
Grand Rapids General Retirement System

Investment Performance Review
Period Ending December 31, 2024

MARINER

4th Quarter 2024 Market Environment

The Economy

- The US Federal Reserve (the Fed) continued to loosen its policy stance during the quarter with two fed funds rate cuts totaling 0.50%, bringing the year-end rate to a range of 4.25%-4.50%. While the Fed conveyed a degree of confidence that the fight against inflation is progressing in its December press release, Fed Chairman Jerome Powell signaled in his post-meeting press conference that the pace and timing of future rate cuts is unclear. The Fed's December "Dot Plot" now projects only two quarter-point rate cuts in 2025, down from four anticipated cuts in September's plot.
- Growth in the US labor market continued during the fourth quarter. US payrolls grew by 256,000 in December, up from the previous month's total of 212,000, and well above the 155,000 projected. If strength in the labor market continues, this data could support a slower pace Fed action in the form of policy rate reductions in 2025.

Equity (Domestic and International)

- US equity results were modestly higher for the quarter. Markets also saw a return to the narrowly focused technology and communication services company exuberance which has dominated domestic performance in recent years. The S&P 500 Index rose 2.4% for the quarter with the small-cap Russell 2000 Index managing just a 0.3% rise. The rotation away from large cap growth stocks during the third quarter seemed to reverse as the Russell 1000 Growth Index once again outpaced the Russell 1000 Value Index by a large margin.
- Large-cap equity benchmarks continue to represent a heavy concentration among a limited number of stocks. As of quarter end, the weight of the top 10 stocks in the S&P 500 Index exceeded 35%.
- Most international stocks faltered during the fourth quarter and US Dollar (USD) denominated results were further exacerbated by a strengthening USD. The USD performance of international stocks fell short of local currency (LCL) returns in most regions for the quarter, albeit to varying degrees.

Fixed Income

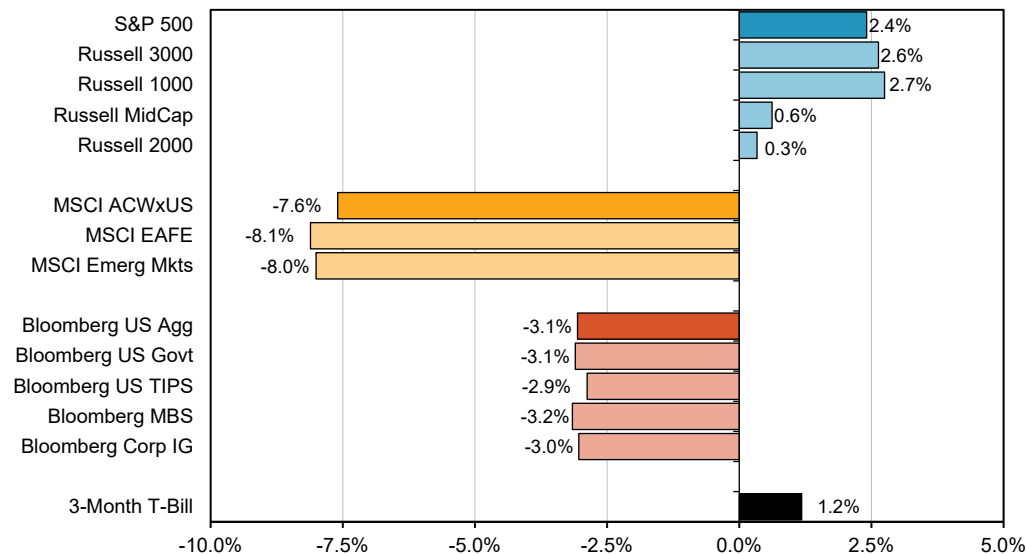
- Fixed-income markets traded lower during the quarter on the back of the Fed's ongoing policy actions. Short term Treasury yields fell while longer term yields rose, leading to a slight steepening in the yield curve. The yield on the bellwether 10-year Treasury advanced by 0.84% during the quarter, closing the year at a yield of 4.58%. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index posting a -3.1% loss for the quarter.
- High-yield bonds outpaced the Bloomberg US Aggregate Bond Index for the quarter, largely due to higher coupons, a shorter duration profile, and a small narrowing of the option-adjusted spread (OAS) for the Bloomberg US High-Yield Index.
- Global bonds fell during the quarter, with the Bloomberg Global Aggregate ex-US returning -6.8% in USD terms. Like international equity results, global bond performance was dragged down by a strengthening USD during the quarter.

Market Themes

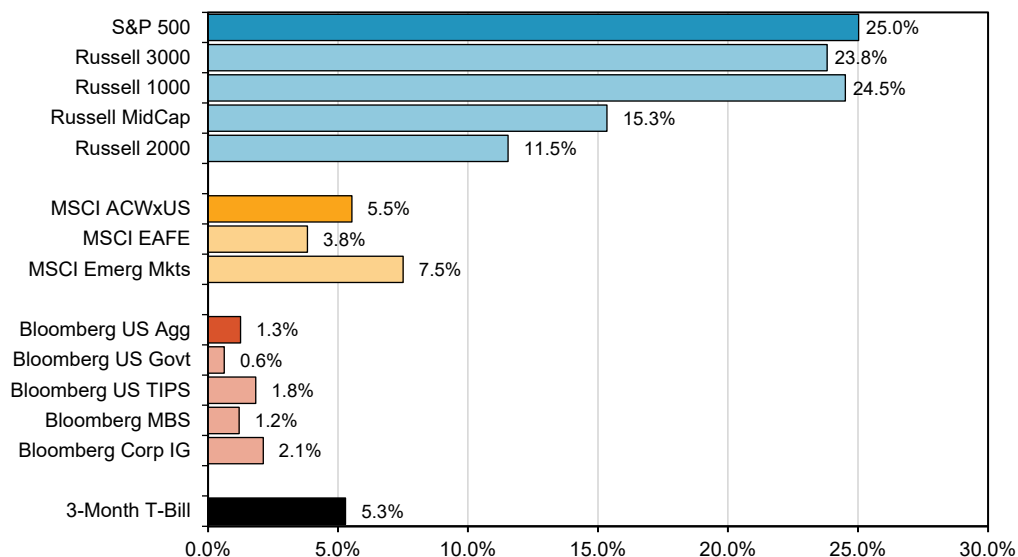
- Strength in the US Dollar during the quarter led to relative weakness in international markets. Many of the major currencies depreciated relative to the US Dollar as the year came to a close. Latin America saw the most significant decline during the period while the Pacific region was the only region to post positive LCL returns.
- The AI trade that has taken shape for much of the past two years continued in 2024 with the communication services and information technology sectors each posting gains of more than 35% for the year. This phenomenon contributed to narrow market leadership particularly within the large-cap segment of the market. The concentration in the large-cap indexes helped the S&P 500 post its second straight year of greater than a 20% return, further widening the performance gap between large and smaller capitalization benchmarks.
- Ongoing military conflicts in Ukraine and the Middle East, coupled with global economic uncertainty, continue to act as headwinds for international market results, further complicated by an advancing USD.
- The results of the most recent US presidential election appeared to please domestic equity markets in anticipation of the new administration supporting loosened regulations and pro-growth policies. As we move into the new year, equity markets will need to digest the anticipated effects of proposed tax legislation changes, a new view on foreign policy, and potential trade tariffs by the new administration.

- Domestic equity markets continued to climb higher during the quarter. Large-cap stocks returned to the forefront, outpacing small-cap stocks. The S&P 500 rose 2.4% during the quarter versus a muted gain of 0.3% for the Russell 2000 Index. The broad capitalization Russell 3000 Index, which benefited from strength in mid- and large-cap names, returned 2.6% for the quarter.
- International developed market equities reversed course and soured during the fourth quarter with the USD performance of the broad benchmarks each trading lower than (LCL) currency performance. The broad MSCI ACWI ex US Index delivered a disappointing -7.6% for the quarter but was down less than both the MSCI EAFE and MSCI EM indexes. The broad index was aided by Canada, which is not included in the EAFE or EM indexes. International developed market (DM) equities narrowly fell behind emerging market (EM) equities, returning -8.1% and -8.0%, respectively for the quarter. Negative performance for the international indexes was broad-based and not localized to any specific region.
- Broad market fixed-income benchmarks displayed a poor finish to the year as many of the core indexes succumbed to a steepening of the yield curve and the prospect of fewer rate cuts in 2025. The Bloomberg US Aggregate Index returned -3.1% for the quarter. The TIPS market, which is not part of the Aggregate Index, was also negative, posting a return of -2.9% for the quarter. While the performance differentials were small, the Mortgage-Backed Securities Index lagged other domestic bond market segments with a benchmark return of -3.2% for the quarter.
- Domestic equity indexes finished the year by adding to their already strong returns over the trailing one-year period. The S&P 500 Index gained 25.0% for the year and the Russell 1000 Index returned 24.5%. The weakest performing capitalization range of domestic equities for the year was the small-cap Russell 2000 Index, which still managed a double-digit climb over the last 12 months, returning a solid 11.5%.
- Domestic bond indexes' results were mixed throughout the year but still managed to deliver positive annual results. While the performance spread was narrow, investment-grade corporate bonds led bond index results for the year, returning a muted 2.1%. The government bond index lagged for the year, but was also positive, posting a return of 0.6%.
- International equity markets also delivered positive results for the trailing one-year period. The MSCI EM Index was the best international performer, returning 7.5%, while the MSCI EAFE and MSCI ACWI ex US indexes posted returns of 3.8% and 5.5%, respectively.

Quarter Performance



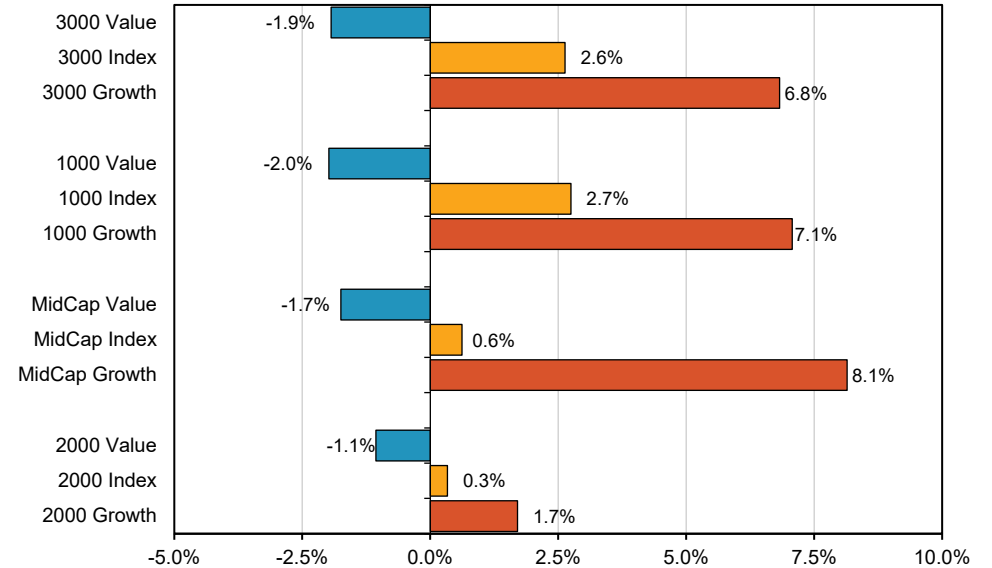
1-Year Performance



Source: Investment Metrics

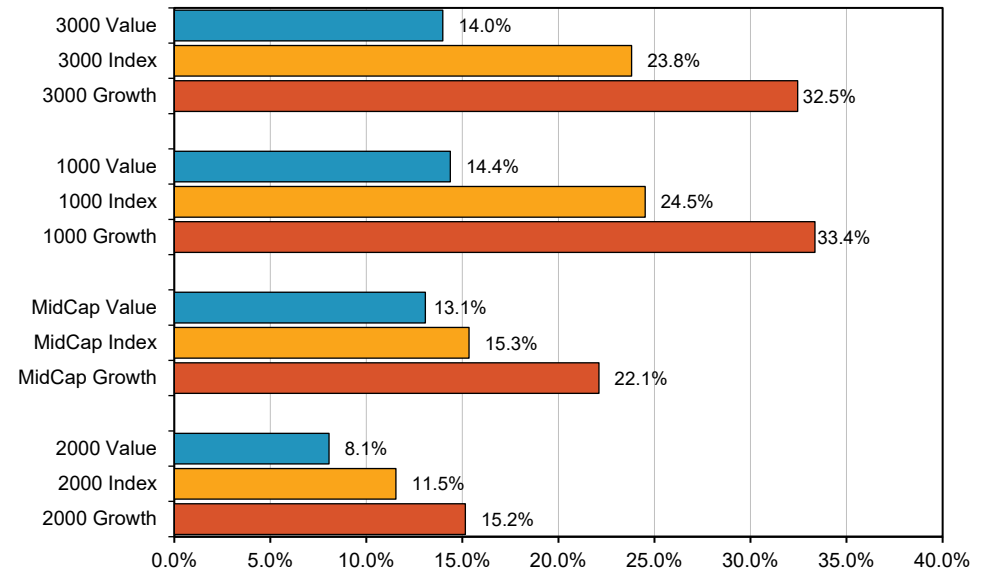
- Domestic equity benchmarks exhibited a return to their long-run trend of growth style companies vastly outperforming value during the fourth quarter. This theme was relatively consistent across the capitalization spectrum with growth benchmarks dominating performance results while value benchmarks each posted negative returns for the quarter.
- The broadest disparity between growth and value was visible in the mid-cap index. The Russell Mid Cap Value Index return of -1.7% trailed the Russell Mid Cap Growth Index return of 8.1%, a performance span of nearly 10%. The Russell Mid Cap Growth Index was also the best performing segment of the equity market during the quarter. Conversely, the worst performing segment of the market was large cap value which returned a disappointing -2.0% during the fourth quarter.

Quarter Performance - Russell Style Series



- This quarter's ascension of the growth indexes widened their performance gaps relative to the value indexes for the trailing year. The Russell 1000 Growth Index amassed a staggering 33.4% for the year, leading the way among style and market capitalization index performance. Much of the year's strong performance has been attributable to the emergence of the "Magnificent 7" stocks (Alphabet, Amazon, Apple, Meta, Microsoft, Nvidia, and Tesla) which have dominated the large-cap core and growth indexes and the headlines over the past several years. The 10 largest stocks in the Russell 1000 Index have contributed more than 50% of the index's total performance over the trailing 12-month period. The weakest performing index for the year was the Russell 2000 Value Index, which still climbed 8.1%.
- The strength of growth sectors is also evident in the trailing one-year period with the chart on the right showing growth benchmarks at all capitalization ranges outpacing their value counterparts. The performance gap between the Russell 1000 Growth Index and the Russell 1000 Value Index was nearly 20% and the gaps for mid- and small-cap indexes were narrower, but still wide.

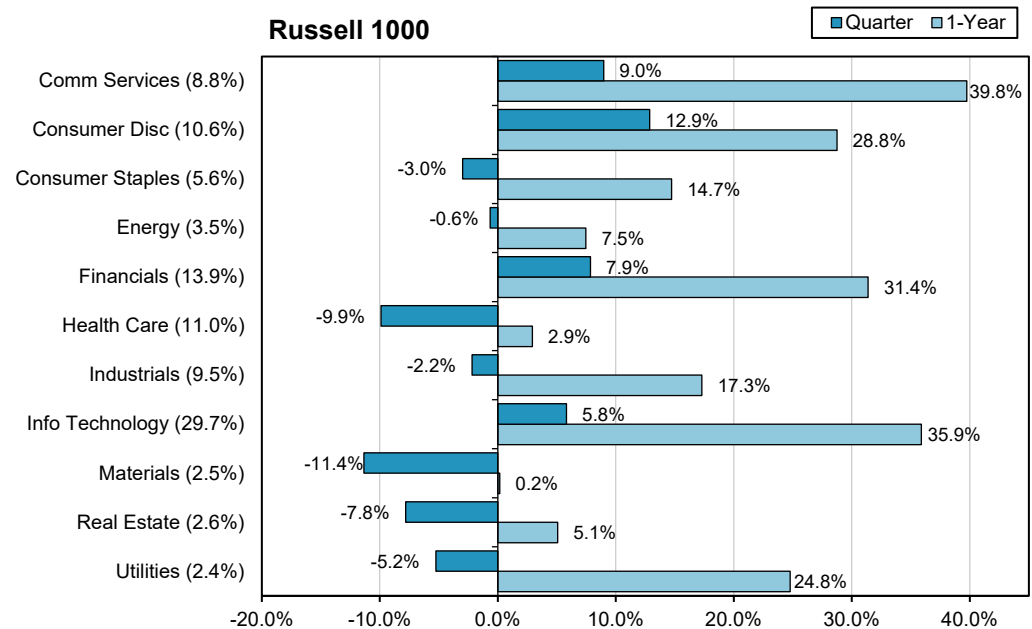
1-Year Performance - Russell Style Series



Source: Investment Metrics

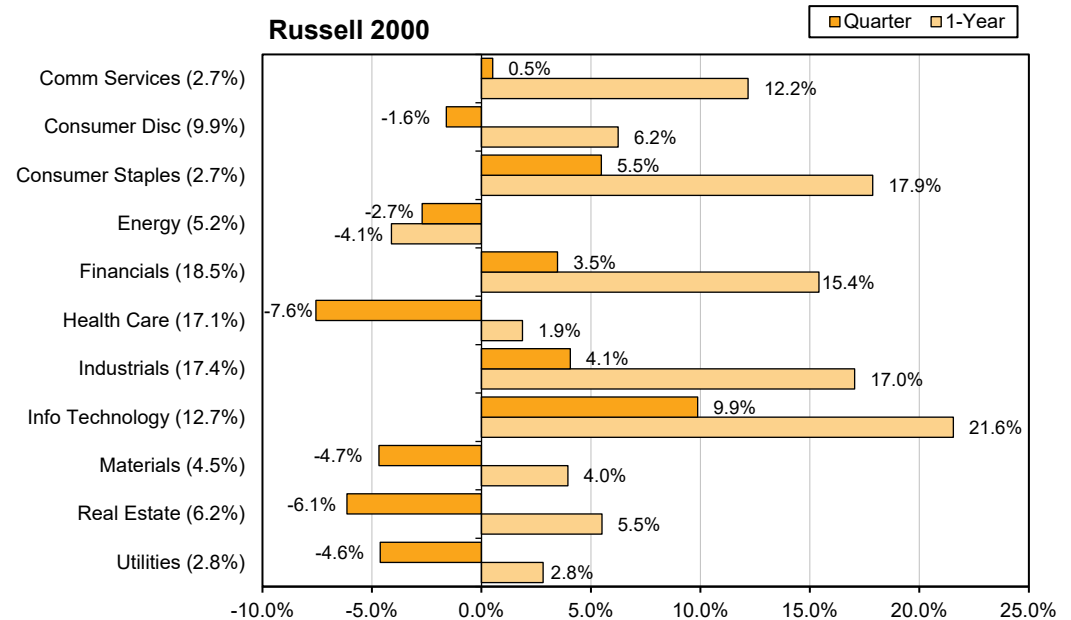
- Economic sector performance delivered mixed results in the fourth quarter as just four of the 11 economic sectors moved higher in the large-cap index. While performance during the year could be characterized by broader participation in the domestic equity markets, this was not the case during the fourth quarter as only the communication services, consumer discretionary, financials, and information technology sectors managed to post positive returns. Within the large cap index, consumer discretionary stocks led the way, collectively returning 12.9% for the quarter while the materials sector struggled, falling -11.4% during the period.
- Full year results during 2024 showcased strong performance across the economic sector classifications. Communication services narrowly outpaced information technology for the year, posting returns of 39.8% and 35.9%, respectively, with financials coming in third with a return of 31.4%. While all sectors posted positive returns for the year, the broad index's strong performance during 2024 was largely driven by three of the five most heavily weighted index sectors.

Russell 1000



- Similar to the large cap benchmark, just five of the 11 small-cap economic sectors gained value during the quarter. Communication services, consumer staples, financials, industrials, and information technology led the way with information technology as the best performing sector during the quarter. Health care faltered as the worst-performing sector with a return of -7.6% during the quarter, followed closely by real estate, which finished the quarter with a return of -6.1%.
- Despite their struggles during the most recent quarter, small-cap stocks delivered strong results for the year. Ten small-cap sectors advanced higher during the trailing one-year period, making energy the lone negative performer over the period. The sector's -2.7% return during the fourth quarter pushed the sector's performance to -4.1% for the trailing year. Information technology (up 21.6%) was the only sector to cross the 20% return threshold, but four others also amassed double digit positive returns for the calendar year.

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 December 31, 2024

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.6%	7.6%	30.7%	Information Technology
NVIDIA Corp	5.8%	10.6%	171.2%	Information Technology
Microsoft Corp	5.8%	-1.8%	12.9%	Information Technology
Amazon.com Inc	3.8%	17.7%	44.4%	Consumer Discretionary
Meta Platforms Inc Class A	2.4%	2.4%	66.0%	Communication Services
Tesla Inc	2.1%	54.4%	62.5%	Consumer Discretionary
Alphabet Inc Class A	2.1%	14.3%	36.0%	Communication Services
Broadcom Inc	2.0%	34.7%	110.4%	Information Technology
Alphabet Inc Class C	1.7%	14.0%	35.6%	Communication Services
Berkshire Hathaway Inc Class B	1.5%	-1.5%	27.1%	Financials

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
FTAI Aviation Ltd	0.5%	8.6%	214.7%	Industrials
Sprouts Farmers Market Inc	0.5%	15.1%	164.1%	Consumer Staples
Insmed Inc	0.4%	-5.4%	122.8%	Health Care
Vaxcyte Inc Ordinary Shares	0.4%	-28.4%	30.4%	Health Care
Credo Technology Group Holding Ltd	0.4%	118.2%	245.2%	Information Technology
Applied Industrial Technologies Inc	0.3%	7.5%	39.7%	Industrials
Mueller Industries Inc	0.3%	7.4%	70.5%	Industrials
Rocket Lab USA Inc	0.3%	161.8%	360.6%	Industrials
Fluor Corp	0.3%	3.4%	25.9%	Industrials
IonQ Inc Class A	0.3%	377.9%	237.1%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Astera Labs Inc	0.0%	152.8%	N/A	Information Technology
AppLovin Corp Ordinary Shares	0.2%	148.1%	712.6%	Information Technology
Trump Media & Technology Group	0.0%	112.2%	N/A	Communication Services
Palantir Technologies Inc Ordinary	0.3%	103.3%	340.5%	Information Technology
SoFi Technologies Inc Ordinary Shares	0.0%	95.9%	54.8%	Financials
Amer Sports Inc	0.0%	75.3%	N/A	Consumer Discretionary
MicroStrategy Inc	0.1%	71.8%	358.5%	Information Technology
United Airlines Holdings Inc	0.1%	70.2%	135.3%	Industrials
New Fortress Energy Inc	0.0%	66.3%	-59.3%	Utilities
Twilio Inc Class A	0.0%	65.7%	42.5%	Information Technology

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Rigetti Computing Inc	0.1%	1848.7%	1449.4%	Information Technology
D-Wave Quantum Inc.	0.0%	754.6%	854.4%	Information Technology
Scholar Rock Holding Corp	0.1%	439.6%	129.9%	Health Care
IonQ Inc Class A	0.3%	377.9%	237.1%	Information Technology
SoundHound AI Inc Ordinary Shares	0.2%	325.8%	835.8%	Information Technology
Kodiak Sciences Inc	0.0%	281.2%	227.3%	Health Care
The RealReal Inc	0.0%	248.1%	443.8%	Consumer Discretionary
SES AI Corp	0.0%	242.3%	19.7%	Industrials
Poseida Therapeutics Inc Ordinary	0.0%	235.7%	185.7%	Health Care
Archer Aviation Inc Class A	0.1%	221.8%	58.8%	Industrials

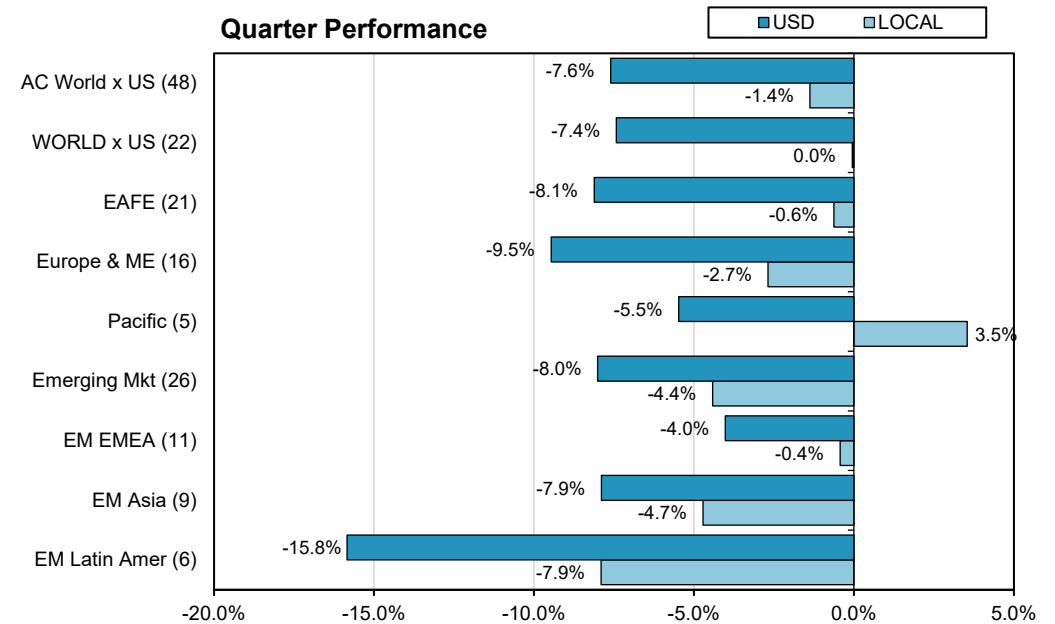
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Capri Holdings Ltd	0.0%	-50.4%	-58.1%	Consumer Discretionary
Celanese Corp Class A	0.0%	-48.8%	-54.6%	Materials
Rocket Companies Inc Ordinary	0.0%	-41.3%	-22.2%	Financials
Enphase Energy Inc	0.0%	-39.2%	-48.0%	Information Technology
Moderna Inc	0.0%	-37.8%	-58.2%	Health Care
Acadia Healthcare Co Inc	0.0%	-37.5%	-49.0%	Health Care
Viking Therapeutics Inc	0.0%	-36.4%	116.2%	Health Care
10x Genomics Inc Ordinary	0.0%	-36.4%	-74.3%	Health Care
Monolithic Power Systems Inc	0.1%	-35.9%	-5.6%	Information Technology
The AES Corp	0.0%	-35.1%	-30.3%	Utilities

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Q32 Bio Inc	0.0%	-92.3%	0.0%	Health Care
Cassava Sciences Inc	0.0%	-92.0%	-89.5%	Health Care
Applied Therapeutics Inc	0.0%	-89.9%	-74.4%	Health Care
Perspective Therapeutics Inc	0.0%	-76.1%	-20.6%	Health Care
Keros Therapeutics Inc	0.0%	-72.7%	-60.2%	Health Care
Bioage Labs Inc	0.0%	-72.2%	N/A	Health Care
Inovio Pharmaceuticals Inc	0.0%	-68.3%	-70.1%	Health Care
PACS Group Inc	0.0%	-67.2%	N/A	Health Care
Shattuck Labs Inc Ordinary Shares	0.0%	-65.3%	-83.0%	Health Care
Sunnova Energy International Inc	0.0%	-64.8%	-77.5%	Utilities

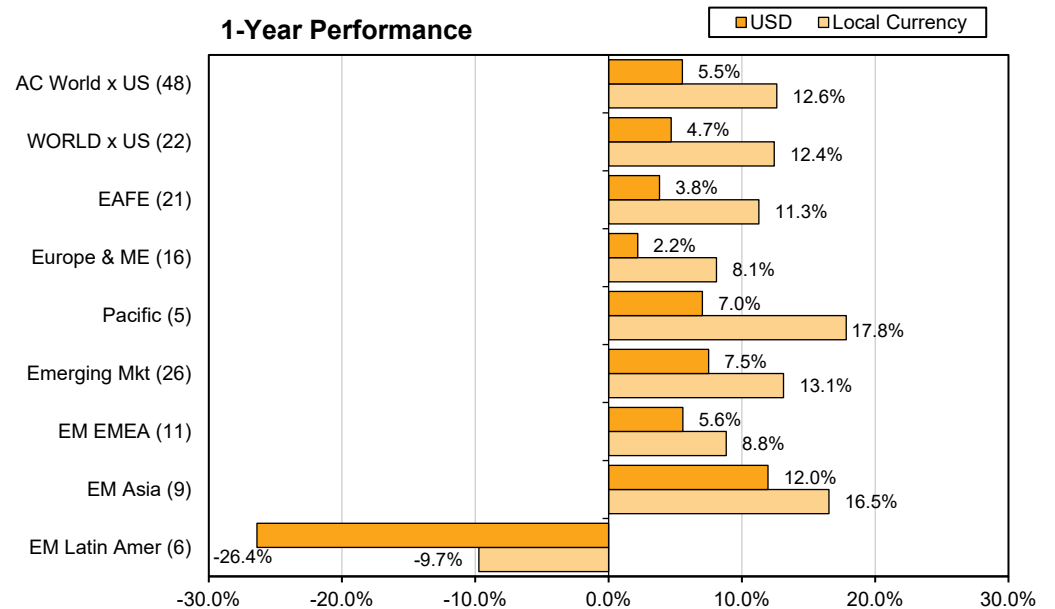
Source: Morningstar Direct

- Results in USD terms among the headline international equity indexes were sharply lower during the quarter. The strengthening USD relative to many major currencies during the quarter was a substantial headwind for the USD performance of non-US regional benchmarks' returns. The developed-market MSCI EAFE Index returned a muted -0.6% in LCL terms but fell -8.1% in USD terms. The MSCI ACWI ex-US Index pulled back -7.6% in USD and -1.4% in LCL terms for the quarter.
- Latin America continued to lag other regions during the quarter in USD terms, posting an outsized loss of -15.8%. Weakening currencies in the region put added pressure on realized performance for US investors. The MSCI Pacific benchmark was the only regional benchmark to deliver positive performance in LCL terms with a return of 3.5%, but USD strength led to a -5.5% decline in USD terms for the quarter. Regional LCL currency performance was disparate for the quarter, with some regional indexes remaining relatively flat over the final three months of the year.
- Full year results by country show Taiwan and Malaysia as the biggest winners during the year in USD terms. These two countries advanced 34.4% and 20.8%, respectively. China was not far behind with the largest economy in the emerging market world climbing 19.4% in USD terms for the year despite declining 7.7% during the fourth quarter. Much of the broad-based MSCI Emerging Market Index's returns are attributable to the health of the dominant Chinese economy, which came under pressure during the year due to troubles in the manufacturing and commercial property sectors.
- Much like domestic markets, trailing one-year results for international developed and emerging markets benchmarks were strongly positive. Higher LCL versus USD returns for most international benchmarks demonstrate the USD's relative strength over the trailing one-year period, which represents a drag on results for US investors.
- Most broad and regional indexes were positive for the trailing 12 months in both USD and LCL terms. The exception to these positive results is the EM Latin America index, where negative LCL performance was exacerbated by the region's currency weakness, which led to a more severe -26.4% return in USD terms. The MSCI Pacific Index led the way with a return of 17.8% in LCL terms for the trailing year, but US investor returns were dampened to just 7.0% in 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 December 31, 2024

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.8%	-4.7%	11.2%
Consumer Discretionary	11.3%	-4.3%	1.4%
Consumer Staples	8.3%	-12.6%	-7.9%
Energy	3.5%	-8.3%	-10.5%
Financials	21.9%	-2.3%	20.9%
Health Care	12.4%	-14.1%	-1.5%
Industrials	17.8%	-6.4%	9.6%
Information Technology	8.8%	-7.2%	3.8%
Materials	6.1%	-17.8%	-12.9%
Real Estate	2.0%	-13.4%	-3.9%
Utilities	3.2%	-12.8%	-4.1%
Total	100.0%	-8.1%	3.8%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.9%	-6.8%	12.4%
Consumer Discretionary	11.2%	-8.1%	4.6%
Consumer Staples	7.0%	-12.4%	-7.8%
Energy	5.0%	-7.9%	-3.5%
Financials	23.7%	-2.8%	17.5%
Health Care	8.8%	-13.9%	-1.4%
Industrials	14.0%	-7.1%	7.5%
Information Technology	13.5%	-1.8%	13.3%
Materials	6.3%	-17.2%	-12.6%
Real Estate	1.8%	-11.5%	-1.7%
Utilities	3.0%	-12.8%	-2.0%
Total	100.0%	-7.6%	5.5%

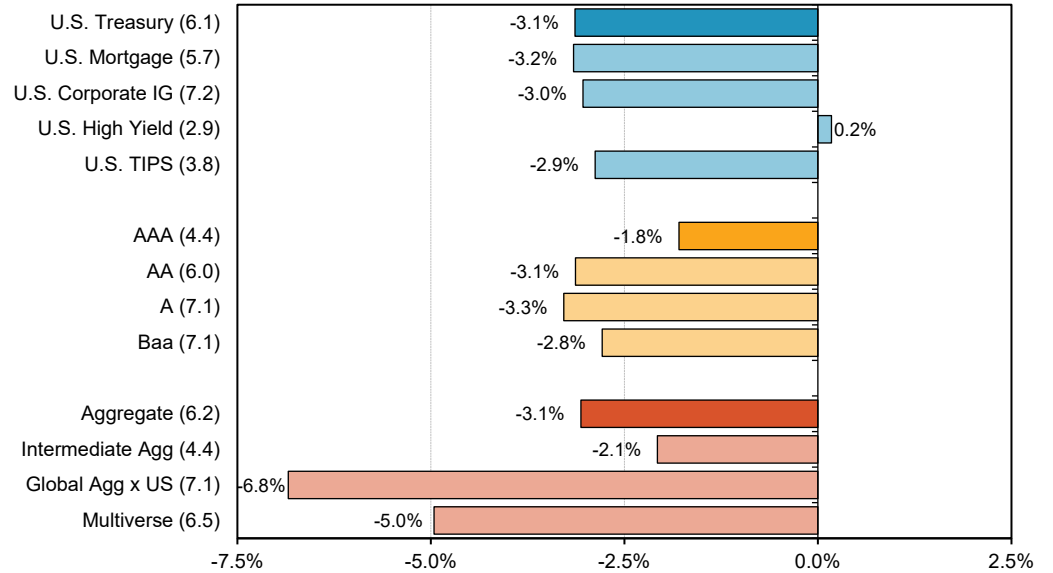
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.4%	-8.1%	15.9%
Consumer Discretionary	13.1%	-14.5%	11.8%
Consumer Staples	4.8%	-13.9%	-11.1%
Energy	4.6%	-14.5%	-5.9%
Financials	23.7%	-5.0%	11.0%
Health Care	3.5%	-11.7%	-0.9%
Industrials	6.6%	-10.9%	0.6%
Information Technology	24.3%	1.1%	20.4%
Materials	5.7%	-18.6%	-19.6%
Real Estate	1.7%	-6.5%	3.8%
Utilities	2.7%	-14.1%	3.3%
Total	100.0%	-8.0%	7.5%

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1- Year Return
Japan	23.2%	14.5%	-3.6%	8.3%
United Kingdom	14.9%	9.3%	-6.8%	7.5%
France	11.1%	6.9%	-10.3%	-5.3%
Switzerland	9.6%	6.0%	-11.3%	-2.0%
Germany	9.2%	5.8%	-5.7%	10.2%
Australia	7.4%	4.6%	-11.4%	1.2%
Netherlands	4.6%	2.9%	-12.4%	1.4%
Sweden	3.6%	2.2%	-14.0%	-3.7%
Denmark	2.9%	1.8%	-21.5%	-12.9%
Italy	2.8%	1.7%	-6.7%	11.3%
Spain	2.8%	1.7%	-9.2%	9.8%
Hong Kong	2.0%	1.2%	-9.8%	0.1%
Singapore	1.7%	1.0%	3.2%	32.3%
Belgium	1.0%	0.6%	-8.3%	8.5%
Finland	1.0%	0.6%	-13.1%	-7.3%
Israel	1.0%	0.6%	14.1%	38.3%
Norway	0.6%	0.4%	-5.4%	-4.3%
Ireland	0.3%	0.2%	-12.6%	14.0%
New Zealand	0.2%	0.1%	-6.0%	-1.5%
Austria	0.2%	0.1%	1.1%	18.3%
Portugal	0.2%	0.1%	-22.7%	-25.2%
Total EAFE Countries	100.0%	62.3%	-8.1%	3.8%
Canada		8.1%	-1.8%	11.9%
Total Developed Countries		70.4%	-7.4%	4.7%
China		8.2%	-7.7%	19.4%
Taiwan		5.8%	3.3%	34.4%
India		5.8%	-11.3%	11.2%
Korea		2.7%	-19.2%	-23.4%
Saudi Arabia		1.2%	-1.5%	0.6%
Brazil		1.2%	-19.4%	-29.8%
South Africa		0.9%	-12.1%	6.7%
Mexico		0.5%	-10.6%	-27.1%
Malaysia		0.5%	-6.9%	20.8%
Indonesia		0.4%	-15.6%	-13.0%
Thailand		0.4%	-10.1%	1.3%
United Arab Emirates		0.4%	9.0%	19.6%
Qatar		0.3%	-0.2%	6.1%
Poland		0.2%	-11.5%	-6.7%
Kuwait		0.2%	1.2%	10.5%
Turkey		0.2%	-3.2%	17.8%
Philippines		0.2%	-13.9%	-0.7%
Greece		0.1%	-6.2%	8.9%
Chile		0.1%	-6.8%	-7.5%
Peru		0.1%	-9.1%	15.8%
Hungary		0.1%	-2.3%	14.0%
Czech Republic		0.0%	0.9%	4.0%
Colombia		0.0%	-0.2%	7.9%
Egypt		0.0%	-9.0%	-31.2%
Total Emerging Countries		29.7%	-8.0%	7.5%
Total ACWixUS Countries		100.0%	-7.6%	5.5%

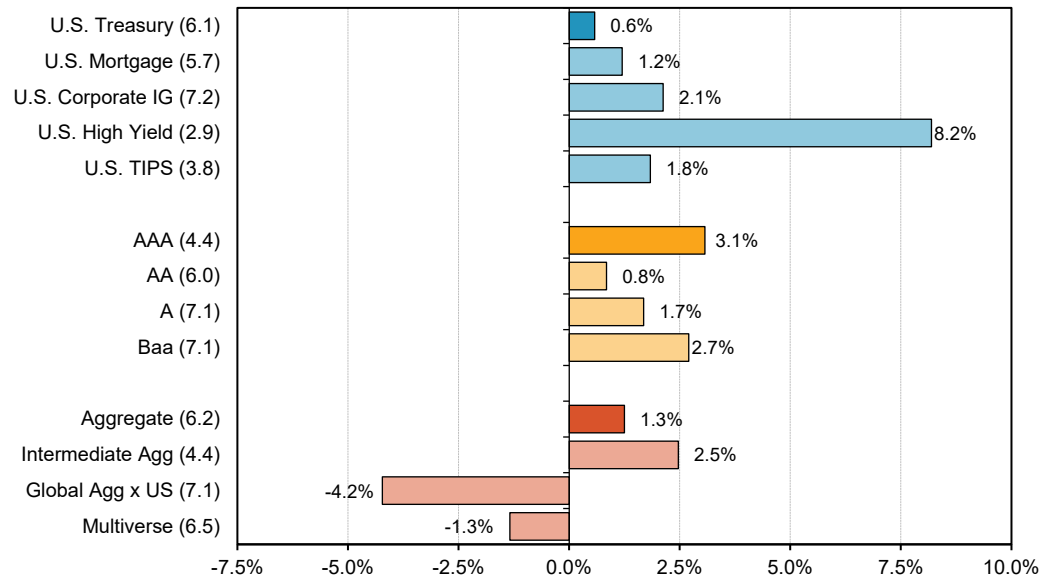
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency,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

- Domestic fixed-income markets declined during the fourth quarter despite two additional 0.25% rate cuts by the Fed. Although the Fed's action moved short-term rates lower, longer-term yields advanced during the quarter, leading to a modest steepening of the Treasury Yield Curve. The Fed's target range is now set at 4.25%-4.50% at year-end, down a full percentage point, including the first 0.50% cut in September of 2024.
- While the Fed's first rate cut in September was initially celebrated by fixed income investors and boosted the levels of the indexes during the third quarter, many of the core indexes fell during the fourth quarter as longer-term yields advanced and worked against the Fed's short-term rate declines. Performance across the investment-grade index's segments declined with the Treasury, Mortgage-Backed and Corporate IG indexes falling in a tight range around -3.0%. Higher quality issues performed better, as BBB issues fell by -2.8%, while AAA issues fell a smaller -1.8% due in large part to their lower duration (4.4 vs. 7.1 years).
- High Yield bonds outperformed investment grade issues as longer-term yields climbed. This was primarily due to the high-yield benchmark's lower duration and higher coupon income. Despite their lower credit quality, below-investment grade issues returned just 0.2% for the quarter, but still outpaced all other broad-based investment-grade fixed income indexes.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index posted a return of 1.3%. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising 2.1% and the US Mortgage Index returning 1.2%. US TIPS, which are excluded from the Bloomberg US Aggregate Bond Index, returned 1.8% for the trailing year.
- Results were mixed across credit qualities of investment grade issues. The performance of AAA issues was aided by their lower duration and returned 3.1% while AA issues returned only 0.8% for the year. High yield bonds were also the best performing segment of the market for the year, returning an outsized 8.2%, more than double any other segment of the domestic fixed income market. Results in high yield were spurred by stable credit spreads and higher coupon income.
- The Bloomberg Global Aggregate ex-US Index finished both the quarter and the year significantly weaker than its domestic benchmark counterpart. Strength in the USD was a primary driver in the international index's weak -6.8% fourth quarter performance and its -4.2% return for the calendar year.

Quarter Performance



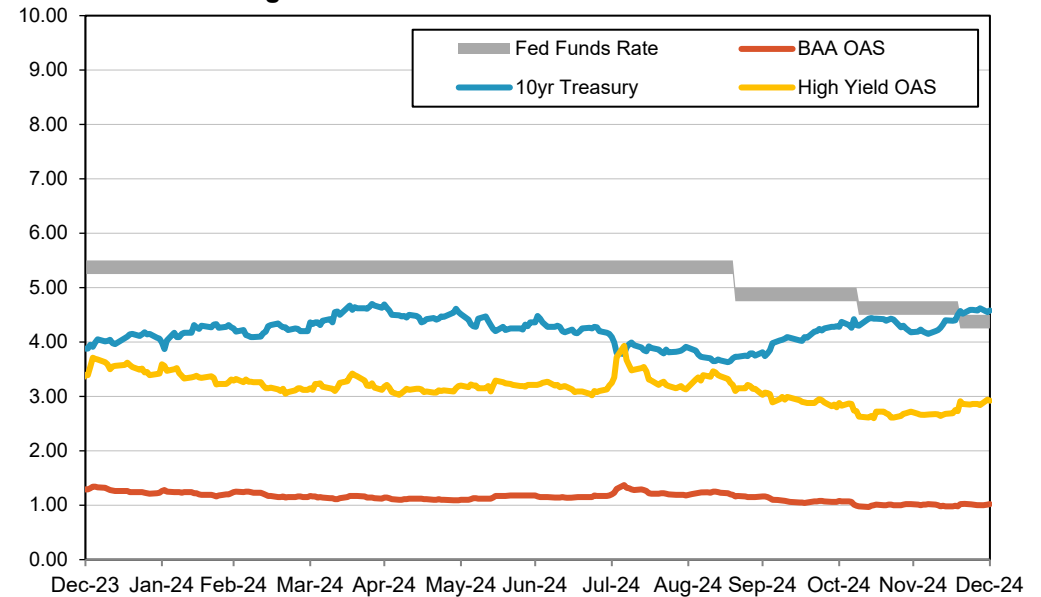
1-Year Performance



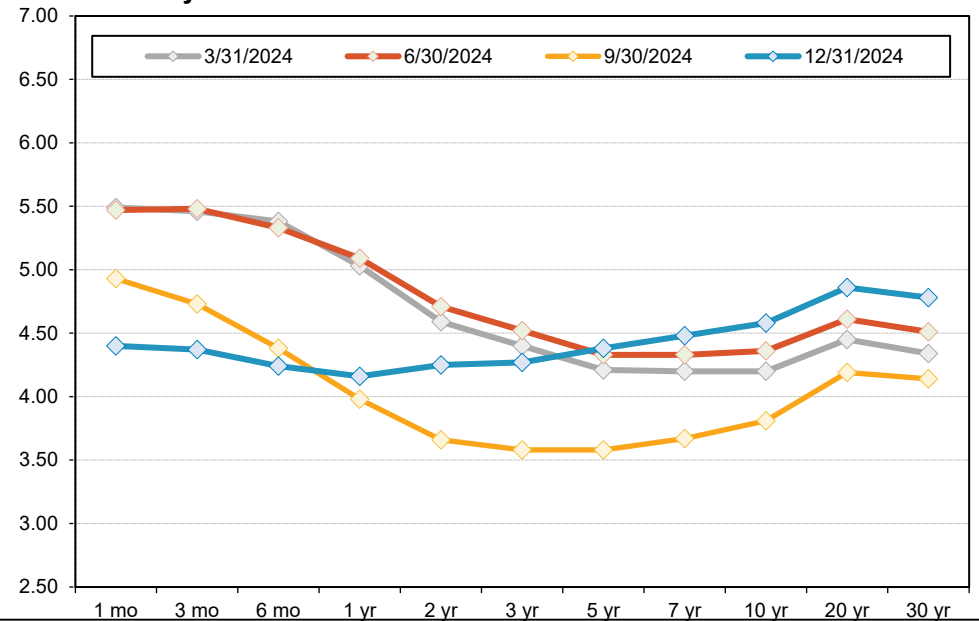
Source: Bloomberg

- The gray band across the graph illustrates the fed funds target rate range over the last 12 months. During the fourth quarter, the Federal Open Market Committee (FOMC) cut its policy rates by 0.50% with two successive 0.25% cuts in November and December. The target policy range now stands at 4.25-4.50%, a level not seen since January of 2023. With inflation declining and unemployment remaining largely stable, the Fed has pivoted from its restrictive monetary policy stance. The most recent FOMC press release continued to emphasize economic data-dependent outcomes while placing greater emphasis on the second part of the committee's dual mandate: full employment. The CME FedWatch tool, which forecasts rates based on fed fund futures pricing, showed a greater than 90% probability of no rate decrease at the FOMC January meeting at the time of this writing. Fed officials and market participants continue to express concern that leaving rates at their current elevated levels 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 0.84% during the quarter. The bellwether benchmark rate opened the quarter at a yield of 3.74% and finished December at a yield of 4.58%, which is its highest level since May 2024.
- 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 decline, beginning October at 1.13% and finishing December at 1.02%. High-yield OAS spreads (represented by the yellow line in the top chart) also remained relatively stable, despite a sharp spike in early August spurred by an unwinding of the yen carry trade. The high-yield OAS fell by 0.11% over the quarter from 3.03% to 2.92%. The spread measure's relative stability over the trailing year results from steady 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. For the first time since November 2022, the quarter-end yield on the 30-year Treasury was higher than the one-month Treasury. Furthermore, the spread between the two-year yield and the 10-year yield continued to widen during the quarter, growing from 0.15% in October to 0.30% at year end. The yield curve had been inverted for much of the last two years. This 2-10-year yield curve inversion is a common heuristic used to foretell a pending recession.

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 \(stlouisfed.org\)](#)

[When will the Federal Reserve start cutting interest rates? | J.P. Morgan Asset Management \(jpmorgan.com\)](#)

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

[China's Economy Limpes Into 2024 – WSJ Support Site - Global Index Lens: Index Returns – MSCI](#)

[Federal Reserve issues FOMC statement](#)

[The Fed - Meeting calendars and information \(federalreserve.gov\)](#)

[The Federal Reserve's latest dot plot, explained – and what it says about interest rates | Bankrate](#)

[Why Chinese banks are now vanishing \(economist.com\)](#)

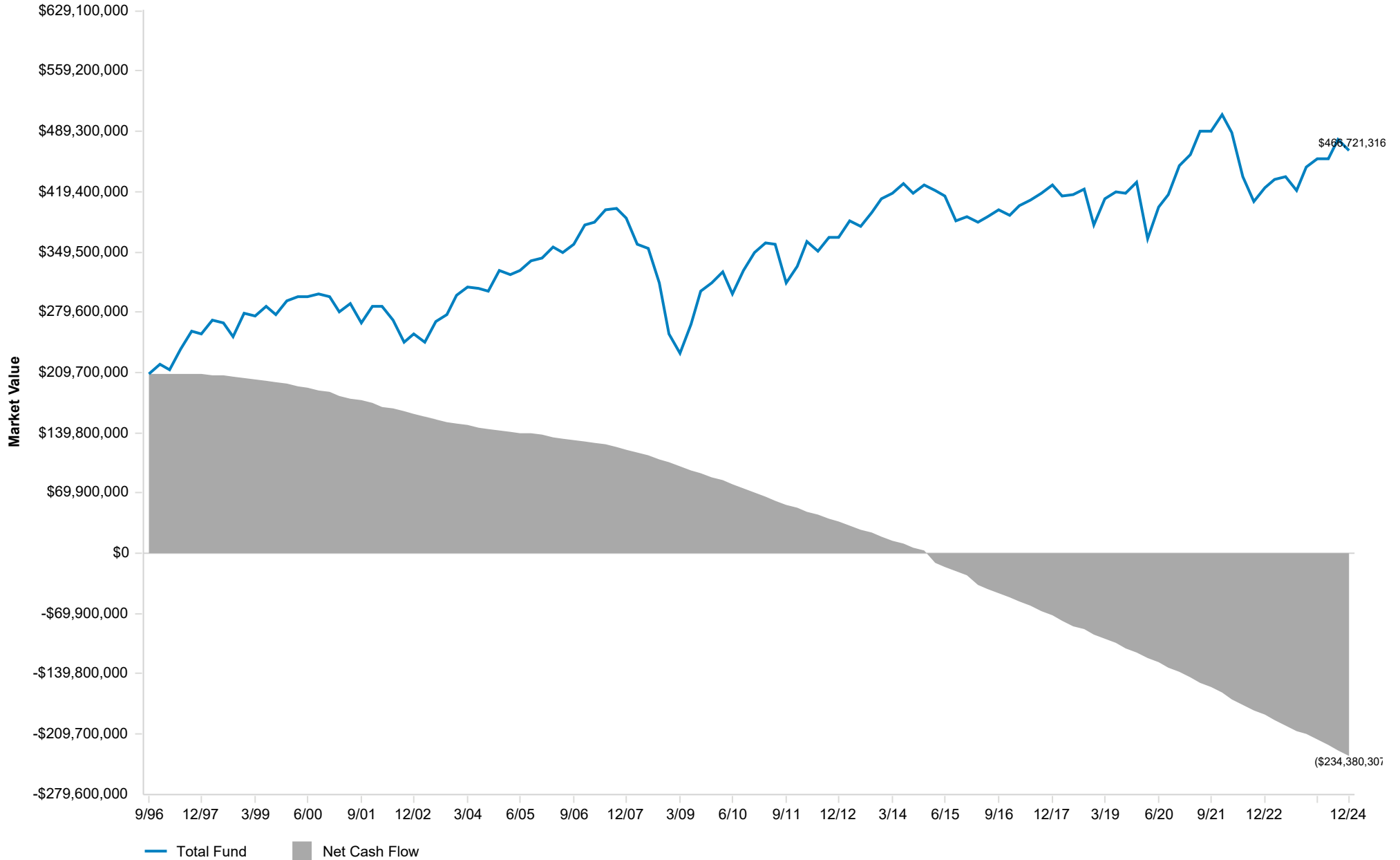
[Fed rate cut: Here's what changed in the central bank's statement \(cnbc.com\)](#)

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

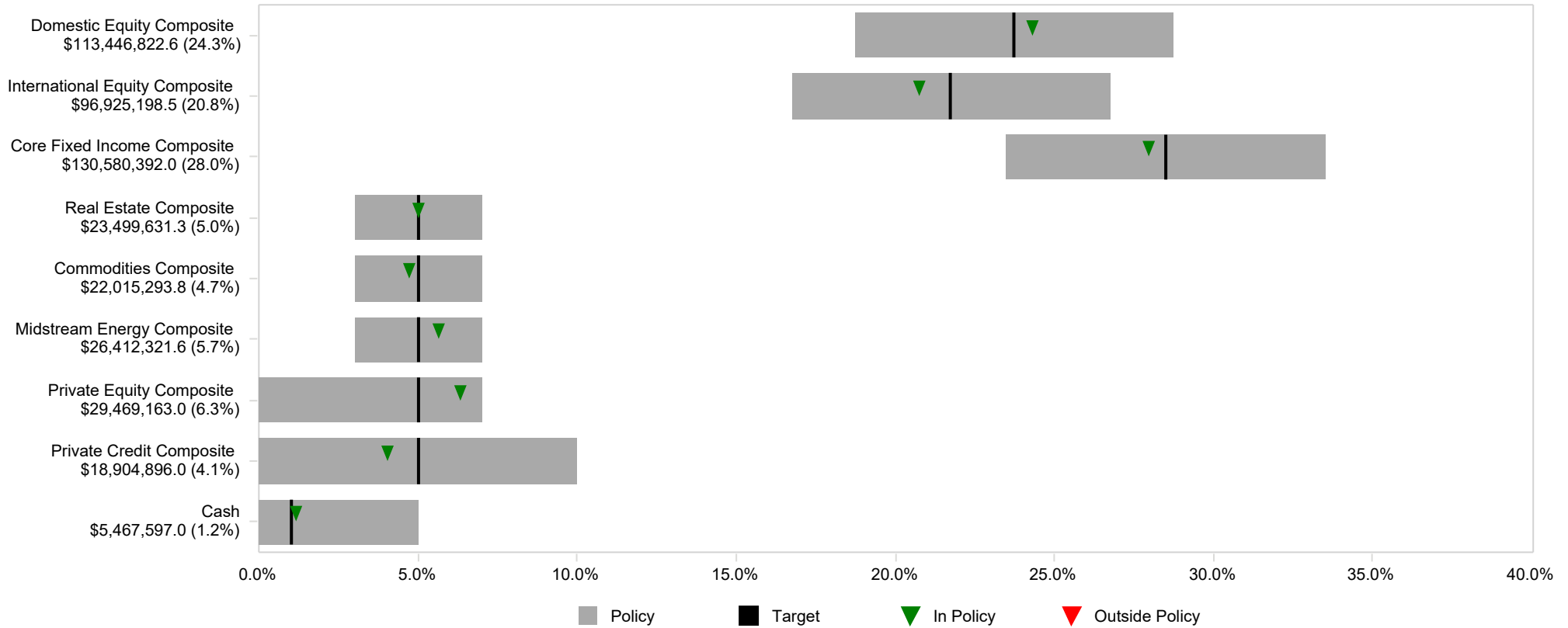
[The Fed's dot plot shows only two rate cuts in 2025, fewer than previously projected](#)

**Grand Rapids General Retirement System
Schedule of Investable Assets
Since Inception Ending December 31, 2024**

Schedule of Investable Assets



Executive Summary



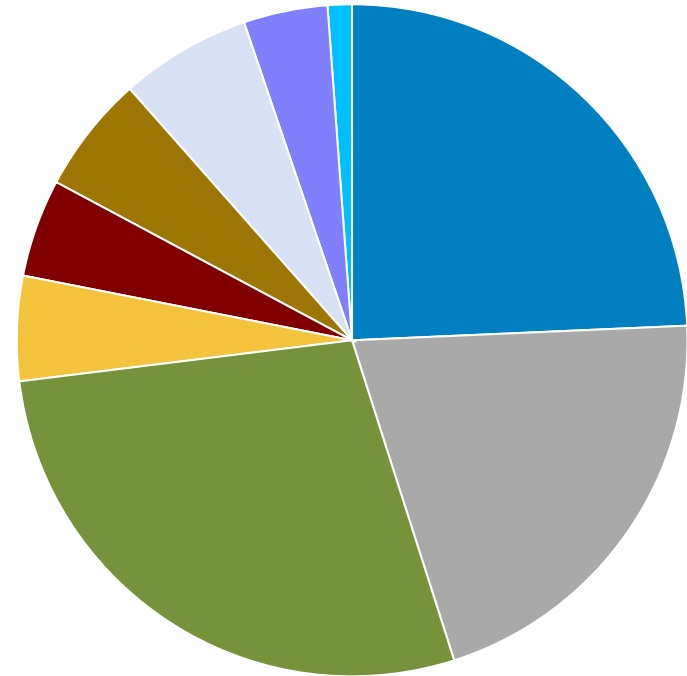
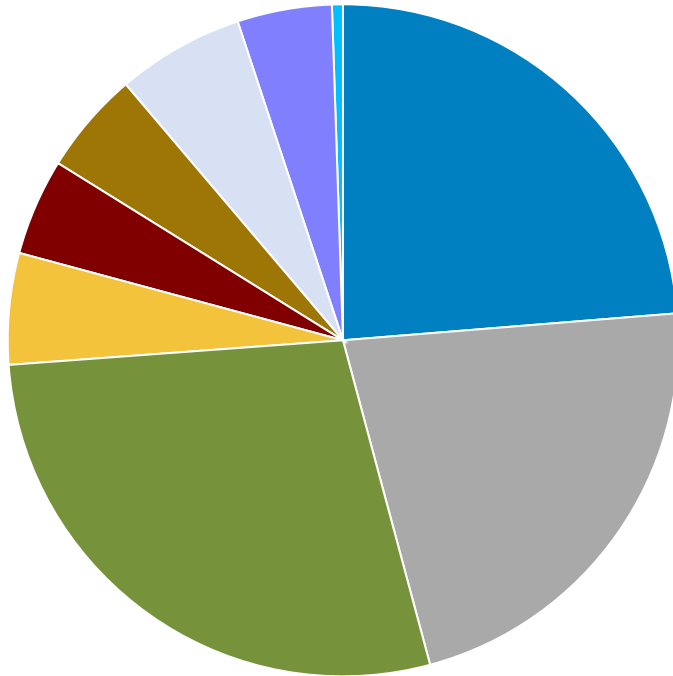
Asset Allocation Compliance

	Asset Allocation \$	Current Allocation (%)	Target Allocation (%)	Minimum Allocation (%)	Maximum Allocation (%)
Total Fund	466,721,316	100.0	100.0	N/A	N/A
Domestic Equity Composite	113,446,823	24.3	23.8	18.8	28.8
International Equity Composite	96,925,198	20.8	21.8	16.8	26.8
Core Fixed Income Composite	130,580,392	28.0	28.5	23.5	33.5
Real Estate Composite	23,499,631	5.0	5.0	3.0	7.0
Commodities Composite	22,015,294	4.7	5.0	3.0	7.0
Midstream Energy Composite	26,412,322	5.7	5.0	3.0	7.0
Private Equity Composite	29,469,163	6.3	5.0	0.0	7.0
Private Credit Composite	18,904,896	4.1	5.0	0.0	10.0
Cash	5,467,597	1.2	1.0	0.0	5.0

Grand Rapids General Retirement System
Asset Allocation By Manager
As of December 31, 2024

Sep-2024 : \$480,043,054

Dec-2024 : \$466,721,316

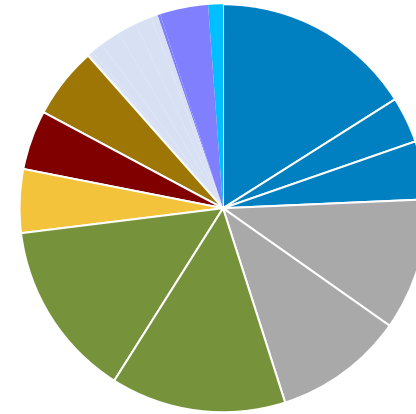
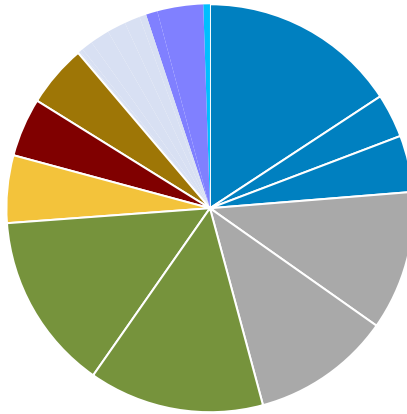


Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ Domestic Equity Composite	113,856,633	23.7	■ Domestic Equity Composite	113,446,823	24.3
■ International Equity Composite	106,067,042	22.1	■ International Equity Composite	96,925,198	20.8
■ Core Fixed Income Composite	134,527,516	28.0	■ Core Fixed Income Composite	130,580,392	28.0
■ Real Estate Composite	25,680,754	5.3	■ Real Estate Composite	23,499,631	5.0
■ Commodities Composite	22,325,296	4.7	■ Commodities Composite	22,015,294	4.7
■ Midstream Energy Composite	23,729,267	4.9	■ Midstream Energy Composite	26,412,322	5.7
■ Private Equity Composite	29,446,086	6.1	■ Private Equity Composite	29,469,163	6.3
■ Private Credit Composite	21,863,640	4.6	■ Private Credit Composite	18,904,896	4.1
■ Cash	2,546,820	0.5	■ Cash	5,467,597	1.2

Grand Rapids General Retirement System
Asset Allocation By Manager
As of December 31, 2024

Sep-2024 : \$480,043,054

Dec-2024 : \$466,721,316



Allocation			Allocation		
	Market Value	Allocation		Market Value	Allocation
■ NTAM S&P 500	75,656,467	15.8	■ NTAM S&P 500	74,764,961	16.0
■ PIMCO Stock Plus	16,668,981	3.5	■ PIMCO Stock Plus	17,075,656	3.7
■ Wellington Small Cap	21,531,185	4.5	■ Wellington Small Cap	21,606,206	4.6
■ Harding Loevner	53,034,455	11.0	■ Harding Loevner	48,819,599	10.5
■ Neuberger Berman CIT	53,032,587	11.0	■ Neuberger Berman CIT	48,105,599	10.3
■ Baird Advisors	66,804,823	13.9	■ Baird Advisors	64,872,461	13.9
■ Western Asset Management	67,722,693	14.1	■ Western Asset Management	-	0.0
■ NT Collective Aggregate Bond Index	-	0.0	■ NT Collective Aggregate Bond Index	65,707,932	14.1
■ Centersquare	25,680,754	5.3	■ Centersquare	23,499,631	5.0
■ Wellington Commodities	22,325,296	4.7	■ Wellington Commodities	22,015,294	4.7
■ Harvest MLP	23,729,267	4.9	■ Harvest MLP	26,412,322	5.7
■ Adams Street 2010 Direct Fund	162,823	0.0	■ Adams Street 2010 Direct Fund	143,145	0.0
■ Adams Street 2010 EM Fund	324,278	0.1	■ Adams Street 2010 EM Fund	312,482	0.1
■ Adams Street 2010 Non-US Fund	515,644	0.1	■ Adams Street 2010 Non-US Fund	470,423	0.1
■ Adams Street 2010 US Fund	1,191,762	0.2	■ Adams Street 2010 US Fund	1,184,187	0.3
■ Adams Street 2013 Global Fund	4,250,327	0.9	■ Adams Street 2013 Global Fund	4,300,550	0.9
■ Adams Street 2015 Global	7,393,584	1.5	■ Adams Street 2015 Global	7,410,515	1.6
■ Adams Street 2017 Global Fund	7,109,109	1.5	■ Adams Street 2017 Global Fund	7,105,583	1.5
■ Adams Street 2019 Global	5,899,539	1.2	■ Adams Street 2019 Global	6,063,134	1.3
■ Aberdeen Global	2,599,020	0.5	■ Aberdeen Global	2,479,144	0.5
■ 50 South Capital Private Credit	4,385,968	0.9	■ 50 South Capital Private Credit	1,016,397	0.2
■ Grosvenor PC	17,477,672	3.6	■ Grosvenor PC	17,888,499	3.8
■ Cash	2,546,820	0.5	■ Cash	5,467,597	1.2

Grand Rapids General Retirement System
Financial Reconciliation
1 Quarter Ending December 31, 2024

Financial Reconciliation Quarter to Date								
	Market Value 10/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
Total Fund	480,043,054	-	4,227,791	-9,769,314	-287,490	-199,312	-7,293,413	466,721,316
Domestic Equity Composite	113,856,633	-2,690,590	-	-	-34,410	-	2,315,189	113,446,823
NTAM S&P 500	75,656,467	-2,722,292	-	-	-2,708	-	1,833,494	74,764,961
PIMCO Stock Plus	16,668,981	-	-	-	-	-	406,675	17,075,656
Wellington Small Cap	21,531,185	31,703	-	-	-31,703	-	75,021	21,606,206
International Equity Composite	106,067,042	-937,720	-	-	-62,280	-2,066	-8,139,778	96,925,198
Harding Loevner	53,034,455	62,280	-	-	-62,280	-2,066	-4,212,790	48,819,599
Neuberger Berman CIT	53,032,587	-1,000,000	-	-	-	-	-3,926,988	48,105,599
Core Fixed Income Composite	134,527,516	78,051	-	-	-78,053	-299	-3,946,823	130,580,392
Baird Advisors	66,804,823	34,912	-	-	-34,912	-299	-1,932,064	64,872,461
Western Asset Management	67,722,693	-66,640,284	-	-	-43,141	-	-1,039,268	-
NT Collective Aggregate Bond Index	-	66,683,423	-	-	-	-	-975,492	65,707,932
Total Real Assets Composite	71,735,317	-762,254	-	-	-112,746	-418	1,067,348	71,927,247
Real Estate Composite	25,680,754	-843,800	-	-	-31,200	-41	-1,306,082	23,499,631
Centersquare	25,680,754	-843,800	-	-	-31,200	-41	-1,306,082	23,499,631
Commodities Composite	22,325,296	35,506	-	-	-35,506	-	-310,002	22,015,294
Wellington Commodities	22,325,296	35,506	-	-	-35,506	-	-310,002	22,015,294
Midstream Energy Composite	23,729,267	46,040	-	-	-46,040	-377	2,683,432	26,412,322
Harvest MLP	23,729,267	46,040	-	-	-46,040	-377	2,683,432	26,412,322

**Grand Rapids General Retirement System
Financial Reconciliation**

1 Quarter Ending December 31, 2024

	Market Value 10/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
Private Equity Composite	29,446,086	-758,817	-	-	-	-5,907	787,801	29,469,163
Adams Street 2010 Direct Fund	162,823	-24,553	-	-	-	-	4,875	143,145
Adams Street 2010 EM Fund	324,278	-13,238	-	-	-	-	1,442	312,482
Adams Street 2010 Non-US Fund	515,644	-66,111	-	-	-	-	20,890	470,423
Adams Street 2010 US Fund	1,191,762	-	-	-	-	-	-7,575	1,184,187
Adams Street 2013 Global Fund	4,250,327	-151,626	-	-	-	-	201,849	4,300,550
Adams Street 2015 Global	7,393,584	-209,149	-	-	-	-	226,080	7,410,515
Adams Street 2017 Global Fund	7,109,109	-174,796	-	-	-	-	171,270	7,105,583
Adams Street 2019 Global	5,899,539	-	-	-	-	-	163,595	6,063,134
Aberdeen Global	2,599,020	-119,344	-	-	-	-5,907	5,375	2,479,144
Private Credit Composite	21,863,640	-3,441,097	-	-	-	-	482,353	18,904,896
50 South Capital Private Credit	4,385,968	-3,441,097	-	-	-	-	71,526	1,016,397
Grosvenor PC	17,477,672	-	-	-	-	-	410,827	17,888,499
Cash	2,546,820	8,512,426	4,227,791	-9,769,314	-	-190,623	140,497	5,467,597

Grand Rapids General Retirement System
Financial Reconciliation
July 1, 2024 To December 31, 2024

Financial Reconciliation Fiscal Year to Date								
	Market Value 07/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
Total Fund	458,332,095	-	8,504,779	-19,479,912	-530,485	-355,148	20,249,987	466,721,316
Domestic Equity Composite	79,865,418	23,910,356	-	-	-52,249	-	9,723,297	113,446,823
NTAM S&P 500	54,151,892	14,569,116	-	-	-5,378	-	6,049,331	74,764,961
PIMCO Stock Plus	15,751,320	-	-	-	-	-	1,324,335	17,075,656
Wellington Small Cap	9,962,206	9,341,240	-	-	-46,871	-	2,349,632	21,606,206
International Equity Composite	80,947,589	16,750,712	-	-	-111,974	-3,259	-657,870	96,925,198
Harding Loevner	40,197,957	8,456,343	-	-	-111,974	-3,259	280,532	48,819,599
Neuberger Berman CIT	40,749,632	8,294,369	-	-	-	-	-938,402	48,105,599
Core Fixed Income Composite	127,655,930	145,324	-	-	-145,325	-716	2,925,180	130,580,392
Baird Advisors	63,420,950	63,406	-	-	-63,406	-716	1,452,227	64,872,461
Western Asset Management	64,234,980	-66,601,506	-	-	-81,919	-	2,448,445	-
NT Collective Aggregate Bond Index	-	66,683,423	-	-	-	-	-975,492	65,707,932
Total Real Assets Composite	69,457,997	-3,554,063	-	-	-220,937	-703	6,244,953	71,927,247
Real Estate Composite	22,550,281	-1,566,561	-	-	-58,439	-77	2,574,427	23,499,631
Centersquare	22,550,281	-1,566,561	-	-	-58,439	-77	2,574,427	23,499,631
Commodities Composite	23,013,065	-777,186	-	-	-72,814	-	-147,772	22,015,294
Wellington Commodities	23,013,065	-777,186	-	-	-72,814	-	-147,772	22,015,294
Midstream Energy Composite	23,894,651	-1,210,316	-	-	-89,684	-627	3,818,297	26,412,322
Harvest MLP	23,894,651	-1,210,316	-	-	-89,684	-627	3,818,297	26,412,322

**Grand Rapids General Retirement System
Financial Reconciliation**

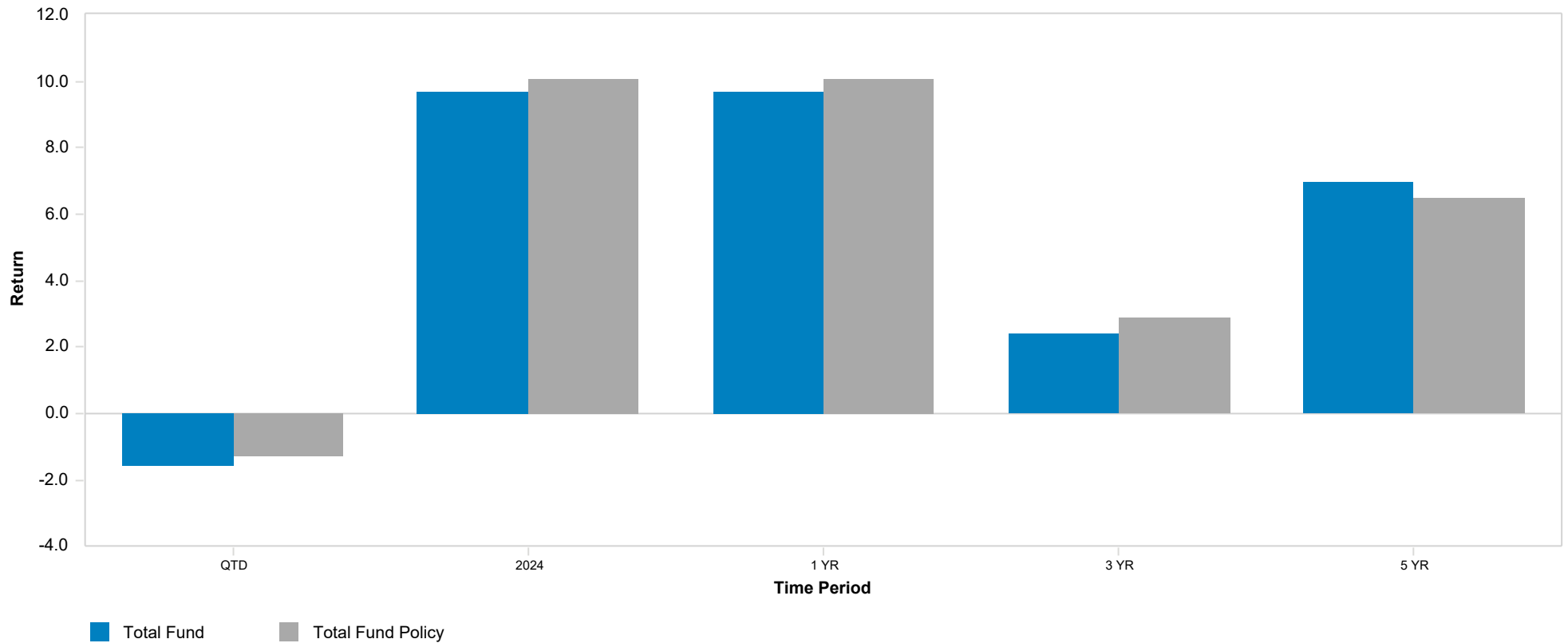
July 1, 2024 To December 31, 2024

	Market Value 07/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Return On Investment	Market Value 12/31/2024
Private Equity Composite	29,993,426	-1,536,433	-	-	-	-5,907	1,018,076	29,469,163
Adams Street 2010 Direct Fund	163,161	-31,168	-	-	-	-	11,152	143,145
Adams Street 2010 EM Fund	341,802	-26,400	-	-	-	-	-2,920	312,482
Adams Street 2010 Non-US Fund	516,797	-66,111	-	-	-	-	19,737	470,423
Adams Street 2010 US Fund	1,265,520	-70,045	-	-	-	-	-11,288	1,184,187
Adams Street 2013 Global Fund	4,411,868	-331,275	-	-	-	-	219,957	4,300,550
Adams Street 2015 Global	7,460,560	-380,356	-	-	-	-	330,311	7,410,515
Adams Street 2017 Global Fund	7,317,570	-407,498	-	-	-	-	195,511	7,105,583
Adams Street 2019 Global	5,758,558	44,550	-	-	-	-	260,026	6,063,134
Aberdeen Global	2,757,590	-268,130	-	-	-	-5,907	-4,410	2,479,144
Private Credit Composite	21,821,038	-3,642,437	-	-	-	-	726,295	18,904,896
50 South Capital Private Credit	4,698,570	-3,642,437	-	-	-	-	-39,736	1,016,397
Grosvenor PC	17,122,468	-	-	-	-	-	766,031	17,888,499
Cash	48,590,696	-32,073,459	8,504,779	-19,479,912	-	-344,563	270,056	5,467,597

Grand Rapids General Retirement System
Performance At-A-Glance
As of December 31, 2024

Gain/Loss Summary					
	QTD	YTD	1 YR	3 YR	5 YR
Total Fund					
Beginning Market Value	480,043,054	447,382,089	447,382,089	508,227,001	430,306,428
Net Contributions	-5,541,523	-22,525,435	-22,525,435	-68,175,642	-110,228,184
Gain/Loss	-7,780,215	41,864,662	41,864,662	26,669,957	146,643,072
Ending Market Value	466,721,316	466,721,316	466,721,316	466,721,316	466,721,316

Comparative Performance



**Grand Rapids General Retirement System
Asset Allocation & Performance**

As of December 31, 2024

	Allocation		Performance(%)										Inception Date
	Market Value \$	%	QTR	YTD	FYTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception		
Total Fund (Gross)	1,316	100.0	-1.51 (78)	9.94 (66)	4.42 (51)	9.94 (66)	2.63 (53)	7.21 (40)	6.83 (57)	6.68 (67)	7.77 (84)	Oct-1987	
Total Fund Composite Policy			-1.29	10.07	4.78	10.07	2.88	6.48	6.10	5.77	7.74		
All Public Plans-Total Fund Median			-0.88	10.88	4.42	10.88	2.70	6.95	6.96	6.99	8.18		
All Public Plans < \$1B-Total Fund Median			-0.88	11.02	4.50	11.02	2.73	6.97	6.99	7.02	-		
Total Fund (Net)	1,316	100.0	-1.57	9.70	4.30	9.70	2.40	6.98	6.58	6.43	7.56	Oct-1987	
Total Fund Composite Policy			-1.29	10.07	4.78	10.07	2.88	6.48	6.10	5.77	7.74		
Domestic Equity Composite	6,823	24.3	1.97 (40)	24.22 (24)	9.05 (34)	24.22 (24)	8.07 (26)	14.06 (23)	13.29 (22)	12.79 (20)	9.54 (89)	Oct-1987	
Russell 3000 Index			2.63	23.81	9.03	23.81	8.01	13.86	13.16	12.55	10.37		
IM U.S. Equity (SA+CF) Median			0.75	15.34	7.99	15.34	5.29	10.62	9.99	9.94	10.70		
NTAM S&P 500	4,961	16.0	2.41 (38)	25.00 (33)	8.44 (33)	25.00 (33)	8.93 (39)	14.52 (32)	13.83 (24)	13.11 (24)	8.33 (67)	Apr-1998	
NTAM Policy			2.41	25.02	8.44	25.02	8.94	14.53	13.83	13.10	8.56		
IM U.S. Large Cap Core Equity (SA+CF) Median			2.12	23.43	7.69	23.43	8.19	13.51	12.69	12.23	8.59		
PIMCO Stock Plus	5,656	3.7	2.44 (37)	25.40 (30)	8.41 (35)	25.40 (30)	8.12 (51)	14.20 (38)	13.60 (30)	12.91 (27)	8.07 (66)	Aug-2000	
S&P 500 Index			2.41	25.02	8.44	25.02	8.94	14.53	13.83	13.10	7.98		
IM U.S. Large Cap Core Equity (SA+CF) Median			2.12	23.43	7.69	23.43	8.19	13.51	12.69	12.23	8.50		
Wellington Small Cap	6,206	4.6	0.21 (46)	16.93 (13)	12.10 (11)	16.93 (13)	3.51 (31)	10.55 (28)	10.17 (15)	10.74 (14)	11.28 (11)	Sep-1999	
Russell 2000 Index			0.33	11.54	9.64	11.54	1.24	7.40	6.91	7.82	8.17		
IM U.S. Small Cap Core Equity (SA+CF) Median			-0.17	10.99	9.46	10.99	1.90	9.18	8.18	8.79	10.37		
International Equity Composite	5,198	20.8	-7.80 (59)	3.24 (64)	-0.84 (61)	3.24 (64)	-1.50 (68)	4.69 (46)	4.35 (37)	5.69 (42)	6.96 (37)	Jul-1995	
International Equity Composite Policy			-7.60	5.53	-0.15	5.53	0.82	4.10	3.53	4.80	5.10		
IM Int'l Equity (SA+CF)			-7.47	5.00	-0.13	5.00	0.63	4.44	3.86	5.38	6.56		
Harding Loevner	9,599	10.5	-8.06 (66)	2.66 (71)	0.36 (38)	2.66 (71)	-1.37 (73)	4.87 (47)	4.25 (42)	-	5.46 (38)	Apr-2015	
MSCI AC World ex USA (Net)			-7.60	5.53	-0.15	5.53	0.82	4.10	3.53	-	4.56		
IM Int'l Large Cap Equity (SA+CF)			-7.48	5.13	-0.27	5.13	0.89	4.72	4.07	-	5.02		
Neuberger Berman CIT	5,599	10.3	-7.54 (52)	3.85 (59)	-2.01 (74)	3.85 (59)	-1.62 (76)	4.47 (55)	-	-	5.00 (46)	Jul-2018	
MSCI AC World ex USA (Net)			-7.60	5.53	-0.15	5.53	0.82	4.10	-	-	4.42		
IM Int'l Large Cap Equity (SA+CF)			-7.48	5.13	-0.27	5.13	0.89	4.72	-	-	4.86		

See the disclosure page at the end of the report.

**Grand Rapids General Retirement System
Asset Allocation & Performance**

As of December 31, 2024

	Allocation		Performance(%)										Inception Date
	Market Value \$	%	QTR	YTD	FYTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception		
Core Fixed Income Composite	0,392	28.0	-2.97 (37)	1.15 (84)	2.20 (21)	1.15 (84)	-3.12 (97)	-0.36 (86)	1.12 (59)	1.81 (22)	5.68 (66)	Oct-1987	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.98	1.25	-2.41	-0.33	0.97	1.35	5.44		
IM U.S. Broad Market Core FI (SA+CF)			-3.04	1.61	2.02	1.61	-2.26	-0.04	1.21	1.57	5.76		
Baird Advisors	2,461	13.9	-2.94 (34)	1.74 (43)	2.19 (21)	1.74 (43)	-2.02 (26)	0.13 (34)	1.38 (26)	1.83 (20)	3.47 (42)	Dec-2002	
Blmbg. U.S. Aggregate Index			-3.06	1.25	1.98	1.25	-2.41	-0.33	0.97	1.35	3.21		
IM U.S. Broad Market Core FI (SA+CF)			-3.04	1.61	2.02	1.61	-2.26	-0.04	1.21	1.57	3.41		
NT Collective Aggregate Bond Index	7,932	14.1	-	-	-	-	-	-	-	-	-	Jan-2025	
Blmbg. U.S. Aggregate Index			-	-	-	-	-	-	-	-	-		
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			-	-	-	-	-	-	-	-	-		
Total Real Assets Composite	7,247	15.4	1.35	17.25	8.90	17.25	8.68	9.76	7.46	-	5.15	Apr-2015	
Real Assets Composite Policy			-0.94	10.17	4.22	10.17	6.56	8.41	6.43	-	4.35		
Real Estate Composite	9,631	5.0	-5.38	11.33	10.87	11.33	-1.06	5.67	5.48	4.79	8.13	Jun-2009	
Real Estate Policy Index			-5.93	8.10	8.70	8.10	-3.02	3.40	4.04	4.16	8.03		
Centersquare	9,631	5.0	-5.38 (18)	11.33 (10)	10.87 (8)	11.33 (10)	-1.06 (13)	5.67 (15)	-	-	5.39 (13)	Oct-2019	
Dow Jones U.S. Select REIT			-5.93	8.10	8.70	8.10	-3.02	3.40	-	-	2.99		
IM U.S. REIT (SA+CF) Median			-6.66	7.27	8.01	7.27	-3.17	4.43	-	-	4.29		
Commodities Composite	5,294	4.7	-1.55	7.03	-1.00	7.03	6.82	10.04	6.70	3.80	0.46	Feb-2013	
Bloomberg Commodity Index Total Return			-0.45	5.38	0.23	5.38	4.05	6.77	4.11	1.28	-1.52		
Wellington Commodities	5,294	4.7	-1.55	7.03	-1.00	7.03	6.82	10.04	6.70	3.80	0.46	Feb-2013	
Bloomberg Commodity Index Total Return			-0.45	5.38	0.23	5.38	4.05	6.77	4.11	1.28	-1.52		
Midstream Energy Composite	2,322	5.7	11.13	41.05	16.20	41.05	29.27	17.72	11.89	-	5.70	Mar-2015	
Alerian Midstream Energy Index			13.47	44.53	24.47	44.53	26.05	16.27	12.53	-	6.78		
Harvest MLP	2,322	5.7	11.13 (38)	41.05 (36)	16.20 (45)	41.05 (36)	29.27 (18)	17.72 (12)	11.89 (10)	-	5.70 (12)	Mar-2015	
Alerian Midstream Energy Index			13.47	44.53	24.47	44.53	26.05	16.27	12.53	-	6.78		
Energy Limited Partnership Median			10.44	38.03	15.52	38.03	25.22	15.22	9.79	-	3.96		
Total Cash Equivalents Composite	7,597	1.2											

See the disclosure page at the end of the report.

Grand Rapids General Retirement System
Comparative Performance - IRR
As of December 31, 2024

Comparative Performance - IRR

	Market Value \$ (\$)	%	QTR	YTD	1 YR	3 YR	5 YR	7 YR	10 YR	Inception	Inception Date
Private Equity Composite	29,469,163	6.3	2.68	4.61	4.61	-2.94	17.85	17.26	15.80	14.88	04/30/2010
Adams Street 2010 Direct Fund	143,145	0.0	3.05	10.22	10.22	-7.73	6.84	9.31	9.73	11.63	04/30/2010
Adams Street 2010 EM Fund	312,482	0.1	0.46	-3.77	-3.77	-10.22	6.85	8.75	10.24	9.31	01/03/2011
Adams Street 2010 Non-US Fund	470,423	0.1	4.40	4.22	4.22	-2.46	15.47	15.98	14.60	12.39	04/30/2010
Adams Street 2010 US Fund	1,184,187	0.3	-0.64	-1.68	-1.68	-7.87	24.47	20.71	16.63	15.73	04/30/2010
Adams Street 2013 Global Fund	4,300,550	0.9	4.81	5.08	5.08	-5.22	14.75	14.98	12.93	12.52	07/03/2013
Adams Street 2015 Global	7,410,515	1.6	3.08	7.42	7.42	-2.08	17.83	16.18	N/A	18.81	09/15/2015
Adams Street 2017 Global Fund	7,105,583	1.5	2.43	4.59	4.59	2.29	17.60	15.80	N/A	15.78	06/22/2017
Adams Street 2019 Global	6,063,134	1.3	2.77	6.39	6.39	1.14	14.22	N/A	N/A	14.22	12/30/2019
Aberdeen Global	2,479,144	0.5	-0.02	-2.86	-2.86	-11.82	24.06	21.27	17.33	15.05	01/17/2012
Private Credit Composite	18,904,896	4.1	2.24	8.18	8.18	5.61	6.03	N/A	N/A	5.89	09/30/2018
50 South Capital Private Credit	1,016,397	0.2	1.76	7.83	7.83	7.11	8.56	N/A	N/A	7.58	11/05/2018
Grosvenor PC	17,888,499	3.8	2.35	8.28	8.28	5.16	5.27	N/A	N/A	5.37	09/27/2018

**Grand Rapids General Retirement System
Asset Allocation & Performance**

As of December 31, 2024

Comparative Performance Fiscal Year Returns

	Performance(%)										
	June 2024	June 2023	June 2022	June 2021	June 2020	June 2019	June 2018	June 2017	June 2016	June 2015	
Total Fund (Gross)	10.29 (68)	5.93 (91)	-5.58 (12)	27.81 (35)	1.57 (79)	5.60 (72)	7.48 (69)	10.34 (77)	0.52 (51)	2.91 (54)	
Total Fund Composite Policy	10.16	5.91	-6.43	25.74	-0.34	5.70	6.18	8.45	-0.53	1.52	
All Public Plans-Total Fund Median	11.41	8.75	-10.91	26.66	3.46	6.34	8.14	11.72	0.55	3.01	
All Public Plans < \$1B-Total Fund Median	11.75	8.97	-11.54	26.63	3.76	6.45	8.13	11.56	0.61	3.04	
Total Fund (Net)	10.05	5.70	-5.79	27.54	1.33	5.33	7.22	10.06	0.26	2.67	
Total Fund Composite Policy	10.16	5.91	-6.43	25.74	-0.34	5.70	6.18	8.45	-0.53	1.52	
Domestic Equity Composite	23.35 (25)	18.96 (31)	-13.06 (49)	46.41 (51)	4.61 (37)	8.78 (33)	14.84 (45)	20.28 (43)	1.87 (24)	7.75 (39)	
FT Wilshire 5000 Total Market TR Index	23.15	19.06	-13.19	44.24	6.78	9.09	14.66	18.54	2.96	7.09	
IM U.S. Equity (SA+CF) Median	14.98	15.50	-13.46	46.58	-1.18	5.67	14.14	19.34	-2.45	6.67	
NTAM S&P 500	24.53 (42)	19.56 (26)	-10.62 (48)	40.76 (52)	7.55 (29)	10.47 (31)	14.35 (38)	17.81 (44)	4.07 (27)	7.54 (53)	
NTAM Policy	24.56	19.59	-10.62	40.79	7.51	10.42	14.37	17.90	3.99	7.42	
IM U.S. Large Cap Core Equity (SA+CF) Median	23.98	17.40	-10.82	40.84	5.15	8.43	13.75	17.30	1.72	7.71	
PIMCO Stock Plus	25.47 (33)	18.76 (35)	-12.78 (72)	41.61 (41)	8.13 (27)	10.69 (30)	14.39 (37)	18.92 (34)	2.69 (39)	6.59 (67)	
S&P 500 Index	24.56	19.59	-10.62	40.79	7.51	10.42	14.37	17.90	3.99	7.42	
IM U.S. Large Cap Core Equity (SA+CF) Median	23.98	17.40	-10.82	40.84	5.15	8.43	13.75	17.30	1.72	7.71	
Wellington Small Cap	14.12 (19)	16.45 (28)	-23.49 (84)	63.77 (34)	-3.85 (32)	3.92 (14)	16.29 (55)	27.24 (14)	-3.96 (40)	8.62 (35)	
Russell 2000 Index	10.06	12.31	-25.20	62.03	-6.63	-3.31	17.57	24.60	-6.73	6.49	
IM U.S. Small Cap Core Equity (SA+CF) Median	9.07	13.16	-17.72	58.97	-8.07	-2.31	16.85	22.77	-5.27	7.60	
International Equity Composite	8.22 (67)	16.98 (42)	-22.30 (64)	36.81 (52)	2.66 (27)	-0.50 (49)	8.85 (44)	19.05 (62)	-6.65 (39)	0.11 (31)	
International Equity Composite Policy	11.62	12.72	-19.42	35.72	-4.80	1.29	7.28	20.45	-10.24	-5.26	
IM International Equity (SA+CF) Median	10.67	15.95	-19.83	37.22	-2.90	-0.61	7.95	20.27	-8.42	-2.05	
Harding Loevner	5.84 (86)	18.44 (37)	-21.90 (71)	34.12 (60)	2.71 (26)	-0.85 (61)	9.39 (32)	20.41 (43)	-5.45 (21)	-	
MSCI AC World ex USA (Net)	11.62	12.72	-19.42	35.72	-4.80	1.29	7.28	20.45	-10.24	-	
IM International Large Cap Equity (SA+CF) Median	10.45	16.93	-19.23	35.87	-2.71	0.17	7.21	19.58	-9.30	-	
Neuberger Berman CIT	10.67 (48)	15.53 (64)	-22.68 (75)	39.44 (31)	2.31 (28)	-0.67 (60)	-	-	-	-	
MSCI AC World ex USA (Net)	11.62	12.72	-19.42	35.72	-4.80	1.29	-	-	-	-	
IM International Large Cap Equity (SA+CF) Median	10.45	16.93	-19.23	35.87	-2.71	0.17	-	-	-	-	

See the disclosure page at the end of the report.

**Grand Rapids General Retirement System
Asset Allocation & Performance**

As of December 31, 2024

	Performance(%)										
	June 2024	June 2023	June 2022	June 2021	June 2020	June 2019	June 2018	June 2017	June 2016	June 2015	
Global Low Volatility Equity Composite	9.92 (73)	6.14 (89)	-6.20 (16)	19.71 (95)	-2.09 (64)	-	-	-	-	-	
MSCI ACWI Minimum Volatility Index (Net)	9.08	5.79	-6.40	19.35	-2.50	-	-	-	-	-	
IM Global Equity (SA+CF) Median	14.46	16.03	-16.17	39.91	1.19	-	-	-	-	-	
BlackRock MSCI ACWI Min Vol	9.92 (73)	6.14 (89)	-6.20 (16)	19.71 (95)	-2.09 (64)	-	-	-	-	-	
MSCI ACWI Minimum Volatility Index (Net)	9.08	5.79	-6.40	19.35	-2.50	-	-	-	-	-	
IM Global Equity (SA+CF) Median	14.46	16.03	-16.17	39.91	1.19	-	-	-	-	-	
Core Fixed Income Composite	2.71 (68)	-0.77 (54)	-12.67 (98)	2.04 (24)	9.15 (24)	8.89 (5)	-0.29 (48)	2.17 (8)	6.21 (22)	2.24 (18)	
Blmbg. U.S. Aggregate Index	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00	1.86	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.97	-0.68	-10.45	0.71	8.67	7.83	-0.33	0.07	5.92	1.87	
Baird Advisors	3.32 (33)	-0.43 (28)	-10.51 (55)	0.44 (58)	9.28 (18)	8.19 (20)	-0.02 (26)	0.69 (27)	6.44 (13)	2.41 (12)	
Blmbg. U.S. Aggregate Index	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00	1.86	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	2.97	-0.68	-10.45	0.71	8.67	7.83	-0.33	0.07	5.92	1.87	
Western Asset Management	2.07 (95)	-1.13 (90)	-14.82 (98)	3.61 (38)	8.95 (22)	9.44 (4)	-0.57 (83)	3.65 (18)	5.98 (20)	2.06 (15)	
Blmbg. U.S. Aggregate Index	2.63	-0.94	-10.29	-0.34	8.74	7.87	-0.40	-0.31	6.00	1.86	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median	4.01	0.16	-11.05	2.96	7.88	7.91	-0.06	1.96	5.11	1.38	
NT Collective Aggregate Bond Index	-	-	-	-	-	-	-	-	-	-	
Blmbg. U.S. Aggregate Index	-	-	-	-	-	-	-	-	-	-	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median	-	-	-	-	-	-	-	-	-	-	
Total Real Assets Composite	15.33	3.15	5.57	32.62	-11.50	2.93	3.85	-0.40	-2.22	-	
Real Assets Composite Policy	12.53	4.16	4.65	38.50	-15.57	2.98	3.35	-0.73	-2.23	-	
TIPS Composite	2.81 (39)	-1.42 (53)	-5.76 (83)	6.40 (60)	7.94 (41)	4.74 (35)	1.80 (54)	-0.57 (44)	4.37 (21)	-	
Bloomberg U.S. TIPS Index	2.71	-1.40	-5.14	6.51	8.28	4.84	2.11	-0.63	4.35	-	
IM U.S. TIPS (SA+CF) Median	2.61	-1.38	-5.16	6.48	7.71	4.60	1.89	-0.64	3.89	-	
Brown Brothers Harriman	2.81 (39)	-1.42 (53)	-5.76 (83)	6.40 (60)	7.94 (41)	4.74 (35)	1.80 (54)	-0.57 (44)	4.37 (21)	-	
Bloomberg U.S. TIPS Index	2.71	-1.40	-5.14	6.51	8.28	4.84	2.11	-0.63	4.35	-	
IM U.S. TIPS (SA+CF) Median	2.61	-1.38	-5.16	6.48	7.71	4.60	1.89	-0.64	3.89	-	
Real Estate Composite	8.21	-0.60	-5.18	37.96	-12.31	8.31	4.35	-1.44	8.76	-1.26	
Real Estate Policy Index	7.15	-0.69	-6.41	39.98	-19.40	7.68	5.64	0.21	11.58	-0.36	
Centersquare	8.21 (16)	-0.60 (30)	-5.18 (23)	37.96 (44)	-	-	-	-	-	-	
Dow Jones U.S. Select REIT	7.15	-0.69	-6.41	39.98	-	-	-	-	-	-	
IM U.S. REIT (SA+CF) Median	6.76	-2.06	-6.47	36.82	-	-	-	-	-	-	
Commodities Composite	15.58	-5.16	17.45	41.03	-7.72	-5.51	13.78	-2.80	-13.64	-22.33	
Bloomberg Commodity Index Total Return	5.00	-9.61	24.27	45.61	-17.38	-6.75	7.35	-6.50	-13.32	-23.71	

See the disclosure page at the end of the report.

**Grand Rapids General Retirement System
Asset Allocation & Performance**

As of December 31, 2024

	Performance(%)									
	June 2024	June 2023	June 2022	June 2021	June 2020	June 2019	June 2018	June 2017	June 2016	June 2015
Wellington Commodities	15.58	-5.16	17.45	41.03	-7.72	-5.51	13.78	-2.80	-13.64	-22.33
Bloomberg Commodity Index Total Return	5.00	-9.61	24.27	45.61	-17.38	-6.75	7.35	-6.50	-13.32	-23.71
Midstream Energy Composite	35.62	20.81	14.56	53.52	-36.75	0.94	-0.22	2.65	-18.30	-
Alerian Midstream Energy Index	26.68	12.16	11.42	53.15	-29.45	6.98	0.15	6.80	-18.25	-
Harvest MLP	35.62 (13)	20.81 (49)	14.56 (7)	53.52 (59)	-36.75 (37)	0.94 (59)	-0.22 (15)	2.65 (61)	-18.30 (45)	-
Alerian Midstream Energy Index	26.68	12.16	11.42	53.15	-29.45	6.98	0.15	6.80	-18.25	-
Energy Limited Partnership Median	30.60	18.19	8.33	56.19	-38.74	1.30	-2.38	3.59	-20.79	-

See the disclosure page at the end of the report.

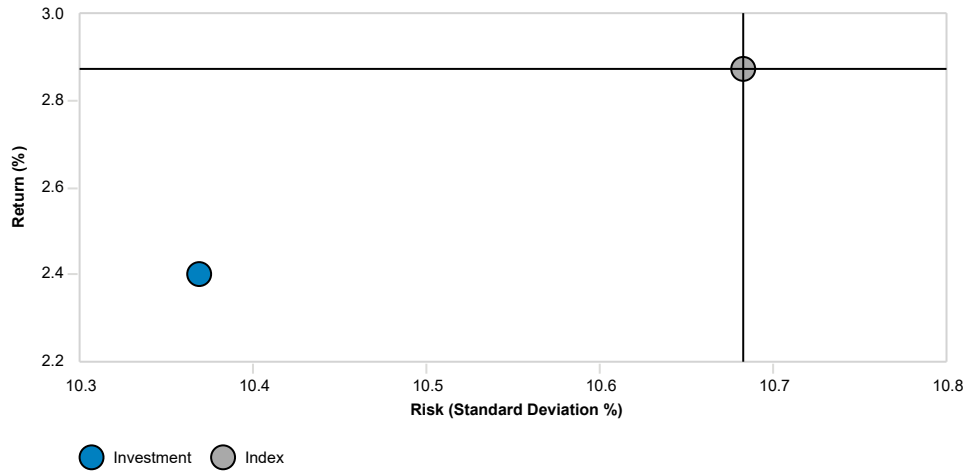
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	2.40	10.37	-0.09	96.98	7	99.74	5
Index	2.88	10.68	-0.04	100.00	7	100.00	5

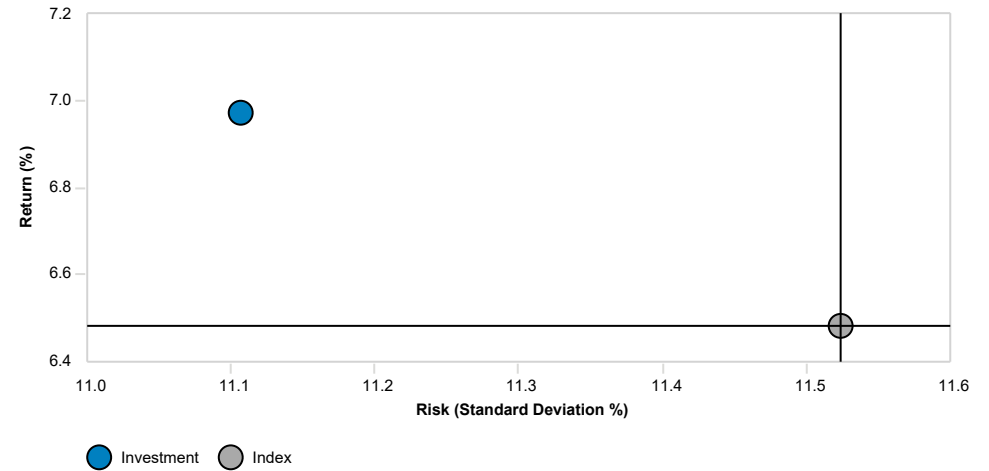
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	6.98	11.11	0.44	100.16	14	96.99	6
Index	6.48	11.52	0.39	100.00	14	100.00	6

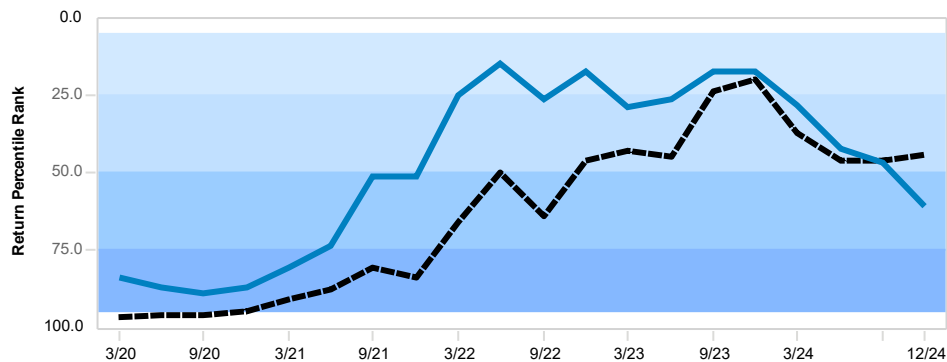
Risk and Return 3 Years



Risk and Return 5 Years

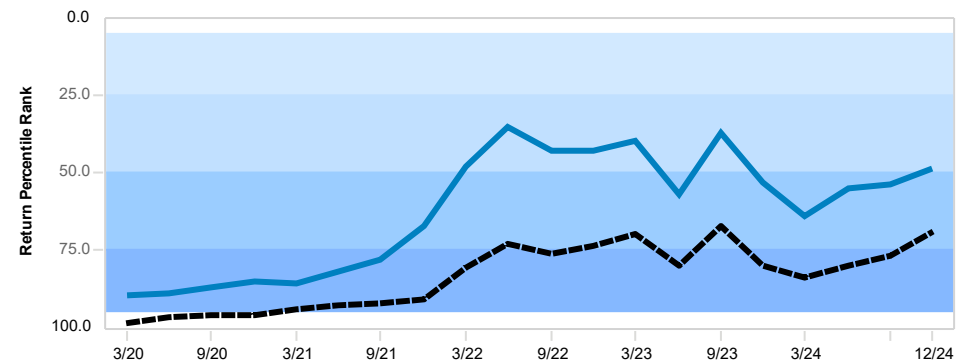


3 Year Rolling Percentile Rank All Public Plans-Total Fund



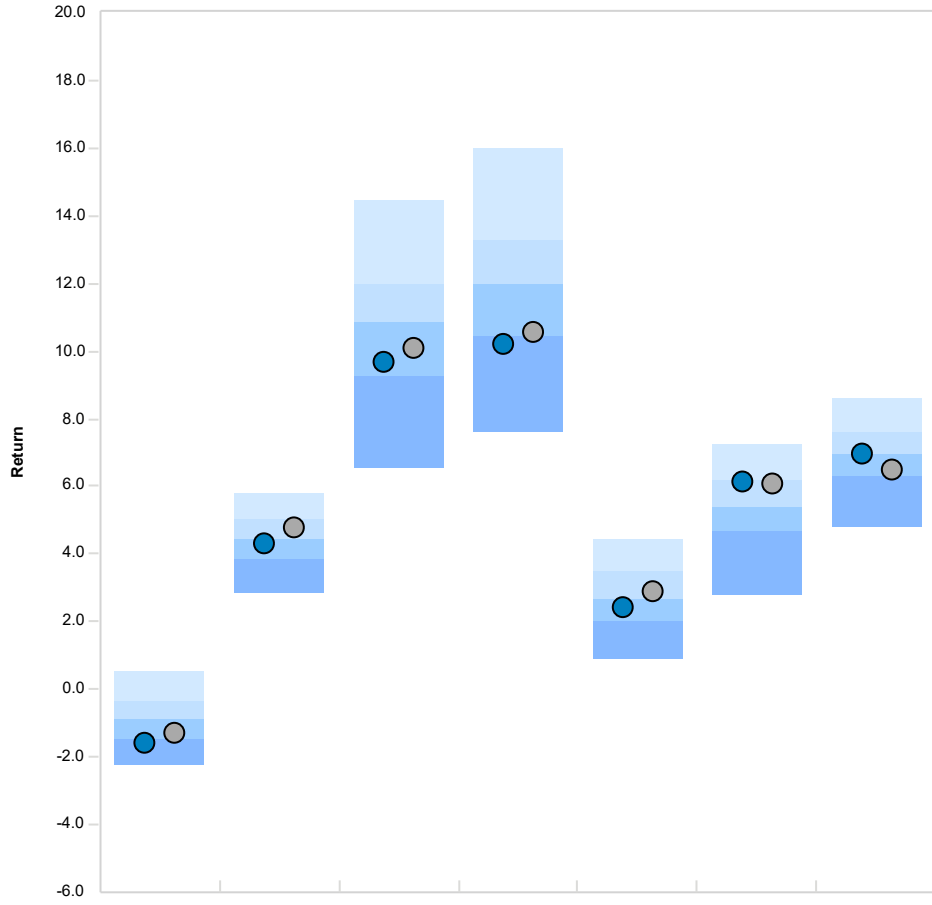
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	6 (30%)	4 (20%)	5 (25%)
Index	20	2 (10%)	8 (40%)	2 (10%)	8 (40%)

5 Year Rolling Percentile Rank All Public Plans-Total Fund



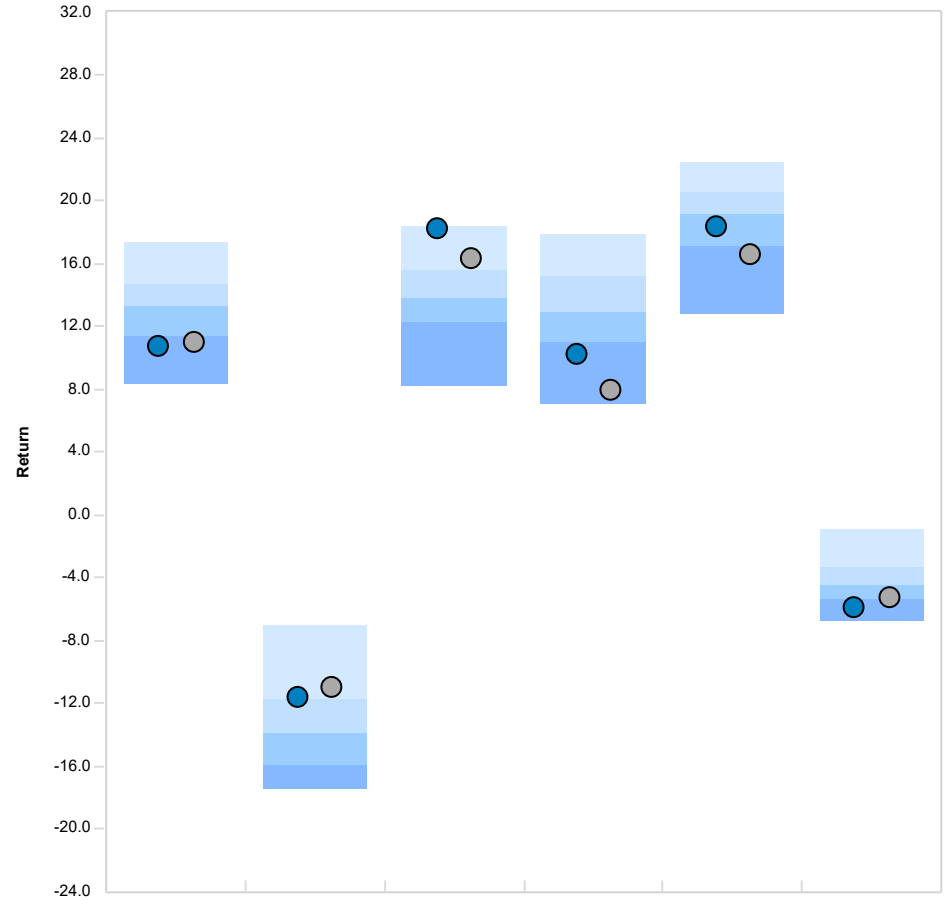
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	0 (0%)	7 (35%)	6 (30%)	7 (35%)
Index	20	0 (0%)	0 (0%)	5 (25%)	15 (75%)

Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-1.57 (79)	4.30 (57)	9.70 (71)	10.23 (78)	2.40 (61)	6.16 (28)	6.98 (49)
● Index	-1.29 (70)	4.78 (36)	10.07 (64)	10.57 (74)	2.88 (44)	6.11 (29)	6.48 (69)
Median	-0.88	4.42	10.88	11.98	2.70	5.37	6.95

Plan Sponsor Peer Group Analysis vs. All Public Plans-Total Fund



	2023	2022	2021	2020	2019	2018
● Investment	10.76 (83)	-11.62 (24)	18.27 (6)	10.31 (82)	18.43 (61)	-5.82 (86)
● Index	11.07 (80)	-10.94 (19)	16.44 (17)	7.98 (93)	16.68 (81)	-5.24 (74)
Median	13.28	-13.81	13.81	12.96	19.17	-4.39

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	5.97 (20)	1.50 (22)	3.62 (86)	7.13 (73)	-2.32 (28)	2.14 (91)
Index	6.15 (13)	1.37 (35)	3.63 (86)	7.24 (72)	-2.22 (25)	2.26 (90)
Median	5.44	1.16	4.87	8.17	-2.95	3.28

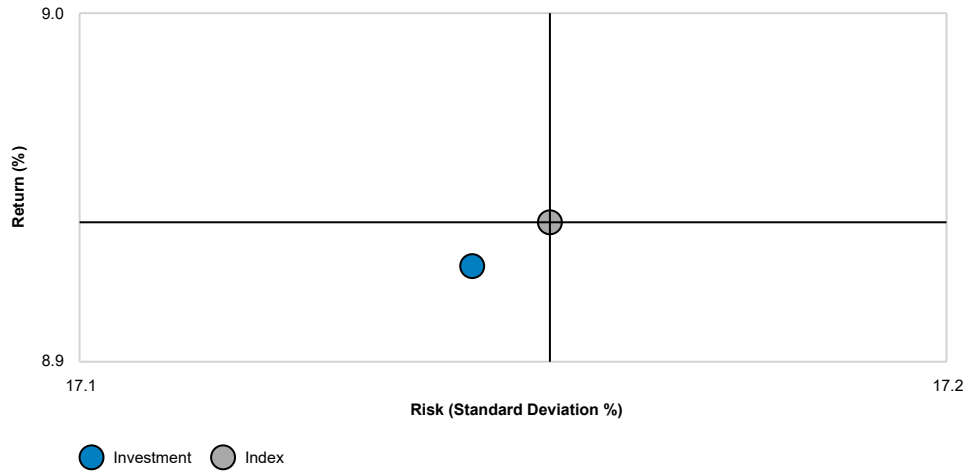
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.93	17.15	0.37	99.92	8	99.95	4
Index	8.94	17.15	0.37	100.00	8	100.00	4

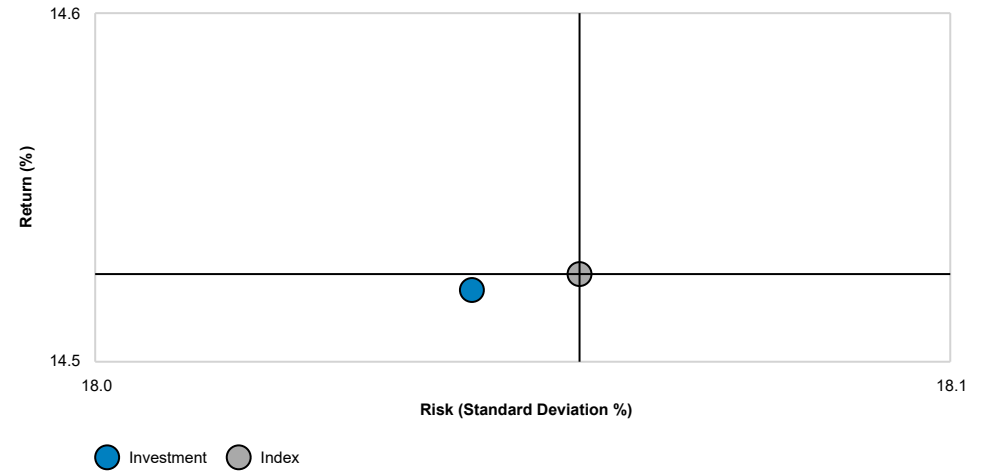
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.52	18.04	0.71	99.94	15	99.92	5
Index	14.53	18.06	0.71	100.00	15	100.00	5

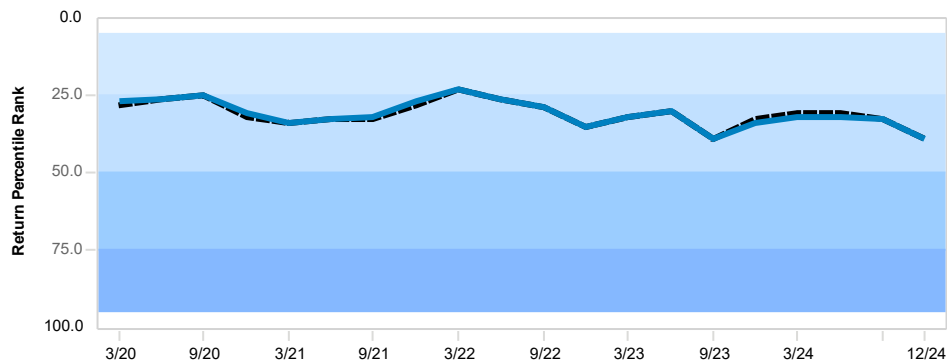
Risk and Return 3 Years



Risk and Return 5 Years

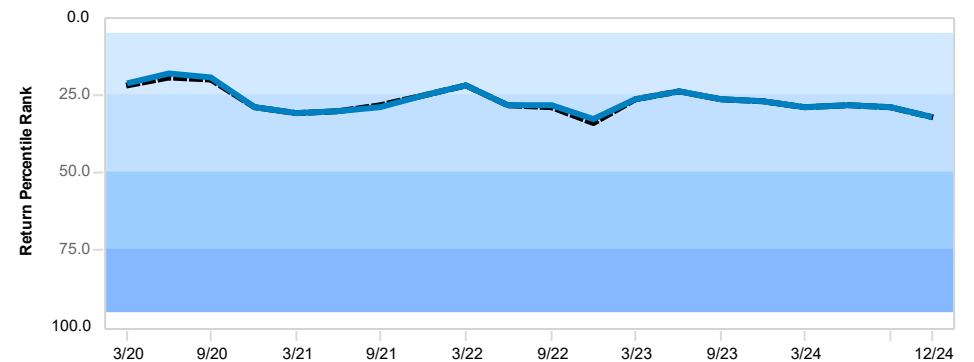


3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



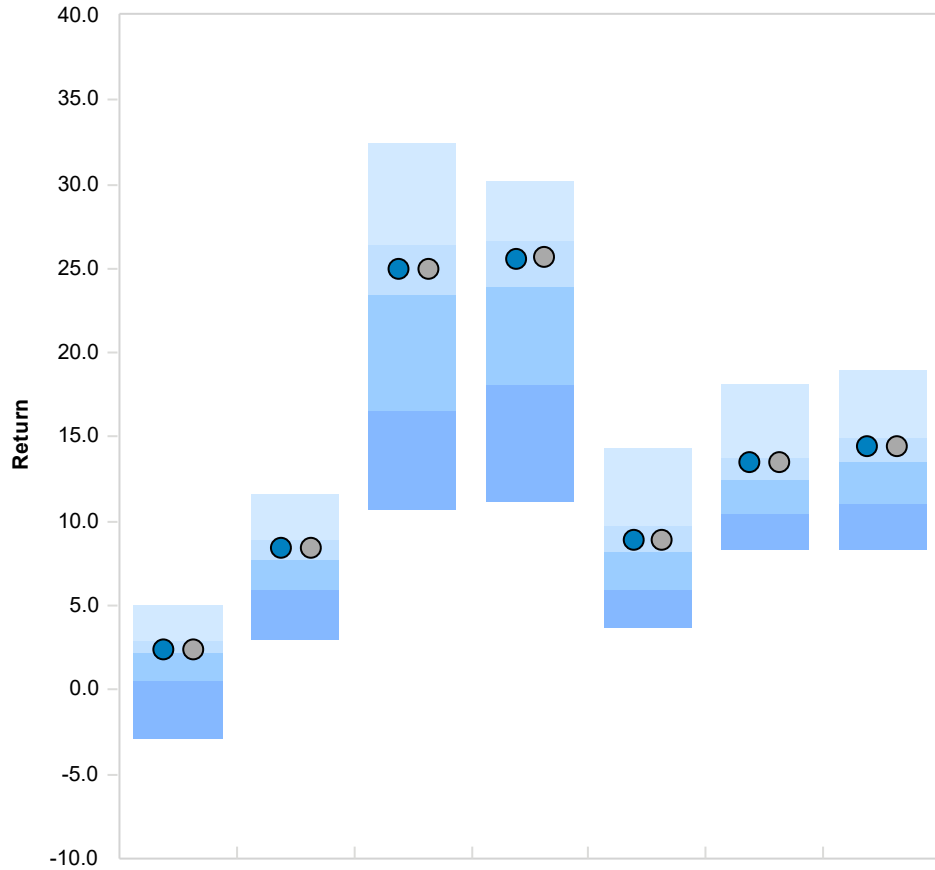
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	2 (10%)	18 (90%)	0 (0%)	0 (0%)
Index	20	2 (10%)	18 (90%)	0 (0%)	0 (0%)

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



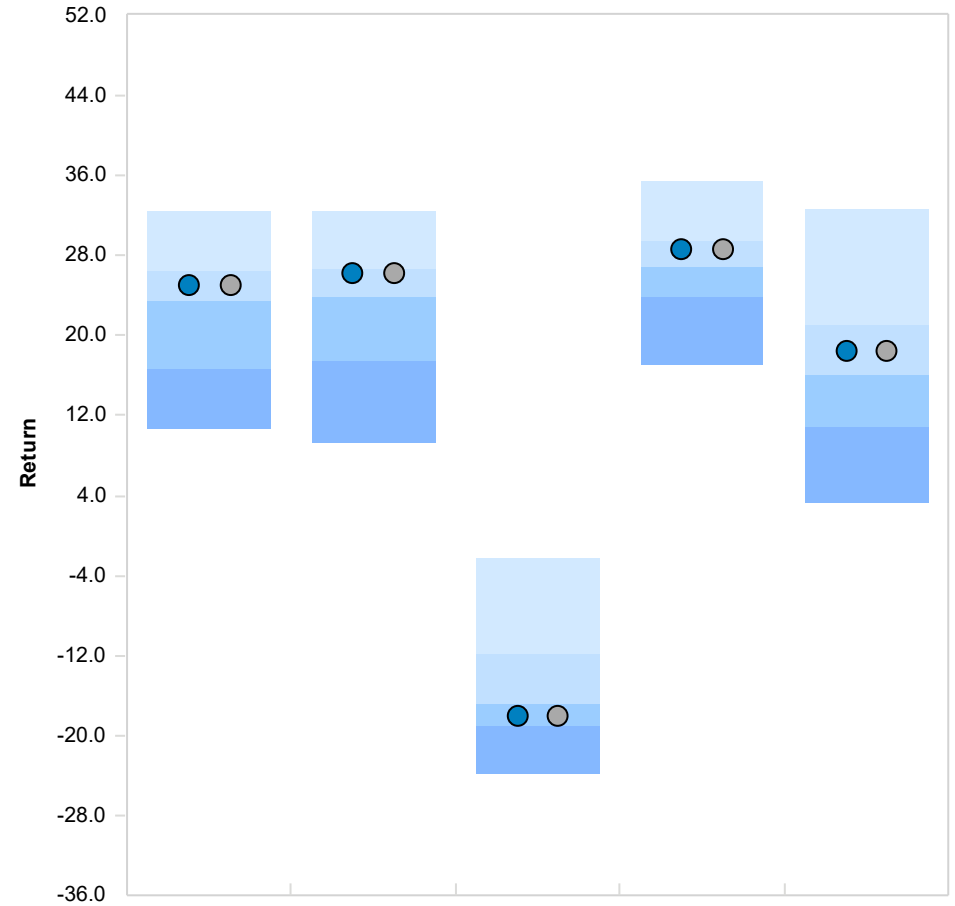
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)
Index	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.41 (38)	8.44 (33)	25.00 (33)	25.63 (34)	8.93 (39)	13.56 (27)	14.52 (32)
● Index	2.41 (38)	8.44 (33)	25.02 (33)	25.65 (34)	8.94 (39)	13.58 (27)	14.53 (32)
Median	2.12	7.69	23.43	23.94	8.19	12.40	13.51

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



	2024	2023	2022	2021	2020
● Investment	25.00 (33)	26.27 (30)	-18.11 (62)	28.66 (31)	18.45 (41)
● Index	25.02 (33)	26.29 (29)	-18.11 (62)	28.71 (30)	18.40 (41)
Median	23.43	23.86	-16.87	26.89	16.02

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	5.89 (41)	4.28 (23)	10.54 (52)	11.68 (44)	-3.27 (66)	8.74 (24)
Index	5.89 (41)	4.28 (22)	10.56 (50)	11.69 (44)	-3.27 (66)	8.74 (24)
Median	5.63	2.98	10.55	11.50	-2.97	7.58

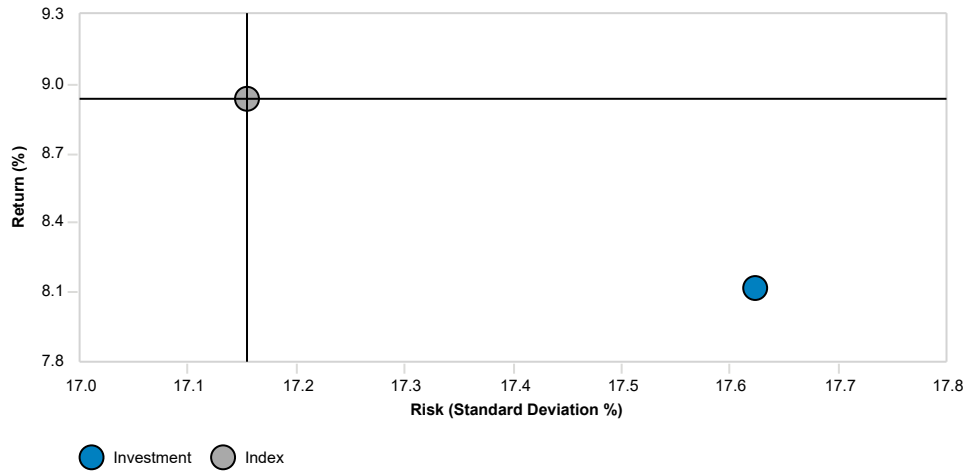
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	8.12	17.62	0.32	100.63	8	104.17	4
Index	8.94	17.15	0.37	100.00	8	100.00	4

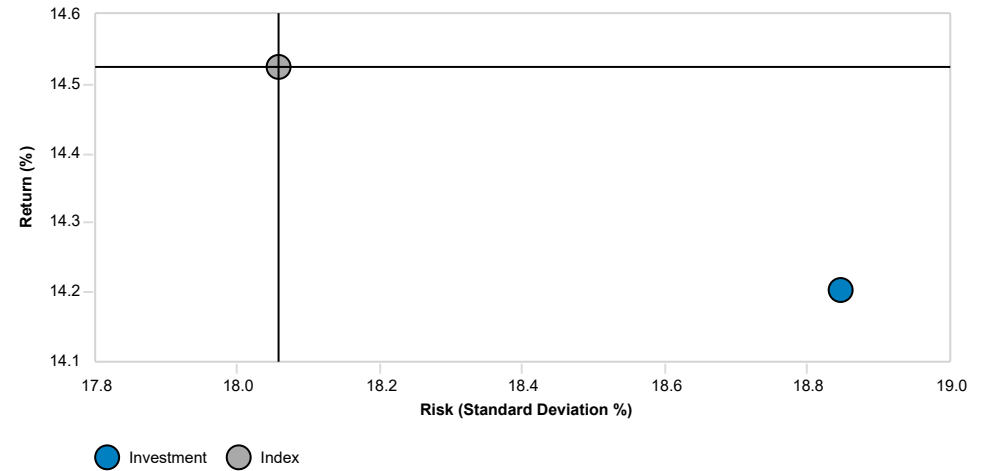
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	14.20	18.85	0.67	101.96	15	104.22	5
Index	14.53	18.06	0.71	100.00	15	100.00	5

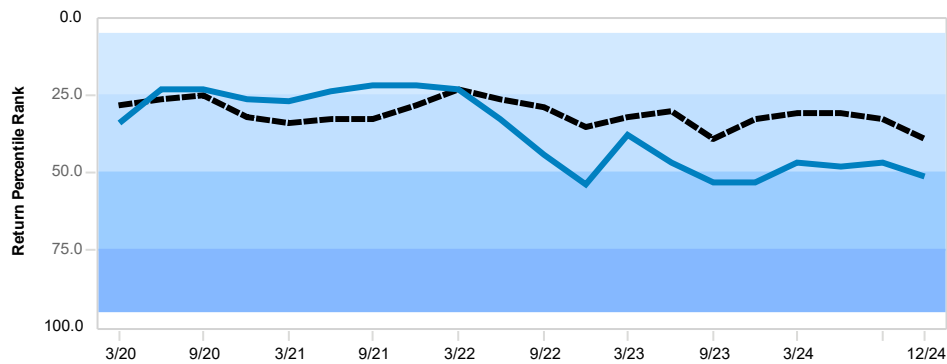
Risk and Return 3 Years



Risk and Return 5 Years

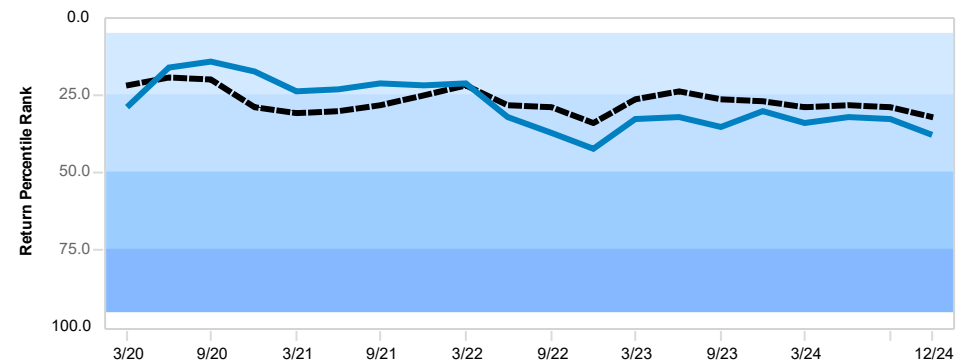


3 Year Rolling Percentile Rank IM U.S. Large Cap Core Equity (SA+CF)



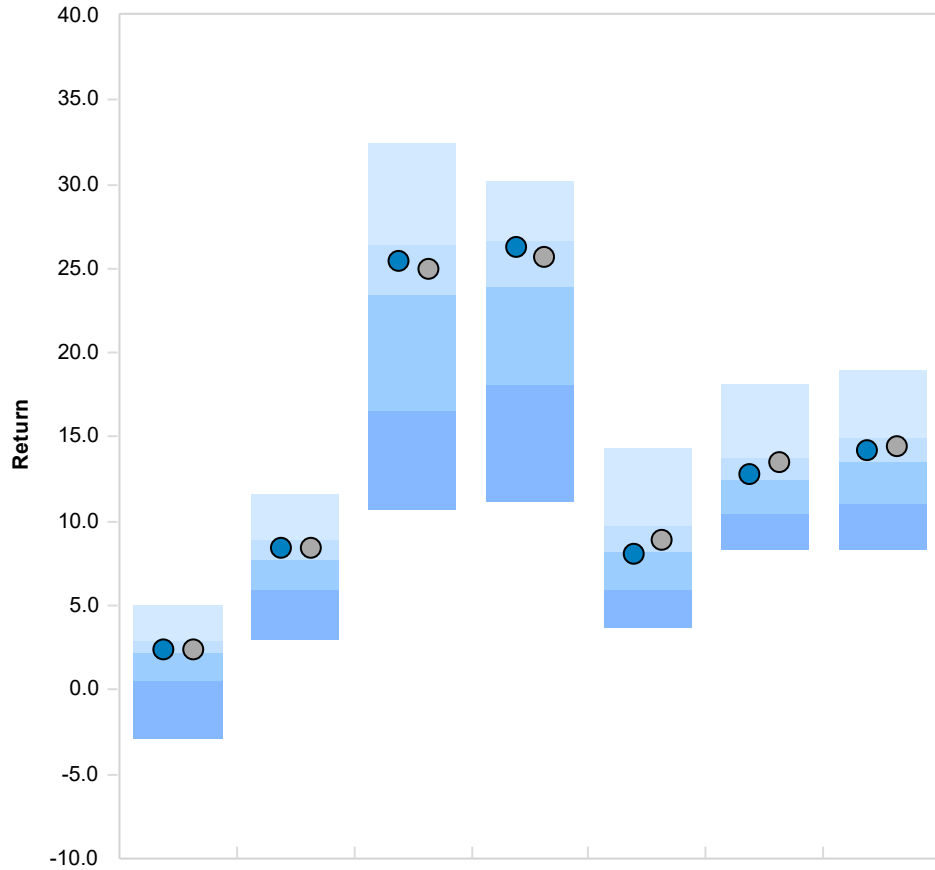
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	6 (30%)	10 (50%)	4 (20%)	0 (0%)
Index	20	2 (10%)	18 (90%)	0 (0%)	0 (0%)

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



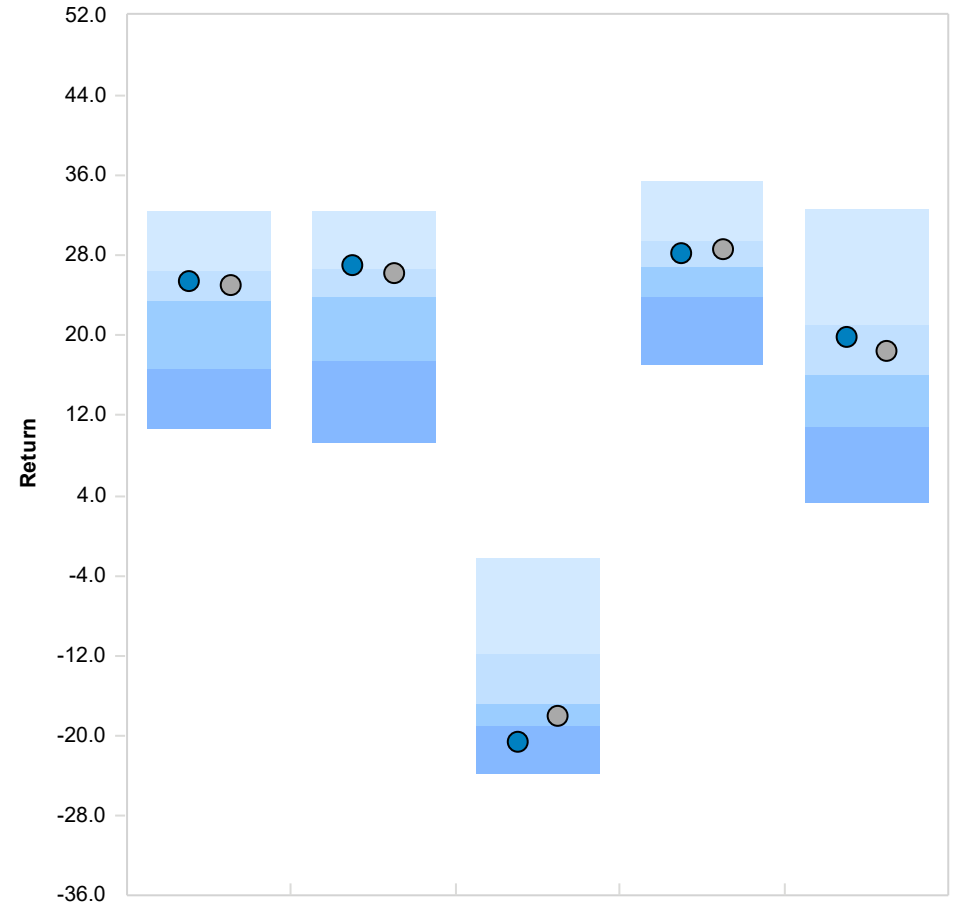
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	8 (40%)	12 (60%)	0 (0%)	0 (0%)
Index	20	6 (30%)	14 (70%)	0 (0%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	2.44 (37)	8.41 (35)	25.40 (30)	26.24 (28)	8.12 (51)	12.85 (42)	14.20 (38)
● Index	2.41 (38)	8.44 (33)	25.02 (33)	25.65 (34)	8.94 (39)	13.58 (27)	14.53 (32)
Median	2.12	7.69	23.43	23.94	8.19	12.40	13.51

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



	2024	2023	2022	2021	2020
● Investment	25.40 (30)	27.08 (25)	-20.69 (87)	28.30 (35)	19.80 (33)
● Index	25.02 (33)	26.29 (29)	-18.11 (62)	28.71 (30)	18.40 (41)
Median	23.43	23.86	-16.87	26.89	16.02

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	5.83 (43)	4.17 (29)	11.04 (42)	11.91 (36)	-3.08 (54)	9.01 (21)
Index	5.89 (41)	4.28 (22)	10.56 (50)	11.69 (44)	-3.27 (66)	8.74 (24)
Median	5.63	2.98	10.55	11.50	-2.97	7.58

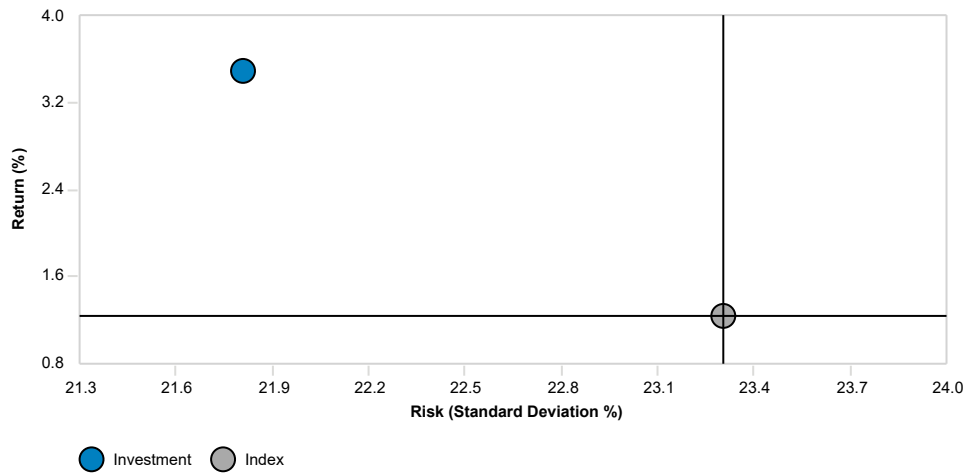
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	3.51	21.81	0.09	94.07	7	87.37	5
Index	1.24	23.30	0.00	100.00	7	100.00	5

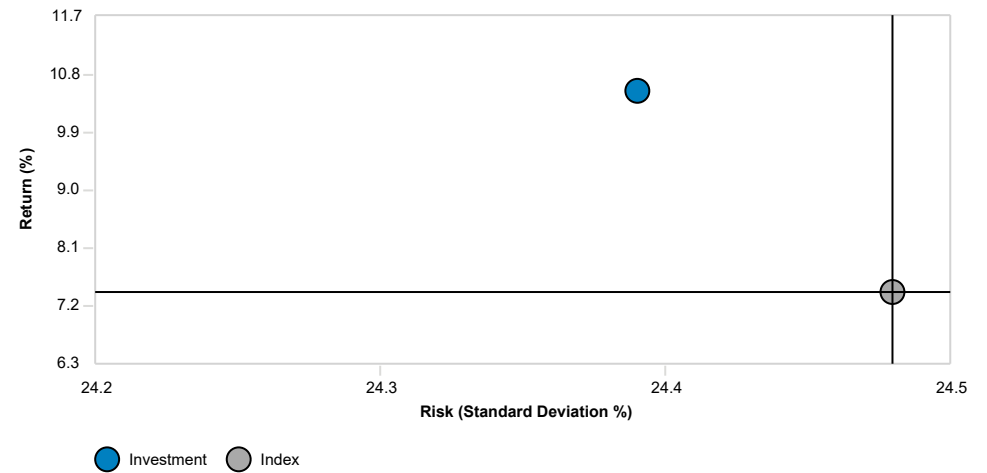
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	10.55	24.39	0.44	99.75	13	89.44	7
Index	7.40	24.48	0.32	100.00	13	100.00	7

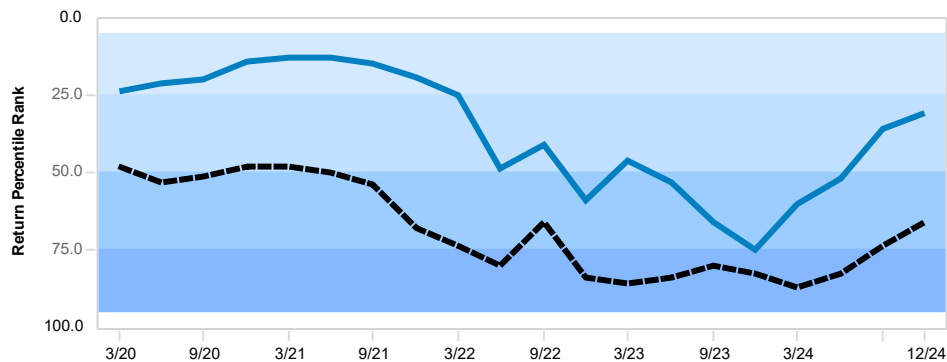
Risk and Return 3 Years



Risk and Return 5 Years

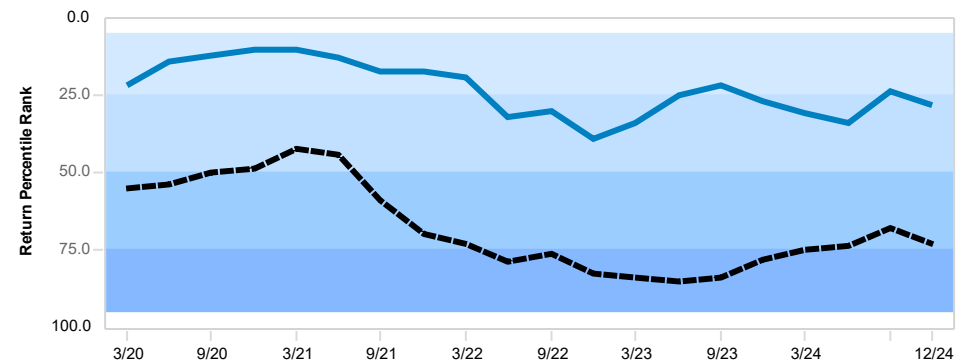


3 Year Rolling Percentile Rank IM U.S. Small Cap Core Equity (SA+CF)



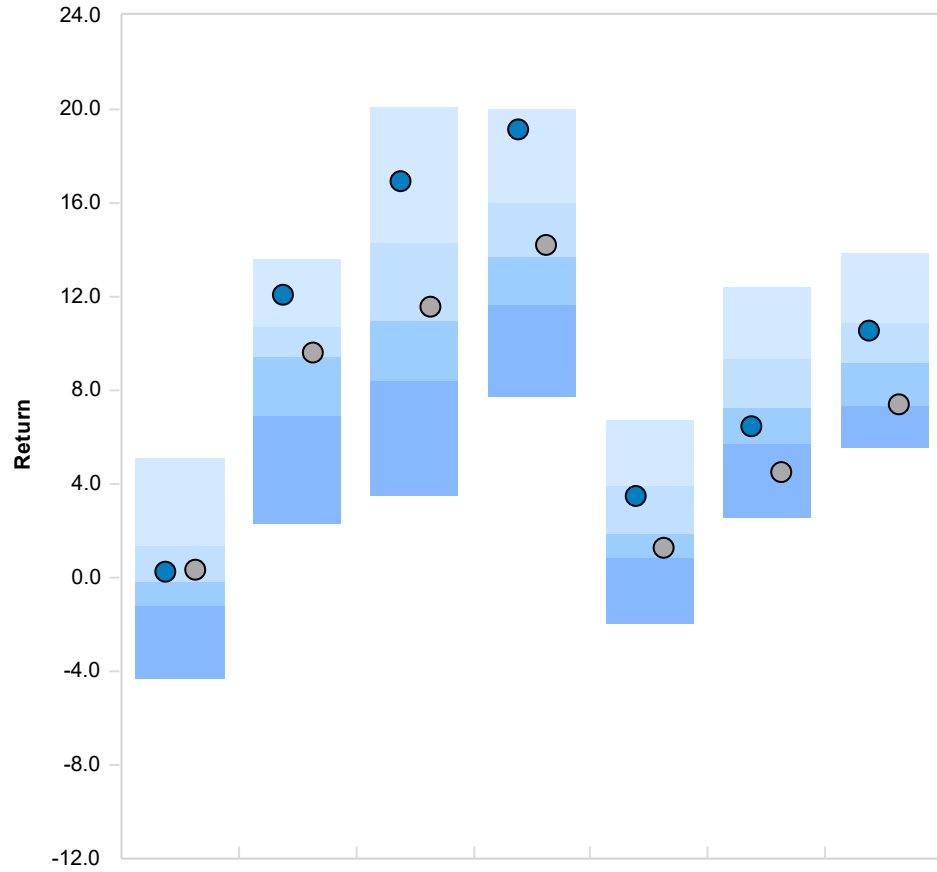
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	9 (45%)	5 (25%)	6 (30%)	0 (0%)
Index	20	0 (0%)	4 (20%)	8 (40%)	8 (40%)

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



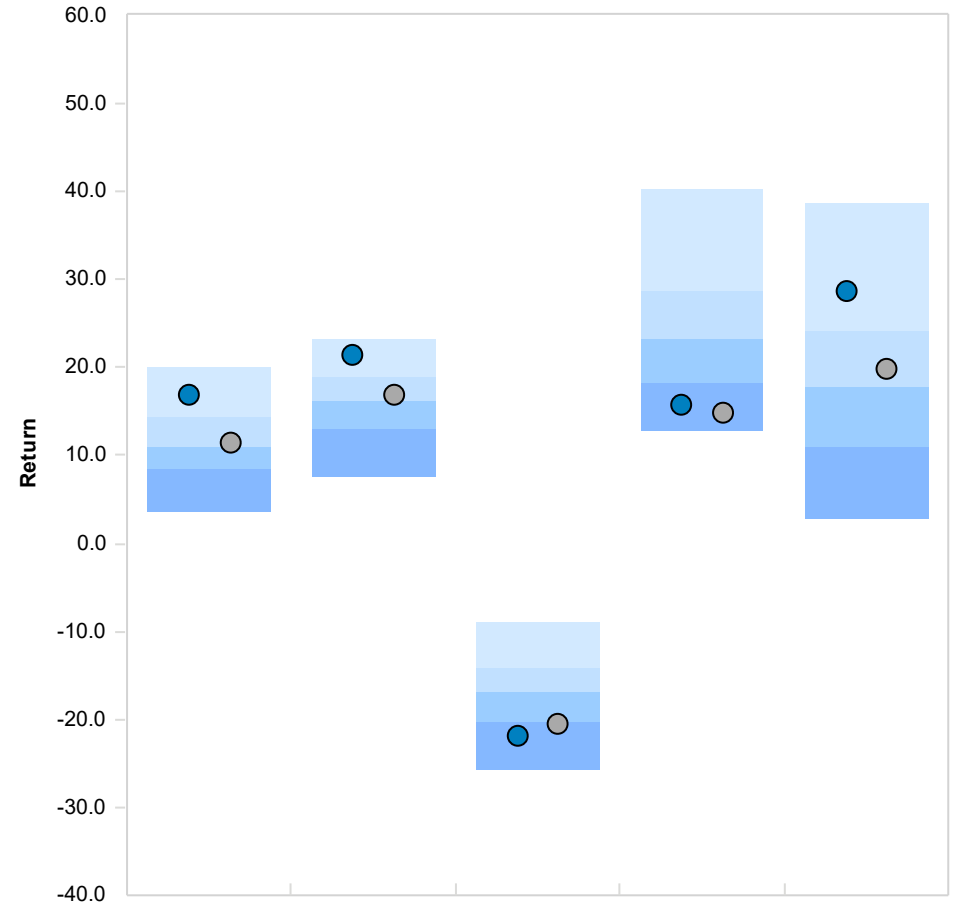
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	12 (60%)	8 (40%)	0 (0%)	0 (0%)
Index	20	0 (0%)	4 (20%)	9 (45%)	7 (35%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	0.21 (46)	12.10 (11)	16.93 (13)	19.16 (7)	3.51 (31)	6.44 (64)	10.55 (28)
● Index	0.33 (45)	9.64 (45)	11.54 (46)	14.20 (44)	1.24 (66)	4.48 (81)	7.40 (73)
Median	-0.17	9.46	10.99	13.70	1.90	7.21	9.18

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



	2024	2023	2022	2021	2020
● Investment	16.93 (13)	21.44 (14)	-21.90 (83)	15.73 (84)	28.68 (16)
● Index	11.54 (46)	16.93 (43)	-20.44 (77)	14.82 (86)	19.96 (36)
Median	10.99	16.31	-16.83	23.25	17.93

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	11.86 (6)	-1.31 (20)	5.70 (44)	13.49 (37)	-3.60 (27)	5.96 (19)
Index	9.27 (47)	-3.28 (51)	5.18 (55)	14.03 (24)	-5.13 (63)	5.21 (31)
Median	8.89	-3.19	5.55	12.66	-4.90	4.41

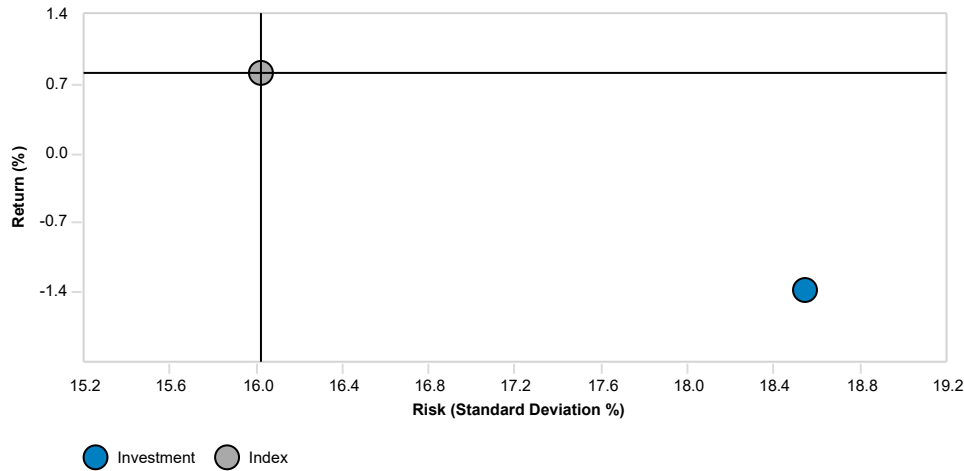
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.37	18.54	-0.19	113.76	7	123.49	5
Index	0.82	16.02	-0.11	100.00	7	100.00	5

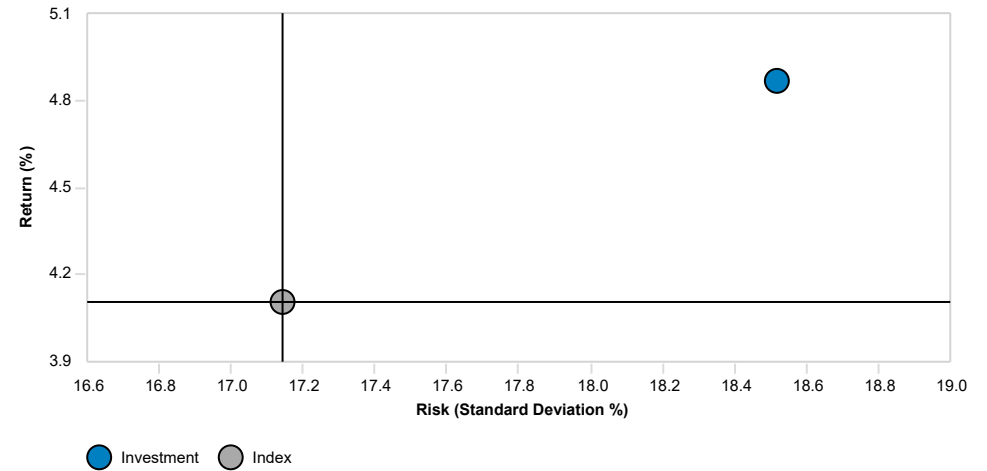
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.87	18.52	0.22	110.35	13	108.50	7
Index	4.10	17.14	0.18	100.00	13	100.00	7

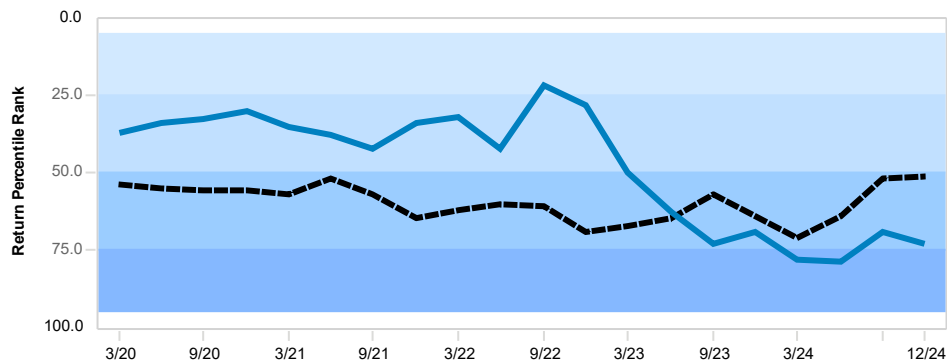
Risk and Return 3 Years



Risk and Return 5 Years

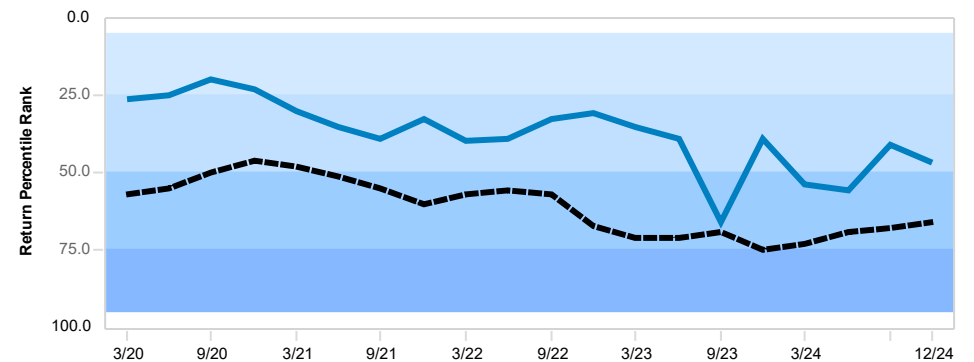


3 Year Rolling Percentile Rank IM International Large Cap Equity (SA+CF)



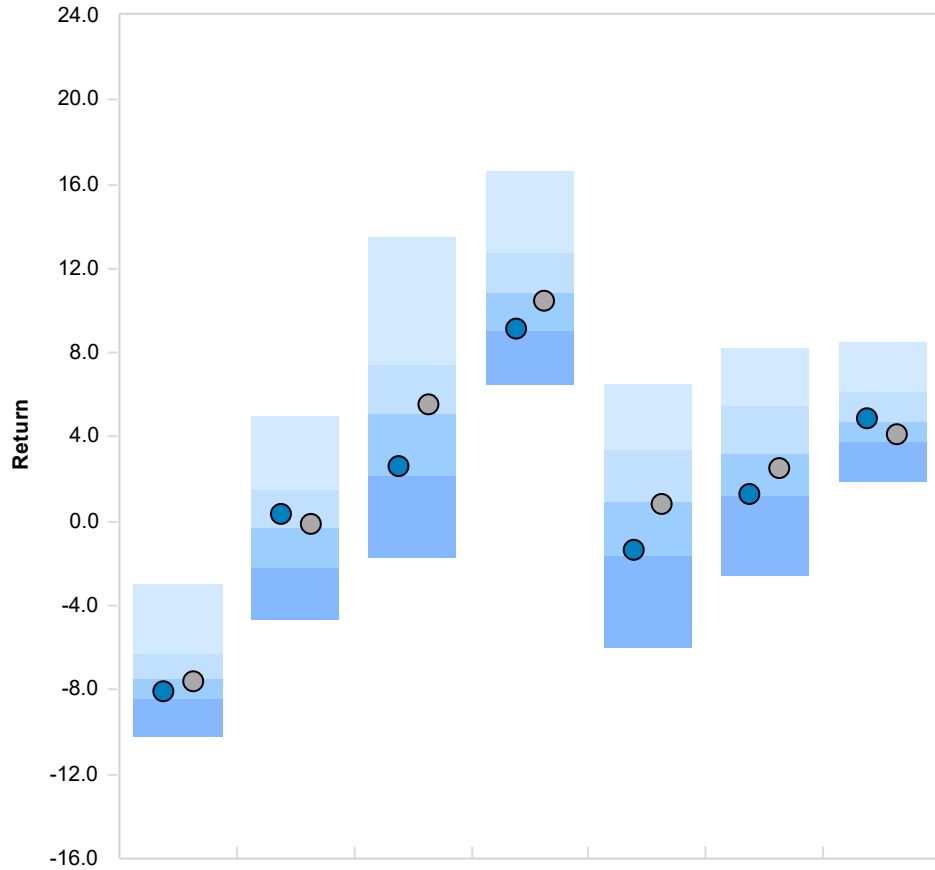
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	1 (5%)	12 (60%)	5 (25%)	2 (10%)
Index	20	0 (0%)	0 (0%)	20 (100%)	0 (0%)

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



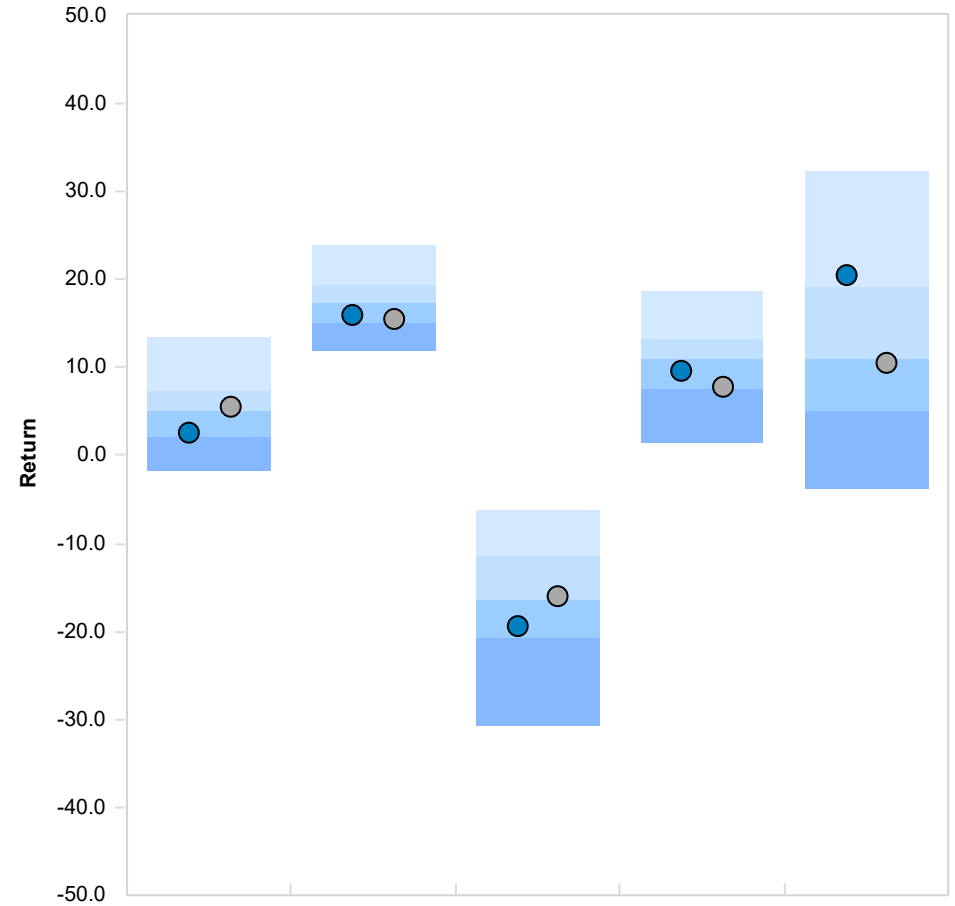
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	3 (15%)	14 (70%)	3 (15%)	0 (0%)
Index	20	0 (0%)	3 (15%)	17 (85%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-8.06 (66)	0.36 (38)	2.66 (71)	9.17 (74)	-1.37 (73)	1.29 (75)	4.87 (47)
● Index	-7.60 (53)	-0.15 (46)	5.53 (44)	10.46 (55)	0.82 (51)	2.53 (61)	4.10 (66)
Median	-7.48	-0.27	5.13	10.86	0.89	3.20	4.72

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



	2024	2023	2022	2021	2020
● Investment	2.66 (71)	16.08 (64)	-19.49 (70)	9.69 (62)	20.52 (22)
● Index	5.53 (44)	15.62 (70)	-16.00 (48)	7.82 (74)	10.65 (52)
Median	5.13	17.41	-16.44	11.09	10.96

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	9.16 (23)	0.30 (42)	1.99 (90)	12.50 (14)	-8.02 (86)	3.55 (34)
Index	8.06 (38)	0.96 (28)	4.69 (62)	9.75 (57)	-3.77 (41)	2.44 (70)
Median	7.09	0.11	5.30	10.12	-4.60	3.06

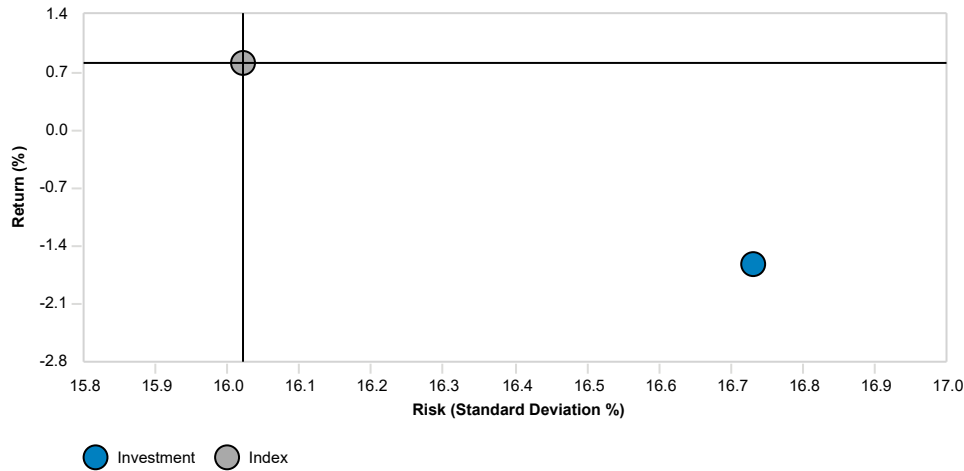
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.62	16.73	-0.25	101.54	7	112.67	5
Index	0.82	16.02	-0.11	100.00	7	100.00	5

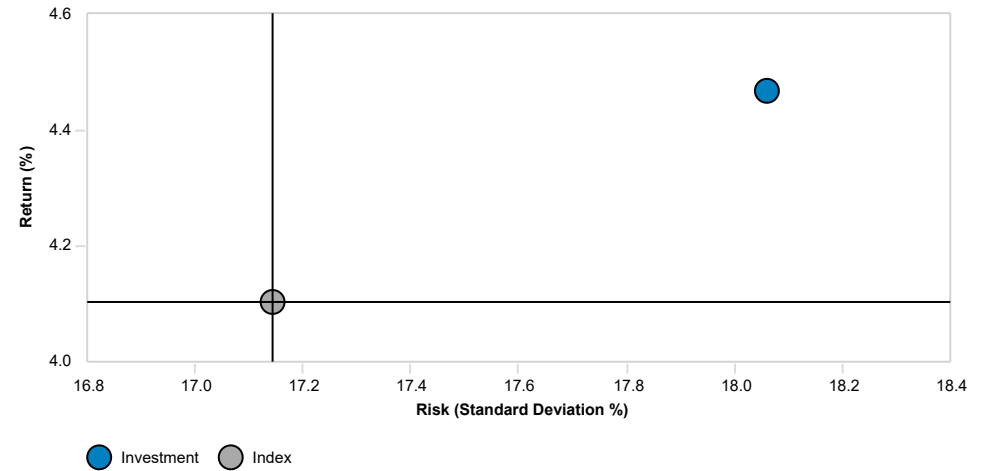
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	4.47	18.06	0.20	106.12	13	105.26	7
Index	4.10	17.14	0.18	100.00	13	100.00	7

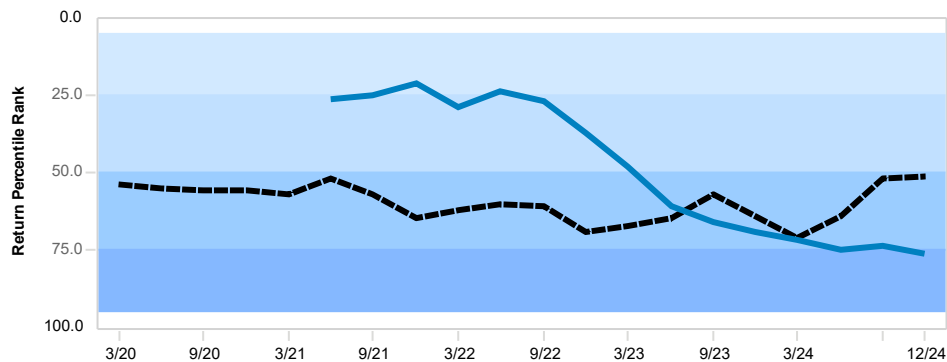
Risk and Return 3 Years



Risk and Return 5 Years

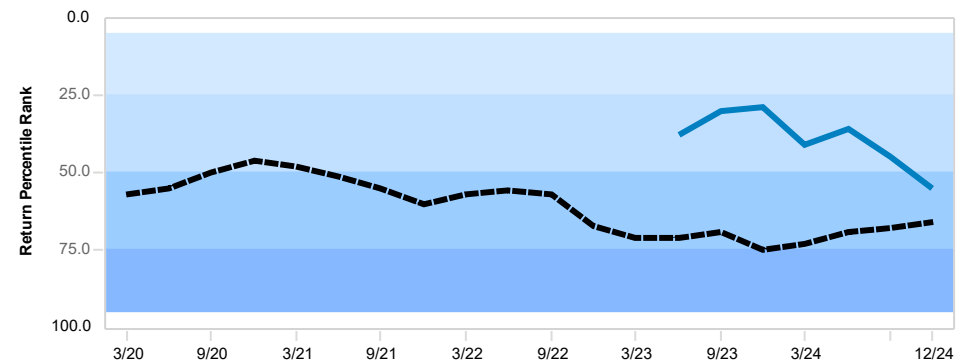


3 Year Rolling Percentile Rank IM International Large Cap Equity (SA+CF)



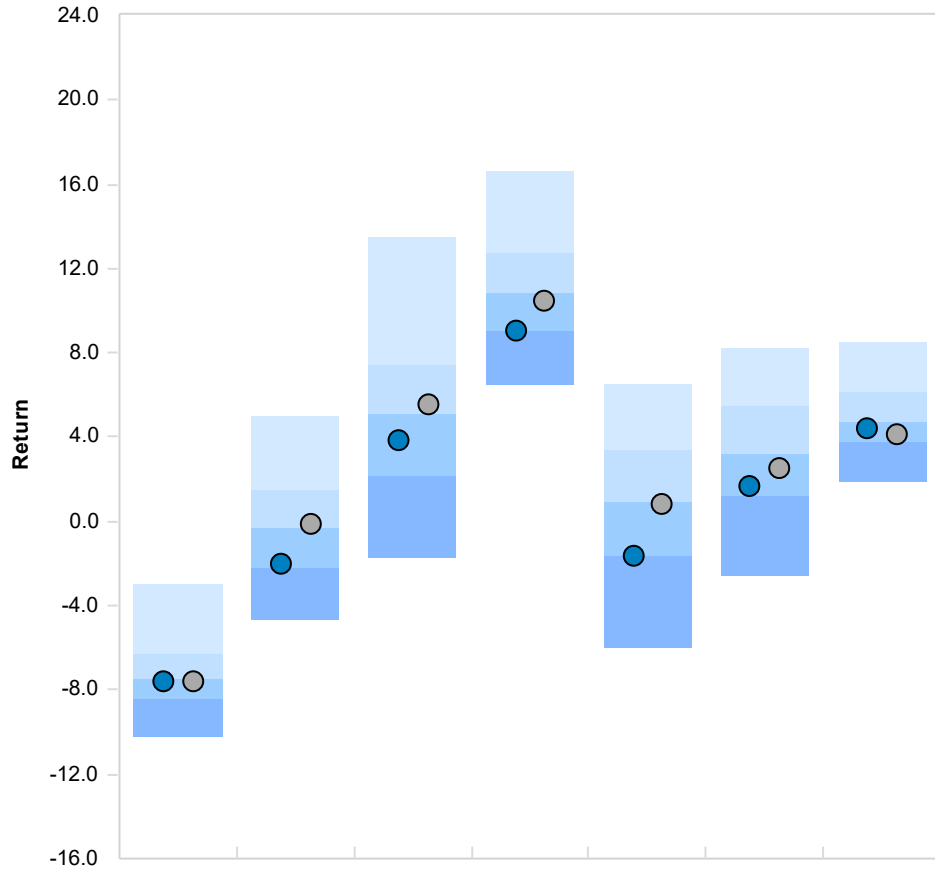
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	15	3 (20%)	5 (33%)	6 (40%)	1 (7%)
Index	20	0 (0%)	0 (0%)	20 (100%)	0 (0%)

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



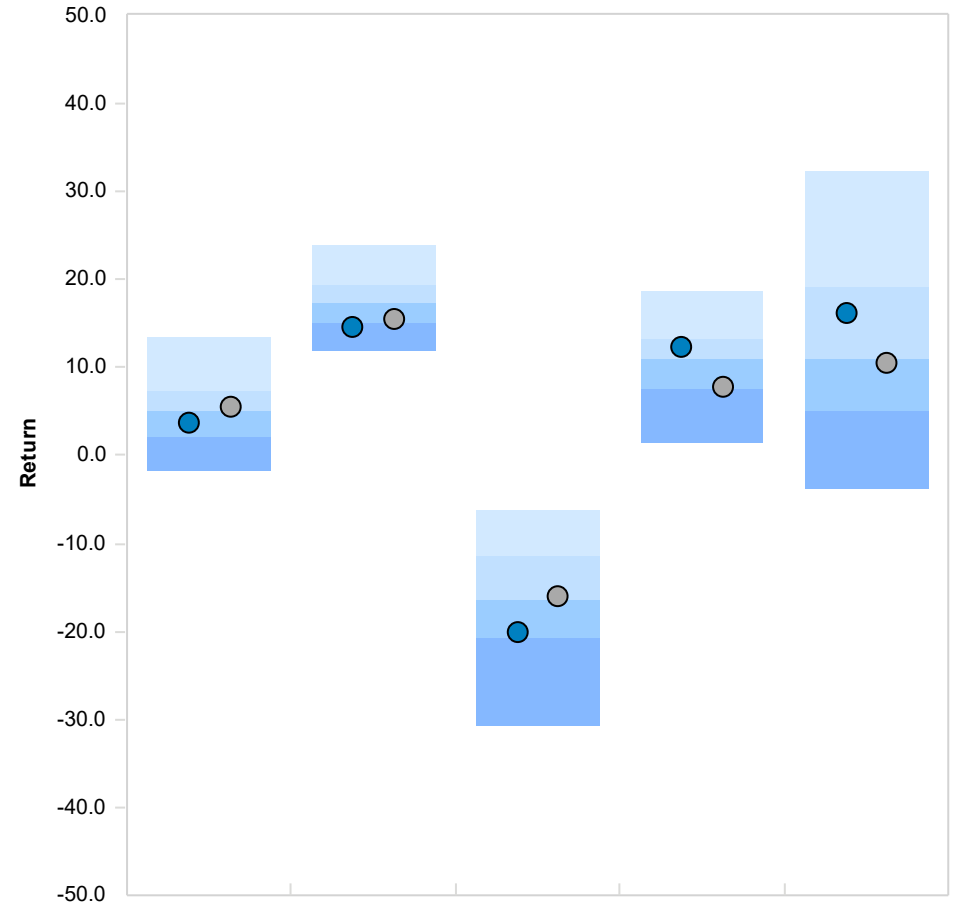
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	7	0 (0%)	6 (86%)	1 (14%)	0 (0%)
Index	20	0 (0%)	3 (15%)	17 (85%)	0 (0%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-7.54 (52)	-2.01 (74)	3.85 (59)	9.08 (75)	-1.62 (76)	1.71 (72)	4.47 (55)
● Index	-7.60 (53)	-0.15 (46)	5.53 (44)	10.46 (55)	0.82 (51)	2.53 (61)	4.10 (66)
Median	-7.48	-0.27	5.13	10.86	0.89	3.20	4.72

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



	2024	2023	2022	2021	2020
● Investment	3.85 (59)	14.57 (80)	-19.99 (72)	12.39 (35)	16.28 (35)
● Index	5.53 (44)	15.62 (70)	-16.00 (48)	7.82 (74)	10.65 (52)
Median	5.13	17.41	-16.44	11.09	10.96

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	5.99 (70)	1.38 (21)	4.54 (64)	9.63 (61)	-4.74 (53)	3.01 (53)
Index	8.06 (38)	0.96 (28)	4.69 (62)	9.75 (57)	-3.77 (41)	2.44 (70)
Median	7.09	0.11	5.30	10.12	-4.60	3.06

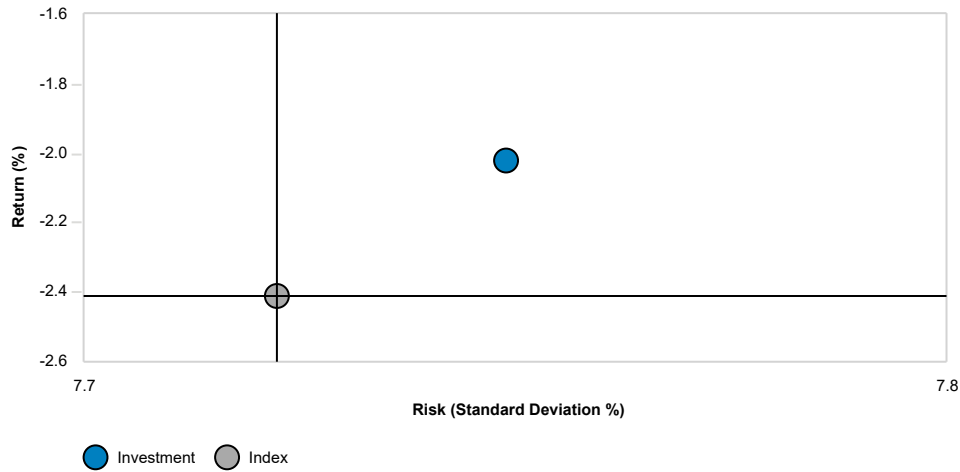
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-2.02	7.75	-0.74	101.20	5	97.81	7
Index	-2.41	7.72	-0.79	100.00	5	100.00	7

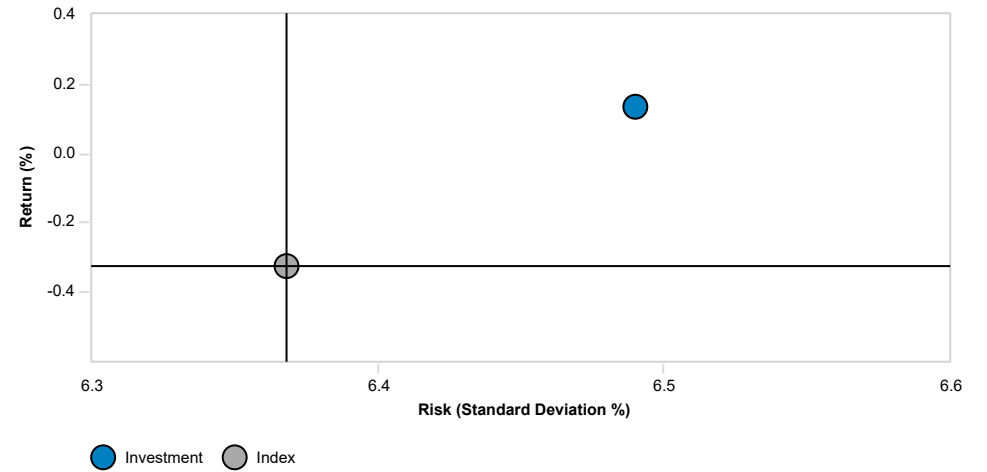
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	0.13	6.49	-0.33	104.98	11	99.62	9
Index	-0.33	6.37	-0.41	100.00	12	100.00	8

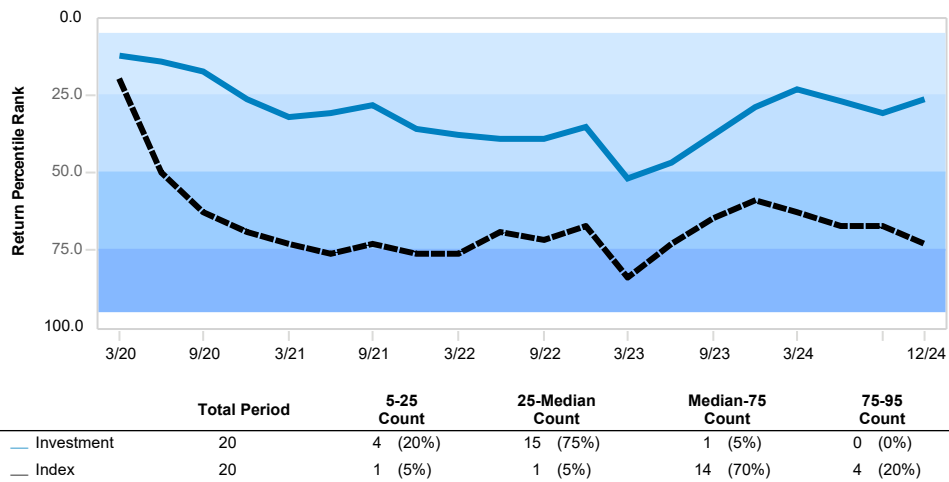
Risk and Return 3 Years



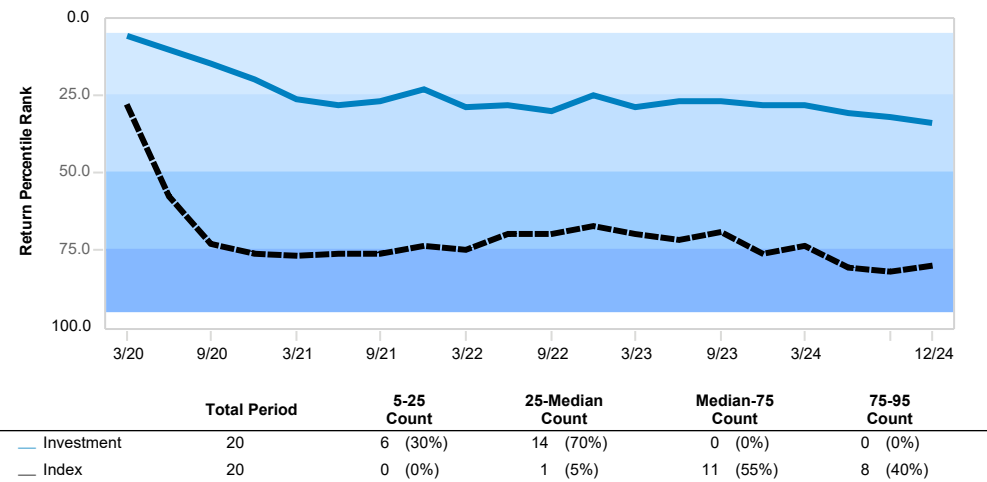
Risk and Return 5 Years



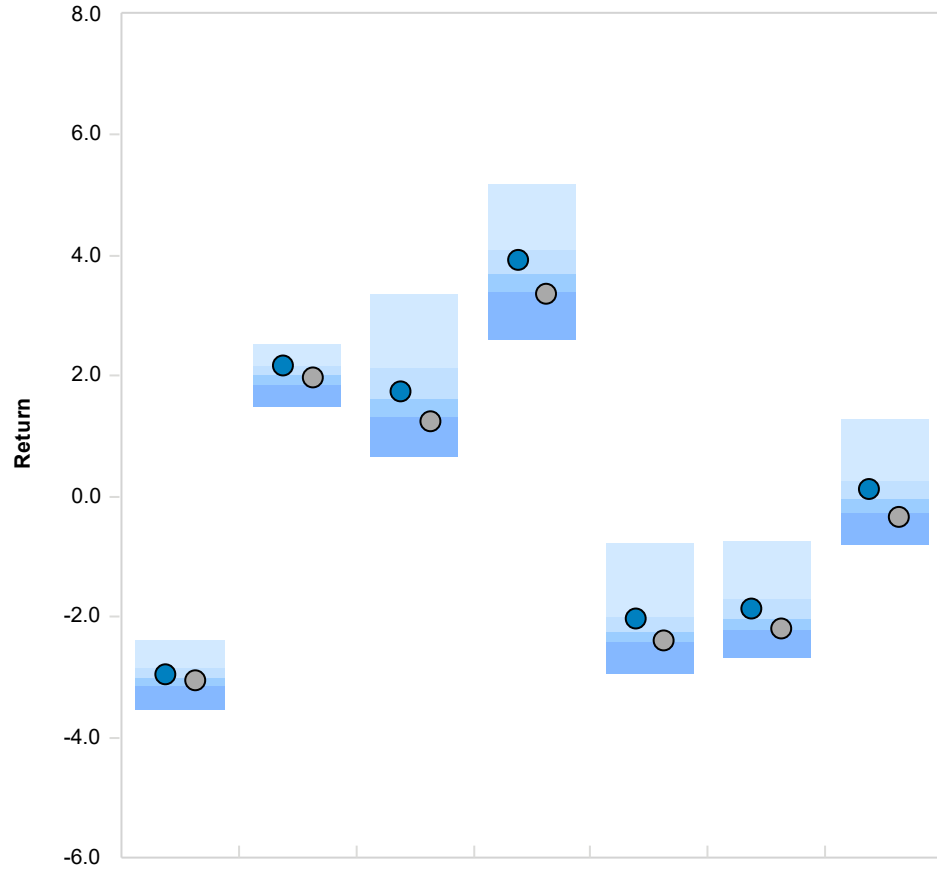
3 Year Rolling Percentile Rank IM U.S. Broad Market Core Fixed Income (SA+CF)



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

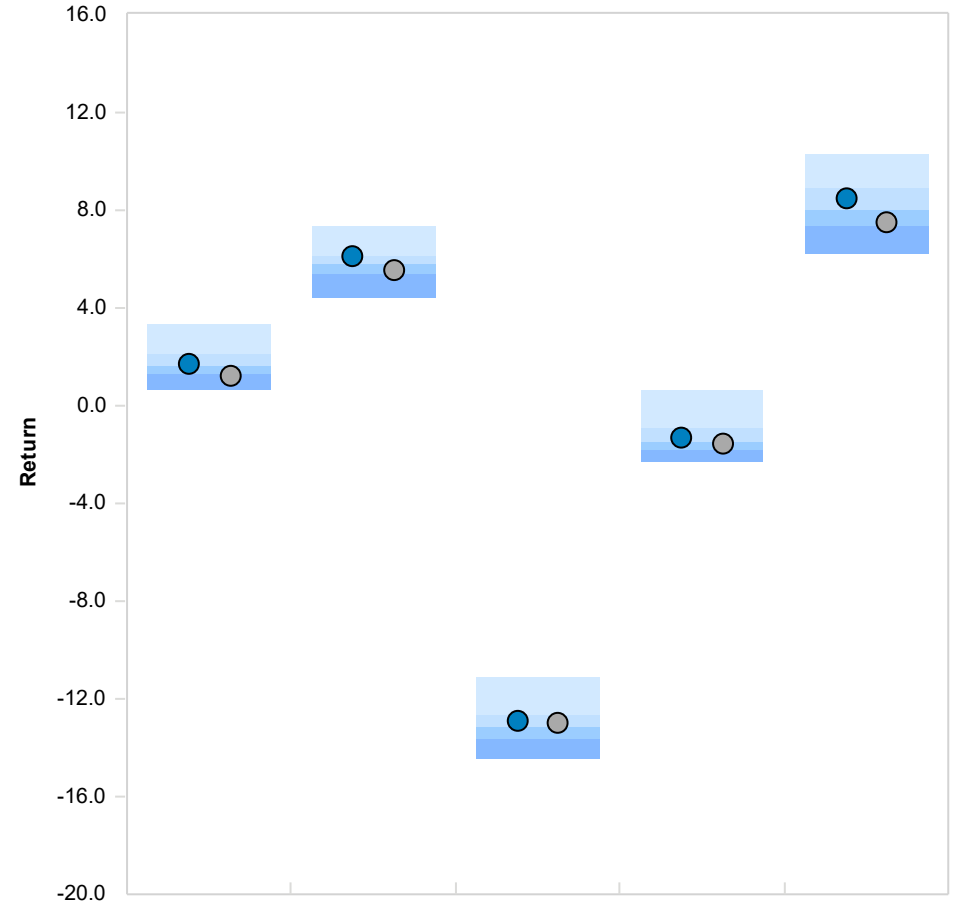


Peer Group Analysis - IM U.S. Broad Market Core Fixed Income (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-2.94 (34)	2.19 (21)	1.74 (43)	3.91 (38)	-2.02 (26)	-1.85 (33)	0.13 (34)
● Index	-3.06 (60)	1.98 (63)	1.25 (81)	3.37 (77)	-2.41 (73)	-2.19 (71)	-0.33 (80)
Median	-3.04	2.02	1.61	3.70	-2.26	-2.03	-0.04

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



	2024	2023	2022	2021	2020
● Investment	1.74 (43)	6.14 (24)	-12.89 (34)	-1.34 (43)	8.48 (35)
● Index	1.25 (81)	5.53 (68)	-13.01 (37)	-1.55 (54)	7.51 (68)
Median	1.61	5.79	-13.13	-1.47	8.03

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	5.29 (27)	0.09 (78)	-0.53 (50)	7.09 (17)	-3.09 (37)	-0.69 (41)
Index	5.20 (46)	0.07 (84)	-0.78 (82)	6.82 (43)	-3.23 (60)	-0.84 (65)
Median	5.19	0.18	-0.55	6.77	-3.18	-0.78

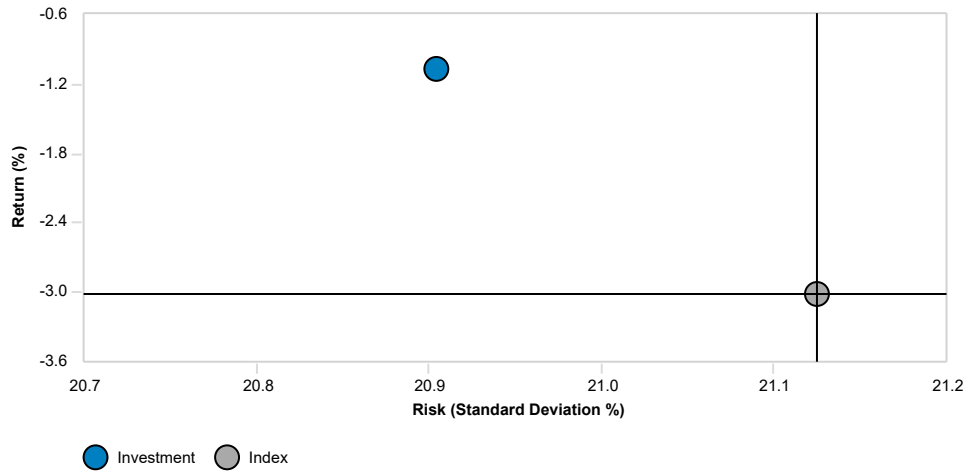
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	-1.06	20.90	-0.13	101.98	6	96.05	6
Index	-3.02	21.12	-0.22	100.00	5	100.00	7

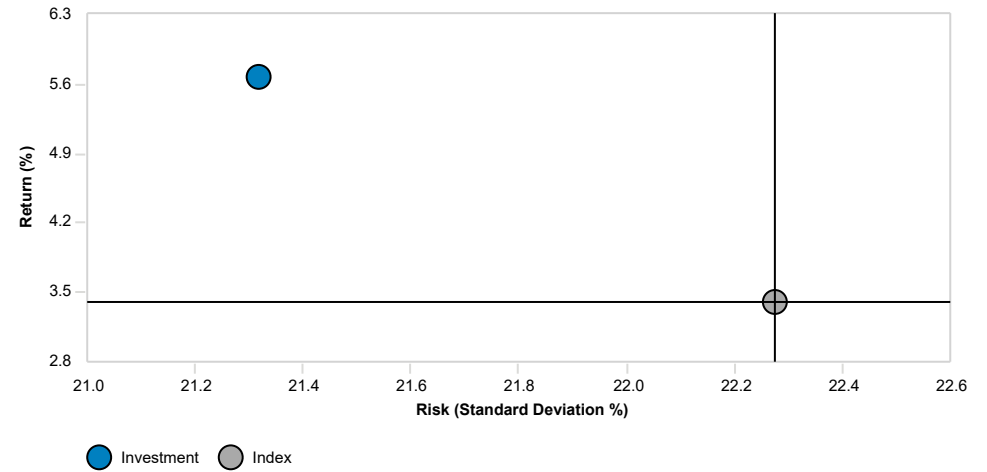
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	5.67	21.32	0.25	100.88	13	94.24	7
Index	3.40	22.28	0.16	100.00	12	100.00	8

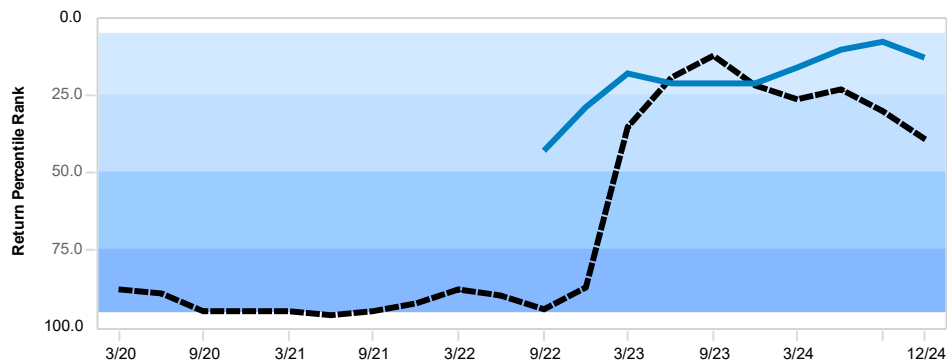
Risk and Return 3 Years



Risk and Return 5 Years

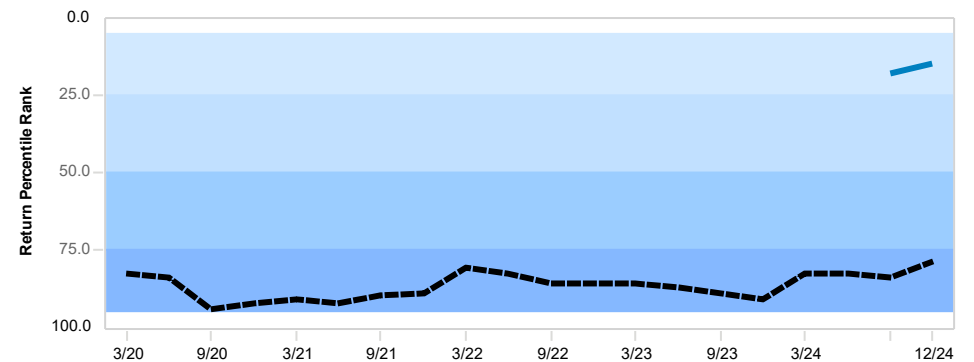


3 Year Rolling Percentile Rank IM U.S. REIT (SA+CF)



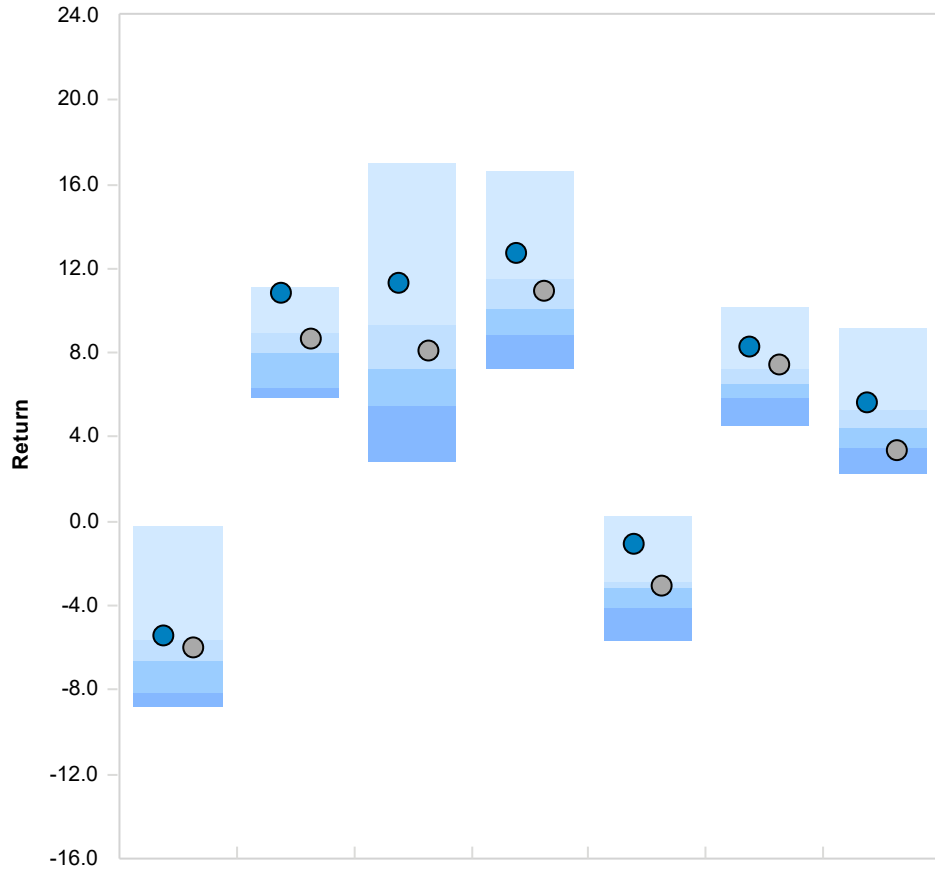
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	10	8 (80%)	2 (20%)	0 (0%)	0 (0%)
Index	20	4 (20%)	4 (20%)	0 (0%)	12 (60%)

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



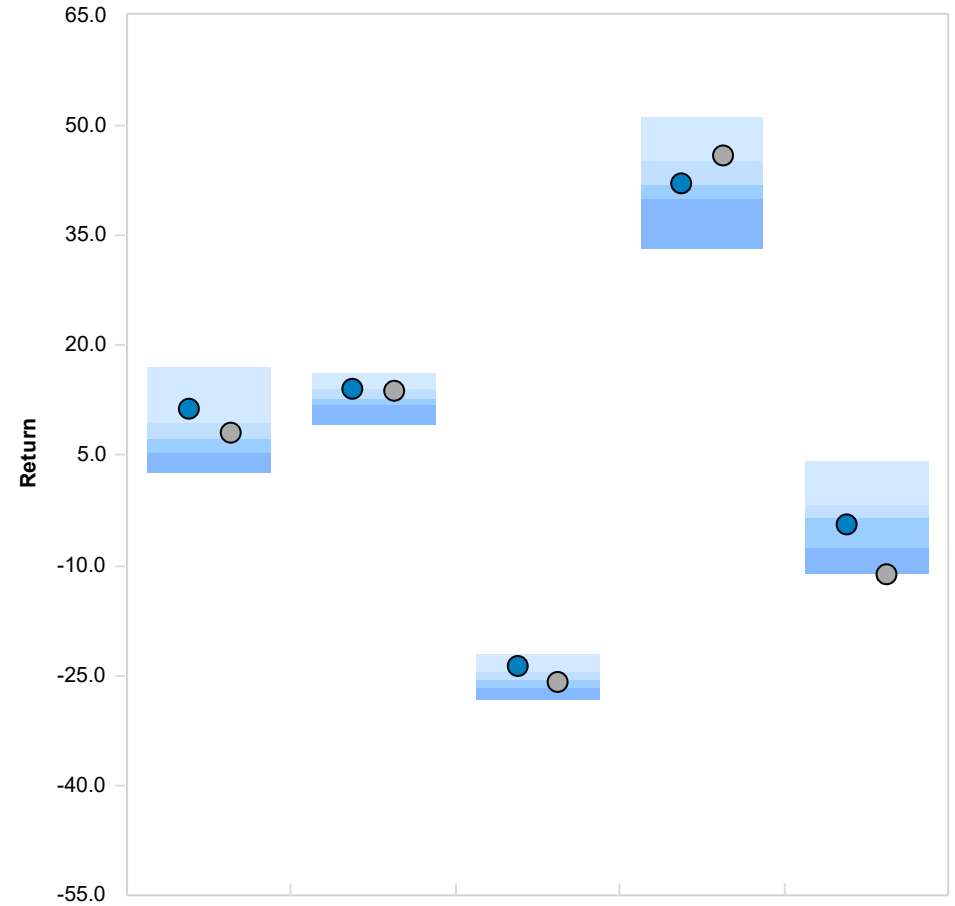
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	2	2 (100%)	0 (0%)	0 (0%)	0 (0%)
Index	20	0 (0%)	0 (0%)	0 (0%)	20 (100%)

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



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	-5.38 (18)	10.87 (8)	11.33 (10)	12.76 (13)	-1.06 (13)	8.32 (9)	5.67 (15)
● Index	-5.93 (34)	8.70 (31)	8.10 (36)	10.99 (34)	-3.02 (39)	7.41 (20)	3.40 (79)
Median	-6.66	8.01	7.27	10.11	-3.17	6.53	4.43

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



	2024	2023	2022	2021	2020
● Investment	11.33 (10)	14.21 (30)	-23.82 (18)	42.15 (43)	-4.29 (57)
● Index	8.10 (36)	13.96 (32)	-25.96 (55)	45.91 (19)	-11.20 (98)
Median	7.27	12.85	-25.66	41.83	-3.70

Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	17.18 (20)	0.79 (27)	-0.38 (18)	16.23 (59)	-7.29 (28)	3.15 (28)
Index	15.56 (69)	-0.16 (61)	-0.39 (19)	16.35 (50)	-7.40 (35)	2.92 (47)
Median	15.90	0.26	-0.98	16.35	-7.55	2.73

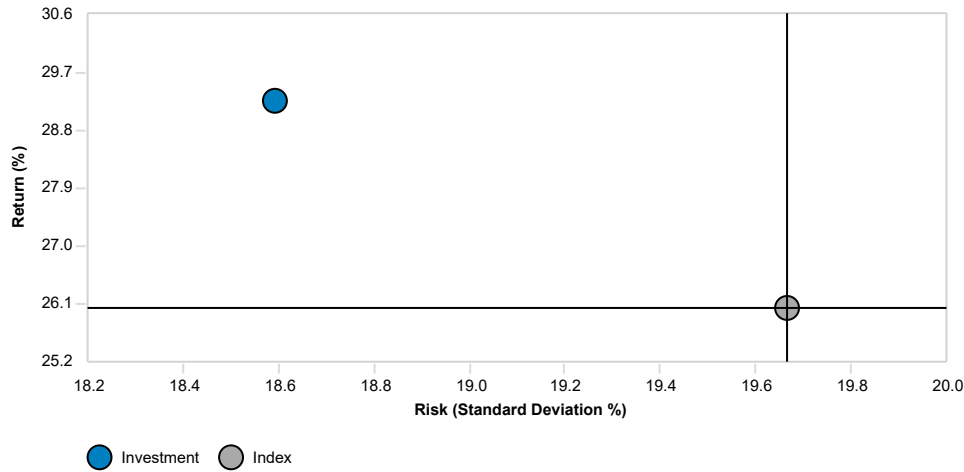
Historical Statistics 3 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	29.27	18.59	1.28	94.91	11	72.51	1
Index	26.05	19.66	1.09	100.00	10	100.00	2

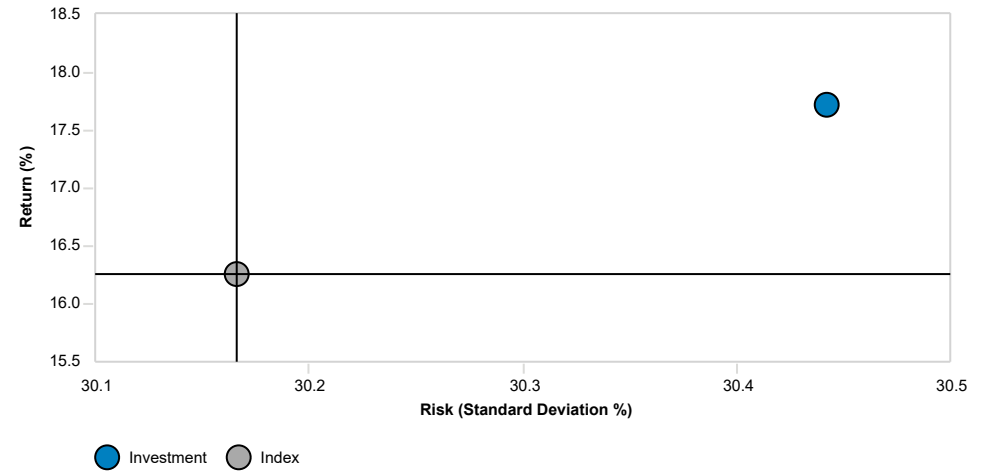
Historical Statistics 5 Years

	Return	Standard Deviation	Sharpe Ratio	Up Market Capture	Up Quarters	Down Market Capture	Down Quarters
Investment	17.72	30.44	0.63	97.54	16	90.20	4
Index	16.27	30.17	0.59	100.00	14	100.00	6

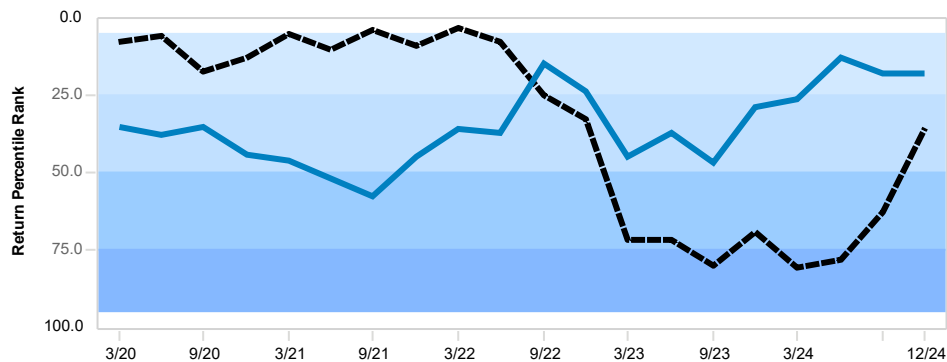
Risk and Return 3 Years



Risk and Return 5 Years

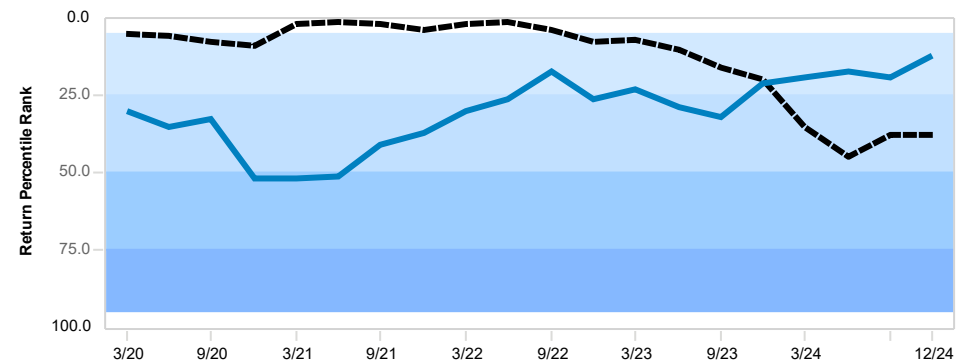


3 Year Rolling Percentile Rank Energy Limited Partnership



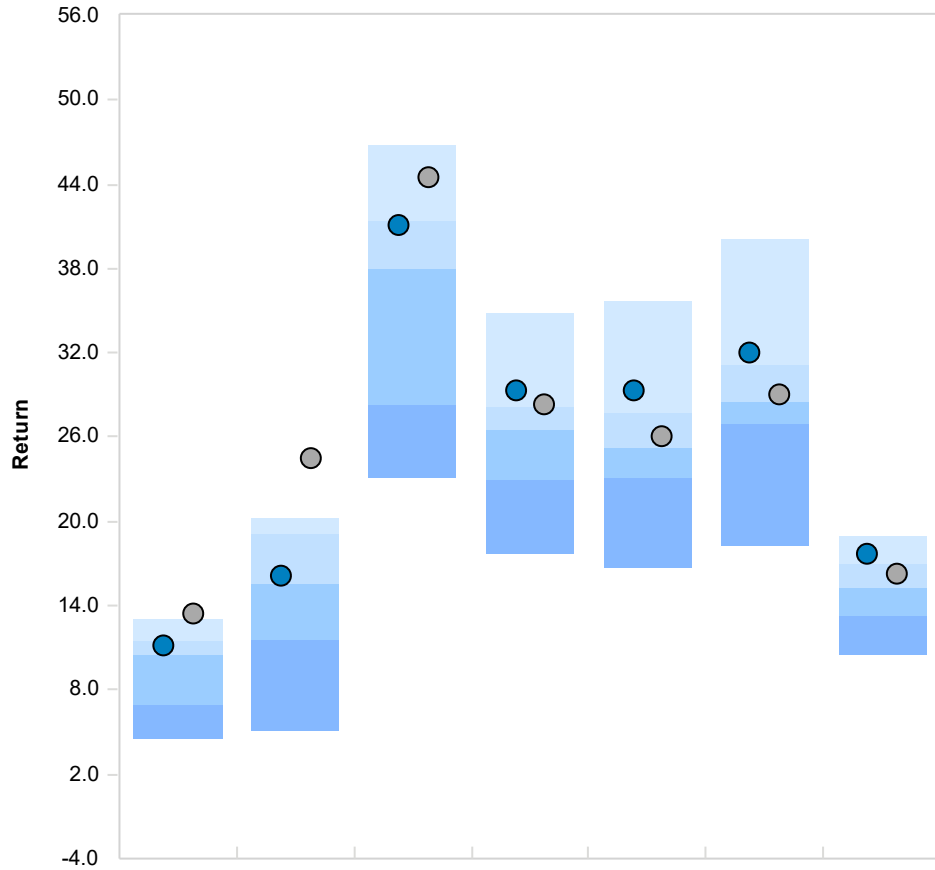
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	5 (25%)	13 (65%)	2 (10%)	0 (0%)
Index	20	11 (55%)	2 (10%)	4 (20%)	3 (15%)

5 Year Rolling Percentile Rank Energy Limited Partnership



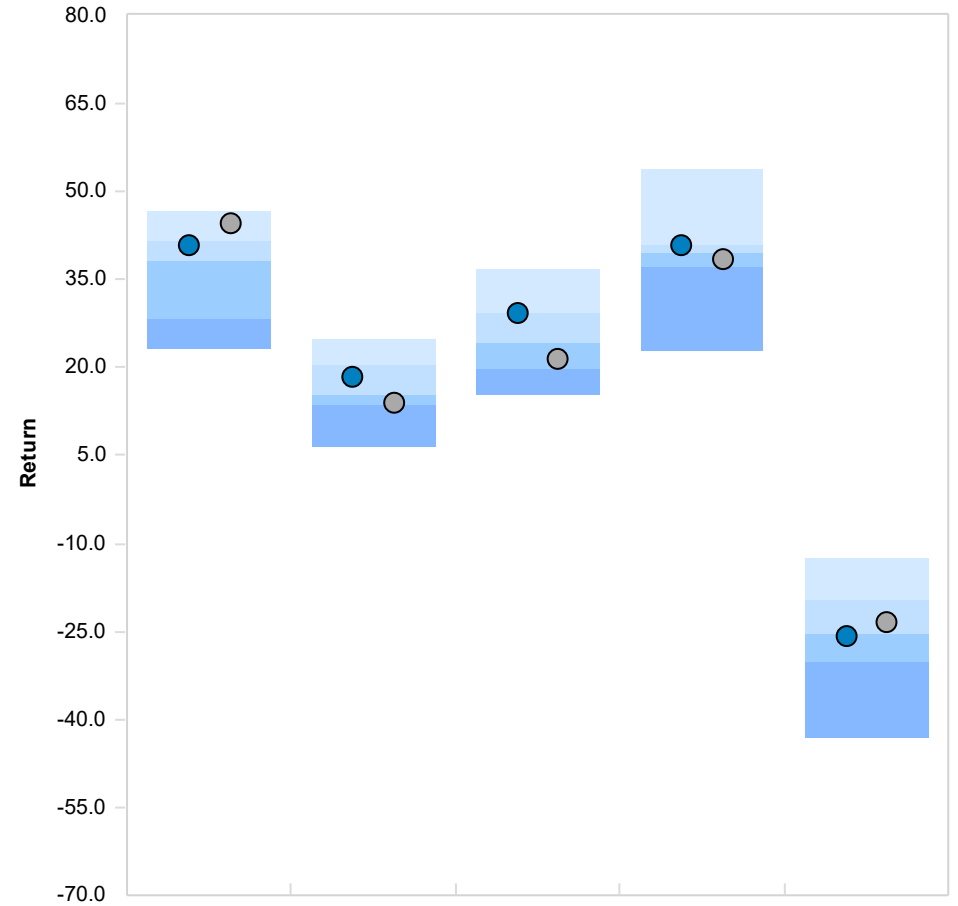
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Investment	20	7 (35%)	10 (50%)	3 (15%)	0 (0%)
Index	20	16 (80%)	4 (20%)	0 (0%)	0 (0%)

Peer Group Analysis - Energy Limited Partnership



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Investment	11.13 (38)	16.20 (45)	41.05 (36)	29.27 (18)	29.27 (18)	32.09 (18)	17.72 (12)
● Index	13.47 (4)	24.47 (1)	44.53 (10)	28.37 (25)	26.05 (36)	29.03 (39)	16.27 (38)
Median	10.44	15.52	38.03	26.55	25.22	28.45	15.22

Peer Group Analysis - Energy Limited Partnership



	2024	2023	2022	2021	2020
● Investment	41.05 (36)	18.48 (41)	29.25 (26)	40.94 (25)	-25.73 (51)
● Index	44.53 (10)	14.02 (70)	21.53 (61)	38.42 (65)	-23.36 (35)
Median	38.03	15.48	24.17	39.39	-25.50

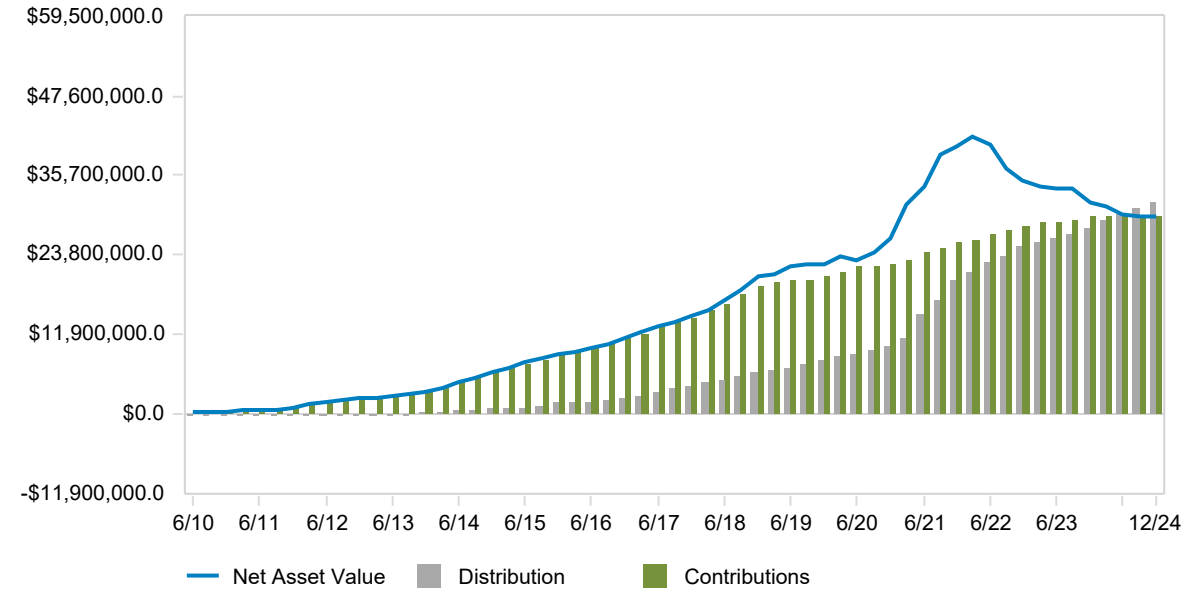
Comparative Performance

	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	1 Qtr Ending Jun-2023
Investment	4.57 (52)	6.43 (18)	14.04 (21)	3.81 (60)	7.62 (35)	2.28 (88)
Index	9.69 (2)	5.42 (44)	10.15 (88)	6.45 (5)	2.49 (85)	3.71 (68)
Median	4.60	5.09	12.18	4.46	5.75	4.29

Cash Flow Summary

Capital Committed:	\$33,000,000
Capital Invested:	\$9,470,332
Total Contributions:	\$29,659,623
Remaining Capital Commitment:	\$3,340,377
Total Distributions:	\$31,587,125
Market Value:	\$29,469,163
Inception Date:	05/01/2010
Inception IRR:	14.9
TVPI:	2.1

Cash Flow Analysis



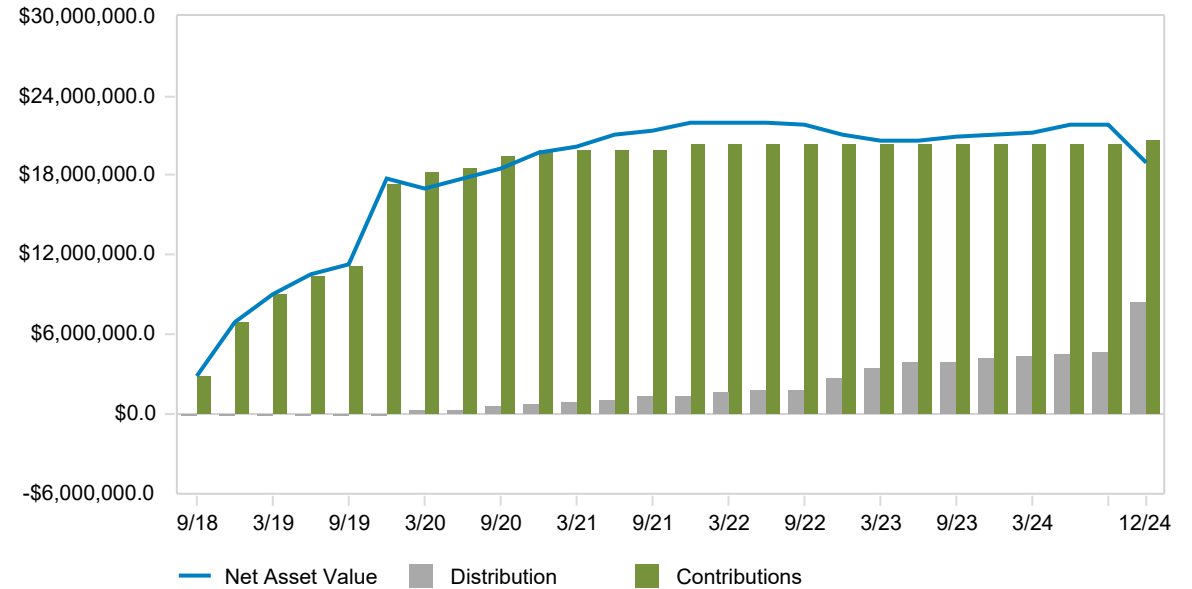
Private Equity Portfolio

Partnerships	Investment Type	Vintage Year	Investment Strategy	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR	TVPI Multiple
Adams Street 2010 Direct Fund	Fund Of Funds	2010	Diversified	500,000	480,500	773,315	143,145	11.6	1.9
Adams Street 2010 EM Fund	Fund Of Funds	2010	Diversified	500,000	449,000	572,045	312,482	9.3	2.0
Adams Street 2010 Non-US Fund	Fund Of Funds	2010	Diversified	1,500,000	1,350,750	2,140,619	470,423	12.4	1.9
Adams Street 2010 US Fund	Fund Of Funds	2010	Diversified	2,500,000	2,202,500	4,277,682	1,184,187	15.7	2.5
Adams Street 2013 Global Fund	Fund Of Funds	2013	Diversified	5,000,000	4,634,201	5,442,177	4,300,550	12.5	2.1
Adams Street 2015 Global	Fund Of Funds	2015	Diversified	6,500,000	5,853,145	5,744,499	7,410,515	18.8	2.2
Adams Street 2017 Global Fund	Fund Of Funds	2017	Diversified	6,000,000	5,119,421	2,595,042	7,105,583	15.8	1.9
Aberdeen Global	Fund Of Funds	2011	Other	5,000,000	4,952,150	9,602,182	2,479,144	15.0	2.4
Adams Street 2019 Global	Fund Of Funds	2019	Diversified	5,500,000	4,617,956	439,564	6,063,134	14.2	1.4
Private Equity Composite				33,000,000	29,659,623	31,587,125	29,469,163	14.8	2.1

Cash Flow Summary

Capital Committed:	\$21,000,000
Capital Invested:	\$2,997,127
Total Contributions:	\$20,617,636
Remaining Capital Commitment:	\$382,364
Total Distributions:	\$8,429,769
Market Value:	\$18,904,896
Inception Date:	09/30/2018
Inception IRR:	5.9
TVPI:	1.3

Cash Flow Analysis



Private Equity Portfolio

Partnerships	Investment Type	Vintage Year	Investment Strategy	Capital Committed \$	Total Contribution \$	Total Distribution \$	Market Value \$	IRR	TVPI Multiple
50 South Capital Private Credit	Fund Of Funds	2018	Private Debt	7,000,000	6,617,636	7,622,630	1,016,397	7.6	1.3
Grosvenor PC	Other	2016	Other	14,000,000	14,000,000	807,139	17,888,499	5.4	1.3
Private Credit Composite				21,000,000	20,617,636	8,429,769	18,904,896	5.9	1.3

Grand Rapids General Retirement System

Fee Analysis

As of December 31, 2024

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Fund	0.37	466,721,316	1,732,206	
Domestic Equity Composite	0.13	113,446,823	144,590	
NTAM S&P 500	0.02	74,764,961	14,953	0.02 % of Assets
PIMCO Stock Plus		17,075,656	-	
Wellington Small Cap	0.60	21,606,206	129,637	0.60 % of Assets
International Equity Composite	0.56	96,925,198	539,859	
Harding Loevner	0.56	48,819,599	275,278	0.80 % of First \$20 M 0.40 % Thereafter
Neuberger Berman CIT	0.55	48,105,599	264,581	0.55 % of Assets
Core Fixed Income Composite	0.13	130,580,392	168,528	
Baird Advisors	0.22	64,872,461	142,245	0.25 % of First \$25 M 0.20 % Thereafter
NT Collective Aggregate Bond Index	0.04	65,707,932	26,283	0.04 % of Assets
Total Real Assets Composite	0.64	71,927,247	458,690	
Real Estate Composite	0.50	23,499,631	117,498	
Centersquare	0.50	23,499,631	117,498	0.50 % of First \$50 M 0.40 % Thereafter
Commodities Composite	0.65	22,015,294	143,099	
Wellington Commodities	0.65	22,015,294	143,099	0.65 % of Assets
Midstream Energy Composite	0.75	26,412,322	198,092	
Harvest MLP	0.75	26,412,322	198,092	0.75 % of Assets

See the disclosure page at the end of the 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.

Grand Rapids General Retirement System

Fee Analysis

As of December 31, 2024

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Private Equity Composite	0.92	29,469,163	271,332	
Adams Street 2010 Direct Fund	2.00	143,145	2,863	2.00 % of Assets
Adams Street 2010 EM Fund	1.00	312,482	3,125	1.00 % of Assets
Adams Street 2010 Non-US Fund	1.00	470,423	4,704	1.00 % of Assets
Adams Street 2010 US Fund	1.00	1,184,187	11,842	1.00 % of Assets
Adams Street 2013 Global Fund	1.00	4,300,550	43,006	1.00 % of Assets
Adams Street 2015 Global	1.00	7,410,515	74,105	1.00 % of Assets
Adams Street 2017 Global Fund	1.00	7,105,583	71,056	1.00 % of Assets
Adams Street 2019 Global	1.00	6,063,134	60,631	1.00 % of Assets
Aberdeen Global		2,479,144	-	
Private Credit Composite	0.79	18,904,896	149,206	
50 South Capital Private Credit	0.60	1,016,397	6,098	0.60 % of Assets
Grosvenor PC	0.80	17,888,499	143,108	0.80 % of First \$25 M 0.70 % of Next \$25 M 0.60 % Thereafter
Cash		5,467,597	-	

See the disclosure page at the end of the 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.

Grand Rapids General Retirement System
Historical Hybrid Composition
As of December 31, 2024

Historical Hybrid Composition

Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Jan-1976		May-2010	
FT Wilshire 5000 Total Market TR Index	55.00	FT Wilshire 5000 Total Market TR Index	45.00
Blmbg. U.S. Aggregate Index	40.00	Blmbg. U.S. Aggregate Index	30.00
MSCI EAFE (Net) Index	5.00	MSCI AC World ex USA (Net)	15.00
Jul-1998		FTSE EPRA/NAREIT Developed Index (Net)	5.00
FT Wilshire 5000 Total Market TR Index	50.00	Private Equity Composite	5.00
Blmbg. U.S. Aggregate Index	40.00	Jul-2010	
MSCI EAFE (Net) Index	10.00	FT Wilshire 5000 Total Market TR Index	45.00
Oct-2002		Blmbg. U.S. Aggregate Index	30.00
FT Wilshire 5000 Total Market TR Index	50.00	MSCI AC World ex USA (Net)	15.00
Blmbg. U.S. Aggregate Index	35.00	FTSE EPRA/NAREIT Developed Index (Net)	5.00
MSCI EAFE (Net) Index	15.00	Private Equity Policy Index	5.00
Apr-2006		Jan-2013	
FT Wilshire 5000 Total Market TR Index	55.00	FT Wilshire 5000 Total Market TR Index	40.00
Blmbg. U.S. Aggregate Index	30.00	Blmbg. U.S. Aggregate Index	30.00
MSCI EAFE (Net) Index	15.00	MSCI AC World ex USA (Net)	15.00
Jul-2006		FTSE EPRA/NAREIT Developed Index (Net)	5.00
FT Wilshire 5000 Total Market TR Index	55.00	Private Equity Policy Index	5.00
Blmbg. U.S. Aggregate Index	30.00	Bloomberg Commodity Index Total Return	5.00
MSCI AC World ex USA (Net)	15.00	Apr-2015	
Jul-2009		FT Wilshire 5000 Total Market TR Index	22.50
FT Wilshire 5000 Total Market TR Index	50.00	Blmbg. U.S. Aggregate Index	25.00
Blmbg. U.S. Aggregate Index	30.00	MSCI AC World ex USA (Net)	22.50
MSCI AC World ex USA (Net)	15.00	FTSE EPRA/NAREIT Developed Index (Net)	5.00
FTSE EPRA/NAREIT Developed Index (Net)	5.00	Private Equity Policy Index	5.00
Apr-2010		Bloomberg Commodity Index Total Return	5.00
FT Wilshire 5000 Total Market TR Index	50.00	S&P MLP Index	5.00
Blmbg. U.S. Aggregate Index	30.00	Bloomberg U.S. TIPS Index	10.00
MSCI AC World ex USA (Net)	15.00	Dec-2018	
FTSE EPRA/NAREIT Developed Index (Net)	5.00	FT Wilshire 5000 Total Market TR Index	22.50
		Blmbg. U.S. Aggregate Index	25.00
		MSCI AC World ex USA (Net)	22.50
		FTSE EPRA/NAREIT Developed Index (Net)	5.00
		Private Equity Policy Index	5.00
		Bloomberg Commodity Index Total Return	5.00
		S&P MLP Index	5.00
		Bloomberg U.S. TIPS Index	10.00

Grand Rapids General Retirement System
Historical Hybrid Composition
As of December 31, 2024

Allocation Mandate	Weight (%)
Jul-2019	
FT Wilshire 5000 Total Market TR Index	17.75
Blmbg. U.S. Aggregate Index	24.50
MSCI AC World ex USA (Net)	17.75
FTSE EPRA/NAREIT Developed Index (Net)	5.00
Private Equity Policy Index	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian MLP Index	5.00
Bloomberg U.S. TIPS Index	5.00
Morningstar LSTA US Leveraged Loan	5.00
MSCI ACWI Minimum Volatility Index (Net)	10.00

Oct-2019	
FT Wilshire 5000 Total Market TR Index	17.75
MSCI AC World ex USA (Net)	17.75
MSCI ACWI Minimum Volatility Index (Net)	10.00
Private Equity Policy Index	5.00
Morningstar LSTA US Leveraged Loan	5.00
Blmbg. U.S. Aggregate Index	24.50
Bloomberg U.S. TIPS Index	5.00
Dow Jones U.S. Select REIT	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian MLP Index	5.00

Oct-2020	
FT Wilshire 5000 Total Market TR Index	17.75
MSCI AC World ex USA (Net)	17.75
Private Equity Policy Index	5.00
MSCI ACWI Minimum Volatility Index (Net)	10.00
Morningstar LSTA US Leveraged Loan	5.00
Blmbg. U.S. Aggregate Index	24.50
Bloomberg U.S. TIPS Index	5.00
Dow Jones U.S. Select REIT	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian Midstream Energy Index	5.00

Allocation Mandate	Weight (%)
Jul-2024	
Russell 3000 Index	23.75
MSCI AC World ex USA (Net)	21.75
Private Equity Policy Index	5.00
Morningstar LSTA US Leveraged Loan	5.00
Blmbg. U.S. Aggregate Index	28.50
Dow Jones U.S. Select REIT	5.00
Bloomberg Commodity Index Total Return	5.00
Alerian Midstream Energy Index	5.00
90 Day U.S. Treasury Bill	1.00

Grand Rapids General Retirement System
Historical Hybrid Compositions
As of December 31, 2024

NTAM S&P 500	
Historical Hybrid Composition	
Allocation Mandate	Weight (%)
Oct-1979	
Russell 1000 Index	100.00
Jul-2007	
S&P 500 Index	100.00

International Equity	
Historical Hybrid Composition	
Allocation Mandate	Weight (%)
Oct-1979	
MSCI EAFE (Net) Index	100.00
Jul-2006	
MSCI AC World ex USA (Net)	100.00

Real Assets	
Historical Hybrid Composition	
Allocation Mandate	Allocation Mandate
Mar-2005	
Bloomberg U.S. TIPS Index	Bloomberg U.S. TIPS Index
FTSE EPRA/NAREIT Developed Index (Net)	Dow Jones U.S. Select REIT
S&P MLP Total Return Index	Alerian MLP Index
Bloomberg Commodity Index Total Return	Bloomberg Commodity Index Total Return
Jul-2019	
Bloomberg U.S. TIPS Index	
FTSE EPRA/NAREIT Developed Index (Net)	
Alerian MLP Index	
Bloomberg Commodity Index Total Return	
Oct-2019	
Bloomberg U.S. TIPS Index	
Dow Jones U.S. Select REIT	
Alerian MLP Index	
Bloomberg Commodity Index Total Return	

Real Estate	
Historical Hybrid Composition	
Allocation Mandate	Weight (%)
Jun-2009	
FTSE EPRA/NAREIT Developed Index (Net)	100.00
Jul-2009	
FTSE EPRA/NAREIT Developed Index (Net)	100.00
Oct-2019	
Dow Jones U.S. Select REIT	100.00

Data prior to 2/1/2024 is from the previous consultant.

Performance is calculated using custodial statements as the investment book of record.

Returns for periods greater than one year are annualized.

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

As of 4/1/2023, each of the underlying funds for Aberdeen (HighVista) have an annual management fee of .25%.

The PIMCO StocksPLUS LP A fee is performance based: 50% of the first .40% of the amount by which performance exceeds the total rate of return on the S&P 500 for the previous twelve month period. Thereafter, the fee is 20% of performance in excess of .40%.

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.

Mariner Institutional compiled this report for the sole use of the client for which it was prepared. Mariner Institutional is responsible for evaluating the performance results of the Total Fund along with the investment advisors by comparing their performance with indices and other related peer universe data that is deemed appropriate. Mariner Institutional uses the results from this evaluation to make observations and recommendations to the client.

Mariner Institutional uses time-weighted calculations which are founded on standards recommended by the CFA Institute. The calculations and values shown are based on information that is received from custodians. Mariner Institutional analyzes transactions as indicated on the custodian statements and reviews the custodial market values of the portfolio. As a result, this provides Mariner Institutional with a reasonable basis that the investment information presented is free from material misstatement. This methodology of evaluating and measuring performance provides Mariner Institutional with a practical foundation for our observations and recommendations. Nothing came to our attention that would cause Mariner Institutional to believe that the information presented is significantly misstated.

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

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

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

This document may contain data provided by Bloomberg.

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

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

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

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

***IMPORTANT DISCLOSURE INFORMATION RE GREENWICH QUALITY LEADER AWARD**

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

Methodology for this Award: For the 2022 Greenwich Quality 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. These U.S.-based institutional investors are corporate and union funds, public funds, and endowment and foundation funds, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset management and investment consulting providers, including qualitative assessments of those firms soliciting their business and detailed information on important market trends.

MARINER

Access to a wealth of knowledge and solutions.