
Erie County Employees Retirement Plan

Investment Performance Review
Period Ending March 31, 2025

MARINER

1st Quarter 2025 Market Environment

The Economy

- The US Federal Reserve (the Fed) continued its shift away from contractionary monetary policy during the quarter and held policy rates steady at a range of 4.25%-4.50%. New language was inserted into the most recent press release following the March 2025 Federal Open Markets Committee (FOMC) meeting, which referred to increased uncertainty regarding the country's economic outlook moving forward. The release also conveyed the Treasury Department would slow the pace of the reduction of their balance sheet beginning in April, which may be an indication of a policy shift away from quantitative tightening. The FOMC's March "Dot Plot" released after the meeting projected that by year end, the appropriate midpoint target rate would be 3.875%, which at the time implied 0.50% of policy rate cuts by year-end.
- Growth in the US labor market continued during the first quarter. US payrolls grew by 228,000 in March, up from the previous month's revised total of 117,000, and well above the 140,000 projected. Unemployment rose to 4.2% as the labor force participation rate increased during the month, which increased the denominator in the calculation. With labor market statistics as a key input into the FOMC's target policy rate decision, persistent strength in private sector employment could lead to a reduction in the pace and magnitude of policy rate decreases in the coming quarters.

Equity (Domestic and International)

- Domestic equity results were broadly lower for the quarter as concerns regarding future economic growth guided by increased uncertainty surrounding geopolitics and domestic policy took hold. Value stocks outperformed growth stocks and large cap stocks outperformed small cap stocks in a rotation characteristic of a "risk-off" trade. Large-cap equity benchmarks continue to represent a heavy concentration among a limited number of stocks. As of quarter end, the top 10 stocks in the S&P 500 Index comprised more than 30% of the index.
- Most international stocks advanced during the first quarter on the backs of a declining US dollar (USD) and concerns regarding US economic growth. The USD's depreciation boosted returns for USD-denominated returns over local currency returns for most international indexes. International equities have experienced recent tailwinds due to investor shifts from domestic markets and into international markets based on greater economic uncertainty in the US and challenging trade relations associated with US tariff policies.

Fixed Income

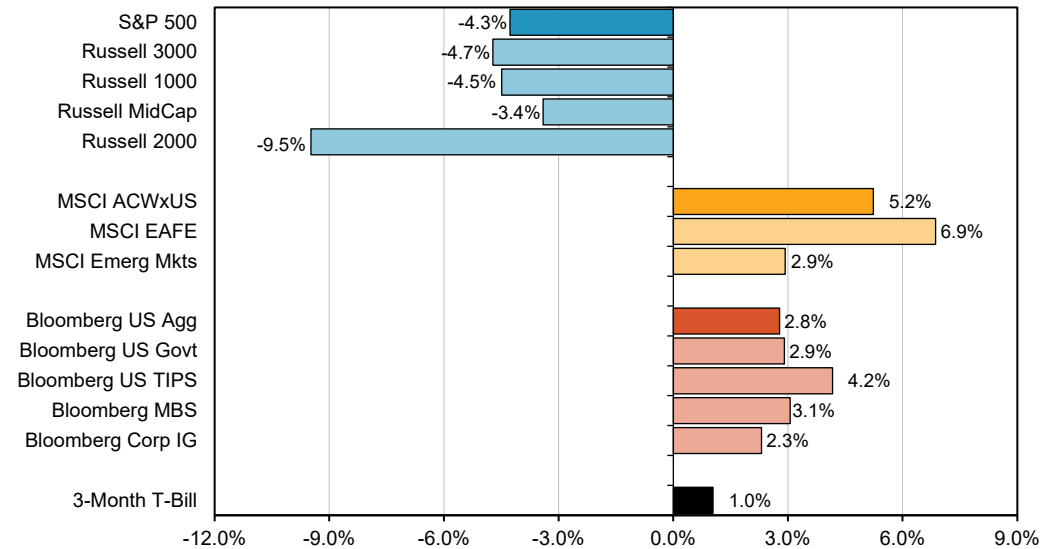
- Fixed-income markets gained during the quarter, driven by their coupons and declining Treasury yields for maturities of one year and longer. Shorter term Treasury yields remained relatively stable due to the FOMC leaving rates unchanged during the January and March meetings, while longer term yields fell slightly based on expectations of lower long-term GDP growth. The yield on the bellwether 10-year Treasury declined by 0.35% during the quarter, closing March at a yield of 4.23%. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index posting a return of 2.8% for the quarter.
- The US TIPS Index was the best-performing fixed-income index for the quarter, amassing a solid 4.2% return as TIPS yields declined. US High Yield bonds lagged all other bond sectors, returning a small, but positive, 1.0% for the quarter, largely due to a widening of the High Yield option-adjusted spread (OAS).
- Global bond returns also rose during the quarter, with the Bloomberg Global Aggregate ex-US returning 2.5% in USD terms.

Market Themes

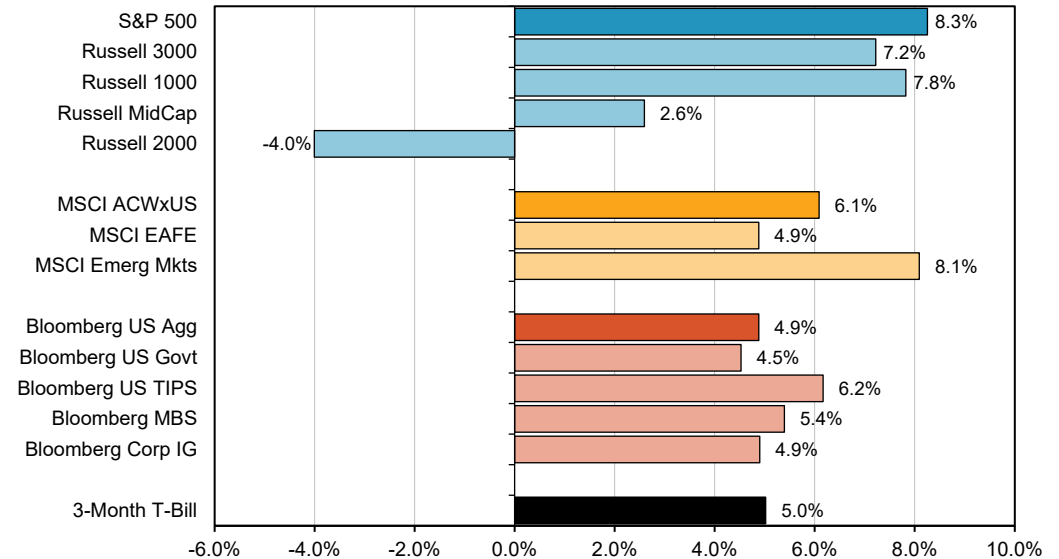
- Weakness in the USD during the quarter led to relative strength in international equity markets as many major non-US currencies appreciated. Volatility in the financial markets increased amid uncertainty about US economic growth amid US tariff policies. The potential impact of US tariffs and foreign retaliation are still evolving, so it is not advisable to draw definitive conclusions regarding their breadth or magnitude. However, the resulting uncertainty has a near-term negative impact on global economic growth and capital markets.
- The equity rotation away from risky trades has exacerbated the performance disparity between large and small cap stocks as concerns about the economy weigh more heavily on small cap stocks

- Volatility in the domestic equity markets ticked up mid-quarter leading to disappointing results across broad-based domestic equity benchmarks. Small-cap equities were the worst-performing domestic segment with the Russell 2000 Index returning -9.5% for the quarter. The Russell Midcap Index was less negative, posting a return of -3.4% while the large-cap Russell 1000 and S&P 500 Indexes were down slightly more, returning -4.5% and -4.3%, respectively.
- International equity markets surged in USD terms as the USD weakened relative to major world currencies. The developed market EAFE Index was the greatest beneficiary of the USD weakness as the index jumped 6.9% for the quarter. Emerging market equities were also positive but struggled to keep pace with developed markets, returning 2.9% for the quarter.
- Broad-based fixed income indexes ended the quarter on a high note with the TIPS Index climbing 4.2%, the best among the bond indexes tracked during the quarter. There was only moderate performance dispersion among the remaining indexes with the Mortgage-Backed Security (MBS) Index returning a solid 3.1% and the Corporate Investment Grade Index returning a lower 2.3%.
- Despite this quarter's setback, large and mid-cap domestic equities have still posted solid performance on a trailing-year basis. The small-cap Russell 2000 Index has fallen slightly over the same period. This continues a trend of large cap dominance that has persisted for several quarters.
- Domestic bonds have continued to perform well, aided by the Federal Reserve's shift away from the contractionary monetary policy it adopted in mid-2022. The TIPS Index has been the best performer over the previous 12 months, climbing 6.2%, aided by more recent performance. The remainder of the indexes displayed similar results during the same 12-month period, all finishing within 1.0% of each other. The 3-Month T-Bill displayed a strong 5.0% return during the year, aided by high short-term interest rates.
- International equity markets had a strong showing for the year in USD terms. The MSCI Emerging Markets Index's return of 8.1% outpaced the developed market index's performance of 4.9% while the MSCI ACWI ex US Index finished the trailing 12 months in the middle, with a return of 6.1%.

Quarter Performance

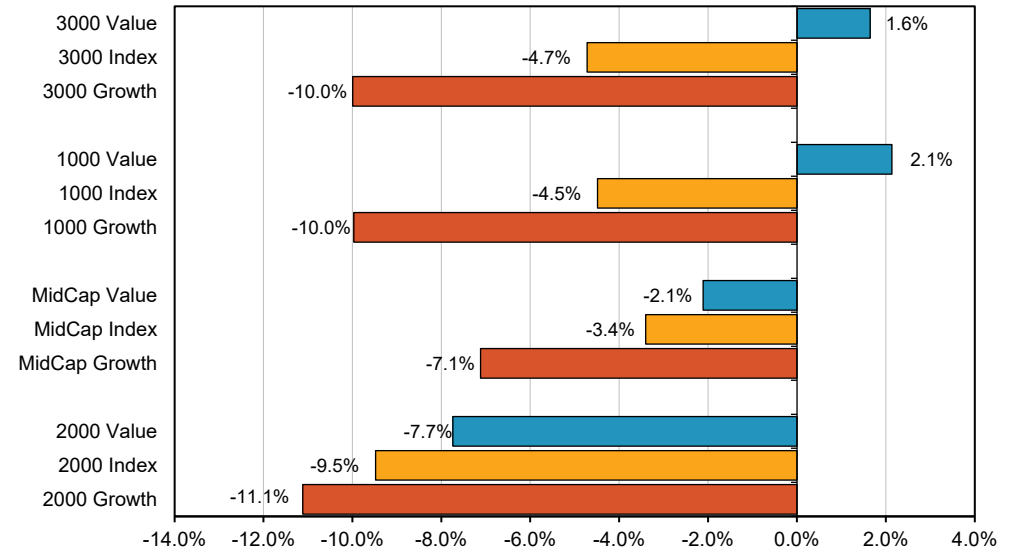


1-Year Performance



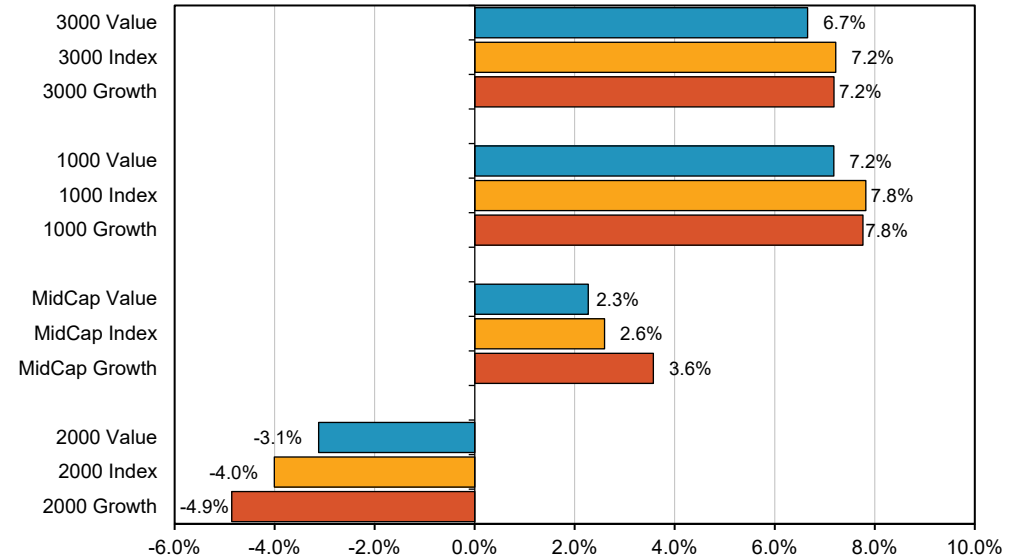
- Domestic equities were challenged during the quarter with small-cap stocks faring worst. The Russell 2000 Index, which consists of the smallest companies in the Russell 3000 Index, fell by -9.5% during the quarter, more than double the decline of either the large-cap Russell 1000 or the Russell Midcap Indexes.
- Growth stocks experienced a significant pullback during the quarter with the Russell 1000 Growth Index, which represents the large-cap growth segment of the market, returning -10.0%. This was the first double-digit loss quarter for the benchmark since the second quarter of 2022. While the decline was only about half as deep as the -20.9% loss experienced in the 2022 quarter, it marked at least a temporary reversal of a trend wherein large cap growth stocks led the way among domestic equities. The best-performing segment of the domestic equity market was large cap value, which posted a positive return of 2.1%. The worst-performing segment was small cap growth which fell -11.1% for the quarter. Value outperformed growth across the capitalization spectrum as the large cap segment experienced the greatest performance disparity with value outpacing growth by 12.1%.

Quarter Performance - Russell Style Series



- Large-cap stocks also outperformed smaller-cap issues during the trailing year with the Russell 1000 Index advancing 7.8% versus a lower 2.6% for the Russell Midcap Index and a return of -4.0% for the Russell 2000 Index. Much of the trailing year's strong performance is attributable to the "Magnificent 7" stocks (Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla) which have dominated the large-cap core and growth indexes and media headlines over the past several years.
- This quarter's value-led results narrowed the disparity between growth and value stocks over the trailing year but growth still outpaced value by a narrow 0.5% margin for the all-cap Russell 3000 Index. The strength of the growth sectors is also evident in the trailing one-year period, which shows growth benchmarks in nearly all capitalization ranges outpacing their value counterparts. The only exception occurred with small-cap stocks, where the value benchmark was down 1.8% less than the growth benchmark.

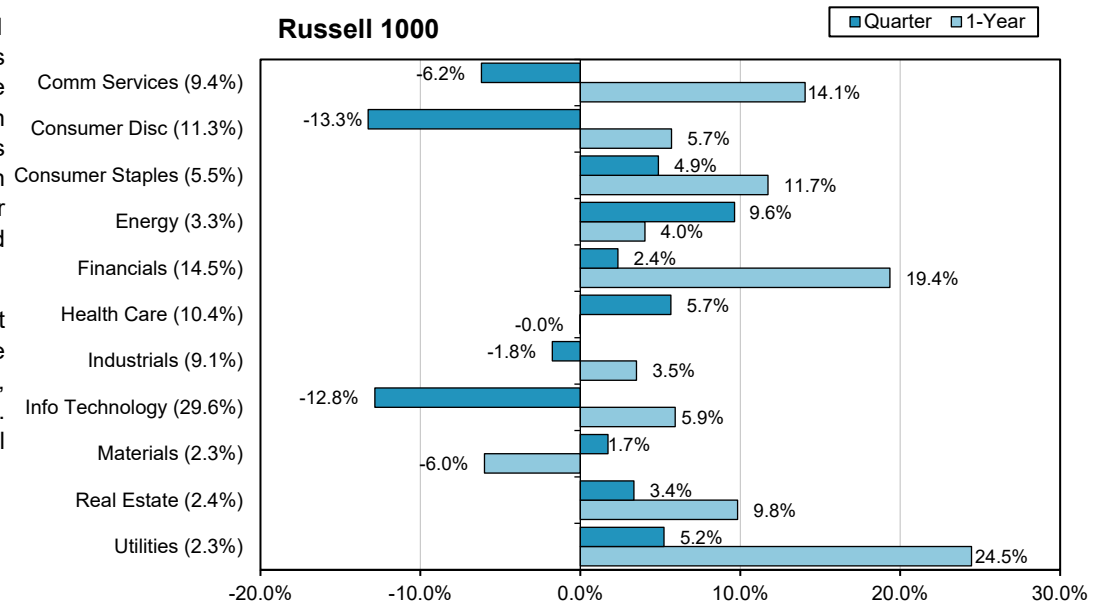
1-Year Performance - Russell Style Series



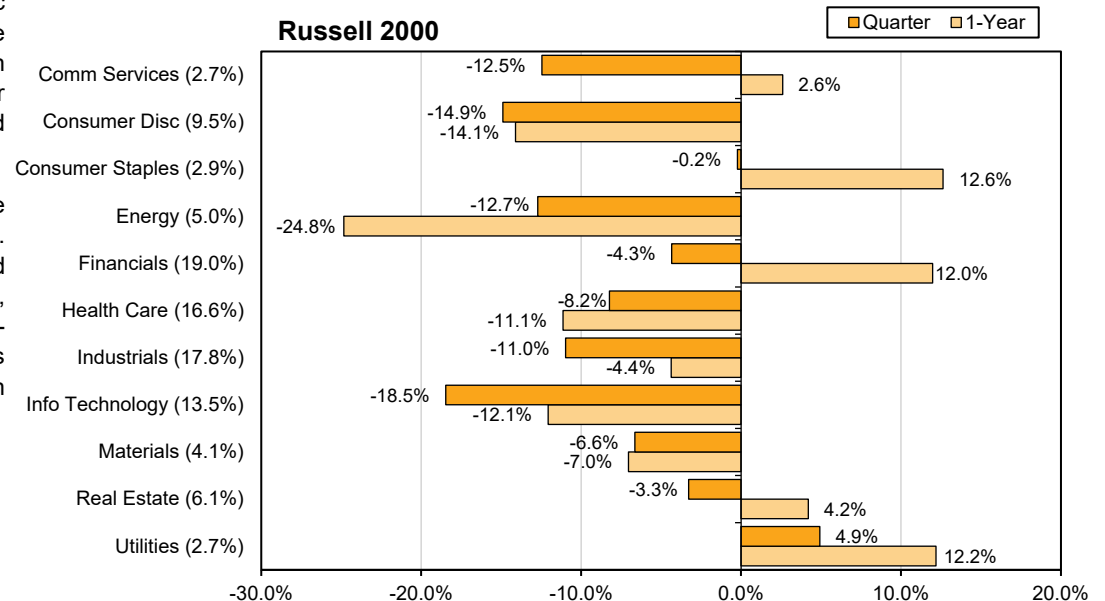
Source: Investment Metrics

- Economic sector performance was mixed in the first quarter. Seven of the 11 economic sectors posted gains within the large-cap index, but four sectors that make up more than 50% of the benchmark were negative. While performance during 2024 was characterized by broad sector participation in domestic equity markets, this was not the case during the first quarter as communication services, consumer discretionary, industrials and information technology stocks all fell. The energy sector led the way, returning 9.6% for the quarter while the worst performing sectors (consumer discretionary and information technology) fell by -13.3% and -12.8%, respectively.
- Trailing year results still showcased strong performance across most economic sectors with nine of the 11 economic sectors posting positive results. Utilities was the best-performing sector during the trailing year, soaring by 24.5%, followed by financials, which advanced by 19.4%. Industrials and health care were the only two sectors to decline for the full year, posting returns of -6.0% and -0.0%, respectively.
- Most small cap sectors lost value this quarter with 10 of 11 economic sectors declining. The only sector to post a positive performance for the quarter was utilities, which climbed by 4.9%. The worst performing sector in the index was information technology, which declined by -18.5%. Four other sectors, communication services, consumer discretionary, energy, and industrials were each down by more than -10.0%.
- The first quarter's sector declines weighed on full-year results across the benchmark. Only five of the 11 sectors were higher for the full year. Consumer staples led other sector results with a return of 12.6%, followed closely by financials and utilities, which returned 12.0% and 12.2%, respectively. Energy was the worst performing sector for the year, returning -24.8%. Three other sectors in the small cap index also fell by double digits over the trailing year: consumer discretionary, health care, and information technology.

Russell 1000



Russell 2000



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

The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of March 31, 2025

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.4%	-11.2%	30.1%	Information Technology
Microsoft Corp	5.4%	-10.8%	-10.1%	Information Technology
NVIDIA Corp	4.9%	-19.3%	20.0%	Information Technology
Amazon.com Inc	3.5%	-13.3%	5.5%	Consumer Discretionary
Meta Platforms Inc Class A	2.5%	-1.5%	19.1%	Communication Services
Berkshire Hathaway Inc Class B	1.9%	17.5%	26.6%	Financials
Alphabet Inc Class A	1.8%	-18.2%	3.0%	Communication Services
Broadcom Inc	1.5%	-27.6%	27.9%	Information Technology
Alphabet Inc Class C	1.5%	-17.9%	3.1%	Communication Services
Tesla Inc	1.4%	-35.8%	47.4%	Consumer Discretionary

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Intra-Cellular Therapies Inc	0.0%	58.0%	90.6%	Health Care
MP Materials Corp Ordinary Shares	0.0%	56.5%	70.7%	Materials
Medical Properties Trust Inc	0.0%	54.7%	43.5%	Real Estate
CVS Health Corp	0.2%	52.8%	-11.2%	Health Care
GRAIL Inc	0.0%	43.1%	N/A	Health Care
Celsius Holdings Inc	0.0%	35.2%	-57.0%	Consumer Staples
Okta Inc Class A	0.0%	33.5%	0.6%	Information Technology
Philip Morris International Inc	0.5%	33.1%	81.0%	Consumer Staples
National Fuel Gas Co	0.0%	31.4%	52.3%	Utilities
Newmont Corp	0.1%	30.5%	37.8%	Materials

Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Fortrea Holdings Inc	0.0%	-59.5%	-81.2%	Health Care
Astera Labs Inc	0.0%	-54.9%	-19.6%	Information Technology
Wolfspeed Inc	0.0%	-54.1%	-89.6%	Information Technology
The Trade Desk Inc Class A	0.0%	-53.4%	-37.4%	Communication Services
e.l.f. Beauty Inc	0.0%	-50.0%	-68.0%	Consumer Staples
Sarepta Therapeutics Inc	0.0%	-47.5%	-50.7%	Health Care
BILL Holdings Inc Ordinary Shares	0.0%	-45.8%	-33.2%	Information Technology
Globant SA	0.0%	-45.1%	-41.7%	Information Technology
New Fortress Energy Inc Class A	0.0%	-45.0%	-72.5%	Energy
Deckers Outdoor Corp	0.0%	-44.9%	-28.7%	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Sprouts Farmers Market Inc	0.6%	20.1%	136.7%	Consumer Staples
Insmed Inc	0.5%	10.5%	181.2%	Health Care
FTAI Aviation Ltd	0.5%	-22.7%	66.9%	Industrials
Corcept Therapeutics Inc	0.4%	126.7%	353.4%	Health Care
SouthState Corp	0.4%	-6.2%	11.7%	Financials
Carpenter Technology Corp	0.4%	6.9%	155.3%	Materials
Applied Industrial Technologies Inc	0.4%	-5.7%	14.9%	Industrials
Mueller Industries Inc	0.4%	-3.8%	42.9%	Industrials
Halozyme Therapeutics Inc	0.3%	33.5%	56.9%	Health Care
Beacon Roofing Supply Inc Class A	0.3%	21.8%	26.2%	Industrials

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
FuboTV Inc	0.0%	137.5%	72.7%	Communication Services
QVC Group Inc Ordinary Shares	0.0%	129.8%	46.6%	Consumer Discretionary
Agilon Health Inc	0.1%	127.9%	-29.0%	Health Care
Corcept Therapeutics Inc	0.4%	126.7%	353.4%	Health Care
Accolade Inc Ordinary Shares	0.0%	104.1%	-33.4%	Health Care
908 Devices Inc Ordinary Shares	0.0%	103.6%	-40.7%	Information Technology
H&E Equipment Services Inc	0.1%	94.1%	50.5%	Industrials
Radius Recycling Inc Ordinary Shares	0.0%	92.7%	43.1%	Materials
Root Inc Ordinary Shares	0.0%	83.8%	118.5%	Financials
OptimizeRx Corp	0.0%	78.0%	-28.8%	Health Care

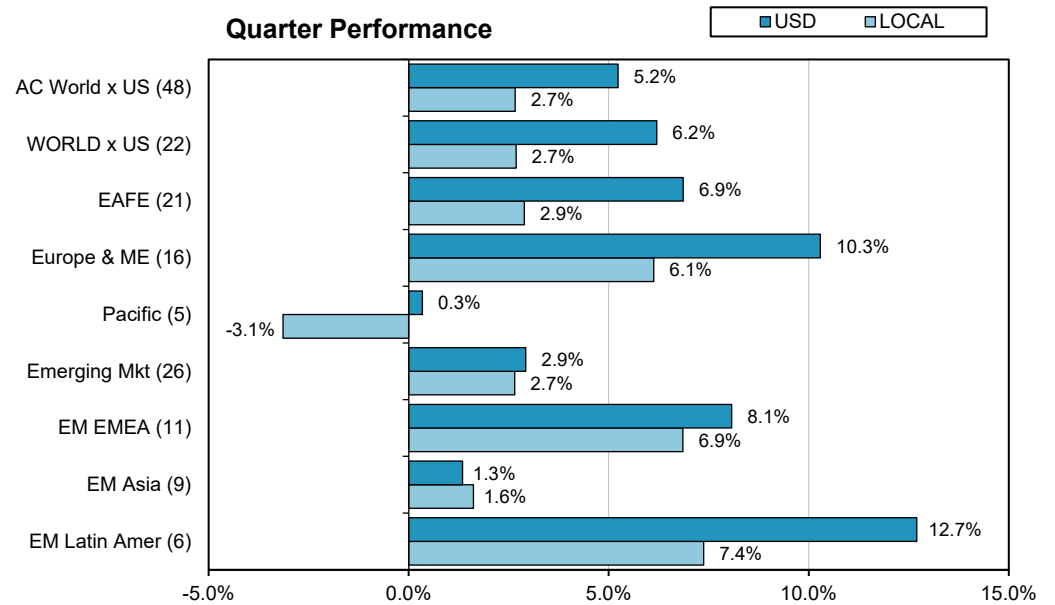
Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Neumora Therapeutics Inc	0.0%	-90.6%	-92.7%	Health Care
Pliant Therapeutics Inc Ordinary Shares	0.0%	-89.7%	-90.9%	Health Care
Sunnova Energy International Inc	0.0%	-89.2%	-93.9%	Utilities
ModivCare Inc	0.0%	-88.9%	-94.4%	Health Care
Conduit Pharmaceuticals Inc	0.0%	-88.5%	-99.8%	Health Care
Solo Brands Inc	0.0%	-85.3%	-92.3%	Consumer Discretionary
Solidion Technology Inc	0.0%	-82.7%	-95.6%	Industrials
LanzaTech Global Inc Ordinary Shares	0.0%	-82.3%	-92.2%	Industrials
IGM Biosciences Inc Ordinary Shares	0.0%	-81.2%	-88.1%	Health Care
Jasper Therapeutics Inc Ordinary	0.0%	-79.9%	-85.4%	Health Care

Source: Morningstar Direct

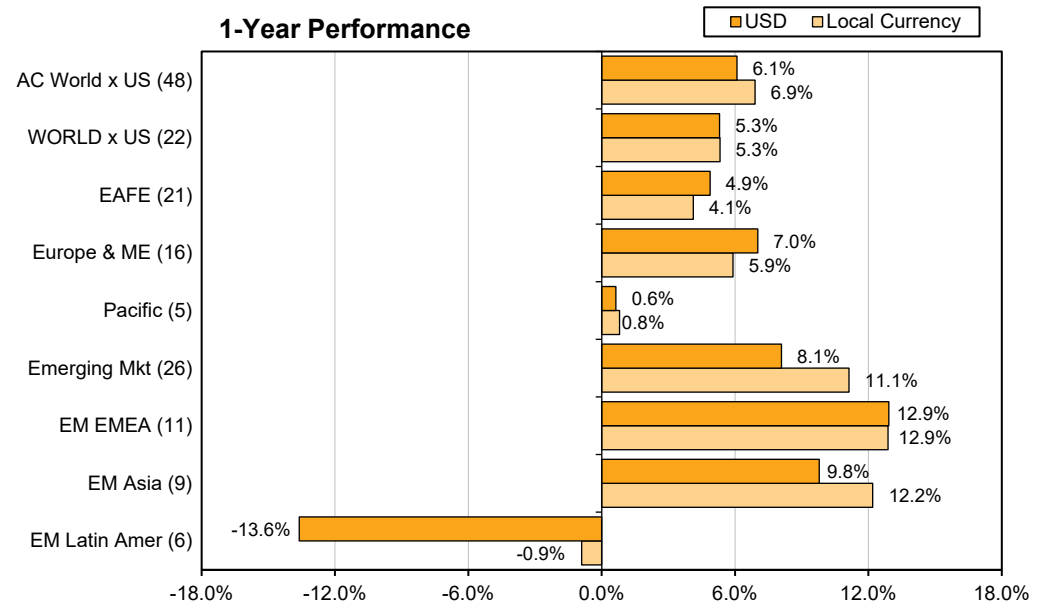
The Market Environment
International and Regional Market Index Performance (Country Count)
As of March 31, 2025

- Performance among headline international equity indexes in USD terms was positive and mostly higher than local currency (LCL) returns during the quarter. The USD's weakness relative to many major currencies was a substantial tailwind for the USD performance of non-US regional benchmark returns. The developed-market MSCI EAFE Index returned a solid 2.9% in LCL terms but advanced a strong 6.9% in USD terms. The MSCI ACWI ex-US Index climbed 2.7% in LCL and 5.2% in USD terms for the quarter.
- The MSCI EM Latin America Index was the best performing regional index for the quarter, returning 7.4% in LCL terms and a double-digit 12.7% in USD terms. The MSCI Pacific Index was the only regional index to fall during the quarter. The benchmark slid -3.1% in LCL terms, yet advanced by 0.3% in USD terms due to local currency appreciation. The MSCI EM Asia Index was the only regional index to depreciate relative to the USD, which caused its 1.3% return in USD terms to be lower than its 1.6% gain in LCL currency terms.
- Full year results for most broad and regional international indexes finished higher except for the EM Latin America Index. Despite its weakness in the first quarter, the USD generally strengthened during the trailing year. While this led to lower USD returns than LCL currency returns for many regions during the period, the developed market MSCI EAFE Index bucked the trend by advancing 4.9% in USD terms and slightly lower 4.1% in LCL terms. The broad MSCI ACWI ex US Index advanced 6.1% in USD terms and 6.9% in LCL terms.
- Most broad and regional indexes were positive for the trailing 12 months in both USD and LCL terms. The exception to these positive results was the EM Latin America Index, where negative USD performance was primarily driven by local currency depreciation. It was the only index to decline over the previous 12 months, falling by -13.6% in USD terms and -0.9% in LCL terms. The MSCI EM EMEA (Europe, Middle East, Africa) Index performed the best among regional indexes, returning 12.9% in both LCL and USD terms.

Quarter Performance



1-Year Performance



Source: MSCI Global Index Monitor (Returns are Net)

The Market Environment
US Dollar International Index Attribution & Country Detail
As of March 31, 2025

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.0%	10.9%	18.4%
Consumer Discretionary	10.4%	-0.7%	-9.4%
Consumer Staples	8.3%	8.3%	3.0%
Energy	3.7%	15.2%	0.9%
Financials	23.6%	15.2%	28.3%
Health Care	12.2%	2.8%	-3.3%
Industrials	17.8%	6.9%	8.7%
Information Technology	8.0%	-2.8%	-11.7%
Materials	5.8%	2.3%	-10.0%
Real Estate	1.9%	1.3%	-4.0%
Utilities	3.4%	12.5%	13.5%
Total	100.0%	6.9%	4.9%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	6.2%	11.5%	22.8%
Consumer Discretionary	11.1%	4.2%	1.7%
Consumer Staples	6.9%	6.5%	1.4%
Energy	5.0%	8.3%	-0.8%
Financials	24.8%	10.2%	22.3%
Health Care	8.7%	2.6%	-2.4%
Industrials	14.0%	5.4%	5.9%
Information Technology	12.2%	-6.3%	-4.7%
Materials	6.3%	6.5%	-5.3%
Real Estate	1.7%	1.0%	-0.4%
Utilities	3.1%	9.4%	10.5%
Total	100.0%	5.2%	6.1%

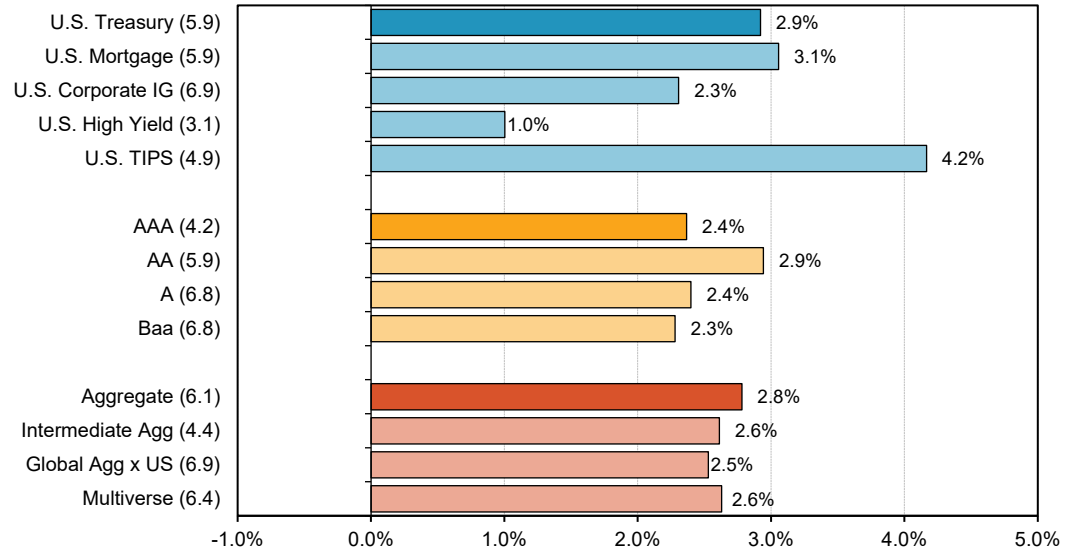
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	10.3%	12.7%	29.6%
Consumer Discretionary	14.6%	13.1%	27.0%
Consumer Staples	4.7%	2.0%	-5.3%
Energy	4.5%	2.5%	-9.8%
Financials	24.4%	5.8%	14.8%
Health Care	3.4%	1.0%	4.8%
Industrials	6.3%	0.2%	-0.6%
Information Technology	21.7%	-8.8%	-0.1%
Materials	5.9%	9.3%	-7.9%
Real Estate	1.7%	0.9%	11.3%
Utilities	2.6%	1.2%	0.9%
Total	100.0%	2.9%	8.1%

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	21.7%	13.7%	0.3%	-2.1%
United Kingdom	15.2%	9.6%	9.7%	14.4%
France	11.6%	7.3%	10.3%	-1.4%
Germany	10.1%	6.3%	15.6%	19.0%
Switzerland	10.0%	6.3%	11.4%	10.6%
Australia	6.6%	4.2%	-2.6%	-2.2%
Netherlands	4.4%	2.8%	2.0%	-10.5%
Sweden	3.7%	2.3%	12.3%	6.9%
Spain	3.1%	2.0%	22.4%	24.2%
Italy	3.1%	1.9%	17.2%	14.7%
Denmark	2.4%	1.5%	-12.1%	-33.5%
Hong Kong	2.0%	1.2%	4.4%	18.3%
Singapore	1.7%	1.1%	9.5%	44.7%
Finland	1.0%	0.7%	13.3%	9.6%
Belgium	1.0%	0.6%	6.1%	13.1%
Israel	0.9%	0.6%	-2.0%	20.6%
Norway	0.7%	0.4%	20.7%	24.2%
Ireland	0.3%	0.2%	15.9%	14.3%
New Zealand	0.2%	0.1%	-8.9%	-6.6%
Austria	0.2%	0.1%	13.2%	33.2%
Portugal	0.2%	0.1%	3.4%	-5.8%
Total EAFE Countries	100.0%	63.0%	6.9%	4.9%
Canada		7.8%	1.1%	8.8%
Total Developed Countries		70.8%	6.2%	5.3%
China		9.1%	15.0%	40.4%
Taiwan		4.9%	-12.6%	4.4%
India		5.4%	-3.0%	1.8%
Korea		2.6%	4.9%	-20.9%
Brazil		1.3%	14.1%	-13.5%
Saudi Arabia		1.2%	1.7%	-2.3%
South Africa		0.9%	13.8%	30.4%
Mexico		0.6%	8.6%	-21.3%
United Arab Emirates		0.4%	4.8%	24.9%
Malaysia		0.4%	-6.0%	10.2%
Indonesia		0.4%	-11.2%	-24.3%
Thailand		0.3%	-13.7%	-4.7%
Poland		0.3%	31.3%	18.4%
Kuwait		0.2%	11.4%	13.6%
Qatar		0.2%	-1.2%	8.8%
Turkey		0.2%	-9.0%	-6.4%
Greece		0.2%	23.4%	26.3%
Philippines		0.1%	-0.6%	-7.0%
Chile		0.1%	17.8%	14.1%
Peru		0.1%	5.4%	5.4%
Hungary		0.1%	18.0%	33.9%
Czech Republic		0.1%	28.7%	45.0%
Colombia		0.0%	33.3%	25.9%
Egypt		0.0%	5.1%	3.0%
Total Emerging Countries		29.2%	2.9%	8.1%
Total ACWixUS Countries		100.0%	5.2%	6.1%

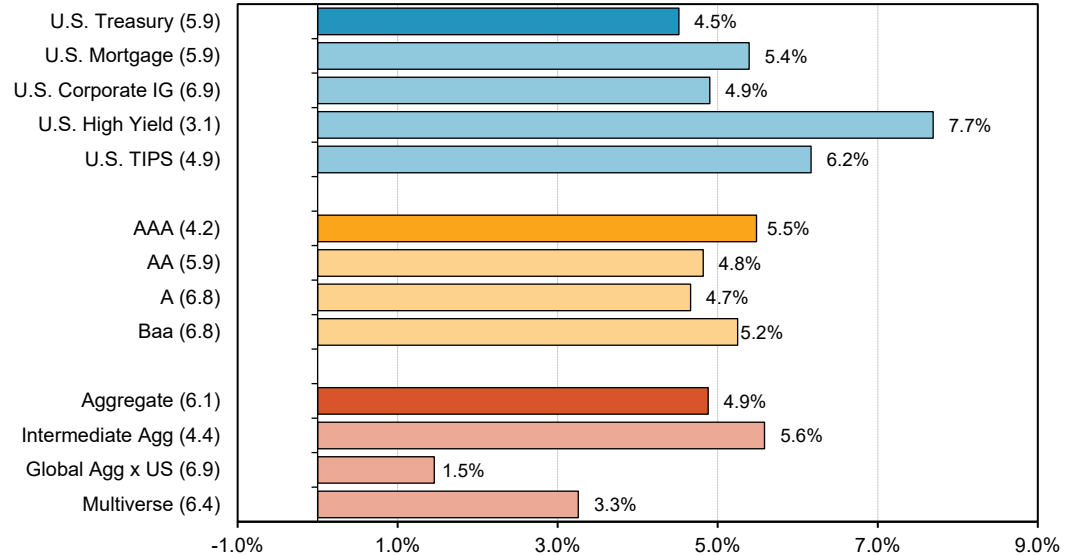
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency,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

- Domestic fixed-income markets advanced during the first quarter as the Fed held its benchmark rate steady during the quarter, maintaining a target range 4.25%-4.50%. The US TIPS Index posted the quarter's strongest bond index performance with a return of 4.9%. The bellwether US Aggregate Index returned 2.8% for the quarter and international bonds, as measured by the Global Agg ex US Index, returned a similar 2.5%.
- Longer term Treasury yields experienced a slight downward shift during the quarter with the benchmark 10 Year Treasury yield falling by 0.35% from the previous quarter's close. This slight downward shift in the yield curve boosted returns for the broad indexes, adding price appreciation to the indexes' income returns.
- High Yield bonds underperformed investment grade issues as the High Yield OAS spread widened during the quarter. Despite their higher income, below-investment grade issues returned just 1.0% for the quarter, and lagged all other broad-based investment-grade fixed income indexes.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index posted a solid 4.9% return. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising 4.9% and the US Mortgage Index returning 5.4%. US TIPS, which are excluded from the Bloomberg US Aggregate Bond Index, returned 6.2% for the trailing year.
- Performance across investment grade sub-indexes was within a 1.0% band for the trailing year. The AAA index posted the year's strongest performance with a return of 5.5%, while the A index returned a moderately lower 4.7% for the year. Non-investment grade high yield bonds were the best performing bond market segment for the year, returning 7.7%. Performance for high yield bonds was spurred by largely stable credit spreads and higher coupon income.
- The Bloomberg Global Aggregate ex-US Index finished both the quarter and the year with positive performance. While weakness in the USD boosted returns this quarter, it still fell short of the performance of domestic bond market indexes. The Global Aggregate ex-US Index ended the year 1.5% higher, falling short of domestic bond market benchmarks.

Quarter Performance



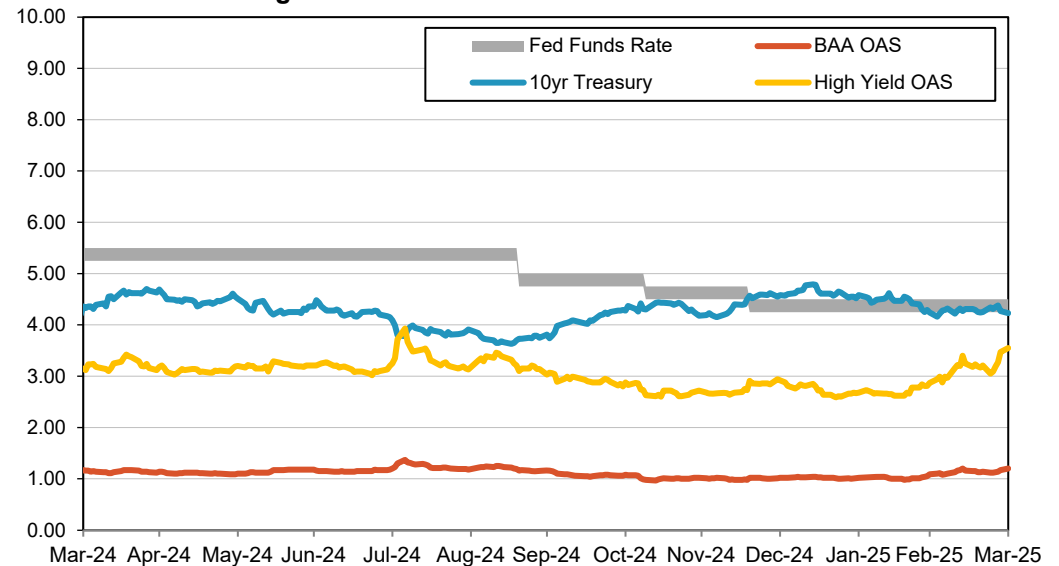
1-Year Performance



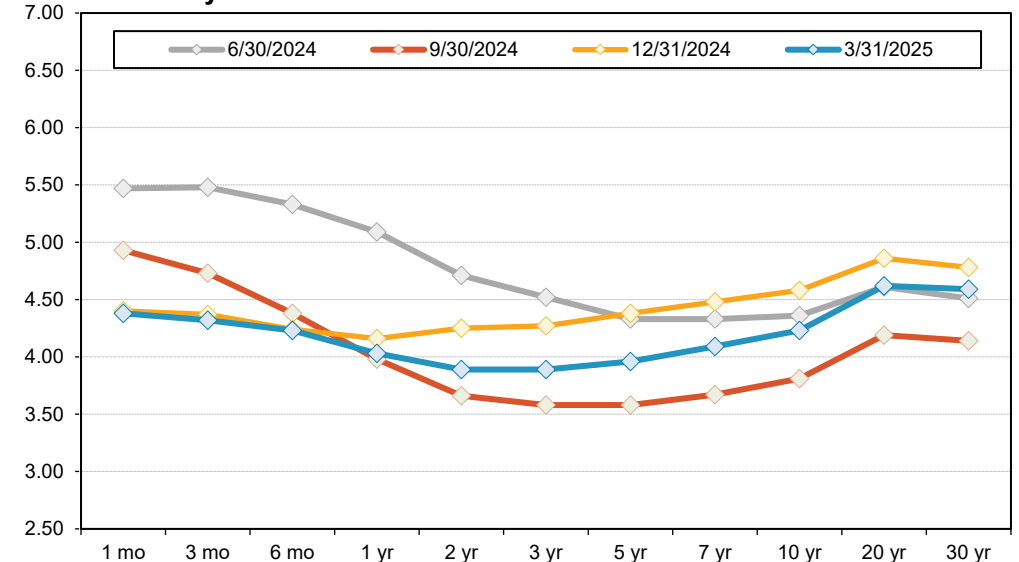
Source: Bloomberg

- The gray band across the graph illustrates the fed funds target rate range over the last 12 months. No action was taken by the Federal Open Market Committee (FOMC) during the first quarter, so the Fund Funds rate maintained a target range of 4.25-4.50%. The March 2025 FOMC press release continued to emphasize economic data-dependent outcomes and reduction of their balance sheet. The CME FedWatch tool, which forecasts the Fed Funds rate based on fed fund futures pricing, showed a near 50/50 probability of no rate decrease at the FOMC meeting in May at the time of this writing. Fed officials and market participants continued to express concern that leaving rates at their current elevated level for an extended period could tip the US economy into a recession.
- The yield on the US 10-year Treasury (blue line of the top chart) rose slightly to begin the quarter before falling off and ending March at 4.27%, an 0.35% decline over the quarter. The bellwether benchmark rate closed at its highest point on January 13th at 4.79%, before falling into the end of the quarter.
- The red line in the top chart shows the option-adjusted spread (OAS) for BAA-rated corporate bonds. This measure quantifies the additional yield premium investors require to purchase and hold non-US Treasury issues with the lowest investment grade rating. During the quarter, the yield spread experienced a slight widening of 0.18%, beginning January at 1.02% and finishing March at 1.20%. High-yield OAS spreads (represented by the yellow line in the top chart) also rose during the quarter, climbing 0.63% from 2.92% to 3.55%. The spread measure's relative stability over the trailing year was concurrent with moderate economic growth, stable monetary policy, and falling inflation readings.
- The lower graph provides a snapshot of the US Treasury yield curve at the end of each of the last four quarters. While the yield curve's slope is positive for maturities above two years, shorter term yields remain elevated. The spread between the two-year yield and the 10-year yield was stable, ending the quarter at the same 0.34% level it ended 2024.

1-Year Trailing Market Rates



Treasury Yield Curve



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

[CME FedWatch Tool - CME Group](#)

[Effective Federal Funds Rate - FEDERAL RESERVE BANK of NEW YORK \(newyorkfed.org\)](#)

[ICE BofA US High Yield Index Option-Adjusted Spread \(BAMLH0A0HYM2\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

[The Fed - Meeting calendars and information](#)

[Federal Reserve Board - Monetary Policy](#)

[Global index lens – MSCI](#)

[U.S. Department of the Treasury](#)

[10-Year Treasury Constant Maturity Minus 2-Year Treasury Constant Maturity \(T10Y2Y\) | FRED | St. Louis Fed \(stlouisfed.org\)](#)

[The Fed's dot plot shows only two rate cuts in 2025, fewer than previously projected](#)

[March Fed meeting: Here's what changed in the new statement](#)

[Jobs report March 2025: U.S. payrolls rose by 228,000 in March](#)

[Current Employment Statistics Highlights March 2025](#)

[Latam assets may receive a trade-war boost, investors say | Reuters](#)

- **The Fund's 1st quarter return was -0.97% and its trailing 1-year return was 3.94%. As of 3-31-2025, the total Fund had an annualized 7-year return of 6.57%.**
- **The Fund's total equity weighting at 3-31-2025 was 52.6% versus its target equity weighting of 50%. Risk assets including public equities, private equity/debt, and private real estate as a percentage of the total Fund was 68.7%.**
- **In February, Mariner Institutional initiated a sale of \$2,000,000 from the Emerald Small Cap Growth strategy with proceeds re-invested into the Boyd Watterson Fixed Income portfolio.**
- **In February, the Portfolio Advisors Credit Strategies Fund continued to pay down by issuing its first withdrawal payment of \$4,666,627 received in the Cash Disbursement account. The remaining balance will be paid out over two more installments.**

- **During the 1st quarter, the Fund received three net distributions from their private equity and private debt managers totaling \$357,094 all received in the Cash Disbursement account.**

- **In January, the Adams Street Co-Investment Fund V issued a capital call in the amount of \$1,000,000 with funding coming from the Vanguard Russell 1000 Growth Index fund.**

- **In March, the Adams Street Co-Investment Fund V issued a capital call due n April 1 in the amount of \$600,000 with funding coming from the Vanguard S&P 500 Index fund.**

- **For calendar year 2024, the Fund’s separate account equity managers (Emerald, AllSpring, and StoneRidge) generated \$53,949 in equity brokerage commissions. Individual trades ranged from 1-3 cents per share utilizing several independent broker/dealers.**

Wednesday, February 19, 2025 @ 12:00 pm

Hamilton Lane Private Equity

Adams Street Partners Private Equity

BGO US Core Plus

Review of Investment Policy Statement (Every February)

Wednesday, May 21, 2025 @ 12:00 pm

Stoneridge Investment Partners

Boyd Watterson Fixed Income

Boyd Watterson GSA Real Estate

Allspring Global Small Cap Value Equity

Review of Brokerage (Every May)

Wednesday, August 20, 2025 @ 12:00 pm

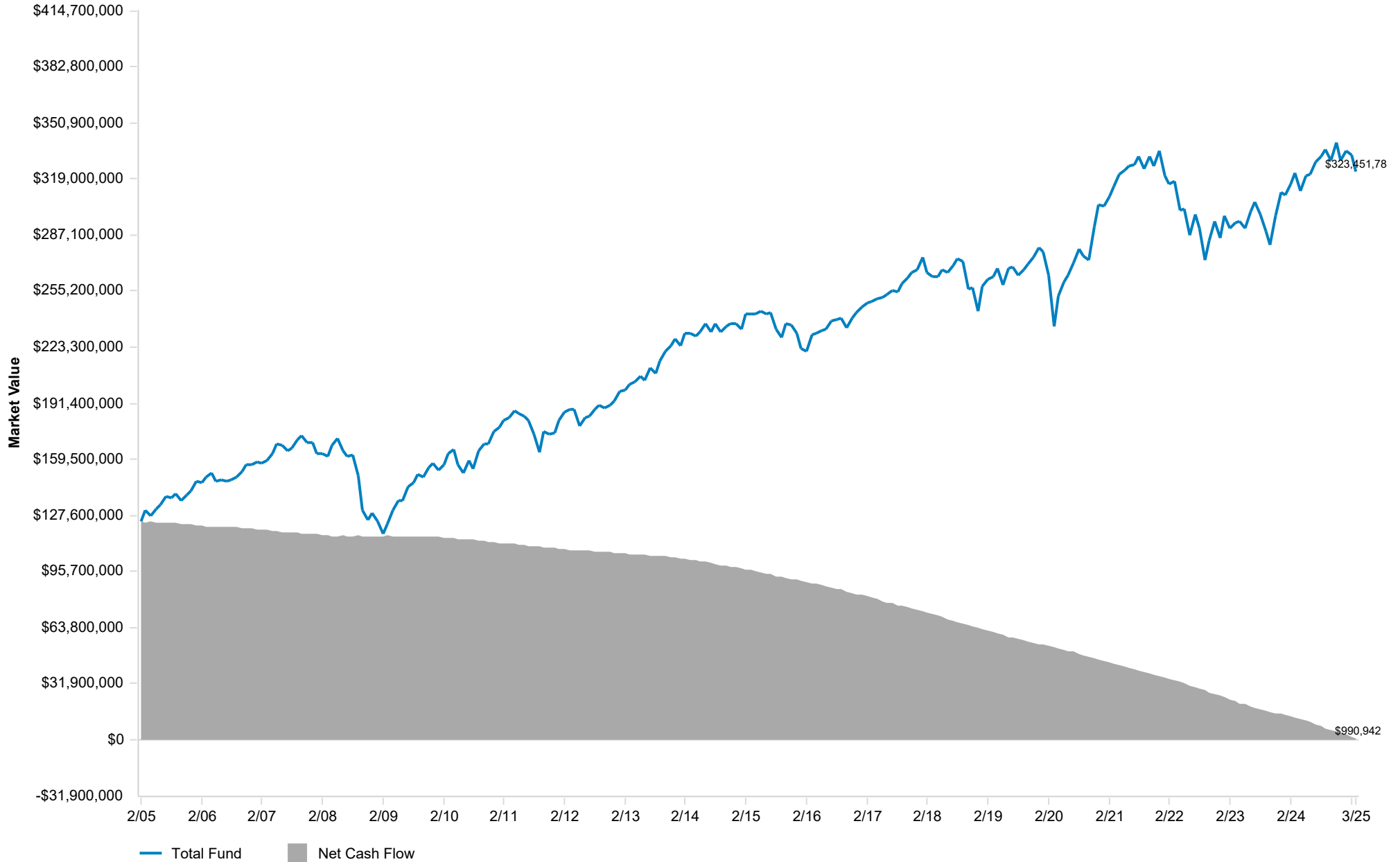
Vanguard Large Cap and Fixed Income
American Funds Europacific Growth Fund
Constitution Capital Partners Private Equity
Emerald Advisors

Wednesday, November 19, 2025 @ 12:00 pm

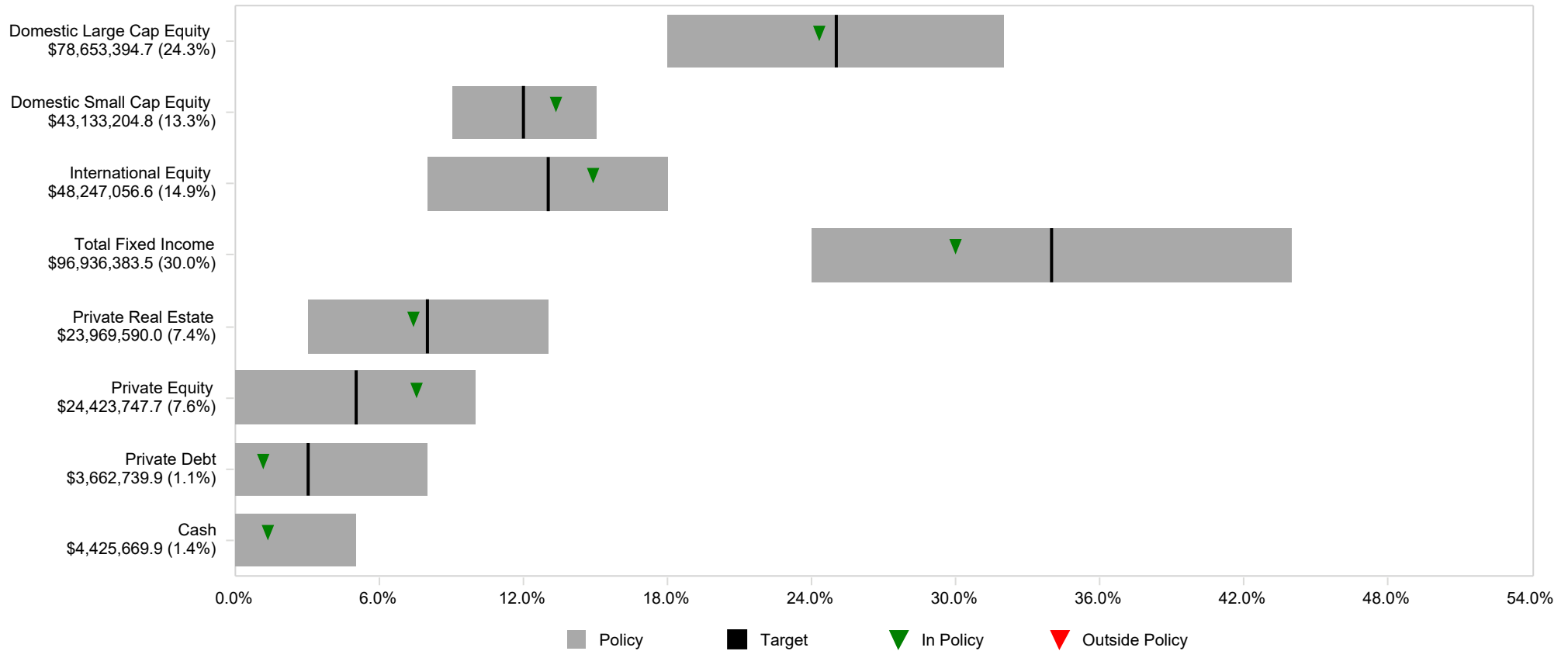
PNC Fixed Income and Custody
DFA Large Cap and International Equity
Portfolio Advisors Private Equity

Schedule of Investable Assets
Total Fund
 Since Inception Ending March 31, 2025

Schedule of Investable Assets



Executive Summary



Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)	Target Allocation (%)
Total Fund	323,451,787	100.0	N/A	N/A	100.0
Domestic Large Cap Equity	78,653,395	24.3	18.0	32.0	25.0
Domestic Small Cap Equity	43,133,205	13.3	9.0	15.0	12.0
International Equity	48,247,057	14.9	8.0	18.0	13.0
Total Fixed Income	96,936,384	30.0	24.0	44.0	34.0
Private Real Estate	23,969,590	7.4	3.0	13.0	8.0
Private Equity	24,423,748	7.6	0.0	10.0	5.0
Private Debt	3,662,740	1.1	0.0	8.0	3.0
Cash	4,425,670	1.4	0.0	5.0	0.0

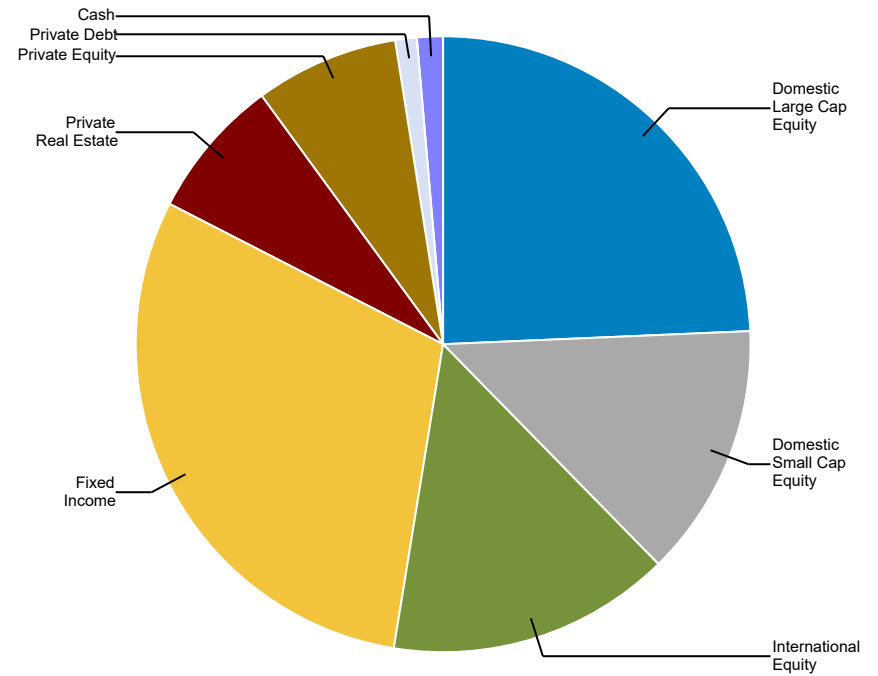
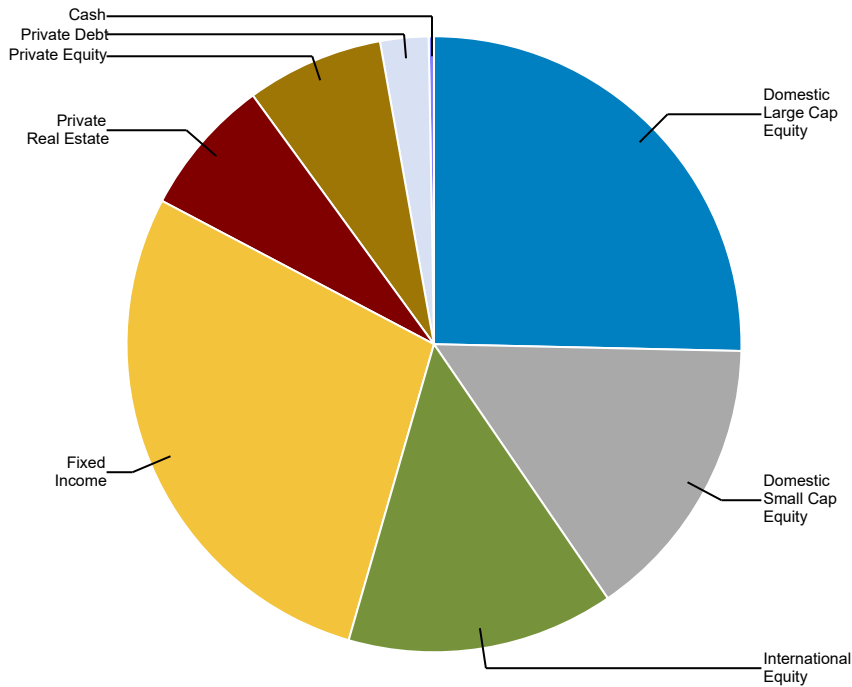
Asset Allocation By Asset Class

Total Fund

As of March 31, 2025

Dec-2024 : \$329,378,866

Mar-2025 : \$323,451,787



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Domestic Large Cap Equity	83,478,916	25.3	■ Domestic Large Cap Equity	78,653,395	24.3
■ Domestic Small Cap Equity	49,727,679	15.1	■ Domestic Small Cap Equity	43,133,205	13.3
■ International Equity	46,230,458	14.0	■ International Equity	48,247,057	14.9
■ Total Fixed Income	92,995,463	28.2	■ Total Fixed Income	96,936,384	30.0
■ Private Real Estate	23,887,704	7.3	■ Private Real Estate	23,969,590	7.4
■ Private Equity	23,766,461	7.2	■ Private Equity	24,423,748	7.6
■ Private Debt	8,371,806	2.5	■ Private Debt	3,662,740	1.1
■ Cash	920,378	0.3	■ Cash	4,425,670	1.4

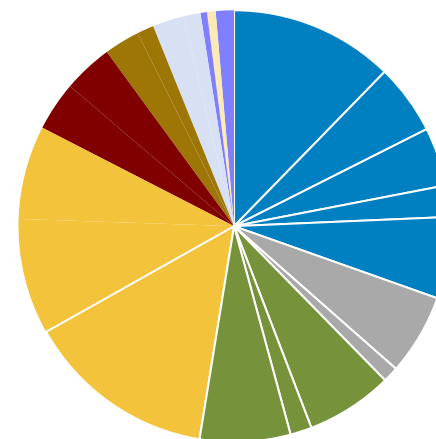
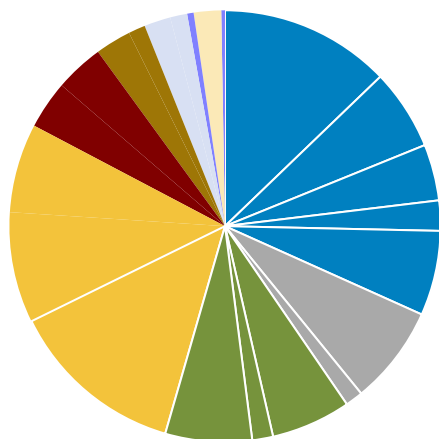
Asset Allocation by Asset Class

Total Fund

As of March 31, 2025

Dec-2024 : \$329,378,866

Mar-2025 : \$323,451,787



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Vanguard S&P 500 Index Fund (VINIX)	42,195,044	12.8	■ Vanguard S&P 500 Index Fund (VINIX)	39,793,895	12.3
■ Vanguard Russell 1000 Growth Index (VRGWX)	19,950,467	6.1	■ Vanguard Russell 1000 Growth Index (VRGWX)	17,052,212	5.3
■ DFA Large Value Equity (DFLVX)	13,888,415	4.2	■ DFA Large Value Equity (DFLVX)	14,205,123	4.4
■ Vanguard Russell 1000 Value Index (VRVIX)	7,444,990	2.3	■ Vanguard Russell 1000 Value Index (VRVIX)	7,602,165	2.4
■ Allspring Global Small Value Eq.	20,957,626	6.4	■ Allspring Global Small Value Eq.	19,728,672	6.1
■ Emerald Small Growth Equity	24,425,151	7.4	■ Emerald Small Growth Equity	19,614,378	6.1
■ StoneRidge Small Growth Equity	4,344,902	1.3	■ StoneRidge Small Growth Equity	3,790,155	1.2
■ DFA International Equity (DFIEX)	19,675,015	6.0	■ DFA International Equity (DFIEX)	21,073,957	6.5
■ DFA Emerging Markets (DFCEX)	5,163,770	1.6	■ DFA Emerging Markets (DFCEX)	5,219,954	1.6
■ EuroPacific Growth Fund (RERGX)	21,391,673	6.5	■ EuroPacific Growth Fund (RERGX)	21,953,145	6.8
■ Boyd Watterson Fixed	43,706,841	13.3	■ Boyd Watterson Fixed	46,222,610	14.3
■ PNC Fixed	27,308,942	8.3	■ PNC Fixed	28,086,316	8.7
■ Vanguard Core Bond Fund (VCOBX)	21,979,679	6.7	■ Vanguard Core Bond Fund (VCOBX)	22,627,458	7.0
■ Boyd Watterson GSA Fund	11,871,459	3.6	■ Boyd Watterson GSA Fund	11,953,345	3.7
■ Bentall GreenOak US Core Plus RE	12,016,245	3.6	■ Bentall GreenOak US Core Plus RE	12,016,245	3.7
■ Ironsides Direct Investment Fund V	8,861,875	2.7	■ Ironsides Direct Investment Fund V	8,586,805	2.7
■ PA Co-Investment Fund III	4,172,444	1.3	■ PA Co-Investment Fund III	4,104,801	1.3
■ Adams Street Co-Investment Fund V	6,554,313	2.0	■ Adams Street Co-Investment Fund V	7,554,313	2.3
■ Hamilton Lane Secondary Fund VI	4,177,829	1.3	■ Hamilton Lane Secondary Fund VI	4,177,829	1.3
■ Ironsides Opportunities Fund	1,594,312	0.5	■ Ironsides Opportunities Fund	1,551,873	0.5
■ PA Credit Strategies Fund	6,777,494	2.1	■ PA Credit Strategies Fund	2,110,867	0.7
■ Cash Account	920,378	0.3	■ Cash Account	4,425,670	1.4

Financial Reconciliation
Total Fund
1 Quarter Ending March 31, 2025

	Market Value 01/01/2025	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2025
Total Fund	329,378,866	-	3,403,760	-5,939,703	-128,995	-124,170	1,567,619	-4,705,590	323,451,787
Domestic Large Cap Equity	83,478,916	-1,600,000	-	-	-	-	274,312	-3,499,833	78,653,395
Vanguard S&P 500 Index Fund (VINIX)	42,195,044	-600,000	-	-	-	-	141,936	-1,943,085	39,793,895
Vanguard Russell 1000 Growth Index (VRGWX)	19,950,467	-1,000,000	-	-	-	-	25,437	-1,923,692	17,052,212
DFA Large Value Equity (DFLVX)	13,888,415	-	-	-	-	-	71,569	245,139	14,205,123
Vanguard Russell 1000 Value Index (VRVIX)	7,444,990	-	-	-	-	-	35,370	121,805	7,602,165
Domestic Small Cap Equity	49,727,679	-2,000,000	-	-	-	-	150,955	-4,745,429	43,133,205
Allspring Global Small Value Eq.	20,957,626	-	-	-	-	-	114,425	-1,343,378	19,728,672
Emerald Small Growth Equity	24,425,151	-2,000,000	-	-	-	-	26,068	-2,836,841	19,614,378
StoneRidge Small Growth Equity	4,344,902	-	-	-	-	-	10,462	-565,210	3,790,155
International Equity	46,230,458	-	-	-	-	-	56,049	1,960,550	48,247,057
DFA International Equity (DFIEX)	19,675,015	-	-	-	-	-	46,444	1,352,498	21,073,957
DFA Emerging Markets (DFCEX)	5,163,770	-	-	-	-	-	9,604	46,580	5,219,954
EuroPacific Growth Fund (RERGX)	21,391,673	-	-	-	-	-	-	561,472	21,953,145
Total Fixed Income	92,995,463	1,400,000	-	-	-	-	1,043,653	1,497,268	96,936,384
Boyd Watterson Fixed	43,706,841	1,400,000	-	-	-	-	503,892	611,877	46,222,610
PNC Fixed	27,308,942	-	-	-	-	-	265,697	511,676	28,086,316
Vanguard Core Bond Fund (VCOBX)	21,979,679	-	-	-	-	-	274,063	373,715	22,627,458
Private Real Estate	23,887,704	-	-	-	-	-	-	81,886	23,969,590
Boyd Watterson GSA Fund	11,871,459	-	-	-	-	-	-	81,886	11,953,345
Bentall GreenOak US Core Plus RE	12,016,245	-	-	-	-	-	-	-	12,016,245
Private Equity	23,766,461	671,895	-	-	-14,608	-	-	-	24,423,748
Ironsides Direct Investment Fund V	8,861,875	-260,462	-	-	-14,608	-	-	-	8,586,805
PA Co-Investment Fund III	4,172,444	-67,643	-	-	-	-	-	-	4,104,801
Adams Street Co-Investment Fund V	6,554,313	1,000,000	-	-	-	-	-	-	7,554,313
Hamilton Lane Secondary Fund VI	4,177,829	-	-	-	-	-	-	-	4,177,829
Private Debt	8,371,806	-4,695,616	-	-	-11,074	-2,377	-	-	3,662,740
Ironsides Opportunities Fund	1,594,312	-28,989	-	-	-11,074	-2,377	-	-	1,551,873
PA Credit Strategies Fund	6,777,494	-4,666,627	-	-	-	-	-	-	2,110,867
Cash	920,378	6,223,721	3,403,760	-5,939,703	-103,313	-121,794	42,652	-31	4,425,670
Cash Account	920,378	6,223,721	3,403,760	-5,939,703	-103,313	-121,794	42,652	-31	4,425,670

Financial Reconciliation

Total Fund

Year To Date Ending March 31, 2025

	Market Value 01/01/2025	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 03/31/2025
Total Fund	329,378,866	-	3,403,760	-5,939,703	-128,995	-124,170	1,567,619	-4,705,590	323,451,787
Domestic Large Cap Equity	83,478,916	-1,600,000	-	-	-	-	274,312	-3,499,833	78,653,395
Vanguard S&P 500 Index Fund (VINIX)	42,195,044	-600,000	-	-	-	-	141,936	-1,943,085	39,793,895
Vanguard Russell 1000 Growth Index (VRGWX)	19,950,467	-1,000,000	-	-	-	-	25,437	-1,923,692	17,052,212
DFA Large Value Equity (DFLVX)	13,888,415	-	-	-	-	-	71,569	245,139	14,205,123
Vanguard Russell 1000 Value Index (VRVIX)	7,444,990	-	-	-	-	-	35,370	121,805	7,602,165
Vesper Capital Mgmt (UTRN)	-	-	-	-	-	-	-	-	-
Domestic Small Cap Equity	49,727,679	-2,000,000	-	-	-	-	150,955	-4,745,429	43,133,205
Allspring Global Small Value Eq.	20,957,626	-	-	-	-	-	114,425	-1,343,378	19,728,672
Emerald Small Growth Equity	24,425,151	-2,000,000	-	-	-	-	26,068	-2,836,841	19,614,378
StoneRidge Small Growth Equity	4,344,902	-	-	-	-	-	10,462	-565,210	3,790,155
International Equity	46,230,458	-	-	-	-	-	56,049	1,960,550	48,247,057
DFA International Equity (DFIEX)	19,675,015	-	-	-	-	-	46,444	1,352,498	21,073,957
DFA Emerging Markets (DFCEX)	5,163,770	-	-	-	-	-	9,604	46,580	5,219,954
EuroPacific Growth Fund (RERGX)	21,391,673	-	-	-	-	-	-	561,472	21,953,145
Total Fixed Income	92,995,463	1,400,000	-	-	-	-	1,043,653	1,497,268	96,936,384
Boyd Watterson Fixed	43,706,841	1,400,000	-	-	-	-	503,892	611,877	46,222,610
PNC Fixed	27,308,942	-	-	-	-	-	265,697	511,676	28,086,316
Vanguard Core Bond Fund (VCOBX)	21,979,679	-	-	-	-	-	274,063	373,715	22,627,458
Private Real Estate	23,887,704	-	-	-	-	-	-	81,886	23,969,590
Boyd Watterson GSA Fund	11,871,459	-	-	-	-	-	-	81,886	11,953,345
Bentall GreenOak US Core Plus RE	12,016,245	-	-	-	-	-	-	-	12,016,245
Private Equity	23,766,461	671,895	-	-	-14,608	-	-	-	24,423,748
Ironsides Direct Investment Fund V	8,861,875	-260,462	-	-	-14,608	-	-	-	8,586,805
PA Co-Investment Fund III	4,172,444	-67,643	-	-	-	-	-	-	4,104,801
Adams Street Co-Investment Fund V	6,554,313	1,000,000	-	-	-	-	-	-	7,554,313
Hamilton Lane Secondary Fund VI	4,177,829	-	-	-	-	-	-	-	4,177,829
Private Debt	8,371,806	-4,695,616	-	-	-11,074	-2,377	-	-	3,662,740
Ironsides Opportunities Fund	1,594,312	-28,989	-	-	-11,074	-2,377	-	-	1,551,873
PA Credit Strategies Fund	6,777,494	-4,666,627	-	-	-	-	-	-	2,110,867
Cash	920,378	6,223,721	3,403,760	-5,939,703	-103,313	-121,794	42,652	-31	4,425,670
Cash Account	920,378	6,223,721	3,403,760	-5,939,703	-103,313	-121,794	42,652	-31	4,425,670

Asset Allocation & Performance

Total Fund

As of March 31, 2025

	Allocation		Performance(%)											Inception Date
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception				
Total Fund (Gross)	323,451,787	100.0	-0.97 (70)	-0.97 (70)	3.94 (84)	4.24 (51)	10.23 (46)	6.57 (67)	6.47 (61)	6.93 (21)		Jan-1998		
Total Fund Policy Index			-1.20	-1.20	3.95	3.86	9.66	6.30	6.11	6.24				
All Public DB Plans Median			-0.42	-0.42	5.11	4.25	10.11	6.86	6.66	6.45				
Total Fund (Net)	323,451,787	100.0	-1.00	-1.00	3.68	4.03	10.00	6.31	6.17	-		Oct-2003		
Total Fund Policy Index			-1.20	-1.20	3.95	3.86	9.66	6.30	6.11	6.73				
Total Equity	170,033,656	52.6	-3.32	-3.32	3.26	5.70	-	-	-	5.70		Apr-2022		
Domestic Large Cap Equity	78,653,395	24.3	-3.95	-3.95	7.35	8.31	-	-	-	8.31		Apr-2022		
Vanguard S&P 500 Index Fund (VINIX)	39,793,895	12.3	-4.29 (42)	-4.29 (42)	8.21 (18)	9.02 (24)	18.55 (21)	13.22 (11)	12.47 (6)	13.26 (8)		Jul-2013		
S&P 500 Index			-4.27	-4.27	8.25	9.06	18.59	13.25	12.50	13.30				
Large Blend Median			-4.39	-4.39	6.32	8.13	17.66	11.93	11.27	12.22				
Vanguard Russell 1000 Growth Index (VRGWX)	17,052,212	5.3	-9.98 (62)	-9.98 (62)	7.68 (19)	10.04 (14)	20.02 (8)	16.02 (7)	15.05 (8)	15.94 (10)		Jul-2013		
Russell 1000 Growth Index			-9.97	-9.97	7.76	10.10	20.09	16.09	15.12	16.02				
Large Growth Median			-9.18	-9.18	4.30	8.07	16.88	13.30	12.82	14.05				
DFA Large Value Equity (DFLVX)	14,205,123	4.4	2.28 (40)	2.28 (40)	3.72 (83)	6.72 (55)	17.62 (32)	8.34 (79)	8.87 (50)	7.91 (39)		May-2006		
Russell 1000 Value Index			2.14	2.14	7.18	6.64	16.15	9.19	8.79	7.62				
Large Value Median			1.74	1.74	6.74	6.93	16.59	9.32	8.84	7.65				
Vanguard Russell 1000 Value Index (VRVIX)	7,602,165	2.4	2.11 (43)	2.11 (43)	7.12 (43)	6.58 (58)	-	-	-	9.16 (67)		Mar-2021		
Russell 1000 Value Index			2.14	2.14	7.18	6.64	-	-	-	9.23				
Large Value Median			1.74	1.74	6.74	6.93	-	-	-	9.75				
Domestic Small Cap Equity	43,133,205	13.3	-9.54	-9.54	-3.81	2.25	-	-	-	2.25		Apr-2022		
Allspring Global Small Value Eq.	19,728,672	6.1	-5.86 (35)	-5.86 (35)	-5.83 (79)	3.52 (54)	16.22 (72)	7.09 (56)	8.06 (43)	8.94 (48)		Dec-2004		
Russell 2000 Value Index			-7.74	-7.74	-3.12	0.05	15.31	5.32	6.07	6.60				
IM U.S. Small Cap Value Equity (SA+CF) Median			-7.06	-7.06	-1.85	3.80	18.15	7.29	7.80	8.89				
Emerald Small Growth Equity	19,614,378	6.1	-12.30 (72)	-12.30 (72)	-1.16 (29)	2.00 (38)	12.95 (55)	7.55 (67)	8.28 (71)	10.49 (67)		Oct-1998		
Russell 2000 Growth Index			-11.12	-11.12	-4.86	0.78	10.78	5.04	6.14	7.31				
IM U.S. Small Cap Growth Equity (SA+CF) Median			-10.57	-10.57	-4.51	0.87	13.23	8.45	9.14	11.09				
StoneRidge Small Growth Equity	3,790,155	1.2	-12.77 (77)	-12.77 (77)	-8.48 (82)	-	-	-	-	-2.77 (90)		Feb-2024		
Russell 2000 Growth Index			-11.12	-11.12	-4.86	-	-	-	-	4.90				
IM U.S. Small Cap Growth Equity (SA+CF) Median			-10.57	-10.57	-4.51	-	-	-	-	4.51				

See the disclosure page at the end of the report.

Asset Allocation & Performance

Total Fund

As of March 31, 2025

	Allocation		Performance(%)									
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date	
International Equity	48,247,057	14.9	4.36	4.36	3.52	4.39	-	-	-	4.39	Apr-2022	
DFA International Equity (DFIEX)	21,073,957	6.5	7.11 (43)	7.11 (43)	6.42 (38)	6.00 (40)	13.93 (7)	5.02 (42)	-	4.96 (40)	Dec-2017	
MSCI EAFE Value Index (Net)			11.56	11.56	12.85	9.69	14.77	5.39	-	5.06		
Foreign Large Blend Median			6.82	6.82	5.81	5.55	11.59	4.82	-	4.73		
DFA Emerging Markets (DFCEX)	5,219,954	1.6	1.09 (64)	1.09 (64)	5.96 (47)	2.85 (39)	11.97 (29)	2.89 (39)	-	3.50 (35)	Dec-2017	
MSCI Emerging Markets (Net) Index			2.93	2.93	8.09	1.44	7.94	1.59	-	2.20		
IM Emerging Markets Equity (SA+CF) Median			2.39	2.39	5.59	1.97	9.00	2.16	-	2.73		
EuroPacific Growth Fund (RERGX)	21,953,145	6.8	2.62 (43)	2.62 (43)	0.34 (56)	3.28 (45)	9.93 (35)	4.23 (53)	-	6.07 (48)	Nov-2015	
MSCI AC World ex USA Growth (Net)			1.96	1.96	1.15	1.75	8.11	4.13	-	5.78		
Foreign Large Growth Median			2.26	2.26	1.23	3.03	9.13	4.63	-	5.98		
Total Fixed Income	96,936,384	30.0	2.74	2.74	5.24	1.95	-	-	-	1.95	Apr-2022	
Boyd Watterson Fixed	46,222,610	14.3	2.58 (80)	2.58 (80)	5.09 (80)	1.84 (19)	1.58 (28)	2.40 (42)	2.05 (64)	4.04 (81)	Oct-1998	
Boyd Watterson Fixed Policy			2.78	2.78	4.88	1.81	0.64	2.02	1.70	-		
IM U.S. Broad Market Fixed Income (SA+CF) Median			2.79	2.79	5.46	1.14	0.93	2.28	2.18	4.43		
PNC Fixed	28,086,316	8.7	2.85 (34)	2.85 (34)	5.21 (70)	1.79 (20)	0.93 (50)	2.22 (54)	1.84 (81)	2.97 (94)	Jul-2008	
PNC Fixed Policy			2.78	2.78	4.88	1.81	0.64	2.02	1.70	2.68		
IM U.S. Broad Market Fixed Income (SA+CF) Median			2.79	2.79	5.46	1.14	0.93	2.28	2.18	3.81		
Vanguard Core Bond Fund (VCOBX)	22,627,458	7.0	2.95 (25)	2.95 (25)	5.59 (32)	-	-	-	-	3.49 (54)	Feb-2023	
Blmbg. U.S. Aggregate Index			2.78	2.78	4.88	-	-	-	-	2.97		
Intermediate Core Bond Median			2.84	2.84	5.43	-	-	-	-	3.56		
Total Alternatives	52,056,078	16.1										
Private Real Estate	23,969,590	7.4	0.34	0.34	-0.49	-0.62	-	-	-	-0.62	Apr-2022	
Boyd Watterson GSA Fund	11,953,345	3.7	0.69 (76)	0.69 (76)	-3.52 (100)	-1.91 (20)	1.92 (65)	3.82 (60)	-	5.29 (-)	Feb-2016	
NCREIF Property Index			1.28	1.28	2.72	-2.11	3.25	4.04	-	4.89		
IM U.S. Private Real Estate (SA+CF) Median			1.18	1.18	2.16	-4.39	2.94	4.13	-	-		
Bentall GreenOak US Core Plus RE	12,016,245	3.7	0.00 (95)	0.00 (95)	2.70 (40)	-	-	-	-	0.48 (-)	Nov-2022	
NCREIF Property Index			1.28	1.28	2.72	-	-	-	-	-4.11		
IM U.S. Private Real Estate (SA+CF) Median			1.18	1.18	2.16	-	-	-	-	-		

See the disclosure page at the end of the report.

	Allocation		Performance(%)								
	Market Value \$	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Private Equity	24,423,748	7.6									
Ironsides Direct Investment Fund V	8,586,805	2.7									
PA Co-Investment Fund III	4,104,801	1.3									
Adams Street Co-Investment Fund V	7,554,313	2.3									
Hamilton Lane Secondary Fund VI	4,177,829	1.3									
Private Debt	3,662,740	1.1									
Ironsides Opportunities Fund	1,551,873	0.5									
PA Credit Strategies Fund	2,110,867	0.7									
Cash	4,425,670	1.4									
Cash Account	4,425,670	1.4									

See the disclosure page at the end of the report.

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Comparative Performance

Total Fund

As of March 31, 2025

Comparative Performance																				
	2024		2023		2022		2021		2020		2019		2018		2017		2016		2015	
Total Fund (Gross)	9.42	(74)	13.15	(52)	-11.59	(24)	13.31	(62)	12.18	(60)	18.55	(66)	-5.13	(70)	14.12	(73)	8.40	(20)	0.36	(35)
Total Fund Policy Index	9.19		13.02		-12.15		11.61		12.26		17.45		-3.89		10.71		8.86		1.22	
All Public DB Plans Median	10.80		13.26		-13.79		13.96		13.00		19.62		-4.42		15.19		7.14		-0.16	
Total Fund (Net)	9.14		12.97		-11.73		13.09		11.89		18.18		-5.52		13.72		7.99		-0.03	
Total Fund Policy Index	9.19		13.02		-12.15		11.61		12.26		17.45		-3.89		10.71		8.86		1.22	
Total Equity	15.51		20.76																	
Domestic Large Cap Equity	23.68		23.91																	
Vanguard S&P 500 Index Fund (VINIX)	24.97	(23)	26.24	(25)	-18.14	(49)	28.67	(21)	18.39	(38)	31.47	(23)	-4.42	(25)	21.80	(33)	11.93	(25)	1.34	(26)
S&P 500 Index	25.02		26.29		-18.11		28.71		18.40		31.49		-4.38		21.83		11.96		1.38	
Large Blend Median	23.23		24.67		-18.23		26.78		17.64		30.05		-5.50		21.18		10.56		0.28	
Vanguard Russell 1000 Growth Index (VRGWX)	33.24	(29)	42.65	(33)	-29.17	(34)	27.52	(15)	38.38	(41)	36.30	(22)	-1.56	(53)	30.13	(42)	7.03	(18)	5.56	(47)
Russell 1000 Growth Index	33.36		42.68		-29.14		27.60		38.49		36.39		-1.51		30.21		7.08		5.67	
Large Growth Median	30.00		39.34		-31.16		21.89		36.16		32.89		-1.36		29.22		2.55		5.13	
DFA Large Value Equity (DFLVX)	12.75	(63)	11.47	(47)	-5.78	(53)	28.07	(27)	-0.60	(82)	25.49	(52)	-11.61	(82)	18.97	(22)	18.89	(13)	-3.49	(52)
Russell 1000 Value Index	14.37		11.46		-7.54		25.16		2.80		26.54		-8.27		13.66		17.34		-3.83	
Large Value Median	14.37		11.06		-5.53		25.98		2.85		25.60		-8.81		16.31		14.32		-3.41	
Vanguard Russell 1000 Value Index (VRVIX)	14.32	(51)	11.42	(48)	-7.62	(69)														
Russell 1000 Value Index	14.37		11.46		-7.54		25.16		2.80		26.54		-8.27		13.66		17.34		-3.83	
Large Value Median	14.37		11.06		-5.53		25.98		2.85		25.60		-8.81		16.31		14.32		-3.41	
Vesper Capital Mgmt (UTRN)			0.73	(100)	-20.37	(85)	30.04	(22)												
S&P 500 Index	25.02		26.29		-18.11		28.71		18.40		31.49		-4.38		21.83		11.96		1.38	
IM U.S. Large Cap Core Equity (SA+CF) Median	23.23		23.81		-16.91		26.87		16.02		29.50		-5.67		21.58		9.87		1.08	
Domestic Small Cap Equity	12.68		18.89																	
Allspring Global Small Value Eq.	7.35	(75)	20.80	(27)	-12.53	(70)	29.83	(50)	2.24	(69)	29.50	(15)	-12.84	(37)	12.21	(46)	30.62	(26)	-3.36	(43)
Russell 2000 Value Index	8.05		14.65		-14.48		28.27		4.63		22.39		-12.86		7.84		31.74		-7.47	
IM U.S. Small Cap Value Equity (SA+CF) Median	11.44		17.23		-10.61		29.80		5.20		25.15		-14.06		11.58		27.21		-4.28	
Emerald Small Growth Equity	19.07	(31)	19.35	(45)	-23.91	(30)	5.74	(77)	39.16	(60)	31.23	(42)	-10.67	(89)	28.70	(27)	10.07	(54)	4.58	(13)
Russell 2000 Growth Index	15.15		18.66		-26.36		2.83		34.63		28.48		-9.31		22.17		11.32		-1.38	
IM U.S. Small Cap Growth Equity (SA+CF) Median	15.64		19.07		-27.36		12.12		43.32		29.54		-3.83		24.51		10.60		-0.72	
StoneRidge Small Growth Equity																				
Russell 2000 Growth Index	15.15		18.66		-26.36		2.83		34.63		28.48		-9.31		22.17		11.32		-1.38	
IM U.S. Small Cap Growth Equity (SA+CF) Median	15.64		19.07		-27.36		12.12		43.32		29.54		-3.83		24.51		10.60		-0.72	

See the disclosure page at the end of this report.

Comparative Performance

Total Fund

As of March 31, 2025

	2024	2023	2022	2021	2020	2019	2018	2017	2016	2015
International Equity	4.84	16.57								
DFA International Equity (DFIEX)	3.99 (55)	17.49 (35)	-13.48 (16)	13.87 (9)	7.72 (68)	21.66 (57)	-17.40 (78)			
MSCI EAFE Value Index (Net)	5.68	18.95	-5.58	10.89	-2.63	16.09	-14.78	21.44	5.02	-5.68
Foreign Large Blend Median	4.30	16.39	-15.85	10.43	9.39	22.06	-14.87	25.53	0.69	-0.97
DFA Emerging Markets (DFCEX)	7.32 (49)	15.45 (38)	-16.40 (33)	5.83 (31)	13.86 (66)	16.04 (71)	-15.25 (42)			
MSCI Emerging Markets (Net) Index	7.50	9.83	-20.09	-2.54	18.31	18.42	-14.57	37.28	11.19	-14.92
IM Emerging Markets Equity (SA+CF) Median	7.21	11.91	-20.19	0.31	18.05	19.12	-16.06	36.15	8.72	-12.81
EuroPacific Growth Fund (RERGX)	5.04 (45)	16.05 (50)	-22.72 (34)	2.84 (78)	25.27 (34)	27.38 (66)	-14.87 (57)	31.14 (50)	1.06 (24)	
MSCI AC World ex USA Growth (Net)	5.07	14.03	-23.05	5.09	22.20	27.34	-14.43	32.01	0.12	-1.25
Foreign Large Growth Median	4.68	15.97	-25.00	8.70	22.13	28.14	-14.16	31.13	-2.47	0.36
Total Fixed Income	2.00	5.64								
Boyd Watterson Fixed	2.20 (56)	6.04 (67)	-9.17 (7)	-0.40 (39)	6.86 (92)	8.69 (85)	-0.03 (52)	3.45 (91)	2.22 (97)	0.92 (30)
Boyd Watterson Fixed Policy	1.25	5.53	-8.24	-1.44	6.43	6.80	0.88	2.14	2.08	1.07
IM U.S. Broad Market Fixed Income (SA+CF) Median	2.32	6.39	-12.92	-0.73	8.75	9.51	-0.01	4.33	3.72	0.63
PNC Fixed	1.69 (73)	6.23 (58)	-9.36 (7)	-1.38 (75)	7.53 (85)	7.29 (96)	0.78 (10)	2.41 (99)	2.11 (97)	0.66 (50)
PNC Fixed Policy	1.25	5.53	-8.24	-1.44	6.43	6.80	0.88	2.14	2.08	1.07
IM U.S. Broad Market Fixed Income (SA+CF) Median	2.32	6.39	-12.92	-0.73	8.75	9.51	-0.01	4.33	3.72	0.63
Vanguard S-T Invt Grade Bond Fund (VFSIX)			-5.72 (70)	-0.30 (50)	5.28 (20)	5.87 (19)	1.02 (44)	2.16 (28)	2.85 (23)	1.18 (6)
Blmbg. 1-3 Year Gov/Credit	4.36	4.61	-3.69	-0.47	3.33	4.03	1.60	0.84	1.28	0.65
Short-Term Bond Median	4.89	5.51	-4.95	-0.30	3.90	4.62	0.92	1.60	1.88	0.36
Vanguard Core Bond Fund (VCOBX)	1.94 (25)									
Blmbg. U.S. Aggregate Index	1.25	5.53	-13.01	-1.55	7.51	8.72	0.01	3.54	2.65	0.55
Intermediate Core Bond Median	1.48	5.58	-13.41	-1.57	7.84	8.50	-0.43	3.43	2.64	0.20
Private Real Estate	-2.39	-2.51								
Bentall GreenOak/MEPT Real Estate			8.74 (27)	20.81 (69)	1.37 (59)	4.55 (78)	8.18 (56)	6.48 (80)	8.97 (72)	13.01 (76)
NCREIF Property Index	0.43	-7.94	5.52	17.70	1.60	6.42	6.72	6.96	7.97	13.33
IM U.S. Private Real Estate (SA+CF) Median	-1.28	-11.03	7.14	22.49	1.57	6.93	8.42	8.07	9.80	15.34
Boyd Watterson GSA Fund	-5.95 (94)	-3.13 (13)	4.58 (74)	8.04 (97)	6.97 (6)	9.53 (15)	9.60 (23)	8.87 (36)		
NCREIF Property Index	0.43	-7.94	5.52	17.70	1.60	6.42	6.72	6.96	7.97	13.33
IM U.S. Private Real Estate (SA+CF) Median	-1.28	-11.03	7.14	22.49	1.57	6.93	8.42	8.07	9.80	15.34
Bentall GreenOak US Core Plus RE	1.52 (18)	1.91 (11)								
NCREIF Property Index	0.43	-7.94	5.52	17.70	1.60	6.42	6.72	6.96	7.97	13.33
IM U.S. Private Real Estate (SA+CF) Median	-1.28	-11.03	7.14	22.49	1.57	6.93	8.42	8.07	9.80	15.34

See the disclosure page at the end of this report.

Private Equity Summary of Partnership

As of March 31, 2025

Private Equity Summary of Partnership

Partnerships	Valuation Date	Vintage Year	Investment Strategy	Capital Commitment \$	Drawn Down \$	Market Value \$	Distributed \$	IRR (%)	TVPI Multiple
Private Equity Funds									
Ironsides Direct Investment Fund V	03/31/2025	2018	Buyouts	6,000,000	7,803,219	8,586,805	5,073,149	13.8	1.8
PA Co-Investment Fund III	03/31/2025	2019	Buyouts	6,000,000	5,511,784	4,104,801	7,036,366	18.1	2.0
Adams Street Co-Investment Fund V	03/31/2025	2022	Co-Investment	10,000,000	5,762,945	7,554,313	-	21.6	1.3
Hamilton Lane Secondary Fund VI	03/31/2025	2022	Secondaries	10,000,000	3,759,176	4,177,829	268,815	21.3	1.2
Private Debt Funds									
Ironsides Opportunities Fund	03/31/2025	2018	Buyout - Mid	4,000,000	2,889,540	1,551,873	2,784,440	10.5	1.5
PA Credit Strategies Fund	03/31/2025	2015	Credit	4,000,000	4,000,000	2,110,867	4,666,627	8.8	1.7

Comparative Performance - IRR
Private Investments
As of March 31, 2025

Comparative Performance - IRR									
	QTR	YTD	1 YR	2 YR	3 YR	4 YR	5 YR	Inception	Inception Date
Private Equity									
Ironsides Direct Investment Fund V	-0.17	-0.17	0.61	5.35	3.32	5.13	15.53	13.76	11/09/2018
PA Co-Investment Fund III	0.00	0.00	5.17	7.02	7.94	14.65	23.83	18.06	11/05/2018
Adams Street Co-Investment Fund V	0.00	0.00	13.07	19.88	N/A	N/A	N/A	21.64	10/28/2022
Hamilton Lane Secondary Fund VI	0.00	0.00	3.01	7.21	N/A	N/A	N/A	21.33	01/03/2023
Private Debt									
Ironsides Opportunities Fund	-0.85	-0.85	-0.84	1.67	5.62	8.19	11.30	10.46	12/31/2018
PA Credit Strategies Fund	0.00	0.00	10.07	7.18	6.35	9.31	9.01	8.77	11/21/2018

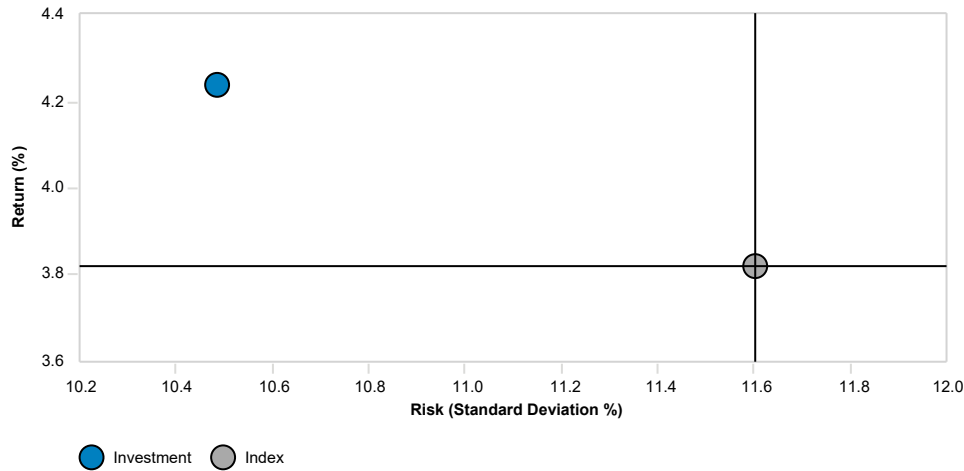
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.24	10.49	0.05	93.85	7	90.16	5
Index	3.82	11.60	0.02	100.00	7	100.00	5

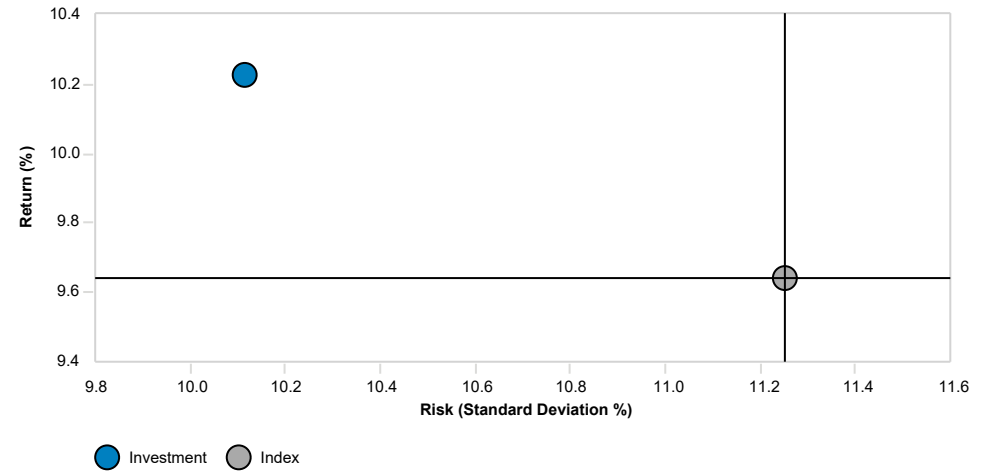
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.23	10.12	0.76	96.15	14	89.10	6
Index	9.64	11.25	0.65	100.00	13	100.00	7

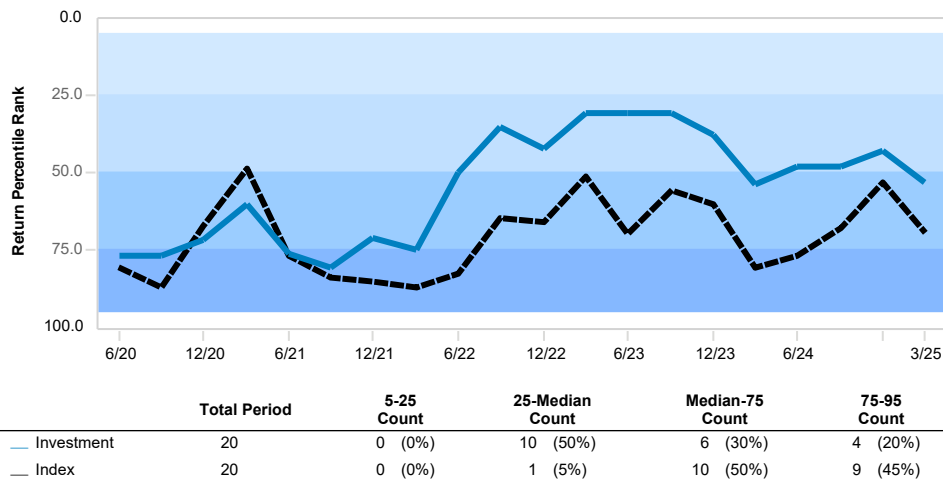
Risk and Return 3 Years



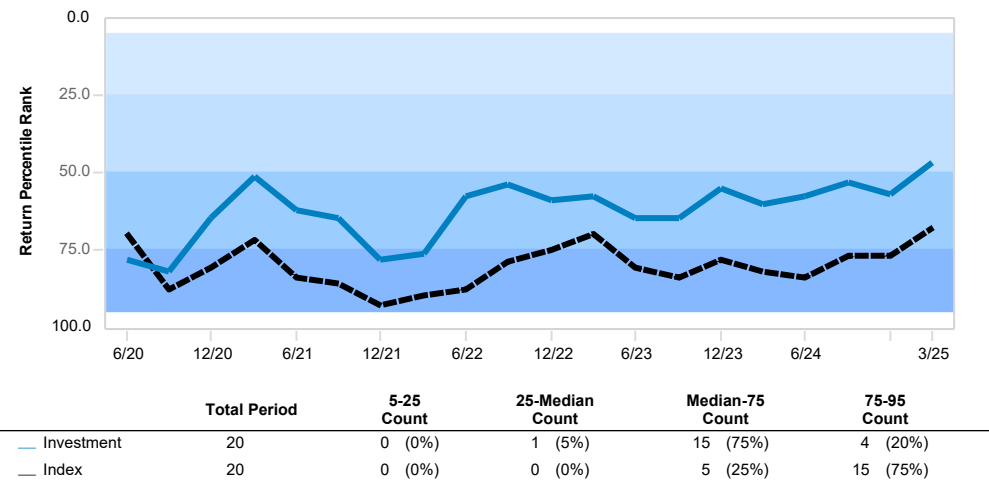
Risk and Return 5 Years



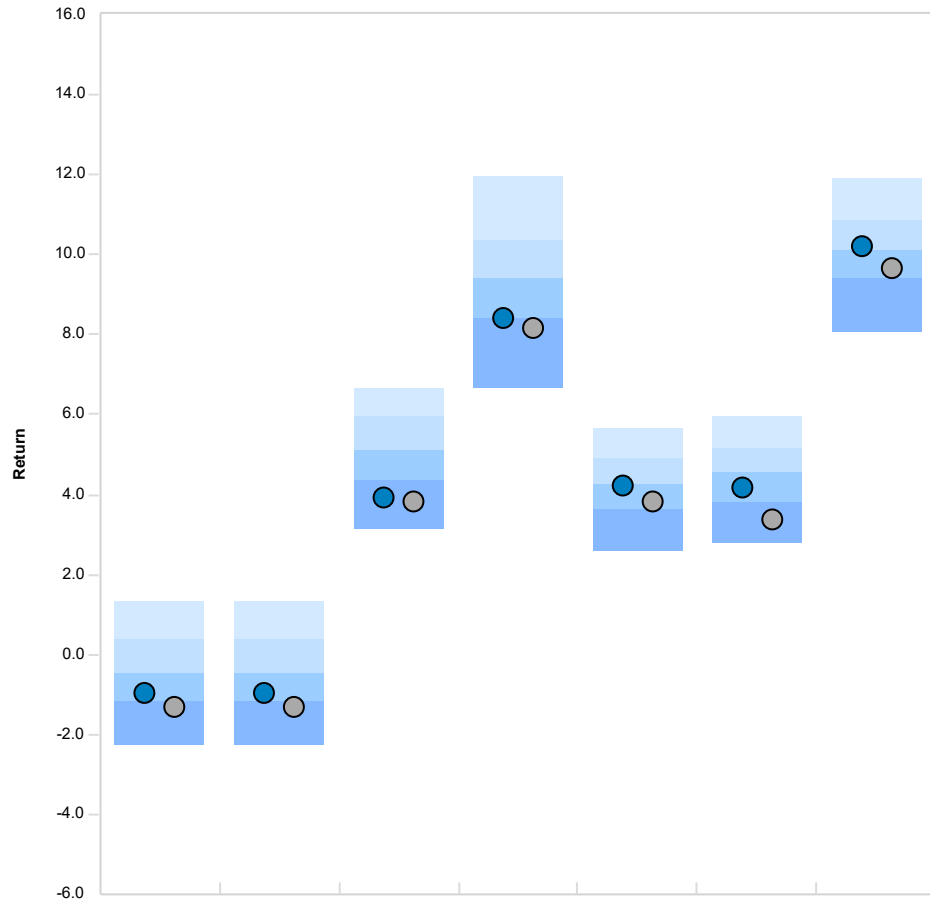
3 Year Rolling Percentile Rank All Public DB Plans



5 Year Rolling Percentile Rank All Public DB Plans

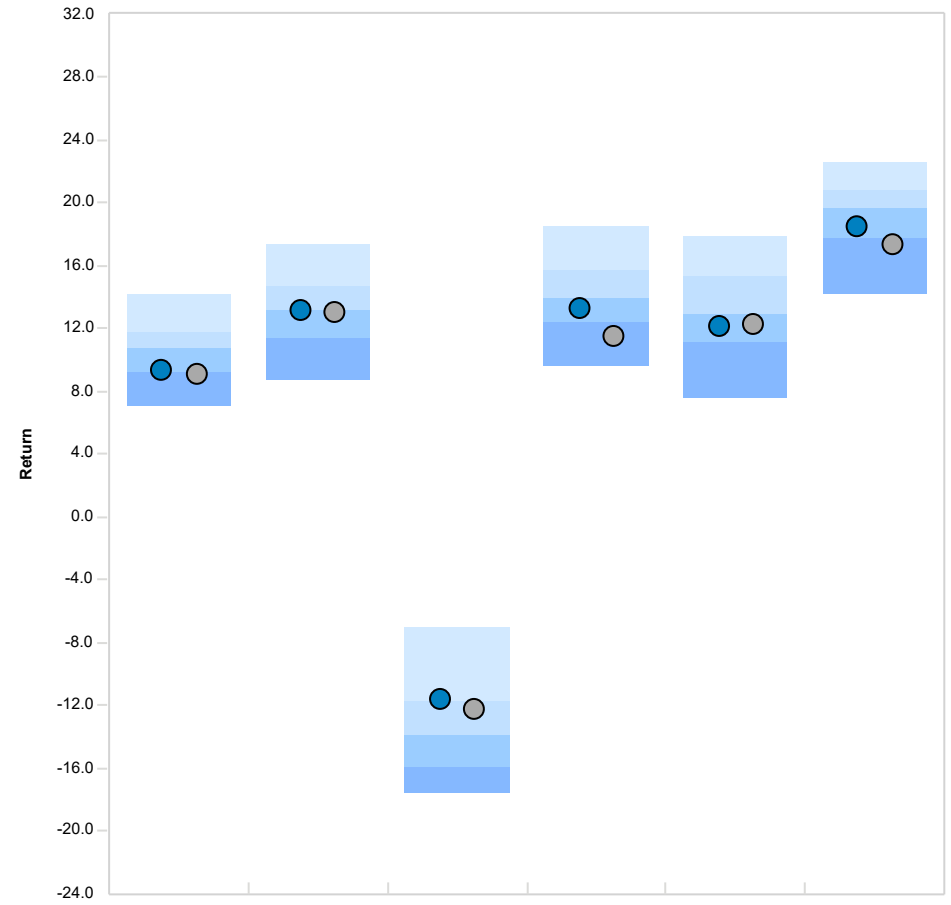


Plan Sponsor Peer Group Analysis vs. All Public DB Plans



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-0.97 (69)	-0.97 (69)	3.94 (86)	8.42 (75)	4.24 (53)	4.19 (61)	10.23 (47)
● Index	-1.31 (80)	-1.31 (80)	3.84 (88)	8.18 (79)	3.82 (69)	3.40 (88)	9.64 (68)
Median	-0.46	-0.46	5.12	9.42	4.28	4.55	10.13

Plan Sponsor Peer Group Analysis vs. All Public DB Plans



	2024	2023	2022	2021	2020	2019
● Investment	9.42 (74)	13.15 (52)	-11.59 (24)	13.31 (62)	12.18 (60)	18.55 (66)
● Index	9.19 (77)	13.02 (54)	-12.15 (31)	11.61 (85)	12.26 (60)	17.45 (78)
Median	10.80	13.26	-13.79	13.96	13.00	19.62

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-1.07 (56)	5.32 (56)	0.72 (74)	4.26 (72)	8.17 (50)	-2.80 (45)
Index	-0.91 (50)	6.07 (16)	0.10 (92)	3.78 (84)	9.15 (28)	-3.42 (79)
Median	-0.93	5.43	1.19	4.89	8.15	-2.96

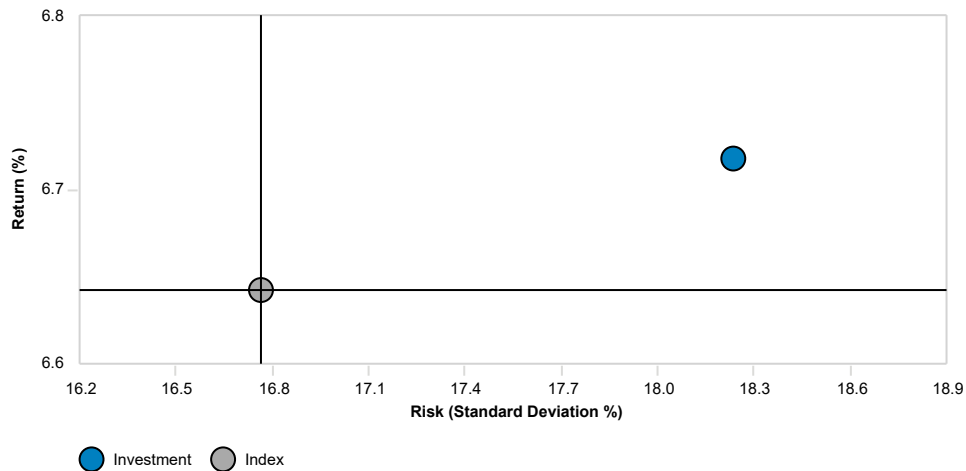
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.72	18.24	0.22	106.48	7	107.34	5
Index	6.64	16.76	0.22	100.00	7	100.00	5

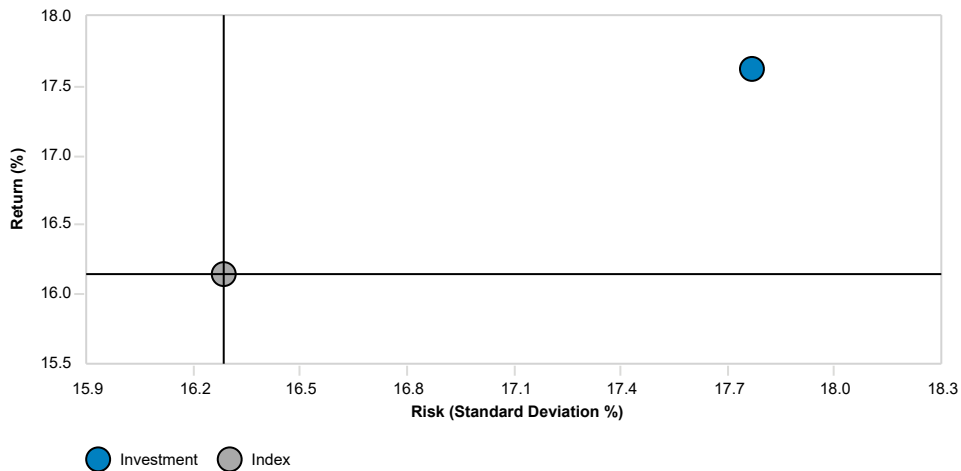
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	17.62	17.77	0.86	105.85	13	102.39	7
Index	16.15	16.28	0.85	100.00	13	100.00	7

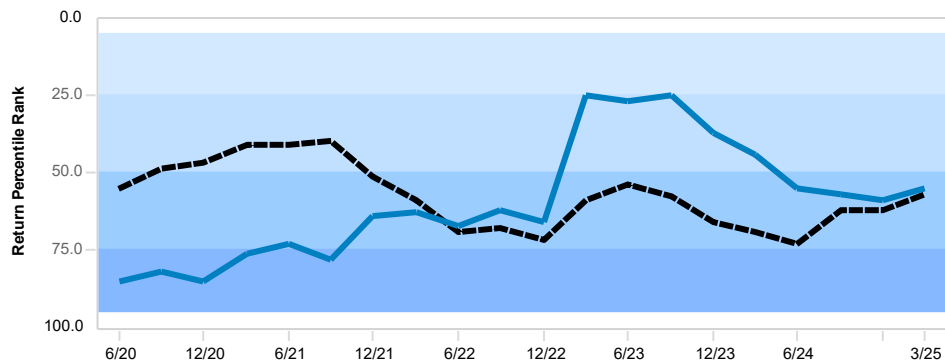
Risk and Return 3 Years



Risk and Return 5 Years

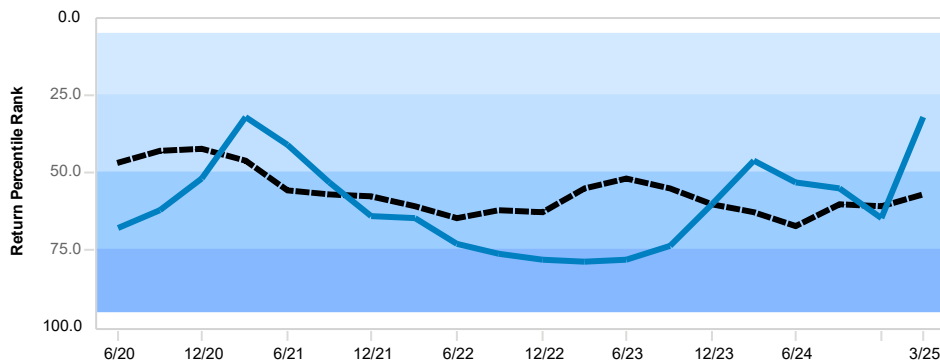


3 Year Rolling Percentile Rank Large Value



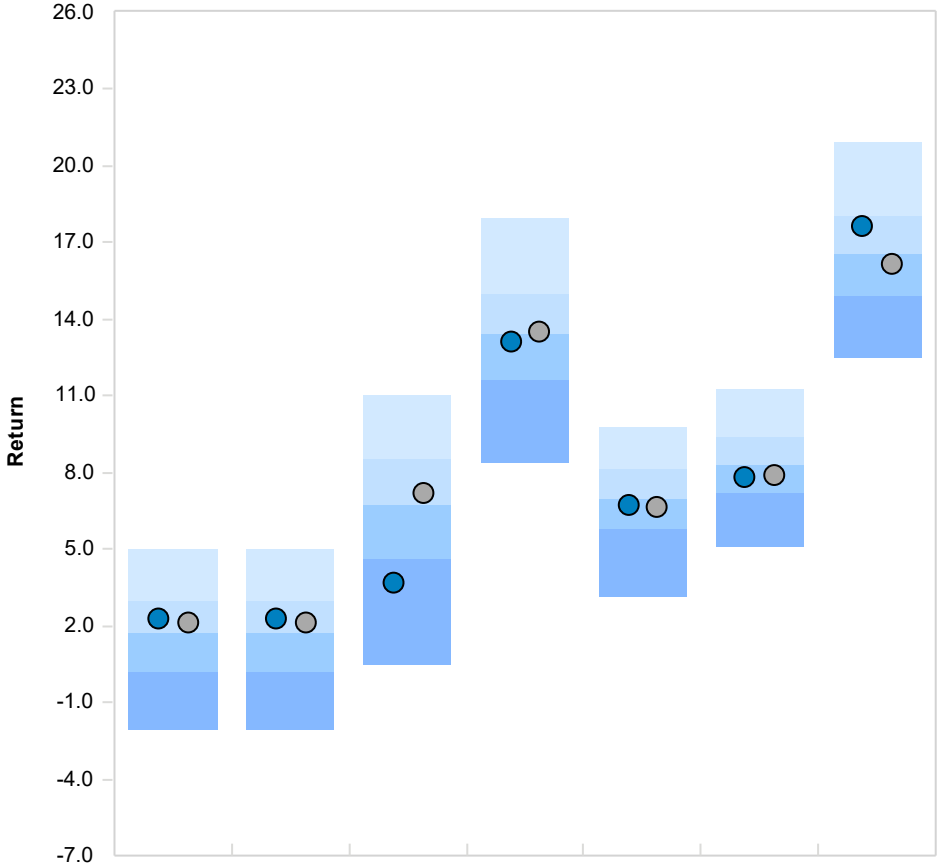
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	3 (15%)	10 (50%)	5 (25%)
Index	20	0 (0%)	5 (25%)	15 (75%)	0 (0%)

5 Year Rolling Percentile Rank Large Value



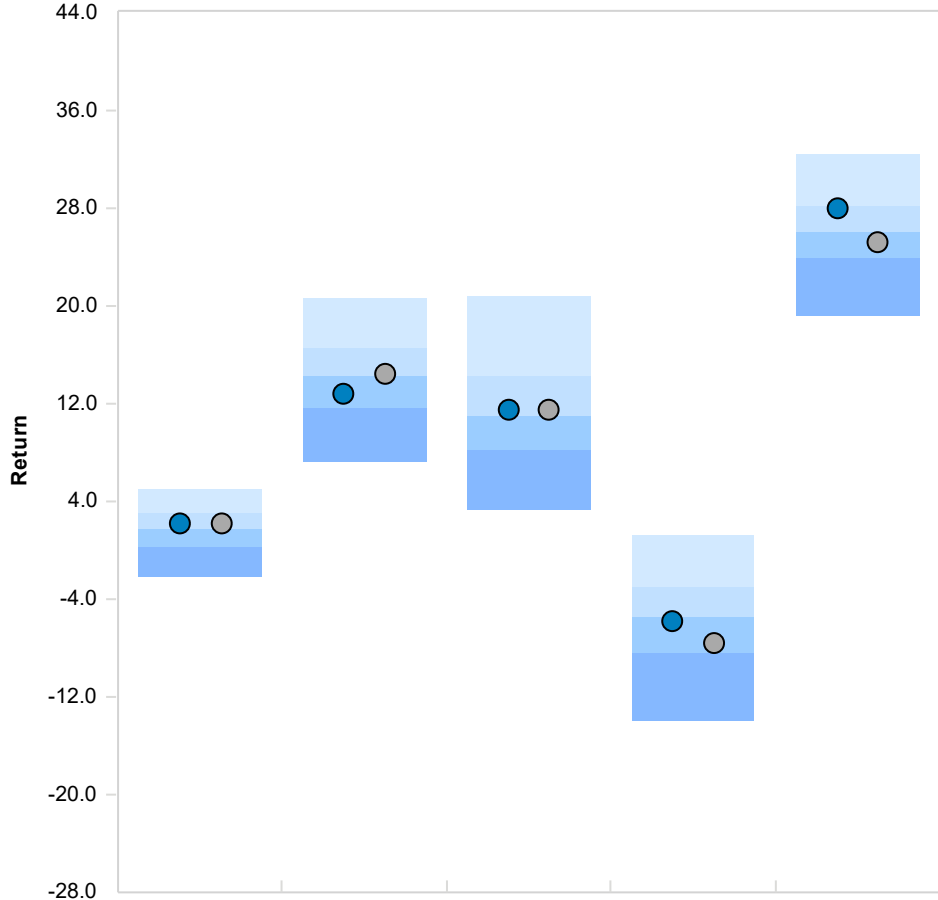
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	4 (20%)	12 (60%)	4 (20%)
Index	20	0 (0%)	4 (20%)	16 (80%)	0 (0%)

Peer Group Analysis - Large Value



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.28 (40)	2.28 (40)	3.72 (83)	13.12 (56)	6.72 (55)	7.83 (63)	17.62 (32)
● Index	2.14 (42)	2.14 (42)	7.18 (41)	13.54 (48)	6.64 (57)	7.88 (62)	16.15 (57)
Median	1.74	1.74	6.74	13.43	6.93	8.31	16.58

Peer Group Analysis - Large Value



	2025	2024	2023	2022	2021
● Investment	2.28 (40)	12.75 (63)	11.47 (47)	-5.78 (53)	28.07 (27)
● Index	2.14 (42)	14.37 (50)	11.46 (47)	-7.54 (69)	25.16 (62)
Median	1.74	14.37	11.06	-5.53	25.98

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-2.31 (68)	6.97 (72)	-2.96 (84)	11.18 (15)	9.06 (64)	-1.39 (19)
Index	-1.98 (56)	9.43 (21)	-2.17 (70)	8.99 (46)	9.50 (52)	-3.16 (65)
Median	-1.81	8.10	-1.41	8.80	9.54	-2.67

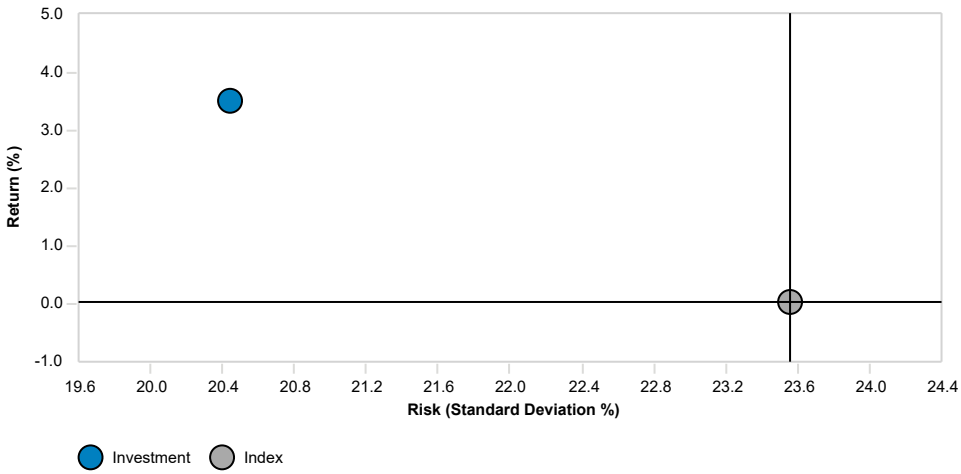
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.52	20.45	0.07	90.34	6	81.44	6
Index	0.05	23.56	-0.06	100.00	5	100.00	7

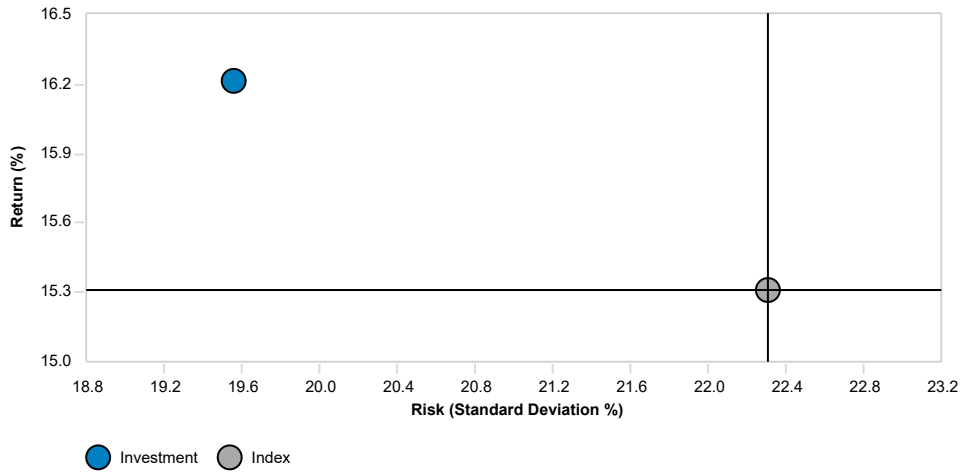
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	16.22	19.56	0.74	90.77	12	83.45	8
Index	15.31	22.30	0.64	100.00	11	100.00	9

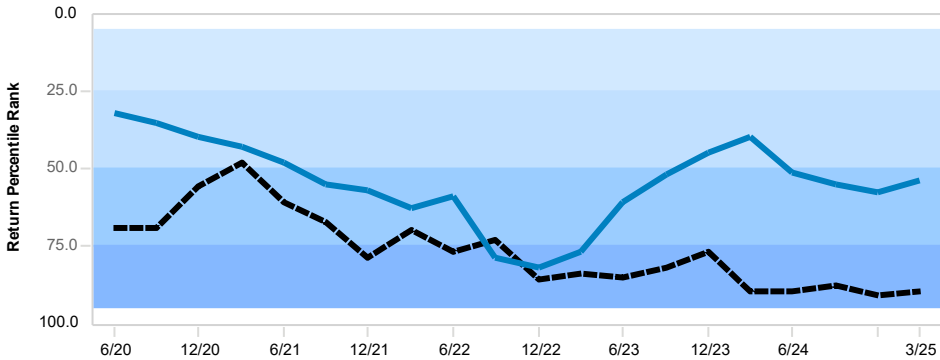
Risk and Return 3 Years



Risk and Return 5 Years

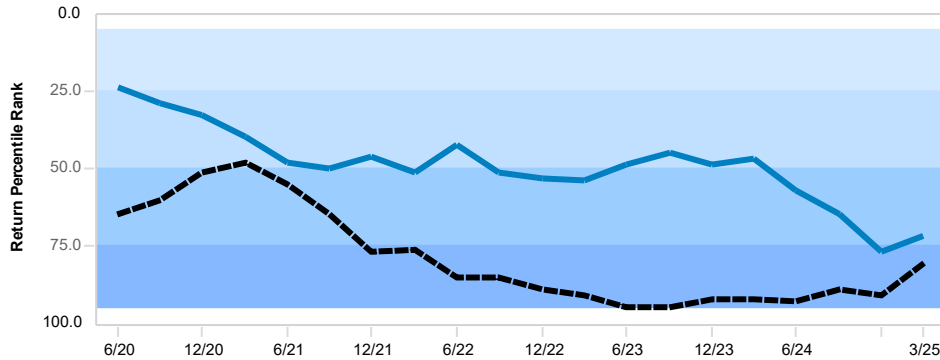


3 Year Rolling Percentile Rank IM U.S. Small Cap Value Equity (SA+CF)



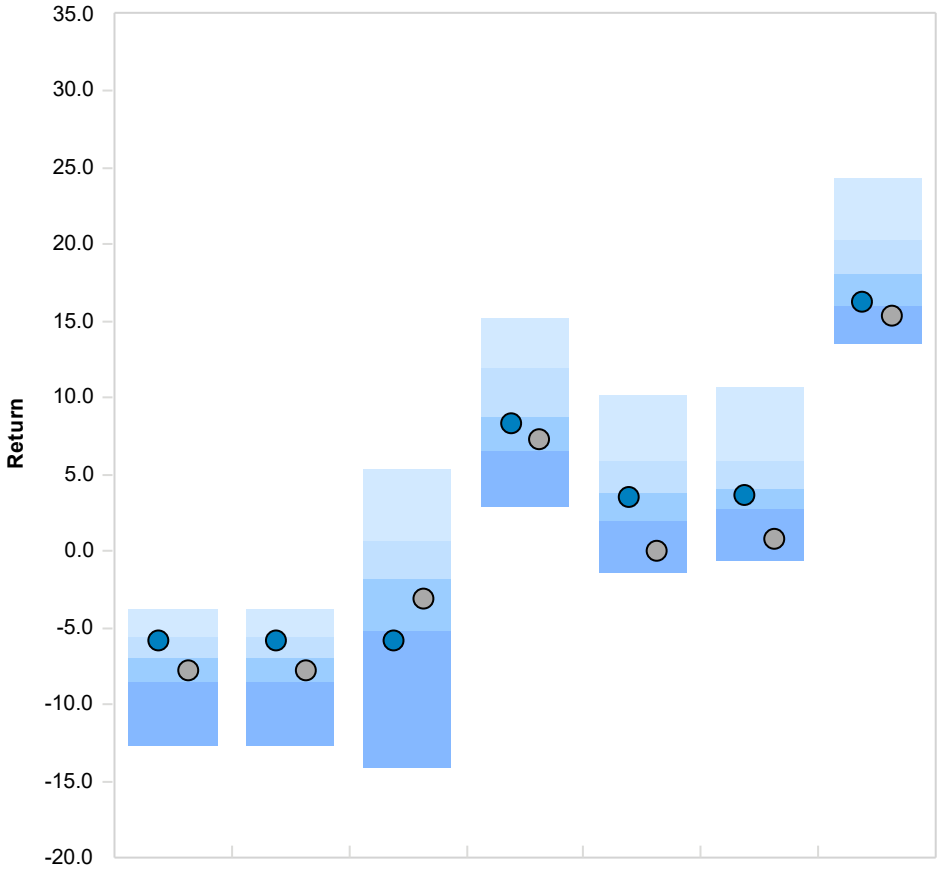
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	7 (35%)	10 (50%)	3 (15%)
Index	20	0 (0%)	1 (5%)	7 (35%)	12 (60%)

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



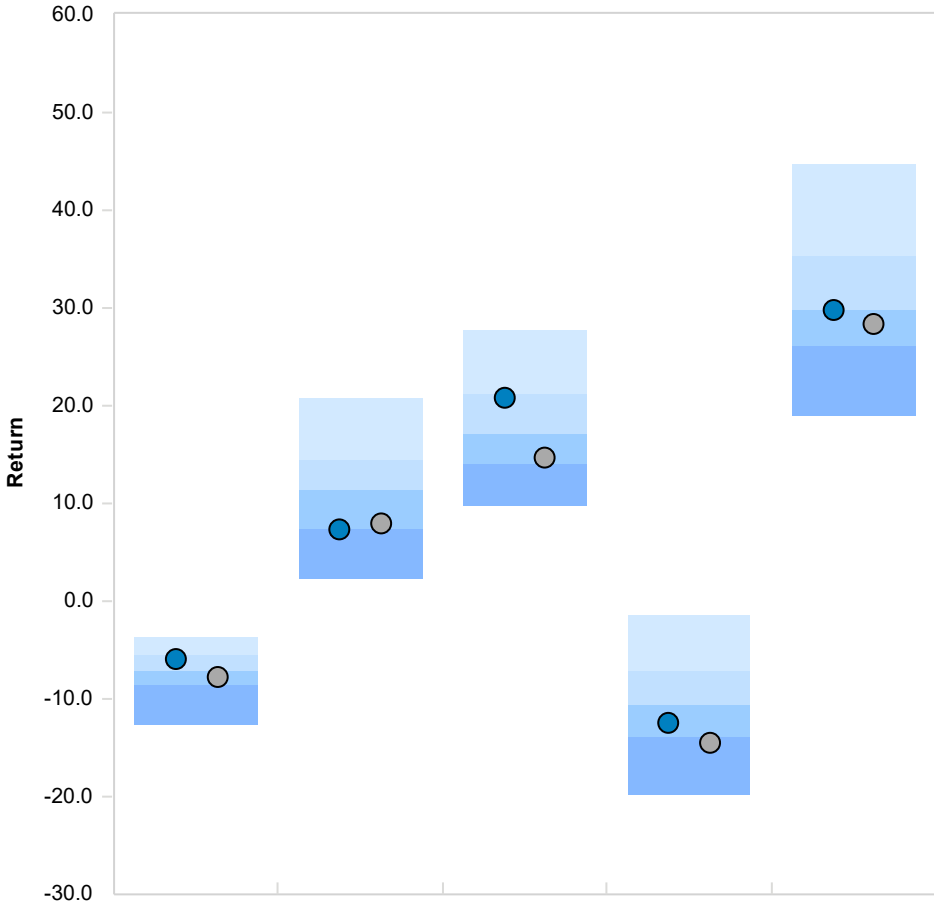
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	11 (55%)	7 (35%)	1 (5%)
Index	20	0 (0%)	1 (5%)	5 (25%)	14 (70%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.86 (35)	-5.86 (35)	-5.83 (79)	8.32 (56)	3.52 (54)	3.73 (58)	16.22 (72)
● Index	-7.74 (61)	-7.74 (61)	-3.12 (61)	7.26 (69)	0.05 (90)	0.86 (90)	15.31 (81)
Median	-7.06	-7.06	-1.85	8.71	3.80	4.11	18.15

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



	2025	2024	2023	2022	2021
● Investment	-5.86 (35)	7.35 (75)	20.80 (27)	-12.53 (70)	29.83 (50)
● Index	-7.74 (61)	8.05 (73)	14.65 (73)	-14.48 (80)	28.27 (58)
Median	-7.06	11.44	17.23	-10.61	29.80

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-1.09 (70)	6.88 (80)	-5.38 (86)	7.32 (26)	12.52 (57)	-2.17 (50)
Index	-1.06 (70)	10.15 (25)	-3.64 (56)	2.90 (91)	15.26 (15)	-2.96 (59)
Median	-0.05	8.56	-3.36	5.19	12.94	-2.25

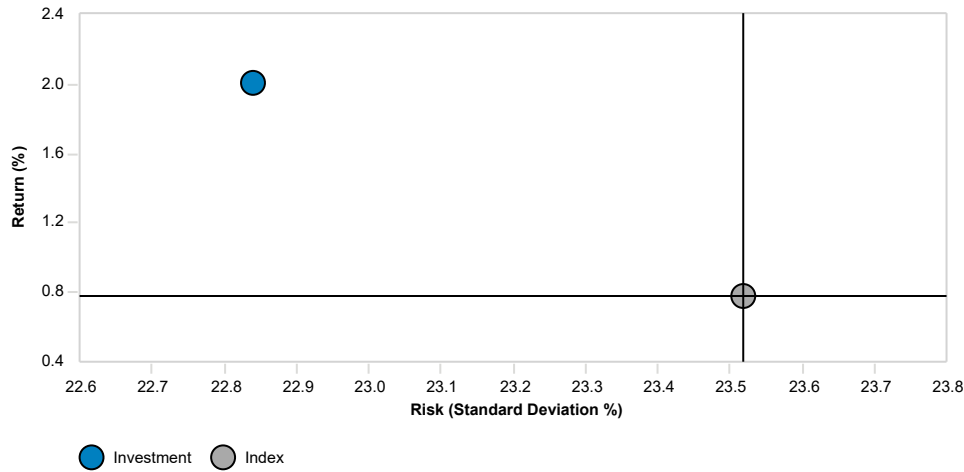
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.00	22.84	0.02	97.17	9	93.61	3
Index	0.78	23.52	-0.03	100.00	8	100.00	4

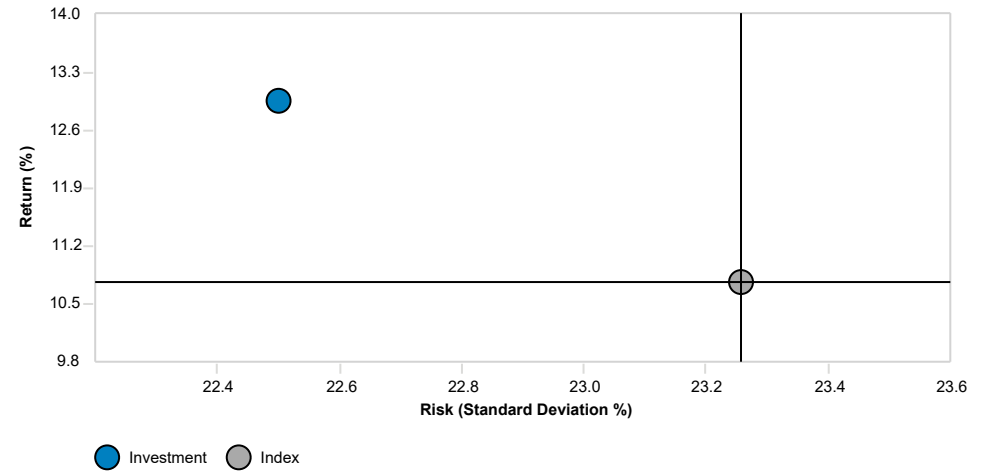
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	12.95	22.50	0.54	100.17	15	93.35	5
Index	10.78	23.26	0.45	100.00	14	100.00	6

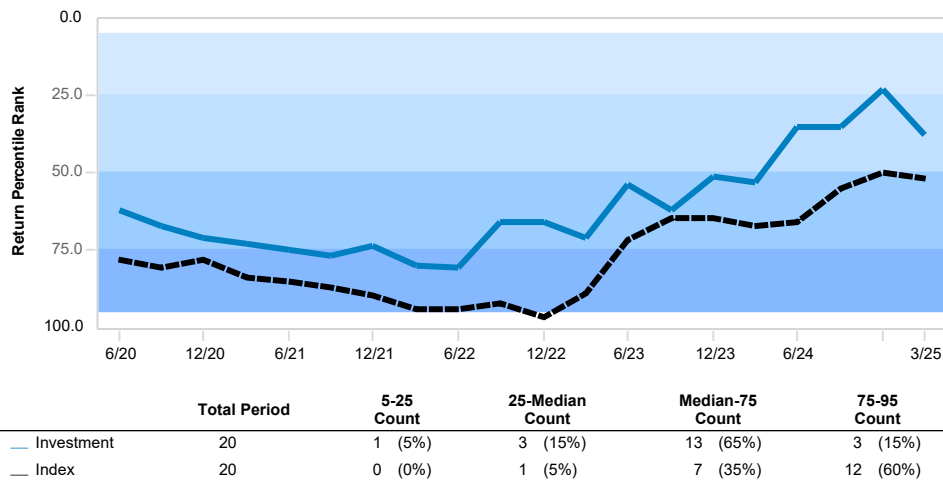
Risk and Return 3 Years



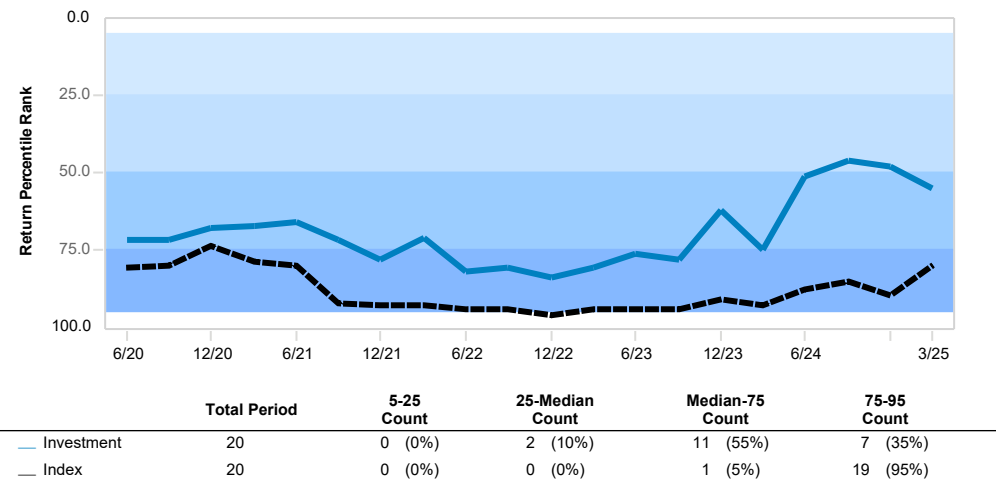
Risk and Return 5 Years



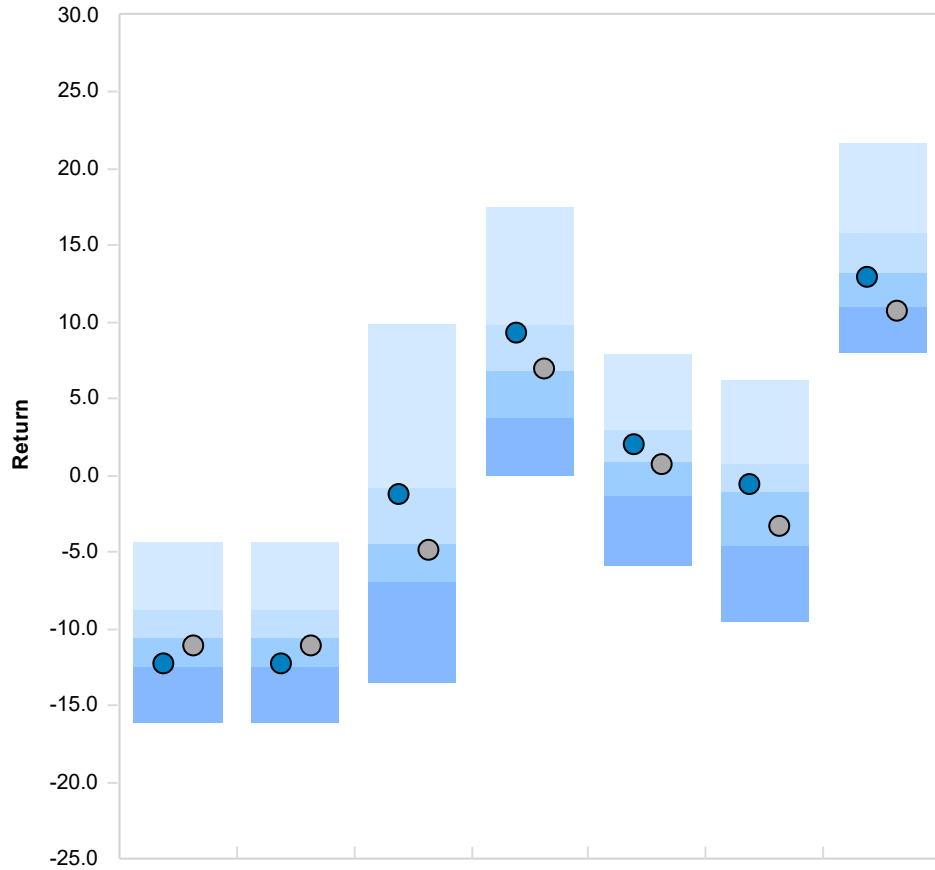
3 Year Rolling Percentile Rank IM U.S. Small Cap Growth Equity (SA+CF)



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

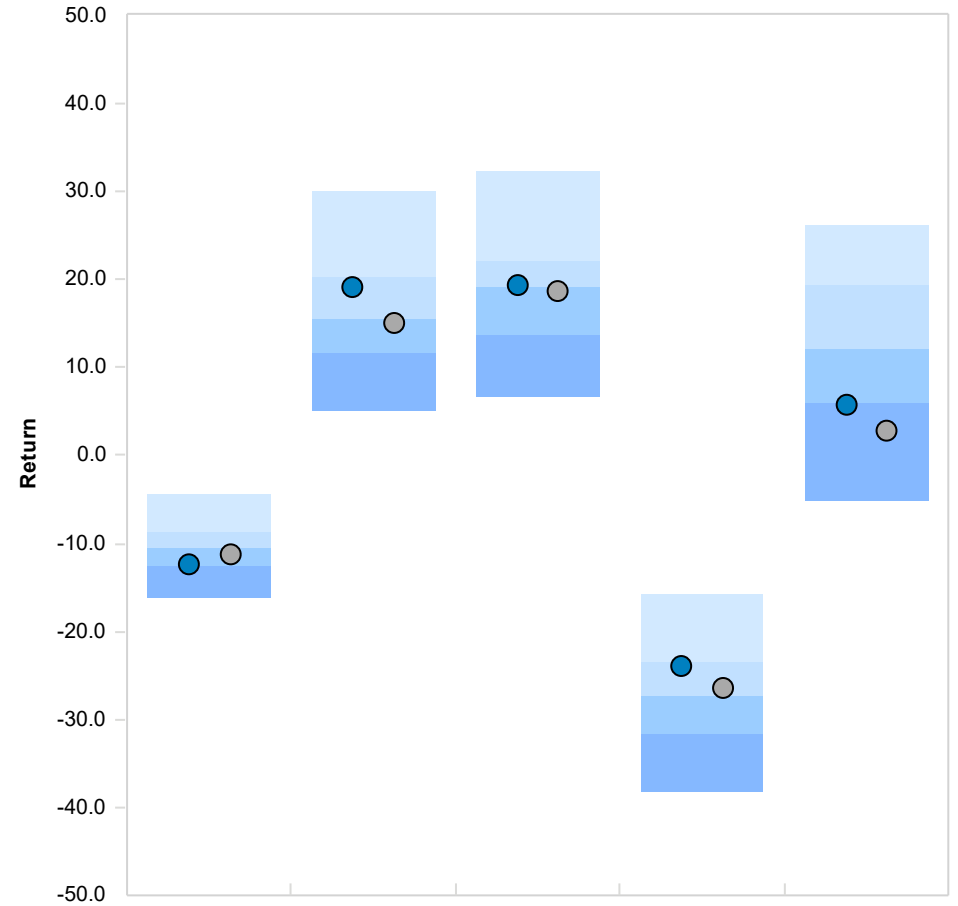


Peer Group Analysis - IM U.S. Small Cap Growth Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-12.30 (72)	-12.30 (72)	-1.16 (29)	9.32 (29)	2.00 (38)	-0.58 (44)	12.95 (55)
● Index	-11.12 (57)	-11.12 (57)	-4.86 (52)	7.00 (48)	0.78 (52)	-3.23 (69)	10.78 (80)
Median	-10.57	-10.57	-4.51	6.91	0.87	-1.06	13.23

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



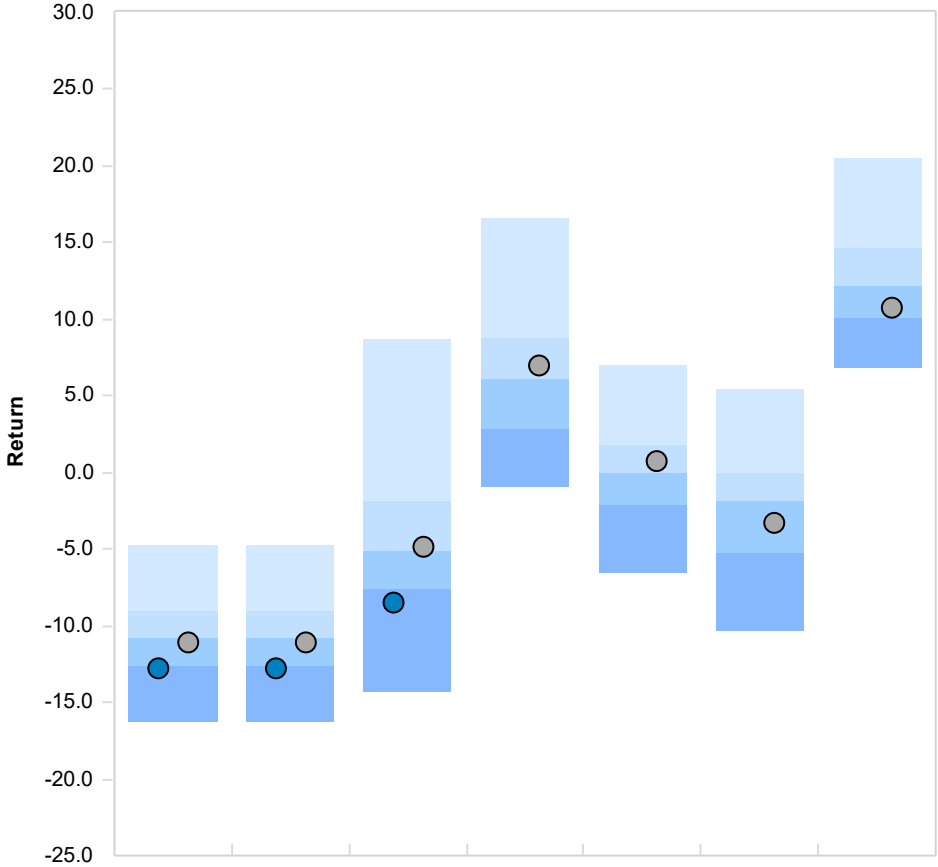
	2025	2024	2023	2022	2021
● Investment	-12.30 (72)	19.07 (31)	19.35 (45)	-23.91 (30)	5.74 (77)
● Index	-11.12 (57)	15.15 (54)	18.66 (52)	-26.36 (43)	2.83 (85)
Median	-10.57	15.64	19.07	-27.36	12.12

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	2.87 (37)	6.22 (75)	3.14 (6)	5.66 (69)	14.91 (11)	-8.50 (80)
Index	1.70 (49)	8.41 (38)	-2.92 (57)	7.58 (47)	12.75 (27)	-7.32 (68)
Median	1.49	7.63	-2.33	7.27	11.14	-6.38

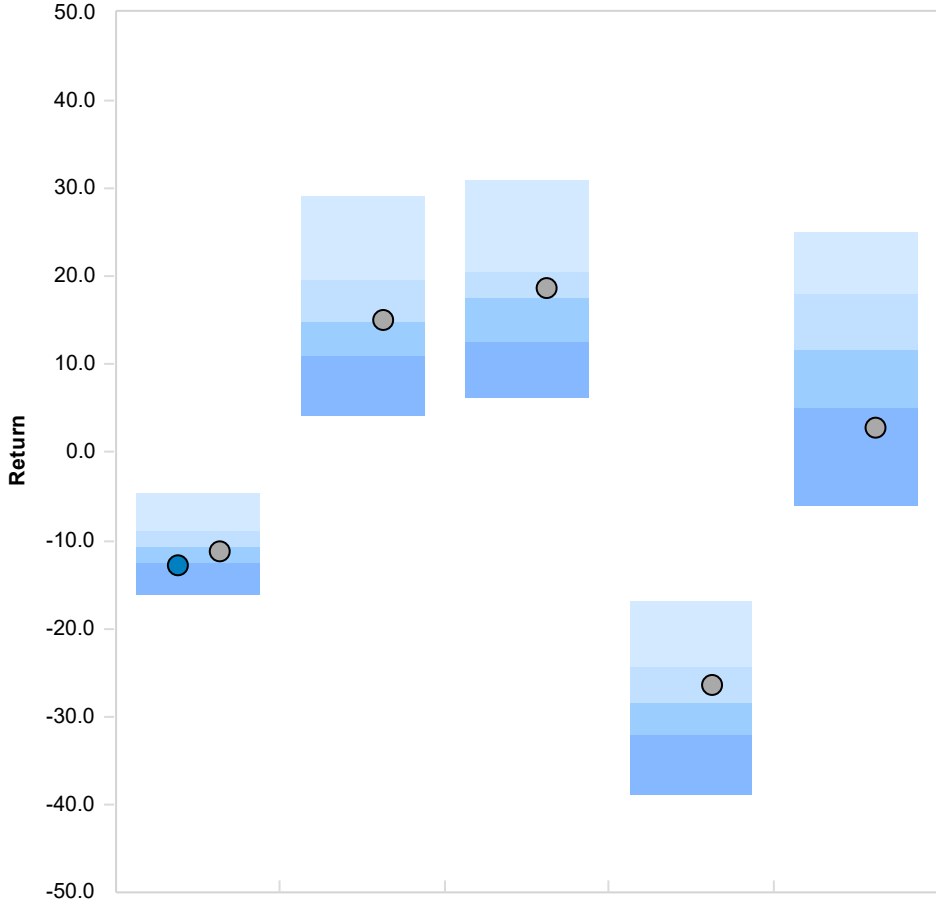
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Peer Group Analysis - IM U.S. Small Cap Growth Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-12.77 (77)	-12.77 (77)	-8.48 (80)	N/A	N/A	N/A	N/A
● Index	-11.12 (55)	-11.12 (55)	-4.86 (48)	7.00 (42)	0.78 (41)	-3.23 (63)	10.78 (69)
Median	-10.80	-10.80	-5.11	6.02	0.01	-1.88	12.21

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



	2025	2024	2023	2022	2021
● Investment	-12.77 (77)	N/A	N/A	N/A	N/A
● Index	-11.12 (55)	15.15 (48)	18.66 (42)	-26.36 (36)	2.83 (84)
Median	-10.80	14.88	17.56	-28.42	11.62

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	2.63 (36)	9.27 (25)	-6.45 (88)	N/A	N/A	N/A
Index	1.70 (44)	8.41 (37)	-2.92 (54)	7.58 (45)	12.75 (20)	-7.32 (65)
Median	1.24	7.52	-2.56	7.06	10.83	-6.73

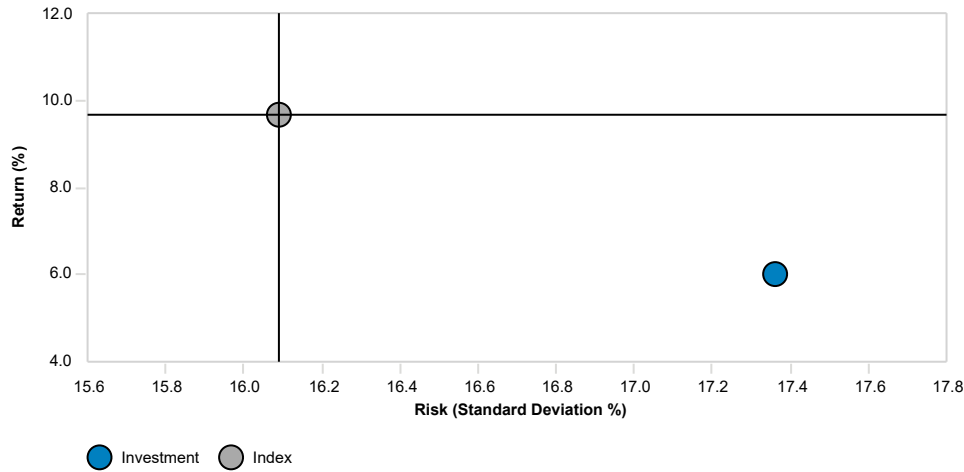
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.00	17.36	0.19	97.80	7	114.53	5
Index	9.69	16.09	0.40	100.00	9	100.00	3

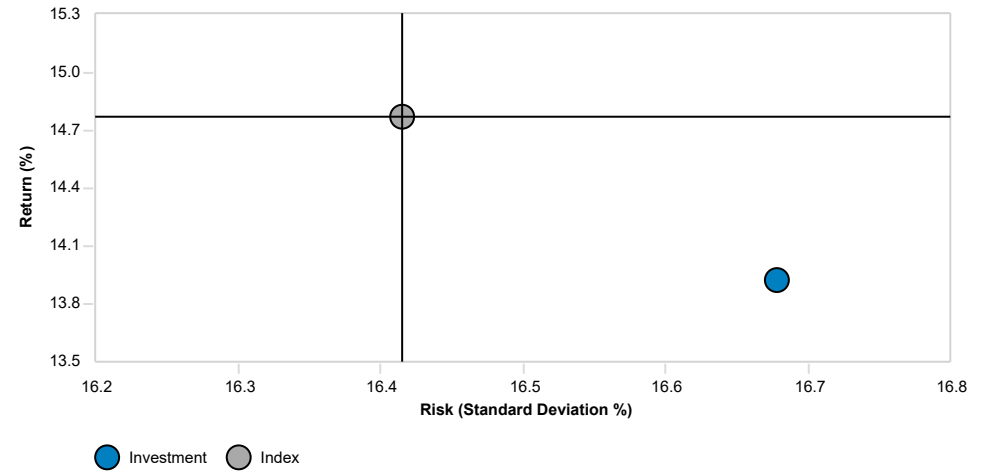
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	13.93	16.68	0.72	99.95	13	104.49	7
Index	14.77	16.42	0.77	100.00	16	100.00	4

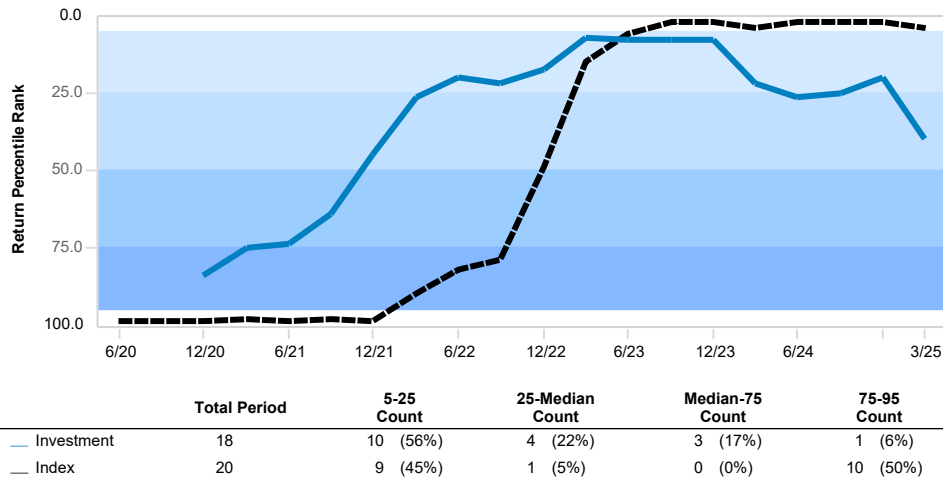
Risk and Return 3 Years



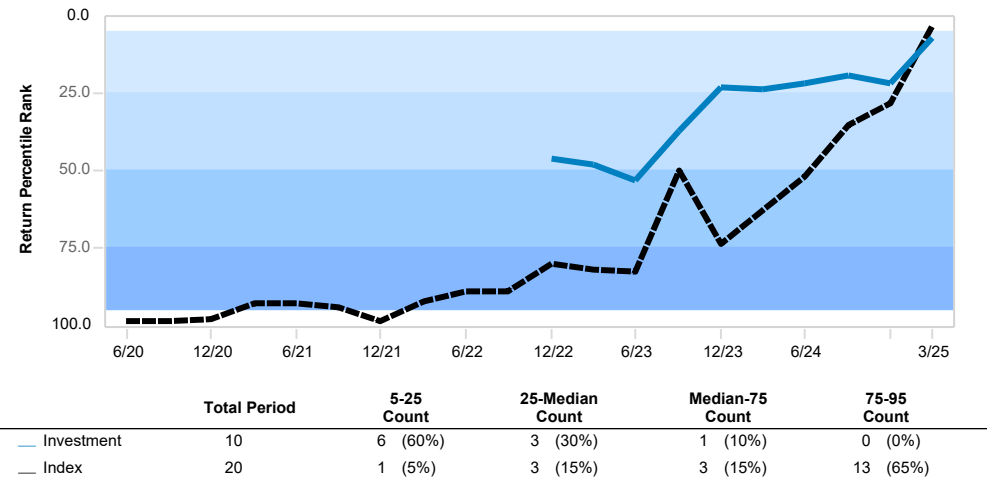
Risk and Return 5 Years



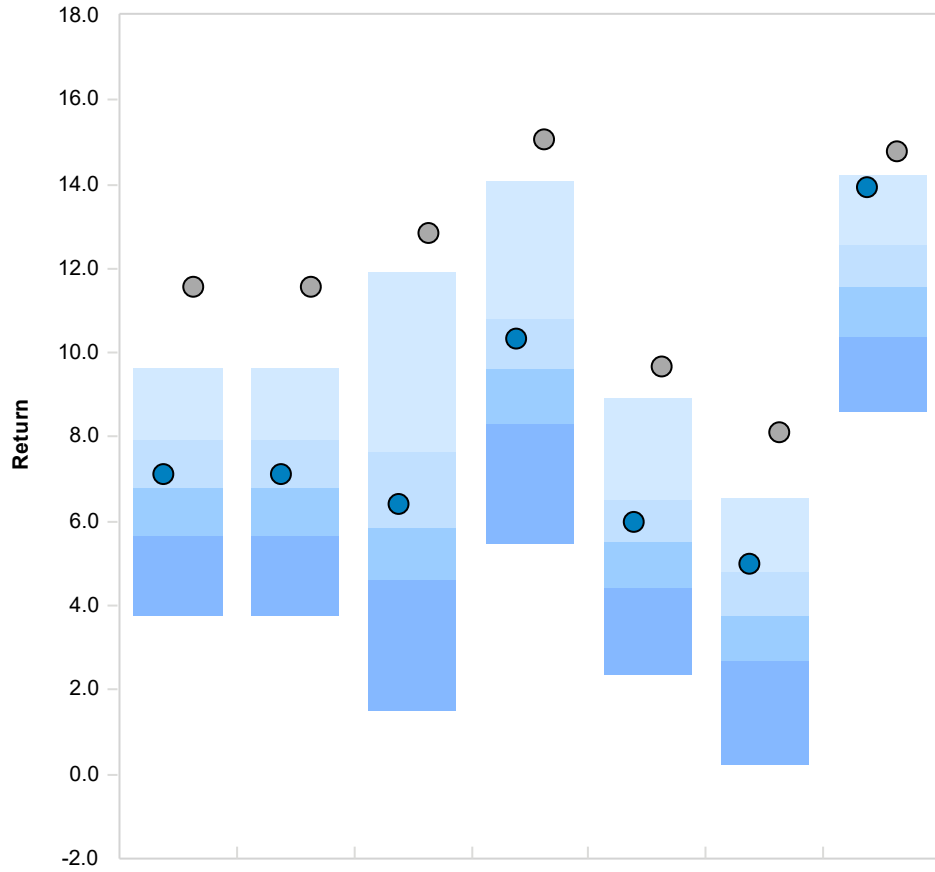
3 Year Rolling Percentile Rank Foreign Large Blend



5 Year Rolling Percentile Rank Foreign Large Blend

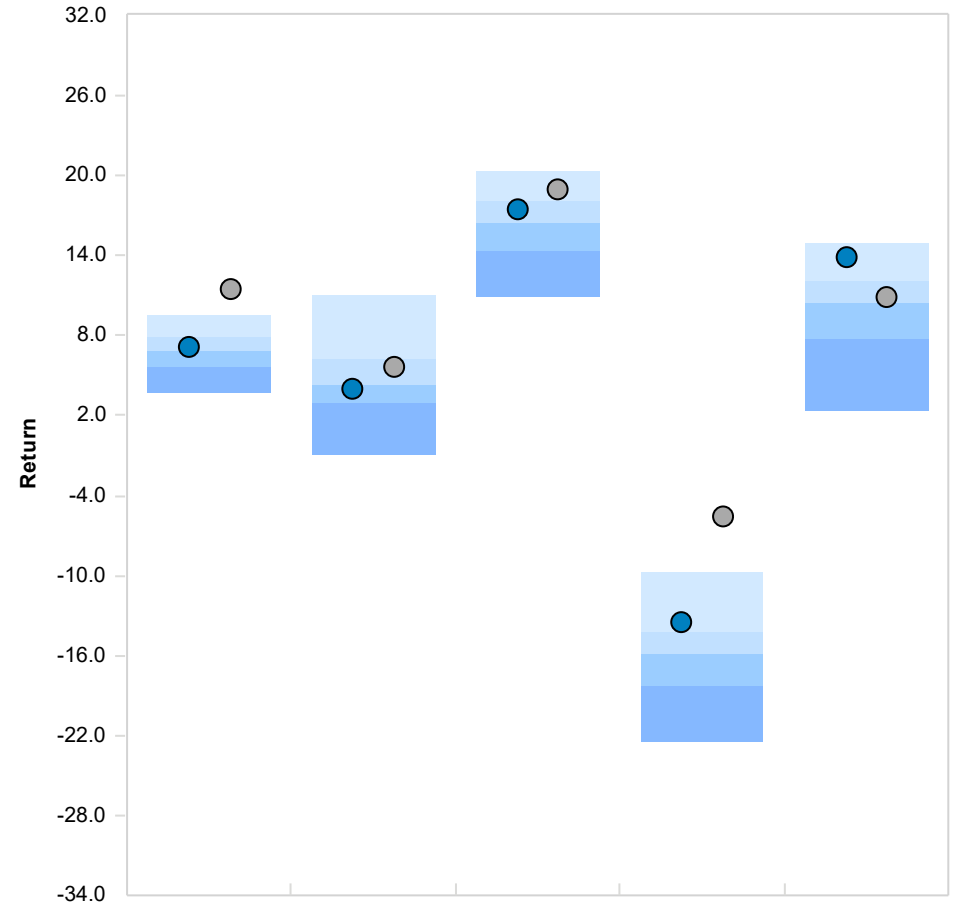


Peer Group Analysis - Foreign Large Blend



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	7.11 (43)	7.11 (43)	6.42 (38)	10.33 (33)	6.00 (40)	5.00 (20)	13.93 (7)
● Index	11.56 (1)	11.56 (1)	12.85 (3)	15.06 (2)	9.69 (4)	8.12 (2)	14.77 (3)
Median	6.82	6.82	5.83	9.63	5.54	3.78	11.59

Peer Group Analysis - Foreign Large Blend



	2025	2024	2023	2022	2021
● Investment	7.11 (43)	3.99 (55)	17.49 (35)	-13.48 (16)	13.87 (9)
● Index	11.56 (1)	5.68 (30)	18.95 (16)	-5.58 (1)	10.89 (43)
Median	6.82	4.30	16.39	-15.85	10.43

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-7.41 (44)	7.81 (34)	-0.47 (75)	4.67 (67)	10.31 (43)	-2.94 (9)
Index	-7.12 (31)	8.89 (12)	0.01 (51)	4.48 (72)	8.22 (89)	0.59 (1)
Median	-7.54	7.14	0.07	5.30	10.03	-4.75

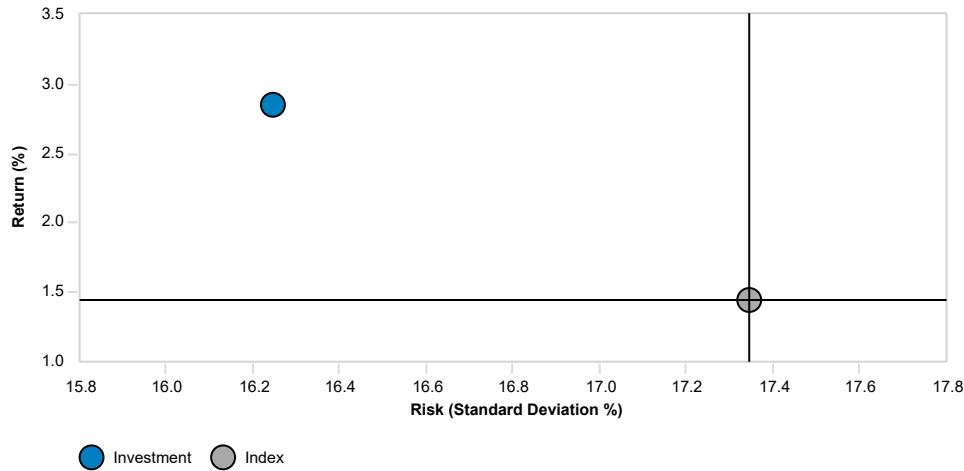
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.85	16.25	0.00	92.77	8	86.11	4
Index	1.44	17.35	-0.07	100.00	8	100.00	4

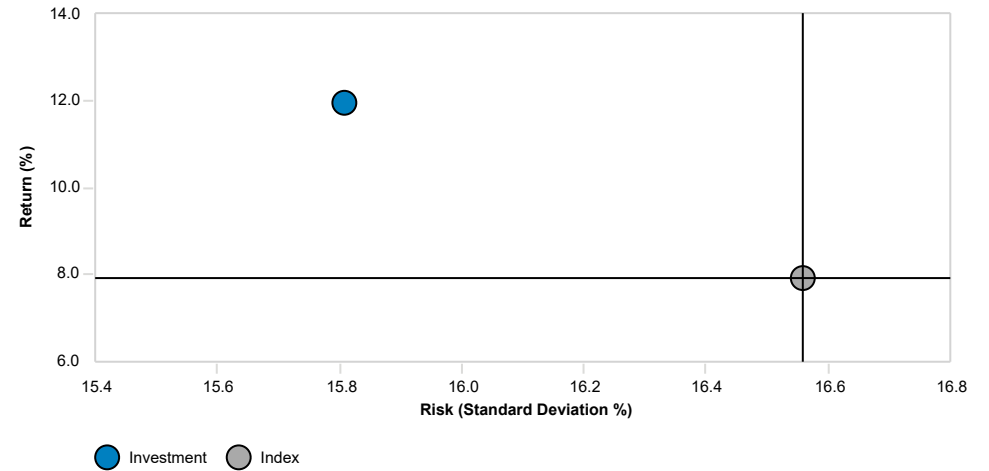
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	11.97	15.81	0.63	99.53	14	79.16	6
Index	7.94	16.56	0.39	100.00	13	100.00	7

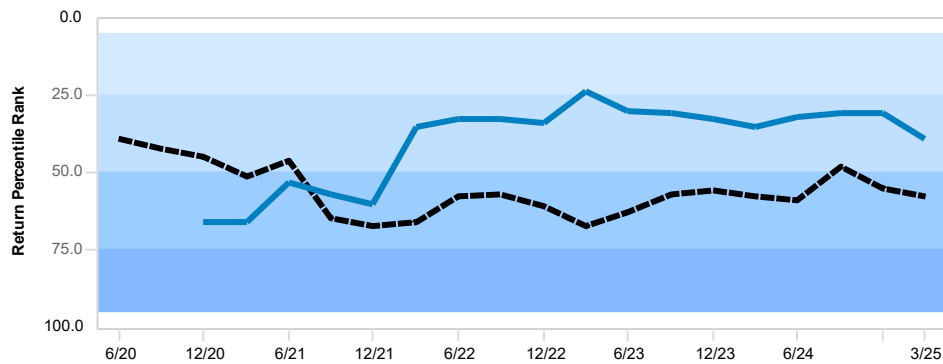
Risk and Return 3 Years



Risk and Return 5 Years

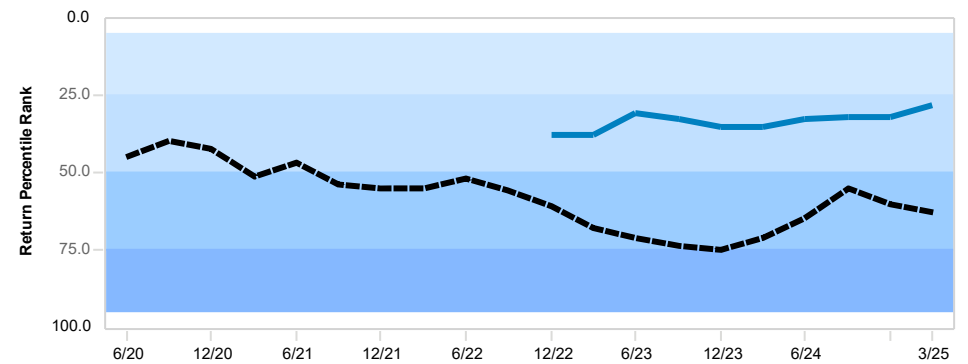


3 Year Rolling Percentile Rank IM Emerging Markets Equity (SA+CF)



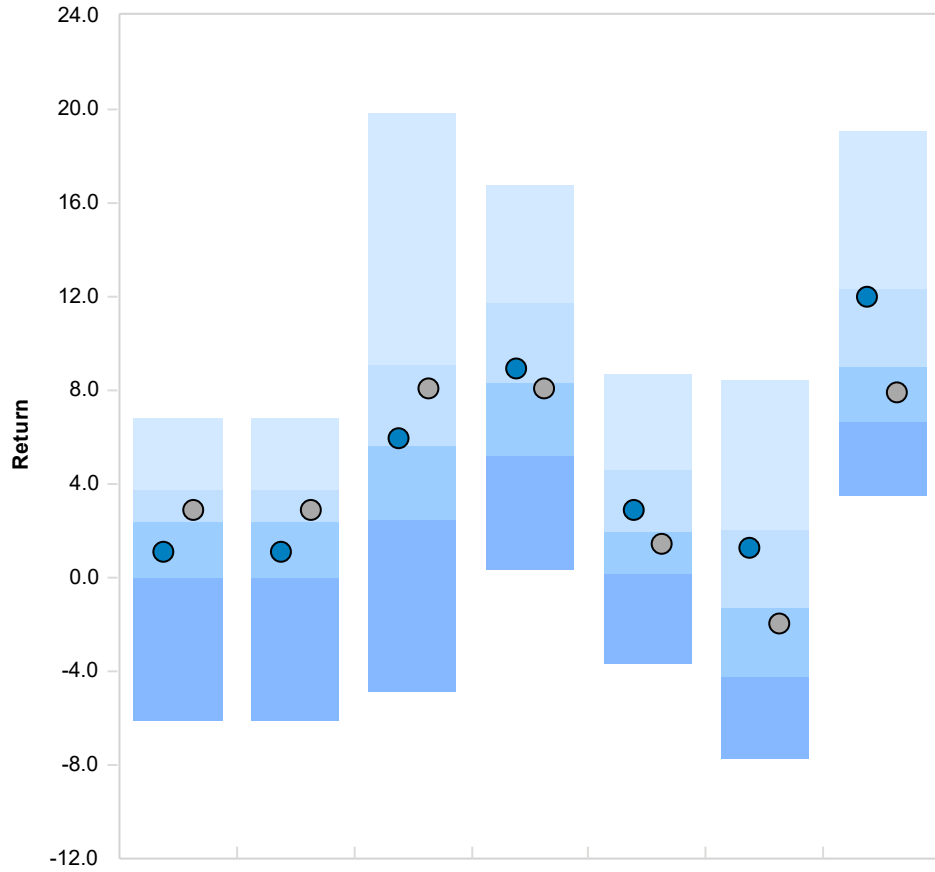
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	18	1 (6%)	12 (67%)	5 (28%)	0 (0%)
Index	20	0 (0%)	5 (25%)	15 (75%)	0 (0%)

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



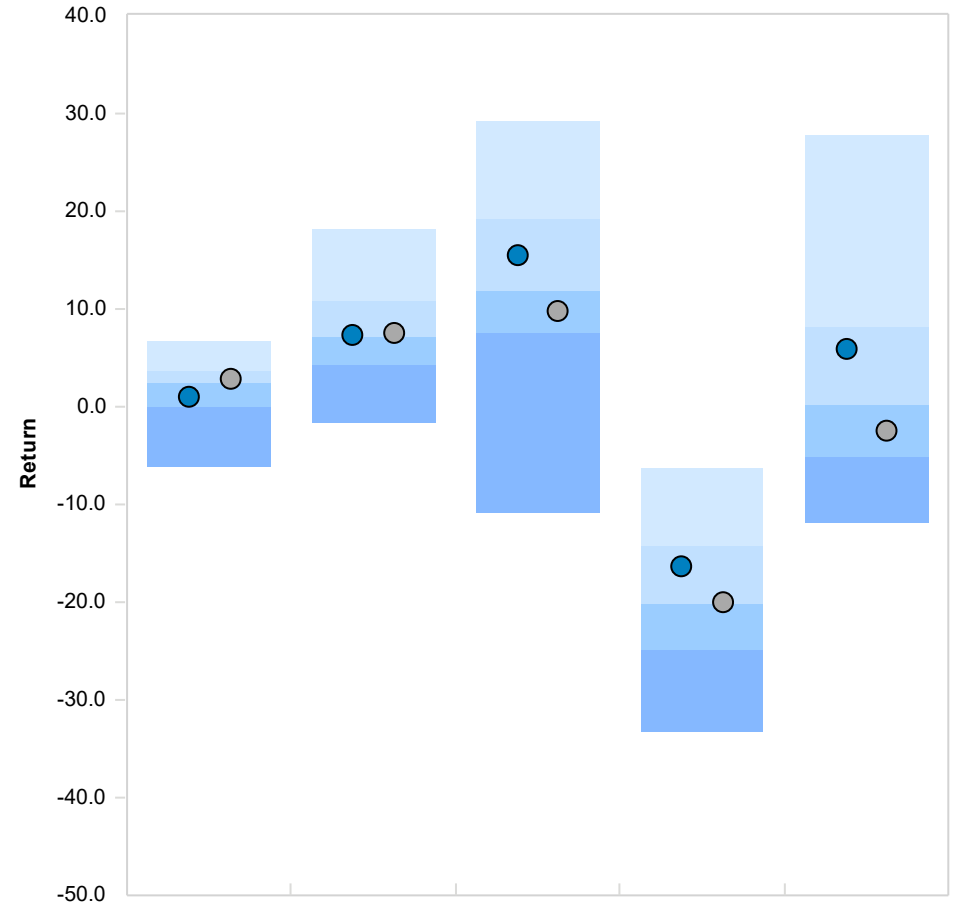
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	10	0 (0%)	10 (100%)	0 (0%)	0 (0%)
Index	20	0 (0%)	4 (20%)	16 (80%)	0 (0%)

Peer Group Analysis - IM Emerging Markets Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	1.09 (63)	1.09 (63)	5.96 (46)	8.91 (47)	2.85 (39)	1.28 (31)	11.97 (28)
● Index	2.93 (40)	2.93 (40)	8.09 (32)	8.12 (52)	1.44 (58)	-1.92 (56)	7.94 (63)
Median	2.38	2.38	5.58	8.32	1.94	-1.26	9.00

Peer Group Analysis - IM Emerging Markets Equity (SA+CF)



	2025	2024	2023	2022	2021
● Investment	1.09 (63)	7.32 (49)	15.45 (38)	-16.40 (33)	5.83 (31)
● Index	2.93 (40)	7.50 (47)	9.83 (65)	-20.09 (49)	-2.54 (63)
Median	2.38	7.22	11.93	-20.22	0.30

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-6.87 (49)	6.62 (53)	5.57 (33)	2.38 (58)	7.86 (55)	-1.52 (34)
Index	-8.01 (74)	8.72 (28)	5.00 (42)	2.37 (59)	7.86 (55)	-2.93 (46)
Median	-6.95	6.88	4.47	3.22	8.08	-3.36

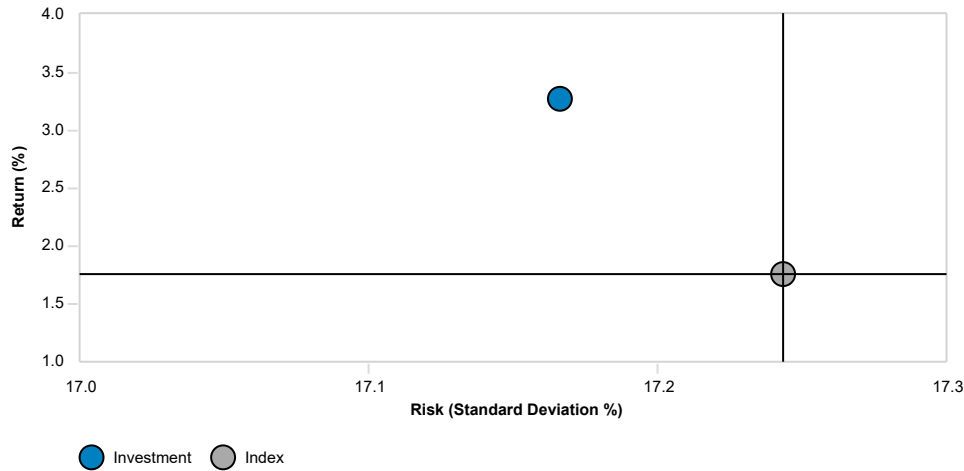
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.28	17.17	0.03	101.94	7	95.67	5
Index	1.75	17.24	-0.05	100.00	8	100.00	4

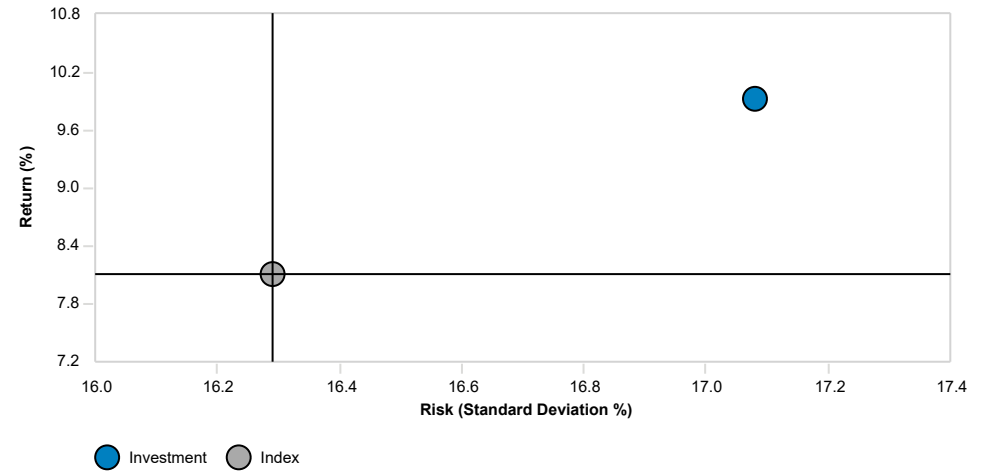
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	9.93	17.08	0.49	105.27	11	98.00	9
Index	8.11	16.29	0.41	100.00	13	100.00	7

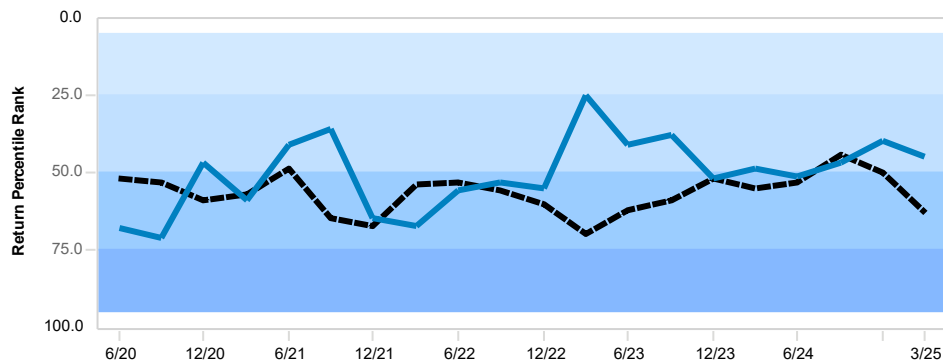
Risk and Return 3 Years



Risk and Return 5 Years

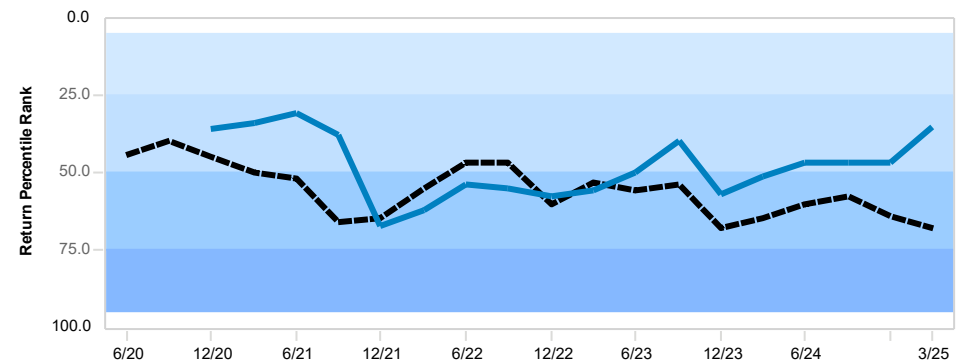


3 Year Rolling Percentile Rank Foreign Large Growth



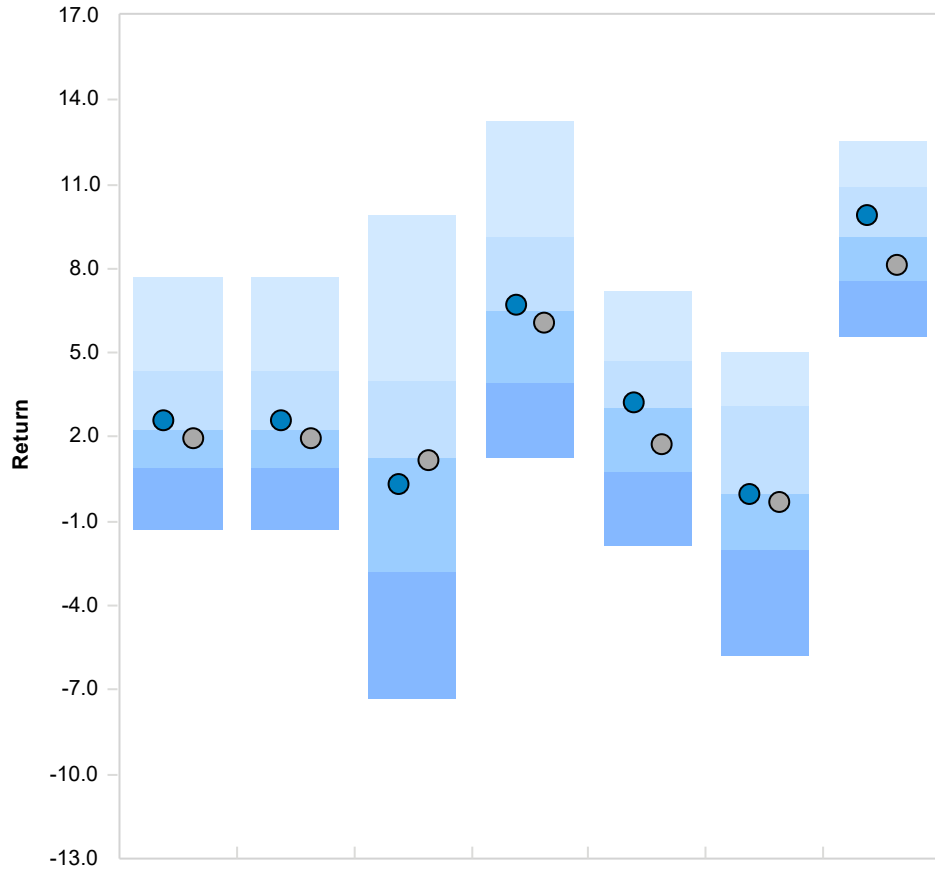
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	9 (45%)	10 (50%)	0 (0%)
Index	20	0 (0%)	3 (15%)	17 (85%)	0 (0%)

5 Year Rolling Percentile Rank Foreign Large Growth



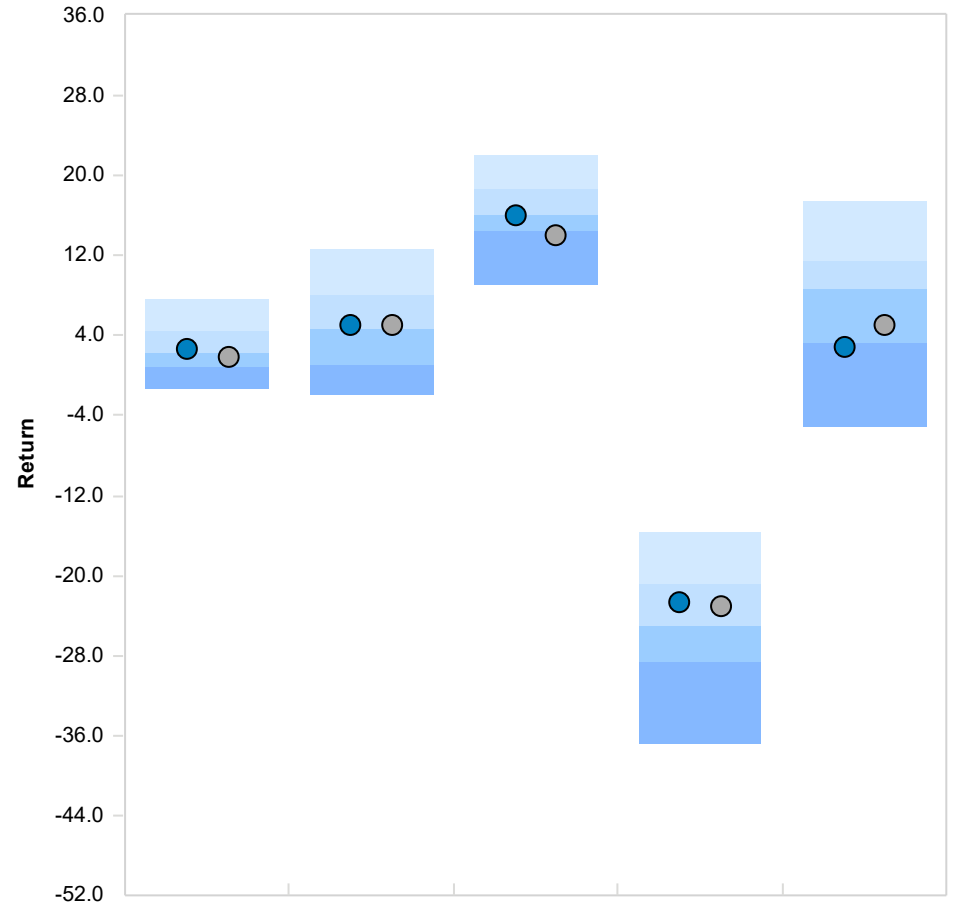
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	18	0 (0%)	10 (56%)	8 (44%)	0 (0%)
Index	20	0 (0%)	6 (30%)	14 (70%)	0 (0%)

Peer Group Analysis - Foreign Large Growth



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.62 (43)	2.62 (43)	0.34 (56)	6.71 (46)	3.28 (45)	-0.04 (51)	9.93 (35)
● Index	1.96 (56)	1.96 (56)	1.15 (51)	6.06 (56)	1.75 (63)	-0.29 (53)	8.11 (68)
Median	2.26	2.26	1.23	6.52	3.03	-0.04	9.13

Peer Group Analysis - Foreign Large Growth



	2025	2024	2023	2022	2021
● Investment	2.62 (43)	5.04 (45)	16.05 (50)	-22.72 (34)	2.84 (78)
● Index	1.96 (56)	5.07 (45)	14.03 (80)	-23.05 (37)	5.09 (70)
Median	2.26	4.68	15.97	-25.00	8.70

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-7.03 (37)	5.41 (59)	-0.23 (51)	7.44 (37)	10.37 (81)	-6.33 (18)
Index	-7.88 (60)	6.92 (34)	0.72 (27)	5.91 (57)	11.12 (61)	-7.31 (36)
Median	-7.51	6.06	-0.18	6.69	11.76	-7.91

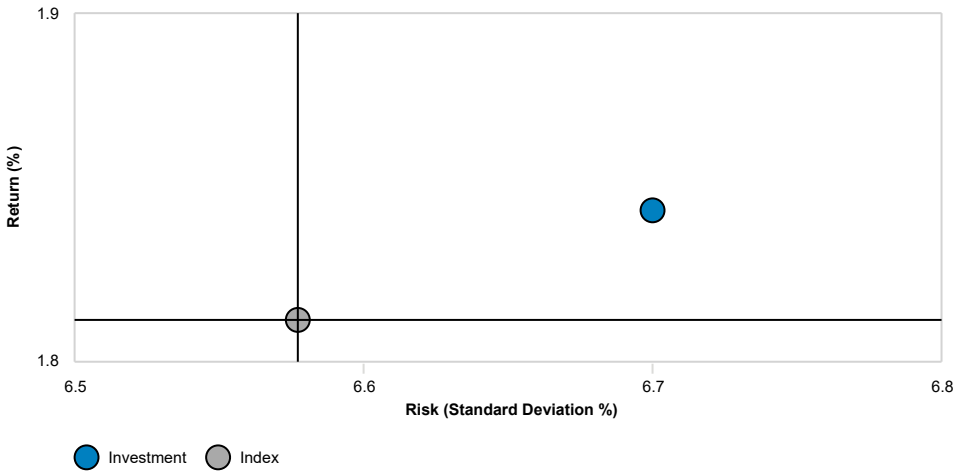
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.84	6.70	-0.32	100.98	6	100.76	6
Index	1.81	6.58	-0.33	100.00	6	100.00	6

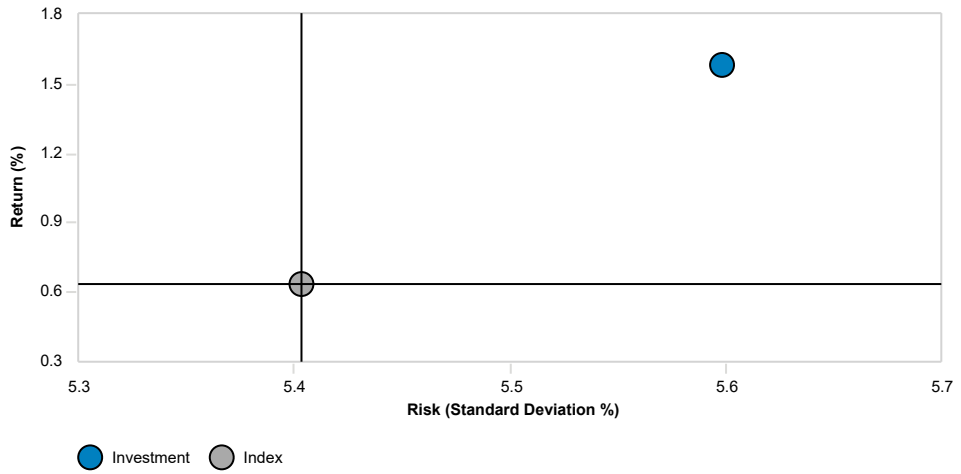
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.58	5.60	-0.14	109.23	11	96.33	9
Index	0.64	5.40	-0.33	100.00	11	100.00	9

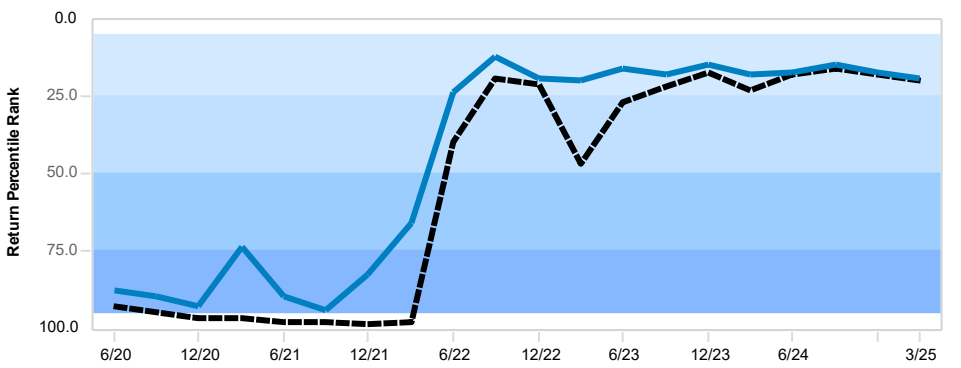
Risk and Return 3 Years



Risk and Return 5 Years

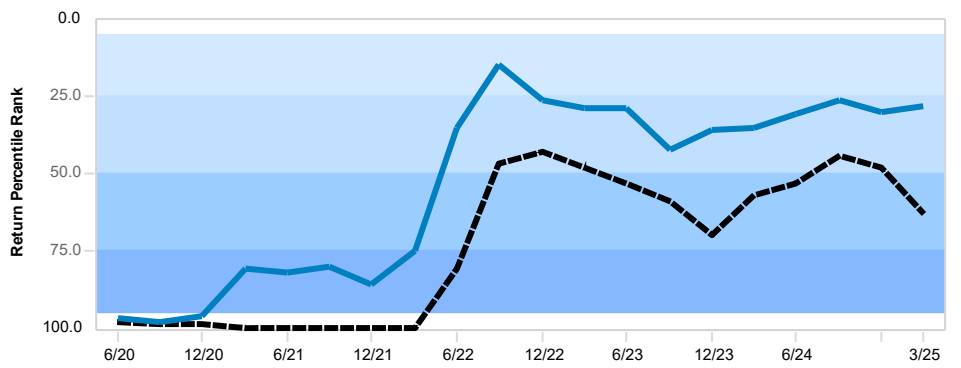


3 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)



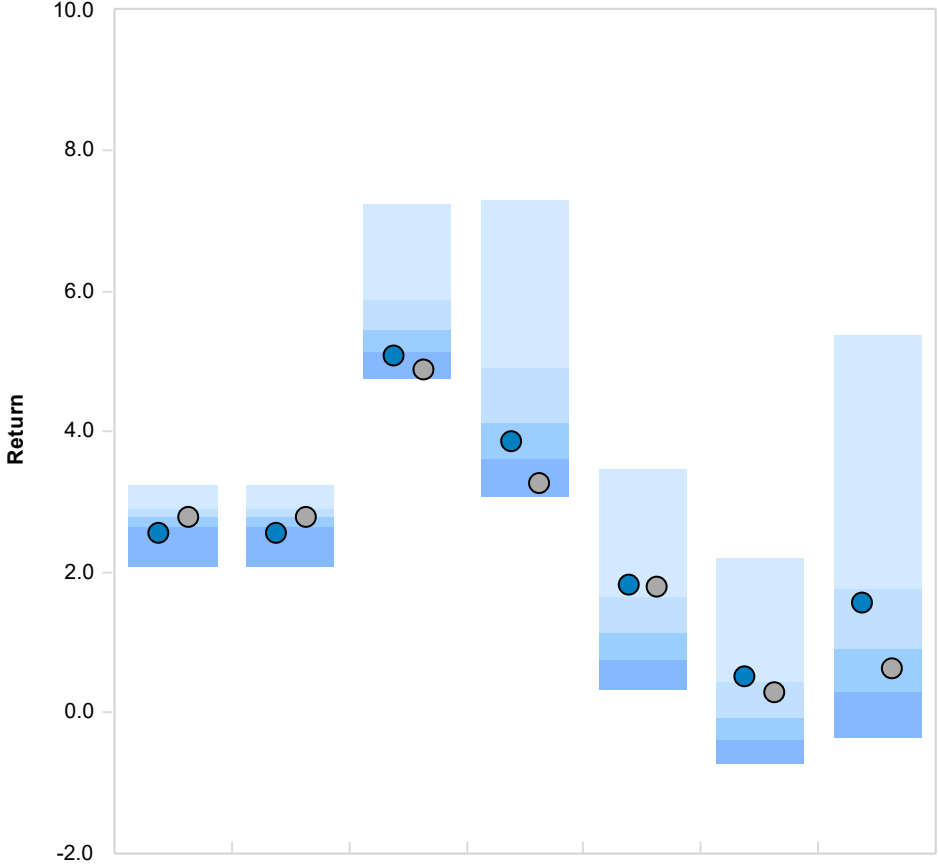
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	12 (60%)	0 (0%)	2 (10%)	6 (30%)
Index	20	9 (45%)	3 (15%)	0 (0%)	8 (40%)

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



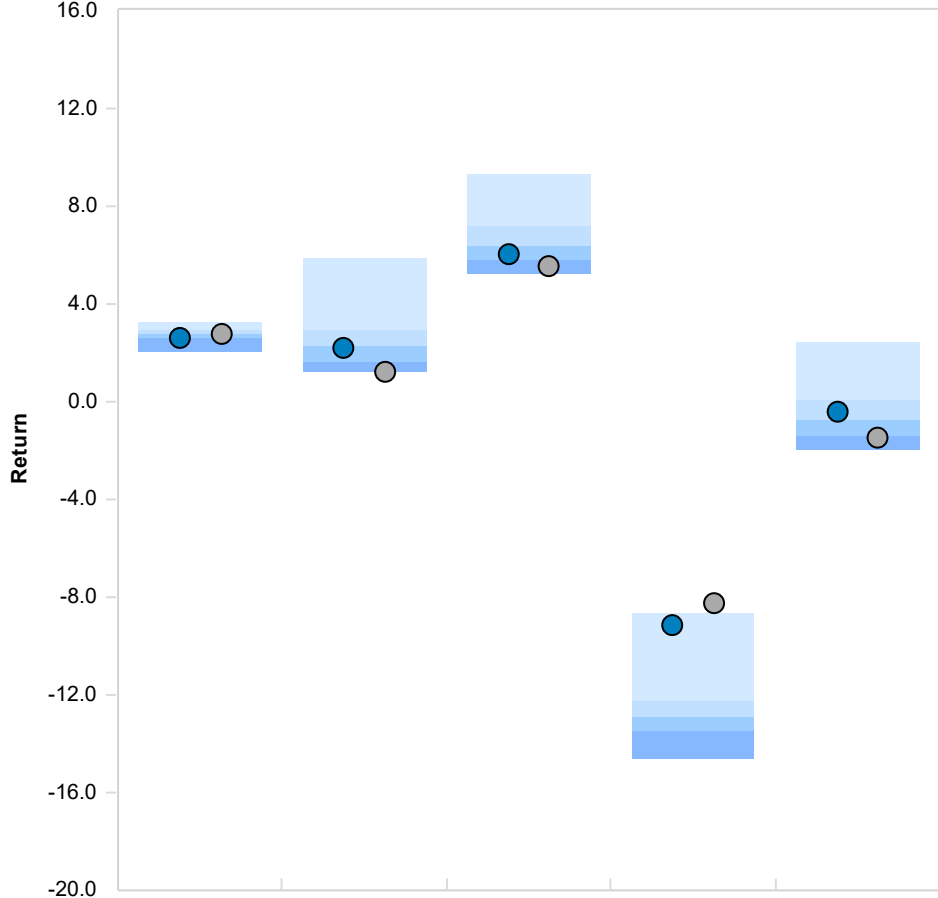
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	11 (55%)	1 (5%)	7 (35%)
Index	20	0 (0%)	5 (25%)	6 (30%)	9 (45%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.58 (80)	2.58 (80)	5.09 (80)	3.87 (62)	1.84 (19)	0.52 (24)	1.58 (28)
● Index	2.78 (52)	2.78 (52)	4.88 (93)	3.28 (92)	1.81 (20)	0.30 (31)	0.64 (63)
Median	2.79	2.79	5.46	4.12	1.14	-0.07	0.93

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



	2025	2024	2023	2022	2021
● Investment	2.58 (80)	2.20 (56)	6.04 (67)	-9.17 (7)	-0.40 (39)
● Index	2.78 (52)	1.25 (94)	5.53 (89)	-8.24 (5)	-1.44 (76)
Median	2.79	2.32	6.38	-12.93	-0.73

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-2.95 (57)	5.34 (37)	0.21 (71)	-0.24 (46)	6.69 (74)	-3.40 (86)
Index	-3.06 (78)	5.20 (66)	0.07 (95)	-0.78 (93)	6.82 (60)	-3.23 (77)
Median	-2.89	5.27	0.32	-0.31	6.92	-3.00

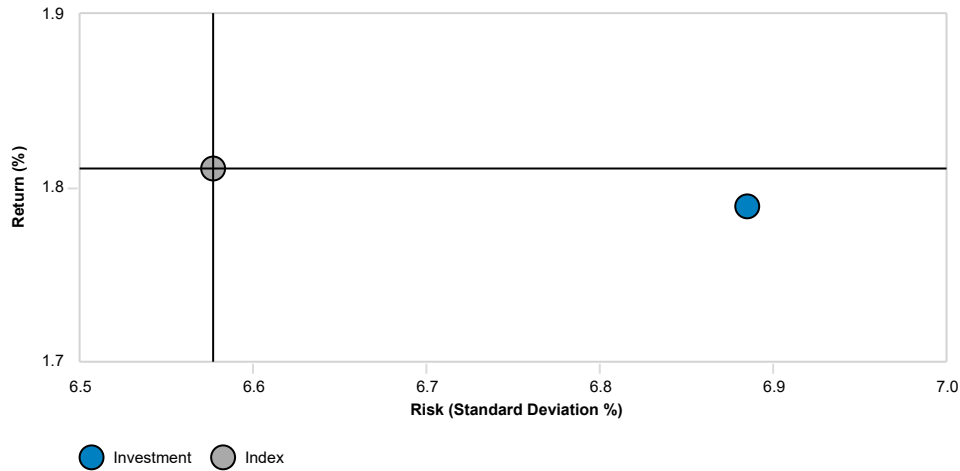
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.79	6.89	-0.31	104.57	6	105.67	6
Index	1.81	6.58	-0.33	100.00	6	100.00	6

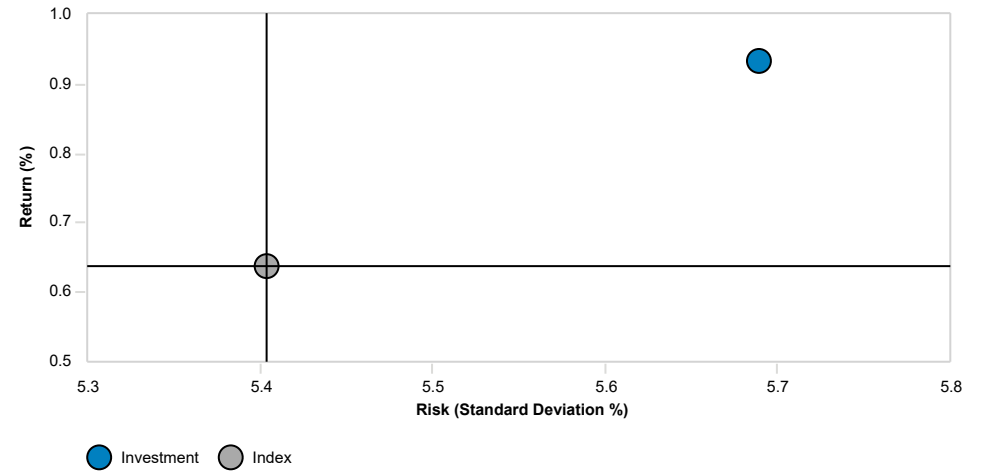
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.93	5.69	-0.26	107.84	10	104.20	10
Index	0.64	5.40	-0.33	100.00	11	100.00	9

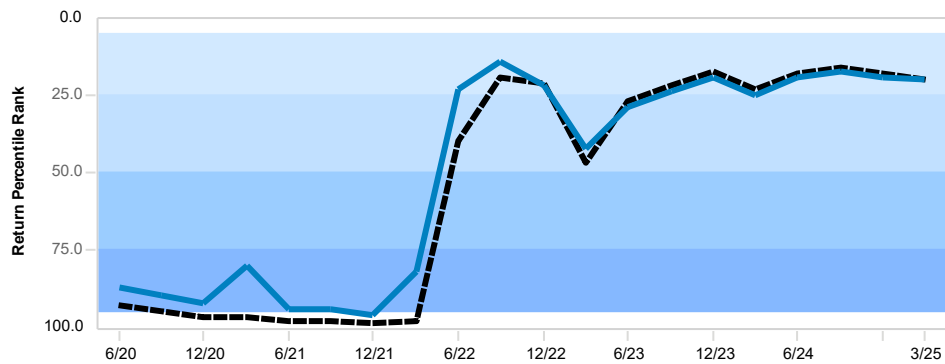
Risk and Return 3 Years



Risk and Return 5 Years

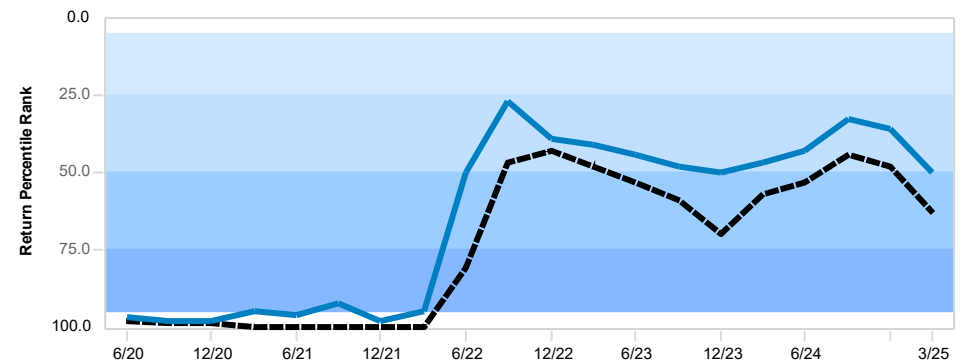


3 Year Rolling Percentile Rank IM U.S. Broad Market Fixed Income (SA+CF)



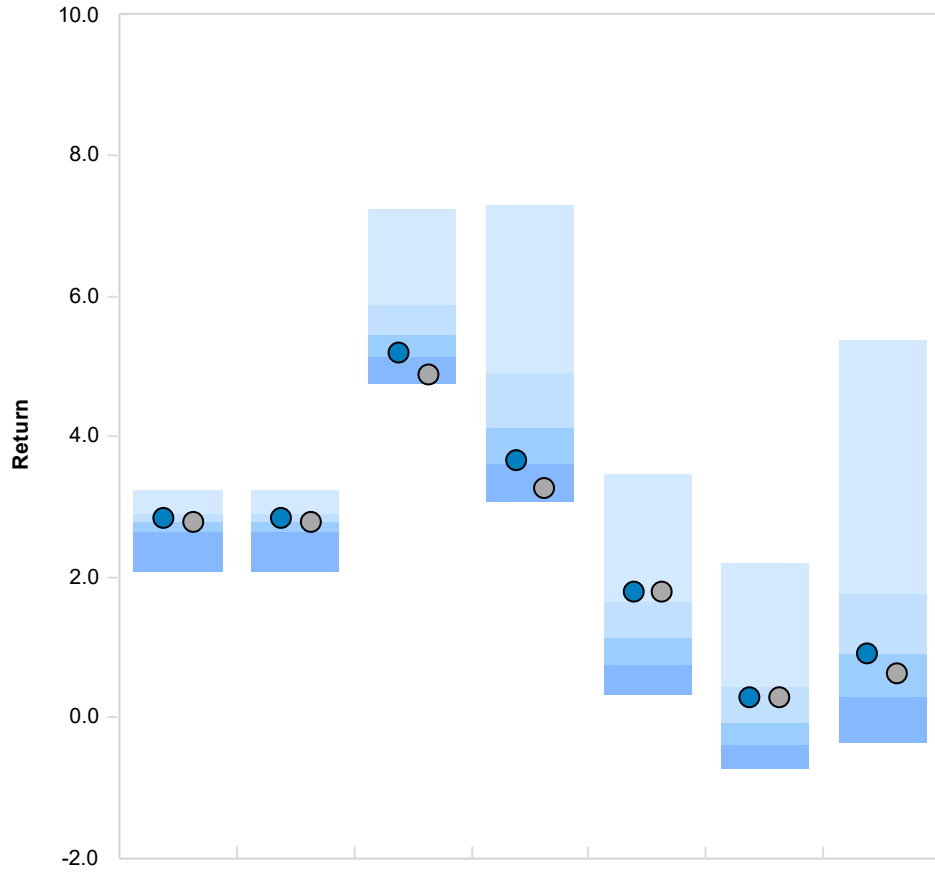
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	10 (50%)	2 (10%)	0 (0%)	8 (40%)
Index	20	9 (45%)	3 (15%)	0 (0%)	8 (40%)

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



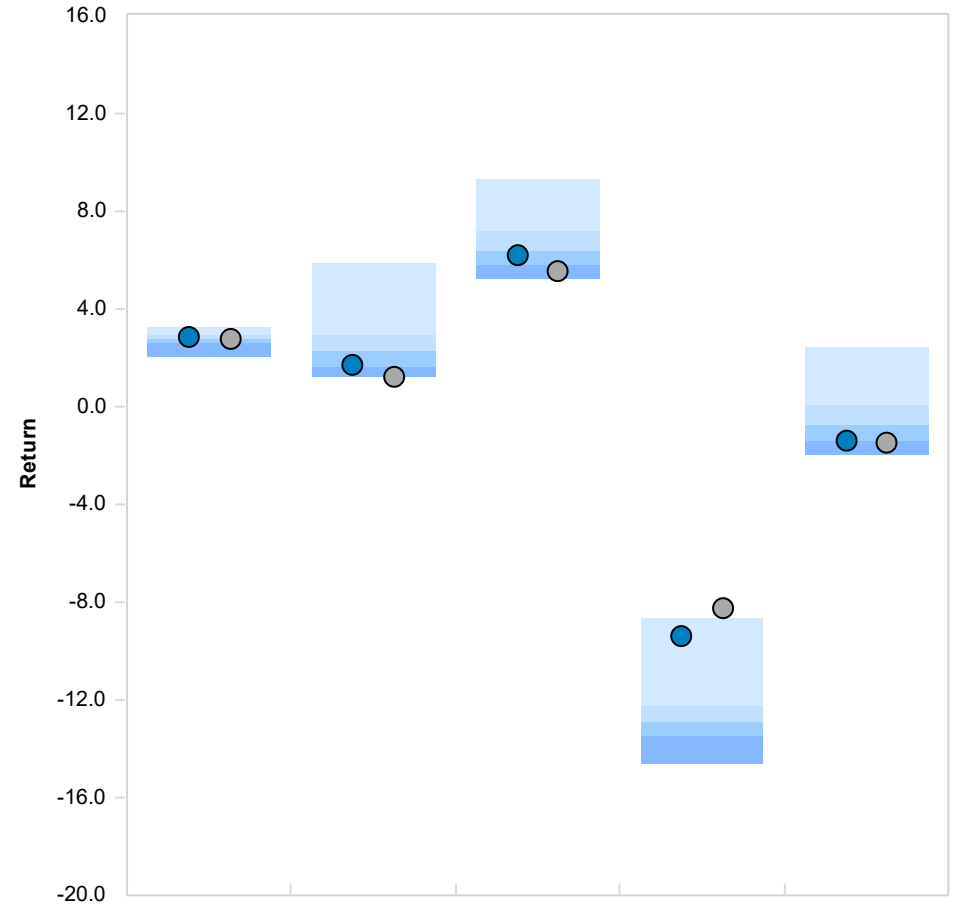
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	12 (60%)	0 (0%)	8 (40%)
Index	20	0 (0%)	5 (25%)	6 (30%)	9 (45%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.85 (34)	2.85 (34)	5.21 (70)	3.66 (72)	1.79 (20)	0.31 (30)	0.93 (50)
● Index	2.78 (52)	2.78 (52)	4.88 (93)	3.28 (92)	1.81 (20)	0.30 (31)	0.64 (63)
Median	2.79	2.79	5.46	4.12	1.14	-0.07	0.93

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



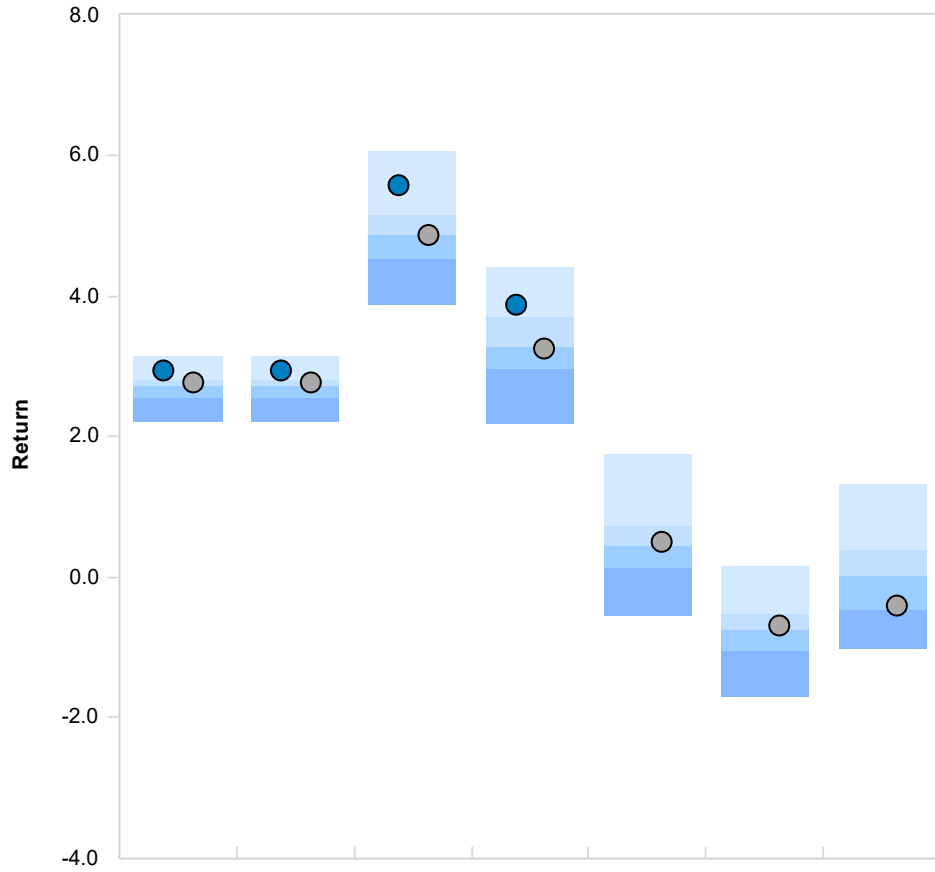
	2025	2024	2023	2022	2021
● Investment	2.85 (34)	1.69 (73)	6.23 (58)	-9.36 (7)	-1.38 (74)
● Index	2.78 (52)	1.25 (94)	5.53 (89)	-8.24 (5)	-1.44 (76)
Median	2.79	2.32	6.38	-12.93	-0.73

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-3.12 (88)	5.36 (34)	0.22 (69)	-0.59 (75)	6.85 (56)	-3.20 (71)
Index	-3.06 (78)	5.20 (66)	0.07 (95)	-0.78 (93)	6.82 (60)	-3.23 (77)
Median	-2.89	5.27	0.32	-0.31	6.92	-3.00

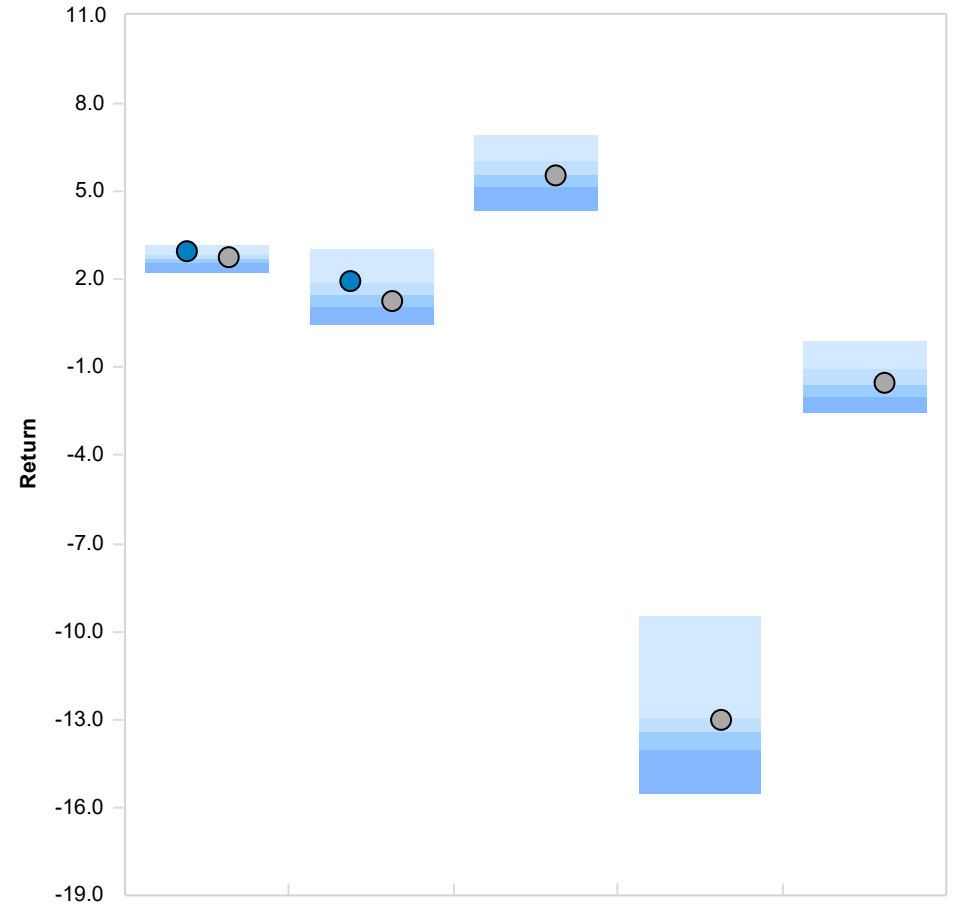
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Peer Group Analysis - Intermediate Core Bond



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.95 (13)	2.95 (13)	5.59 (11)	3.90 (18)	N/A	N/A	N/A
● Index	2.78 (33)	2.78 (33)	4.88 (52)	3.28 (51)	0.52 (42)	-0.67 (39)	-0.40 (72)
Median	2.72	2.72	4.89	3.29	0.44	-0.75	0.03

Peer Group Analysis - Intermediate Core Bond



	2025	2024	2023	2022	2021
● Investment	2.95 (13)	1.94 (25)	N/A	N/A	N/A
● Index	2.78 (33)	1.25 (66)	5.53 (56)	-13.01 (27)	-1.55 (49)
Median	2.72	1.48	5.58	-13.41	-1.57

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	-2.88 (27)	5.28 (23)	0.31 (20)	-0.61 (48)	6.85 (32)	-2.93 (22)
Index	-3.06 (50)	5.20 (37)	0.07 (78)	-0.78 (72)	6.82 (35)	-3.23 (61)
Median	-3.07	5.13	0.17	-0.63	6.69	-3.16

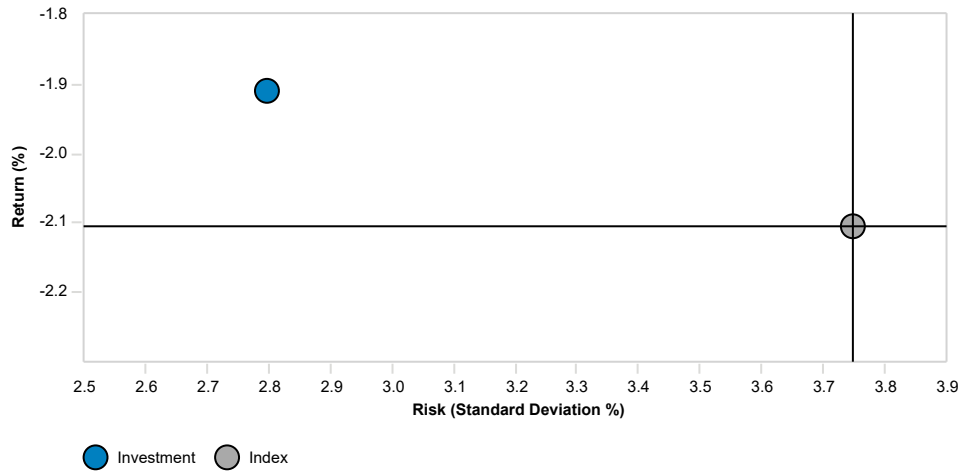
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.91	2.80	-1.78	2.83	6	45.19	6
Index	-2.11	3.75	-1.49	100.00	5	100.00	7

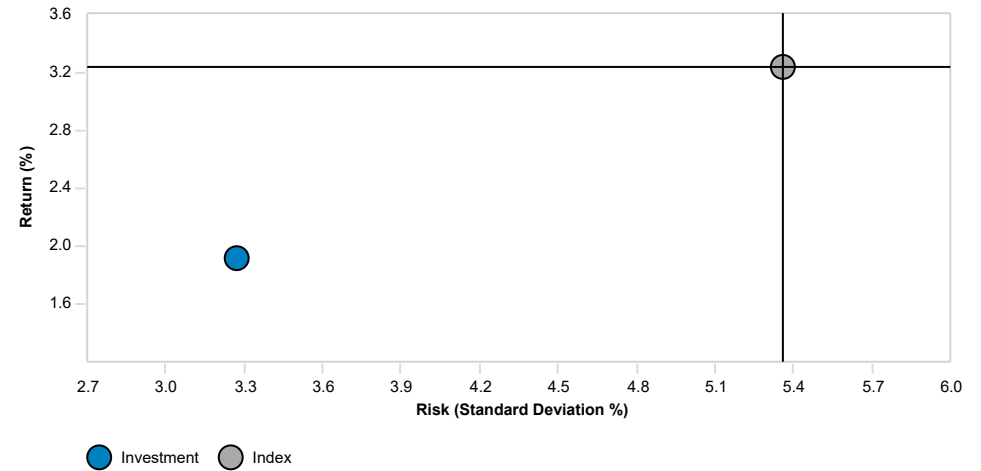
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	1.92	3.28	-0.13	43.94	14	26.33	6
Index	3.25	5.36	0.13	100.00	12	100.00	8

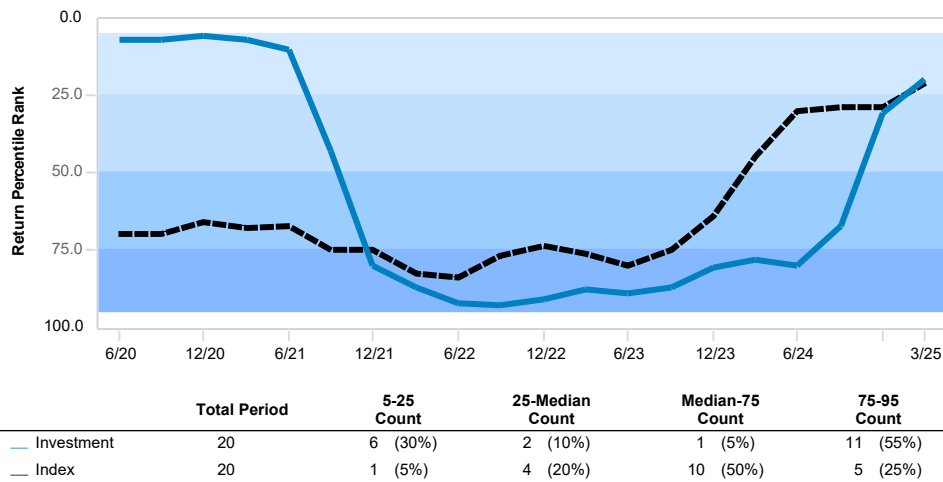
Risk and Return 3 Years



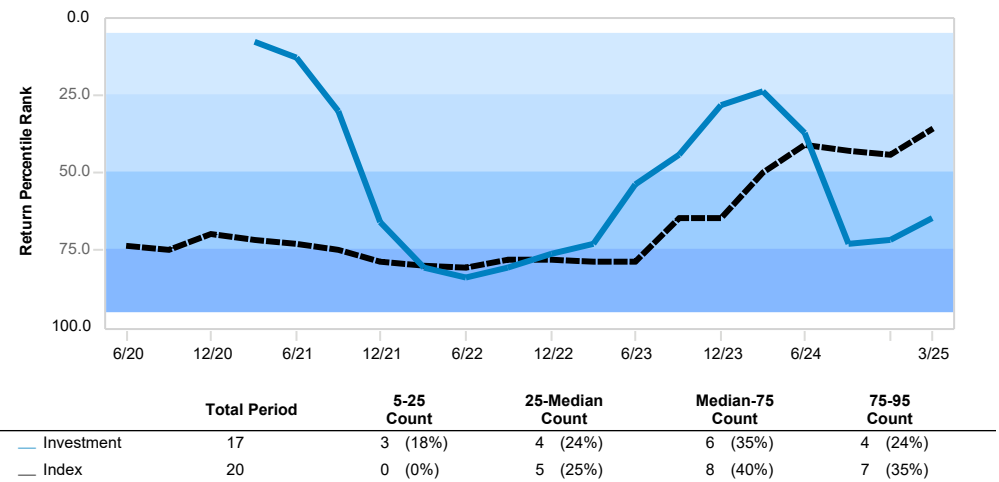
Risk and Return 5 Years



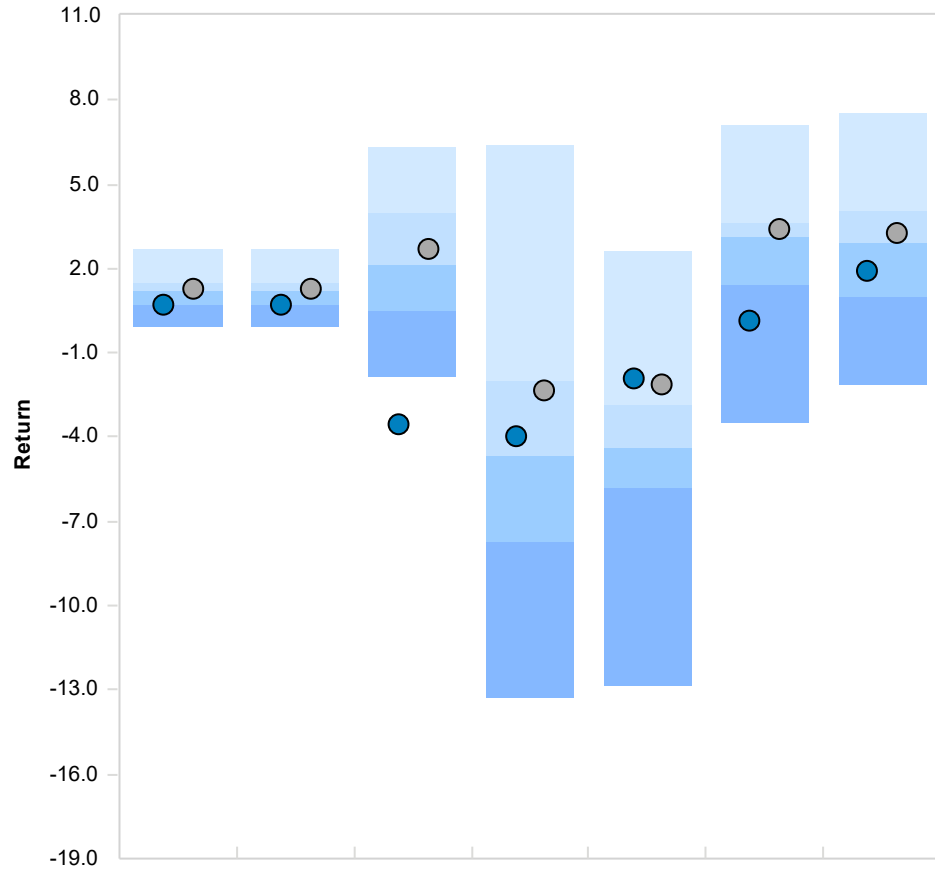
3 Year Rolling Percentile Rank IM U.S. Private Real Estate (SA+CF)



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

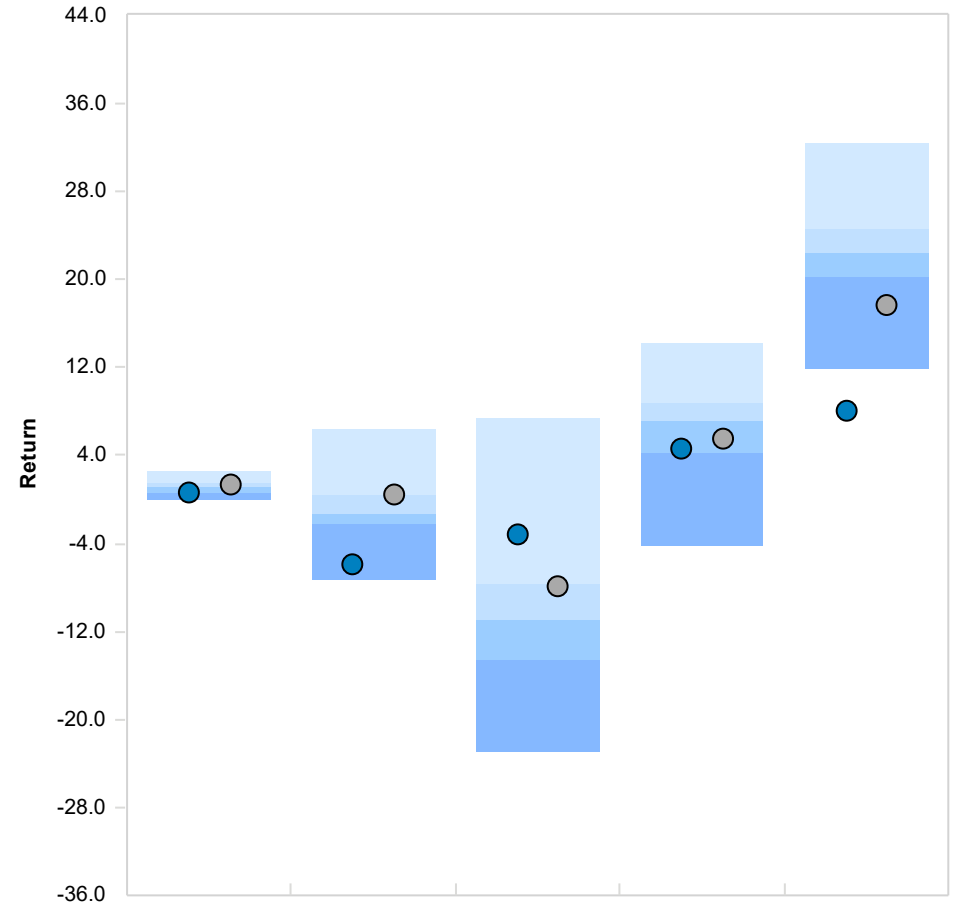


Peer Group Analysis - IM U.S. Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	0.69 (76)	0.69 (76)	-3.52 (100)	-3.93 (35)	-1.91 (20)	0.14 (86)	1.92 (65)
● Index	1.28 (44)	1.28 (44)	2.72 (40)	-2.34 (28)	-2.11 (21)	3.41 (30)	3.25 (36)
Median	1.18	1.18	2.16	-4.66	-4.39	3.14	2.94

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



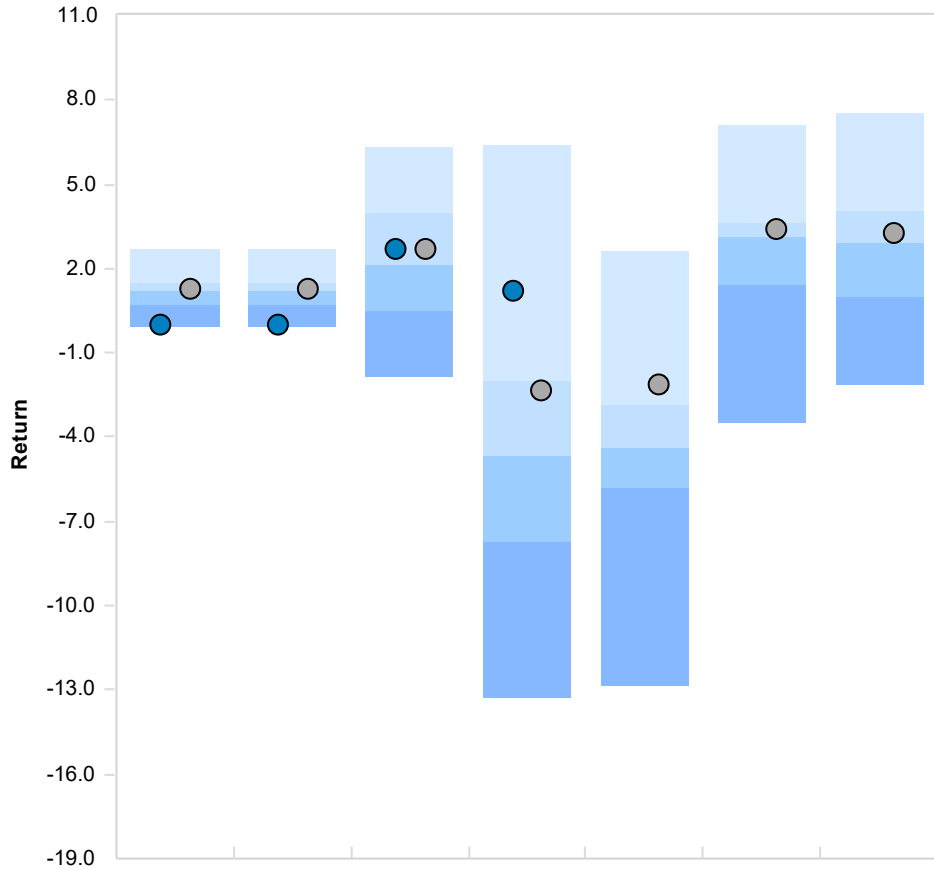
	2025	2024	2023	2022	2021
● Investment	0.69 (76)	-5.95 (94)	-3.13 (13)	4.58 (74)	8.04 (97)
● Index	1.28 (44)	0.43 (27)	-7.94 (26)	5.52 (62)	17.70 (82)
Median	1.18	-1.28	-11.03	7.14	22.49

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	0.17 (88)	-3.37 (99)	-1.01 (72)	-1.84 (42)	-2.20 (34)	-0.85 (17)
Index	0.90 (61)	0.78 (36)	-0.26 (31)	-0.98 (24)	-3.02 (42)	-1.37 (22)
Median	1.19	0.26	-0.69	-2.10	-4.20	-2.37

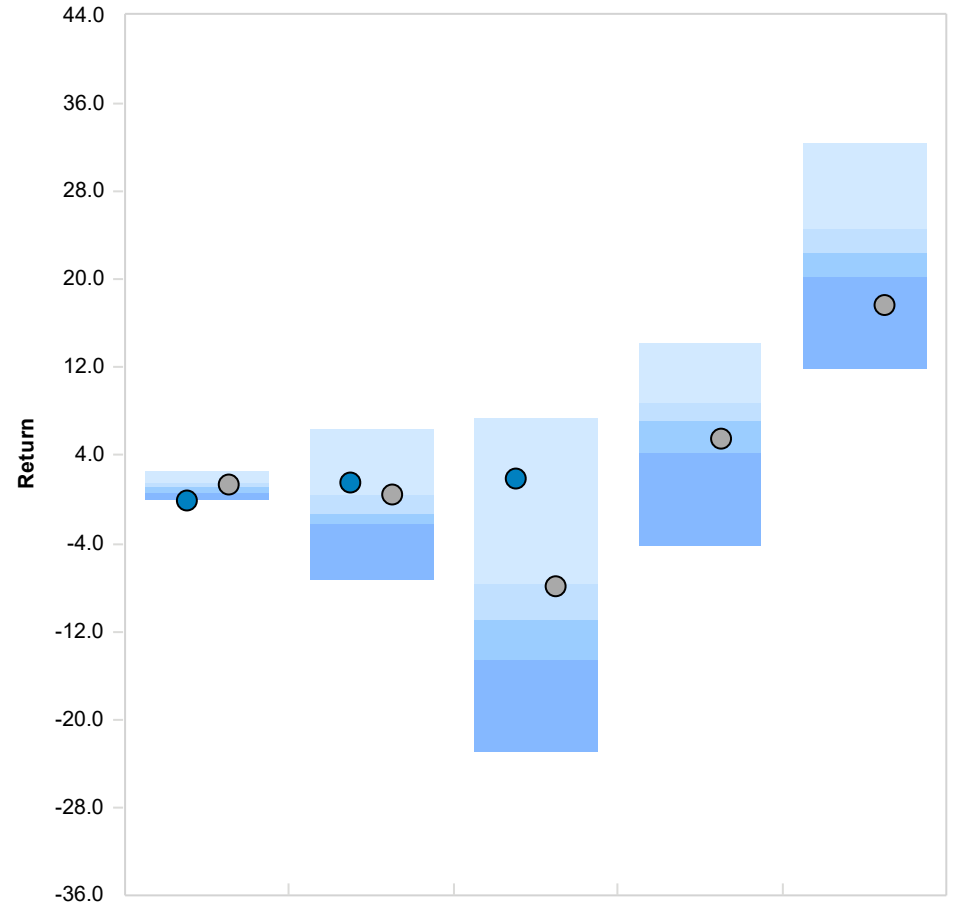
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Peer Group Analysis - IM U.S. Open End Private Real Estate (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	0.00 (95)	0.00 (95)	2.70 (40)	1.18 (11)	N/A	N/A	N/A
● Index	1.28 (44)	1.28 (44)	2.72 (40)	-2.34 (28)	-2.11 (21)	3.41 (30)	3.25 (36)
Median	1.18	1.18	2.16	-4.66	-4.39	3.14	2.94

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



	2025	2024	2023	2022	2021
● Investment	0.00 (95)	1.52 (18)	1.91 (11)	N/A	N/A
● Index	1.28 (44)	0.43 (27)	-7.94 (26)	5.52 (62)	17.70 (82)
Median	1.18	-1.28	-11.03	7.14	22.49

Comparative Performance

	1 Qtr Ending Dec-2024	1 Qtr Ending Sep-2024	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023
Investment	1.13 (51)	0.74 (37)	0.81 (10)	-1.15 (27)	-1.21 (16)	0.53 (11)
Index	0.90 (61)	0.78 (36)	-0.26 (31)	-0.98 (24)	-3.02 (42)	-1.37 (22)
Median	1.19	0.26	-0.69	-2.10	-4.20	-2.37

Erie County Employees Retirement Plan

Fee Analysis

As of March 31, 2025

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Fund	0.38	323,451,787	1,228,108	
Domestic Large Cap Equity	0.08	78,653,395	59,972	
Vanguard S&P 500 Index Fund (VINIX)	0.04	39,793,895	13,928	0.04 % of Assets
Vanguard Russell 1000 Growth Index (VRGWX)	0.06	17,052,212	10,231	0.06 % of Assets
DFA Large Value Equity (DFLVX)	0.22	14,205,123	31,251	0.22 % of Assets
Vanguard Russell 1000 Value Index (VRVIX)	0.06	7,602,165	4,561	0.06 % of Assets
Domestic Small Cap Equity	0.56	43,133,205	242,071	
Allspring Global Small Value Eq.	0.50	19,728,672	98,643	0.50 % of Assets
Emerald Small Growth Equity	0.62	19,614,378	120,686	0.75 % of First \$2 M 0.60 % Thereafter
StoneRidge Small Growth Equity	0.60	3,790,155	22,741	0.60 % of Assets
International Equity	0.36	48,247,057	171,920	
DFA International Equity (DFIEX)	0.24	21,073,957	50,578	0.24 % of Assets
DFA Emerging Markets (DFCEX)	0.39	5,219,954	20,358	0.39 % of Assets
EuroPacific Growth Fund (RERGX)	0.46	21,953,145	100,984	0.46 % of Assets
Total Fixed Income	0.21	96,936,384	207,581	
Boyd Watterson Fixed	0.23	46,222,610	106,312	0.23 % of Assets
PNC Fixed	0.28	28,086,316	78,642	0.28 % of Assets
Vanguard Core Bond Fund (VCOBX)	0.10	22,627,458	22,627	0.10 % of Assets
Private Real Estate	1.12	23,969,590	269,579	
Boyd Watterson GSA Fund	1.25	11,953,345	149,417	1.25 % of Assets
Bentall GreenOak US Core Plus RE	1.00	12,016,245	120,162	1.00 % of Assets
Private Equity	1.00	24,423,748	244,237	
Ironsides Direct Investment Fund V	1.00	8,586,805	85,868	1.00 % of Assets
PA Co-Investment Fund III	1.00	4,104,801	41,048	1.00 % of Assets
Adams Street Co-Investment Fund V	1.00	7,554,313	75,543	1.00 % of Assets
Hamilton Lane Secondary Fund VI	1.00	4,177,829	41,778	1.00 % of Assets
Private Debt	0.89	3,662,740	32,748	
Ironsides Opportunities Fund	0.75	1,551,873	11,639	0.75 % of Assets
PA Credit Strategies Fund	1.00	2,110,867	21,109	1.00 % of Assets
Cash		4,425,670	-	
Cash Account		4,425,670	-	

See the disclosure page at the end of this report.

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

Historical Hybrid Composition
Total Fund Policy Index
As of March 31, 2025

Historical Hybrid Composition

Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Dec-1997		Mar-2019	
Bloomberg Intermediate US Govt/Credit Idx	40.00	MSCI EAFE (Net) Index	13.00
MSCI EAFE (Net) Index	10.00	Bloomberg Intermediate US Govt/Credit Idx	29.00
Russell 3000 Index	50.00	NCREIF Property Index	6.00
Mar-1998		Russell 2000 Index	12.00
Russell 3000 Index	50.00	Russell 1000 Index	25.00
MSCI EAFE (Net) Index	10.00	Alerian MLP Index	4.00
Bloomberg Intermediate US Govt/Credit Idx	40.00	S&P UBS Leveraged Loan Index	2.00
Mar-2005		Russell Microcap + 3%	4.00
Russell 3000 Index	50.00	Bloomberg 1-5 Year Gov/Credit Idx	5.00
MSCI EAFE (Net) Index	10.00	Mar-2021	
Bloomberg Intermediate US Govt/Credit Idx	37.00	MSCI EAFE (Net) Index	13.00
Blmbg. U.S. Corp High Yield	3.00	Bloomberg Intermediate US Govt/Credit Idx	29.00
Mar-2007		NCREIF Property Index	8.00
Russell 3000 Index	50.00	Russell 2000 Index	15.00
MSCI EAFE (Net) Index	10.00	Russell 1000 Index	22.00
Bloomberg Intermediate US Govt/Credit Idx	30.00	S&P UBS Leveraged Loan Index	3.00
Blmbg. U.S. Gov't/Credit	10.00	Russell Microcap + 3%	5.00
Dec-2010		Bloomberg 1-5 Year Gov/Credit Idx	5.00
Russell 3000 Index	45.00	Jan-2023	
MSCI EAFE (Net) Index	10.00	MSCI EAFE (Net) Index	13.00
Bloomberg Intermediate US Govt/Credit Idx	38.00	Blmbg. U.S. Aggregate Index	34.00
NCREIF Property Index	7.00	NCREIF Property Index	8.00
Dec-2015		Russell 2000 Index	15.00
MSCI EAFE (Net) Index	10.00	Russell 1000 Index	22.00
Bloomberg Intermediate US Govt/Credit Idx	37.00	S&P UBS Leveraged Loan Index	3.00
NCREIF Property Index	7.00	Russell Microcap + 3%	5.00
Russell 2000 Index	15.00		
Russell 1000 Index	12.00		
S&P 500 Index	13.00		
Alerian MLP Index	6.00		

Returns prior to 1/1/2023 are from the prior consultant.

Returns for periods greater than one year are annualized.

Manager fees associated with money market or cash accounts are not tracked.

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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The awards are not indicative of any future performance. The awards or any other rankings and/or recognition by unaffiliated rating services and/or publications should not be construed as a guarantee that a client will experience a certain level of results or satisfaction, nor should it be construed as a current or past endorsement by any of our clients. No fee was paid to participate in this award survey.

The 2024-25 award was issued in February 2025, based on data from February to September of 2024. The 2023 award was issued in April 2024, based on data from Feb to November of 2023. The 2022 award was issued in April 2023, based on data from Feb to November of 2022. The 2021 award was issued in April of 2022, based on data from July to October 2021. Data was collected via interviews conducted by Coalition Greenwich. The 2024 and 2023 awards were issued to Mariner Institutional (formerly AndCo Consulting). The 2021 and 2022 awards were issued to AndCo, prior to becoming Mariner Institutional. The methodology: For the 2024-25 Coalition Greenwich Best Investment Consultant Award for Overall U.S. Investment Consulting – Midsize Consultants – Between February and September 2024, Crisil Coalition Greenwich conducted interviews with 699 individuals from 563 of the largest tax-exempt funds in the United States. For the 2023 Greenwich Best Investment Consultant Award for Overall U.S. Investment Consulting – Midsize Consultants – Between February and November 2023, Coalition Greenwich conducted interviews with 708 individuals from 575 of the largest tax-exempt funds in the United States. For the 2022 Greenwich Best Investment Consultant Award for Overall U.S. Investment Consulting – Midsize Consultants – Between February and November 2022, Coalition Greenwich conducted interviews with 727 individuals from 590 of the largest tax-exempt funds in the United States. For the 2021 Greenwich Best Investment Consultant Award – Overall U.S. Investment Consulting – Midsize Consultants – Between July and October 2021, Coalition Greenwich conducted interviews with 811 individuals from 661 of the largest tax-exempt funds in the United States. These U.S.-based institutional investors are corporate, public, union, and endowment and foundation funds with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset management and investment consulting providers, including qualitative assessments of those firms soliciting their business and detailed information on important market trends.

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