

Investment Performance Review
Period Ending March 31, 2022

Retirement Board of Allegheny County



1st Quarter 2022 Market Environment



The Economy

- The global economy faced headwinds as Russia invaded Ukraine in February. Despite their small percentage of the global GDP, both Russia and Ukraine play significant roles in the global economy. Russia provides most of Europe's energy supplies and combined, both countries account for a large percentage of food supplies.
- Prior to the crisis in Ukraine, the global and US economies were already expected to grow at a slower rate in the 1st quarter. For the 4th quarter 2021, the US GDP grew at an annual rate of 6.9%. Estimates for the 1st quarter 2022 vary significantly, ranging between 0.5% and 2.0%.
- The US labor market remained a source of strength during the 1st quarter with the unemployment rate falling to 3.6% in March. The pace of job growth accelerated during the quarter with a three-month average of roughly +562,000. Importantly, the number of workers re-entering the workforce increased during the quarter with strong wage growth as the likely catalyst.
- The US Federal Reserve Bank (the Fed) began the process of normalizing interest rates by raising the Fed Funds rate by 0.25%. Additionally, the Fed signaled it was ready to begin the process of shrinking its balance sheet by not reinvesting up to \$95 billion of maturing bonds into new securities each month. This process is referred to as "quantitative tightening" and is meant to drain liquidity from the economy with the goal of slowing inflation.

Equity (Domestic and International)

- US equities declined during the 1st quarter as concerns regarding the conflict in Ukraine and the potential for a slowing global economy acted as headwinds. Large cap value was the best performing domestic segment of the equity market relative to other US market capitalizations and styles during the period while small cap growth performed the worst.
- International stocks also struggled during the 1st quarter. The primary driver of performance was the conflict in Ukraine which significantly affected western Europe and emerging markets. Another contributor to poor performance was the continued strength of the US dollar, which rose against both the Euro and Yen developed market currencies and most emerging market currencies during the period. Finally, China was negatively impacted by a rise in Covid-19 infections which resulted in new restrictions in Shanghai.

Fixed Income

- Continued concerns about rising inflation, combined with the Fed beginning to raise interest rates acted as headwinds for fixed income performance during the quarter. US interest rates moved significantly higher during the quarter with the US 10-Year Treasury bond rising 83 basis points to close at 2.34%.
- Performance across most bond market sectors was negative during the quarter, with US high yield corporate bonds and US Treasury Inflation-Protected Securities (TIPS) down the least.
- The combination of higher coupons and a shorter maturity profile relative to high quality government bonds was the primary driver of the relative outperformance of high yield bonds during the period.
- TIPS continued their strong relative performance against all other bond market sectors during the quarter. Investors' expectations of higher future US inflation remained strong as inflation remained well above the Fed's stated 2% long-term target average.

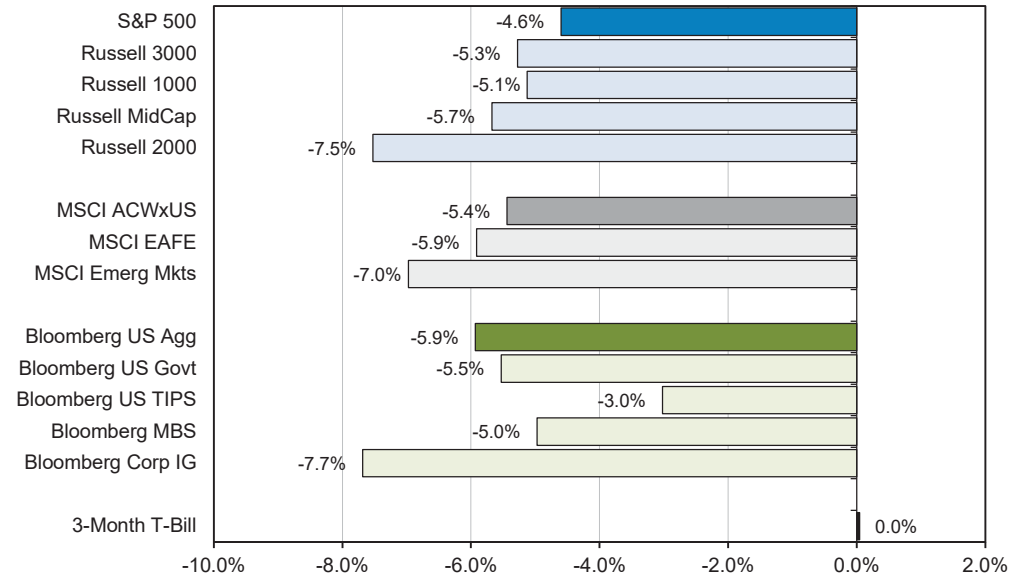
Market Themes

- The tone of global central bank monetary policy shifted during the quarter as the Fed and the Bank of England both raised interest rates during the period. Additionally, the European Central Bank announced it would begin tightening monetary policy by slowing its bond purchases.
- The crisis in Ukraine will likely be a drag on global economic growth for the foreseeable future. Restrictions on Russian energy exports, especially to western Europe, will likely result in a material slowdown of those economies as a result of higher prices.
- US equity markets experienced their first down quarter since the onset of the pandemic in the 1st quarter of 2020. Growth-oriented stocks underperformed value stocks as investors' concerns about future economic growth increased. Historically, value stocks have outperformed growth stocks during economic slowdowns marked by recession.
- Interest rates rose across the Treasury yield curve during the quarter in anticipation of the Fed raising interest rates. As a result of their maturity profile, longer-dated bonds significantly underperformed shorter-dated bonds despite yields rising only modestly in comparison. Lower quality corporate bonds outperformed given their higher coupons and shorter maturity profiles despite concerns about widening credit spreads as economic conditions deteriorate.



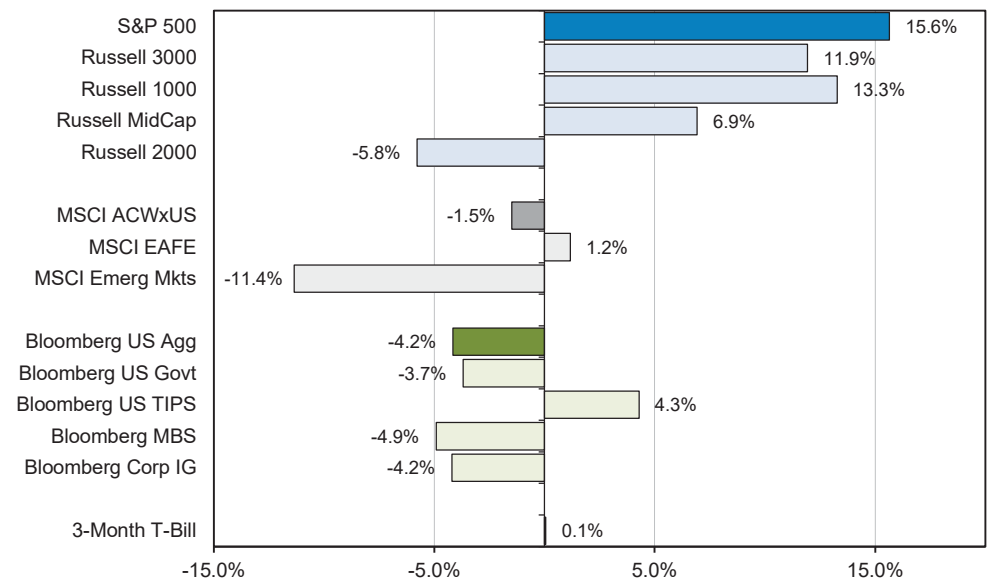
- Broad US equity markets experienced weak, negative returns during the 1st quarter of 2022. A variety of factors contributed to performance including elevated inflation, rising interest rate expectations, geopolitical events in Ukraine, and concerns related to slower economic growth. For the period, the S&P 500 large cap benchmark returned -4.6%, compared to -5.7% for mid-cap and -7.5% for small cap indices.
- Developed markets international equities also suffered negative results for the 1st quarter. Europe was negatively impacted by the crisis in Ukraine, rising energy costs, and continued rising inflation. Emerging markets were also negatively impacted by Russia's invasion of Ukraine. Emerging markets were also impacted by the rise of Covid-19 cases in China and resulting restrictions. During the period, the MSCI EAFE Index returned -5.9% while the MSCI Emerging Markets Index declined by -7.0%
- For the quarter, performance of the bond market was broadly negative due to increasing inflation and expectations that global central banks would begin the process of raising interest rates. The Bloomberg (BB) US Aggregate Index returned -5.9%, for the period while Investment Grade Corporate bonds posted a return of -7.7%. The best performing sector on a relative basis was US TIPS which declined by -3.0%.

Quarter Performance



- Despite the recent poor performance, developed equity markets posted strong returns over the trailing 1-year period. The primary drivers of return during the period were economic growth and an accommodative monetary policy support from global central banks. The S&P 500 large cap stock index led equity market performance for the year with a return of 15.6%. The outlier was the Russell 2000 small cap index which declined by -5.8% for the year.
- Over the trailing 1-year period performance across international markets diverged with the developed market MSCI EAFE Index returning 1.2% while the MSCI Emerging Markets Index fell by -11.4%. While economic growth improved throughout the year, emerging markets were negatively impacted by geopolitical events related to Russia, Ukraine, and China.
- Bond market returns disappointed over the trailing 1-year period due to rising inflation and the expectation of multiple interest rates increases. TIPS were the lone bright spot in the bond market with the TIPS Index returning 4.3% for the year.

1-Year Performance

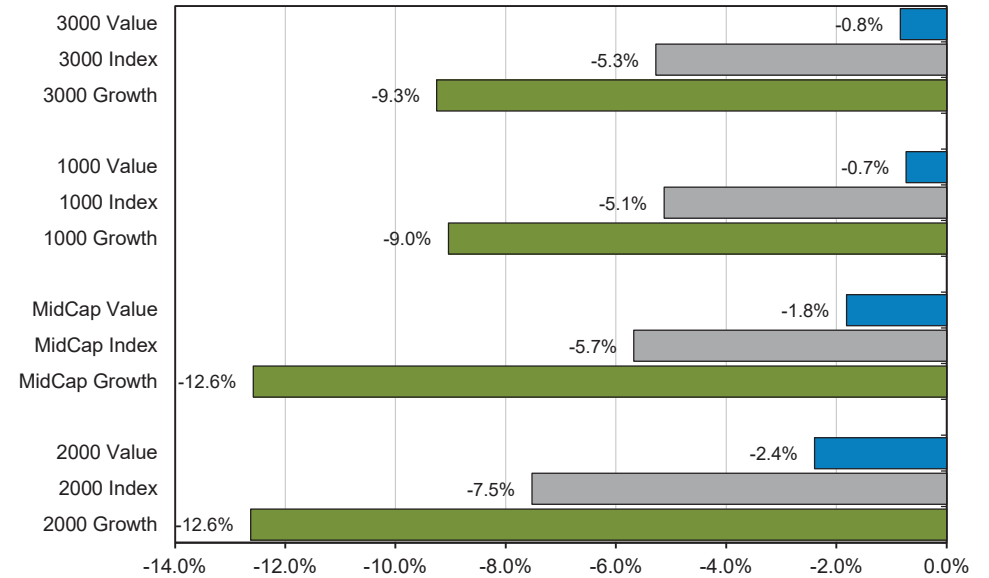


Source: Investment Metrics



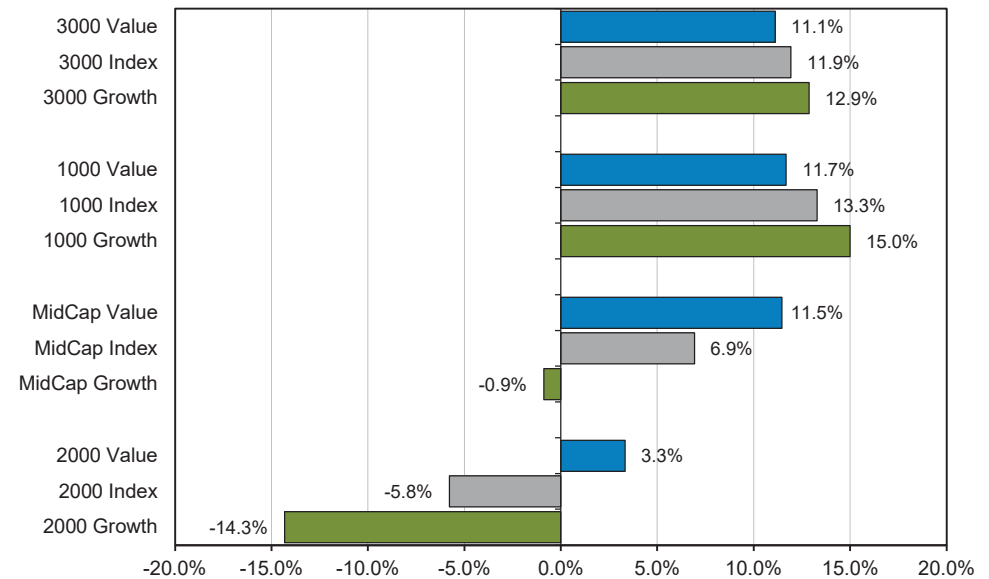
- Momentum shifted during the 1st quarter as each broad US equity benchmark posted negative results across both the style and market capitalization spectrums. Large cap stocks continued their leadership, followed by mid and small cap issues. The Russell 1000 Index declined by -5.1% for the quarter while the Russell Mid Cap Index and the Russell 2000 Index fell by -5.7% and -7.5%, respectively.
- Performance across styles and market capitalizations was disparate during the quarter. Large, Mid, Small cap value stocks all sizably outpaced their growth counterparts. For the period, the Russell 1000 Value Index was the best relative performing style index, posting a return of -0.7%. Mid cap and small cap growth stocks were the laggards during the period with both the Mid Cap Growth Index and Russell 2000 Growth Index returning a weak -12.6%.

Quarter Performance - Russell Style Series



- Performance across most market capitalizations and styles was positive over the trailing 1-year period. Much like the 1st quarter, large cap stocks outperformed mid and small cap stocks for the year. The Russell 1000 Index return of 13.3% for the year, significantly outperformed both its mid and small cap growth index counterparts. The outlier during the period was the Russell 2000 Index which returned -5.8%.
- While the dispersion across large cap styles was relatively narrow for the year, there was wide performance dispersion across mid and small style-based indexes. Within mid and small cap benchmark results, value dominated growth by double digits. The Russell Mid Cap Value Index returned 11.5% while the Russell 2000 Value Index returned 3.3% for the period. In comparison, the Russell Mid Cap Growth Index returned -0.9%, while the Russell 2000 Growth Index declined by -14.3%.

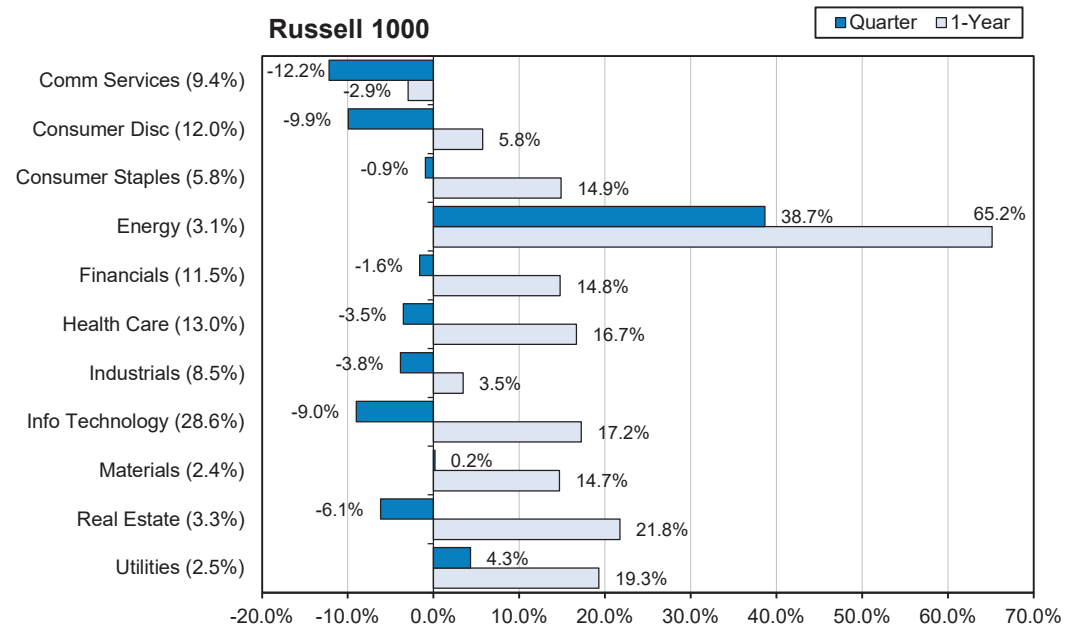
1-Year Performance - Russell Style Series



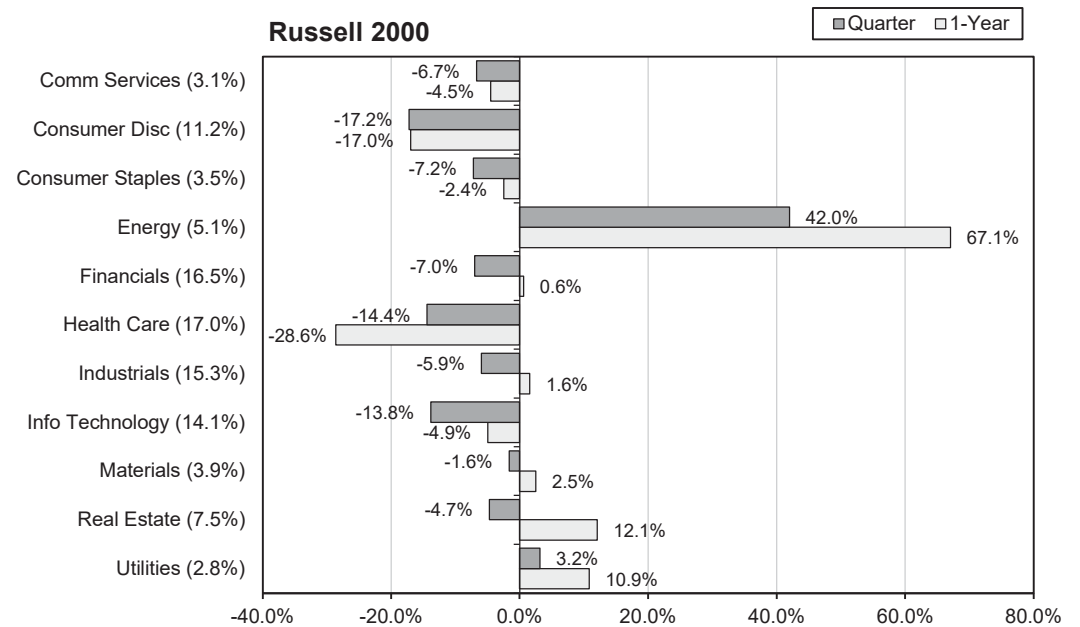
Source: Investment Metrics



- Economic sector performance was negative across eight of the eleven large cap economic sectors for the 1st quarter. However, the three positive sectors represent less than 10% of the index. Four additional sectors outpaced the return of the broad index on a relative basis during the period.
- Energy (38.7%), utilities (4.3%), and materials (0.2%) were the best performing sectors for the quarter. Energy continued its relative outperformance during the quarter as the price of oil remained elevated. Economically sensitive sectors such as communication services (-12.2%), consumer discretionary (-9.9%), and information technology (-9.0%) significantly underperformed the broader index for the quarter.
- For the full year, eight sectors exceeded the return of the broad large cap benchmark: energy (65.2%), real estate (21.8%), utilities (19.3%), information technology (17.2%), health care (16.7%), consumer staples (14.9%), financials (14.8%), and materials (14.7%). The weakest economic sector performance in the Russell 1000 for the year was communication services, which was the lone sector to deliver negative returns (-2.9%).



- Small cap sector performance was also mixed with two economic sectors posting positive performance and an additional five outpacing the return of the broader Russell 2000 Index (-7.5%) on a relative basis. Energy (42.0%) was the best performing sector for the period. Utilities (3.2%) was the only other sector posting a positive return for the quarter.
- For the trailing 1-year period, nine of the eleven sectors outpaced the broad benchmark's return. Not surprisingly, sector performance was led by energy (67.1%), real estate (12.1%), utilities (10.9%), materials (2.5%), industrials (1.6%), and financials (0.6%). Consumer staples (-2.4%), communication services (-4.5%), and information technology (-4.9%) outpaced the core benchmark on a relative basis but were negative in absolute terms. The weakest sector over the full year was health care which fell -28.6%.



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



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

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.38%	-1.5%	43.8%	Information Technology
Microsoft Corp	5.50%	-8.1%	31.8%	Information Technology
Amazon.com Inc	3.35%	-2.2%	5.4%	Consumer Discretionary
Tesla Inc	2.12%	2.0%	61.3%	Consumer Discretionary
Alphabet Inc Class A	1.98%	-4.0%	34.9%	Communication Services
Alphabet Inc Class C	1.83%	-3.5%	35.0%	Communication Services
NVIDIA Corp	1.54%	-7.2%	104.6%	Information Technology
Berkshire Hathaway Inc Class B	1.53%	18.0%	38.1%	Financials
Meta Platforms Inc Class A	1.21%	-33.9%	-24.5%	Communication Services
UnitedHealth Group Inc	1.13%	1.9%	38.9%	Health Care

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Occidental Petroleum Corp	0.11%	96.2%	113.9%	Energy
New Fortress Energy Inc Class A	0.00%	77.1%	-6.0%	Energy
The Mosaic Co	0.06%	69.6%	112.2%	Materials
Halliburton Co	0.08%	66.2%	78.2%	Energy
United States Steel Corp	0.02%	58.9%	44.9%	Materials
EQT Corp	0.02%	58.6%	86.2%	Energy
APA Corp	0.04%	54.3%	133.0%	Energy
Marathon Oil Corp	0.05%	53.4%	138.6%	Energy
Baker Hughes Co Class A	0.06%	52.4%	73.5%	Energy
Alcoa Corp	0.04%	51.3%	178.0%	Materials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Vroom Inc Ordinary Shares	0.00%	-75.3%	-93.2%	Consumer Discretionary
GoHealth Inc Ordinary Shares - Class A	0.00%	-68.9%	-89.9%	Financials
TuSimple Hldgs Inc Ord Shrs - Class A	0.00%	-66.0%	N/A	Industrials
Fluence Energy Inc	0.00%	-63.1%	N/A	Industrials
Nektar Therapeutics	0.00%	-60.1%	-73.1%	Health Care
Skillz Inc Ordinary Shares - Class A	0.00%	-59.7%	-84.2%	Communication Services
Natera Inc	0.01%	-56.4%	-59.9%	Health Care
EPAM Systems Inc	0.04%	-55.6%	-25.2%	Information Technology
Trex Co Inc	0.02%	-51.6%	-28.6%	Industrials
Rivian Automotive Inc Class A	0.02%	-51.5%	N/A	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Ovintiv Inc	0.52%	61.4%	130.9%	Energy
AMC Entertainment Hldgs Inc Class A	0.47%	-9.4%	141.3%	Communication Services
Avis Budget Group Inc	0.40%	27.0%	263.0%	Industrials
BJ's Wholesale Club Holdings Inc	0.34%	1.0%	50.7%	Consumer Staples
Chesapeake Energy Corp Ord Shrs	0.33%	37.6%	108.8%	Energy
Tenet Healthcare Corp	0.33%	5.2%	65.3%	Health Care
Tetra Tech Inc	0.33%	-2.7%	22.2%	Industrials
Antero Resources Corp	0.32%	74.5%	199.3%	Energy
Lattice Semiconductor Corp	0.30%	-20.9%	35.4%	Information Technology
EastGroup Properties Inc	0.30%	-10.3%	44.8%	Real Estate

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
NexTier Oilfield Solutions Inc	0.06%	160.3%	148.4%	Energy
Peabody Energy Corp	0.08%	143.6%	701.6%	Energy
RPC Inc	0.03%	135.0%	97.6%	Energy
SOC Telemed Inc Ord Shrs - Class A	0.01%	133.6%	-52.5%	Health Care
Kosmos Energy Ltd	0.12%	107.8%	134.2%	Energy
Tidewater Inc	0.03%	103.0%	73.5%	Energy
Team Inc	0.00%	102.8%	-80.8%	Industrials
Golar LNG Ltd	0.09%	100.0%	142.2%	Energy
US Silica Holdings Inc	0.05%	98.5%	51.8%	Energy
Intrepid Potash Inc	0.03%	92.2%	152.3%	Materials

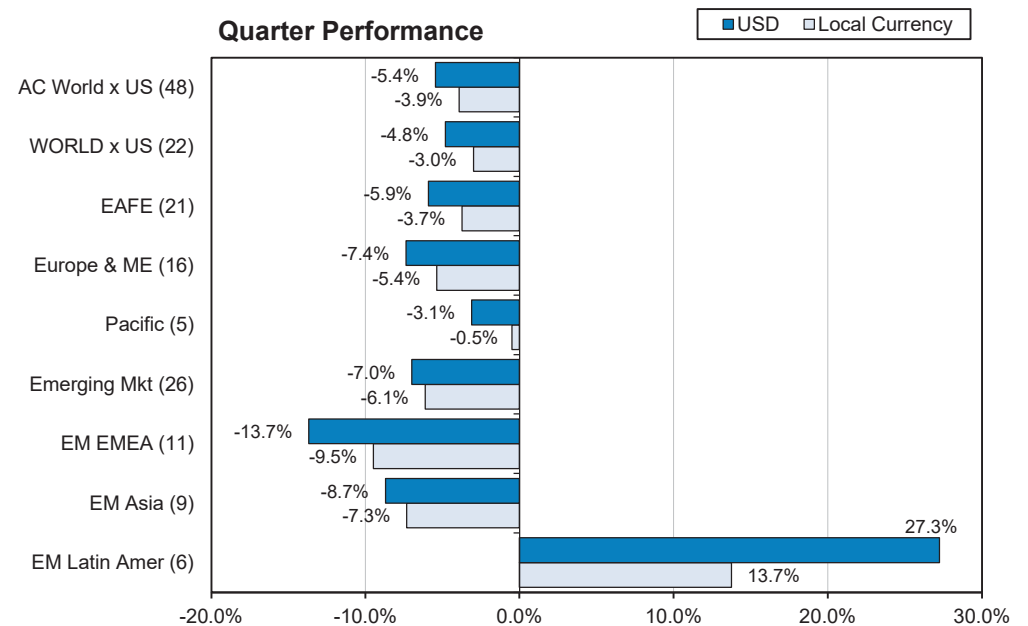
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Kodiak Sciences Inc	0.01%	-90.9%	-93.2%	Health Care
Aligos Therapeutics Inc Ord Shares	0.00%	-81.9%	-90.5%	Health Care
MEI Pharma Inc	0.00%	-77.4%	-82.4%	Health Care
Applied Therapeutics Inc	0.00%	-76.4%	-88.7%	Health Care
Annexon Inc Ordinary Shares	0.00%	-76.2%	-90.2%	Health Care
BioAtla Inc Ordinary Shares	0.00%	-74.5%	-90.2%	Health Care
Accelerate Diagnostics Inc	0.00%	-72.4%	-82.7%	Health Care
Laird Superfood Inc Ordinary Shares	0.00%	-72.3%	-90.4%	Consumer Staples
Society Pass Inc	0.00%	-71.5%	N/A	Communication Services
89bio Inc Ordinary Shares	0.00%	-71.2%	-84.1%	Health Care

Source: Morningstar Direct



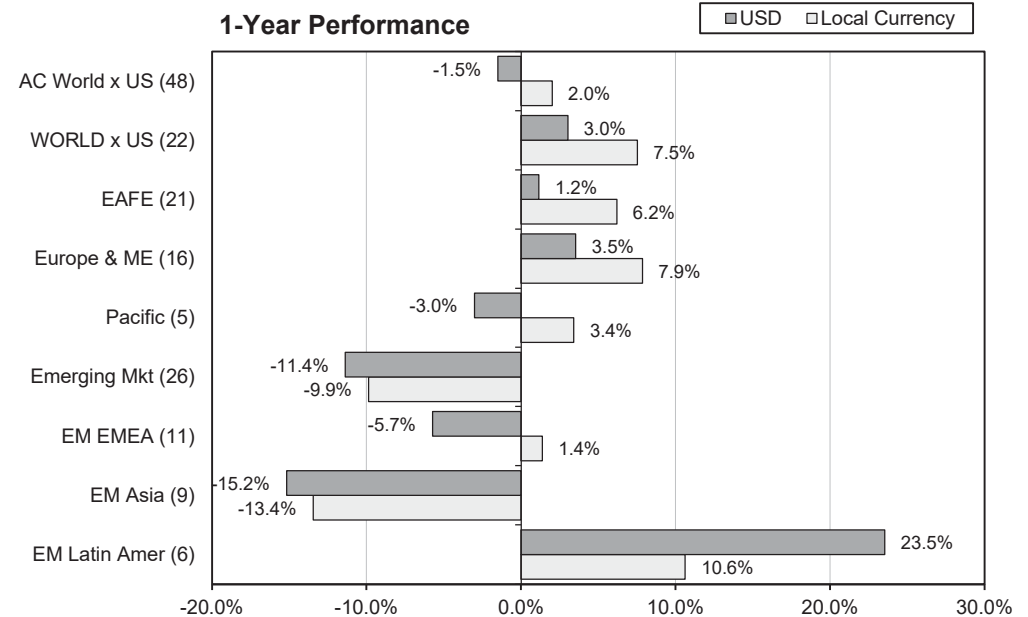
- Most developed market international equity indexes tracked in the chart posted negative returns in both US dollar (USD) and local currency (LC) terms for the 1st quarter. The outlier during the period was the Latin America region. This strong performance was led by Brazil which benefited from rising commodity prices. The developed market MSCI EAFE Index returned -5.9% in USD and -3.7% in LC terms for the period, while the MSCI Emerging Markets Index declined by -7.0% in USD and -6.1% in LC terms.

Quarter Performance



- The trailing 1-year results for international developed markets were broadly positive across most regions and currencies. The MSCI EAFE Index returned 1.2% in USD for the year and 6.2% in LC terms. In contrast, returns across emerging markets were broadly lower with the exception being Latin America. While the MSCI Emerging Markets Index declined by -11.4% in USD and -9.9% in LC terms, the Latin America regional index's return was a solid 23.5% in USD and 10.6% in LC term. In contrast, performance in the Asia regional benchmarks detracted from emerging market index performance with the EM Asia Index returning -15.2% in USD and -13.4% in LC term, largely due to concerns related to slowing growth in China and the recent rise in infections related to the pandemic.

1-Year Performance



Source: MSCI Global Index Monitor (Returns are Net)



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

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.9%	-1.7%	-10.8%
Consumer Discretionary	11.5%	-13.6%	-9.6%
Consumer Staples	10.2%	-7.7%	1.7%
Energy	4.1%	17.0%	30.0%
Financials	17.7%	-1.1%	5.1%
Health Care	13.1%	-3.7%	8.9%
Industrials	15.4%	-10.7%	-3.8%
Information Technology	8.6%	-16.1%	-1.0%
Materials	8.2%	3.3%	8.4%
Real Estate	2.9%	-2.7%	-1.2%
Utilities	3.4%	-4.1%	-1.7%
Total	100.0%	-5.9%	1.2%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.2%	-6.1%	-16.6%
Consumer Discretionary	11.1%	-14.3%	-21.2%
Consumer Staples	8.4%	-7.2%	0.2%
Energy	5.4%	6.9%	22.9%
Financials	20.6%	1.6%	9.1%
Health Care	9.4%	-5.1%	2.3%
Industrials	12.2%	-8.6%	-1.9%
Information Technology	12.2%	-15.1%	-5.4%
Materials	8.9%	5.2%	9.5%
Real Estate	2.5%	-2.8%	-8.1%
Utilities	3.2%	-2.4%	2.0%
Total	100.0%	-5.4%	-1.5%

MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.1%	-11.3%	-23.6%
Consumer Discretionary	12.3%	-16.4%	-38.8%
Consumer Staples	5.8%	-7.9%	-9.9%
Energy	4.8%	-20.7%	-6.7%
Financials	22.1%	5.7%	10.7%
Health Care	3.9%	-14.0%	-27.8%
Industrials	5.4%	-2.7%	2.7%
Information Technology	21.6%	-11.2%	-6.8%
Materials	9.4%	3.2%	3.4%
Real Estate	2.1%	-1.8%	-27.6%
Utilities	2.6%	-0.2%	10.2%
Total	100.0%	-7.0%	-11.4%

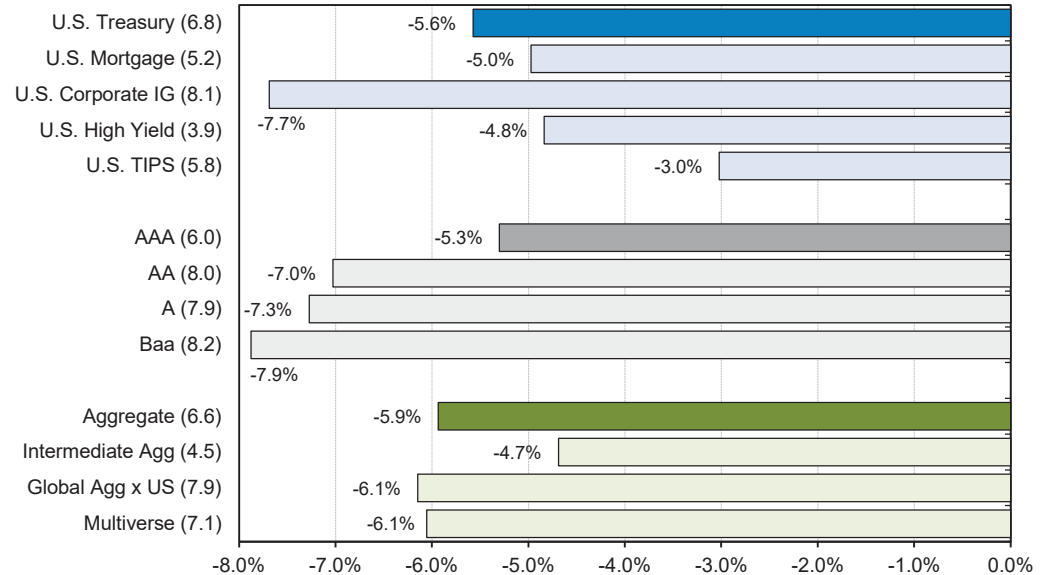
Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.3%	14.1%	-6.6%	-6.5%
United Kingdom	15.3%	9.6%	1.8%	13.6%
France	11.4%	7.2%	-8.7%	4.5%
Switzerland	10.4%	6.6%	-6.4%	13.9%
Germany	8.2%	5.2%	-12.9%	-12.0%
Australia	8.2%	5.1%	7.3%	13.5%
Netherlands	4.4%	2.8%	-17.4%	-5.2%
Sweden	3.6%	2.2%	-15.5%	-7.4%
Hong Kong	2.9%	1.8%	-1.8%	-12.0%
Denmark	2.7%	1.7%	-6.4%	14.9%
Italy	2.4%	1.5%	-10.1%	-2.7%
Spain	2.3%	1.5%	-4.1%	-3.7%
Singapore	1.5%	0.9%	-1.7%	-4.6%
Finland	1.0%	0.6%	-11.9%	-2.6%
Belgium	0.9%	0.6%	-4.9%	-0.3%
Norway	0.8%	0.5%	10.2%	21.1%
Israel	0.7%	0.5%	-6.9%	7.6%
Ireland	0.6%	0.4%	-20.1%	-17.7%
Portugal	0.2%	0.1%	2.3%	7.1%
Austria	0.2%	0.1%	-20.0%	3.6%
New Zealand	0.2%	0.1%	-8.7%	-15.2%
Total EAFE Countries	100.0%	63.1%	-5.9%	1.2%
Canada		8.3%	4.6%	20.2%
Total Developed Countries		71.4%	-4.8%	3.0%
China		8.6%	-14.2%	-32.5%
Taiwan		4.6%	-6.6%	6.3%
India		3.7%	-1.9%	17.9%
Korea		3.6%	-9.6%	-18.5%
Brazil		1.7%	35.9%	24.7%
Saudi Arabia		1.2%	17.3%	38.7%
South Africa		1.2%	20.3%	11.1%
Mexico		0.7%	8.6%	27.7%
Thailand		0.5%	4.2%	-1.6%
Indonesia		0.5%	9.6%	21.0%
Malaysia		0.4%	2.0%	1.5%
United Arab Emirates		0.4%	21.2%	58.1%
Qatar		0.3%	19.5%	34.4%
Kuwait		0.2%	19.4%	45.7%
Philippines		0.2%	2.2%	9.9%
Poland		0.2%	-9.8%	5.8%
Chile		0.2%	29.5%	-8.3%
Peru		0.1%	34.9%	20.9%
Turkey		0.1%	12.9%	1.6%
Colombia		0.1%	33.8%	39.3%
Greece		0.1%	1.1%	7.6%
Hungary		0.1%	-19.4%	-10.0%
Czech Republic		0.0%	3.1%	51.5%
Egypt		0.0%	-23.4%	-14.3%
Total Emerging Countries		28.6%	-7.0%	-11.4%
Total ACWixUS Countries		100.0%	-5.4%	-1.5%

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.

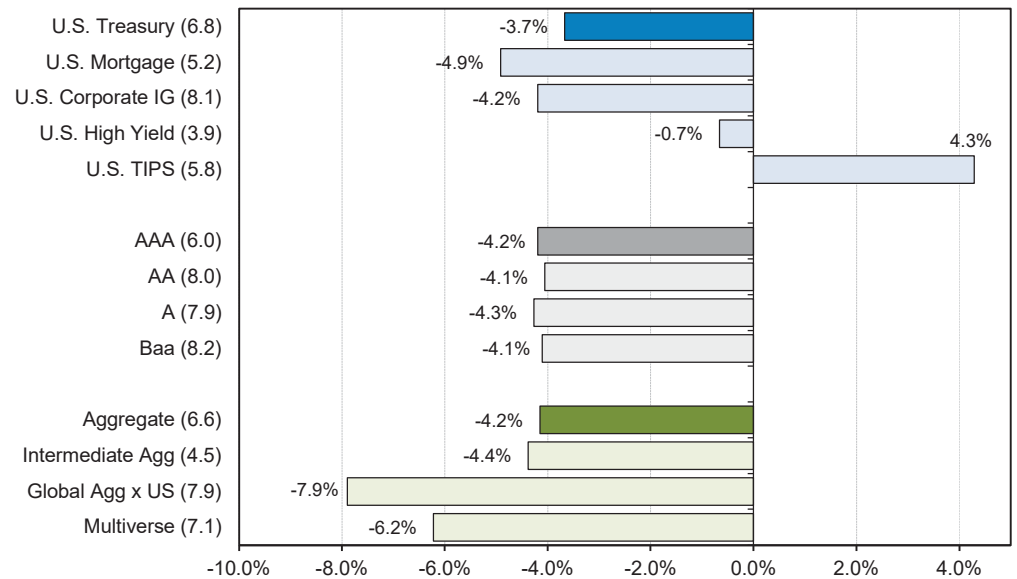


- Fixed income market results were broadly negative during the 1st quarter. Investors' concerns about rising inflation, combined with expectations of higher US interest rates, detracted from performance. US Treasury yields were higher across the maturity curve but remained below their long-term averages.
- The return for the BB US Aggregate Bond Index, the bellwether investment grade benchmark, was down -5.9% for the period.
- Performance across the investment grade index's segments was also negative during the period with the US Corporate Investment Grade bonds returning -7.7% and the US Mortgage index component posting a return of -5.0%.
- US TIPS posted the quarter's strongest relative bond performance with a return of -3.0%. High yield bonds outperformed their investment grade counterparts, but still declined by -4.8%.
- Outside of domestic markets, the BB Global Aggregate ex US Index posted a return of -6.1% for the quarter. Like international stocks, global bond index performance was negatively impacted by the strengthening USD, which acted as a drag on domestic index returns.
- Over the trailing 1-year period, domestic investment grade benchmark performance was negative, led lower by mortgage-backed bonds (-4.9%) and investment grade corporate bonds (-4.2%). The only sector of the market that generated positive performance for the year was US TIPS (4.3%). The bellwether Bloomberg US Aggregate Bond Index (-4.2%) declined for the year.
- Lower quality high yield corporate bonds outperformed their investment grade counterparts on a relative basis with the Bloomberg US High Yield Index returning -0.7% for the period.
- Performance for non-US bonds was broadly negative for the year with the developed market Bloomberg Global Aggregate ex US Index falling by -7.9%. The combination of rising interest rates overseas, a longer maturity profile, and USD strength hindered index performance for the year.

Quarter Performance



1-Year Performance

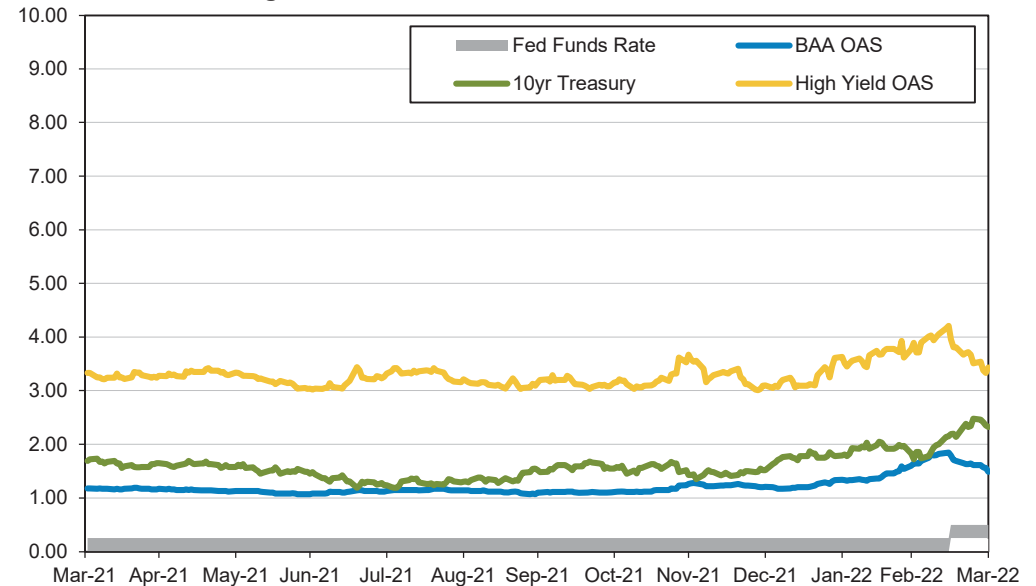


Source: Bloomberg

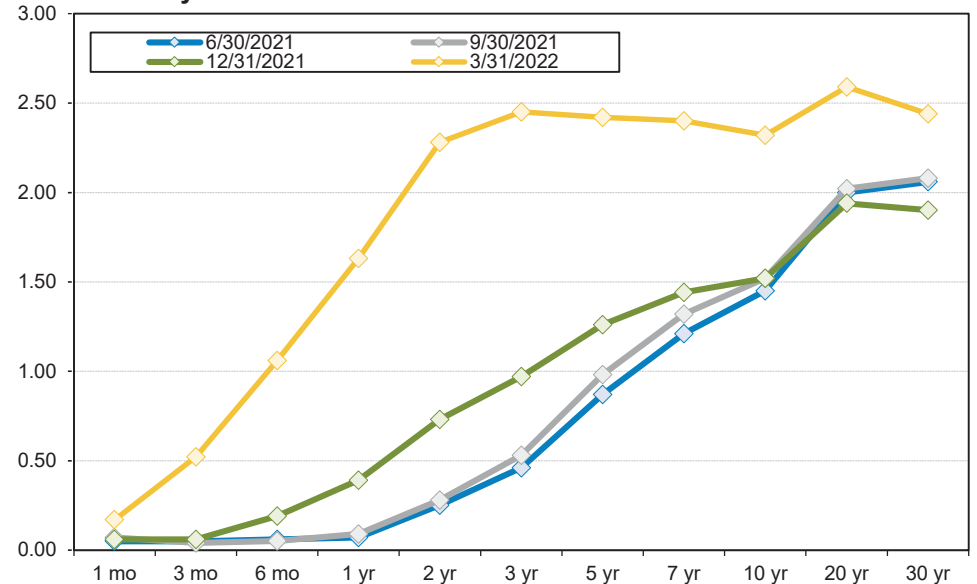


- The gray band across the graph illustrates the range of the current Fed Funds Rate. In the 1st quarter this year, the Fed raised its target rate range from 0.25% to 0.50%. During its recent March meeting, the Federal Open Market Committee (FOMC) stated it intends to begin removing liquidity from the market by also allowing bonds held on its balance sheet to mature without reinvesting those proceeds. Importantly, the FOMC also stated that it will react to data and could potentially raise rates at a faster pace if inflation does not subside.
- 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 2.47% during the latter part of March 2022, interest rates traded lower for the remainder of the quarter. The yield on the US 10-year Treasury was 2.34% on March 31st.
- The blue line illustrates changes in the BAA OAS (Option Adjusted Spread). This measure quantifies the additional yield premium that investors require to purchase and hold non-US Treasury investment grade issues. For the full year, the spread widened slightly from 1.18% to 1.49%. High Yield OAS was largely unchanged during the year as spreads rose from 3.33% to 3.43%. High Yield spreads briefly exceeded 4.00% following the onset of the crisis in Ukraine, but quickly retreated.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. Short-term rates rose dramatically during the 1st quarter of 2022 in anticipation that the FOMC would begin raising rates to combat rising inflation. Longer-term rates were modestly higher, albeit less dramatically than either short- or intermediate-term interest rates. While not shown in the chart, 10-Year rates briefly traded below the 2-year rates. Historically, a persistent inversion of these two key rates has been an indication of a future recession withing 6- to 24-months. As of the end of the quarter, the spread between 2-Year and 10-Year rates was positive. However, 10-Year rates were trading lower than the intermediate 3- and 5-year rates.

1-Year Trailing Market Rates



Treasury Yield Curve



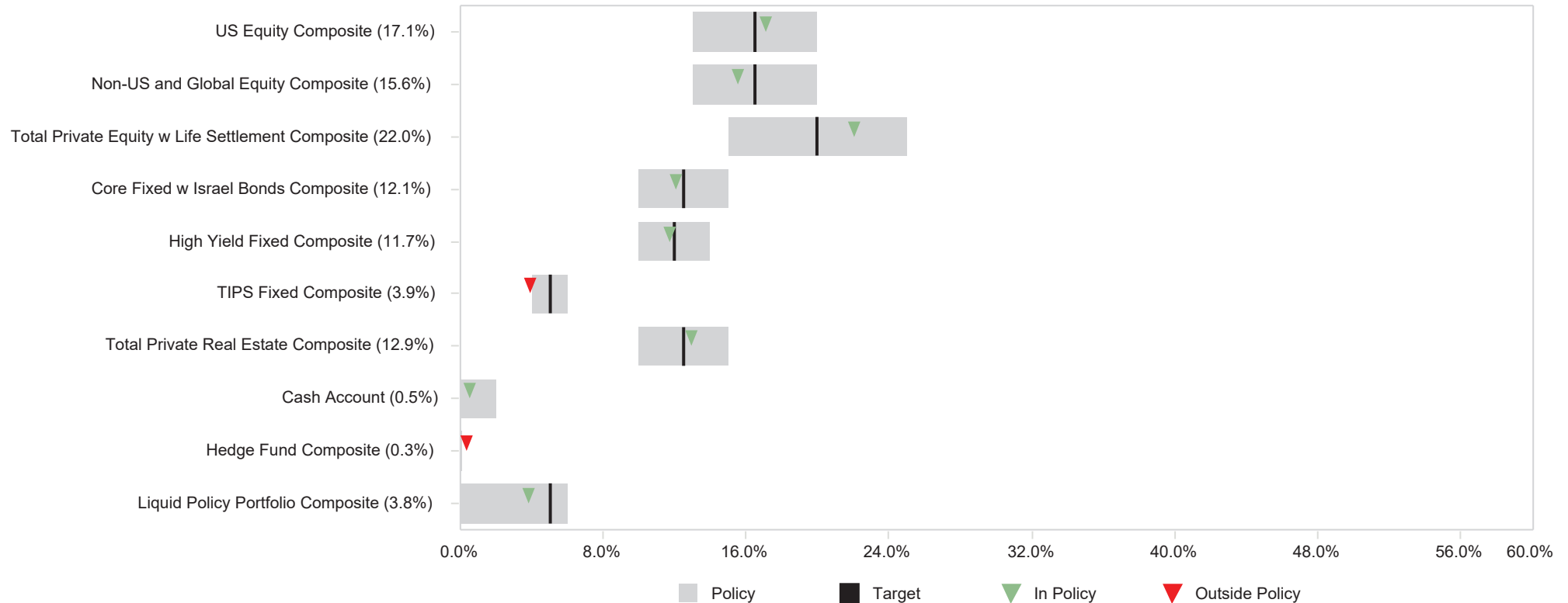
Source: US Department of Treasury, FRED (Federal Reserve of St. Louis)



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Executive Summary



Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
Total Fund	1,055,133,295	100.0	N/A	N/A	100.0
US Equity Composite	180,163,045	17.1	13.0	20.0	16.5
Non-US and Global Equity Composite	164,146,263	15.6	13.0	20.0	16.5
Total Private Equity w Life Settlement Composite	232,375,748	22.0	15.0	25.0	20.0
Core Fixed w Israel Bonds Composite	127,635,605	12.1	10.0	15.0	12.5
High Yield Fixed Composite	123,524,625	11.7	10.0	14.0	12.0
TIPS Fixed Composite	41,654,324	3.9	4.0	6.0	5.0
Total Private Real Estate Composite	136,580,265	12.9	10.0	15.0	12.5
Cash Account	5,230,586	0.5	0.0	2.0	0.0
Hedge Fund Composite	3,414,731	0.3	0.0	0.0	0.0
Liquid Policy Portfolio Composite	40,408,096	3.8	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 March 31, 2022

Asset Allocation Attributes

	Mar-2022		Dec-2021		Sep-2021		Jun-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Total Fund	1,055,133,295	100.00	1,095,129,059	100.00	1,061,582,892	100.00	1,065,297,936	100.00
US Equity Composite	180,163,045	17.07	194,965,866	17.80	191,381,978	18.03	206,964,304	19.43
SSgA S&P 500 Index	84,402,437	8.00	94,096,192	8.59	98,897,469	9.32	113,473,325	10.65
Fragasso Large Core (EMWO)	6,988,141	0.66	7,282,231	0.66	6,777,074	0.64	6,761,732	0.63
Twin Capital Enhanced Equity	41,397,972	3.92	43,179,388	3.94	38,800,465	3.65	38,751,933	3.64
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,428,926	0.14	1,578,091	0.14	-	0.00	-	0.00
Earnest Small Value	16,511,363	1.56	16,770,333	1.53	16,004,954	1.51	16,313,304	1.53
Emerald Advisors Small Cap	14,240,025	1.35	15,923,325	1.45	15,892,394	1.50	16,117,598	1.51
Emerald Advisors All Cap (EMWO)	6,371,490	0.60	6,645,020	0.61	6,434,646	0.61	6,487,868	0.61
Ethos (EMWO)	2,019,477	0.19	2,215,004	0.20	2,044,862	0.19	2,075,980	0.19
CIM Small Cap (EMWO)	5,473,904	0.52	5,867,714	0.54	5,753,594	0.54	6,217,573	0.58
Cookson Peirce (EMWO)	1,329,310	0.13	1,408,568	0.13	776,520	0.07	764,991	0.07
Non US Equity Composite	164,146,200	15.56	180,597,451	16.49	179,122,457	16.87	206,133,519	19.35
SSgA ACWI ex US	37,347,180	3.54	39,473,532	3.60	38,754,304	3.65	39,954,917	3.75
Baillie Gifford Intl Equity	59,489,941	5.64	70,428,526	6.43	70,852,805	6.67	85,183,044	8.00
FIAM Select International Equity	31,349,834	2.97	33,861,588	3.09	33,092,364	3.12	44,294,565	4.16
Segall, Bryant & Hamill	35,959,245	3.41	36,833,806	3.36	36,422,984	3.43	36,700,993	3.45
Global Equity Composite	62	0.00	62	0.00	-	0.00	1,478,051	0.14
Columbus Macro (EMWO)	62	0.00	62	0.00	-	0.00	1,478,051	0.14
Core Fixed w Israel Bonds Composite	127,635,605	12.10	134,181,540	12.25	119,178,215	11.23	119,209,697	11.19
C S McKee	41,696,118	3.95	44,252,683	4.04	39,226,274	3.70	39,241,240	3.68
Federated Core Broad	38,195,499	3.62	40,339,887	3.68	35,286,105	3.32	35,257,659	3.31
CIM Investment Mgmt	27,558,343	2.61	28,732,165	2.62	23,870,703	2.25	23,881,595	2.24
StoneRidge Partners (EMWO)	5,241,029	0.50	5,471,185	0.50	5,506,700	0.52	5,508,900	0.52
Gridiron Capital Fixed Income (EMWO)	4,773,059	0.45	4,966,214	0.45	4,950,498	0.47	4,949,184	0.46
FNB (EMWO)	2,708,051	0.26	2,824,616	0.26	2,834,889	0.27	2,832,517	0.27
Israel Bonds	7,463,505	0.71	7,594,790	0.69	7,503,045	0.71	7,538,603	0.71
High Yield Fixed Composite	123,524,625	11.71	128,401,665	11.72	127,406,673	12.00	126,344,170	11.86
Oaktree High Yield	66,909,229	6.34	69,504,798	6.35	68,865,410	6.49	68,226,091	6.40
Federated High Yield	53,015,275	5.02	55,256,029	5.05	54,922,299	5.17	54,540,895	5.12
Sound Point	3,600,120	0.34	3,640,838	0.33	3,618,963	0.34	3,577,185	0.34
TIPS Fixed Composite	41,654,324	3.95	42,930,455	3.92	41,960,670	3.95	41,239,579	3.87
MCM TIPS	41,654,324	3.95	42,930,455	3.92	41,960,670	3.95	41,239,579	3.87



**Historical Asset Allocation
Total Fund**

As of March 31, 2022

	Mar-2022		Dec-2021		Sep-2021		Jun-2021	
	(\$)	%	(\$)	%	(\$)	%	(\$)	%
Real Estate Composite	125,169,252	11.86	119,482,642	10.91	111,896,168	10.54	107,206,991	10.06
Morgan Stanley Prime Property Fund[CE]	95,026,175	9.01	88,802,131	8.11	81,023,718	7.63	76,563,491	7.19
Oaktree Real Estate	6,465,443	0.61	6,567,794	0.60	6,978,943	0.66	6,935,753	0.65
Washington Alliance (EMWO)	13,472,055	1.28	13,478,182	1.23	13,174,110	1.24	13,174,110	1.24
Washington Alliance II (EMWO)	1,300,881	0.12	1,300,881	0.12	1,181,352	0.11	1,181,352	0.11
Siguler Guff Distressed RE	8,904,698	0.84	9,333,655	0.85	9,538,045	0.90	9,352,285	0.88
ERECT Composite	11,411,014	1.08	10,441,201	0.95	10,497,897	0.99	10,370,488	0.97
ERECT Fund II	11,411,014	1.08	10,441,201	0.95	10,497,897	0.99	10,370,488	0.97
Private Equity Composite	219,253,042	20.78	215,873,991	19.71	206,036,289	19.41	203,107,237	19.07
Life Settlement Composite	13,122,706	1.24	13,584,945	1.24	14,172,823	1.34	14,953,680	1.40
Hedge Fund Composite	3,414,731	0.32	3,564,755	0.33	3,408,000	0.32	3,394,452	0.32
Gridiron Capital Multi-Asset (EMWO)	3,414,563	0.32	3,564,587	0.33	3,407,831	0.32	3,394,284	0.32
Liquid Policy Portfolio Composite	40,408,096	3.83	42,539,612	3.88	49,078,819	4.62	18,484,307	1.74
BlackRock Liquidity iShares Public Pension Fund	40,408,096	3.83	42,539,612	3.88	49,078,819	4.62	18,484,307	1.74
Cash Account	5,230,586	0.50	8,564,864	0.78	7,442,895	0.70	6,411,455	0.60



Financial Reconciliation	Market Value 01/01/2022	Net Flows	Return On Investment	Market Value 03/31/2022
Total Fund	1,095,129,059	-13,998,455	-25,629,371	1,055,133,295
SSgA S&P 500 Index	94,096,192	-4,995,936	-4,693,756	84,402,437
Fragasso Large Core (EMWO)	7,282,231	9,723	-294,090	6,988,141
Twin Capital Enhanced Equity	43,179,388	35,745	-1,781,416	41,397,972
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,578,091	-	-149,165	1,428,926
Earnest Small Value	16,770,333	-	-258,970	16,511,363
Emerald Advisors Small Cap	15,923,325	26,360	-1,683,299	14,240,025
Emerald Advisors All Cap (EMWO)	6,645,020	9,266	-273,530	6,371,490
Ethos (EMWO)	2,215,004	-	-195,527	2,019,477
CIM Small Cap (EMWO)	5,867,714	10,526	-394,100	5,473,904
Cookson Peirce (EMWO)	1,408,568	1,635	-79,258	1,329,310
US Equity Composite	194,965,866	-4,902,681	-9,803,112	180,163,045
SSgA ACWI ex US	39,473,532	6,485	-2,126,352	37,347,180
Baillie Gifford Intl Equity	70,428,526	-	-10,938,585	59,489,941
FIAM Select International Equity	33,861,588	27,083	-2,511,754	31,349,834
Segall, Bryant & Hamill	36,833,806	-	-874,560	35,959,245
Non US Equity Composite	180,597,451	33,568	-16,451,251	164,146,200
Columbus Macro (EMWO)	62	-	-	62
Global Equity Composite	62	-	-	62
C S McKee	44,252,683	23,975	-2,556,565	41,696,118
Federated Core Broad	40,339,887	24,628	-2,144,387	38,195,499
CIM Investment Mgmt	28,732,165	17,958	-1,173,822	27,558,343
StoneRidge Partners (EMWO)	5,471,185	2,666	-230,157	5,241,029
Gridiron Capital Fixed Income (EMWO)	4,966,214	7,853	-193,155	4,773,059
FNB (EMWO)	2,824,616	-	-116,565	2,708,051
Israel Bonds	7,594,790	3,746	-131,285	7,463,505
Core Fixed w Israel Bonds Composite	134,181,540	80,826	-6,545,935	127,635,605
Oaktree High Yield	69,504,798	-	-2,506,001	66,909,229
Federated High Yield	55,256,029	-	-2,240,754	53,015,275
Sound Point	3,640,838	-	-40,718	3,600,120
High Yield Fixed Composite	128,401,665	-	-4,787,472	123,524,625
MCM TIPS	42,930,455	-	-1,276,131	41,654,324
TIPS Fixed Composite	42,930,455	-	-1,276,131	41,654,324



Financial Reconciliation
Total Fund
1 Quarter Ending March 31, 2022

	Market Value 01/01/2022	Net Flows	Return On Investment	Market Value 03/31/2022
Morgan Stanley Prime Property Fund[CE]	88,802,131	-	6,224,044	95,026,175
Oaktree Real Estate	6,567,794	-	-102,351	6,465,443
Washington Alliance (EMWO)	13,478,182	-	-6,127	13,472,055
Washington Alliance II (EMWO)	1,300,881	-	-	1,300,881
Siguler Guff Distressed RE	9,333,655	-428,957	-	8,904,698
Real Estate Composite	119,482,642	-428,957	6,115,566	125,169,252
ERECT Composite	10,441,201	-	969,813	11,411,014
Private Equity Composite	215,873,991	-5,224,192	8,662,872	219,253,042
Life Settlement Composite	13,584,945	-220,311	-241,929	13,122,706
Gridiron Capital Multi-Asset (EMWO)	3,564,587	6,420	-150,024	3,414,563
Maplewood (EMWO)	168	-	-	168
Hedge Fund Composite	3,564,755	6,420	-150,024	3,414,731
BlackRock Liquidity iShares Public Pension Fund	42,539,612	-	-2,131,516	40,408,096
Liquid Policy Portfolio Composite	42,539,612	-	-2,131,516	40,408,096
MLP Composite	8	-	-	8
Cash Account	8,564,864	-3,343,129	9,747	5,230,586

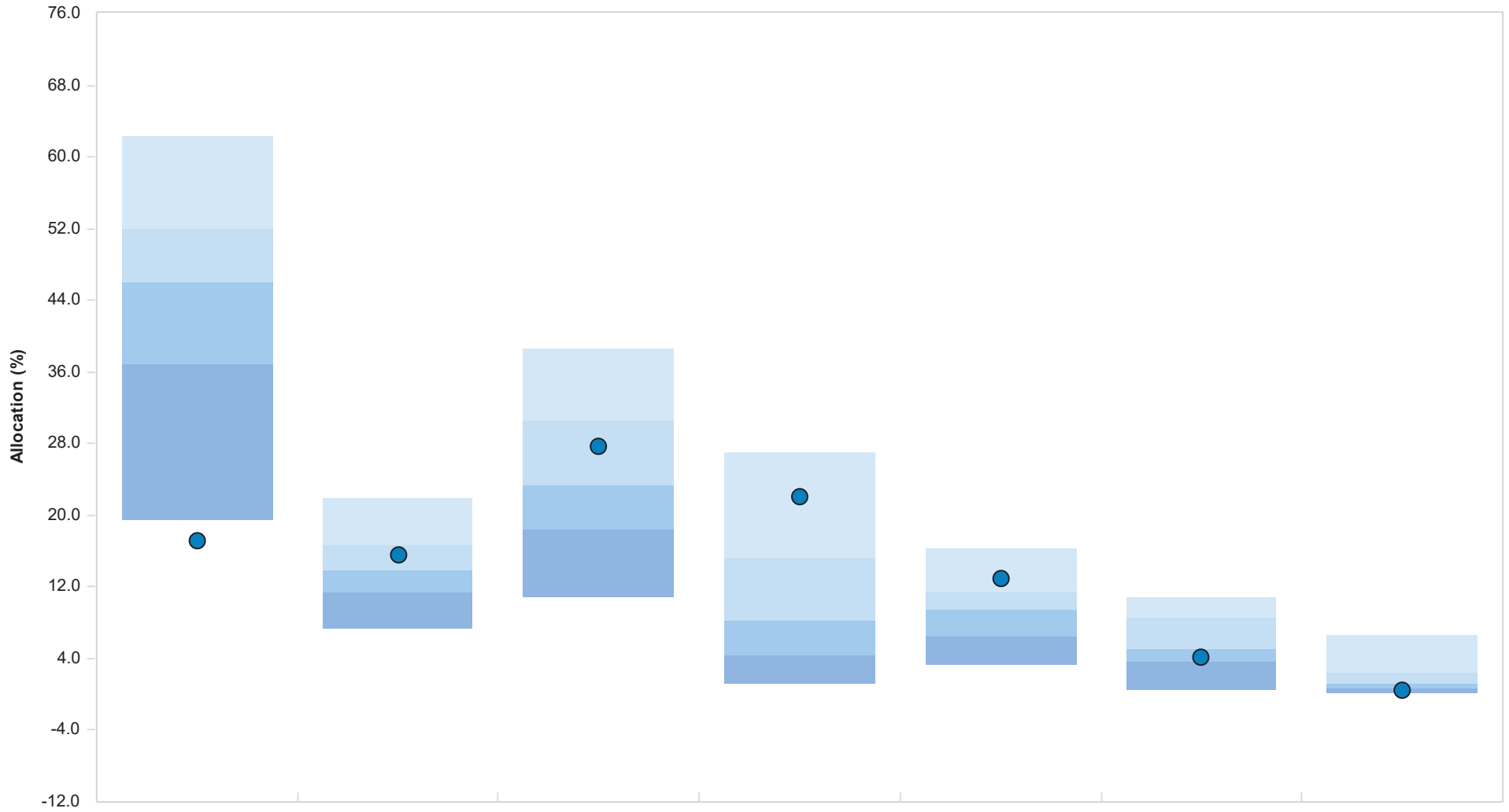


Financial Reconciliation	Market Value 01/01/2022	Net Flows	Income	Return On Investment	Market Value 03/31/2022
Total Fund	1,095,129,059	-13,998,455	270,365	-25,629,371	1,055,133,295
SSgA S&P 500 Index	94,096,192	-4,995,936	-	-4,693,756	84,402,437
Fragasso Large Core (EMWO)	7,282,231	9,723	-710	-294,090	6,988,141
Twin Capital Enhanced Equity	43,179,388	35,745	2,031	-1,781,416	41,397,972
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,578,091	-	-	-149,165	1,428,926
Earnest Small Value	16,770,333	-	-2,705	-258,970	16,511,363
Emerald Advisors Small Cap	15,923,325	26,360	-579	-1,683,299	14,240,025
Emerald Advisors All Cap (EMWO)	6,645,020	9,266	106	-273,530	6,371,490
Ethos (EMWO)	2,215,004	-	4	-195,527	2,019,477
CIM Small Cap (EMWO)	5,867,714	10,526	510	-394,100	5,473,904
Cookson Peirce (EMWO)	1,408,568	1,635	175	-79,258	1,329,310
US Equity Composite	194,965,866	-4,902,681	-1,169	-9,803,112	180,163,045
SSgA ACWI ex US	39,473,532	6,485	-	-2,126,352	37,347,180
Baillie Gifford Intl Equity	70,428,526	-	-	-10,938,585	59,489,941
FIAM Select International Equity	33,861,588	27,083	-	-2,511,754	31,349,834
Segall, Bryant & Hamill	36,833,806	-	232,179	-874,560	35,959,245
Non US Equity Composite	180,597,451	33,568	232,179	-16,451,251	164,146,200
Columbus Macro (EMWO)	62	-	-	-	62
Global Equity Composite	62	-	-	-	62
C S McKee	44,252,683	23,975	-7,046	-2,556,565	41,696,118
Federated Core Broad	40,339,887	24,628	10,284	-2,144,387	38,195,499
CIM Investment Mgmt	28,732,165	17,958	452	-1,173,822	27,558,343
StoneRidge Partners (EMWO)	5,471,185	2,666	-3,464	-230,157	5,241,029
Gridiron Capital Fixed Income (EMWO)	4,966,214	7,853	-93	-193,155	4,773,059
FNB (EMWO)	2,824,616	-	-	-116,565	2,708,051
Israel Bonds	7,594,790	3,746	40,119	-131,285	7,463,505
Core Fixed w Israel Bonds Composite	134,181,540	80,826	40,251	-6,545,935	127,635,605
Oaktree High Yield	69,504,798	-	-	-2,506,001	66,909,229
Federated High Yield	55,256,029	-	-	-2,240,754	53,015,275
Sound Point	3,640,838	-	-	-40,718	3,600,120
High Yield Fixed Composite	128,401,665	-	-	-4,787,472	123,524,625
MCM TIPS	42,930,455	-	1	-1,276,131	41,654,324
TIPS Fixed Composite	42,930,455	-	1	-1,276,131	41,654,324



	Market Value 01/01/2022	Net Flows	Income	Return On Investment	Market Value 03/31/2022
Morgan Stanley Prime Property Fund[CE]	88,802,131	-	-	6,224,044	95,026,175
Oaktree Real Estate	6,567,794	-	-	-102,351	6,465,443
Washington Alliance (EMWO)	13,478,182	-	-	-6,127	13,472,055
Washington Alliance II (EMWO)	1,300,881	-	-	-	1,300,881
Siguler Guff Distressed RE	9,333,655	-428,957	-	-	8,904,698
Real Estate Composite	119,482,642	-428,957	-	6,115,566	125,169,252
ERECT Composite	10,441,201	-	-	969,813	11,411,014
Private Equity Composite	215,873,991	-5,224,192	-	8,662,872	219,253,042
Life Settlement Composite	13,584,945	-220,311	-	-241,929	13,122,706
Gridiron Capital Multi-Asset (EMWO)	3,564,587	6,420	-841	-150,024	3,414,563
Maplewood (EMWO)	168	-	-	-	168
Hedge Fund Composite	3,564,755	6,420	-841	-150,024	3,414,731
BlackRock Liquidity iShares Public Pension Fund	42,539,612	-	-	-2,131,516	40,408,096
Liquid Policy Portfolio Composite	42,539,612	-	-	-2,131,516	40,408,096
MLP Composite	8	-	-	-	8
Cash Account	8,564,864	-3,343,129	-57	9,747	5,230,586

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	17.07 (96)	15.56 (30)	27.75 (34)	22.02 (11)	12.94 (14)	4.15 (71)	0.50 (81)
5th Percentile	62.31	21.95	38.59	27.02	16.34	10.82	6.68
1st Quartile	51.98	16.68	30.48	15.18	11.29	8.54	2.45
Median	45.94	13.86	23.31	8.24	9.41	5.08	1.22
3rd Quartile	36.91	11.43	18.30	4.27	6.47	3.64	0.57
95th Percentile	19.45	7.28	10.76	1.26	3.34	0.46	0.09



Asset Allocation & Performance	Allocation		Performance(%)							
	Market Value \$	%	MTH	QTR	YTD	1 YR	3 YR	5 YR	Inception	Inception Date
Total Fund	1,055,133,295	100.0	1.27	-2.37	-2.37	7.87	9.36	8.29	7.57	12/1993
Total Fund Policy Index			1.50	-1.85	-1.85	10.11	10.34	8.70	7.76	
US Equity Composite	180,163,045	17.1	3.03	-5.01	-5.01	10.09	17.28	14.60	9.61	11/1993
FT Wilshire 5000 Total Market TR Index			3.35	-4.95	-4.95	13.09	18.66	15.65	10.38	
Non US Equity Composite	164,146,200	15.6	-0.61	-9.13	-9.13	-7.30	7.80	6.84	5.21	01/2001
Non US Equity Policy Index			0.16	-5.44	-5.44	-1.48	7.76	6.85	4.45	
Core Fixed w Israel Bonds Composite*	127,635,605	12.1	-2.20	-4.94	-4.94	-3.44	2.49	2.53	6.63	01/1983
Bimbg. U.S. Aggregate Index			-2.78	-5.93	-5.93	-4.15	1.69	2.14	6.63	
High Yield Fixed Composite	123,524,625	11.7	-0.69	-3.80	-3.80	0.17	4.31	4.10	6.43	04/2008
FTSE High Yield Market Capped Index			-0.76	-4.29	-4.29	-0.23	4.14	4.38	6.76	
TIPS Fixed Composite	41,654,324	3.9	-1.86	-2.97	-2.97	4.26	6.21	4.44	3.65	04/2008
Bloomberg U.S. TIPS Index			-1.86	-3.02	-3.02	4.29	6.22	4.43	3.61	
Real Estate Composite	125,169,252	11.9	5.14	5.14	5.14	22.16	9.58	9.91	9.12	04/2003
NCREIF Fund Index-ODCE (VW) (Net)			7.17	7.17	7.17	27.29	10.31	8.91	7.75	
ERECT Composite	11,411,014	1.1	9.29	9.29	9.29	11.70	6.37	8.07	7.30	09/2010
CPI - All Urban Consumers (SA)			1.24	2.71	2.71	8.56	4.20	3.36	2.43	
Total Private Equity w Life Settlement Composite*	232,375,748	22.0	2.66	3.69	3.69	25.65	16.81	13.59	8.12	04/2003
Total Private Equity Policy Index			2.69	3.72	3.72	27.70	17.63	14.07	8.24	
Hedge Fund Composite	3,414,731	0.3	0.26	-4.39	-4.39	4.49	7.57	1.18	2.54	04/2003
90 Day T-Bill Index + 3%			0.28	0.78	0.78	3.07	3.83	4.16	4.24	
Liquid Policy Portfolio Composite	40,408,096	3.8	0.73	-5.06	-5.06	4.70	N/A	N/A	6.17	03/2021
Liquid Policy Benchmark			0.74	-5.26	-5.26	4.36	N/A	N/A	5.93	
Cash Account	5,230,586	0.5	0.04	0.12	0.12	0.50	0.99	1.25	0.72	01/2012
90 Day U.S. Treasury Bill			0.03	0.04	0.04	0.06	0.81	1.13	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
Total Fund	1,055,133,295	100.0	-2.37	-2.37	7.87	9.36	8.29	7.57	12/1993
Total Fund Policy Index			-1.85	-1.85	10.11	10.34	8.70	7.76	
US Equity Composite	180,163,045	17.1	-5.01	-5.01	10.09	17.28	14.60	9.61	11/1993
FT Wilshire 5000 Total Market TR Index			-4.95	-4.95	13.09	18.66	15.65	10.38	
SSgA S&P 500 Index	84,402,437	8.0	-4.60	-4.60	15.58	18.97	16.01	10.00	11/2007
S&P 500 Index			-4.60	-4.60	15.65	18.92	15.99	9.96	
Fragasso Large Core (EMWO)	6,988,141	0.7	-4.17	-4.17	10.25	15.47	14.08	12.99	09/2012
S&P 500 Index			-4.60	-4.60	15.65	18.92	15.99	15.22	
Twin Capital Enhanced Equity	41,397,972	3.9	-4.21	-4.21	14.94	17.89	14.66	10.19	01/2006
S&P 500 Index			-4.60	-4.60	15.65	18.92	15.99	10.47	
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	1,428,926	0.1	-9.45	-9.45	N/A	N/A	N/A	-9.45	01/2022
S&P 500 Index			-4.60	-4.60	15.65	18.92	15.99	-4.60	
Earnest Small Value	16,511,363	1.6	-1.54	-1.54	-0.73	14.30	10.48	13.67	06/2009
Russell 2000 Value Index			-2.40	-2.40	3.32	12.73	8.57	12.50	
Emerald Advisors Small Cap	14,240,025	1.3	-10.74	-10.74	-9.05	11.37	12.47	11.00	11/2004
Russell 2000 Growth Index			-12.63	-12.63	-14.33	9.88	10.33	9.45	
Emerald Advisors All Cap (EMWO)	6,371,490	0.6	-4.26	-4.26	9.39	26.47	22.65	19.06	10/2015
Russell 3000 Growth Index			-9.25	-9.25	12.86	22.68	20.16	19.18	
Ethos (EMWO)	2,019,477	0.2	-8.83	-8.83	2.21	16.84	15.30	15.39	08/2016
S&P 500 Index			-4.60	-4.60	15.65	18.92	15.99	15.97	
CIM Small Cap (EMWO)	5,473,904	0.5	-6.89	-6.89	-10.70	8.40	6.30	6.19	01/2014
Russell 2000 Index			-7.53	-7.53	-5.79	11.74	9.74	8.66	
Cookson Peirce (EMWO)	1,329,310	0.1	-5.74	-5.74	14.57	13.48	N/A	17.30	12/2018
Russell 3000 Index			-5.28	-5.28	11.92	18.24	15.40	17.46	
Non US Equity Composite	164,146,200	15.6	-9.13	-9.13	-7.30	7.80	6.84	5.21	01/2001
Non US Equity Policy Index			-5.44	-5.44	-1.48	7.76	6.85	4.45	
SSgA ACWI ex US	37,347,180	3.5	-5.40	-5.40	-1.37	8.24	7.07	4.85	05/2015
MSCI AC World ex USA (Net)			-5.44	-5.44	-1.48	7.51	6.76	4.51	



	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)	59,489,941	5.6	-15.53 -5.44	-15.53 -5.44	-17.48 -1.48	7.22 7.51	7.57 6.76	8.25 5.92	08/2009
FIAM Select International Equity FIAM Policy Index	31,349,834	3.0	-7.49 -5.44	-7.49 -5.44	-2.67 -1.48	9.29 7.51	7.25 6.76	4.84 4.37	01/2001
Segall, Bryant & Hamill MSCI EAFE Small Cap (net) Index	35,959,245	3.4	-2.37 -8.53	-2.37 -8.53	3.42 -3.63	5.32 8.51	3.47 7.42	4.38 6.70	05/2015
Core Fixed w Israel Bonds Composite*	127,635,605	12.1	-4.94	-4.94	-3.44	2.49	2.53	6.63	01/1983
Blmbg. U.S. Aggregate Index			-5.93	-5.93	-4.15	1.69	2.14	6.63	
C S McKee Blmbg. U.S. Aggregate Index	41,696,118	4.0	-5.83 -5.93	-5.83 -5.93	-4.03 -4.15	2.06 1.69	2.43 2.14	6.99 6.63	01/1983
Federated Core Broad Blmbg. U.S. Aggregate Index	38,195,499	3.6	-5.37 -5.93	-5.37 -5.93	-3.33 -4.15	3.58 1.69	3.33 2.14	4.49 3.66	09/2006
CIM Investment Mgmt Bloomberg Intermediate US Govt/Credit Idx	27,558,343	2.6	-4.15 -4.51	-4.15 -4.51	-3.90 -4.10	1.45 1.50	1.56 1.81	2.89 3.25	11/2005
StoneRidge Partners (EMWO) StoneRidge Policy Index	5,241,029	0.5	-4.26 -4.72	-4.26 -4.72	-4.22 -4.09	0.57 1.70	1.22 2.03	1.43 2.03	08/2015
Gridiron Capital Fixed Income (EMWO) Blmbg. U.S. Aggregate Index	4,773,059	0.5	-4.05 -5.93	-4.05 -5.93	-1.39 -4.15	3.85 1.69	3.35 2.14	3.24 2.19	02/2017
FNB (EMWO) Bloomberg Intermed Aggregate Index	2,708,051	0.3	-4.13 -4.69	-4.13 -4.69	-3.64 -4.38	1.65 1.19	N/A 1.67	1.58 1.56	07/2017
Israel Bonds	7,463,505	0.7	-1.78	-1.78	0.31	1.66	1.62	2.54	01/2012
High Yield Fixed Composite	123,524,625	11.7	-3.80	-3.80	0.17	4.31	4.10	6.43	04/2008
FTSE High Yield Market Capped Index			-4.29	-4.29	-0.23	4.14	4.38	6.76	
Oaktree High Yield FTSE High Yield Market Capped Index	66,909,229	6.3	-3.73 -4.29	-3.73 -4.29	0.40 -0.23	3.75 4.14	3.58 4.38	6.10 6.76	04/2008
Federated High Yield Blmbg. U.S. High Yield - 2% Issuer Cap	53,015,275	5.0	-4.06 -4.82	-4.06 -4.82	-0.27 -0.66	5.11 4.56	N/A 4.68	4.73 4.45	07/2017
Sound Point Credit Suisse Leveraged Loan Index	3,600,120	0.3	-1.12 -0.10	-1.12 -0.10	2.50 3.23	3.28 4.10	3.93 4.05	4.30 4.04	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
TIPS Fixed Composite	41,654,324	3.9	-2.97	-2.97	4.26	6.21	4.44	3.65	04/2008
Bloomberg U.S. TIPS Index			-3.02	-3.02	4.29	6.22	4.43	3.61	
MCM TIPS	41,654,324	3.9	-2.97	-2.97	4.26	6.21	4.44	4.56	12/2016
Bloomberg U.S. TIPS Index			-3.02	-3.02	4.29	6.22	4.43	4.37	
Real Estate Composite	125,169,252	11.9	5.14	5.14	22.16	9.58	9.91	9.12	04/2003
NCREIF Fund Index-ODCE (VW) (Net)			7.17	7.17	27.29	10.31	8.91	7.75	
Morgan Stanley Prime Property Fund[CE]	95,026,175	9.0	7.01	7.01	27.57	11.33	9.99	9.27	04/2003
NCREIF Fund Index-ODCE (VW) (Net)			7.17	7.17	27.29	10.31	8.91	7.75	
Oaktree Real Estate	6,465,443	0.6	-1.56	-1.56	-7.40	-4.24	0.13	4.25	08/2013
Washington Alliance (EMWO)	13,472,055	1.3	-0.05	-0.05	10.42	8.71	14.33	12.61	08/2013
Washington Alliance II (EMWO)	1,300,881	0.1	0.00	0.00	14.83	N/A	N/A	6.86	03/2020
Siguler Guff Distressed RE	8,904,698	0.8	0.00	0.00	16.19	5.85	10.29	7.69	03/2014
ERECT Composite	11,411,014	1.1	9.29	9.29	11.70	6.37	8.07	7.30	09/2010
CPI - All Urban Consumers (SA)			2.71	2.71	8.56	4.20	3.36	2.43	
Private Equity Composite	219,253,042	20.8	4.04	4.04	28.04	17.65	14.08	8.25	04/2003
Private Equity Policy Index			4.04	4.04	28.04	17.65	14.08	8.25	
Life Settlement Composite	13,122,706	1.2	-1.80	-1.80	-4.80	-5.62	-3.79	4.90	09/2009
Hedge Fund Composite	3,414,731	0.3	-4.39	-4.39	4.49	7.57	1.18	2.54	04/2003
90 Day T-Bill Index + 3%			0.78	0.78	3.07	3.83	4.16	4.24	
Gridiron Capital Multi-Asset (EMWO)	3,414,563	0.3	-4.39	-4.39	4.49	8.93	N/A	8.60	02/2019
HFRI FoF Composite Lagged			-2.89	-2.89	1.07	5.81	4.60	6.16	
Liquid Policy Portfolio Composite	40,408,096	3.8	-5.06	-5.06	4.70	N/A	N/A	6.17	03/2021
Liquid Policy Benchmark			-5.26	-5.26	4.36	N/A	N/A	5.93	
BlackRock Liquidity iShares Public Pension Fund	40,408,096	3.8	-5.08	-5.08	4.40	N/A	N/A	4.40	04/2021
Liquid Policy Benchmark			-5.26	-5.26	4.36	N/A	N/A	4.36	
Cash Account	5,230,586	0.5	0.12	0.12	0.50	0.99	1.25	0.72	01/2012

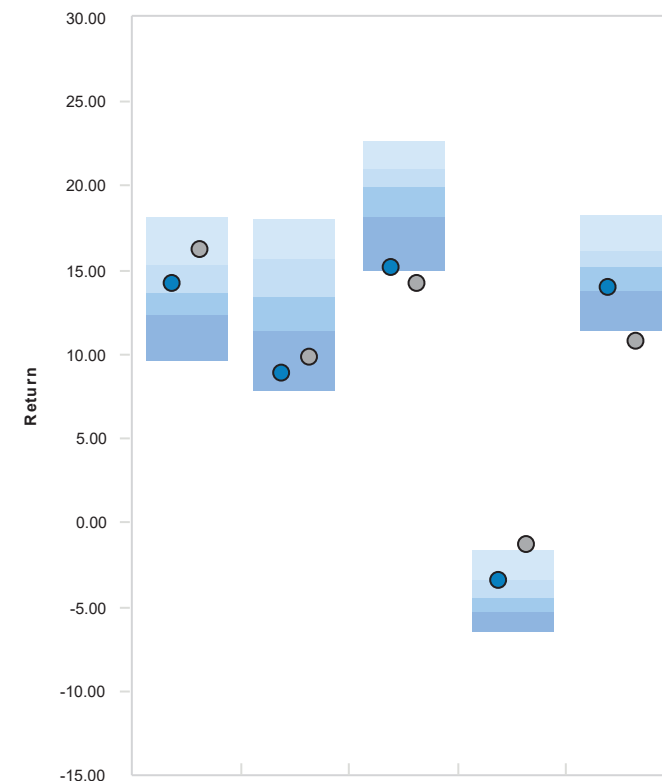
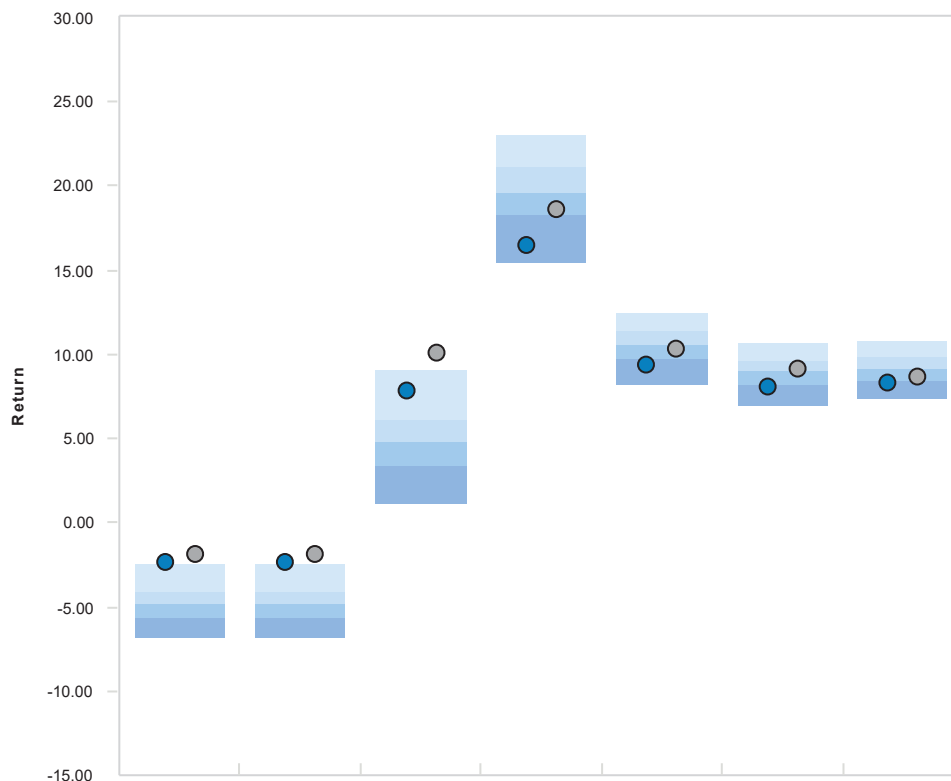


Comparative Performance - IRR
Private Real Estate Accounts
As of March 31, 2022

Comparative Performance - IRR						
	1 YR	3 YR	5 YR	7 YR	Inception	Inception Date
Oaktree Real Estate NEW	-7.40	-4.15	0.46	2.45	5.86	09/18/2013
Siguler Guff Distressed RE	16.26	5.31	10.95	9.12	8.81	06/30/2014
Washington Alliance (EMWO)	10.55	8.67	14.72	15.27	14.34	03/31/2014
Washington Alliance II (EMWO)	14.81	N/A	N/A	N/A	7.60	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	-2.37 (5)	-2.37 (5)	7.87 (9)	16.50 (91)	9.36 (83)	8.09 (78)	8.29 (79)
● Total Fund Policy Index	-1.85 (2)	-1.85 (2)	10.11 (4)	18.57 (71)	10.34 (57)	9.16 (45)	8.70 (67)
Median	-4.85	-4.85	4.82	19.61	10.57	9.03	9.18

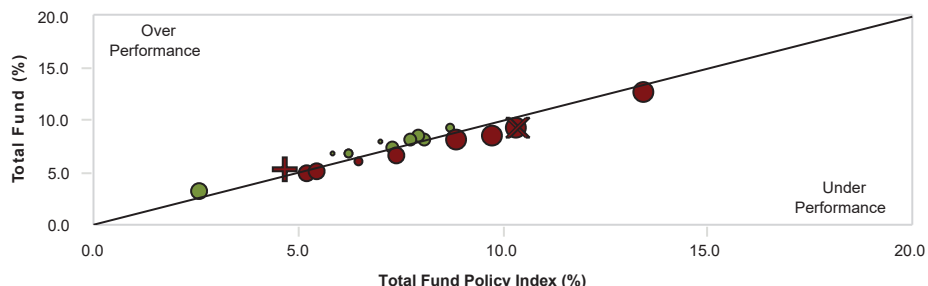
	2021	2020	2019	2018	2017
● Total Fund	14.29 (39)	8.93 (92)	15.16 (94)	-3.36 (25)	13.97 (70)
● Total Fund Policy Index	16.27 (16)	9.82 (88)	14.24 (97)	-1.27 (4)	10.82 (97)
Median	13.63	13.44	19.92	-4.50	15.18

Comparative Performance

	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	1 Qtr Ending Sep-2020
Total Fund	4.47	0.83	4.89	3.44	7.76	4.22
Total Fund Policy Index	4.84	1.49	5.43	3.65	8.87	3.18

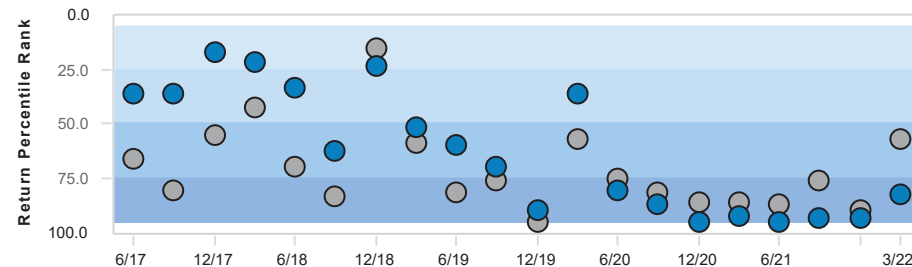


3 Yr Rolling Under/Over Performance - 5 Years



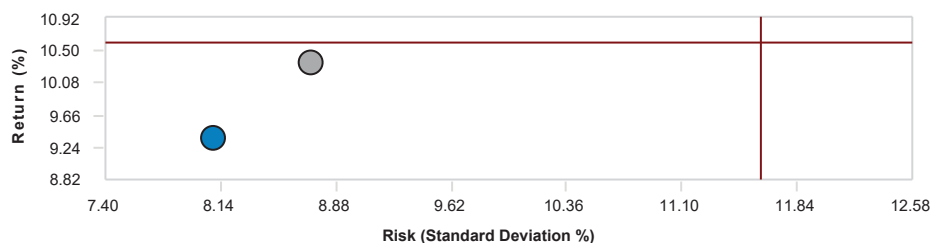
- Over Performance
- Under Performance
- + Earliest Date
- X Latest Date

3 Yr Rolling Percentile Ranking - 5 Years



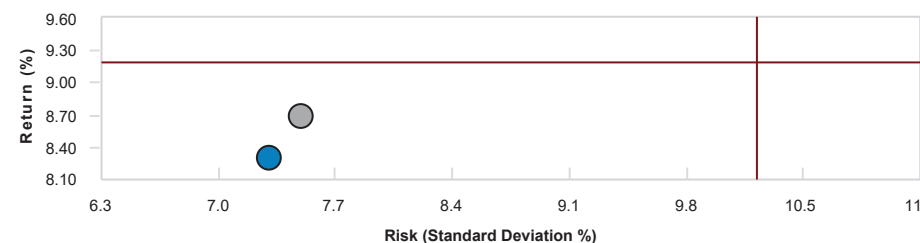
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Total Fund	20	3 (15%)	4 (20%)	4 (20%)	9 (45%)
● Total Fund Policy Index	20	1 (5%)	1 (5%)	7 (35%)	11 (55%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Total Fund	9.36	8.09
● Total Fund Policy Index	10.34	8.72
— Median	10.61	11.60

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Total Fund	8.29	7.30
● Total Fund Policy Index	8.70	7.49
— Median	9.18	10.22

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.45	95.63	103.25	-0.09	-0.66	1.04	0.92	5.28
Total Fund Policy Index	0.00	100.00	100.00	0.00	N/A	1.07	1.00	5.46

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund	1.39	101.10	109.71	-0.02	-0.28	0.96	0.96	4.82
Total Fund Policy Index	0.00	100.00	100.00	0.00	N/A	0.99	1.00	4.70



Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	18.97	17.50	1.03	100.03	10	99.84	2
Index	18.92	17.51	1.03	100.00	10	100.00	2

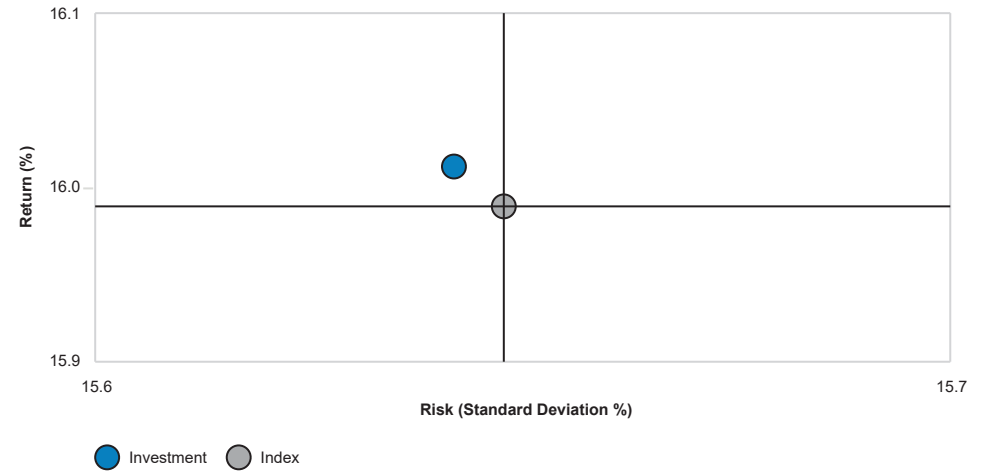
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	16.01	15.64	0.96	100.02	16	99.90	4
Index	15.99	15.65	0.96	100.00	16	100.00	4

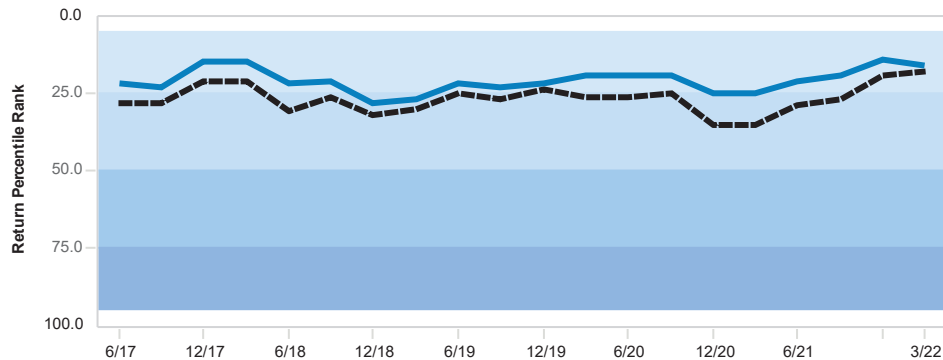
Risk and Return 3 Years



Risk and Return 5 Years

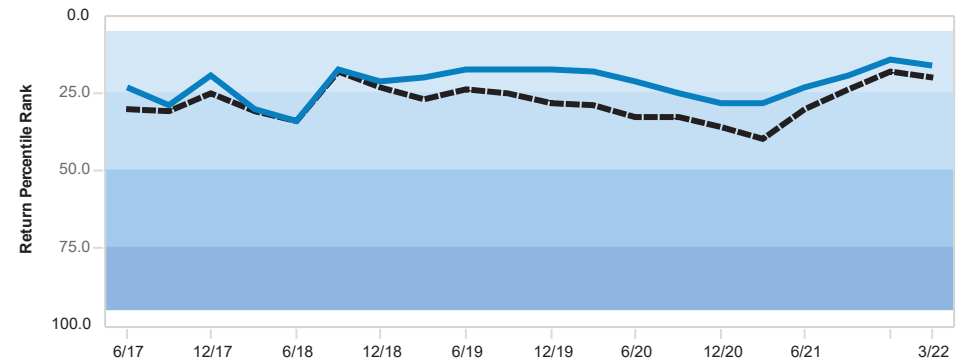


3 Year Rolling Percentile Rank IM U.S. Large Cap Index Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)
Index	20	7 (35%)	13 (65%)	0 (0%)	0 (0%)

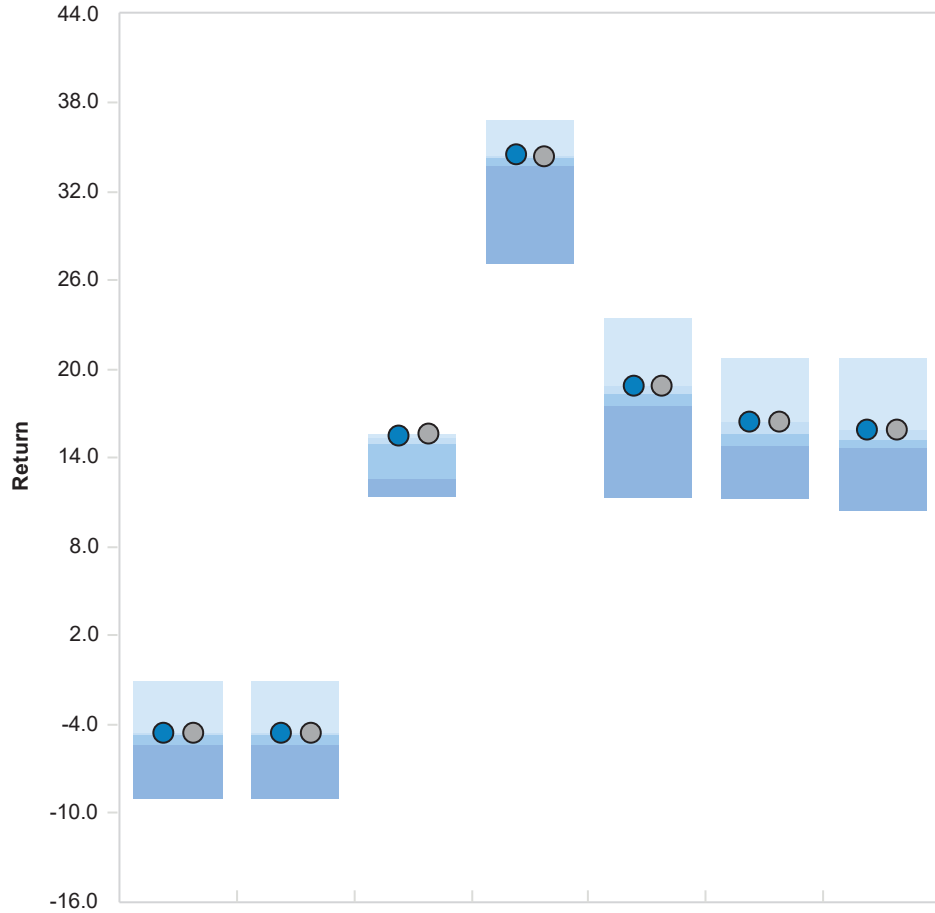
5 Year Rolling Percentile Rank IM U.S. Large Cap Index Equity (SA+CF)



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

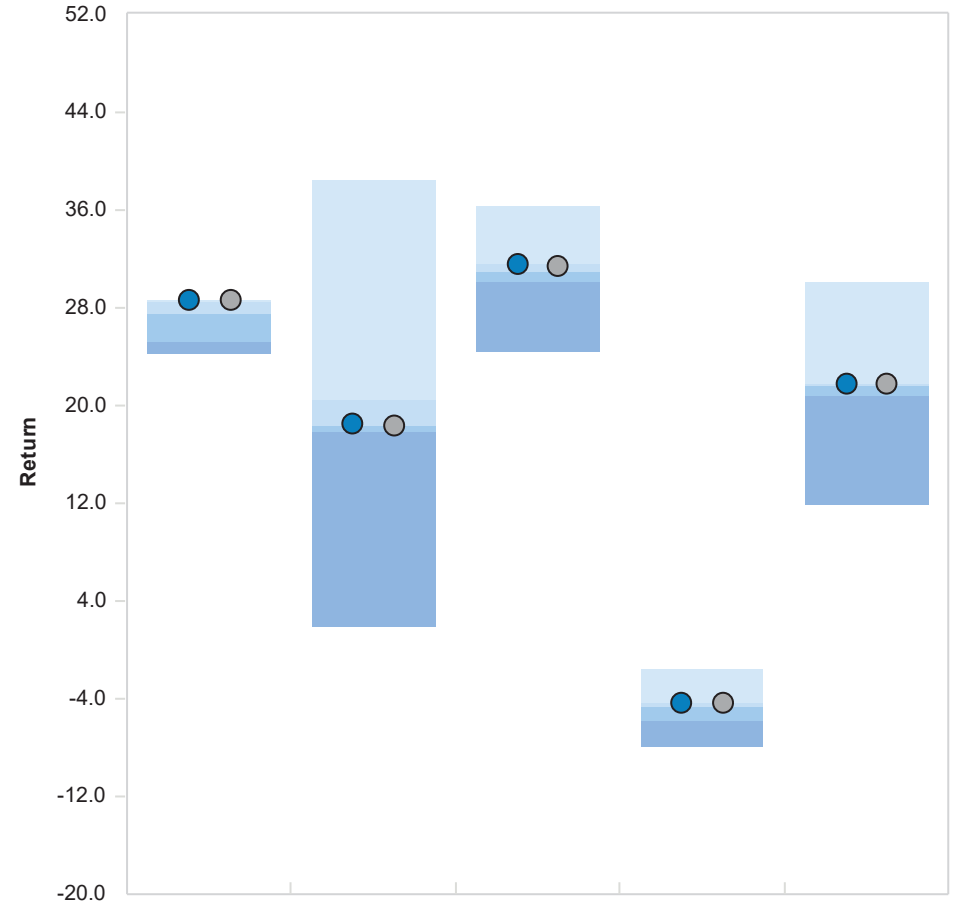


Peer Group Analysis - IM U.S. Large Cap Index Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.60 (23)	-4.60 (23)	15.58 (16)	34.50 (23)	18.97 (16)	16.52 (16)	16.01 (16)
● Index	-4.60 (22)	-4.60 (22)	15.65 (4)	34.47 (25)	18.92 (18)	16.49 (19)	15.99 (20)
Median	-4.69	-4.69	14.98	34.28	18.43	15.72	15.34

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



	2021	2020	2019	2018	2017
● Investment	28.65 (16)	18.53 (47)	31.54 (25)	-4.40 (28)	21.85 (28)
● Index	28.71 (5)	18.40 (52)	31.49 (33)	-4.38 (25)	21.83 (30)
Median	27.56	18.42	30.95	-4.61	21.63

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	11.01 (40)	0.56 (27)	8.53 (29)	6.18 (39)	12.23 (40)	8.93 (54)
Index	11.03 (33)	0.58 (13)	8.55 (19)	6.17 (45)	12.15 (50)	8.93 (54)
Median	10.98	0.40	8.37	6.16	12.15	8.93



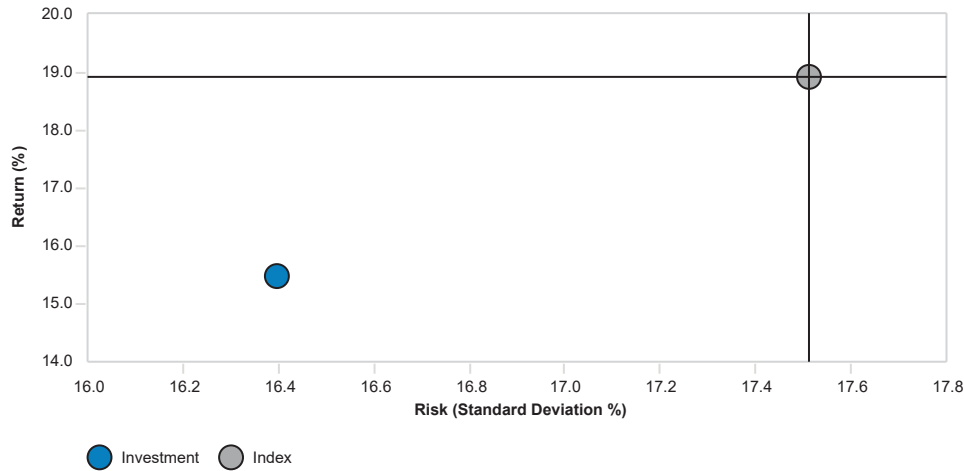
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.47	16.39	0.91	89.37	10	96.33	2
Index	18.92	17.51	1.03	100.00	10	100.00	2

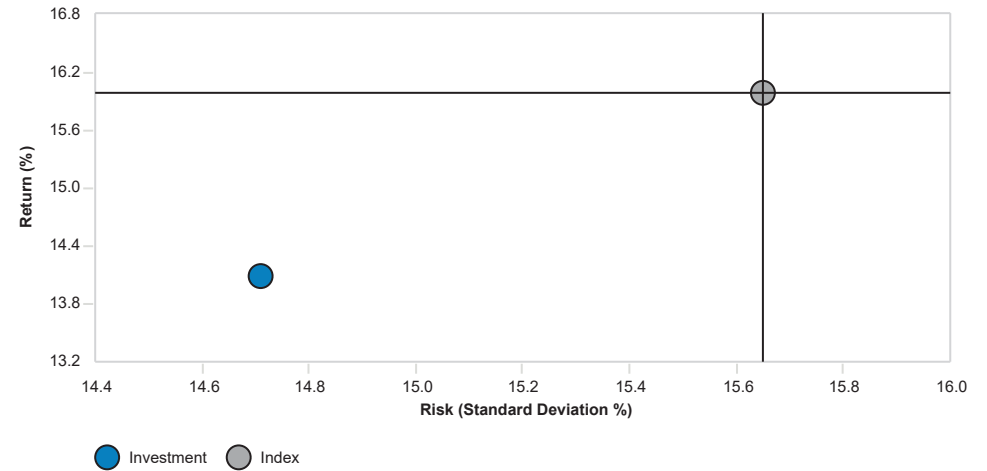
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.08	14.71	0.89	92.79	16	97.32	4
Index	15.99	15.65	0.96	100.00	16	100.00	4

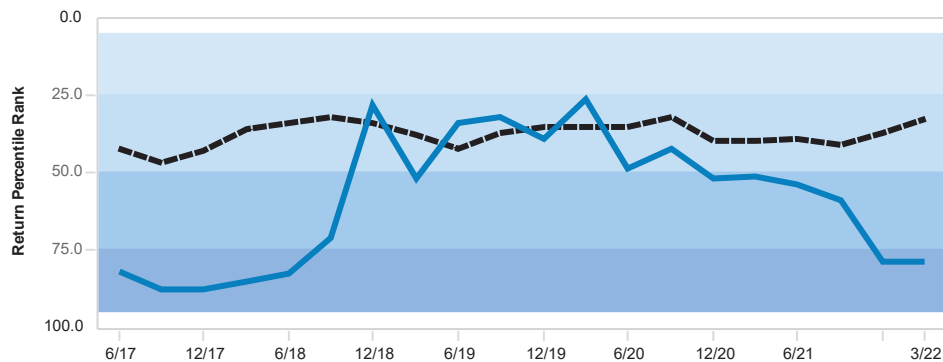
Risk and Return 3 Years



Risk and Return 5 Years

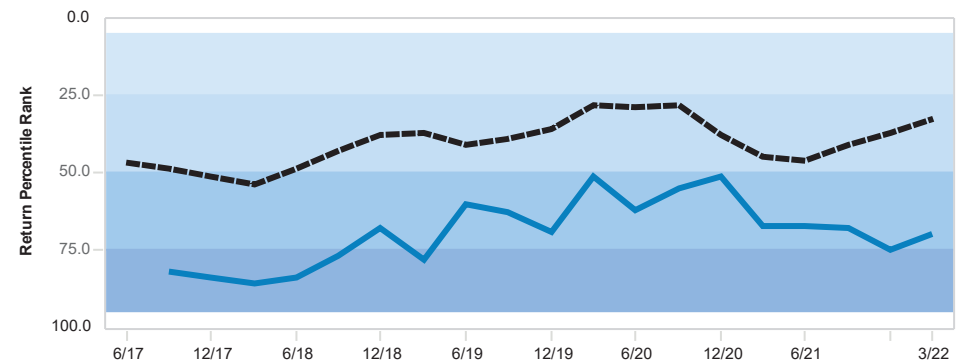


3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



	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%)

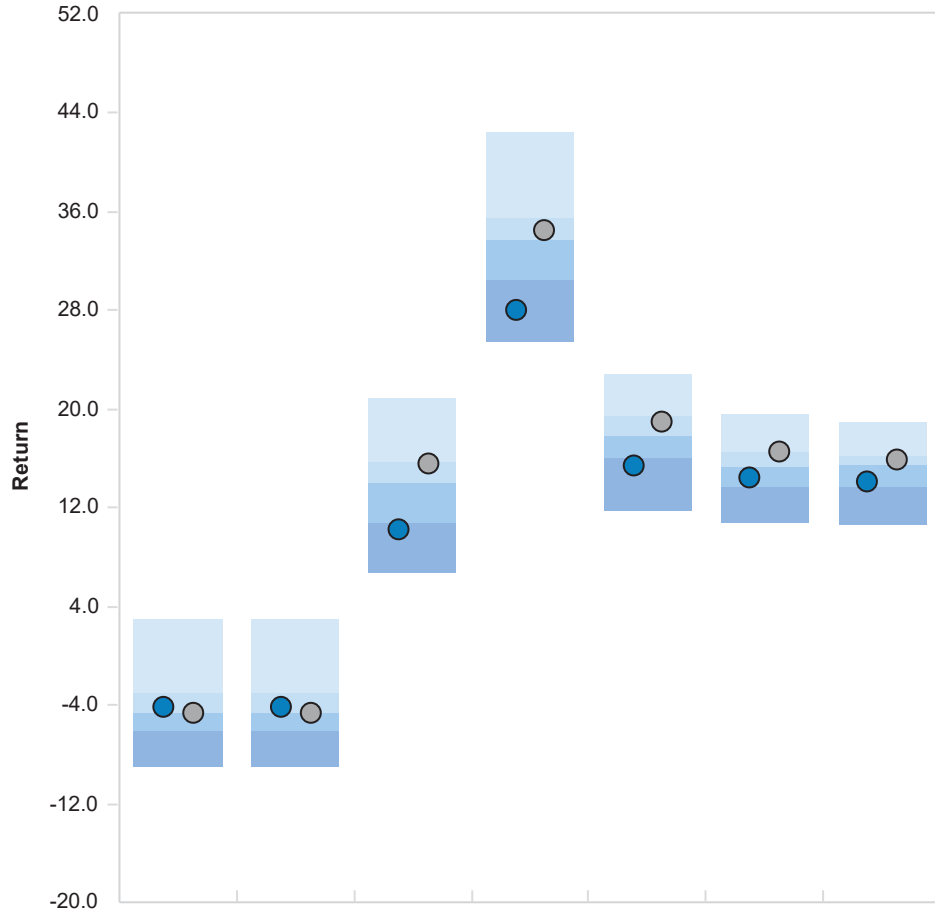
5 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	19	0 (0%)	0 (0%)	13 (68%)	6 (32%)
Index	20	0 (0%)	18 (90%)	2 (10%)	0 (0%)

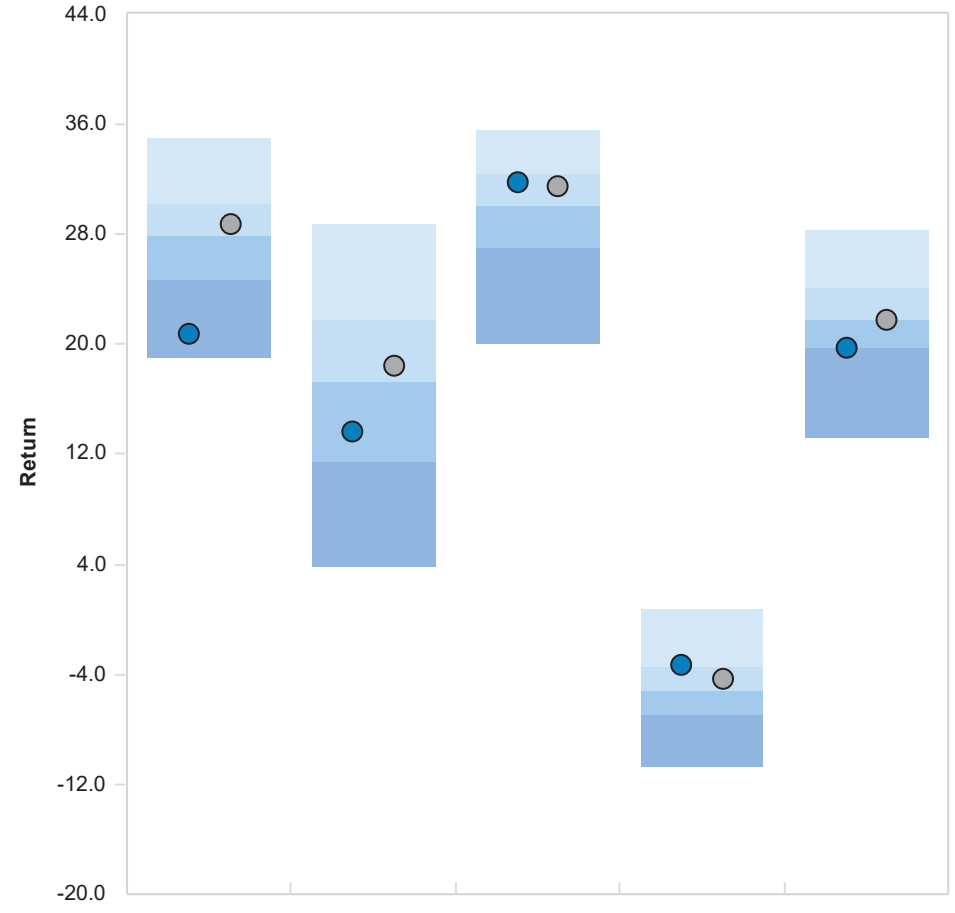


Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.17 (39)	-4.17 (39)	10.25 (79)	28.06 (88)	15.47 (79)	14.45 (64)	14.08 (70)
● Index	-4.60 (53)	-4.60 (53)	15.65 (28)	34.47 (40)	18.92 (33)	16.49 (30)	15.99 (33)
Median	-4.58	-4.58	13.98	33.72	17.92	15.29	15.39

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	27.89	17.25	30.03	-5.15	21.85

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	7.31 (89)	0.09 (52)	7.12 (71)	4.98 (78)	11.57 (66)	9.49 (23)
Index	11.03 (33)	0.58 (27)	8.55 (31)	6.17 (62)	12.15 (54)	8.93 (36)
Median	10.34	0.11	8.04	6.74	12.32	8.02



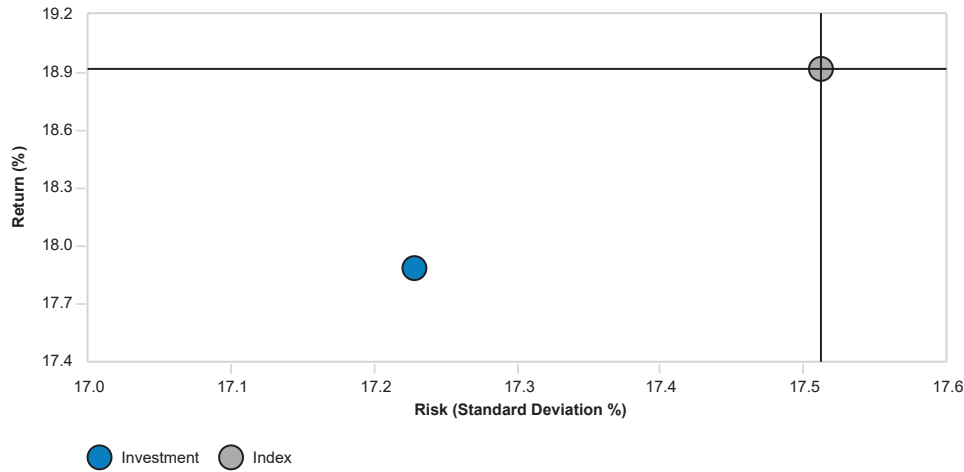
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	17.89	17.23	1.00	96.75	10	98.66	2
Index	18.92	17.51	1.03	100.00	10	100.00	2

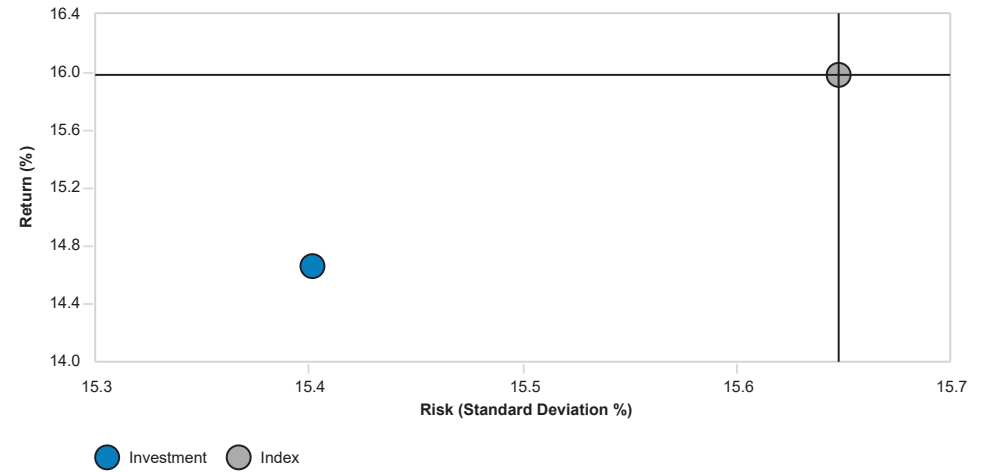
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.66	15.40	0.89	95.48	16	98.79	4
Index	15.99	15.65	0.96	100.00	16	100.00	4

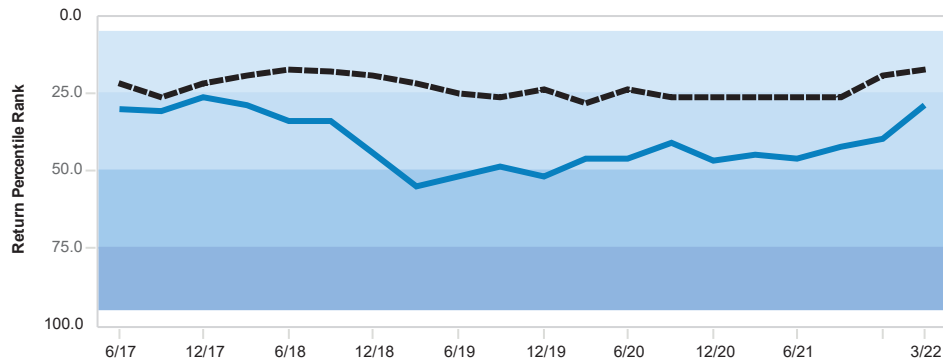
Risk and Return 3 Years



Risk and Return 5 Years

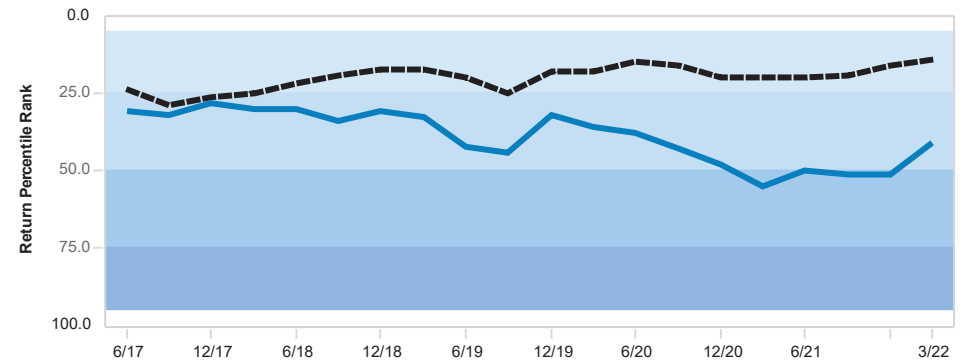


3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	17 (85%)	3 (15%)	0 (0%)
Index	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)

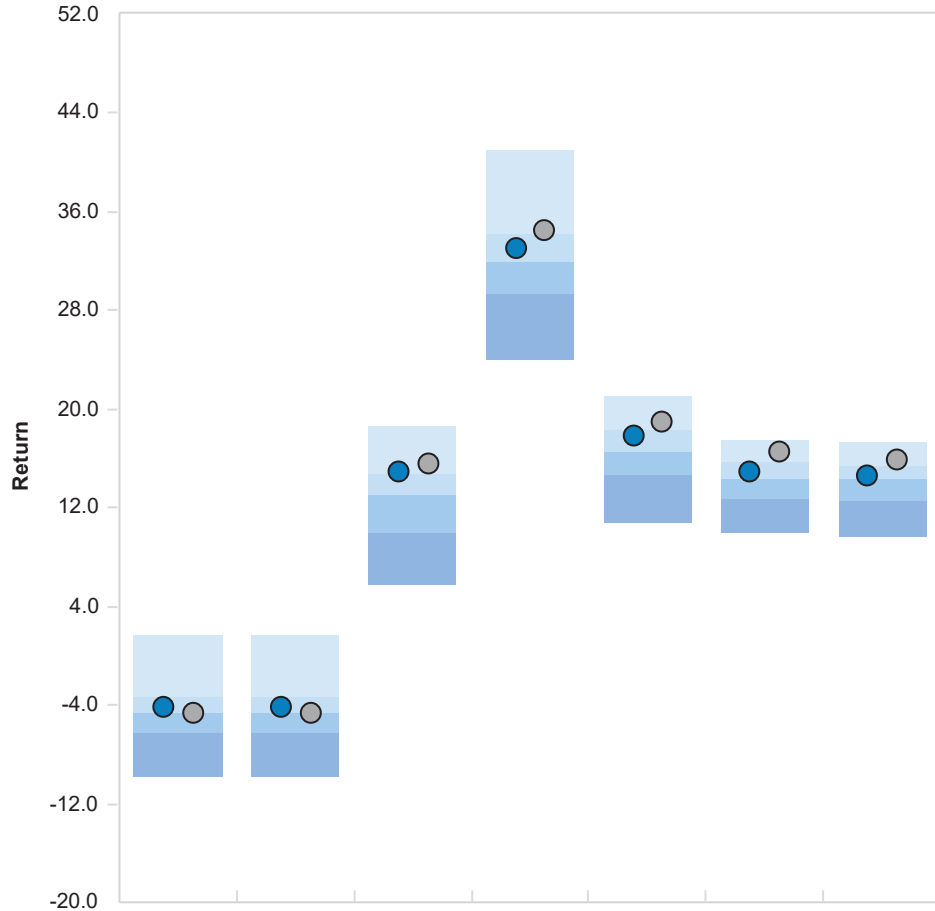
5 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	17 (85%)	3 (15%)	0 (0%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

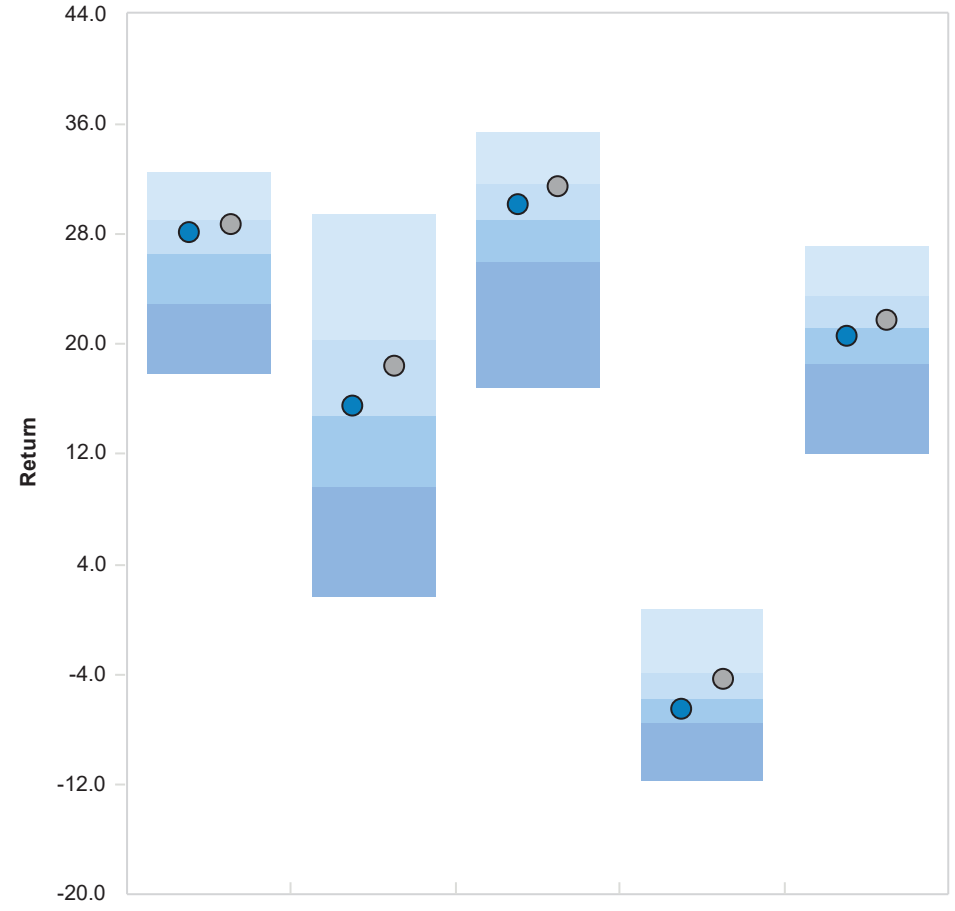


Peer Group Analysis - IM U.S. Large Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.21 (40)	-4.21 (40)	14.94 (24)	33.09 (41)	17.89 (29)	15.00 (33)	14.66 (41)
● Index	-4.60 (47)	-4.60 (47)	15.65 (16)	34.47 (22)	18.92 (17)	16.49 (16)	15.99 (14)
Median	-4.70	-4.70	13.07	31.93	16.60	14.26	14.35

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



	2021	2020	2019	2018	2017
● Investment	28.13 (34)	15.56 (44)	30.24 (36)	-6.43 (60)	20.67 (56)
● Index	28.71 (27)	18.40 (34)	31.49 (27)	-4.38 (31)	21.83 (43)
Median	26.57	14.78	29.09	-5.71	21.25

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	11.19 (21)	0.04 (50)	7.88 (46)	6.78 (47)	11.26 (60)	8.44 (38)
Index	11.03 (24)	0.58 (25)	8.55 (21)	6.17 (56)	12.15 (46)	8.93 (32)
Median	9.81	0.02	7.72	6.55	11.91	7.89



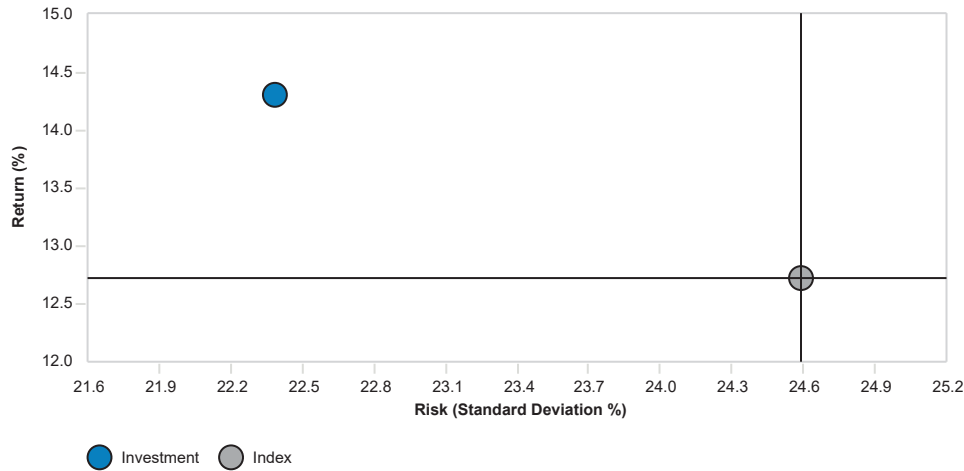
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.30	22.39	0.67	94.23	8	87.49	4
Index	12.73	24.59	0.58	100.00	8	100.00	4

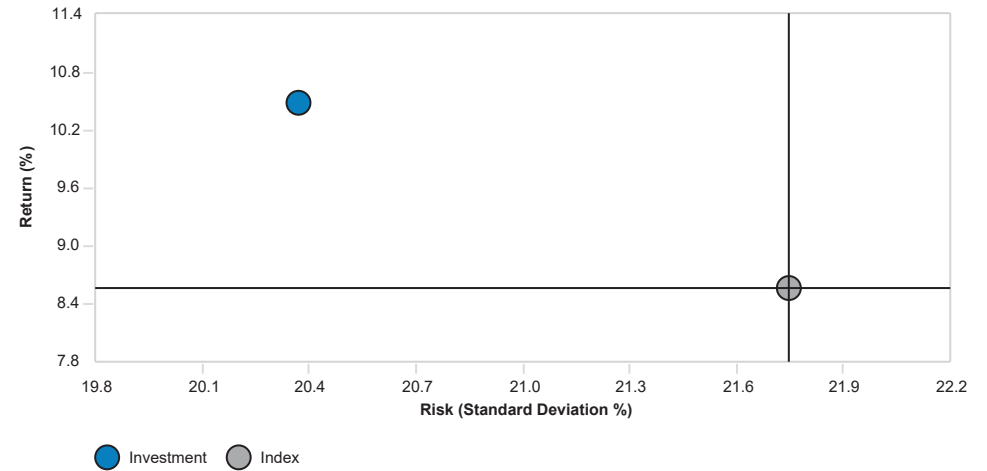
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.48	20.37	0.54	96.55	14	88.59	6
Index	8.57	21.74	0.44	100.00	14	100.00	6

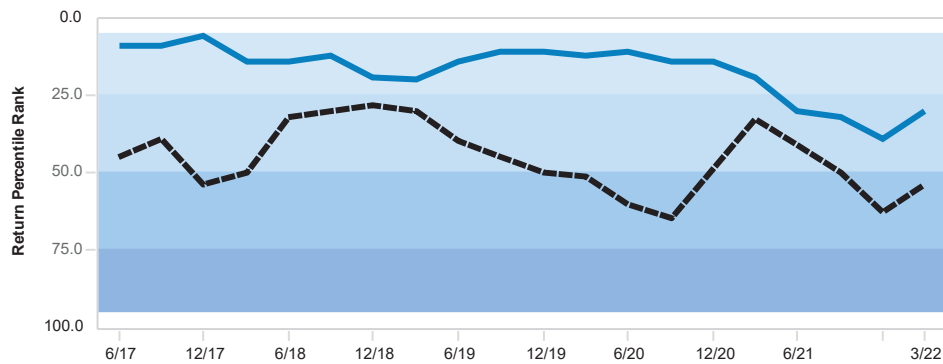
Risk and Return 3 Years



Risk and Return 5 Years

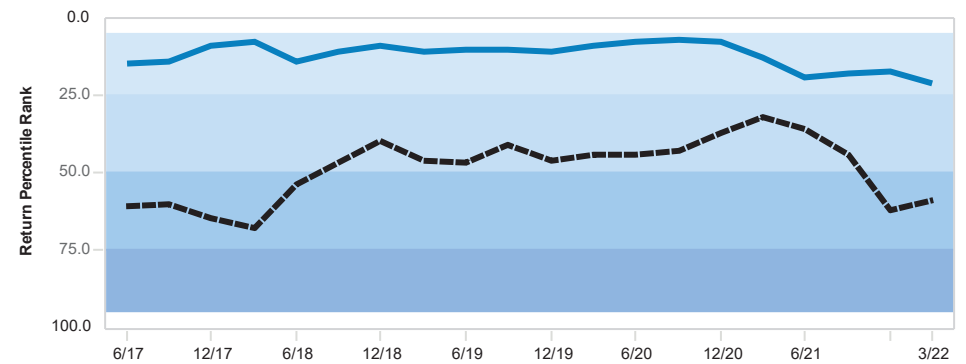


3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (SA+CF)



	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	0 (0%)	14 (70%)	6 (30%)	0 (0%)

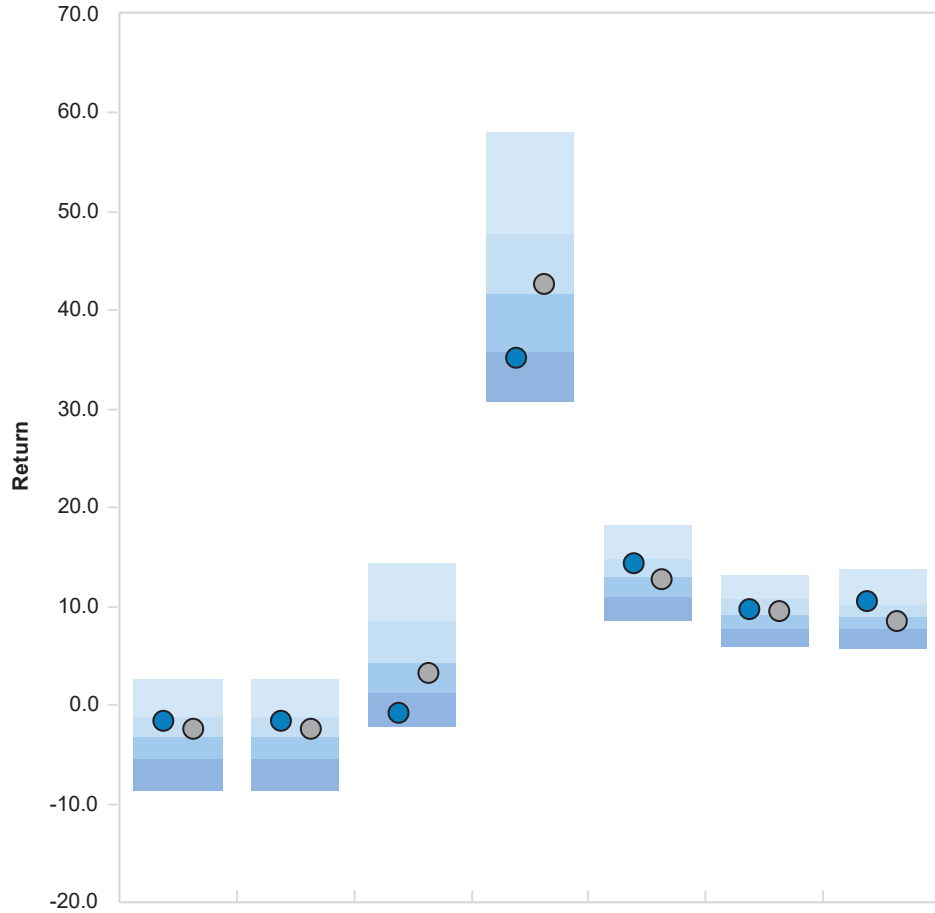
5 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (SA+CF)



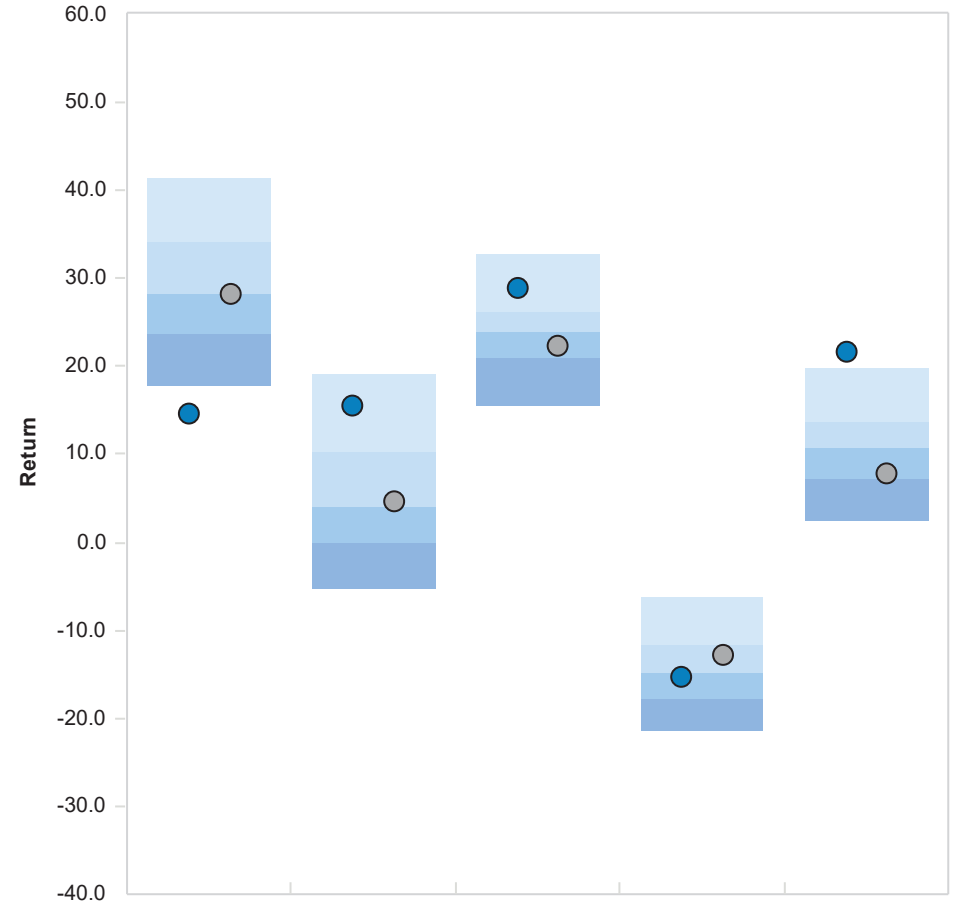
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	13 (65%)	7 (35%)	0 (0%)



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



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	-1.54 (29)	-1.54 (29)	-0.73 (90)	35.20 (79)	14.30 (30)	9.80 (35)	10.48 (21)
Index	-2.40 (36)	-2.40 (36)	3.32 (61)	42.69 (45)	12.73 (54)	9.45 (40)	8.57 (59)
Median	-3.13	-3.13	4.36	41.60	12.88	9.06	8.95

	2021	2020	2019	2018	2017
Investment	14.64 (99)	15.50 (12)	28.89 (11)	-15.35 (55)	21.78 (4)
Index	28.27 (50)	4.63 (48)	22.39 (63)	-12.86 (34)	7.84 (70)
Median	28.26	4.02	23.85	-14.84	10.74

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	4.55 (84)	-2.12 (57)	-1.48 (100)	13.70 (82)	29.60 (49)	4.13 (32)
Index	4.36 (86)	-2.98 (78)	4.56 (32)	21.17 (27)	33.36 (23)	2.56 (46)
Median	6.64	-1.78	3.81	18.55	29.53	2.10



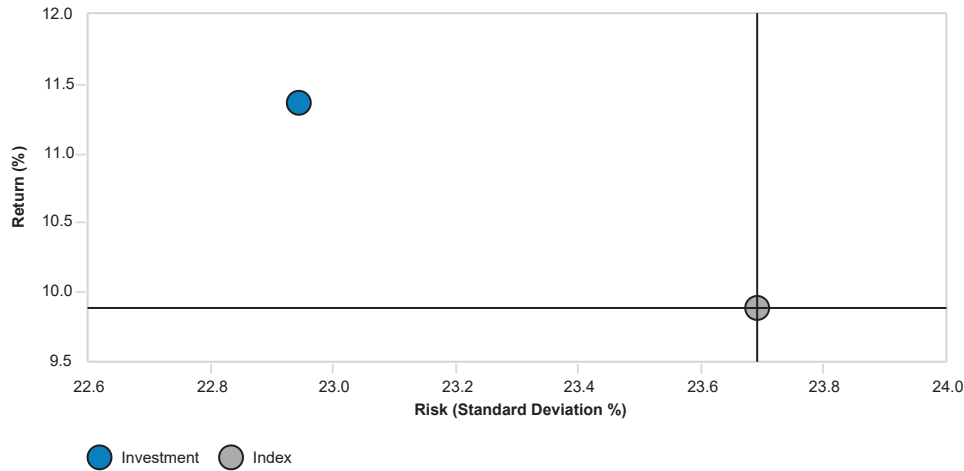
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.37	22.94	0.55	101.93	8	97.99	4
Index	9.88	23.69	0.48	100.00	8	100.00	4

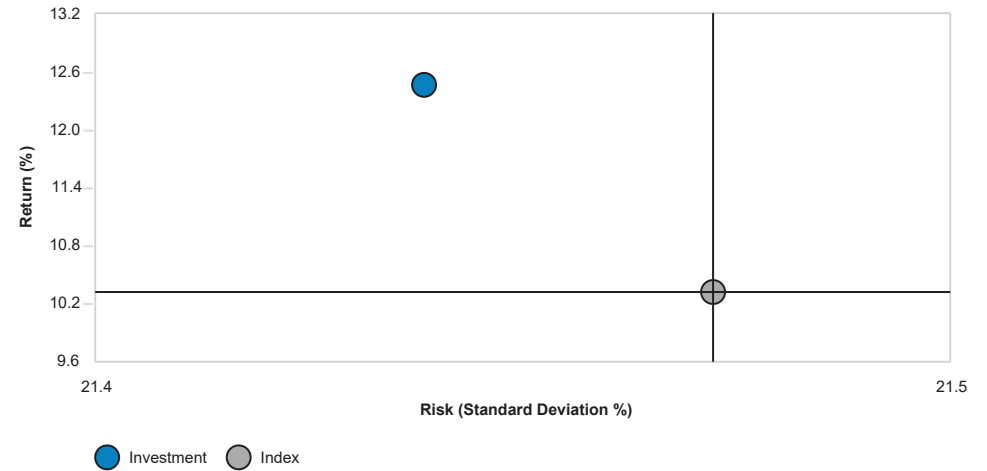
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	12.47	21.44	0.61	102.39	14	94.60	6
Index	10.33	21.47	0.51	100.00	15	100.00	5

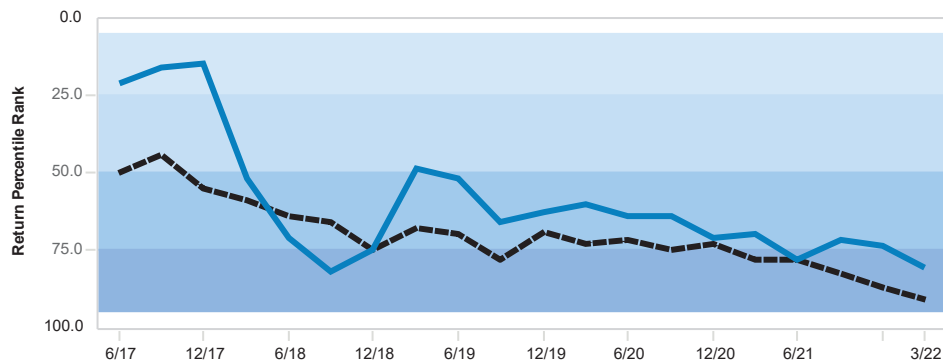
Risk and Return 3 Years



Risk and Return 5 Years

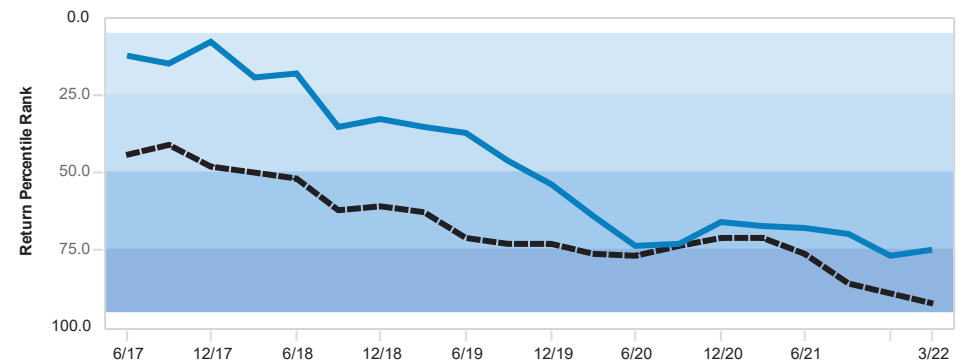


3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	1 (5%)	13 (65%)	3 (15%)
Index	20	0 (0%)	2 (10%)	12 (60%)	6 (30%)

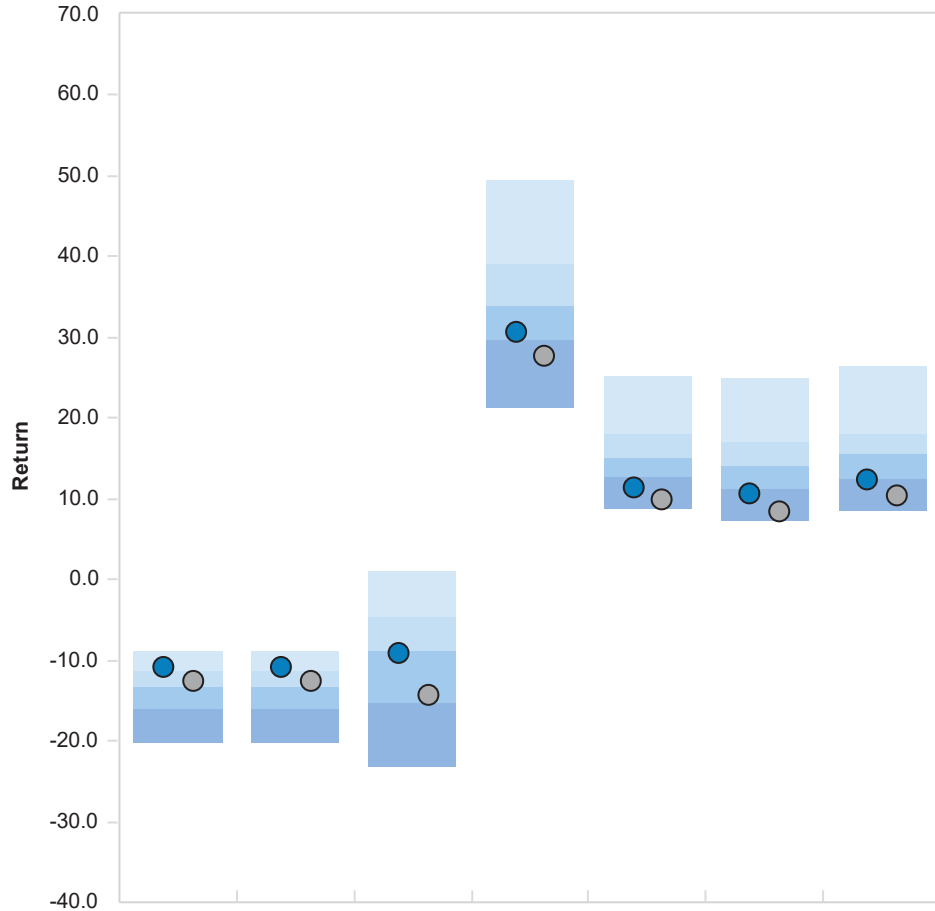
5 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	5 (25%)	9 (45%)	1 (5%)
Index	20	0 (0%)	4 (20%)	10 (50%)	6 (30%)

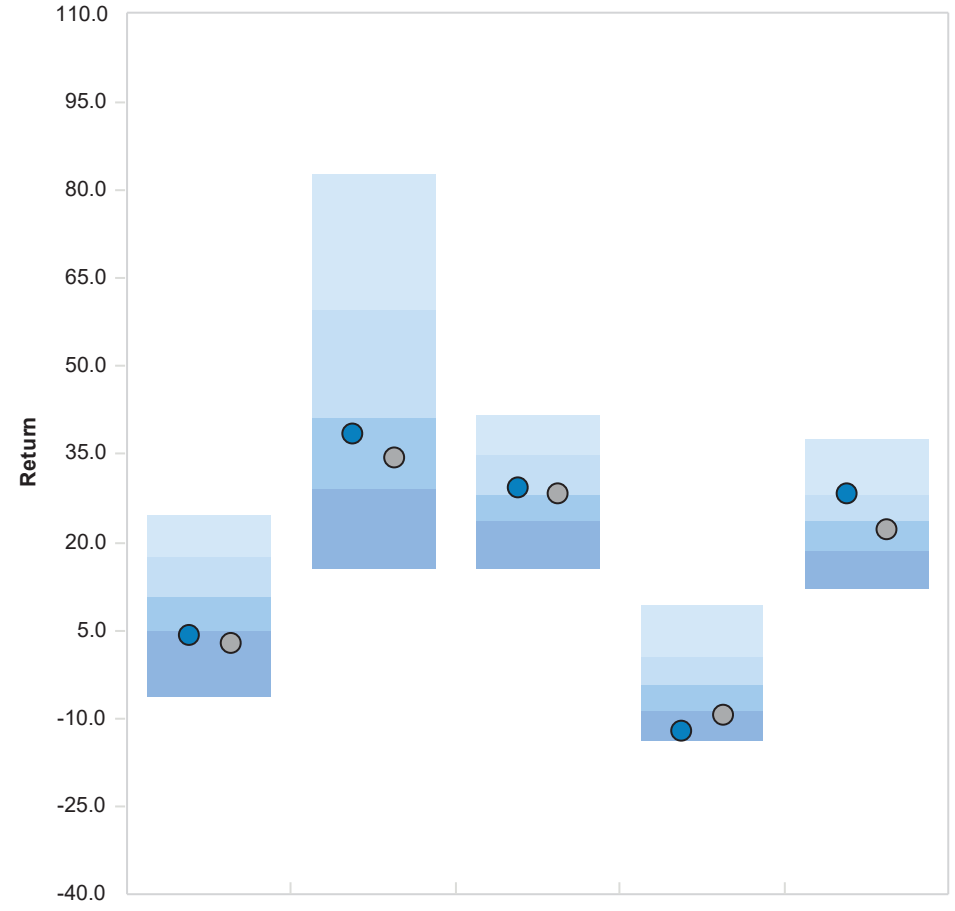


Peer Group Analysis - IM U.S. Small Cap Growth Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-10.74 (21)	-10.74 (21)	-9.05 (51)	30.62 (71)	11.37 (81)	10.64 (79)	12.47 (75)
● Index	-12.63 (47)	-12.63 (47)	-14.33 (72)	27.65 (83)	9.88 (91)	8.34 (91)	10.33 (92)
Median	-13.23	-13.23	-8.88	34.02	15.17	14.17	15.68

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



	2021	2020	2019	2018	2017
● Investment	4.32 (80)	38.53 (57)	29.23 (45)	-11.94 (91)	28.31 (24)
● Index	2.83 (84)	34.63 (64)	28.48 (48)	-9.31 (79)	22.17 (56)
Median	10.52	41.34	28.01	-4.13	23.68

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.01 (65)	-1.58 (43)	3.51 (80)	2.38 (73)	26.28 (58)	9.60 (43)
Index	0.01 (65)	-5.65 (91)	3.92 (77)	4.88 (56)	29.61 (28)	7.16 (67)
Median	1.40	-1.86	5.56	5.57	27.14	8.87



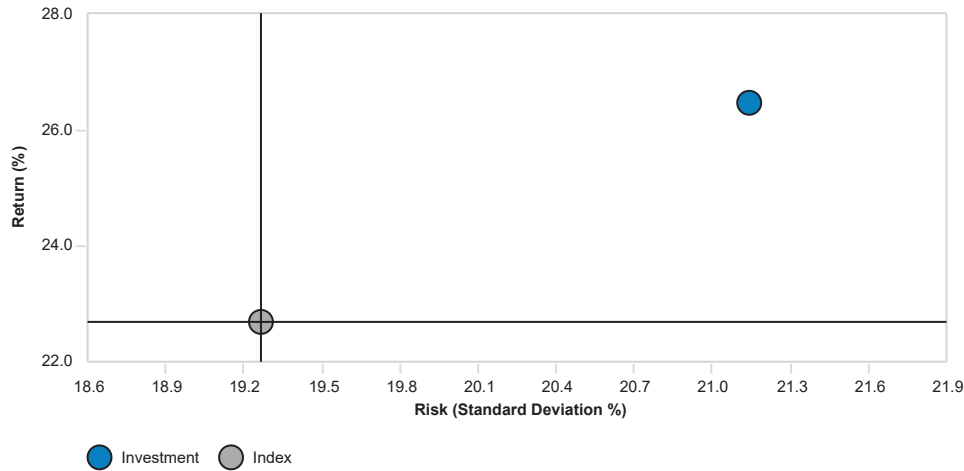
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	26.47	21.14	1.18	104.57	8	90.65	4
Index	22.68	19.27	1.12	100.00	10	100.00	2

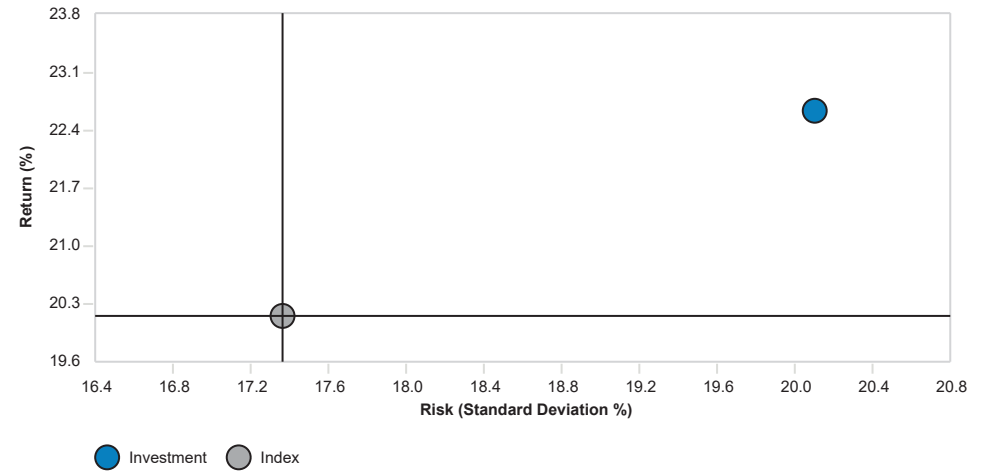
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	22.65	20.10	1.06	106.77	15	98.59	5
Index	20.16	17.37	1.08	100.00	17	100.00	3

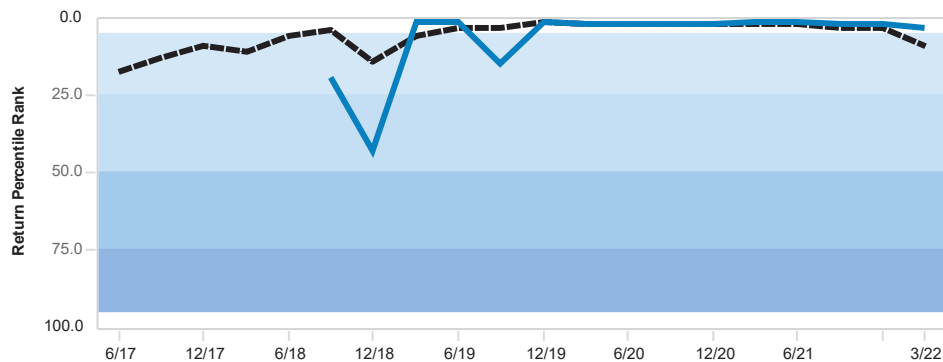
Risk and Return 3 Years



Risk and Return 5 Years

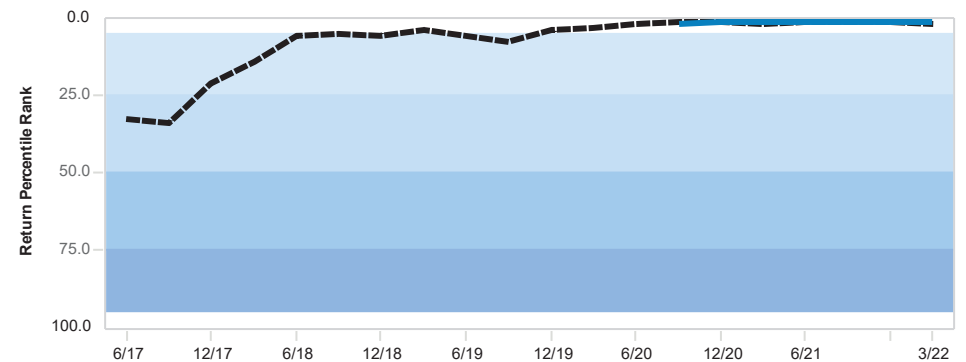


3 Year Rolling Percentile Rank IM U.S. All Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	14 (93%)	1 (7%)	0 (0%)	0 (0%)
Index	20	20 (100%)	0 (0%)	0 (0%)	0 (0%)

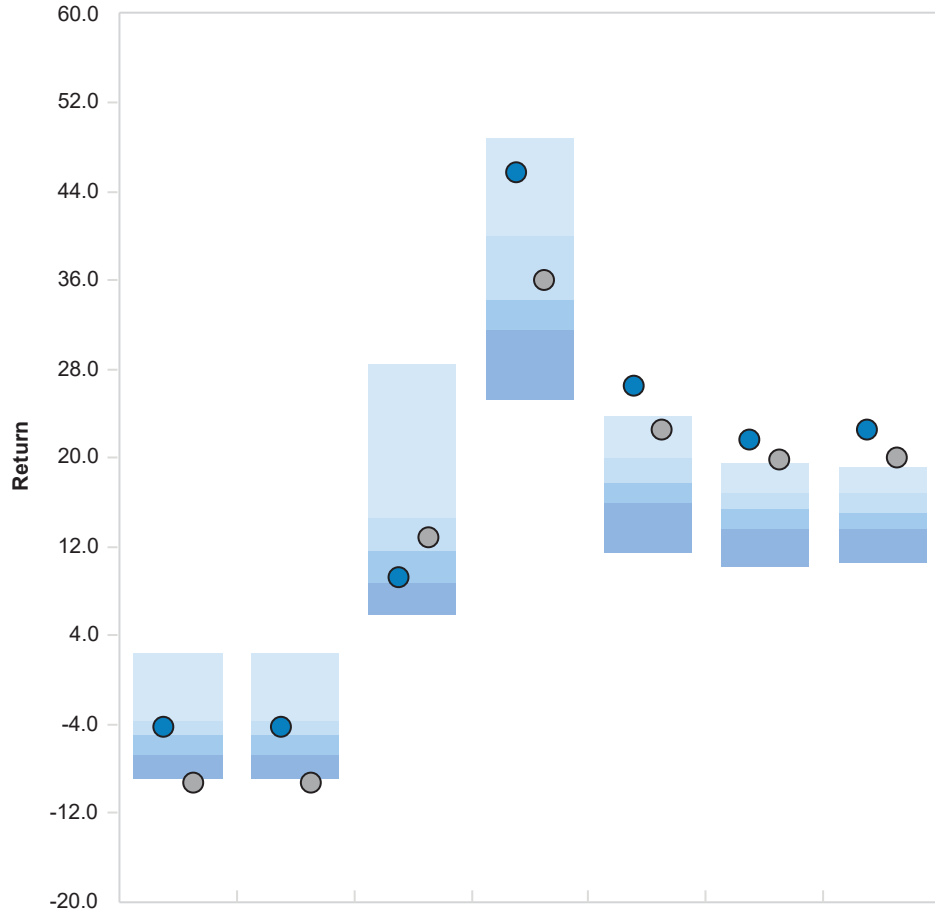
5 Year Rolling Percentile Rank IM U.S. All Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	7	7 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	18 (90%)	2 (10%)	0 (0%)	0 (0%)

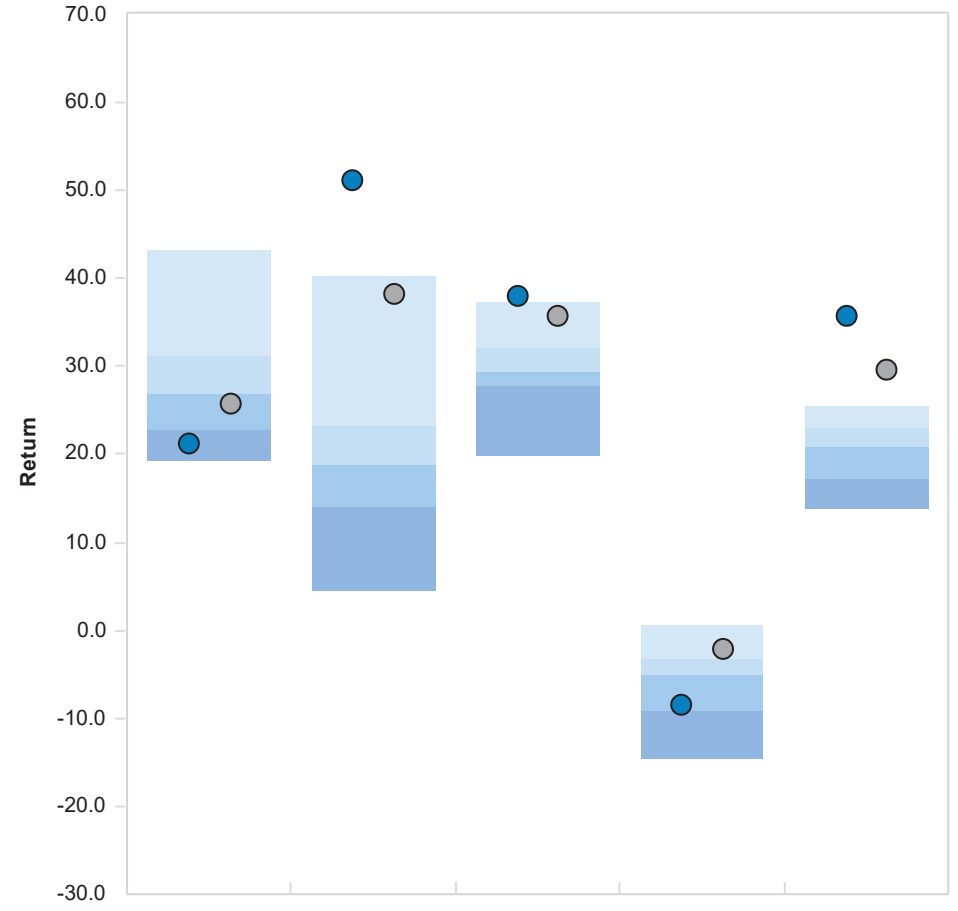


Peer Group Analysis - IM U.S. All Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.26 (30)	-4.26 (30)	9.39 (69)	45.75 (11)	26.47 (3)	21.76 (2)	22.65 (1)
● Index	-9.25 (99)	-9.25 (99)	12.86 (37)	36.18 (39)	22.68 (9)	19.93 (3)	20.16 (2)
Median	-4.83	-4.83	11.58	34.37	17.71	15.45	15.12

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 Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Investment	3.11 (100)	-0.97 (80)	11.89 (3)	6.19 (61)	17.39 (22)	14.85 (2)
Index	10.89 (19)	0.69 (34)	11.38 (3)	1.19 (97)	12.41 (77)	12.86 (4)
Median	9.26	0.13	7.53	7.12	14.52	7.82



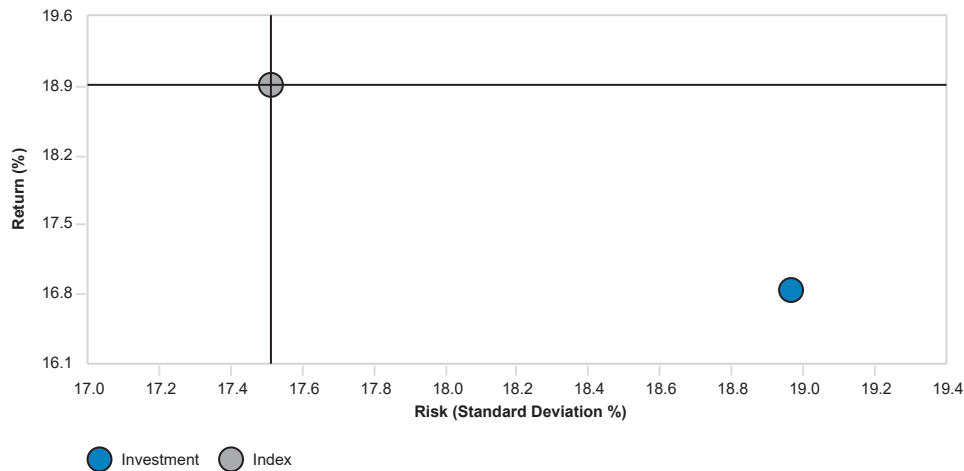
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	16.84	18.97	0.87	96.30	9	101.20	3
Index	18.92	17.51	1.03	100.00	10	100.00	2

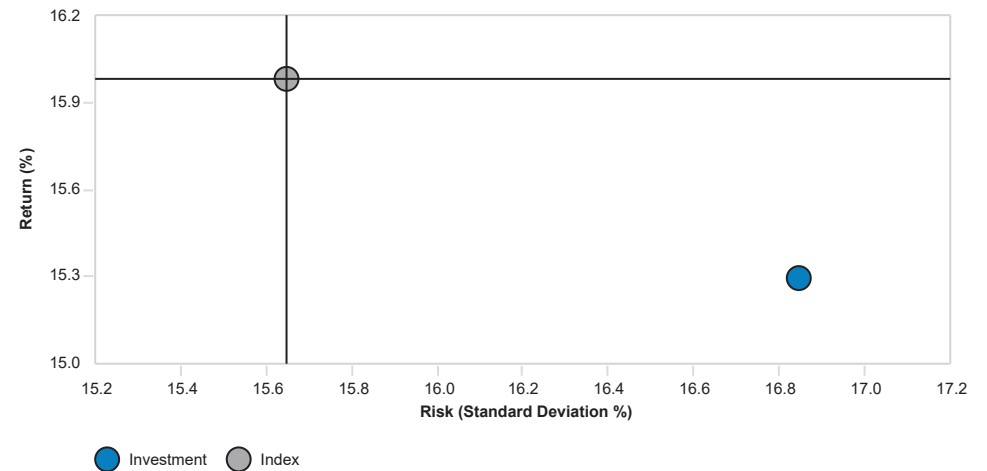
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	15.30	16.85	0.86	97.89	16	98.30	4
Index	15.99	15.65	0.96	100.00	16	100.00	4

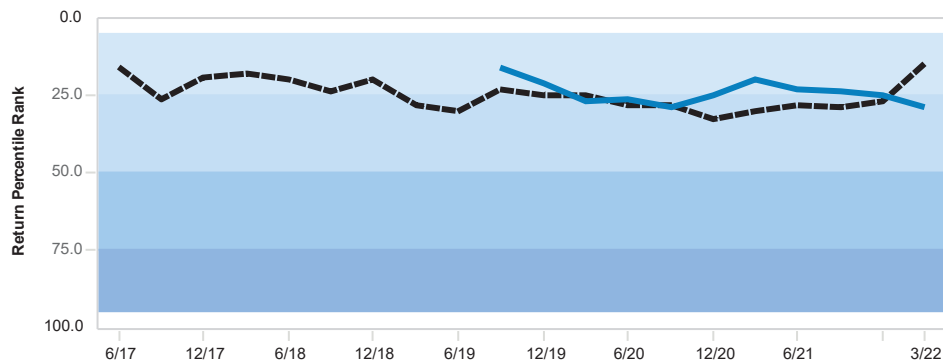
Risk and Return 3 Years



Risk and Return 5 Years

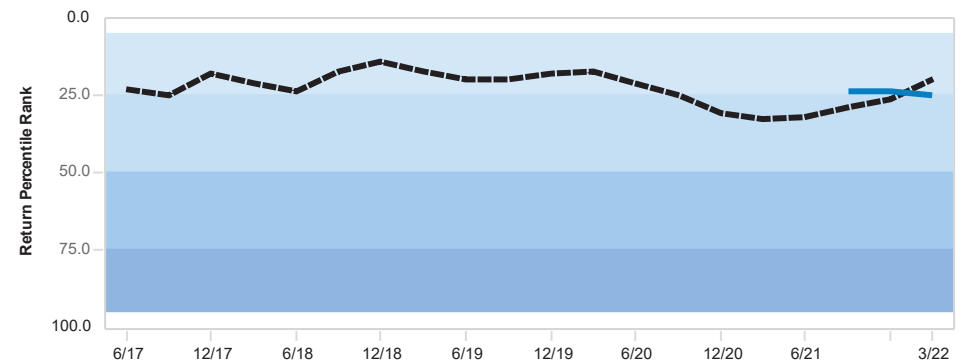


3 Year Rolling Percentile Rank IM U.S. Equity (MF)



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

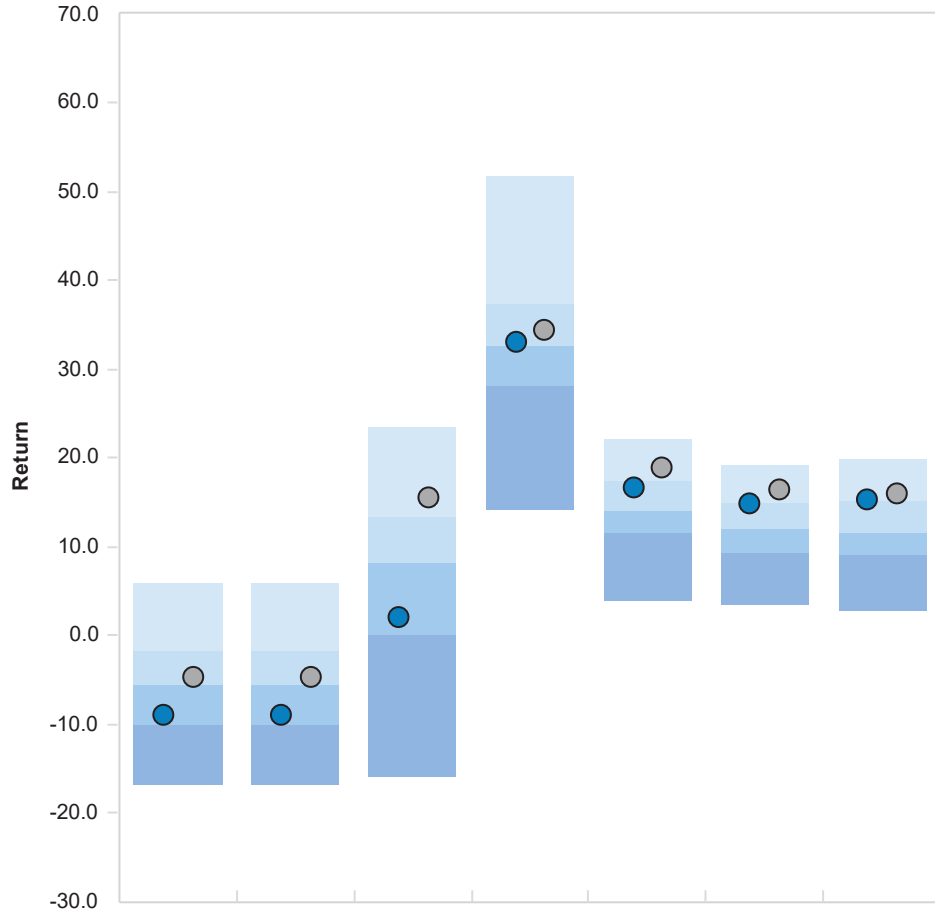
5 Year Rolling Percentile Rank IM U.S. Equity (MF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	3	3 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	15 (75%)	5 (25%)	0 (0%)	0 (0%)

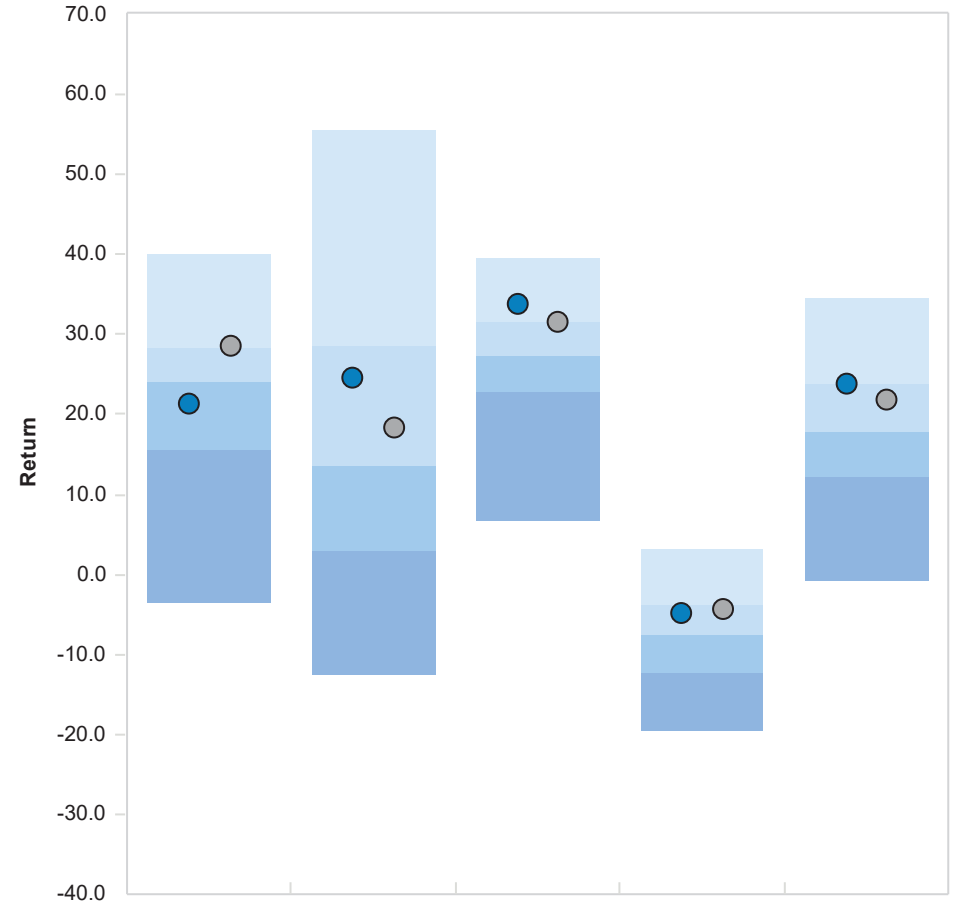


Peer Group Analysis - IM U.S. Equity (MF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-8.83 (70)	-8.83 (70)	2.21 (70)	33.23 (48)	16.84 (29)	14.86 (26)	15.30 (25)
● Index	-4.60 (42)	-4.60 (42)	15.65 (13)	34.47 (39)	18.92 (15)	16.49 (15)	15.99 (20)
Median	-5.46	-5.46	8.26	32.80	14.08	11.96	11.66

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 (23)	18.40 (41)	31.49 (26)	-4.38 (29)	21.83 (32)
Median	24.08	13.67	27.36	-7.49	17.84

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	8.32 (39)	-1.50 (67)	5.07 (68)	8.36 (45)	19.71 (38)	7.50 (44)
Index	11.03 (14)	0.58 (23)	8.55 (27)	6.17 (58)	12.15 (71)	8.93 (33)
Median	7.25	-0.59	6.40	7.38	16.26	6.65



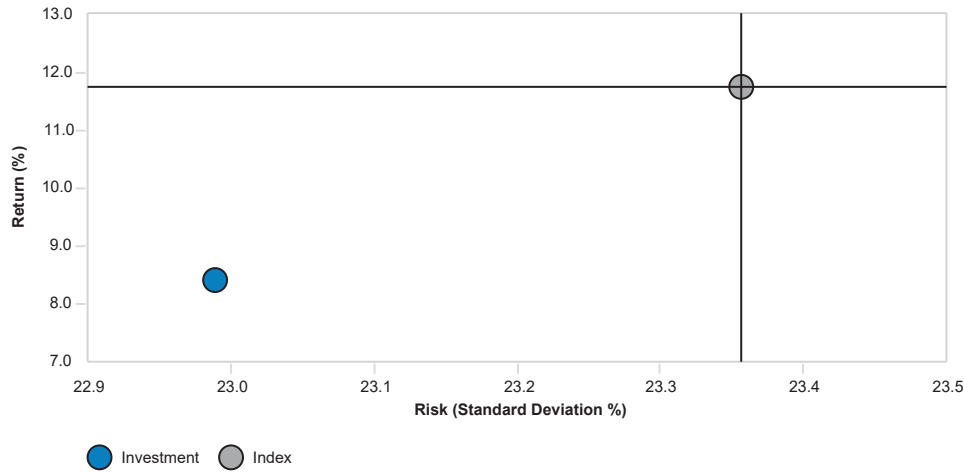
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.40	22.99	0.43	92.24	9	101.09	3
Index	11.74	23.36	0.56	100.00	8	100.00	4

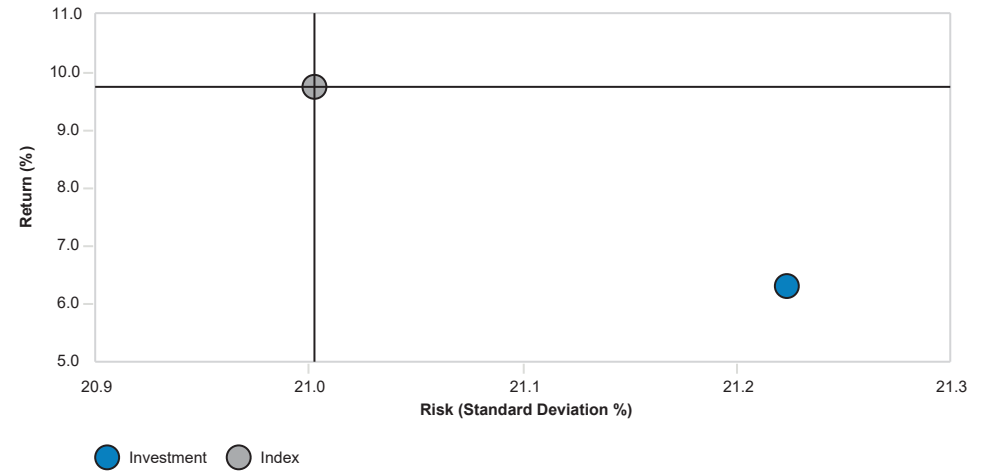
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.30	21.22	0.34	94.15	16	105.98	4
Index	9.74	21.00	0.50	100.00	14	100.00	6

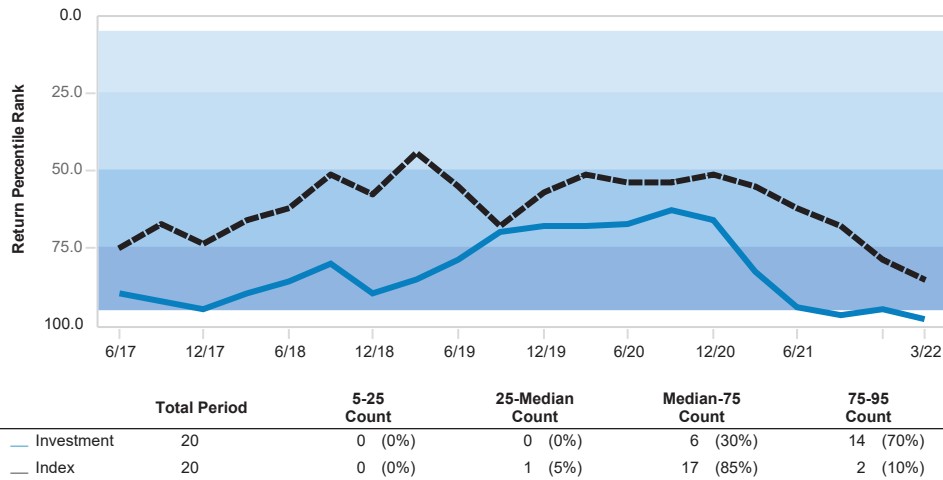
Risk and Return 3 Years



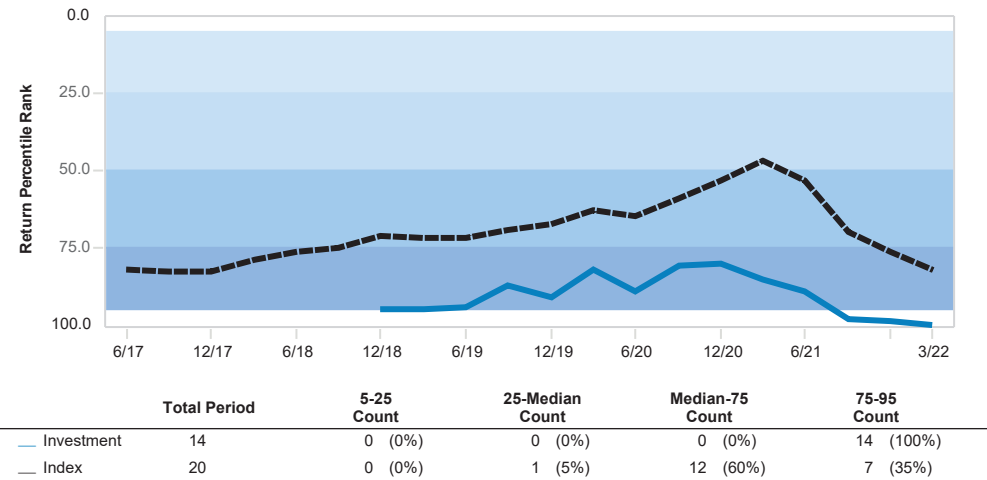
Risk and Return 5 Years



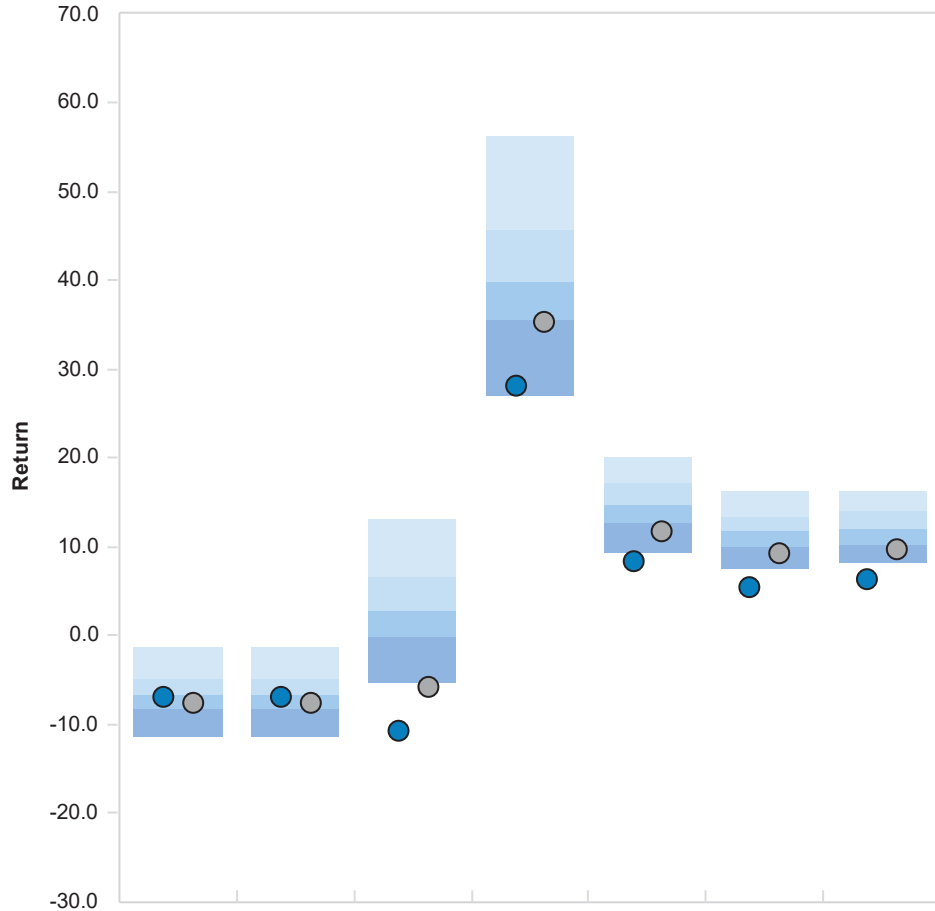
3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (SA+CF)



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

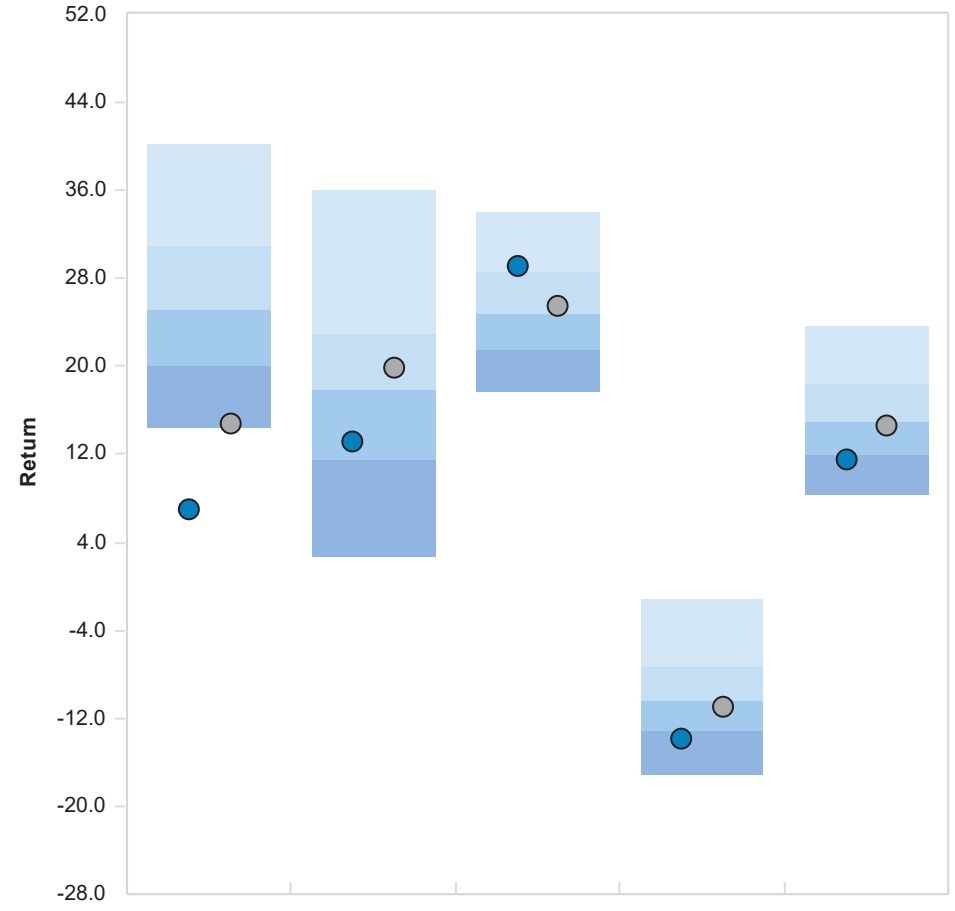


Peer Group Analysis - IM U.S. Small Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-6.89 (56)	-6.89 (56)	-10.70 (100)	28.13 (94)	8.40 (98)	5.47 (99)	6.30 (100)
● Index	-7.53 (67)	-7.53 (67)	-5.79 (97)	35.49 (78)	11.74 (85)	9.24 (85)	9.74 (82)
Median	-6.57	-6.57	2.85	39.91	14.63	11.77	12.12

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



	2021	2020	2019	2018	2017
● Investment	6.97 (100)	13.19 (66)	29.19 (24)	-13.87 (81)	11.60 (79)
● Index	14.82 (94)	19.96 (35)	25.53 (49)	-11.01 (57)	14.65 (55)
Median	25.18	17.85	24.79	-10.47	15.05

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	1.79 (96)	-7.63 (100)	2.01 (95)	11.53 (70)	28.75 (46)	4.06 (64)
Index	2.14 (95)	-4.36 (94)	4.29 (67)	12.70 (59)	31.37 (27)	4.93 (49)
Median	6.13	-1.15	5.01	13.73	28.10	4.81



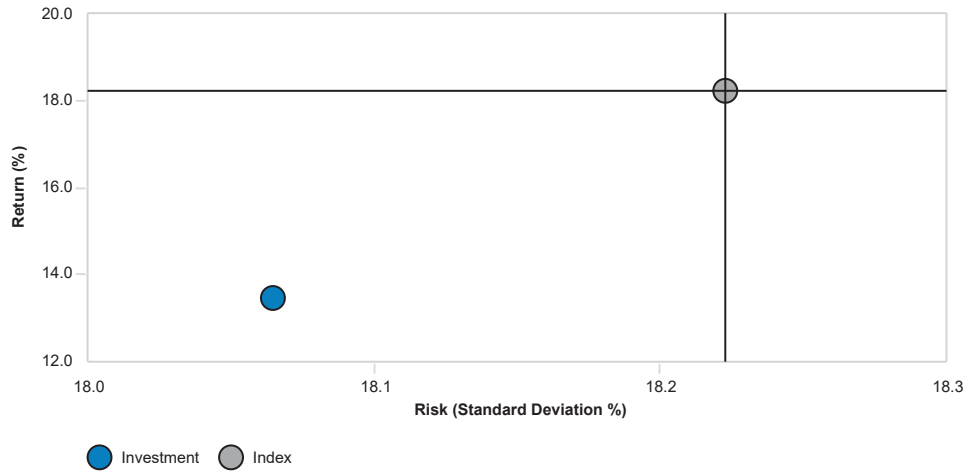
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.48	18.06	0.74	83.02	9	89.15	3
Index	18.24	18.22	0.97	100.00	9	100.00	3

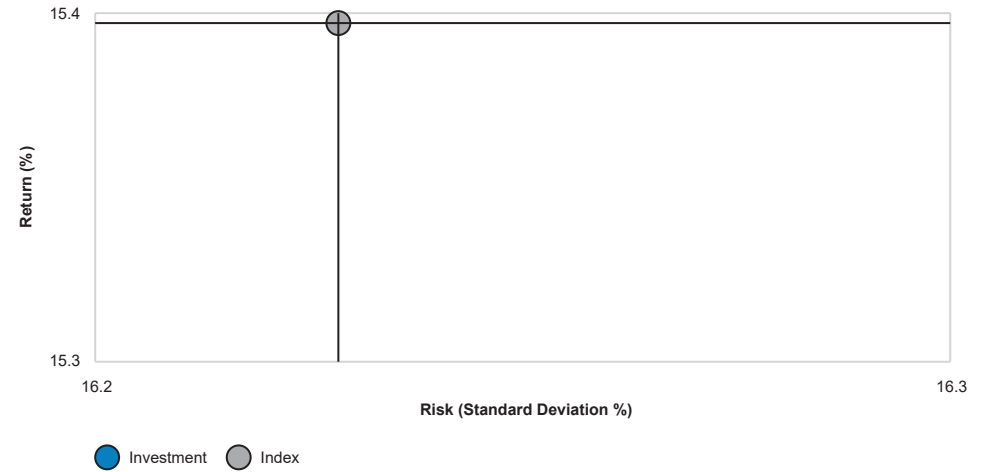
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	15.40	16.23	0.90	100.00	15	100.00	5

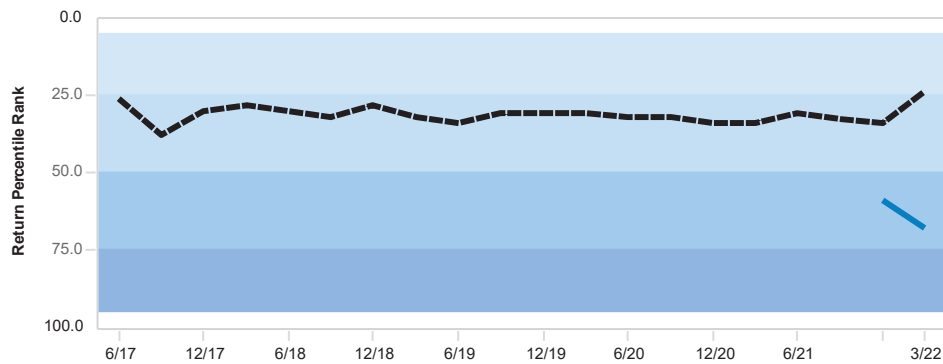
Risk and Return 3 Years



Risk and Return 5 Years

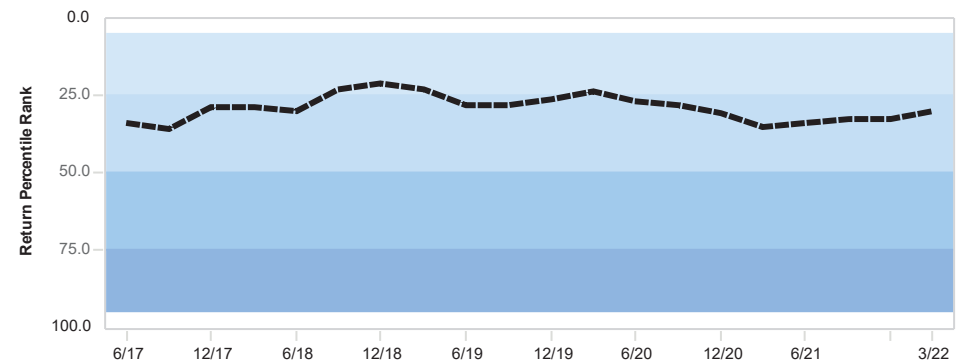


3 Year Rolling Percentile Rank IM U.S. Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	2	0 (0%)	0 (0%)	2 (100%)	0 (0%)
Index	20	1 (5%)	19 (95%)	0 (0%)	0 (0%)

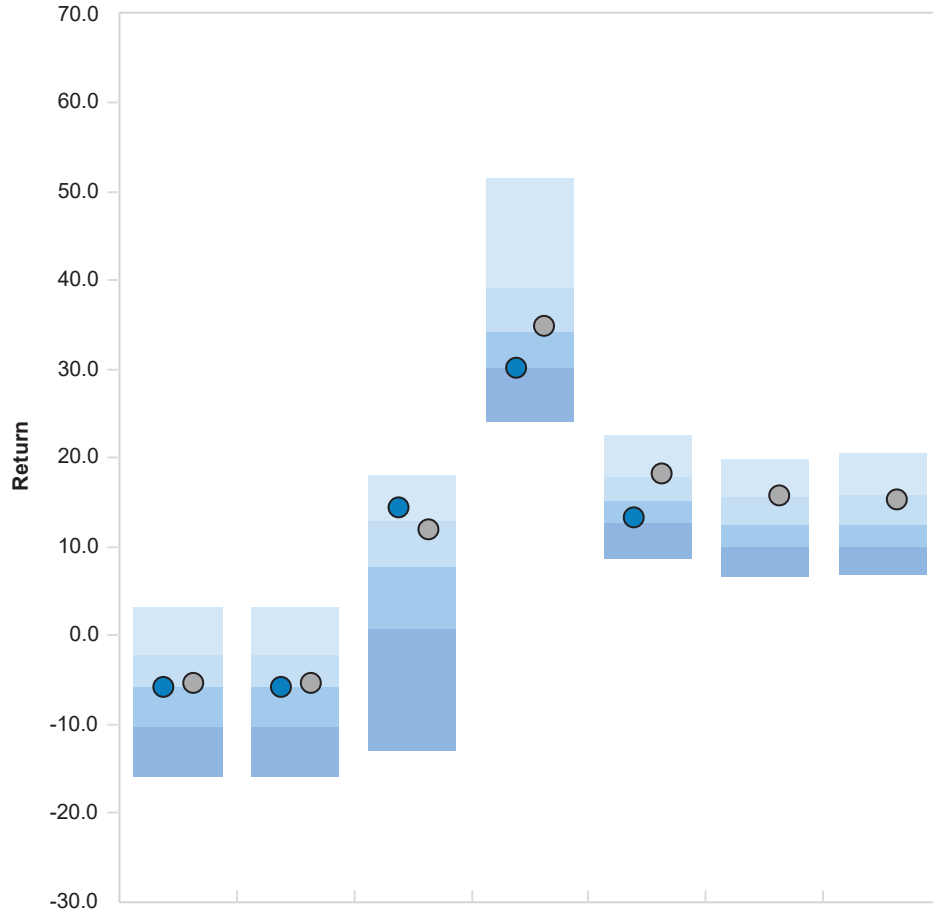
5 Year Rolling Percentile Rank IM U.S. Equity (SA+CF)



	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%)

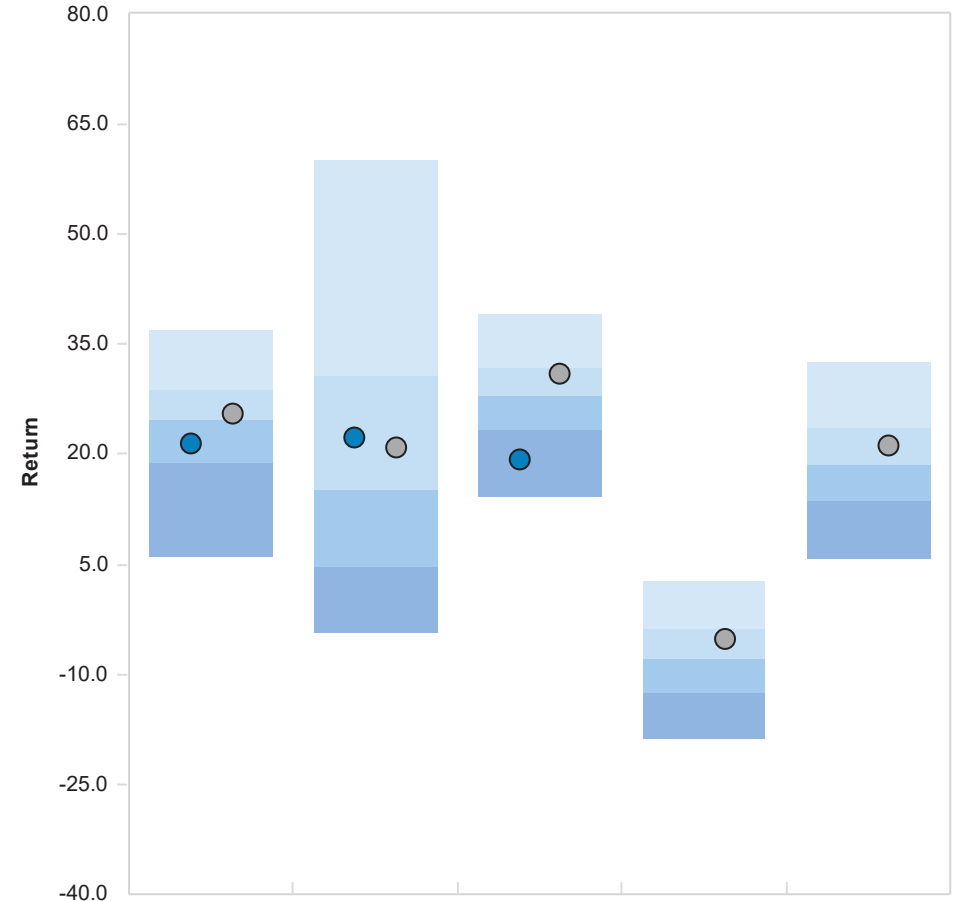


Peer Group Analysis - IM U.S. Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.74 (50)	-5.74 (50)	14.57 (16)	30.14 (76)	13.48 (68)	N/A	N/A
● Index	-5.28 (47)	-5.28 (47)	11.92 (31)	34.87 (46)	18.24 (24)	15.80 (25)	15.40 (30)
Median	-5.78	-5.78	7.71	34.22	15.17	12.51	12.57

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



	2021	2020	2019	2018	2017
● Investment	21.59 (67)	22.31 (36)	19.24 (89)	N/A	N/A
● Index	25.66 (44)	20.89 (37)	31.02 (30)	-5.24 (34)	21.13 (38)
Median	24.74	15.12	27.91	-7.76	18.43

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	15.43 (1)	1.38 (13)	3.87 (85)	0.03 (94)	12.52 (77)	3.76 (79)
Index	9.28 (26)	-0.10 (40)	8.24 (28)	6.35 (63)	14.68 (67)	9.21 (29)
Median	7.12	-0.55	6.24	9.00	18.60	6.79



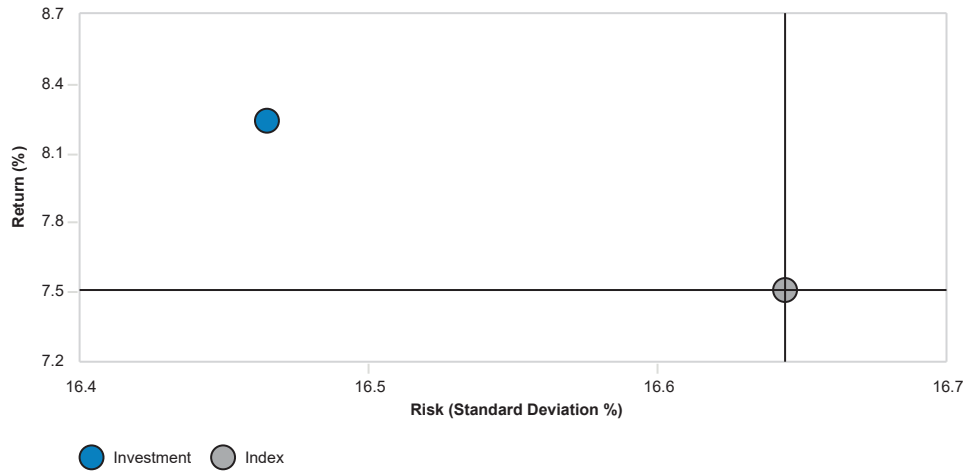
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.24	16.46	0.51	100.35	8	96.99	4
Index	7.51	16.64	0.47	100.00	8	100.00	4

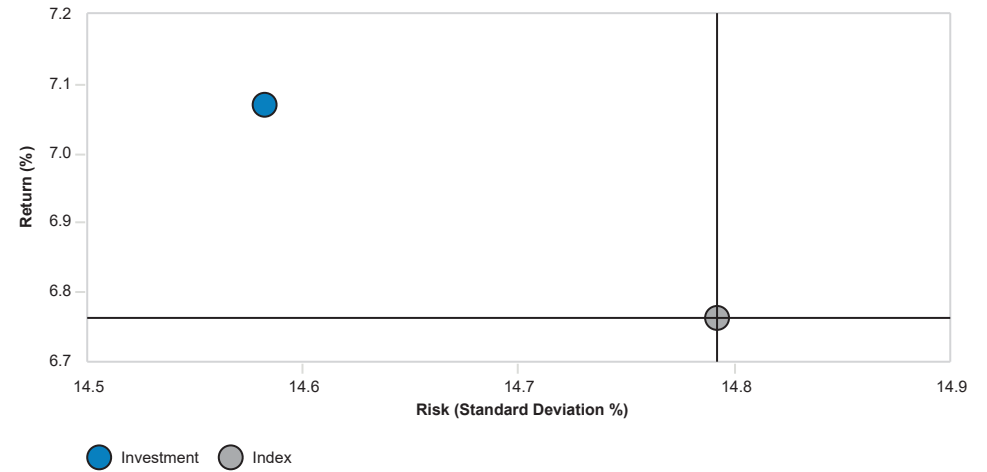
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.07	14.58	0.46	98.80	13	96.61	7
Index	6.76	14.79	0.44	100.00	13	100.00	7

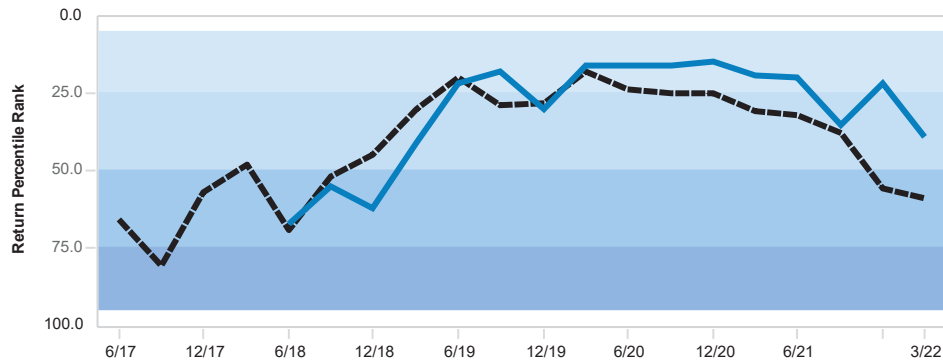
Risk and Return 3 Years



Risk and Return 5 Years

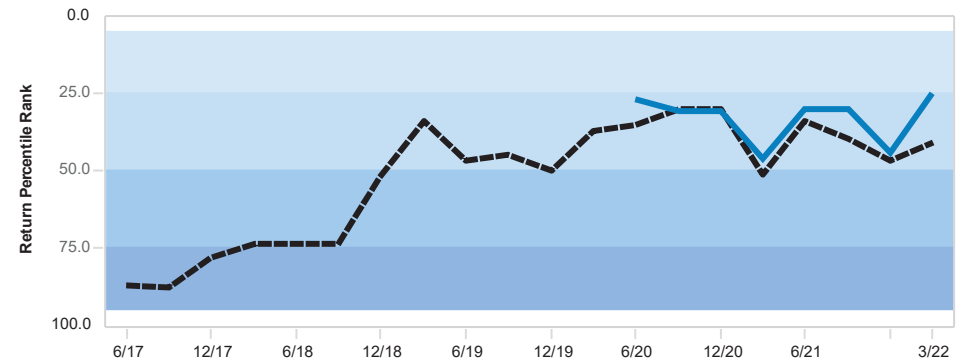


3 Year Rolling Percentile Rank IM Enhanced and Indexed International Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	16	9 (56%)	4 (25%)	3 (19%)	0 (0%)
Index	20	5 (25%)	8 (40%)	6 (30%)	1 (5%)

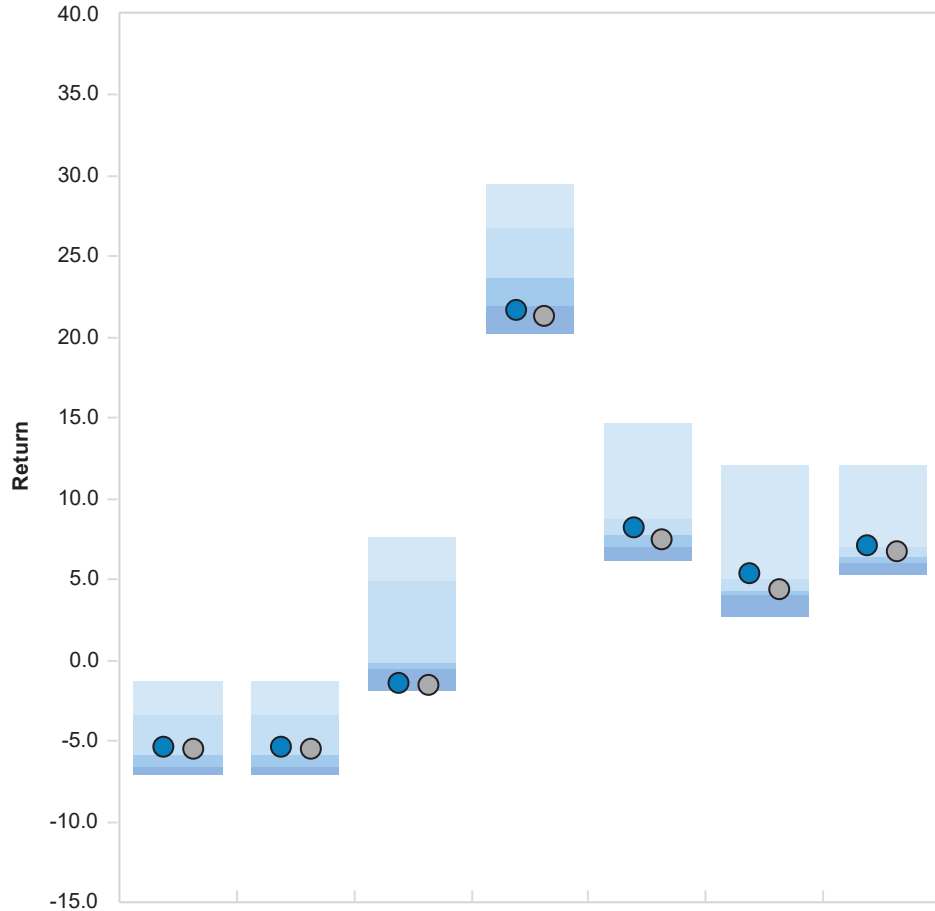
5 Year Rolling Percentile Rank IM Enhanced and Indexed International Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	8	1 (13%)	7 (88%)	0 (0%)	0 (0%)
Index	20	0 (0%)	12 (60%)	5 (25%)	3 (15%)

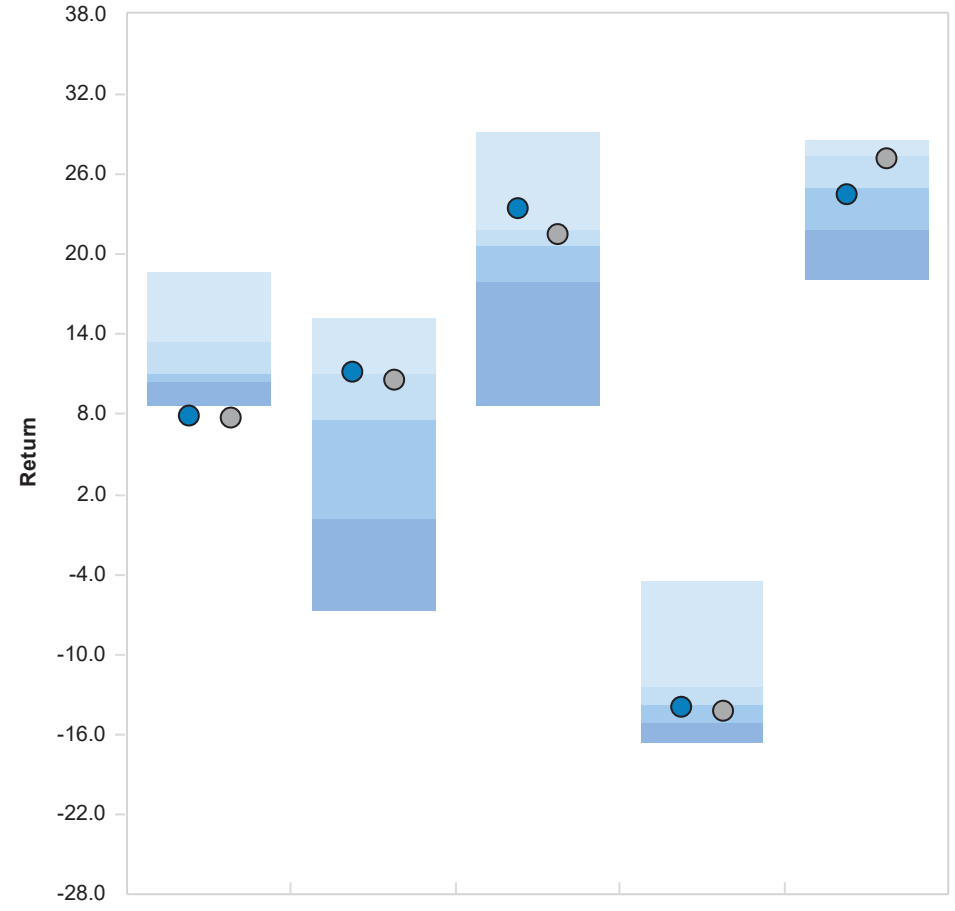


Peer Group Analysis - IM Enhanced and Indexed International Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.40 (44)	-5.40 (44)	-1.37 (86)	21.66 (80)	8.24 (39)	5.35 (25)	7.07 (25)
● Index	-5.44 (45)	-5.44 (45)	-1.48 (87)	21.32 (82)	7.51 (59)	4.45 (40)	6.76 (41)
Median	-5.86	-5.86	-0.23	23.73	7.77	4.32	6.36

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



	2021	2020	2019	2018	2017
● Investment	7.96 (100)	11.27 (17)	23.42 (14)	-13.88 (51)	24.56 (63)
● Index	7.82 (100)	10.65 (29)	21.51 (38)	-14.20 (54)	27.19 (27)
Median	11.08	7.63	20.57	-13.86	24.97

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	1.84 (80)	-3.02 (93)	5.57 (46)	3.54 (75)	17.31 (21)	6.27 (24)
Index	1.82 (81)	-2.99 (92)	5.48 (50)	3.49 (80)	17.01 (34)	6.25 (25)
Median	3.02	-1.10	5.45	3.94	15.72	4.38



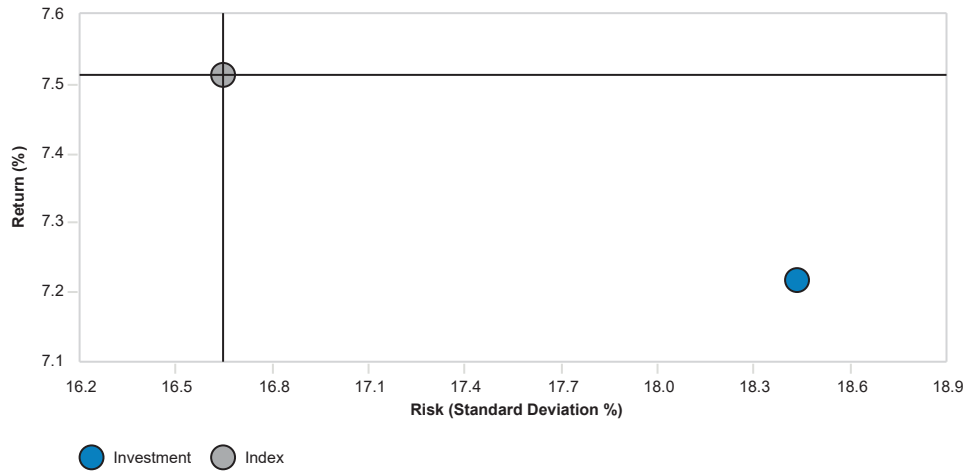
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.22	18.43	0.43	108.78	7	112.72	5
Index	7.51	16.64	0.47	100.00	8	100.00	4

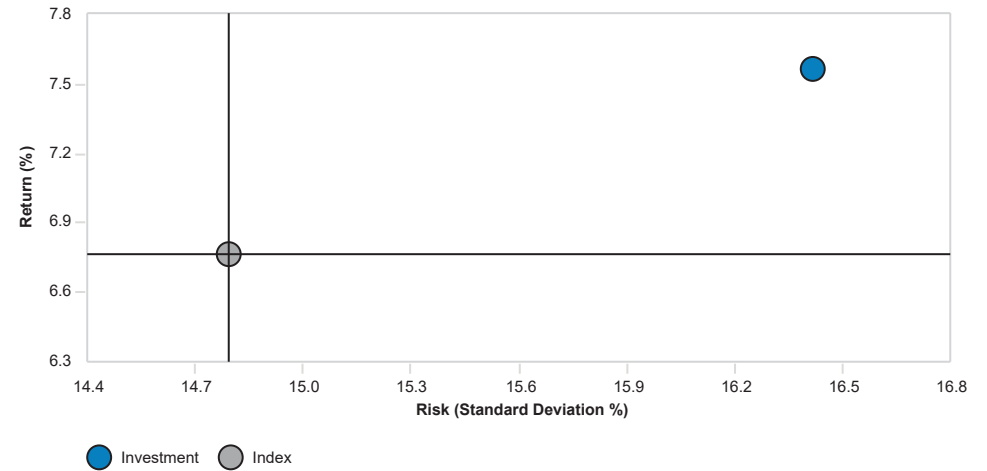
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.57	16.42	0.46	109.26	12	107.39	8
Index	6.76	14.79	0.44	100.00	13	100.00	7

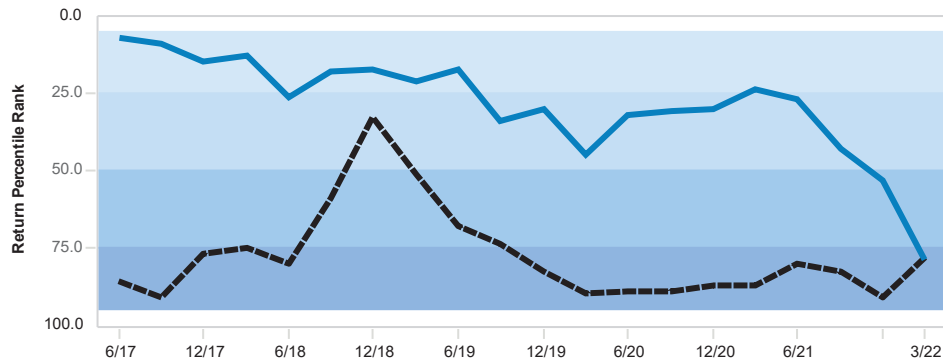
Risk and Return 3 Years



Risk and Return 5 Years

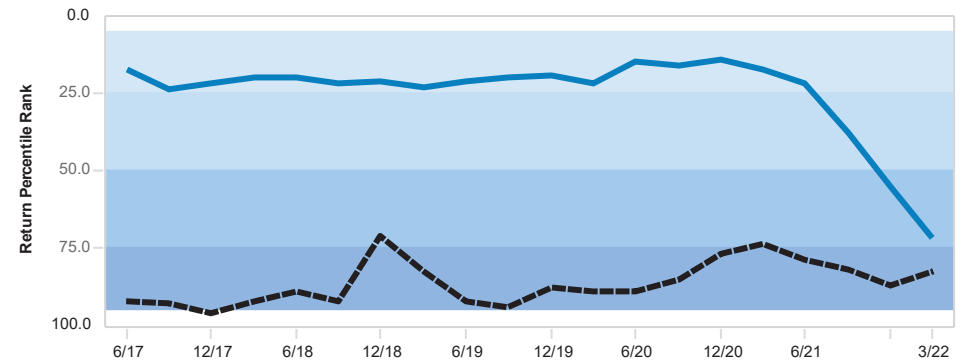


3 Year Rolling Percentile Rank IM International Large Cap Growth Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	9 (45%)	1 (5%)	1 (5%)
Index	20	0 (0%)	1 (5%)	5 (25%)	14 (70%)

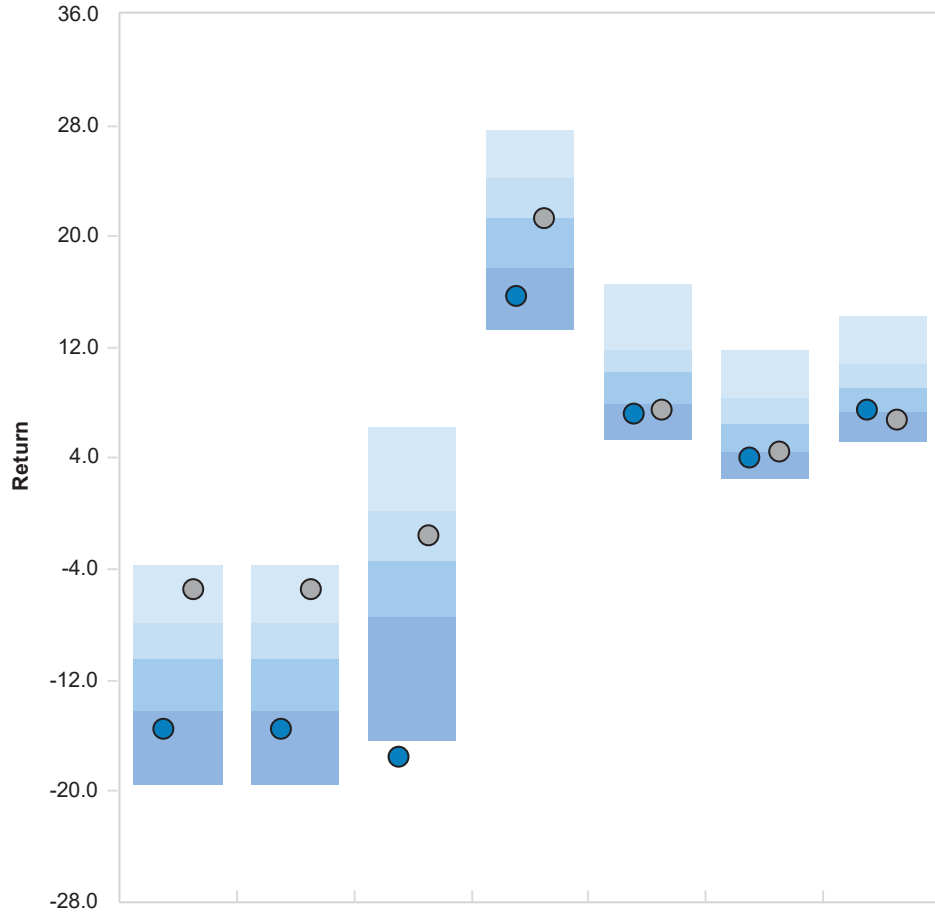
5 Year Rolling Percentile Rank IM International Large Cap Growth Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	17 (85%)	1 (5%)	2 (10%)	0 (0%)
Index	20	0 (0%)	0 (0%)	2 (10%)	18 (90%)

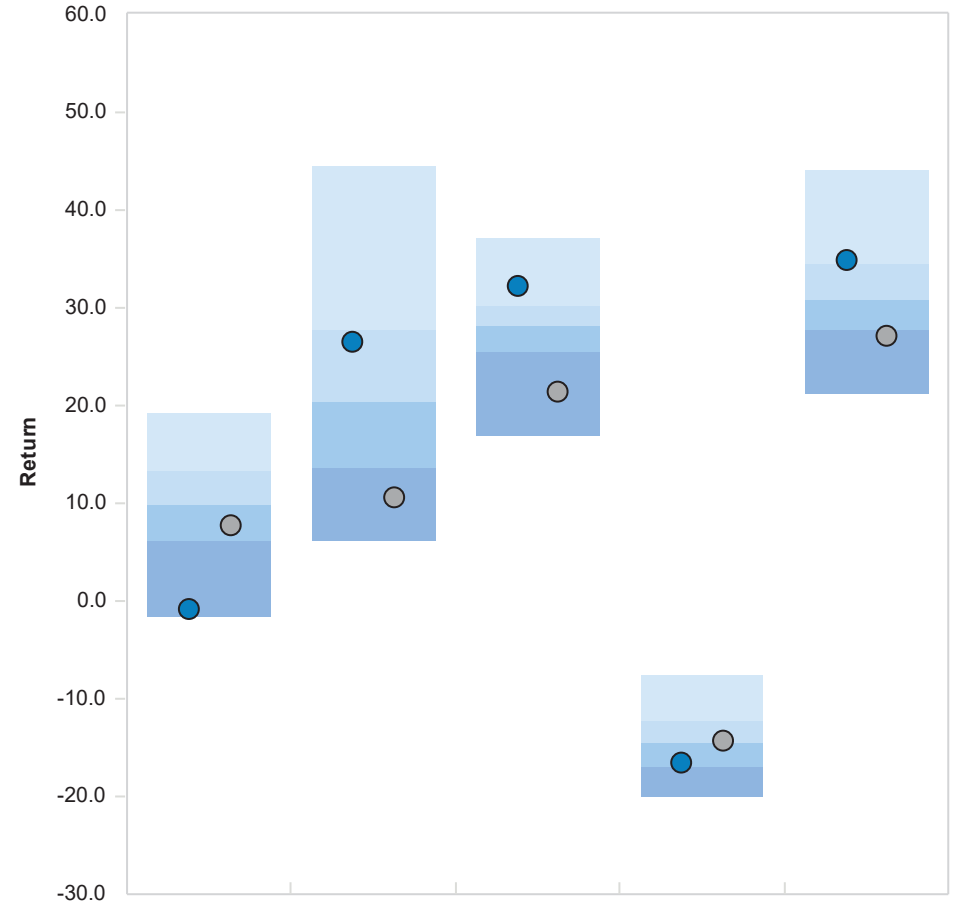


Peer Group Analysis - IM International Large Cap Growth Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-15.53 (85)	-15.53 (85)	-17.48 (97)	15.72 (86)	7.22 (79)	4.06 (83)	7.57 (72)
● Index	-5.44 (13)	-5.44 (13)	-1.48 (40)	21.32 (50)	7.51 (78)	4.45 (77)	6.76 (83)
Median	-10.48	-10.48	-3.39	21.30	10.21	6.54	9.11

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



	2021	2020	2019	2018	2017
● Investment	-0.72 (95)	26.60 (31)	32.23 (18)	-16.57 (70)	34.83 (25)
● Index	7.82 (66)	10.65 (82)	21.51 (88)	-14.20 (49)	27.19 (79)
Median	9.77	20.32	28.21	-14.46	30.80

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	-0.60 (85)	-5.42 (96)	3.91 (93)	1.63 (32)	14.94 (46)	10.66 (31)
Index	1.82 (66)	-2.99 (76)	5.48 (65)	3.49 (15)	17.01 (25)	6.25 (89)
Median	2.73	-0.65	6.59	0.81	14.41	8.97



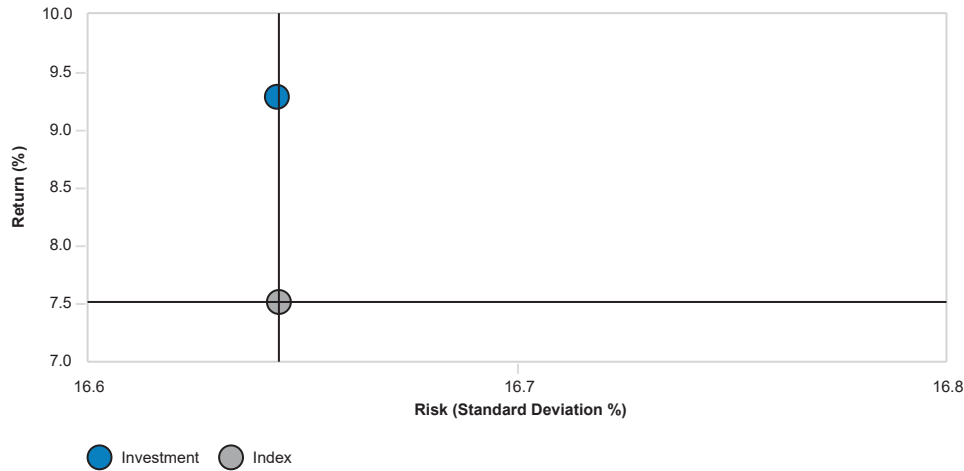
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.29	16.64	0.57	103.16	8	95.65	4
Index	7.51	16.64	0.47	100.00	8	100.00	4

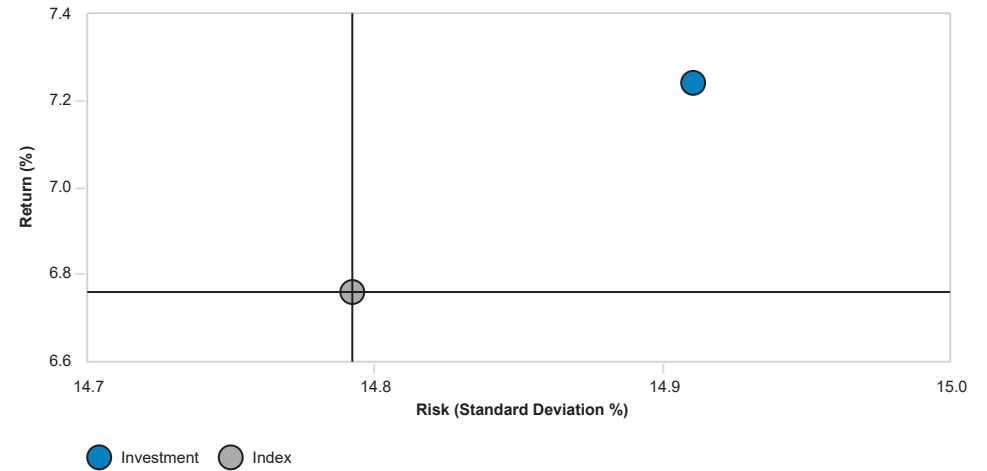
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	7.25	14.91	0.47	100.82	13	98.27	7
Index	6.76	14.79	0.44	100.00	13	100.00	7

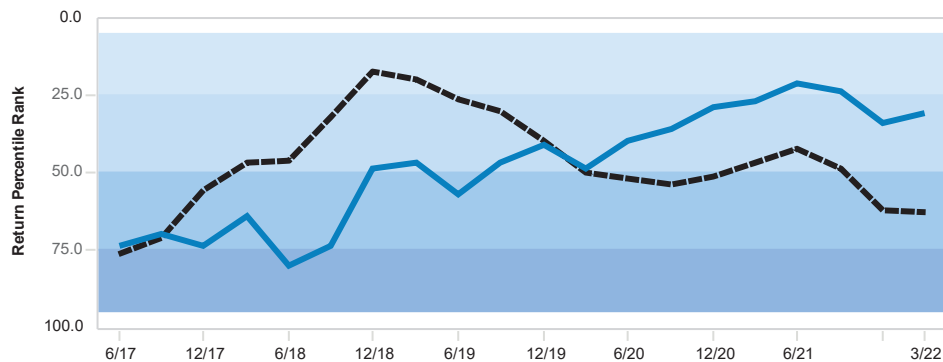
Risk and Return 3 Years



Risk and Return 5 Years

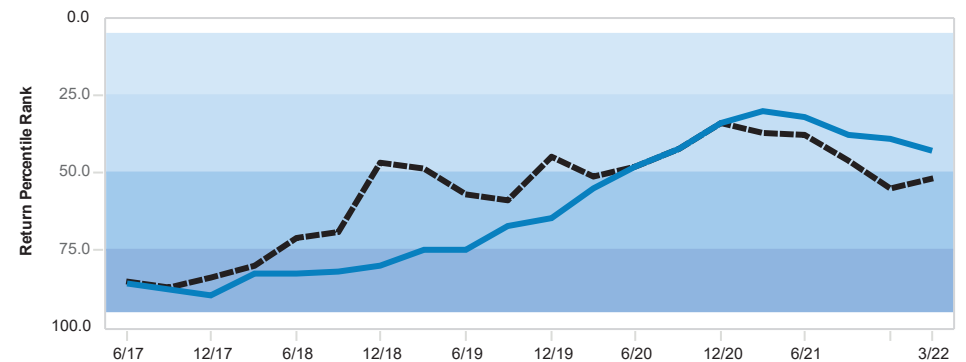


3 Year Rolling Percentile Rank IM International Large Cap Core Equity (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	11 (55%)	6 (30%)	1 (5%)
Index	20	2 (10%)	10 (50%)	7 (35%)	1 (5%)

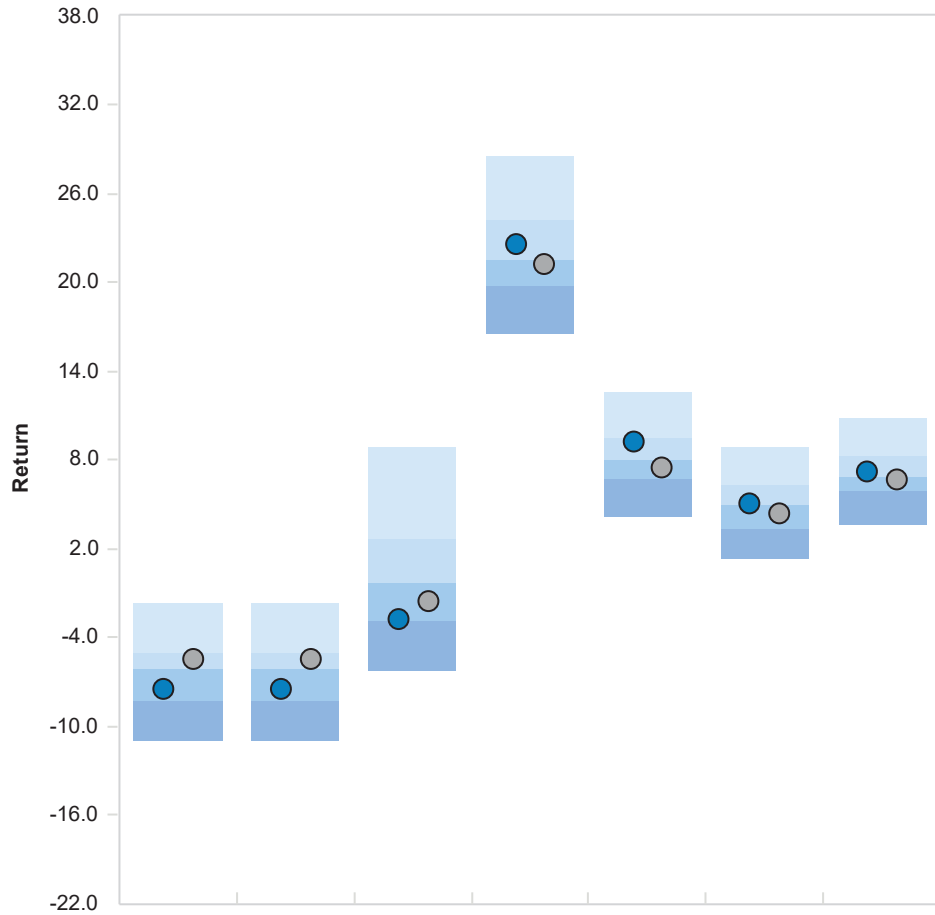
5 Year Rolling Percentile Rank IM International Large Cap Core Equity (SA+CF)



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

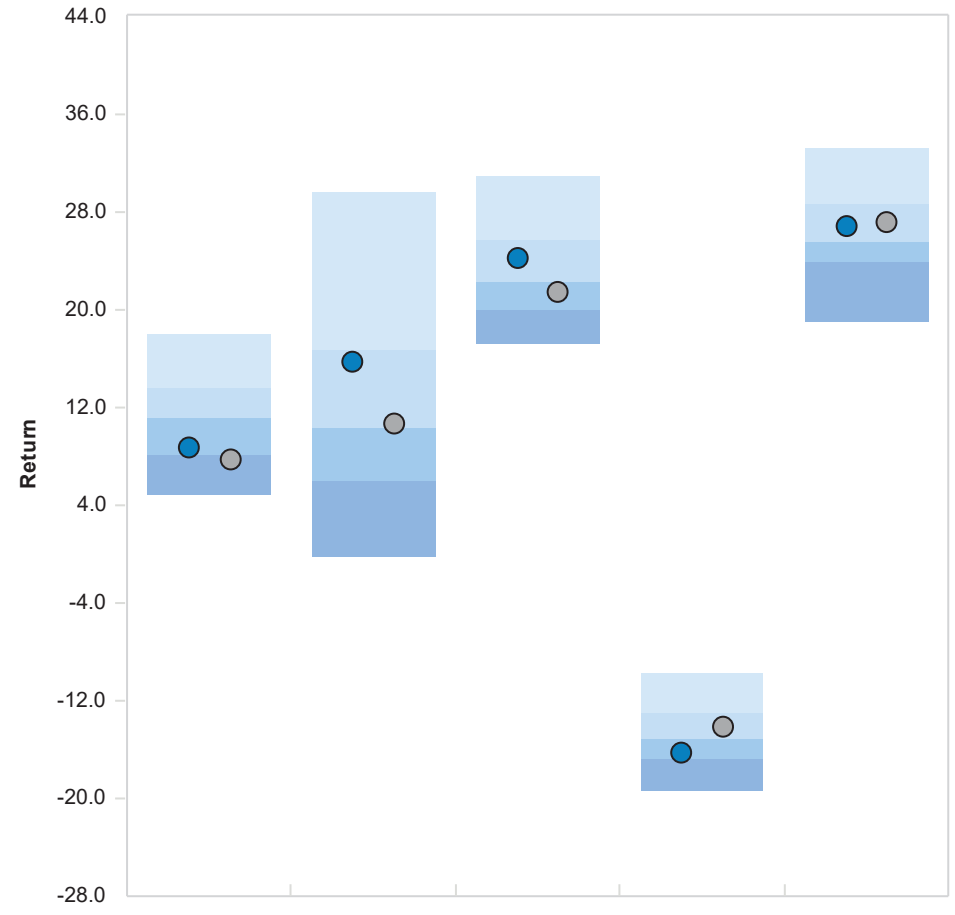


Peer Group Analysis - IM International Large Cap Core Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-7.49 (66)	-7.49 (66)	-2.67 (74)	22.61 (37)	9.29 (31)	5.16 (43)	7.25 (43)
● Index	-5.44 (30)	-5.44 (30)	-1.48 (61)	21.32 (53)	7.51 (63)	4.45 (57)	6.76 (52)
Median	-6.09	-6.09	-0.31	21.61	8.11	4.95	6.83

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



	2021	2020	2019	2018	2017
● Investment	8.78 (72)	15.83 (27)	24.24 (35)	-16.33 (70)	26.92 (38)
● Index	7.82 (77)	10.65 (49)	21.51 (60)	-14.20 (42)	27.19 (35)
Median	11.16	10.32	22.26	-15.16	25.48

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	2.23 (68)	-2.77 (80)	5.86 (42)	3.38 (62)	17.20 (23)	7.03 (43)
Index	1.82 (80)	-2.99 (82)	5.48 (50)	3.49 (60)	17.01 (26)	6.25 (54)
Median	3.00	-1.49	5.46	3.93	15.51	6.39



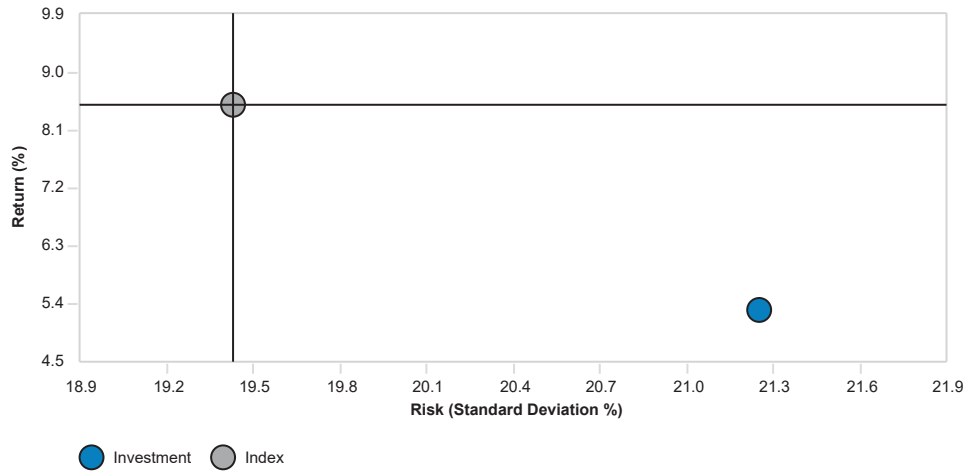
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.32	21.25	0.32	99.34	7	111.26	5
Index	8.51	19.43	0.48	100.00	9	100.00	3

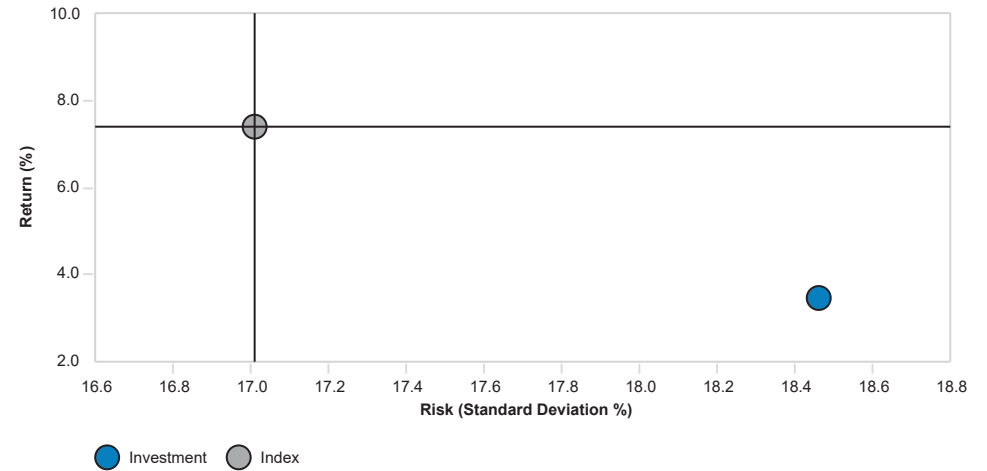
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.47	18.46	0.22	97.11	11	115.26	9
Index	7.42	17.01	0.44	100.00	14	100.00	6

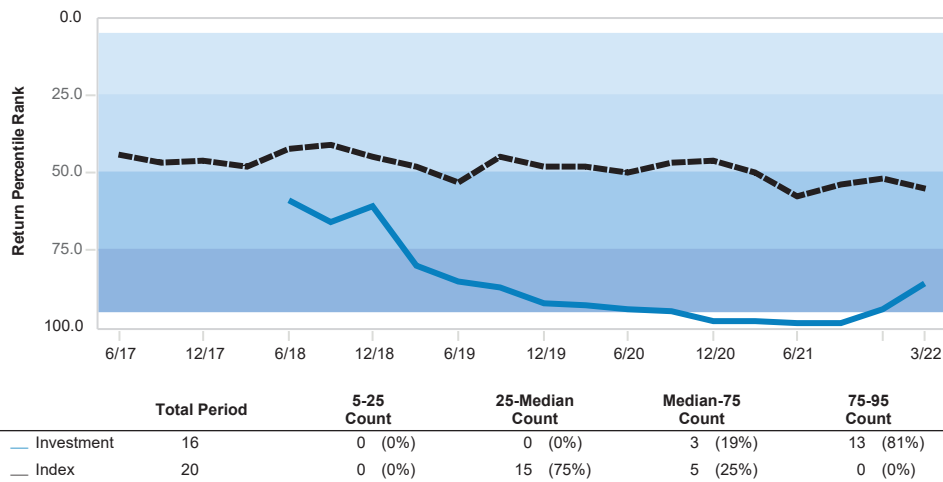
Risk and Return 3 Years



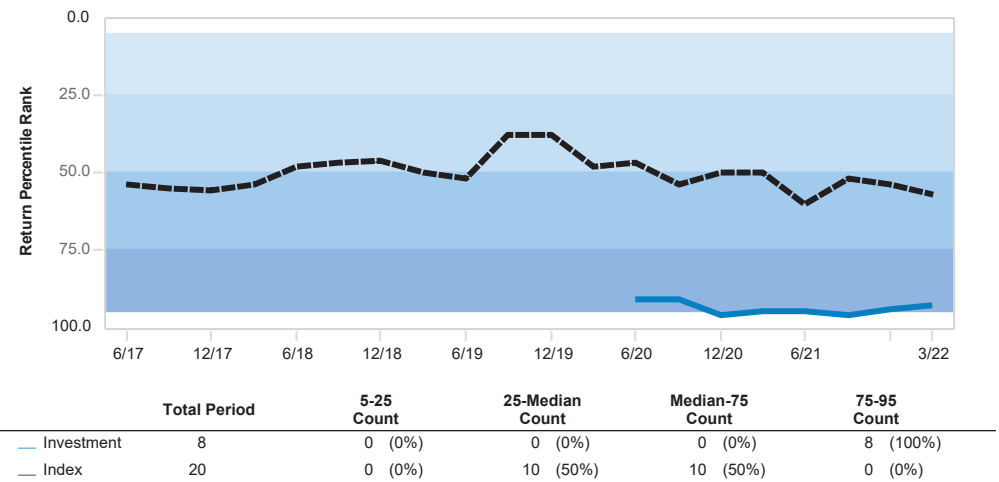
Risk and Return 5 Years



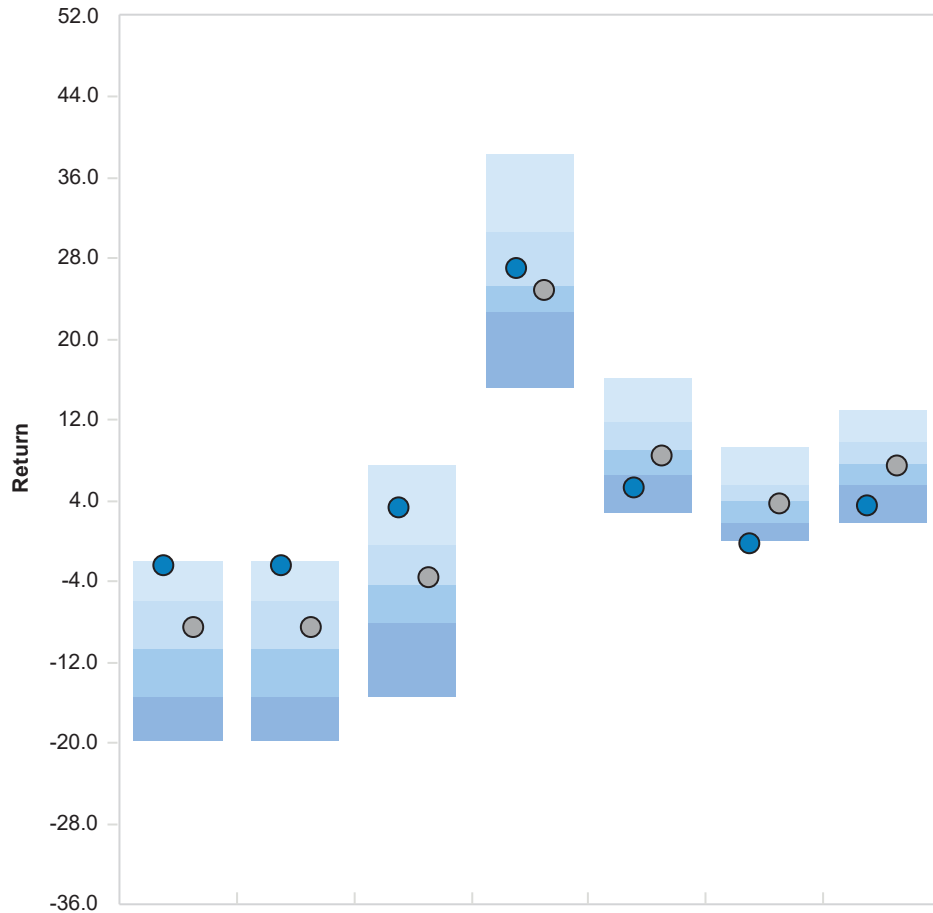
3 Year Rolling Percentile Rank IM International Small Cap Equity (SA+CF)



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

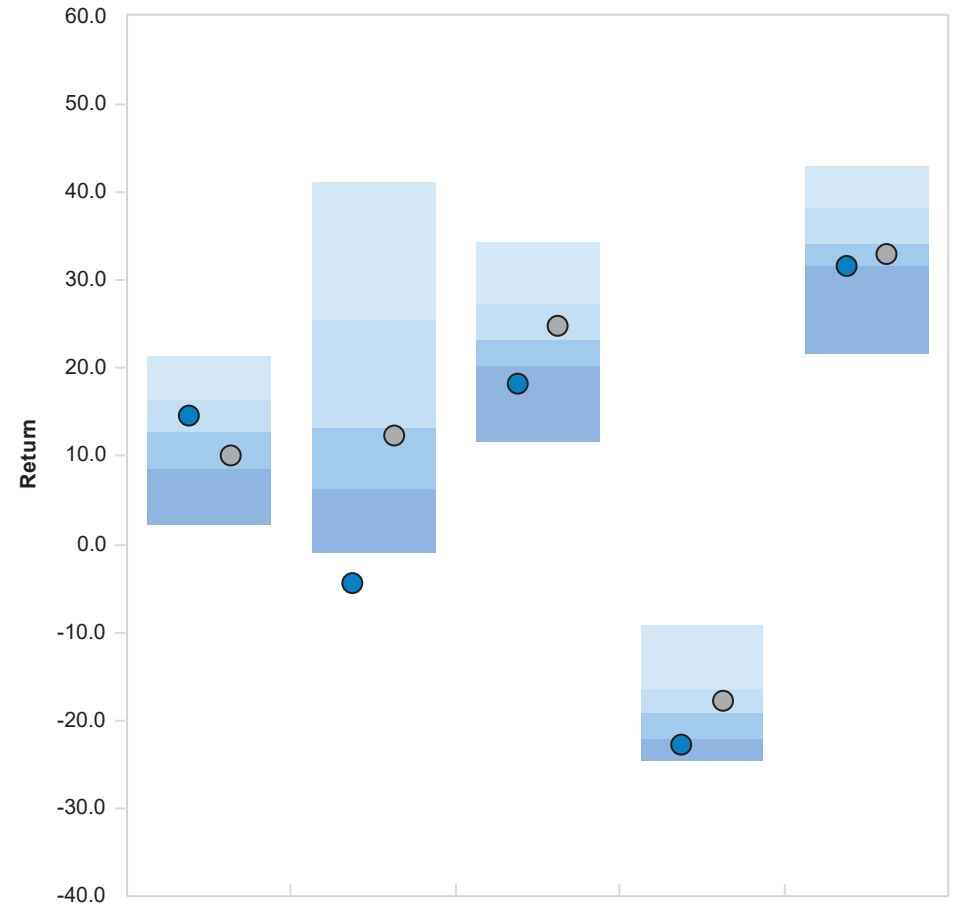


Peer Group Analysis - IM International Small Cap Equity (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.37 (8)	-2.37 (8)	3.42 (15)	27.13 (42)	5.32 (86)	-0.27 (96)	3.47 (93)
● Index	-8.53 (39)	-8.53 (39)	-3.63 (48)	24.94 (54)	8.51 (55)	3.74 (54)	7.42 (57)
Median	-10.59	-10.59	-4.32	25.34	9.16	4.01	7.61

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 (82)	31.71 (75)
● Index	10.10 (68)	12.34 (52)	24.96 (38)	-17.89 (36)	33.01 (61)
Median	12.81	13.23	23.37	-19.17	34.24

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.97 (41)	-0.92 (67)	5.89 (70)	8.14 (22)	15.33 (61)	8.38 (82)
Index	0.07 (53)	0.90 (34)	4.34 (91)	4.50 (50)	17.27 (46)	10.25 (49)
Median	0.29	0.10	7.00	4.27	16.78	10.22



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	13.75	16.98	0.80	100.00	8	100.00	4

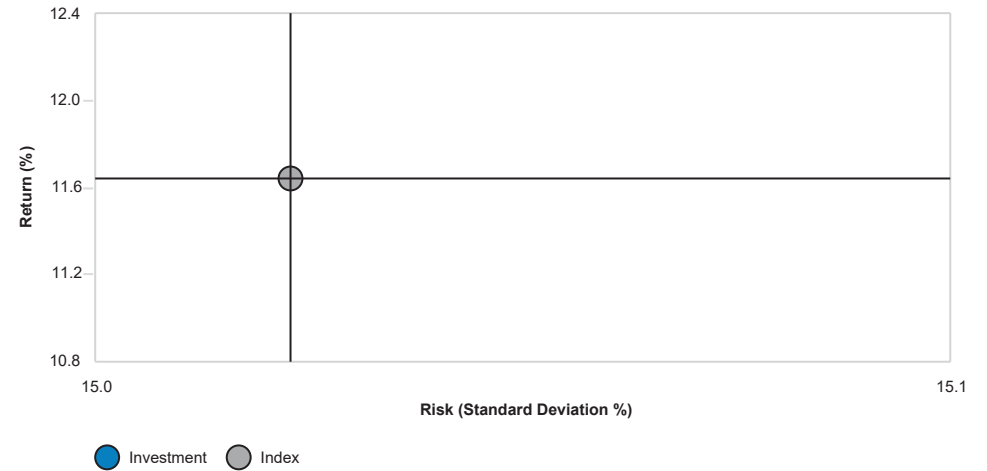
Historical Statistics 5 Years

	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	11.64	15.02	0.73	100.00	14	100.00	6

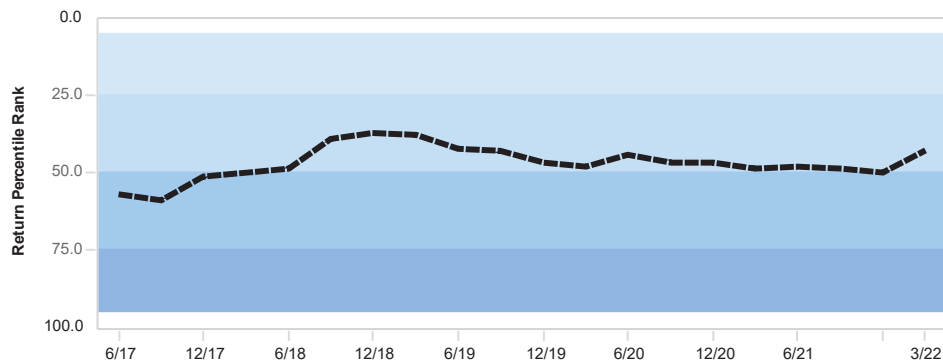
Risk and Return 3 Years



Risk and Return 5 Years

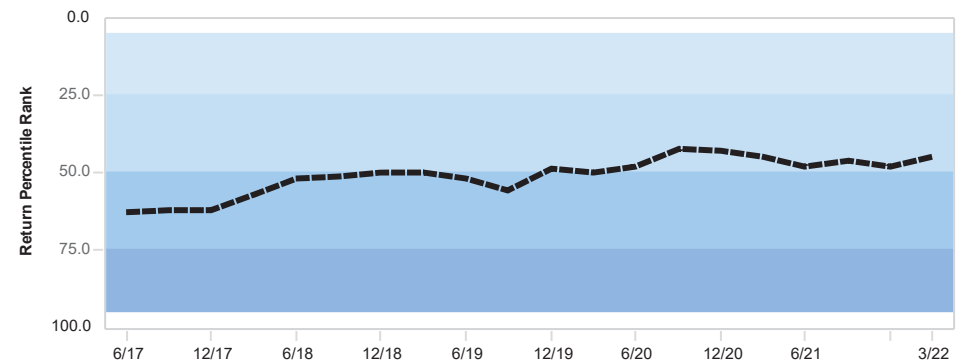


3 Year Rolling Percentile Rank IM Global Equity (SA+CF)



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

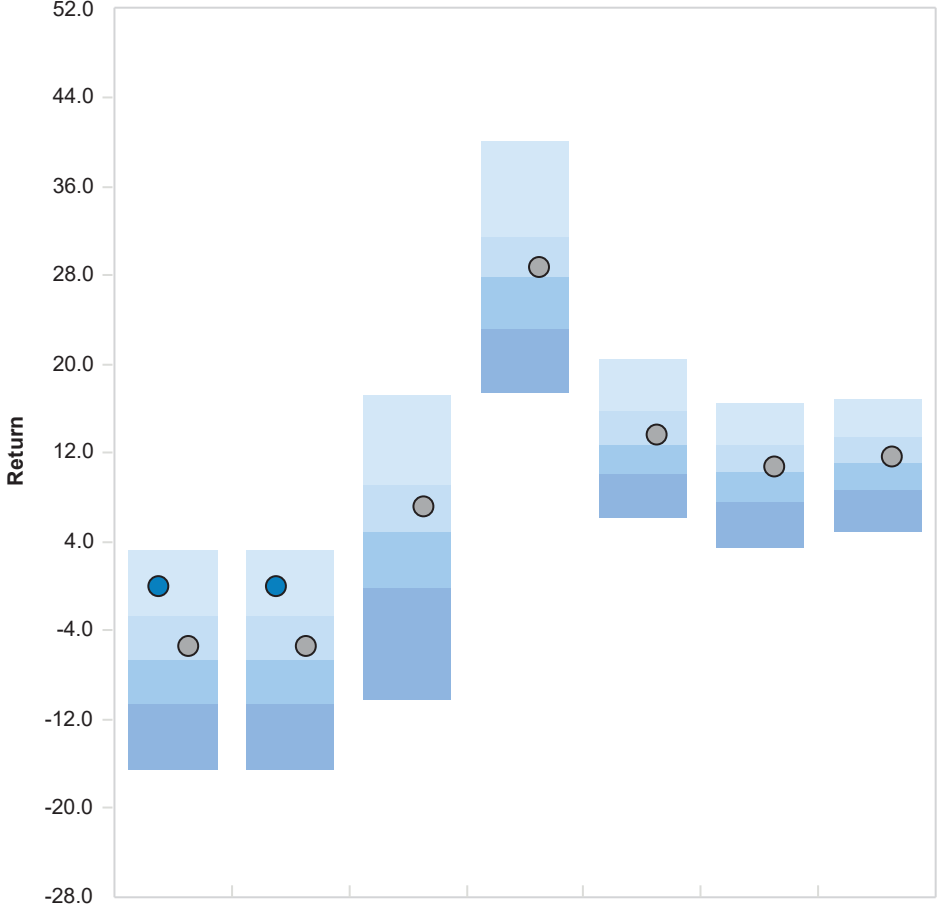
5 Year Rolling Percentile Rank IM Global Equity (SA+CF)



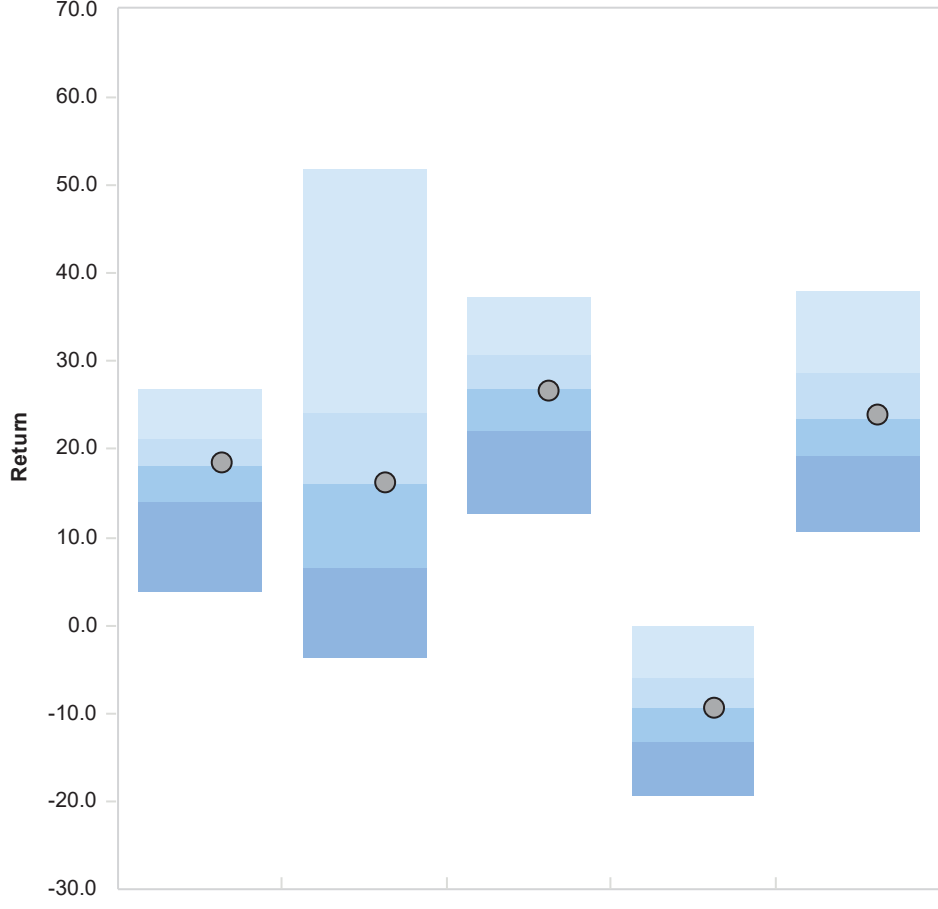
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	0	0	0	0	0
Index	20	0 (0%)	12 (60%)	8 (40%)	0 (0%)



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	0.00 (15)	0.00 (15)	N/A	N/A	N/A	N/A	N/A
Index	-5.36 (44)	-5.36 (44)	7.28 (35)	28.78 (44)	13.75 (43)	10.85 (44)	11.64 (45)
Median	-6.53	-6.53	4.89	27.90	12.80	10.21	11.15

	2021	2020	2019	2018	2017
Investment	N/A	N/A	N/A	N/A	N/A
Index	18.54 (47)	16.25 (50)	26.60 (52)	-9.42 (50)	23.97 (48)
Median	18.15	16.14	26.95	-9.44	23.54

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	N/A	-0.46 (42)	4.78 (81)	3.08 (64)	13.22 (61)	7.22 (59)
Index	6.68 (41)	-1.05 (60)	7.39 (41)	4.57 (49)	14.68 (48)	8.13 (49)
Median	5.96	-0.71	6.82	4.39	14.28	8.00



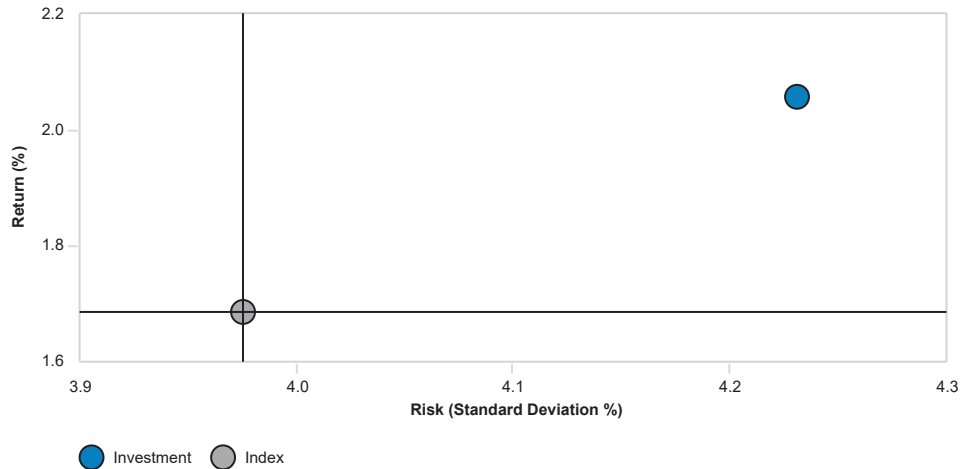
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.06	4.23	0.32	109.94	8	105.40	4
Index	1.69	3.98	0.24	100.00	10	100.00	2

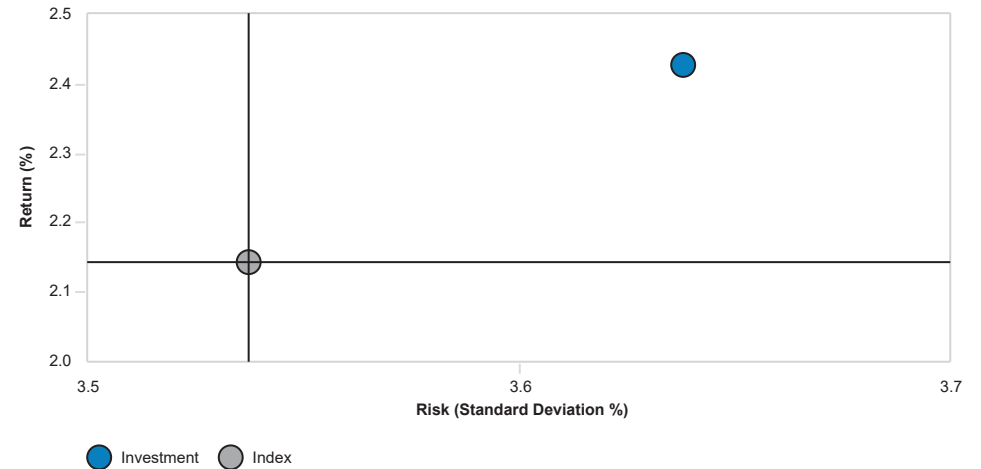
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.43	3.64	0.37	104.28	14	99.16	6
Index	2.14	3.54	0.31	100.00	16	100.00	4

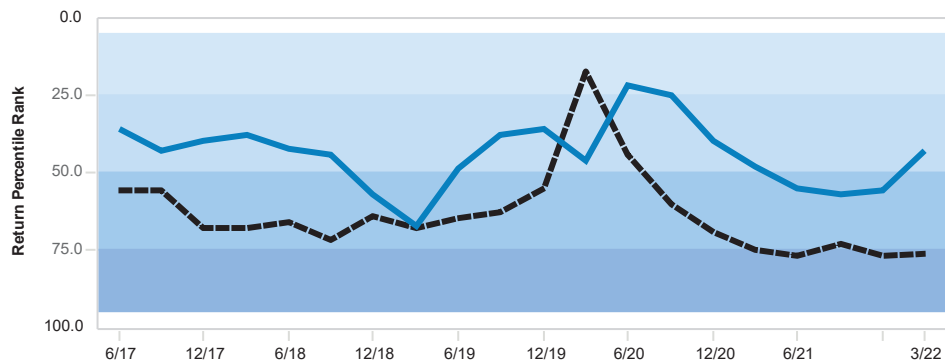
Risk and Return 3 Years



Risk and Return 5 Years

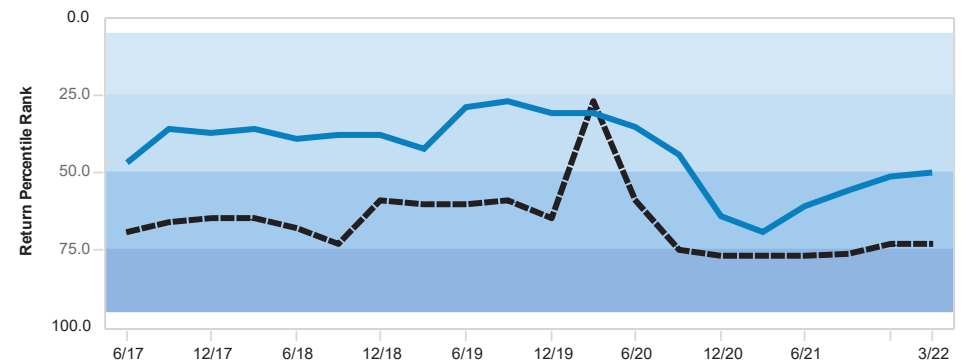


3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	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%)

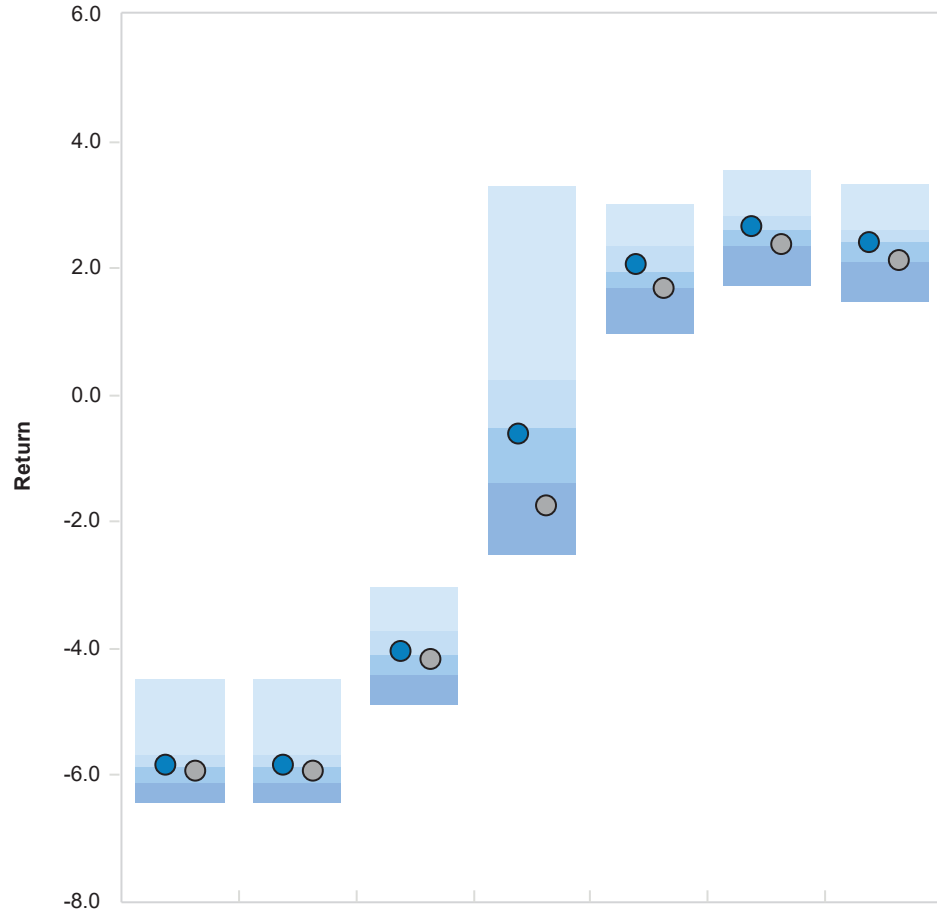
5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	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%)

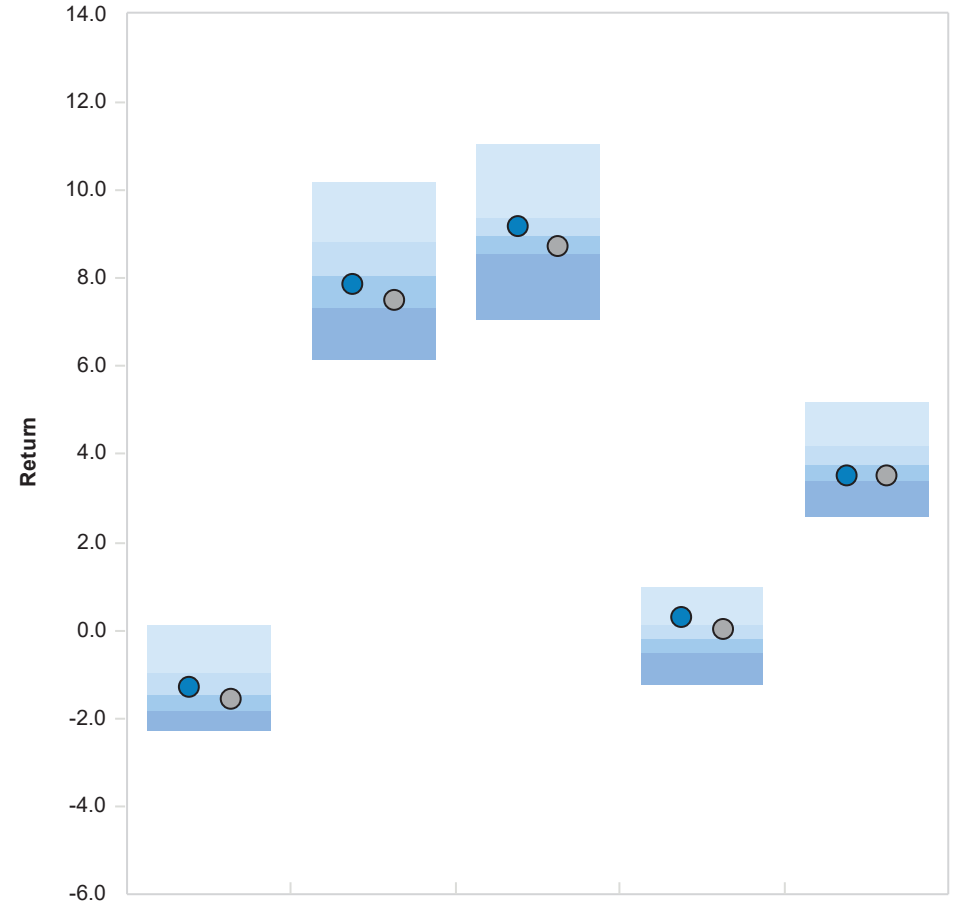


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.83 (47)	-5.83 (47)	-4.03 (44)	-0.61 (51)	2.06 (43)	2.67 (44)	2.43 (50)
● Index	-5.93 (57)	-5.93 (57)	-4.15 (54)	-1.75 (81)	1.69 (76)	2.38 (74)	2.14 (73)
Median	-5.86	-5.86	-4.09	-0.51	1.94	2.61	2.43

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



	2021	2020	2019	2018	2017
● Investment	-1.29 (44)	7.87 (55)	9.18 (40)	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	8.04	8.97	-0.21	3.75

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	-0.01 (21)	-0.09 (88)	2.01 (41)	-3.14 (46)	0.55 (89)	1.07 (50)
Index	0.01 (16)	0.05 (43)	1.83 (72)	-3.38 (62)	0.67 (79)	0.62 (83)
Median	-0.13	0.03	1.97	-3.17	1.05	1.06



Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.58	3.92	0.72	116.66	10	81.77	2
Index	1.69	3.98	0.24	100.00	10	100.00	2

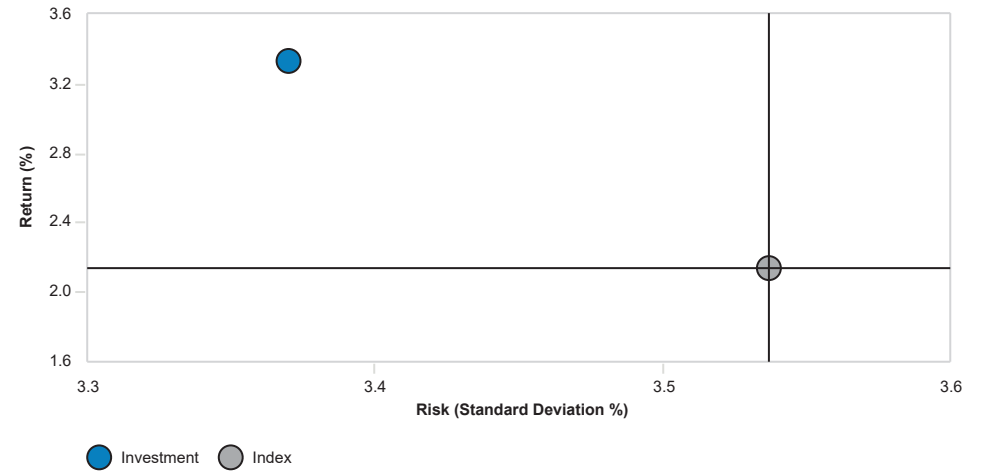
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.33	3.37	0.66	105.86	16	78.17	4
Index	2.14	3.54	0.31	100.00	16	100.00	4

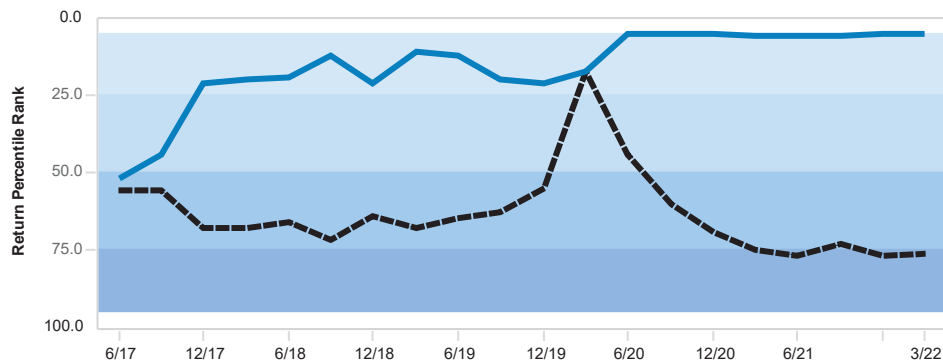
Risk and Return 3 Years



Risk and Return 5 Years

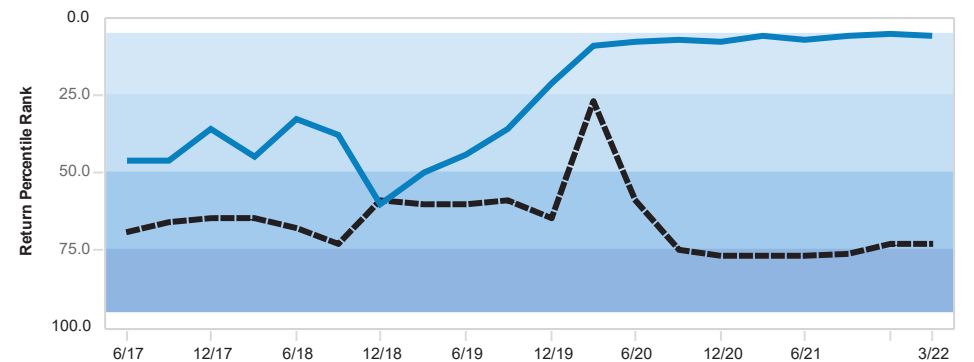


3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	18 (90%)	1 (5%)	1 (5%)	0 (0%)
Index	20	1 (5%)	1 (5%)	15 (75%)	3 (15%)

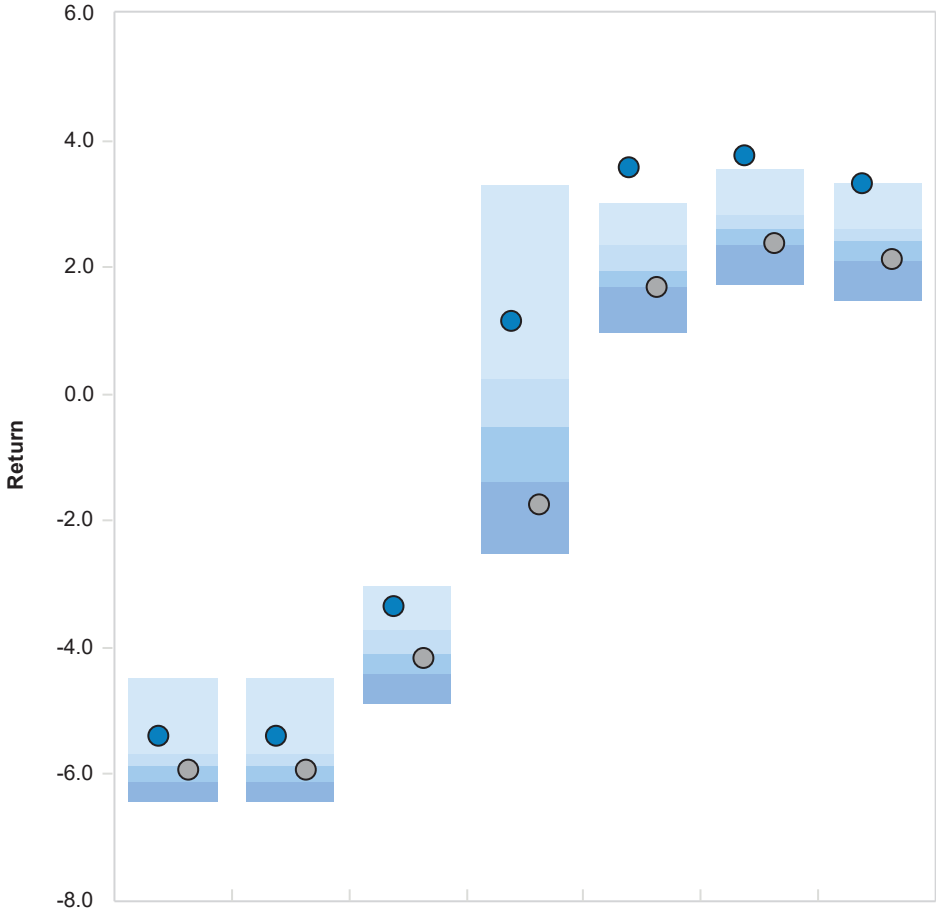
5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	9 (45%)	1 (5%)	0 (0%)
Index	20	0 (0%)	1 (5%)	15 (75%)	4 (20%)

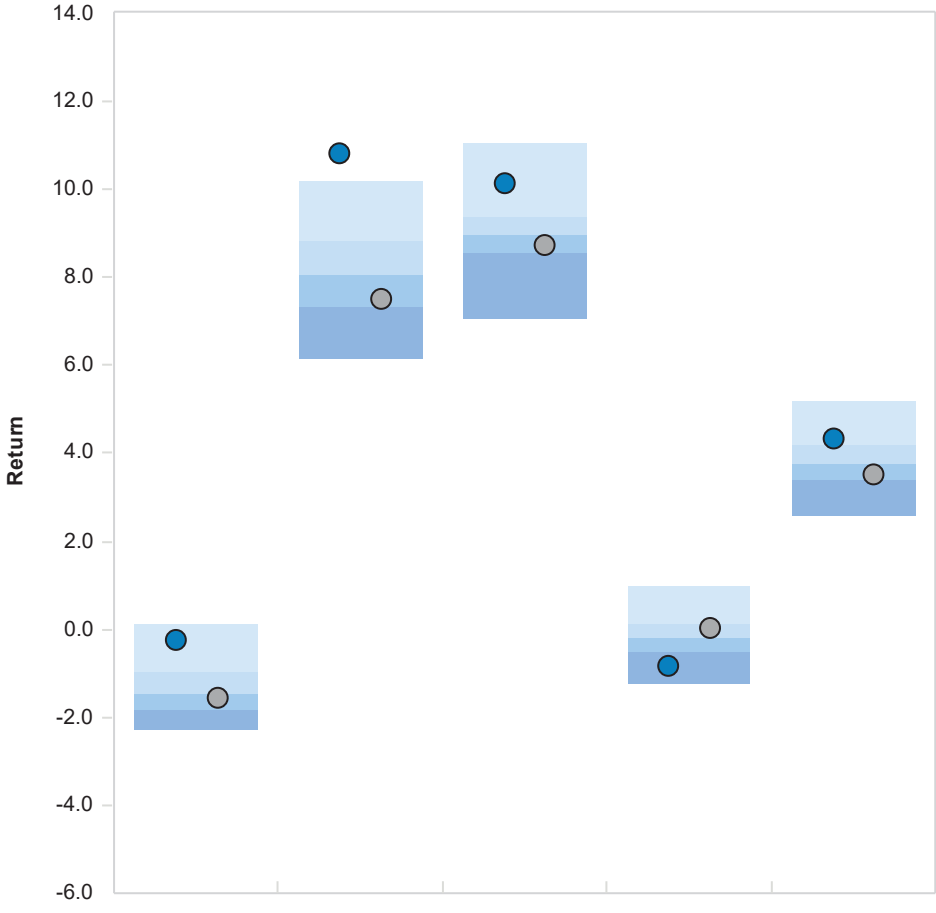


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.37 (16)	-5.37 (16)	-3.33 (7)	1.16 (12)	3.58 (5)	3.76 (5)	3.33 (6)
● Index	-5.93 (57)	-5.93 (57)	-4.15 (54)	-1.75 (81)	1.69 (76)	2.38 (74)	2.14 (73)
Median	-5.86	-5.86	-4.09	-0.51	1.94	2.61	2.43

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



	2021	2020	2019	2018	2017
● Investment	-0.25 (9)	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	8.04	8.97	-0.21	3.75

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.09 (8)	0.02 (54)	2.05 (38)	-2.36 (11)	1.68 (19)	1.36 (29)
Index	0.01 (16)	0.05 (43)	1.83 (72)	-3.38 (62)	0.67 (79)	0.62 (83)
Median	-0.13	0.03	1.97	-3.17	1.05	1.06



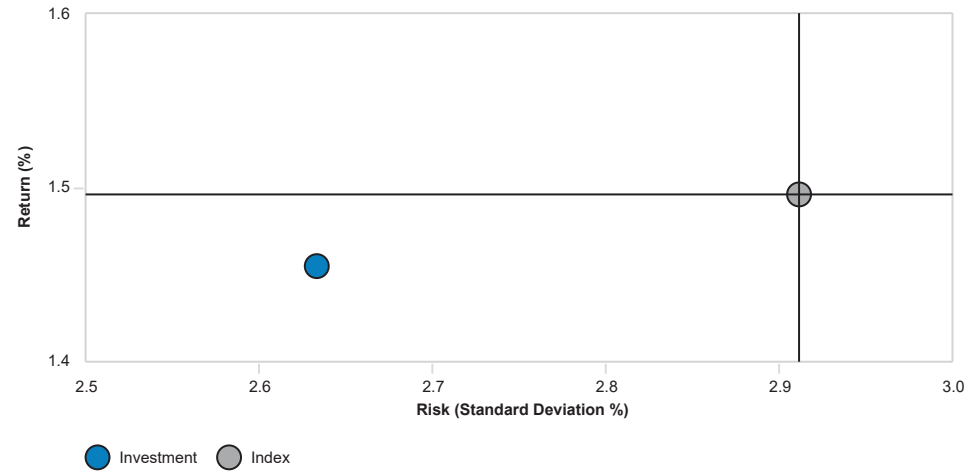
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.45	2.63	0.27	88.11	8	83.79	4
Index	1.50	2.91	0.26	100.00	9	100.00	3

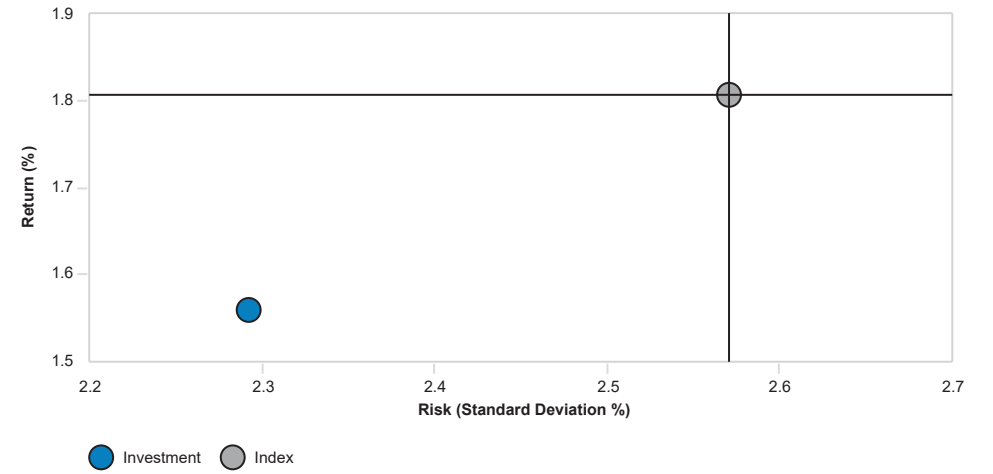
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.56	2.29	0.21	86.13	14	86.08	6
Index	1.81	2.57	0.28	100.00	15	100.00	5

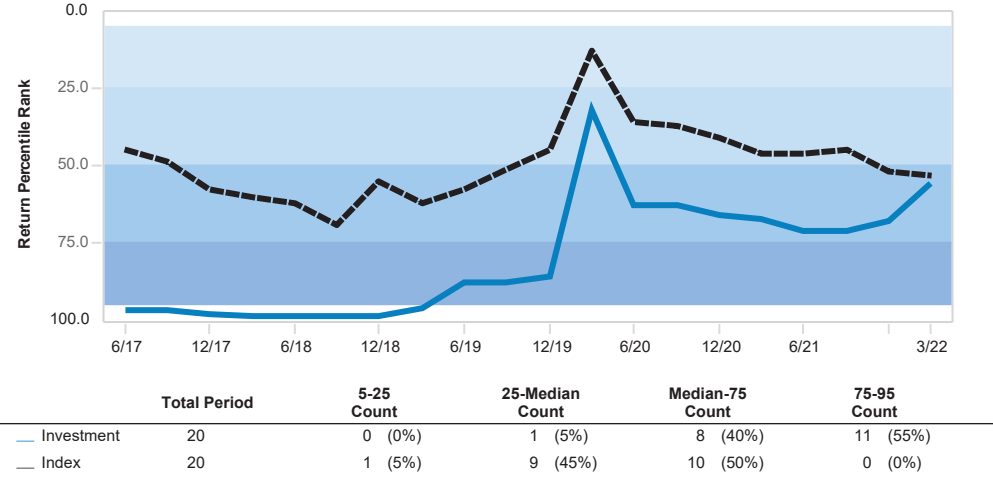
Risk and Return 3 Years



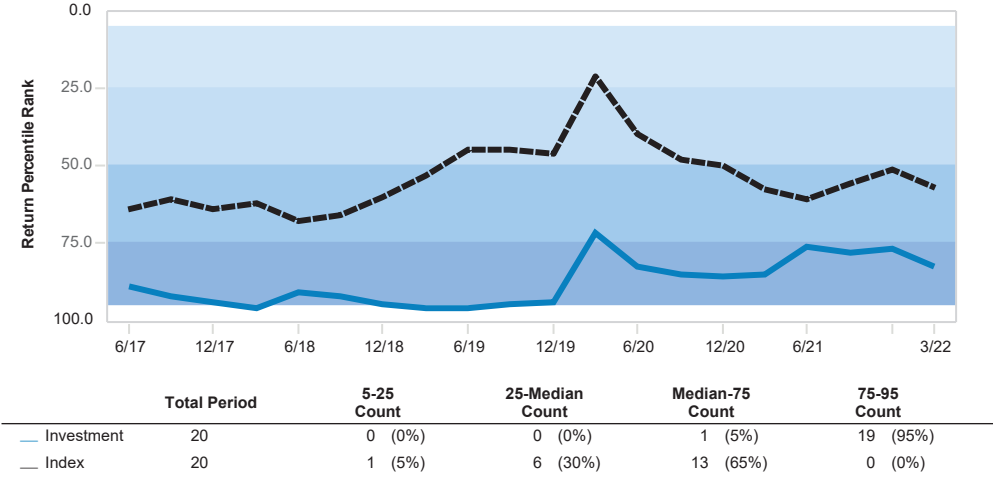
Risk and Return 5 Years



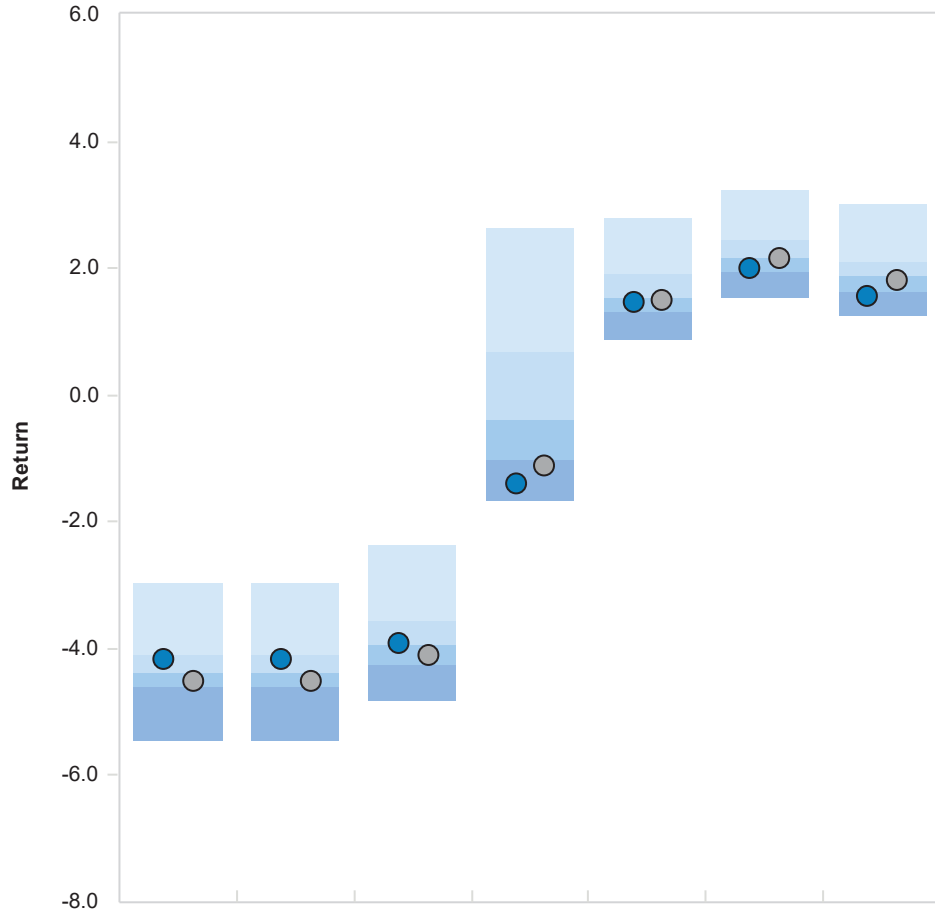
3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



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

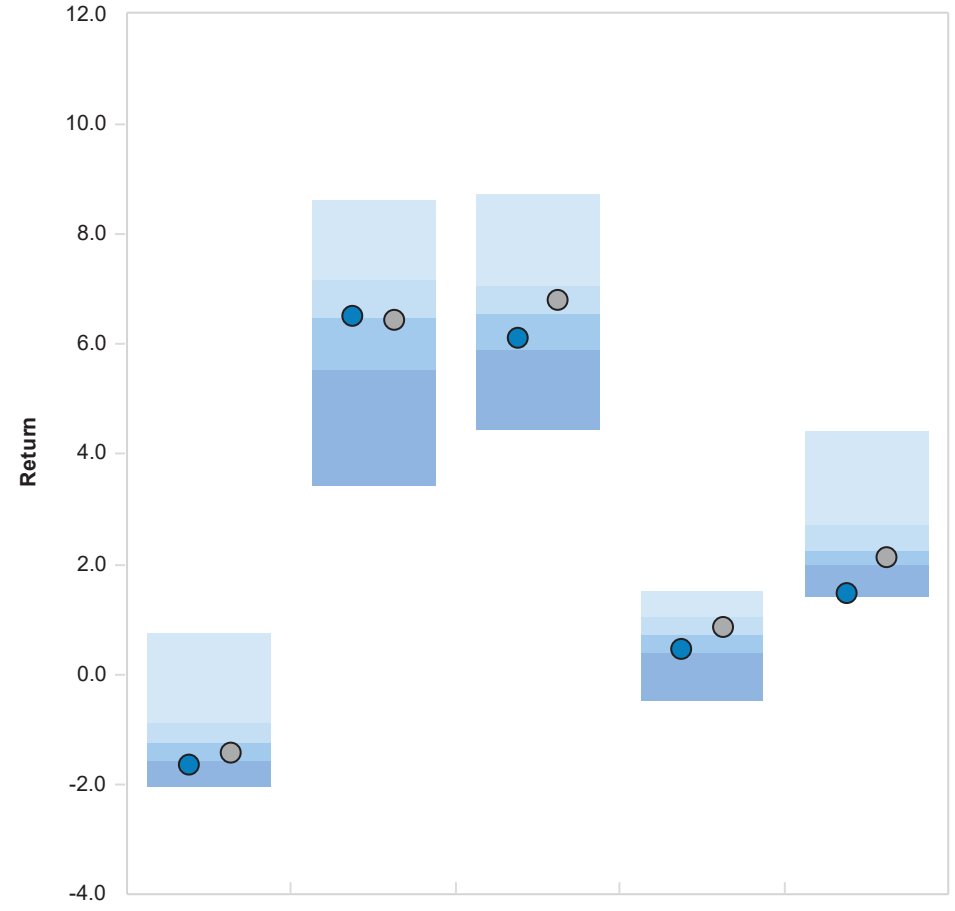


Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.15 (30)	-4.15 (30)	-3.90 (49)	-1.41 (88)	1.45 (56)	2.00 (72)	1.56 (83)
● Index	-4.51 (64)	-4.51 (64)	-4.10 (65)	-1.09 (78)	1.50 (53)	2.18 (47)	1.81 (57)
Median	-4.39	-4.39	-3.93	-0.39	1.54	2.15	1.87

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



	2021	2020	2019	2018	2017
● Investment	-1.65 (81)	6.52 (47)	6.11 (71)	0.47 (68)	1.49 (90)
● Index	-1.44 (63)	6.43 (52)	6.80 (41)	0.88 (38)	2.14 (65)
Median	-1.25	6.47	6.57	0.72	2.25

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	-0.60 (58)	-0.11 (86)	0.97 (55)	-1.90 (74)	0.36 (85)	0.60 (69)
Index	-0.57 (48)	0.02 (44)	0.98 (53)	-1.86 (70)	0.48 (73)	0.61 (68)
Median	-0.58	-0.01	0.99	-1.68	0.63	0.82



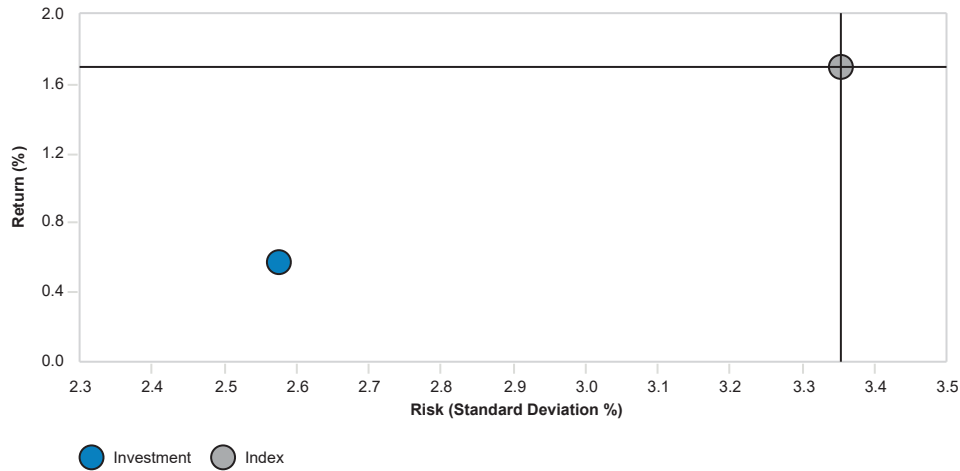
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.57	2.58	-0.08	67.16	7	82.87	5
Index	1.70	3.35	0.28	100.00	9	100.00	3

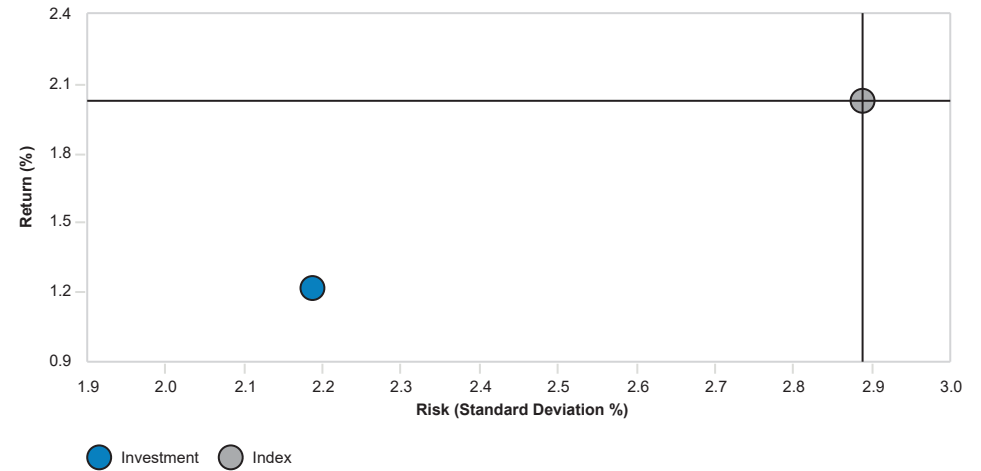
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.22	2.19	0.05	69.92	14	77.03	6
Index	2.03	2.89	0.33	100.00	14	100.00	6

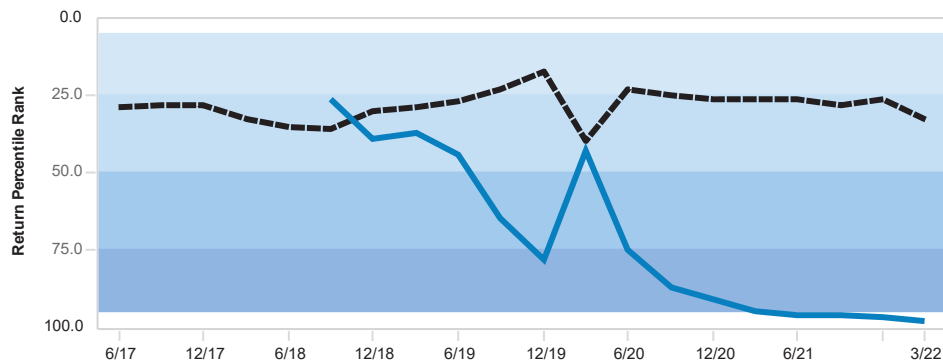
Risk and Return 3 Years



Risk and Return 5 Years

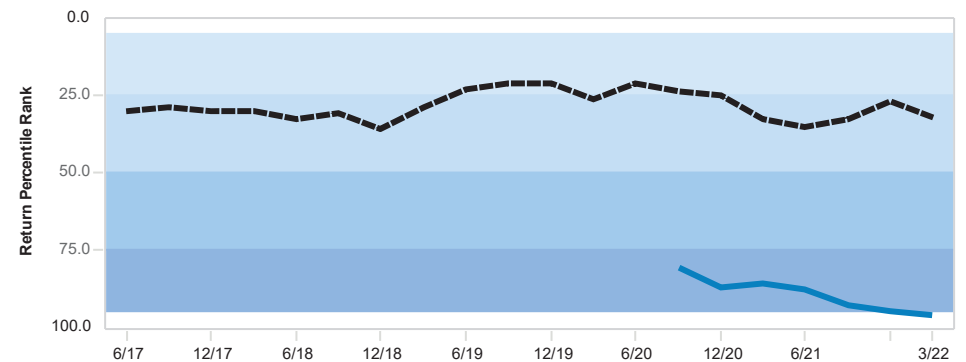


3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	0 (0%)	5 (33%)	2 (13%)	8 (53%)
Index	20	4 (20%)	16 (80%)	0 (0%)	0 (0%)

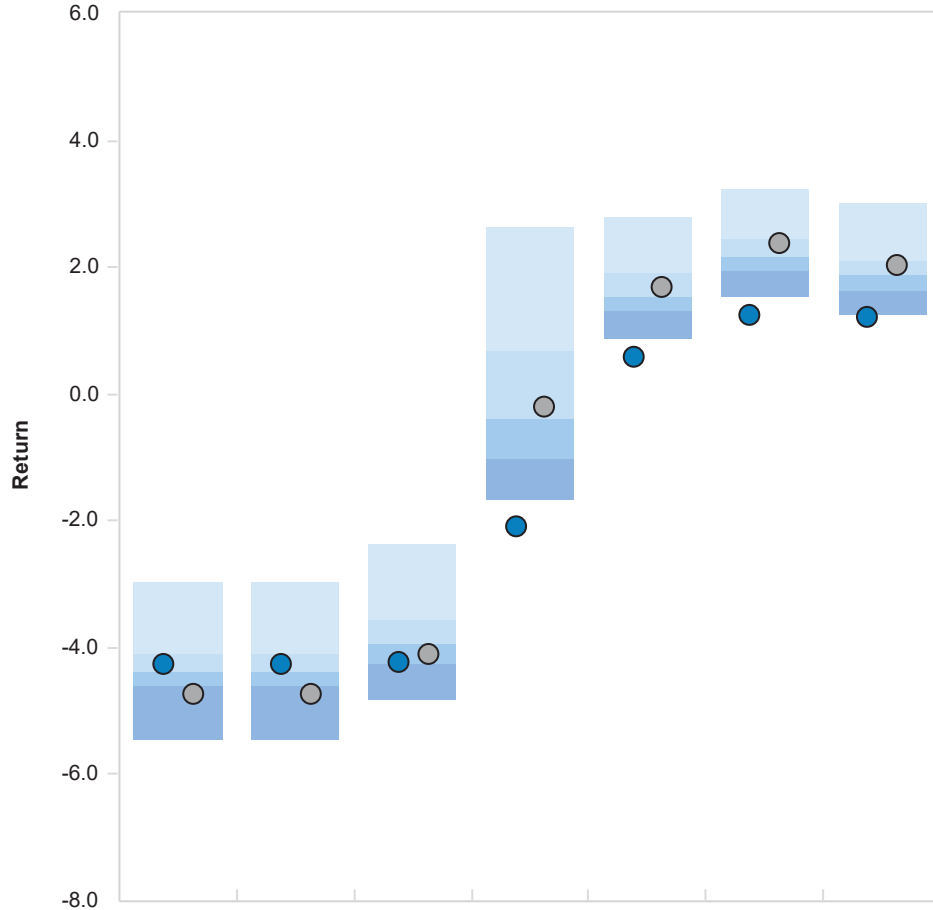
5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	7	0 (0%)	0 (0%)	0 (0%)	7 (100%)
Index	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)

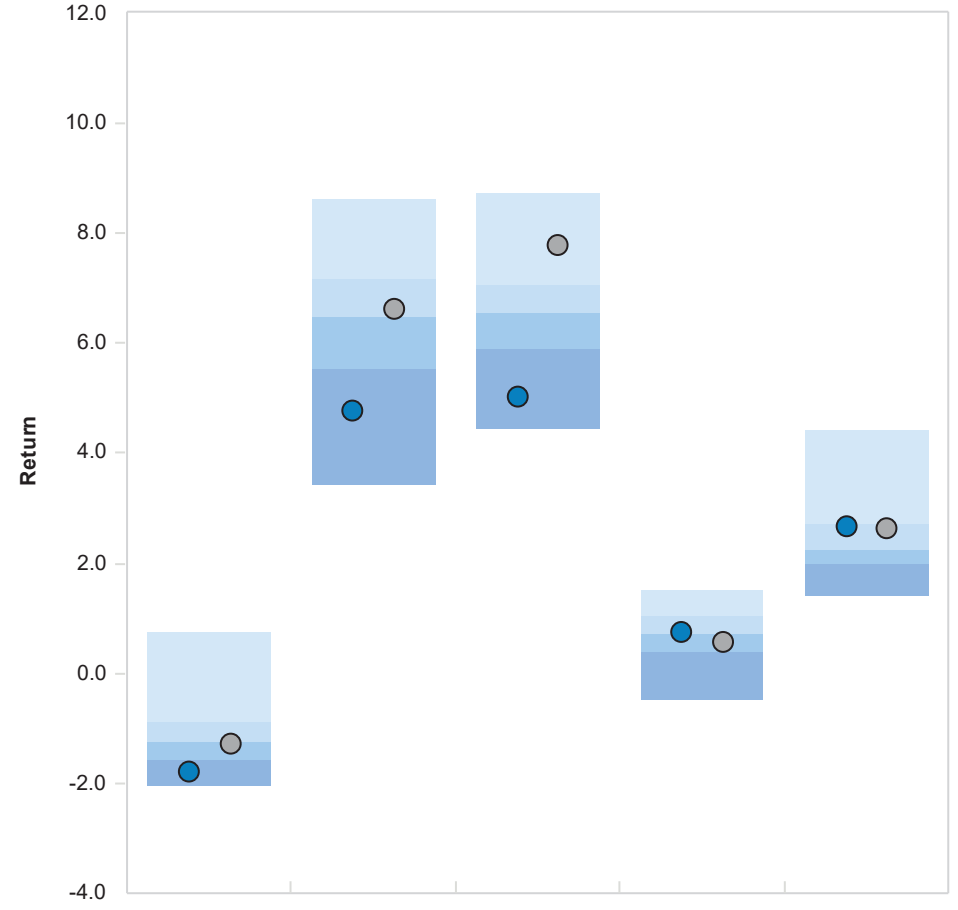


Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.26 (40)	-4.26 (40)	-4.22 (73)	-2.09 (99)	0.57 (98)	1.25 (98)	1.22 (96)
● Index	-4.72 (82)	-4.72 (82)	-4.09 (65)	-0.18 (43)	1.70 (33)	2.39 (27)	2.03 (32)
Median	-4.39	-4.39	-3.93	-0.39	1.54	2.15	1.87

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



	2021	2020	2019	2018	2017
● Investment	-1.80 (89)	4.79 (90)	5.02 (93)	0.74 (50)	2.68 (28)
● Index	-1.29 (55)	6.62 (44)	7.78 (13)	0.58 (60)	2.65 (29)
Median	-1.25	6.47	6.57	0.72	2.25

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	-0.69 (80)	-0.09 (82)	0.83 (76)	-1.83 (68)	0.33 (88)	-0.44 (100)
Index	-0.56 (46)	0.04 (35)	1.18 (24)	-1.93 (78)	0.84 (37)	0.82 (50)
Median	-0.58	-0.01	0.99	-1.68	0.63	0.82



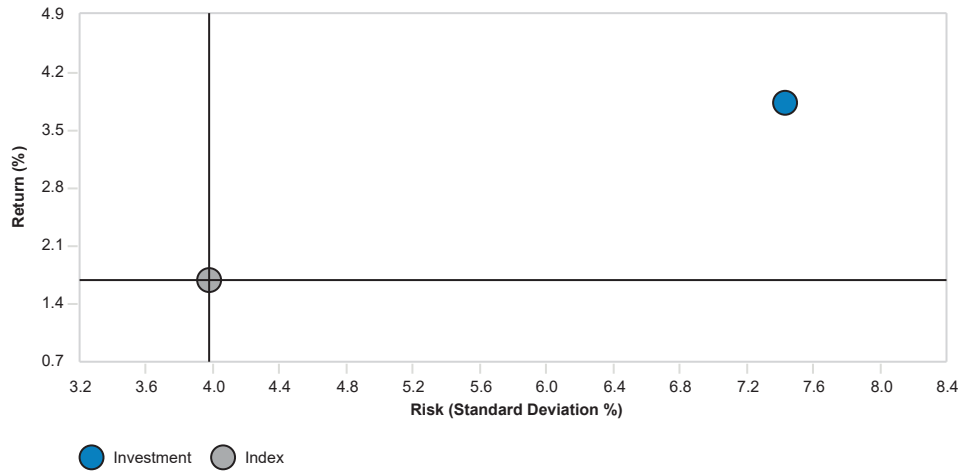
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.85	7.43	0.43	123.41	9	80.73	3
Index	1.69	3.98	0.24	100.00	10	100.00	2

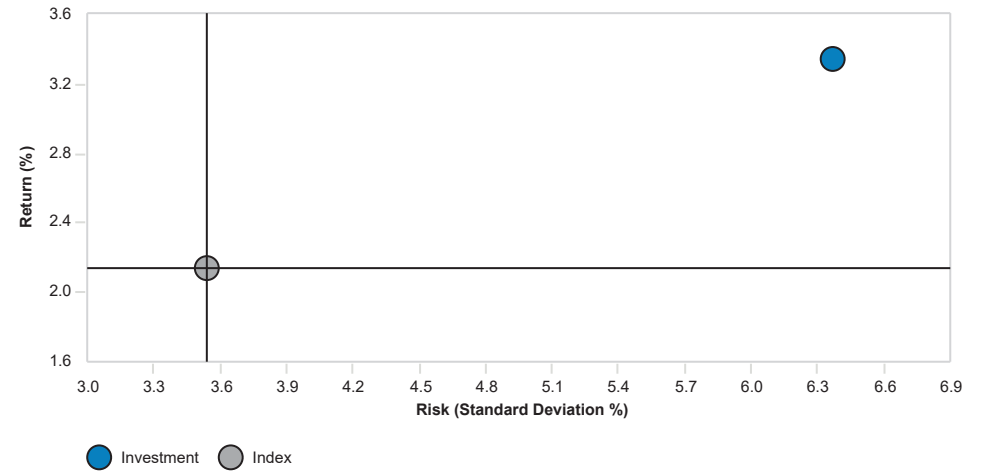
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.35	6.37	0.37	109.54	13	79.51	7
Index	2.14	3.54	0.31	100.00	16	100.00	4

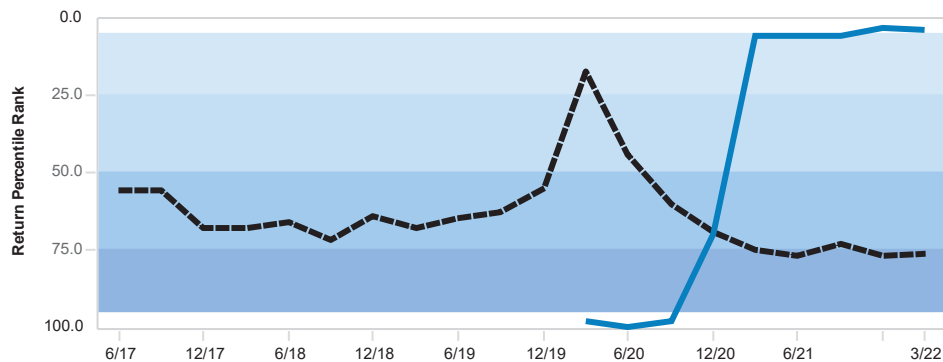
Risk and Return 3 Years



Risk and Return 5 Years

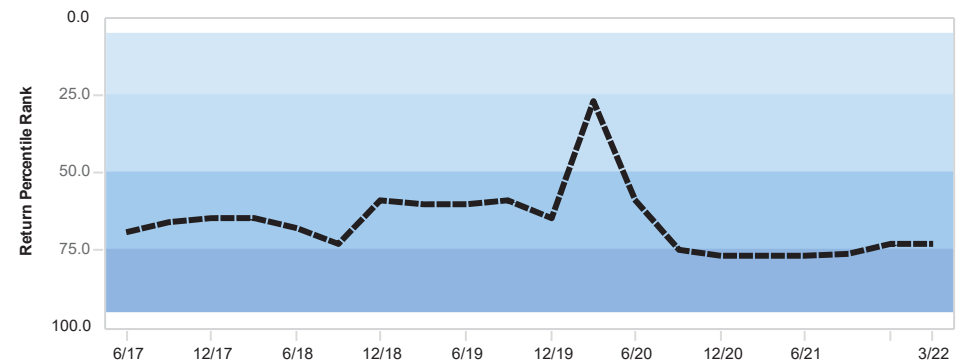


3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



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

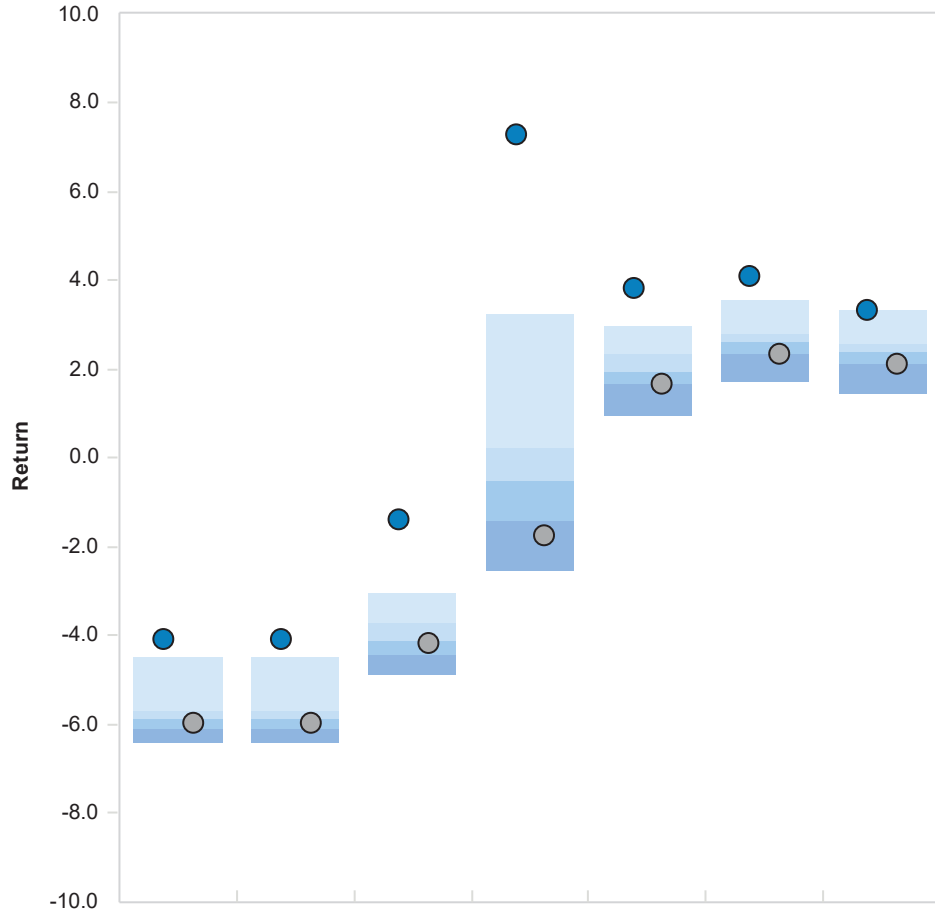
5 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	1	1 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	1 (5%)	15 (75%)	4 (20%)

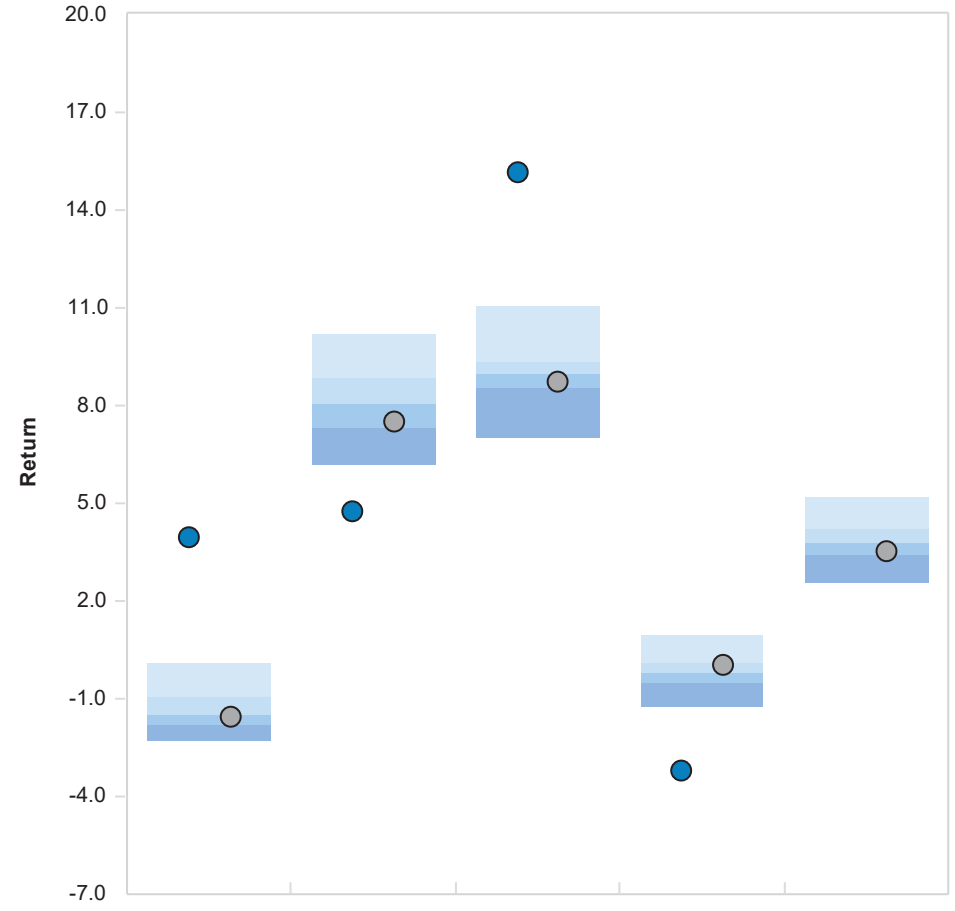


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.05 (1)	-4.05 (1)	-1.39 (1)	7.32 (1)	3.85 (4)	4.11 (5)	3.35 (5)
● Index	-5.93 (57)	-5.93 (57)	-4.15 (54)	-1.75 (81)	1.69 (76)	2.38 (74)	2.14 (73)
Median	-5.86	-5.86	-4.09	-0.51	1.94	2.61	2.43

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	8.04	8.97	-0.21	3.75

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.15 (4)	-0.14 (92)	2.75 (3)	1.16 (1)	6.38 (1)	3.80 (1)
Index	0.01 (16)	0.05 (43)	1.83 (72)	-3.38 (62)	0.67 (79)	0.62 (83)
Median	-0.13	0.03	1.97	-3.17	1.05	1.06



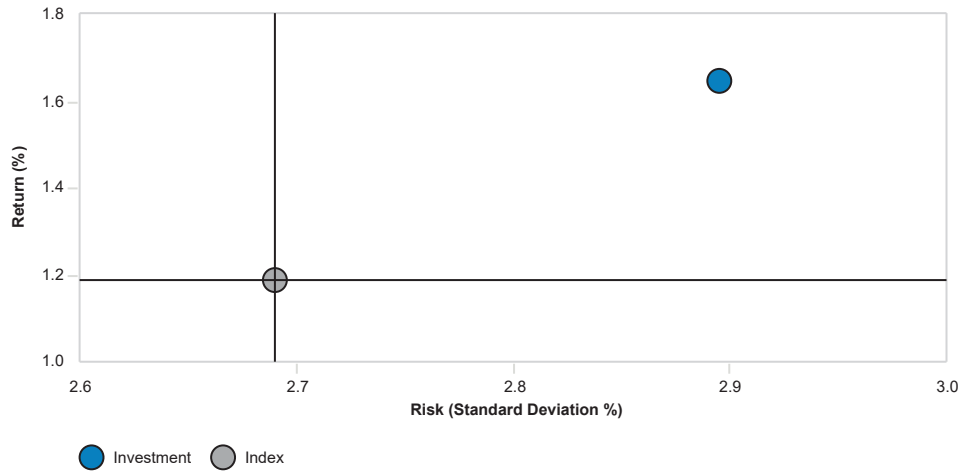
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.65	2.89	0.31	117.22	8	108.14	4
Index	1.19	2.69	0.16	100.00	9	100.00	3

Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	1.67	2.47	0.24	100.00	15	100.00	5

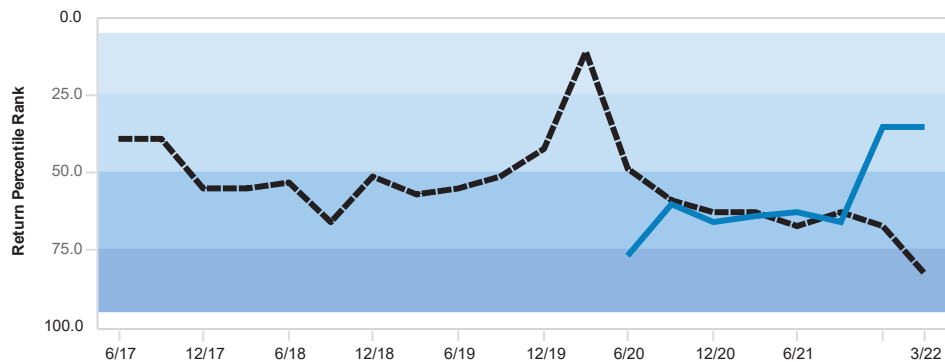
Risk and Return 3 Years



Risk and Return 5 Years

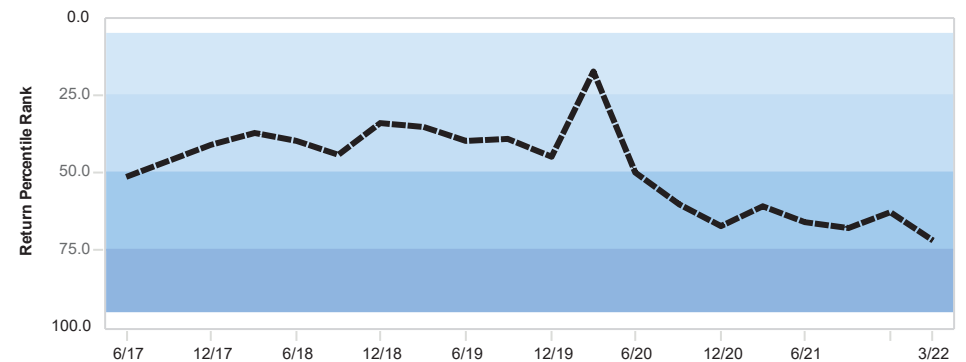


3 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	8	0 (0%)	2 (25%)	5 (63%)	1 (13%)
Index	20	1 (5%)	4 (20%)	14 (70%)	1 (5%)

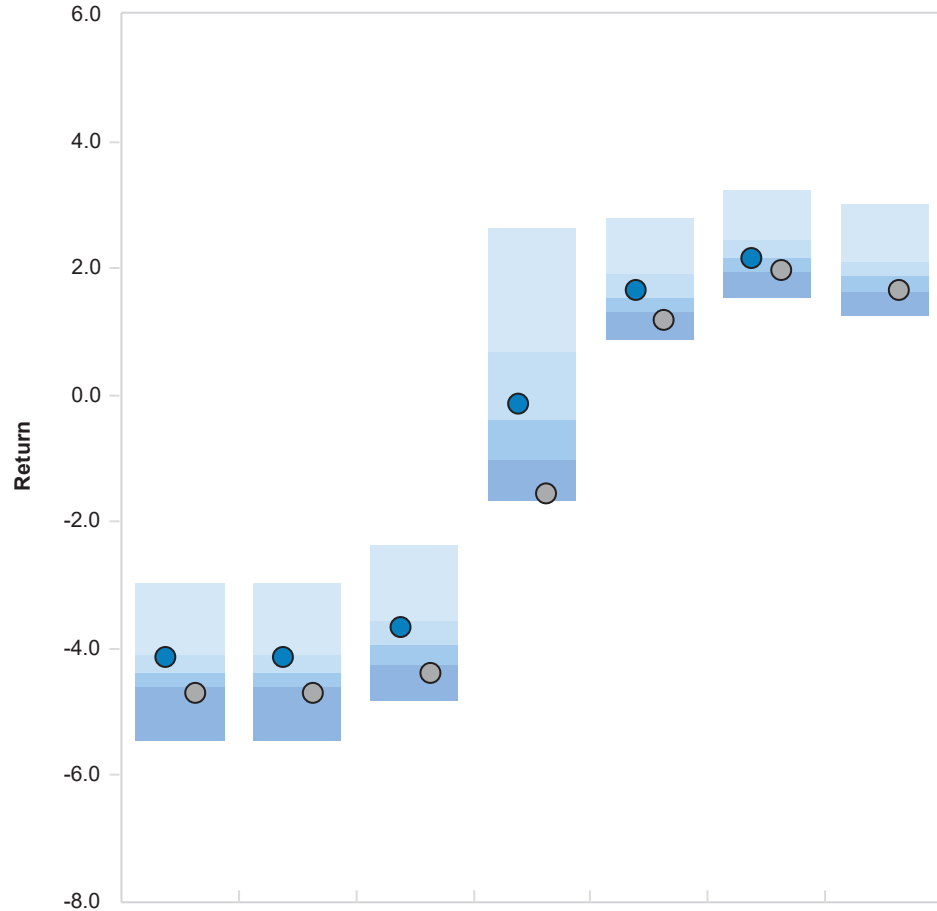
5 Year Rolling Percentile Rank IM U.S. Intermediate Duration (SA+CF)



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

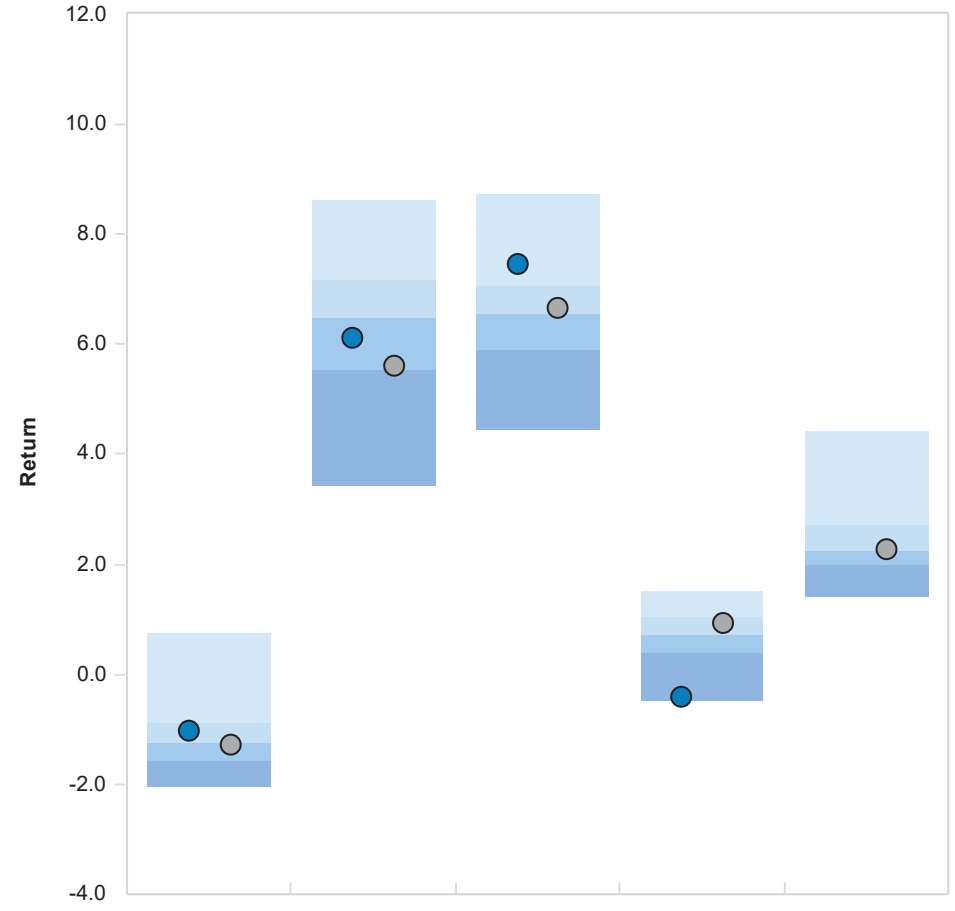


Peer Group Analysis - IM U.S. Intermediate Duration (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.13 (29)	-4.13 (29)	-3.64 (28)	-0.14 (41)	1.65 (35)	2.15 (50)	N/A
● Index	-4.69 (79)	-4.69 (79)	-4.38 (86)	-1.54 (92)	1.19 (83)	1.96 (75)	1.67 (72)
Median	-4.39	-4.39	-3.93	-0.39	1.54	2.15	1.87

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



	2021	2020	2019	2018	2017
● Investment	-1.04 (33)	6.13 (65)	7.47 (17)	-0.40 (95)	N/A
● Index	-1.29 (55)	5.60 (75)	6.67 (46)	0.92 (35)	2.27 (49)
Median	-1.25	6.47	6.57	0.72	2.25

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	-0.45 (20)	0.00 (49)	0.96 (63)	-1.53 (37)	0.71 (46)	0.78 (52)
Index	-0.51 (29)	0.05 (31)	0.78 (79)	-1.61 (43)	0.42 (77)	0.48 (82)
Median	-0.58	-0.01	0.99	-1.68	0.63	0.82



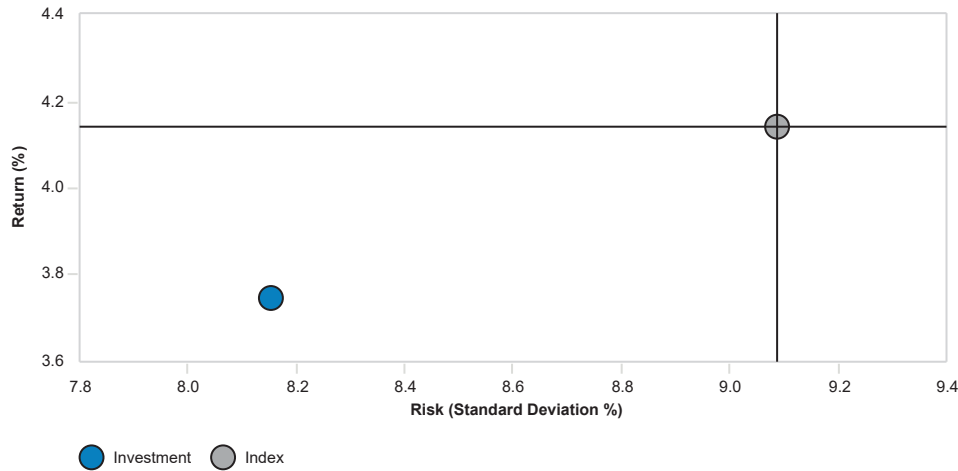
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.75	8.15	0.39	89.16	10	88.96	2
Index	4.14	9.09	0.40	100.00	10	100.00	2

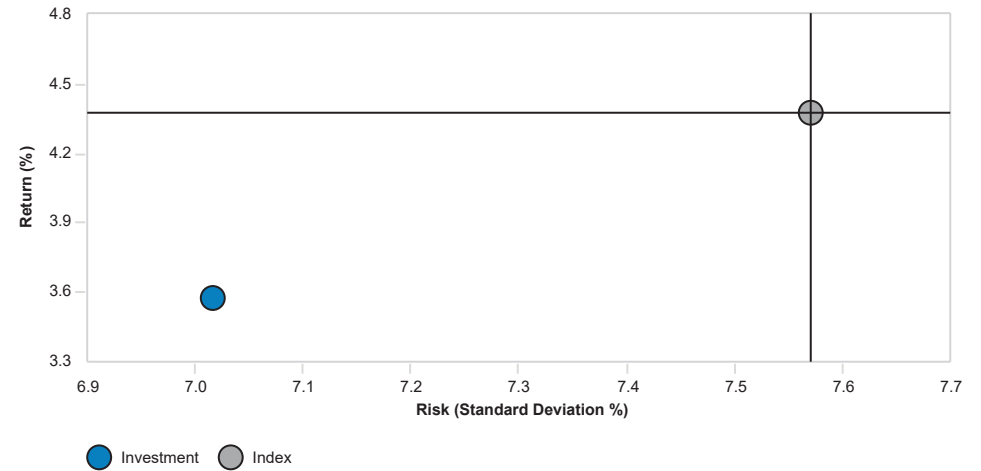
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.58	7.02	0.37	89.49	16	95.51	4
Index	4.38	7.57	0.45	100.00	16	100.00	4

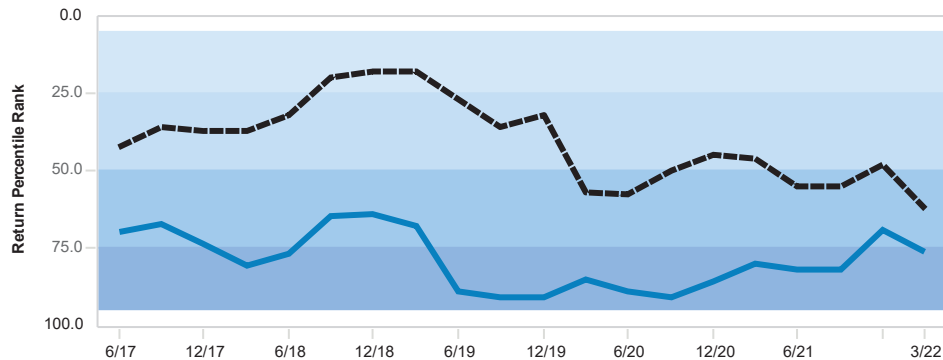
Risk and Return 3 Years



Risk and Return 5 Years

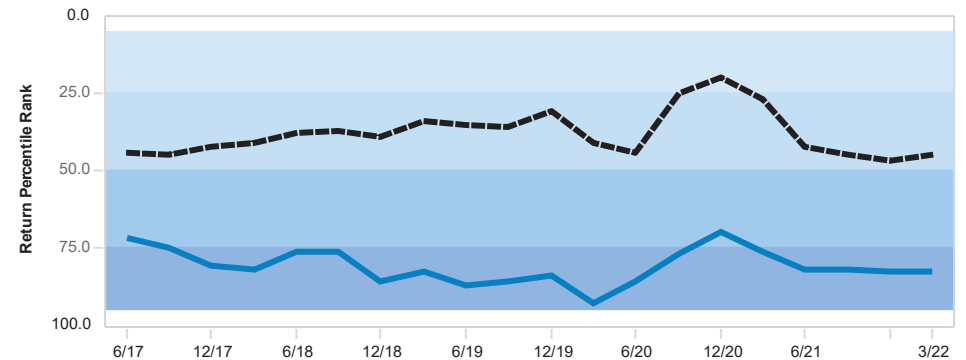


3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	0 (0%)	7 (35%)	13 (65%)
Index	20	3 (15%)	12 (60%)	5 (25%)	0 (0%)

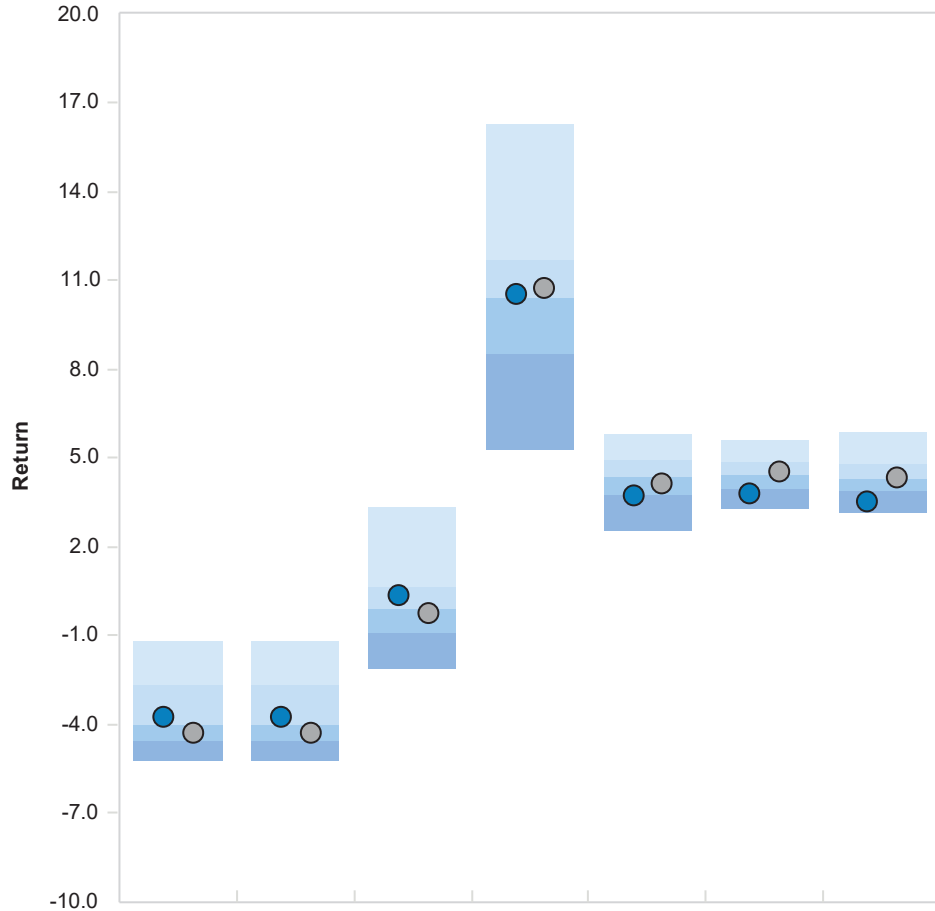
5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



	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%)	18 (90%)	0 (0%)	0 (0%)

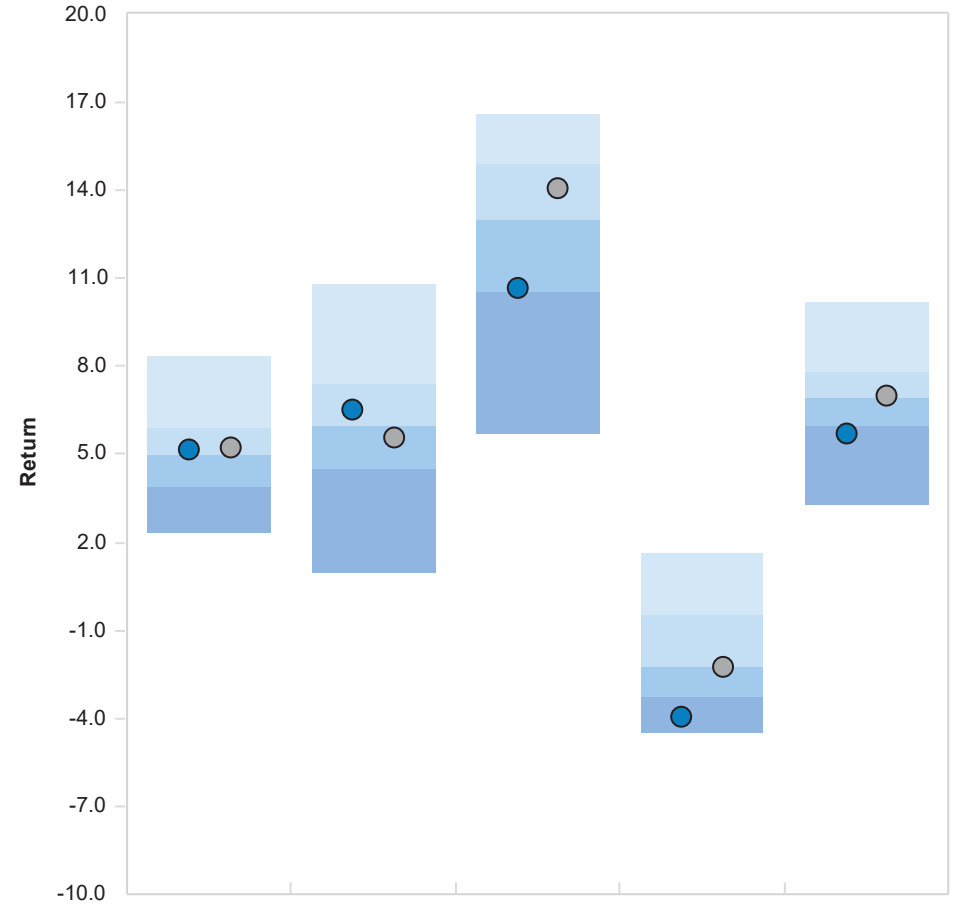


Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-3.73 (42)	-3.73 (42)	0.40 (30)	10.58 (47)	3.75 (76)	3.84 (83)	3.58 (83)
● Index	-4.29 (63)	-4.29 (63)	-0.23 (55)	10.76 (43)	4.14 (62)	4.55 (46)	4.38 (45)
Median	-4.02	-4.02	-0.12	10.42	4.34	4.45	4.32

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 (44)	5.60 (62)	14.05 (41)	-2.22 (51)	6.97 (49)
Median	4.95	5.96	12.99	-2.22	6.93

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.93 (8)	0.94 (20)	2.37 (68)	0.82 (56)	6.26 (40)	4.63 (42)
Index	0.67 (36)	0.93 (20)	2.59 (47)	0.94 (47)	6.30 (38)	4.92 (26)
Median	0.59	0.74	2.57	0.90	5.83	4.49



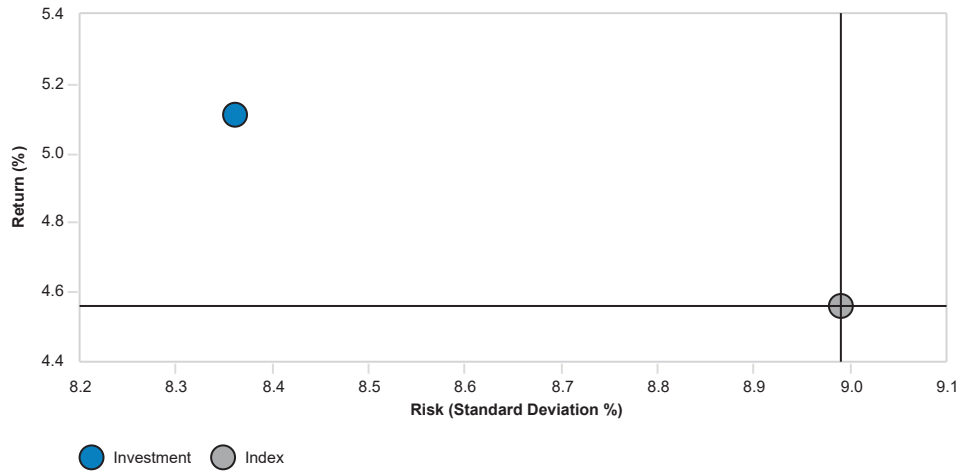
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.11	8.36	0.54	98.67	10	91.05	2
Index	4.56	8.99	0.45	100.00	10	100.00	2

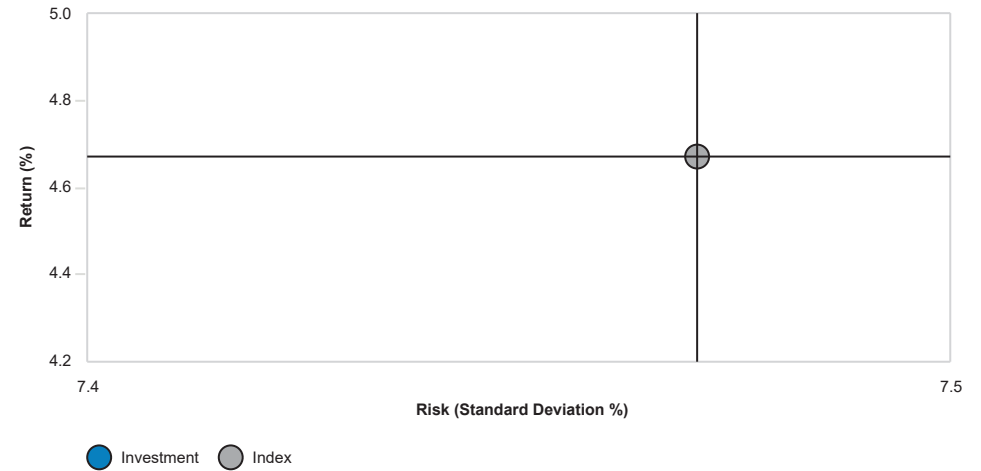
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Index	4.68	7.47	0.49	100.00	16	100.00	4

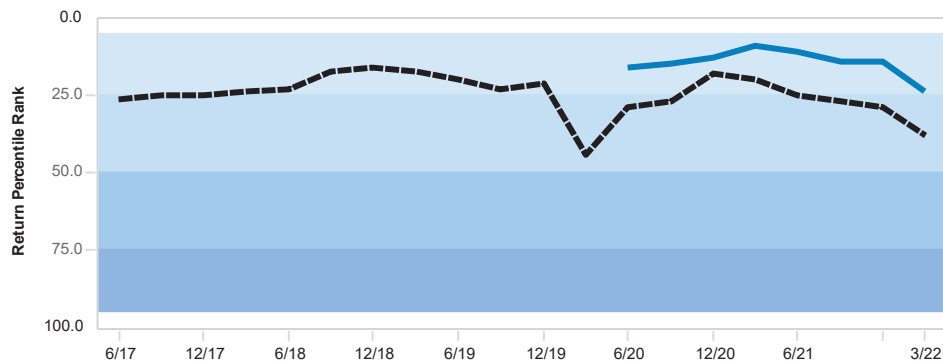
Risk and Return 3 Years



Risk and Return 5 Years

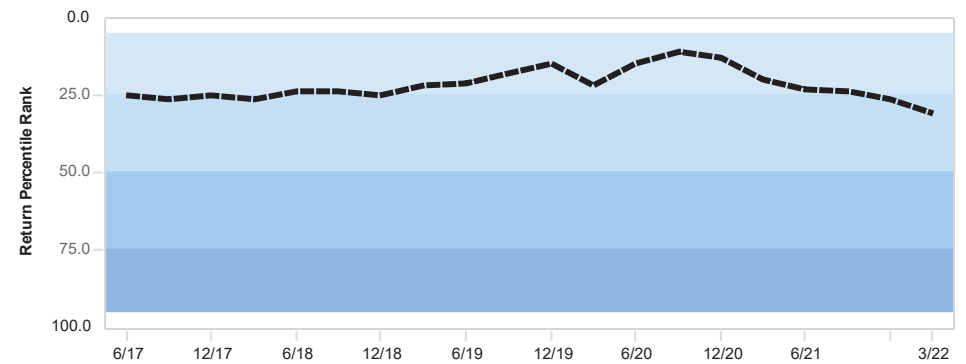


3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	8	8 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	13 (65%)	7 (35%)	0 (0%)	0 (0%)

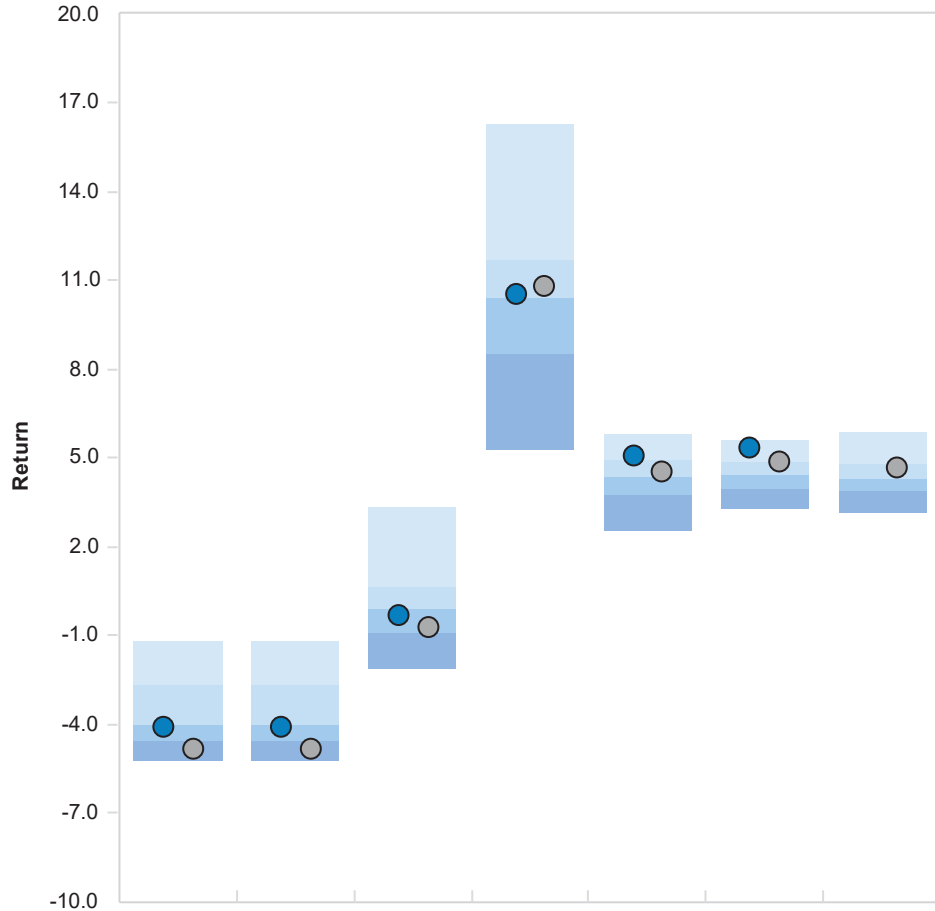
5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



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

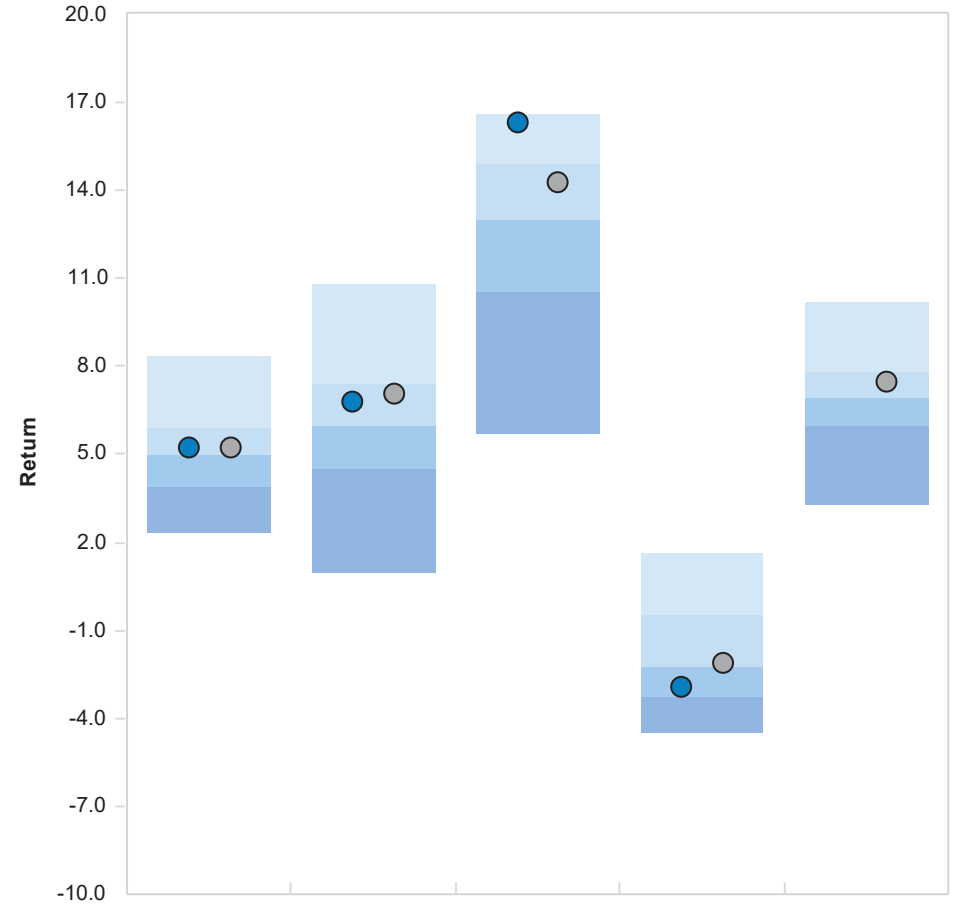


Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-4.06 (52)	-4.06 (52)	-0.27 (58)	10.54 (47)	5.11 (24)	5.37 (12)	N/A
● Index	-4.82 (88)	-4.82 (88)	-0.66 (67)	10.83 (42)	4.56 (38)	4.90 (24)	4.68 (31)
Median	-4.02	-4.02	-0.12	10.42	4.34	4.45	4.32

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 (30)	14.32 (34)	-2.08 (47)	7.50 (37)
Median	4.95	5.96	12.99	-2.22	6.93

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.61 (46)	0.70 (58)	2.60 (47)	1.27 (38)	5.56 (59)	4.51 (50)
Index	0.69 (35)	0.89 (24)	2.74 (40)	0.86 (53)	6.44 (34)	4.58 (45)
Median	0.59	0.74	2.57	0.90	5.83	4.49



Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.28	8.37	0.33	95.20	9	106.41	3
Index	4.10	8.38	0.42	100.00	10	100.00	2

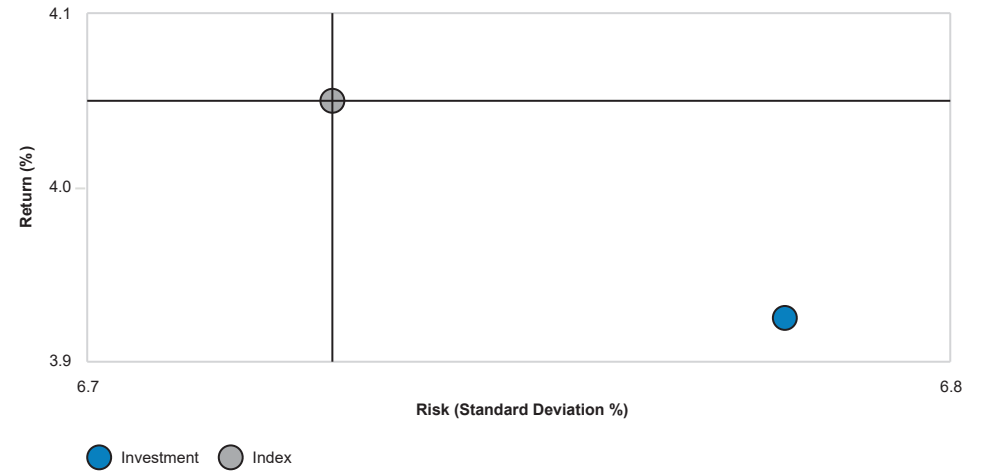
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.93	6.78	0.43	96.96	16	96.68	4
Index	4.05	6.73	0.45	100.00	17	100.00	3

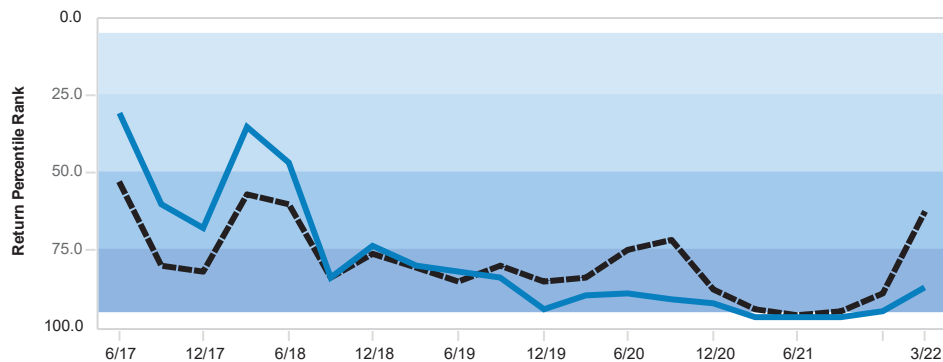
Risk and Return 3 Years



Risk and Return 5 Years

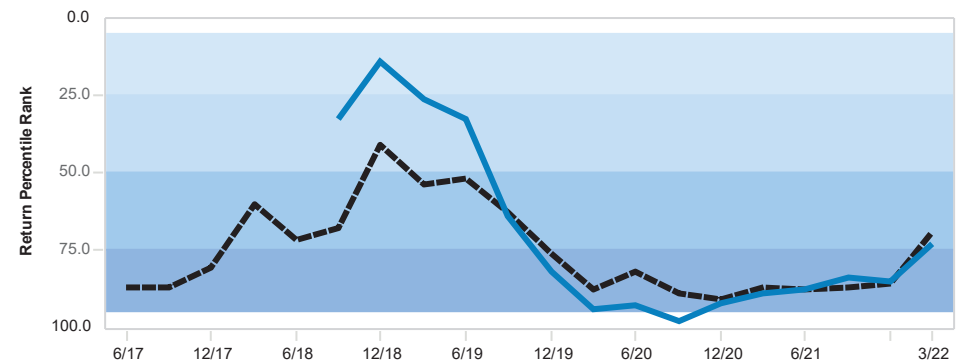


3 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



	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	0 (0%)	0 (0%)	6 (30%)	14 (70%)

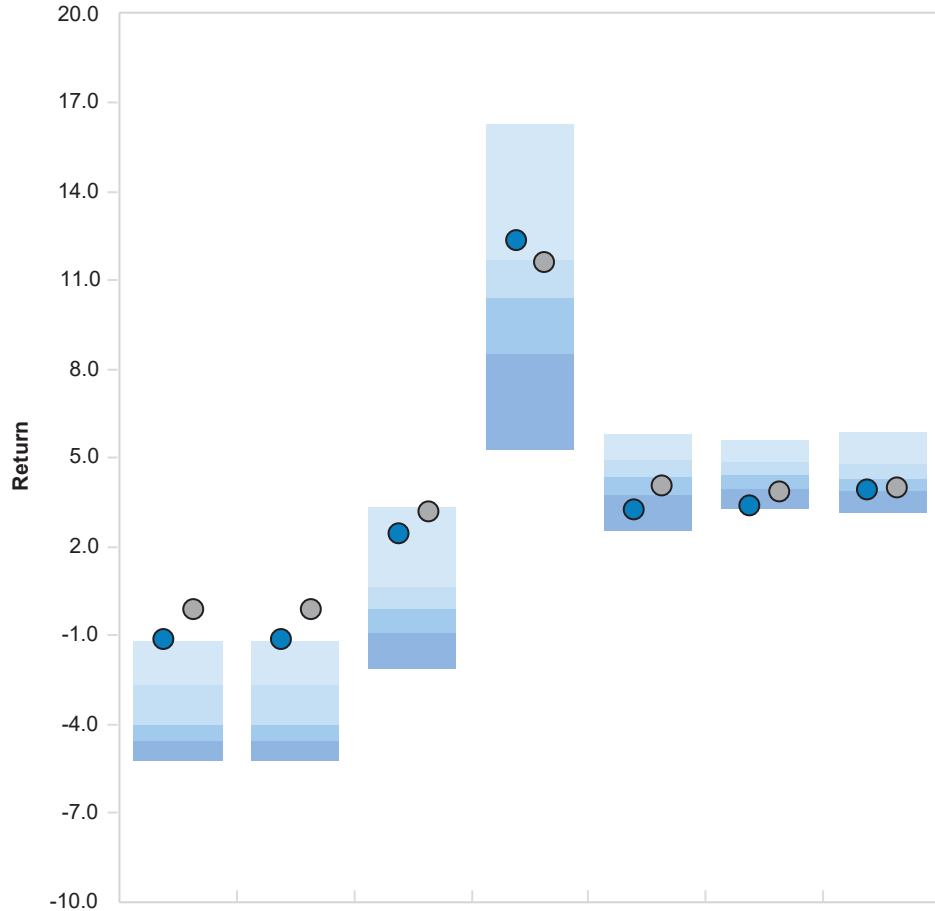
5 Year Rolling Percentile Rank IM U.S. High Yield Bonds (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	1 (7%)	3 (20%)	2 (13%)	9 (60%)
Index	20	0 (0%)	1 (5%)	7 (35%)	12 (60%)

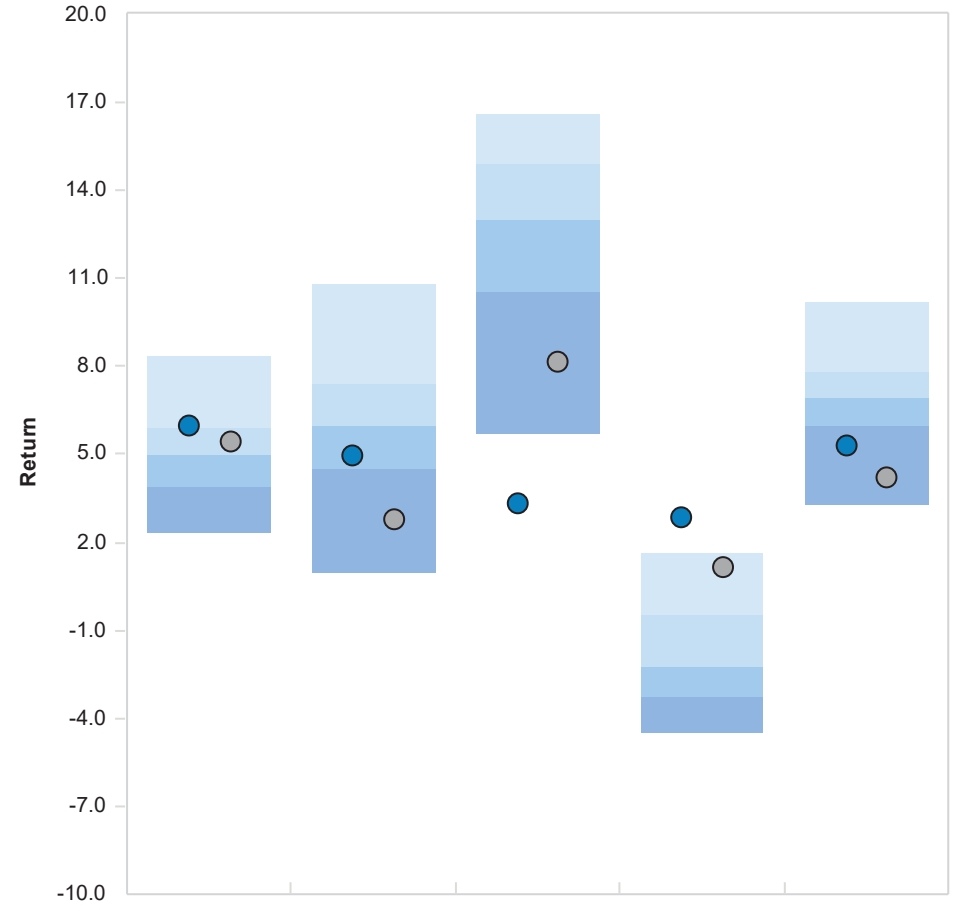


Peer Group Analysis - IM U.S. High Yield Bonds (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-1.12 (5)	-1.12 (5)	2.50 (7)	12.35 (20)	3.28 (87)	3.40 (93)	3.93 (73)
● Index	-0.10 (1)	-0.10 (1)	3.23 (6)	11.65 (27)	4.10 (63)	3.90 (80)	4.05 (69)
Median	-4.02	-4.02	-0.12	10.42	4.34	4.45	4.32

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



	2021	2020	2019	2018	2017
● Investment	5.99 (21)	4.98 (69)	3.31 (99)	2.84 (2)	5.31 (85)
● Index	5.41 (39)	2.78 (87)	8.16 (84)	1.14 (10)	4.25 (90)
Median	4.95	5.96	12.99	-2.22	6.93

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	0.60 (47)	1.17 (9)	1.84 (84)	2.25 (14)	5.39 (65)	4.64 (42)
Index	0.72 (30)	1.13 (9)	1.45 (90)	2.01 (18)	3.63 (88)	4.12 (69)
Median	0.59	0.74	2.57	0.90	5.83	4.49



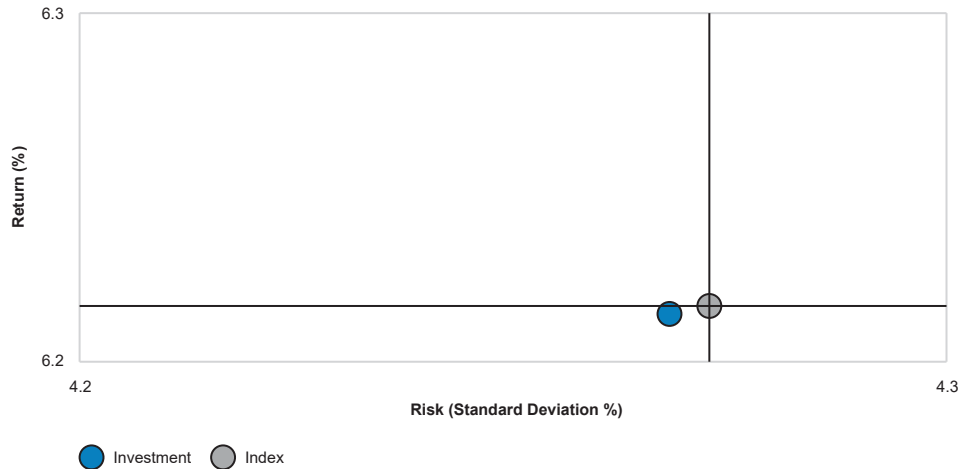
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.21	4.27	1.24	99.79	10	99.49	2
Index	6.22	4.27	1.24	100.00	10	100.00	2

Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.44	3.81	0.86	99.78	14	99.15	6
Index	4.43	3.81	0.86	100.00	14	100.00	6

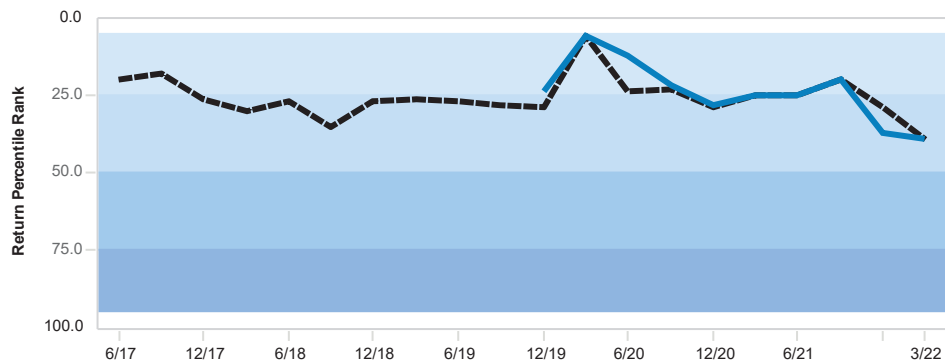
Risk and Return 3 Years



Risk and Return 5 Years

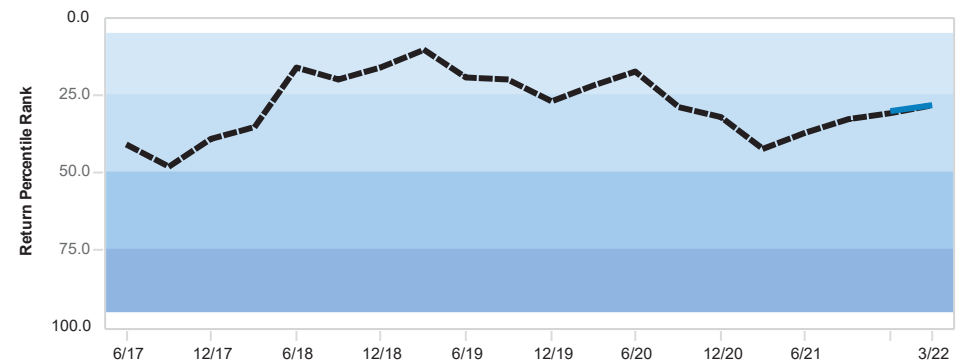


3 Year Rolling Percentile Rank IM U.S. TIPS (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	10	7 (70%)	3 (30%)	0 (0%)	0 (0%)
Index	20	8 (40%)	12 (60%)	0 (0%)	0 (0%)

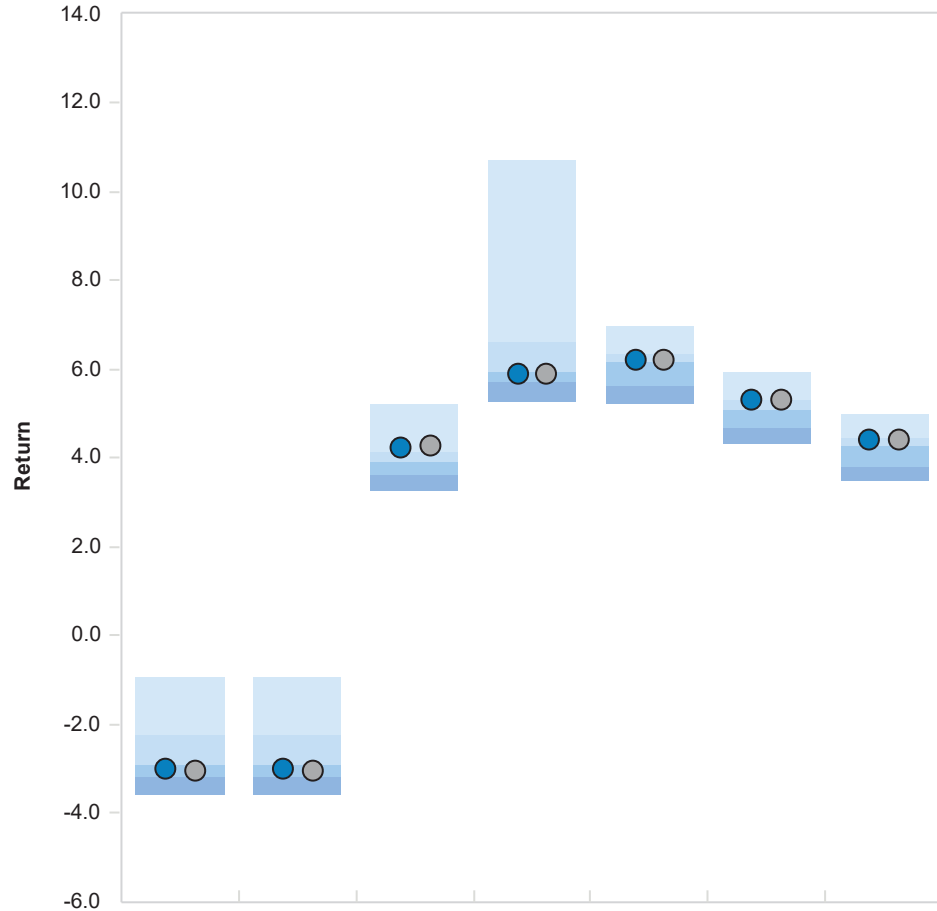
5 Year Rolling Percentile Rank IM U.S. TIPS (SA+CF)



	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	2	0 (0%)	2 (100%)	0 (0%)	0 (0%)
Index	20	8 (40%)	12 (60%)	0 (0%)	0 (0%)

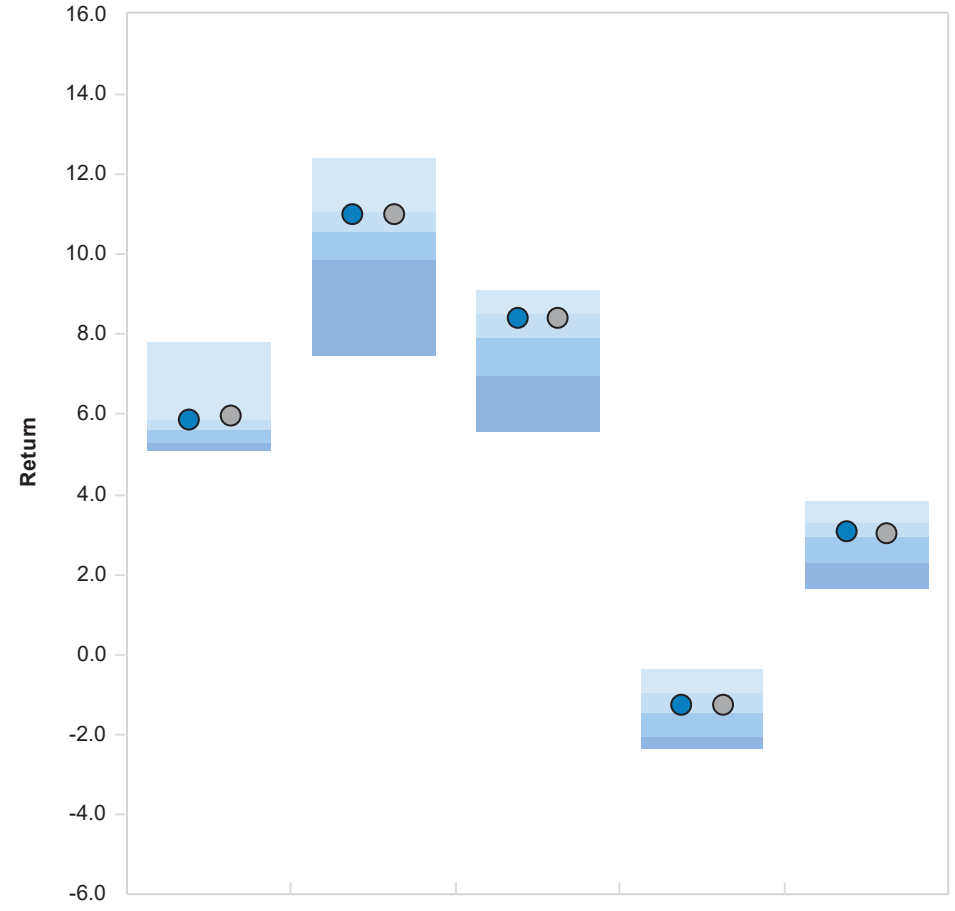


Peer Group Analysis - IM U.S. TIPS (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.97 (54)	-2.97 (54)	4.26 (18)	5.89 (58)	6.21 (39)	5.33 (26)	4.44 (28)
● Index	-3.02 (56)	-3.02 (56)	4.29 (16)	5.90 (58)	6.22 (39)	5.33 (26)	4.43 (28)
Median	-2.90	-2.90	3.95	5.95	6.17	5.09	4.28

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



	2021	2020	2019	2018	2017
● Investment	5.87 (24)	11.02 (28)	8.43 (28)	-1.27 (38)	3.10 (40)
● Index	5.96 (20)	10.99 (31)	8.43 (28)	-1.26 (38)	3.01 (46)
Median	5.62	10.57	7.92	-1.44	2.91

Comparative Performance

	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	1 Qtr Ending Sep-2020
Investment	2.30 (24)	1.74 (18)	3.24 (29)	-1.48 (70)	1.60 (58)	3.04 (56)
Index	2.36 (7)	1.75 (17)	3.25 (28)	-1.47 (69)	1.62 (42)	3.03 (57)
Median	2.16	1.62	3.12	-1.36	1.62	3.15



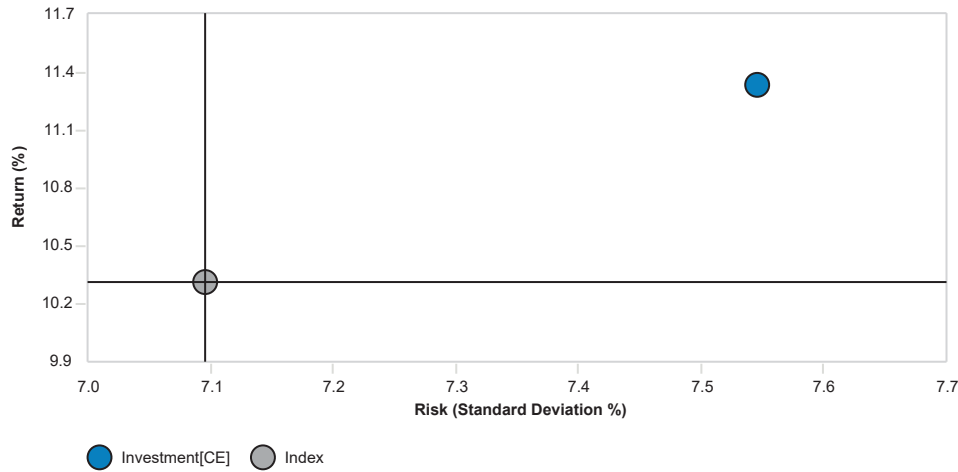
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment[CE]	11.33	7.55	1.35	109.29	11	105.82	1
Index	10.31	7.10	1.30	100.00	11	100.00	1

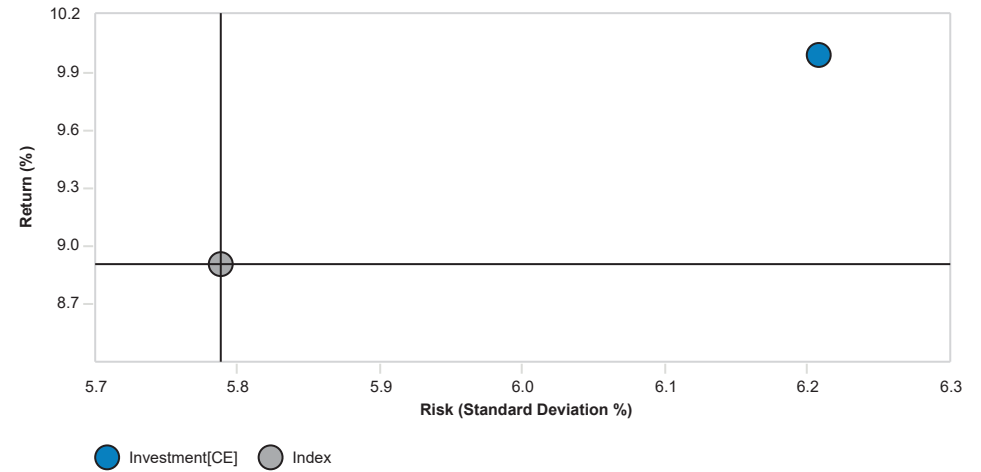
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment[CE]	9.99	6.21	1.38	111.49	19	105.82	1
Index	8.91	5.79	1.30	100.00	19	100.00	1

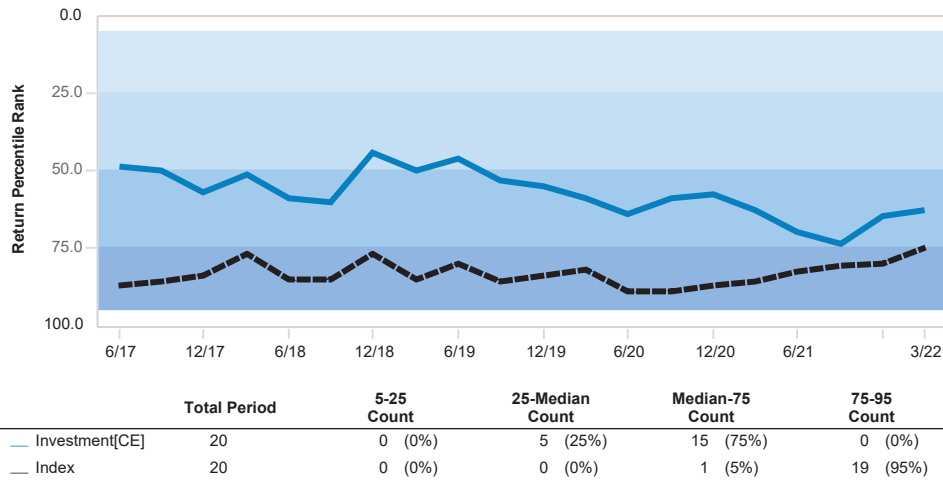
Risk and Return 3 Years



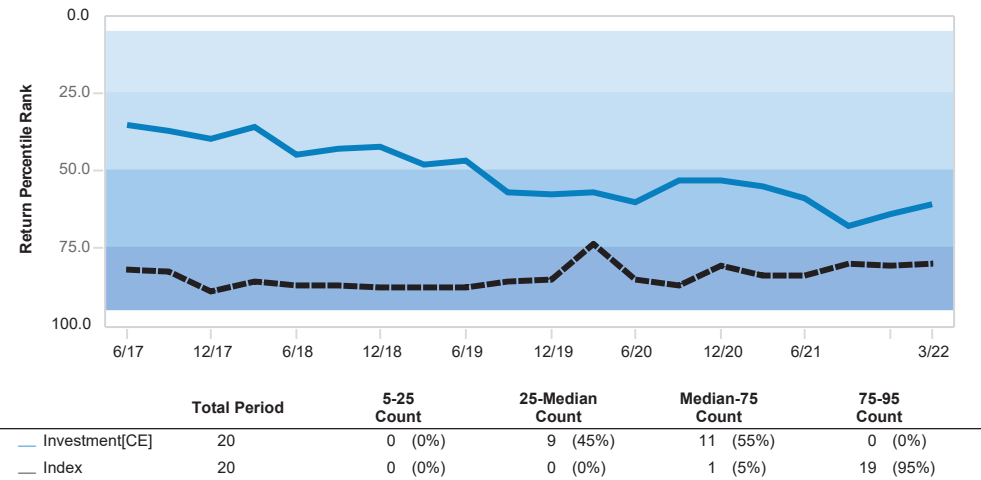
Risk and Return 5 Years



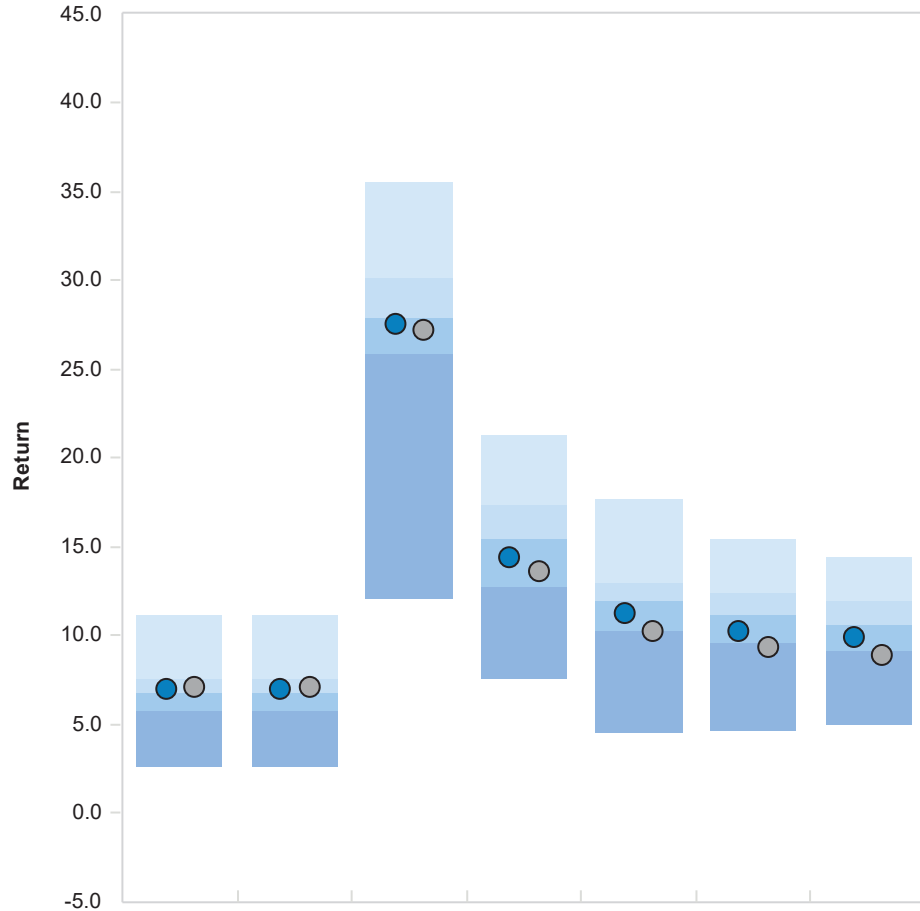
3 Year Rolling Percentile Rank IM U.S. Private Real Estate (SA+CF)



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

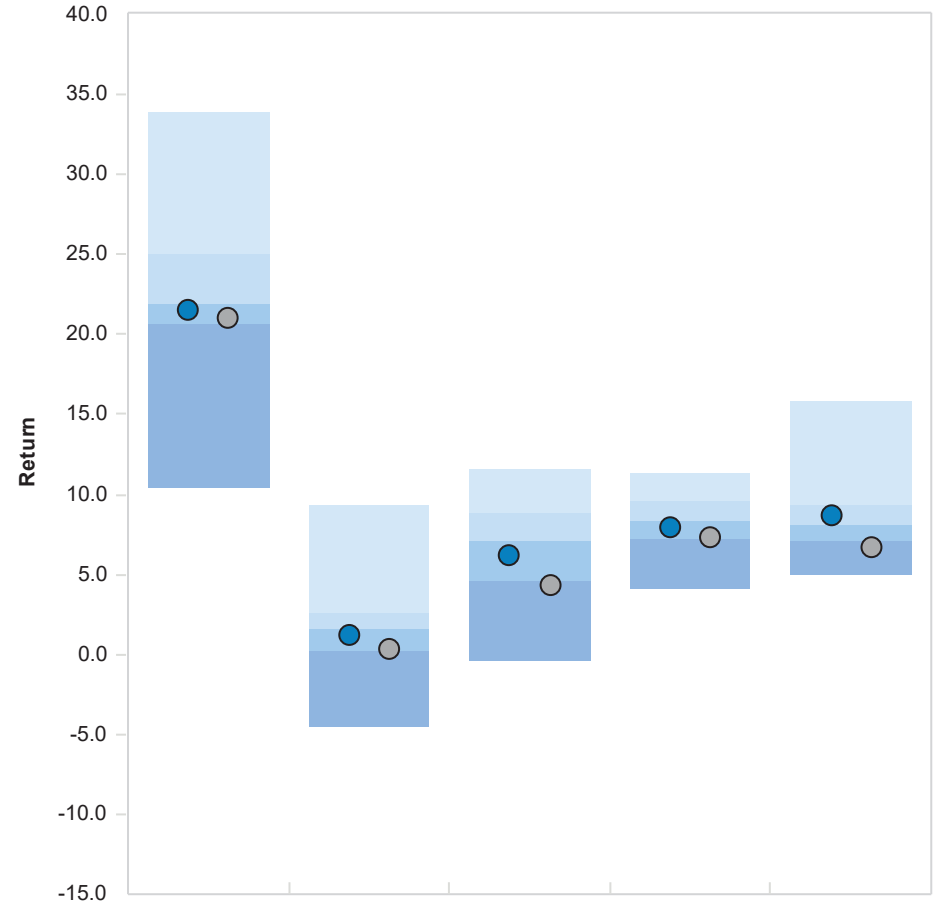


Peer Group Analysis - IM U.S. Private Real Estate (SA+CF)



	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment[CE]	7.01 (44)	7.01 (44)	27.57 (53)	14.39 (63)	11.33 (63)	10.28 (65)	9.99 (61)
● Index	7.17 (35)	7.17 (35)	27.29 (54)	13.65 (66)	10.31 (75)	9.36 (80)	8.91 (80)
Median	6.75	6.75	27.92	15.40	11.92	11.21	10.65

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



	2021	2020	2019	2018	2017
● Investment[CE]	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 Dec-2021	1 Qtr Ending Sep-2021	1 Qtr Ending Jun-2021	1 Qtr Ending Mar-2021	1 Qtr Ending Dec-2020	1 Qtr Ending Sep-2020
Investment[CE]	9.60 (20)	5.83 (73)	2.78 (90)	1.91 (56)	1.47 (56)	1.06 (26)
Index	7.66 (45)	6.41 (49)	3.68 (74)	1.89 (56)	1.10 (71)	0.27 (63)
Median	7.57	6.33	4.17	2.10	1.63	0.49



**Private Equity Summary of Partnership
Total Private Equity w Life Settlement Composite
As of March 31, 2022**

Private Equity Summary of Partnership

Partnerships	Vintage Year	Capital Commitment \$	Market Value \$
Total Private Equity w Life Settlement Composite		324,900,410	232,375,748
Accolade Partners V	2015	3,000,000	6,696,128
Accolade Partners VI	2018	3,000,000	3,718,967
Adams Street 2003 U.S Fund	2003	13,733,000	355,467
Adams Street 2008 Global	2008	10,000,000	5,747,078
Adams Street 2009 Global	2009	5,000,000	3,867,285
Auldbrass Spec Opps II	2018	4,000,000	5,883,172
Birchmere Ventures IV	2012	525,000	349,597
BlackRock Multi-Alternative Opps	2016	3,000,000	2,024,437
Blackstone Tac Op I	2012	2,000,000	592,384
Blackstone Tac Op II	2015	3,000,000	1,032,134
Blackstone Tac Op III	2019	5,000,000	4,432,930
CCA Black	2015	7,500,000	7,409,618
CCA Blue	2013	3,800,000	1,756,397
CCA Green	2009	15,000,000	-
CCA Longevity Fund VI LP	2019	5,000,000	3,956,691
Commonfund Venture Partners XII	2018	3,000,000	4,505,763
Constitution Ironsides Direct Investment Fund IV	2016	3,000,000	2,782,823
Constitution Ironsides Opportunities Fund	2018	4,000,000	3,044,252
Constitution Ironsides Partnership Fund II	2011	6,000,000	22,352
Constitution Ironsides Partnership Fund III	2014	8,000,000	3,869,206
Crestline Opportunity Fund III	2016	4,000,000	3,044,041
Crestline Recovery II	2011	3,000,000	188,002
DCM Fund IV	2015	3,000,000	3,833,000
Draper Triangle II	2005	10,000,000	54,289
Draper Triangle III	2013	13,500,000	20,781,235
Emerald Advisors Fin Srv I	2018	2,000,000	1,829,047
Entrust Special Opportunities Fund III	2015	3,000,000	1,517,580
Entrust Special Opportunities Fund IV	2018	3,000,000	3,641,033
Farol Fund II	2020	4,000,000	4,714,281
Five Points III	2017	3,000,000	3,217,401
Glouston Private Equity Opportunities IV	2011	3,000,000	522,091
Goldman Sachs Private Equity Partners 2004	2005	10,000,000	505,143
Greenspring Early Stage I LP	2018	4,000,000	6,119,915
Greenspring Opportunities II-A	2013	3,000,000	1,930,795
Greenspring Opportunities III	2014	3,000,000	3,639,534
Greenspring Opportunities IV	2015	3,000,000	5,858,761
Greenspring Opportunities V	2018	3,000,000	5,460,151
Greenspring Secondaries I	2014	1,000,000	990,788
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 March 31, 2022**

Partnerships	Vintage Year	Capital Commitment \$	Market Value \$
iNetworks INOF II	2013	-	6,793,727
iNetworks Opportunity Fund	2013	11,000,000	14,632,359
iNetworks Opportunity Fund II	2020	12,500,000	7,724,256
JMI Equity Fund IX-A	2019	3,000,000	4,176,771
Mellon PAM Fund V	2005	10,000,000	65,938
Mesirow Partners Fund IV	2006	17,000,000	4,680,785
North Haven Capital Partners VI	2015	3,000,000	2,740,263
North Haven Senior Loan Fund	2018	4,000,000	1,809,494
Pharos Capital Partners III	2013	3,000,000	2,914,388
PLSG Accelerator Fund	2011	250,000	84,622
ValStone Partners IV	2008	20,000,000	1
ValStone Partners V	2013	20,000,000	21,628,004
ValStone Partners VI	2017	20,000,000	19,043,033
Valstone Senior Living	2018	13,092,410	14,586,208



Historical Hybrid Composition
Total Fund Policy Index
As of March 31, 2022

Historical Hybrid Composition			
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1979		Jun-2010	
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
Mar-2007		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	Mar-2013	
90 Day U.S. Treasury Bill	5.00	FT Wilshire 5000 Total Market TR Index	16.10
Sep-2008		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	Apr-2016	
Dec-2008		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	Jan-2019	
Sep-2009		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		



Allocation Mandate	Weight (%)
Mar-2021	
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	
Allocation Mandate	Weight (%)
Dec-2000	
MSCI EAFE (Net) Index	100.00
Sep-2008	
MSCI AC World ex USA (Net)	100.00
Mar-2015	
MSCI AC World ex USA IMI (Net)	100.00
Mar-2021	
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
Domestic Equity				
SSgA S&P 500 Index	0.02	84,402,437	16,880	0.02 % of Assets
Fragasso Large Core (EMWO)	0.60	6,988,141	42,066	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	41,397,972	144,893	0.35 % of Assets
Vesper U.S. Large Cap Short-Term Reversal Strategy ETF (UTRN)	0.75	1,428,926	10,717	0.75 % of Assets
Earnest Small Value	0.90	16,511,363	148,835	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	0.74	14,240,025	105,440	1.00 % of First \$2 M 0.75 % of Next \$8 M 0.60 % Thereafter
Emerald Advisors All Cap (EMWO)	0.60	6,371,490	38,229	0.60 % of Assets
Ethos (EMWO)	0.47	2,019,477	9,492	0.47 % of Assets
CIM Small Cap (EMWO)	0.72	5,473,904	39,396	0.75 % of First \$5 M 0.40 % of Next \$10 M 0.25 % Thereafter
Cookson Peirce (EMWO)	0.50	1,329,310	6,647	0.50 % of Assets
International Equity				
SSgA ACWI ex US	0.07	37,347,180	26,143	0.07 % of Assets
Baillie Gifford Intl Equity	0.61	59,489,941	362,889	0.61 % of Assets
FIAM Select International Equity	0.33	31,349,834	102,145	0.34 % of First \$25 M 0.27 % of Next \$25 M 0.24 % of Next \$150 M 0.20 % Thereafter
Segall, Bryant & Hamill	0.63	35,959,245	226,817	0.75 % of First \$15 M 0.55 % of Next \$20 M 0.45 % of Next \$30 M 0.35 % Thereafter
Global Equity				
Columbus Macro (EMWO)	0.71	62	-	0.70 % of Assets



	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Core Fixed w Israel Bonds				
C S McKee	0.25	41,696,118	104,240	0.25 % of Assets
Federated Core Broad	0.28	38,195,499	107,989	0.30 % of First \$25 M 0.25 % of Next \$25 M 0.20 % Thereafter
CIM Investment Mgmt	0.25	27,558,343	68,896	0.25 % of Assets
StoneRidge Partners (EMWO)	0.30	5,241,029	15,723	0.30 % of Assets
Gridiron Capital Fixed Income (EMWO)	0.65	4,773,059	31,025	0.65 % of Assets
FNB (EMWO)	0.35	2,708,051	9,478	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	7,463,505	14,927	0.20 % of Assets
High Yield Fixed				
Oaktree High Yield	0.50	66,909,229	334,546	0.50 % of Assets
Federated High Yield	0.45	53,015,275	238,569	0.45 % of Assets
Sound Point	1.00	3,600,120	36,001	1.00 % of Assets
TIPS Fixed				
MCM TIPS	0.03	41,654,324	12,496	0.03 % of First \$50 M 0.02 % of Next \$50 M 0.01 % Thereafter
Real Estate				
Morgan Stanley Prime Property Fund[CE]	0.84	95,026,175	798,220	0.84 % of Assets
Oaktree Real Estate^	2.03	6,465,443	131,248	2.03 % of Assets
Washington Alliance (EMWO)	1.50	13,472,055	202,081	1.50 % of Assets
Washington Alliance II (EMWO)	1.50	1,300,881	19,513	1.50 % of Assets
Siguler Guff Distressed RE^	0.93	8,904,698	82,814	0.93 % of Assets
ERECT Fund II	1.35	11,411,014	154,049	1.35 % of Assets
Hedge Fund				
Gridiron Capital Multi-Asset (EMWO)	0.75	3,414,563	25,609	Performance Based 0.75 and 10.00
Liquid Policy Portfolio				
BlackRock Liquidity iShares Public Pension Fund*	0.08	40,408,096	32,326	0.08 % of Assets
Investments ex Private Equity		817,526,786	3,700,338	

^ 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



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

	Commitment Amount \$	2020 Mgmt Fees \$
Total Private Equity w Life Settlement Composite	324,900,410.00	2,674,986.40
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%).



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



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