

Investment Performance Review  
Period Ending June 30, 2022

# Retirement Board of Allegheny County

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As you may recall from our Client Letter at the beginning of the year, AndCo remains steadfast in our belief and conviction that the best way to service our valued clients is within a model that is independent, singularly focused, customized, and passionately delivered. We continue to reinvest 100% of our net profits back into the organization to enhance our customized service model and provide the appropriate resources for all our team members to serve our valued clients at a high level.

To that end, we are thrilled to share that AndCo is the recipient of a Greenwich Quality Leader Award for mid-sized consulting firms!

Coalition Greenwich is a leading global provider of data, analytics, and insights to the financial services industry, and the Greenwich Exchange provides institutional investors with robust and actionable data to inform their decision-making. Research participants receive regional and global industry insights, as well as peers' perceptions of asset managers and investment consultants.

Outlined below are the award criteria research participants answer that determines Quality Leader Awards each year. To qualify as a research participant you must have at least \$150MM in investable assets.

2021 was the first year we launched an initiative to participate in this research opportunity and the experience helped glean key insights into what is important for our clients and how we can better serve them going forward. We deeply appreciate the client representatives that acted as research participants in the 2021 study.

While our consultants are the tip of the spear when servicing our clients, this award, and our overall client service experience, would not have been possible without the work of our entire AndCo team. We greatly appreciate their ongoing work and efforts that made this award possible.

As we have stated since our rebrand in 2017, our name, AndCo, reminds us of who we work for every day - "Our Client" &Co. You will always be first in our service model and at the forefront of each team member's efforts to serve, earn your trust, and add value.

Thank you again for your valued partnership and the opportunity to serve you. We share this award with you and will continue to work hard to earn your trust as we move forward in these challenging market environments.

## GREENWICH QUALITY LEADER AWARD CRITERIA

Understanding of Client Goals and Objectives	Client Satisfaction with Manager Recommendations	Timeliness in Providing Written Reports
Advice on DC Plan Structure and Design	Communication of Philosophy and Investment Beliefs	Capability of Consultants Assigned to Clients
Credibility with Investment Committee	Advice on Long-Term Asset Allocation and Liability Issues	Usefulness of Personal Meetings
Proactive Advice and Innovative Ideas	Responsiveness and Prompt Follow-Up on Client Requests	Sufficient Professional Resources
	Usefulness of Written Investment Reviews	

*IMPORTANT DISCLOSURE INFORMATION RE GREENWICH QUALITY LEADER AWARD: This communication is intended for informational purposes only and should not be regarded as investment advice or as a recommendation regarding any particular course of action. AndCo Consulting is an investment adviser registered with the U.S. Securities and Exchange Commission ("SEC"). Registration as an investment adviser does not constitute an endorsement of the firm by securities regulators nor does it indicate that the adviser has attained a particular level of skill or ability.*

*These ratings are not indicative of AndCo's future performance. These awards or any other rankings and/or recognition by unaffiliated rating services and/or publications should not be construed as a guarantee that a client will experience a certain level of results or satisfaction if they invest with AndCo, nor should it be construed as a current or past endorsement by any of our clients. AndCo did not pay a fee to participate in this award survey. Coalition Greenwich and AndCo are not affiliated entities.*

*METHODOLOGY FOR THIS AWARD: Between July and October 2021, Coalition Greenwich conducted interviews with 811 individuals from 661 of the largest tax-exempt funds in the United States. These U.S.-based institutional investors are corporate and union funds, public funds, and endowment and foundation funds, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset management and investment consulting providers, including qualitative assessments of those firms soliciting their business and detailed information on important market trends.*



## **2nd Quarter 2022 Market Environment**



## The Economy

- Global economic growth continued to slow during the 2nd quarter as global central banks tightened monetary policy in order to fight persistently high inflation. Additionally, rising geopolitical concerns related to Russia's continued action in Ukraine, China's zero-Covid policy, and social unrest in emerging markets all contributed to the slowdown.
- The US Federal Reserve Bank (the Fed) increased interest rates twice during the quarter by a total of 1.25%. June's rate increase of 0.75% was the largest interest rate increase since the early 1990s. The Fed indicated that its primary focus is arresting the increase in inflation which could require additional rate increases.
- The US labor market continues to be a source of strength with the unemployment rate holding steady at 3.6% in June. The pace of job growth remains above the market's expectations with 390,000 and 372,000 new jobs created in May and June, respectively. Despite these gains, the number of available workers entering the workforce remains significantly below the pre-pandemic high.
- The US housing market showed signs of cooling as higher mortgage rates pushed many buyers out of the market. Importantly, housing starts and new building permits continued their downward trend which suggests future new inventory may fall short of demand. Finally, home price appreciation continued to increase as measured by the Cash-Shiller Home Price Index.

## Equity (Domestic and International)

- US equities declined broadly during the 2nd quarter as worries regarding inflation, sharply higher interest rates, rising recession risk, and continued geopolitical events weighed on the equity market. Large cap value was the least negative (-12.2%) segment of the domestic equity market relative to other styles and capitalizations for the second consecutive quarter. Mid-cap growth was the worst performing style, falling 21.1% for the period.
- International stocks also struggled during the 2nd quarter as the continuing conflict in Ukraine and persistently high inflation drove markets lower. Western Europe was negatively affected by rising energy prices due to continued restrictions on purchases from Russia. Additionally, both the Euro and Yen currencies fell against the US dollar (USD) because of increasing uneasiness over future economic growth.

## Fixed Income

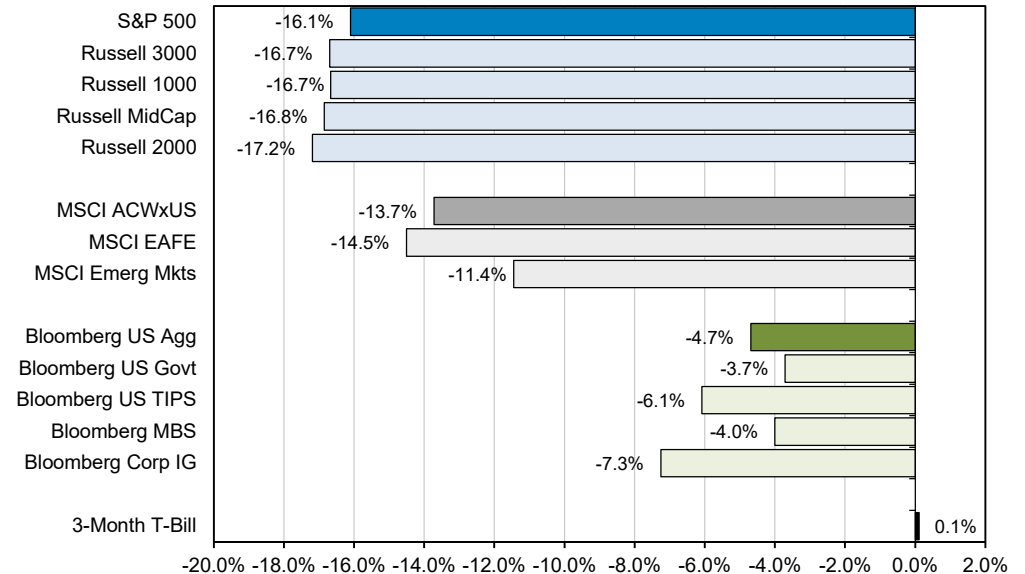
- Concerns about current inflation levels, combined with the Fed's stated commitment to continue raising interest rates, were the primary drivers of return during the 2nd quarter. US interest rates moved significantly higher during the quarter with the US 10-Year Treasury bond rising 63 basis points to close at a yield of 2.98%.
- Performance was broadly negative across all bond market sectors during the quarter with US Treasury bonds holding up the most as market volatility increased.
- Investment grade corporate bonds underperformed higher quality mortgage-backed and US Treasury bonds during the quarter. High yield bonds also lagged their peers as fears over future economic growth and weaker corporate earnings drove credit spreads wider.
- Counterintuitively, TIPS underperformed nominal US Treasury bonds during the quarter as the bond market's future expectation for inflation declined.

## Market Themes

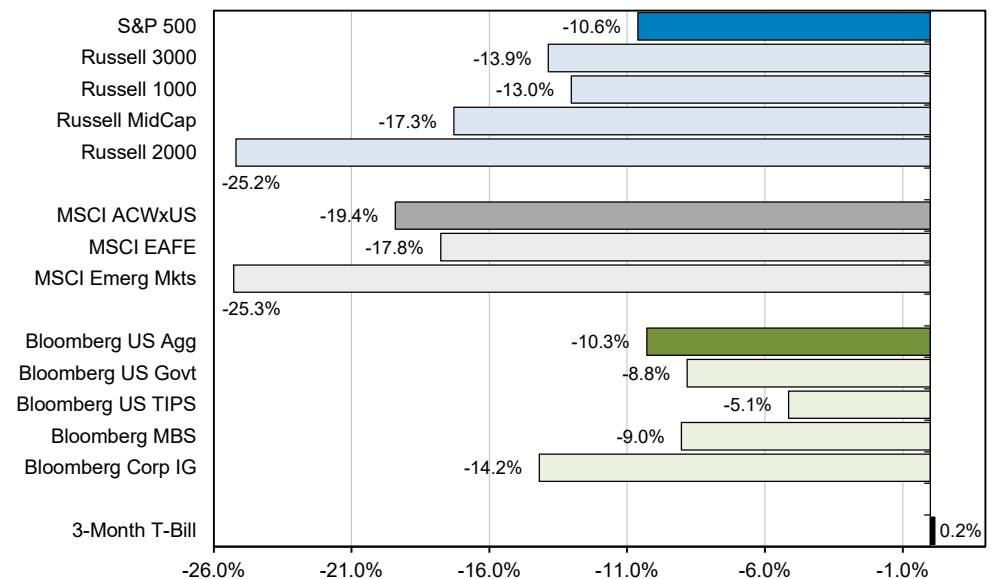
- The pace of global central bank monetary tightening increased during the quarter with the both the Fed and Bank of England raising interest rates. The European Central Bank also hinted it would begin raising rates during the 3rd quarter.
- The crisis in Ukraine continues to negatively impact global economic growth. Specifically, recently imposed restrictions will likely result in higher energy costs in Europe just as economic growth begins to slow.
- US equity markets experienced their second consecutive negative quarter of performance and their worst start to a calendar year since the 1970s. Growth-oriented stocks significantly underperformed value stocks as investors' fears about rising inflation and future economic growth carried through to asset prices. Historically, growth stocks have underperformed value stocks as the economy slows.
- Interest rates continued to rise across the Treasury yield curve during the quarter as investors believe the Fed will continue to raise interest rates to fight inflation. The shape of the yield curve remained relatively flat between two- and ten-year maturities. Historically, the yield curve has been used as a leading indicator to predict the market's expectations of a recession.

- Broad US equity markets continued their recent trend delivering negative returns during the 2nd quarter of 2022. A variety of factors contributed to performance including persistently high inflation, the potential for future interest rate increases, geopolitical events in Ukraine, and concerns related to slower economic growth. For the period, the S&P 500 large cap benchmark returned -16.1%, compared to -16.8% for mid-cap and -17.2% for small cap indices.
- Developed market international equities also suffered negative results for the 2nd quarter. Europe continues to be negatively impacted by the ongoing crisis in Ukraine. Recently, restrictions related to Russian energy imports were imposed leading to further energy cost increases. For the quarter, the MSCI EAFE Index declined by -14.5%.
- Emerging markets were also under pressure due to the continued conflict in Ukraine and China's "Zero Covid" policy. During the period, the MSCI Emerging Markets Index fell by -11.4%
- Bond market performance was broadly negative for the quarter due to rising inflation and the prospect of additional interest rate increases. The Bloomberg (BB) US Aggregate Index returned -4.7% for the period while Investment Grade Corporate bonds posted a return of -7.3%. US Treasury bonds held up the most for the period, but still declined by -3.7%.
- The quarter's negative performance added to challenged returns of developed equity markets over the trailing 1-year period. The primary drivers of returns during the period were rising inflation, the path of interest rates, and future economic growth. The S&P 500 large cap stock index led relative equity market performance for the year but still returned a disappointing -10.6%. The downside outlier was the Russell 2000 small cap index, which declined by -25.3% for the year.
- Similar to domestic equities, the developed international and emerging markets suffered negative returns over the trailing 1-year period. The developed market MSCI EAFE Index posted a return of -17.8% while the MSCI Emerging Markets Index pulled back by -25.3%. Economic growth slowed throughout the year as monetary stimulus wore off and it became increasingly clear that high inflation levels were not transitory.
- Bond market returns also disappointed over the trailing 1-year period with the BB US Aggregate Index dropping by -10.3%.

### Quarter Performance



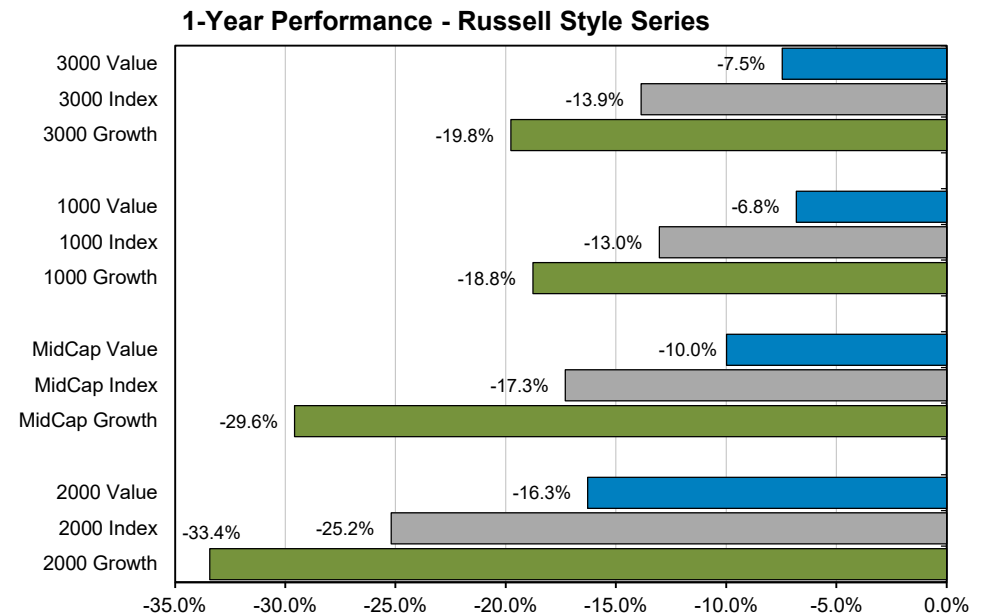
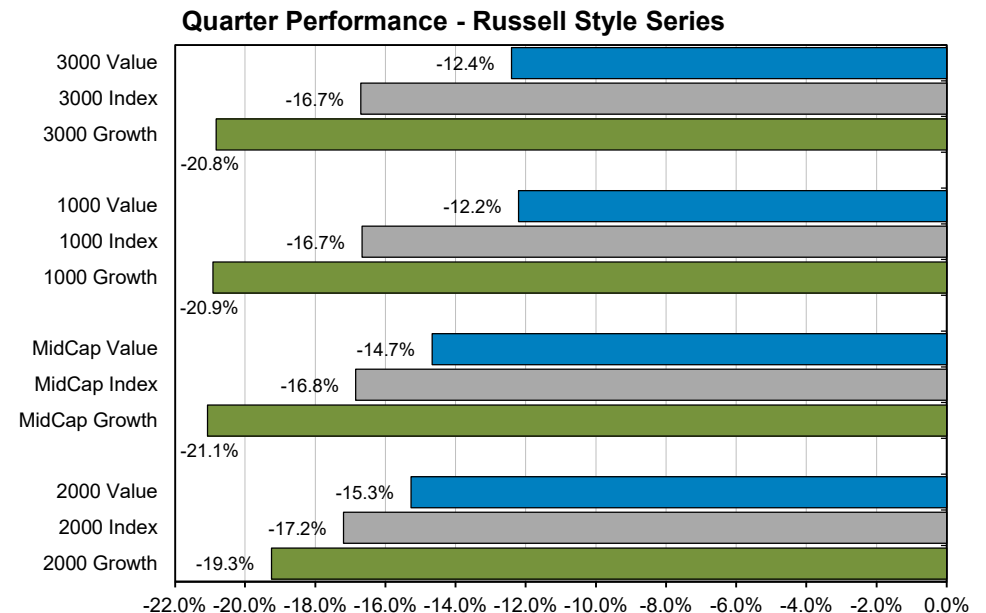
### 1-Year Performance



Source: Investment Metrics



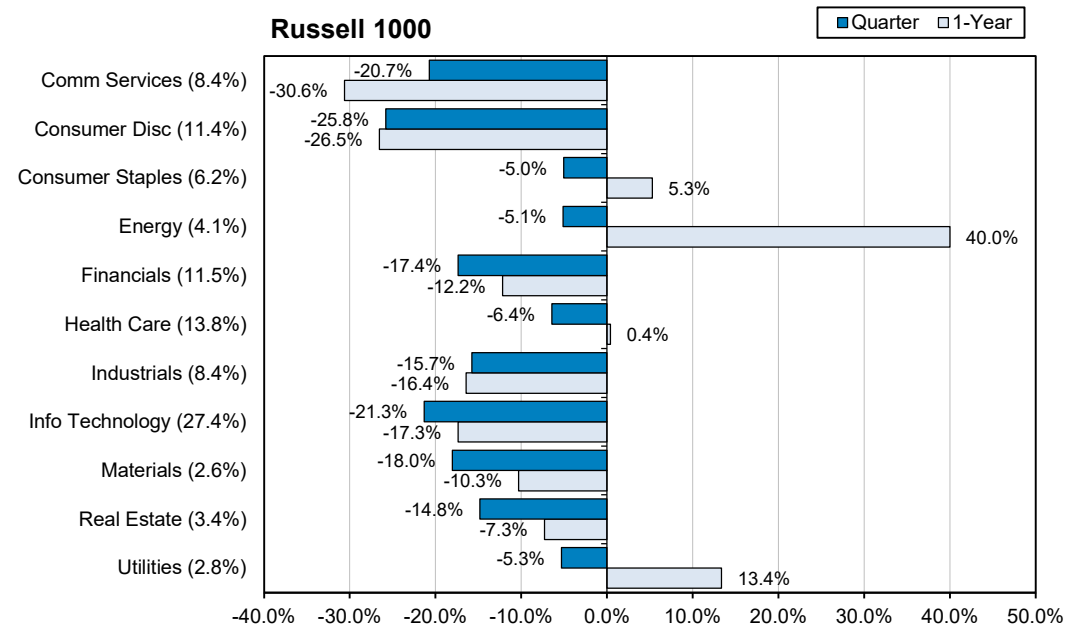
- Volatility increased during the 2nd quarter as each broad US equity benchmark posted negative results across both the style and market capitalization spectrums. Large cap stocks continued their leadership, followed by mid and small cap issues. The Russell 1000 Index declined by -16.7% for the quarter while the Russell Mid Cap Index and the Russell 2000 Index fell by -16.8% and -17.2%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Value stocks handily outpaced their growth counterparts across market capitalizations. For the period, the Russell 1000 Value Index was the least negative performing style index, posting a weak return of -12.2%. Mid cap and large cap growth stocks fell even further with the Mid Cap Growth Index declining by -21.1% and the Russell 1000 Growth Index posting a return of -20.9%.
- Performance across all market capitalizations and styles were also negative over the trailing 1-year period. Much like the 2nd quarter, large cap stocks were down less than mid and small cap stocks for the 1-year period. The Russell 1000 Index returned -13.0% for the year but was down significantly less than both its mid and small cap growth index counterparts. The downside outlier during the period was the Russell 2000 Index which fell by -25.2%.
- The return dispersion across market styles was also wide for the trailing 1-year period and value stocks were down less than growth stocks by a two-to-one margin across large, mid and small style-based indexes. The return dispersion was extreme with the Russell 1000 Value Index returning -6.8%, and at the other end of the spectrum, the Russell 2000 Growth Index posting a return of -33.4%.



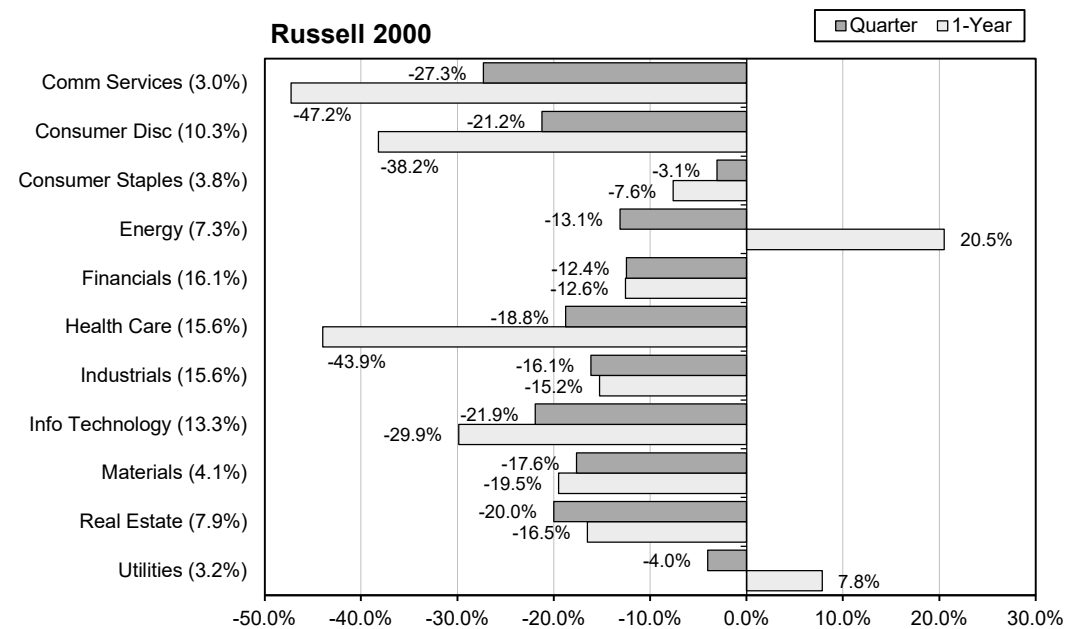
Source: Investment Metrics



- Economic sector performance was negative across all eleven large cap economic sectors for the 2nd quarter. Only four sectors were down less than the return of the broader Russell 1000 Index (-16.7%) on a relative basis during the period.
- Defensive sectors including consumer staples (-5.0%) energy (-5.1%), and utilities (-5.3%) were the least negative performing sectors for the quarter. Concerns about a potential economic slowdown drove the performance of consumer staples during the period. Energy prices remained elevated which acted as a tailwind for the sector. Economically sensitive sectors such as consumer discretionary (-25.8%), information technology (-21.3%), and communication services (-20.7%), significantly underperformed the broader index for the quarter.
- For the full year, seven sectors exceeded the return of the broad large cap benchmark: energy (40.0%), utilities (13.4%), consumer staples (5.3%), health care (0.4%), real estate (-7.3%), materials (-10.3%), and financials (-12.2%). The weakest economic sector performance in the Russell 1000 for the year was communication services (-30.6%).



- Small cap sector performance was also broadly negative for the 2nd quarter with all sectors posting negative performance. Five sectors were down less than the return of the broader Russell 2000 Index (-17.2%) on a relative basis. The consumer staples (-3.1%) sector held up the most for the quarter and the communication services (-27.3%) sector the was the weakest.
- For the trailing 1-year period, seven of the eleven small sectors outpaced the broad benchmark's return (-25.2%). However, only two defensive sectors posted positive performance for the year: energy (20.5%) and utilities (7.8%). The weakest sector over the trailing year was communication services (-47.2%).



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



**The Market Environment**  
**Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000**  
As of June 30, 2022

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	5.92%	-21.6%	0.4%	Information Technology
Microsoft Corp	5.44%	-16.5%	-4.4%	Information Technology
Amazon.com Inc	2.67%	-34.8%	-38.3%	Consumer Discretionary
Alphabet Inc Class A	1.85%	-21.6%	-10.8%	Communication Services
Alphabet Inc Class C	1.70%	-21.7%	-12.7%	Communication Services
Tesla Inc	1.62%	-37.5%	-0.9%	Consumer Discretionary
Berkshire Hathaway Inc Class B	1.39%	-22.6%	-1.8%	Financials
UnitedHealth Group Inc	1.36%	1.1%	30.0%	Health Care
Johnson & Johnson	1.32%	0.8%	10.5%	Health Care
Meta Platforms Inc Class A	1.05%	-27.5%	-53.6%	Communication Services

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Ollie's Bargain Outlet Holdings Inc	0.01%	36.8%	-30.2%	Consumer Discretionary
H&R Block Inc	0.02%	36.6%	56.7%	Consumer Discretionary
United Therapeutics Corp	0.03%	31.3%	31.3%	Health Care
Grocery Outlet Holding Corp	0.01%	30.0%	23.0%	Consumer Staples
Pilgrims Pride Corp	0.00%	24.4%	40.8%	Consumer Staples
Seagen Inc Ordinary Shares	0.07%	22.8%	12.1%	Health Care
Lamb Weston Holdings Inc	0.03%	19.7%	-10.0%	Consumer Staples
Post Holdings Inc	0.01%	18.9%	14.1%	Consumer Staples
Monster Beverage Corp	0.10%	16.0%	1.5%	Consumer Staples
American Campus Communities Inc	0.03%	15.2%	41.8%	Real Estate

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Carvana Co Class A	0.01%	-81.1%	-92.5%	Consumer Discretionary
Coinbase Global Inc Ord Shrs - Class A	0.02%	-75.2%	-81.4%	Financials
Upstart Holdings Inc Ordinary Shares	0.01%	-71.0%	-74.7%	Financials
Lyft Inc Class A	0.01%	-65.4%	-78.0%	Industrials
Peloton Interactive Inc	0.01%	-65.3%	-92.6%	Consumer Discretionary
Cloudflare Inc	0.03%	-63.5%	-58.7%	Information Technology
Unity Software Inc Ordinary Shares	0.02%	-62.9%	-66.5%	Information Technology
Affirm Holdings Inc Ord Shrs - Class A	0.01%	-61.0%	-73.2%	Information Technology
Wayfair Inc Class A	0.01%	-60.7%	-86.2%	Consumer Discretionary
Royal Caribbean Group	0.02%	-58.3%	-59.1%	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Biohaven Pharmaceutical Hldg Co Ltd	0.40%	22.9%	50.1%	Health Care
ShockWave Medical Inc	0.30%	-7.8%	0.8%	Health Care
Chart Industries Inc	0.27%	-2.6%	14.4%	Industrials
Halozyme Therapeutics Inc	0.26%	10.3%	-3.1%	Health Care
SailPoint Technologies Holdings Inc	0.26%	22.5%	22.7%	Information Technology
SouthState Corp	0.25%	-4.8%	-3.3%	Financials
Southwest Gas Holdings Inc	0.25%	12.0%	35.9%	Utilities
Stag Industrial Inc	0.24%	-24.5%	-14.5%	Real Estate
Agree Realty Corp	0.24%	9.8%	6.4%	Real Estate
RBC Bearings Inc	0.23%	-4.6%	-7.3%	Industrials

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Redbox Entertainment Inc Class A	0.00%	213.6%	N/A	Communication Services
Turning Point Therapeutics Inc	0.15%	180.3%	-3.6%	Health Care
Veru Inc	0.03%	134.0%	40.0%	Consumer Staples
GTU Technology Holdings Inc Class A	0.01%	93.8%	-12.0%	Information Technology
Day One Biopharmaceuticals Inc	0.02%	80.4%	-21.4%	Health Care
SIGA Technologies Inc	0.02%	73.3%	95.7%	Health Care
Sierra Oncology Inc	0.04%	71.6%	182.4%	Health Care
Scorpio Tankers Inc	0.08%	62.0%	60.1%	Energy
Lulus Fashion Lounge Holdings Inc	0.00%	60.0%	N/A	Consumer Discretionary
Convey Health Solutions Hldg Ord Shrs	0.01%	59.0%	-8.6%	Health Care

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Applied Blockchain Inc	0.00%	-93.3%	-90.1%	Information Technology
TeraWulf Inc	0.00%	-85.7%	N/A	Information Technology
Velo3D Inc	0.00%	-85.2%	N/A	Industrials
Avaya Holdings Corp	0.01%	-82.3%	-91.7%	Information Technology
Bird Global Inc Class A	0.00%	-82.2%	N/A	Industrials
Core Scientific Inc Ord Shares - Class A	0.01%	-81.9%	N/A	Information Technology
Boxed Inc	0.00%	-81.8%	N/A	Consumer Discretionary
Marathon Digital Holdings Inc	0.02%	-80.9%	-83.0%	Information Technology
Riot Blockchain Inc	0.02%	-80.2%	-88.9%	Information Technology
Endo International PLC	0.00%	-79.8%	-90.0%	Health Care

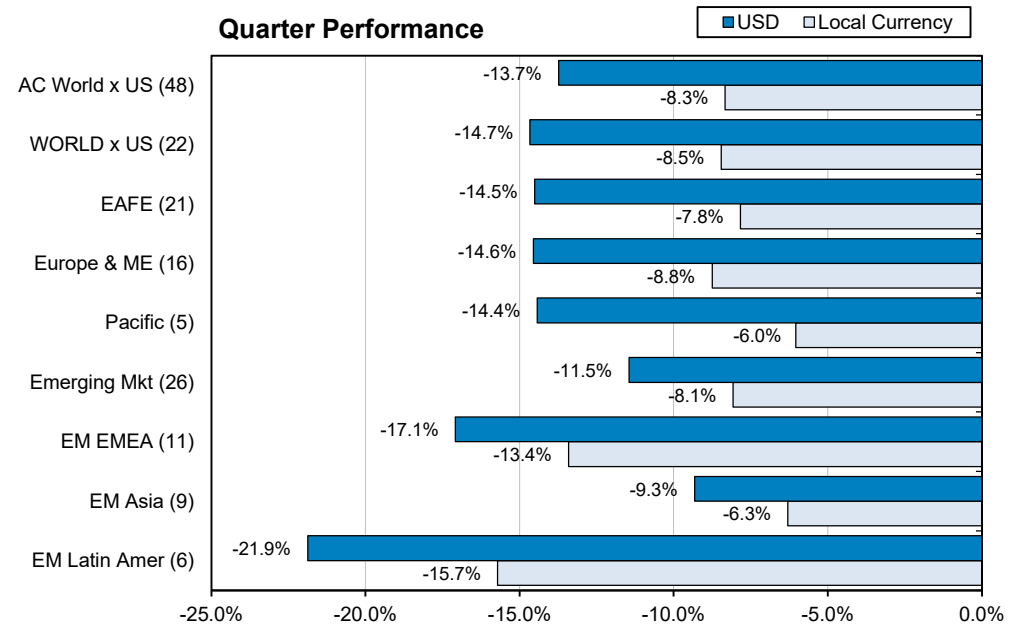
Source: Morningstar Direct





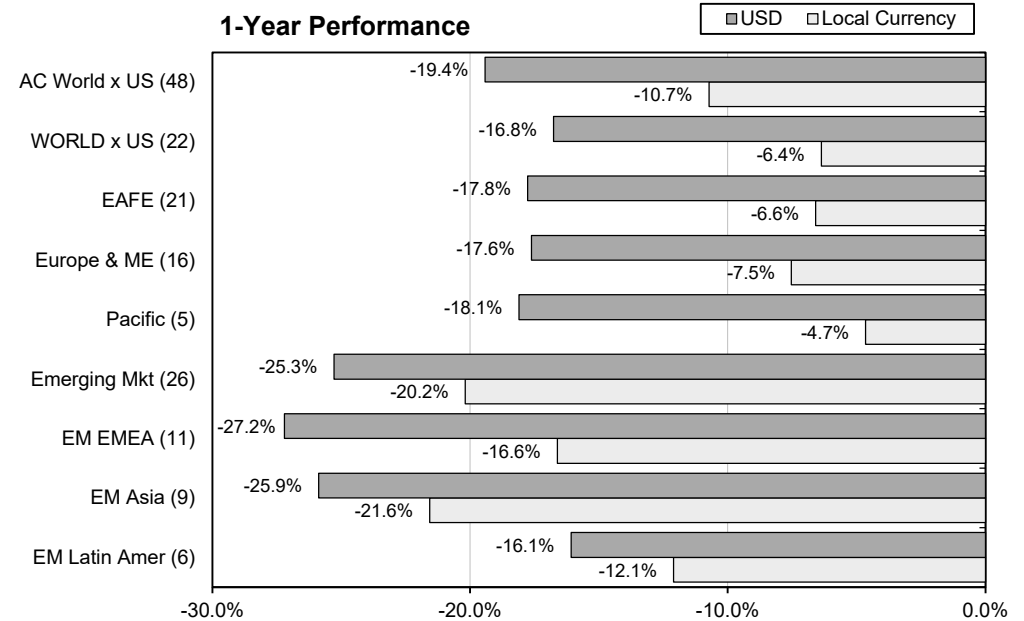
- Performance across all developed and emerging international equity indexes tracked in the chart were negative during the quarter in both US dollar (USD) and local currency (LC) terms. The developed market MSCI EAFE Index returned -14.5% in USD and -7.8% in LC terms. Developed markets were negatively impacted by rising inflation and tighter monetary policy. Emerging markets, especially those that export commodities, held up better.

**Quarter Performance**



- The trailing 1-year results for both international developed and emerging markets were broadly negative across all regions and currencies. The MSCI EAFE Index returned -17.8% in USD for the year and -6.6% in LC terms. Similarly, returns across emerging markets were broadly lower with the MSCI Emerging Markets Index falling by -25.3% in USD and -20.2% in LC terms. Within emerging markets, the EMEA region was the worst performing, declining by -27.2% in USD and -16.6% in LC terms. The region was negatively affected by the conflict in Ukraine.

**1-Year Performance**



Source: MSCI Global Index Monitor (Returns are Net)



**The Market Environment**  
**US Dollar International Index Attribution & Country Detail**  
As of June 30, 2022

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.0%	-10.9%	-20.7%
Consumer Discretionary	11.3%	-15.5%	-27.6%
Consumer Staples	10.9%	-8.4%	-14.0%
Energy	4.8%	-4.1%	21.4%
Financials	17.7%	-13.9%	-12.3%
Health Care	13.9%	-9.5%	-9.9%
Industrials	14.9%	-18.5%	-24.4%
Information Technology	7.8%	-23.5%	-30.0%
Materials	7.5%	-21.0%	-18.6%
Real Estate	2.9%	-15.8%	-20.9%
Utilities	3.5%	-11.8%	-12.2%
<b>Total</b>	<b>100.0%</b>	<b>-14.5%</b>	<b>-17.8%</b>

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.5%	-10.7%	-26.6%
Consumer Discretionary	11.7%	-8.4%	-31.1%
Consumer Staples	8.9%	-7.6%	-14.0%
Energy	6.0%	-4.7%	8.2%
Financials	20.3%	-14.3%	-10.4%
Health Care	9.8%	-9.6%	-15.8%
Industrials	11.8%	-17.1%	-22.1%
Information Technology	11.0%	-22.6%	-31.6%
Materials	8.0%	-21.4%	-19.1%
Real Estate	2.5%	-13.5%	-22.5%
Utilities	3.4%	-9.5%	-7.5%
<b>Total</b>	<b>100.0%</b>	<b>-13.7%</b>	<b>-19.4%</b>

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.6%	-10.5%	-32.9%
Consumer Discretionary	14.9%	6.3%	-37.2%
Consumer Staples	6.1%	-4.6%	-17.7%
Energy	5.0%	-5.9%	-21.7%
Financials	21.2%	-14.1%	-8.7%
Health Care	4.0%	-8.8%	-42.3%
Industrials	5.6%	-9.5%	-17.8%
Information Technology	19.2%	-20.8%	-28.9%
Materials	8.4%	-20.6%	-24.2%
Real Estate	2.1%	-6.1%	-27.6%
Utilities	2.9%	-4.4%	3.3%
<b>Total</b>	<b>100.0%</b>	<b>-11.5%</b>	<b>-25.3%</b>

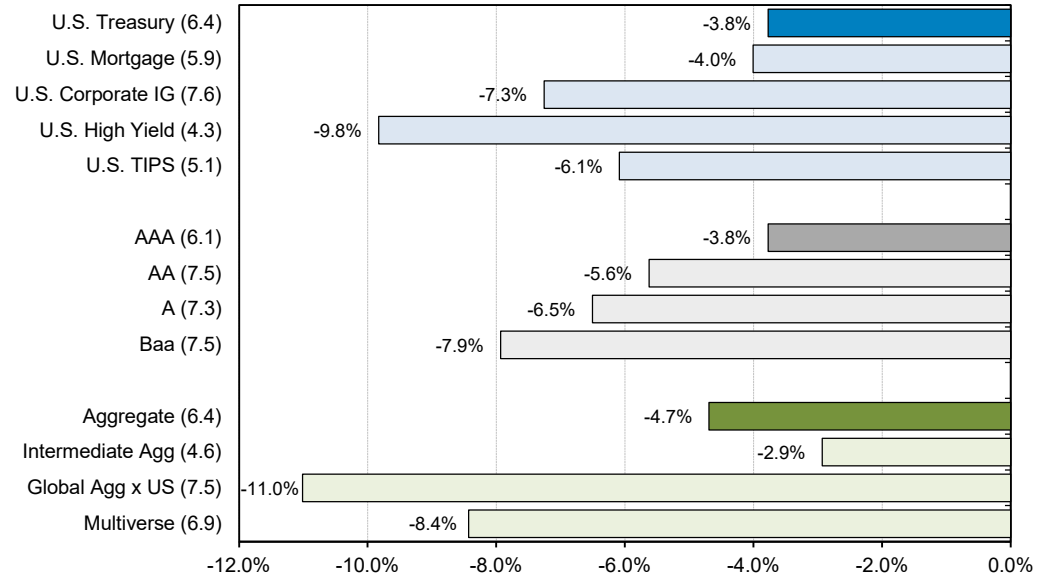
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.3%	13.8%	-14.6%	-19.9%
United Kingdom	15.9%	9.9%	-10.5%	-4.0%
France	11.2%	7.0%	-14.8%	-18.3%
Switzerland	10.5%	6.5%	-14.5%	-12.7%
Australia	7.8%	4.9%	-18.1%	-13.1%
Germany	7.8%	4.8%	-18.1%	-31.2%
Netherlands	4.1%	2.6%	-19.0%	-28.4%
Sweden	3.4%	2.1%	-21.4%	-31.0%
Hong Kong	3.3%	2.1%	-1.1%	-15.2%
Denmark	2.8%	1.7%	-12.0%	-10.5%
Spain	2.5%	1.6%	-8.4%	-16.3%
Italy	2.3%	1.4%	-17.7%	-22.7%
Singapore	1.5%	0.9%	-16.8%	-21.0%
Belgium	1.0%	0.6%	-13.4%	-21.0%
Finland	1.0%	0.6%	-10.9%	-21.7%
Norway	0.8%	0.5%	-14.8%	-1.6%
Israel	0.8%	0.5%	-20.0%	-18.1%
Ireland	0.6%	0.4%	-19.6%	-35.4%
Portugal	0.2%	0.1%	-6.1%	1.4%
Austria	0.2%	0.1%	-17.2%	-23.1%
New Zealand	0.2%	0.1%	-16.9%	-25.8%
<b>Total EAFE Countries</b>	<b>100.0%</b>	<b>62.2%</b>	<b>-14.5%</b>	<b>-17.8%</b>
Canada		8.1%	-15.8%	-8.0%
<b>Total Developed Countries</b>		<b>71.4%</b>	<b>-4.8%</b>	<b>3.0%</b>
China		10.5%	3.4%	-31.8%
Taiwan		4.3%	-19.8%	-20.4%
India		3.8%	-13.7%	-4.8%
Korea		3.4%	-20.9%	-38.5%
Brazil		1.4%	-24.4%	-23.3%
Saudi Arabia		1.3%	-12.5%	10.3%
South Africa		1.1%	-23.0%	-13.2%
Mexico		0.6%	-15.2%	-0.7%
Thailand		0.6%	-10.6%	-7.5%
Indonesia		0.5%	-9.0%	16.1%
Malaysia		0.4%	-12.8%	-9.3%
United Arab Emirates		0.4%	-19.4%	14.7%
Qatar		0.3%	-10.8%	17.4%
Kuwait		0.2%	-7.7%	22.8%
Philippines		0.2%	-19.5%	-17.8%
Poland		0.2%	-27.1%	-35.1%
Chile		0.2%	-15.9%	-10.1%
Turkey		0.1%	-10.9%	-9.0%
Peru		0.1%	-30.2%	-7.5%
Greece		0.1%	-17.0%	-17.5%
Colombia		0.1%	-28.0%	3.3%
Czech Republic		0.1%	-3.7%	27.4%
Hungary		0.1%	-26.3%	-42.2%
Egypt		0.0%	-20.4%	-24.8%
<b>Total Emerging Countries</b>		<b>29.7%</b>	<b>-11.5%</b>	<b>-25.3%</b>
<b>Total ACWixUS Countries</b>		<b>100.0%</b>	<b>-13.7%</b>	<b>-19.4%</b>

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

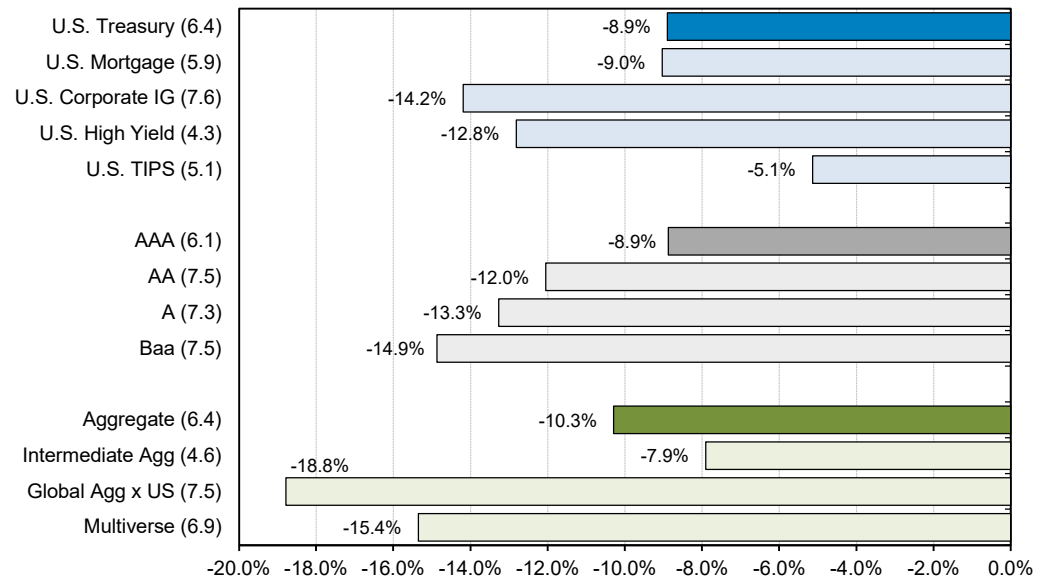


- Fixed income markets were broadly negative during the 2nd quarter. Investors remained focused on rising inflation and the potential of future Fed rate increases to combat it. As a result, US Treasury bond yields were higher across the maturity curve during the quarter.
- The return for the BB US Aggregate Bond Index, the bellwether investment grade benchmark, was down -4.7% for the period.
- Performance across the investment grade index's segments was also negative during the period with the US Corporate Investment Grade bonds declining -7.3% and the US Mortgage index component posting a return of -4.0%.
- US Treasury bonds were the quarter's least negative segment, returning -3.8% and high yield bonds were the worst performing, declining by -9.8%.
- Outside of domestic markets, the BB Global Aggregate ex US Index fell by -11.0% for the quarter. Like international stocks, global bond index performance was negatively impacted by the strengthening USD, which acted as a drag on USD index returns. Additionally, yields in both German and Japan, two of the largest issuers in the benchmark, moved markedly higher during the period.
- Over the trailing 1-year period, domestic investment grade benchmark performance was negative and led lower by investment grade corporate(-14.2%) and mortgage (-9.0%) bonds. US TIPS (-5.1%) were down less than nominal US Treasury bonds (-8.9%). The bellwether BB US Aggregate Bond Index declined by -10.3% for the year.
- Primarily due to their shorter maturity profile, lower quality high yield corporate bonds fell by less than their investment grade counterparts with the BB US High Yield Index returning -12.8% for the period.
- Non-US bonds have been under significant pressure over the past year with the developed market BB Global Aggregate ex US Index falling by -18.8%. The combination of rising inflation, higher interest rates, a longer maturity profile, and USD strength contributed to weak index performance for the year.

**Quarter Performance**



**1-Year Performance**

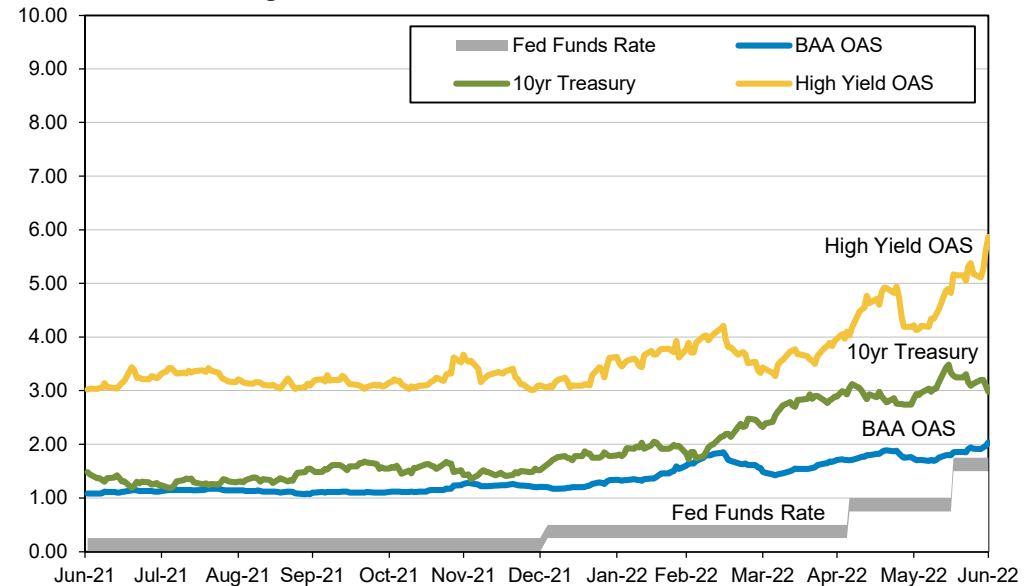


Source: Bloomberg

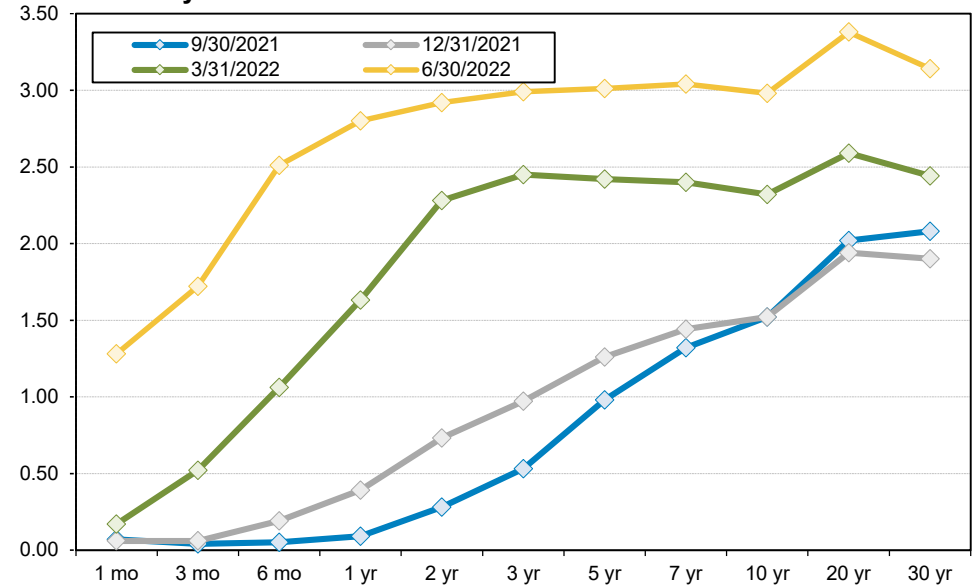


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 2nd quarter this year, the Fed raised the upper end of its target rate range from 0.50% to 1.75%. During its recent June meeting, the Federal Open Market Committee (FOMC) stated that it remains committed to fighting higher inflation and will consider future interest rate increases. Importantly, the FOMC stated that it will begin lowering the size of the balance sheet by not reinvesting proceeds from maturing bonds.
- The yield on the US 10-year Treasury (green line) ended the period higher as concerns over the pace of inflation, combined with the Fed's announced rate increase, drove yields higher. After reaching a high of nearly 3.50% during June, interest rates traded fell for the remainder of the quarter. The yield on the US 10-year Treasury was 2.98% on June 30th.
- 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 to 2.04% from 1.07%. High Yield OAS moved significantly higher over the latter part of the year as spreads rose from 3.04% to 5.87%. High Yield spreads began moving wider during the year on concerns over slowing economic growth which raises the specter of a potential increase in defaults.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. The yield curve shifted significantly higher across all maturities during the 2nd quarter of 2022 following the Fed's decision to raise interest rates by 1.25%. The shape of the yield curve normalized during the quarter as longer-term interest rates moved above short-term rates. As of the end of the quarter, the spread between 2-year and 10-year rates was positive. Historically, market expectations for recession increase when longer-term interest rates trade below their short-term peers.

**1-Year Trailing Market Rates**



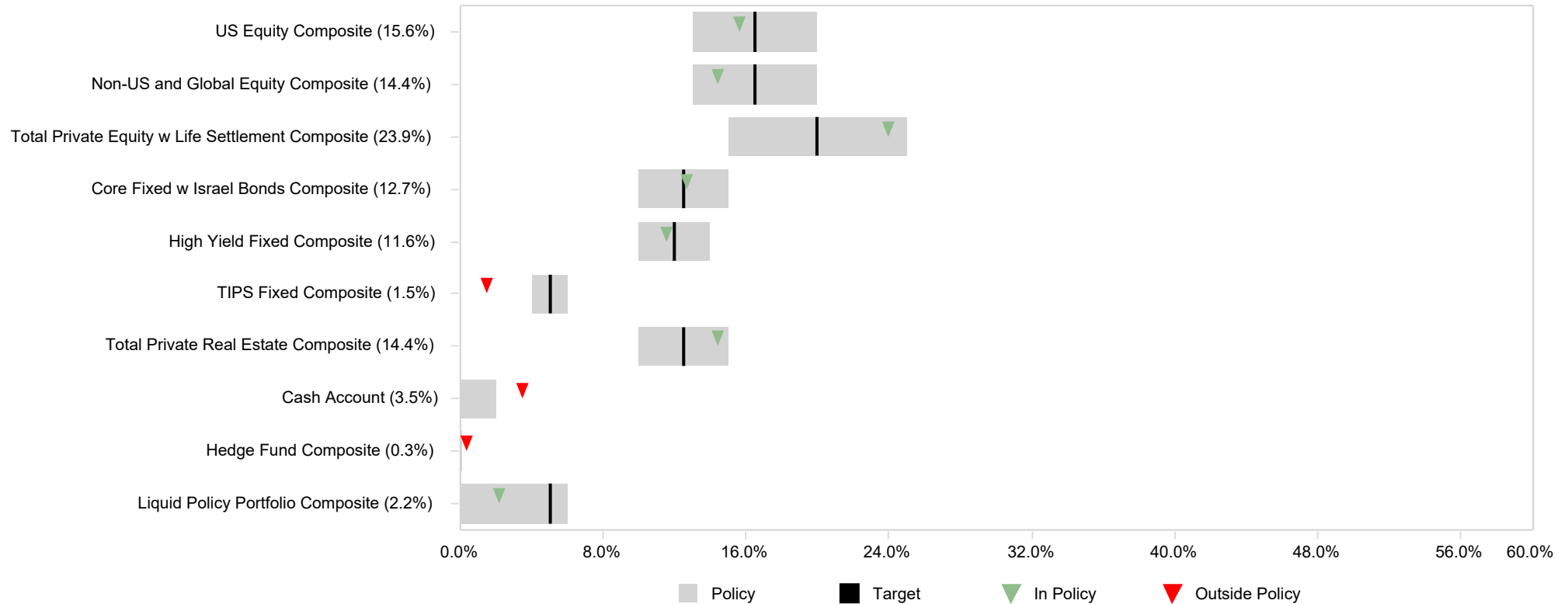
**Treasury Yield Curve**



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



**Executive Summary**



**Asset Allocation Compliance**

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
<b>Total Fund</b>	<b>966,877,212</b>	<b>100.0</b>	<b>N/A</b>	<b>N/A</b>	<b>100.0</b>
US Equity Composite	150,923,916	15.6	13.0	20.0	16.5
Non-US and Global Equity Composite	138,960,263	14.4	13.0	20.0	16.5
Total Private Equity w Life Settlement Composite	231,392,180	23.9	15.0	25.0	20.0
Core Fixed w Israel Bonds Composite	122,951,479	12.7	10.0	15.0	12.5
High Yield Fixed Composite	111,700,649	11.6	10.0	14.0	12.0
TIPS Fixed Composite	14,191,061	1.5	4.0	6.0	5.0
Total Private Real Estate Composite	138,985,271	14.4	10.0	15.0	12.5
Cash Account	33,473,731	3.5	0.0	2.0	0.0
Hedge Fund Composite	3,083,282	0.3	0.0	0.0	0.0
Liquid Policy Portfolio Composite	21,215,370	2.2	0.0	6.0	5.0

*Asset Allocation includes assets of the Emerging, Minority, and Women owned Investment Manager Program. The Investment Policy Statement for the Retirement Board of Allegheny County allows for the Pension's asset allocation to temporarily fall outside of the stated policy ranges due to market fluctuations and the Pension's short-term cash flow needs. Recommendations are provided by the Pension's investment consultant regarding rebalancing of the Pension's asset allocation.*



**Historical Asset Allocation  
Total Fund**

As of June 30, 2022

**Asset Allocation Attributes**

	Jun-2022		Mar-2022		Dec-2021		Sep-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	966,877,212	100.00	1,054,944,656	100.00	1,095,129,059	100.00	1,061,582,892	100.00
<b>US Equity Composite</b>	<b>150,923,916</b>	<b>15.61</b>	<b>180,163,045</b>	<b>17.08</b>	<b>194,965,866</b>	<b>17.80</b>	<b>191,381,978</b>	<b>18.03</b>
SSgA S&P 500 Index	70,812,454	7.32	84,402,437	8.00	94,096,192	8.59	98,897,469	9.32
Fragasso Large Core (EMWO)	5,921,990	0.61	6,988,141	0.66	7,282,231	0.66	6,777,074	0.64
Twin Capital Enhanced Equity	34,978,827	3.62	41,397,972	3.92	43,179,388	3.94	38,800,465	3.65
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,332,487	0.14	1,428,926	0.14	1,578,091	0.14	-	0.00
Earnest Small Value	14,308,378	1.48	16,511,363	1.57	16,770,333	1.53	16,004,954	1.51
Emerald Advisors Small Cap	11,396,825	1.18	14,240,025	1.35	15,923,325	1.45	15,892,394	1.50
Emerald Advisors All Cap (EMWO)	4,858,103	0.50	6,371,490	0.60	6,645,020	0.61	6,434,646	0.61
Ethos (EMWO)	1,589,693	0.16	2,019,477	0.19	2,215,004	0.20	2,044,862	0.19
CIM Small Cap (EMWO)	4,573,253	0.47	5,473,904	0.52	5,867,714	0.54	5,753,594	0.54
Cookson Peirce (EMWO)	1,151,906	0.12	1,329,310	0.13	1,408,568	0.13	776,520	0.07
<b>Non US Equity Composite</b>	<b>138,960,201</b>	<b>14.37</b>	<b>164,146,200</b>	<b>15.56</b>	<b>180,597,451</b>	<b>16.49</b>	<b>179,122,457</b>	<b>16.87</b>
SSgA ACWI ex US	32,304,036	3.34	37,347,180	3.54	39,473,532	3.60	38,754,304	3.65
Baillie Gifford Intl Equity	49,321,563	5.10	59,489,941	5.64	70,428,526	6.43	70,852,805	6.67
FIAM Select International Equity	27,189,741	2.81	31,349,834	2.97	33,861,588	3.09	33,092,364	3.12
Segall, Bryant & Hamill	30,144,861	3.12	35,959,245	3.41	36,833,806	3.36	36,422,984	3.43
<b>Global Equity Composite</b>	<b>62</b>	<b>0.00</b>	<b>62</b>	<b>0.00</b>	<b>62</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>
Columbus Macro (EMWO)	62	0.00	62	0.00	62	0.00	-	0.00
<b>Core Fixed w Israel Bonds Composite</b>	<b>122,951,479</b>	<b>12.72</b>	<b>127,635,605</b>	<b>12.10</b>	<b>134,181,540</b>	<b>12.25</b>	<b>119,178,215</b>	<b>11.23</b>
C S McKee	39,779,032	4.11	41,696,118	3.95	44,252,683	4.04	39,226,274	3.70
Federated Core Broad	36,554,326	3.78	38,195,499	3.62	40,339,887	3.68	35,286,105	3.32
CIM Investment Mgmt	26,946,688	2.79	27,558,343	2.61	28,732,165	2.62	23,870,703	2.25
StoneRidge Partners (EMWO)	5,117,385	0.53	5,241,029	0.50	5,471,185	0.50	5,506,700	0.52
Gridiron Capital Fixed Income (EMWO)	4,546,930	0.47	4,773,059	0.45	4,966,214	0.45	4,950,498	0.47
FNB (EMWO)	2,648,686	0.27	2,708,051	0.26	2,824,616	0.26	2,834,889	0.27
Israel Bonds	7,358,433	0.76	7,463,505	0.71	7,594,790	0.69	7,503,045	0.71
<b>High Yield Fixed Composite</b>	<b>111,700,649</b>	<b>11.55</b>	<b>123,524,625</b>	<b>11.71</b>	<b>128,401,665</b>	<b>11.72</b>	<b>127,406,673</b>	<b>12.00</b>
Oaktree High Yield	60,420,606	6.25	66,909,229	6.34	69,504,798	6.35	68,865,410	6.49
Federated High Yield	47,913,985	4.96	53,015,275	5.03	55,256,029	5.05	54,922,299	5.17
Sound Point	3,366,058	0.35	3,600,120	0.34	3,640,838	0.33	3,618,963	0.34
<b>TIPS Fixed Composite</b>	<b>14,191,061</b>	<b>1.47</b>	<b>41,654,324</b>	<b>3.95</b>	<b>42,930,455</b>	<b>3.92</b>	<b>41,960,670</b>	<b>3.95</b>
MCM TIPS	14,191,061	1.47	41,654,324	3.95	42,930,455	3.92	41,960,670	3.95



**Historical Asset Allocation  
Total Fund**

As of June 30, 2022

	Jun-2022		Mar-2022		Dec-2021		Sep-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
<b>Real Estate Composite</b>	<b>127,574,257</b>	<b>13.19</b>	<b>124,980,612</b>	<b>11.85</b>	<b>119,482,642</b>	<b>10.91</b>	<b>111,896,168</b>	<b>10.54</b>
Morgan Stanley Prime Property Fund	97,917,742	10.13	95,026,175	9.01	88,802,131	8.11	81,023,718	7.63
Oaktree Real Estate	6,421,511	0.66	6,465,443	0.61	6,567,794	0.60	6,978,943	0.66
Washington Alliance (EMWO)	13,136,689	1.36	13,472,055	1.28	13,478,182	1.23	13,174,110	1.24
Washington Alliance II (EMWO)	2,140,077	0.22	1,572,293	0.15	1,300,881	0.12	1,181,352	0.11
Siguler Guff Distressed RE	7,958,238	0.82	8,444,646	0.80	9,333,655	0.85	9,538,045	0.90
<b>ERECT Composite</b>	<b>11,411,014</b>	<b>1.18</b>	<b>11,411,014</b>	<b>1.08</b>	<b>10,441,201</b>	<b>0.95</b>	<b>10,497,897</b>	<b>0.99</b>
ERECT Fund II	11,411,014	1.18	11,411,014	1.08	10,441,201	0.95	10,497,897	0.99
<b>Private Equity Composite</b>	<b>220,018,309</b>	<b>22.76</b>	<b>219,253,042</b>	<b>20.78</b>	<b>215,873,991</b>	<b>19.71</b>	<b>206,036,289</b>	<b>19.41</b>
<b>Life Settlement Composite</b>	<b>11,373,871</b>	<b>1.18</b>	<b>13,122,706</b>	<b>1.24</b>	<b>13,584,945</b>	<b>1.24</b>	<b>14,172,823</b>	<b>1.34</b>
<b>Hedge Fund Composite</b>	<b>3,083,282</b>	<b>0.32</b>	<b>3,414,731</b>	<b>0.32</b>	<b>3,564,755</b>	<b>0.33</b>	<b>3,408,000</b>	<b>0.32</b>
Gridiron Capital Multi-Asset (EMWO)	3,083,114	0.32	3,414,563	0.32	3,564,587	0.33	3,407,831	0.32
<b>Liquid Policy Portfolio Composite</b>	<b>21,215,370</b>	<b>2.19</b>	<b>40,408,096</b>	<b>3.83</b>	<b>42,539,612</b>	<b>3.88</b>	<b>49,078,819</b>	<b>4.62</b>
BlackRock Liquidity iShares Public Pension Fund	21,215,370	2.19	40,408,096	3.83	42,539,612	3.88	49,078,819	4.62
Cash Account	33,473,731	3.46	5,230,586	0.50	8,564,864	0.78	7,442,895	0.70



<b>Financial Reconciliation</b>	<b>Market Value 04/01/2022</b>	<b>Net Flows</b>	<b>Return On Investment</b>	<b>Market Value 06/30/2022</b>
<b>Total Fund</b>	<b>1,054,944,656</b>	<b>-16,307,754</b>	<b>-71,363,198</b>	<b>966,877,212</b>
SSgA S&P 500 Index	84,402,437	3,561	-13,589,983	70,812,454
Fragasso Large Core (EMWO)	6,988,141	9,544	-1,066,152	5,921,990
Twin Capital Enhanced Equity	41,397,972	32,460	-6,419,144	34,978,827
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,428,926	-	-96,439	1,332,487
Earnest Small Value	16,511,363	36,747	-2,202,985	14,308,378
Emerald Advisors Small Cap	14,240,025	23,190	-2,844,295	11,396,825
Emerald Advisors All Cap (EMWO)	6,371,490	7,970	-1,513,439	4,858,103
Ethos (EMWO)	2,019,477	-69,805	-359,979	1,589,693
CIM Small Cap (EMWO)	5,473,904	9,945	-901,583	4,573,253
Cookson Peirce (EMWO)	1,329,310	1,507	-177,404	1,151,906
<b>US Equity Composite</b>	<b>180,163,045</b>	<b>55,118</b>	<b>-29,171,403</b>	<b>150,923,916</b>
SSgA ACWI ex US	37,347,180	5,907	-5,043,144	32,304,036
Baillie Gifford Intl Equity	59,489,941	-	-10,168,378	49,321,563
FIAM Select International Equity	31,349,834	25,865	-4,160,093	27,189,741
Segall, Bryant & Hamill	35,959,245	56,297	-5,814,385	30,144,861
<b>Non US Equity Composite</b>	<b>164,146,200</b>	<b>88,069</b>	<b>-25,186,000</b>	<b>138,960,201</b>
Columbus Macro (EMWO)	62	-	-	62
<b>Global Equity Composite</b>	<b>62</b>	<b>-</b>	<b>-</b>	<b>62</b>
C S McKee	41,696,118	22,873	-1,917,087	39,779,032
Federated Core Broad	38,195,499	24,167	-1,641,174	36,554,326
CIM Investment Mgmt	27,558,343	16,842	-611,656	26,946,688
StoneRidge Partners (EMWO)	5,241,029	2,572	-123,643	5,117,385
Gridiron Capital Fixed Income (EMWO)	4,773,059	7,501	-226,129	4,546,930
FNB (EMWO)	2,708,051	2,418	-59,365	2,648,686
Israel Bonds	7,463,505	3,688	-105,072	7,358,433
<b>Core Fixed w Israel Bonds Composite</b>	<b>127,635,605</b>	<b>80,060</b>	<b>-4,684,126</b>	<b>122,951,479</b>
Oaktree High Yield	66,909,229	-	-6,392,609	60,420,606
Federated High Yield	53,015,275	-	-5,101,290	47,913,985
Sound Point	3,600,120	-	-234,062	3,366,058
<b>High Yield Fixed Composite</b>	<b>123,524,625</b>	<b>-</b>	<b>-11,727,961</b>	<b>111,700,649</b>
MCM TIPS	41,654,324	-25,018,929	-2,441,580	14,191,061
<b>TIPS Fixed Composite</b>	<b>41,654,324</b>	<b>-25,018,929</b>	<b>-2,441,580</b>	<b>14,191,061</b>





**Financial Reconciliation**  
**Total Fund**  
**1 Quarter Ending June 30, 2022**

	Market Value 04/01/2022	Net Flows	Return On Investment	Market Value 06/30/2022
Morgan Stanley Prime Property Fund	95,026,175	-	2,891,567	97,917,742
Oaktree Real Estate	6,465,443	-	-43,932	6,421,511
Washington Alliance (EMWO)	13,472,055	-335,366	-	13,136,689
Washington Alliance II (EMWO)	1,572,293	567,784	-	2,140,077
Siguler Guff Distressed RE	8,444,646	-486,408	-	7,958,238
<b>Real Estate Composite</b>	<b>124,980,612</b>	<b>-253,989</b>	<b>2,847,635</b>	<b>127,574,257</b>
<b>ERECT Composite</b>	<b>11,411,014</b>	<b>-</b>	<b>-</b>	<b>11,411,014</b>
<b>Private Equity Composite</b>	<b>219,253,042</b>	<b>-2,443,034</b>	<b>3,208,301</b>	<b>220,018,309</b>
<b>Life Settlement Composite</b>	<b>13,122,706</b>	<b>-2,338,719</b>	<b>589,885</b>	<b>11,373,871</b>
Gridiron Capital Multi-Asset (EMWO)	3,414,563	5,970	-331,449	3,083,114
Maplewood (EMWO)	168	-	-	168
<b>Hedge Fund Composite</b>	<b>3,414,731</b>	<b>5,970</b>	<b>-331,449</b>	<b>3,083,282</b>
BlackRock Liquidity iShares Public Pension Fund	40,408,096	-14,700,000	-4,492,726	21,215,370
<b>Liquid Policy Portfolio Composite</b>	<b>40,408,096</b>	<b>-14,700,000</b>	<b>-4,492,726</b>	<b>21,215,370</b>
<b>MLP Composite</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>8</b>
Cash Account	5,230,586	28,217,700	26,226	33,473,731



**Financial Reconciliation**  
**Total Fund**  
Year To Date Ending June 30, 2022

<b>Financial Reconciliation</b>	<b>Market Value 01/01/2022</b>	<b>Net Flows</b>	<b>Income</b>	<b>Return On Investment</b>	<b>Market Value 06/30/2022</b>
<b>Total Fund</b>	<b>1,095,129,059</b>	<b>-30,303,087</b>	<b>-364,354</b>	<b>-97,181,209</b>	<b>966,877,212</b>
SSgA S&P 500 Index	94,096,192	-4,992,376	-	-18,283,739	70,812,454
Fragasso Large Core (EMWO)	7,282,231	19,267	4,324	-1,360,241	5,921,990
Twin Capital Enhanced Equity	43,179,388	68,205	5,103	-8,200,561	34,978,827
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,578,091	-	-	-245,604	1,332,487
Earnest Small Value	16,770,333	36,747	-2,023	-2,461,955	14,308,378
Emerald Advisors Small Cap	15,923,325	49,551	-143	-4,527,594	11,396,825
Emerald Advisors All Cap (EMWO)	6,645,020	17,236	336	-1,786,969	4,858,103
Ethos (EMWO)	2,215,004	-69,805	-1	-555,506	1,589,693
CIM Small Cap (EMWO)	5,867,714	20,471	-436	-1,295,683	4,573,253
Cookson Peirce (EMWO)	1,408,568	3,142	-212	-256,662	1,151,906
<b>US Equity Composite</b>	<b>194,965,866</b>	<b>-4,847,563</b>	<b>6,947</b>	<b>-38,974,515</b>	<b>150,923,916</b>
SSgA ACWI ex US	39,473,532	12,393	-	-7,169,496	32,304,036
Baillie Gifford Intl Equity	70,428,526	-	-	-21,106,963	49,321,563
FIAM Select International Equity	33,861,588	52,948	-	-6,671,847	27,189,741
Segall, Bryant & Hamill	36,833,806	56,297	-458,896	-6,688,945	30,144,861
<b>Non US Equity Composite</b>	<b>180,597,451</b>	<b>121,637</b>	<b>-458,896</b>	<b>-41,637,251</b>	<b>138,960,201</b>
Columbus Macro (EMWO)	62	-	-	-	62
<b>Global Equity Composite</b>	<b>62</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>62</b>
C S McKee	44,252,683	46,848	51,728	-4,473,652	39,779,032
Federated Core Broad	40,339,887	48,795	22,248	-3,785,561	36,554,326
CIM Investment Mgmt	28,732,165	34,799	-3,551	-1,785,477	26,946,688
StoneRidge Partners (EMWO)	5,471,185	5,238	-6,048	-353,800	5,117,385
Gridiron Capital Fixed Income (EMWO)	4,966,214	15,354	11,751	-419,283	4,546,930
FNB (EMWO)	2,824,616	2,418	4	-175,930	2,648,686
Israel Bonds	7,594,790	7,434	-	-236,356	7,358,433
<b>Core Fixed w Israel Bonds Composite</b>	<b>134,181,540</b>	<b>160,886</b>	<b>76,130</b>	<b>-11,230,060</b>	<b>122,951,479</b>
Oaktree High Yield	69,504,798	-	-	-8,898,610	60,420,606
Federated High Yield	55,256,029	-	-	-7,342,044	47,913,985
Sound Point	3,640,838	-	-	-274,780	3,366,058
<b>High Yield Fixed Composite</b>	<b>128,401,665</b>	<b>-</b>	<b>-</b>	<b>-16,515,433</b>	<b>111,700,649</b>
MCM TIPS	42,930,455	-25,015,806	-	-3,717,711	14,191,061
<b>TIPS Fixed Composite</b>	<b>42,930,455</b>	<b>-25,015,806</b>	<b>-</b>	<b>-3,717,711</b>	<b>14,191,061</b>

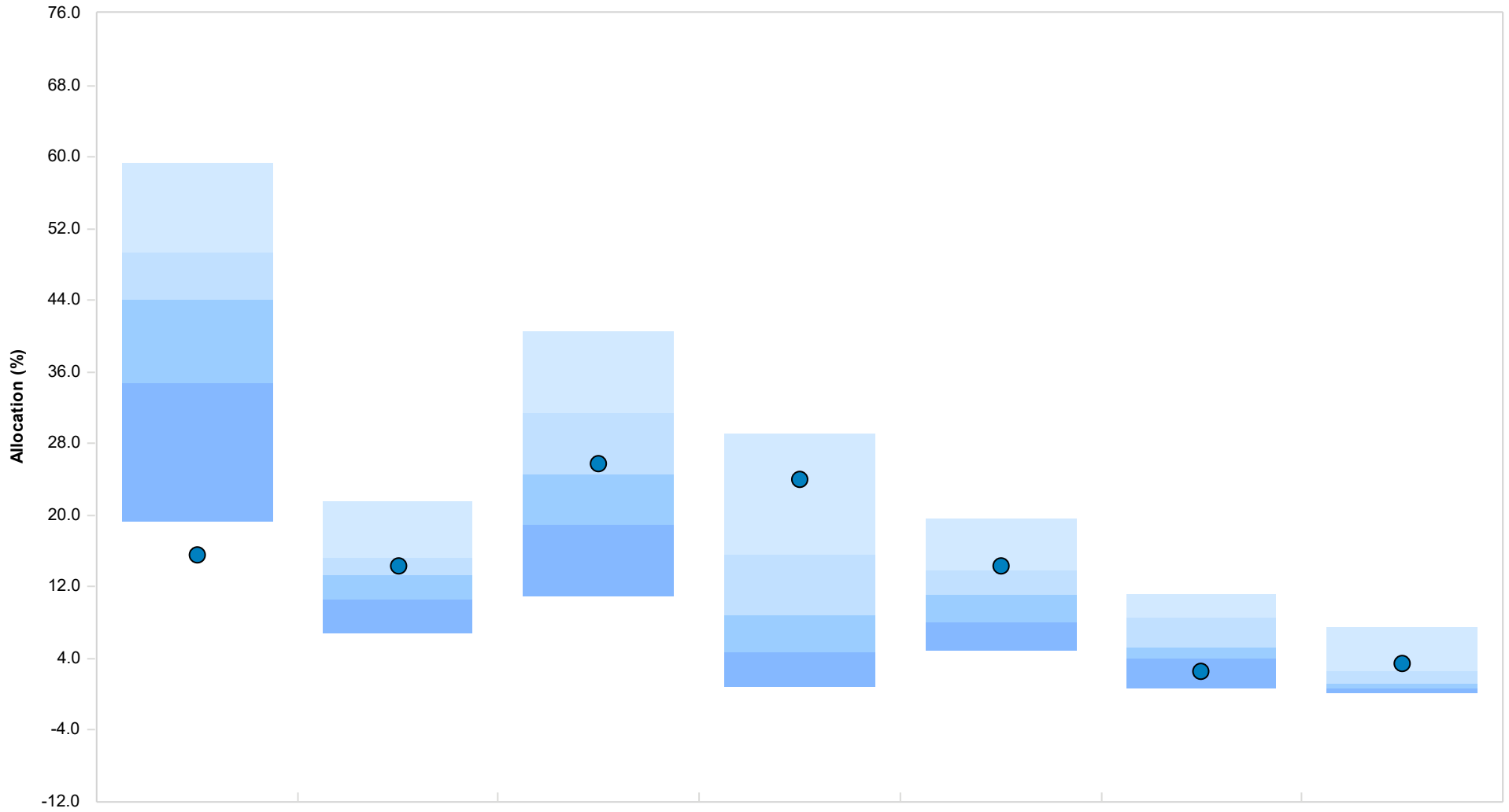


**Financial Reconciliation**  
**Total Fund**  
**Year To Date Ending June 30, 2022**

	<b>Market Value 01/01/2022</b>	<b>Net Flows</b>	<b>Income</b>	<b>Return On Investment</b>	<b>Market Value 06/30/2022</b>
Morgan Stanley Prime Property Fund	88,802,131	-	-	9,115,611	97,917,742
Oaktree Real Estate	6,567,794	-	-	-146,283	6,421,511
Washington Alliance (EMWO)	13,478,182	-335,366	-	-6,127	13,136,689
Washington Alliance II (EMWO)	1,300,881	567,784	-	271,412	2,140,077
Siguler Guff Distressed RE	9,333,655	-915,365	-	-460,052	7,958,238
<b>Real Estate Composite</b>	<b>119,482,642</b>	<b>-682,946</b>	<b>-</b>	<b>8,774,561</b>	<b>127,574,257</b>
<b>ERECT Composite</b>	<b>10,441,201</b>	<b>-</b>	<b>-</b>	<b>969,813</b>	<b>11,411,014</b>
<b>Private Equity Composite</b>	<b>215,873,991</b>	<b>-7,667,226</b>	<b>-</b>	<b>11,871,173</b>	<b>220,018,309</b>
<b>Life Settlement Composite</b>	<b>13,584,945</b>	<b>-2,559,030</b>	<b>-</b>	<b>347,956</b>	<b>11,373,871</b>
Gridiron Capital Multi-Asset (EMWO)	3,564,587	12,390	270	-481,473	3,083,114
Maplewood (EMWO)	168	-	-	-	168
<b>Hedge Fund Composite</b>	<b>3,564,755</b>	<b>12,390</b>	<b>270</b>	<b>-481,473</b>	<b>3,083,282</b>
BlackRock Liquidity iShares Public Pension Fund	42,539,612	-14,700,000	-	-6,624,242	21,215,370
<b>Liquid Policy Portfolio Composite</b>	<b>42,539,612</b>	<b>-14,700,000</b>	<b>-</b>	<b>-6,624,242</b>	<b>21,215,370</b>
<b>MLP Composite</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8</b>
Cash Account	8,564,864	24,874,571	11,195	35,973	33,473,731



Plan Sponsor TF Asset Allocation vs. All Public DB Plans



	US Equity	Global ex-US Equity	US Fixed	Alternatives	Total Real Estate	Global TAA	Cash & Equivalents
● Total Fund	15.61 (97)	14.37 (32)	25.74 (45)	23.93 (10)	14.37 (21)	2.51 (90)	3.46 (17)
5th Percentile	59.25	21.57	40.58	29.14	19.69	11.19	7.50
1st Quartile	49.23	15.31	31.37	15.51	13.85	8.53	2.66
Median	44.01	13.25	24.51	8.90	11.15	5.21	1.25
3rd Quartile	34.81	10.63	18.98	4.65	8.05	4.00	0.65
95th Percentile	19.34	6.87	11.05	0.87	4.79	0.69	0.09



Asset Allocation & Performance	Allocation		Performance(%)							
	Market Value \$	%	MTH	QTR	YTD	1 YR	3 YR	5 YR	Inception	Inception Date
<b>Total Fund</b>	<b>966,877,212</b>	<b>100.0</b>	<b>-3.71</b>	<b>-6.84</b>	<b>-9.07</b>	<b>-4.21</b>	<b>5.96</b>	<b>6.14</b>	<b>7.23</b>	<b>12/1993</b>
Total Fund Policy Index			-3.68	-6.95	-8.67	-2.82	6.84	6.79	7.42	
<b>US Equity Composite</b>	<b>150,923,916</b>	<b>15.6</b>	<b>-8.34</b>	<b>-16.26</b>	<b>-20.46</b>	<b>-13.80</b>	<b>9.00</b>	<b>9.93</b>	<b>8.84</b>	<b>11/1993</b>
FT Wilshire 5000 Total Market TR Index			-8.36	-16.77	-20.89	-13.19	10.17	10.83	9.58	
<b>Non US Equity Composite</b>	<b>138,960,201</b>	<b>14.4</b>	<b>-9.17</b>	<b>-15.39</b>	<b>-23.12</b>	<b>-25.30</b>	<b>0.81</b>	<b>1.80</b>	<b>4.34</b>	<b>01/2001</b>
Non US Equity Policy Index			-8.60	-13.73	-18.42	-19.42	1.66	2.57	3.68	
<b>Core Fixed w Israel Bonds Composite*</b>	<b>122,951,479</b>	<b>12.7</b>	<b>-1.28</b>	<b>-3.73</b>	<b>-8.49</b>	<b>-8.63</b>	<b>0.21</b>	<b>1.50</b>	<b>6.49</b>	<b>01/1983</b>
Bmbg. U.S. Aggregate Index			-1.57	-4.69	-10.35	-10.29	-0.94	0.88	6.46	
<b>High Yield Fixed Composite</b>	<b>111,700,649</b>	<b>11.6</b>	<b>-6.56</b>	<b>-9.57</b>	<b>-13.01</b>	<b>-11.59</b>	<b>0.48</b>	<b>1.62</b>	<b>5.57</b>	<b>04/2008</b>
FTSE High Yield Market Capped Index			-6.77	-9.90	-13.77	-12.38	-0.18	1.84	5.86	
<b>TIPS Fixed Composite</b>	<b>14,191,061</b>	<b>1.5</b>	<b>-3.53</b>	<b>-6.44</b>	<b>-9.22</b>	<b>-5.52</b>	<b>2.91</b>	<b>3.15</b>	<b>3.10</b>	<b>04/2008</b>
Bloomberg U.S. TIPS Index			-3.16	-6.08	-8.92	-5.14	3.04	3.21	3.09	
<b>Real Estate Composite</b>	<b>127,574,257</b>	<b>13.2</b>	<b>2.28</b>	<b>2.28</b>	<b>7.37</b>	<b>21.34</b>	<b>9.81</b>	<b>9.99</b>	<b>9.11</b>	<b>04/2003</b>
NCREIF Fund Index-ODCE (VW) (Net)			4.58	4.58	12.05	28.36	11.68	9.56	7.89	
<b>ERECT Composite</b>	<b>11,411,014</b>	<b>1.2</b>	<b>0.00</b>	<b>0.00</b>	<b>9.29</b>	<b>10.03</b>	<b>6.46</b>	<b>8.54</b>	<b>7.14</b>	<b>09/2010</b>
CPI - All Urban Consumers (SA)			1.32	2.65	5.43	8.99	4.97	3.88	2.60	
<b>Total Private Equity w Life Settlement Composite*</b>	<b>231,392,180</b>	<b>23.9</b>	<b>0.20</b>	<b>1.64</b>	<b>5.40</b>	<b>18.56</b>	<b>16.79</b>	<b>13.71</b>	<b>8.11</b>	<b>04/2003</b>
Total Private Equity Policy Index			0.20	1.64	5.42	19.43	17.62	14.19	8.22	
<b>Hedge Fund Composite</b>	<b>3,083,282</b>	<b>0.3</b>	<b>-4.97</b>	<b>-9.88</b>	<b>-13.83</b>	<b>-10.24</b>	<b>3.18</b>	<b>1.25</b>	<b>1.95</b>	<b>04/2003</b>
90 Day T-Bill Index + 3%			0.27	0.85	1.64	3.17	3.65	4.14	4.23	
<b>Liquid Policy Portfolio Composite</b>	<b>21,215,370</b>	<b>2.2</b>	<b>-7.88</b>	<b>-13.20</b>	<b>-17.59</b>	<b>-13.84</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.59</b>	<b>03/2021</b>
Liquid Policy Benchmark			-6.40	-12.00	-16.63	-12.83	N/A	N/A	-4.79	
<b>Cash Account</b>	<b>33,473,731</b>	<b>3.5</b>	<b>0.11</b>	<b>0.31</b>	<b>0.43</b>	<b>0.58</b>	<b>0.88</b>	<b>1.27</b>	<b>0.73</b>	<b>01/2012</b>
90 Day U.S. Treasury Bill			0.02	0.11	0.15	0.17	0.63	1.11	0.60	

\* All returns prior to March 2021 are from the original Core Fixed Composite and the Private Equity Composite, respectively. All returns from March 2021 and forward are from the composites inclusive of the Israel Bonds and Life Settlement funds, respectively



Asset Allocation & Performance	Allocation		Performance(%)						
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	Inception	Inception Date
<b>Total Fund</b>	<b>966,877,212</b>	<b>100.0</b>	<b>-6.84</b>	<b>-9.07</b>	<b>-4.21</b>	<b>5.96</b>	<b>6.14</b>	<b>7.23</b>	<b>12/1993</b>
Total Fund Policy Index			-6.95	-8.67	-2.82	6.84	6.79	7.42	
<b>US Equity Composite</b>	<b>150,923,916</b>	<b>15.6</b>	<b>-16.26</b>	<b>-20.46</b>	<b>-13.80</b>	<b>9.00</b>	<b>9.93</b>	<b>8.84</b>	<b>11/1993</b>
FT Wilshire 5000 Total Market TR Index			-16.77	-20.89	-13.19	10.17	10.83	9.58	
SSgA S&P 500 Index	70,812,454	7.3	-16.11	-19.97	-10.66	10.64	11.33	8.52	11/2007
S&P 500 Index			-16.10	-19.96	-10.62	10.60	11.31	8.48	
Fragasso Large Core (EMWO)	5,921,990	0.6	-15.38	-18.91	-12.91	6.97	9.73	10.74	09/2012
S&P 500 Index			-16.10	-19.96	-10.62	10.60	11.31	12.78	
Twin Capital Enhanced Equity	34,978,827	3.6	-15.58	-19.14	-10.06	9.98	10.28	8.91	01/2006
S&P 500 Index			-16.10	-19.96	-10.62	10.60	11.31	9.14	
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,332,487	0.1	-6.75	-15.56	N/A	N/A	N/A	-15.56	01/2022
S&P 500 Index			-16.10	-19.96	-10.62	10.60	11.31	-19.96	
Earnest Small Value	14,308,378	1.5	-13.55	-14.89	-12.90	6.88	6.88	12.13	06/2009
Russell 2000 Value Index			-15.28	-17.31	-16.28	6.18	4.89	10.83	
Emerald Advisors Small Cap	11,396,825	1.2	-20.13	-28.70	-29.82	2.09	6.12	9.43	11/2004
Russell 2000 Growth Index			-19.25	-29.45	-33.43	1.40	4.80	8.00	
Emerald Advisors All Cap (EMWO)	4,858,103	0.5	-23.88	-27.12	-25.58	13.84	15.05	13.61	10/2015
Russell 3000 Growth Index			-20.83	-28.15	-19.78	11.84	13.63	14.39	
Ethos (EMWO)	1,589,693	0.2	-18.17	-25.39	-20.40	7.38	9.88	10.87	08/2016
S&P 500 Index			-16.10	-19.96	-10.62	10.60	11.31	11.88	
CIM Small Cap (EMWO)	4,573,253	0.5	-16.63	-22.38	-27.02	1.00	2.21	3.76	01/2014
Russell 2000 Index			-17.20	-23.43	-25.20	4.21	5.17	6.01	
Cookson Peirce (EMWO)	1,151,906	0.1	-13.46	-18.43	-4.55	7.36	N/A	11.42	12/2018
Russell 3000 Index			-16.70	-21.10	-13.87	9.77	10.60	10.37	
<b>Non US Equity Composite</b>	<b>138,960,201</b>	<b>14.4</b>	<b>-15.39</b>	<b>-23.12</b>	<b>-25.30</b>	<b>0.81</b>	<b>1.80</b>	<b>4.34</b>	<b>01/2001</b>
Non US Equity Policy Index			-13.73	-18.42	-19.42	1.66	2.57	3.68	
SSgA ACWI ex US	32,304,036	3.3	-13.52	-18.19	-19.21	1.80	2.84	2.58	05/2015
MSCI AC World ex USA (Net)			-13.73	-18.42	-19.42	1.35	2.50	2.22	



	Allocation		Performance(%)						
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	Inception	Inception Date
Baillie Gifford Intl Equity MSCI AC World ex USA (Net)	49,321,563	5.1	-17.09 -13.73	-29.97 -18.42	-34.16 -19.42	-1.04 1.35	1.76 2.50	6.52 4.60	08/2009
FIAM Select International Equity FIAM Policy Index	27,189,741	2.8	-13.35 -13.73	-19.84 -18.42	-20.32 -19.42	3.14 1.35	2.98 2.50	4.09 3.60	01/2001
Segall, Bryant & Hamill MSCI EAFE Small Cap (net) Index	30,144,861	3.1	-16.31 -17.69	-18.30 -24.71	-18.26 -23.98	-0.31 1.12	-1.53 1.72	1.67 3.61	05/2015
<b>Core Fixed w Israel Bonds Composite*</b>	<b>122,951,479</b>	<b>12.7</b>	<b>-3.73</b>	<b>-8.49</b>	<b>-8.63</b>	<b>0.21</b>	<b>1.50</b>	<b>6.49</b>	<b>01/1983</b>
Blmbg. U.S. Aggregate Index			-4.69	-10.35	-10.29	-0.94	0.88	6.46	
C S McKee Blmbg. U.S. Aggregate Index	39,779,032	4.1	-4.65 -4.69	-10.21 -10.35	-10.30 -10.29	-0.60 -0.94	1.19 0.88	6.82 6.46	01/1983
Federated Core Broad Blmbg. U.S. Aggregate Index	36,554,326	3.8	-4.36 -4.69	-9.50 -10.35	-9.41 -10.29	0.93 -0.94	2.13 0.88	4.13 3.29	09/2006
CIM Investment Mgmt Bloomberg Intermediate US Govt/Credit Idx	26,946,688	2.8	-2.28 -2.37	-6.33 -6.77	-7.00 -7.28	-0.12 -0.16	0.97 1.13	2.71 3.05	11/2005
StoneRidge Partners (EMWO) StoneRidge Policy Index	5,117,385	0.5	-2.41 -2.84	-6.56 -7.43	-7.29 -7.91	-0.86 -0.18	0.56 1.23	1.02 1.53	08/2015
Gridiron Capital Fixed Income (EMWO) Blmbg. U.S. Aggregate Index	4,546,930	0.5	-4.89 -4.69	-8.74 -10.35	-8.72 -10.29	1.10 -0.94	2.10 0.88	2.14 1.19	02/2017
FNB (EMWO) Bloomberg Intermed Aggregate Index	2,648,686	0.3	-2.28 -2.93	-6.31 -7.48	-6.74 -7.91	0.07 -0.60	1.04 0.88	1.04 0.88	07/2017
Israel Bonds	7,358,433	0.8	-1.46	-3.21	-2.59	0.79	1.16	2.33	01/2012
<b>High Yield Fixed Composite</b>	<b>111,700,649</b>	<b>11.6</b>	<b>-9.57</b>	<b>-13.01</b>	<b>-11.59</b>	<b>0.48</b>	<b>1.62</b>	<b>5.57</b>	<b>04/2008</b>
FTSE High Yield Market Capped Index			-9.90	-13.77	-12.38	-0.18	1.84	5.86	
Oaktree High Yield FTSE High Yield Market Capped Index	60,420,606	6.2	-9.70 -9.90	-13.07 -13.77	-11.44 -12.38	0.22 -0.18	1.01 1.84	5.23 5.86	04/2008
Federated High Yield Blmbg. U.S. High Yield - 2% Issuer Cap	47,913,985	5.0	-9.62 -9.84	-13.29 -14.19	-12.15 -12.82	0.79 0.18	2.39 2.09	2.39 2.09	07/2017
Sound Point Credit Suisse Leveraged Loan Index	3,366,058	0.3	-6.50 -4.36	-7.55 -4.45	-5.90 -2.68	0.66 2.03	2.25 2.97	3.39 3.41	08/2013

\* All returns prior to March 2021 are from the original Core Fixed Composite. All returns March 2021 and forward are from the composite inclusive of the Israel Bonds.



	Allocation		Performance(%)						
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	Inception	Inception Date
<b>TIPS Fixed Composite</b>	<b>14,191,061</b>	<b>1.5</b>	<b>-6.44</b>	<b>-9.22</b>	<b>-5.52</b>	<b>2.91</b>	<b>3.15</b>	<b>3.10</b>	<b>04/2008</b>
Bloomberg U.S. TIPS Index			-6.08	-8.92	-5.14	3.04	3.21	3.09	
MCM TIPS	14,191,061	1.5	-6.10	-8.90	-5.18	3.03	3.22	3.18	12/2016
Bloomberg U.S. TIPS Index			-6.08	-8.92	-5.14	3.04	3.21	3.01	
<b>Real Estate Composite</b>	<b>127,574,257</b>	<b>13.2</b>	<b>2.28</b>	<b>7.37</b>	<b>21.34</b>	<b>9.81</b>	<b>9.99</b>	<b>9.11</b>	<b>04/2003</b>
NCREIF Fund Index-ODCE (VW) (Net)			4.58	12.05	28.36	11.68	9.56	7.89	
Morgan Stanley Prime Property Fund	97,917,742	10.1	3.04	10.27	27.89	11.78	10.17	9.32	04/2003
NCREIF Fund Index-ODCE (VW) (Net)			4.58	12.05	28.36	11.68	9.56	7.89	
Oaktree Real Estate	6,421,511	0.7	-0.68	-2.23	-7.41	-4.26	-0.35	4.05	08/2013
Washington Alliance (EMWO)	13,136,689	1.4	0.00	-0.05	4.86	8.41	13.18	12.23	08/2013
Washington Alliance II (EMWO)	2,140,077	0.2	0.00	20.86	38.79	N/A	N/A	15.08	03/2020
Siguler Guff Distressed RE	7,958,238	0.8	0.00	-5.17	7.34	3.87	9.13	6.77	03/2014
<b>ERECT Composite</b>	<b>11,411,014</b>	<b>1.2</b>	<b>0.00</b>	<b>9.29</b>	<b>10.03</b>	<b>6.46</b>	<b>8.54</b>	<b>7.14</b>	<b>09/2010</b>
CPI - All Urban Consumers (SA)			2.65	5.43	8.99	4.97	3.88	2.60	
<b>Private Equity Composite</b>	<b>220,018,309</b>	<b>22.8</b>	<b>1.47</b>	<b>5.57</b>	<b>19.92</b>	<b>17.56</b>	<b>14.16</b>	<b>8.22</b>	<b>04/2003</b>
Private Equity Policy Index			1.47	5.57	19.92	17.56	14.16	8.22	
<b>Life Settlement Composite</b>	<b>11,373,871</b>	<b>1.2</b>	<b>4.48</b>	<b>2.60</b>	<b>-0.37</b>	<b>-4.24</b>	<b>-3.82</b>	<b>5.16</b>	<b>09/2009</b>
<b>Hedge Fund Composite</b>	<b>3,083,282</b>	<b>0.3</b>	<b>-9.88</b>	<b>-13.83</b>	<b>-10.24</b>	<b>3.18</b>	<b>1.25</b>	<b>1.95</b>	<b>04/2003</b>
90 Day T-Bill Index + 3%			0.85	1.64	3.17	3.65	4.14	4.23	
Gridiron Capital Multi-Asset (EMWO)	3,083,114	0.3	-9.88	-13.83	-10.24	4.38	N/A	4.71	02/2019
HFRI FoF Composite Lagged			-3.88	-6.53	-5.45	3.96	3.63	4.52	
<b>Liquid Policy Portfolio Composite</b>	<b>21,215,370</b>	<b>2.2</b>	<b>-13.20</b>	<b>-17.59</b>	<b>-13.84</b>	<b>N/A</b>	<b>N/A</b>	<b>-5.59</b>	<b>03/2021</b>
Liquid Policy Benchmark			-12.00	-16.63	-12.83	N/A	N/A	-4.79	
BlackRock Liquidity iShares Public Pension Fund	21,215,370	2.2	-11.65	-16.14	-12.43	N/A	N/A	-6.26	04/2021
Liquid Policy Benchmark			-12.00	-16.63	-12.83	N/A	N/A	-6.58	
Cash Account	33,473,731	3.5	0.31	0.43	0.58	0.88	1.27	0.73	01/2012

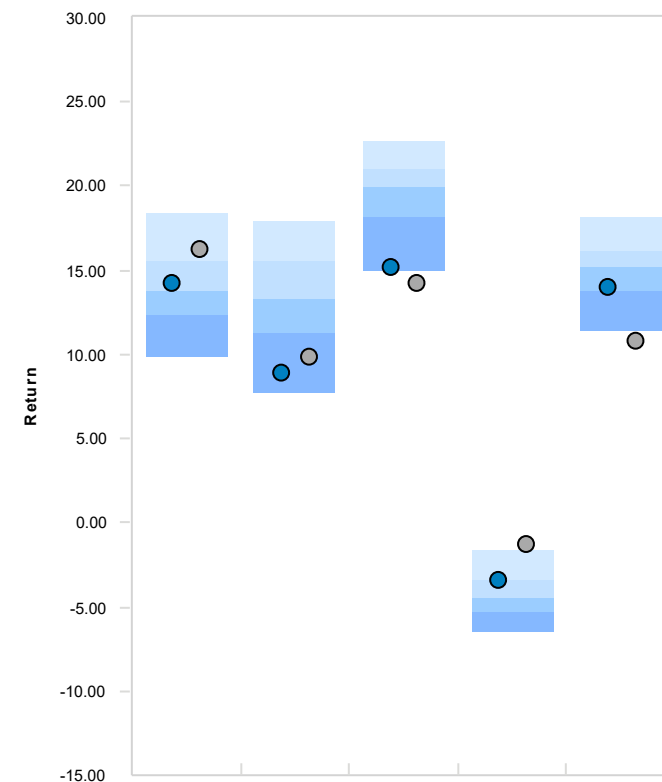
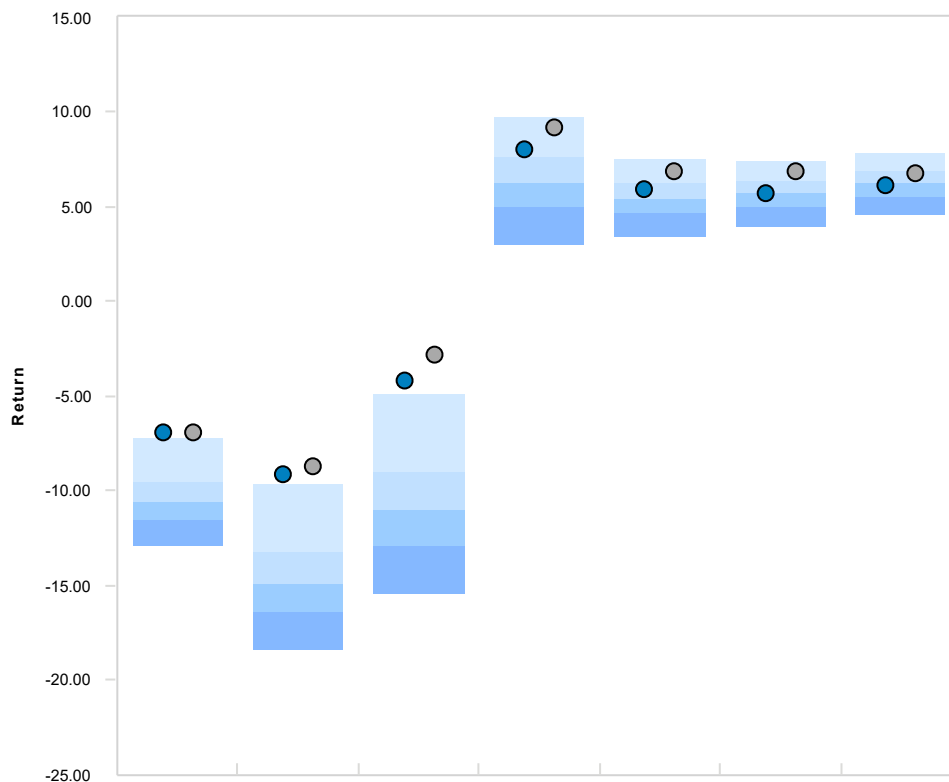




<b>Comparative Performance - IRR</b>						
	<b>1 YR</b>	<b>3 YR</b>	<b>5 YR</b>	<b>7 YR</b>	<b>Inception</b>	<b>Inception Date</b>
Oaktree Real Estate NEW	-7.41	-4.21	0.22	1.52	5.75	09/18/2013
Siguler Guff Distressed RE	8.26	3.79	10.59	8.72	8.12	06/30/2014
Washington Alliance (EMWO)	4.92	8.42	13.63	13.85	13.88	03/31/2014
Washington Alliance II (EMWO)	37.82	N/A	N/A	N/A	16.09	03/13/2020



**Plan Sponsor Peer Group Analysis - All Public DB Plans**



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fund	-6.84 (4)	-9.07 (4)	-4.21 (4)	8.04 (20)	5.96 (31)	5.78 (47)	6.14 (54)
● Total Fund Policy Index	-6.95 (5)	-8.67 (4)	-2.82 (2)	9.22 (10)	6.84 (13)	6.87 (11)	6.79 (28)
Median	-10.62	-14.93	-10.98	6.25	5.45	5.72	6.21

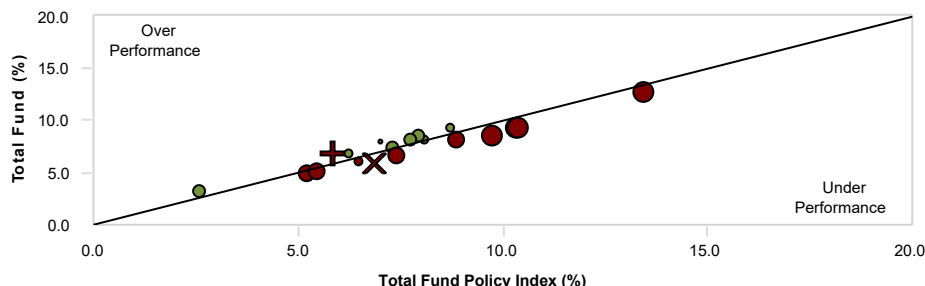
	2021	2020	2019	2018	2017
● Total Fund	14.29 (41)	8.93 (92)	15.16 (94)	-3.36 (25)	13.97 (71)
● Total Fund Policy Index	16.27 (17)	9.82 (88)	14.24 (97)	-1.27 (4)	10.82 (97)
Median	13.78	13.34	19.89	-4.50	15.17

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
<b>Total Fund</b>	<b>-2.39</b>	<b>4.47</b>	<b>0.83</b>	<b>4.89</b>	<b>3.44</b>	<b>7.76</b>
Total Fund Policy Index	-1.85	4.84	1.49	5.43	3.65	8.87

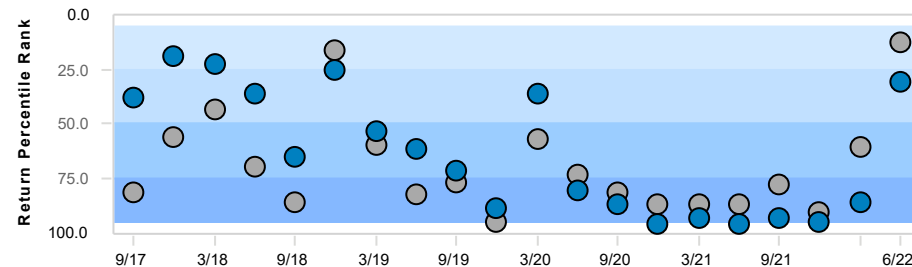


3 Yr Rolling Under/Over Performance - 5 Years



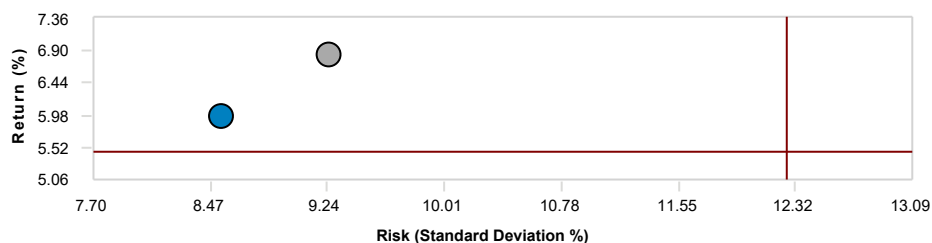
- Over Performance
- Under Performance
- + Earliest Date
- X Latest Date

3 Yr Rolling Percentile Ranking - 5 Years



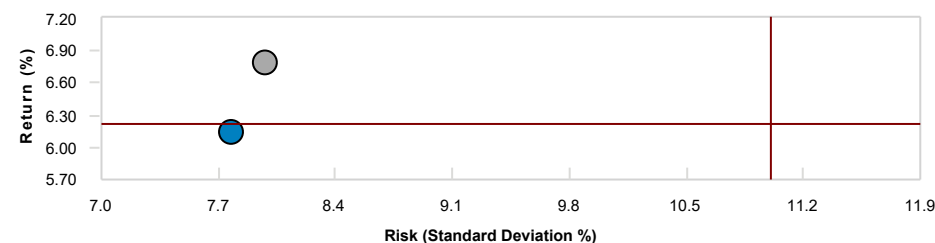
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
<span style="color: blue;">●</span> Total Fund	20	3 (15%)	4 (20%)	4 (20%)	9 (45%)
<span style="color: grey;">●</span> Total Fund Policy Index	20	2 (10%)	1 (5%)	6 (30%)	11 (55%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
<span style="color: blue;">●</span> Total Fund	5.96	8.54
<span style="color: grey;">●</span> Total Fund Policy Index	6.84	9.24
<span style="color: red;">—</span> Median	5.46	12.26

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
<span style="color: blue;">●</span> Total Fund	6.14	7.77
<span style="color: grey;">●</span> Total Fund Policy Index	6.79	7.98
<span style="color: red;">—</span> Median	6.23	11.00

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.42	94.54	100.52	-0.30	-0.63	0.64	0.92	5.94
Total Fund Policy Index	0.00	100.00	100.00	0.00	N/A	0.69	1.00	6.16

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.34	99.29	107.49	-0.35	-0.47	0.66	0.96	5.35
Total Fund Policy Index	0.00	100.00	100.00	0.00	N/A	0.72	1.00	5.25



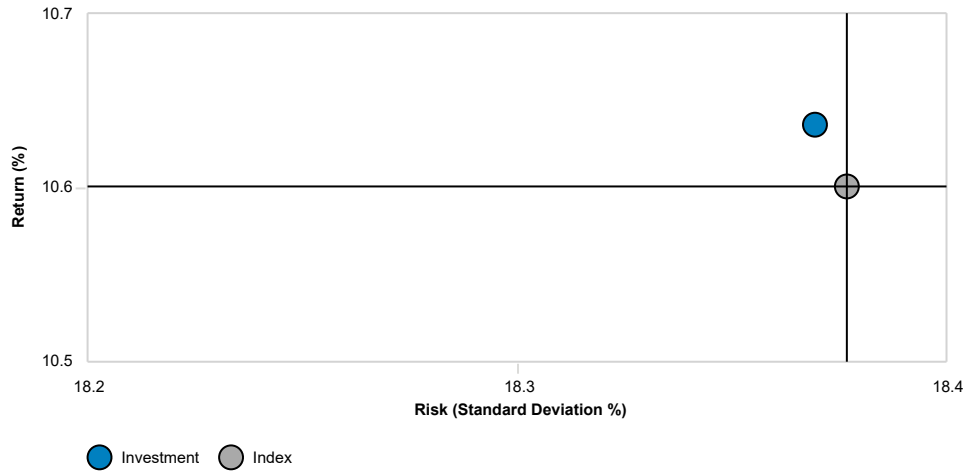
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.64	18.37	0.61	100.02	9	99.87	3
Index	10.60	18.38	0.61	100.00	9	100.00	3

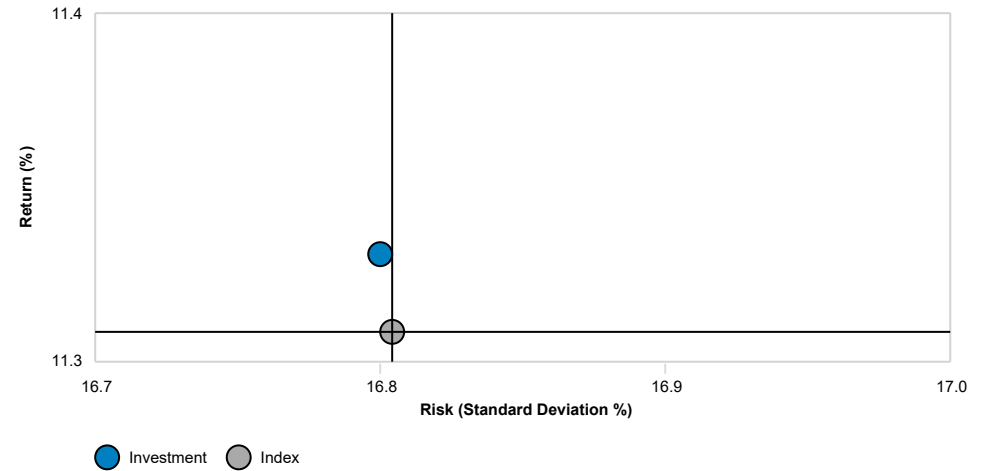
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.33	16.80	0.66	100.02	15	99.93	5
Index	11.31	16.80	0.66	100.00	15	100.00	5

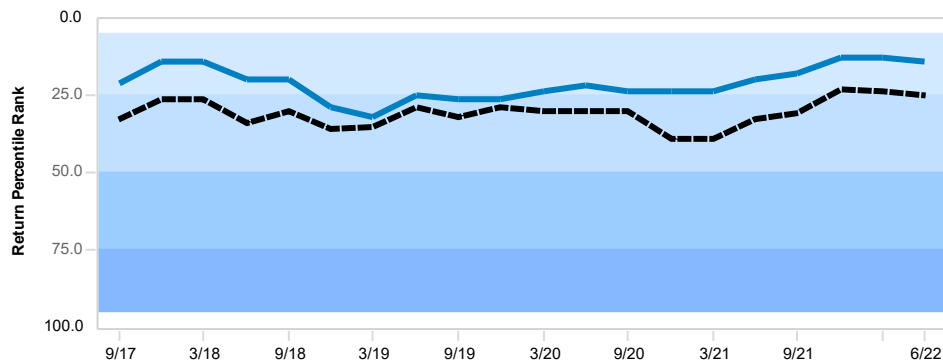
Risk and Return 3 Years



Risk and Return 5 Years

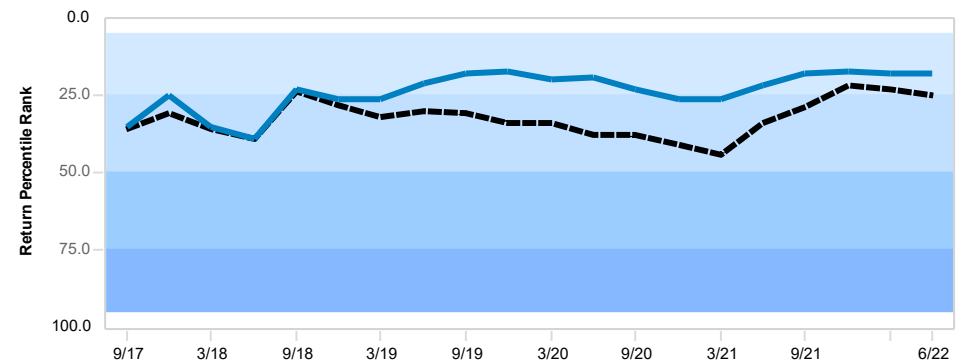


3 Year Rolling Percentile Rank IM U.S. Large Cap Index Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)
Index	20	3 (15%)	17 (85%)	0 (0%)	0 (0%)

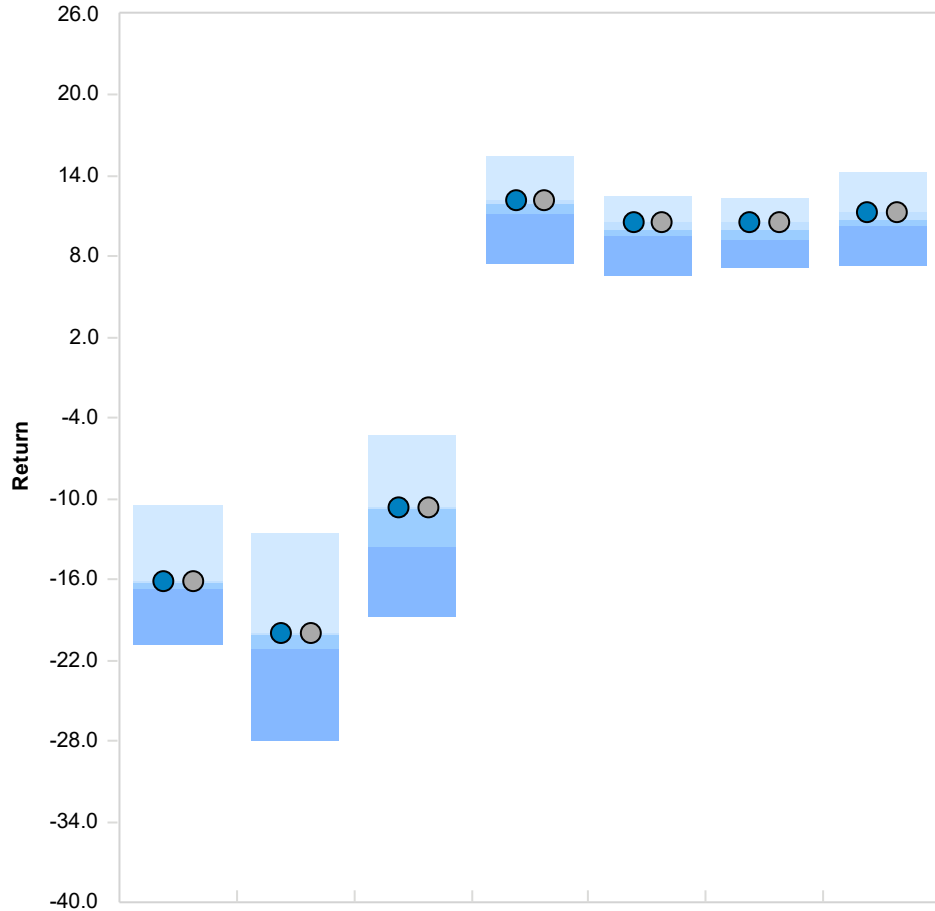
5 Year Rolling Percentile Rank IM U.S. Large Cap Index Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)
Index	20	4 (20%)	16 (80%)	0 (0%)	0 (0%)

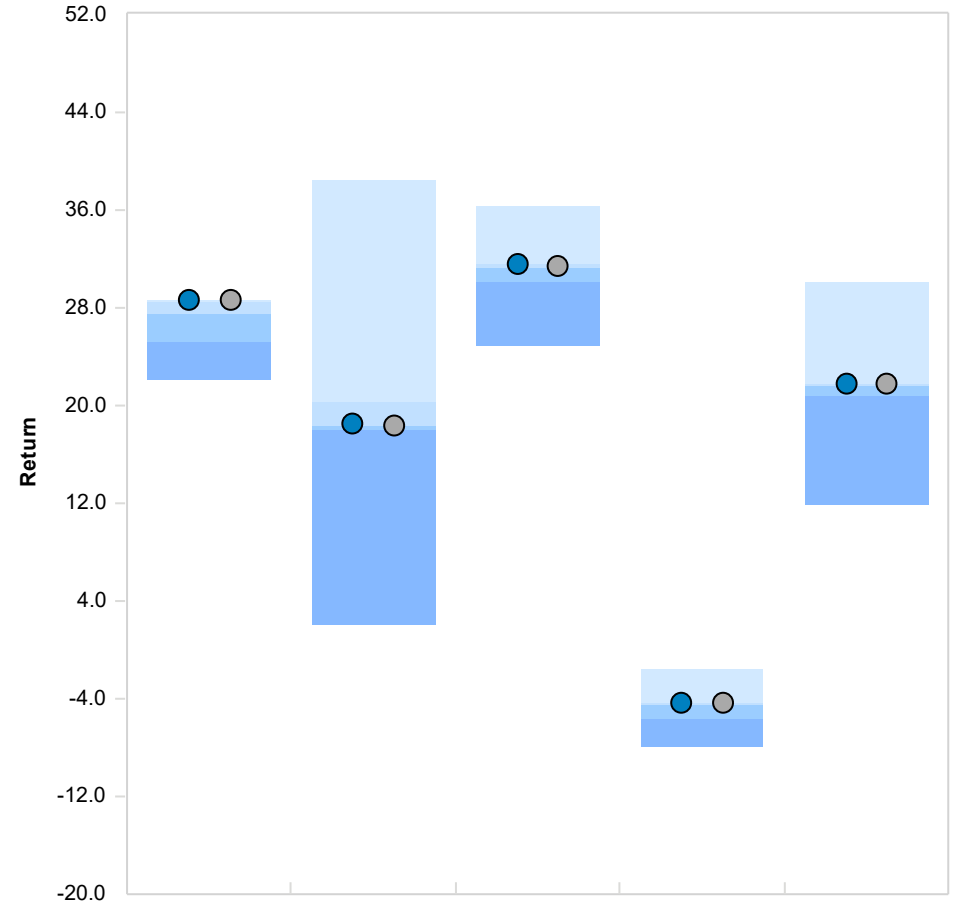


Peer Group Analysis - IM U.S. Large Cap Index Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-16.11 (46)	-19.97 (43)	-10.66 (41)	12.19 (19)	10.64 (14)	10.58 (21)	11.33 (18)
● Index	-16.10 (36)	-19.96 (38)	-10.62 (23)	12.18 (27)	10.60 (25)	10.55 (29)	11.31 (25)
Median	-16.14	-20.03	-10.79	11.93	10.02	9.96	10.77

Peer Group Analysis - IM U.S. Large Cap Index Equity (SA+CF)



	2021	2020	2019	2018	2017
● Investment	28.65 (20)	18.53 (44)	31.54 (24)	-4.40 (32)	21.85 (29)
● Index	28.71 (9)	18.40 (55)	31.49 (37)	-4.38 (29)	21.83 (33)
Median	27.57	18.45	31.24	-4.57	21.68

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.60 (36)	11.01 (42)	0.56 (31)	8.53 (33)	6.18 (37)	12.23 (38)
Index	-4.60 (34)	11.03 (30)	0.58 (13)	8.55 (23)	6.17 (48)	12.15 (53)
Median	-4.64	10.99	0.41	8.49	6.17	12.15



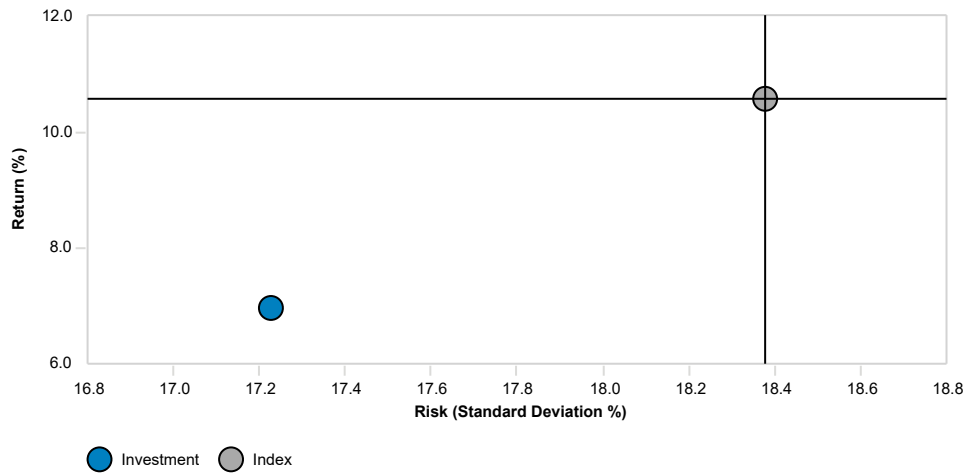
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.97	17.23	0.44	87.29	9	97.56	3
Index	10.60	18.38	0.61	100.00	9	100.00	3

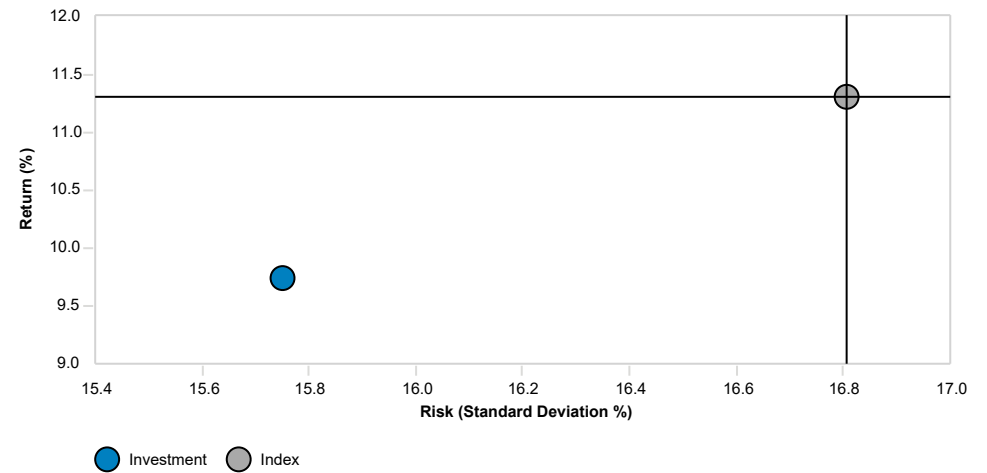
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.73	15.75	0.60	92.33	15	96.12	5
Index	11.31	16.80	0.66	100.00	15	100.00	5

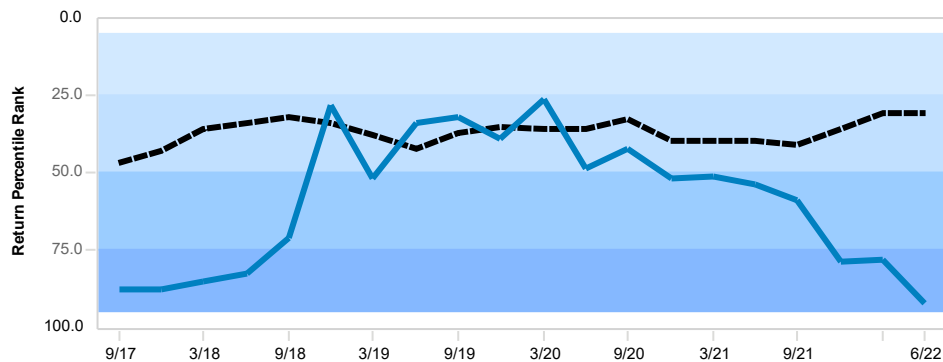
**Risk and Return 3 Years**



**Risk and Return 5 Years**

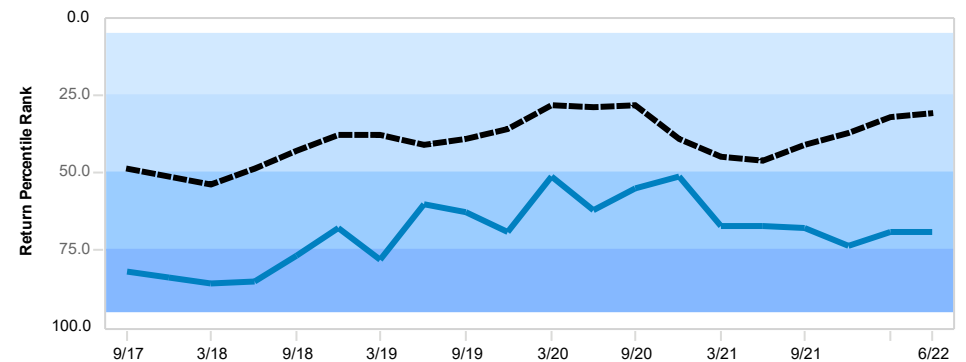


**3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	7 (35%)	6 (30%)	7 (35%)
Index	20	0 (0%)	20 (100%)	0 (0%)	0 (0%)

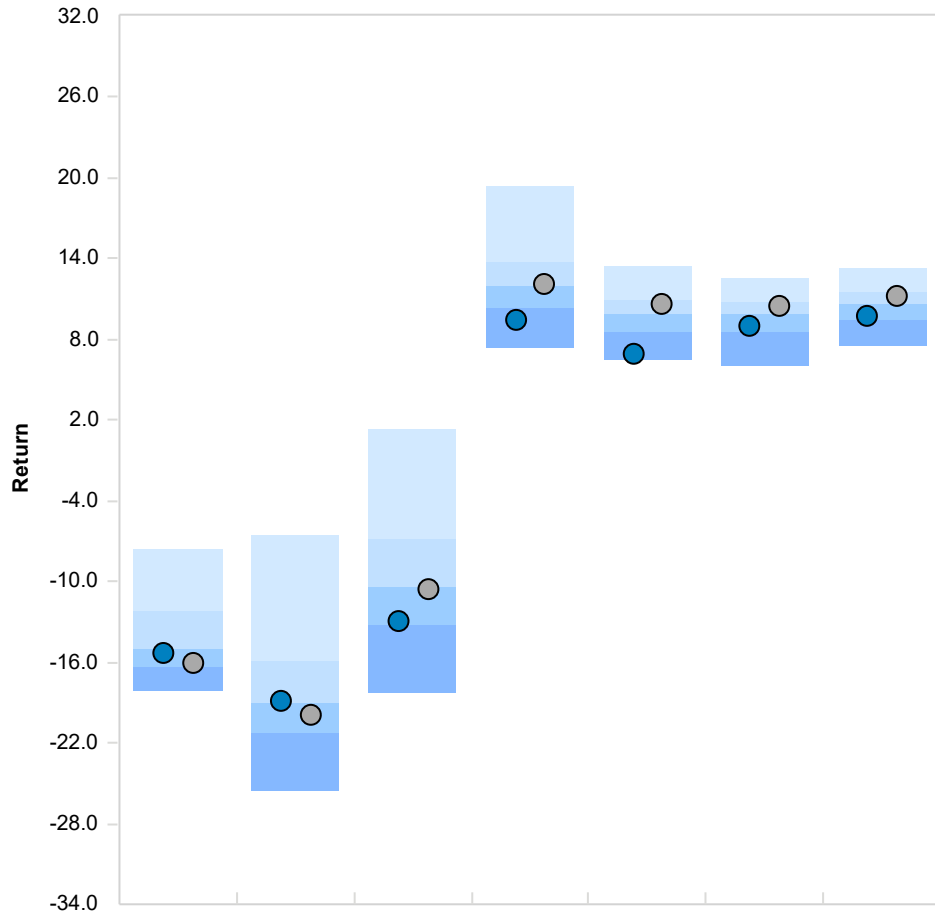
**5 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	14 (70%)	6 (30%)
Index	20	0 (0%)	18 (90%)	2 (10%)	0 (0%)

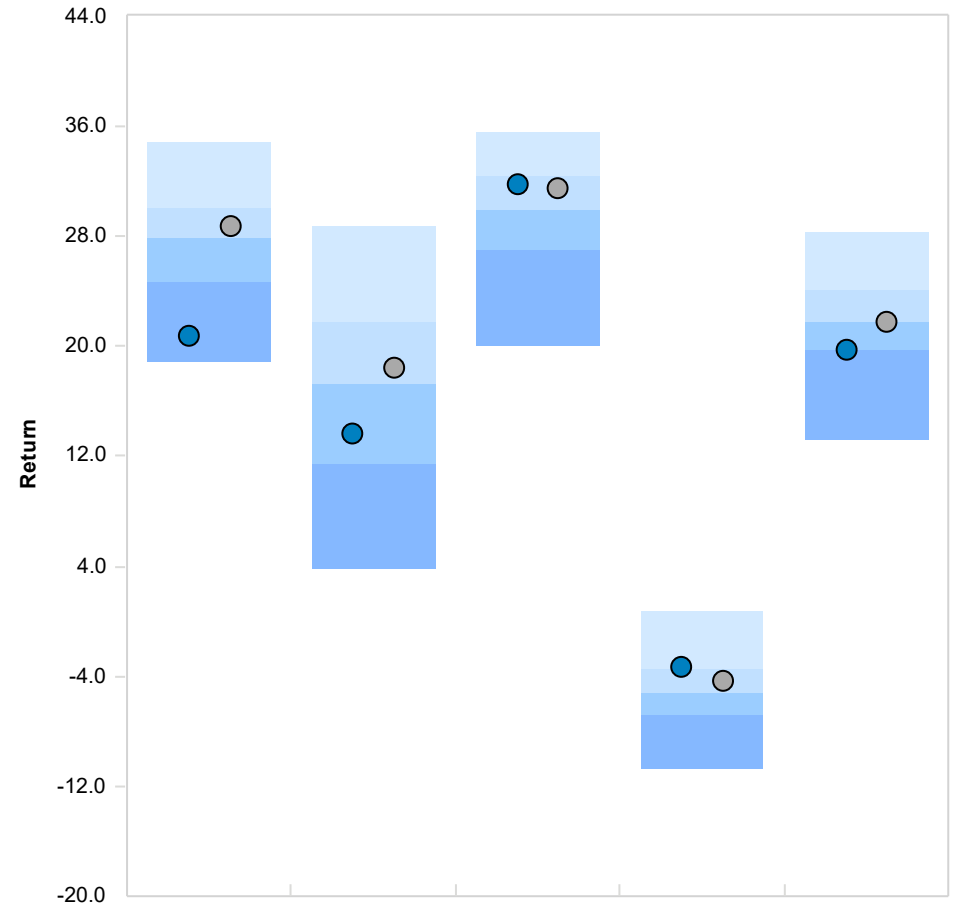


**Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-15.38 (54)	-18.91 (47)	-12.91 (72)	9.38 (83)	6.97 (92)	9.03 (64)	9.73 (69)
● Index	-16.10 (68)	-19.96 (65)	-10.62 (52)	12.18 (46)	10.60 (31)	10.55 (34)	11.31 (31)
Median	-15.06	-19.04	-10.49	12.03	9.84	9.85	10.68

**Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	20.79 (92)	13.61 (65)	31.87 (31)	-3.35 (22)	19.69 (76)
● Index	28.71 (37)	18.40 (43)	31.49 (35)	-4.38 (38)	21.83 (52)
Median	27.83	17.26	29.99	-5.15	21.86

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.17 (41)	7.31 (89)	0.09 (52)	7.12 (71)	4.98 (78)	11.57 (66)
Index	-4.60 (54)	11.03 (31)	0.58 (27)	8.55 (31)	6.17 (62)	12.15 (54)
Median	-4.58	10.24	0.11	8.04	6.74	12.32



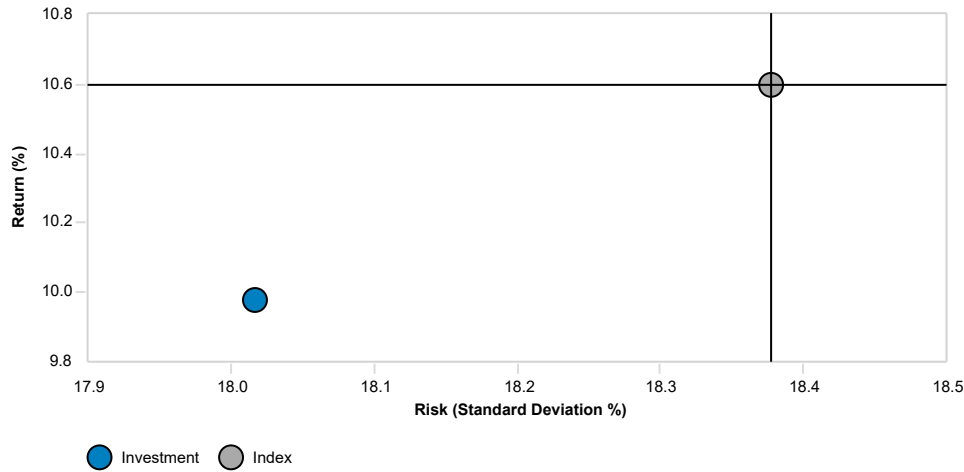
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.98	18.02	0.58	96.81	9	98.08	3
Index	10.60	18.38	0.61	100.00	9	100.00	3

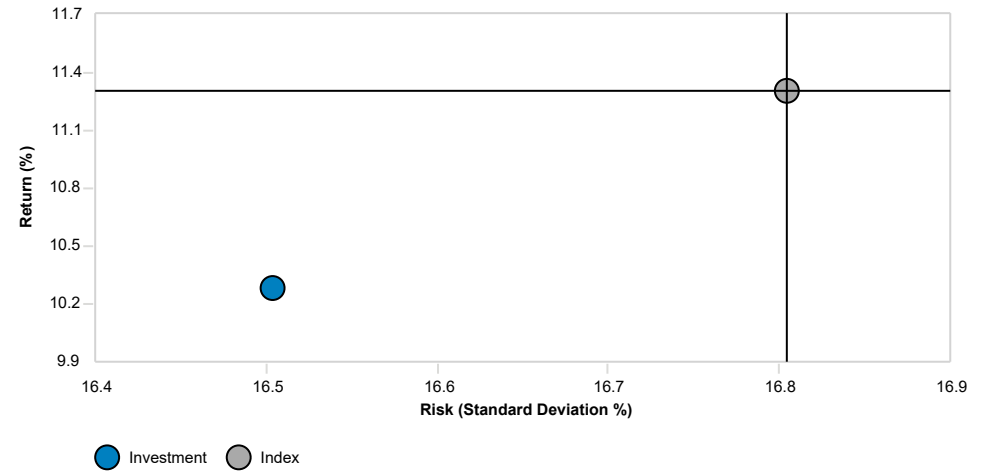
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.28	16.50	0.61	95.86	15	98.55	5
Index	11.31	16.80	0.66	100.00	15	100.00	5

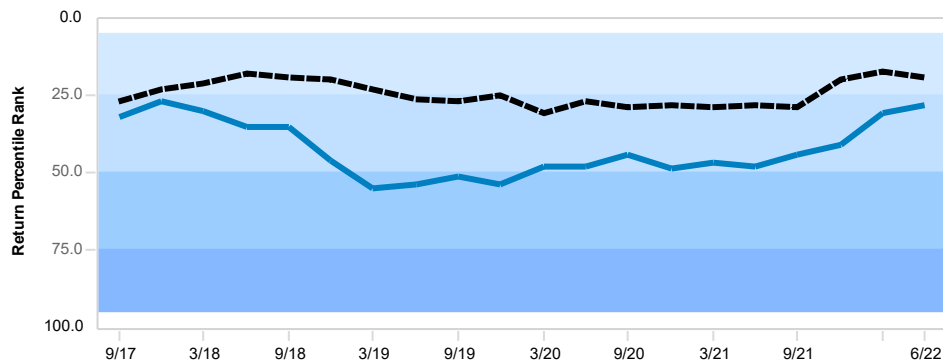
**Risk and Return 3 Years**



**Risk and Return 5 Years**

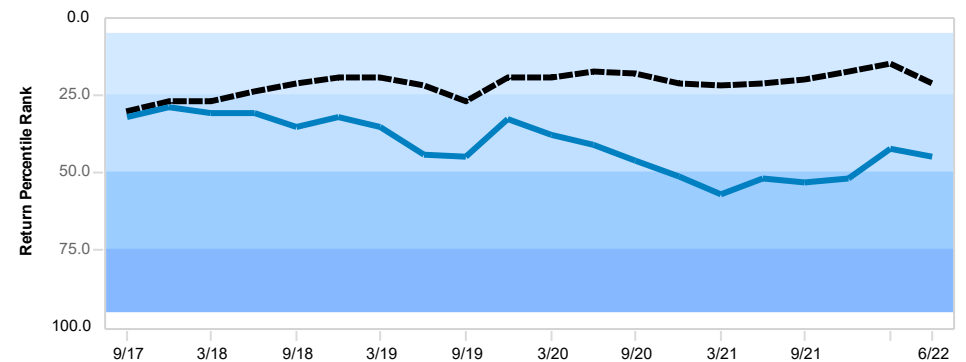


**3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	16 (80%)	4 (20%)	0 (0%)
Index	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)

**5 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)**

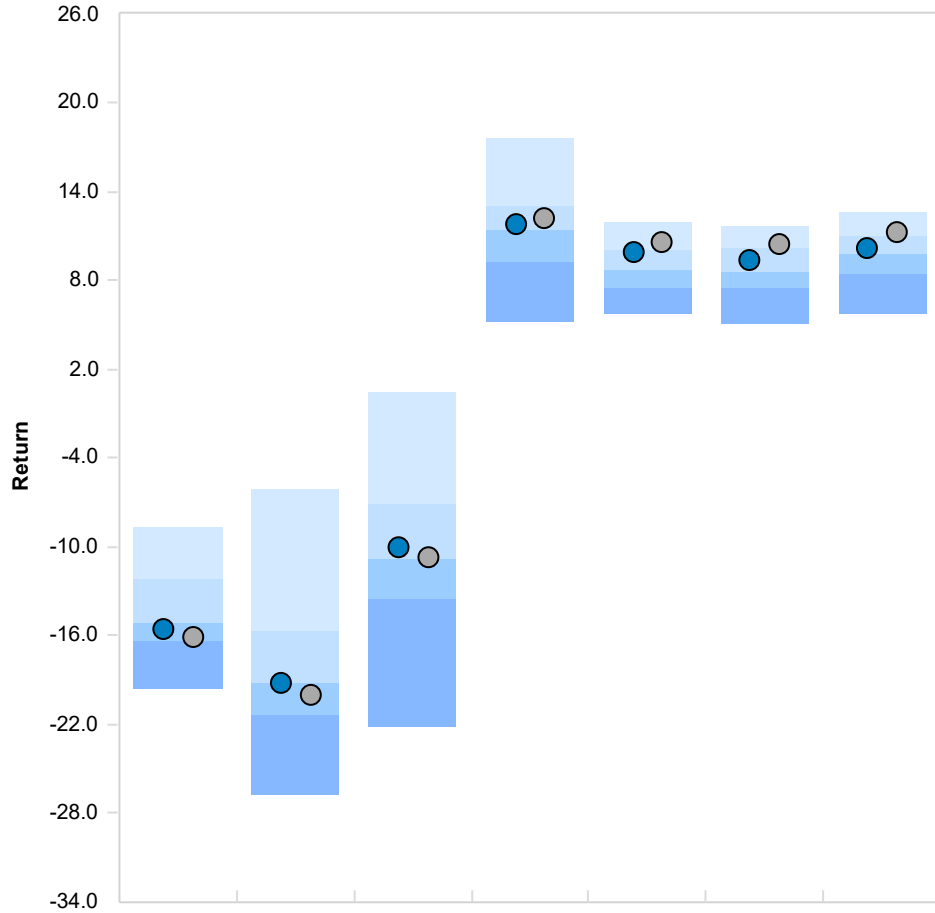


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)
Index	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)



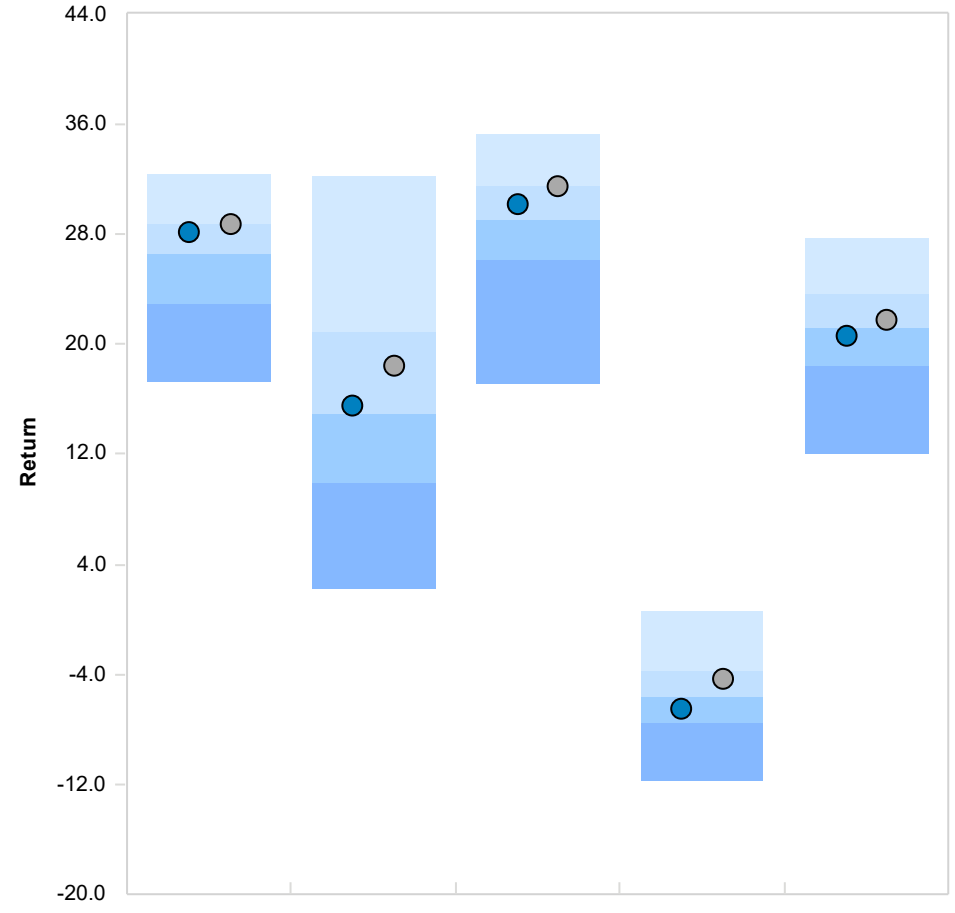


**Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-15.58 (59)	-19.14 (50)	-10.06 (45)	11.81 (43)	9.98 (28)	9.42 (40)	10.28 (45)
● Index	-16.10 (72)	-19.96 (61)	-10.62 (49)	12.18 (36)	10.60 (19)	10.55 (22)	11.31 (21)
Median	-15.10	-19.18	-10.88	11.43	8.78	8.65	9.79

**Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	28.13 (31)	15.56 (46)	30.24 (35)	-6.43 (62)	20.67 (56)
● Index	28.71 (26)	18.40 (36)	31.49 (26)	-4.38 (33)	21.83 (43)
Median	26.52	15.04	29.09	-5.66	21.25

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.21 (41)	11.19 (21)	0.04 (50)	7.88 (46)	6.78 (47)	11.26 (58)
Index	-4.60 (46)	11.03 (23)	0.58 (24)	8.55 (22)	6.17 (56)	12.15 (44)
Median	-4.68	9.79	0.03	7.72	6.55	11.78



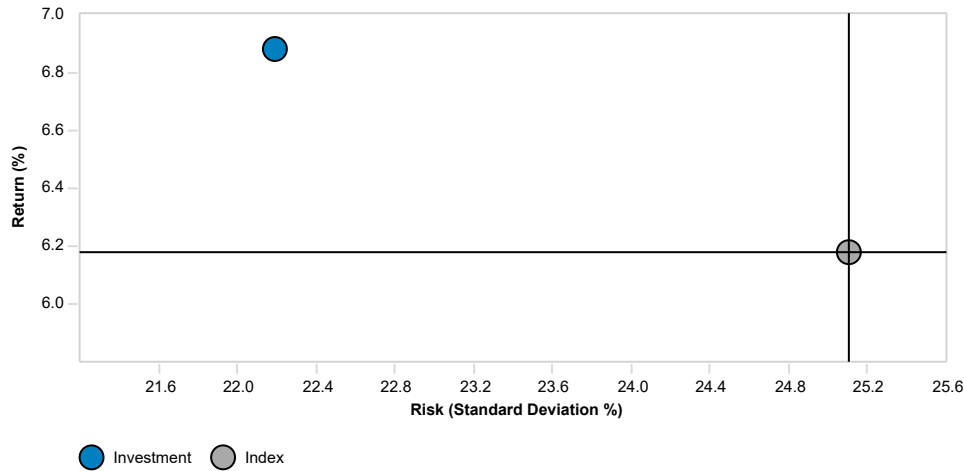
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.88	22.19	0.38	89.33	7	86.25	5
Index	6.18	25.10	0.34	100.00	7	100.00	5

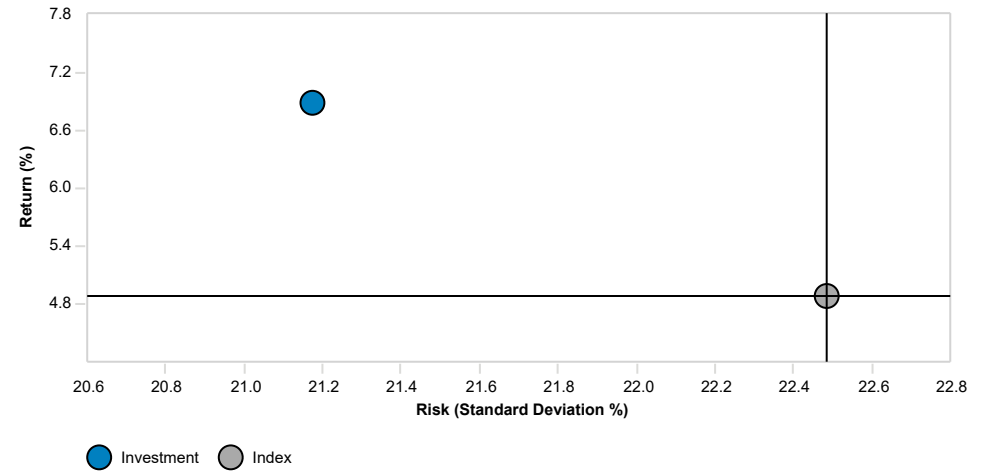
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.88	21.18	0.37	98.05	13	91.37	7
Index	4.89	22.49	0.28	100.00	13	100.00	7

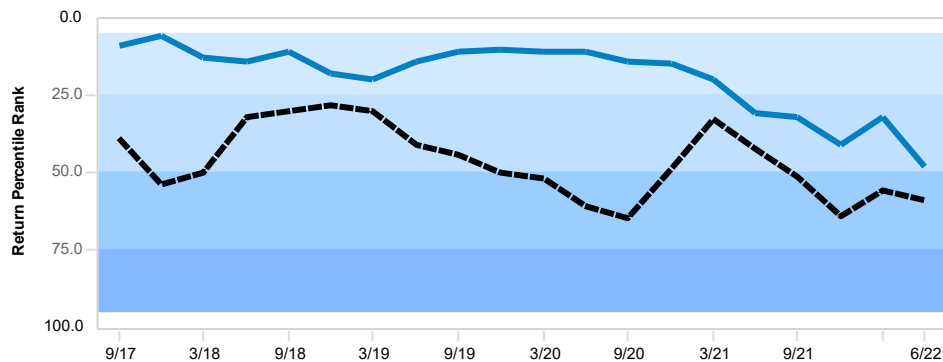
**Risk and Return 3 Years**



**Risk and Return 5 Years**

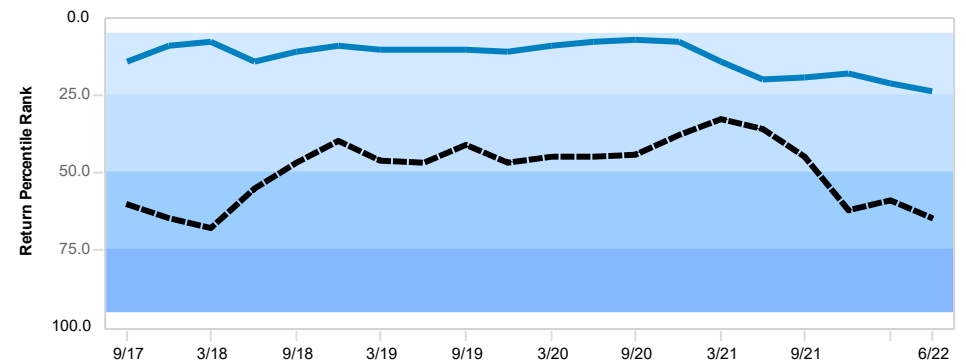


**3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (SA+CF)**



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

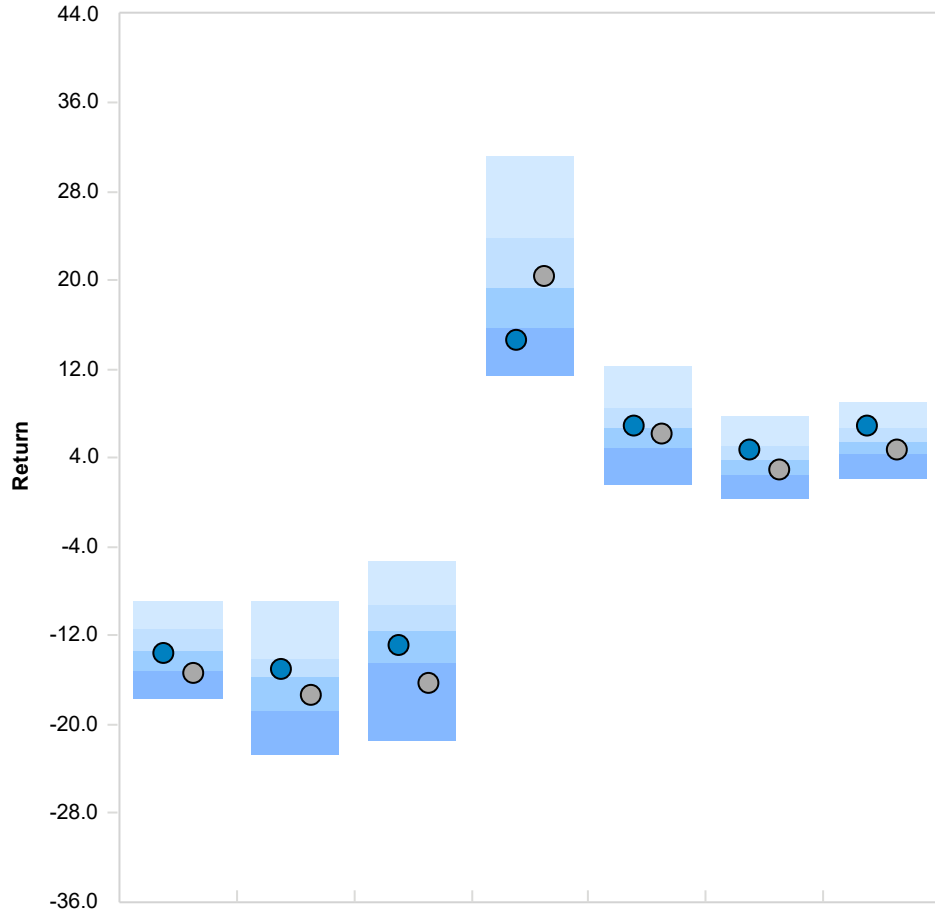
**5 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)

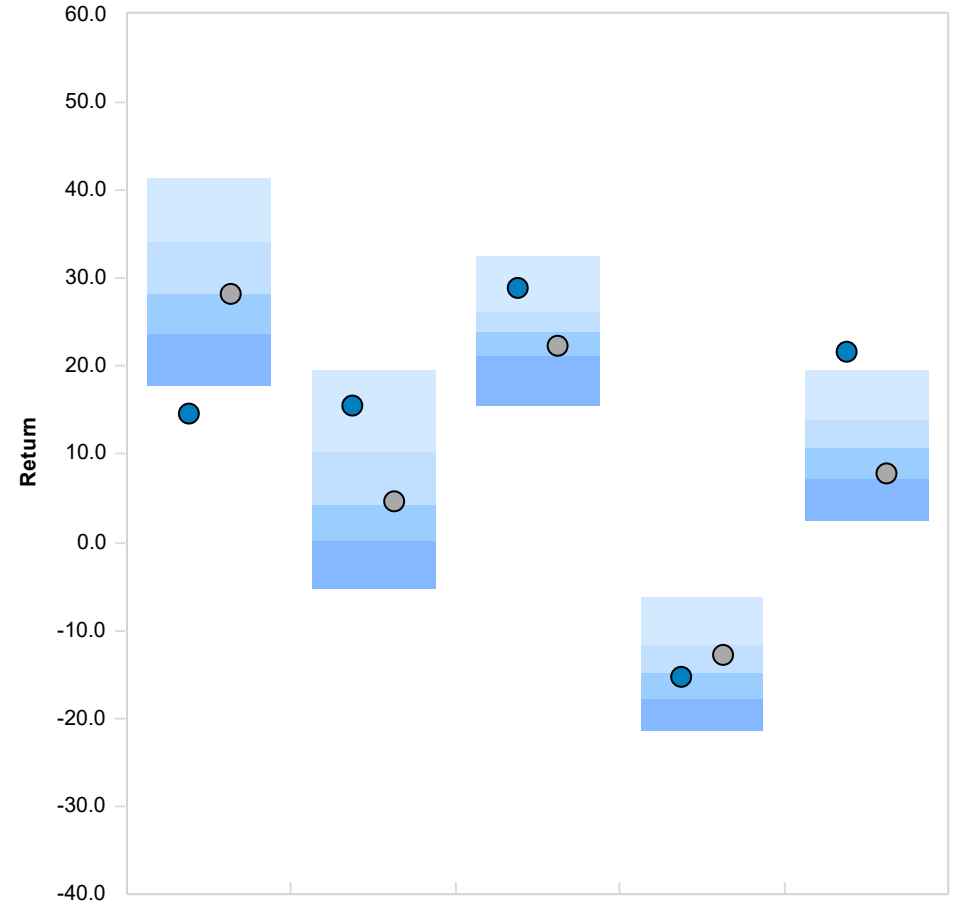


**Peer Group Analysis - IM U.S. Small Cap Value Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-13.55 (56)	-14.89 (37)	-12.90 (65)	14.75 (81)	6.88 (48)	4.84 (29)	6.88 (24)
● Index	-15.28 (78)	-17.31 (64)	-16.28 (86)	20.44 (45)	6.18 (59)	2.93 (67)	4.89 (65)
Median	-13.30	-15.65	-11.61	19.44	6.80	3.87	5.52

**Peer Group Analysis - IM U.S. Small Cap Value Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	14.64 (99)	15.50 (13)	28.89 (11)	-15.35 (55)	21.78 (4)
● Index	28.27 (50)	4.63 (49)	22.39 (64)	-12.86 (34)	7.84 (70)
Median	28.26	4.17	23.95	-14.90	10.74

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-1.54 (28)	4.55 (84)	-2.12 (56)	-1.48 (100)	13.70 (82)	29.60 (50)
Index	-2.40 (36)	4.36 (86)	-2.98 (78)	4.56 (32)	21.17 (27)	33.36 (24)
Median	-3.19	6.68	-1.80	3.81	18.55	29.59



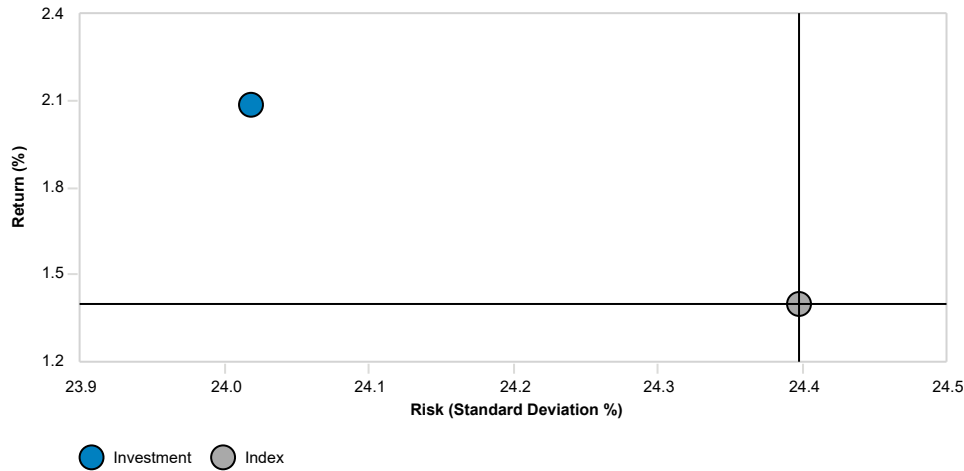
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.09	24.02	0.18	103.58	7	102.04	5
Index	1.40	24.40	0.15	100.00	7	100.00	5

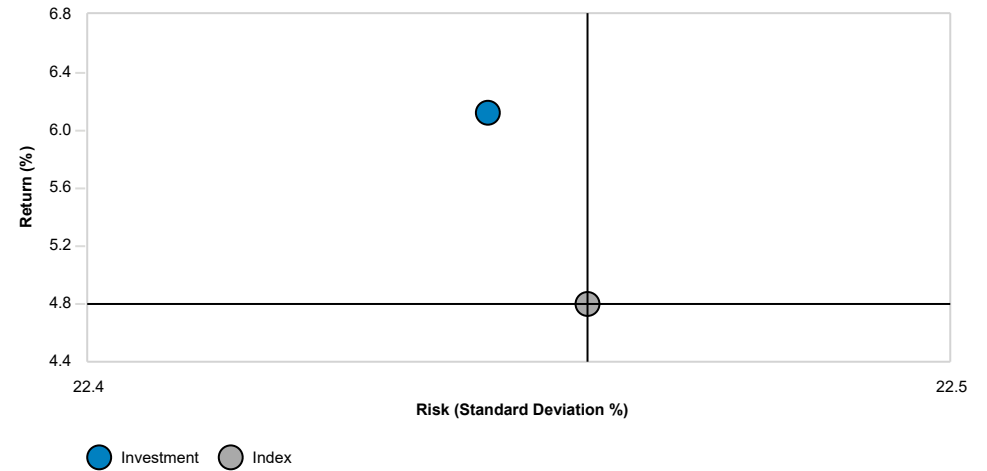
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.12	22.45	0.33	102.86	13	98.69	7
Index	4.80	22.46	0.27	100.00	14	100.00	6

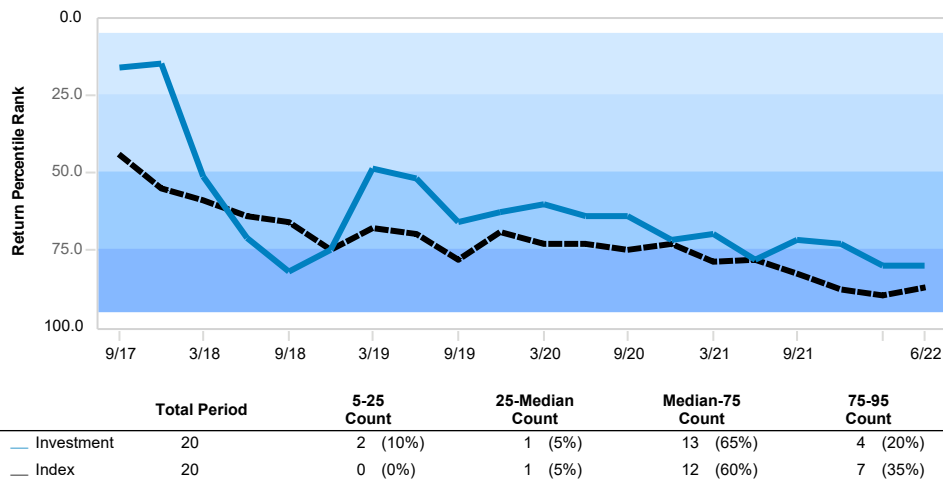
**Risk and Return 3 Years**



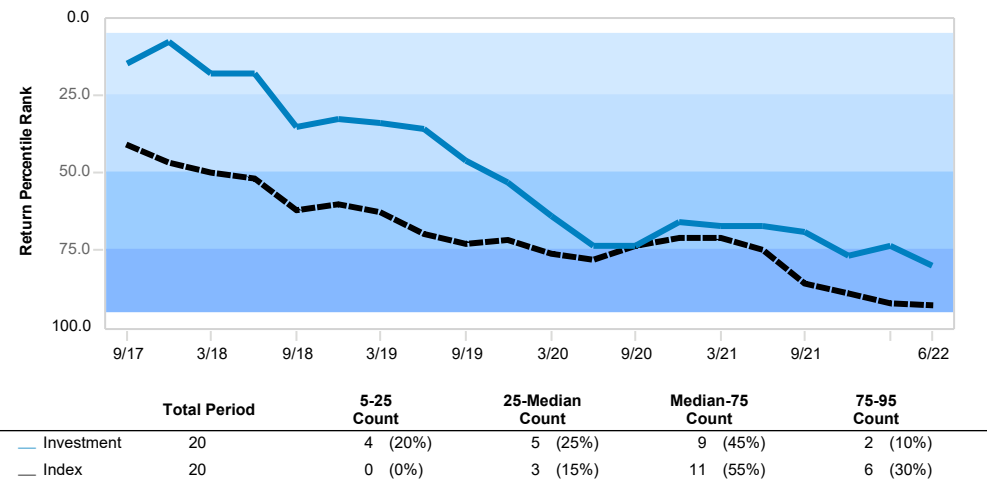
**Risk and Return 5 Years**



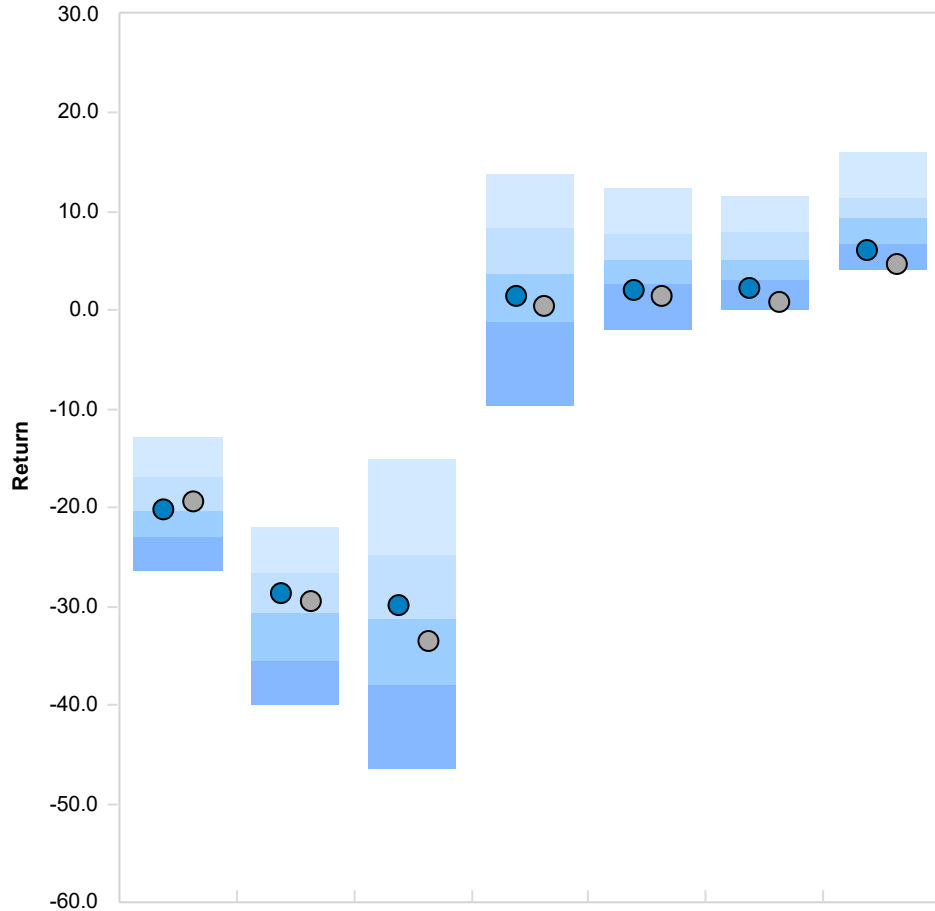
**3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (SA+CF)**



**5 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (SA+CF)**

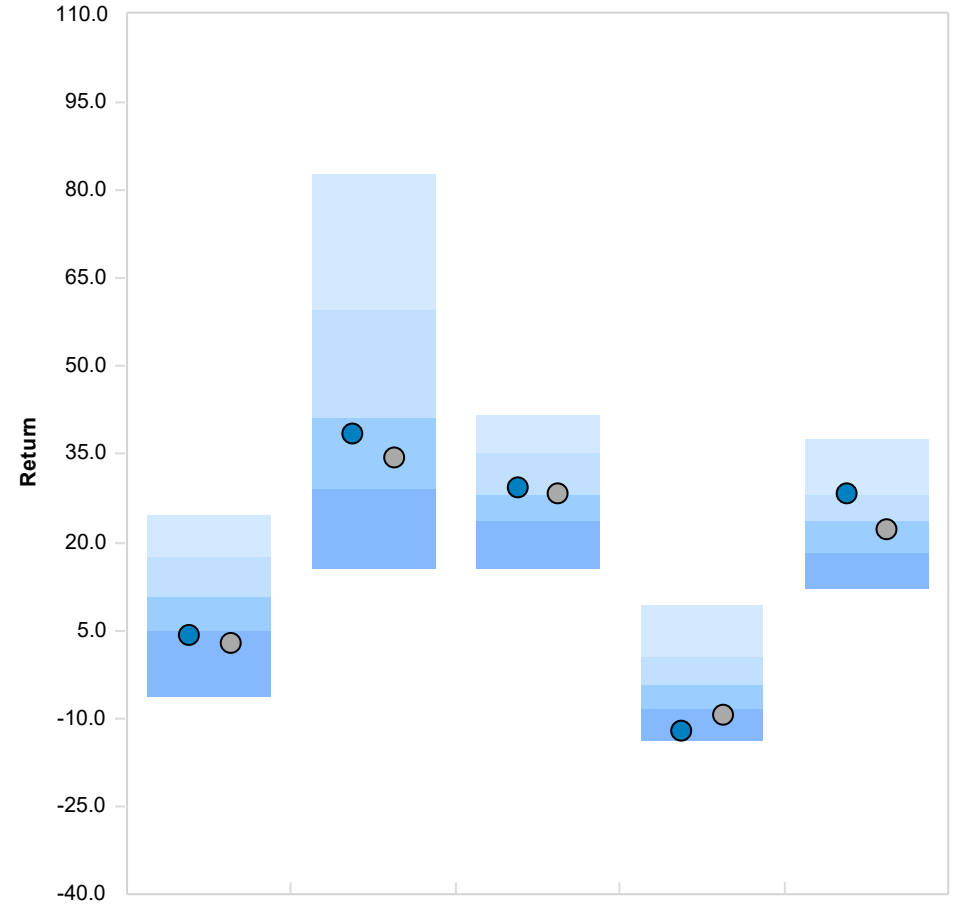


**Peer Group Analysis - IM U.S. Small Cap Growth Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-20.13 (47)	-28.70 (36)	-29.82 (46)	1.46 (62)	2.09 (80)	2.32 (81)	6.12 (80)
● Index	-19.25 (45)	-29.45 (42)	-33.43 (59)	0.38 (68)	1.40 (87)	0.93 (91)	4.80 (93)
Median	-20.27	-30.68	-31.26	3.70	5.19	5.20	9.32

**Peer Group Analysis - IM U.S. Small Cap Growth Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	4.32 (78)	38.53 (58)	29.23 (46)	-11.94 (91)	28.31 (24)
● Index	2.83 (83)	34.63 (65)	28.48 (48)	-9.31 (79)	22.17 (56)
Median	10.52	41.25	28.06	-4.16	23.64

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-10.74 (20)	0.01 (64)	-1.58 (43)	3.51 (79)	2.38 (73)	26.28 (59)
Index	-12.63 (45)	0.01 (64)	-5.65 (91)	3.92 (76)	4.88 (55)	29.61 (28)
Median	-13.30	1.23	-1.87	5.46	5.57	27.13



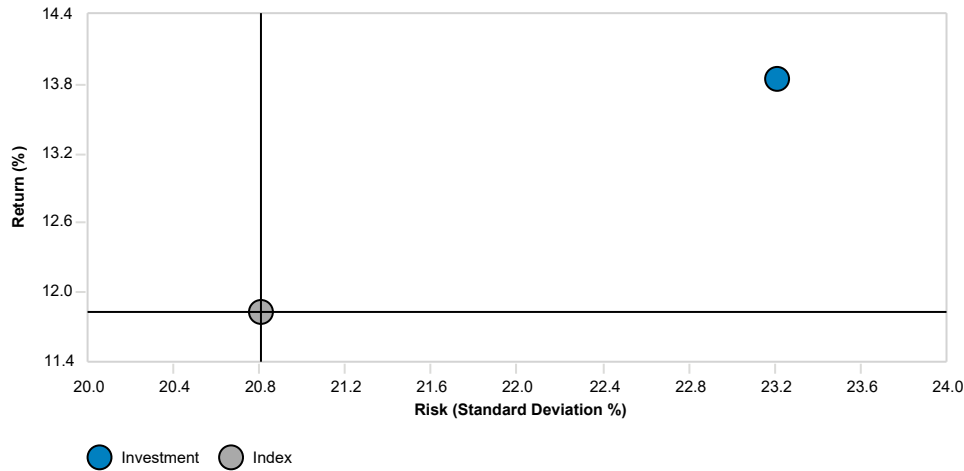
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.84	23.21	0.65	105.11	7	97.94	5
Index	11.84	20.81	0.61	100.00	9	100.00	3

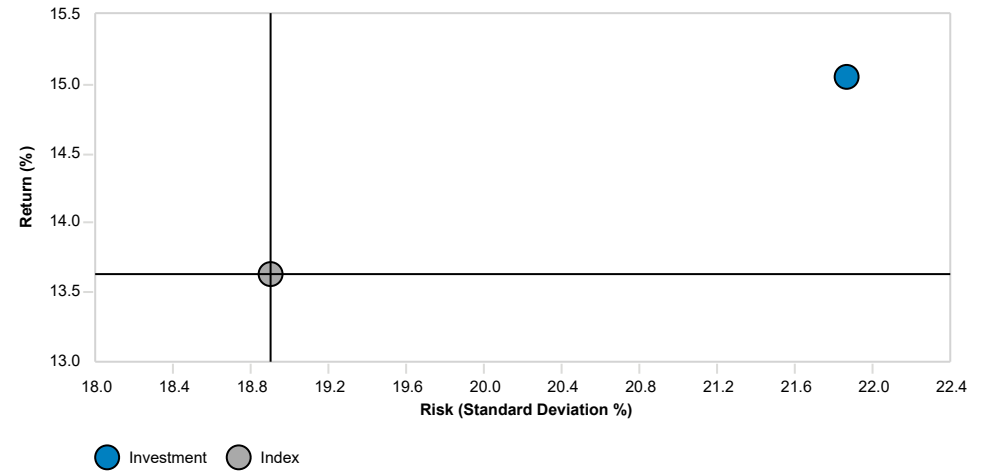
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.05	21.87	0.70	106.88	14	102.55	6
Index	13.63	18.91	0.71	100.00	16	100.00	4

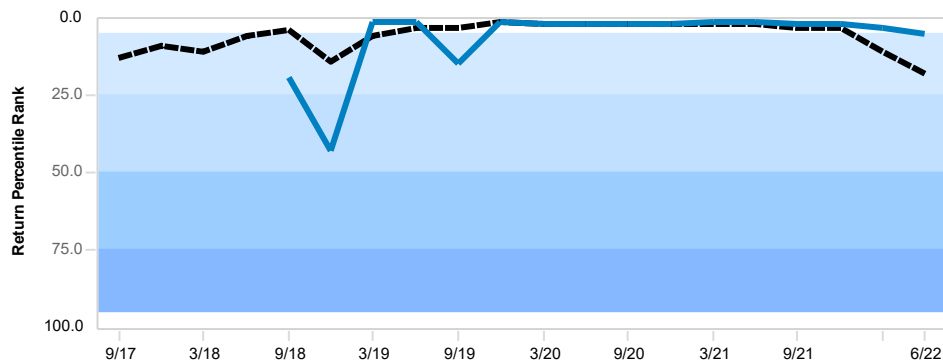
**Risk and Return 3 Years**



**Risk and Return 5 Years**

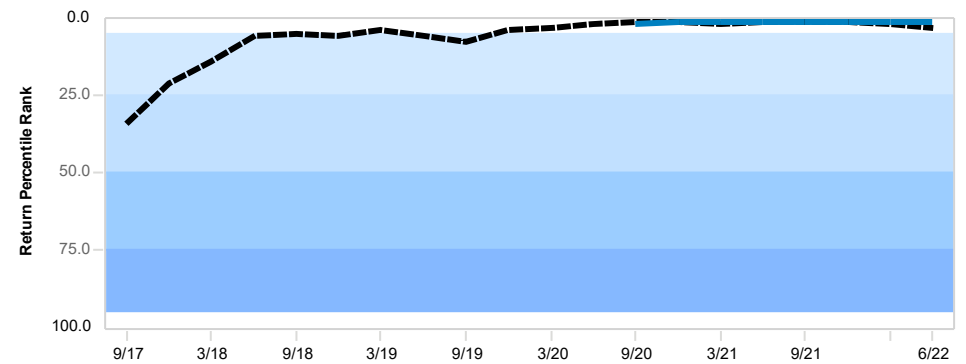


**3 Year Rolling Percentile Rank IM U.S. All Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	15 (94%)	1 (6%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

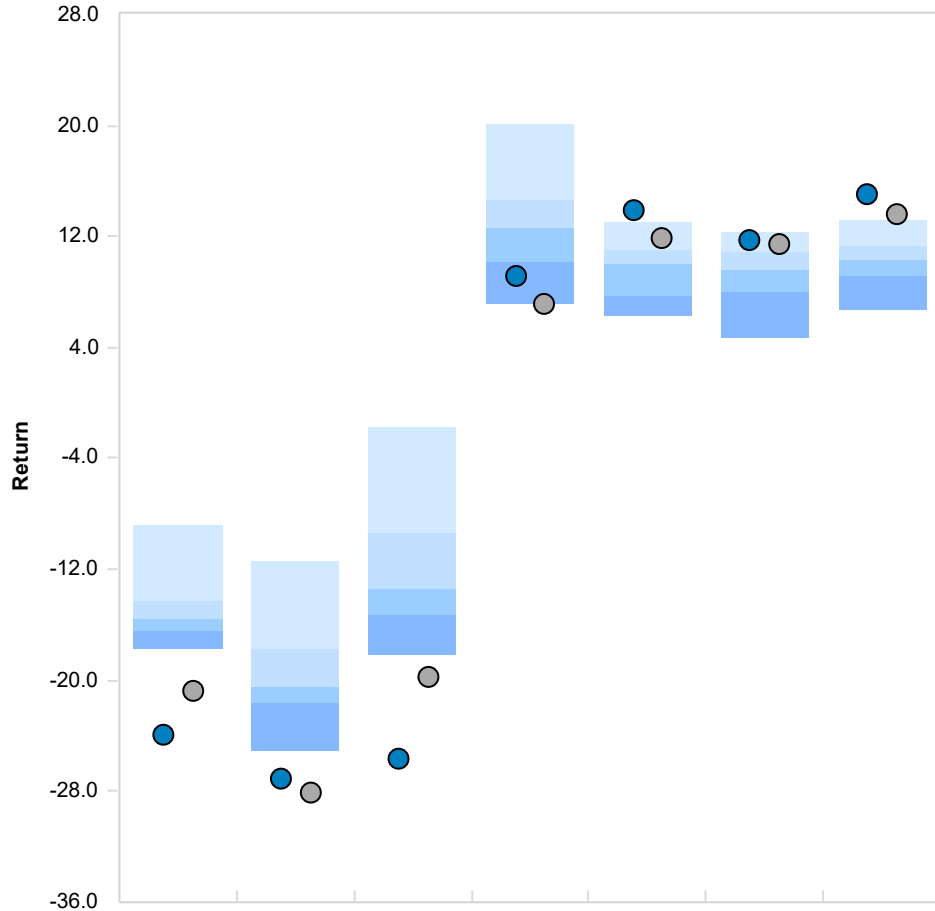
**5 Year Rolling Percentile Rank IM U.S. All Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	8	8 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)

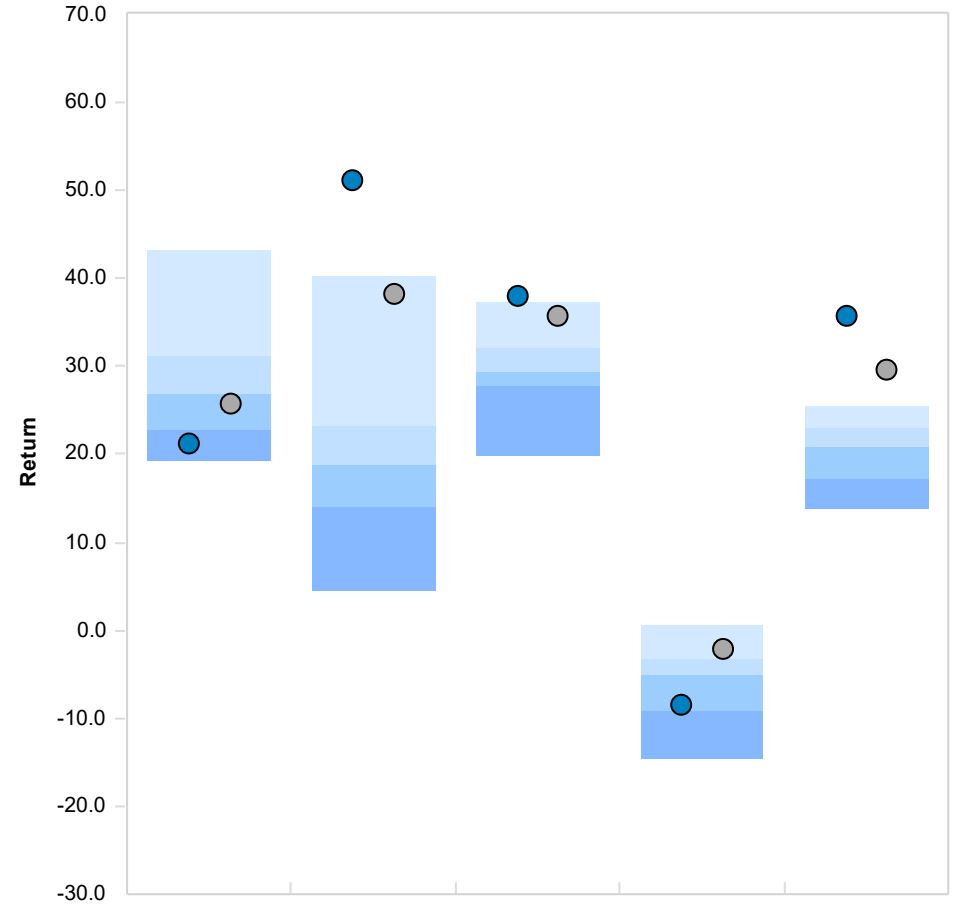


**Peer Group Analysis - IM U.S. All Cap Core Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-23.88 (100)	-27.12 (100)	-25.58 (100)	9.19 (79)	13.84 (5)	11.71 (9)	15.05 (1)
● Index	-20.83 (100)	-28.15 (100)	-19.78 (100)	7.10 (96)	11.84 (18)	11.53 (16)	13.63 (3)
Median	-15.52	-20.42	-13.42	12.55	9.97	9.63	10.32

**Peer Group Analysis - IM U.S. All Cap Core Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	21.32 (81)	51.29 (3)	38.03 (2)	-8.39 (73)	35.81 (1)
● Index	25.85 (61)	38.26 (6)	35.85 (10)	-2.12 (21)	29.59 (1)
Median	26.93	18.81	29.45	-5.10	20.89

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.26 (30)	3.11 (100)	-0.97 (80)	11.89 (3)	6.19 (61)	17.39 (22)
Index	-9.25 (97)	10.89 (19)	0.69 (34)	11.38 (3)	1.19 (97)	12.41 (77)
Median	-5.03	9.26	0.13	7.53	7.12	14.52



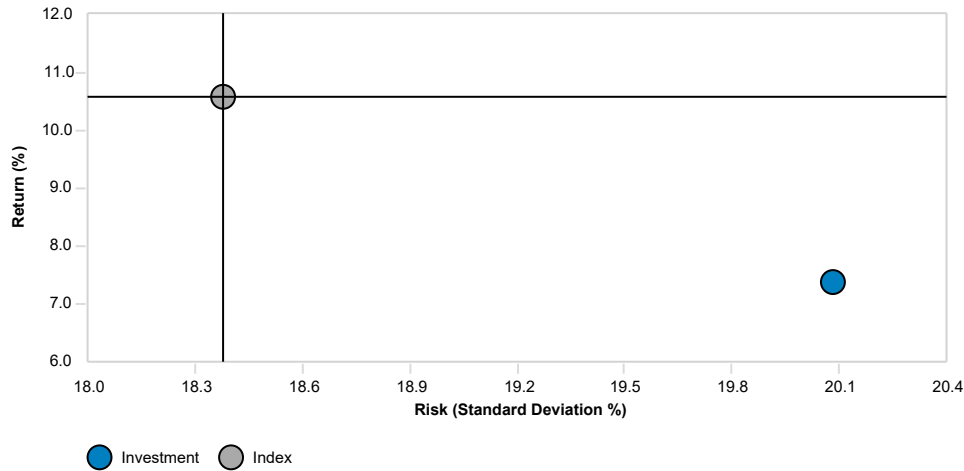
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.38	20.08	0.42	95.34	8	105.70	4
Index	10.60	18.38	0.61	100.00	9	100.00	3

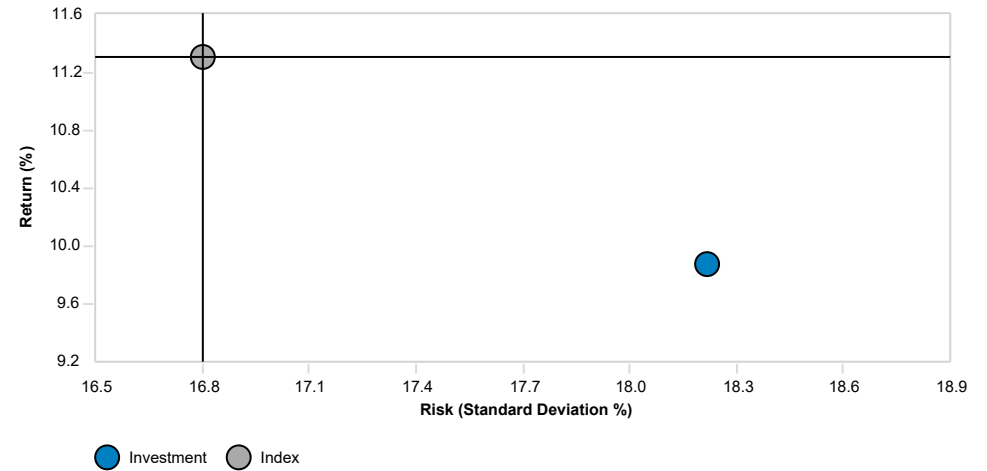
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.88	18.22	0.55	97.51	15	101.68	5
Index	11.31	16.80	0.66	100.00	15	100.00	5

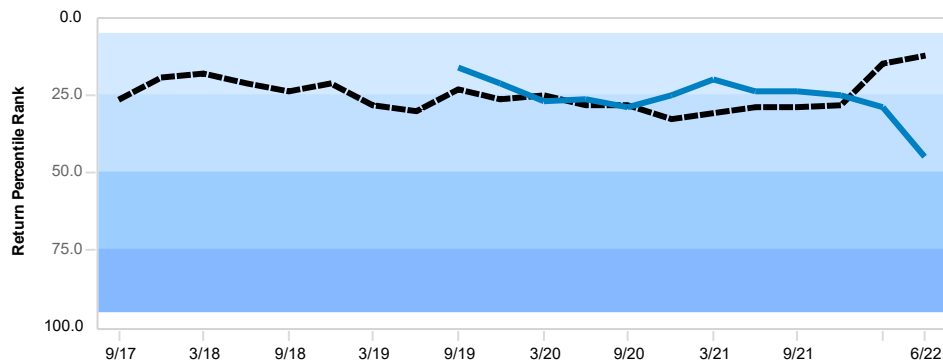
Risk and Return 3 Years



Risk and Return 5 Years

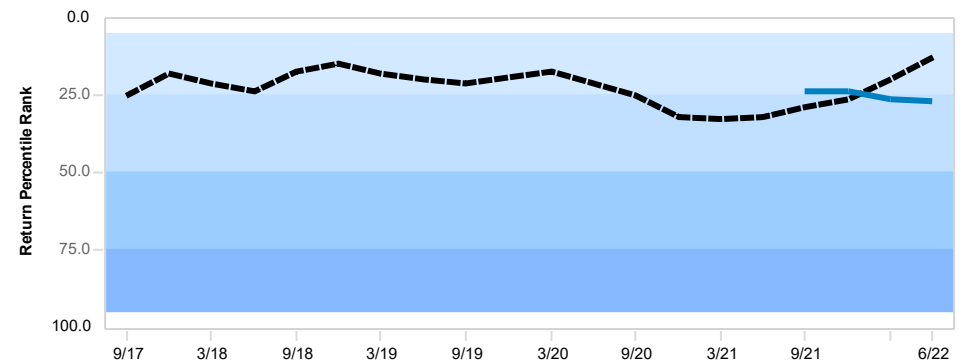


3 Year Rolling Percentile Rank IM U.S. Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	12	7 (58%)	5 (42%)	0 (0%)	0 (0%)
Index	20	9 (45%)	11 (55%)	0 (0%)	0 (0%)

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

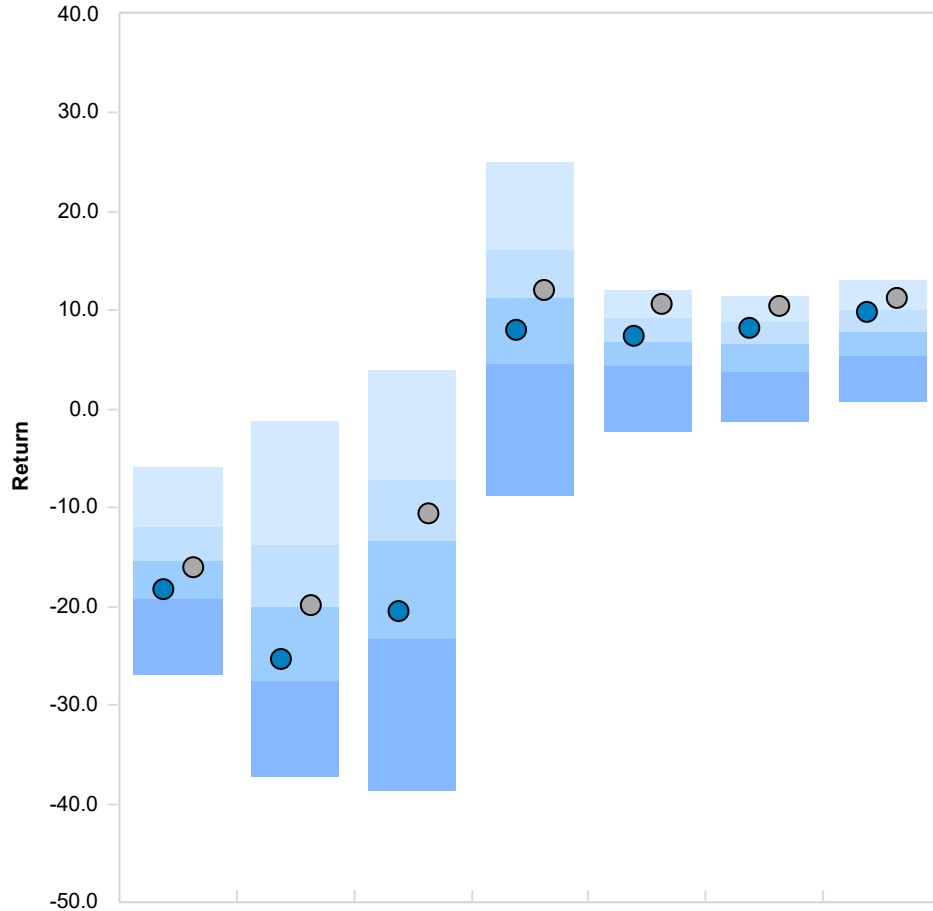


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	4	2 (50%)	2 (50%)	0 (0%)	0 (0%)
Index	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)



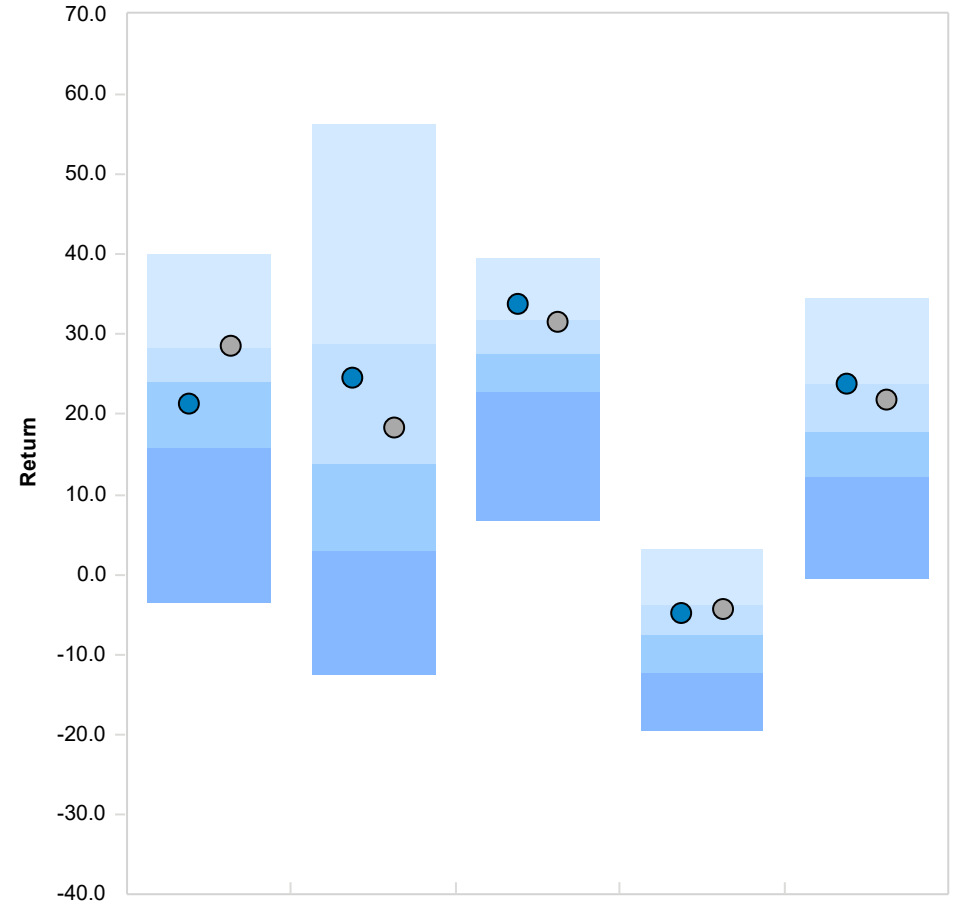


Peer Group Analysis - IM U.S. Equity (MF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-18.17 (71)	-25.39 (71)	-20.40 (70)	8.00 (66)	7.38 (45)	8.29 (32)	9.88 (27)
● Index	-16.10 (57)	-19.96 (50)	-10.62 (38)	12.18 (44)	10.60 (12)	10.55 (10)	11.31 (13)
Median	-15.44	-19.99	-13.44	11.34	6.90	6.64	7.74

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



	2021	2020	2019	2018	2017
● Investment	21.48 (62)	24.65 (30)	33.89 (17)	-4.89 (33)	23.74 (26)
● Index	28.71 (24)	18.40 (41)	31.49 (27)	-4.38 (29)	21.83 (32)
Median	24.23	13.98	27.51	-7.48	17.94

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-8.83 (69)	8.32 (39)	-1.50 (67)	5.07 (69)	8.36 (45)	19.71 (38)
Index	-4.60 (42)	11.03 (14)	0.58 (23)	8.55 (27)	6.17 (58)	12.15 (71)
Median	-5.54	7.28	-0.58	6.45	7.43	16.34



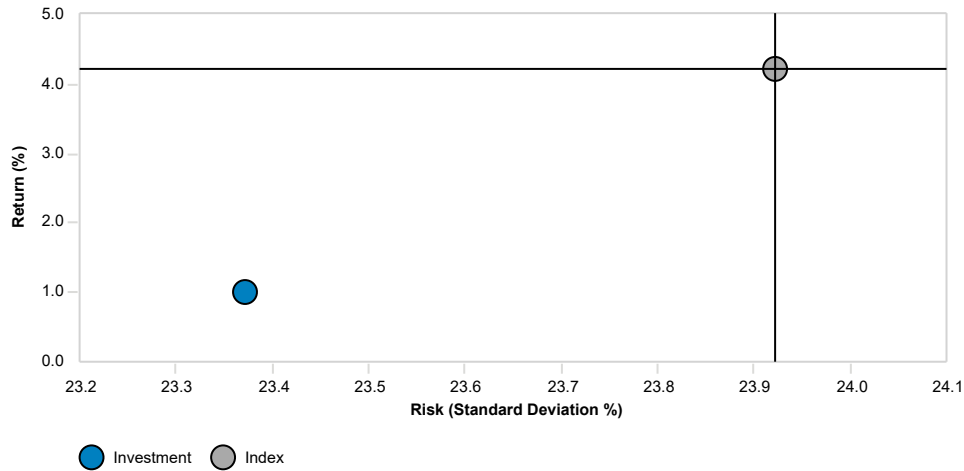
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.00	23.37	0.14	90.33	8	99.97	4
Index	4.21	23.92	0.27	100.00	7	100.00	5

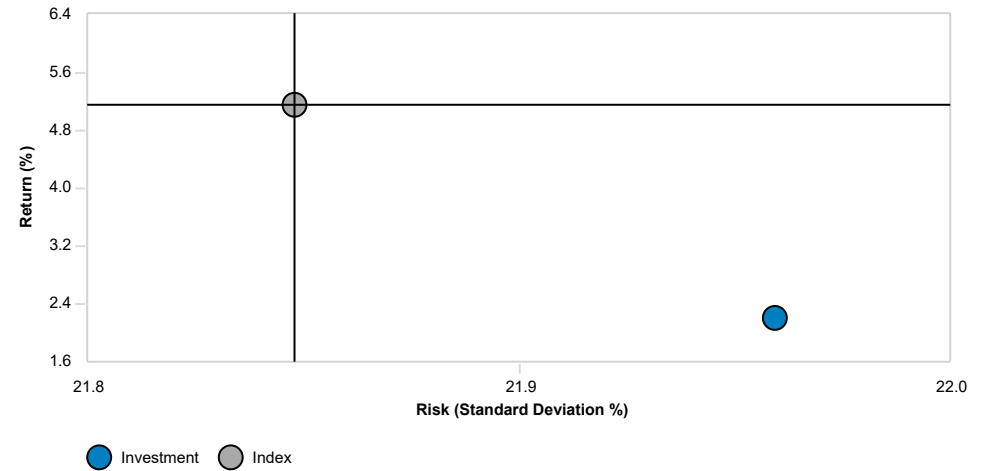
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.21	21.96	0.16	94.38	15	104.33	5
Index	5.17	21.85	0.29	100.00	13	100.00	7

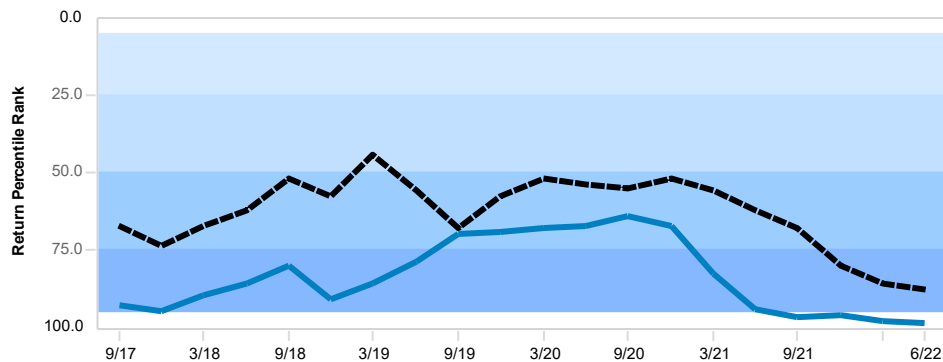
**Risk and Return 3 Years**



**Risk and Return 5 Years**

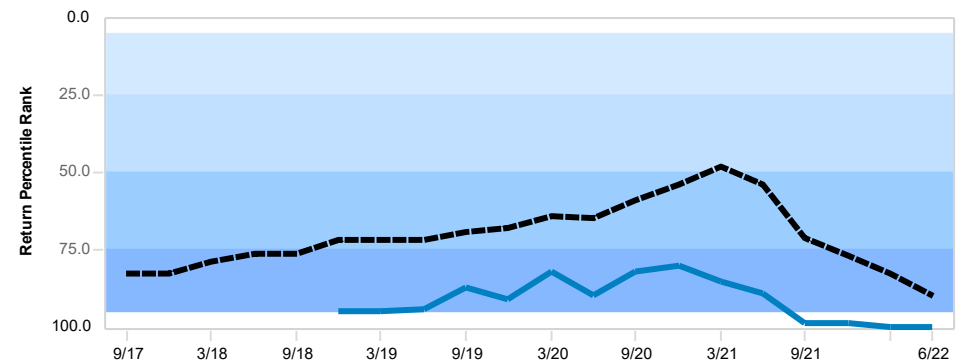


**3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	6 (30%)	14 (70%)
Index	20	0 (0%)	1 (5%)	16 (80%)	3 (15%)

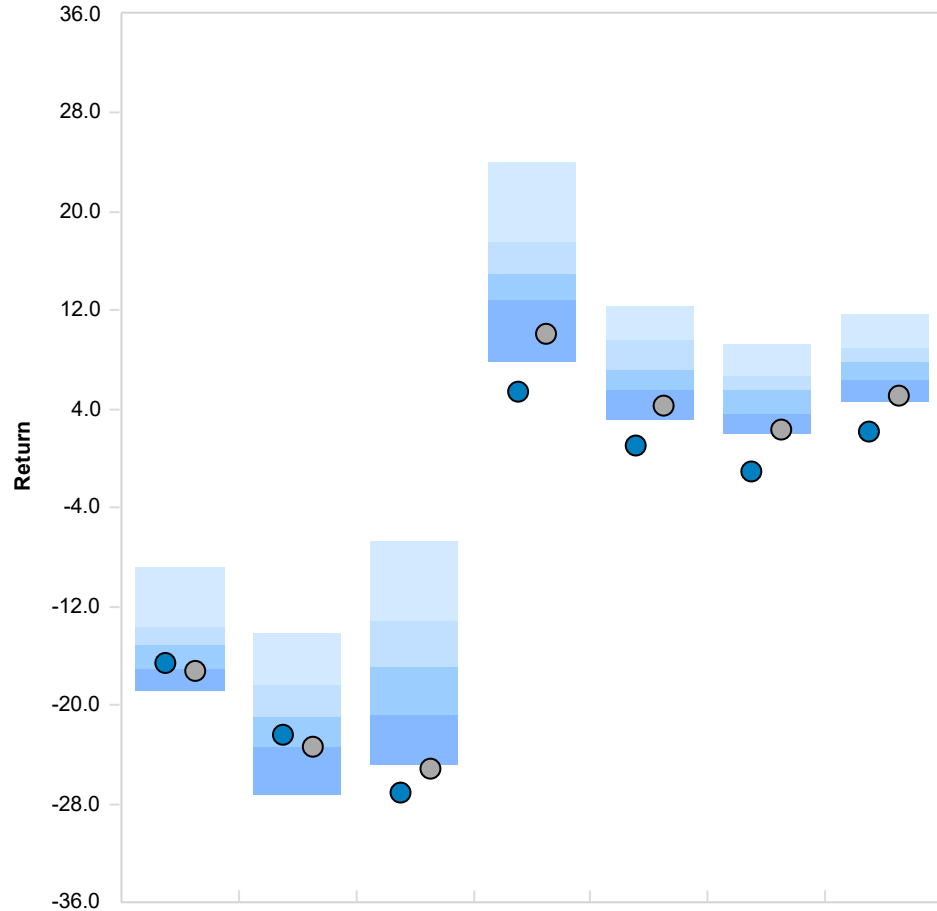
**5 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	0 (0%)	0 (0%)	0 (0%)	15 (100%)
Index	20	0 (0%)	1 (5%)	11 (55%)	8 (40%)

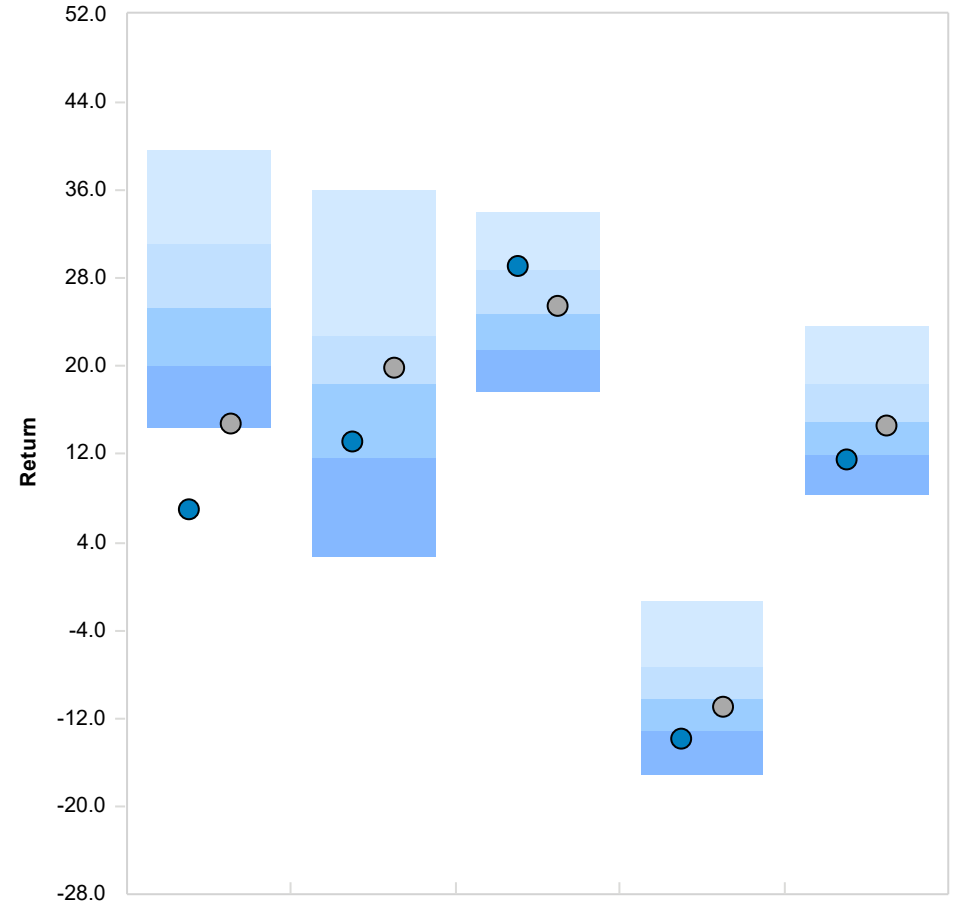


**Peer Group Analysis - IM U.S. Small Cap Core Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-16.63 (66)	-22.38 (63)	-27.02 (99)	5.47 (99)	1.00 (99)	-1.05 (99)	2.21 (100)
● Index	-17.20 (86)	-23.43 (78)	-25.20 (98)	10.09 (92)	4.21 (88)	2.28 (93)	5.17 (90)
Median	-15.12	-20.90	-16.96	14.99	7.15	5.56	7.78

**Peer Group Analysis - IM U.S. Small Cap Core Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	6.97 (100)	13.19 (67)	29.19 (25)	-13.87 (82)	11.60 (79)
● Index	14.82 (94)	19.96 (36)	25.53 (49)	-11.01 (58)	14.65 (55)
Median	25.27	18.45	24.86	-10.25	15.05

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-6.89 (55)	1.79 (96)	-7.63 (100)	2.01 (95)	11.53 (70)	28.75 (46)
Index	-7.53 (67)	2.14 (95)	-4.36 (94)	4.29 (68)	12.70 (59)	31.37 (28)
Median	-6.58	6.13	-1.14	5.01	13.51	28.15



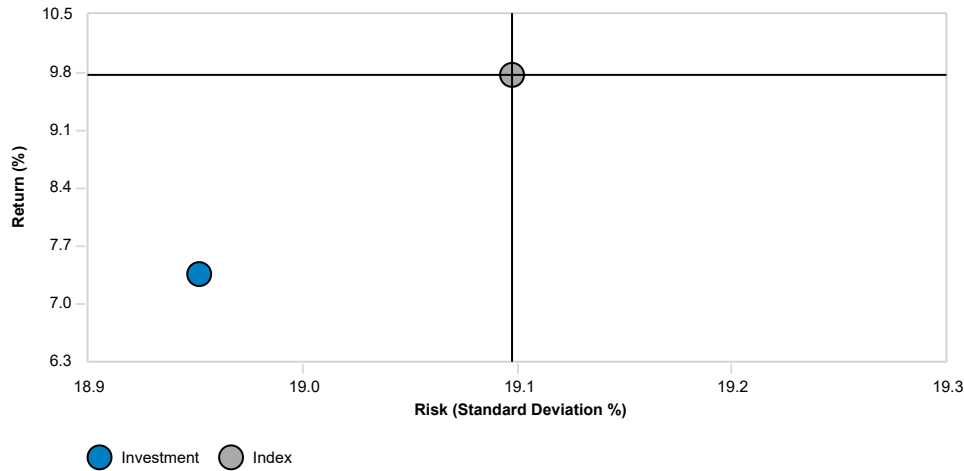
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.36	18.95	0.44	84.96	8	87.81	4
Index	9.77	19.10	0.55	100.00	8	100.00	4

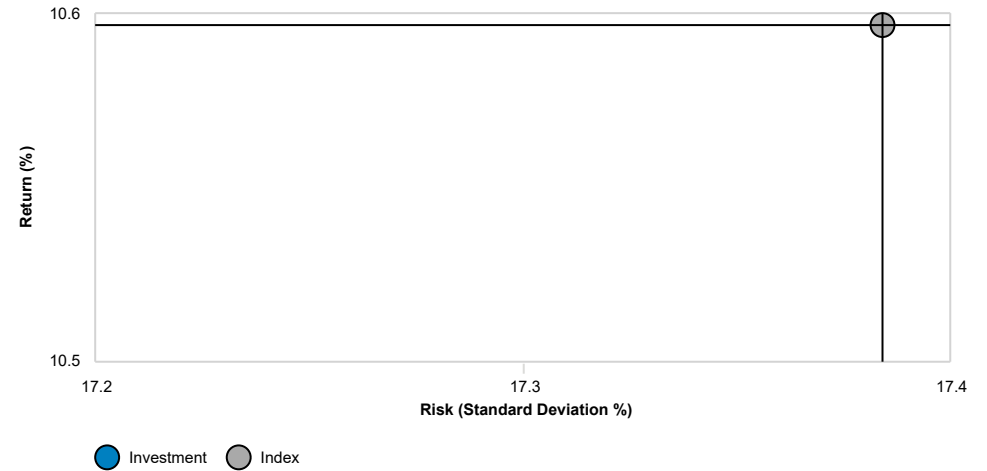
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	10.60	17.38	0.60	100.00	14	100.00	6

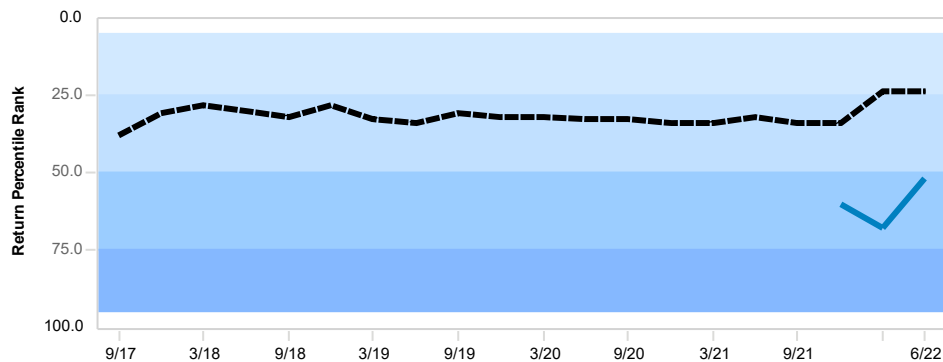
**Risk and Return 3 Years**



**Risk and Return 5 Years**

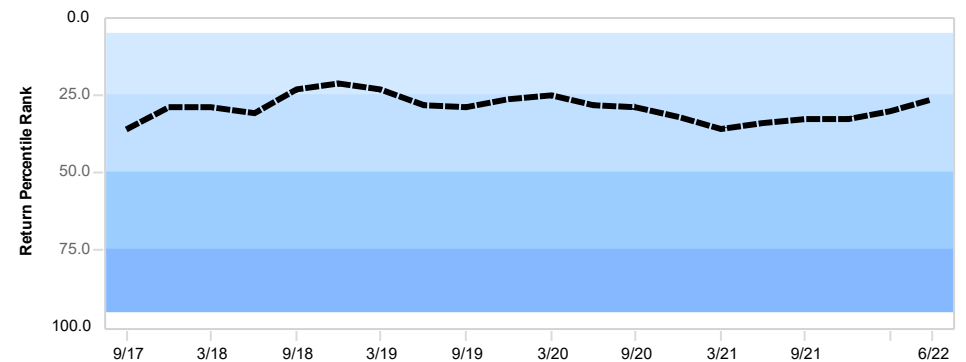


**3 Year Rolling Percentile Rank IM U.S. Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	3	0 (0%)	0 (0%)	3 (100%)	0 (0%)
Index	20	2 (10%)	18 (90%)	0 (0%)	0 (0%)

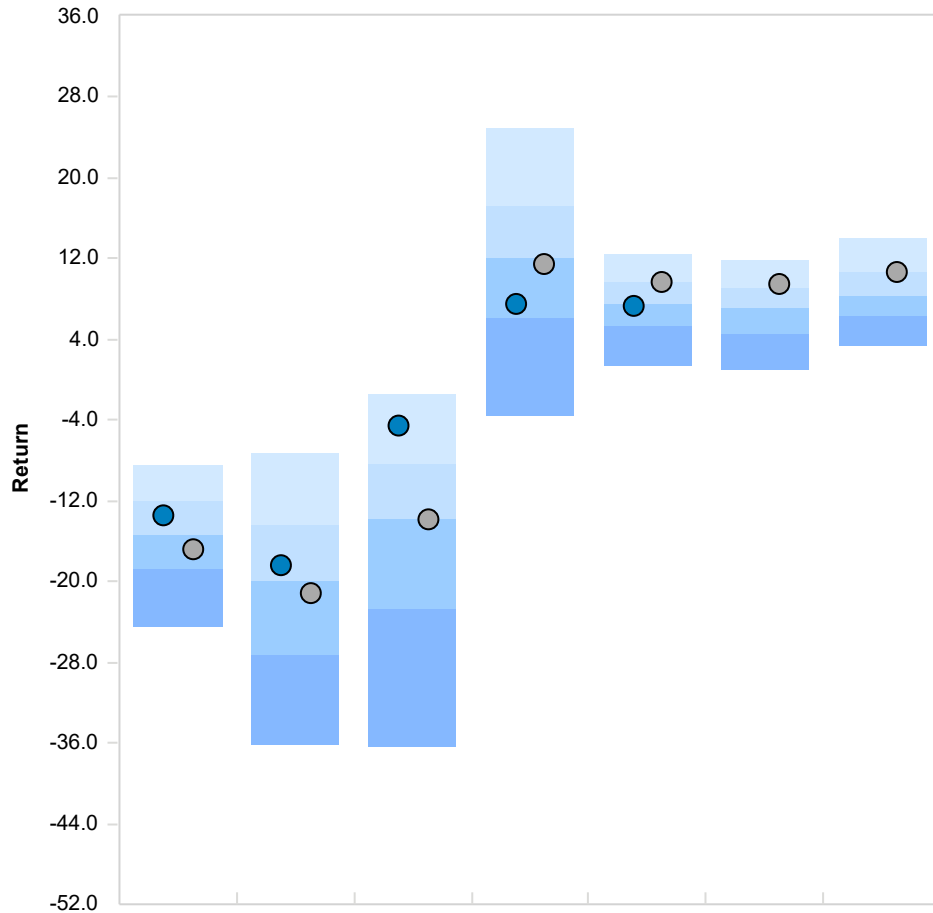
**5 Year Rolling Percentile Rank IM U.S. Equity (SA+CF)**



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

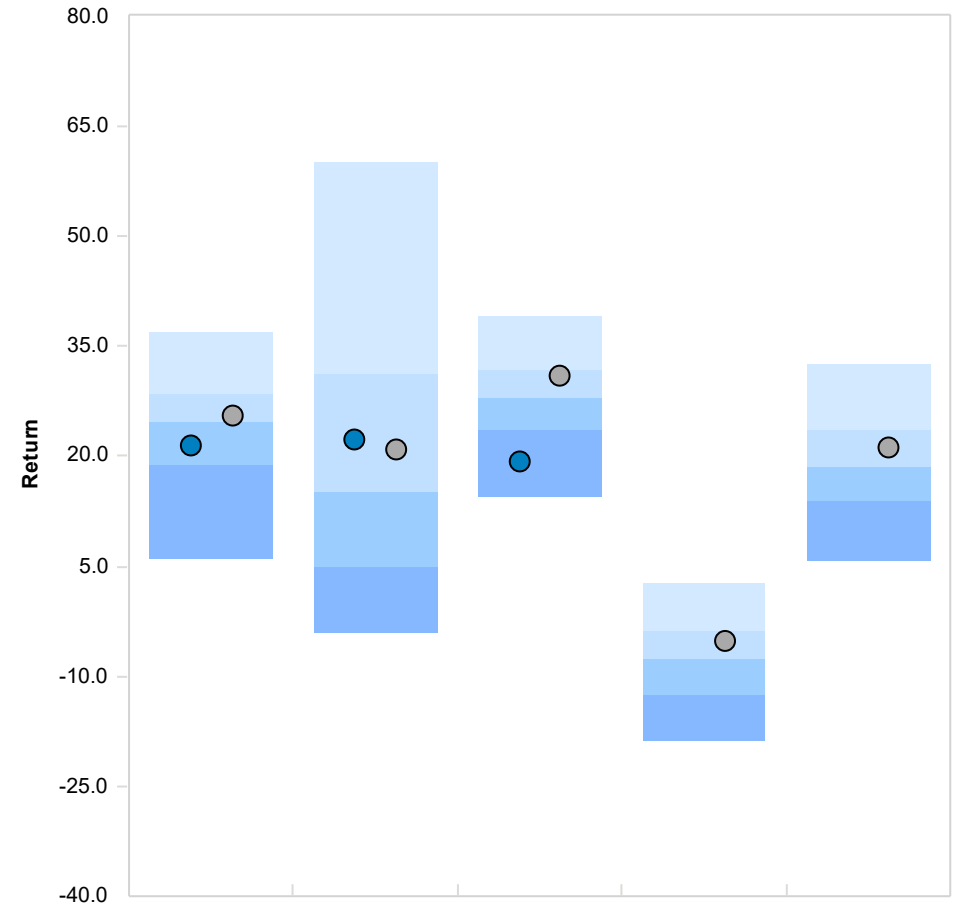


Peer Group Analysis - IM U.S. Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-13.46 (35)	-18.43 (41)	-4.55 (12)	7.61 (72)	7.36 (52)	N/A	N/A
● Index	-16.70 (64)	-21.10 (57)	-13.87 (51)	11.43 (55)	9.77 (24)	9.58 (20)	10.60 (26)
Median	-15.39	-20.00	-13.77	12.09	7.58	7.18	8.40

Peer Group Analysis - IM U.S. Equity (SA+CF)



	2021	2020	2019	2018	2017
● Investment	21.59 (66)	22.31 (36)	19.24 (89)	N/A	N/A
● Index	25.66 (44)	20.89 (38)	31.02 (30)	-5.24 (35)	21.13 (38)
Median	24.73	15.26	28.00	-7.70	18.47

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-5.74 (50)	15.43 (1)	1.38 (13)	3.87 (85)	0.03 (93)	12.52 (77)
Index	-5.28 (47)	9.28 (25)	-0.10 (41)	8.24 (29)	6.35 (63)	14.68 (66)
Median	-5.80	7.14	-0.52	6.30	8.89	18.48



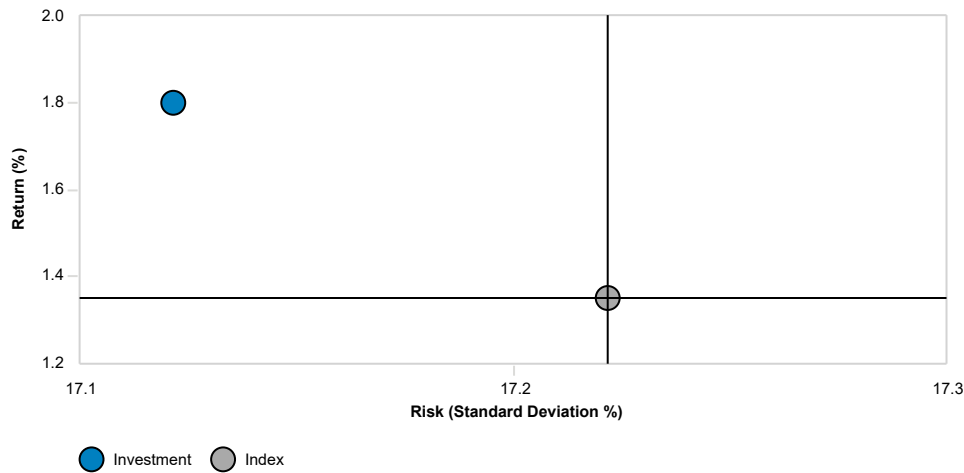
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.80	17.12	0.15	100.32	7	98.37	5
Index	1.35	17.22	0.13	100.00	7	100.00	5

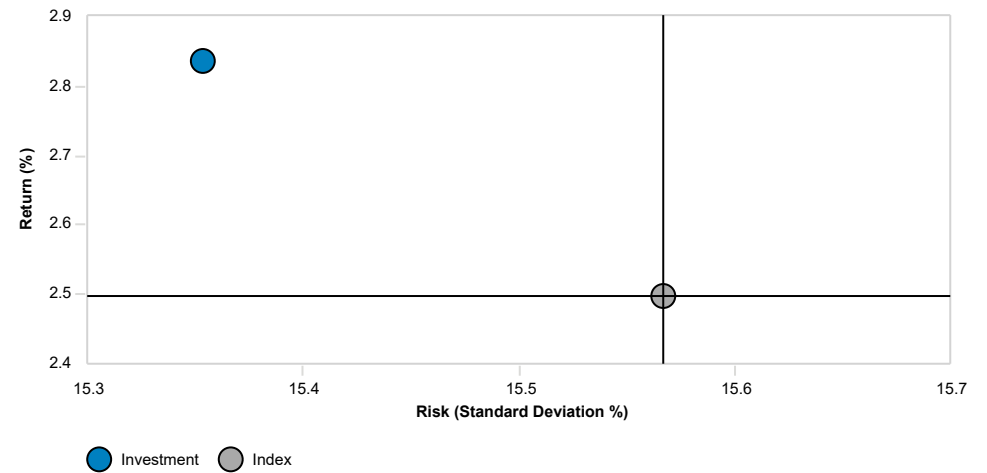
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.84	15.35	0.19	98.82	12	97.03	8
Index	2.50	15.57	0.17	100.00	12	100.00	8

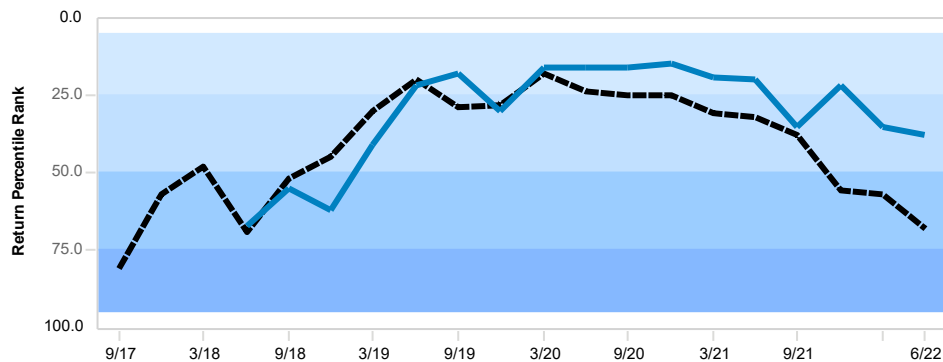
**Risk and Return 3 Years**



**Risk and Return 5 Years**

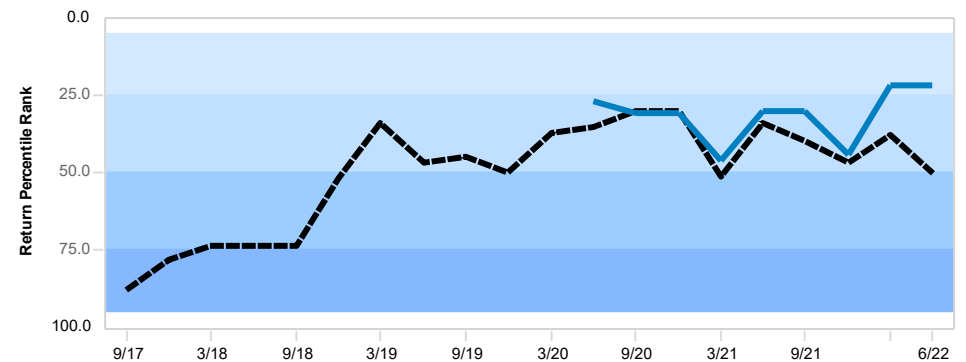


**3 Year Rolling Percentile Rank IM Enhanced and Indexed International Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	17	9 (53%)	5 (29%)	3 (18%)	0 (0%)
Index	20	5 (25%)	8 (40%)	6 (30%)	1 (5%)

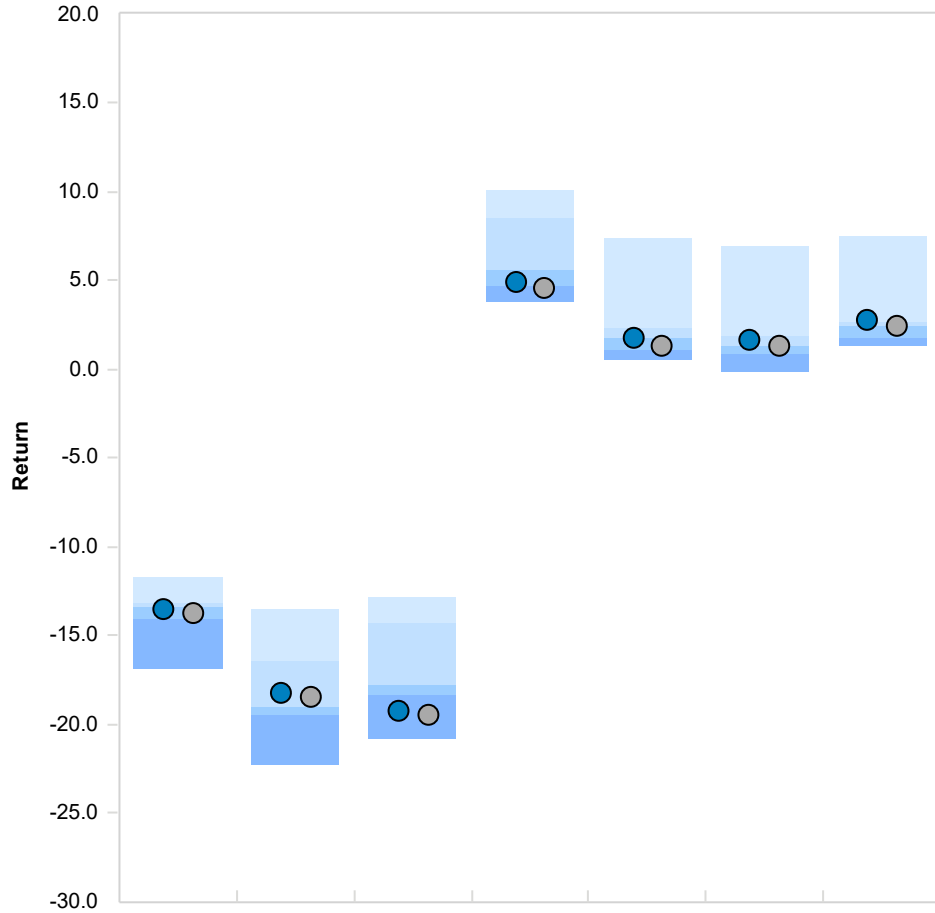
**5 Year Rolling Percentile Rank IM Enhanced and Indexed International Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	9	2 (22%)	7 (78%)	0 (0%)	0 (0%)
Index	20	0 (0%)	13 (65%)	5 (25%)	2 (10%)

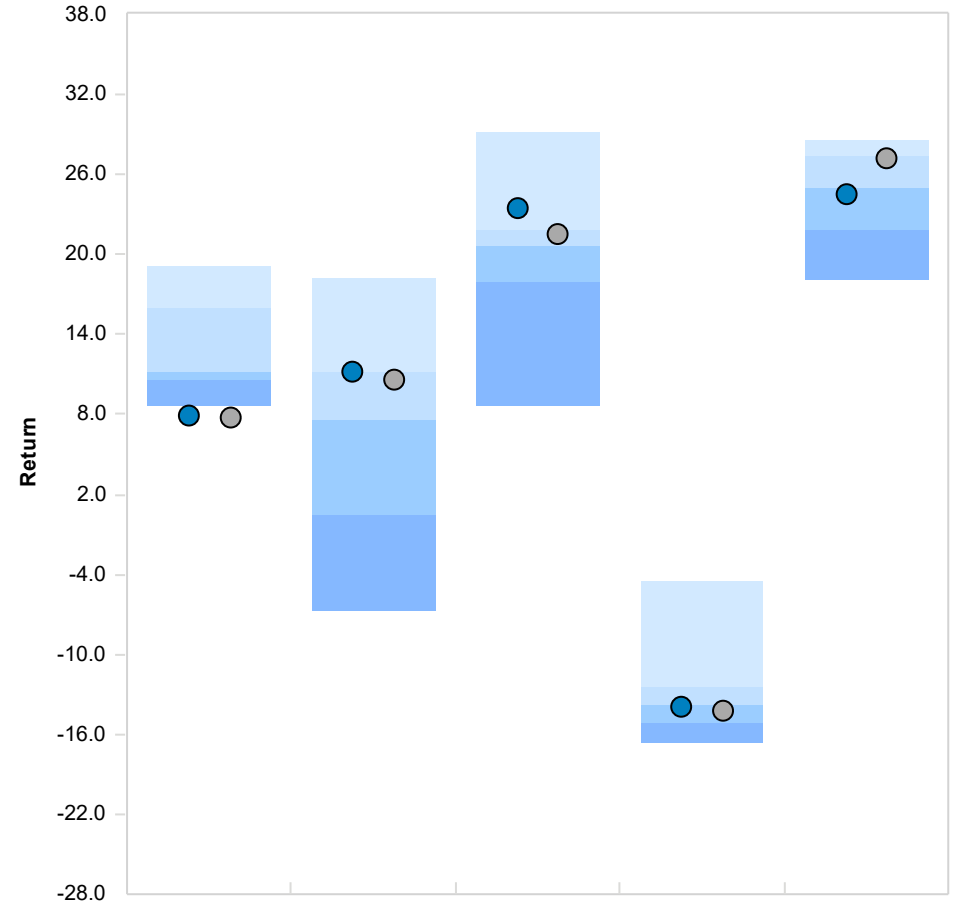


Peer Group Analysis - IM Enhanced and Indexed International Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-13.52 (58)	-18.19 (32)	-19.21 (81)	4.93 (71)	1.80 (38)	1.73 (28)	2.84 (22)
● Index	-13.73 (65)	-18.42 (33)	-19.42 (82)	4.58 (77)	1.35 (68)	1.34 (54)	2.50 (50)
Median	-13.37	-19.04	-17.78	5.66	1.78	1.38	2.49

Peer Group Analysis - IM Enhanced and Indexed International Equity (SA+CF)



	2021	2020	2019	2018	2017
● Investment	7.96 (100)	11.27 (22)	23.42 (14)	-13.88 (51)	24.56 (63)
● Index	7.82 (100)	10.65 (34)	21.51 (38)	-14.20 (54)	27.19 (27)
Median	11.22	7.69	20.57	-13.86	24.97

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-5.40 (40)	1.84 (82)	-3.02 (93)	5.57 (50)	3.54 (77)	17.31 (20)
Index	-5.44 (41)	1.82 (82)	-2.99 (93)	5.48 (53)	3.49 (82)	17.01 (32)
Median	-5.97	3.02	-1.10	5.55	4.28	15.68



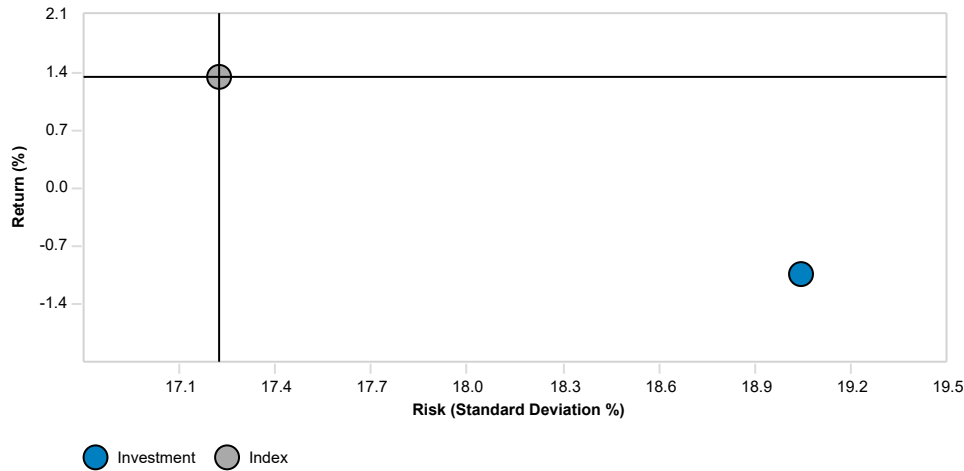
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.04	19.05	0.01	104.10	6	114.18	6
Index	1.35	17.22	0.13	100.00	7	100.00	5

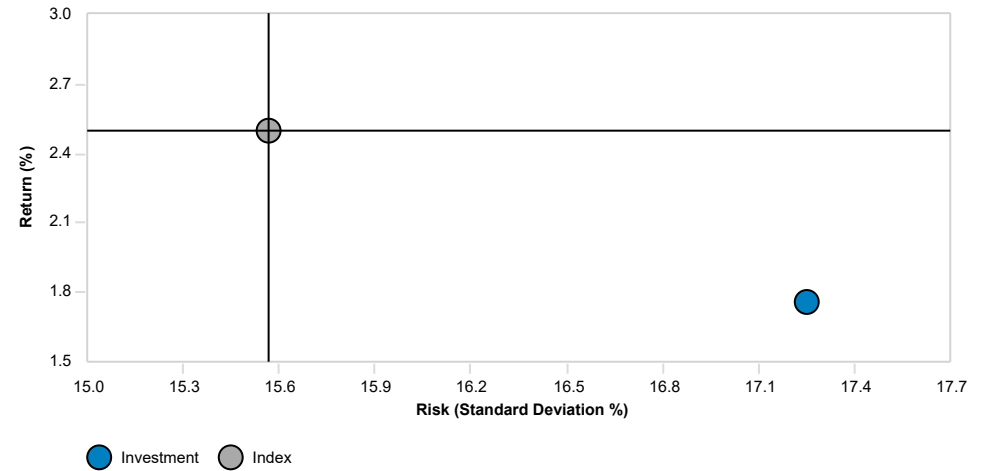
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.76	17.25	0.12	105.47	11	108.87	9
Index	2.50	15.57	0.17	100.00	12	100.00	8

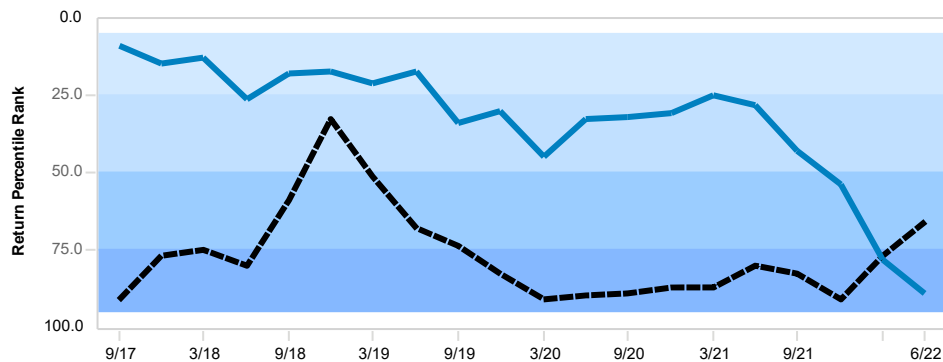
**Risk and Return 3 Years**



**Risk and Return 5 Years**

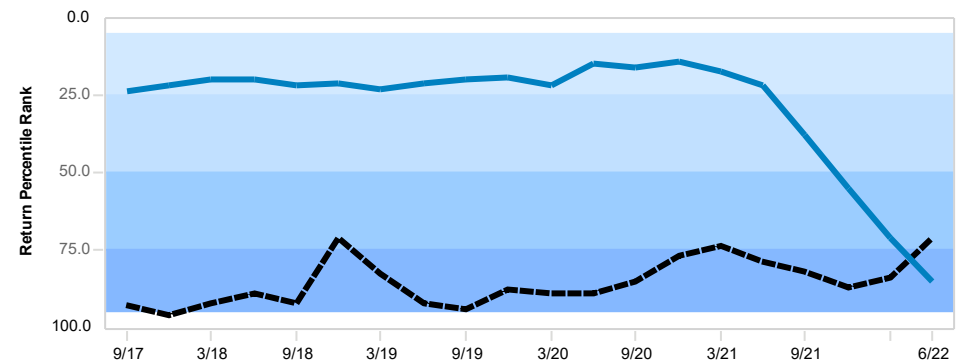


**3 Year Rolling Percentile Rank IM International Large Cap Growth Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	8 (40%)	9 (45%)	1 (5%)	2 (10%)
Index	20	0 (0%)	1 (5%)	6 (30%)	13 (65%)

**5 Year Rolling Percentile Rank IM International Large Cap Growth Equity (SA+CF)**

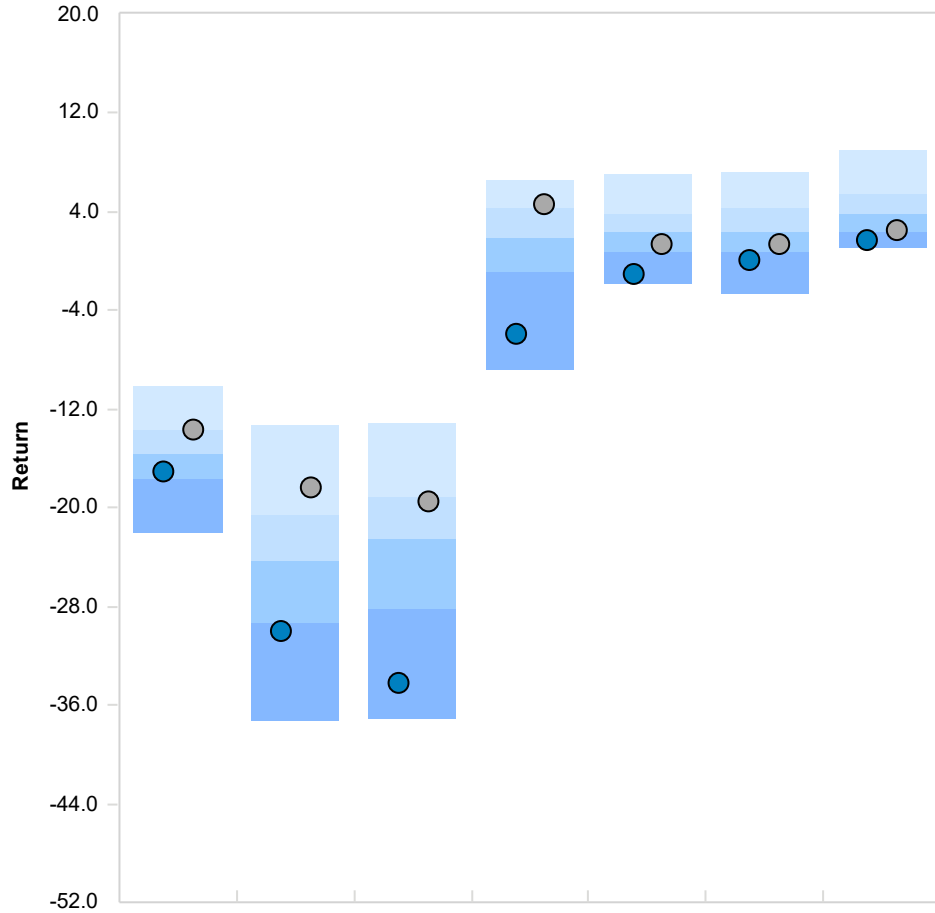


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	16 (80%)	1 (5%)	2 (10%)	1 (5%)
Index	20	0 (0%)	0 (0%)	3 (15%)	17 (85%)



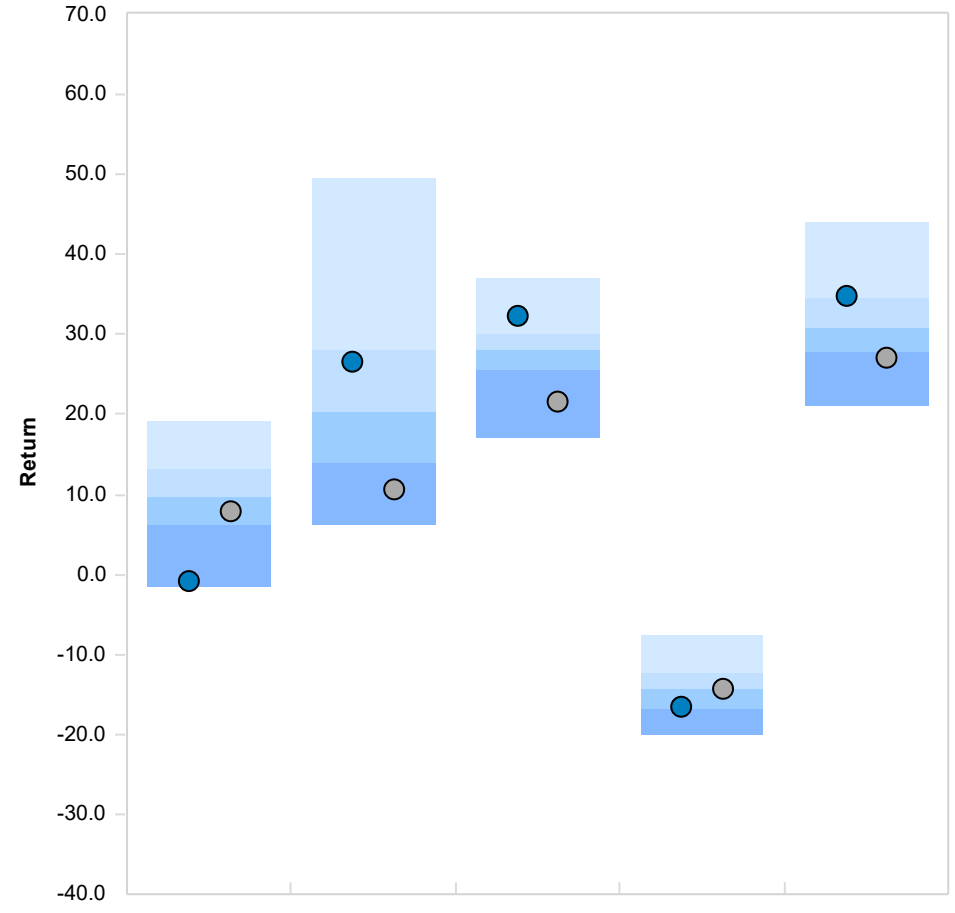


**Peer Group Analysis - IM International Large Cap Growth Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-17.09 (69)	-29.97 (77)	-34.16 (88)	-5.96 (91)	-1.04 (89)	0.02 (83)	1.76 (85)
● Index	-13.73 (25)	-18.42 (13)	-19.42 (27)	4.58 (22)	1.35 (66)	1.34 (68)	2.50 (71)
Median	-15.58	-24.40	-22.49	1.82	2.32	2.29	3.75

**Peer Group Analysis - IM International Large Cap Growth Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	-0.72 (95)	26.60 (32)	32.23 (18)	-16.57 (70)	34.83 (25)
● Index	7.82 (66)	10.65 (83)	21.51 (88)	-14.20 (50)	27.19 (79)
Median	9.74	20.43	28.21	-14.41	30.80

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-15.53 (85)	-0.60 (84)	-5.42 (96)	3.91 (93)	1.63 (32)	14.94 (47)
Index	-5.44 (12)	1.82 (66)	-2.99 (76)	5.48 (66)	3.49 (15)	17.01 (26)
Median	-11.04	2.71	-0.59	6.66	0.86	14.43



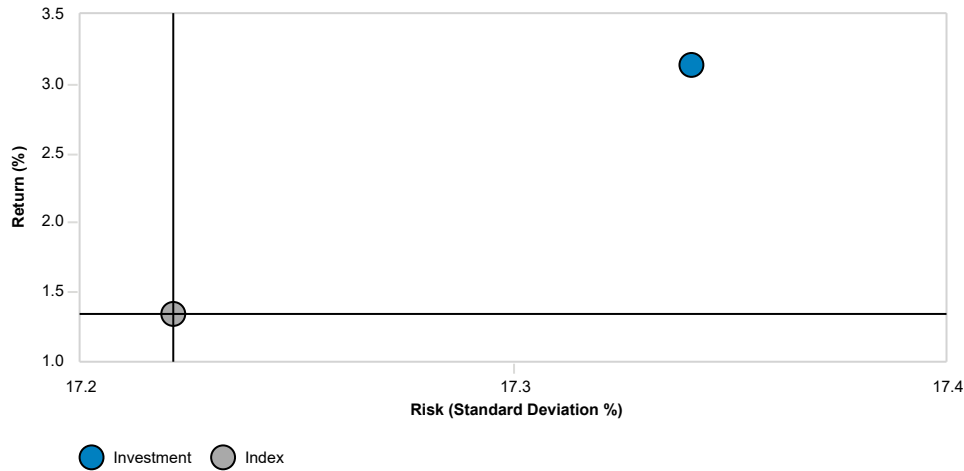
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.14	17.34	0.23	104.65	7	96.99	5
Index	1.35	17.22	0.13	100.00	7	100.00	5

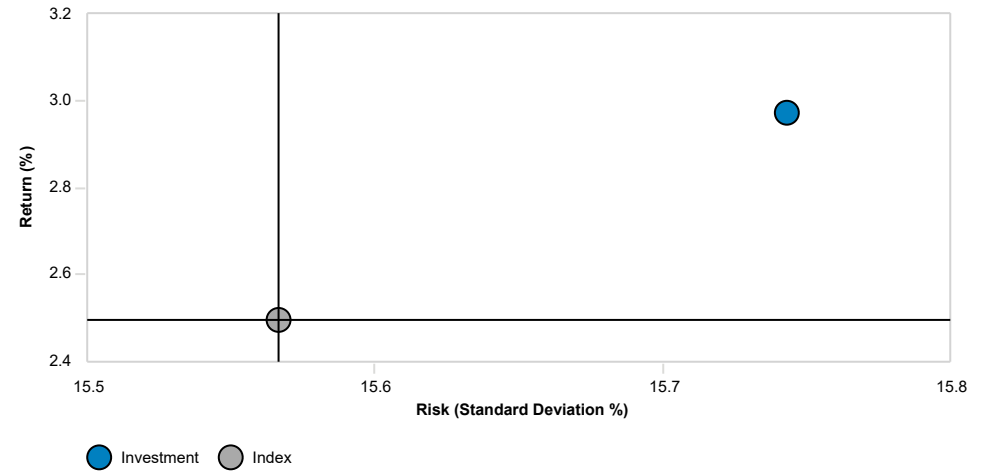
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.98	15.74	0.20	101.45	12	99.13	8
Index	2.50	15.57	0.17	100.00	12	100.00	8

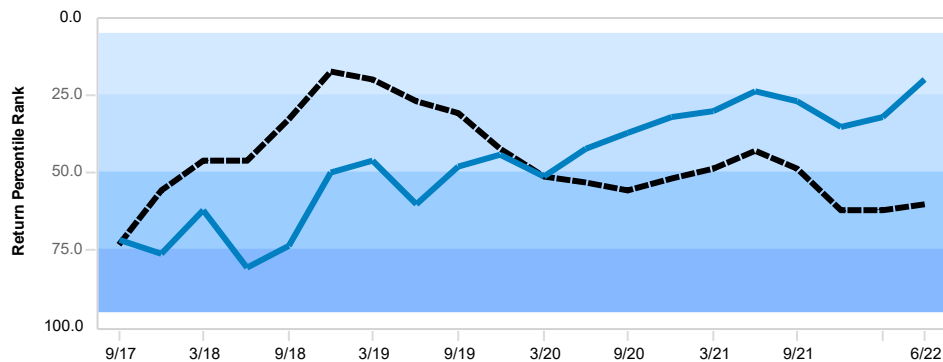
**Risk and Return 3 Years**



**Risk and Return 5 Years**

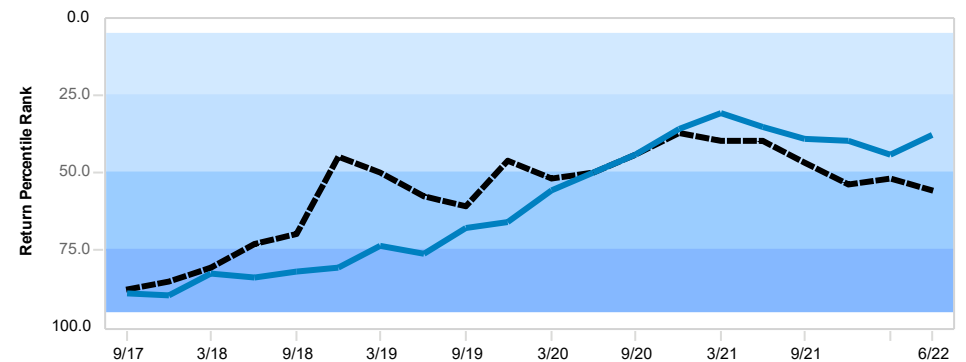


**3 Year Rolling Percentile Rank IM International Large Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	11 (55%)	5 (25%)	2 (10%)
Index	20	2 (10%)	9 (45%)	9 (45%)	0 (0%)

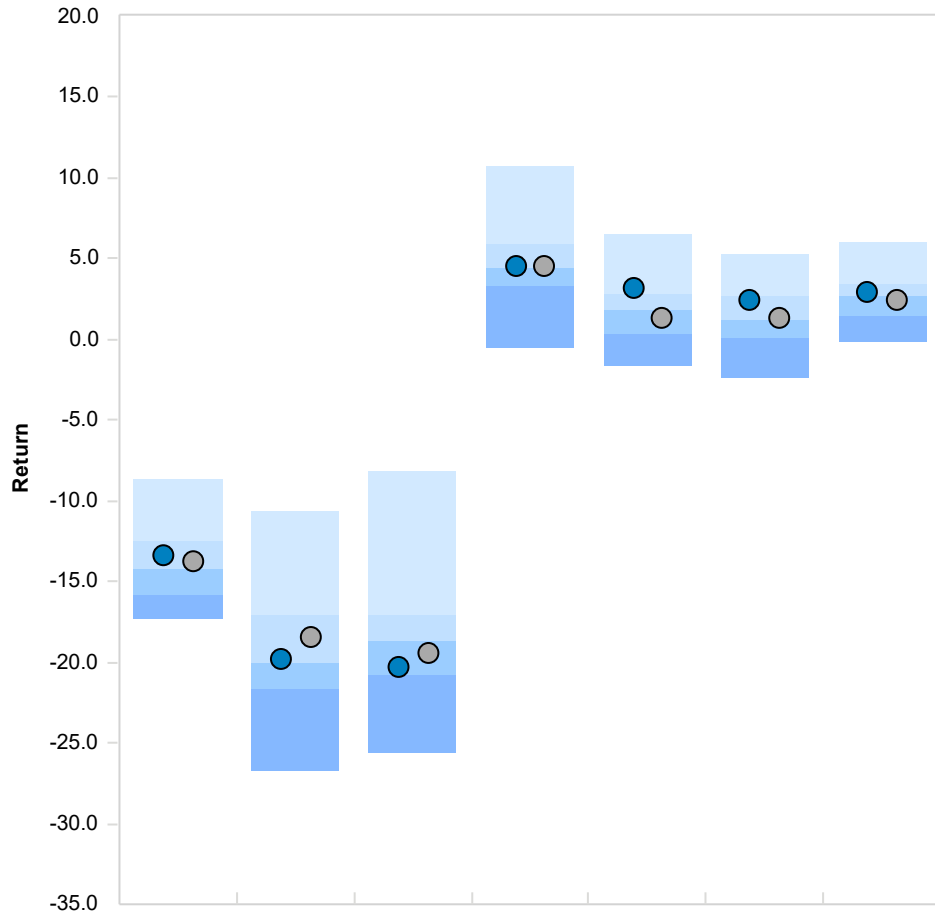
**5 Year Rolling Percentile Rank IM International Large Cap Core Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	9 (45%)	4 (20%)	7 (35%)
Index	20	0 (0%)	9 (45%)	8 (40%)	3 (15%)

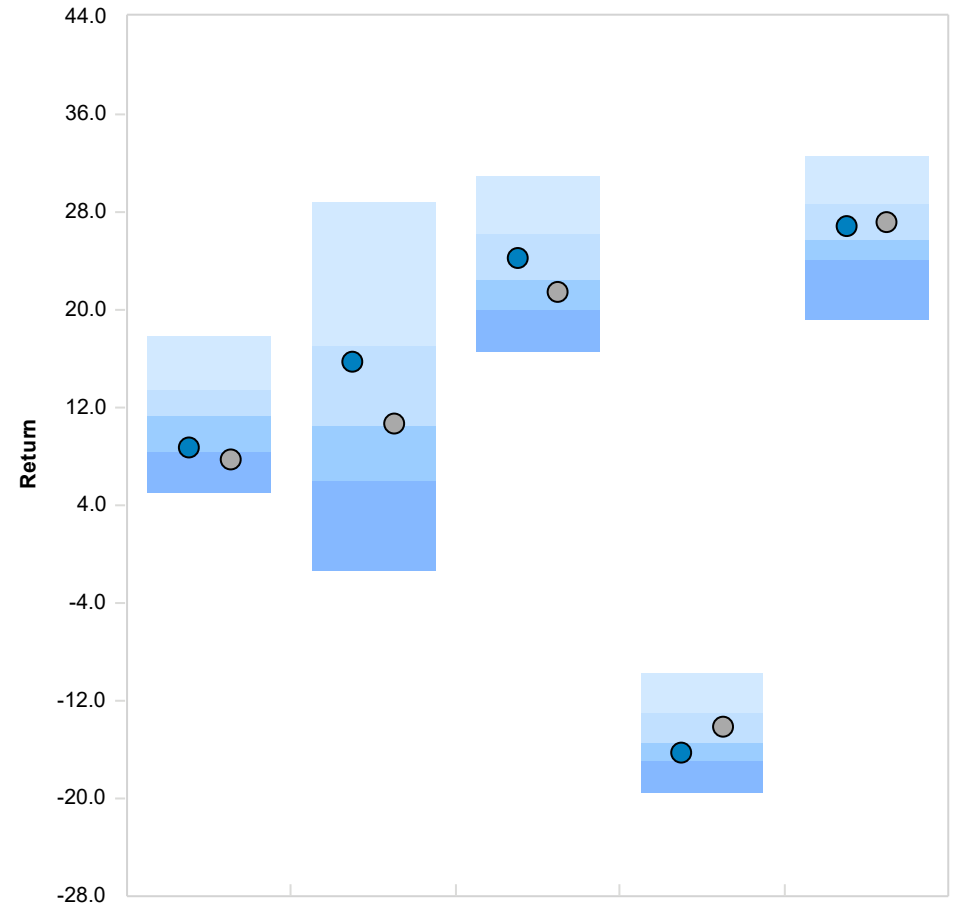


Peer Group Analysis - IM International Large Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-13.35 (41)	-19.84 (48)	-20.32 (72)	4.59 (49)	3.14 (20)	2.47 (27)	2.98 (38)
● Index	-13.73 (46)	-18.42 (37)	-19.42 (61)	4.58 (49)	1.35 (60)	1.34 (47)	2.50 (56)
Median	-14.27	-20.02	-18.68	4.42	1.88	1.26	2.66

Peer Group Analysis - IM International Large Cap Core Equity (SA+CF)



	2021	2020	2019	2018	2017
● Investment	8.78 (74)	15.83 (30)	24.24 (36)	-16.33 (69)	26.92 (37)
● Index	7.82 (79)	10.65 (50)	21.51 (60)	-14.20 (39)	27.19 (34)
Median	11.39	10.53	22.48	-15.37	25.69

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-7.49 (65)	2.23 (69)	-2.77 (80)	5.86 (43)	3.38 (61)	17.20 (23)
Index	-5.44 (31)	1.82 (79)	-2.99 (83)	5.48 (50)	3.49 (59)	17.01 (26)
Median	-6.13	3.02	-1.28	5.46	3.93	15.45



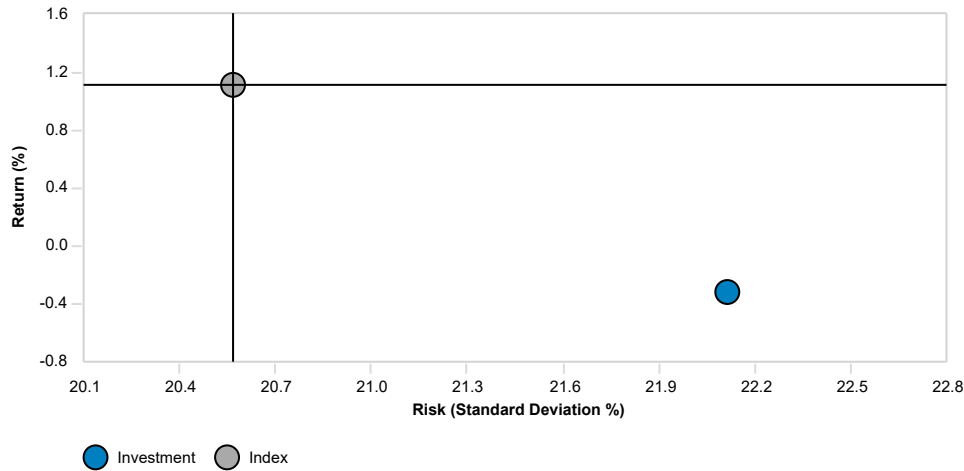
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.31	22.11	0.07	100.91	7	105.06	5
Index	1.12	20.57	0.13	100.00	8	100.00	4

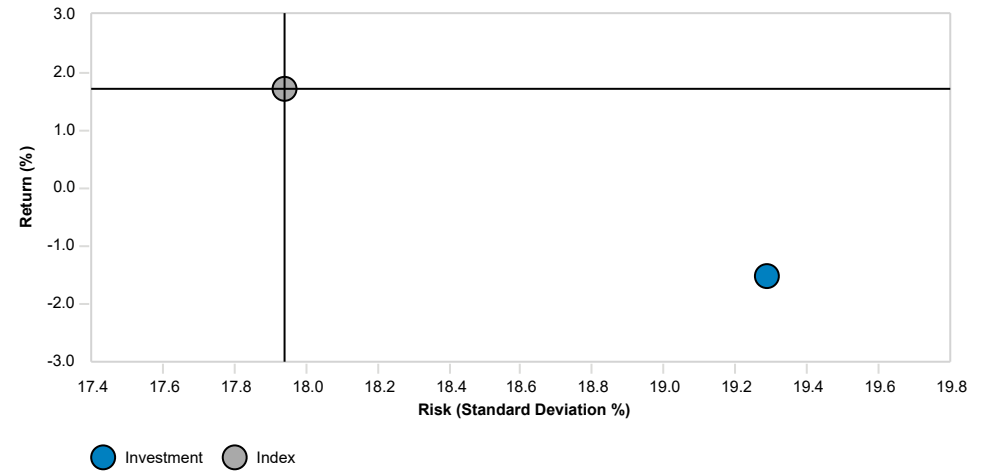
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.53	19.29	-0.04	98.05	10	111.54	10
Index	1.72	17.94	0.12	100.00	13	100.00	7

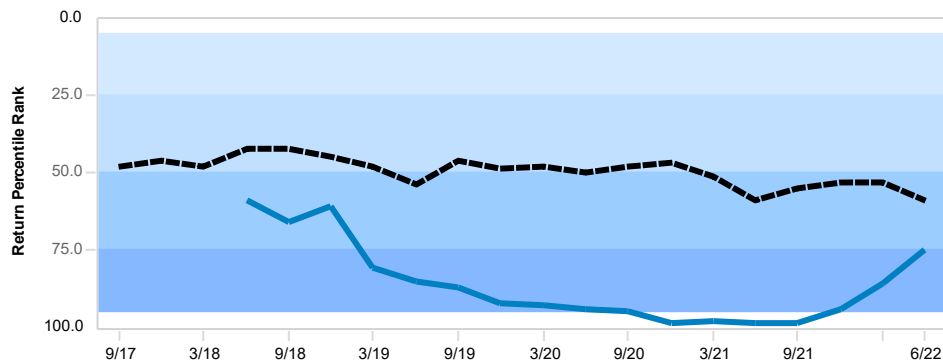
**Risk and Return 3 Years**



**Risk and Return 5 Years**

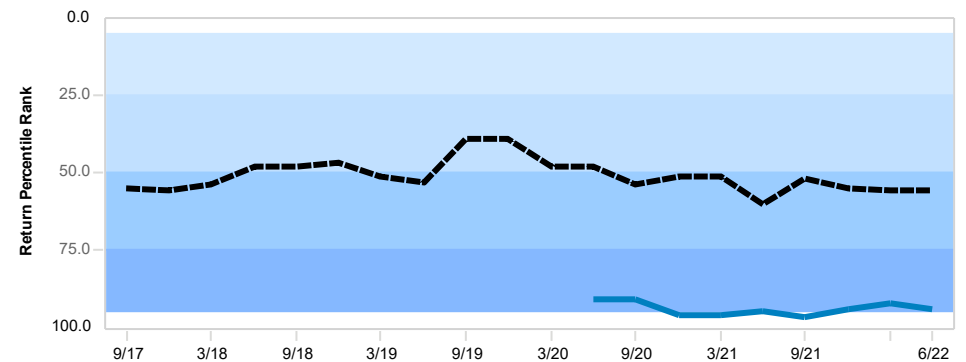


**3 Year Rolling Percentile Rank IM International Small Cap Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	17	0 (0%)	0 (0%)	4 (24%)	13 (76%)
Index	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)

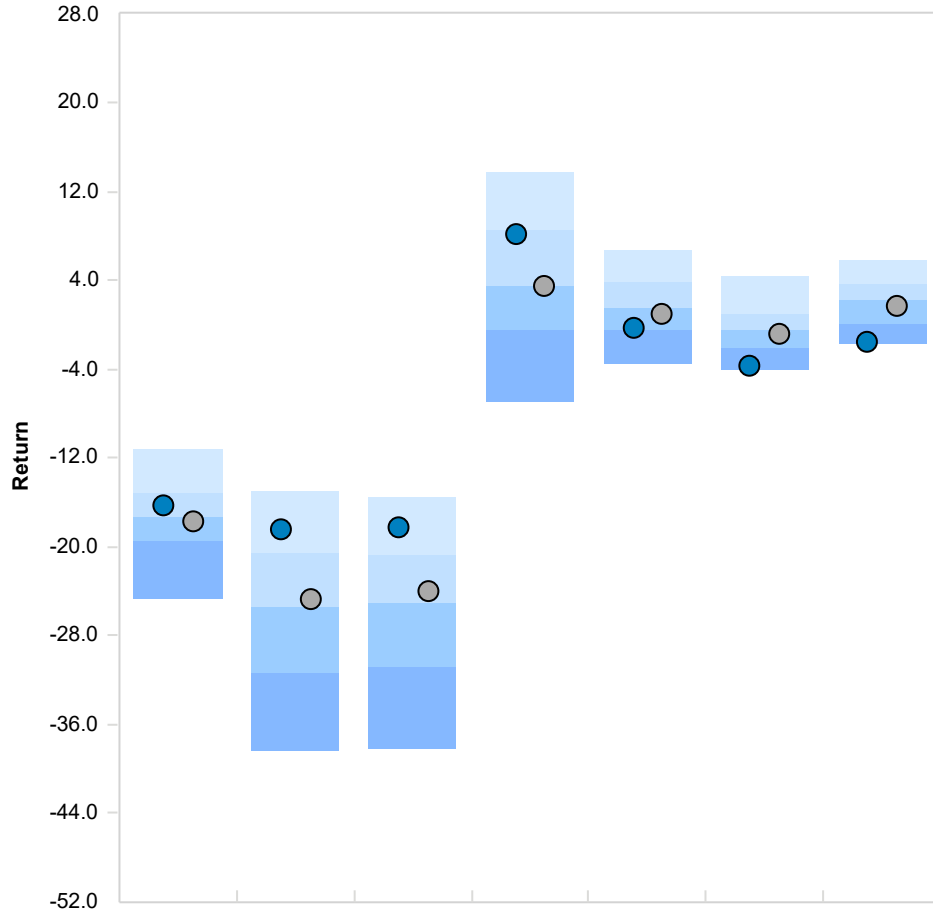
**5 Year Rolling Percentile Rank IM International Small Cap Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	9	0 (0%)	0 (0%)	0 (0%)	9 (100%)
Index	20	0 (0%)	7 (35%)	13 (65%)	0 (0%)

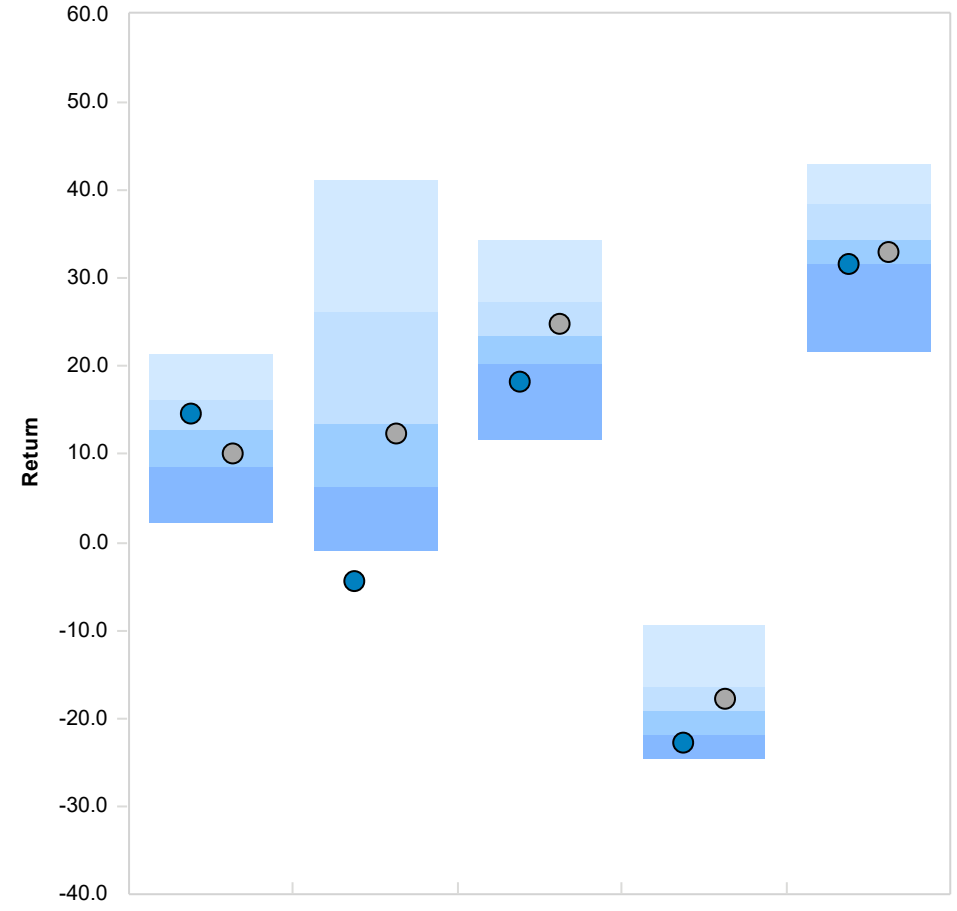


**Peer Group Analysis - IM International Small Cap Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-16.31 (36)	-18.30 (17)	-18.26 (15)	8.17 (30)	-0.31 (75)	-3.57 (92)	-1.53 (94)
● Index	-17.69 (63)	-24.71 (48)	-23.98 (44)	3.53 (51)	1.12 (59)	-0.80 (56)	1.72 (56)
Median	-17.33	-25.48	-25.05	3.56	1.61	-0.36	2.26

**Peer Group Analysis - IM International Small Cap Equity (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	14.56 (32)	-4.29 (98)	18.21 (82)	-22.85 (83)	31.71 (76)
● Index	10.10 (67)	12.34 (53)	24.96 (38)	-17.89 (36)	33.01 (61)
Median	12.77	13.42	23.38	-19.16	34.38

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-2.37 (8)	0.97 (40)	-0.92 (66)	5.89 (71)	8.14 (22)	15.33 (62)
Index	-8.53 (40)	0.07 (53)	0.90 (34)	4.34 (91)	4.50 (49)	17.27 (46)
Median	-10.58	0.29	0.09	6.88	4.22	16.88



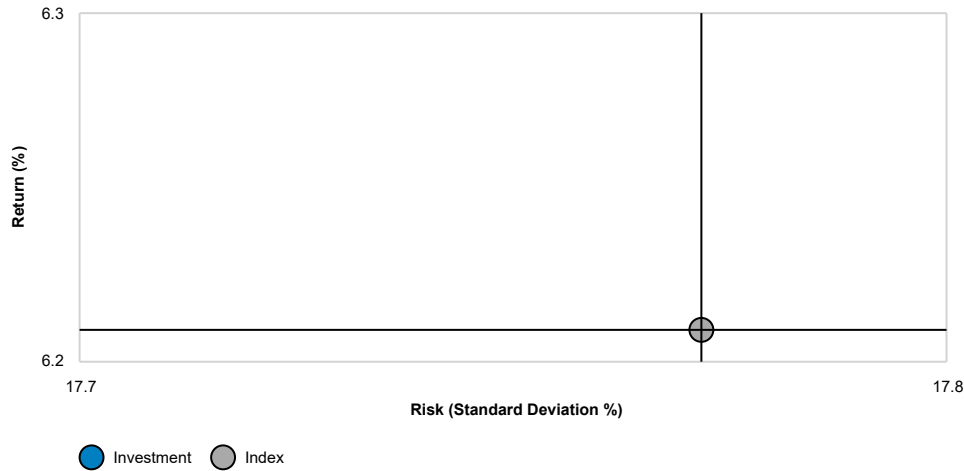
**Historical Statistics 3 Years**

	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	6.21	17.77	0.39	100.00	7	100.00	5

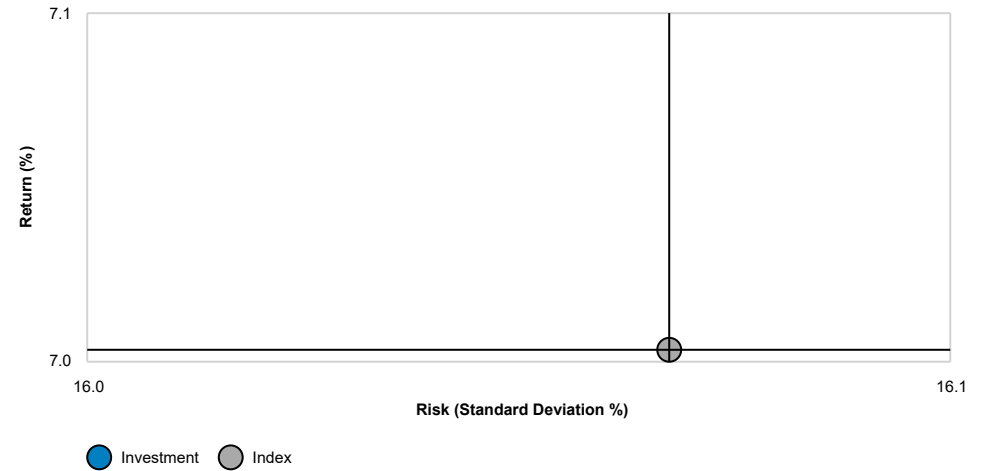
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	7.00	16.07	0.43	100.00	13	100.00	7

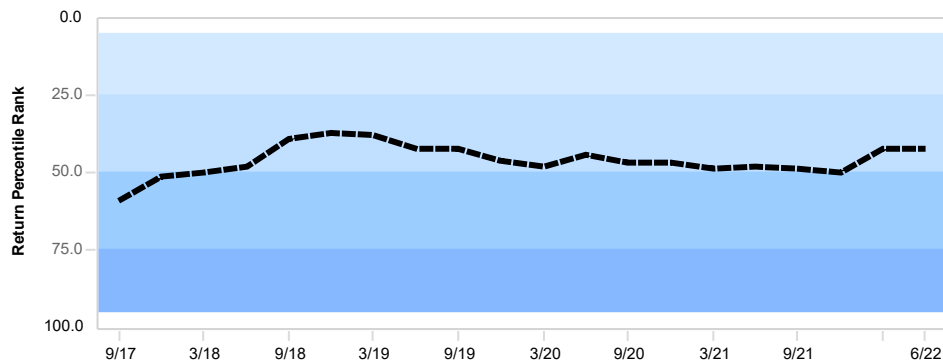
**Risk and Return 3 Years**



**Risk and Return 5 Years**

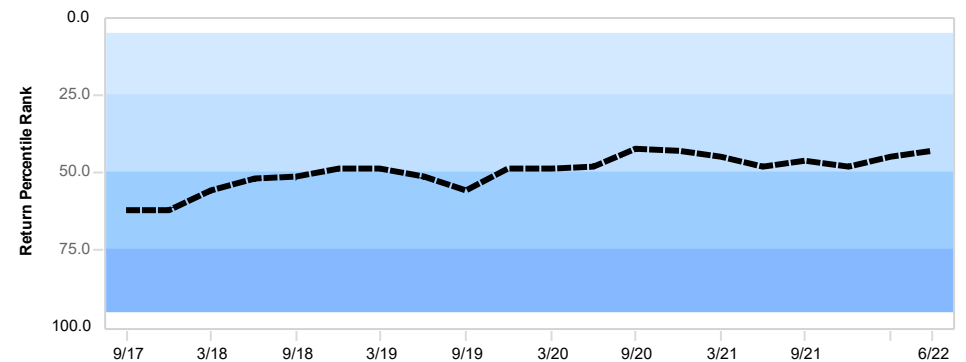


**3 Year Rolling Percentile Rank IM Global Equity (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	0 (0%)	18 (90%)	2 (10%)	0 (0%)

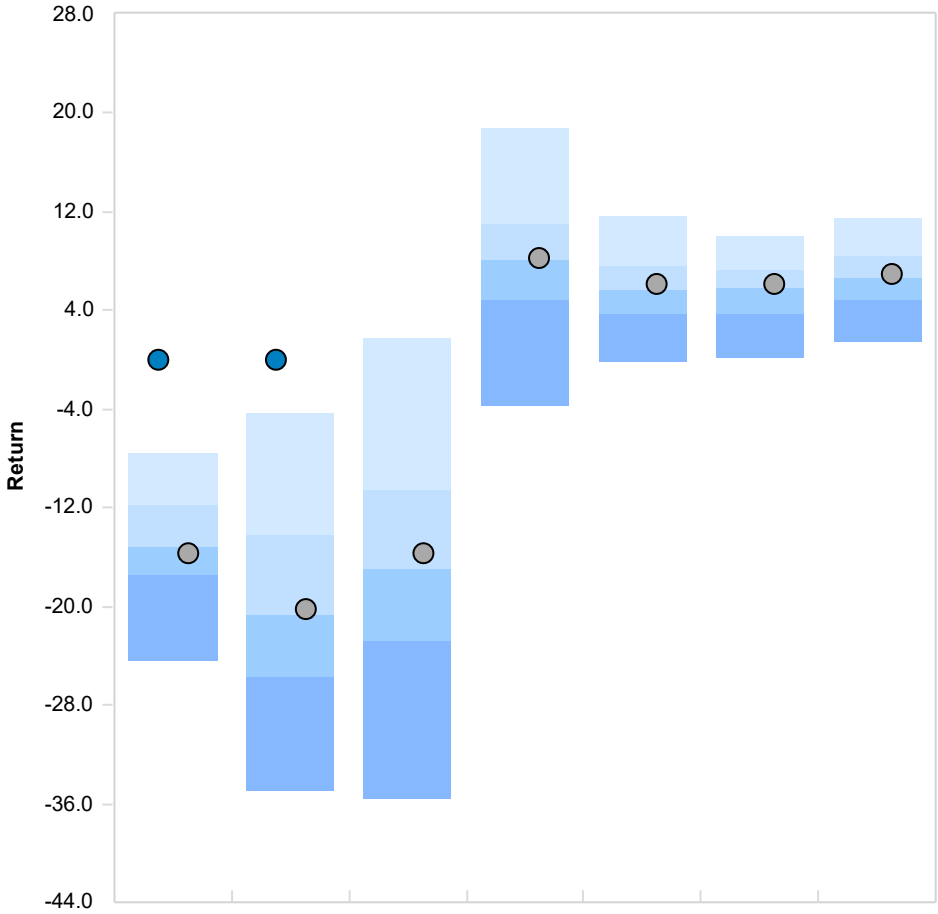
**5 Year Rolling Percentile Rank IM Global Equity (SA+CF)**



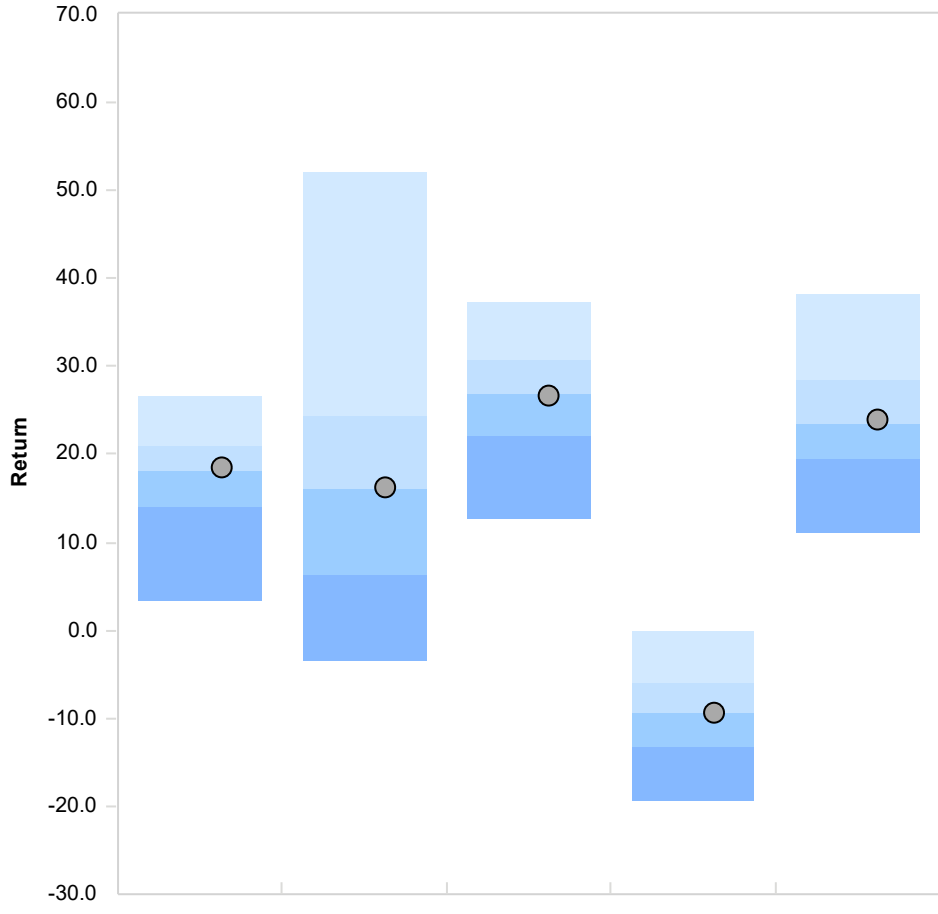
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)



**Peer Group Analysis - IM Global Equity (SA+CF)**



**Peer Group Analysis - IM Global Equity (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
Investment	0.03 (1)	0.03 (2)	N/A	N/A	N/A	N/A	N/A
Index	-15.66 (57)	-20.18 (49)	-15.75 (44)	8.32 (49)	6.21 (42)	6.09 (49)	7.00 (43)
Median	-15.24	-20.65	-16.94	8.17	5.60	5.86	6.59

	2021	2020	2019	2018	2017
Investment	N/A	N/A	N/A	N/A	N/A
Index	18.54 (46)	16.25 (49)	26.60 (52)	-9.42 (50)	23.97 (48)
Median	17.99	16.01	26.97	-9.45	23.54

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	0.00 (15)	N/A	-0.46 (42)	4.78 (81)	3.08 (63)	13.22 (62)
Index	-5.36 (43)	6.68 (42)	-1.05 (59)	7.39 (40)	4.57 (49)	14.68 (48)
Median	-6.52	5.99	-0.71	6.77	4.35	14.30



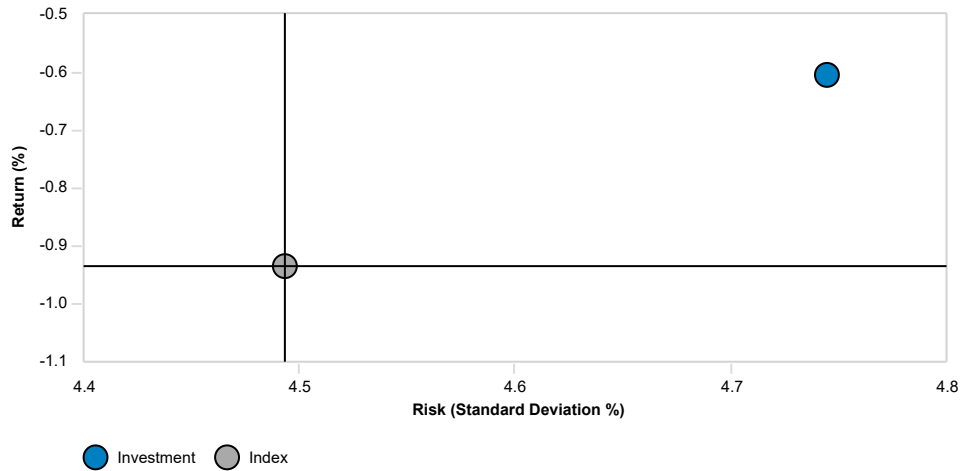
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.60	4.74	-0.24	110.66	7	103.67	5
Index	-0.94	4.49	-0.33	100.00	9	100.00	3

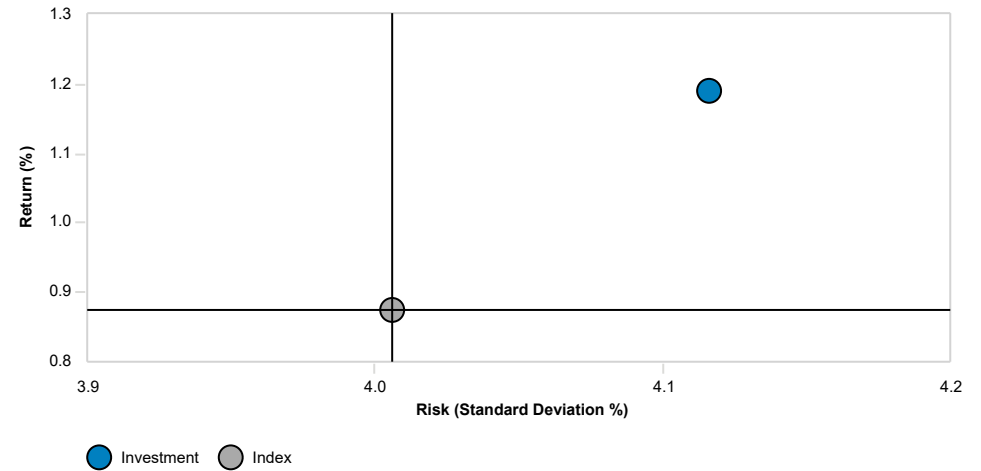
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.19	4.12	0.04	105.10	13	99.47	7
Index	0.88	4.01	-0.04	100.00	15	100.00	5

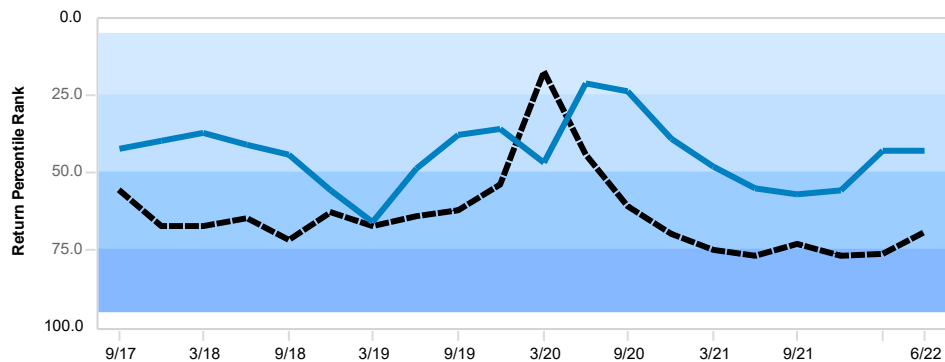
Risk and Return 3 Years



Risk and Return 5 Years

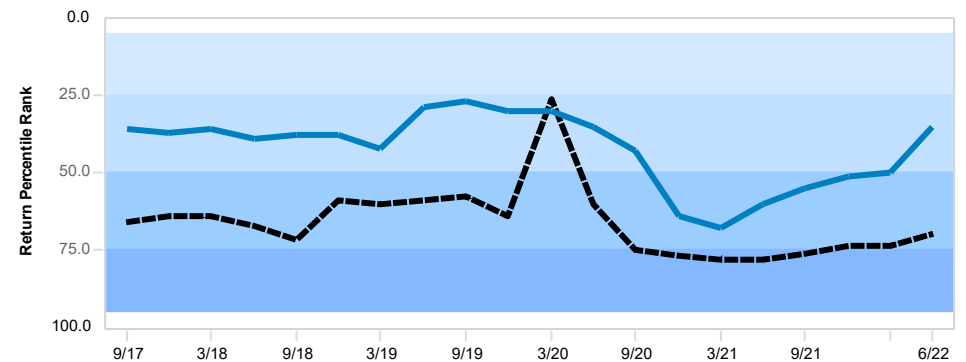


3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	13 (65%)	5 (25%)	0 (0%)
Index	20	1 (5%)	1 (5%)	15 (75%)	3 (15%)

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

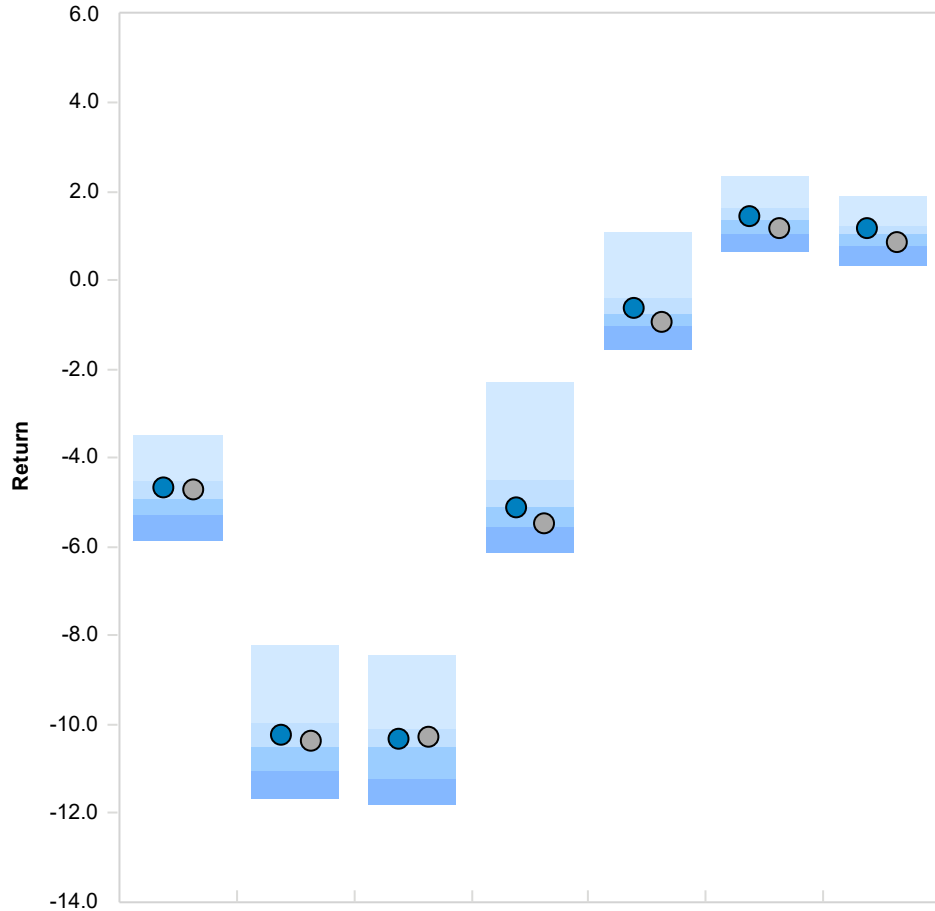


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	15 (75%)	5 (25%)	0 (0%)
Index	20	0 (0%)	1 (5%)	15 (75%)	4 (20%)



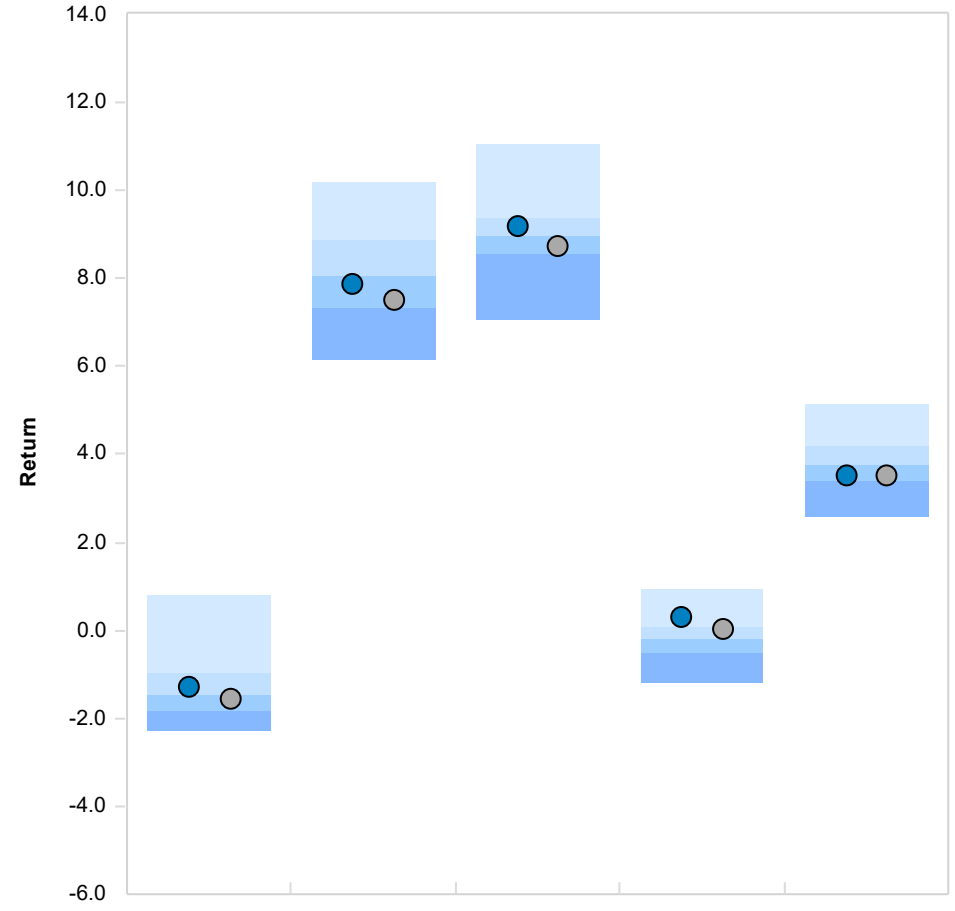


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.65 (28)	-10.21 (35)	-10.30 (38)	-5.09 (51)	-0.60 (43)	1.46 (36)	1.19 (35)
● Index	-4.69 (34)	-10.35 (42)	-10.29 (38)	-5.45 (70)	-0.94 (69)	1.20 (63)	0.88 (70)
Median	-4.91	-10.47	-10.52	-5.09	-0.72	1.38	1.06

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



	2021	2020	2019	2018	2017
● Investment	-1.29 (44)	7.87 (56)	9.18 (39)	0.29 (15)	3.52 (67)
● Index	-1.55 (54)	7.51 (69)	8.72 (69)	0.01 (32)	3.54 (64)
Median	-1.47	8.05	8.96	-0.21	3.74

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-5.83 (47)	-0.01 (21)	-0.09 (87)	2.01 (41)	-3.14 (46)	0.55 (89)
Index	-5.93 (58)	0.01 (16)	0.05 (42)	1.83 (73)	-3.38 (62)	0.67 (79)
Median	-5.86	-0.13	0.03	1.96	-3.17	1.05



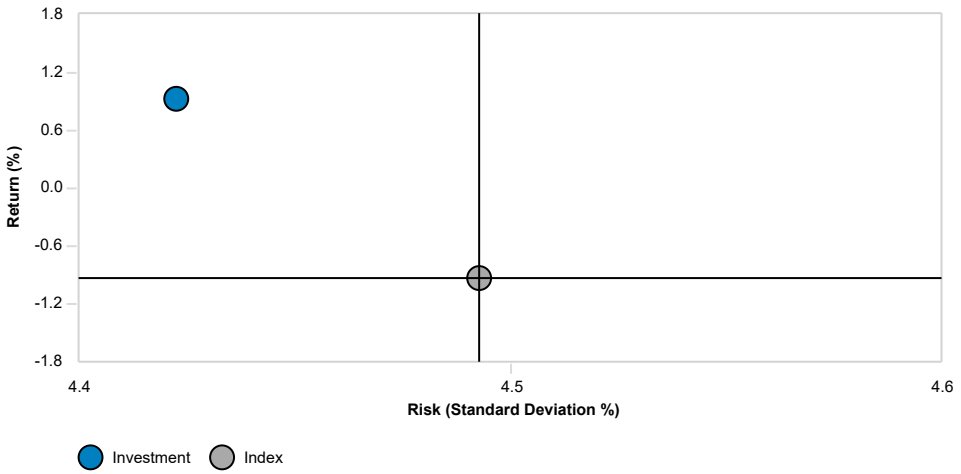
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.93	4.42	0.09	115.94	9	83.94	3
Index	-0.94	4.49	-0.33	100.00	9	100.00	3

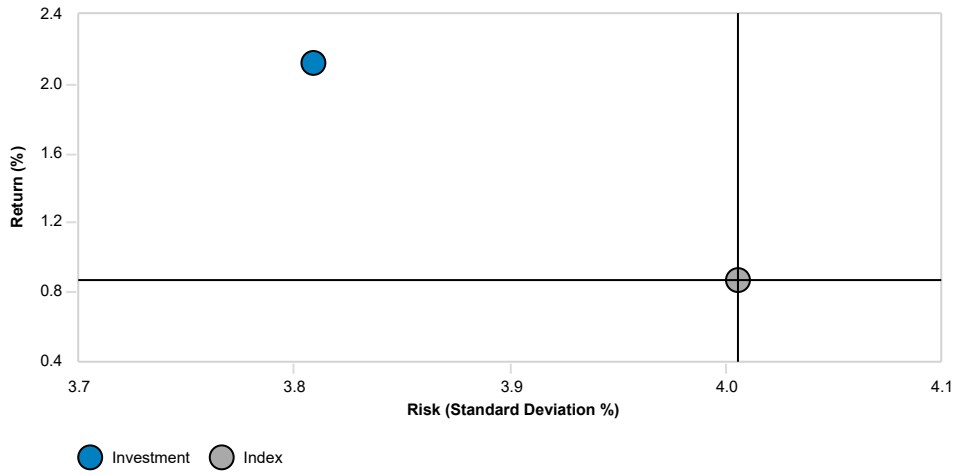
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.13	3.81	0.29	105.69	15	81.06	5
Index	0.88	4.01	-0.04	100.00	15	100.00	5

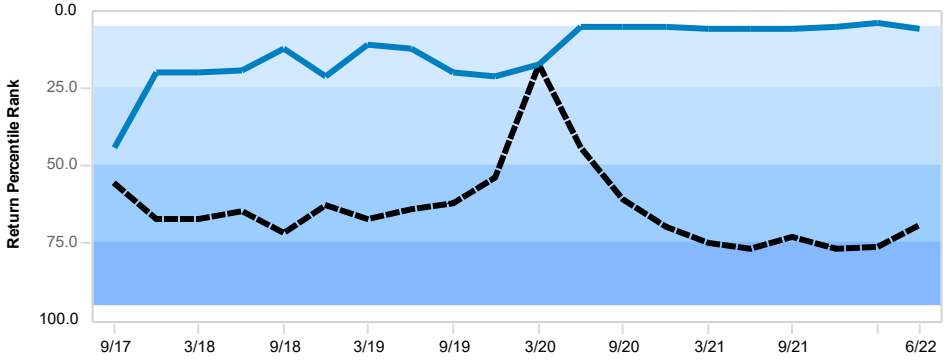
**Risk and Return 3 Years**



**Risk and Return 5 Years**

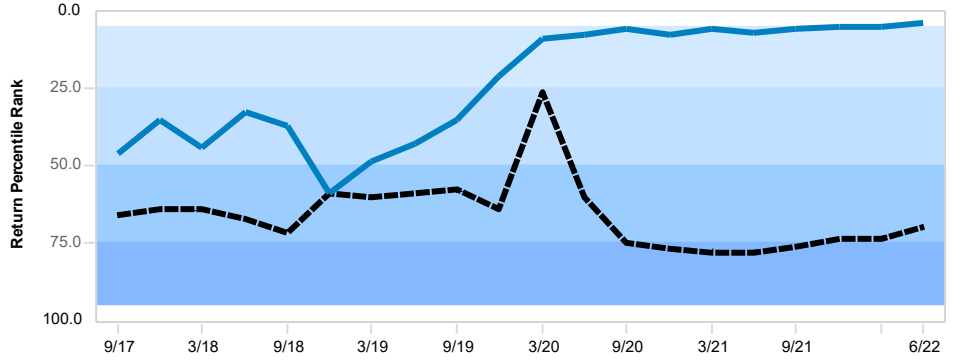


**3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	19 (95%)	1 (5%)	0 (0%)	0 (0%)
Index	20	1 (5%)	1 (5%)	15 (75%)	3 (15%)

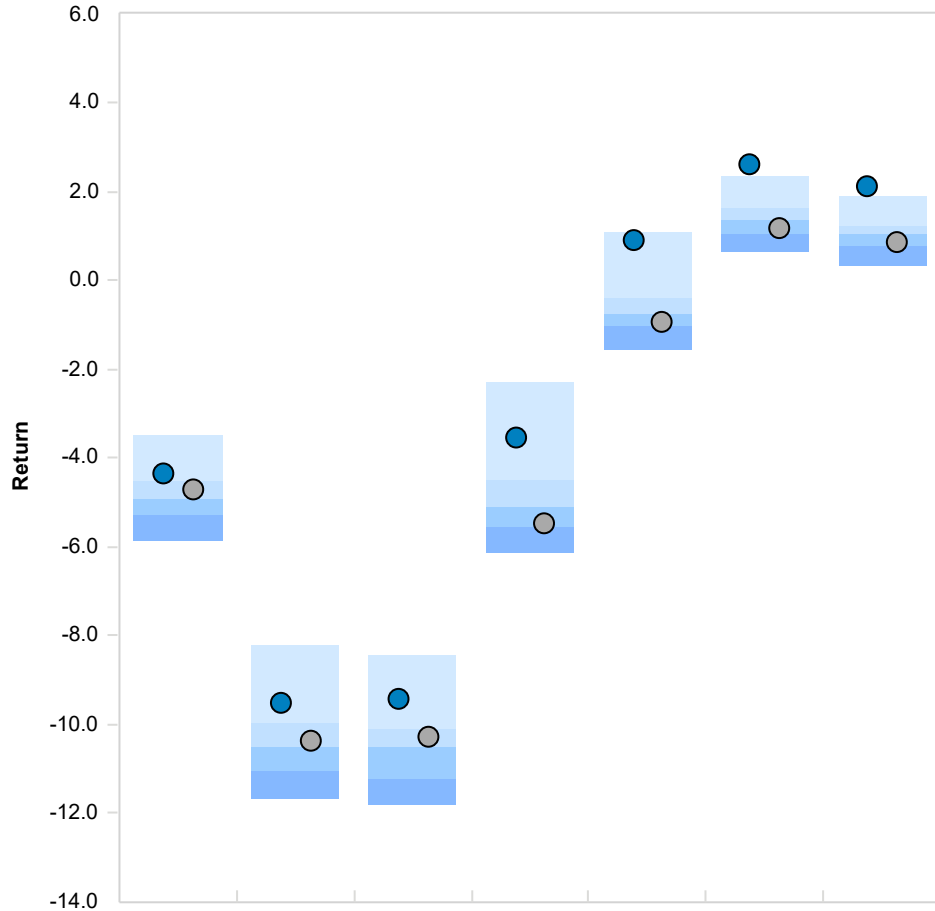
**5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	11 (55%)	8 (40%)	1 (5%)	0 (0%)
Index	20	0 (0%)	1 (5%)	15 (75%)	4 (20%)

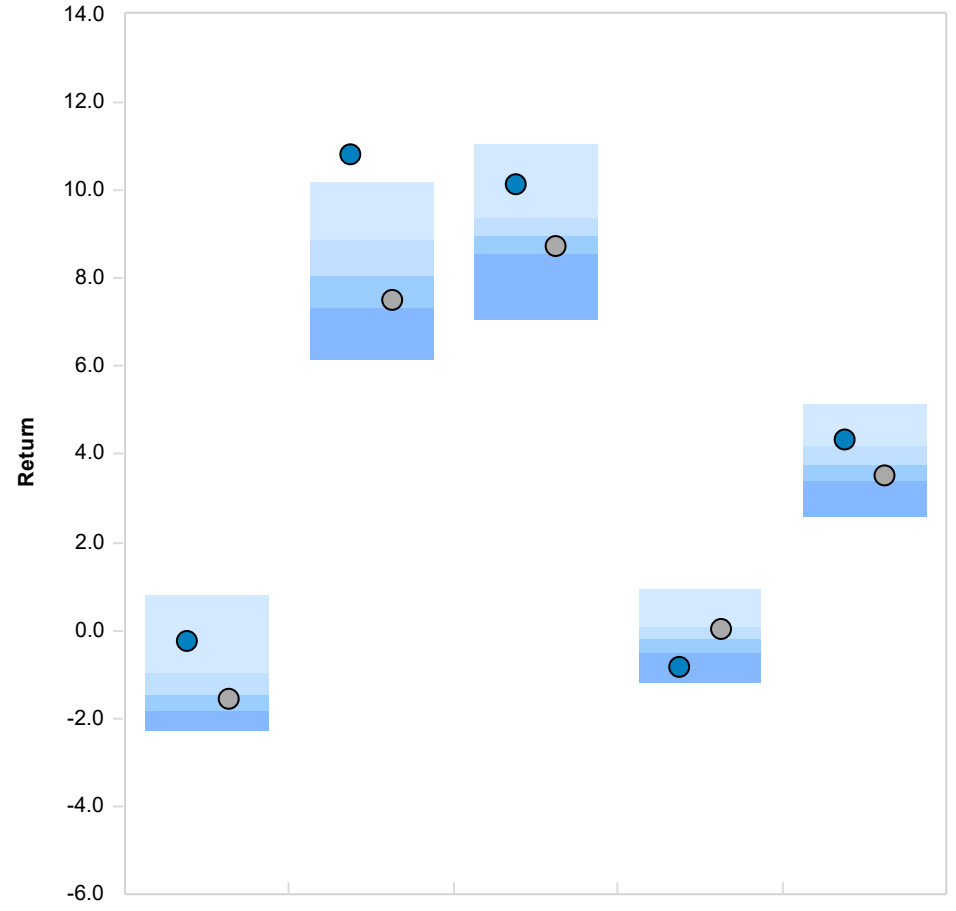


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.36 (20)	-9.50 (16)	-9.41 (14)	-3.54 (9)	0.93 (6)	2.62 (4)	2.13 (4)
● Index	-4.69 (34)	-10.35 (42)	-10.29 (38)	-5.45 (70)	-0.94 (69)	1.20 (63)	0.88 (70)
Median	-4.91	-10.47	-10.52	-5.09	-0.72	1.38	1.06

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



	2021	2020	2019	2018	2017
● Investment	-0.25 (10)	10.80 (3)	10.15 (10)	-0.81 (89)	4.33 (18)
● Index	-1.55 (54)	7.51 (69)	8.72 (69)	0.01 (32)	3.54 (64)
Median	-1.47	8.05	8.96	-0.21	3.74

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-5.37 (16)	0.09 (8)	0.02 (54)	2.05 (38)	-2.36 (11)	1.68 (19)
Index	-5.93 (58)	0.01 (16)	0.05 (42)	1.83 (73)	-3.38 (62)	0.67 (79)
Median	-5.86	-0.13	0.03	1.96	-3.17	1.05



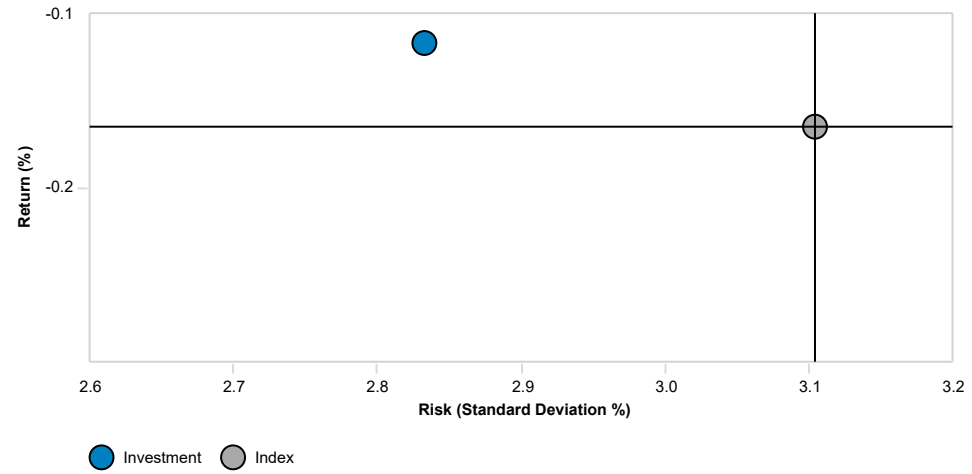
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.12	2.83	-0.26	87.07	7	86.45	5
Index	-0.16	3.10	-0.24	100.00	8	100.00	4

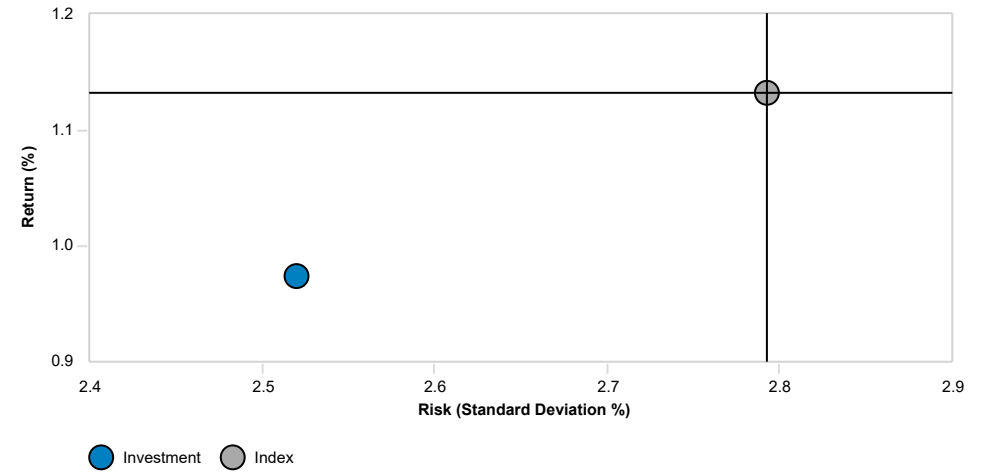
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.97	2.52	-0.04	87.52	13	88.13	7
Index	1.13	2.79	0.02	100.00	14	100.00	6

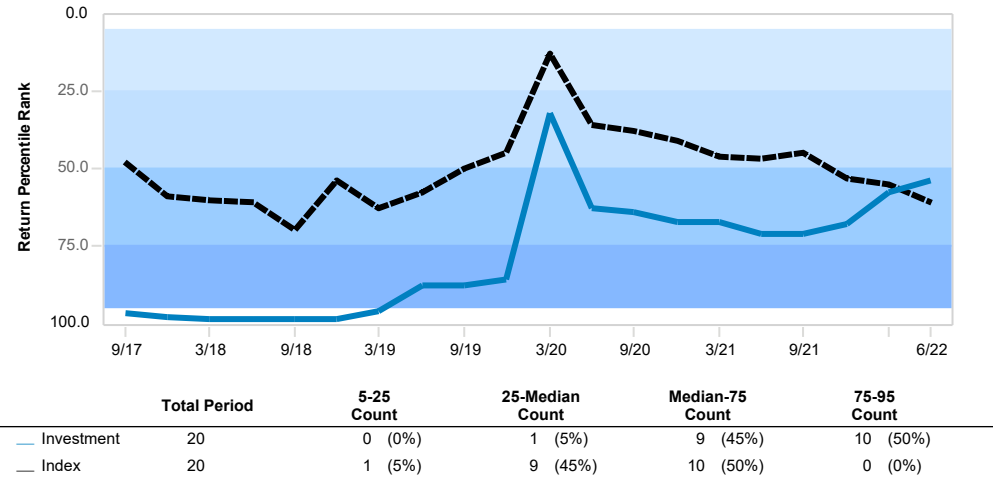
**Risk and Return 3 Years**



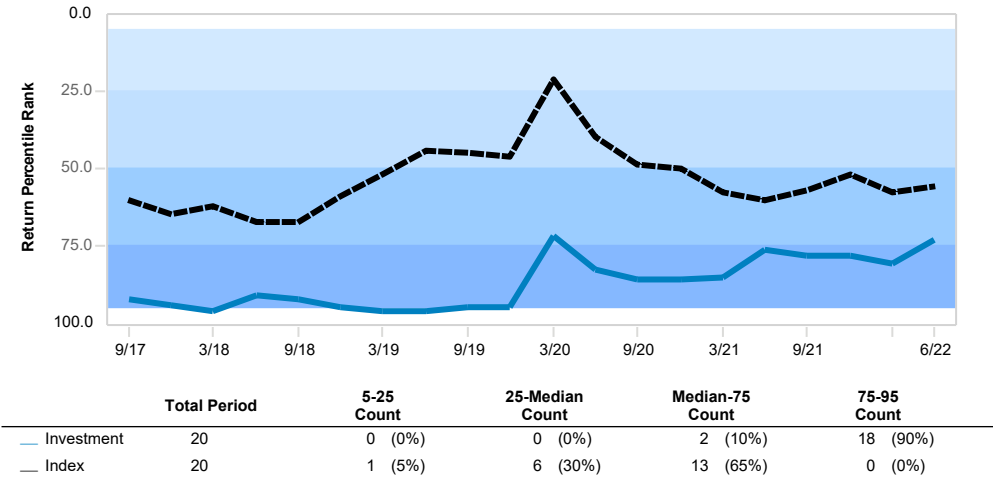
**Risk and Return 5 Years**



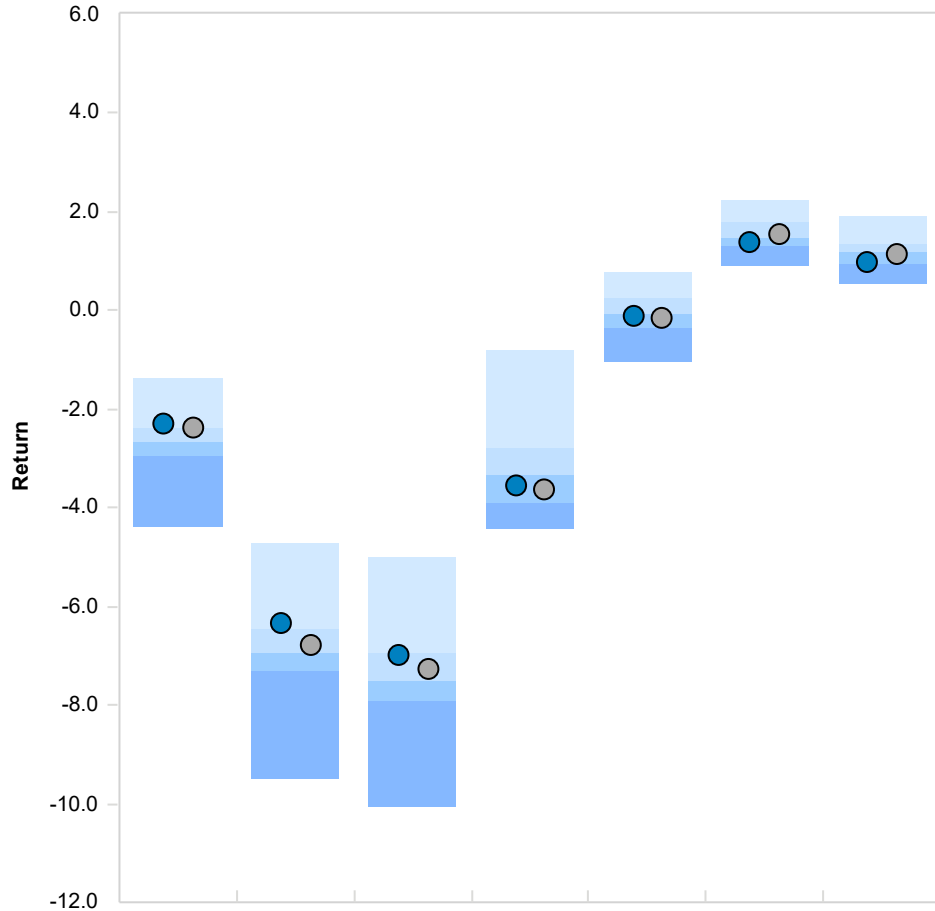
**3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**



**5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**

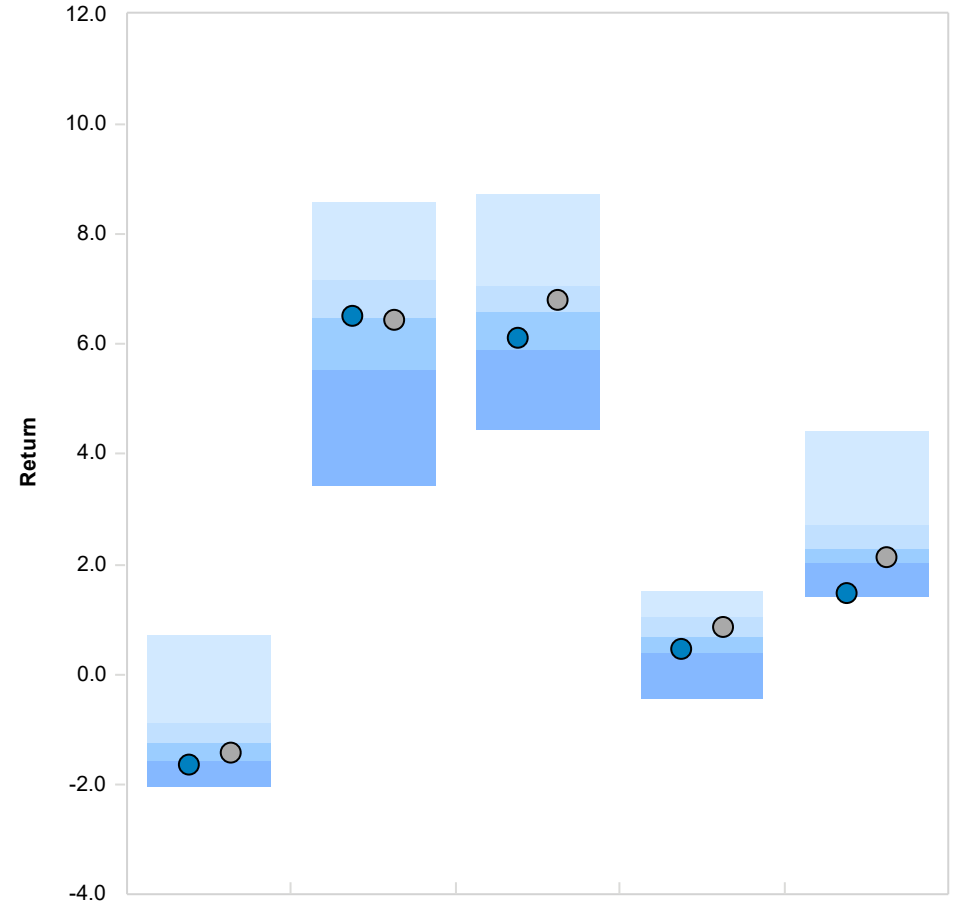


Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.28 (21)	-6.33 (21)	-7.00 (28)	-3.56 (58)	-0.12 (54)	1.39 (63)	0.97 (73)
● Index	-2.37 (24)	-6.77 (44)	-7.28 (44)	-3.62 (65)	-0.16 (61)	1.56 (46)	1.13 (56)
Median	-2.65	-6.94	-7.49	-3.36	-0.09	1.48	1.17

Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)



	2021	2020	2019	2018	2017
● Investment	-1.65 (82)	6.52 (48)	6.11 (71)	0.47 (68)	1.49 (90)
● Index	-1.44 (64)	6.43 (52)	6.80 (42)	0.88 (37)	2.14 (65)
Median	-1.24	6.48	6.59	0.70	2.26

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.15 (29)	-0.60 (59)	-0.11 (86)	0.97 (55)	-1.90 (74)	0.36 (85)
Index	-4.51 (66)	-0.57 (49)	0.02 (44)	0.98 (54)	-1.86 (70)	0.48 (73)
Median	-4.39	-0.58	-0.01	0.99	-1.68	0.64



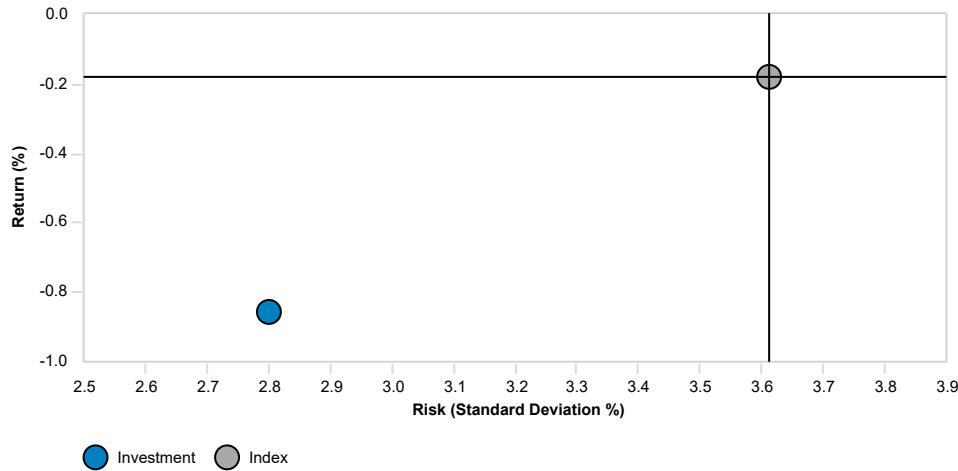
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-0.86	2.80	-0.53	67.28	6	82.83	6
Index	-0.18	3.61	-0.21	100.00	8	100.00	4

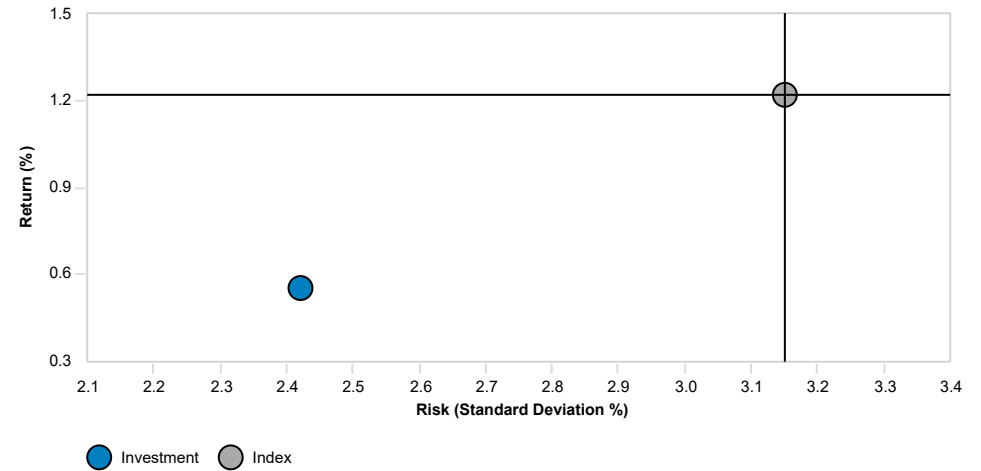
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.56	2.42	-0.22	70.01	13	78.65	7
Index	1.23	3.15	0.05	100.00	13	100.00	7

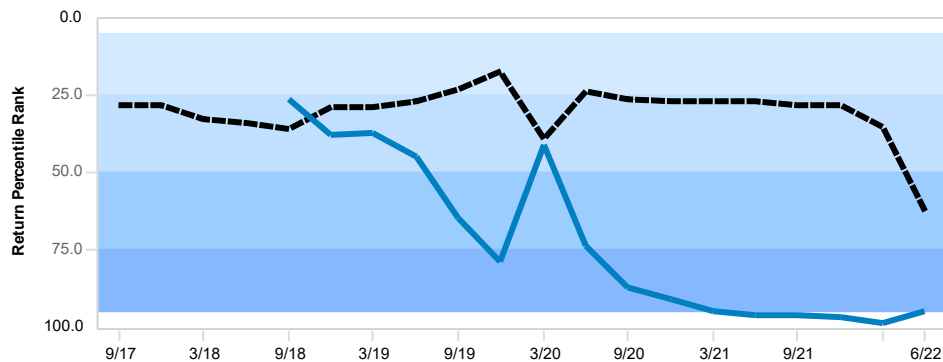
**Risk and Return 3 Years**



**Risk and Return 5 Years**

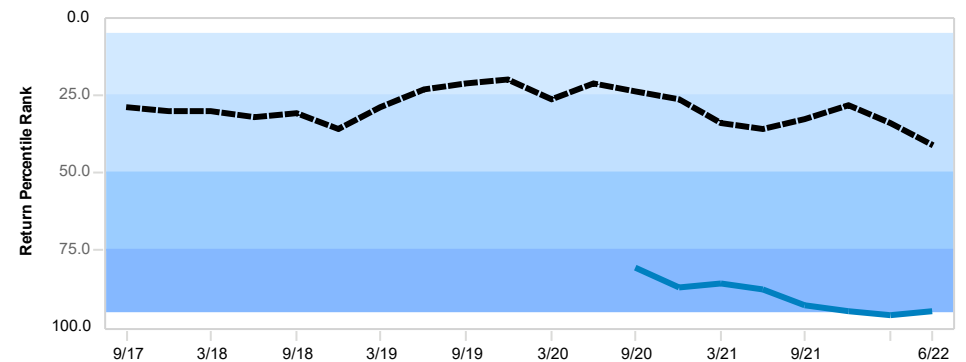


**3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	0 (0%)	5 (31%)	2 (13%)	9 (56%)
Index	20	3 (15%)	16 (80%)	1 (5%)	0 (0%)

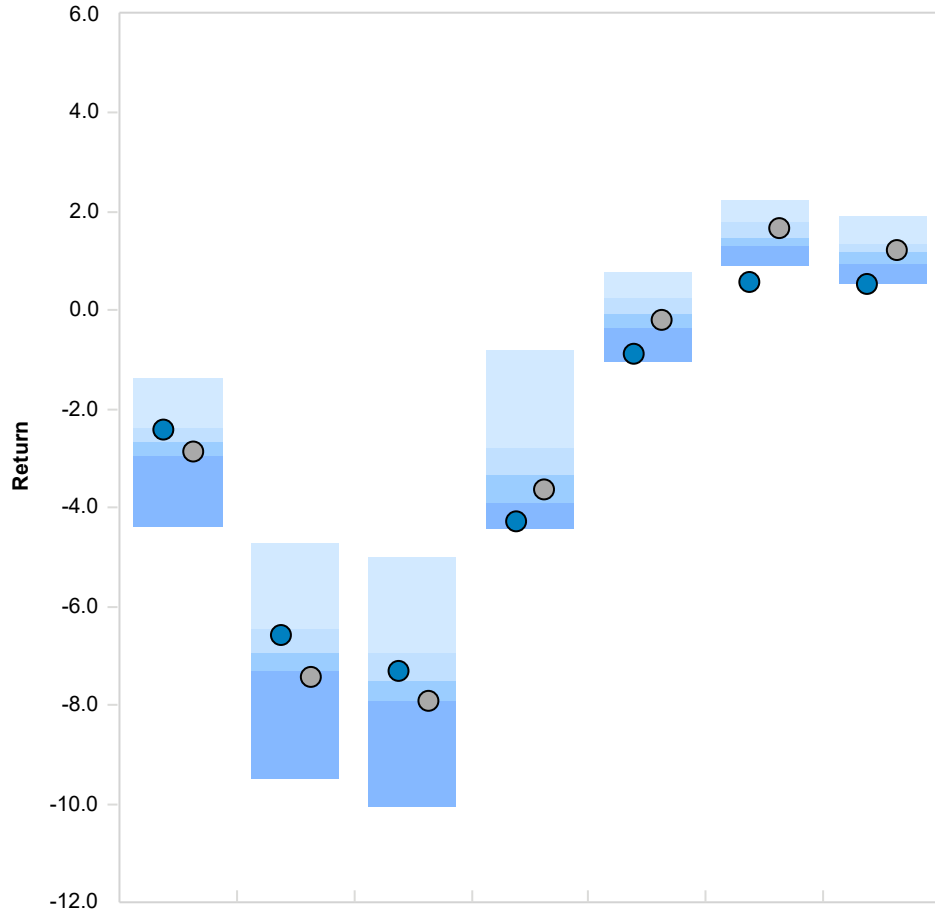
**5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	8	0 (0%)	0 (0%)	0 (0%)	8 (100%)
Index	20	5 (25%)	15 (75%)	0 (0%)	0 (0%)

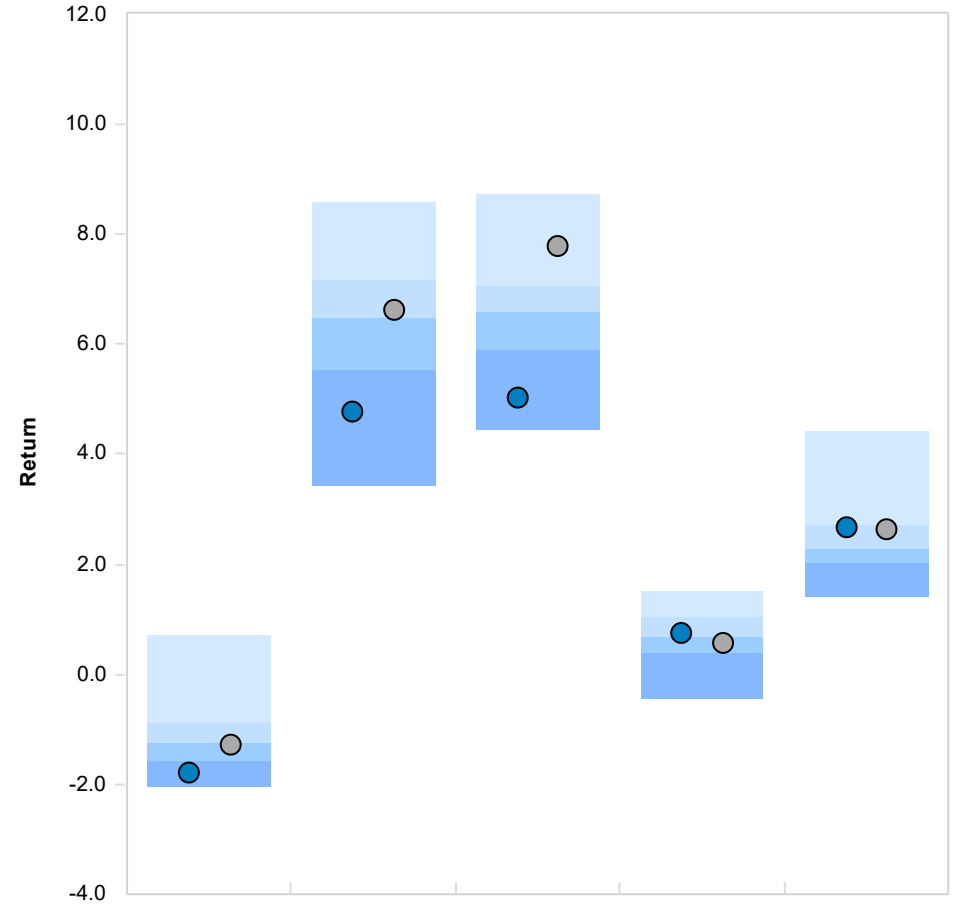


**Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.41 (27)	-6.56 (31)	-7.29 (44)	-4.26 (93)	-0.86 (95)	0.59 (97)	0.56 (95)
● Index	-2.84 (67)	-7.43 (79)	-7.91 (75)	-3.61 (65)	-0.18 (62)	1.66 (35)	1.23 (41)
Median	-2.65	-6.94	-7.49	-3.36	-0.09	1.48	1.17

**Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	-1.80 (90)	4.79 (90)	5.02 (93)	0.74 (50)	2.68 (28)
● Index	-1.29 (55)	6.62 (44)	7.78 (13)	0.58 (59)	2.65 (29)
Median	-1.24	6.48	6.59	0.70	2.26

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.26 (39)	-0.69 (80)	-0.09 (82)	0.83 (76)	-1.83 (68)	0.33 (88)
Index	-4.72 (83)	-0.56 (47)	0.04 (35)	1.18 (25)	-1.93 (78)	0.84 (38)
Median	-4.39	-0.58	-0.01	0.99	-1.68	0.64



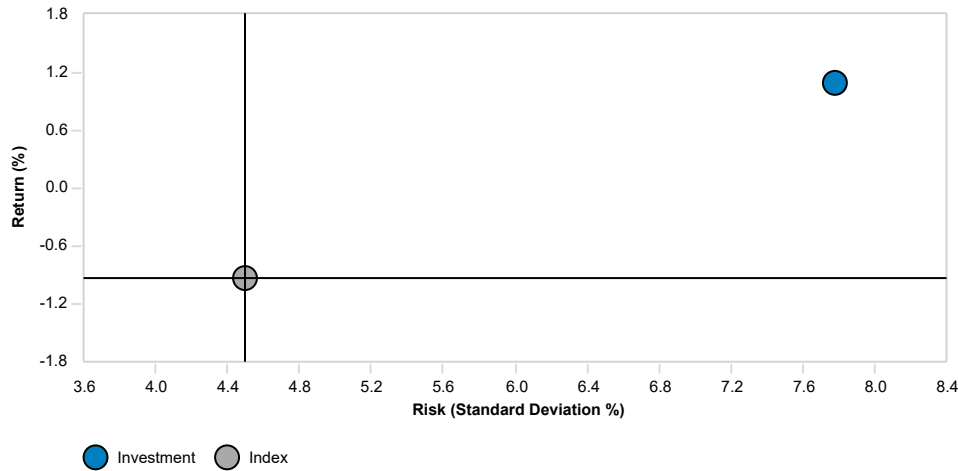
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.10	7.78	0.10	126.70	8	87.19	4
Index	-0.94	4.49	-0.33	100.00	9	100.00	3

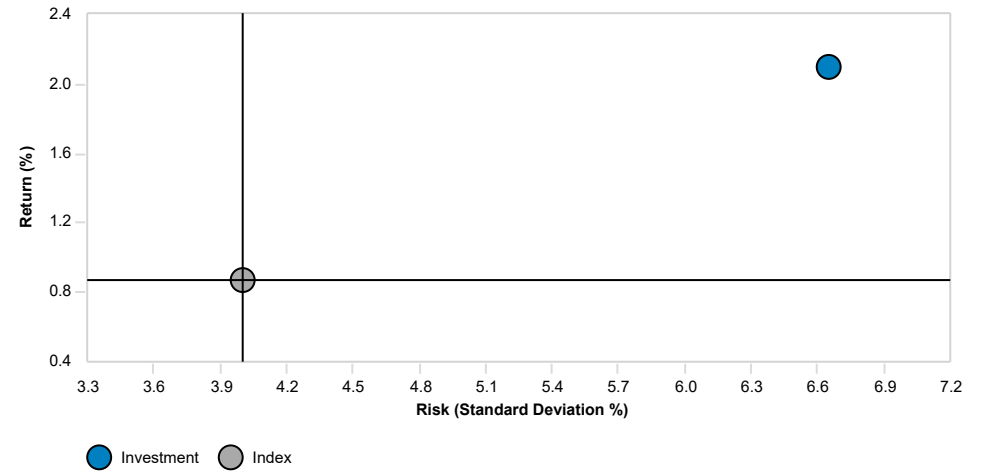
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.10	6.65	0.18	111.44	12	85.20	8
Index	0.88	4.01	-0.04	100.00	15	100.00	5

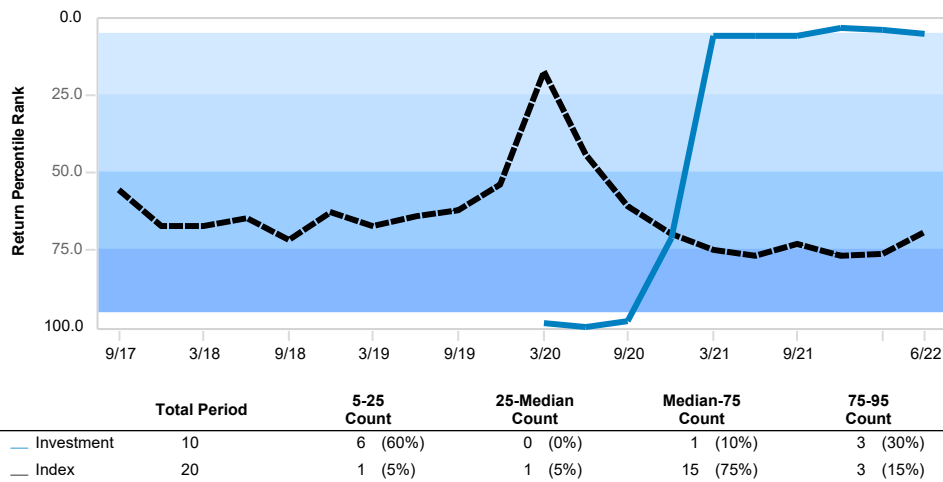
**Risk and Return 3 Years**



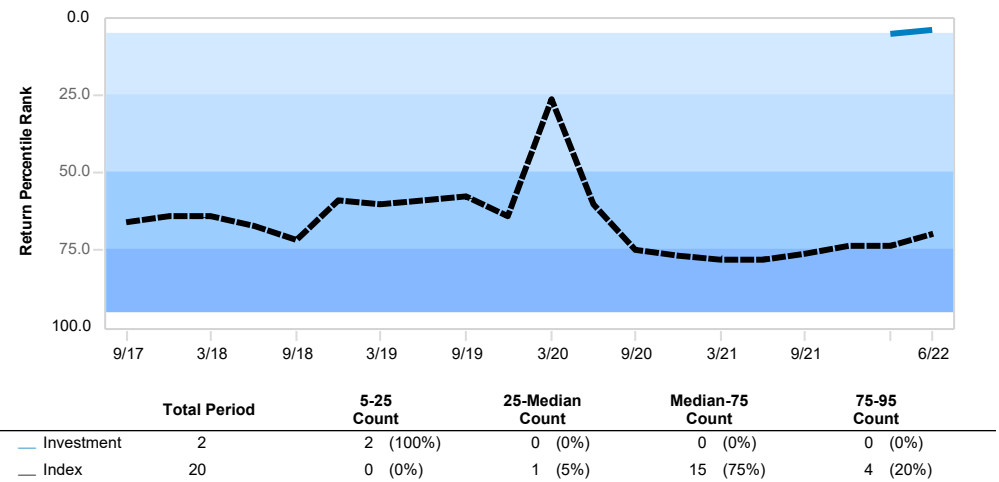
**Risk and Return 5 Years**



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

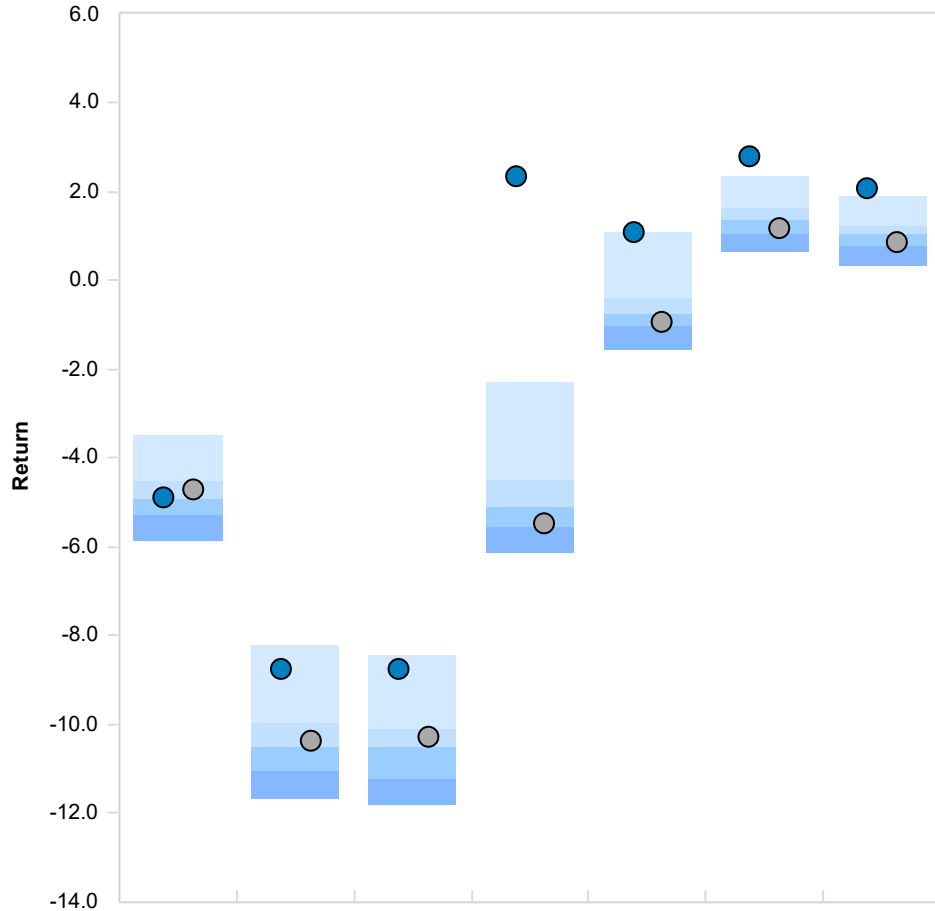


**5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)**



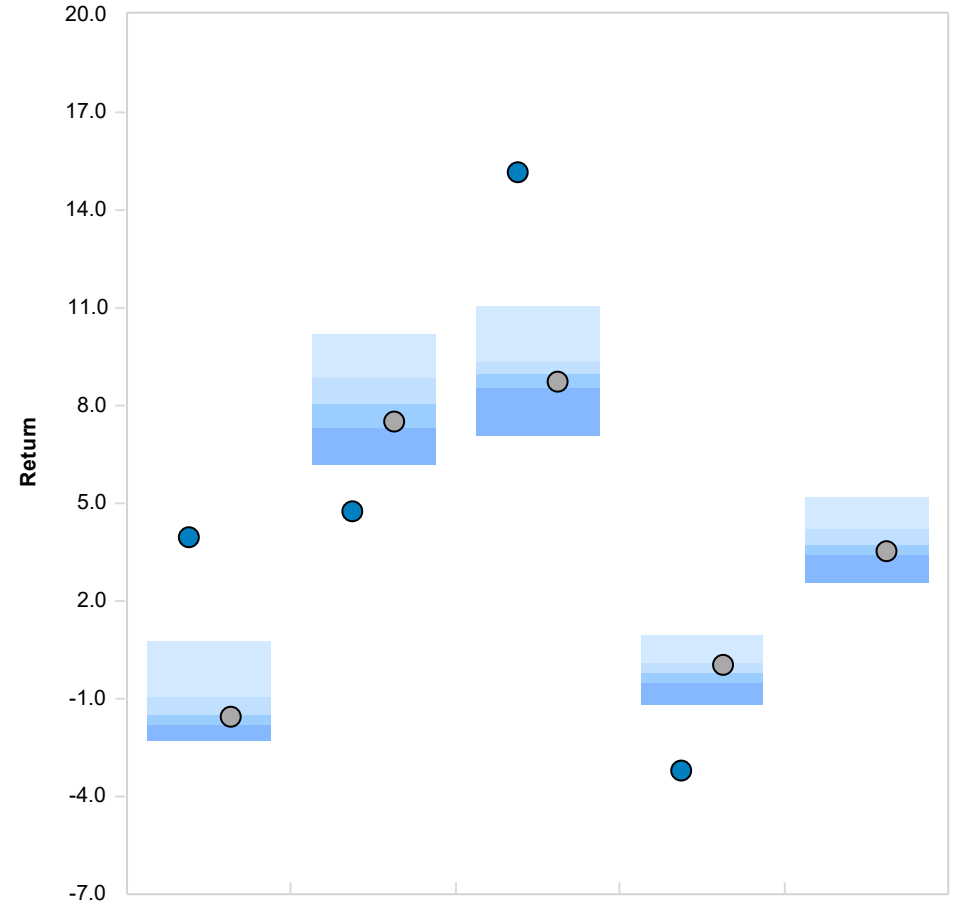


**Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.89 (48)	-8.74 (10)	-8.72 (9)	2.35 (1)	1.10 (5)	2.82 (4)	2.10 (4)
● Index	-4.69 (34)	-10.35 (42)	-10.29 (38)	-5.45 (70)	-0.94 (69)	1.20 (63)	0.88 (70)
Median	-4.91	-10.47	-10.52	-5.09	-0.72	1.38	1.06

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



	2021	2020	2019	2018	2017
● Investment	3.95 (1)	4.78 (98)	15.16 (2)	-3.20 (100)	N/A
● Index	-1.55 (54)	7.51 (69)	8.72 (69)	0.01 (32)	3.54 (64)
Median	-1.47	8.05	8.96	-0.21	3.74

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.05 (1)	0.15 (4)	-0.14 (91)	2.75 (3)	1.16 (1)	6.38 (1)
Index	-5.93 (58)	0.01 (16)	0.05 (42)	1.83 (73)	-3.38 (62)	0.67 (79)
Median	-5.86	-0.13	0.03	1.96	-3.17	1.05



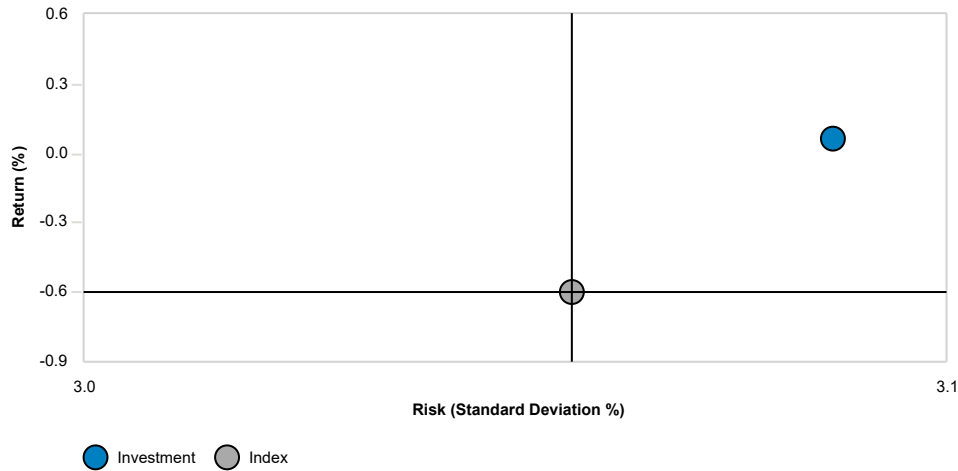
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.07	3.09	-0.17	118.20	7	98.98	5
Index	-0.60	3.06	-0.39	100.00	8	100.00	4

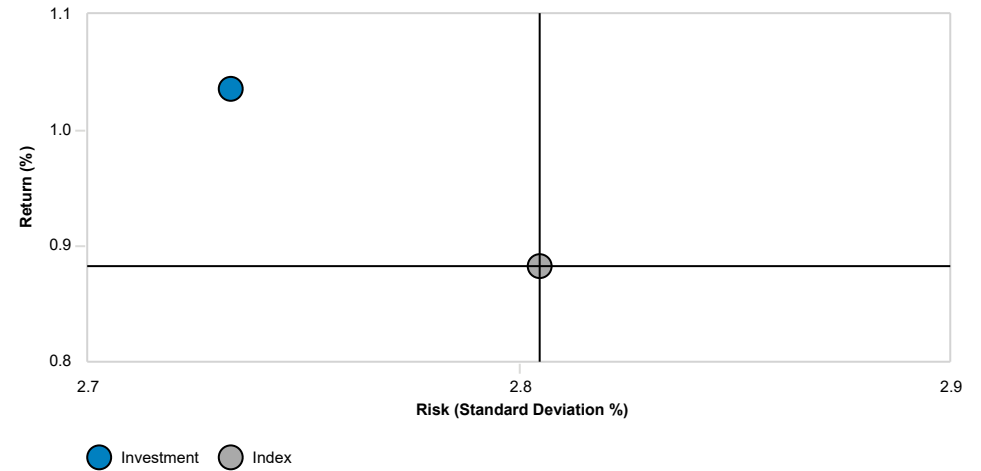
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.04	2.73	-0.01	98.53	12	93.24	8
Index	0.88	2.80	-0.07	100.00	14	100.00	6

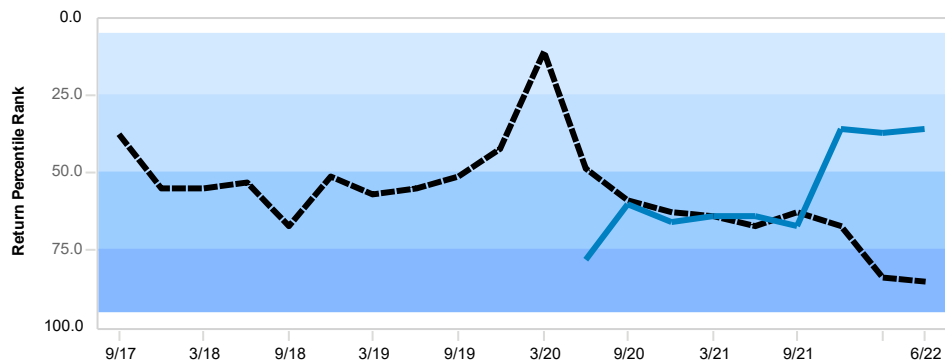
**Risk and Return 3 Years**



**Risk and Return 5 Years**

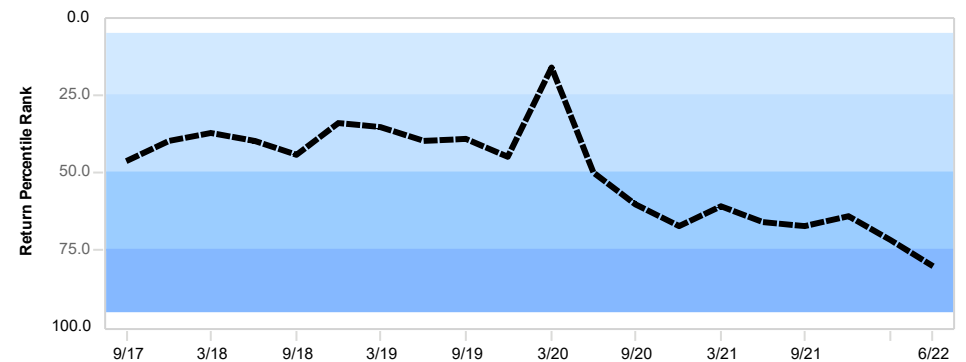


**3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	9	0 (0%)	3 (33%)	5 (56%)	1 (11%)
Index	20	1 (5%)	3 (15%)	14 (70%)	2 (10%)

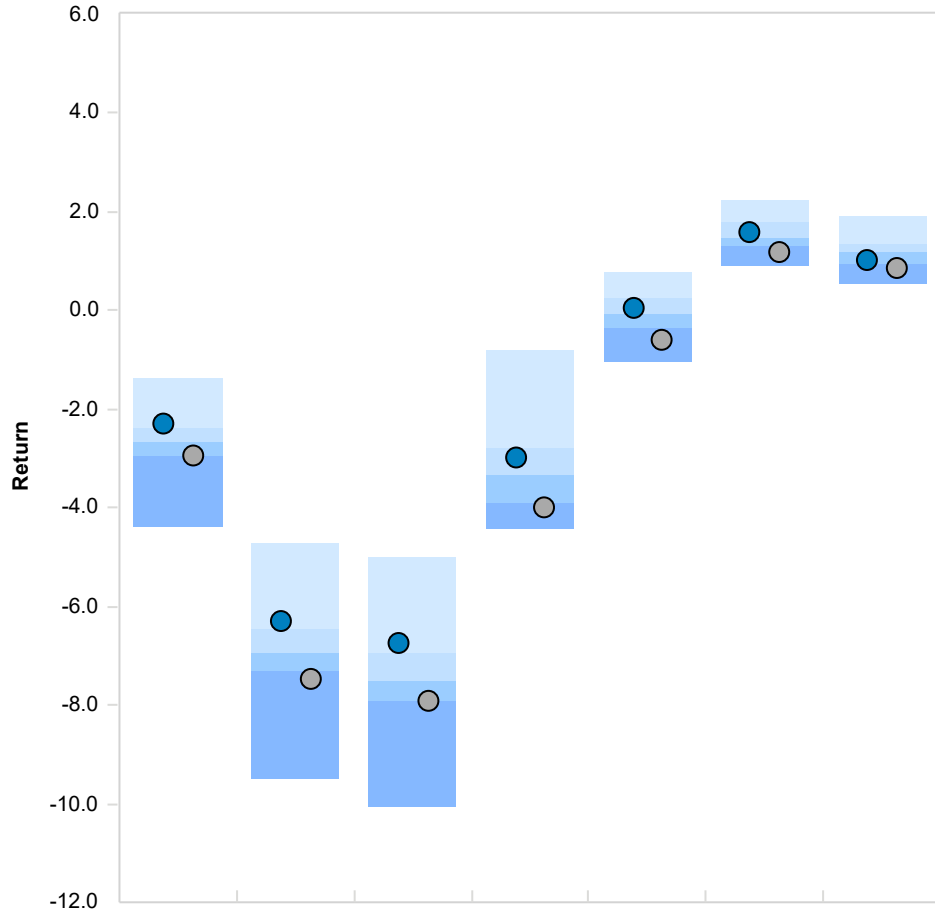
**5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	1	0 (0%)	0 (0%)	1 (100%)	0 (0%)
Index	20	1 (5%)	11 (55%)	7 (35%)	1 (5%)

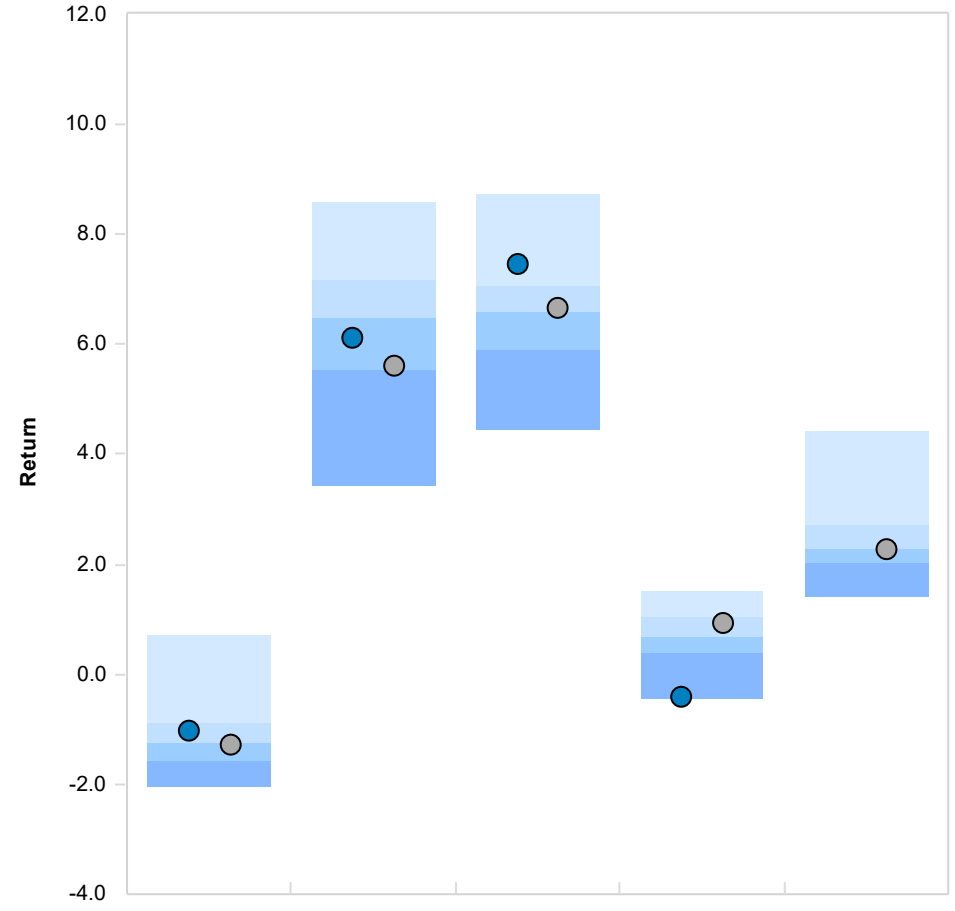


**Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.28 (21)	-6.31 (21)	-6.74 (21)	-2.99 (32)	0.07 (36)	1.57 (45)	1.04 (67)
● Index	-2.93 (75)	-7.48 (81)	-7.91 (74)	-4.01 (85)	-0.60 (85)	1.19 (83)	0.88 (80)
Median	-2.65	-6.94	-7.49	-3.36	-0.09	1.48	1.17

**Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	-1.04 (34)	6.13 (65)	7.47 (18)	-0.40 (95)	N/A
● Index	-1.29 (55)	5.60 (75)	6.67 (47)	0.92 (35)	2.27 (49)
Median	-1.24	6.48	6.59	0.70	2.26

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.13 (28)	-0.45 (21)	0.00 (49)	0.96 (63)	-1.53 (37)	0.71 (46)
Index	-4.69 (80)	-0.51 (30)	0.05 (31)	0.78 (79)	-1.61 (43)	0.42 (77)
Median	-4.39	-0.58	-0.01	0.99	-1.68	0.64



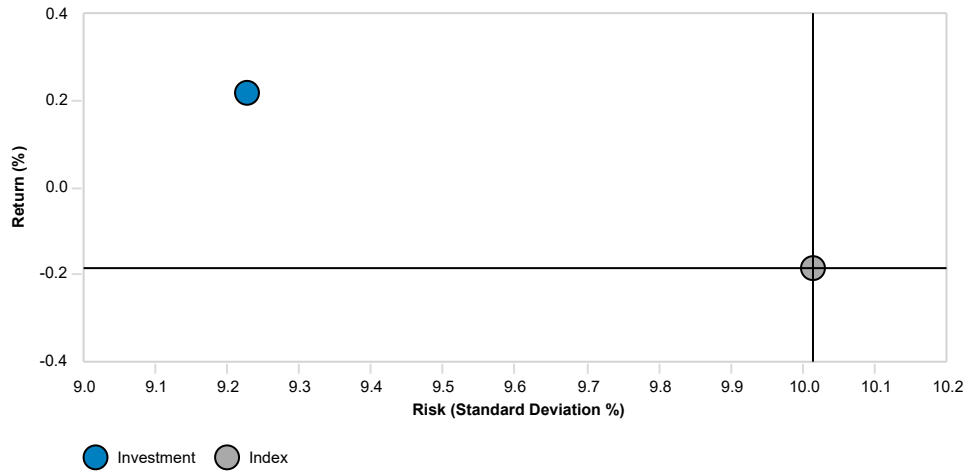
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.22	9.23	0.00	96.33	9	93.03	3
Index	-0.18	10.01	-0.03	100.00	9	100.00	3

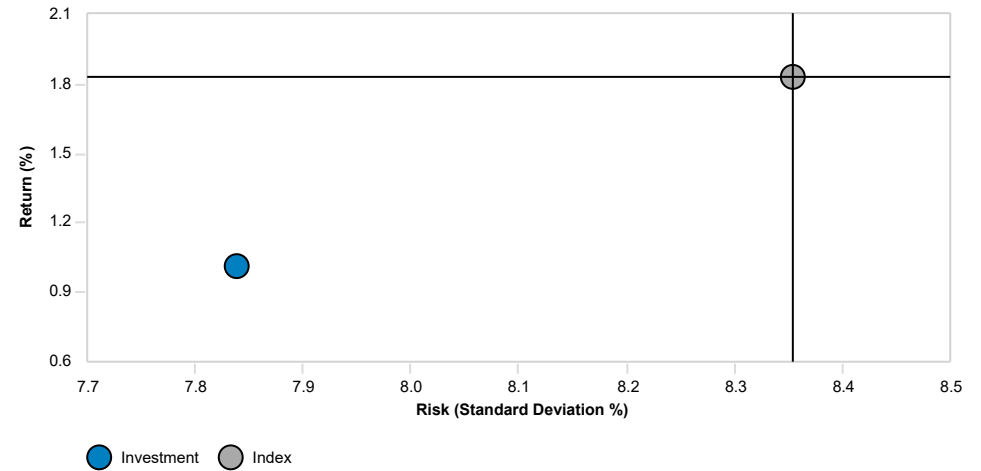
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.01	7.84	0.03	88.87	15	96.90	5
Index	1.84	8.35	0.13	100.00	15	100.00	5

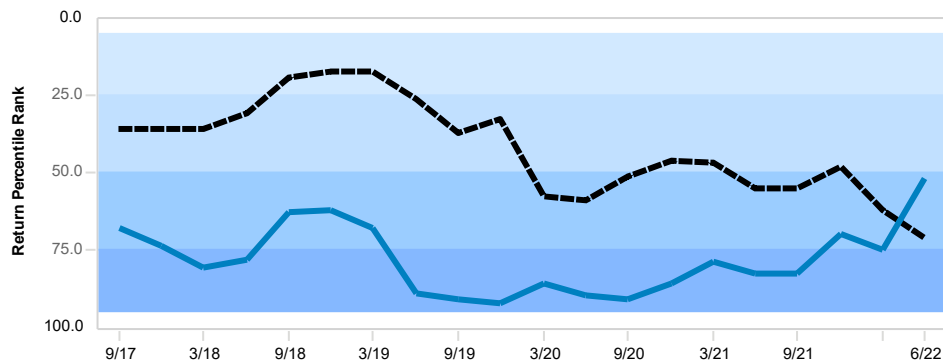
**Risk and Return 3 Years**



**Risk and Return 5 Years**

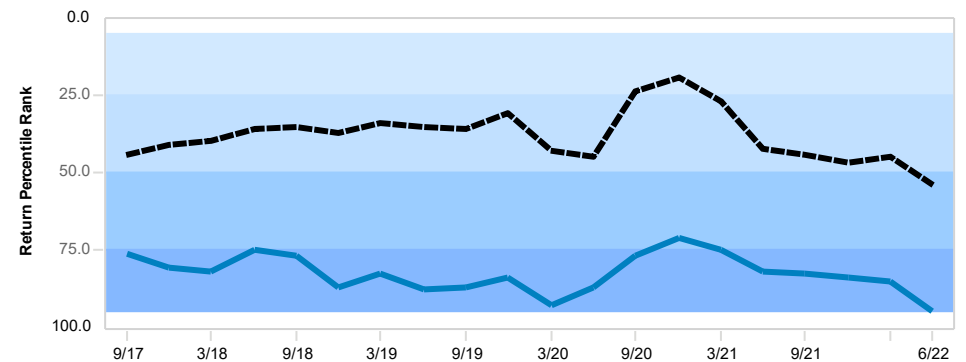


**3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	8 (40%)	12 (60%)
Index	20	3 (15%)	10 (50%)	7 (35%)	0 (0%)

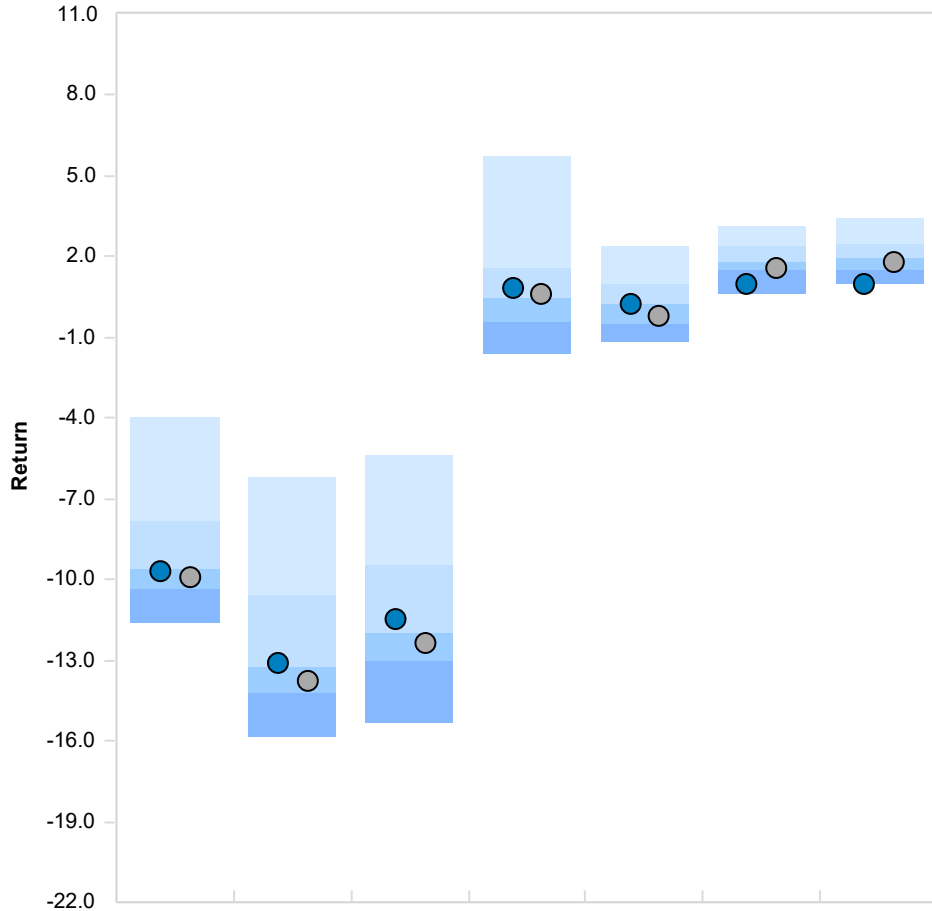
**5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	3 (15%)	17 (85%)
Index	20	2 (10%)	17 (85%)	1 (5%)	0 (0%)

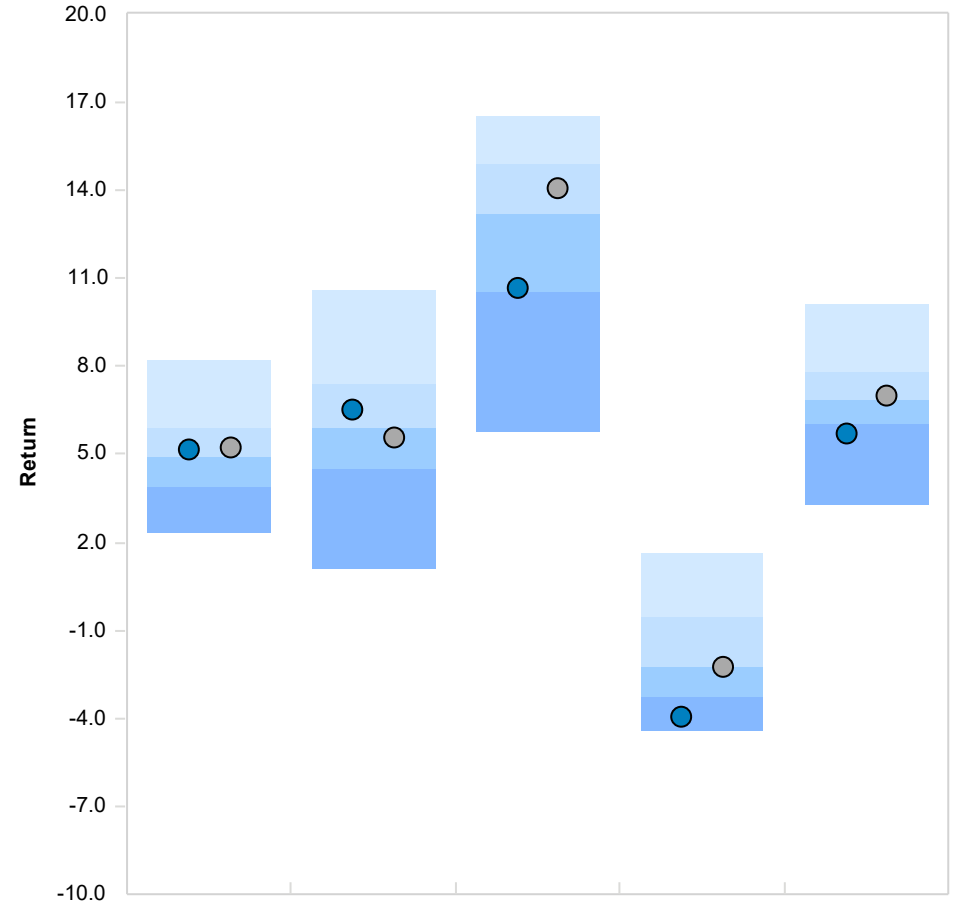


**Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-9.70 (58)	-13.07 (48)	-11.44 (44)	0.81 (38)	0.22 (52)	1.02 (88)	1.01 (95)
● Index	-9.90 (68)	-13.77 (64)	-12.38 (62)	0.60 (46)	-0.18 (71)	1.59 (70)	1.84 (54)
Median	-9.63	-13.24	-11.96	0.48	0.24	1.84	1.93

**Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	5.15 (45)	6.53 (42)	10.71 (75)	-3.94 (89)	5.69 (81)
● Index	5.22 (43)	5.60 (61)	14.05 (42)	-2.22 (50)	6.97 (49)
Median	4.91	5.95	13.20	-2.24	6.87

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-3.73 (41)	0.93 (7)	0.94 (21)	2.37 (68)	0.82 (56)	6.26 (39)
Index	-4.29 (62)	0.67 (36)	0.93 (21)	2.59 (46)	0.94 (48)	6.30 (38)
Median	-3.97	0.60	0.75	2.56	0.90	5.80



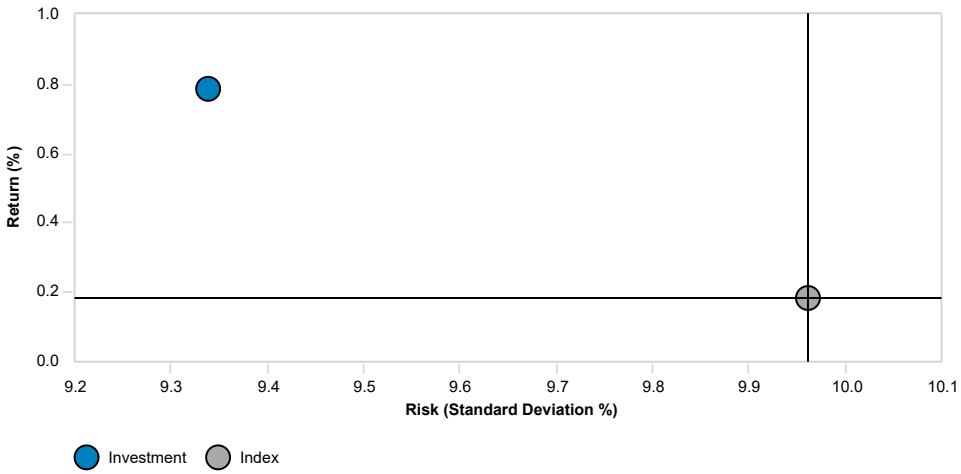
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.79	9.34	0.06	98.11	9	92.64	3
Index	0.18	9.96	0.01	100.00	9	100.00	3

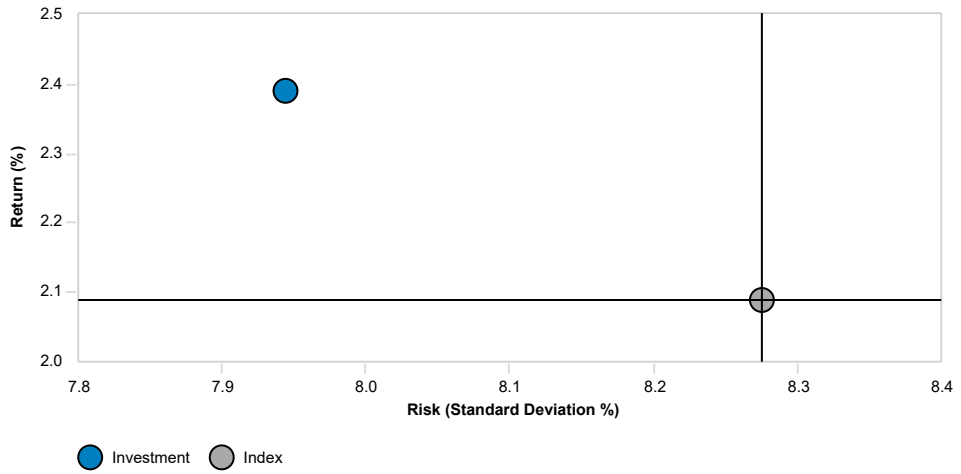
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.39	7.94	0.20	99.54	15	95.89	5
Index	2.09	8.28	0.16	100.00	15	100.00	5

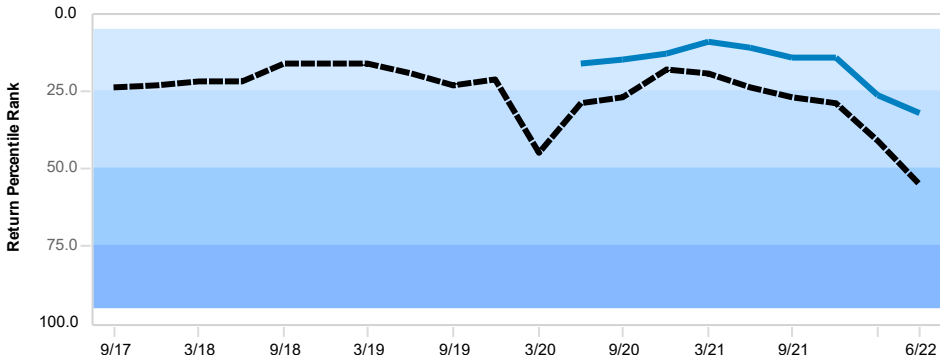
**Risk and Return 3 Years**



**Risk and Return 5 Years**

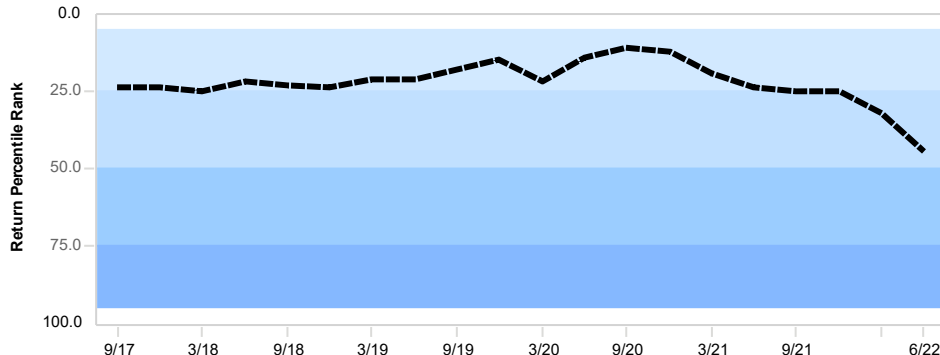


**3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	9	7 (78%)	2 (22%)	0 (0%)	0 (0%)
Index	20	13 (65%)	6 (30%)	1 (5%)	0 (0%)

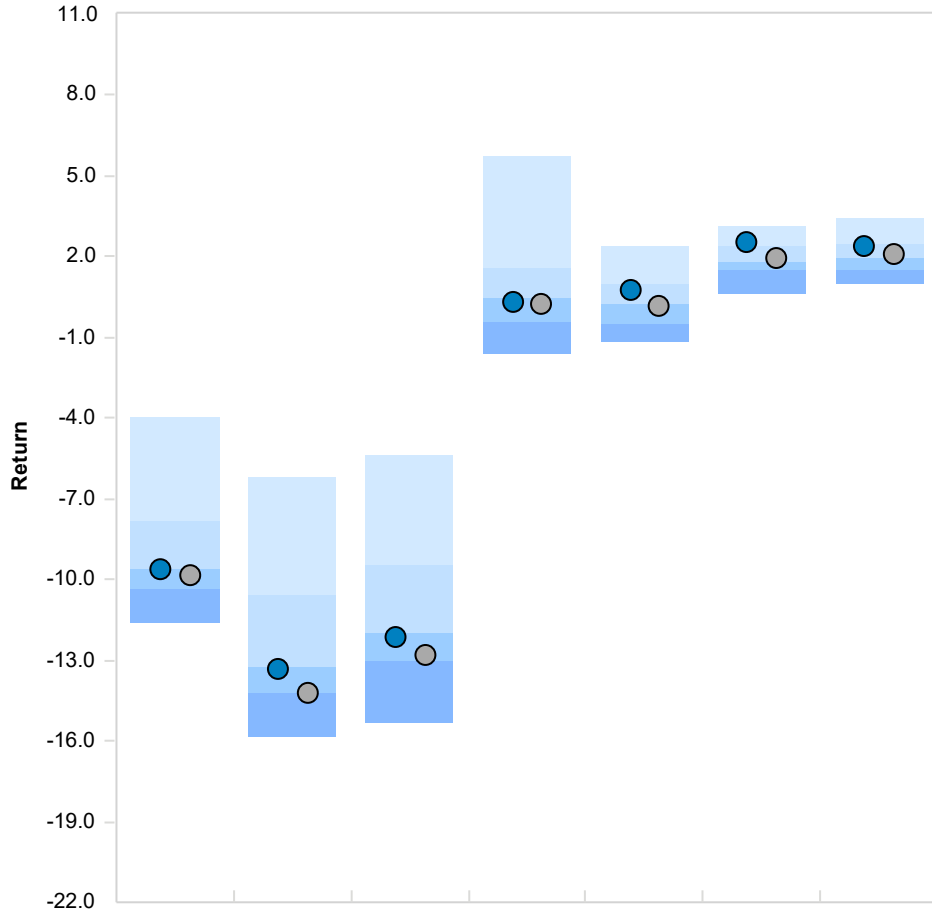
**5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	1	0 (0%)	1 (100%)	0 (0%)	0 (0%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

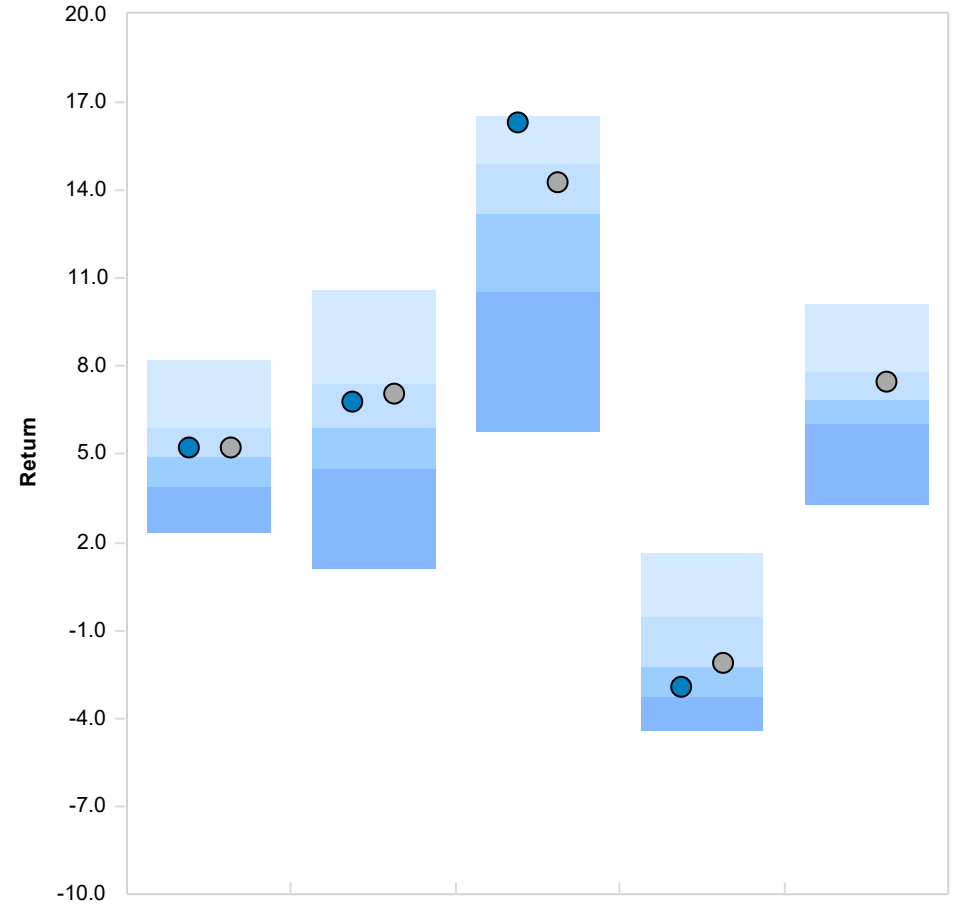


**Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)**



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-9.62 (50)	-13.29 (52)	-12.15 (54)	0.35 (55)	0.79 (32)	2.52 (17)	2.39 (31)
● Index	-9.84 (62)	-14.19 (74)	-12.82 (69)	0.27 (57)	0.18 (55)	1.96 (44)	2.09 (44)
Median	-9.63	-13.24	-11.96	0.48	0.24	1.84	1.93

**Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)**



	2021	2020	2019	2018	2017
● Investment	5.27 (42)	6.78 (37)	16.30 (7)	-2.90 (69)	N/A
● Index	5.26 (42)	7.05 (31)	14.32 (35)	-2.08 (47)	7.50 (36)
Median	4.91	5.95	13.20	-2.24	6.87

**Comparative Performance**

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-4.06 (53)	0.61 (47)	0.70 (58)	2.60 (46)	1.27 (39)	5.56 (58)
Index	-4.82 (89)	0.69 (34)	0.89 (25)	2.74 (39)	0.86 (53)	6.44 (33)
Median	-3.97	0.60	0.75	2.56	0.90	5.80



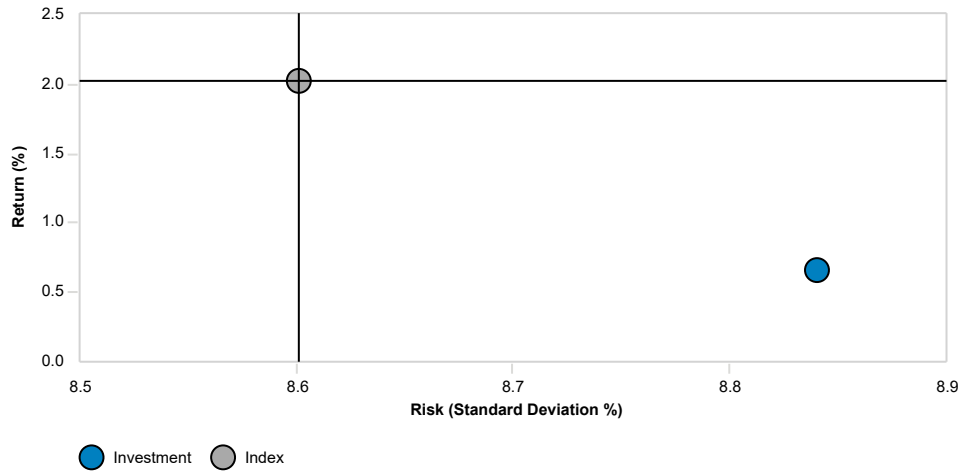
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.66	8.84	0.05	97.02	8	116.03	4
Index	2.03	8.60	0.20	100.00	9	100.00	3

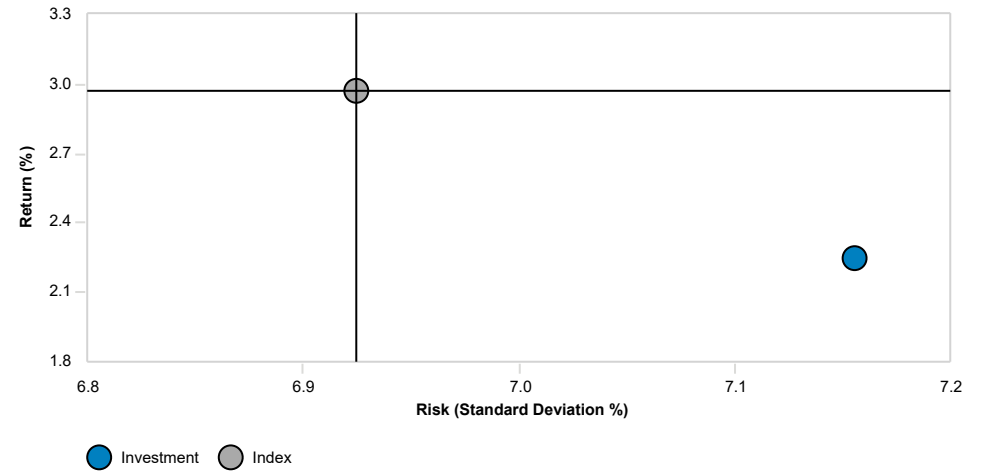
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.25	7.16	0.19	96.33	15	108.67	5
Index	2.97	6.92	0.30	100.00	16	100.00	4

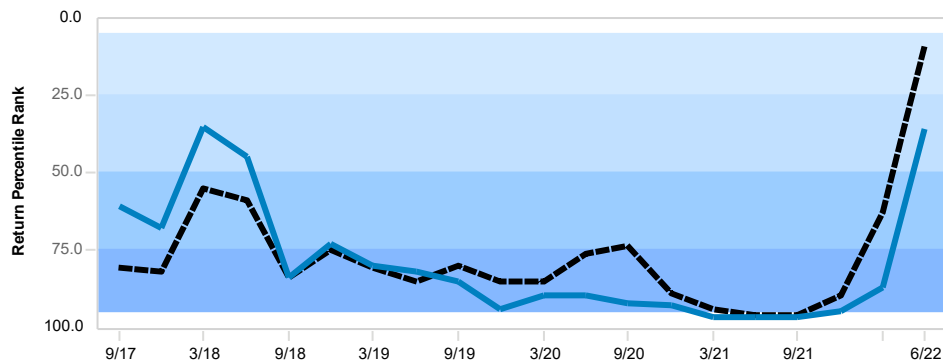
**Risk and Return 3 Years**



**Risk and Return 5 Years**

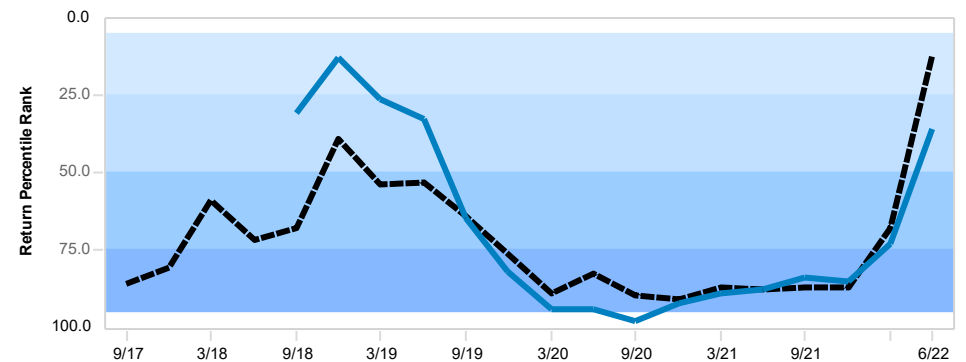


**3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	3 (15%)	3 (15%)	14 (70%)
Index	20	1 (5%)	0 (0%)	5 (25%)	14 (70%)

**5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)**

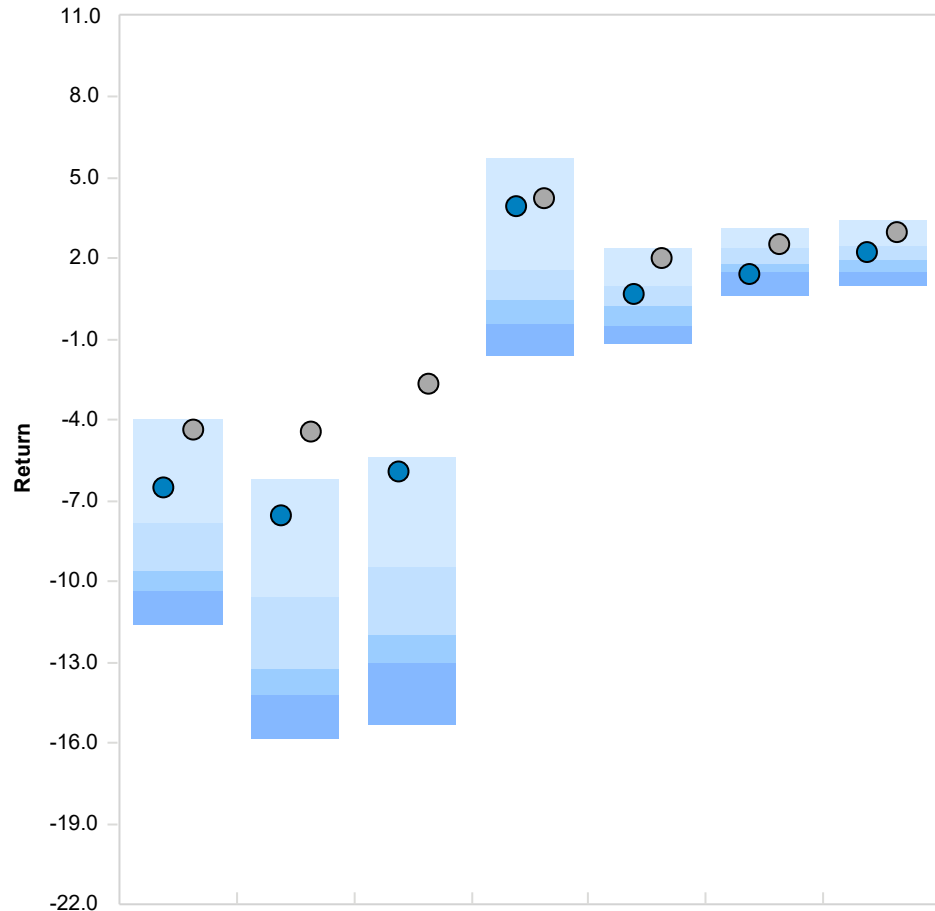


	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	1 (6%)	4 (25%)	2 (13%)	9 (56%)
Index	20	1 (5%)	1 (5%)	7 (35%)	11 (55%)



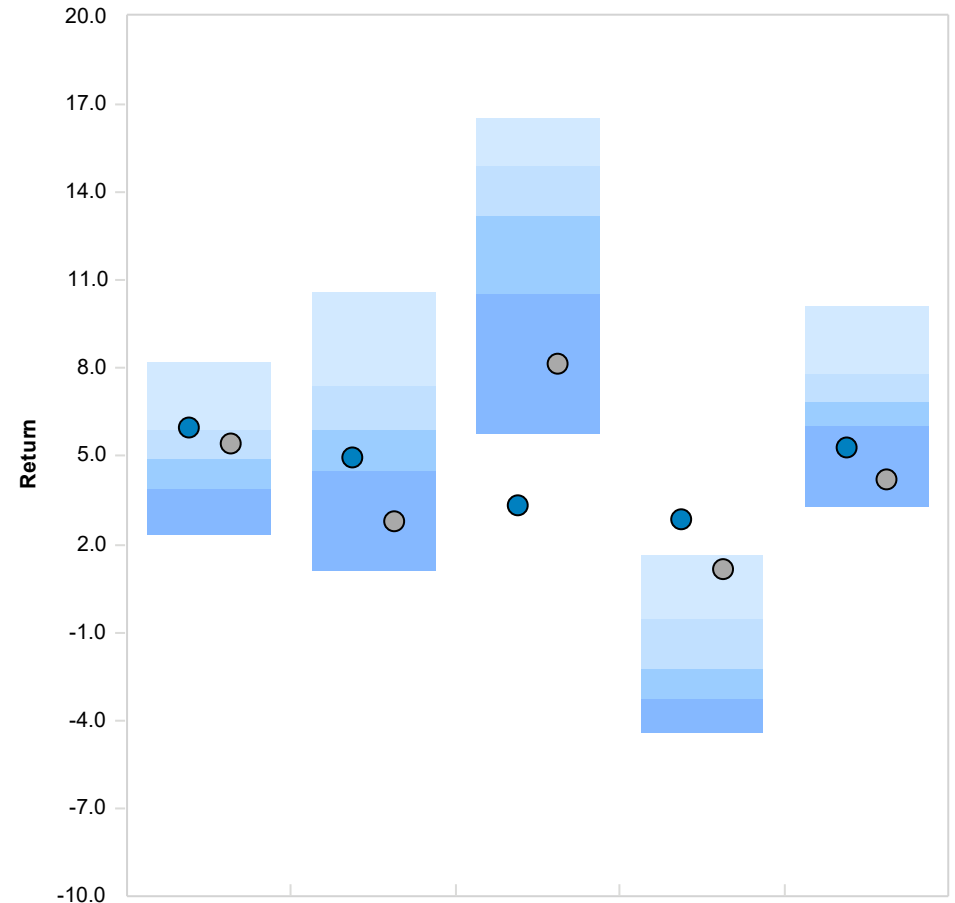


Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-6.50 (15)	-7.55 (13)	-5.90 (7)	3.96 (8)	0.66 (36)	1.43 (77)	2.25 (36)
● Index	-4.36 (7)	-4.45 (2)	-2.68 (2)	4.25 (7)	2.03 (9)	2.55 (17)	2.97 (12)
Median	-9.63	-13.24	-11.96	0.48	0.24	1.84	1.93

Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)



	2021	2020	2019	2018	2017
● Investment	5.99 (22)	4.98 (68)	3.31 (99)	2.84 (2)	5.31 (85)
● Index	5.41 (39)	2.78 (87)	8.16 (84)	1.14 (10)	4.25 (91)
Median	4.91	5.95	13.20	-2.24	6.87

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-1.12 (5)	0.60 (48)	1.17 (9)	1.84 (84)	2.25 (14)	5.39 (64)
Index	-0.10 (1)	0.72 (30)	1.13 (9)	1.45 (90)	2.01 (19)	3.63 (89)
Median	-3.97	0.60	0.75	2.56	0.90	5.80



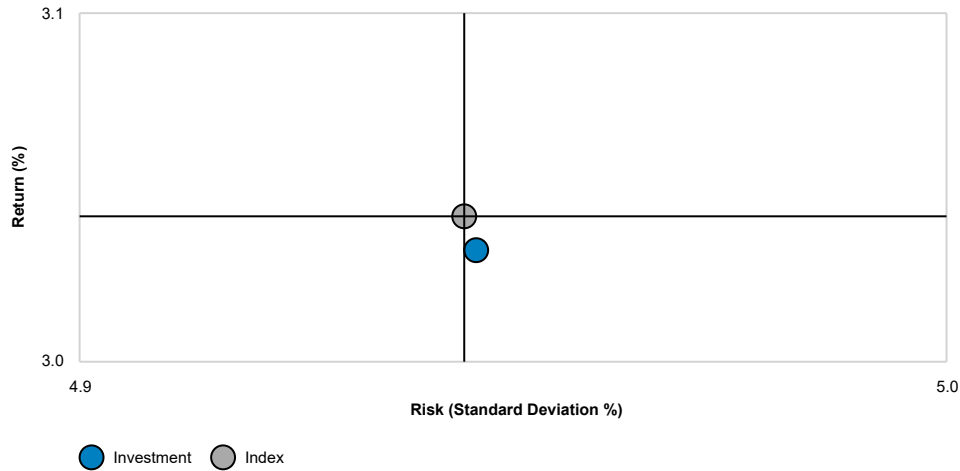
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.03	4.95	0.50	99.78	9	99.83	3
Index	3.04	4.94	0.50	100.00	9	100.00	3

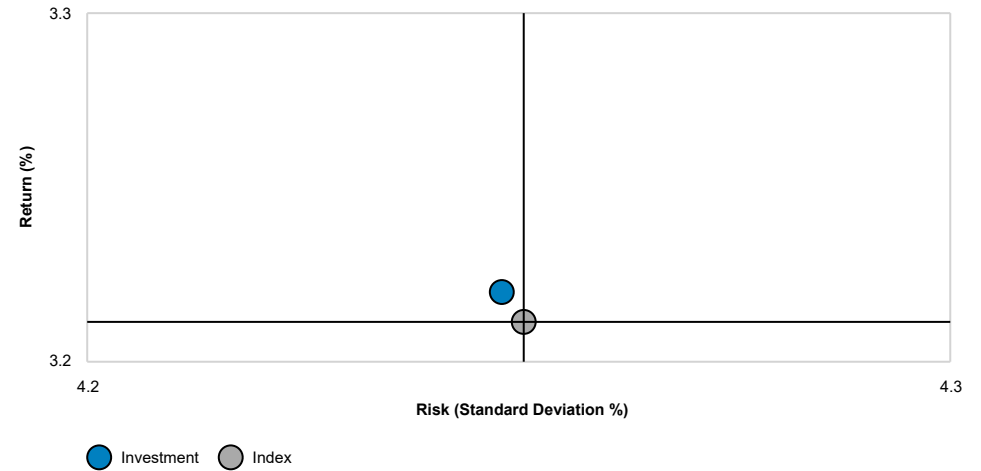
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.22	4.25	0.51	99.84	14	99.54	6
Index	3.21	4.25	0.51	100.00	14	100.00	6

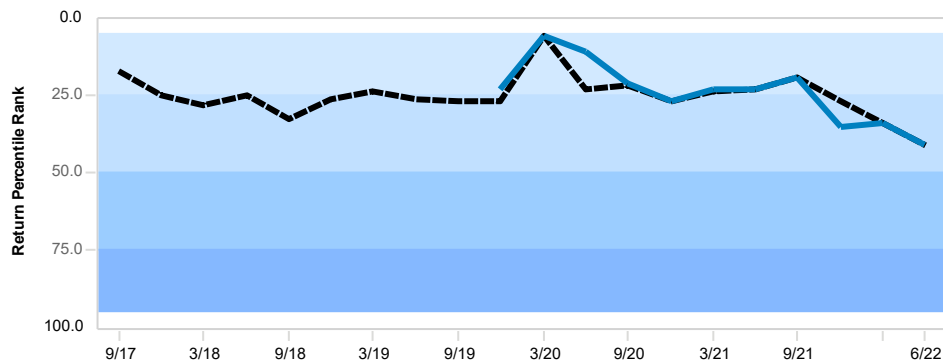
Risk and Return 3 Years



Risk and Return 5 Years

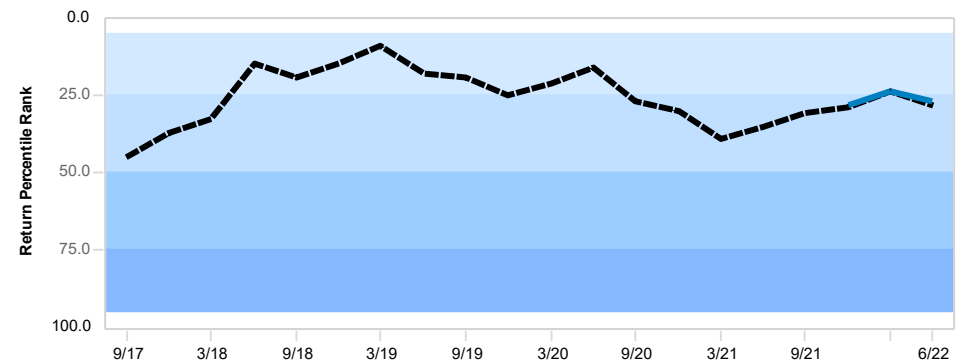


3 Year Rolling Percentile Rank IM U.S. TIPS (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	11	7 (64%)	4 (36%)	0 (0%)	0 (0%)
Index	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)

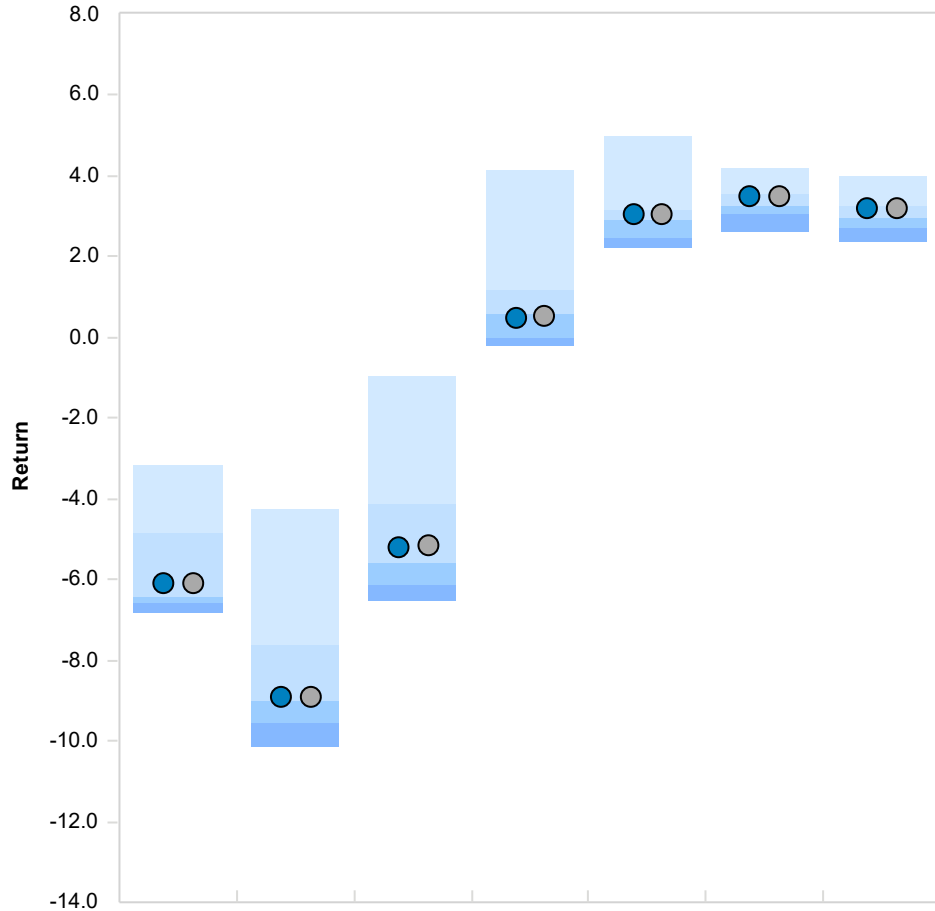
5 Year Rolling Percentile Rank IM U.S. TIPS (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	3	1 (33%)	2 (67%)	0 (0%)	0 (0%)
Index	20	10 (50%)	10 (50%)	0 (0%)	0 (0%)

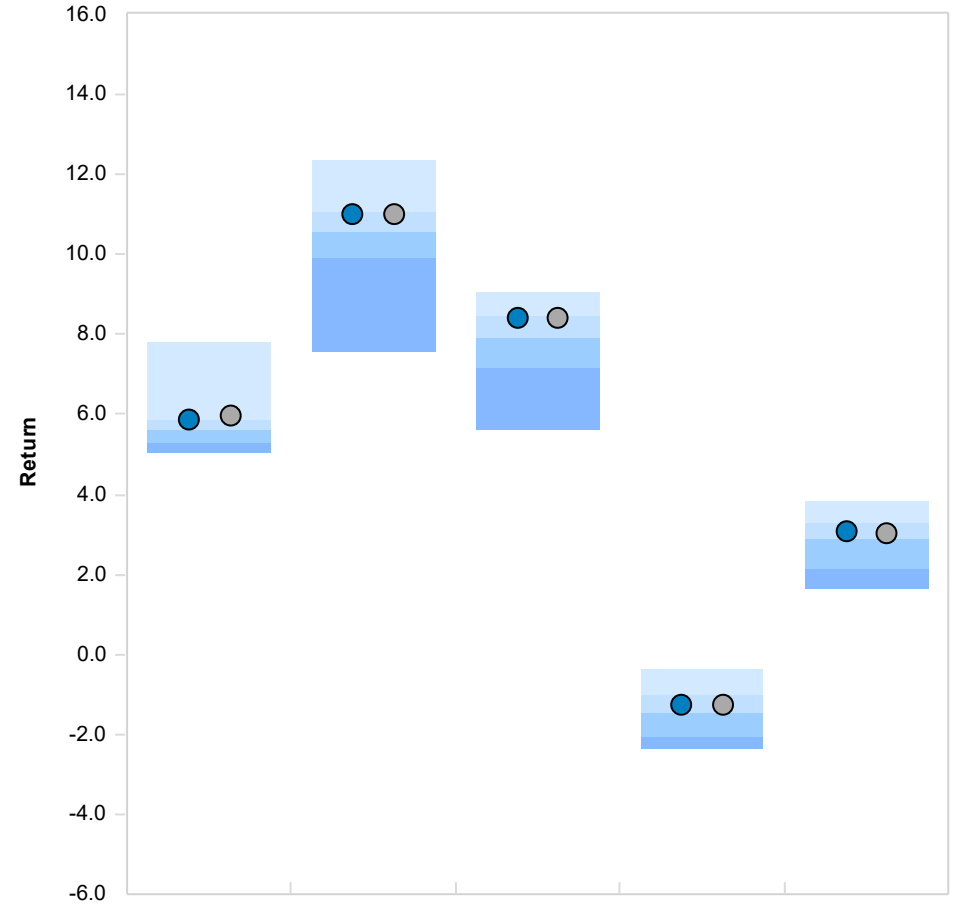


Peer Group Analysis - IM U.S. TIPS (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-6.10 (39)	-8.90 (40)	-5.18 (42)	0.48 (53)	3.03 (41)	3.48 (34)	3.22 (27)
● Index	-6.08 (38)	-8.92 (40)	-5.14 (41)	0.52 (52)	3.04 (41)	3.49 (34)	3.21 (28)
Median	-6.44	-9.00	-5.60	0.60	2.89	3.27	2.97

Peer Group Analysis - IM U.S. TIPS (SA+CF)



	2021	2020	2019	2018	2017
● Investment	5.87 (24)	11.02 (27)	8.43 (27)	-1.27 (37)	3.10 (39)
● Index	5.96 (20)	10.99 (29)	8.43 (27)	-1.26 (36)	3.01 (44)
Median	5.62	10.55	7.90	-1.46	2.86

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	-2.98 (51)	2.30 (24)	1.74 (18)	3.24 (29)	-1.48 (70)	1.60 (58)
Index	-3.02 (52)	2.36 (7)	1.75 (17)	3.25 (28)	-1.47 (69)	1.62 (42)
Median	-2.98	2.16	1.62	3.12	-1.36	1.62



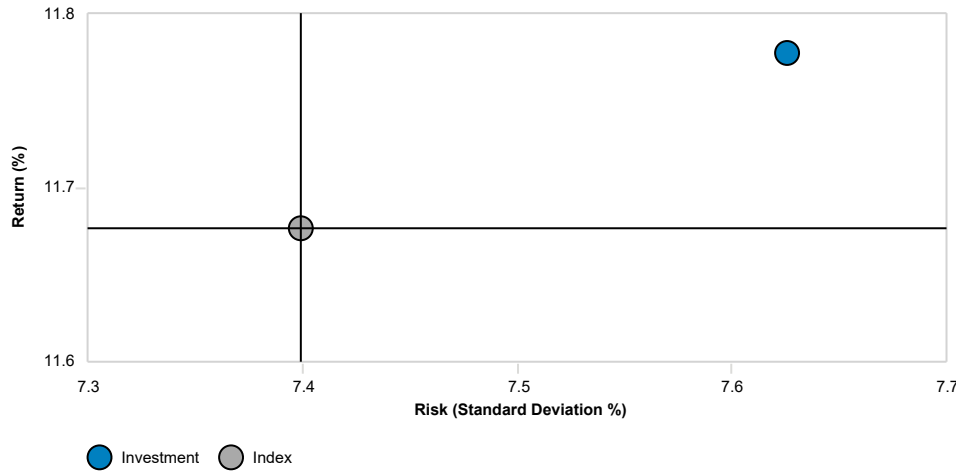
**Historical Statistics 3 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.78	7.63	1.41	101.17	11	105.82	1
Index	11.68	7.40	1.44	100.00	11	100.00	1

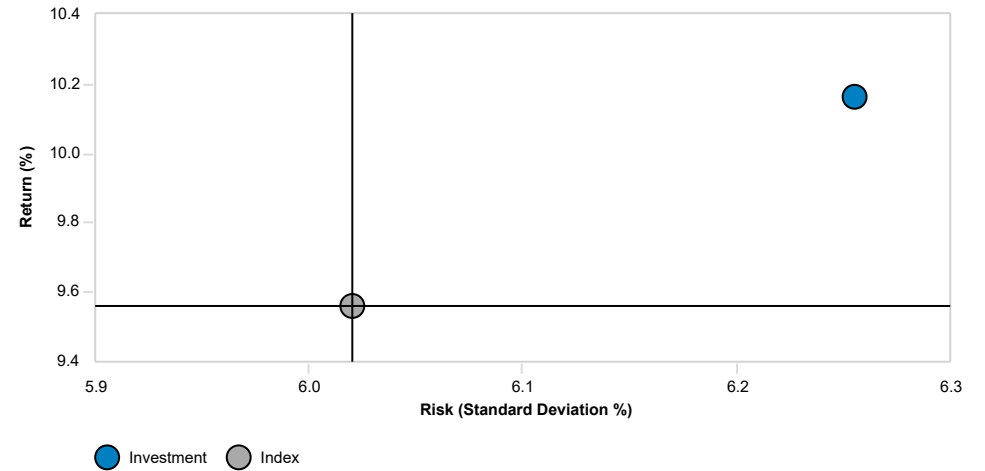
**Historical Statistics 5 Years**

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.17	6.26	1.40	106.07	19	105.82	1
Index	9.56	6.02	1.36	100.00	19	100.00	1

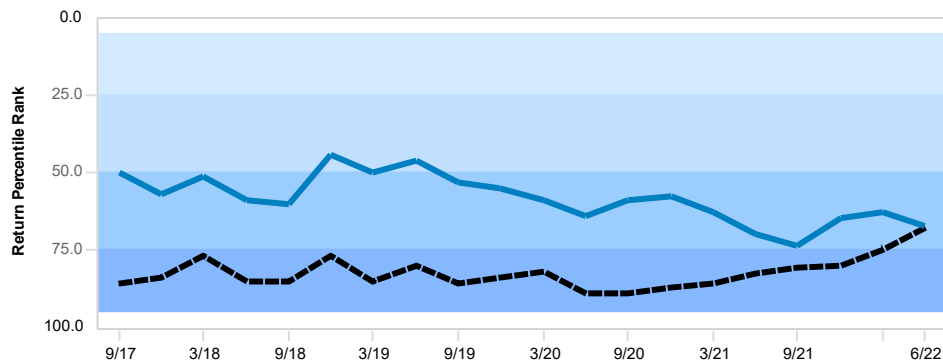
**Risk and Return 3 Years**



**Risk and Return 5 Years**

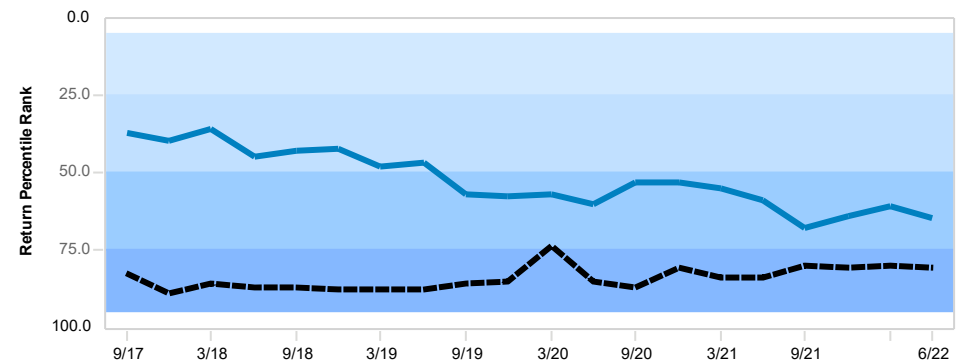


**3 Year Rolling Percentile Rank IM U.S. Private Real Estate (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	4 (20%)	16 (80%)	0 (0%)
Index	20	0 (0%)	0 (0%)	2 (10%)	18 (90%)

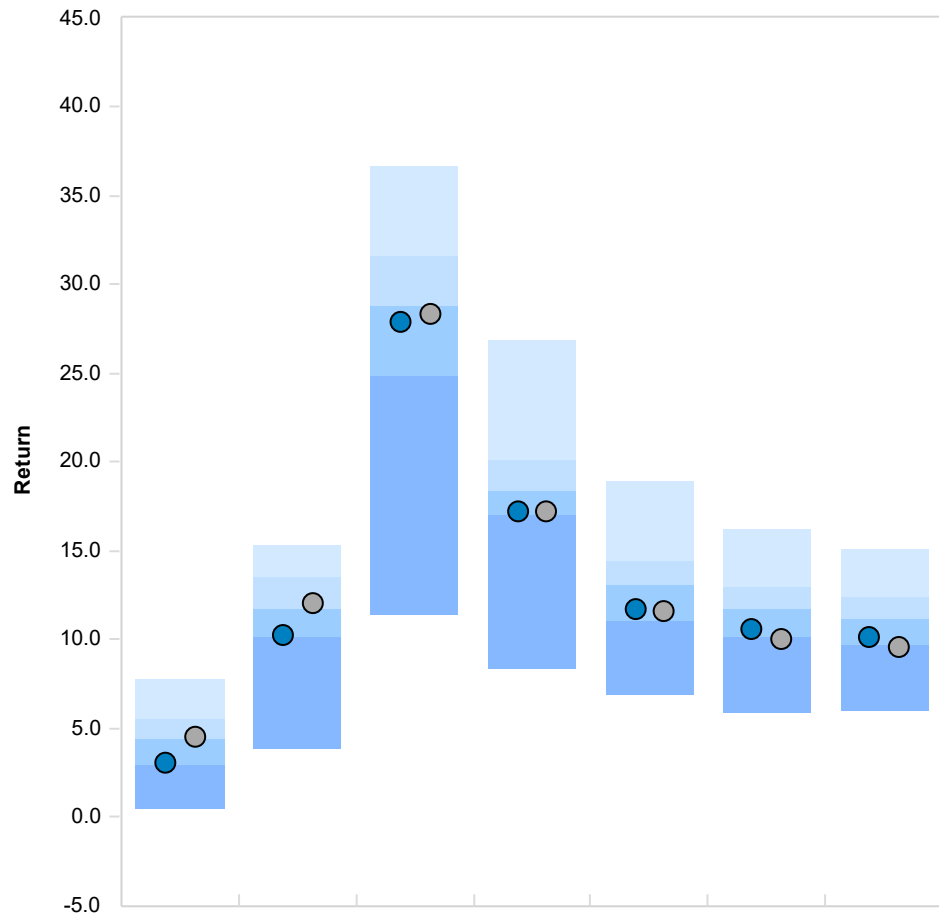
**5 Year Rolling Percentile Rank IM U.S. Private Real Estate (SA+CF)**



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	8 (40%)	12 (60%)	0 (0%)
Index	20	0 (0%)	0 (0%)	1 (5%)	19 (95%)

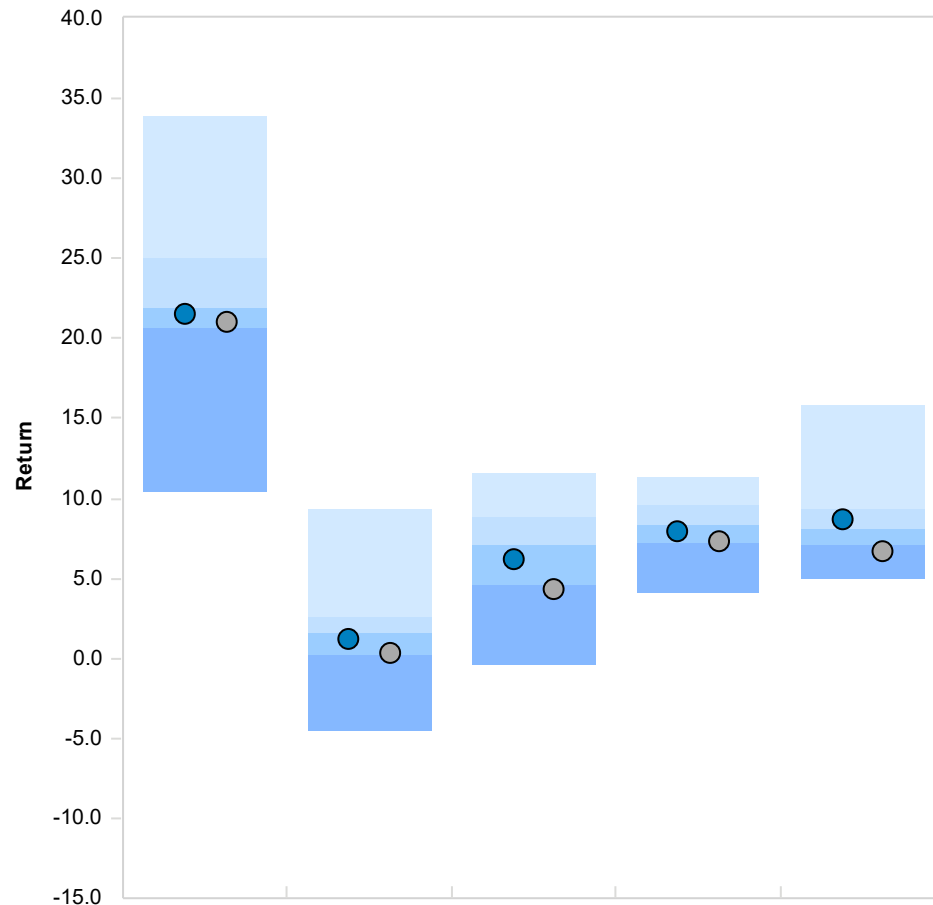


Peer Group Analysis - IM U.S. Private Real Estate (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	3.04 (74)	10.27 (72)	27.89 (62)	17.21 (66)	11.78 (67)	10.61 (63)	10.17 (65)
● Index	4.58 (47)	12.05 (44)	28.36 (61)	17.24 (64)	11.68 (68)	10.09 (79)	9.56 (81)
Median	4.40	11.71	28.87	18.42	13.12	11.73	11.23

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



	2021	2020	2019	2018	2017
● Investment	21.48 (61)	1.26 (63)	6.17 (70)	7.96 (57)	8.75 (41)
● Index	21.02 (65)	0.34 (75)	4.39 (79)	7.36 (74)	6.66 (79)
Median	21.86	1.58	7.02	8.27	8.08

Comparative Performance

	1 Qtr Ending Mar-2022	1 Qtr Ending Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020
Investment	7.01 (44)	9.60 (20)	5.83 (73)	2.78 (90)	1.91 (56)	1.47 (56)
Index	7.14 (36)	7.66 (45)	6.41 (49)	3.68 (74)	1.89 (56)	1.10 (71)
Median	6.75	7.57	6.33	4.17	2.10	1.63



**Private Equity Summary of Partnership**  
**Total Private Equity w Life Settlement Composite**  
As of June 30, 2022

**Private Equity Summary of Partnership**

Partnerships	Vintage Year	Capital Commitment \$	Market Value \$
<b>Total Private Equity w Life Settlement Composite</b>		<b>324,900,410</b>	<b>231,392,180</b>
Accolade Partners V	2015	3,000,000	6,665,372
Accolade Partners VI	2018	3,000,000	3,095,883
Adams Street 2003 U.S Fund	2003	13,733,000	341,050
Adams Street 2008 Global	2008	10,000,000	4,877,301
Adams Street 2009 Global	2009	5,000,000	3,391,118
Auldbrass Spec Opps II	2018	4,000,000	6,800,534
Birchmere Ventures IV	2012	525,000	47,430
BlackRock Multi-Alternative Opps	2016	3,000,000	2,308,557
Blackstone Tac Op I	2012	2,000,000	514,722
Blackstone Tac Op II	2015	3,000,000	798,980
Blackstone Tac Op III	2019	5,000,000	4,288,061
CCA Black	2015	7,500,000	7,369,115
CCA Blue	2013	3,800,000	-
CCA Green	2009	15,000,000	-
CCA Longevity Fund VI LP	2019	5,000,000	4,004,756
Commonfund Venture Partners XII	2018	3,000,000	5,178,432
Constitution Ironsides Direct Investment Fund IV	2016	3,000,000	2,768,463
Constitution Ironsides Opportunities Fund	2018	4,000,000	2,956,596
Constitution Ironsides Partnership Fund II	2011	6,000,000	1,874
Constitution Ironsides Partnership Fund III	2014	8,000,000	4,407,029
Crestline Opportunity Fund III	2016	4,000,000	2,844,531
Crestline Recovery II	2011	3,000,000	117,589
DCM Fund IV	2015	3,000,000	3,767,892
Draper Triangle II	2005	10,000,000	31,075
Draper Triangle III	2013	13,500,000	20,178,322
Emerald Advisors Fin Srv I	2018	2,000,000	1,746,114
Entrust Special Opportunities Fund III	2015	3,000,000	1,517,580
Entrust Special Opportunities Fund IV	2018	3,000,000	3,717,318
Farol Fund II	2020	4,000,000	5,724,317
Five Points III	2017	3,000,000	3,217,401
Glouston Private Equity Opportunities IV	2011	3,000,000	466,307
Goldman Sachs Private Equity Partners 2004	2005	10,000,000	366,704
Greenspring Early Stage I LP	2018	4,000,000	6,404,854
Greenspring Opportunities II-A	2013	3,000,000	1,930,795
Greenspring Opportunities III	2014	3,000,000	3,924,534
Greenspring Opportunities IV	2015	3,000,000	5,005,297
Greenspring Opportunities V	2018	3,000,000	5,175,151
Greenspring Secondaries I	2014	1,000,000	752,897
Greenspring Secondaries II	2016	2,000,000	1,602,132

*Data Sources:*  
Market Values - BNY Mellon and Investment Managers  
Commitments - Asset Strategies



**Private Equity Summary of Partnership  
Total Private Equity w Life Settlement Composite  
As of June 30, 2022**

Partnerships	Vintage Year	Capital Commitment \$	Market Value \$
iNetworks INOF II	2013	-	6,731,412
iNetworks Opportunity Fund	2013	11,000,000	15,173,088
iNetworks Opportunity Fund II	2020	12,500,000	7,698,576
JMI Equity Fund IX-A	2019	3,000,000	4,890,756
Mellon PAM Fund V	2005	10,000,000	50,833
Mesirow Partners Fund IV	2006	17,000,000	4,110,358
North Haven Capital Partners VI	2015	3,000,000	3,052,601
North Haven Senior Loan Fund	2018	4,000,000	2,661,366
Pharos Capital Partners III	2013	3,000,000	3,018,394
PLSG Accelerator Fund	2011	250,000	84,622
ValStone Partners IV	2008	20,000,000	1
ValStone Partners V	2013	20,000,000	22,079,296
ValStone Partners VI	2017	20,000,000	18,948,586
Valstone Senior Living	2018	13,092,410	14,586,208

*Data Sources:  
Market Values - BNY Mellon and Investment Managers  
Commitments - Asset Strategies*



<b>Historical Hybrid Composition</b>			
<b>Allocation Mandate</b>	<b>Weight (%)</b>	<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Jan-1979</b>		<b>Jun-2010</b>	
Russell 3000 Index	65.00	FT Wilshire 5000 Total Market TR Index	20.00
Blmbg. U.S. Aggregate Index	35.00	MSCI AC World ex USA (Net)	25.00
<b>Mar-2007</b>		Blmbg. U.S. Aggregate Index	14.00
FT Wilshire 5000 Total Market TR Index	45.00	FTSE High Yield Market Capped Index	10.00
MSCI EAFE (Net) Index	10.00	Bloomberg U.S. TIPS Index	6.00
Blmbg. U.S. Aggregate Index	25.00	Bloomberg Commodity Index Total Return	5.00
Bloomberg Commodity Index Total Return	5.00	NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	10.00
NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	5.00	Private Equity Composite	10.00
Private Equity Composite	5.00	<b>Mar-2013</b>	
90 Day U.S. Treasury Bill	5.00	FT Wilshire 5000 Total Market TR Index	16.10
<b>Sep-2008</b>		MSCI AC World ex USA (Net)	18.90
FT Wilshire 5000 Total Market TR Index	45.00	Blmbg. U.S. Aggregate Index	10.00
MSCI AC World ex USA (Net)	10.00	FTSE High Yield Market Capped Index	12.00
Blmbg. U.S. Aggregate Index	25.00	Bloomberg U.S. TIPS Index	5.00
Bloomberg Commodity Index Total Return	5.00	Bloomberg Commodity Index Total Return	8.00
NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	5.00	NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	10.00
Private Equity Composite	5.00	Private Equity Composite	20.00
90 Day U.S. Treasury Bill	5.00	<b>Apr-2016</b>	
<b>Dec-2008</b>		FT Wilshire 5000 Total Market TR Index	15.00
FT Wilshire 5000 Total Market TR Index	35.00	MSCI AC World ex USA (Net)	15.00
MSCI AC World ex USA (Net)	15.00	Blmbg. U.S. Aggregate Index	10.00
Blmbg. U.S. Aggregate Index	20.00	FTSE High Yield Market Capped Index	12.00
FTSE High Yield Market Capped Index	5.00	Bloomberg U.S. TIPS Index	8.00
Bloomberg U.S. TIPS Index	5.00	Bloomberg Commodity Index Total Return	2.50
Bloomberg Commodity Index Total Return	5.00	NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	10.00
NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	7.50	Private Equity Composite	22.50
Private Equity Composite	5.00	Alerian MLP Index	5.00
90 Day U.S. Treasury Bill	2.50	<b>Jan-2019</b>	
<b>Sep-2009</b>		FT Wilshire 5000 Total Market TR Index	16.50
FT Wilshire 5000 Total Market TR Index	30.00	MSCI AC World ex USA (Net)	16.50
MSCI AC World ex USA (Net)	20.00	Blmbg. U.S. Aggregate Index	12.50
Blmbg. U.S. Aggregate Index	15.00	FTSE High Yield Market Capped Index	12.00
FTSE High Yield Market Capped Index	10.00	Bloomberg U.S. TIPS Index	5.00
Bloomberg U.S. TIPS Index	7.50	NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	12.50
Bloomberg Commodity Index Total Return	2.50	Private Equity Composite	20.00
NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	10.00	Alerian MLP Index	5.00
Private Equity Composite	5.00		





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Allocation Mandate	Weight (%)
<b>Mar-2021</b>	
Russell 3000 Index	16.50
MSCI AC World ex USA (Net)	16.50
Blmbg. U.S. Aggregate Index	12.50
FTSE High Yield Market Capped Index	12.00
Bloomberg U.S. TIPS Index	5.00
NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net) Monthly	12.50
Liquid Policy Benchmark	5.00
Total Private Equity w Life Settlement Composite	20.00



**Historical Hybrid Composition**

**Allocation Mandate**

**Weight (%)**

**Nov-1993**

FT Wilshire 5000 Total Market TR Index

100.00

**Mar-2021**

Russell 3000 Index

100.00



**Historical Hybrid Composition**

<b>Allocation Mandate</b>	<b>Weight (%)</b>
<b>Dec-2000</b>	
MSCI EAFE (Net) Index	100.00
<b>Sep-2008</b>	
MSCI AC World ex USA (Net)	100.00
<b>Mar-2015</b>	
MSCI AC World ex USA IMI (Net)	100.00
<b>Mar-2021</b>	
MSCI AC World ex USA (Net)	100.00



**Historical Hybrid Composition**

**Allocation Mandate**

**Weight (%)**

**Mar-2021**

S&P 500 Index	30.00
S&P MidCap 400 Index	2.00
S&P SmallCap 600 Index	10.50
MSCI EAFE IMI (Net)	16.90
MSCI Emerging Markets IMI (Net)	6.10
Blmbg. U.S. Aggregate Index	25.00
ICE BofAML 1-3 Year Treasury	4.50
FTSE NAREIT Equity REIT Index	5.00



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Domestic Equity</b>				
SSgA S&P 500 Index	0.02	70,812,454	14,162	0.02 % of Assets
Fragasso Large Core (EMWO)	0.62	5,921,990	36,735	1.00 % of First \$0 M 0.95 % of Next \$0 M 0.75 % of Next \$1 M 0.65 % of Next \$2 M 0.55 % of Next \$3 M 0.50 % of Next \$3 M 0.25 % of Next \$3 M 0.20 % Thereafter
Twin Capital Enhanced Equity	0.35	34,978,827	122,426	0.35 % of Assets
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	0.75	1,332,487	9,994	0.75 % of Assets
Earnest Small Value	0.92	14,308,378	132,313	1.00 % of First \$10 M 0.75 % of Next \$15 M 0.60 % of Next \$25 M 0.50 % Thereafter
Emerald Advisors Small Cap	0.78	11,396,825	88,381	1.00 % of First \$2 M 0.75 % of Next \$8 M 0.60 % Thereafter
Emerald Advisors All Cap (EMWO)	0.60	4,858,103	29,149	0.60 % of Assets
Ethos (EMWO)	0.47	1,589,693	7,472	0.47 % of Assets
CIM Small Cap (EMWO)	0.75	4,573,253	34,299	0.75 % of First \$5 M 0.40 % of Next \$10 M 0.25 % Thereafter
Cookson Peirce (EMWO)	0.50	1,151,906	5,760	0.50 % of Assets
<b>International Equity</b>				
SSgA ACWI ex US	0.07	32,304,036	22,613	0.07 % of Assets
Baillie Gifford Intl Equity	0.61	49,321,563	300,862	0.61 % of Assets
FIAM Select International Equity	0.33	27,189,741	90,912	0.34 % of First \$25 M 0.27 % of Next \$25 M 0.24 % of Next \$150 M 0.20 % Thereafter
Segall, Bryant & Hamill	0.65	30,144,861	195,797	0.75 % of First \$15 M 0.55 % of Next \$20 M 0.45 % of Next \$30 M 0.35 % Thereafter
<b>Global Equity</b>				
Columbus Macro (EMWO)	0.70	62	-	0.70 % of Assets



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
<b>Core Fixed w Israel Bonds</b>				
C S McKee	0.25	39,779,032	99,448	0.25 % of Assets
Federated Core Broad	0.28	36,554,326	103,886	0.30 % of First \$25 M 0.25 % of Next \$25 M 0.20 % Thereafter
CIM Investment Mgmt	0.25	26,946,688	67,367	0.25 % of Assets
StoneRidge Partners (EMWO)	0.30	5,117,385	15,352	0.30 % of Assets
Gridiron Capital Fixed Income (EMWO)	0.65	4,546,930	29,555	0.65 % of Assets
FNB (EMWO)	0.35	2,648,686	9,270	0.35 % of First \$5 M 0.30 % of Next \$5 M 0.25 % of Next \$10 M 0.20 % Thereafter
Israel Bonds	0.20	7,358,433	14,717	0.20 % of Assets
<b>High Yield Fixed</b>				
Oaktree High Yield	0.50	60,420,606	302,103	0.50 % of Assets
Federated High Yield	0.45	47,913,985	215,613	0.45 % of Assets
Sound Point	1.00	3,366,058	33,661	1.00 % of Assets
<b>TIPS Fixed</b>				
MCM TIPS	0.03	14,191,061	4,257	0.03 % of First \$50 M 0.02 % of Next \$50 M 0.01 % Thereafter
<b>Real Estate</b>				
Morgan Stanley Prime Property Fund	0.84	97,917,742	822,509	0.84 % of Assets
Oaktree Real Estate^	1.83	6,421,511	117,514	1.83 % of Assets
Washington Alliance (EMWO)	1.50	13,136,689	197,050	1.50 % of Assets
Washington Alliance II (EMWO)	1.50	2,140,077	32,101	1.50 % of Assets
Siguler Guff Distressed RE^	0.96	7,958,238	76,399	0.96 % of Assets
ERECT Fund II	1.35	11,411,014	154,049	1.35 % of Assets
<b>Hedge Fund</b>				
Gridiron Capital Multi-Asset (EMWO)	0.75	3,083,114	23,123	Performance Based 0.75 and 10.00
<b>Liquid Policy Portfolio</b>				
BlackRock Liquidity iShares Public Pension Fund*	0.08	21,215,370	16,972	0.08 % of Assets
<b>Investments ex Private Equity</b>		<b>702,011,124</b>	<b>3,425,820</b>	

^ Due to limitations in reporting as a result of the variable and commitment based fee structure, AndCo calculated an approximation for this noted fee schedule. This figure demonstrates the "effective" basis point charge, computed based on the most recently available assessed quarterly fee + expenses, divided by the ending market value. The actual fee schedule can be found in Appendix A.  
\* Estimated fee based on average of underlying funds



**Allegheny County Employees' Retirement System**  
**2020 Private Investment Management Fee Summary**  
**June 30, 2021**

**\*\*All fee information provided by Asset Strategies**

	Commitment Amount \$	2020 Mgmt Fees \$
<b>Total Private Equity w Life Settlement Composite</b>	<b>324,900,410.00</b>	<b>2,674,986.40</b>
Accolade Partners V	3,000,000.00	15,369.00
Accolade Partners VI	3,000,000.00	-
Adams Street 2003 U.S. Fund	13,733,000.00	-
Adams Street 2008 Global	10,000,000.00	41,884.00
Adams Street 2009 Global	5,000,000.00	26,463.00
Auldbrass Spec Opps II	4,000,000.00	50,000.00
Birchmere Ventures IV	525,000.00	3,800.00
Blackrock Multi-Alternative Opps	3,000,000.00	14,252.70
Blackstone Tac Op I	2,000,000.00	9,960.00
Blackstone Tac Op II	3,000,000.00	21,306.00
Blackstone Tac Op III	5,000,000.00	72,708.00
CCA Black	7,500,000.00	166,543.00
CCA Blue	3,800,000.00	51,149.00
CCA Green	15,000,000.00	(186,372.00)
CCA Longevity Fund VI LP	5,000,000.00	62,500.00
Commonfund Venture Partners XII*	3,000,000.00	21,000.00
Constitution Ironsides Direct Investment Fund IV	3,000,000.00	13,351.78
Constitution Ironsides Opportunities Fund	4,000,000.00	-
Constitution Ironsides Partnership Fund II	6,000,000.00	-
Constitution Ironsides Partnership Fund III	8,000,000.00	32,794.03
Crestline Opportunity Fund III	4,000,000.00	45,703.59
Crestline Recovery II	3,000,000.00	2,455.00
DCM Fund IV	3,000,000.00	19,853.00
Draper Triangle II	10,000,000.00	-
Draper Triangle III	13,500,000.00	209,629.00
Emerald Advisors Fin Srv I	2,000,000.00	30,000.00
Entrust Special Opportunities Fund III	3,000,000.00	16,835.00
Entrust Special Opportunities Fund IV	3,000,000.00	30,670.00
Farol Fund II	4,000,000.00	91,632.71
Five Points III	3,000,000.00	30,000.00
Glouston Private Equity Opportunities IV	3,000,000.00	16,410.59
Goldman Sachs Private Equity Partners 2004	10,000,000.00	5,179.00
Greenspring Early Stage I LP	4,000,000.00	9,868.00
Greenspring Opportunities II-A	3,000,000.00	58,200.00
Greenspring Opportunities III	3,000,000.00	54,106.00
Greenspring Opportunities IV	3,000,000.00	54,723.00
Greenspring Opportunities V	3,000,000.00	50,961.00
Greenspring Secondaries I	1,000,000.00	7,500.00
Greenspring Secondaries II	2,000,000.00	1,500.00



**\*\*All fee information provided by Asset Strategies**

	Commitment Amount \$	2020 Mgmt Fees \$
iNetworks INOF II	-	89,932.00
iNetworks Opportunity Fund	11,000,000.00	178,200.00
iNetworks Opportunity Fund II	12,500,000.00	250,000.00
JMI Equity Fund IX-A	3,000,000.00	36,522.00
Mellon PAM Fund V	10,000,000.00	25,000.00
Mesirow Partners Fund IV	17,000,000.00	78,860.00
North Haven Capital Partners VI	3,000,000.00	48,574.00
North Haven Senior Loan Fund	4,000,000.00	30,551.00
Pharos Capital Partners III	3,000,000.00	37,136.00
PLSG Accelerator Fund	250,000.00	-
Valstone Partners IV	20,000,000.00	-
Valstone Partners V	20,000,000.00	300,000.00
Valstone Partners VI	20,000,000.00	300,000.00
Valstone Senior Living	13,092,410.00	148,277.00

*\*Commonfund Ven XII management fees for 2020 estimate based on Committed Amount and fee percent outlined in fund documents*





## Oaktree Real Estate Opportunities VI LP Fee Calculation

The annual Management Fee shall be an amount equal to the sum of the amounts determined with respect to each Limited Partner as follows: (a) prior to the end of the Investment Period, the product of the Management Fee Percentage attributable to such Limited Partner's Capital Commitment and the Capital Commitment of such Limited Partner and (b) from and after the day following the end of the Investment Period, the product of the Management Fee Percentage attributable to such Limited Partner's Capital Commitment and the lesser of (i) such Limited Partner's allocable portion of the Aggregate Contributed Capital and (ii) such Limited Partner's allocable portion of the cost basis of the Permitted Investments held by the Fund as of the end of the next-to-last month of the immediately preceding calendar quarter.

## Siguler Guff Distressed Real Estate Opportunities Fund II, LP Fee Calculation

A management fee shall be payable with respect to each Limited Partner by the Partnership to the Investment Manager (the "Management Fee") quarterly in arrears on the last day of each fiscal quarter. Up to and including the end of the Direct Investment Commitment Period or, if earlier, the date on which pursuant to Section 7.03(b) the Partners and Parallel Company Partners have voted to require the General Partner to cease making both Direct Investments and additional commitments to Funds (the "Investment Termination Date"), the Management Fee, for each Limited Partner, shall be payable at that Limited Partner's Blended Rate multiplied by the aggregate amount of such Limited Partner's Capital Commitment. From and after the end of the Direct Investment Commitment Period or, if earlier, the Investment Termination Date, the Management Fee, for each Limited Partner, shall be payable at that Limited Partner's Applicable Percentage (as hereinafter defined) per annum multiplied by the aggregate amount of such Limited Partner's Capital Commitment. The "Blended Rate" shall be a percentage of a Limited Partner's Capital Commitment calculated by combining (x) one percent (1%) per annum on the first \$10,000,000 of such Limited Partner's Capital Commitment, (y) eighty-five one hundredths of one percent (0.85%) per annum on the next \$40,000,000 of such Limited Partner's Capital Commitment and (z) five tenths of one percent (0.50%) per annum on such Limited Partner's remaining Capital Commitment. The "Applicable Percentage" shall represent an amount equal to eighty percent (80%) of the Blended Rate used to calculate the Management Fee for the preceding year. For example, in the first year following the termination of the Direct Investment Commitment Period or the Investment Termination Date, as the case may be, the Applicable Percentage with respect to Limited Partners with Capital Commitments less than or equal to \$10,000,000 (and therefore with Blended Rates of 1%) shall be 0.80% (80% of 1%), and for the following year, the Applicable Percentage shall be 0.64% (80% of 0.80%).



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<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.

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