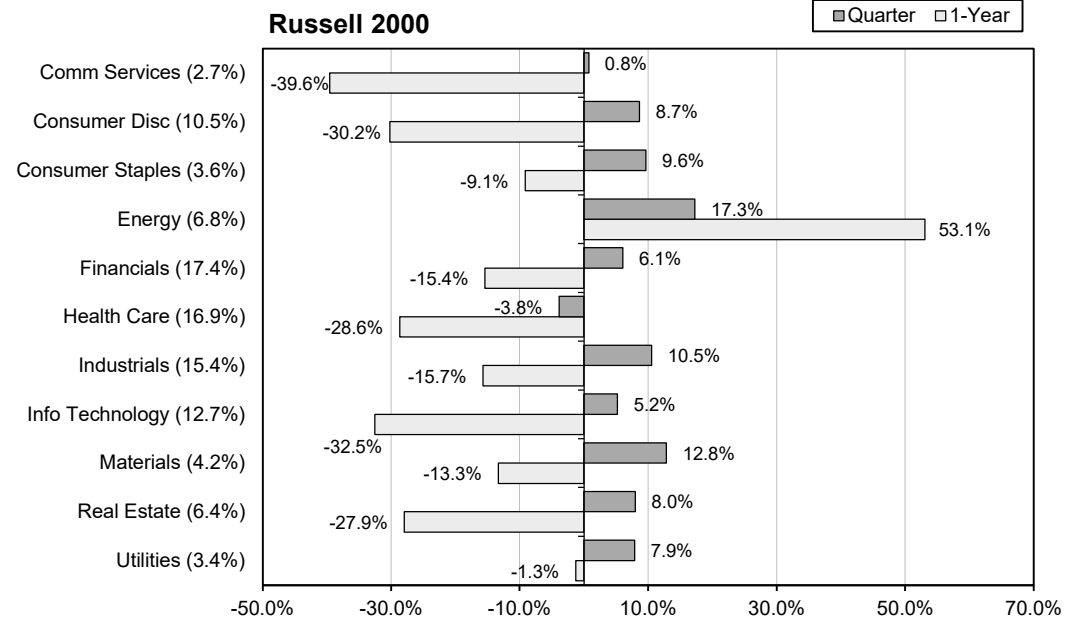




- Economic sector performance was positive for nine of the eleven large cap economic sectors for the 4th quarter. Seven sectors outpaced the return of the broad index on a relative basis during the period.
- Energy continued its strong 2022 performance with a 4th quarter return of 21.1%. Other sectors that outpaced the headline index's return for the quarter included industrials (17.2%), materials (15.8%), financials (12.7%), healthcare (12.6%), consumer staples (12.6%), and utilities (8.7%). The real estate (3.7%), information technology (3.7%), communication services (-1.9%), and consumer discretionary (-8.3%) sectors all trailed the Russell 1000 Index return for the period.
- For the full year, seven economic sectors exceeded the return of the broad large cap benchmark but only the energy (64.5%) and utilities (1.3%) sectors managed to post positive, albeit vastly different, results. The weakest economic sector performance in the Russell 1000 for the year was communication services which declined by a staggering -40.2%.



- Ten small cap economic sectors posted positive returns during the quarter and seven exceeded the 6.2% return of the broader Russell 2000 Index. The energy (17.3%), materials (12.8%), and industrials (10.5%) sectors each posted double-digit positive results for the quarter. The only small cap economic sector that posted negative performance for the quarter was health care which fell by -3.8%.
- For the trailing 1-year period, six of the eleven economic sectors were down less than the broad small cap benchmark's return of -20.4%. Energy was the best performing and only positive economic sector for the year with a strong return of 53.1%. The utilities (-1.3%) and consumer staples (-9.1%) sectors were only small cap index segments to fall less than double-digit amounts for the year. The worst performing sector for the full year was communication services with a return of -39.6%. In addition, the information technology (-32.5%), consumer discretionary (-30.2%), health care (28.6%), and real estate (-27.9%) sectors all were down significantly for the year.



Source: Morningstar Direct





**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of December 31, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	5.5%	-5.8%	-26.4%	Information Technology
Microsoft Corp	5.1%	3.3%	-28.0%	Information Technology
Amazon.com Inc	2.1%	-25.7%	-49.6%	Consumer Discretionary
Berkshire Hathaway Inc Class B	1.6%	15.7%	3.3%	Financials
Alphabet Inc Class A	1.5%	-7.8%	-39.1%	Communication Services
UnitedHealth Group Inc	1.4%	5.3%	7.0%	Health Care
Alphabet Inc Class C	1.3%	-7.7%	-38.7%	Communication Services
Johnson & Johnson	1.3%	8.8%	6.0%	Health Care
Exxon Mobil Corp	1.3%	27.4%	87.4%	Energy
JPMorgan Chase & Co	1.1%	29.5%	-12.6%	Financials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Horizon Therapeutics PLC	0.1%	83.9%	5.6%	Health Care
Burlington Stores Inc	0.0%	81.2%	-30.4%	Consumer Discretionary
Halliburton Co	0.1%	60.4%	74.5%	Energy
Universal Health Services Inc Class B	0.0%	60.0%	9.4%	Health Care
PVH Corp	0.0%	57.7%	-33.7%	Consumer Discretionary
Spectrum Brands Holdings Inc	0.0%	57.4%	-38.6%	Consumer Staples
Boeing Co	0.3%	57.3%	-5.4%	Industrials
Under Armour Inc A	0.0%	52.8%	-52.1%	Consumer Discretionary
Exact Sciences Corp	0.0%	52.4%	-36.4%	Health Care
Moderna Inc	0.2%	51.9%	-29.3%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Carvana Co Class A	0.0%	-76.7%	-98.0%	Consumer Discretionary
Opendoor Technologies Inc Class A	0.0%	-62.7%	-92.1%	Real Estate
Tesla Inc	0.9%	-53.6%	-65.0%	Consumer Discretionary
Lucid Group Inc Shs	0.0%	-51.1%	-82.1%	Consumer Discretionary
Guardant Health Inc	0.0%	-49.5%	-72.8%	Health Care
Affirm Holdings Inc - Class A	0.0%	-48.5%	-90.4%	Information Technology
WeWork Inc	0.0%	-46.0%	-83.4%	Real Estate
AppLovin Corp - Class A	0.0%	-46.0%	-88.8%	Information Technology
Ginkgo Bioworks Holdings Inc	0.0%	-45.8%	-79.7%	Materials
Olaplex Holdings Inc	0.0%	-45.5%	-82.1%	Consumer Staples

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Halozyne Therapeutics Inc	0.3%	43.9%	41.5%	Health Care
ShockWave Medical Inc	0.3%	-26.1%	15.3%	Health Care
Inspire Medical Systems Inc	0.3%	42.0%	9.5%	Health Care
EMCOR Group Inc	0.3%	28.4%	16.8%	Industrials
Crocs Inc	0.3%	57.9%	-15.4%	Consumer Discretionary
Matador Resources Co	0.3%	17.2%	55.9%	Energy
Iridium Communications Inc	0.3%	15.8%	24.5%	Communication Services
Murphy Oil Corp	0.3%	22.9%	68.3%	Energy
Agree Realty Corp	0.3%	6.0%	3.5%	Real Estate
Texas Roadhouse Inc	0.3%	4.7%	4.1%	Consumer Discretionary

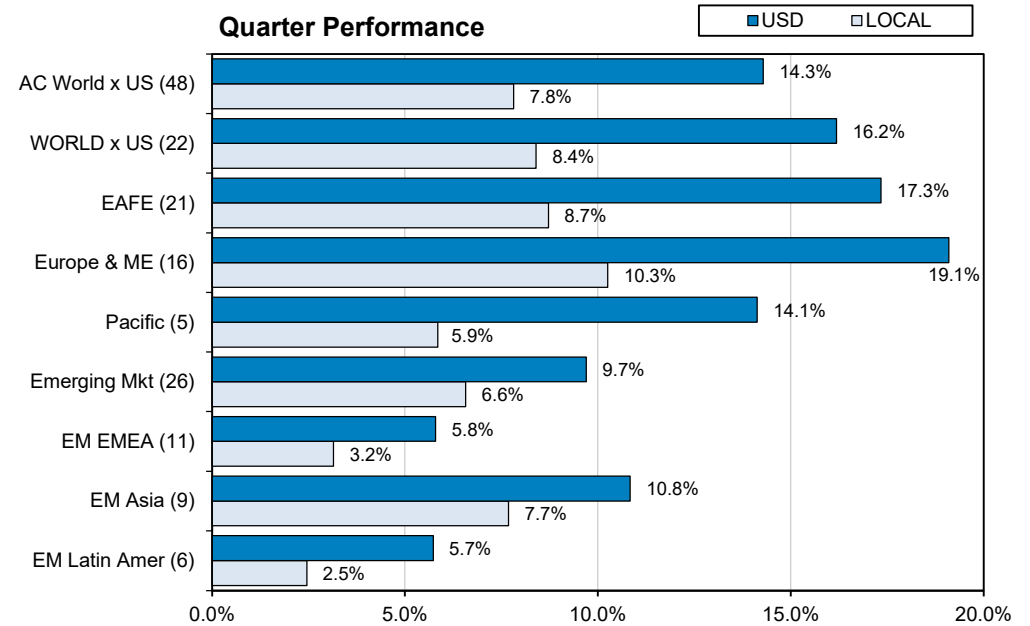
Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Madrigal Pharmaceuticals Inc	0.2%	346.6%	242.5%	Health Care
Immunovant Inc	0.0%	218.1%	108.3%	Health Care
Rayonier Advanced Materials Inc	0.0%	204.8%	68.1%	Materials
Maxar Technologies Inc	0.2%	176.5%	75.5%	Industrials
4D Molecular Therapeutics Inc	0.0%	176.2%	1.2%	Health Care
Icosavax Inc	0.0%	151.3%	-65.3%	Health Care
Imago BioSciences Inc	0.0%	138.9%	51.6%	Health Care
Provention Bio Inc	0.0%	134.9%	88.1%	Health Care
Biohaven Ltd	0.0%	120.3%	N/A	Health Care
Oceaneering International Inc	0.1%	119.7%	54.6%	Energy

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Tricida Inc	0.0%	-98.5%	-98.4%	Health Care
Relmada Therapeutics Inc	0.0%	-90.6%	-84.5%	Health Care
Avaya Holdings Corp	0.0%	-87.7%	-99.0%	Information Technology
Instil Bio Inc	0.0%	-87.0%	-96.3%	Health Care
Greenidge Generation Holdings Inc.	0.0%	-85.5%	-98.2%	Information Technology
Eiger BioPharmaceuticals Inc	0.0%	-84.3%	-77.3%	Health Care
Cano Health Inc - Class A	0.0%	-84.2%	-84.6%	Health Care
Gossamer Bio Inc	0.0%	-81.9%	-80.8%	Health Care
Rockley Photonics Holdings Ltd	0.0%	-80.3%	-96.8%	Information Technology
Boxed Inc	0.0%	-78.9%	-98.6%	Consumer Discretionary

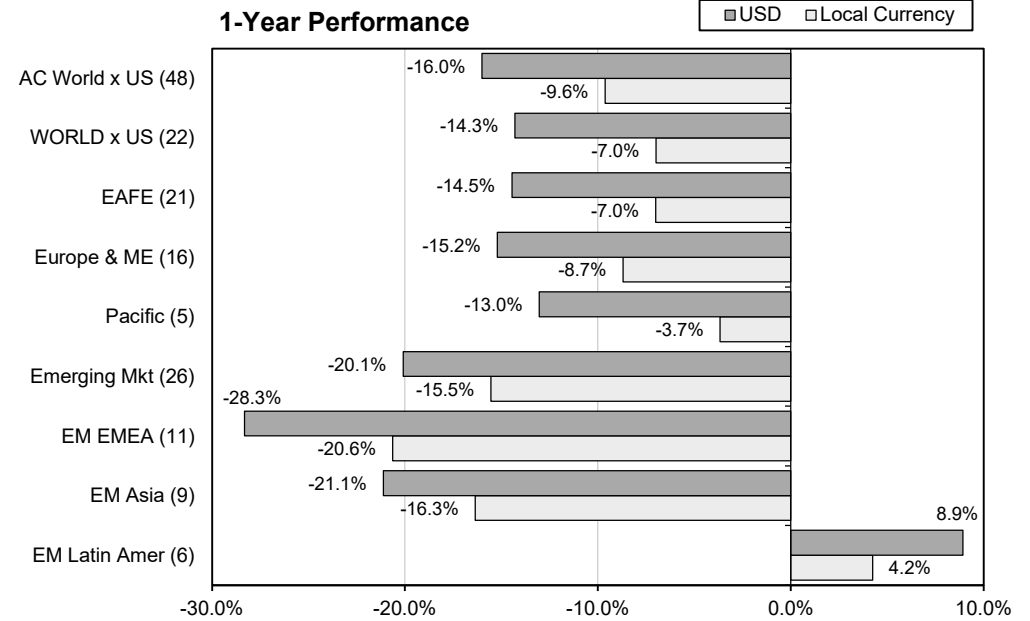
Source: Morningstar Direct



- Each of the developed and emerging market international equity indexes tracked in the chart posted positive returns in both US dollar (USD) and local currency (LC) terms for the 4th quarter. A weaker USD acted as a tailwind for non-US index performance during the quarter. Higher energy prices and the reopening of China also drove performance, especially in emerging markets. The developed market MSCI EAFE Index returned a strong 17.3% in USD and 8.7% in LC terms for the period, and the MSCI Emerging Markets Index rose by 9.7% in USD and 6.6% in LC terms.



- The trailing 1-year results for international developed and emerging markets were negative across most regions and currencies. The MSCI EAFE Index returned -14.5% in USD for the year and -7.0% in LC terms. Similarly, returns across emerging markets were broadly lower except for Latin America which returned 8.9% in USD and 4.2% in LC terms. The MSCI Emerging Markets Index declined by -20.1% in USD and -15.5% in LC terms for the year. Performance in the EMEA regional benchmark significantly detracted from emerging market index performance with the EMEA Index posting returns of -28.3% in USD and -20.6% in LC terms.



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of December 31, 2022

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	7.8%	10.1%	-16.8%
Consumer Discretionary	5.0%	17.8%	-22.4%
Consumer Staples	18.7%	10.6%	-13.0%
Energy	4.5%	19.8%	27.7%
Financials	15.1%	23.9%	-4.6%
Health Care	13.6%	14.2%	-11.0%
Industrials	10.5%	19.0%	-20.6%
Information Technology	7.8%	14.9%	-32.4%
Materials	11.1%	20.7%	-10.3%
Real Estate	3.5%	11.0%	-20.9%
Utilities	2.6%	19.4%	-12.4%
<b>Total</b>	<b>100.0%</b>	<b>17.3%</b>	<b>-14.5%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.4%	12.0%	-21.6%
Consumer Discretionary	6.0%	14.7%	-21.7%
Consumer Staples	21.0%	9.8%	-11.9%
Energy	5.9%	13.3%	8.1%
Financials	12.3%	15.6%	-7.3%
Health Care	9.8%	14.1%	-12.9%
Industrials	8.9%	17.3%	-18.4%
Information Technology	10.8%	13.5%	-34.5%
Materials	11.4%	16.6%	-11.2%
Real Estate	3.4%	10.4%	-20.6%
Utilities	2.3%	13.0%	-11.1%
<b>Total</b>	<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	8.9%	58.8%	1.8%
Consumer Discretionary	4.9%	46.2%	5.6%
Consumer Staples	22.1%	77.4%	48.9%
Energy	9.9%	92.9%	40.2%
Financials	6.1%	44.6%	24.5%
Health Care	4.1%	53.5%	3.8%
Industrials	6.4%	49.7%	18.8%
Information Technology	18.6%	9.8%	-34.7%
Materials	14.1%	45.6%	10.6%
Real Estate	3.0%	13.8%	-15.4%
Utilities	1.9%	38.8%	26.8%
<b>Total</b>	<b>100.0%</b>	<b>9.7%</b>	<b>-20.1%</b>

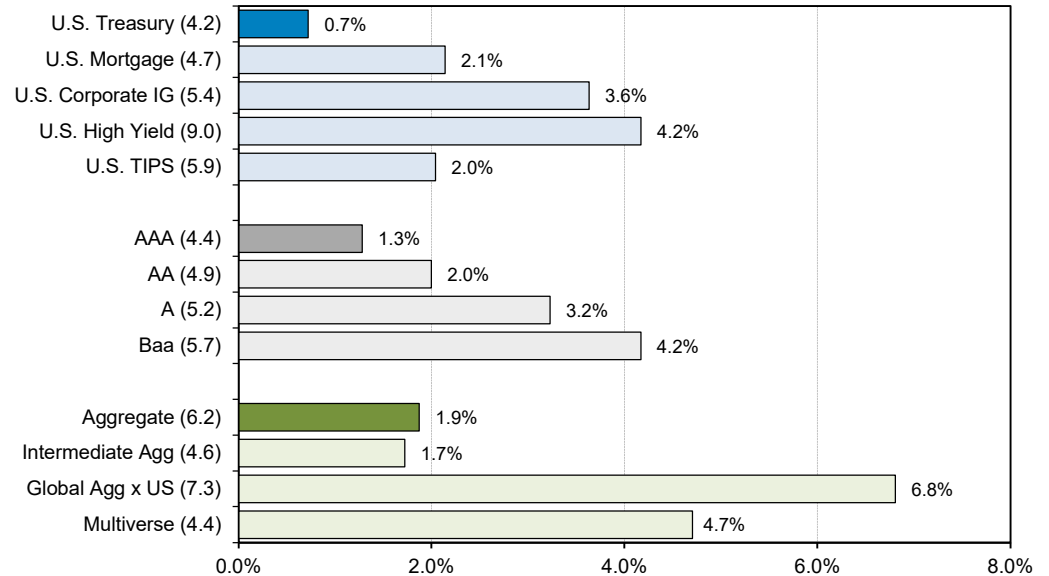
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	21.9%	14.0%	13.2%	-16.6%
United Kingdom	15.3%	9.8%	17.0%	-4.8%
France	11.8%	7.6%	22.2%	-13.3%
Switzerland	10.1%	6.5%	10.4%	-18.3%
Australia	7.9%	5.1%	15.7%	-5.3%
Germany	8.2%	5.2%	24.6%	-22.3%
Netherlands	4.3%	2.7%	21.0%	-27.7%
Sweden	3.3%	2.1%	18.1%	-28.4%
Hong Kong	3.0%	1.9%	18.2%	-4.7%
Denmark	3.0%	1.9%	31.6%	-4.8%
Spain	2.4%	1.5%	22.9%	-7.3%
Italy	2.3%	1.5%	26.4%	-14.4%
Singapore	1.5%	1.0%	10.5%	-11.0%
Belgium	1.0%	0.7%	22.6%	-12.5%
Finland	1.0%	0.7%	16.3%	-15.3%
Norway	0.8%	0.5%	16.9%	-7.0%
Israel	0.7%	0.5%	0.4%	-26.7%
Ireland	0.7%	0.4%	21.5%	-26.2%
Portugal	0.2%	0.1%	17.2%	0.2%
Austria	0.2%	0.1%	31.1%	-26.4%
New Zealand	0.2%	0.1%	24.5%	-13.6%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>63.9%</b>	<b>17.3%</b>	<b>-14.5%</b>
Canada		7.7%	7.4%	-12.9%
<b>Total Developed Countries</b>		<b>71.6%</b>	<b>16.2%</b>	<b>-14.3%</b>
China		9.2%	13.5%	-21.9%
Taiwan		3.9%	9.6%	-29.8%
India		4.1%	2.0%	-8.0%
Korea		3.2%	18.1%	-29.4%
Brazil		1.5%	2.4%	14.2%
Saudi Arabia		1.2%	-7.4%	-5.1%
South Africa		1.0%	18.3%	-3.9%
Mexico		0.6%	12.5%	-2.0%
Thailand		0.6%	16.1%	5.0%
Indonesia		0.5%	-3.6%	3.6%
Malaysia		0.4%	14.0%	-5.8%
United Arab Emirates		0.4%	-1.5%	-6.2%
Qatar		0.3%	-15.3%	-6.9%
Kuwait		0.3%	5.7%	10.1%
Philippines		0.2%	21.1%	-13.9%
Poland		0.2%	47.7%	-27.2%
Chile		0.2%	6.2%	19.4%
Turkey		0.2%	62.9%	90.4%
Peru		0.1%	17.4%	9.4%
Greece		0.1%	29.1%	0.3%
Colombia		0.0%	19.7%	-6.0%
Czech Republic		0.0%	6.5%	-14.4%
Hungary		0.1%	36.3%	-31.1%
Egypt		0.0%	28.5%	-22.6%
<b>Total Emerging Countries</b>		<b>28.4%</b>	<b>9.7%</b>	<b>-20.1%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>14.3%</b>	<b>-16.0%</b>

Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)

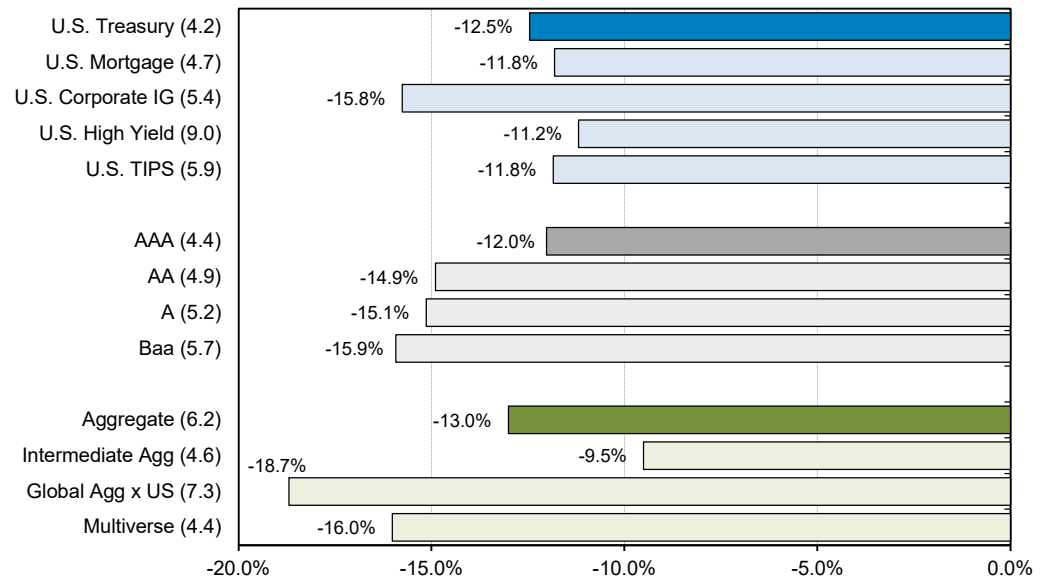


- After an extremely challenging year in fixed income markets, the 4th quarter's positive bond benchmark results were a welcome relief. Despite two rate increases during the quarter, bond performance was aided by lower investor concerns about rising inflation as US CPI declined. This was reflected in both intermediate and long-term interest rates which remained relatively stable during the quarter.
- The return for the BB US Aggregate Bond Index, the bellwether US investment grade benchmark, rose by 1.9% 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 3.6% and the US Mortgage Index component posting a return of 2.1%.
- High yield bonds outperformed their investment grade counterparts, surging 4.2% during the quarter. US TIPS, which have delivered strong performance in recent periods, rose by 2.0% as investors' expectations of future inflation declined.
- Outside of domestic markets, the Bloomberg Global Aggregate ex US Index posted a strong return of 6.8% for the quarter. Like domestic bonds, global bond index performance was positively impacted declining inflation, but the benchmark also received a boost from the decline in the USD for the quarter.
- Over the trailing 1-year period, the bellwether BB US Aggregate Bond Index declined by -13.0% and each of the benchmark's components fell by more than -10%. US TIPS, which are excluded from the bellwether index, dropped by -11.8% for the year.
- Lower quality high yield corporate bonds were down less than their investment grade counterparts on a relative basis with the Bloomberg US High Yield Index posting still discouraging return of -11.2% for the period.
- Performance for non-US bonds was also strongly negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -18.7%. The combination of rising interest rates overseas, elevated inflation, geopolitical risks, and USD strength earlier in the year hindered non-US index performance.

**Quarter Performance**



**1-Year Performance**

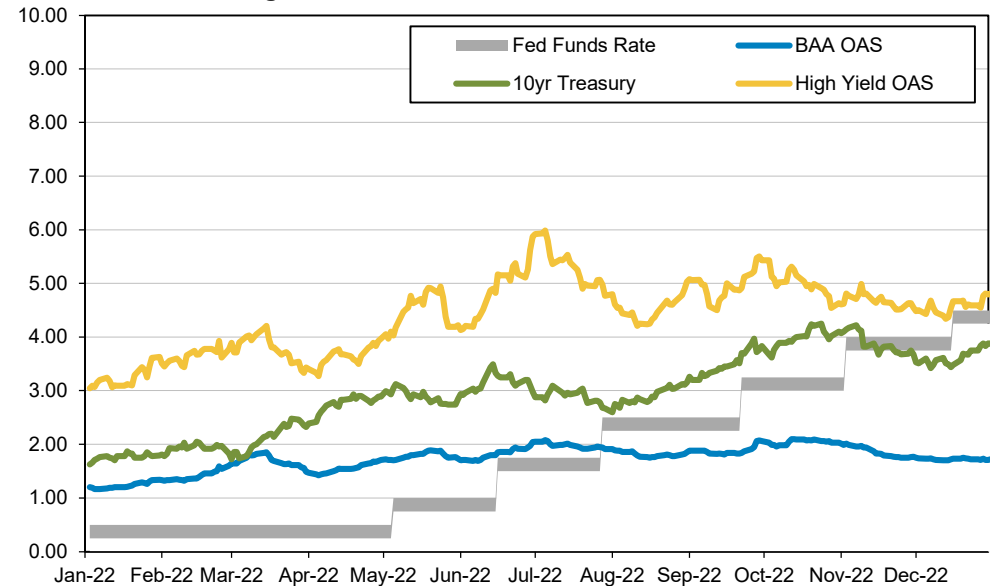


Source: Bloomberg

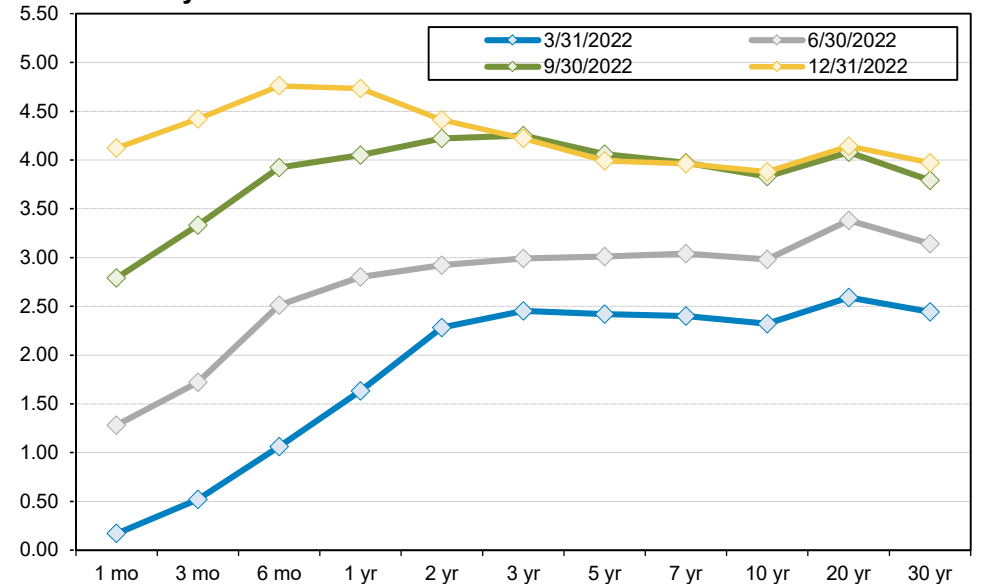


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 4th quarter this year, the Fed raised the lower end of its target rate range from 3.00% to 4.25% through a 0.75% increase in November and a 0.50% increase in December. During its December meeting, the Federal Open Market Committee (FOMC) stated it intends to monitor economic growth closely and will continue to raise interest rates to fight inflation if needed. 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.
- The yield on the US 10-year Treasury (green line) ended the period slightly higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields. The closing yield on the 10-Year Treasury was 3.88% at year-end, an increase of 0.08% from its 3rd quarter closing yield. The benchmark's rate peaked in October, reaching a high of roughly 4.25% before declining to end the quarter.
- 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 1.17% to 1.72%. High Yield OAS spreads rose from roughly 3.05% at the beginning of the year to 4.81% at year-end. During 2022, high yield spreads reached a level of 5.80% in early July before trading lower the remainder of the year.
- 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 4th quarter as the FOMC increased interest rates twice to combat elevated inflation. Despite these short-term rate increases, both intermediate and longer-term rates remained largely unchanged during the quarter. The yield curve remained inverted between 2-year and 10-year rates. Said differently, the short-term rate was higher than the long-term rate. Historically, a persistent inversion of these two key rates has been an indication of a future recession withing 6- to 24-months.

**1-Year Trailing Market Rates**



**Treasury Yield Curve**



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

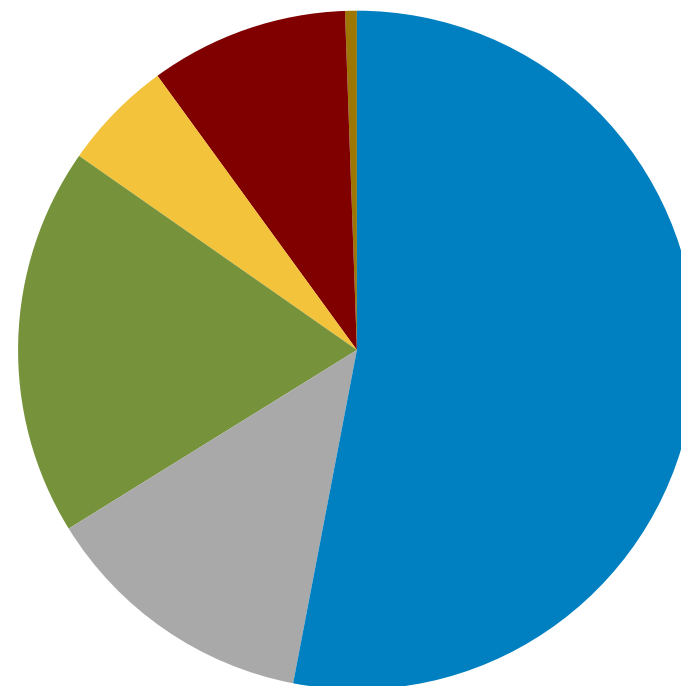
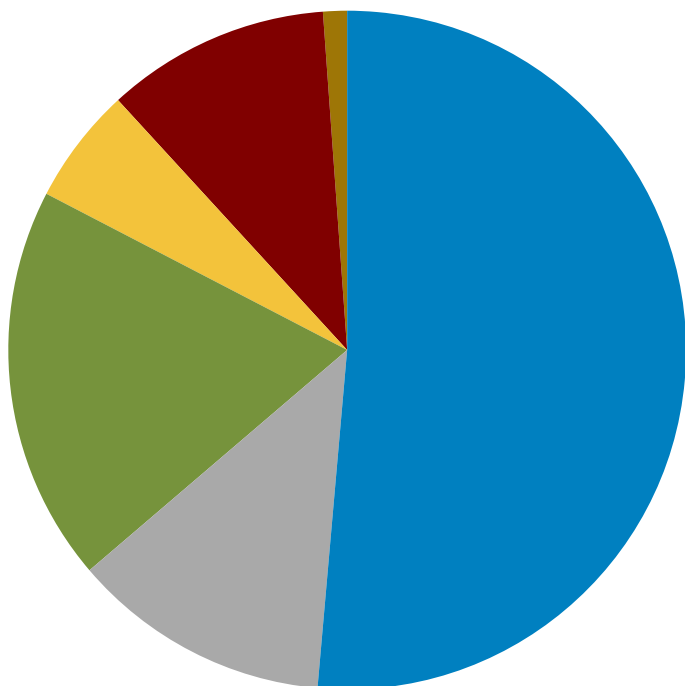


Page Intentionally Left Blank



Asset Allocation By Segment as of  
 September 30, 2022 : \$52,622,468

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



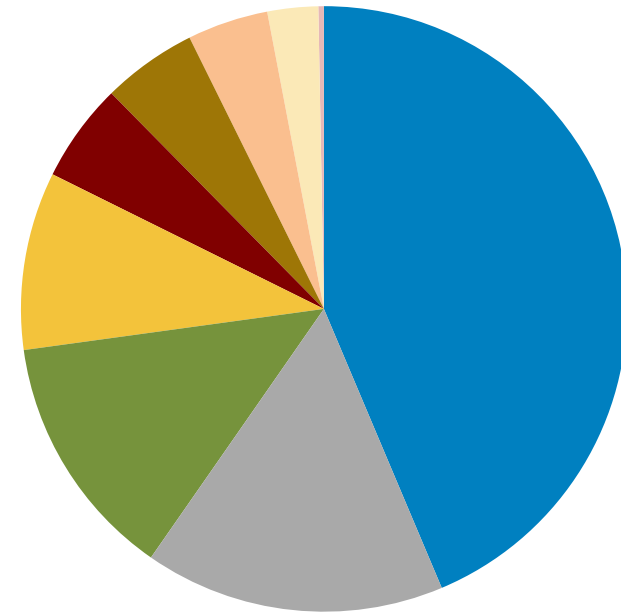
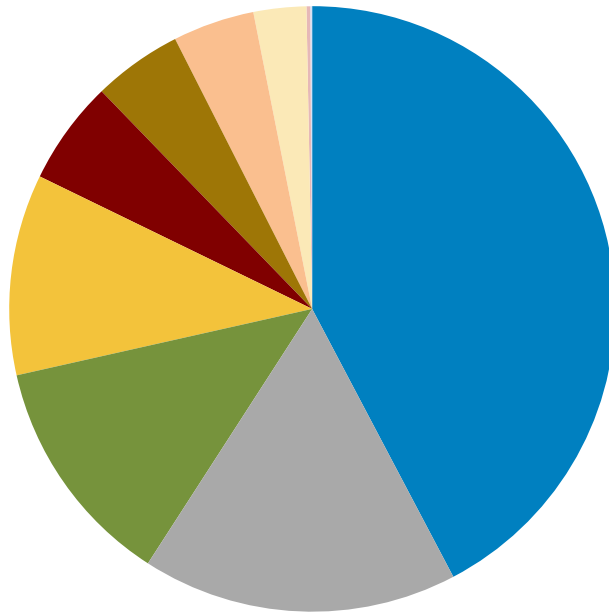
Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	27,045,781	51.4	Domestic Equity	29,810,099	53.0
International Equity	6,503,680	12.4	International Equity	7,400,184	13.2
Domestic Fixed Income	9,926,457	18.9	Domestic Fixed Income	10,410,745	18.5
Other Fixed Income	2,924,502	5.6	Other Fixed Income	2,970,414	5.3
Real Estate	5,619,568	10.7	Real Estate	5,315,341	9.5
Cash Equivalent	602,480	1.1	Cash Equivalent	318,044	0.6





Asset Allocation By Manager as of  
Sep-2022 : \$52,622,468

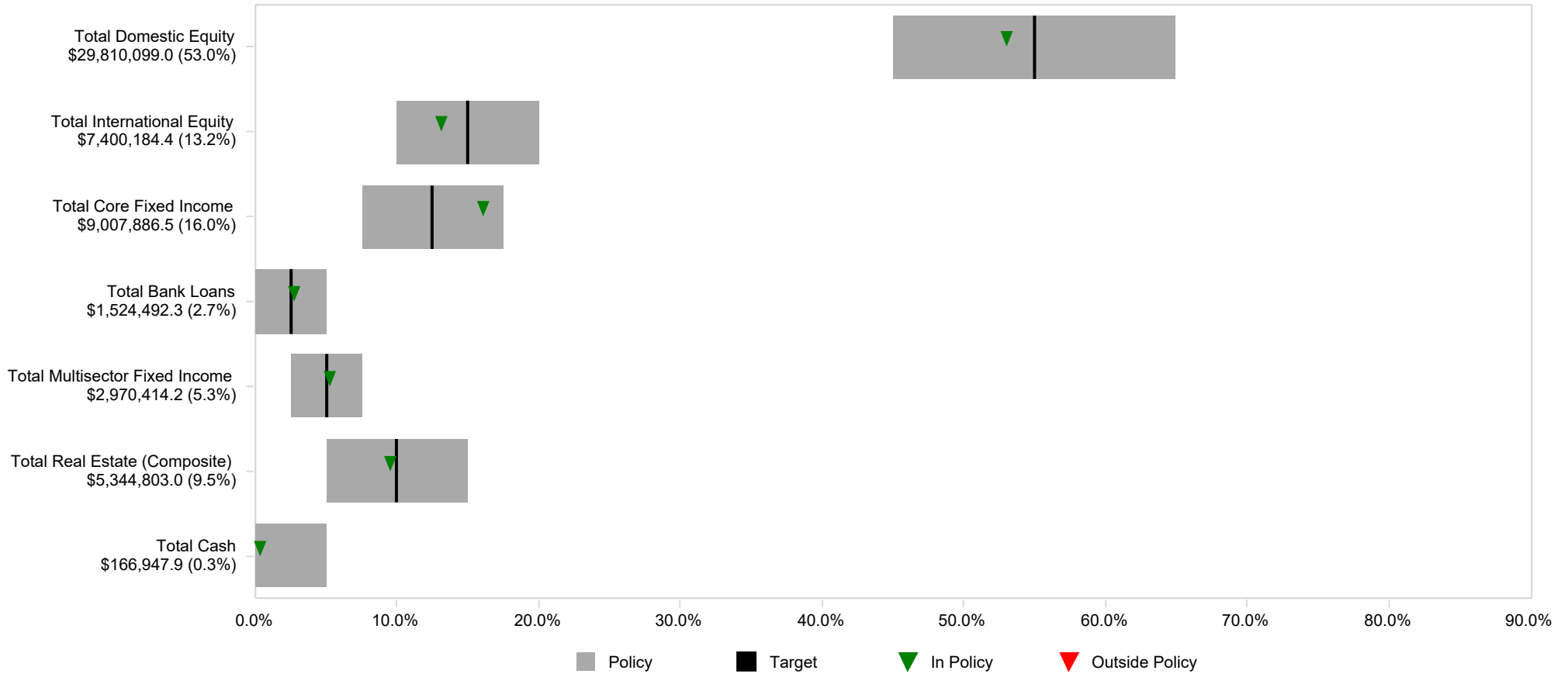
Asset Allocation By Manager as of  
Dec-2022 : \$56,224,827



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
Vanguard Total Stock Index (VITSX)	22,252,842	42.3	Vanguard Total Stock Index (VITSX)	24,539,780	43.6
Garcia Hamilton	8,856,216	16.8	Garcia Hamilton	9,007,886	16.0
EuroPacific Growth R6 (RERGX)	6,503,680	12.4	EuroPacific Growth R6 (RERGX)	7,400,184	13.2
Clarion (Core Real Estate)	5,650,001	10.7	Clarion (Core Real Estate)	5,344,803	9.5
Apollo Total Return Fund	2,924,502	5.6	Apollo Total Return Fund	2,970,414	5.3
American Beacon SC Value R6 (AASRX)	2,503,896	4.8	American Beacon SC Value R6 (AASRX)	2,848,229	5.1
Conestoga Small Cap I (CCALX)	2,289,043	4.3	Conestoga Small Cap I (CCALX)	2,422,090	4.3
Pacific Funds Floating Rate (PLFRX)	1,483,914	2.8	Pacific Funds Floating Rate (PLFRX)	1,524,492	2.7
Mutual Fund Cash	100,785	0.2	Mutual Fund Cash	163,522	0.3
Frost Bank Cash Account	57,589	0.1	Frost Bank Cash Account	3,426	0.0



**Executive Summary**



**Asset Allocation Compliance**

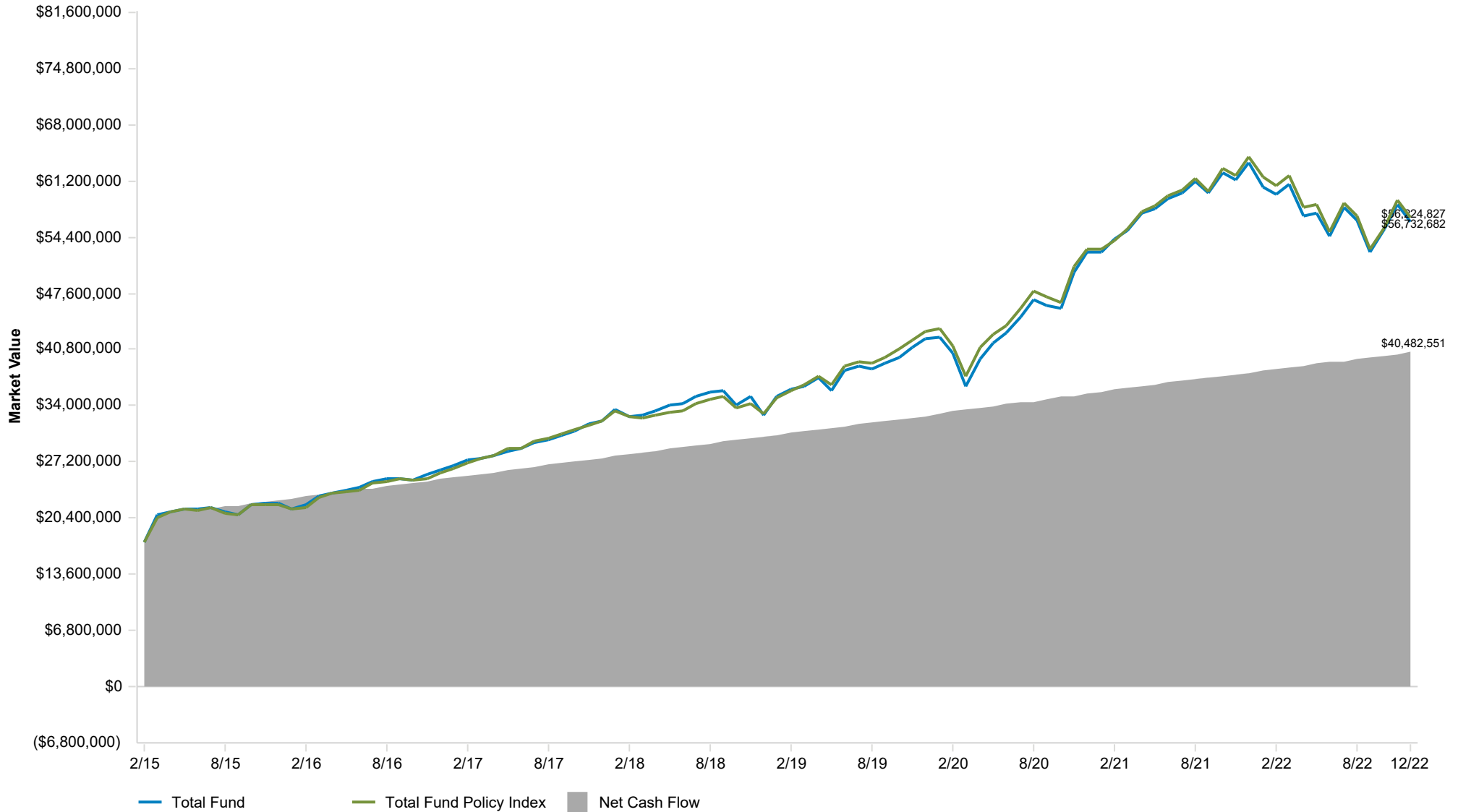
	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)	Target Rebal. (\$000)
<b>Total Fund</b>	<b>56,224,827</b>	<b>100.0</b>	<b>N/A</b>	<b>N/A</b>	<b>100.0</b>	<b>-</b>
Total Domestic Equity	29,810,099	53.0	45.0	65.0	55.0	1,113,556
Total International Equity	7,400,184	13.2	10.0	20.0	15.0	1,033,540
Total Core Fixed Income	9,007,886	16.0	7.5	17.5	12.5	-1,979,783
Total Bank Loans	1,524,492	2.7	0.0	5.0	2.5	-118,872
Total Multisector Fixed Income	2,970,414	5.3	2.5	7.5	5.0	-159,173
Total Real Estate (Composite)	5,344,803	9.5	5.0	15.0	10.0	277,680
Total Cash	166,948	0.3	0.0	5.0	0.0	-166,948

Overweight to Multisector fixed income is in line with proposed IPS update.



**Schedule of Investable Assets**  
**Total Fund**  
 Since Inception Ending December 31, 2022

**Schedule of Investable Assets**



**Schedule of Investable Assets**

Periods Ending	Beginning Market Value \$	Net Cash Flow \$	Ending Market Value \$
Inception	17,541,325	22,941,226	56,224,827



The Woodlands Firefighters' Retirement System  
Financial Reconciliation

1 Quarter Ending December 31, 2022

Financial Reconciliation One Quarter									
	Market Value 10/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 12/31/2022
<b>Total Fund</b>	<b>52,622,468</b>	<b>-</b>	<b>790,967</b>	<b>-74,217</b>	<b>-27,594</b>	<b>-32,975</b>	<b>415,270</b>	<b>2,530,907</b>	<b>56,224,827</b>
<b>Total Domestic Equity</b>	<b>27,045,781</b>	<b>700,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>160,761</b>	<b>1,903,557</b>	<b>29,810,099</b>
Vanguard Total Stock Index (VITSX)	22,252,842	700,000	-	-	-	-	116,434	1,470,505	24,539,780
American Beacon SC Value R6 (AASRX)	2,503,896	-	-	-	-	-	44,327	300,006	2,848,229
Conestoga Small Cap I (CCALX)	2,289,043	-	-	-	-	-	-	133,047	2,422,090
<b>Total International Developed Equity</b>	<b>6,503,680</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>107,537</b>	<b>788,968</b>	<b>7,400,184</b>
EuroPacific Growth R6 (RERGX)	6,503,680	-	-	-	-	-	107,537	788,968	7,400,184
<b>Total Core Fixed Income</b>	<b>8,856,216</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-12,166</b>	<b>-686</b>	<b>74,542</b>	<b>89,980</b>	<b>9,007,886</b>
Garcia Hamilton	8,856,216	-	-	-	-12,166	-686	74,542	89,980	9,007,886
<b>Total Bank Loans</b>	<b>1,483,914</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29,193</b>	<b>11,385</b>	<b>1,524,492</b>
Pacific Funds Floating Rate (PLFRX)	1,483,914	-	-	-	-	-	29,193	11,385	1,524,492
<b>Total Multisector Fixed Income</b>	<b>2,924,502</b>	<b>-20,974</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>66,886</b>	<b>2,970,414</b>
Apollo Total Return Fund	2,924,502	-20,974	-	-	-	-	-	66,886	2,970,414
<b>Total Real Estate</b>	<b>5,650,001</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-15,428</b>	<b>-</b>	<b>40,099</b>	<b>-329,869</b>	<b>5,344,803</b>
Clarion	5,650,001	-	-	-	-15,428	-	40,099	-329,869	5,344,803
<b>Total Cash</b>	<b>158,373</b>	<b>-679,026</b>	<b>790,967</b>	<b>-74,217</b>	<b>-</b>	<b>-32,289</b>	<b>3,138</b>	<b>-</b>	<b>166,948</b>
Frost Bank Cash Account	57,589	20,974	-	-74,217	-	-1,313	392	-	3,426
Mutual Fund Cash	100,785	-700,000	790,967	-	-	-30,976	2,746	-	163,522



The Woodlands Firefighters' Retirement System  
Financial Reconciliation

Year To Date Ending December 31, 2022

Financial Reconciliation Year to Date									
	Market Value 01/01/2022	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 12/31/2022
<b>Total Fund</b>	<b>63,441,556</b>	<b>-</b>	<b>3,121,620</b>	<b>-354,304</b>	<b>-85,067</b>	<b>-169,400</b>	<b>1,133,294</b>	<b>-10,862,871</b>	<b>56,224,827</b>
<b>Total Domestic Equity</b>	<b>36,202,504</b>	<b>450,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>435,038</b>	<b>-7,277,443</b>	<b>29,810,099</b>
Vanguard Total Stock Index (VITSX)	29,247,917	950,000	-	-	-	-	390,711	-6,048,848	24,539,780
American Beacon SC Value R6 (AASRX)	3,586,523	-500,000	-	-	-	-	44,327	-282,621	2,848,229
Conestoga Small Cap I (CCALX)	3,368,064	-	-	-	-	-	-	-945,974	2,422,090
<b>Total International Developed Equity</b>	<b>8,485,942</b>	<b>950,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>147,141</b>	<b>-2,182,899</b>	<b>7,400,184</b>
EuroPacific Growth R6 (RERGX)	8,485,942	950,000	-	-	-	-	147,141	-2,182,899	7,400,184
<b>Total Core Fixed Income</b>	<b>12,116,613</b>	<b>-1,750,000</b>	<b>-</b>	<b>-</b>	<b>-26,654</b>	<b>-3,195</b>	<b>275,847</b>	<b>-1,604,725</b>	<b>9,007,886</b>
Garcia Hamilton	12,116,613	-1,750,000	-	-	-26,654	-3,195	275,847	-1,604,725	9,007,886
<b>Total Bank Loans</b>	<b>1,536,887</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>83,485</b>	<b>-95,880</b>	<b>1,524,492</b>
Pacific Funds Floating Rate (PLFRX)	1,536,887	-	-	-	-	-	83,485	-95,880	1,524,492
<b>Total Multisector Fixed Income</b>	<b>-</b>	<b>2,961,192</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17,834</b>	<b>-8,611</b>	<b>2,970,414</b>
Apollo Total Return Fund	-	2,961,192	-	-	-	-	17,834	-8,611	2,970,414
<b>Total Real Estate</b>	<b>4,927,376</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-58,413</b>	<b>-</b>	<b>169,153</b>	<b>306,687</b>	<b>5,344,803</b>
Clarion	4,927,376	-	-	-	-58,413	-	169,153	306,687	5,344,803
<b>Total Cash</b>	<b>172,234</b>	<b>-2,611,192</b>	<b>3,121,620</b>	<b>-354,304</b>	<b>-</b>	<b>-166,205</b>	<b>4,795</b>	<b>-</b>	<b>166,948</b>
Frost Bank Cash Account	30,383	331,974	-	-354,304	-	-5,257	630	-	3,426
Mutual Fund Cash	141,851	-2,943,166	3,121,620	-	-	-160,948	4,165	-	163,522



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

As of December 31, 2022

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	
<b>Total Fund (Net)</b>	<b>56,224,827</b>	<b>100.0</b>	<b>5.55</b>	<b>(56)</b>	<b>-15.28</b>	<b>(73)</b>	<b>-15.28</b>	<b>(73)</b>	<b>-1.15</b>	<b>(53)</b>	<b>4.57</b>	<b>(21)</b>	<b>5.34</b>	<b>(33)</b>	<b>5.54</b>	<b>(47)</b>	<b>03/01/2015</b>
Total Fund Policy Index			6.01	(40)	-15.33	(73)	-15.33	(73)	-0.79	(45)	4.36	(25)	5.73	(18)	5.72	(38)	
All Public Plans-Total Fund (Net)			5.69		-13.85		-13.85		-1.07		3.56		4.91		5.48		
<b>New Portfolio Structure 10/1/19</b>	<b>56,224,827</b>	<b>100.0</b>	<b>5.55</b>		<b>-15.28</b>		<b>-15.28</b>		<b>-1.15</b>		<b>4.57</b>		<b>-</b>		<b>6.13</b>		<b>10/01/2019</b>
Total Fund Policy Index			6.01		-15.33		-15.33		-0.79		4.36		5.73		6.04		
<b>Total Equity</b>	<b>37,210,283</b>	<b>66.2</b>	<b>8.84</b>		<b>-19.87</b>		<b>-19.87</b>		<b>-1.86</b>		<b>5.47</b>		<b>6.50</b>		<b>7.26</b>		<b>03/01/2015</b>
<b>Total Domestic Equity</b>	<b>29,810,099</b>	<b>53.0</b>	<b>7.66</b>		<b>-19.20</b>		<b>-19.20</b>		<b>0.54</b>		<b>6.90</b>		<b>-</b>		<b>8.46</b>		<b>07/01/2019</b>
Vanguard Total Stock Index (VITSX)	24,539,780	43.6	7.15	(64)	-19.51	(64)	-19.51	(64)	0.60	(58)	6.99	(38)	-		8.95	(34)	07/01/2019
CRSP U.S. Total Market TR Index			7.15	(64)	-19.49	(63)	-19.49	(63)	0.61	(57)	6.99	(38)	8.73	(-)	8.95	(35)	
IM U.S. Multi-Cap Core Equity (MF) Median			8.06		-18.37		-18.37		1.15		6.48		-		8.29		
American Beacon SC Value R6 (AASRX)	2,848,229	5.1	13.75	(16)	-7.72	(27)	-7.72	(27)	8.77	(51)	7.17	(40)	-		8.51	(45)	07/01/2019
Russell 2000 Value Index			8.42	(90)	-14.48	(96)	-14.48	(96)	4.73	(94)	4.70	(88)	4.13	(-)	6.29	(86)	
IM U.S. Small Cap Value Equity (MF) Median			11.70		-11.09		-11.09		8.78		6.79		-		8.39		
Conestoga Small Cap I (CCALX)	2,422,090	4.3	5.81	(36)	-28.09	(54)	-28.09	(54)	-8.52	(36)	3.00	(56)	-		3.02	(67)	07/01/2019
Russell 2000 Growth Index			4.13	(56)	-26.36	(44)	-26.36	(44)	-12.98	(66)	0.65	(83)	3.51	(-)	2.45	(73)	
IM U.S. Small Cap Growth Equity (MF) Median			4.46		-27.54		-27.54		-10.28		3.48		-		3.96		
<b>Total International Developed Equity</b>	<b>7,400,184</b>	<b>13.2</b>	<b>13.78</b>		<b>-22.65</b>		<b>-22.65</b>		<b>-10.81</b>		<b>-0.09</b>		<b>-</b>		<b>2.24</b>		<b>07/01/2019</b>
EuroPacific Growth R6 (RERGX)	7,400,184	13.2	13.78	(86)	-22.74	(100)	-22.74	(100)	-10.87	(100)	-0.16	(68)	-		2.18	(58)	07/01/2019
MSCI AC World ex USA (Net)			14.28	(83)	-16.00	(61)	-16.00	(61)	-4.83	(69)	0.07	(61)	0.88	(-)	2.01	(61)	
IM International Large Cap Core Equity (MF) Median			17.09		-15.06		-15.06		-3.15		0.82		-		2.49		

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 December 31, 2022

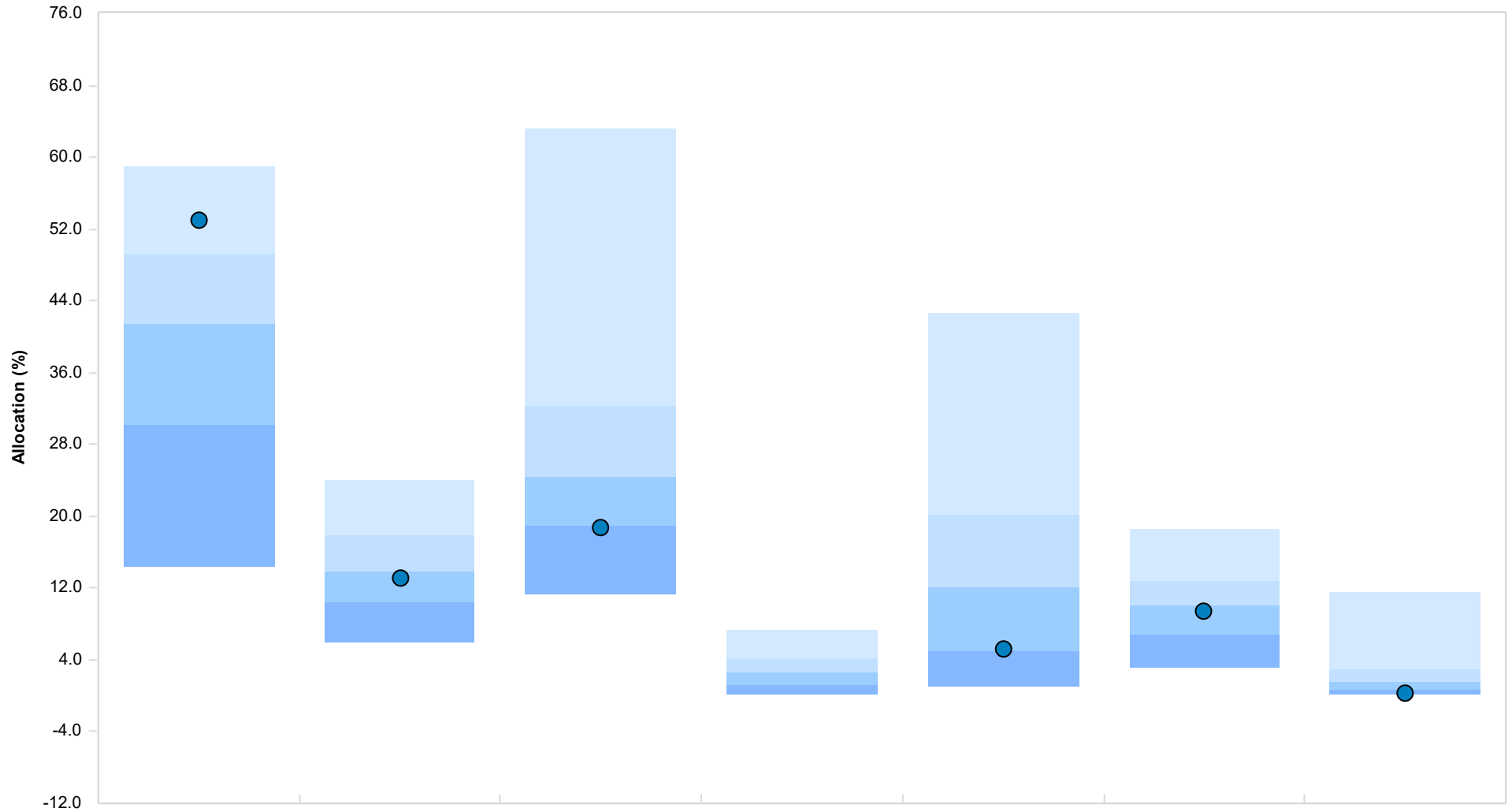
	Allocation		All Performance Data is Net of Fees(%)							
	Market Value	%	QTR	YTD	1 YR	2 YR	3 YR	5 YR	Inception	Inception Date
<b>Total Fixed Income</b>	<b>13,502,793</b>	<b>24.0</b>	<b>1.96</b>	<b>-9.55</b>	<b>-9.55</b>	<b>-5.70</b>	<b>-1.63</b>	<b>0.33</b>	<b>0.74</b>	<b>03/01/2015</b>
<b>Total Core Fixed Income</b>	<b>9,007,886</b>	<b>16.0</b>	<b>1.72</b>	<b>-11.39</b>	<b>-11.39</b>	<b>-7.00</b>	<b>-2.35</b>	<b>-</b>	<b>-1.40</b>	<b>07/01/2019</b>
Garcia Hamilton	9,007,886	16.0	1.86 (44)	-11.15 (8)	-11.15 (8)	-6.76 (21)	-2.11 (43)	-	-1.16 (50)	07/01/2019
Blmbg. U.S. Aggregate Index			1.87 (42)	-13.01 (55)	-13.01 (55)	-7.45 (67)	-2.71 (90)	0.02 (-)	-1.65 (91)	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			1.82	-12.95	-12.95	-7.27	-2.20	-	-1.17	
<b>Total Bank Loans</b>	<b>1,524,492</b>	<b>2.7</b>	<b>2.73</b>	<b>-0.81</b>	<b>-0.81</b>	<b>1.86</b>	<b>1.77</b>	<b>-</b>	<b>2.27</b>	<b>07/01/2019</b>
Pacific Funds Floating Rate (PLFRX)	1,524,492	2.7	2.73 (43)	-0.81 (14)	-0.81 (14)	1.86 (20)	1.77 (17)	-	2.28 (17)	07/01/2019
Credit Suisse Leveraged Loan Index			2.34 (66)	-1.06 (20)	-1.06 (20)	2.12 (12)	2.34 (2)	3.24 (-)	2.75 (4)	
IM U.S. Bank Loans (MF) Median			2.63	-2.22	-2.22	0.89	1.10	-	1.58	
<b>Total Multisector Fixed Income</b>	<b>2,970,414</b>	<b>5.3</b>	<b>2.30</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-1.40</b>	<b>04/01/2022</b>
Apollo Total Return Fund	2,970,414	5.3	2.30	-	-	-	-	-	-1.64	04/01/2022
Blmbg. Global Multiverse			4.71	-16.01	-16.01	-10.44	-4.37	-1.57	-10.60	
<b>Total Real Estate</b>	<b>5,344,803</b>	<b>9.5</b>	<b>-5.13 (48)</b>	<b>9.63 (14)</b>	<b>9.63 (14)</b>	<b>15.81 (34)</b>	<b>11.09 (30)</b>	<b>-</b>	<b>10.87 (32)</b>	<b>10/01/2019</b>
NCREIF Fund Index-ODCE (VW)			-4.97 (40)	7.47 (41)	7.47 (41)	14.58 (42)	9.93 (45)	8.68 (-)	9.64 (44)	
IM U.S. Open End Private Real Estate (SA+CF) Median			-5.18	6.78	6.78	14.03	9.72	-	9.45	
Clarion	5,344,803	9.5	-5.13 (48)	9.63 (14)	9.63 (14)	15.81 (34)	11.09 (30)	-	10.87 (32)	10/01/2019
NCREIF Fund Index-ODCE (VW)			-4.97 (40)	7.47 (41)	7.47 (41)	14.58 (42)	9.93 (45)	8.68 (-)	9.64 (44)	
IM U.S. Open End Private Real Estate (SA+CF) Median			-5.18	6.78	6.78	14.03	9.72	-	9.45	
<b>Total Cash</b>	<b>166,948</b>	<b>0.3</b>	<b>0.93</b>	<b>1.68</b>	<b>1.68</b>	<b>0.84</b>	<b>0.80</b>	<b>-</b>	<b>0.96</b>	<b>07/01/2019</b>
Frost Bank Cash Account	3,426	0.0	0.86	1.66	1.66	0.84	0.79	-	0.92	07/01/2019
Mutual Fund Cash	163,522	0.3	0.94	1.69	1.69	0.82	0.77	-	0.95	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	53.02 (12)	13.16 (57)	18.73 (77)	N/A	5.28 (72)	9.51 (57)	0.30 (87)
5th Percentile	58.95	24.04	63.20	7.33	42.67	18.63	11.60
1st Quartile	49.07	17.92	32.33	4.22	20.10	12.70	2.96
Median	41.41	13.78	24.34	2.66	12.06	10.20	1.51
3rd Quartile	30.17	10.47	18.92	1.17	4.97	6.86	0.67
95th Percentile	14.35	5.99	11.41	0.07	1.05	3.02	0.08

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



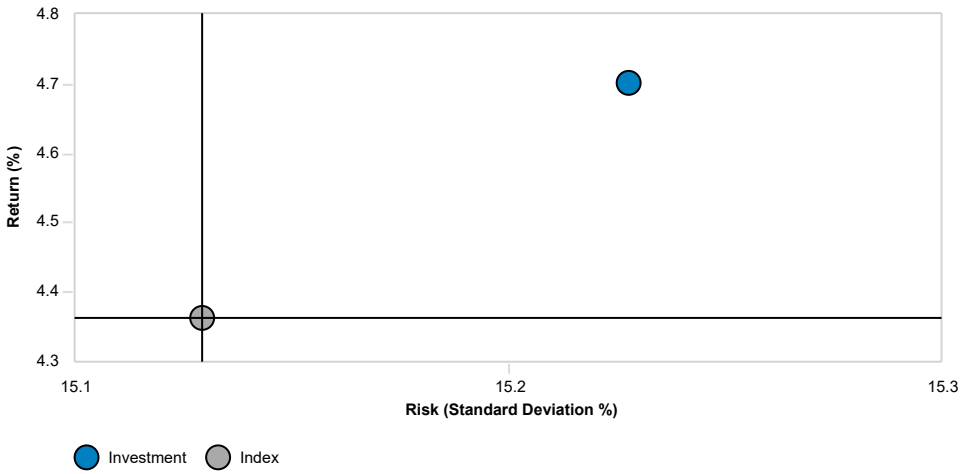
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.70	15.23	0.33	100.96	8	99.45	4
Index	4.36	15.13	0.31	100.00	8	100.00	4

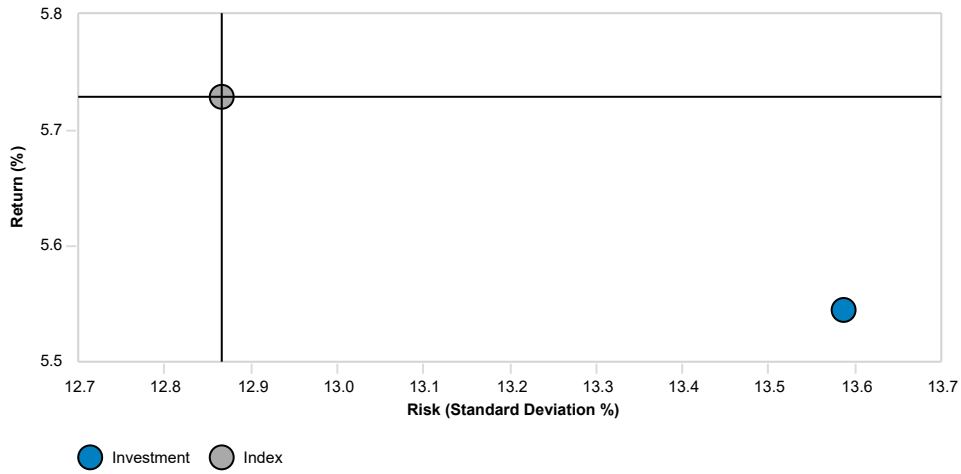
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.54	13.59	0.37	104.16	14	106.51	6
Index	5.73	12.87	0.40	100.00	14	100.00	6

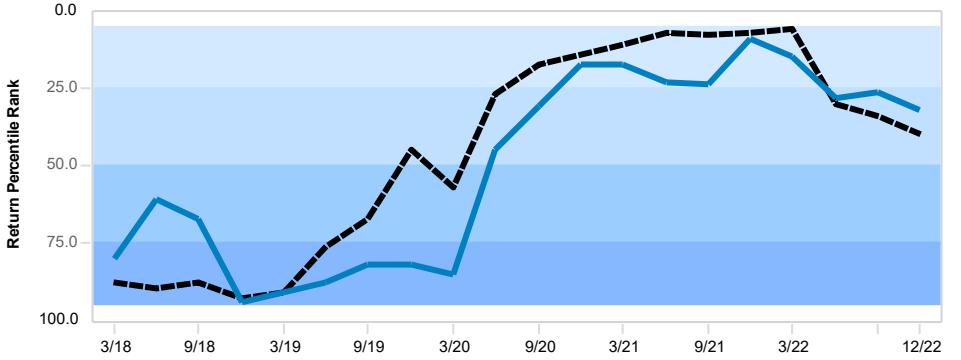
**Risk and Return 3 Years**



**Risk and Return 5 Years**

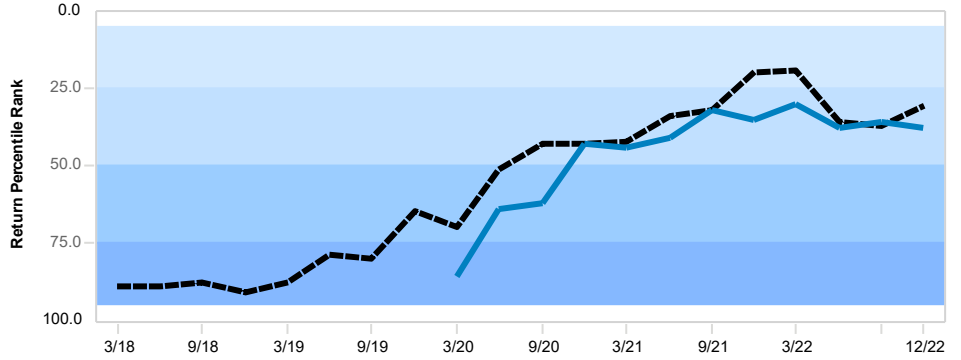


**3 Year Rolling Percentile Rank All Public Plans-Total Fund**



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

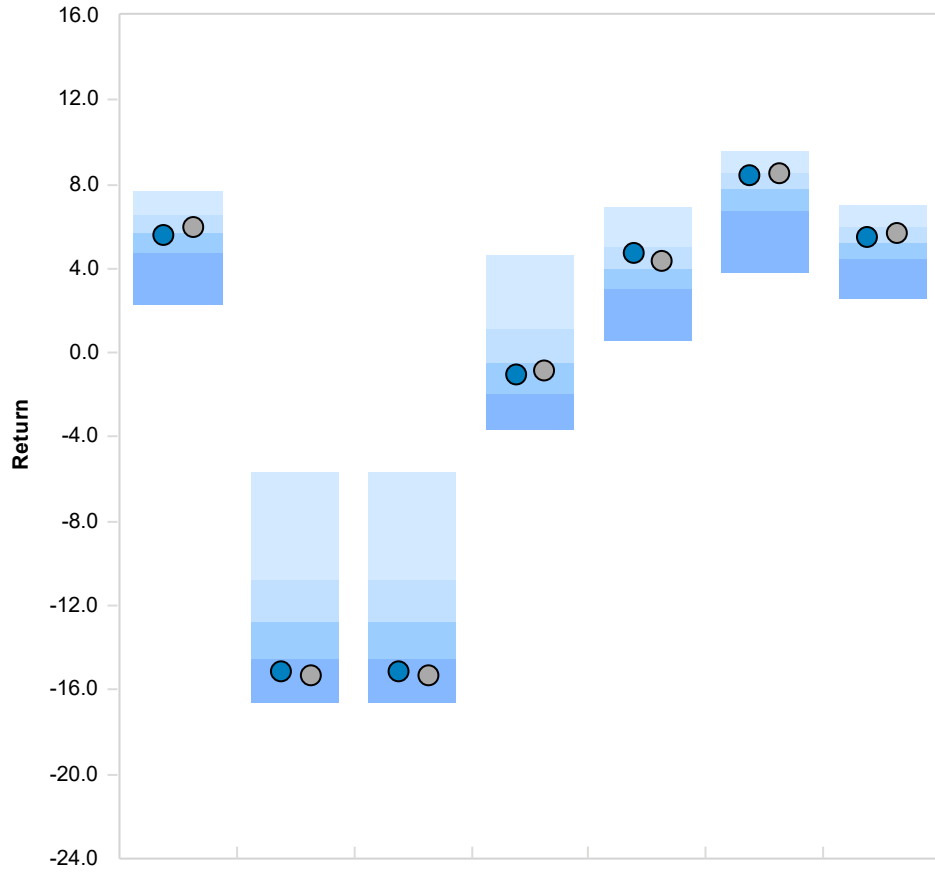
**5 Year Rolling Percentile Rank All Public Plans-Total Fund**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	0 (0%)	9 (75%)	2 (17%)	1 (8%)
Index	20	2 (10%)	8 (40%)	3 (15%)	7 (35%)

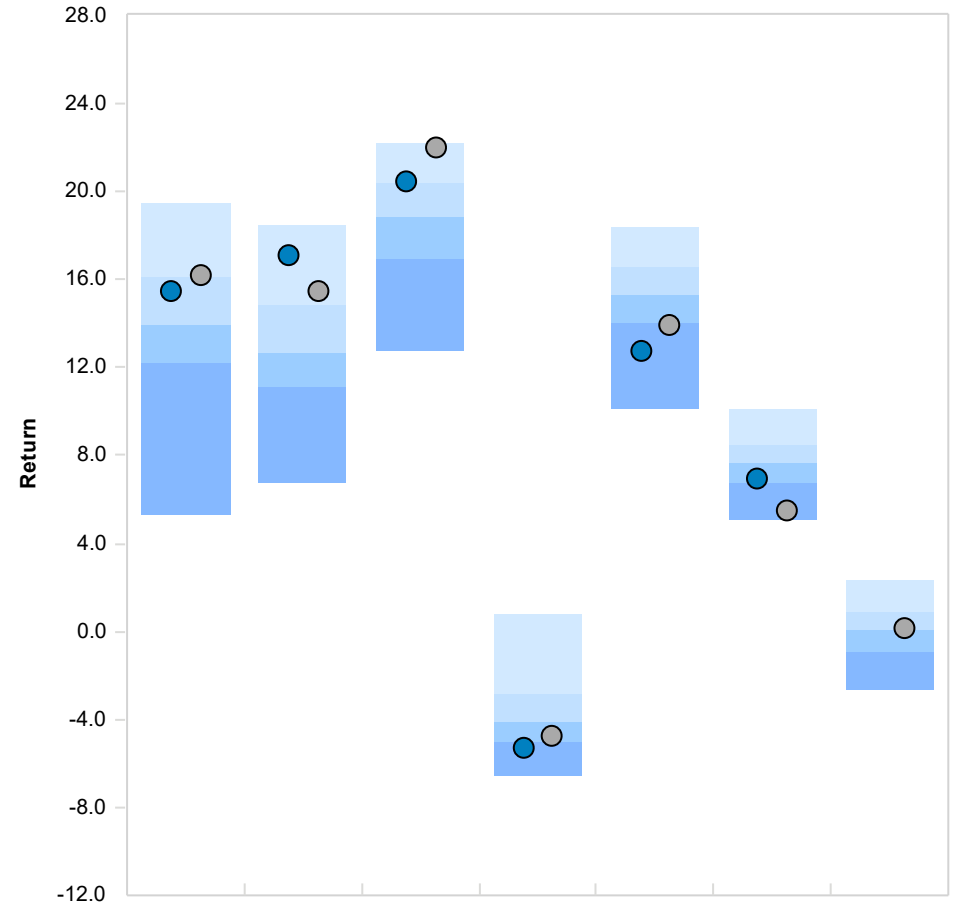


**Peer Group Analysis - All Public Plans-Total Fund**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	5.60 (53)	-15.16 (83)	-15.16 (83)	-1.02 (58)	4.70 (32)	8.44 (28)	5.54 (38)
● Index	6.01 (40)	-15.33 (85)	-15.33 (85)	-0.79 (55)	4.36 (40)	8.52 (25)	5.73 (31)
Median	5.66	-12.78	-12.78	-0.49	3.98	7.74	5.17

**Peer Group Analysis - All Public Plans-Total Fund**



	2021	2020	2019	2018	2017	2016	2015
● Investment	15.48 (31)	17.15 (9)	20.46 (23)	-5.28 (80)	12.72 (88)	7.00 (71)	N/A
● Index	16.24 (24)	15.50 (19)	22.02 (6)	-4.75 (66)	13.90 (77)	5.47 (94)	0.13 (48)
Median	13.97	12.71	18.86	-4.08	15.33	7.64	0.07

**Comparative Performance**

	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	1 Qtr Ending Jun-2021
Investment	-4.41 (54)	-11.25 (82)	-5.29 (77)	5.19 (20)	0.14 (44)	5.77 (31)
Index	-4.80 (71)	-12.16 (95)	-4.50 (57)	5.98 (7)	0.04 (50)	6.06 (20)
Median	-4.30	-9.88	-4.29	4.34	0.04	5.44



**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.98	21.49	0.39	99.99	7	100.00	5
Index	6.99	21.49	0.39	100.00	7	100.00	5

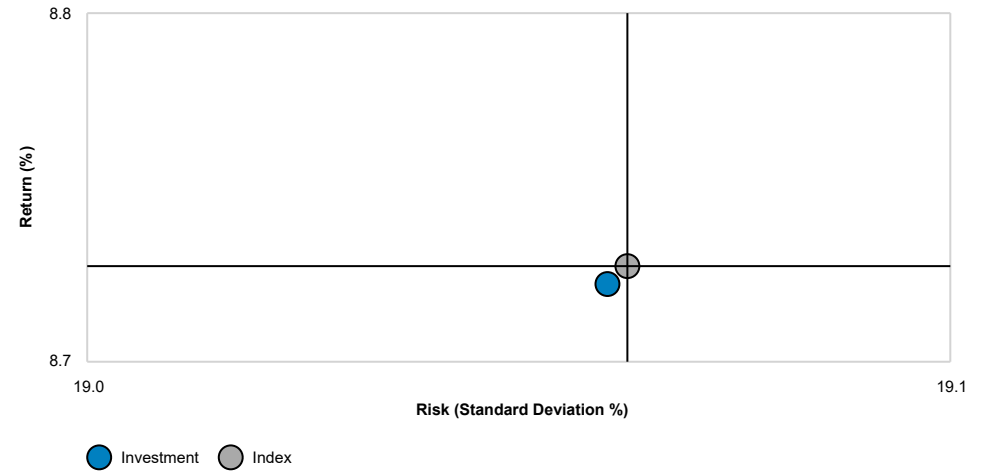
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.72	19.06	0.47	99.98	13	100.00	7
Index	8.73	19.06	0.47	100.00	13	100.00	7

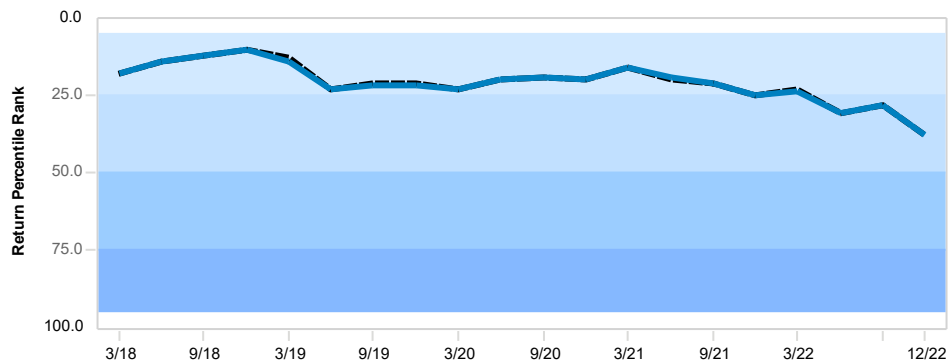
**Risk and Return 3 Years**



**Risk and Return 5 Years**

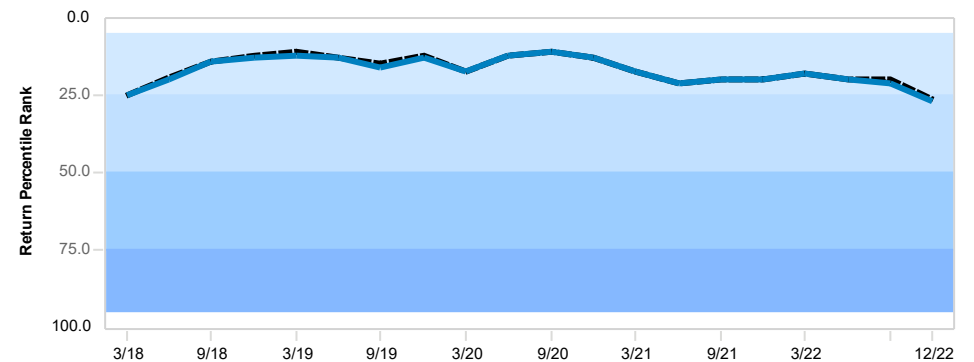


**3 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)
Index	20	17 (85%)	3 (15%)	0 (0%)	0 (0%)

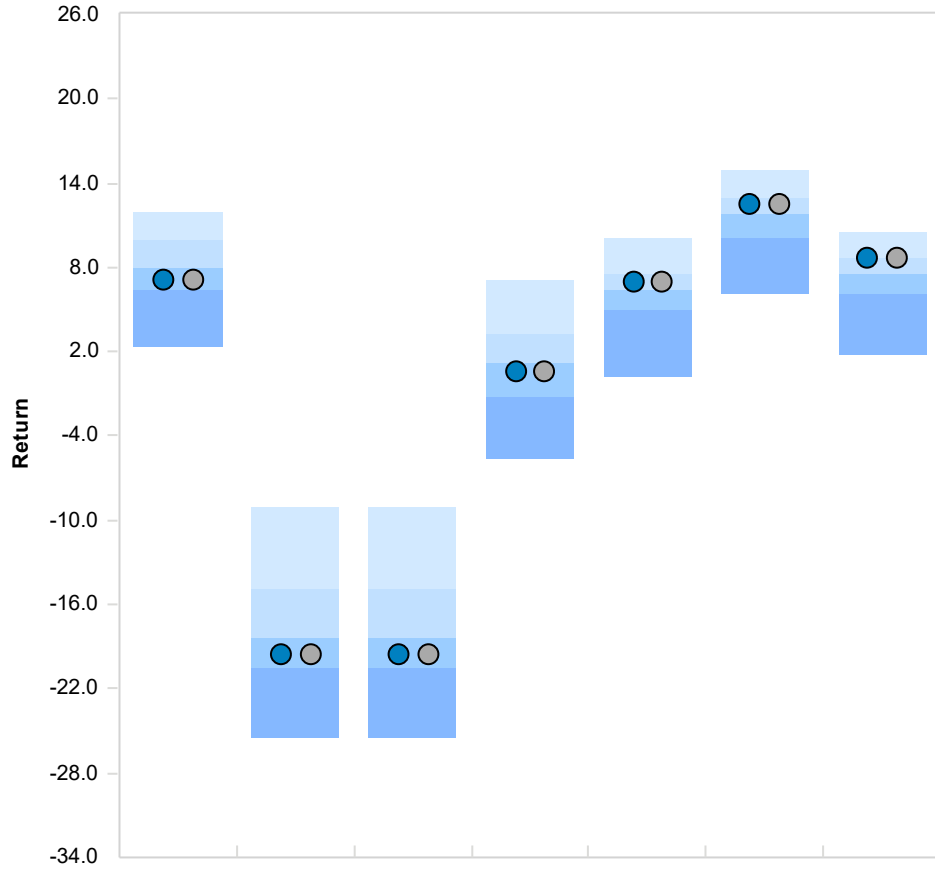
**5 Year Rolling Percentile Rank IM U.S. Multi-Cap Core Equity (MF)**



	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%)

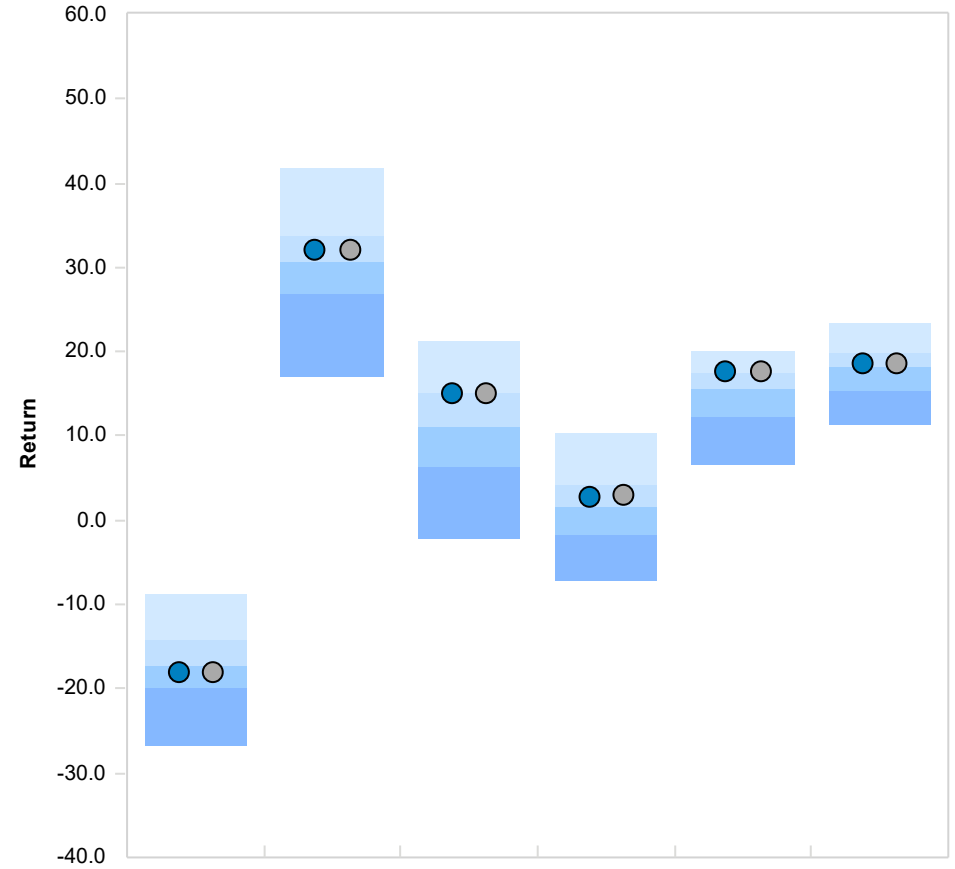


**Peer Group Analysis - IM U.S. Multi-Cap Core Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	7.16 (63)	-19.51 (64)	-19.51 (64)	0.60 (58)	6.98 (38)	12.50 (34)	8.72 (27)
● Index	7.15 (64)	-19.49 (63)	-19.49 (63)	0.61 (57)	6.99 (38)	12.51 (34)	8.73 (26)
Median	8.06	-18.37	-18.37	1.15	6.48	11.81	7.55

**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 Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-4.46 (41)	-16.84 (78)	-5.46 (43)	9.16 (49)	-0.06 (41)	8.29 (30)
Index	-4.44 (39)	-16.85 (79)	-5.44 (42)	9.16 (50)	-0.06 (41)	8.29 (30)
Median	-4.63	-15.83	-5.87	9.15	-0.23	7.66



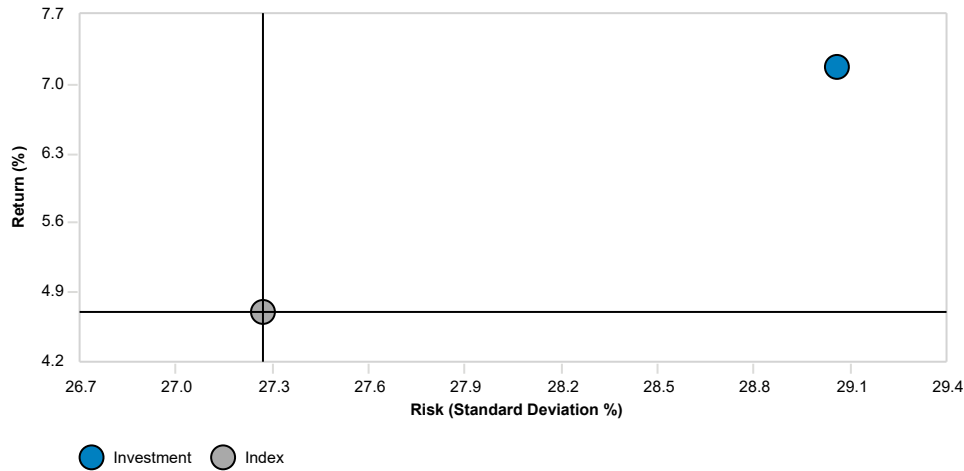
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.17	29.06	0.36	107.96	7	101.07	5
Index	4.70	27.27	0.28	100.00	7	100.00	5

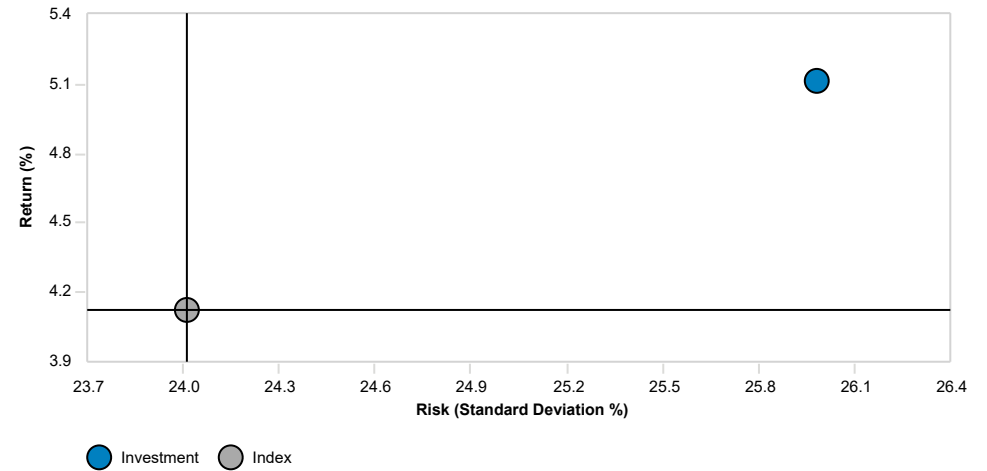
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.11	25.99	0.28	108.84	12	105.82	8
Index	4.13	24.01	0.24	100.00	12	100.00	8

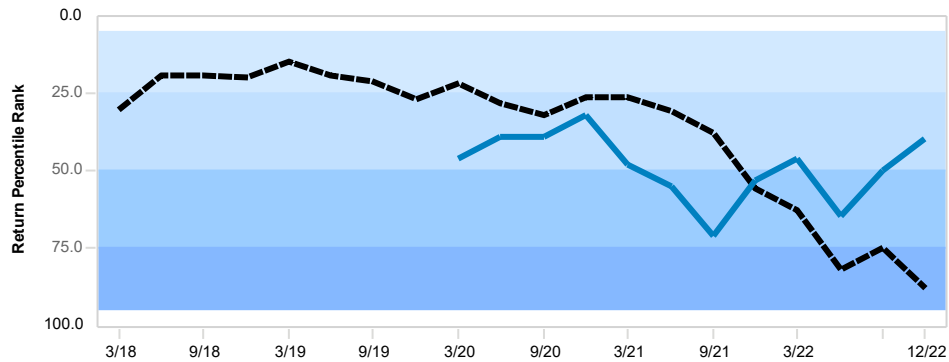
**Risk and Return 3 Years**



**Risk and Return 5 Years**

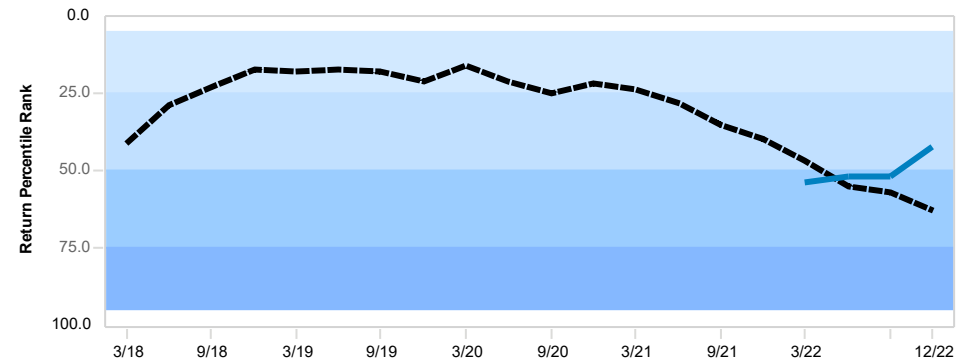


**3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	0 (0%)	8 (67%)	4 (33%)	0 (0%)
Index	20	7 (35%)	8 (40%)	3 (15%)	2 (10%)

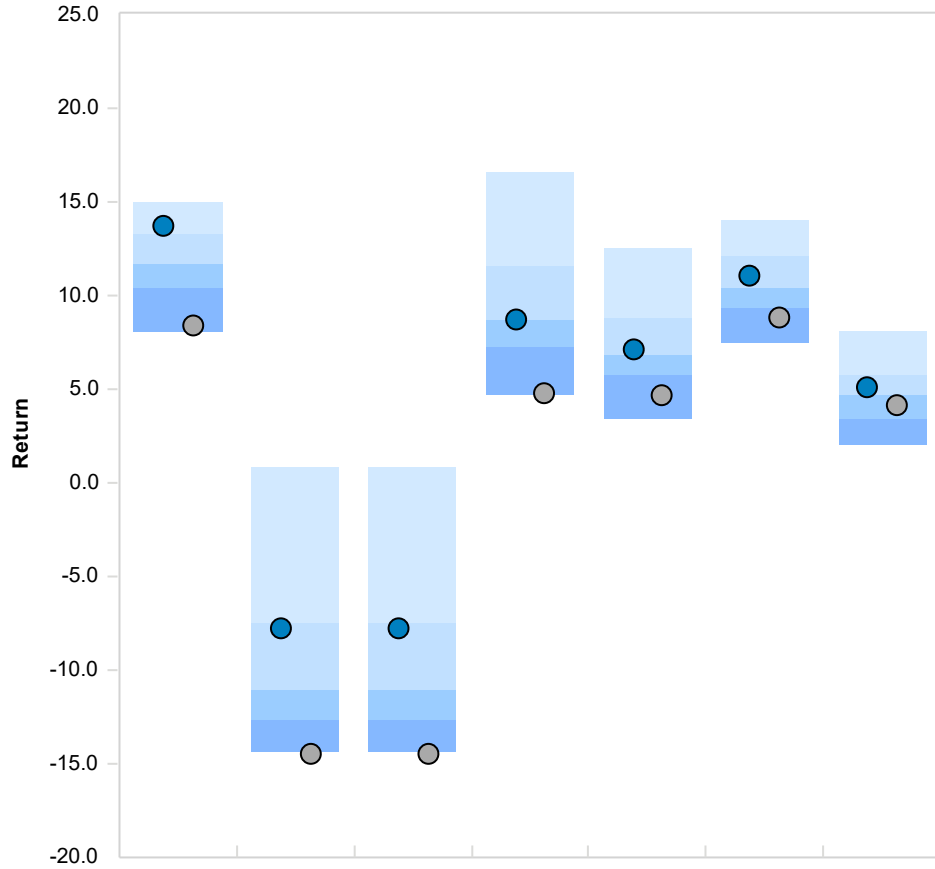
**5 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (MF)**



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

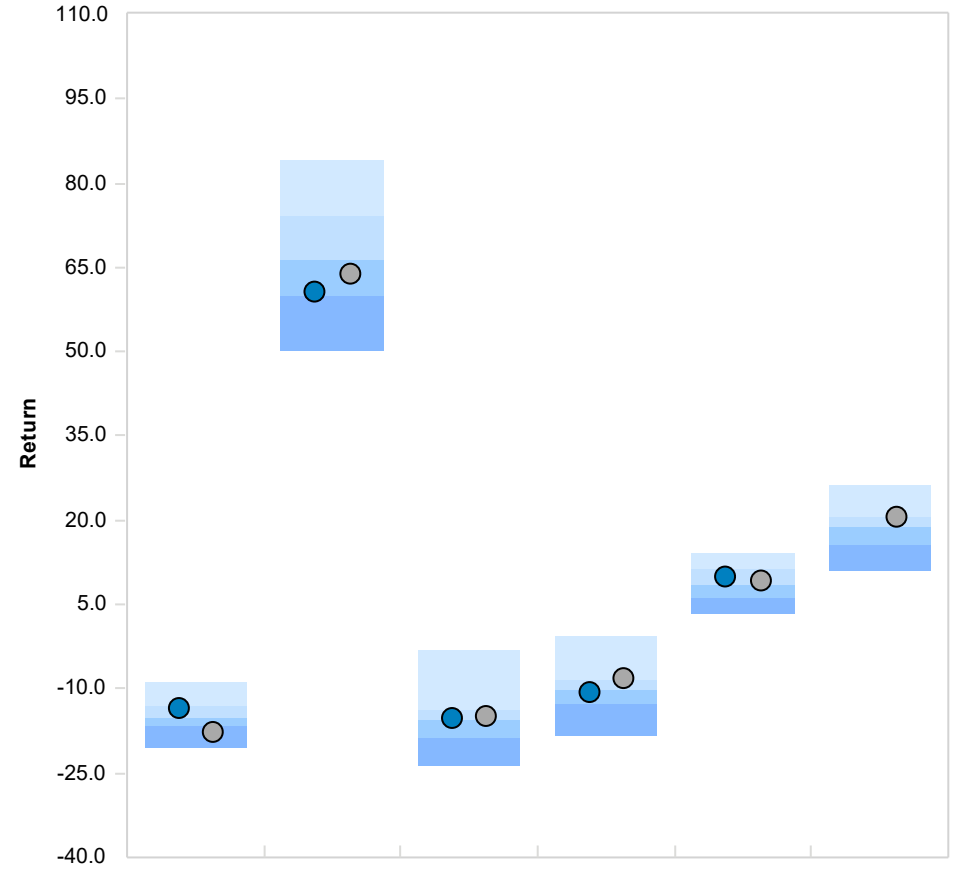


**Peer Group Analysis - IM U.S. Small Cap Value Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	13.75 (16)	-7.72 (27)	-7.72 (27)	8.77 (51)	7.17 (40)	11.04 (40)	5.11 (42)
● Index	8.42 (90)	-14.48 (96)	-14.48 (96)	4.73 (94)	4.70 (88)	8.87 (84)	4.13 (63)
Median	11.70	-11.09	-11.09	8.78	6.79	10.48	4.73

**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 Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-4.24 (36)	-14.63 (69)	-0.77 (32)	6.75 (34)	-2.05 (53)	2.47 (84)
Index	-4.61 (42)	-15.28 (83)	-2.40 (63)	4.36 (72)	-2.98 (81)	4.56 (46)
Median	-5.41	-13.89	-1.70	5.80	-1.84	4.36





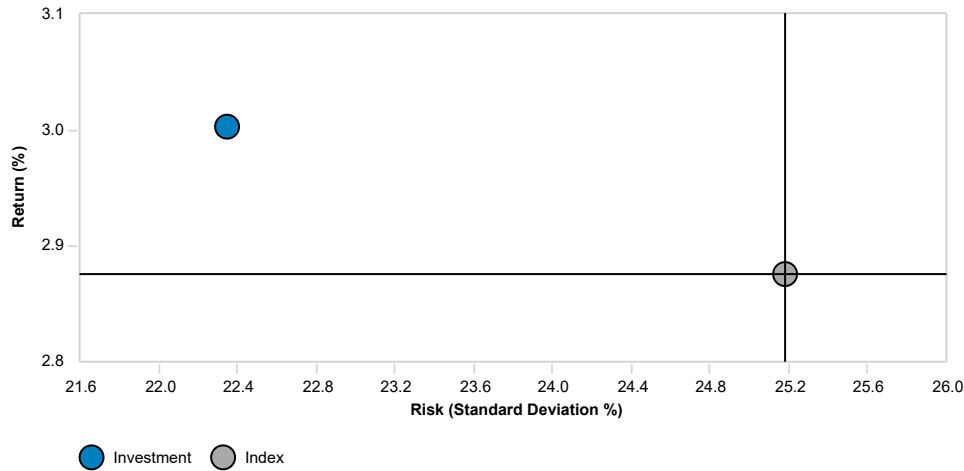
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.00	22.35	0.21	87.44	8	86.72	4
Index	2.88	25.18	0.21	100.00	7	100.00	5

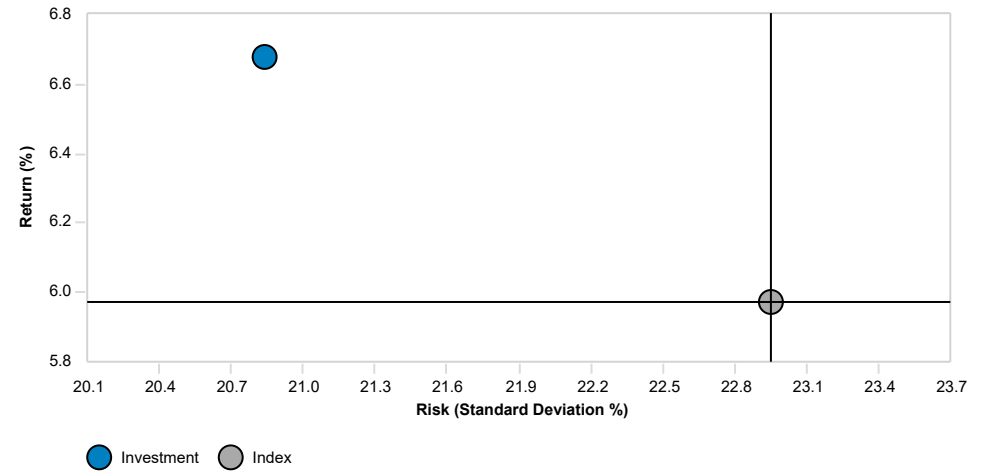
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.68	20.84	0.36	92.57	14	89.40	6
Index	5.97	22.95	0.31	100.00	13	100.00	7

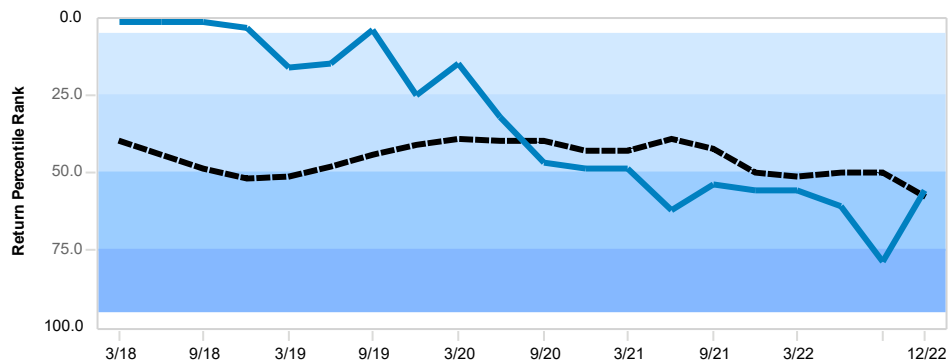
Risk and Return 3 Years



Risk and Return 5 Years

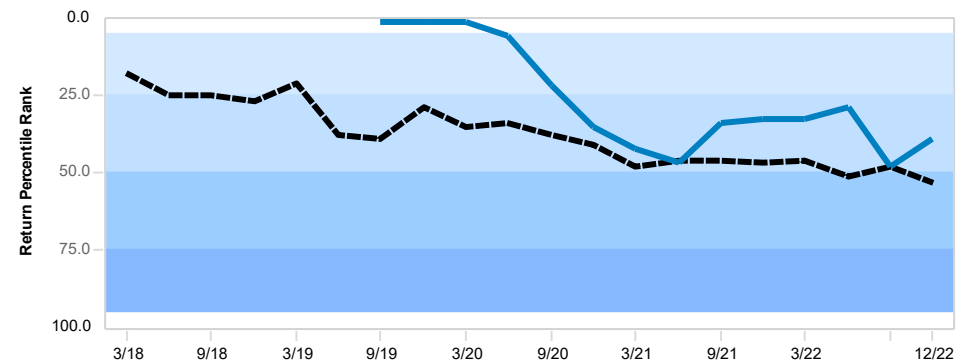


3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	4 (20%)	6 (30%)	1 (5%)
Index	20	0 (0%)	16 (80%)	4 (20%)	0 (0%)

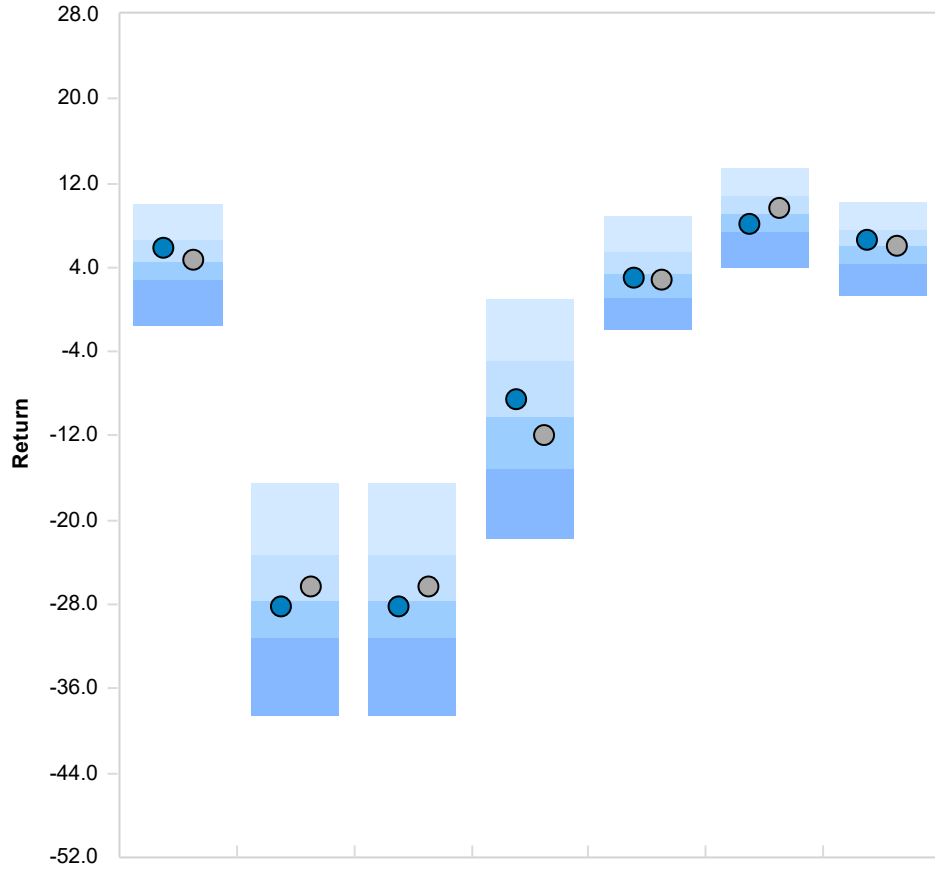
5 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	14	5 (36%)	9 (64%)	0 (0%)	0 (0%)
Index	20	4 (20%)	14 (70%)	2 (10%)	0 (0%)

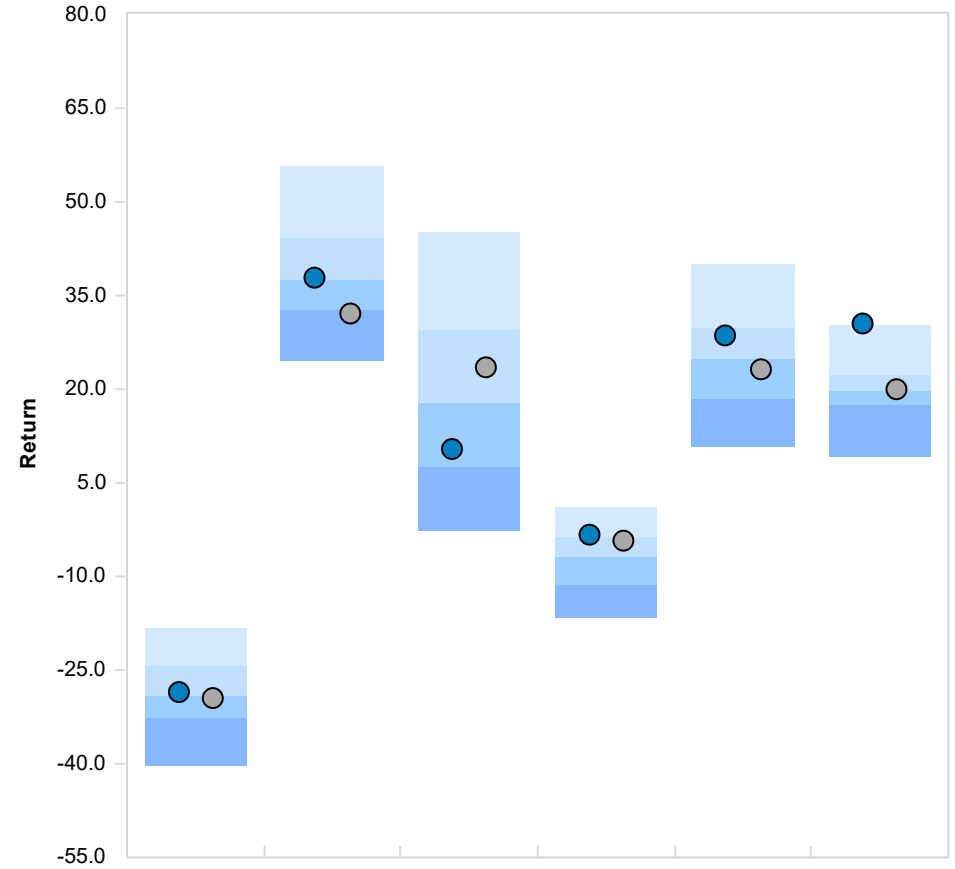


**Peer Group Analysis - IM U.S. Small Cap Growth Equity (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	5.81 (36)	-28.09 (54)	-28.09 (54)	-8.52 (36)	3.00 (56)	8.20 (68)	6.68 (39)
● Index	4.72 (47)	-26.21 (42)	-26.21 (42)	-11.96 (61)	2.88 (58)	9.63 (41)	5.97 (53)
Median	4.46	-27.54	-27.54	-10.28	3.48	9.17	6.11

**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 Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-4.23 (87)	-16.23 (20)	-15.28 (72)	5.02 (25)	4.02 (2)	3.44 (72)
Index	-0.12 (32)	-19.55 (56)	-12.30 (44)	0.20 (71)	-3.53 (75)	6.04 (28)
Median	-1.36	-19.15	-12.81	2.47	-1.97	4.71



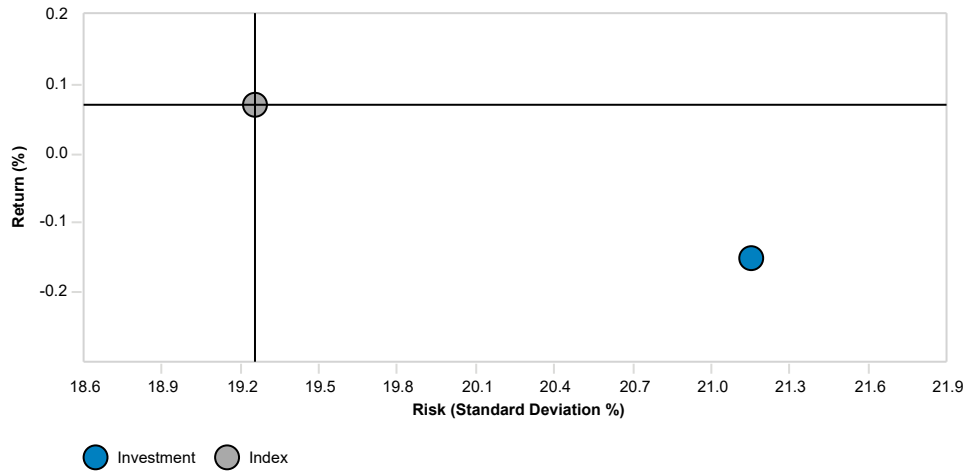
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.15	21.15	0.06	111.08	5	111.33	7
Index	0.07	19.26	0.06	100.00	7	100.00	5

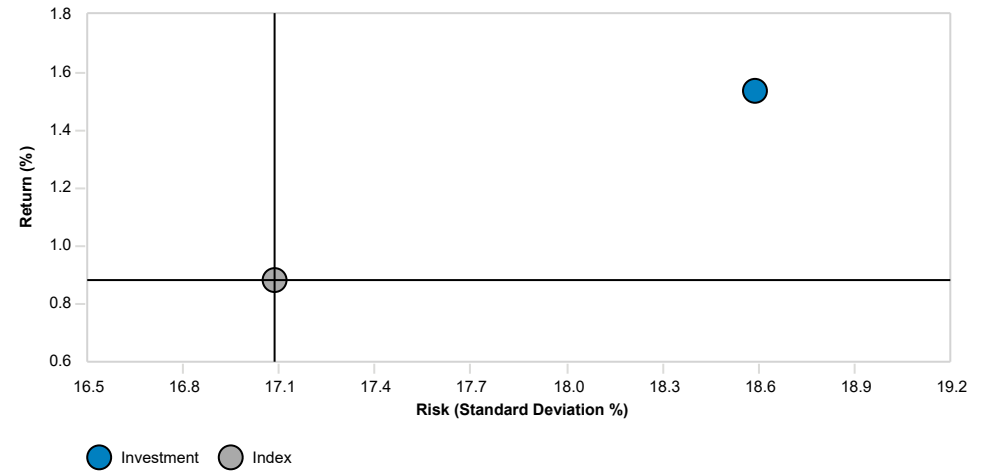
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.54	18.59	0.11	109.33	9	106.15	11
Index	0.88	17.08	0.06	100.00	11	100.00	9

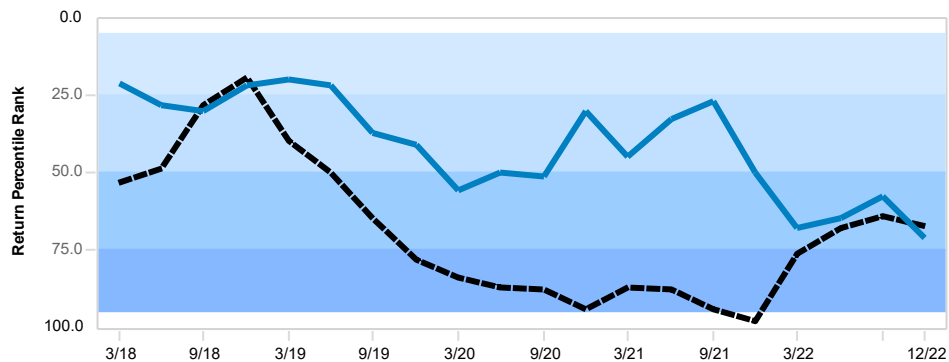
Risk and Return 3 Years



Risk and Return 5 Years

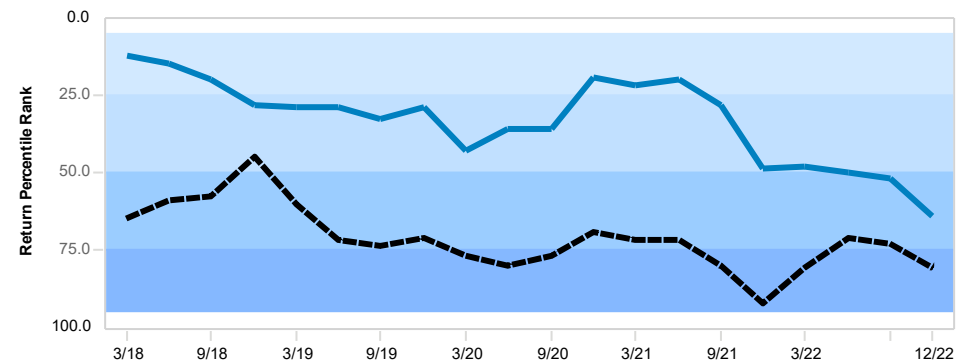


3 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



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

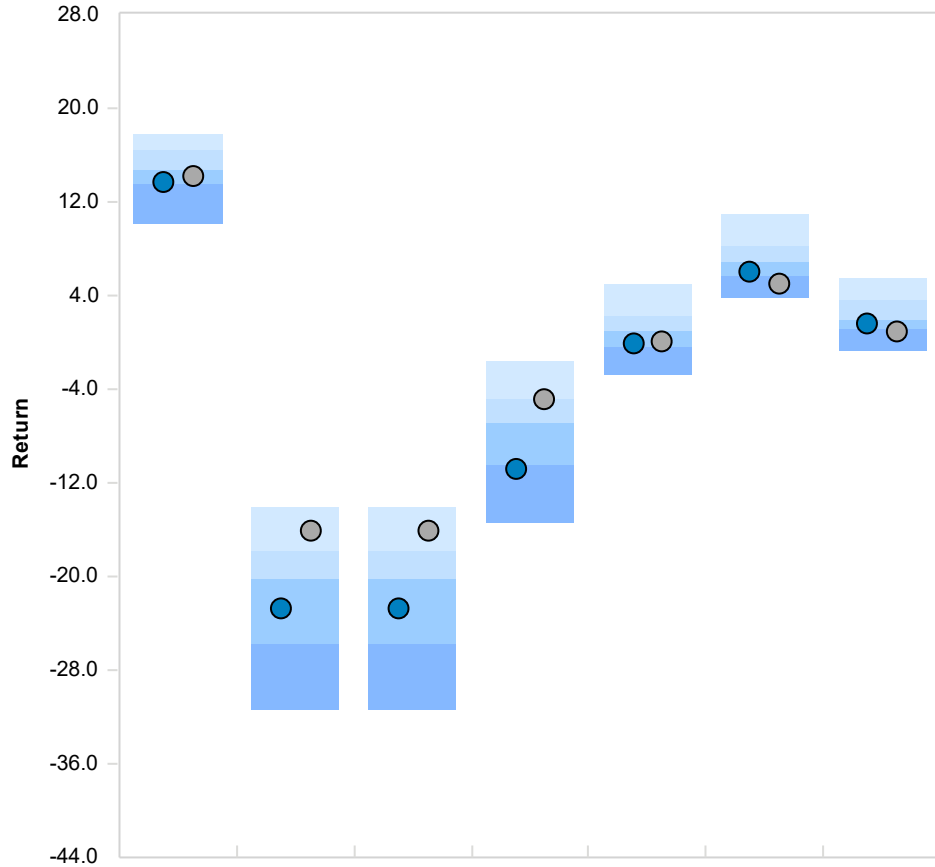
5 Year Rolling Percentile Rank IM International Large Cap Growth Equity (MF)



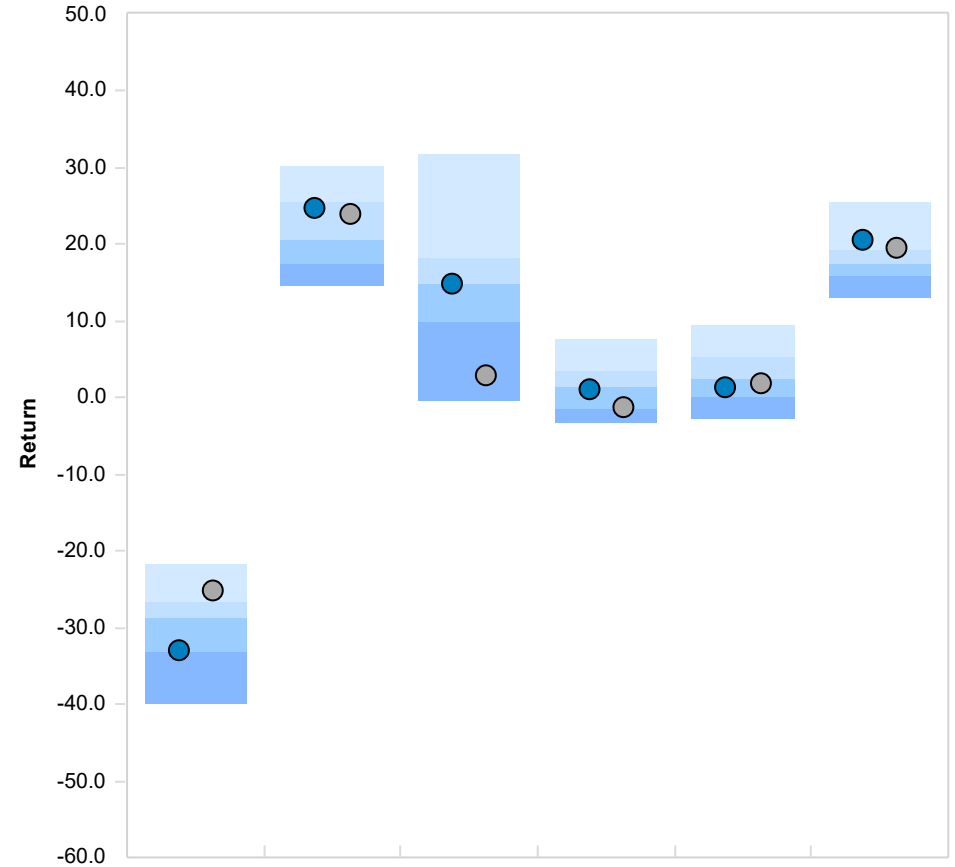
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	12 (60%)	2 (10%)	0 (0%)
Index	20	0 (0%)	1 (5%)	12 (60%)	7 (35%)



**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 Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-9.33 (39)	-14.65 (49)	-12.24 (59)	-1.13 (92)	-2.35 (57)	6.97 (25)
Index	-9.91 (67)	-13.73 (32)	-5.44 (5)	1.82 (74)	-2.99 (68)	5.48 (67)
Median	-9.57	-14.68	-10.99	3.17	-1.61	6.34



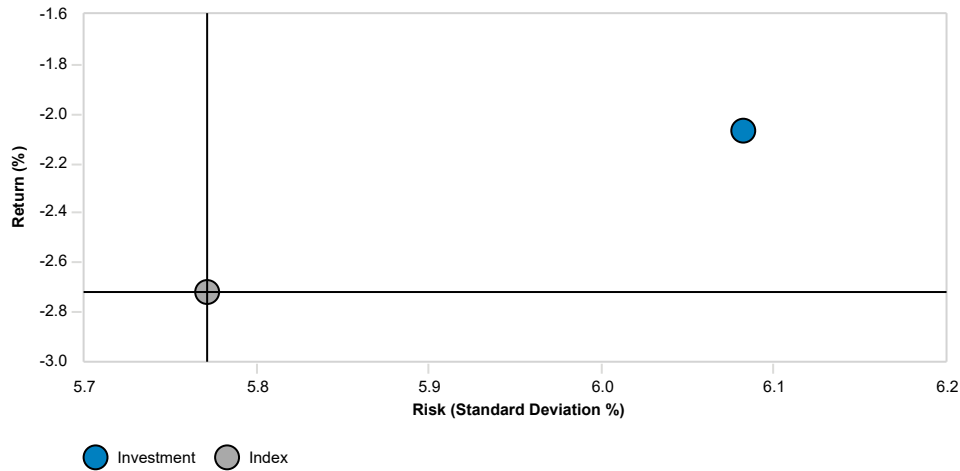
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.07	6.08	-0.43	108.96	6	98.84	6
Index	-2.71	5.77	-0.57	100.00	8	100.00	4

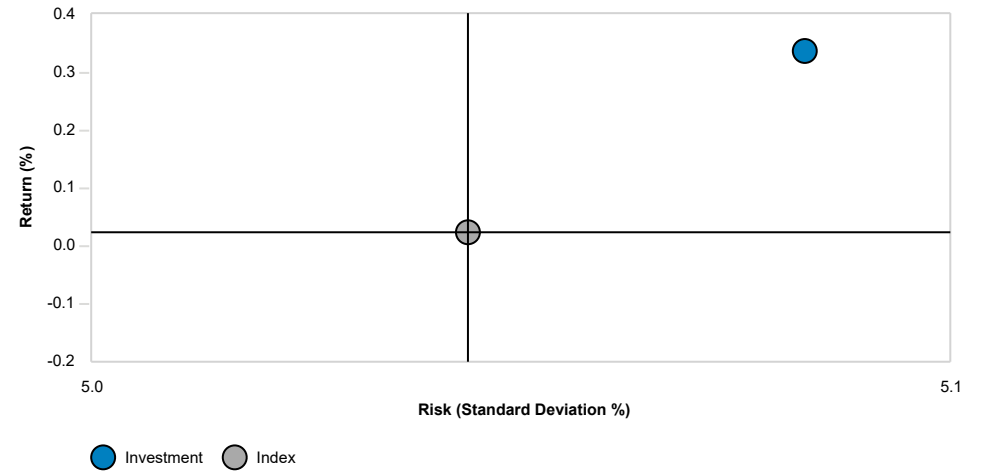
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.34	5.08	-0.16	97.85	11	92.84	9
Index	0.02	5.04	-0.22	100.00	14	100.00	6

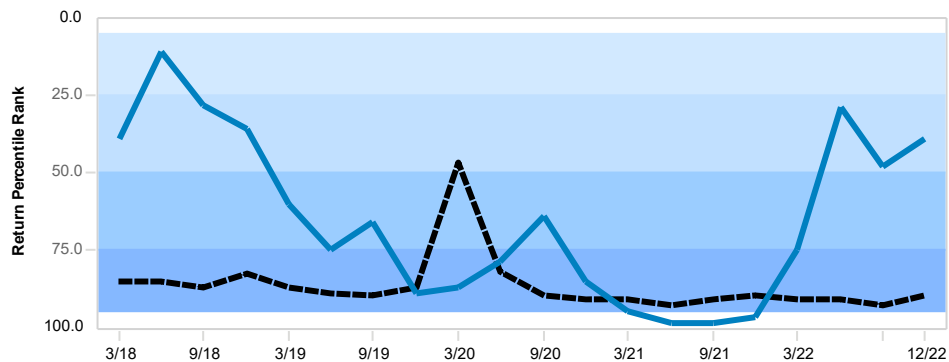
**Risk and Return 3 Years**



**Risk and Return 5 Years**

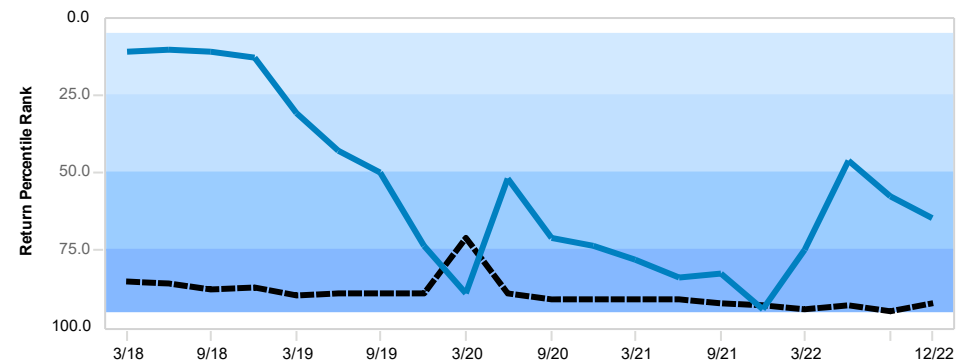


**3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



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

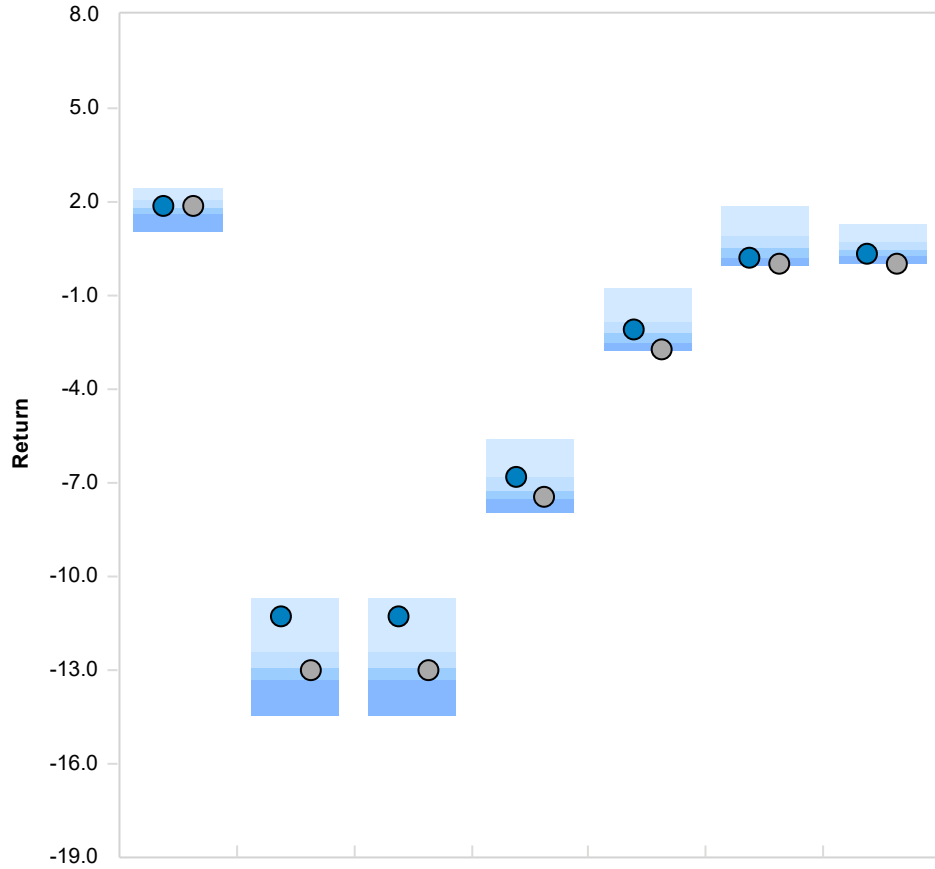
**5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	4 (20%)	4 (20%)	7 (35%)	5 (25%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

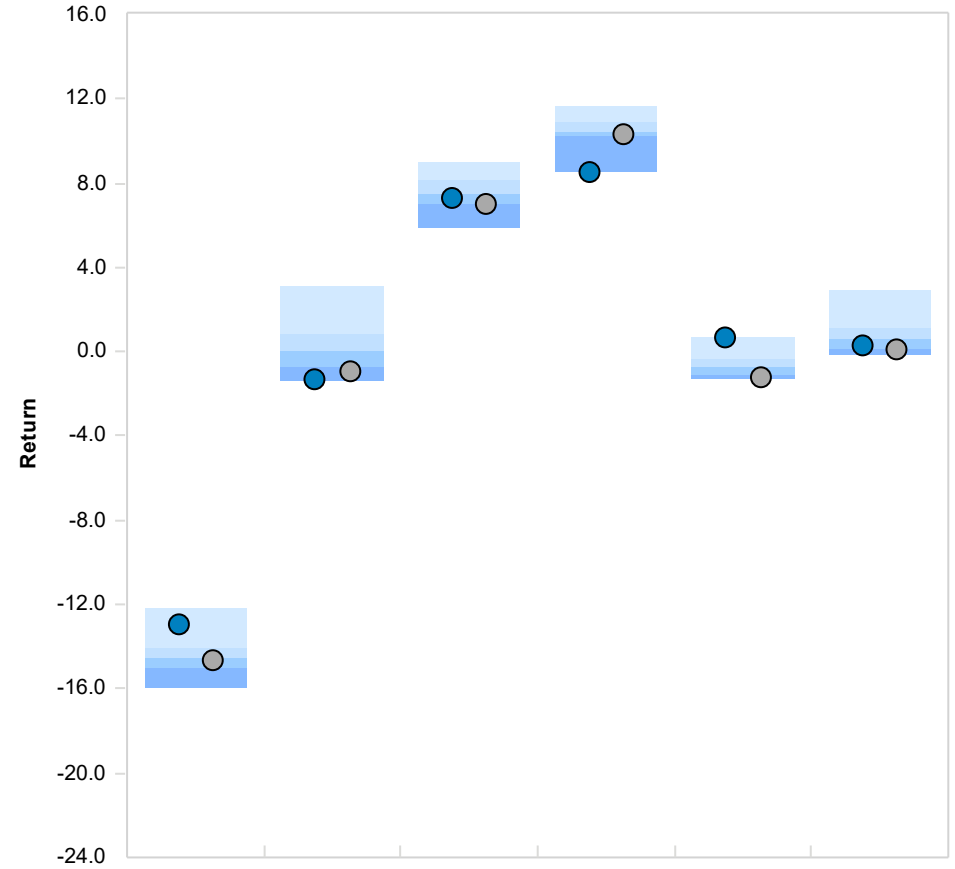


**Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	1.90 (37)	-11.25 (9)	-11.25 (9)	-6.79 (23)	-2.07 (39)	0.18 (80)	0.34 (65)
● Index	1.87 (42)	-13.01 (55)	-13.01 (55)	-7.45 (67)	-2.71 (90)	0.03 (90)	0.02 (92)
Median	1.82	-12.95	-12.95	-7.27	-2.20	0.53	0.45

**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 (5)	0.31 (68)
● Index	-14.60 (60)	-0.90 (84)	6.98 (77)	10.30 (69)	-1.22 (88)	0.07 (84)
Median	-14.50	-0.03	7.53	10.42	-0.74	0.63

**Comparative Performance**

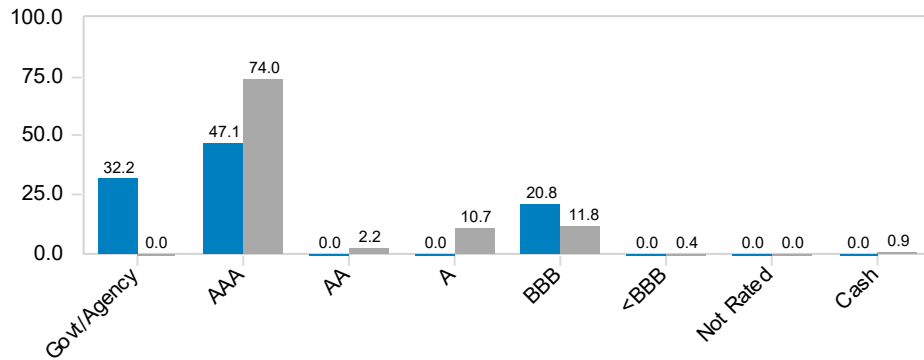
	1 Qtr Ending Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	-5.20 (98)	-3.92 (8)	-4.38 (3)	-0.05 (54)	-0.06 (91)	1.26 (98)
Index	-4.75 (77)	-4.69 (38)	-5.93 (70)	0.01 (32)	0.05 (69)	1.83 (86)
Median	-4.56	-4.76	-5.81	-0.04	0.10	1.98



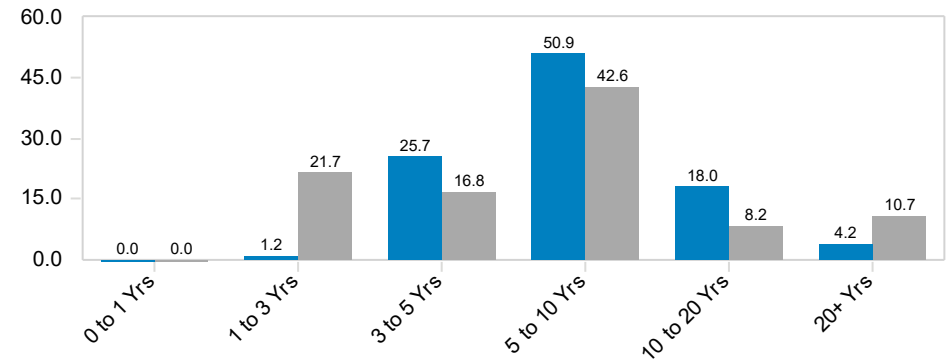
Portfolio Characteristics

	Portfolio	Benchmark
Avg. Maturity	8.61	8.71
Avg. Quality	AA+	AA1/AA2
Coupon Rate (%)	3.14	2.43
Current Yield	3.47	2.32
Effective Duration	6.92	6.69

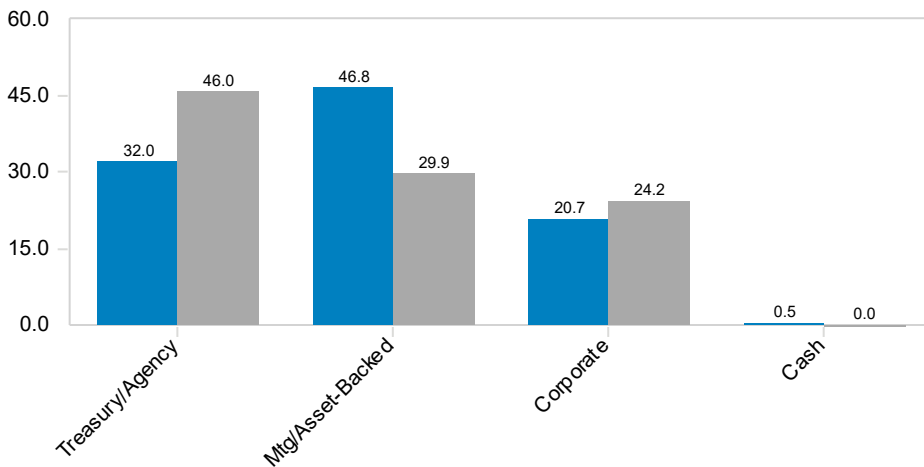
Credit Quality Distribution (%)



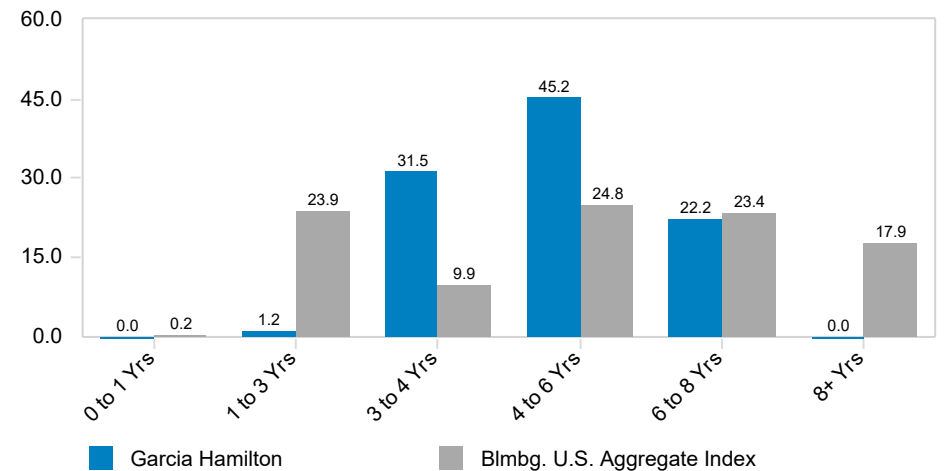
Maturity Distribution (%)



Sector Distribution (%)



Duration Distribution (%)



Garcia Hamilton

Blmbg. U.S. Aggregate Index



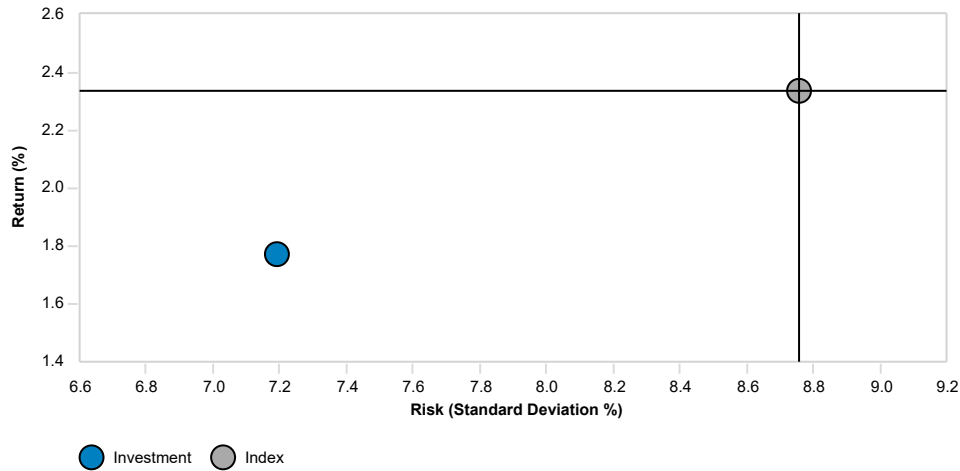
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.77	7.19	0.18	83.29	10	86.73	2
Index	2.34	8.76	0.22	100.00	9	100.00	3

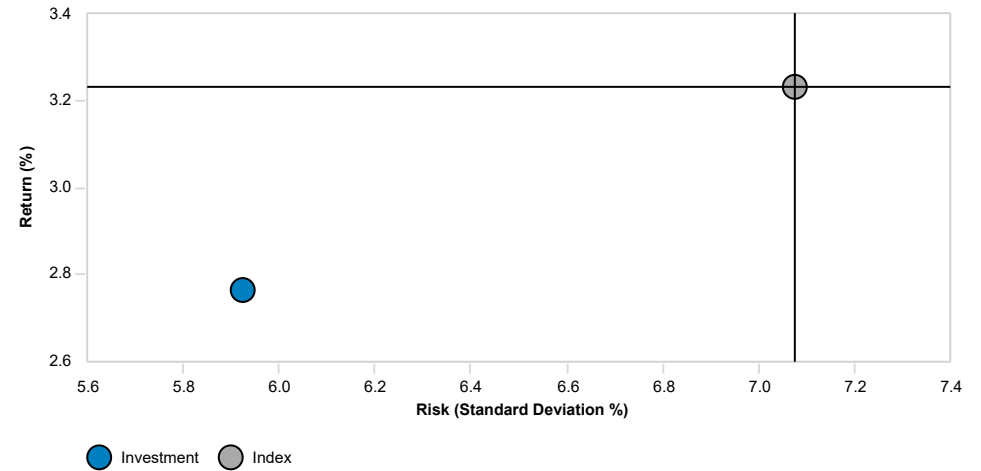
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.77	5.92	0.28	87.06	17	88.86	3
Index	3.24	7.07	0.31	100.00	16	100.00	4

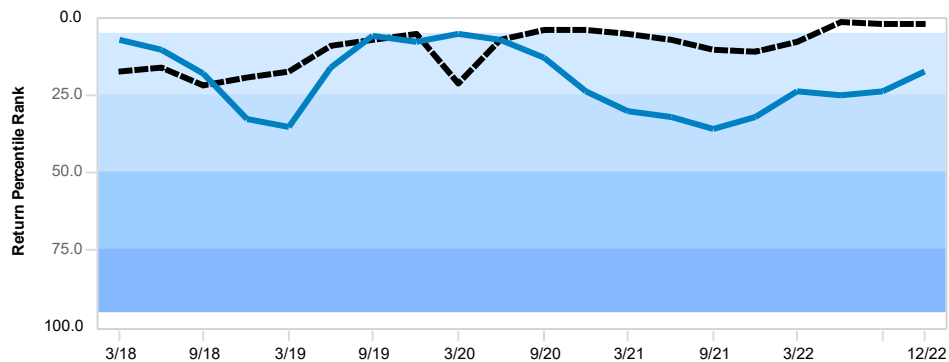
**Risk and Return 3 Years**



**Risk and Return 5 Years**

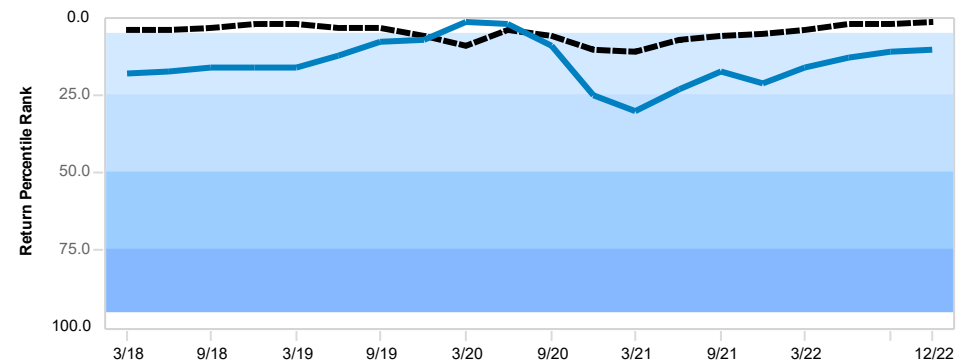


**3 Year Rolling Percentile Rank IM U.S. Bank Loans (MF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	14 (70%)	6 (30%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

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

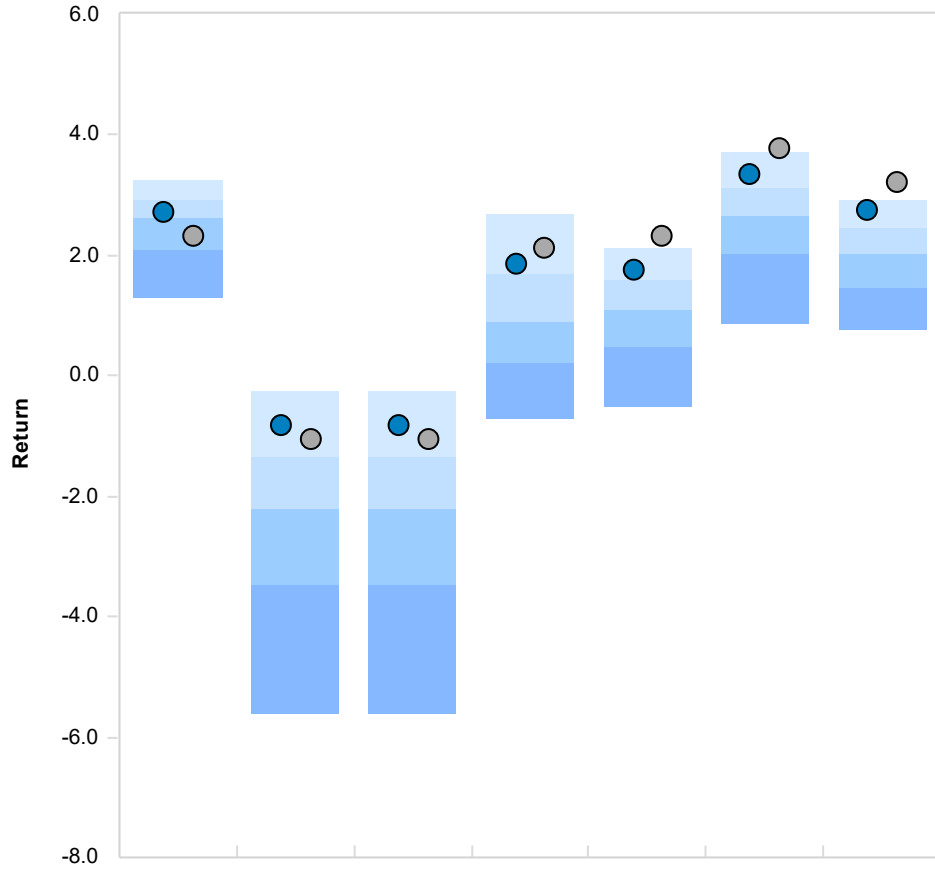


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)



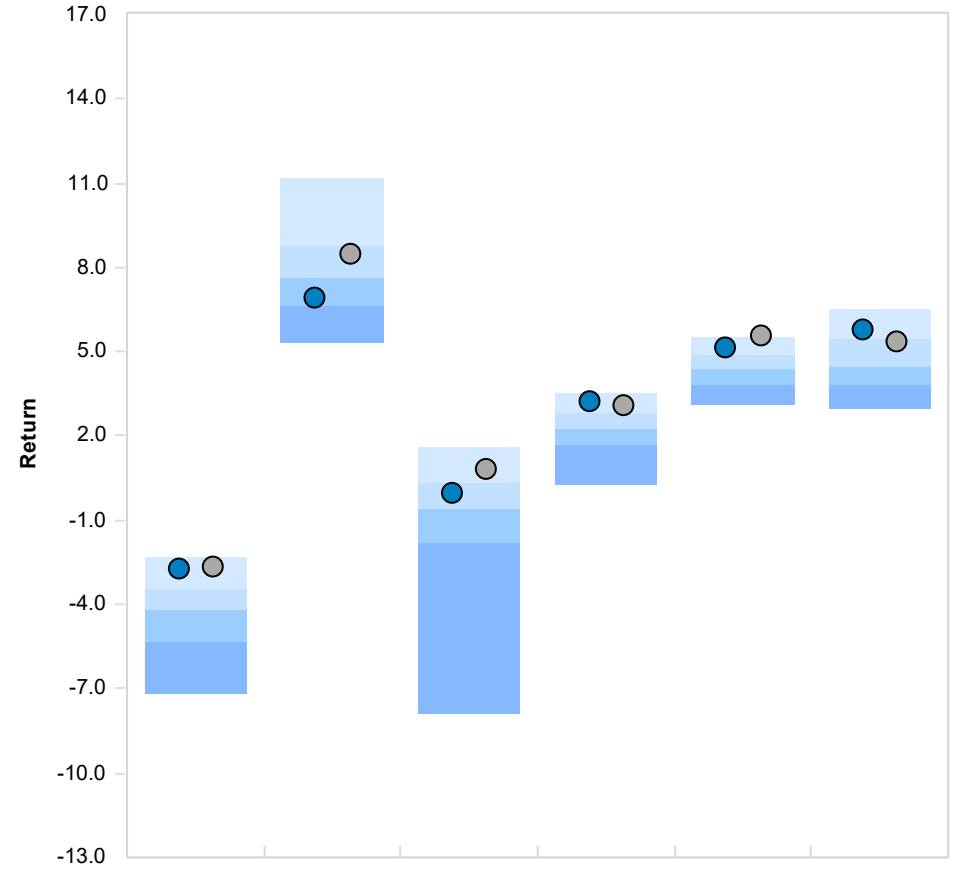


**Peer Group Analysis - IM U.S. Bank Loans (MF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.72 (45)	-0.83 (14)	-0.83 (14)	1.86 (19)	1.77 (17)	3.36 (17)	2.77 (10)
● Index	2.34 (66)	-1.06 (20)	-1.06 (20)	2.12 (12)	2.34 (2)	3.77 (4)	3.24 (1)
Median	2.63	-2.22	-2.22	0.89	1.10	2.67	2.03

**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 Sep-2022	1 Qtr Ending Jun-2022	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021
Investment	1.41 (19)	-4.82 (26)	0.02 (6)	0.74 (13)	0.93 (41)	1.56 (24)
Index	1.18 (37)	-4.36 (7)	-0.10 (11)	0.72 (15)	1.13 (15)	1.45 (37)
Median	1.05	-5.27	-0.52	0.49	0.87	1.36



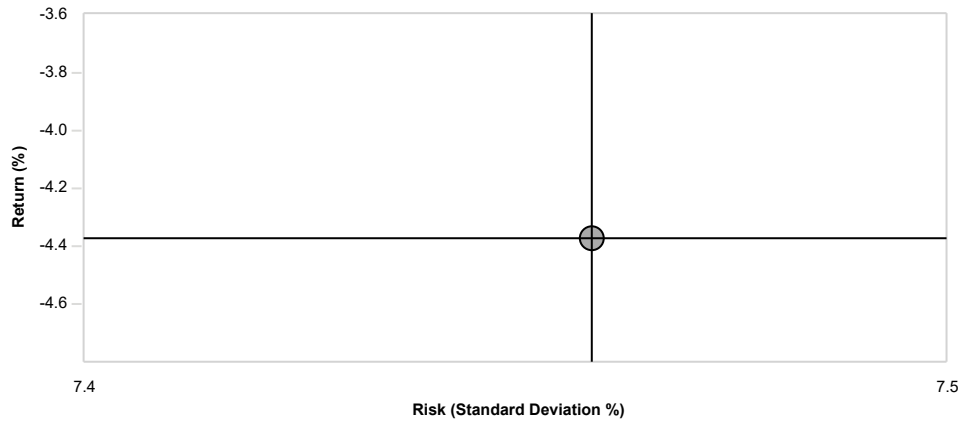
**Historical Statistics 3 Years**

	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	-4.37	7.46	-0.66	100.00	5	100.00	7

**Historical Statistics 5 Years**

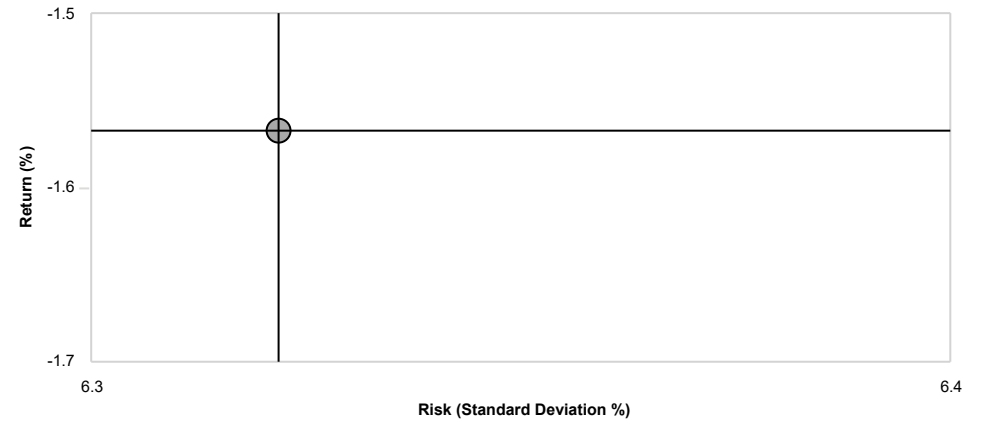
	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	-1.57	6.32	-0.42	100.00	11	100.00	9

**Risk and Return 3 Years**



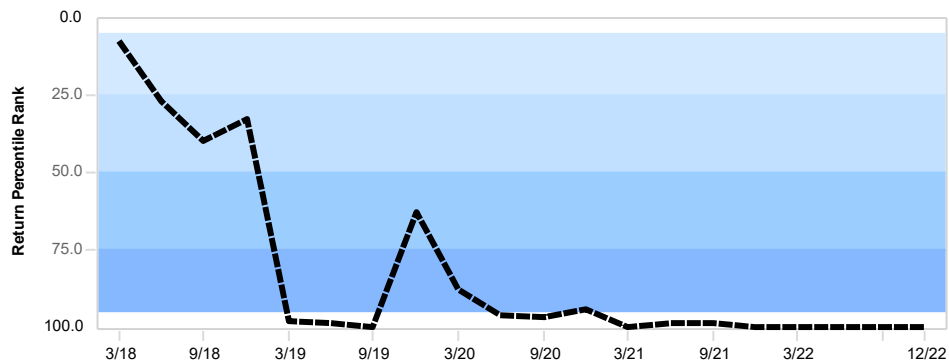
● Investment ● Index

**Risk and Return 5 Years**



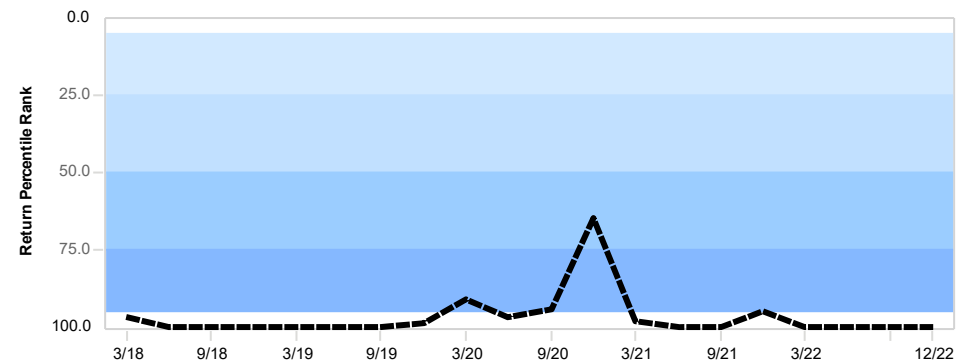
● Investment ● Index

**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	1 (5%)	3 (15%)	1 (5%)	15 (75%)

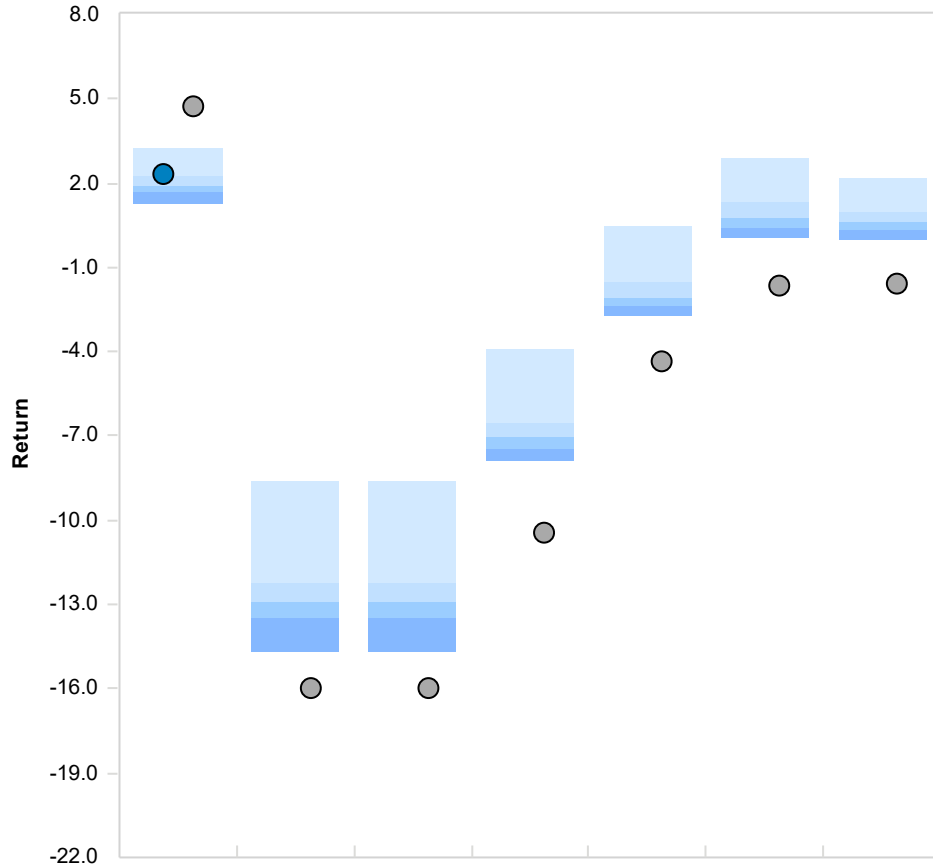
**5 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)**



	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%)

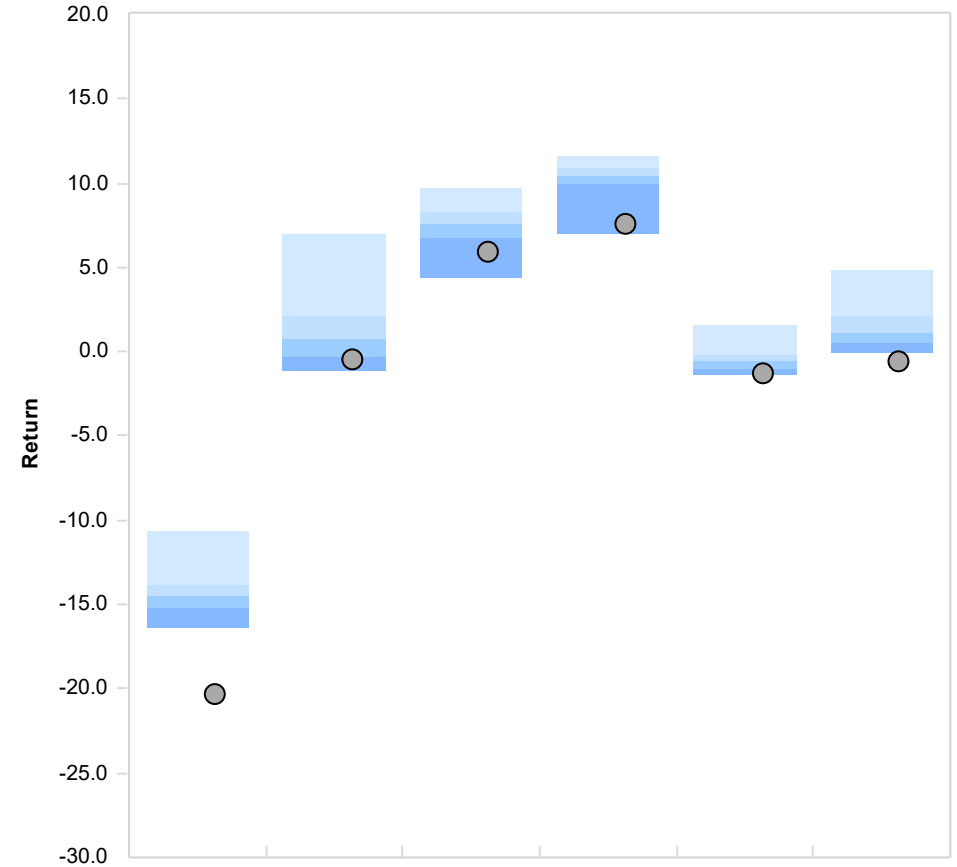


**Peer Group Analysis - IM U.S. Broad Market Fixed Income (SA+CF)**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.30 (21)	N/A	N/A	N/A	N/A	N/A	N/A
● Index	4.71 (1)	-16.01 (99)	-16.01 (99)	-10.44 (100)	-4.37 (100)	-1.62 (100)	-1.57 (100)
Median	1.92	-12.92	-12.92	-7.05	-2.04	0.76	0.60

**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 (78)	5.99 (89)	7.54 (92)	-1.32 (95)	-0.56 (100)
Median	-14.51	0.71	7.55	10.39	-0.60	1.05

**Comparative Performance**

	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	1 Qtr Ending Jun-2021
Investment	0.41 (1)	-4.25 (14)	N/A	N/A	N/A	N/A
Index	-6.76 (100)	-8.43 (99)	-6.05 (78)	-0.70 (99)	-0.91 (100)	1.45 (96)
Median	-4.45	-5.04	-5.80	0.00	0.14	2.14



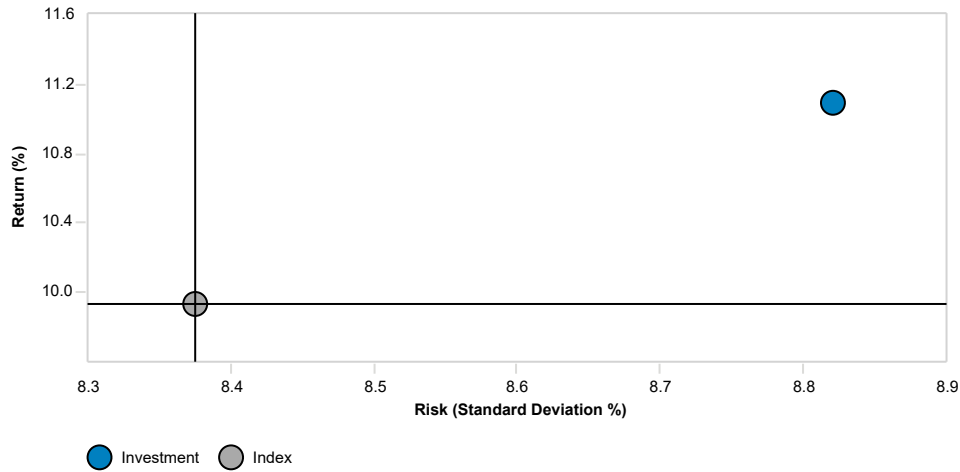
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.09	8.82	1.14	110.32	10	106.53	2
Index	9.93	8.37	1.07	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	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	8.68	6.75	1.07	100.00	18	100.00	2

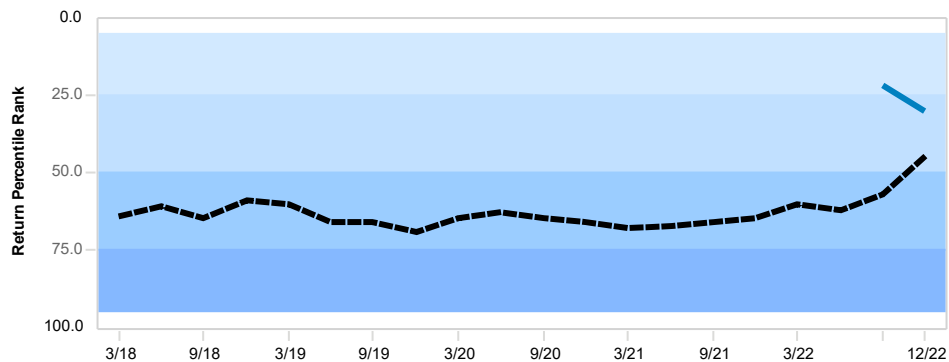
**Risk and Return 3 Years**



**Risk and Return 5 Years**

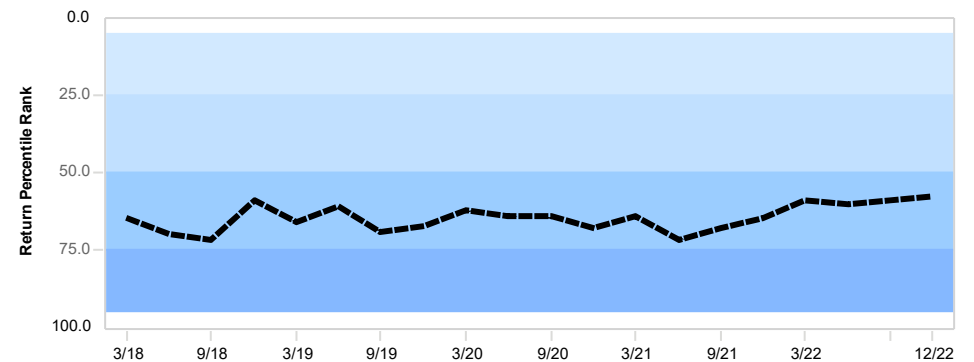


**3 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)**



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

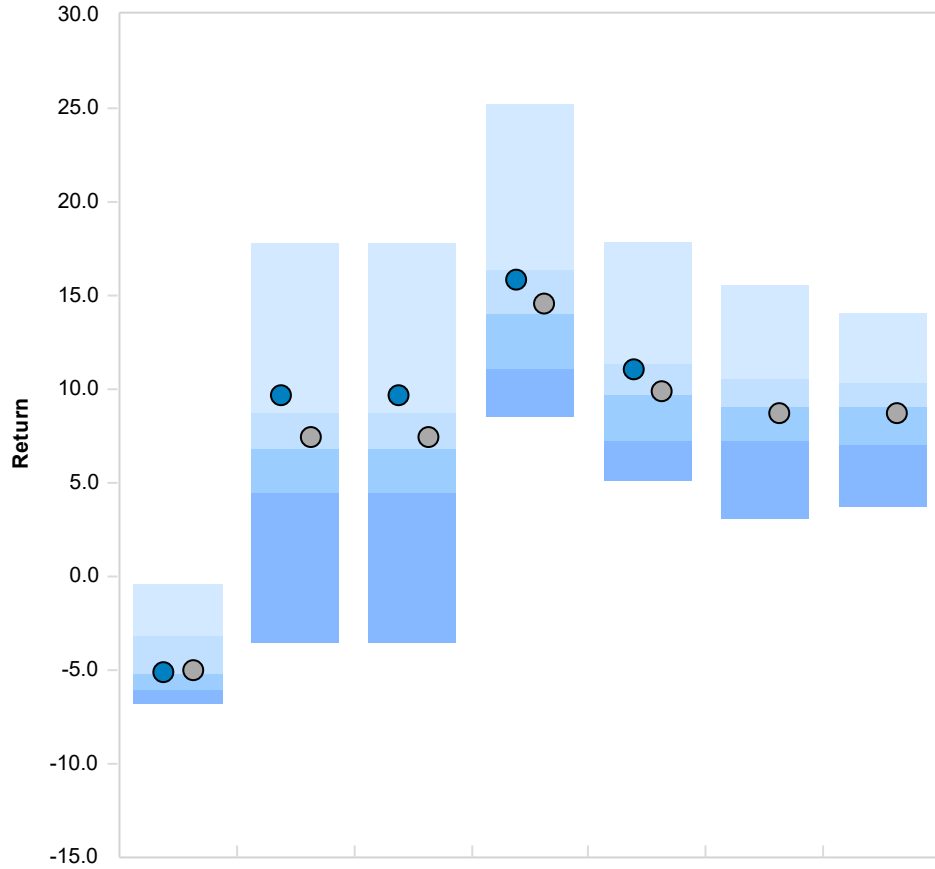
**5 Year Rolling Percentile Rank IM U.S. Open End Private Real Estate (SA+CF)**



	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%)

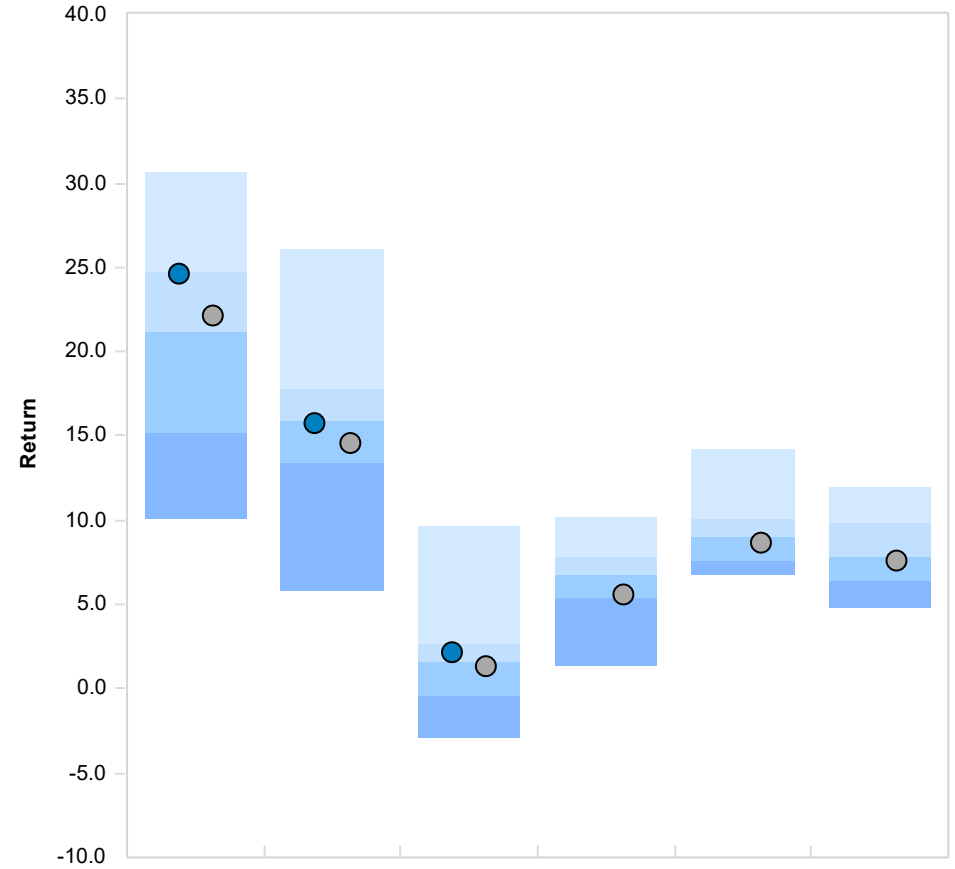


Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.13 (48)	9.63 (14)	9.63 (14)	15.81 (34)	11.09 (30)	N/A	N/A
● Index	-4.97 (40)	7.47 (41)	7.47 (41)	14.58 (42)	9.93 (45)	8.76 (54)	8.68 (58)
Median	-5.18	6.78	6.78	14.03	9.72	9.03	9.01

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 (29)	15.76 (52)	2.20 (36)	N/A	N/A	N/A
● Index	22.09 (47)	14.63 (55)	1.39 (59)	5.59 (74)	8.68 (61)	7.66 (53)
Median	21.16	15.91	1.62	6.80	8.98	7.83

Comparative Performance

	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	1 Qtr Ending Jun-2021
Investment	0.65 (47)	7.27 (11)	7.04 (45)	7.82 (45)	6.08 (60)	4.63 (34)
Index	0.52 (58)	4.77 (36)	7.37 (34)	7.97 (40)	6.63 (40)	3.93 (64)
Median	0.60	4.39	6.86	7.58	6.33	4.17



**The Woodlands Firefighters' Retirement System**  
**Comparative Performance Trailing Performance Composite Returns**  
As of December 31, 2022

<b>Comparative Performance</b>								
	<b>QTR</b>	<b>YTD</b>	<b>1 YR</b>	<b>2 YR</b>	<b>3 YR</b>	<b>5 YR</b>	<b>Inception</b>	<b>Inception Date</b>
<b>Domestic Equity</b>								
<b>Vanguard Total Stock Index (VITSX)</b>	<b>7.16</b>	<b>-19.51</b>	<b>-19.51</b>	<b>0.60</b>	<b>6.98</b>	<b>8.72</b>	<b>7.79</b>	<b>08/01/1997</b>
CRSP U.S. Total Market TR Index	7.15	-19.49	-19.49	0.61	6.99	8.73	N/A	
<b>American Beacon SC Value R6 (AASRX)</b>	<b>13.75</b>	<b>-7.72</b>	<b>-7.72</b>	<b>8.77</b>	<b>7.17</b>	<b>5.11</b>	<b>5.61</b>	<b>03/01/2017</b>
Russell 2000 Value Index	8.42	-14.48	-14.48	4.73	4.70	4.13	4.75	
<b>Conestoga Small Cap I (CCALX)</b>	<b>5.81</b>	<b>-28.09</b>	<b>-28.09</b>	<b>-8.52</b>	<b>3.00</b>	<b>6.68</b>	<b>10.38</b>	<b>09/01/2014</b>
Russell 2000 Growth Index	4.13	-26.36	-26.36	-12.98	0.65	3.51	6.27	
<b>International Equity</b>								
<b>EuroPacific Growth R6 (RERGX)</b>	<b>13.78</b>	<b>-22.72</b>	<b>-22.72</b>	<b>-10.85</b>	<b>-0.15</b>	<b>1.54</b>	<b>6.40</b>	<b>06/01/2009</b>
MSCI AC World ex USA (Net)	14.28	-16.00	-16.00	-4.83	0.07	0.88	5.23	
<b>Core Fixed Income</b>								
<b>Garcia Hamilton (Gross of Fees)</b>	<b>1.90</b>	<b>-11.25</b>	<b>-11.25</b>	<b>-6.79</b>	<b>-2.07</b>	<b>0.34</b>	<b>5.36</b>	<b>01/01/1992</b>
Blmbg. U.S. Aggregate Index	1.87	-13.01	-13.01	-7.45	-2.71	0.02	4.64	
<b>Bank Loans</b>								
<b>Pacific Funds Floating Rate (PLFRX)</b>	<b>2.72</b>	<b>-0.83</b>	<b>-0.83</b>	<b>1.86</b>	<b>1.77</b>	<b>2.77</b>	<b>3.91</b>	<b>07/01/2011</b>
Credit Suisse Leveraged Loan Index	2.34	-1.06	-1.06	2.12	2.34	3.24	4.00	
<b>Real Estate</b>								
<b>Clarion Lion Properties Fund</b>	<b>-5.15</b>	<b>9.62</b>	<b>9.62</b>	<b>16.30</b>	<b>11.41</b>	<b>10.22</b>	<b>8.23</b>	<b>04/01/2000</b>
NCREIF Fund Index-ODCE (VW)	-4.97	7.47	7.47	14.58	9.93	8.68	8.36	

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 December 31, 2022

Comparative Performance	YTD	2021	2020	2019	2018	2017	2016	2015
<b>Domestic Equity</b>								
<b>Vanguard Total Stock Index (VITSX)</b>	<b>-19.51</b>	<b>25.73</b>	<b>21.00</b>	<b>30.81</b>	<b>-5.16</b>	<b>21.17</b>	<b>12.67</b>	<b>0.42</b>
CRSP U.S. Total Market TR Index	-19.49	25.72	20.99	30.84	-5.17	21.19	12.68	0.40
<b>American Beacon SC Value R6 (AASRX)</b>	<b>-7.72</b>	<b>28.21</b>	<b>4.03</b>	<b>23.50</b>	<b>-15.59</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
Russell 2000 Value Index	-14.48	28.27	4.63	22.39	-12.86	7.84	31.74	-7.47
<b>Conestoga Small Cap I (CCALX)</b>	<b>-28.09</b>	<b>16.37</b>	<b>30.59</b>	<b>25.42</b>	<b>0.81</b>	<b>28.74</b>	<b>14.30</b>	<b>8.26</b>
Russell 2000 Growth Index	-26.36	2.83	34.63	28.48	-9.31	22.17	11.32	-1.38
<b>International Developed Equity</b>								
<b>EuroPacific Growth R6 (RERGX)</b>	<b>-22.72</b>	<b>2.84</b>	<b>25.27</b>	<b>27.40</b>	<b>-14.91</b>	<b>31.17</b>	<b>1.01</b>	<b>-0.48</b>
MSCI AC World ex USA (Net)	-16.00	7.82	10.65	21.51	-14.20	27.19	4.50	-5.66
<b>Core Fixed Income</b>								
<b>Garcia Hamilton (Gross of Fees)</b>	<b>-11.25</b>	<b>-2.11</b>	<b>8.10</b>	<b>7.25</b>	<b>0.97</b>	<b>3.81</b>	<b>3.17</b>	<b>0.84</b>
Blmbg. U.S. Aggregate Index	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65	0.55
<b>Bank Loans</b>								
<b>Pacific Funds Floating Rate (PLFRX)</b>	<b>-0.83</b>	<b>4.62</b>	<b>1.59</b>	<b>8.30</b>	<b>0.41</b>	<b>4.33</b>	<b>8.91</b>	<b>0.75</b>
Credit Suisse Leveraged Loan Index	-1.06	5.41	2.78	8.16	1.14	4.25	9.87	-0.41
<b>Real Estate</b>								
<b>Clarion Lion Properties Fund</b>	<b>9.62</b>	<b>23.38</b>	<b>2.24</b>	<b>7.26</b>	<b>9.66</b>	<b>8.99</b>	<b>9.09</b>	<b>15.71</b>
NCREIF Fund Index-ODCE (VW)	7.47	22.17	1.19	5.34	8.35	7.62	8.77	15.02

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



**Woodlands Fire Retirement System**  
**Fee Analysis**  
As of December 31, 2022

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Vanguard Total Stock Index (VITSX)	0.03	24,539,780	7,362	0.03 % of Assets
American Beacon SC Value R6 (AASRX)	0.78	2,848,229	22,216	0.78 % of Assets
Conestoga Small Cap I (CCALX)	0.90	2,422,090	21,799	0.90 % of Assets
<b>Total Domestic Equity</b>	<b>0.17</b>	<b>29,810,099</b>	<b>51,377</b>	
EuroPacific Growth R6 (RERGX)	0.49	7,400,184	36,261	0.49 % of Assets
<b>Total International Equity</b>	<b>0.49</b>	<b>7,400,184</b>	<b>36,261</b>	
Garcia Hamilton	0.25	9,007,886	22,520	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
Pacific Funds Floating Rate (PLFRX)	0.72	1,524,492	10,976	0.72 % of Assets
Apollo Total Return Fund	0.80	2,970,414	23,763	0.80 % of First \$100 M 0.75 % of Next \$100 M 0.70 % Thereafter
<b>Total Fixed Income</b>	<b>0.42</b>	<b>13,502,793</b>	<b>57,259</b>	
Clarion (Core Real Estate)	1.25	5,344,803	66,810	1.25 % of Assets
<b>Total Real Estate</b>	<b>1.25</b>	<b>5,344,803</b>	<b>66,810</b>	
Frost Bank Cash Account		3,426	-	
Mutual Fund Cash		163,522	-	
<b>Total Cash</b>		<b>166,948</b>	<b>-</b>	
<b>Total Fund</b>	<b>0.38</b>	<b>56,224,827</b>	<b>211,707</b>	

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





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**

<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Jan-1973</b>	
MSCI World (net)	60.00
Bloomberg Intermediate US Govt/Credit Idx	40.00
<b>Jun-2019</b>	
Russell 3000 Index	62.50
MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	22.50
<b>Oct-2019</b>	
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
<b>Mar-2022</b>	
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
<b>Sep-2022</b>	
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.

---

<b>Active Return</b>	- Arithmetic difference between the manager's performance and the designated benchmark return over a specified time period.
<b>Alpha</b>	- 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.
<b>Beta</b>	- A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of the portfolio's systematic risk.
<b>Consistency</b>	- 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.
<b>Distributed to Paid In (DPI)</b>	- 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.
<b>Down Market Capture</b>	- The ratio of average portfolio performance over the designated benchmark during periods of negative returns. A lower value indicates better product performance
<b>Downside Risk</b>	- 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.
<b>Excess Return</b>	- Arithmetic difference between the manager's performance and the risk-free return over a specified time period.
<b>Excess Risk</b>	- A measure of the standard deviation of a portfolio's performance relative to the risk free return.
<b>Information Ratio</b>	- 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.
<b>Public Market Equivalent (PME)</b>	- 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.
<b>R-Squared</b>	- 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.
<b>Return</b>	- Compounded rate of return for the period.
<b>Sharpe Ratio</b>	- 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.
<b>Standard Deviation</b>	- 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.
<b>Total Value to Paid In (TVPI)</b>	- 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
<b>Tracking Error</b>	- This is a measure of the standard deviation of a portfolio's returns in relation to the performance of its designated market benchmark.
<b>Treynor Ratio</b>	- 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.
<b>Up Market Capture</b>	- 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.

The strategies listed may not be suitable for all investors. We believe the information provided here is reliable, but do not warrant its accuracy or completeness. Past performance is not an indication of future performance. Any information contained in this report is for informational purposes only and should not be construed to be an offer to buy or sell any securities, investment consulting, or investment management services.

Additional information included in this document may contain data provided by from index databases, public economic sources and the managers themselves.

This document may contain data provided by Bloomberg Barclays. Bloomberg Barclays Index data provided by way of Barclays Live.

This document may contain data provided by Standard and Poor's. Nothing contained within any document, advertisement or presentation from S&P Indices constitutes an offer of services in jurisdictions where S&P Indices does not have the necessary licenses. All information provided by S&P Indices is impersonal and is not tailored to the needs of any person, entity or group of persons. Any returns or performance provided within any document is provided for illustrative purposes only and does not demonstrate actual performance. Past performance is not a guarantee of future investment results.

This document may contain data provided by MSCI, Inc. Copyright MSCI, 2017. Unpublished. All Rights Reserved. This information may only be used for your internal use, may not be reproduced or disseminated in any form and may not be used to create any financial instruments or products or any indices. This information is provided on an "as is" basis and the user of this information assumes the entire risk of any use it may make or permit to be made of this information. Neither MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information makes any express or implied warranties or representations with respect to such information or the results to be obtained by the use thereof, and MSCI, its affiliates and each such other person hereby expressly disclaim all warranties (including, without limitation, all warranties of originality, accuracy, completeness, timeliness, non-infringement, merchantability and fitness for a particular purpose) with respect to this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any other person involved in or related to compiling, computing or creating this information have any liability for any direct, indirect, special, incidental, punitive, consequential or any other damages (including, without limitation, lost profits) even if notified of, or if it might otherwise have anticipated, the possibility of such damages.

This document may contain data provided by Russell Investment Group. Russell Investment Group is the source owner of the data contained or reflected in this material and all trademarks and copyrights related thereto. The material may contain confidential information and unauthorized use, disclosure, copying, dissemination or redistribution is strictly prohibited. This is a user presentation of the data. Russell Investment Group is not responsible for the formatting or configuration of this material or for any inaccuracy in presentation thereof.

This document may contain data provided by Morningstar. All rights reserved. Use of this content requires expert knowledge. It is to be used by specialist institutions only. The information contained herein: (1) is proprietary to Morningstar and/or its content providers; (2) may not be copied, adapted or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information, except where such damages or losses cannot be limited or excluded by law in your jurisdiction. Past financial performance is not guarantee of future results.



**Clients first.**



CHICAGO | CLEVELAND | DALLAS | DETROIT | ORLANDO | PITTSBURGH | RENO

**AndCo Consulting** | (844) 44-ANDCO | *AndCoConsulting.com*