
Lake Worth Beach Firefighters' Relief and Pension Fund

Investment Performance Review
Period Ending September 30, 2024

MARINER

3rd Quarter 2024 Market Environment

The Economy

- The US Federal Reserve (the Fed) shifted its policy stance during the quarter and cut the fed funds rate by 0.50% for the first time in four years to a range of 4.75%-5.00%. Capital markets celebrated the move after struggling to predict the pace and timing of future Fed actions earlier in the year. In its press release for the September meeting, the Fed continued to assert its stance on fighting inflation, while also inserting that the committee is strongly committed to “supporting maximum employment.” Fed Chairman Jerome Powell signaled to the markets that the expectation is for the committee to shift to a more expansionary policy moving forward.
- The Fed’s September “Dot Plot” showed revised expectations from a single 0.25% rate cut for the remainder of 2024 to a low-end estimate of a 4.25%-4.50% range. The dots also showed the target rate range decreasing below 4.00% in 2025.
- Growth in the US labor market continued in the third quarter, albeit at a slower pace than previous quarters with growth coming in at 527,000 new jobs. However, the strength of the labor market during the previous year was undermined by the large downward revision (818,000) on the trailing one-year statistic.

Equity (Domestic and International)

- US equity results were sharply higher for the quarter, which also saw a significant broadening of returns across both the style and capitalization spectrum. The S&P 500 Index rose a solid 5.9% for the quarter and the small-cap Russell 2000 Index posted a higher gain of 9.3%. This quarter not only saw a significant rotation from large-cap to small-cap stocks but also from growth stocks to value stocks as value indexes outpaced their growth counterparts.
- Large-cap equity benchmarks continue to represent top-heavy concentration among a limited number of stocks. As of quarter end, the top 10 stocks in the S&P 500 Index made up nearly 35% of the index.
- International stocks continued delivering positive results during the third quarter and US Dollar (USD) denominated results were further helped by a weakening USD. USD performance of international stocks surged past local currency (LCL) returns in most regions for the quarter, albeit to varying degrees.

Fixed Income

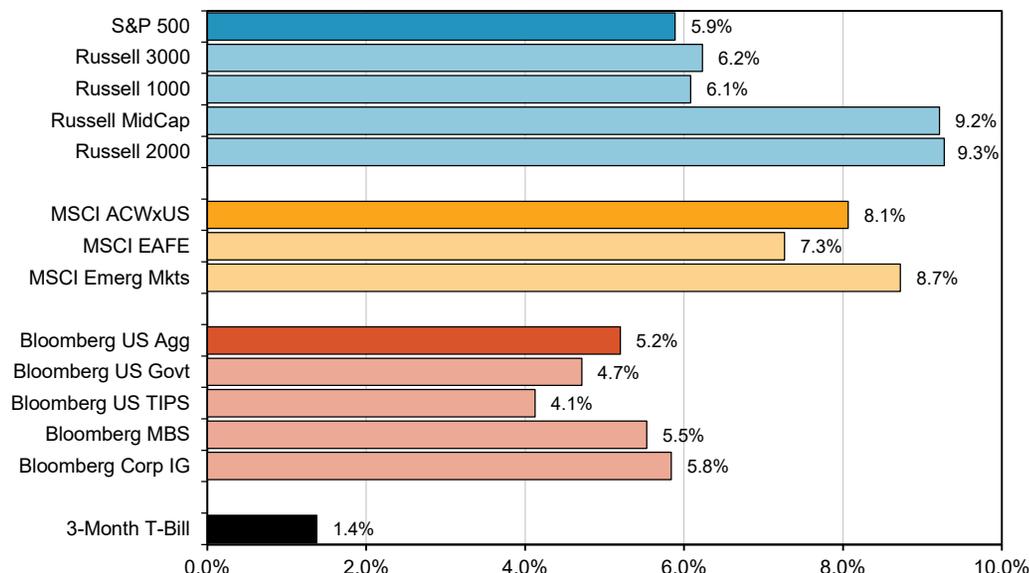
- Fixed-income markets traded higher during the quarter on the back of the Fed’s policy shift as Treasury yields fell. The inverse relationship between prices and yields resulted in the Bloomberg US Aggregate Bond Index advancing 5.2%. The yield on the bellwether 10-year Treasury declined by 0.55% during the quarter.
- High-yield bonds slightly outperformed the Bloomberg US Aggregate Bond Index for the quarter, largely due to higher coupons and partly due to narrowing option-adjusted spreads (OAS) for the Bloomberg US High-Yield index.
- Global bonds outpaced the domestic benchmarks, with the Bloomberg Global Aggregate ex-US returning 8.5% for the quarter in USD terms. Global bond performance was boosted by a weakening USD during the quarter.

Market Themes

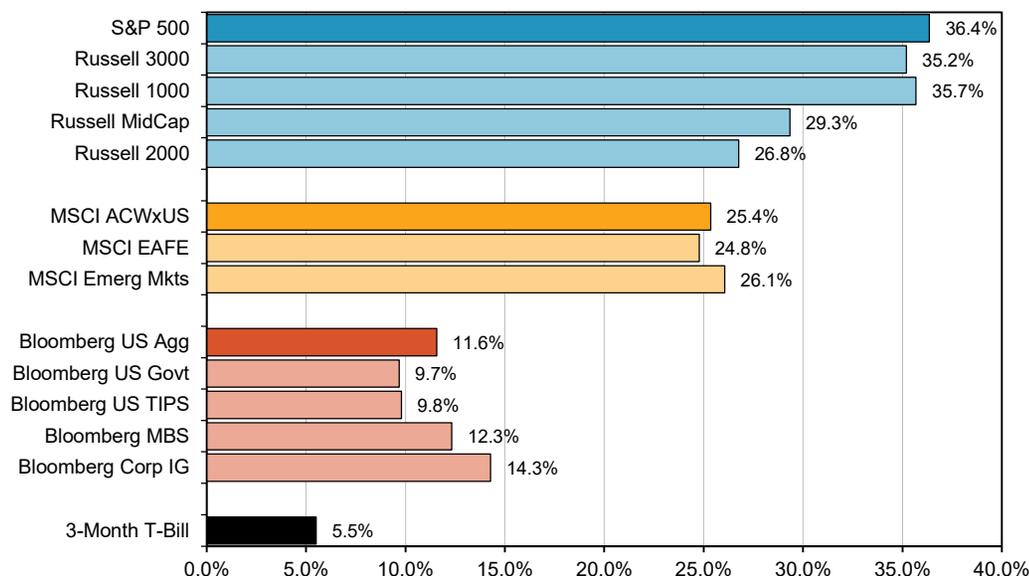
- Divergent monetary policies across regions led to increased volatility during the quarter. Most developed markets across the world kept rates at elevated levels as central banks continued their tight monetary stances. However, the Japanese Central Bank chose to raise its policy rates at the end of July, shortly before the Fed cut its policy rate in September. This divergence led to an unwinding of the systematic Yen carry trade, where investors quickly took action to cover short yen positions by taking down positions in various higher growth investments, including US equities. This subsequently led to a sharp decline in equity markets around the world in early August.
- Ongoing military conflicts in Ukraine and the Middle East, coupled with global economic uncertainty, continue to act as headwinds for international market results but they received a boost from the weakening USD. New escalations to existing conflicts have resulted in anticipated and unanticipated consequences. Domestic Defense companies have tended to trade higher on the news of developing escalations abroad while similarly putting upward pressure on oil prices and downward pressure on energy stocks as a result.

- Performance in the domestic equity markets was broadly positive after markets received a boost from the Fed's first rate cut in four years. Small-cap stocks outperformed their large-cap counterparts, with the Russell 2000 returning 9.3% versus a gain of 5.9% for the S&P 500. The all-cap Russell 3000, which is heavily weighted in its large-cap names, lagged the Russell 2000 Index by 3.1%, returning 6.2% for the quarter.
- International developed market equities realized similar results with both the MSCI ACWI ex US and MSCI EAFE indexes gaining during the quarter. The MSCI ACWI ex US Index posted a strong 8.1% for the quarter, while the MSCI EAFE Index returned a slightly lower 7.3%, both in USD terms. International emerging market (EM) equities were the best performing foreign segment, gaining 8.7% in for the quarter and outpacing their developed market counterparts. Much of the solid USD performance for EM can be attributed to the Far East index countries, particularly China, Taiwan, and Singapore.
- Broad fixed-income indexes added to their year-to-date results during the quarter, thanks in large part to the Fed's 0.50% rate cut on September 18th. The Bloomberg US Aggregate Index returned a solid 5.2% for the quarter. Investment-grade corporate bonds topped other US fixed-income sectors for the quarter, finishing with a return of 5.8%. The TIPS market, which is not part of the Aggregate Index, was the worst-performing bond benchmark during the quarter with a return of 4.1%, lagging the rest of the domestic fixed-income indexes.
- Large-cap US equity indexes built on their already massive returns over the trailing one-year period. The S&P 500 Index has gained 36.4%, while the Russell 1000 Index returned 35.7%. The weakest performing capitalization range of domestic equities for the year has been the small-cap Russell 2000 Index, which still posted a double-digit return of 26.8% over the last 12 months.
- Domestic bond indexes also produced strong, positive results for the year. Investment-grade corporate bonds continued to lead, returning an impressive 14.3% for the trailing one-year. The government bond index lagged for the year, but still returned a solid 9.7%.
- International markets also showcased healthy performance for the trailing one-year period. The MSCI EM Index was the best international performer, returning 26.1%, while the MSCI EAFE and MSCI ACWI ex US indexes posted returns of 24.8% and 25.4%, respectively.

Quarter Performance

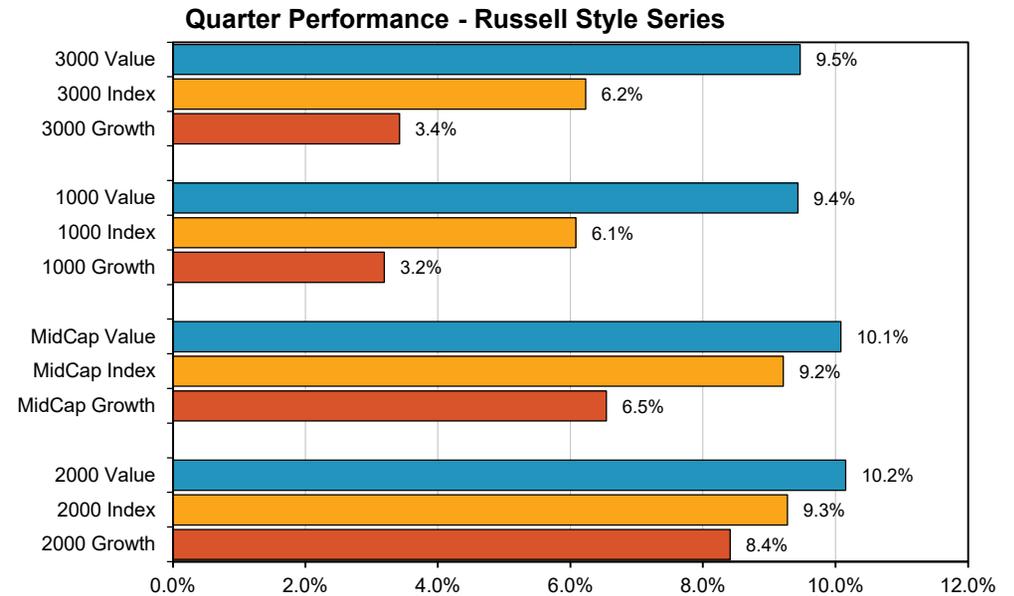


1-Year Performance

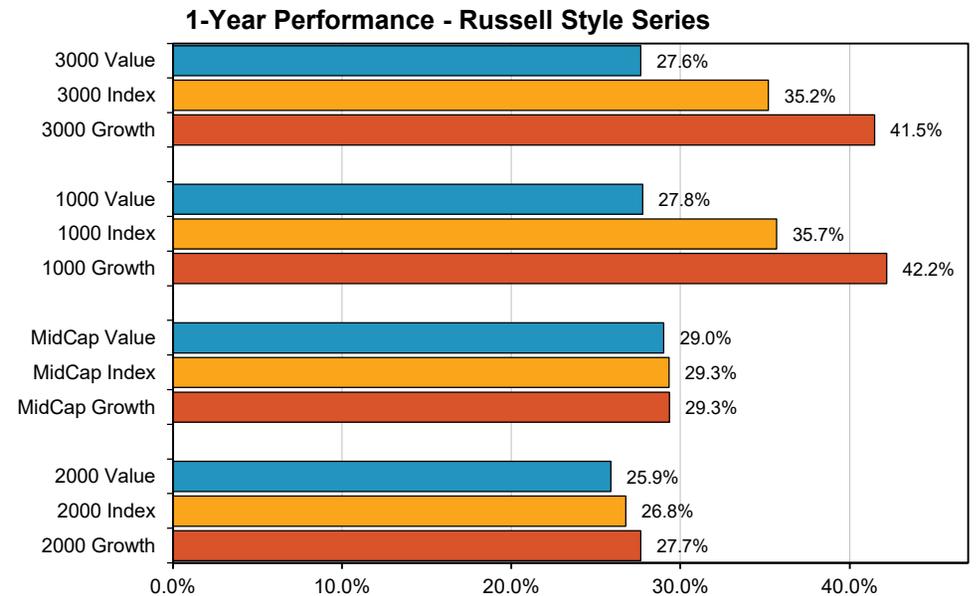


Source: Investment Metrics

- Domestic equity benchmarks posted strong absolute results across styles and market capitalization ranges. During the third quarter, value stocks outpaced their growth counterparts at each capitalization level for the first time since Q4 2022. The best-performing segment of the equity market was small-cap value, with the Russell 2000 Value Index advancing 10.2% for the quarter. Conversely, the large-cap growth Russell 1000 Growth Index produced the weakest relative equity performance, returning just 3.2%.
- The growth-oriented rally took a hiatus during the quarter with the broadest disparity visible in large-cap indexes. The Russell 1000 Value Index return of 9.4% surpassed the Russell 1000 Growth Index return by 6.2%. This quarter's results bucked the trend of large-cap growth stocks being the best-performing segment of the domestic equity market.



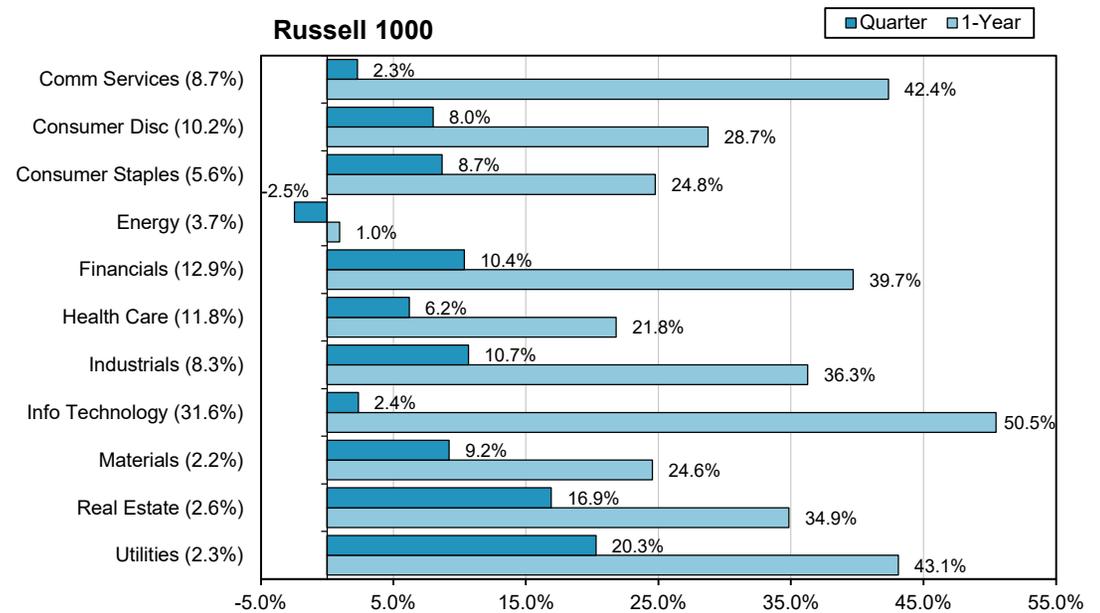
- This quarter's resurgence by the value indexes was not enough to bring them above growth indexes on a trailing one-year basis. The Russell 1000 Growth Index amassed a staggering 42.2%, leading the way among style and market capitalization classifications. Much of this strong performance has been attributable 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 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 posted an impressive 25.9%.
- The strength of growth sectors is evident in the chart with the broad-cap, large-cap, and small-cap benchmarks outpacing their value counterparts for the trailing one-year period. The gap between the Russell 1000 Growth Index and the Russell 1000 Value Index was in double-digits for the year, while the gaps for mid- and small-cap indexes were much narrower.



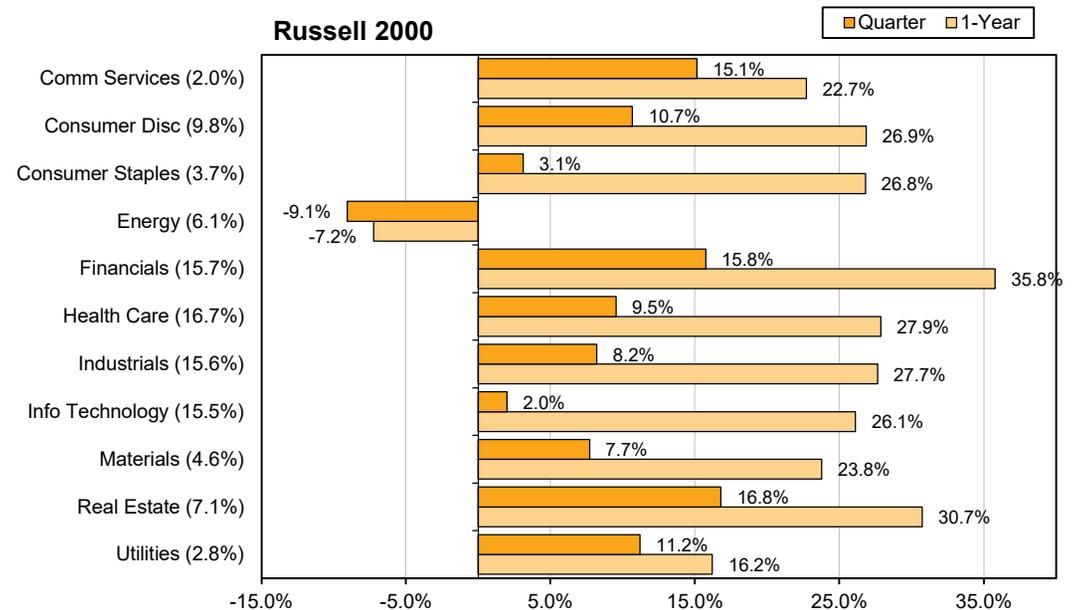
Source: Investment Metrics

- Economic sector performance was mostly positive during the third quarter, with 10 of the 11 economic sectors moving higher in both the large-cap and small-cap indexes. The quarter continued the previous trend in the domestic equities markets of broader participation in companies outside of the technology sector. Energy was the lone sector to slide during the quarter, posting a return of -2.5%.
- Third-quarter results for the large-cap benchmark added to already strong trailing one-year numbers, with all but one sector producing a return of greater than 20%. Similar to the quarter's results, the energy sector was the one to fall short, gaining just 1.0% over the trailing year. Of the 11 sectors, three (communication services, information technology, and utilities) were up by more than 40.0% for the past year. Financials, industrials, and real estate followed closely behind with gains of 39.7%, 36.3%, and 34.9%, respectively. Despite this strong sector performance, only five of the six leading sectors managed to outpace the Russell 1000 Index's return of 35.7%, which was lifted even higher by the strong results in the most heavily weighted sector, information technology.
- Small-cap stocks displayed similar strength, with 10 of the 11 small-cap economic sectors gaining value during the quarter. Real estate, financials, and communication services led the way with gains of more than 15% for the quarter. Similar to the large-cap benchmark, energy was the worst-performing sector for the quarter and produced the sole negative sector return, falling -9.1%.
- Small-cap stocks also had a strong performance for the trailing year. The same 10 small-cap sectors that advanced during the quarter moved higher over the trailing one-year period. Energy remains the weakest performing sector, with the most recent quarterly return dragging the sector's performance to -7.2% for the trailing year. Financials (up 35.8%), and seven other sectors earned more than 20%.

Russell 1000



Russell 2000



Source: Morningstar Direct

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

The Market Environment
Top 10 Index Weights & Quarterly Performance for the Russell 1000 & 2000
As of September 30, 2024

Top 10 Weighted Stocks				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Apple Inc	6.4%	10.8%	36.8%	Information Technology
Microsoft Corp	6.1%	-3.6%	37.3%	Information Technology
NVIDIA Corp	5.4%	-1.7%	179.3%	Information Technology
Amazon.com Inc	3.3%	-3.6%	46.6%	Consumer Discretionary
Meta Platforms Inc Class A	2.4%	13.6%	91.3%	Communication Services
Alphabet Inc Class A	1.8%	-8.8%	27.1%	Communication Services
Berkshire Hathaway Inc Class B	1.6%	13.1%	31.4%	Financials
Alphabet Inc Class C	1.6%	-8.7%	27.1%	Communication Services
Broadcom Inc	1.5%	7.8%	110.9%	Information Technology
Tesla Inc	1.4%	32.2%	4.6%	Consumer Discretionary

Top 10 Weighted Stocks				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Vaxcyte Inc Ordinary Shares	0.5%	51.3%	124.1%	Health Care
FTAI Aviation Ltd	0.5%	29.1%	281.0%	Industrials
Insmed Inc	0.4%	9.0%	189.1%	Health Care
Sprouts Farmers Market Inc	0.4%	32.0%	158.0%	Consumer Staples
Fabrinet	0.3%	-3.4%	41.9%	Information Technology
Applied Industrial Technologies Inc	0.3%	15.2%	45.4%	Industrials
Mueller Industries Inc	0.3%	30.5%	100.0%	Industrials
Fluor Corp	0.3%	9.6%	30.0%	Industrials
Ensign Group Inc	0.3%	16.3%	55.1%	Health Care
UFP Industries Inc	0.3%	17.5%	29.6%	Industrials

Top 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
Exact Sciences Corp	0.0%	61.2%	-0.1%	Healthcare
Inspire Medical Systems Inc	0.0%	57.7%	6.4%	Healthcare
AppLovin Corp Ordinary Shares - A	0.1%	56.9%	226.7%	Information Technology
Doximity Inc Class A	0.0%	55.8%	105.3%	Healthcare
Ubiquiti Inc	0.0%	52.7%	55.3%	Information Technology
Vornado Realty Trust	0.0%	49.9%	75.4%	Real Estate
GE Vernova Inc	0.1%	48.7%	N/A	Utilities
VF Corp	0.0%	48.5%	15.5%	Communication Services
Palantir Technologies Inc Ordinary - A	0.1%	46.9%	132.5%	Technology
SharkNinja Inc	0.0%	44.7%	139.9%	Communication Services

Top 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Lumen Technologies Inc Ordinary	0.1%	545.5%	400.0%	Communication Services
CommScope Holding Co Inc	0.0%	396.7%	81.8%	Information Technology
Capricor Therapeutics Inc	0.0%	218.9%	344.7%	Health Care
Summit Therapeutics Inc Ordinary	0.0%	180.8%	1071.1%	Health Care
Q32 Bio Inc	0.0%	148.6%	N/A	Health Care
Intuitive Machines Inc Ordinary - A	0.0%	143.9%	120.5%	Industrials
IGM Biosciences Inc Ordinary	0.0%	140.8%	98.1%	Health Care
Cassava Sciences Inc	0.0%	138.3%	76.9%	Health Care
AST SpaceMobile Inc Ordinary - A	0.1%	125.2%	588.2%	Communication Services
Biomea Fusion Inc	0.0%	124.4%	-26.6%	Health Care

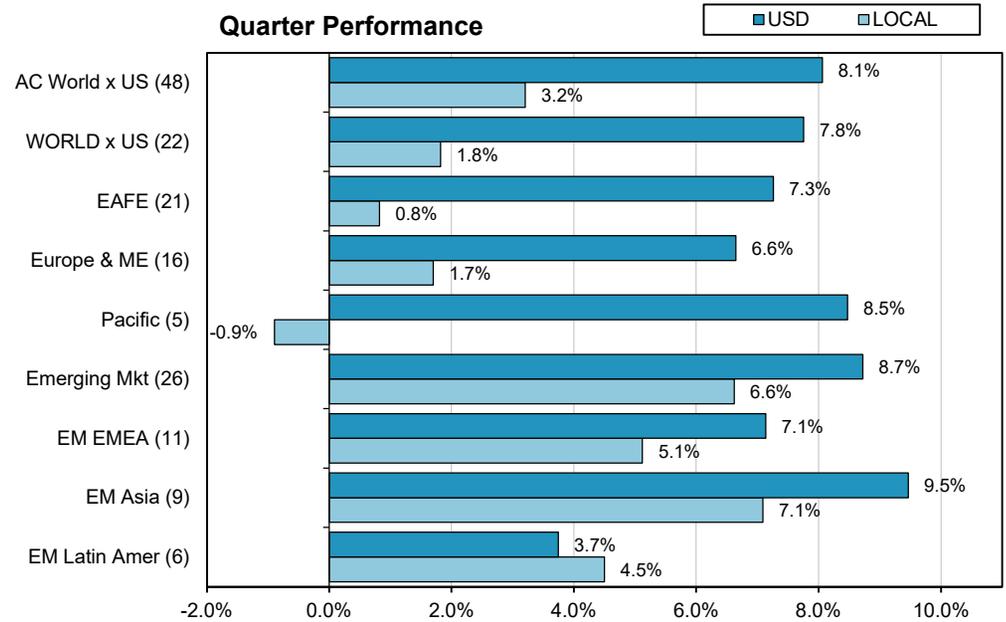
Bottom 10 Performing Stocks (by Quarter)				
Russell 1000	Weight	1-Qtr Return	1-Year Return	Sector
New Fortress Energy Inc Class A	0.0%	-58.3%	-71.7%	Utilities
Wolfspeed Inc	0.0%	-57.4%	-74.5%	Information Technology
Trump Media & Technology Group Corp	0.0%	-50.9%	N/A	Communication Services
Super Micro Computer Inc	0.0%	-49.2%	51.8%	Information Technology
e.l.f. Beauty Inc	0.0%	-48.3%	-0.7%	Consumer Staples
Celsius Holdings Inc	0.0%	-45.1%	-45.2%	Consumer Staples
Moderna Inc	0.1%	-43.7%	-35.3%	Health Care
DexCom Inc	0.1%	-40.9%	-28.1%	Health Care
Advance Auto Parts Inc	0.0%	-38.2%	-29.1%	Communication Services
Dollar General Corp	0.0%	-35.7%	-18.6%	Consumer Staples

Bottom 10 Performing Stocks (by Quarter)				
Russell 2000	Weight	1-Qtr Return	1-Year Return	Sector
Conduit Pharmaceuticals Inc	0.0%	-88.8%	-98.0%	Health Care
HilleVax Inc	0.0%	-87.8%	-86.9%	Health Care
iLearningEngines Inc	0.0%	-81.6%	N/A	Information Technology
SolarMax Technology Inc	0.0%	-80.8%	N/A	Industrials
Verrica Pharmaceuticals Inc	0.0%	-80.1%	-62.7%	Health Care
Elevation Oncology Inc	0.0%	-77.8%	-9.5%	Health Care
Actinium Pharmaceuticals Inc	0.0%	-74.6%	-68.2%	Health Care
Renovaro Inc	0.0%	-72.4%	-89.2%	Health Care
B. Riley Financial Inc	0.0%	-70.2%	-86.1%	Financials
ALX Oncology Holdings Inc Ordinary	0.0%	-69.8%	-62.1%	Health Care

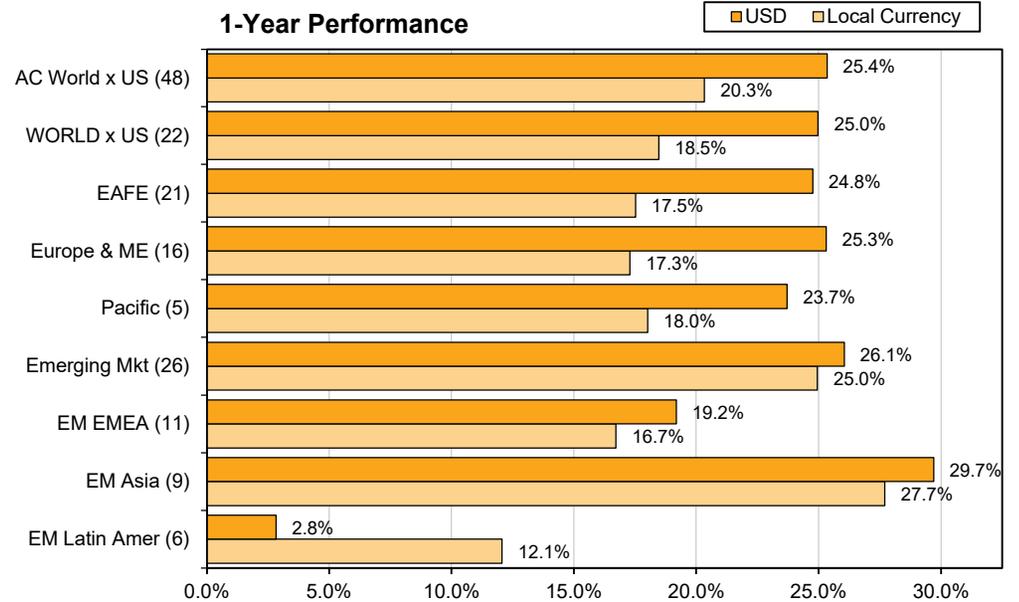
Source: Morningstar Direct

- Results in USD terms among the headline international equity indexes were sharply higher during the quarter, echoing the performance of major domestic equity benchmarks. The weakening USD relative to many major currencies during the quarter was a tailwind for the USD performance of most regional benchmarks' returns. The developed-market MSCI EAFE Index returned a muted 0.8% in LCL terms but rose 7.3% in USD terms. The MSCI Emerging Markets Index was the best-performing broad index, climbing 8.7% in USD and 6.6% in LCL terms for the quarter.
- Latin America lagged other regions during the quarter in USD terms, posting a return of 3.7%. Weakening currencies in the region put pressure on performance, making it the only region with USD performance that lagged LCL currency performance. The MSCI Pacific benchmark was the only regional benchmark to deliver negative performance in LCL teams (-0.9%), but USD weakness led to an 8.5% positive return in USD terms. Regional LCL currency performance struggles were led by the unwinding of the carry trade in the Japanese equity markets in early August which carried over to neighboring Pacific countries and US markets.
- China, which is the most heavily weighted country in the emerging market index, continued its rebound during the quarter posting a 23.5% gain in USD terms. Recently announced government stimulus for the Chinese economy helped lift equity markets in the country during the quarter. The Chinese economy has yet to expand at its pre-pandemic rate of roughly 5.0% primarily due to troubles in its commercial property and banking sectors, which have created challenges for growth in the region.
- Much like domestic markets, trailing one-year results for international developed and emerging markets benchmarks were strongly positive. Higher USD versus LCL returns for most international benchmarks demonstrate the USD's relative weakness over the trailing one-year period.
- All broad and regional indexes were positive for the trailing 12 months in both USD and LCL terms. The EM Latin America index, where weakening local currencies dragged the region's double-digit LCL performance to a muted 2.8% in USD terms. MSCI Asia Index led the way with a return of 27.7% in LCL terms for the trailing year. The relative weakening of the USD during the period further boosted returns in the region to 29.7% 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 September 30, 2024

MSCI - EAFE	Sector Weight	Quarter Return	1-Year Return
Communication Services	4.3%	11.5%	27.1%
Consumer Discretionary	11.0%	4.8%	14.4%
Consumer Staples	8.7%	10.6%	10.9%
Energy	3.6%	-5.8%	-2.1%
Financials	20.6%	10.4%	36.0%
Health Care	13.3%	4.6%	20.4%
Industrials	17.3%	9.4%	33.8%
Information Technology	8.7%	-2.4%	35.6%
Materials	6.8%	10.7%	24.0%
Real Estate	2.2%	17.3%	27.6%
Utilities	3.4%	14.9%	25.4%
Total	100.0%	7.3%	24.8%

MSCI - ACWixUS	Sector Weight	Quarter Return	1-Year Return
Communication Services	5.6%	13.6%	26.3%
Consumer Discretionary	11.3%	11.5%	20.4%
Consumer Staples	7.4%	10.5%	11.1%
Energy	5.0%	-1.7%	7.2%
Financials	22.5%	11.4%	33.2%
Health Care	9.4%	6.4%	20.4%
Industrials	13.8%	8.7%	30.5%
Information Technology	12.8%	-1.6%	38.3%
Materials	7.1%	9.4%	18.8%
Real Estate	1.9%	16.9%	23.5%
Utilities	3.2%	13.4%	27.7%
Total	100.0%	8.1%	25.4%

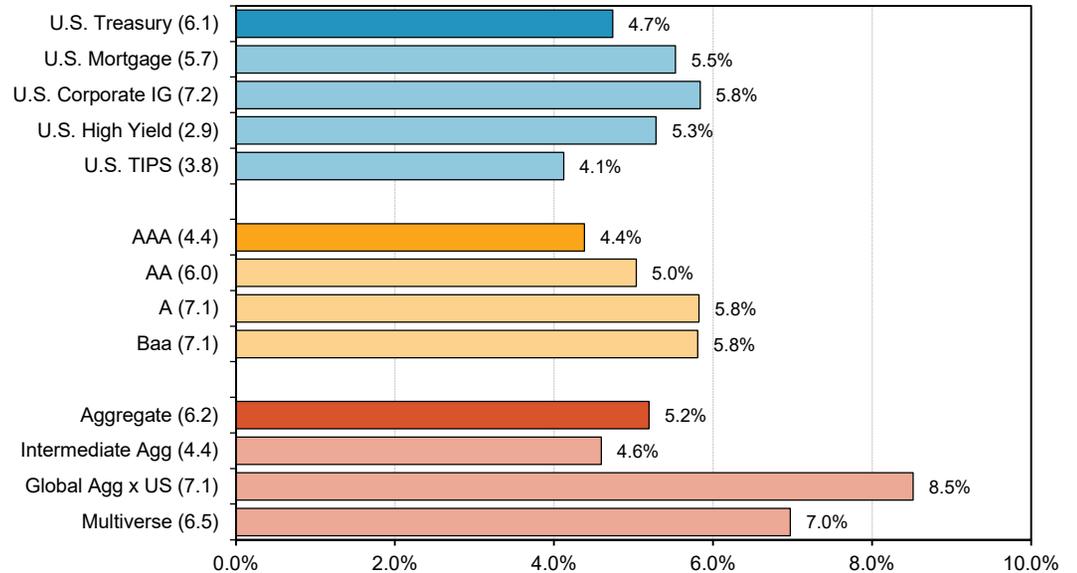
MSCI - Emerging Mkt	Sector Weight	Quarter Return	1-Year Return
Communication Services	9.4%	15.6%	26.2%
Consumer Discretionary	14.0%	25.0%	31.9%
Consumer Staples	5.2%	11.1%	9.6%
Energy	4.8%	-0.4%	17.4%
Financials	22.8%	10.4%	26.5%
Health Care	3.6%	22.9%	20.5%
Industrials	6.8%	7.0%	19.9%
Information Technology	22.2%	-2.6%	40.3%
Materials	6.6%	5.5%	5.5%
Real Estate	1.6%	14.8%	10.8%
Utilities	2.9%	9.3%	35.5%
Total	100.0%	8.7%	26.1%

Country	MSCI-EAFE Weight	MSCI-ACWixUS Weight	Quarter Return	1-Year Return
Japan	22.3%	14.0%	5.7%	21.6%
United Kingdom	14.7%	9.3%	7.9%	23.3%
France	11.4%	7.1%	7.7%	16.4%
Switzerland	9.9%	6.2%	8.5%	21.6%
Germany	9.0%	5.7%	10.7%	32.1%
Australia	7.8%	4.9%	11.5%	31.6%
Netherlands	4.8%	3.0%	-4.5%	38.7%
Denmark	3.4%	2.1%	-10.3%	24.5%
Sweden	3.4%	2.1%	8.4%	35.8%
Italy	2.7%	1.7%	8.6%	34.4%
Spain	2.8%	1.8%	13.7%	35.9%
Hong Kong	2.0%	1.3%	24.4%	14.8%
Singapore	1.5%	0.9%	17.6%	33.9%
Finland	1.0%	0.7%	8.1%	16.5%
Belgium	1.0%	0.6%	15.3%	25.9%
Israel	0.8%	0.5%	12.4%	32.4%
Norway	0.6%	0.4%	2.1%	4.5%
Ireland	0.3%	0.2%	13.9%	38.6%
Portugal	0.2%	0.1%	8.7%	11.3%
Austria	0.2%	0.1%	8.7%	28.3%
New Zealand	0.2%	0.1%	5.6%	20.1%
Total EAFE Countries	100.0%	62.7%	7.3%	24.8%
Canada		7.7%	12.0%	26.8%
Total Developed Countries		70.4%	7.8%	25.0%
China		8.2%	23.5%	23.9%
India		5.8%	7.3%	40.3%
Taiwan		5.2%	0.5%	52.7%
Korea		3.1%	-5.6%	9.3%
Brazil		1.4%	7.1%	2.6%
Saudi Arabia		1.1%	5.3%	11.2%
South Africa		0.9%	16.1%	36.7%
Mexico		0.6%	-3.4%	-3.4%
Indonesia		0.5%	15.3%	5.2%
Malaysia		0.4%	20.5%	35.6%
Thailand		0.4%	28.9%	17.0%
United Arab Emirates		0.3%	12.0%	6.4%
Poland		0.3%	-3.9%	45.7%
Turkey		0.2%	-12.6%	6.8%
Qatar		0.2%	10.6%	11.2%
Kuwait		0.2%	3.7%	8.9%
Philippines		0.2%	21.7%	22.7%
Greece		0.1%	10.4%	31.3%
Chile		0.1%	5.3%	5.8%
Peru		0.1%	7.9%	57.4%
Hungary		0.1%	6.3%	36.4%
Czech Republic		0.0%	5.1%	7.7%
Colombia		0.0%	-0.9%	25.4%
Egypt		0.0%	12.3%	-7.3%
Total Emerging Countries		29.6%	8.7%	26.1%
Total ACWixUS Countries		100.0%	8.1%	25.4%

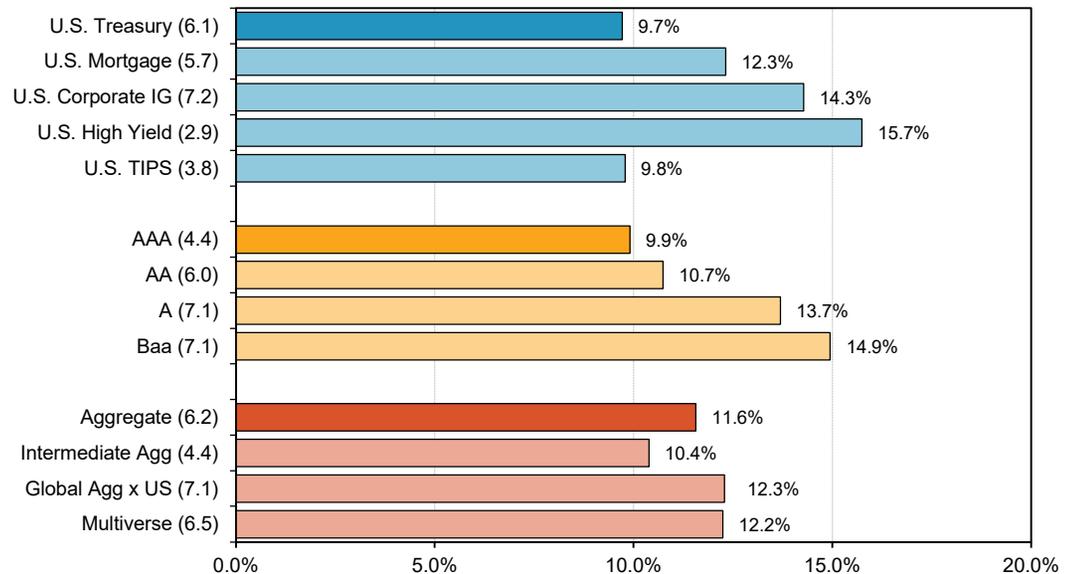
Source: Morningstar Direct, MSCI Global Index Monitor (Returns are Net in USD)
As a result of the GICS classification changes on 9/28/2018 and certain associated reporting limitations, sector performance represents backward looking performance for the prior year of each sector's current constituency,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

- Domestic fixed-income markets advanced during the third quarter. Although the Federal Reserve began to unwind its tight monetary policy stance that began in 2022 during the quarter, yields remained elevated. On September 18, the Fed reduced its target policy rate by 0.50%, a move that was celebrated in a performance boost by equity and bond markets alike.
- After a muted first half of 2024, which held the Bloomberg US Aggregate Bond Index slightly negative for the year, the index posted its best quarterly performance year-to-date, climbing 5.2% during the third quarter. Performance across the investment-grade index's segments was more favorable in the credit sectors, with the corporate investment-grade index rising 5.8%, outpacing the government and mortgage-backed-securities sectors. Lower quality issues also performed better, with A and BAA components of the index outpacing higher quality issues during the quarter.
- High Yield bonds underperformed investment grade issues as interest rates declined primarily due to the high-yield benchmark's lower duration. Despite their lower duration, below-investment grade issues continued to rise, posting a return of 5.3% for the quarter. The Bloomberg Global Aggregate ex-US Index outperformed all broad-market domestic indexes with a return of 8.5% for the quarter, aided by a weakening USD.
- Over the trailing one-year period, the Bloomberg US Aggregate Bond Index posted a solid 11.6% return. The benchmark's sub-components also posted positive performance over the trailing 12 months with the Bloomberg US Corporate Investment Grade Index rising a strong 14.3% and the US Mortgage Index returning 12.3%. US TIPS, which are excluded from the Bloomberg US Aggregate Bond Index, returned 9.8% for the trailing year.
- Among credit qualities, lower-quality issues (both within investment grade and below investment grade) have outperformed higher-quality bonds due to higher yields and credit spread compression over the last year. Higher yields mean larger coupon payments as well as greater sensitivity to changes in credit spreads, which narrowed. High-yield bonds have enjoyed a healthy 15.7% gain for the trailing year.
- The Bloomberg Global Aggregate ex-US Index moderately outpaced its domestic counterpart, the Bloomberg US Aggregate Bond Index, by 0.7% during the trailing year.

Quarter Performance



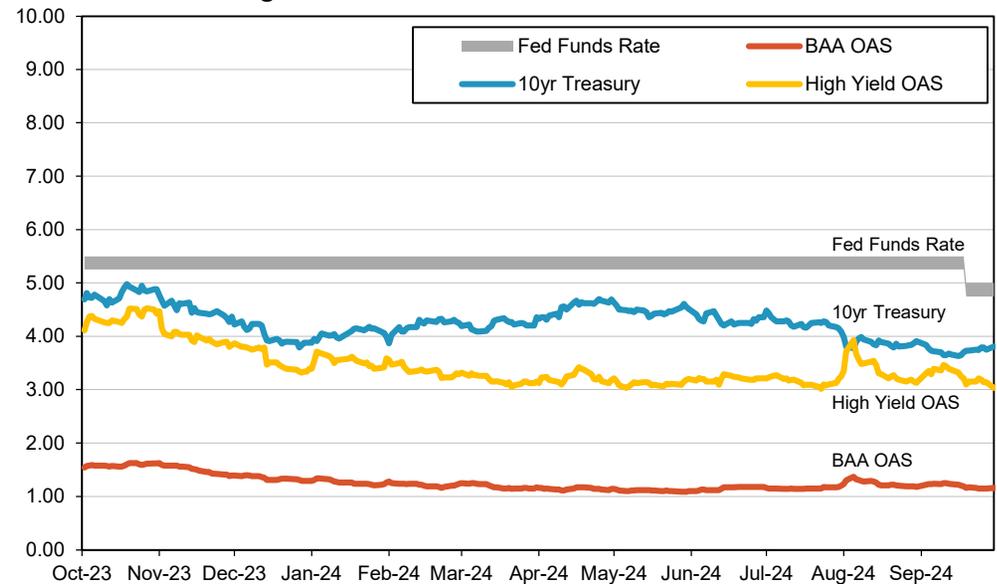
1-Year Performance



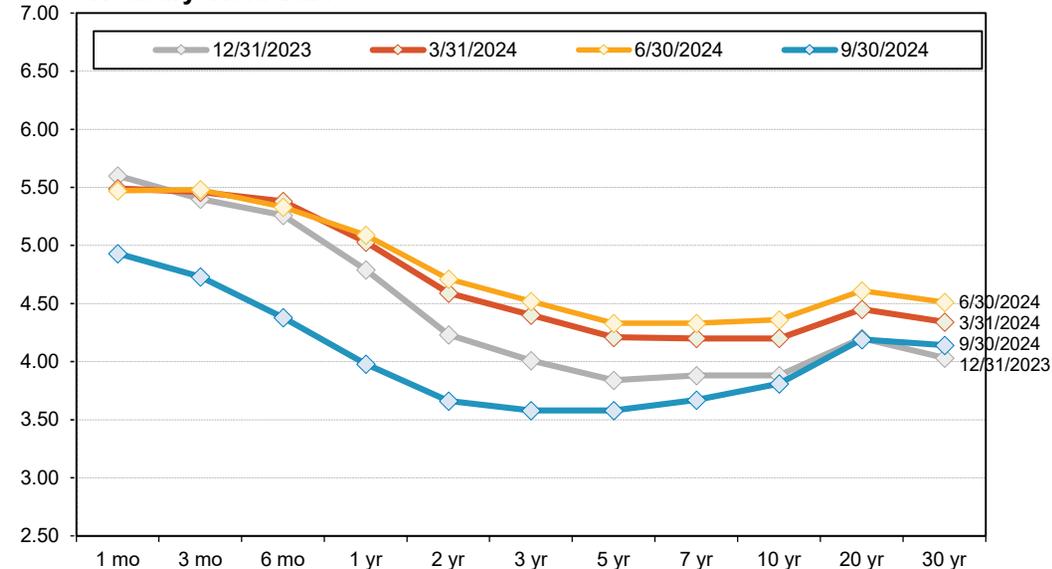
Source: Bloomberg

- The gray band across the graph illustrates the fed funds target rate range over the last 12 months. During the third quarter, the Federal Open Market Committee (FOMC) cut its policy rates by 0.50%, to a range of 4.75-5.00%. The last rate increase occurred at the FOMC's July 2023 meeting, and this was the first rate cut since March of 2020. With inflation declining and unemployment remaining largely stable, the Fed appears to be pivoting from a tight monetary policy stance. The most recent FOMC press release continued to emphasize economic data-dependent outcomes while placing renewed 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 80% probability of a 0.25% rate decrease at the FOMC November 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. However, inflation remains above the FOMC's long-term 2.0% target level.
- The yield on the US 10-year Treasury (blue line of the top chart) fell roughly 0.55% during the quarter, attributable to Fed policy decisions and expectations of future rate actions. The bellwether benchmark rate opened the quarter at a yield of 4.36% and finished September at a yield of 3.81%. The 10-year Treasury benchmark's rate peaked in October 2023, cresting at a yield of just under 5.00% before pulling back during the remainder of the year.
- 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 was relatively stable, beginning July at 1.18% and finishing September at 1.16%. High-yield OAS spreads (represented by the yellow line in the top chart) have also remained relatively unchanged, despite a sharp spike in early August spurred by an unwinding of the Yen carry trade. The high-yield OAS fell 0.18% over the quarter from 3.21% to 3.03%. 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 July 2022, the quarter-end yield on the 10-year Treasury was higher relative to the two-year Treasury. The yield curve has been inverted for each of the previous three quarter-end readings on the graph and for much of the last two years. This 2-10-year yield curve inversion is a common heuristic used to foretell a pending recession environment.

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](#)

[Yen drops to 38-year low, U.S. dollar slumps after weak data \(cnbc.com\)](#)

[U.S. job growth revised down by the most since 2009. Why this time is different \(cnbc.com\)](#)

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

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

[Top 25 Stocks in the S&P 500 By Index Weight for July 2024 \(investopedia.com\)](#)

[Fed's Jerome Powell Declares 'Time Has Come' for Interest-Rate Cuts – WSJ](#)

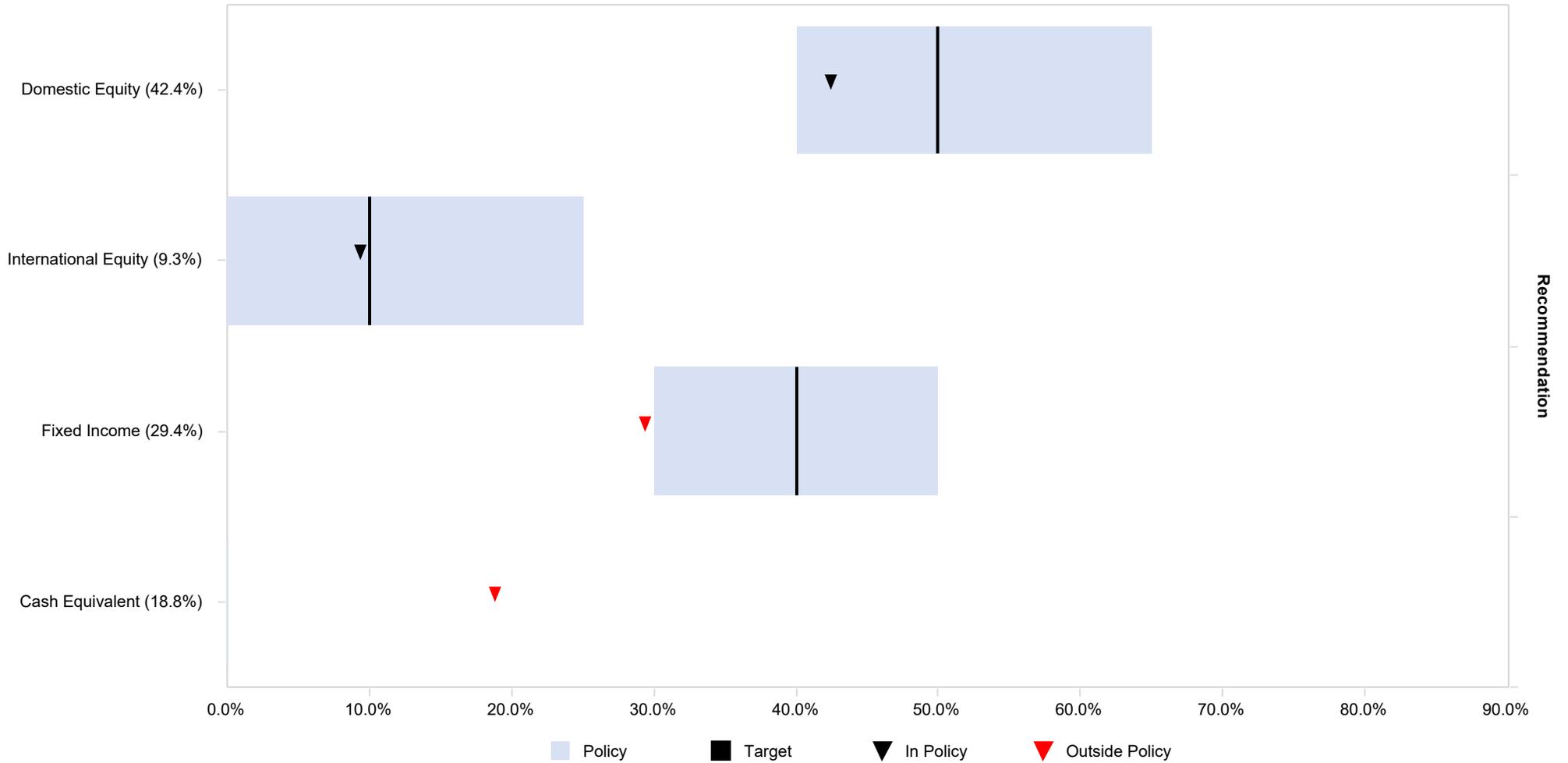
[Why Chinese banks are now vanishing \(economist.com\)](#)

[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 \(stlouisfed.org\)](#)

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Executive Summary

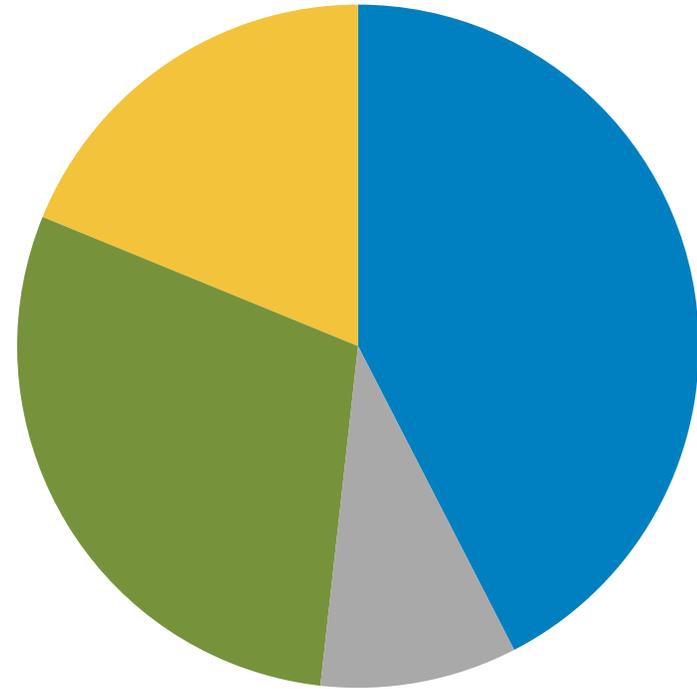
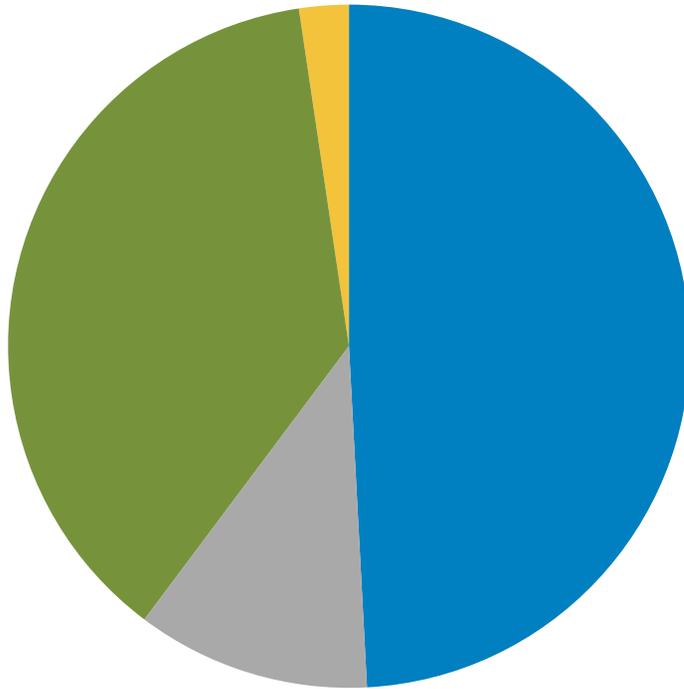


Asset Allocation Compliance

	Minimum Allocation (%)	Maximum Allocation (%)	Current Allocation (%)	Target Allocation (%)
Cash Equivalent	0.0	0.0	18.8	0.0
International Equity	0.0	25.0	9.3	10.0
Fixed Income	30.0	50.0	29.4	40.0
Domestic Equity	40.0	65.0	42.4	50.0
Total Fund	N/A	N/A	100.0	100.0

Asset Allocation By Segment as of
June 30, 2024 : \$2,108,411

Asset Allocation By Segment as of
September 30, 2024 : \$2,257,017



Allocation			Allocation		
Segments	Market Value	Allocation	Segments	Market Value	Allocation
Domestic Equity	1,036,475	49.2	Domestic Equity	957,743	42.4
International Equity	233,681	11.1	International Equity	210,534	9.3
Fixed Income	788,576	37.4	Fixed Income	663,861	29.4
Cash Equivalent	49,679	2.4	Cash Equivalent	424,879	18.8

Financial Reconciliation Quarter to Date

		Market Value 07/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 09/30/2024
Highland Capital	Balanced Portfolio	2,108,411	-	370,866	-322,484	-2,635	-6,995	12,091	97,764	2,257,017

Financial Reconciliation Year to Date

		Market Value 01/01/2024	Net Transfers	Contributions	Distributions	Management Fees	Other Expenses	Income	Apprec./ Deprec.	Market Value 09/30/2024
Highland Capital	Balanced Portfolio	2,288,497	-	370,866	-647,049	-8,321	-27,349	39,307	241,067	2,257,017

Comparative Performance Trailing Returns										
	QTR	FYTD	1 YR	3 YR	5 YR	10 YR	Inception	Inception Date		
Total Fund (Net)	5.48	13.42	23.15	5.13	7.96	7.08	6.96	03/01/1997		
Total Fund Policy	5.94	13.66	24.68	5.41	9.06	8.07	7.31			
Total Fund (Gross)	5.61 (41)	13.85 (9)	23.68 (16)	5.64 (27)	8.49 (47)	7.64 (43)	7.37 (47)	03/01/1997		
Total Fund Policy	5.94 (29)	13.66 (12)	24.68 (9)	5.41 (32)	9.06 (27)	8.07 (22)	7.31 (54)			
All Public Plans-Total Fund Median	5.37	11.36	20.17	4.82	8.37	7.47	7.34			
Total Domestic Equity	7.10 (26)	23.77 (18)	38.68 (23)	11.16 (50)	15.33 (55)	12.61 (66)	9.82 (62)	03/01/1997		
Domestic Equity Policy	6.08 (41)	21.18 (49)	35.68 (46)	10.83 (57)	15.60 (50)	12.99 (54)	9.32 (94)			
IM U.S. Large Cap Core Equity (SA+CF) Median	5.89	21.07	35.30	11.09	15.59	13.20	10.07			
Total International Equity	5.78 (87)	8.61 (92)	24.52 (69)	4.31 (54)	7.20 (84)	4.00 (97)	4.48 (100)	10/01/2005		
International Equity Policy	8.17 (38)	14.70 (39)	25.96 (46)	4.67 (49)	8.10 (70)	5.72 (85)	5.03 (99)			
IM International Core Equity (SA+CF) Median	7.57	13.85	25.59	4.63	8.83	6.65	6.33			
Total Fixed Income	4.58 (97)	5.27 (33)	10.08 (99)	-0.50 (14)	1.37 (18)	2.43 (42)	4.48 (79)	03/01/1997		
Fixed Income Policy	5.20 (67)	4.45 (95)	11.57 (89)	-1.39 (89)	0.33 (98)	1.84 (98)	4.33 (93)			
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	5.24	4.96	12.30	-0.97	0.89	2.33	4.82			

Returns for periods greater than one year are annualized.
Returns are expressed as percentages. Fiscal year ends December 31st.

Comparative Performance

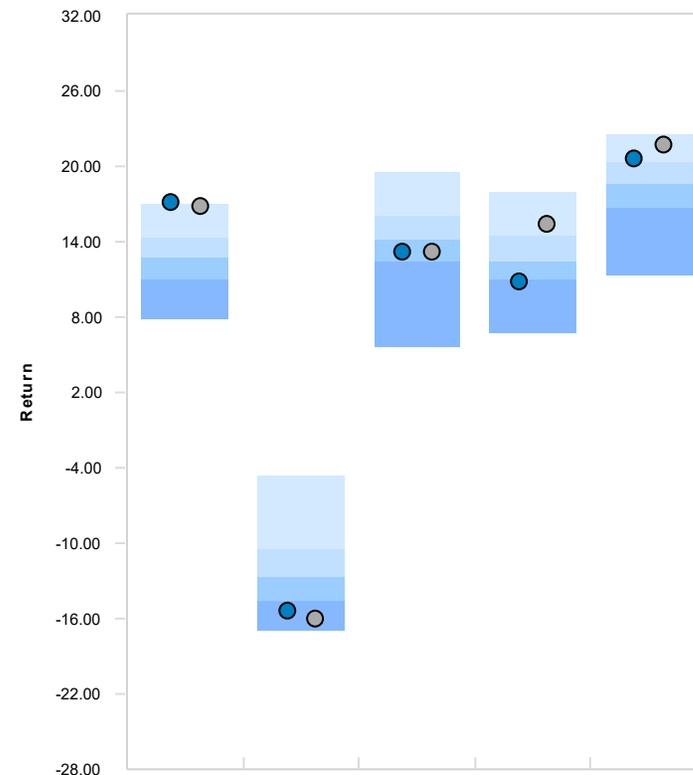
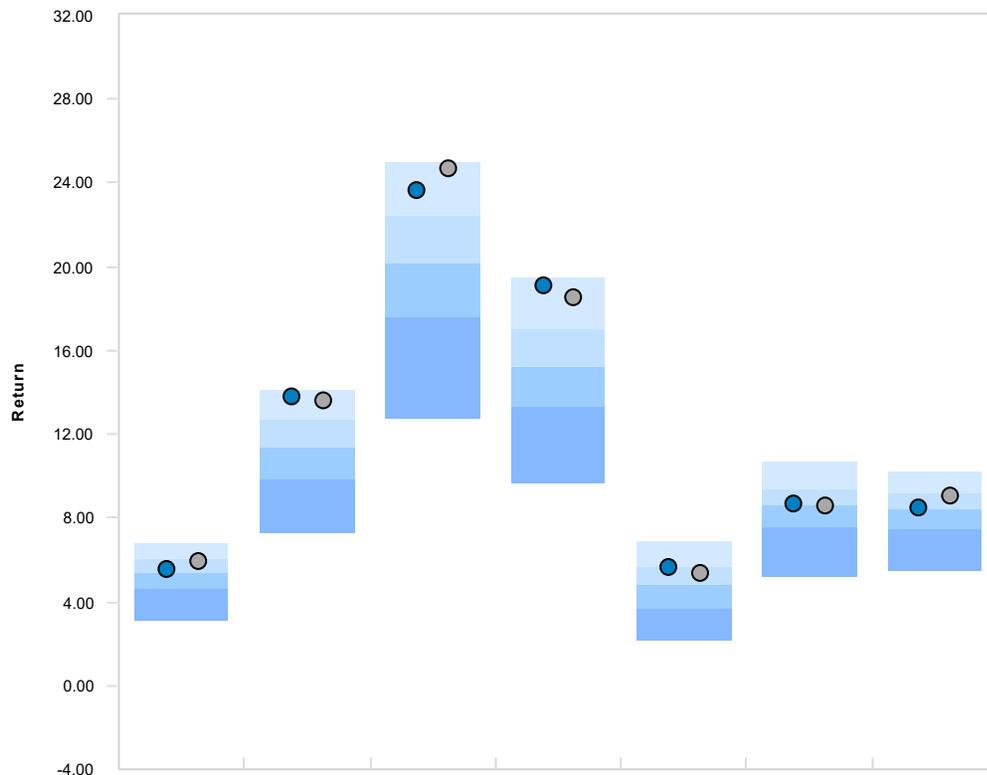
Total Fund

As of September 30, 2024

Comparative Performance Fiscal Year Returns						
	YTD	2023	2022	2021	2020	2019
Total Fund (Net)	13.42	16.65	-15.78	12.51	10.35	19.99
Total Fund Policy	13.66	16.83	-16.04	13.20	15.45	21.78
Total Fund (Gross)	13.85 (9)	17.13 (5)	-15.33 (83)	13.18 (65)	10.77 (77)	20.58 (22)
Total Fund Policy	13.66 (12)	16.83 (6)	-16.04 (90)	13.20 (65)	15.45 (17)	21.78 (10)
All Public Plans-Total Fund Median	11.36	12.68	-12.68	14.15	12.48	18.63
Total Domestic Equity	23.77 (18)	27.21 (29)	-19.71 (85)	26.47 (59)	16.78 (54)	29.80 (55)
Domestic Equity Policy	21.18 (49)	26.53 (35)	-19.13 (76)	26.24 (62)	20.89 (30)	31.02 (39)
IM U.S. Large Cap Core Equity (SA+CF) Median	21.07	24.70	-16.54	27.75	17.69	30.13
Total International Equity	8.61 (92)	21.38 (13)	-15.18 (37)	7.07 (86)	7.33 (76)	24.38 (48)
International Equity Policy	14.70 (39)	16.21 (61)	-15.57 (38)	8.29 (80)	11.13 (56)	22.13 (65)
IM International Core Equity (SA+CF) Median	13.85	17.28	-16.74	12.32	12.18	23.97
Total Fixed Income	5.27 (33)	5.70 (69)	-11.66 (12)	1.19 (5)	6.75 (96)	8.79 (69)
Fixed Income Policy	4.45 (95)	5.53 (85)	-13.01 (54)	-1.55 (66)	7.51 (86)	8.72 (79)
IM U.S. Broad Market Core Fixed Income (SA+CF) Median	4.96	5.98	-12.95	-1.24	8.34	9.17

Returns for periods greater than one year are annualized.
Returns are expressed as percentages.
Fiscal year ends December 31st.

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



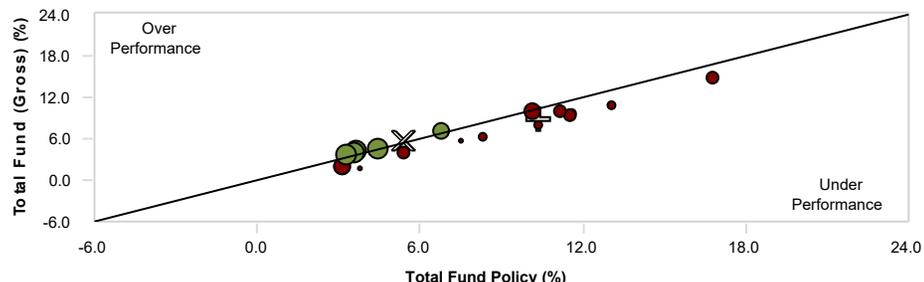
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Total Fund (Gross)	5.61 (41)	13.85 (9)	23.68 (16)	19.12 (7)	5.64 (27)	8.72 (46)	8.49 (47)
● Total Fund Policy	5.94 (29)	13.66 (12)	24.68 (9)	18.58 (9)	5.41 (32)	8.57 (51)	9.06 (27)
Median	5.37	11.36	20.17	15.20	4.82	8.57	8.37

	2023	2022	2021	2020	2019
● Total Fund (Gross)	17.13 (5)	-15.33 (83)	13.18 (65)	10.77 (77)	20.58 (22)
● Total Fund Policy	16.83 (6)	-16.04 (90)	13.20 (65)	15.45 (17)	21.78 (10)
Median	12.68	-12.68	14.15	12.48	18.63

Comparative Performance

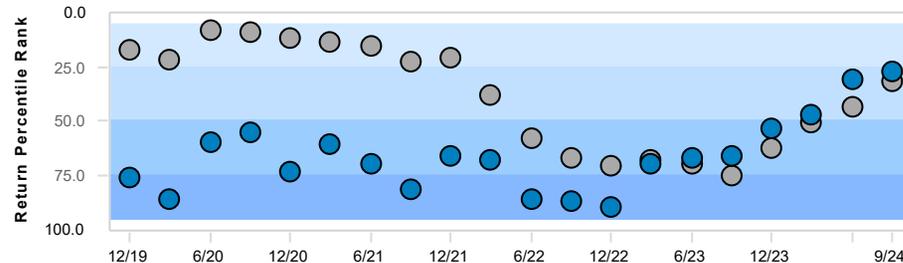
	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Total Fund (Gross)	1.65 (13)	6.05 (14)	8.63 (41)	-2.86 (46)	5.04 (3)	5.68 (5)
Total Fund Policy	1.94 (7)	5.25 (35)	9.69 (14)	-3.21 (64)	4.19 (12)	5.61 (6)
All Public Plans-Total Fund Median	1.15	4.88	8.18	-2.96	3.27	4.37

3 Yr Rolling Under/Over Performance - 5 Years



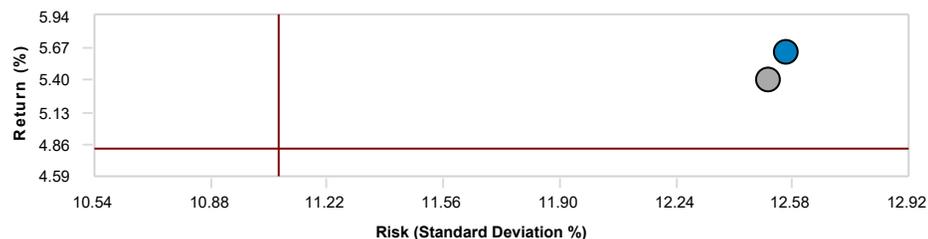
- Over Performance
- Under Performance
- + Earliest Date
- x Latest Date

3 Yr Rolling Percentile Ranking - 5 Years



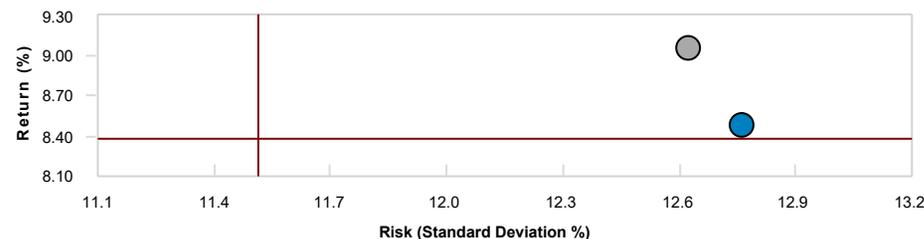
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Total Fund (Gross)	20	0 (0%)	3 (15%)	11 (55%)	6 (30%)
● Total Fund Policy	20	9 (45%)	3 (15%)	8 (40%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Total Fund (Gross)	5.64	12.56
● Total Fund Policy	5.41	12.51
— Median	4.82	11.08

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Total Fund (Gross)	8.49	12.76
● Total Fund Policy	9.06	12.62
— Median	8.37	11.52

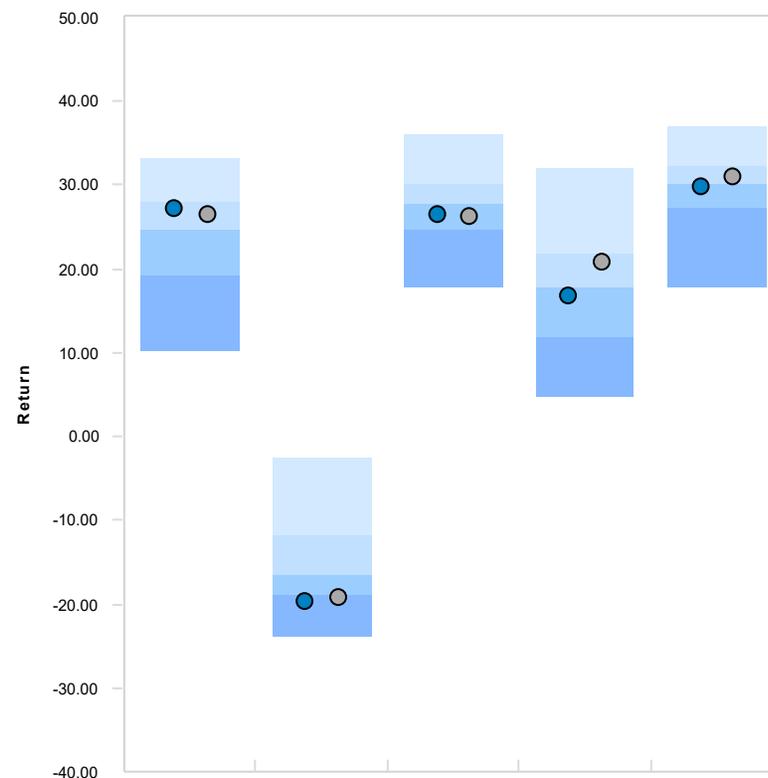
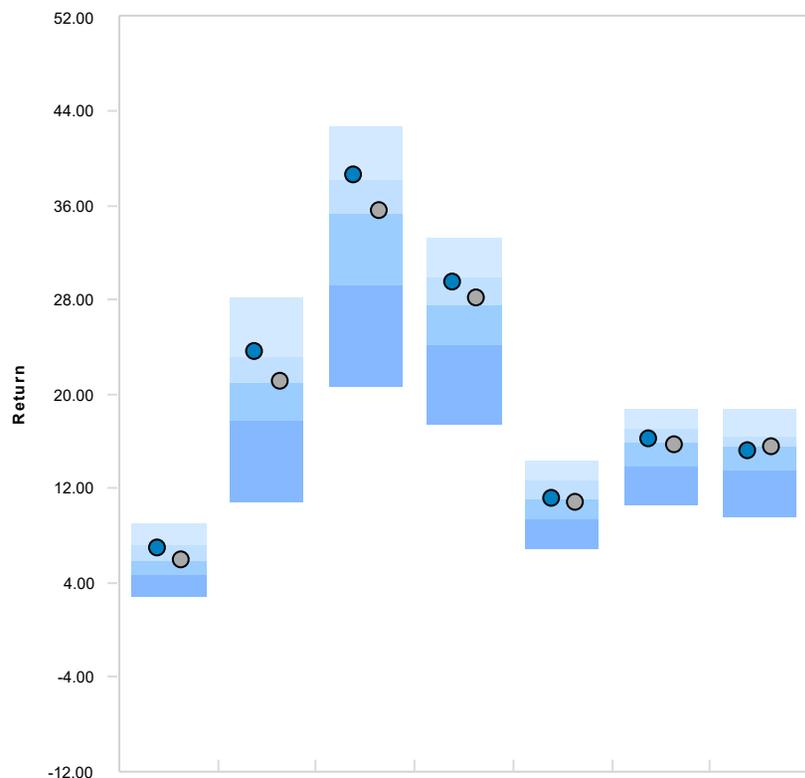
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Gross)	1.51	100.67	99.50	0.25	0.15	0.23	1.00	8.51
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.21	1.00	8.40

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Total Fund (Gross)	1.58	98.70	101.53	-0.54	-0.32	0.52	1.00	8.53
Total Fund Policy	0.00	100.00	100.00	0.00	N/A	0.57	1.00	8.19

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



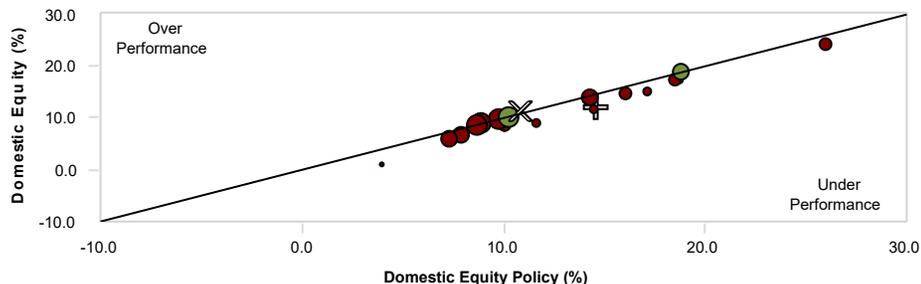
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Domestic Equity	7.10 (26)	23.77 (18)	38.68 (23)	29.58 (28)	11.16 (50)	16.29 (38)	15.33 (55)
○ Domestic Equity Policy	6.08 (41)	21.18 (49)	35.68 (46)	28.23 (46)	10.83 (57)	15.75 (52)	15.60 (50)
Median	5.89	21.07	35.30	27.58	11.09	15.92	15.59

	2023	2022	2021	2020	2019
● Domestic Equity	27.21 (29)	-19.71 (85)	26.47 (59)	16.78 (54)	29.80 (55)
○ Domestic Equity Policy	26.53 (35)	-19.13 (76)	26.24 (62)	20.89 (30)	31.02 (39)
Median	24.70	-16.49	27.75	17.69	30.09

Comparative Performance

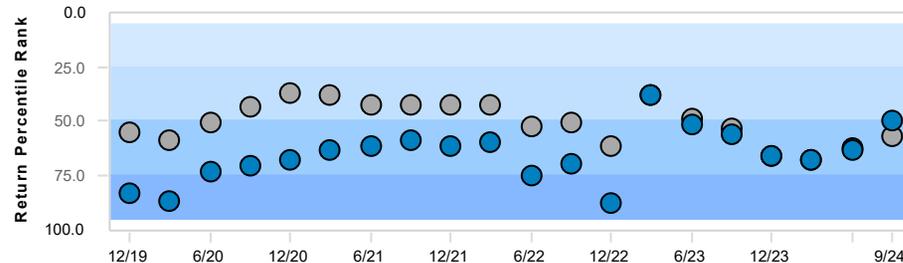
	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Domestic Equity	3.70 (43)	11.44 (41)	12.04 (36)	-3.39 (76)	9.55 (19)	7.28 (33)
Domestic Equity Policy	3.57 (44)	10.30 (59)	11.96 (38)	-3.15 (67)	8.58 (37)	7.46 (29)
IM U.S. LCC Equity (SA+CF)	3.19	10.86	11.62	-2.79	7.88	6.45

3 Yr Rolling Under/Over Performance - 5 Years



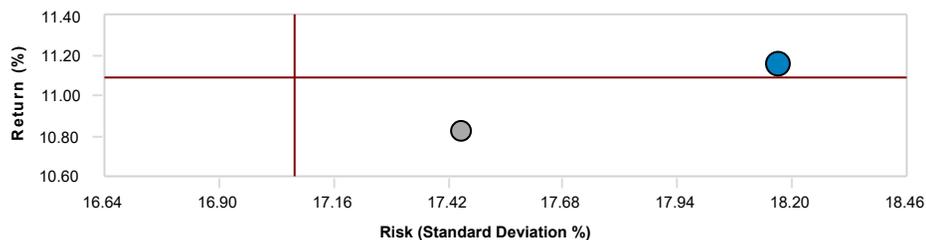
- Over Performance
- Under Performance
- + Earliest Date
- x Latest Date

3 Yr Rolling Percentile Ranking - 5 Years



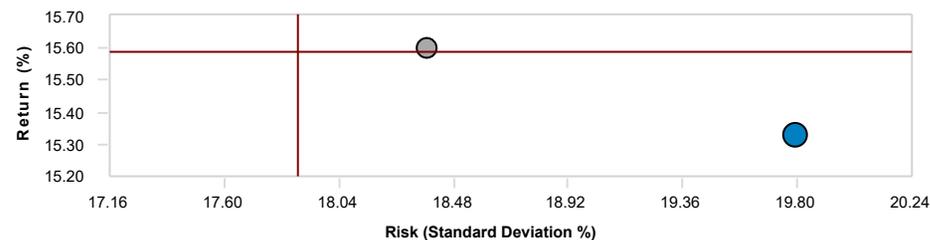
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
● Domestic Equity	20	0 (0%)	2 (10%)	15 (75%)	3 (15%)
● Domestic Equity Policy	20	0 (0%)	9 (45%)	11 (55%)	0 (0%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
● Domestic Equity	11.16	18.17
● Domestic Equity Policy	10.83	17.45
— Median	11.09	17.07

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
● Domestic Equity	15.33	19.79
● Domestic Equity Policy	15.60	18.38
— Median	15.59	17.88

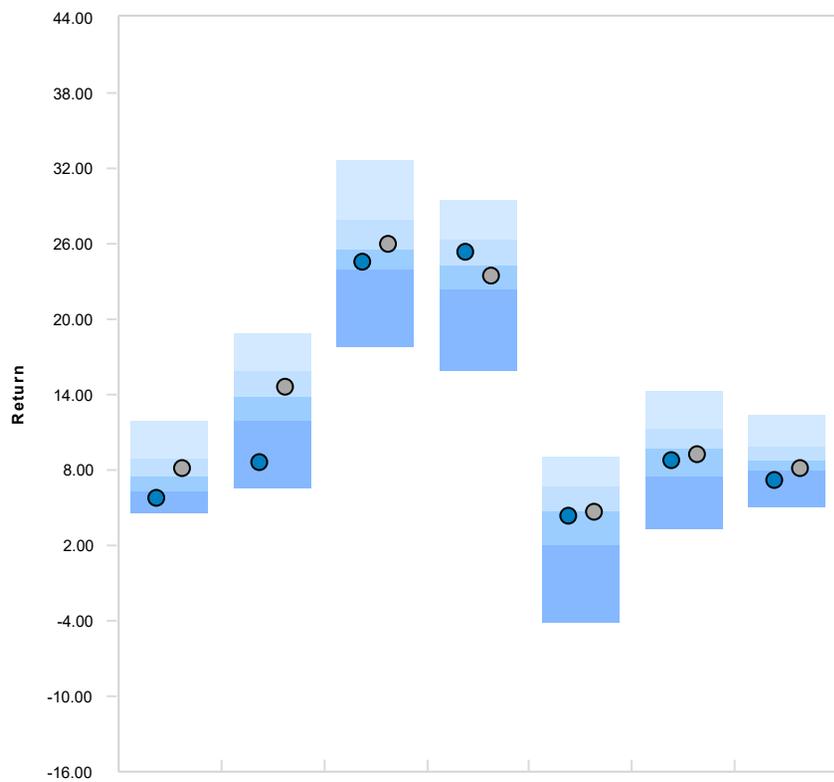
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Domestic Equity	1.85	103.70	103.73	0.00	0.23	0.49	1.04	11.68
Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.49	1.00	11.25

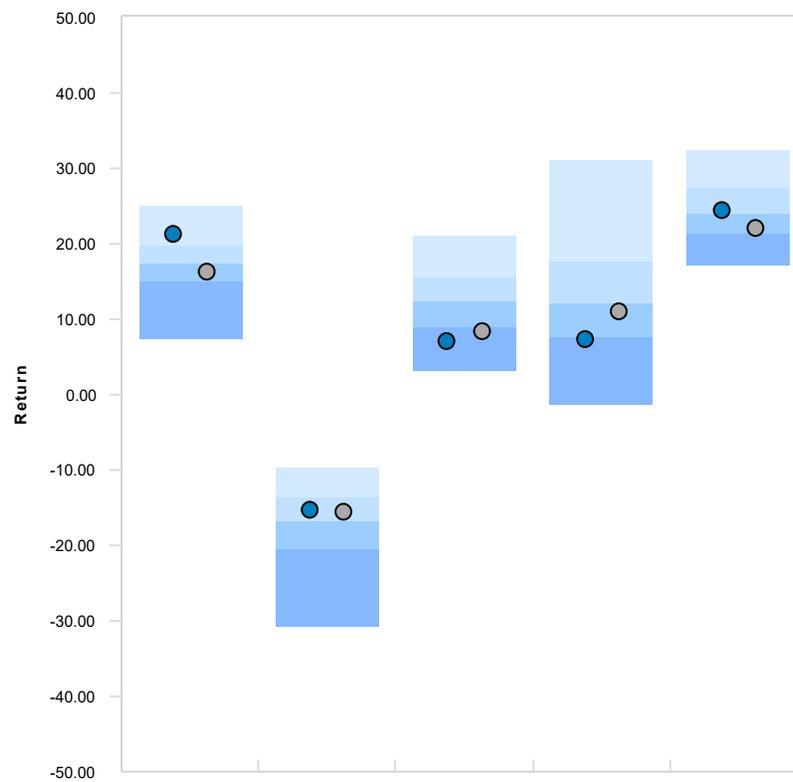
Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Domestic Equity	3.28	104.32	107.72	-0.98	0.02	0.71	1.06	13.02
Domestic Equity Policy	0.00	100.00	100.00	0.00	N/A	0.76	1.00	11.61

Peer Group Analysis - IM Intl Core Equity (SA+CF)



	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● International Equity	5.78 (87)	8.61 (92)	24.52 (69)	25.36 (36)	4.31 (54)	8.81 (61)	7.20 (84)
○ Intl Equity Policy	8.17 (38)	14.70 (39)	25.96 (46)	23.47 (61)	4.67 (49)	9.29 (55)	8.10 (70)
Median	7.57	13.85	25.59	24.28	4.63	9.67	8.83

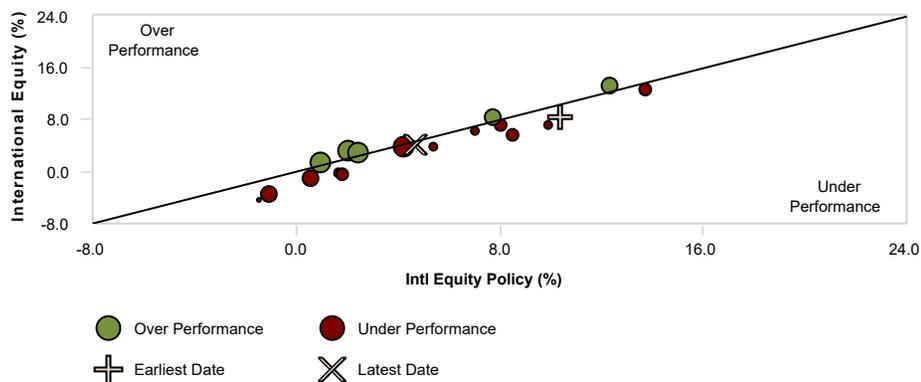


	2023	2022	2021	2020	2019
● International Equity	21.38 (13)	-15.18 (37)	7.07 (86)	7.33 (76)	24.38 (48)
○ Intl Equity Policy	16.21 (61)	-15.57 (38)	8.29 (80)	11.13 (56)	22.13 (65)
Median	17.28	-16.74	12.32	12.18	23.97

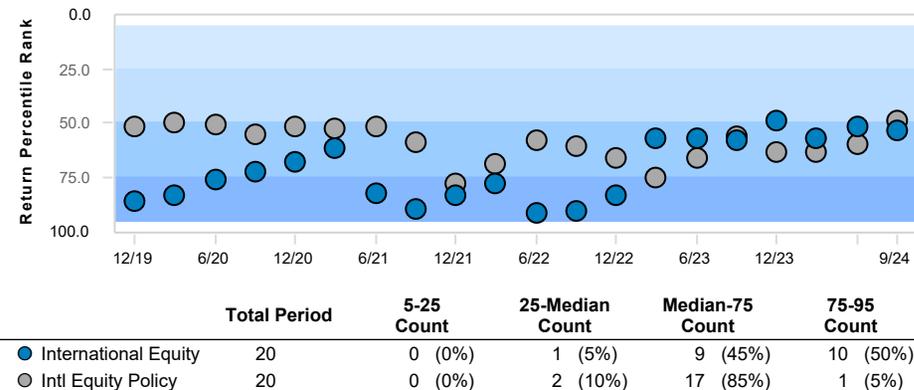
Comparative Performance

	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	1 Qtr Ending Mar-2023
International Equity	-2.44 (94)	5.24 (61)	14.65 (5)	-5.41 (71)	3.11 (46)	8.55 (32)
Intl Equity Policy	1.17 (26)	4.81 (68)	9.82 (68)	-3.68 (44)	2.67 (59)	7.00 (64)
IM Intl Core Equity (SA+CF)	0.26	5.75	10.49	-4.01	3.03	7.68

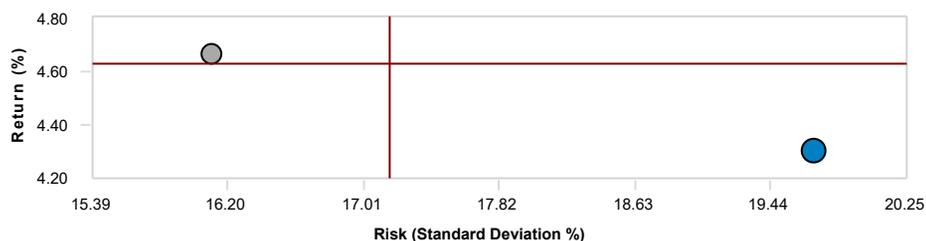
3 Yr Rolling Under/Over Performance - 5 Years



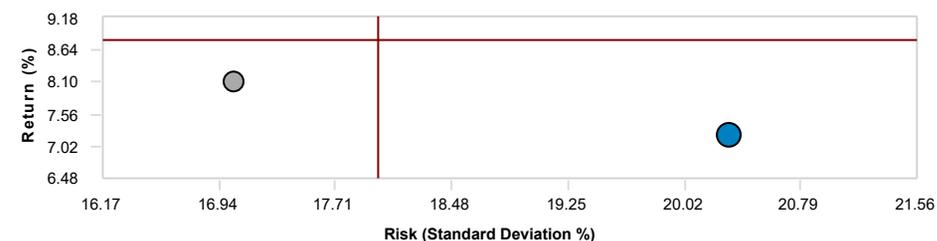
3 Yr Rolling Percentile Ranking - 5 Years



Peer Group Scattergram - 3 Years



Peer Group Scattergram - 5 Years



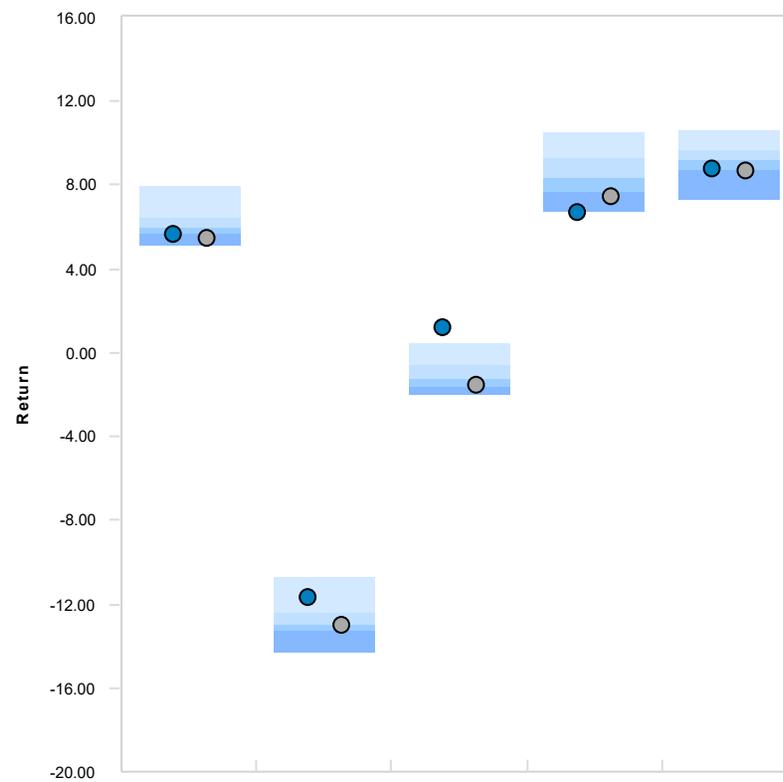
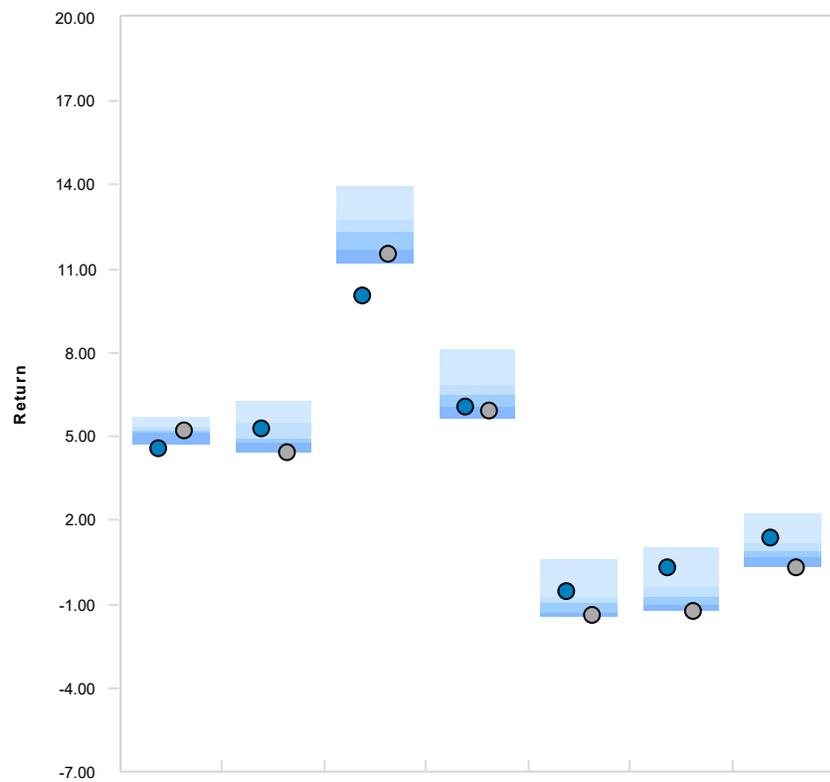
Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
International Equity	6.50	116.41	119.71	-0.67	0.05	0.14	1.17	12.93
Intl Equity Policy	0.00	100.00	100.00	0.00	N/A	0.15	1.00	10.56

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
International Equity	8.87	111.16	117.65	-0.89	-0.02	0.33	1.07	13.83
Intl Equity Policy	0.00	100.00	100.00	0.00	N/A	0.41	1.00	11.27

Peer Group Analysis - IM U.S. Broad MKt Core FI (SA+CF)



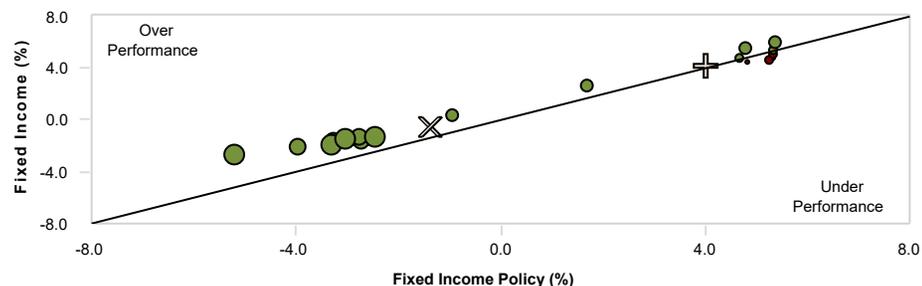
	QTR	FYTD	1 YR	2 YR	3 YR	4 YR	5 YR
● Fixed Income	4.58 (97)	5.27 (33)	10.08 (99)	6.10 (76)	-0.50 (14)	0.32 (9)	1.37 (18)
○ Fixed Income Policy	5.20 (67)	4.45 (95)	11.57 (89)	5.97 (87)	-1.39 (89)	-1.27 (94)	0.33 (98)
Median	5.24	4.96	12.30	6.53	-0.97	-0.75	0.89

	2023	2022	2021	2020	2019
● Fixed Income	5.70 (69)	-11.66 (12)	1.19 (5)	6.75 (96)	8.79 (69)
○ Fixed Income Policy	5.53 (85)	-13.01 (54)	-1.55 (66)	7.51 (86)	8.72 (79)
Median	5.98	-12.95	-1.24	8.34	9.17

Comparative Performance

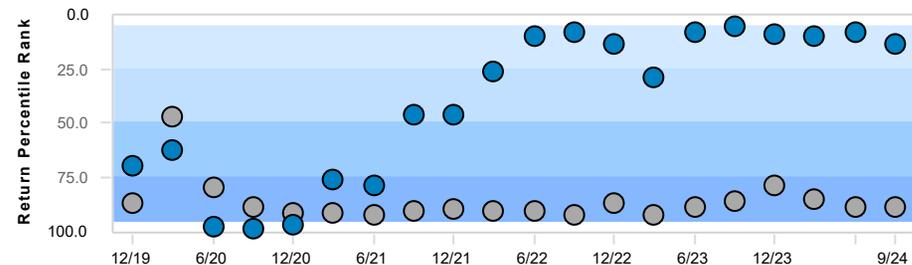
	1 Qtr Ending Jun-2024	1 Qtr Ending Mar-2024	1 Qtr Ending Dec-2023	1 Qtr Ending Sep-2023	1 Qtr Ending Jun-2023	1 Qtr Ending Mar-2023
Fixed Income	0.83 (3)	-0.17 (19)	4.57 (100)	-1.49 (4)	-0.49 (23)	3.13 (58)
Fixed Income Policy	0.07 (94)	-0.78 (92)	6.82 (53)	-3.23 (71)	-0.84 (80)	2.96 (77)
IM U.S. Broad Mkt Core FI (SA+CF)	0.26	-0.48	6.82	-3.14	-0.72	3.15

3 Yr Rolling Under/Over Performance - 5 Years



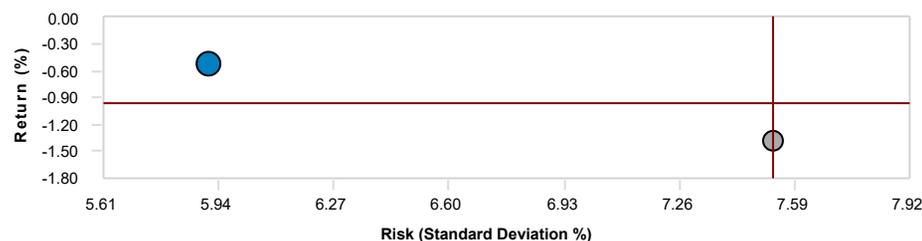
- Over Performance
- Under Performance
- + Earliest Date
- X Latest Date

3 Yr Rolling Percentile Ranking - 5 Years



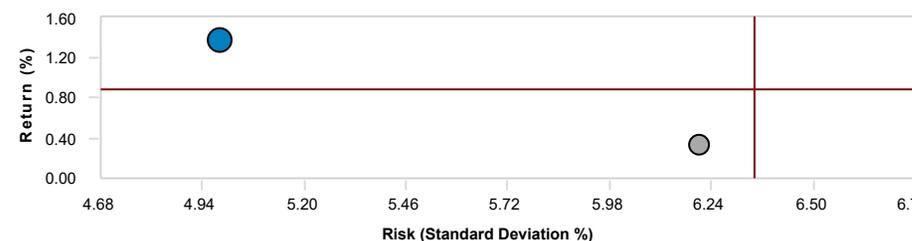
	Total Period	5-25 Count	25-Median Count	Median-75 Count	75-95 Count
Fixed Income	20	9 (45%)	4 (20%)	2 (10%)	5 (25%)
Fixed Income Policy	20	0 (0%)	1 (5%)	0 (0%)	19 (95%)

Peer Group Scattergram - 3 Years



	Return	Standard Deviation
Fixed Income	-0.50	5.91
Fixed Income Policy	-1.39	7.53
Median	-0.97	7.53

Peer Group Scattergram - 5 Years



	Return	Standard Deviation
Fixed Income	1.37	4.98
Fixed Income Policy	0.33	6.21
Median	0.89	6.35

Historical Statistics - 3 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Fixed Income	1.98	79.74	74.73	0.54	0.40	-0.66	0.77	4.16
Fixed Income Policy	0.00	100.00	100.00	0.00	N/A	-0.62	1.00	5.32

Historical Statistics - 5 Years

	Tracking Error	Up Market Capture	Down Market Capture	Alpha	Information Ratio	Sharpe Ratio	Beta	Downside Risk
Fixed Income	1.76	85.05	72.06	1.08	0.55	-0.16	0.78	3.35
Fixed Income Policy	0.00	100.00	100.00	0.00	N/A	-0.29	1.00	4.27

Benchmark History
Investment Policy Benchmarks
As of September 30,2024

Total Fund Policy		Total International Equity Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	Weight (%)
Mar-1997		Oct-2005	
S&P 500 Index	60.00	MSCI EAFE Index	100.00
Blmbg. U.S. Gov't/Credit	40.00		
Oct-2004		Apr-2010	
S&P 500 Index	60.00	MSCI AC World ex USA	100.00
Blmbg. U.S. Aggregate Index	40.00		
Oct-2005		Total Domestic Equity Policy	
S&P 500 Index	55.00	Allocation Mandate	
MSCI EAFE Index	5.00	Weight (%)	
Blmbg. U.S. Aggregate Index	40.00	Mar-1997	
Apr-2010		S&P 500 Index	
Russell 3000 Index	50.00	100.00	
MSCI AC World ex USA	15.00	Apr-2010	
Blmbg. U.S. Aggregate Index	35.00	Russell 3000 Index	
Oct-2021		100.00	
Russell 1000 Index	50.00	Oct-2021	
MSCI AC World ex USA	10.00	Russell 1000 Index	
Blmbg. U.S. Aggregate Index	40.00	100.00	
Total Equity Policy		Total Fixed Income Policy	
Allocation Mandate	Weight (%)	Allocation Mandate	
Mar-1997		Mar-1997	
S&P 500 Index	100.00	Blmbg. U.S. Gov't/Credit	
Oct-2005		100.00	
S&P 500 Index	90.00	Oct-2004	
MSCI EAFE Index	10.00	Blmbg. U.S. Aggregate Index	
Apr-2010		100.00	
Russell 3000 Index	75.00		
MSCI AC World ex USA	25.00		

**Lake Worth Firefighters 2
Fee Analysis
As of September 30, 2024**

	Estimated Annual Fee (%)	Market Value (\$)	Estimated Annual Fee (\$)	Fee Schedule
Total Fund	0.50	2,257,017	11,285	
Highland Capital Balanced Portfolio	0.50	2,257,017	11,285	0.50 % of Assets

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.

Total Fund Compliance:

Yes No N/A

Equity Compliance:

Yes No N/A

Fixed Income Compliance:

Yes No N/A

Manager Compliance:

Yes	No	N/A												
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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.

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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.

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