

Oakland Police and Fire Retirement System

Quarterly Performance Report
as of September 30, 2024

Agenda

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Executive Summary

Total Portfolio Review

The Oakland Police and Fire Retirement System (OPFRS) finished the quarter with \$475.2 million in assets after net cash flows including monthly benefit payments.

→ The new asset allocation policy, approved in Q1, came into effect on July 1. At the end of the quarter, most asset classes were within their long-term target allocation ranges.

Cash Flow Summary (\$ Millions)	Quarter	1 Year
Beginning Market Value	453.2	405.1
Net Cash Flows (including Benefit Payments)	-4.6	-13.1
Net Investment Change (Gain/Loss)	26.6	83.2
Ending Market Value	475.2	475.2

Investment Performance¹

	QTD	YTD	1 Year	3 Year	5 Year
Total Plan (Gross)	5.9	11.5	20.9	4.7	7.4
Total Plan (Net)	5.8	11.3	20.5	4.4	7.1
<i>Policy Benchmark</i>	<i>5.4</i>	<i>12.6</i>	<i>22.3</i>	<i>5.2</i>	<i>7.8</i>
Excess Return	0.4	-1.3	-1.8	-0.8	-0.7
<i>Public DB (\$250M-\$1B) Median Fund</i>	<i>5.0</i>	<i>11.3</i>	<i>19.5</i>	<i>4.4</i>	<i>8.3</i>
Total Plan (Net) vs. Peer Median Fund	0.8	0.0	1.0	0.0	-1.2
<i>Peer Group Percentile Rank</i>	<i>19</i>	<i>52</i>	<i>33</i>	<i>52</i>	<i>79</i>

¹ Fiscal year begins on July 1. Peer group is Investment Metrics Public Defined Benefit plans with \$250 million to \$1 billion in assets. The number of peers is between 104–107 portfolios in each time period. Please see the Benchmark History section for the Policy Benchmark's current and historical compositions.

Asset Class and Manager Highlights¹

- On a net of fee basis, the **Total Plan** outperformed its Policy Benchmark during the quarter while underperforming the Benchmark in other time periods.
 - The underperformance year-to-date and over the trailing 1-year period was driven primarily by the Domestic Equity segment as mid- and small-cap market segments as well as OPFRS's managers in these segments lagged the broad market Russell 3000 Index.
 - Fixed Income and Covered Calls contributed positively to the Total Plan's relative performance for year-to-date and over the trailing 1-year period, partially offsetting Domestic Equity's underperformance.
- **Domestic Equity** underperformed the Russell 3000 Index over most periods except for the quarter. All active Domestic Equity managers except Earnest Partners outperformed their respective benchmarks for the quarter.
- **International Equity** and its only active manager, SGA, outperformed MSCI ACWI ex US (Net) for all time periods.
- **Fixed Income** slightly outperformed its custom benchmark (currently composed of Bloomberg US Universal Index) over the quarter. All underlying managers outperformed their respective benchmarks for all time periods.
- The **Credit** segment, with Polen Capital as its sole manager, underperformed its benchmark, the Bloomberg US Corporate High Yield Index, during the quarter, year-to-date, and over the 1-year trailing period.
- **Covered Calls**, as well as both the passive BXM and the active DeltaShift strategies, underperformed the CBOE S&P 500 Buy Write Index during the quarter while outperforming the benchmark over the 1-year and longer periods.
- The **Crisis Risk Offset** segment underperformed its custom benchmark over all time periods measured. During the quarter and year-to-date, Kepos Alternative Risk Premia and Vanguard Long-term Treasury ETF outperformed or matched their respective benchmarks while Versor Trend Following significantly lagged its benchmark.

¹ Fiscal year begins on July 1. Please see the Benchmark History section for the custom benchmarks' current and historical compositions.

Economic and Market Update

Data as of September 30, 2024

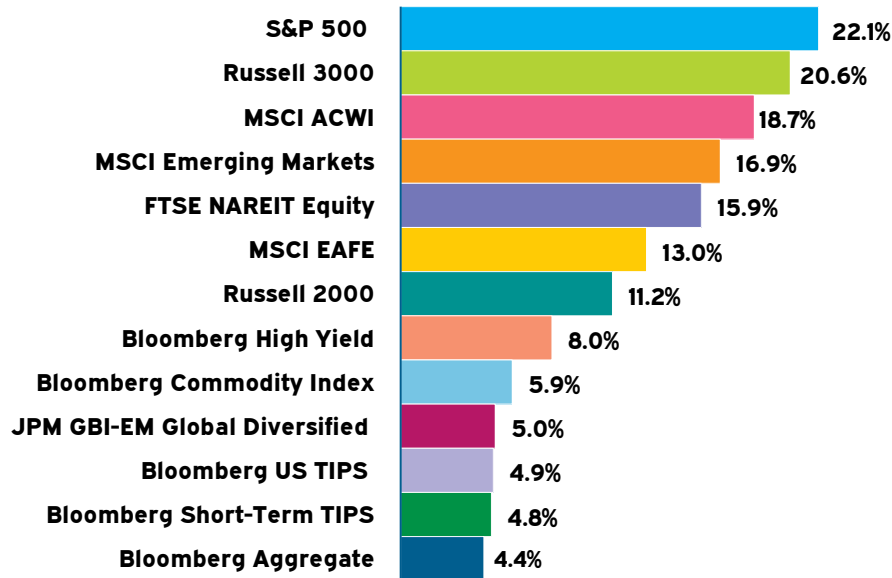
Commentary

In the third quarter, stock and bond markets rallied despite heightened volatility. Central bank indications of future interest rate cuts given declining inflation pressures was a key driver of gains.

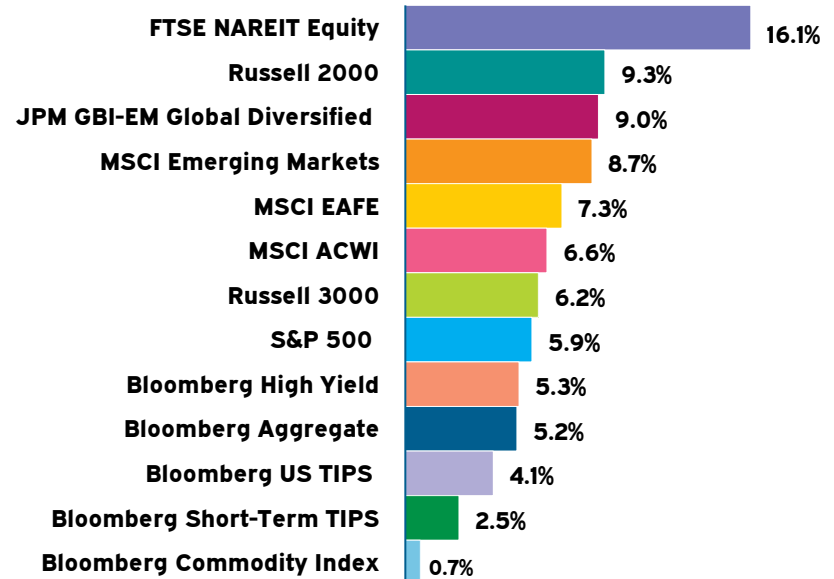
- In September, the Federal Reserve surprised many in the markets with a 50 basis point interest rate cut while the US economy and employment picture remains quite healthy.
- In the third quarter, US equities (Russell 3000) rose 6.2%. The US equity rally broadened, with value and small cap stocks outperforming large cap growth stocks, reversing the narrow leadership trend earlier this year.
- Emerging market stocks (+8.7%) outperformed developed market stocks in the third quarter; in non-US developed markets (+7.3%) value and small cap stocks also beat the broad market.
- After two years of piecemeal policy stimulus, China's policy makers rolled out a significant stimulus package to support equity prices, reduce bank reserve requirements and funding rates, and support current and future mortgage borrowers. In particular, bank loans for listed company share buybacks and purchases drove the MSCI China equity index to rally 23.9% in September and 23.5% for the entire third quarter.
- Fixed income markets also posted positive returns on expectations for additional policy rate cuts this year and next, as inflation pressures recede, and the economy slows.
- Looking ahead, the paths of inflation, labor markets, and monetary policy, China's slowing economy and potential policy stimulus benefits, increased geopolitical tensions, and the looming US election will be key factors.

Index Returns¹

YTD



Q3



→ Major markets finished the third quarter in positive territory despite several spikes in volatility. Falling inflation, resilient growth in the US, and dovish central banks supported stocks and bonds. Rate sensitive sectors, like REITs, particularly benefited from lower interest rates.

→ Year-to-date through September, all major asset classes were positive, led by US equities.

¹ Source: Bloomberg. Data is as of September 30, 2024.

Domestic Equity Returns¹

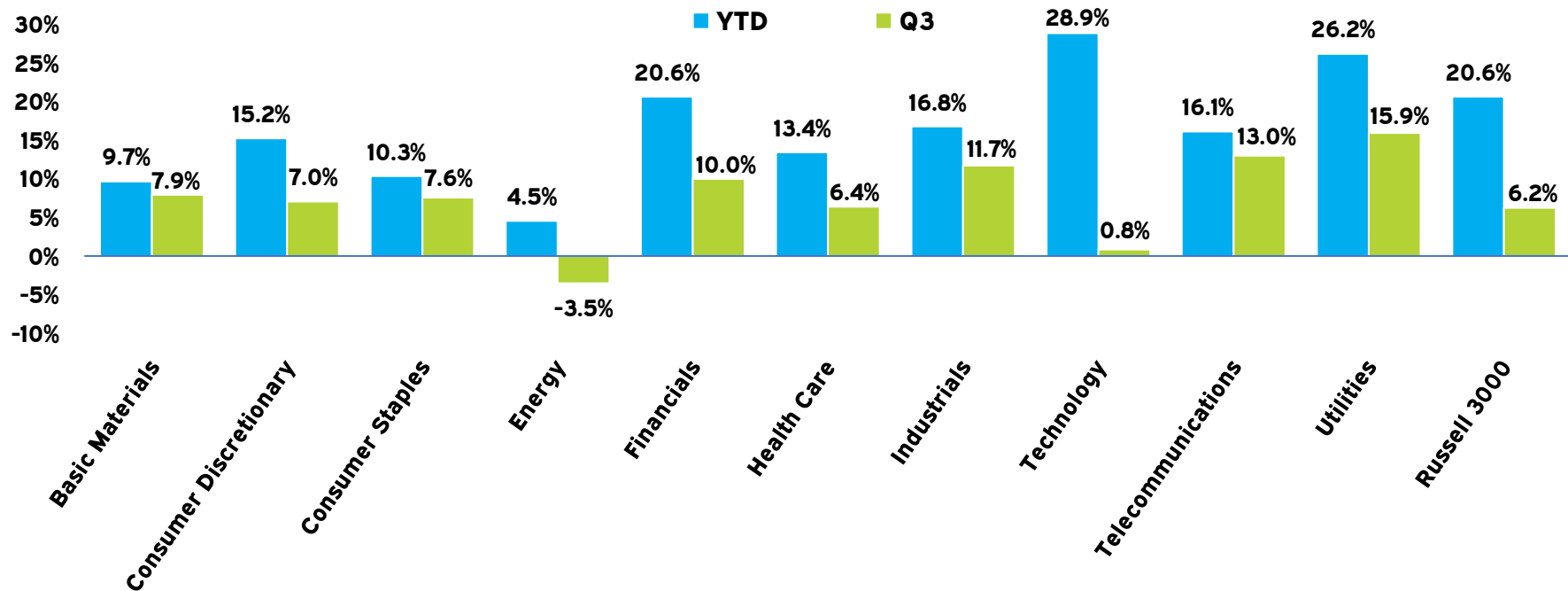
Domestic Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
S&P 500	2.1	5.9	22.1	36.4	11.9	16.0	13.4
Russell 3000	2.1	6.2	20.6	35.2	10.3	15.3	12.8
Russell 1000	2.1	6.1	21.2	35.7	10.8	15.6	13.1
Russell 1000 Growth	2.8	3.2	24.5	42.2	12.0	19.7	16.5
Russell 1000 Value	1.4	9.4	16.7	27.8	9.0	10.7	9.2
Russell MidCap	2.2	9.2	14.6	29.3	5.7	11.3	10.2
Russell MidCap Growth	3.3	6.5	12.9	29.3	2.3	11.5	11.3
Russell MidCap Value	1.9	10.1	15.1	29.0	7.4	10.3	8.9
Russell 2000	0.7	9.3	11.2	26.8	1.8	9.4	8.8
Russell 2000 Growth	1.3	8.4	13.2	27.7	-0.4	8.8	8.9
Russell 2000 Value	0.1	10.2	9.2	25.9	3.8	9.3	8.2

US Equities: The Russell 3000 rose +6.2% in the third quarter, bringing the year-to-date results to +20.6%.

- In the third quarter, the previously technology-driven stock rally broadened out as optimism grew over the potential for a “soft landing” of the US economy and as investors reexamined the future of AI-related stocks.
- In this environment, value outperformed growth across the capitalization spectrum and small cap stocks (Russell 2000: +9.3%) outperformed large cap stocks (Russell 1000: +6.1%).
- Despite the third quarter’s rally in value and small cap stocks, large cap growth stocks are the best performing asset class (R1000 Growth: +24.5%) for the year-to-date 2024 due to on-going enthusiasm for AI.

¹ Source: Bloomberg. Data is as of September 30, 2024.

Russell 3000 Sector Returns¹



- With the notable exception of energy stocks, all sectors posted positive returns in the third quarter.
- On the prospect of growing energy demand for cloud computing for AI, utilities were the best performing sector in the third quarter (+15.9%) followed by telecom (+13.0%) and industrials (+11.7%).
- All sectors feature positive returns for the year-to-date period. Technology stocks (+28.9%) continue to lead the broader market, followed by utilities (+26.2%), and financials (+20.6%).

¹ Source: Bloomberg. Data is as of September 30, 2024.

Foreign Equity Returns¹

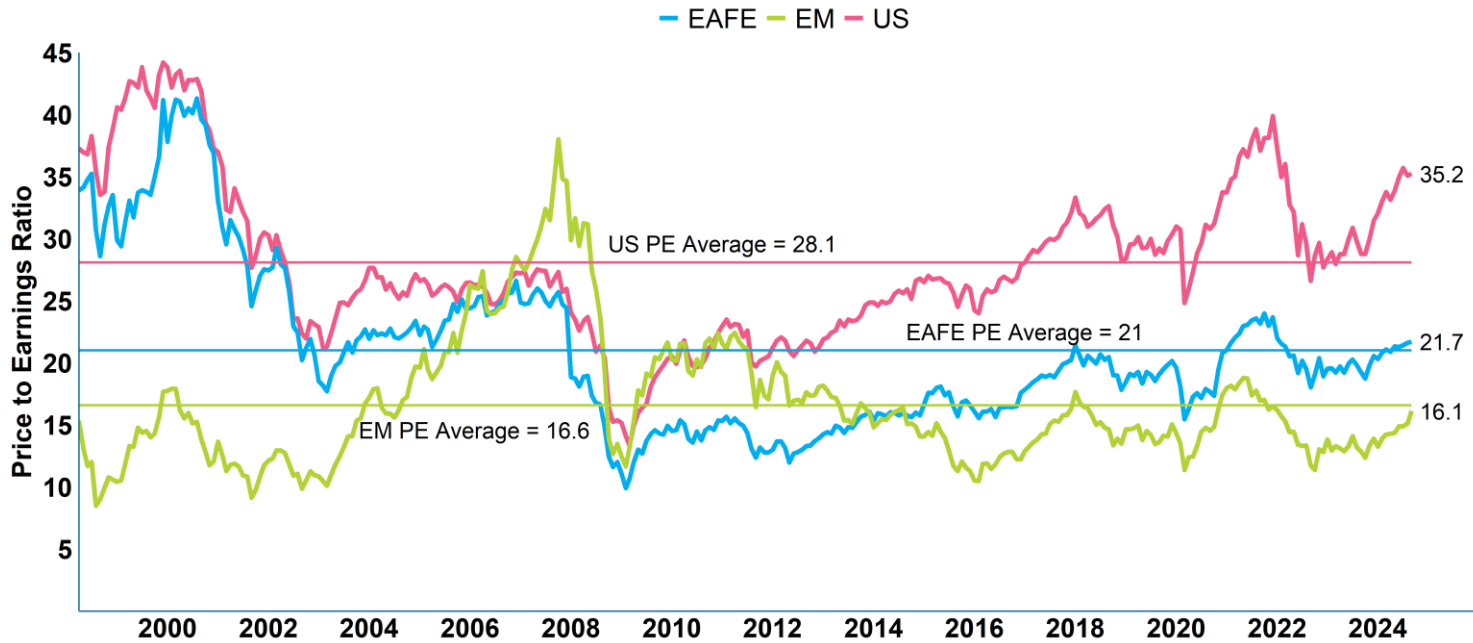
Foreign Equity	September (%)	Q3 (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)
MSCI ACWI ex. US	2.7	8.1	14.2	25.4	4.1	7.6	5.2
MSCI EAFE	0.9	7.3	13.0	24.8	5.5	8.2	5.7
MSCI EAFE (Local Currency)	-0.4	0.8	12.0	17.5	7.9	8.8	7.4
MSCI EAFE Small Cap	2.6	10.5	11.1	23.5	-0.4	6.4	6.2
MSCI Emerging Markets	6.7	8.7	16.9	26.1	0.4	5.7	4.0
MSCI Emerging Markets (Local Currency)	5.6	6.6	18.3	25.0	2.9	7.4	6.5
MSCI EM ex. China	1.3	4.0	12.7	27.4	3.4	8.4	4.8
MSCI China	23.9	23.5	29.3	23.9	-5.6	0.8	3.4

Foreign Equity: Developed international equities (MSCI EAFE) rose +7.3% in the third quarter, while emerging market equities (MSCI Emerging Markets) gained 8.7%.

- Non-US developed market stocks saw similar themes as the US, with value and small cap stocks outperforming large cap stocks in the third quarter, as investors anticipated further rate cuts from the European Central Bank and the Bank of England. Japan’s TOPIX index experienced an over 20% decline at the start of August due to the Bank of Japan’s (BoJ) unexpected rate increase and related pressures on the yen carry trade. It subsequently recovered, though, as the BoJ signaled that further rate increases were not likely.
- In late September, China announced significant stimulus measures to support asset prices resulting in Chinese stocks rallying +23.9% just in September. This led to emerging markets having the best quarterly results (+8.7%).
- The weakening US dollar further supported international stocks, particularly in developed markets.

¹ Source: Bloomberg. Data is as September 30, 2024.

Equity Cyclically Adjusted P/E Ratios¹



- The broad global equity rally lifted stocks' cyclically adjusted price/earnings ratios over the quarter, with US stock valuations finishing well above their long-term 28.1 average.
- Non-US developed market valuations increased to slightly above their long-term average while emerging market stocks are now trading close to their long-term average given the strong recent gains.

¹ US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group. Developed and Emerging Market Equity (MSCI EAFE and EM Index) Cyclically Adjusted P/E Source: Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years. Data is as of September 2024. The average line is the long-term average of the US, EM, and EAFE PE values from April 1998 to the recent month-end respectively.

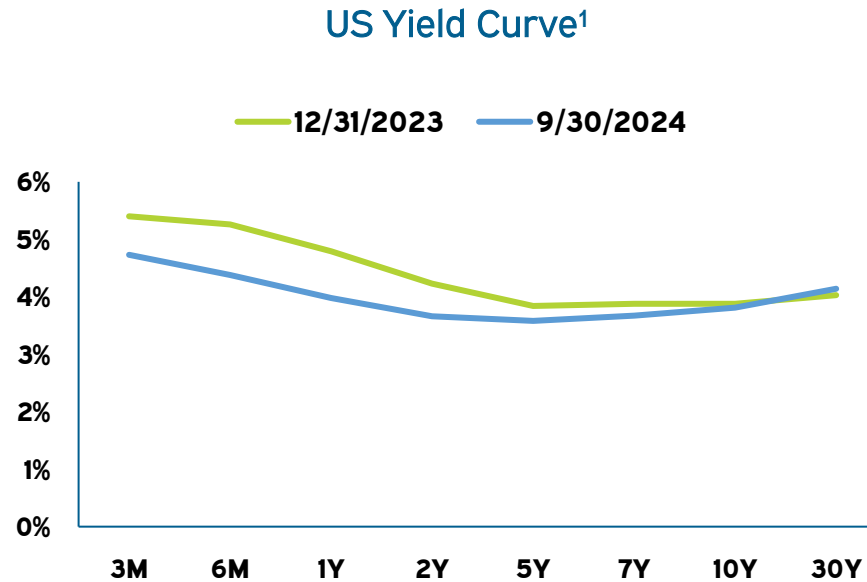
Fixed Income Returns¹

Fixed Income	September (%)	QTD (%)	YTD (%)	1 YR (%)	3 YR (%)	5 YR (%)	10 YR (%)	Current Yield (%)	Duration (Years)
Bloomberg Universal	1.4	5.2	4.9	12.1	-1.0	0.7	2.1	4.5	6.0
Bloomberg Aggregate	1.3	5.2	4.4	11.6	-1.4	0.3	1.8	4.2	6.2
Bloomberg US TIPS	1.5	4.1	4.9	9.8	-0.6	2.6	2.5	3.8	6.9
Bloomberg Short-term TIPS	1.0	2.5	4.8	7.5	2.5	3.6	2.4	3.9	2.4
Bloomberg US Long Treasury	2.0	7.8	2.4	15.4	-8.3	-4.3	1.1	4.2	15.5
Bloomberg High Yield	1.6	5.3	8.0	15.7	3.1	4.7	5.0	7.0	3.4
JPM GBI-EM Global Diversified (USD)	3.4	9.0	5.0	13.4	0.6	0.6	0.6	--	--

Fixed Income: The Bloomberg Universal index rose 5.2% in the third quarter, bringing the year-to-date return into positive territory (+4.9%).

- Fixed income indexes rose in the quarter as rates fell, driven by a continued decline in inflation. This and the weakening labor market led to the Fed cutting interest rates with more cuts expected.
- The broad US bond market (Bloomberg Aggregate) rose 5.2% over the quarter, with the broad TIPS market gaining 4.1%. The less interest rate sensitive short-term TIPS index increased 2.5%.
- Riskier bonds experienced volatility during the quarter but ultimately posted strong results as risk appetite remained strong. Emerging market debt gained 9.0% and high yield rose 5.3%.

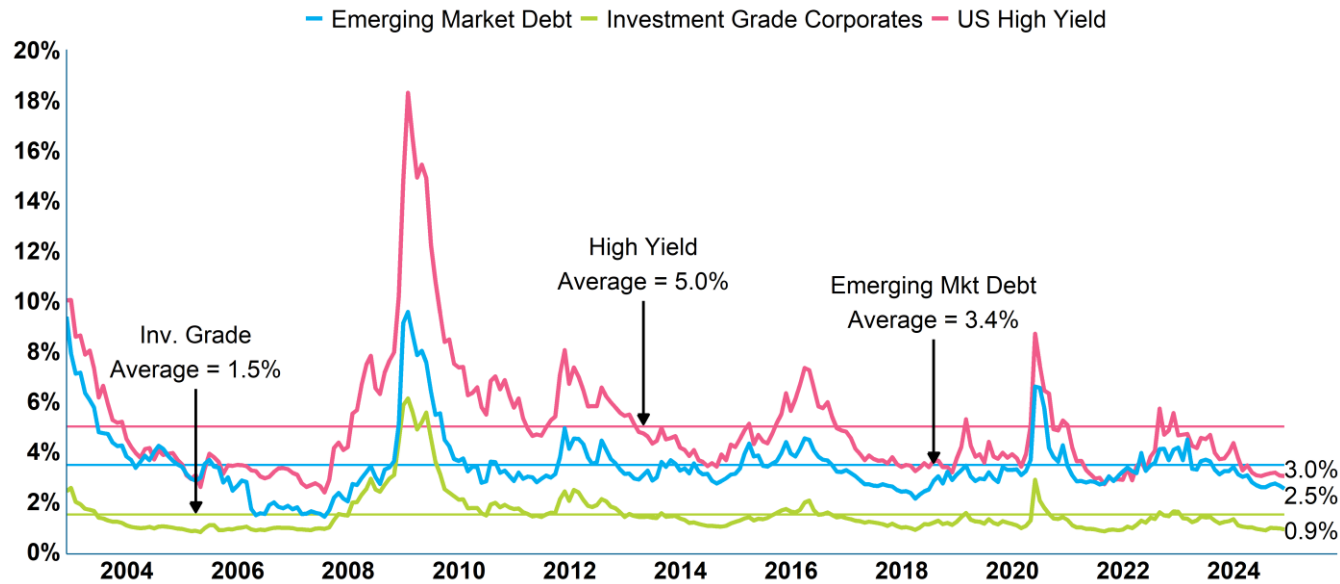
¹ Source: Bloomberg. Data is as of September 30, 2024. The yield and duration data from Bloomberg is defined as the index's yield to worst and modified duration, respectively. JPM GBI-EM data is from J.P. Morgan. Current yield and duration data is not available.



- US interest rates fell over the quarter as economic data continued to soften and the Fed started its rate cutting cycle.
- The more policy sensitive 2-year Treasury yield declined from 4.75% to 3.64% over the quarter, while the 10-year Treasury yield fell from 4.40% to 3.78% over the same period.
- Notably, the portion of the yield curve from 2-years to 10-years was no longer inverted at the end of September, given policy rate cuts and resilient growth. This trend could continue as the Fed likely continues to cut interest rates.

¹ Source: Bloomberg. Data is as of September 30, 2024.

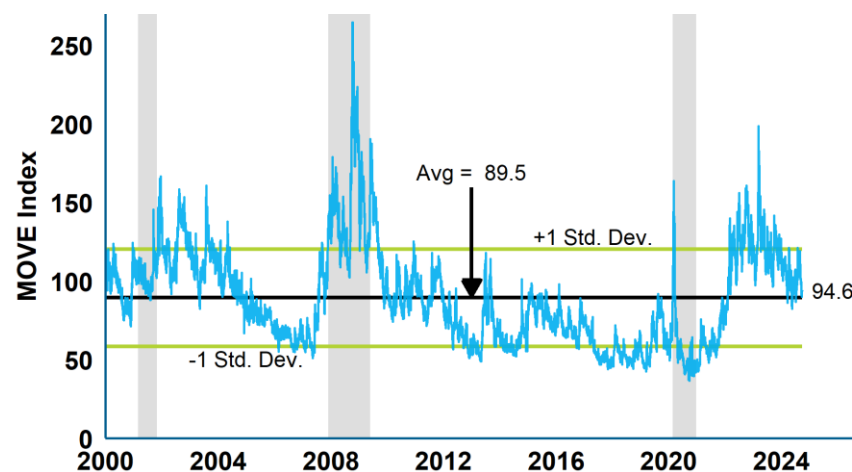
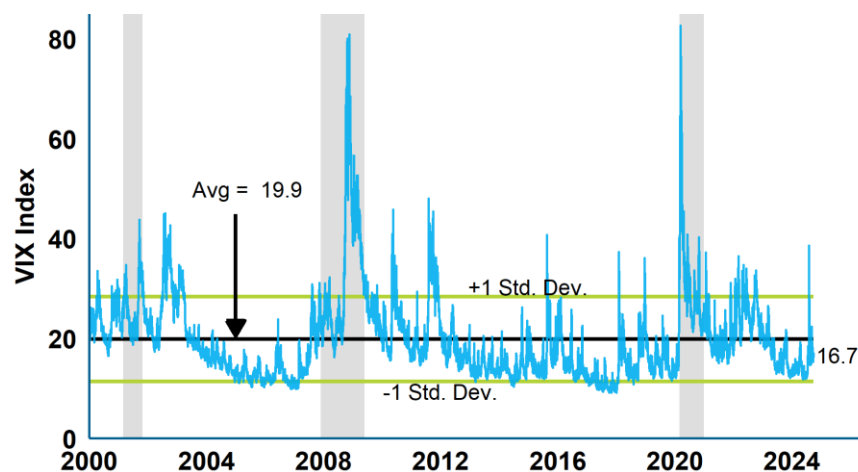
Credit Spreads vs. US Treasury Bonds¹



- Spreads (the yield above a comparable maturity Treasury) widened significantly at the start of the quarter in the volatile environment but declined after, largely finishing where they started.
- All yield spreads remained below their respective long-run averages, particularly high yield.
- Although spreads are relatively tight, yields remain at above-average levels compared to the last two decades, particularly for short-term issues.

¹ Source: Bloomberg. Data is as September 30, 2024. Average lines denote the average of the investment grade, high yield, and emerging market spread values from September 2002 to the recent month-end, respectively.

Equity and Fixed Income Volatility¹



- In the third quarter, equity and bond market volatility experienced periods of elevation due to concerns over the US labor market, the unwinding of the yen-carry trade, and increased geopolitical tensions. Ultimately, both settled well below their respective peaks as additional economic data and the easing of monetary policy calmed investors.
- Volatility levels (VIX) in the stock market spiked above one standard deviation of its long-term average in early August but finished below the long-term average.
- Bond market volatility (MOVE) also fluctuated through the quarter. Uncertainty in the bond market remains above the long-run average as markets continue to reprice the pace of interest rate cuts.

¹ Equity Volatility – Source: FRED. Fixed Income Volatility – Source: Bloomberg. Implied volatility as measured using VIX Index for equity markets and the MOVE Index to measure interest rate volatility for fixed income markets. Data is as of September 2024. The average line indicated is the average of the VIX and MOVE values between January 2000 and September 2024.

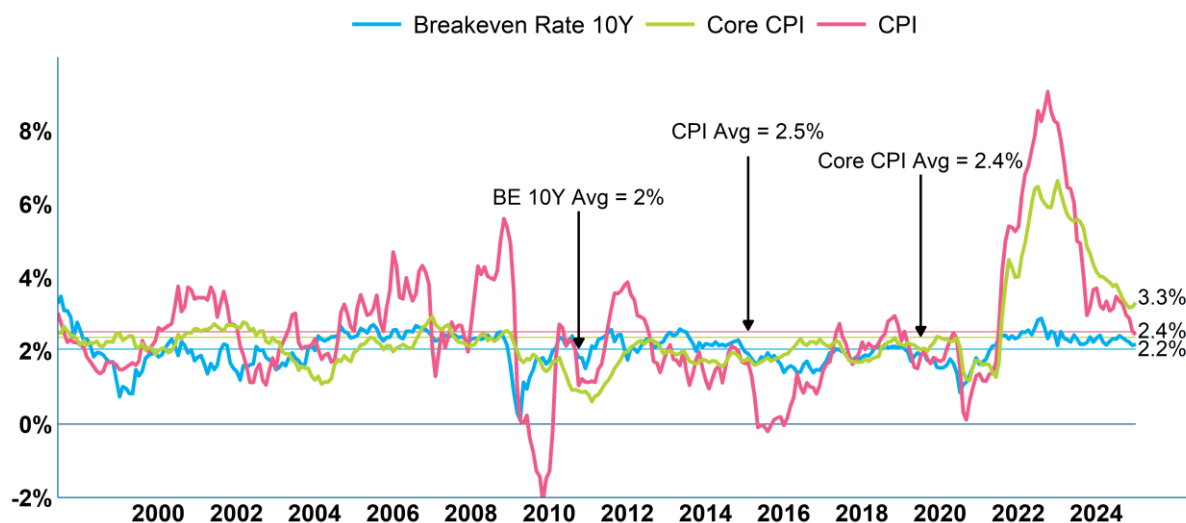
Recent Market Strength: China¹



- On September 24th, Chinese policy makers surprised markets with a suite of policy stimulus measures designed to support stock prices, banks, and mortgage borrowers.
- Banks were asked to extend loans to publicly traded companies for share purchases and buybacks, contributing to significant equity market gains in the last week of the quarter. These policies also contributed to increased foreign demand for Chinese shares.
- The banking sector benefited from a cut to the 1-year medium term lending rate and to their reserve requirement rate.
- Homeowners may also benefit from changes to downpayment minimums and mortgage rate reductions.
- Despite the recent gains in the stock market, questions remain about the ultimate impact of these policies on longer-term growth in China, as well as policy makers' commitment to continue supporting the economy.

¹ Source: Bloomberg. Data as of September 30, 2024.

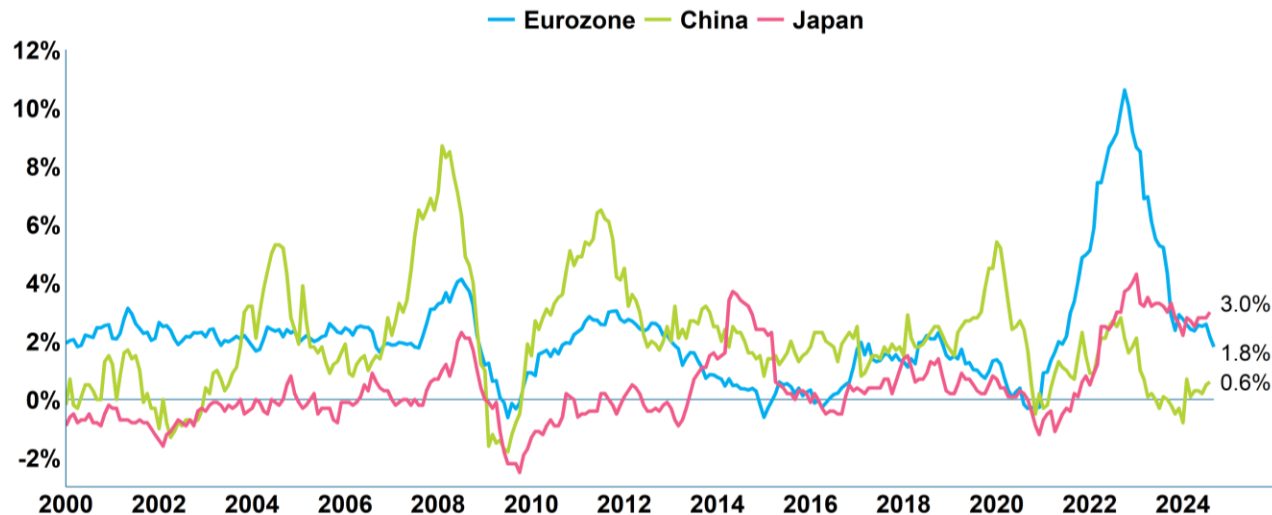
US Ten-Year Breakeven Inflation and CPI¹



- Over the quarter, year-over-year headline inflation continued to decline (3.0% to 2.4%) supporting the Fed's start to cutting policy rates. The 2.4% September level was the lowest since early 2021.
- Month-over-month inflation increased 0.2% each month over the quarter. Food and shelter costs saw monthly increases, while energy prices largely fell.
- Year-over-year core inflation (excluding food and energy) finished the quarter where it started (3.3%). Shelter (+4.9% YoY) and transportation (+8.5% YoY) remain key drivers of stickier core inflation.
- Inflation expectations (breakevens) have been relatively stable over the last several years. They remain below current inflation levels.

¹ Source: FRED. Data is as September 2024. The CPI and 10 Year Breakeven average lines denote the average values from February 1997 to the present month-end, respectively. Breakeven values represent month-end values for comparative purposes.

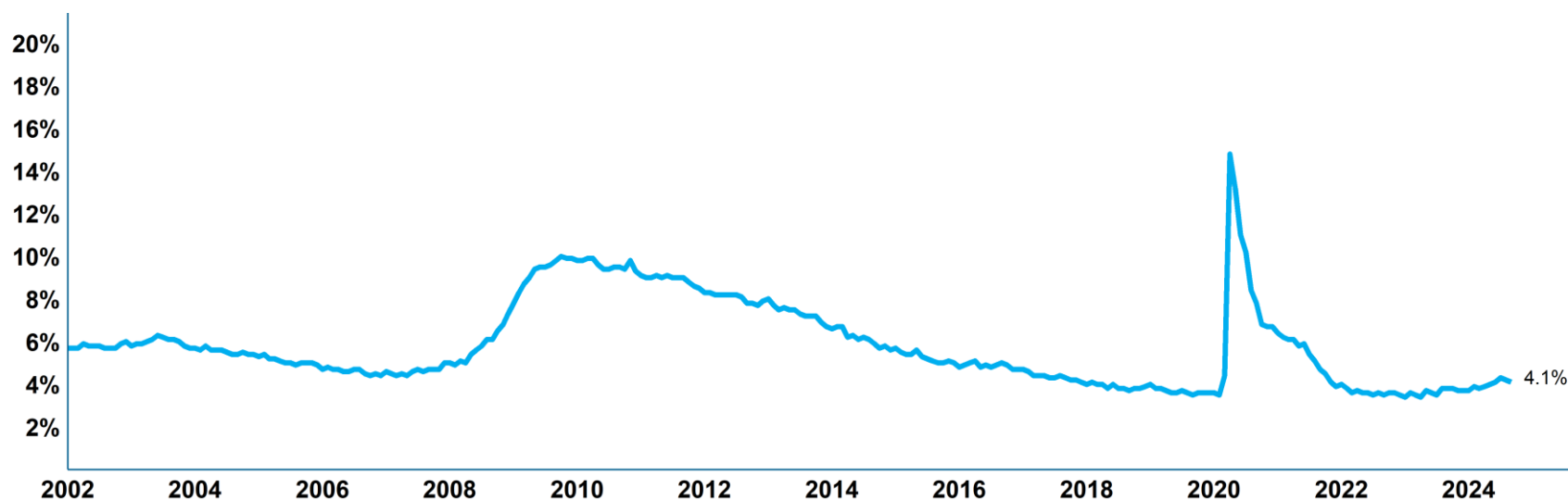
Global Inflation (CPI Trailing Twelve Months)¹



- In the eurozone, inflation fell from 2.5% to 1.8% over the quarter (a level below the US), potentially clearing the way for further rate cuts from the European Central Bank.
- By contrast, inflation in Japan recently increased (2.8% to 3.0%) due in part to higher food, electricity, and gas prices supporting the case for additional interest rate increases by the Bank of Japan.
- In China, inflation increased each of the last seven months, after declines late last year. Recent extreme weather has caused supply issues and contributed to higher prices. Inflation in China remains much lower than in other countries, due to weak consumer spending and as issues in the real estate sector continue to weigh on sentiment.

¹ Source: Bloomberg. Data is as of September 30, 2024, except Japan and China which are as of August 31, 2024.

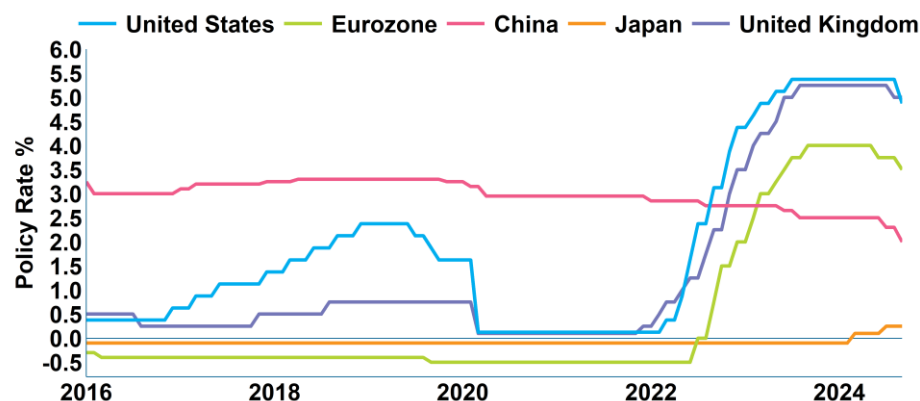
US Unemployment¹



- The US labor market has softened but remains relatively strong. After reaching 4.3% in July, the unemployment rate finished the quarter at the level it started (4.1%), with 6.8 million people looking for work.
- After job gains came in below expectations in July (114k versus 175k) and August (142k versus 165k), contributing to some of the market volatility, they finished strong in September, beating estimates (254k versus 150k). Food services (+69K) and healthcare (+45K) were the largest contributors to the September gains.
- Initial claims for unemployment remain relatively low and year-over-year wage gains remain strong (+4.0%). The number of job openings increased slightly (7.9 to 8.0 million) over the quarter.

¹ Source: FRED. Data is as of September 30, 2024.

Policy Rates¹



- In the US, the Fed reduced interest rates by 0.5% after holding them at a 5.25%-5.50% level for over a year. In their statement they highlighted that they would make additional interest rate cut decisions based on incoming data. Market participants are pricing in roughly two additional cuts in 2024.
- The Bank of England (BoE) and the European Central Bank (ECB) have both started cutting rates. The BoE made a 25 basis points interest rate cut in July while the ECB made two similar cuts in June and September.
- Inflation in Japan remains elevated, prompting Bank of Japan officials to raise the policy rate 0.15% to 0.25% over the quarter after decades at near-zero rates.
- China announced a broad based unexpected stimulus package that included lower interest rates, a reduction in bank reserve requirements, and liquidity for stock investors.

¹ Source: Bloomberg. Data is as of September, 2024. United States rate is the mid-point of the Federal Funds Target Rate range. Eurozone rate is the ECB Deposit Facility Announcement Rate. Japan rate is the Bank of Japan Unsecured Overnight Call Rate Expected. China rate is the China Central Bank 1-Year Medium Term Interest Rate. UK rate is the UK Bank of England Official Bank Rate.

US Dollar vs. Broad Currencies¹



- The US dollar weakened in the third quarter by 4.7% versus other major currencies, influenced by the decline in interest rates and expectations for slower growth.
- It remains at historically strong levels, though, given relatively stronger growth, higher interest rates, and on the prospects of other central banks, potentially easing policy faster than the Fed.
- Looking ahead, the track of policy rates across major central banks will be key for the path of the US dollar from here. If the US economy slows more than expected and the Fed relatedly lowers rates at a faster pace, we could see the dollar weaken further.

¹ Source: Bloomberg. Data as of September 30, 2024.

Summary

Key Trends:

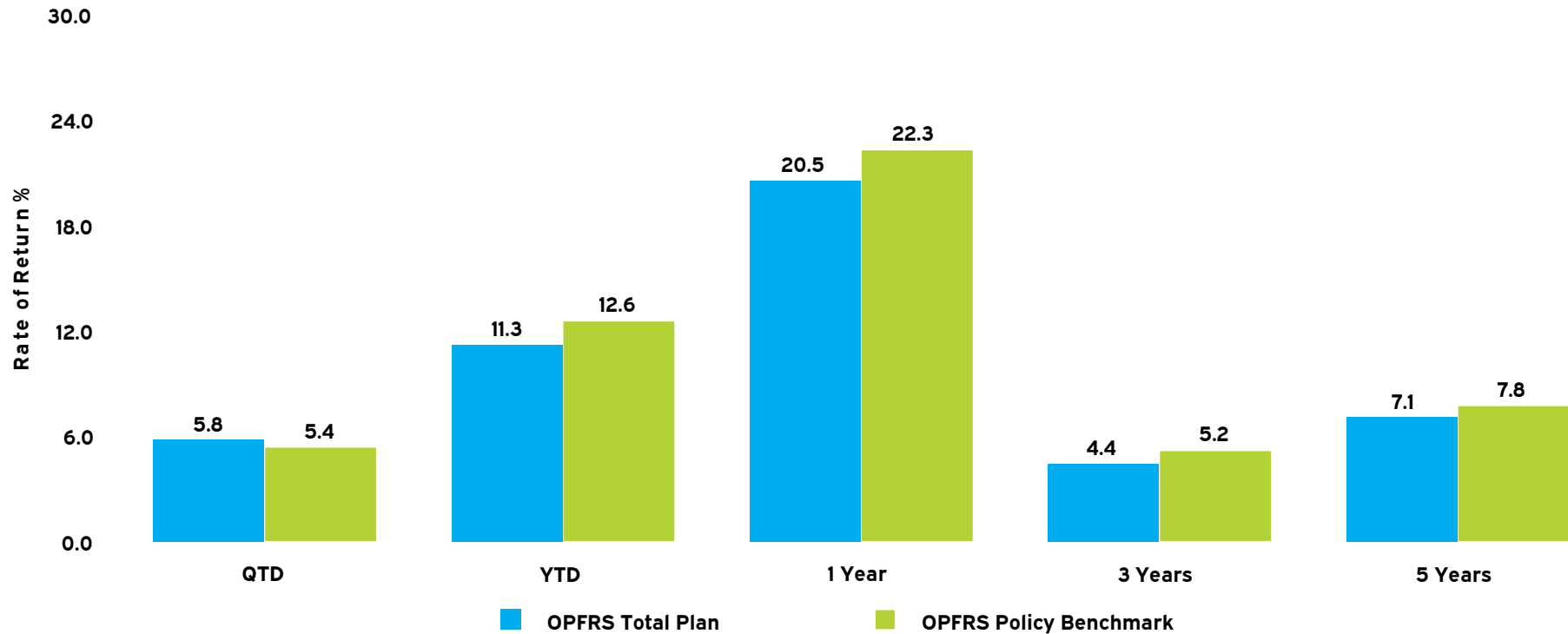
- According to the International Monetary Fund's (IMF) July report, global growth this year is expected to match the 2023 estimate at around 3.2% with most major economies predicted to avoid a recession.
- Key economic data in the US has largely weakened and come in below expectations, causing markets to expect an additional two rate cuts this year after the Fed's initial 0.5% reduction. Uncertainty remains regarding the timing and pace of interest rate cuts in the coming year.
- US consumers could feel pressure as certain components of inflation (e.g., shelter) remain high, borrowing costs stay elevated, and the job market may weaken further.
- A focus for US equities going forward will be whether earnings can remain resilient if growth slows. Also, the future paths of the large technology companies that have driven market gains will be important.
- We have started to see divergences in monetary policy. Some central banks, such as the Fed, European Central Bank, and the Bank of England, have started to cut interest rates and others, like the Bank of Japan, have increased interest rates. This disparity will likely influence capital flows and currencies.
- China appears to have shifted focus to more policy support for the economy/asset prices with a new suite of policy stimulus and signals for more support ahead. It is still not clear what the long-term impact of these policies will be on the economy and if policy makers will remain committed to these efforts.

Quarterly Performance
as of September 30, 2024

Summary of Cash Flows

	QTD (\$)	1 Year (\$)
OPFRS Total Plan		
Beginning Market Value	453,231,642	405,143,449
Net Cash Flow	-4,582,611	-13,074,310
Net Investment Change	26,575,956	83,155,848
Ending Market Value	475,224,987	475,224,987

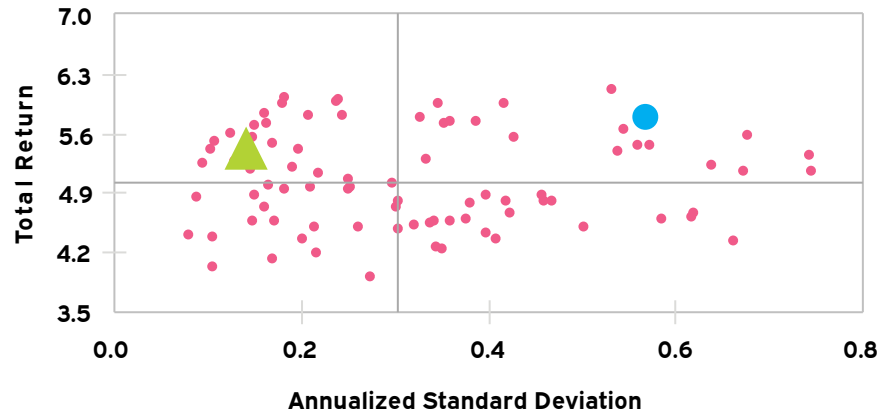
Return Summary Ending September 30, 2024



Total Plan performance shown is net of fees.

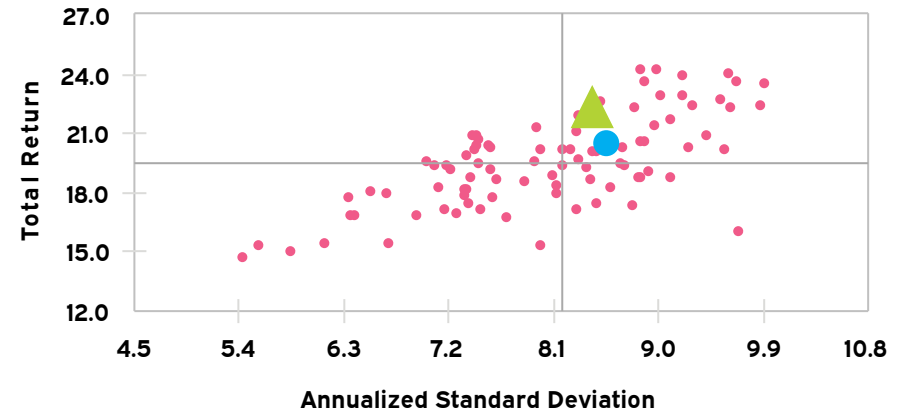
Total Plan Risk/Return Summary | As of September 30, 2024

Risk-Return Summary QTD Ending September 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

Risk-Return Summary 1 Yr Ending September 30, 2024



- IM Public DB \$250M-\$1B
- OPFRS Total Plan
- ▲ OPFRS Policy Benchmark

	Return	Standard Deviation
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OPFRS Total Plan	5.8	0.6
OPFRS Policy Benchmark	5.4	0.1
Median	5.0	0.3

	Return	Standard Deviation
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OPFRS Total Plan	20.5	8.5
OPFRS Policy Benchmark	22.3	8.4
Median	19.5	8.2

Performance shown is net of fees. Calculation is based on monthly periodicity.
Fiscal year begins on July 1. Plan Sponsor Peer Group shown is net of fees.

Asset Class Performance: Gross of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Gross)	475,224,987	100.0	5.9	11.5	20.9	4.7	7.4	7.5	6.9	Dec-88
<i>OPFRS Policy Benchmark</i>			<i>5.4</i>	<i>12.6</i>	<i>22.3</i>	<i>5.2</i>	<i>7.8</i>	<i>7.5</i>	<i>8.1</i>	
Excess Return			0.5	-1.1	-1.4	-0.5	-0.4	0.0	-1.2	
Domestic Equity (Gross)	209,973,200	44.2	7.7	17.1	31.3	8.8	13.5	11.9	9.4	Jun-97
<i>Russell 3000 (Blend)</i>			<i>6.2</i>	<i>20.6</i>	<i>35.2</i>	<i>10.3</i>	<i>15.3</i>	<i>12.8</i>	<i>9.8</i>	
Excess Return			1.5	-3.5	-3.9	-1.5	-1.8	-0.9	-0.4	
International Equity (Gross)	64,875,583	13.7	8.3	15.7	26.8	6.6	9.0	7.1	5.9	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>8.1</i>	<i>14.2</i>	<i>25.4</i>	<i>4.1</i>	<i>7.6</i>	<i>5.2</i>	<i>5.5</i>	
Excess Return			0.2	1.5	1.4	2.5	1.4	1.9	0.4	
Fixed Income (Gross)	113,464,866	23.9	5.3	5.1	12.2	-0.9	1.0	2.5	4.8	Jan-94
<i>Bloomberg Universal (Blend)</i>			<i>5.2</i>	<i>4.9</i>	<i>12.1</i>	<i>-1.1</i>	<i>0.7</i>	<i>2.2</i>	<i>4.6</i>	
Excess Return			0.1	0.2	0.1	0.2	0.3	0.3	0.2	
Credit (Gross)	10,380,969	2.2	3.1	7.5	11.9	4.2	6.5	--	5.9	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			<i>5.3</i>	<i>8.0</i>	<i>15.7</i>	<i>3.1</i>	<i>4.7</i>	<i>--</i>	<i>5.3</i>	
Excess Return			-2.2	-0.5	-3.8	1.1	1.8	--	0.6	
Covered Calls (Gross)	21,094,705	4.4	4.6	15.2	23.6	9.8	12.3	10.2	10.1	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			<i>5.5</i>	<i>13.6</i>	<i>18.3</i>	<i>6.4</i>	<i>6.6</i>	<i>6.3</i>	<i>6.3</i>	
Excess Return			-0.9	1.6	5.3	3.4	5.7	3.9	3.8	
Crisis Risk Offset (Gross)	39,389,515	8.3	-1.0	0.8	1.3	-3.6	-8.5	--	-6.4	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>0.6</i>	<i>4.6</i>	<i>6.8</i>	<i>4.4</i>	<i>0.4</i>	<i>--</i>	<i>0.8</i>	
Excess Return			-1.6	-3.8	-5.5	-8.0	-8.9	--	-7.2	
Cash (Gross)	16,046,148	3.4	0.2	0.5	0.5	0.2	0.4	0.8	0.6	Mar-11

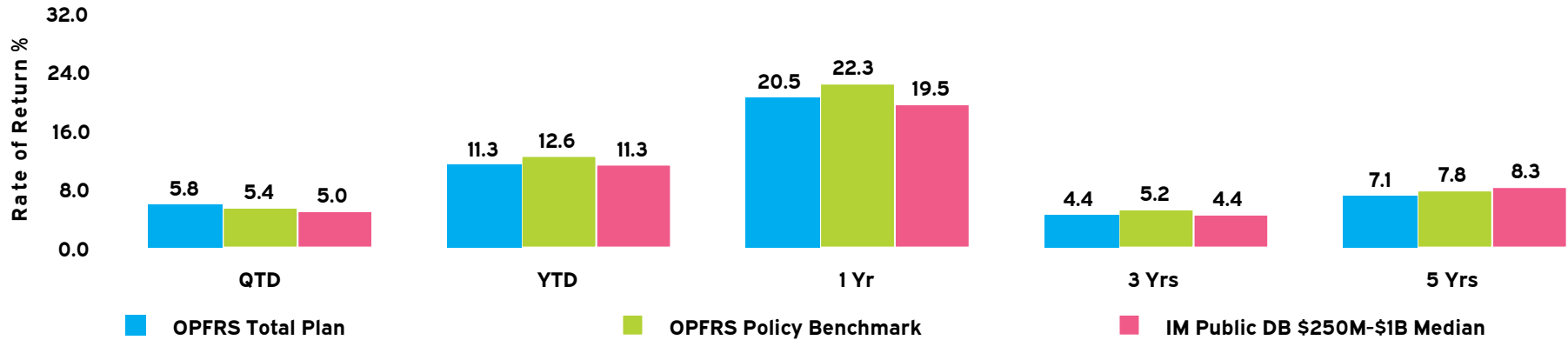
Performance shown is gross of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Asset Class Performance: Net of Fees | As of September 30, 2024

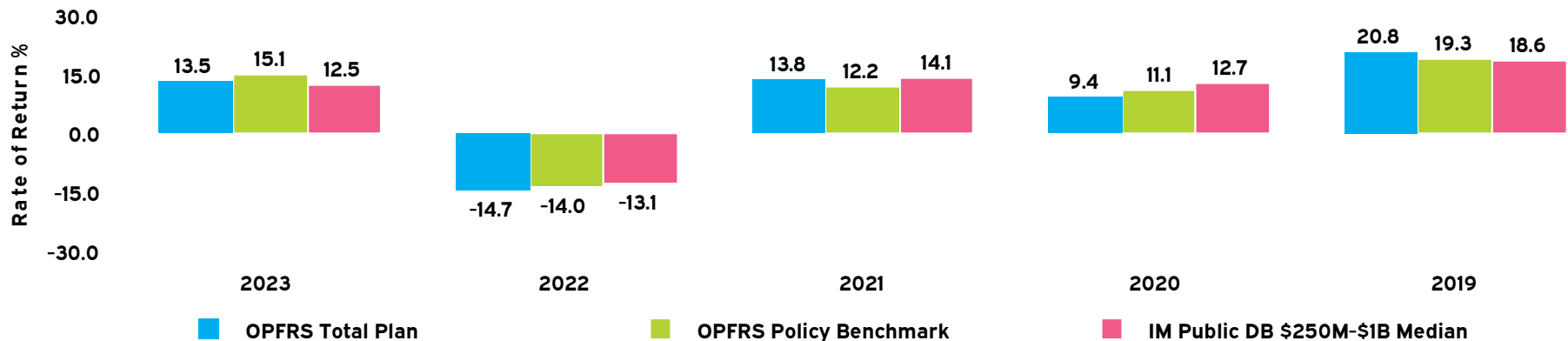
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
OPFRS Total Plan (Net)	475,224,987	100.0	5.8	11.3	20.5	4.4	7.1	7.2	6.8	Dec-88
<i>OPFRS Policy Benchmark</i>			5.4	12.6	22.3	5.2	7.8	7.5	8.1	
Excess Return			0.4	-1.3	-1.8	-0.8	-0.7	-0.3	-1.3	
<i>IM Public DB \$250M-\$1B Median (Net)</i>			5.0	11.3	19.5	4.4	8.3	7.2	8.2	
Peer Group Rank			19	52	33	52	79	50	100	
Domestic Equity (Net)	209,973,200	44.2	7.6	16.9	30.9	8.5	13.2	11.7	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			6.2	20.6	35.2	10.3	15.3	12.8	9.8	
Excess Return			1.4	-3.7	-4.3	-1.8	-2.1	-1.1	-0.5	
International Equity (Net)	64,875,583	13.7	8.1	15.2	26.0	6.0	8.4	6.7	5.8	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			8.1	14.2	25.4	4.1	7.6	5.2	5.5	
Excess Return			0.0	1.0	0.6	1.9	0.8	1.5	0.3	
Fixed Income (Net)	113,464,866	23.9	5.3	4.9	12.0	-1.1	0.8	2.3	4.6	Jan-94
<i>Bloomberg Universal (Blend)</i>			5.2	4.9	12.1	-1.1	0.7	2.2	4.6	
Excess Return			0.1	0.0	-0.1	0.0	0.1	0.1	0.0	
Credit (Net)	10,380,969	2.2	2.9	7.0	11.3	3.6	5.8	--	5.3	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			5.3	8.0	15.7	3.1	4.7	--	5.3	
Excess Return			-2.4	-1.0	-4.4	0.5	1.1	--	0.0	
Covered Calls (Net)	21,094,705	4.4	4.5	15.0	23.4	9.6	12.0	9.9	9.8	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			5.5	13.6	18.3	6.4	6.6	6.3	6.3	
Excess Return			-1.0	1.4	5.1	3.2	5.4	3.6	3.5	
Crisis Risk Offset (Net)	39,389,515	8.3	-1.1	0.7	1.0	-3.8	-8.7	--	-6.6	Aug-18
<i>Crisis Risk Offset Benchmark</i>			0.6	4.6	6.8	4.4	0.4	--	0.8	
Excess Return			-1.7	-3.9	-5.8	-8.2	-9.1	--	-7.4	
Cash (Net)	16,046,148	3.4	0.2	0.5	0.5	0.2	0.4	0.8	0.6	Mar-11

Performance shown is net of fees, except for Total Plan, Domestic Equity, and International Equity composites which have a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Trailing Period Performance Ending September 30, 2024



Calendar Year Performance Ending December 31, 2023



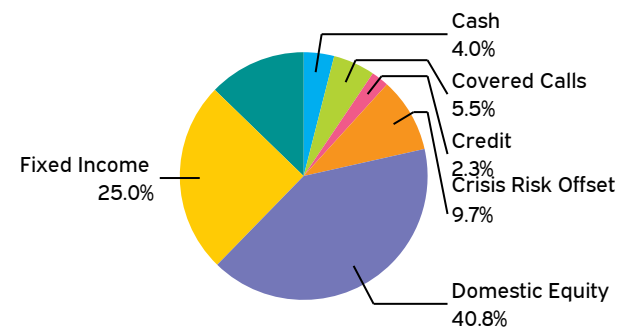
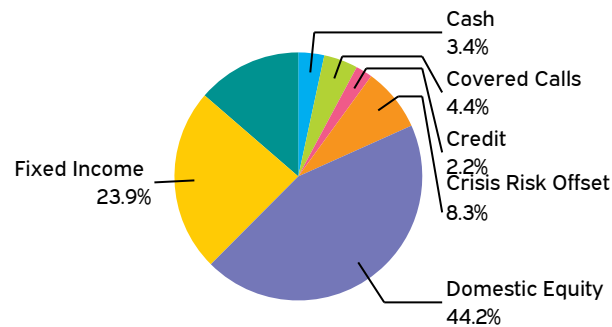
Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and thereafter. Fiscal year begins on July 1.

Asset Allocation | As of As of September 30, 2024

	Balance (\$)	Current Allocation (%)	Policy (%)	Difference (%)	Interim Policy (%)	Policy Range (%)	Within IPS Range?
Domestic Equity	209,973,200	44.2	25.0	19.2	34.0	15.0 - 35.0	No
International Equity	64,875,583	13.7	5.0	8.7	12.0	2.0 - 22.0	Yes
Fixed Income	113,464,866	23.9	51.0	-27.1	44.0	31.0 - 71.0	No
Credit	10,380,969	2.2	10.0	-7.8	0.0	0.0 - 16.0	Yes
Covered Calls	21,094,705	4.4	0.0	4.4	0.0	0.0 - 5.0	Yes
Crisis Risk Offset	39,389,515	8.3	9.0	-0.7	10.0	4.0 - 14.0	Yes
Cash	16,046,148	3.4	0.0	3.4	0.0	0.0 - 5.0	Yes
Total	475,224,987	100.0	100.0	0.0	100.0		

September 30, 2024: \$475,224,986.7

September 30, 2023: \$406,308,110.42



Cash account market value includes cash balances held in ETF accounts at the custodian and residuals from terminated managers. Policy (%) column reflects the long-term allocation targets starting July 1, 2024.

Manager Performance - Net of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Domestic Equity	209,973,200	100.0	7.6	16.9	30.9	8.5	13.2	11.7	9.3	Jun-97
<i>Russell 3000 (Blend)</i>			6.2	20.6	35.2	10.3	15.3	12.8	9.8	
Excess Return			1.4	-3.7	-4.3	-1.8	-2.1	-1.1	-0.5	
Northern Trust Russell 1000	106,908,322	50.9	6.1	21.1	35.6	10.7	15.5	13.0	14.2	Jun-10
<i>Russell 1000 Index</i>			6.1	21.2	35.7	10.8	15.6	13.1	14.3	
Excess Return			0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
EARNEST Partners	42,722,324	20.3	8.2	10.6	24.7	6.5	11.9	11.8	9.6	Apr-06
<i>Russell Midcap Index</i>			9.2	14.6	29.3	5.8	11.3	10.2	9.2	
Excess Return			-1.0	-4.0	-4.6	0.7	0.6	1.6	0.4	
eV US Mid Cap Core Equity Rank			50	83	63	67	51	19	35	
Wellington Select Quality Equity	28,167,816	13.4	10.2	15.2	26.5	--	--	--	10.7	May-22
<i>Russell 1000 Index</i>			6.1	21.2	35.7	--	--	--	16.1	
Excess Return			4.1	-6.0	-9.2	--	--	--	-5.4	
eV US Large Cap Core Equity Rank			2	84	85	--	--	--	88	
Brown Fundamental Small Cap Value	14,693,257	7.0	10.5	14.3	29.0	10.8	--	--	9.3	Apr-21
<i>Russell 2000 Value Index</i>			10.2	9.2	25.9	3.8	--	--	3.6	
Excess Return			0.3	5.1	3.1	7.0	--	--	5.7	
eV US Small Cap Value Equity Rank			17	18	14	9	--	--	15	
Rice Hall James	17,481,481	8.3	9.4	13.2	28.3	0.6	8.7	--	7.8	Aug-17
<i>Russell 2000 Growth Index</i>			8.4	13.2	27.7	-0.4	8.8	--	8.2	
Excess Return			1.0	0.0	0.6	1.0	-0.1	--	-0.4	
eV US Small Cap Growth Equity Rank			22	47	34	38	71	--	89	

Performance shown is net of fees, except for the Domestic Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
International Equity	64,875,583	100.0	8.1	15.2	26.0	6.0	8.4	6.7	5.8	Jan-98
<i>MSCI ACWI ex US (Blend)</i>			<i>8.1</i>	<i>14.2</i>	<i>25.4</i>	<i>4.1</i>	<i>7.6</i>	<i>5.2</i>	<i>5.5</i>	
Excess Return			0.0	1.0	0.6	1.9	0.8	1.5	0.3	
Vanguard Developed Markets ETF	17,684,221	27.3	7.2	12.2	24.6	4.8	8.3	--	8.8	Sep-19
<i>FTSE Developed All Cap ex-U.S. Index</i>			<i>7.6</i>	<i>12.5</i>	<i>24.7</i>	<i>5.0</i>	<i>8.6</i>	<i>--</i>	<i>9.1</i>	
Excess Return			-0.4	-0.3	-0.1	-0.2	-0.3	--	-0.3	
SGA ACWI ex-U.S. Equity	47,191,363	72.7	8.4	16.3	26.6	6.5	--	--	7.0	Dec-19
<i>MSCI AC World ex USA (Net)</i>			<i>8.1</i>	<i>14.2</i>	<i>25.4</i>	<i>4.1</i>	<i>--</i>	<i>--</i>	<i>6.9</i>	
Excess Return			0.3	2.1	1.2	2.4	--	--	0.1	
eV ACWI ex-US All Cap Core Eq Rank			20	15	26	13	--	--	53	

Performance shown is net of fees, except for the International Equity composite which has a mix of gross and net of fees performance. Please see the Addendum for more details. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Fixed Income	113,464,866	100.0	5.3	4.9	12.0	-1.1	0.8	2.3	4.6	Jan-94
<i>Bloomberg Universal (Blend)</i>			5.2	4.9	12.1	-1.1	0.7	2.2	4.6	
Excess Return			0.1	0.0	-0.1	0.0	0.1	0.1	0.0	
Ramirez	76,882,860	67.8	5.2	4.8	11.7	-1.3	0.5	--	2.1	Jan-17
<i>Blmbg. U.S. Aggregate Index</i>			5.2	4.4	11.6	-1.4	0.3	--	1.7	
Excess Return			0.0	0.4	0.1	0.1	0.2	--	0.4	
eV US Core Fixed Inc Rank			36	48	65	60	74	--	31	
Wellington Core Bond	7,381,307	6.5	5.3	5.5	13.3	-1.2	--	--	-0.5	Apr-21
<i>Blmbg. U.S. Aggregate Index</i>			5.2	4.4	11.6	-1.4	--	--	-0.7	
Excess Return			0.1	1.1	1.7	0.2	--	--	0.2	
eV US Core Fixed Inc Rank			17	9	5	47	--	--	52	
Reams	29,200,698	25.7	5.3	5.1	12.5	-0.5	3.0	3.3	5.0	Feb-98
<i>Bloomberg Universal (Blend)</i>			5.2	4.9	12.1	-1.1	0.7	2.2	4.2	
Excess Return			0.1	0.2	0.4	0.6	2.3	1.1	0.8	
eV US Core Plus Fixed Inc Rank			41	69	58	26	4	9	27	

Performance shown is net of fees. Since inception date and performance begin in the month following an investments initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Credit	10,380,969	100.0	2.9	7.0	11.3	3.6	5.8	--	5.3	Feb-15
<i>Blmbg. U.S. Corp: High Yield Index</i>			5.3	8.0	15.7	3.1	4.7	--	5.3	
Excess Return			-2.4	-1.0	-4.4	0.5	1.1	--	0.0	
Polen Capital	10,380,969	100.0	2.9	7.0	11.3	3.6	5.8	--	5.3	Feb-15
<i>ICE BofA U.S. High Yield Index</i>			5.3	8.0	15.7	3.1	4.5	--	5.2	
Excess Return			-2.4	-1.0	-4.4	0.5	1.3	--	0.1	
eV US High Yield Fixed Inc Rank			91	60	88	31	13	--	24	

Performance shown is net of fees. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of September 30, 2024

	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Covered Calls	21,094,705	100.0	4.5	15.0	23.4	9.6	12.0	9.9	9.8	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			5.5	13.6	18.3	6.4	6.6	6.3	6.3	
Excess Return			-1.0	1.4	5.1	3.2	5.4	3.6	3.5	
Parametric BXM	10,071,437	47.7	4.0	13.0	18.6	8.1	9.2	7.8	7.8	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			5.5	13.6	18.3	6.4	6.6	6.3	6.3	
Excess Return			-1.5	-0.6	0.3	1.7	2.6	1.5	1.5	
Parametric DeltaShift	11,023,268	52.3	4.9	16.9	28.1	10.9	14.6	11.9	11.9	Apr-14
<i>Cboe S&P 500 Buy Write Index</i>			5.5	13.6	18.3	6.4	6.6	6.3	6.3	
Excess Return			-0.6	3.3	9.8	4.5	8.0	5.6	5.6	

Performance shown is net of fees. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

Manager Performance - Net of Fees | As of September 30, 2024

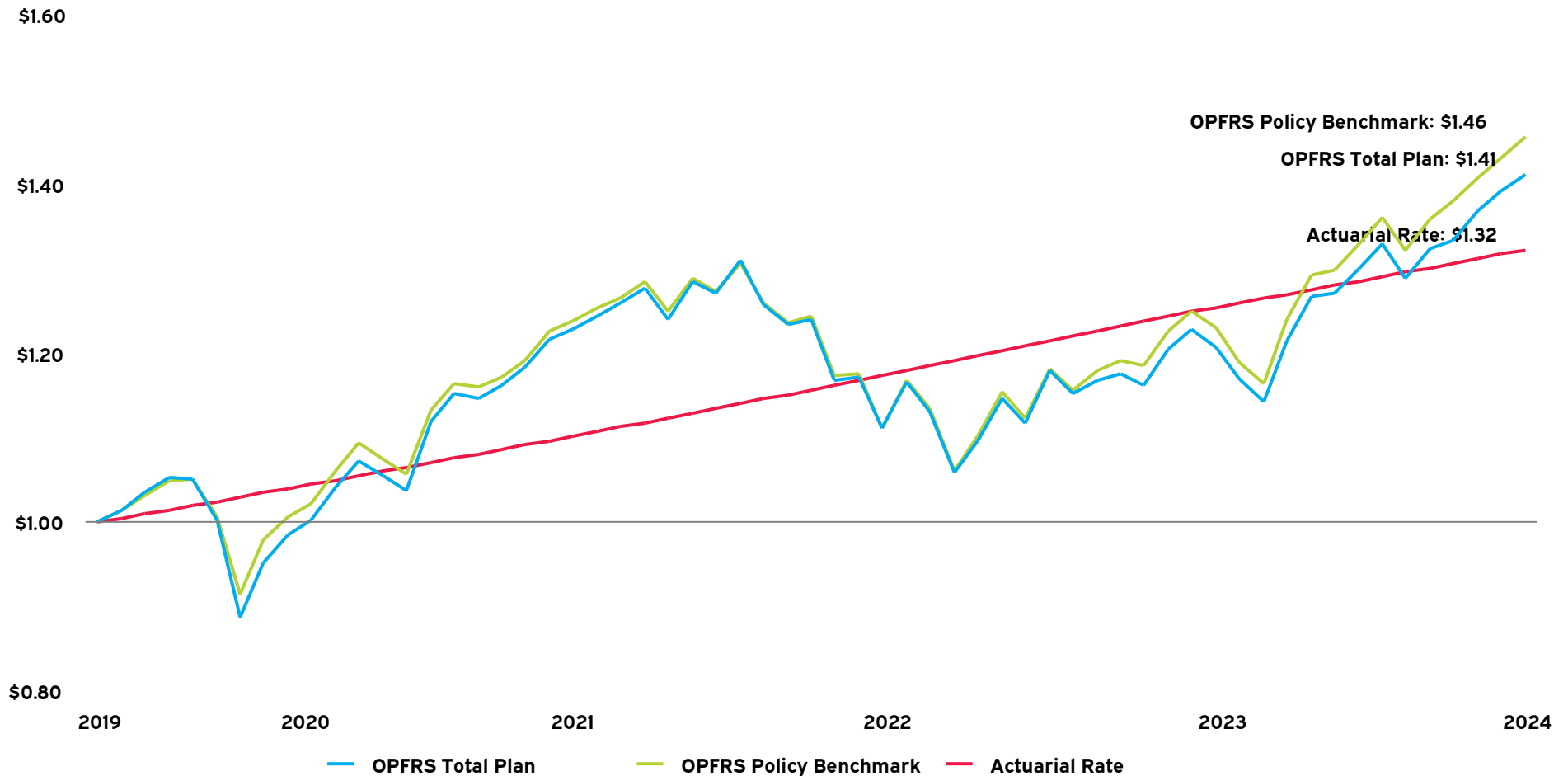
	Market Value (\$)	% of Portfolio	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Since Inception	Inception Date
Crisis Risk Offset	39,389,515	100.0	-1.1	0.7	1.0	-3.8	-8.7	--	-6.6	Aug-18
<i>Crisis Risk Offset Benchmark</i>			<i>0.6</i>	<i>4.6</i>	<i>6.8</i>	<i>4.4</i>	<i>0.4</i>	<i>--</i>	<i>0.8</i>	
Over/Under			<i>-1.7</i>	<i>-3.9</i>	<i>-5.8</i>	<i>-8.2</i>	<i>-9.1</i>	<i>--</i>	<i>-7.4</i>	
Kepos Alternative Risk Premia	12,271,394	31.2	1.2	12.7	11.9	--	--	--	8.0	Feb-22
<i>SG Multi Alternative Risk Premia Index</i>			<i>0.3</i>	<i>8.3</i>	<i>6.8</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>7.0</i>	
Over/Under			<i>0.9</i>	<i>4.4</i>	<i>5.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>1.0</i>	
Versor Trend Following	13,429,347	34.1	-10.5	-9.9	-17.0	--	--	--	-4.3	Apr-22
<i>SG Trend Index</i>			<i>-5.9</i>	<i>2.3</i>	<i>-2.9</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>2.4</i>	
Over/Under			<i>-4.6</i>	<i>-12.2</i>	<i>-14.1</i>	<i>--</i>	<i>--</i>	<i>--</i>	<i>-6.7</i>	
Vanguard Long-Term Treasury ETF	13,688,773	34.8	7.8	2.7	15.3	-8.4	-4.3	--	-2.7	Jul-19
<i>Blmbg. U.S. Government: Long Term Bond Index</i>			<i>7.8</i>	<i>2.4</i>	<i>15.4</i>	<i>-8.3</i>	<i>-4.2</i>	<i>--</i>	<i>-2.7</i>	
Over/Under			<i>0.0</i>	<i>0.3</i>	<i>-0.1</i>	<i>-0.1</i>	<i>-0.1</i>	<i>--</i>	<i>0.0</i>	

Performance shown is net of fees. Since inception date and performance begin in the month following an investment's initial funding. Fiscal year begins on July 1. Please see Benchmark History section for custom benchmark compositions.

**Cash Flow Summary
Quarter To Date**

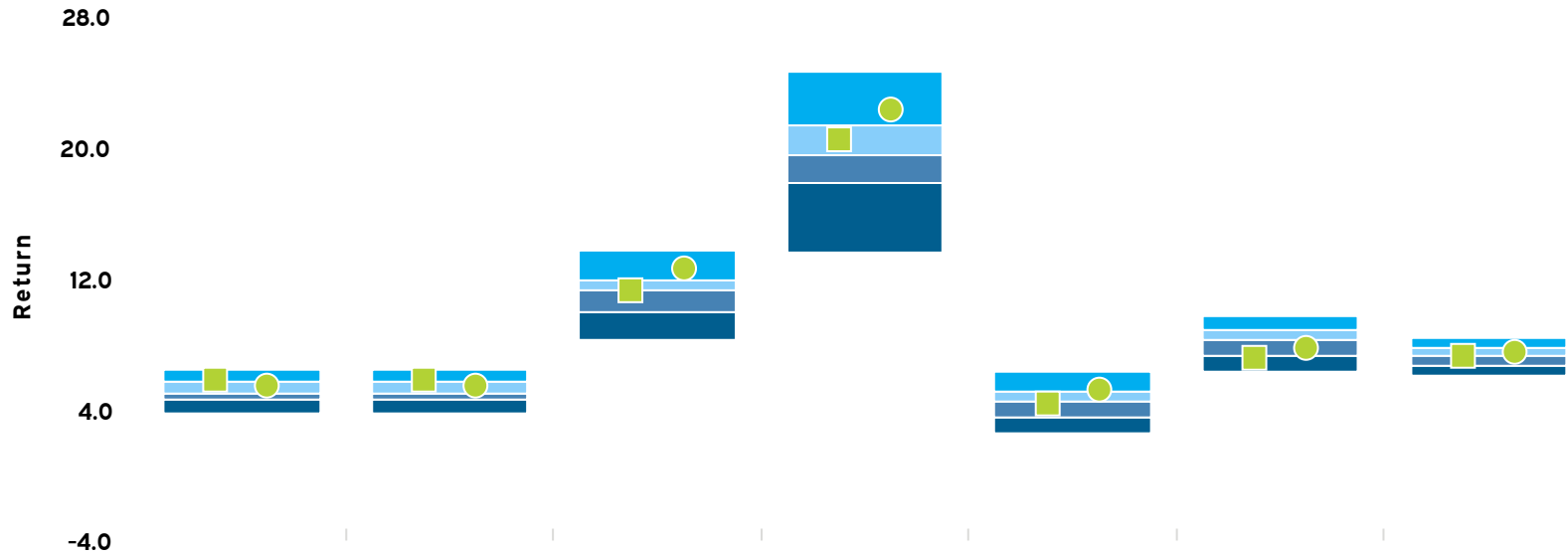
	Beginning Market Value(\$)	Net Cash Flow(\$)	Net Investment Change(\$)	Ending Market Value(\$)
Northern Trust Russell 1000	100,798,118	-	6,110,204	106,908,322
EARNEST Partners	39,396,764	-	3,325,560	42,722,324
Wellington Select Quality Equity	25,563,443	-	2,604,373	28,167,816
Brown Fundamental Small Cap Value	13,276,304	-	1,416,953	14,693,257
Rice Hall James	15,939,120	-	1,542,362	17,481,481
Vanguard Developed Markets ETF	16,549,028	-48,355	1,183,547	17,684,221
SGA ACWI ex-U.S. Equity	43,425,507	-	3,765,855	47,191,363
Ramirez	73,029,640	-	3,853,221	76,882,860
Wellington Core Bond	7,006,703	-	374,605	7,381,307
Reams	27,712,396	-	1,488,302	29,200,698
Polen Capital	10,084,780	-	296,190	10,380,969
Parametric BXM	11,654,056	-2,000,000	417,381	10,071,437
Parametric DeltaShift	12,467,561	-2,000,000	555,707	11,023,268
Kepos Alternative Risk Premia	12,120,231	-	151,164	12,271,394
Versor Trend Following	14,998,517	-	-1,569,170	13,429,347
Vanguard Long-Term Treasury ETF	12,830,166	-133,952	992,558	13,688,773
Cash - Money Market	5,866,309	257,669	36,170	6,160,148
Cash - Treasury	10,513,000	-627,000	-	9,886,000
Securities Lending Northern Trust	-	-30,974	30,974	-
OPFRS Total Plan	453,231,642	-4,582,611	26,575,956	475,224,987

Growth of a Dollar 5 Years ending September 30, 2024



The actuarial assumed rate is 8% through June 2009, 7.5% through June 2010, 7% through June 2011, 6.75% through June 2014, 6.5% through December 2017, 6.0% through June 2023, and 5.0% since July 2023.

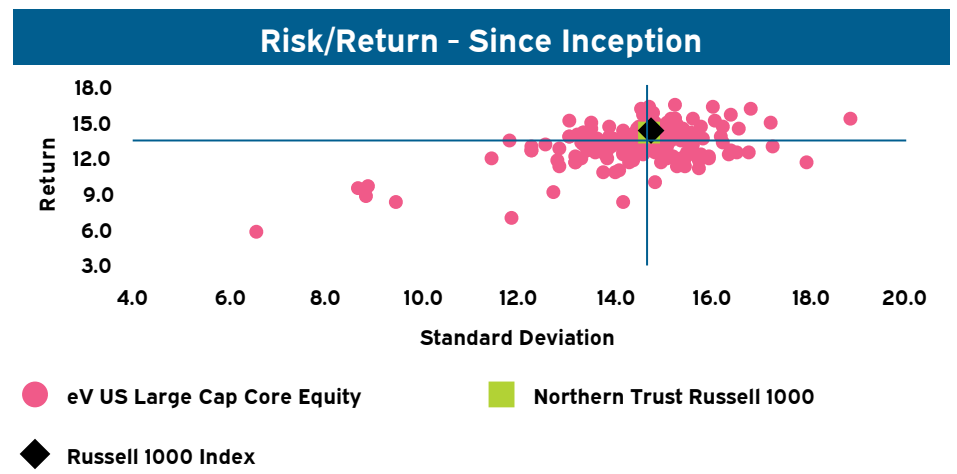
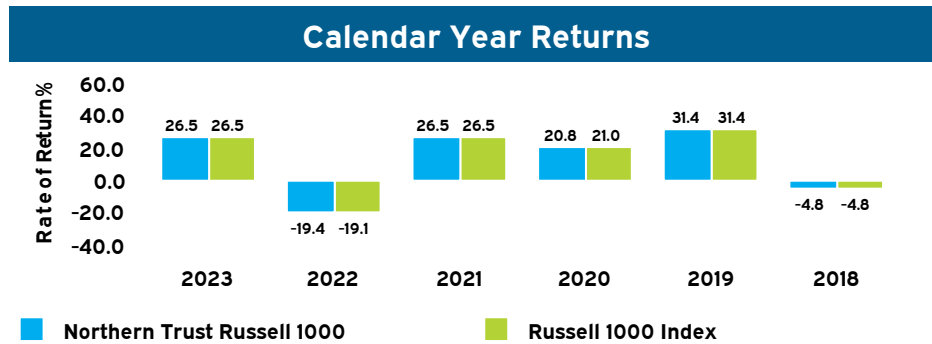
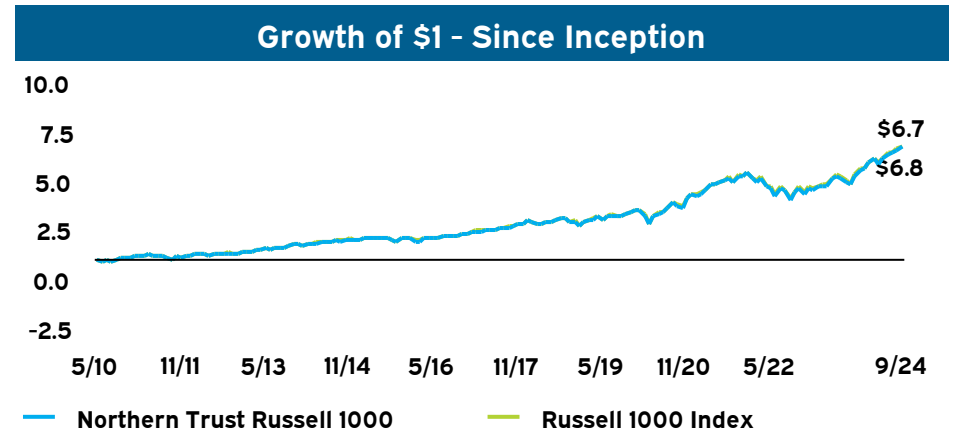
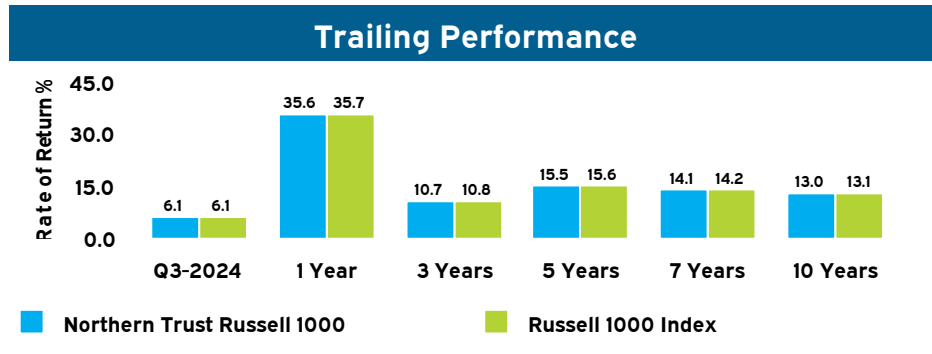
Plan Sponsor Peer Group Performance Comparison vs. InvMetrics Public DB \$250M-\$1B Net



	QTD (%)	FYTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
■ OPFRS Total Plan	5.8 (19)	5.8 (19)	11.3 (52)	20.5 (33)	4.4 (52)	7.1 (79)	7.2 (50)
● OPFRS Policy Benchmark	5.4 (37)	5.4 (37)	12.6 (18)	22.3 (22)	5.2 (23)	7.8 (63)	7.5 (36)
5th Percentile	6.5	6.5	13.7	24.6	6.2	9.7	8.4
1st Quartile	5.7	5.7	11.9	21.4	5.1	8.9	7.8
Median	5.0	5.0	11.3	19.5	4.4	8.3	7.2
3rd Quartile	4.6	4.6	9.9	17.8	3.6	7.3	6.7
95th Percentile	3.7	3.7	8.3	13.6	2.5	6.3	6.1
Population	107	107	105	105	104	104	92

Total Plan performance is a mix of gross and net of fees; performance is gross of fees prior to January 2016 and net of fees thereafter. Parentheses contain percentile rankings. Calculation based on monthly periodicity. Fiscal year begins on July 1.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Northern Trust Russell 1000	0.00	0.99	-2.55	4.04	0.00	1.00	99.61	-
Russell 1000 Index	0.00	1.00	-	4.03	0.00	1.00	100.00	-



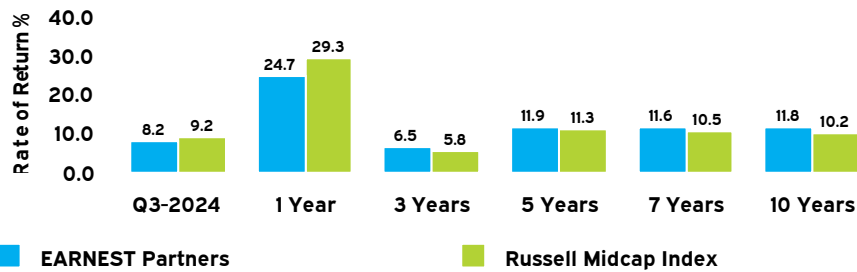
	QTD Return	QTD Risk
Northern Trust Russell 1000	6.06	0.39
Russell 1000 Index	6.08	0.39

Performance shown is net of fees. Risk is measured as Standard Deviation.

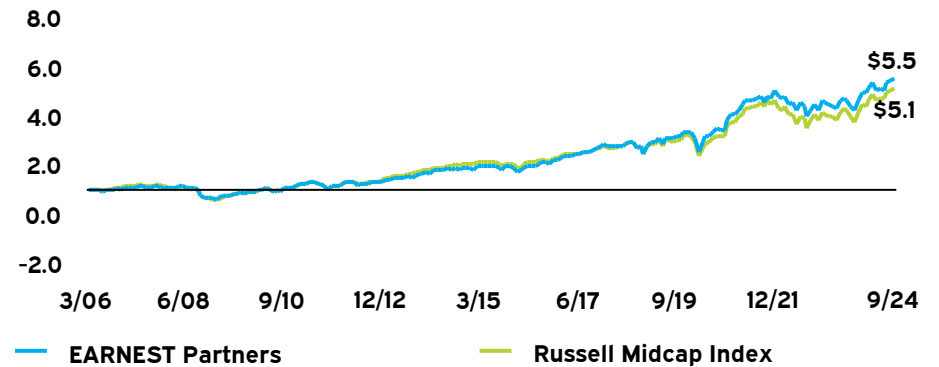
EARNEST Partners | As of September 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
EARNEST Partners	-2.36	1.69	-0.31	1.06	0.94	0.96	90.25	-
Russell Midcap Index	0.00	1.00	-	2.07	0.00	1.00	100.00	-

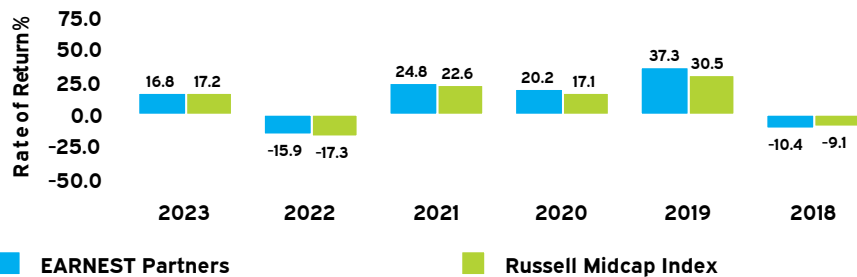
Trailing Performance



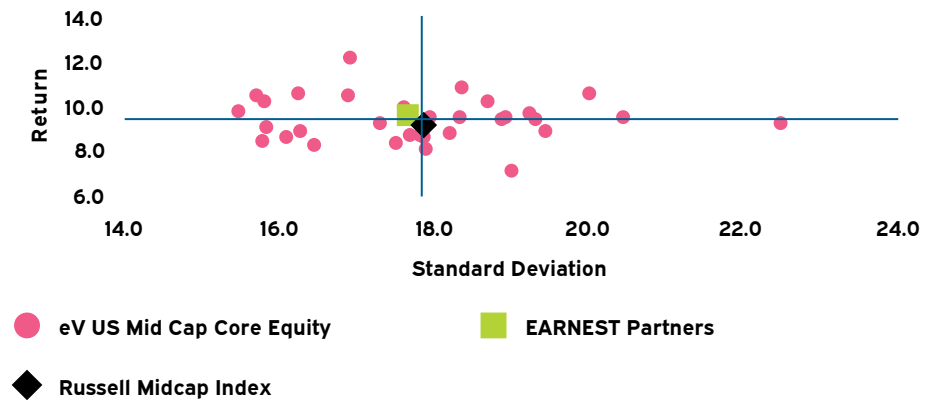
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



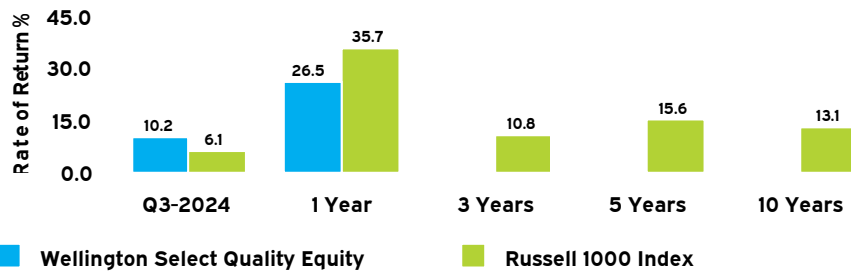
	QTD Return	QTD Risk
EARNEST Partners	8.24	2.11
Russell Midcap Index	9.21	1.22

Performance shown is net of fees. Risk is measured as Standard Deviation.

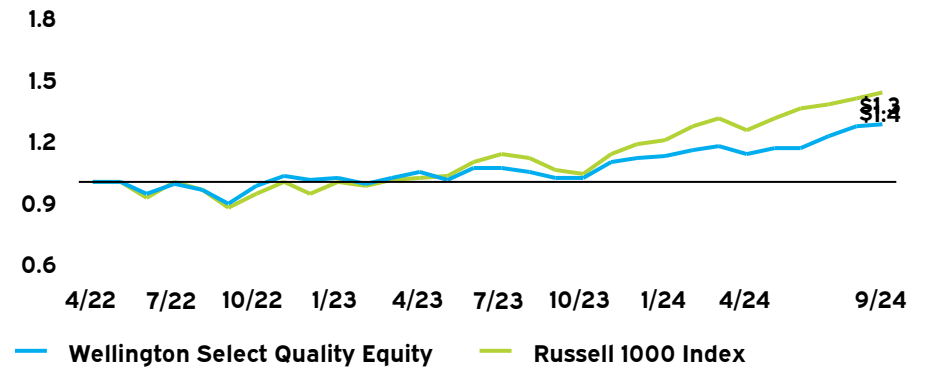
Wellington Select Quality Equity | As of September 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Wellington Select Quality Equity	6.84	-1.78	0.75	1.85	1.76	0.20	165.92	-
Russell 1000 Index	0.00	1.00	-	4.03	0.00	1.00	100.00	-

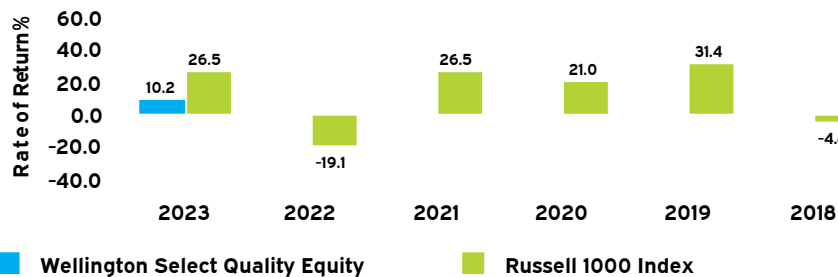
Trailing Performance



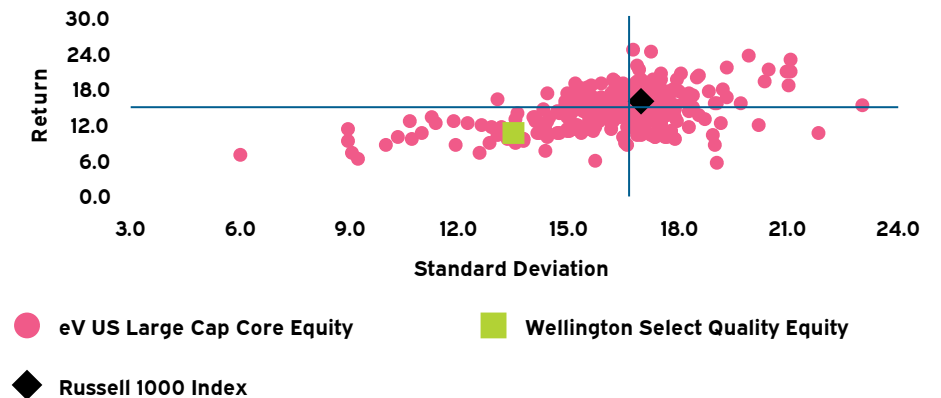
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



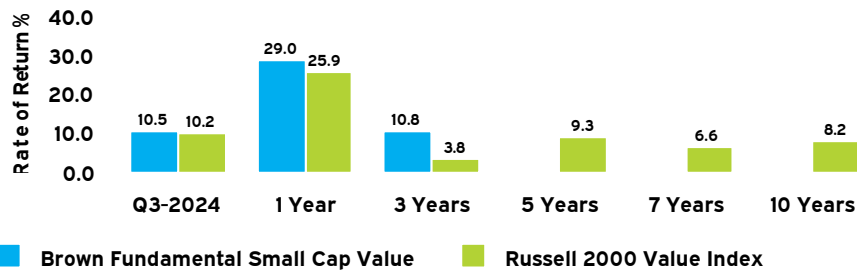
	QTD Return	QTD Risk
Wellington Select Quality Equity	10.19	1.55
Russell 1000 Index	6.08	0.39

Performance shown is net of fees. Risk is measured as Standard Deviation.

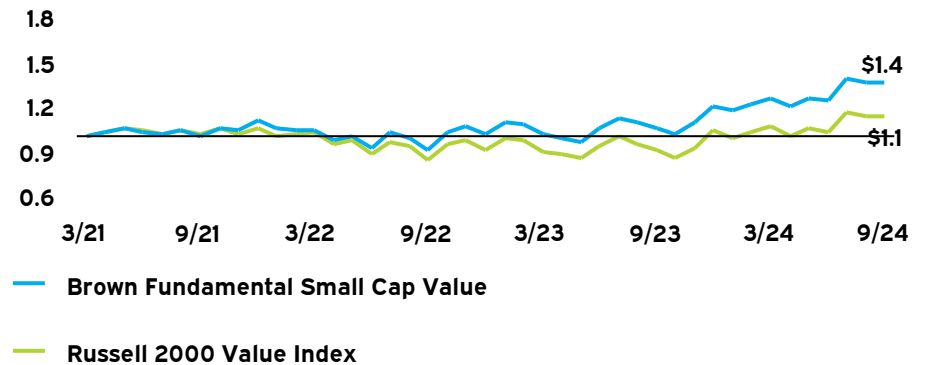
Brown Fundamental Small Cap Value | As of September 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Brown Fundamental Small Cap Value	0.17	0.98	0.26	0.51	0.42	1.00	104.75	113.68
Russell 2000 Value Index	0.00	1.00	-	0.48	0.00	1.00	100.00	100.00

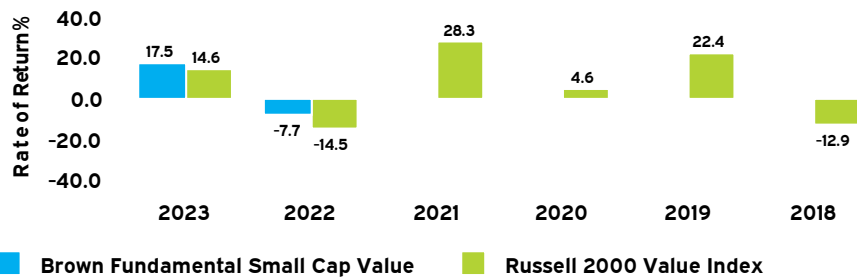
Trailing Performance



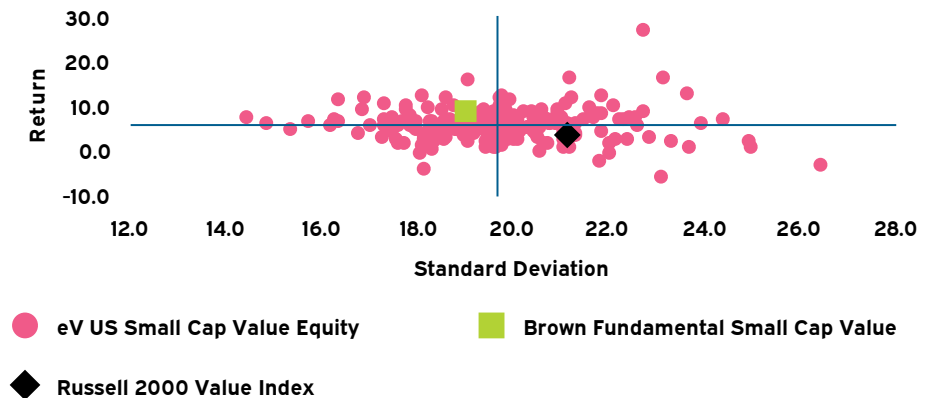
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



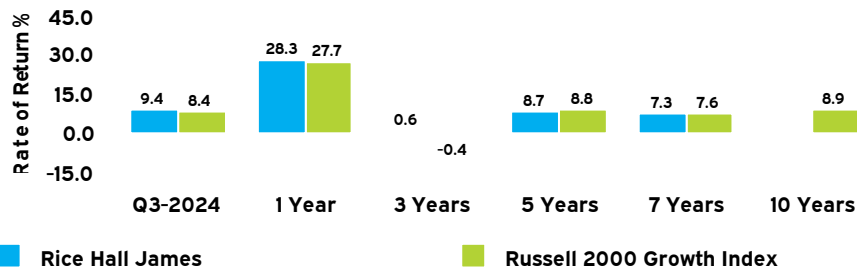
	QTD Return	QTD Risk
Brown Fundamental Small Cap Value	10.52	6.13
Russell 2000 Value Index	10.15	6.22

Performance shown is net of fees. Risk is measured as Standard Deviation.

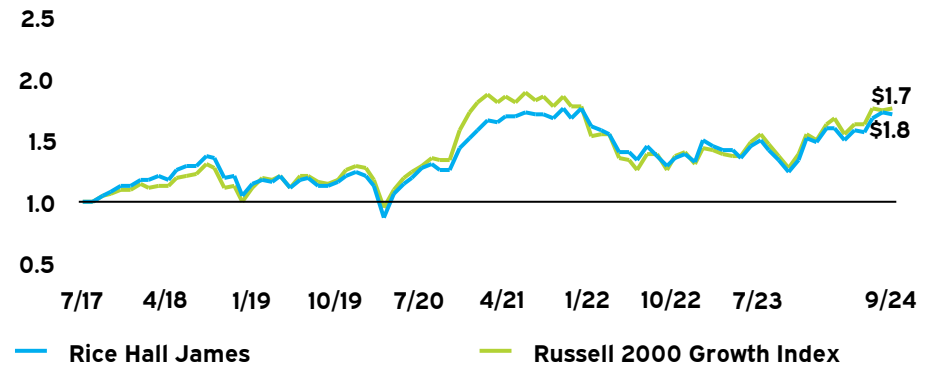
Rice Hall James | As of September 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Rice Hall James	1.23	0.67	0.12	0.77	2.57	0.58	69.15	-245.81
Russell 2000 Growth Index	0.00	1.00	-	0.60	0.00	1.00	100.00	100.00

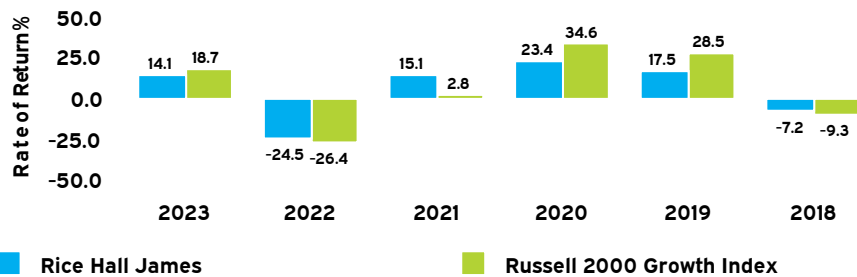
Trailing Performance



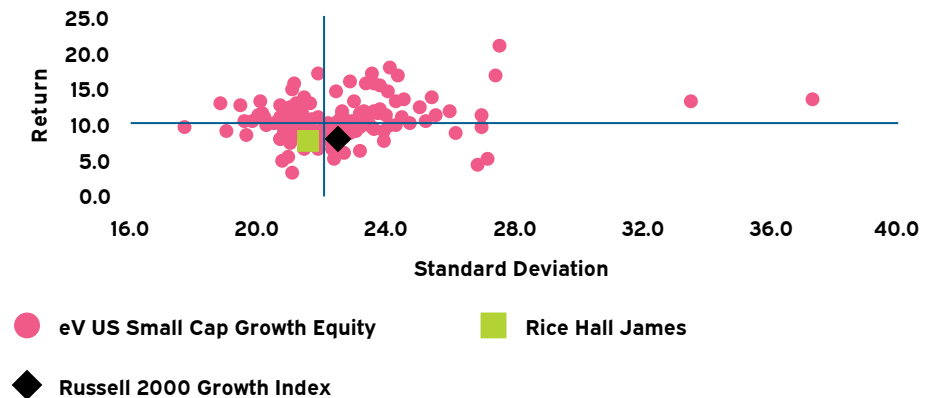
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



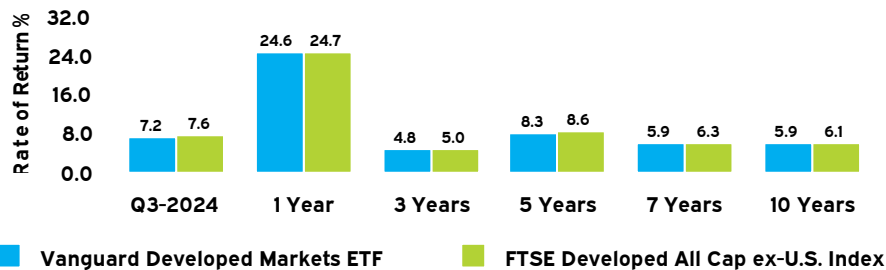
	QTD Return	QTD Risk
Rice Hall James	9.41	3.44
Russell 2000 Growth Index	8.41	3.93

Performance shown is net of fees. Risk is measured as Standard Deviation.

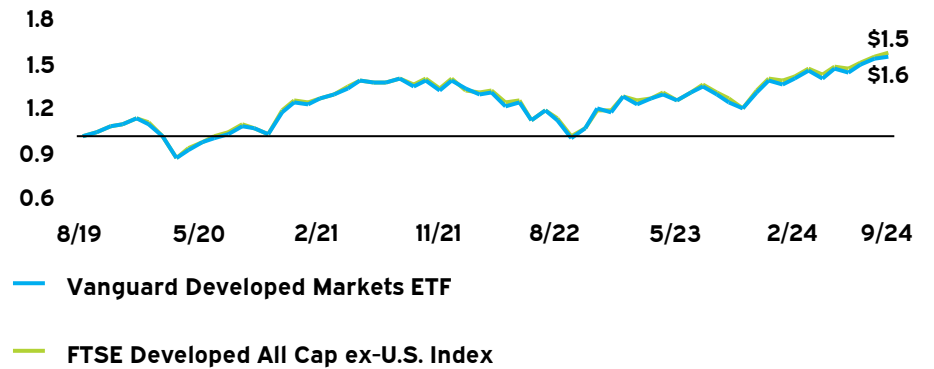
Vanguard Developed Markets ETF | As of September 30, 2024

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
Vanguard Developed Markets ETF	-0.06	0.96	-0.95	2.15	0.15	0.97	94.08	-
FTSE Developed All Cap ex-U.S. Index	0.00	1.00	-	2.26	0.00	1.00	100.00	-

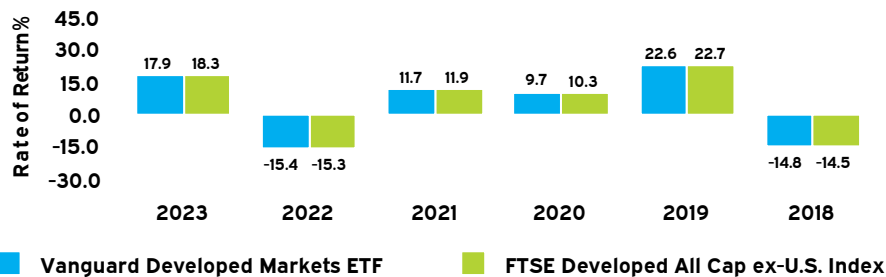
Trailing Performance



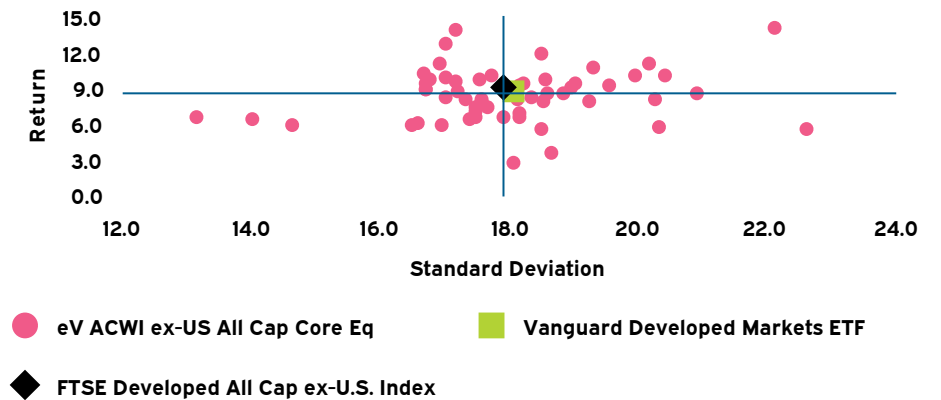
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception

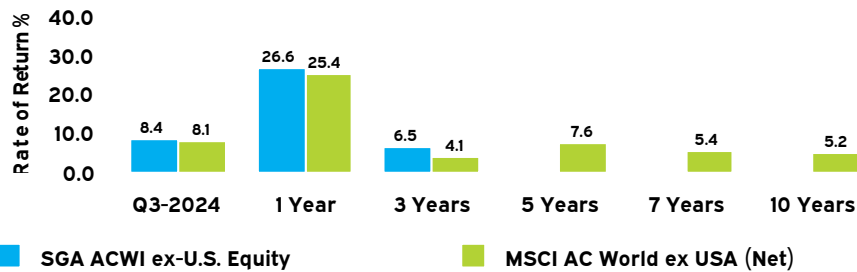


	QTD Return	QTD Risk
Vanguard Developed Markets ETF	7.16	0.89
FTSE Developed All Cap ex-U.S. Index	7.62	0.91

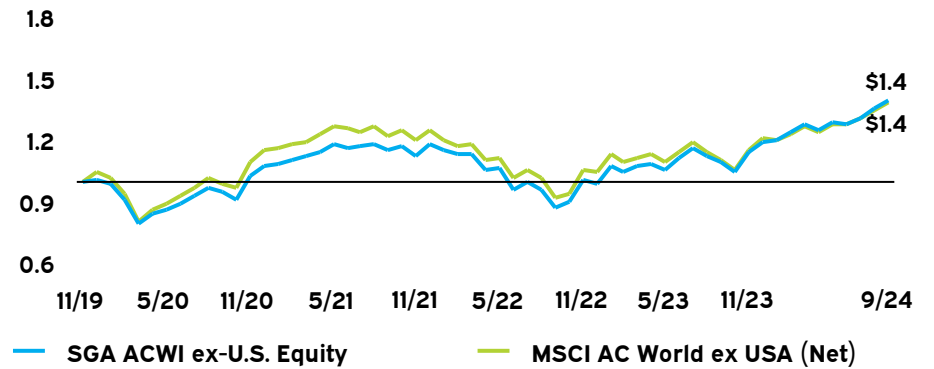
Performance shown is net of fees. Risk is measured as Standard Deviation.

	Alpha	Beta	Information Ratio	Sharpe Ratio	Tracking Error	R-Squared	Up Capture	Down Capture
SGA ACWI ex-U.S. Equity	-1.04	1.45	1.22	7.28	0.10	1.00	104.65	-
MSCI AC World ex USA (Net)	0.00	1.00	-	10.05	0.00	1.00	100.00	-

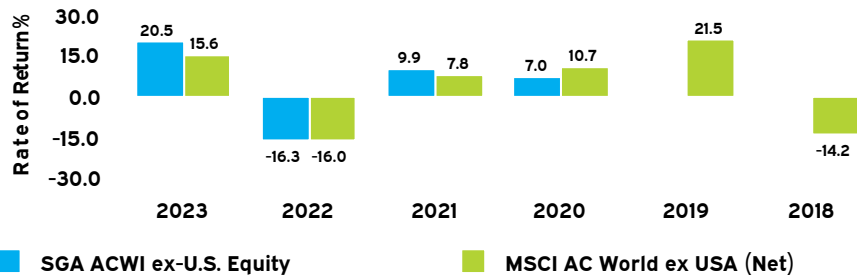
Trailing Performance



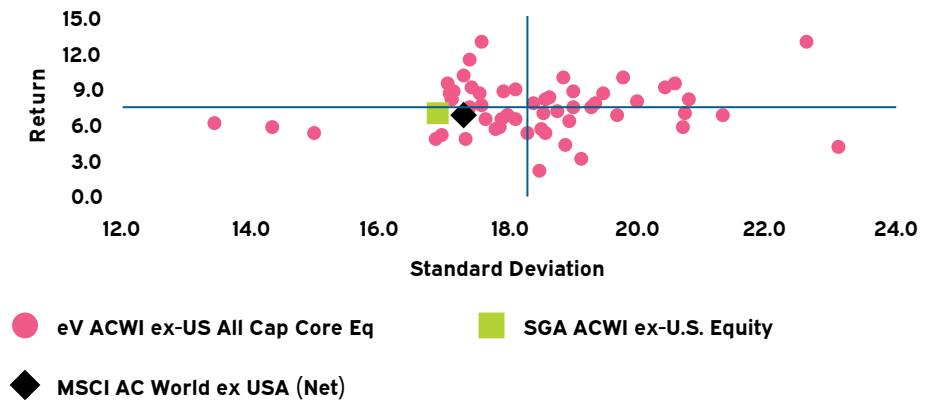
Growth of \$1 - Since Inception



Calendar Year Returns



Risk/Return - Since Inception



	QTD Return	QTD Risk
SGA ACWI ex-U.S. Equity	8.45	0.32
MSCI AC World ex USA (Net)	8.06	0.22

Performance shown is net of fees. Risk is measured as Standard Deviation.

Account Information

Account Name	Ramirez
Account Structure	Separate Account
Inception Date	01/30/2017
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

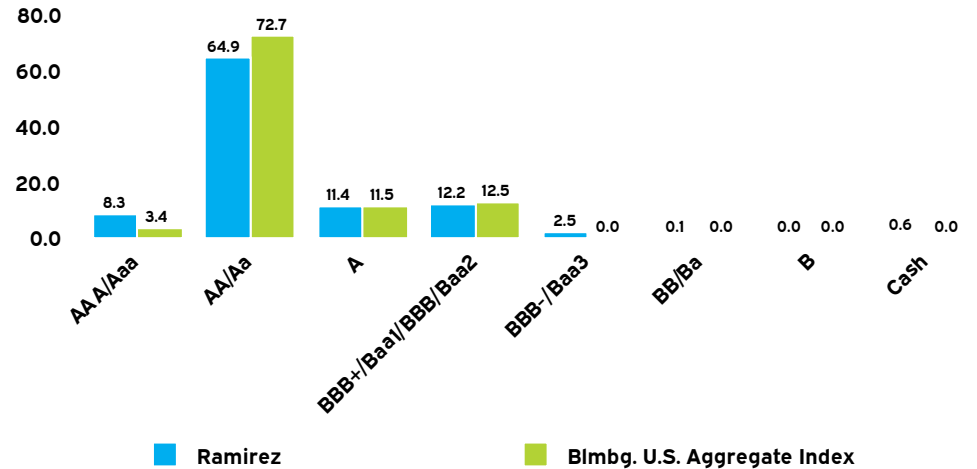
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Ramirez	5.2	4.8	11.7	-1.3	0.5
Blmbg. U.S. Aggregate Index	5.2	4.4	11.6	-1.4	0.3

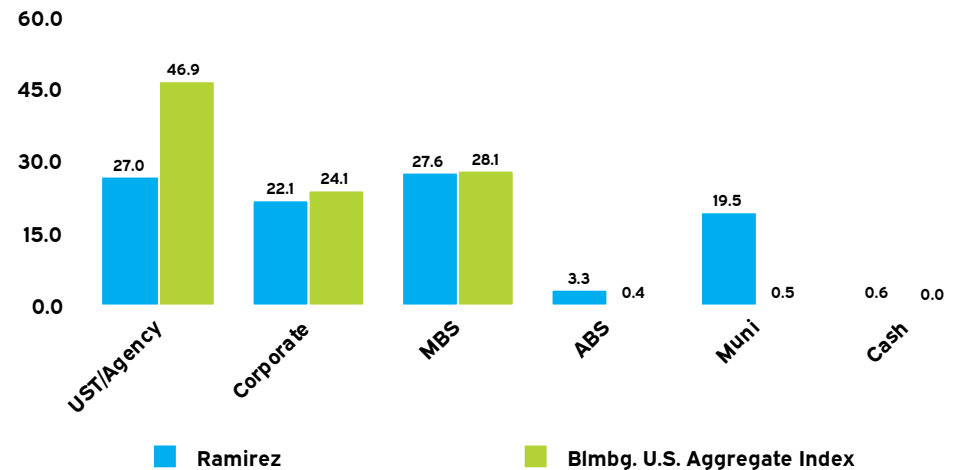
Portfolio Fixed Income Characteristics

	Q3-24 Portfolio	Q2-24 Portfolio
Yield To Maturity	5.5	5.2
Average Duration	6.3	6.1
Average Quality	AA	AA
Weighted Average Maturity	9.0	9.1

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Wellington Core Bond
Account Structure	Commingled Fund
Inception Date	04/01/2021
Asset Class	US Fixed Income
Benchmark	Blmbg. U.S. Aggregate Index
Peer Group	eV US Core Fixed Inc

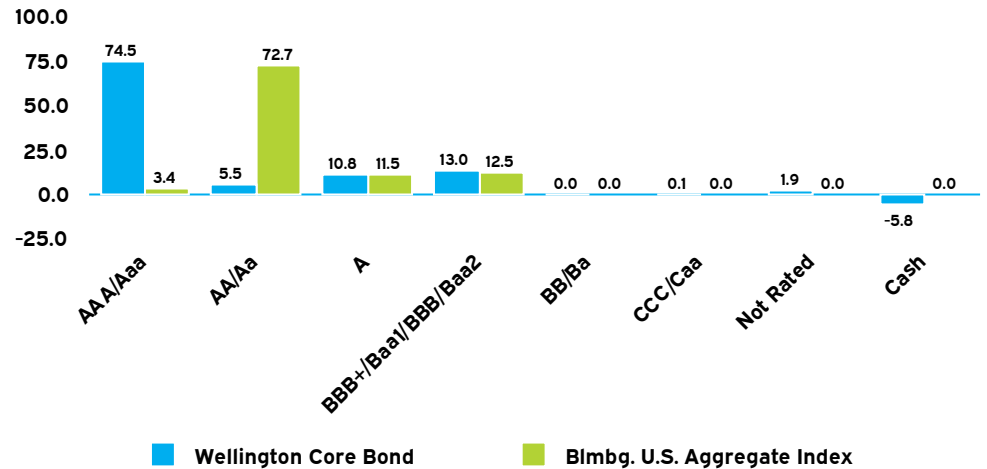
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Wellington Core Bond	5.3	5.5	13.3	-1.2	-
Blmbg. U.S. Aggregate Index	5.2	4.4	11.6	-1.4	0.3

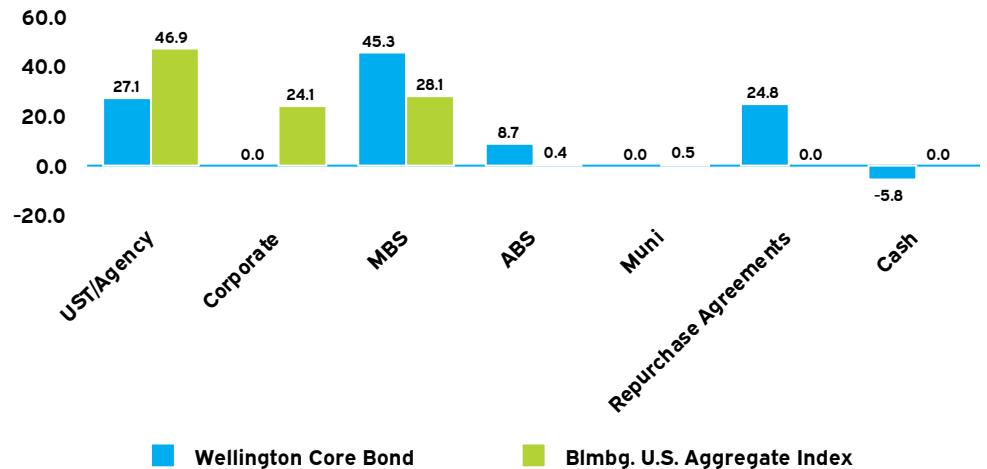
Portfolio Fixed Income Characteristics

	Q3-24 Portfolio	Q2-24 Portfolio
Yield To Maturity	5.1	5.3
Average Duration	6.4	6.7
Average Quality	AA	AA
Weighted Average Maturity	-	-

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Reams
Account Structure	Separate Account
Inception Date	01/01/1998
Asset Class	US Fixed Income
Benchmark	Bloomberg Universal (Blend)
Peer Group	eV US Core Plus Fixed Inc

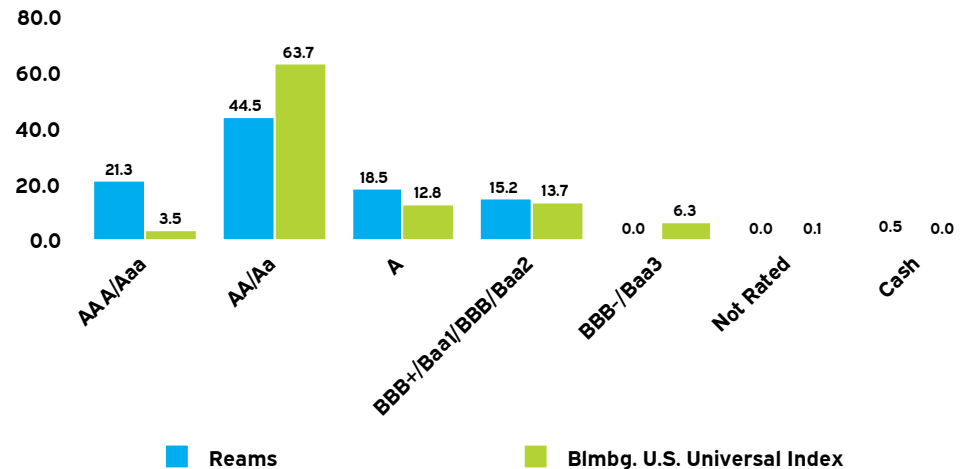
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Reams	5.3	5.1	12.5	-0.5	3.0
Blmbg. U.S. Universal Index	5.2	4.9	12.1	-1.1	0.7

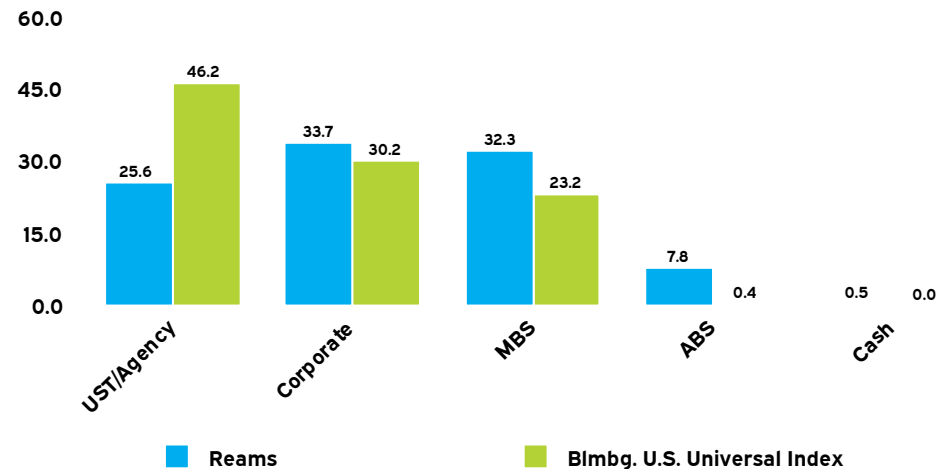
Portfolio Fixed Income Characteristics

	Q3-24 Portfolio	Q2-24 Portfolio
Yield To Maturity	4.6	5.3
Average Duration	6.1	6.4
Average Quality	AA	AA
Weighted Average Maturity	8.7	9.4

Credit Quality Allocation



Sector Allocation



Performance shown is net of fees.

Account Information

Account Name	Polen Capital
Account Structure	Commingled Fund
Inception Date	02/01/2015
Asset Class	US Fixed Income
Benchmark	ICE BofA U.S. High Yield Index
Peer Group	eV US High Yield Fixed Inc

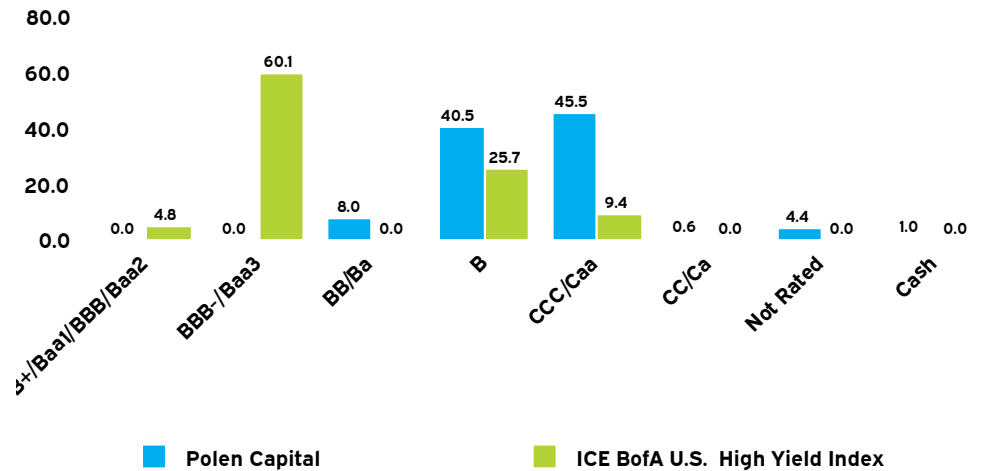
Portfolio Performance Summary

	QTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)
Polen Capital	2.9	7.0	11.3	3.6	5.8
ICE BofA U.S. High Yield Index	5.3	8.0	15.7	3.1	4.5

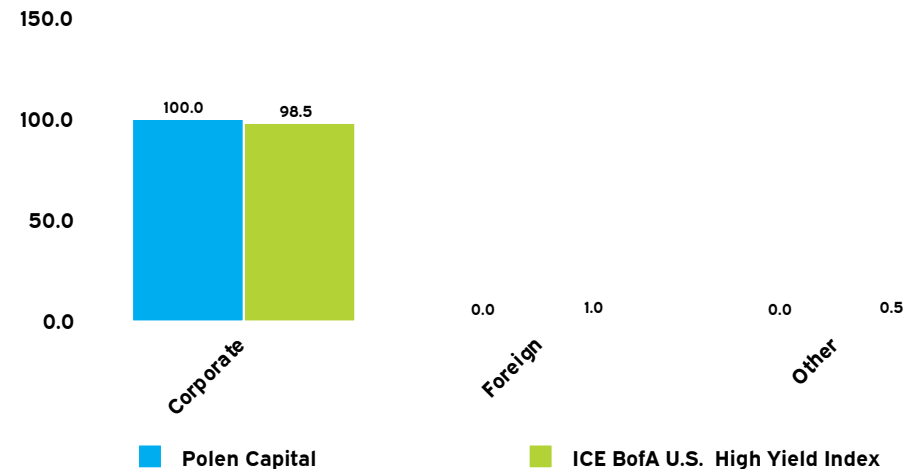
Portfolio Fixed Income Characteristics

	Q3-24 Portfolio	Q2-24 Portfolio
Yield To Maturity	9.0	9.7
Average Duration	2.0	2.1
Average Quality	B	B
Weighted Average Maturity	4.8	4.9

Credit Quality Allocation



Sector Allocation

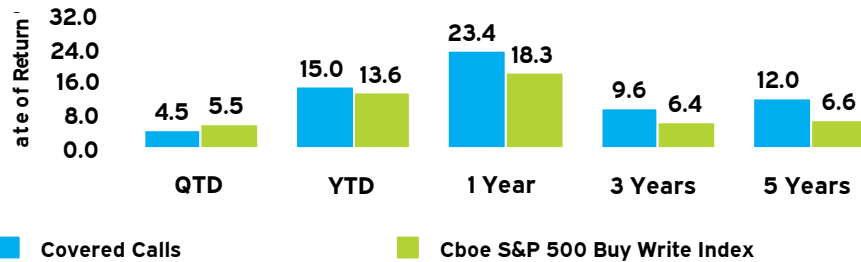


Performance shown is net of fees.

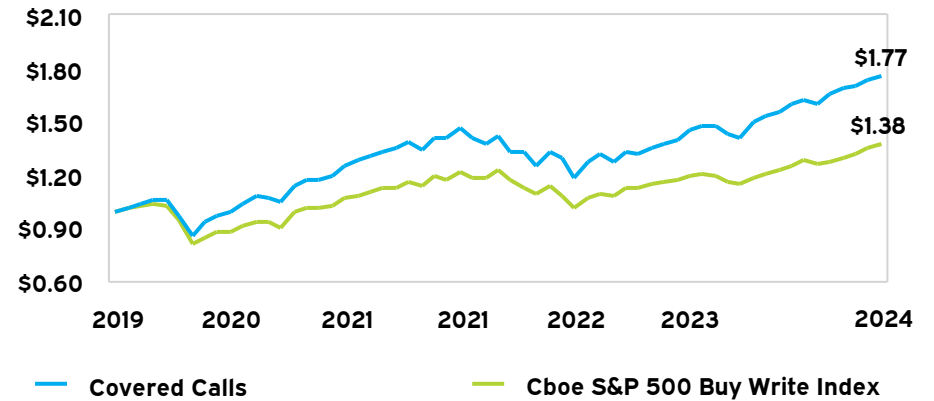
Covered Calls | As of September 30, 2024

	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Covered Calls	9.8	11.2	3.2	1.0	0.8	4.0	123.9	105.4	04/01/2014
Cboe S&P 500 Buy Write Index	6.3	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric BXM	7.8	9.2	2.3	0.9	0.4	3.1	99.7	85.9	04/01/2014
Cboe S&P 500 Buy Write Index	6.3	10.2	0.0	1.0	-	0.0	100.0	100.0	
Parametric DeltaShift	11.9	13.5	4.3	1.2	0.9	6.2	147.2	122.3	04/01/2014
Cboe S&P 500 Buy Write Index	6.3	10.2	0.0	1.0	-	0.0	100.0	100.0	

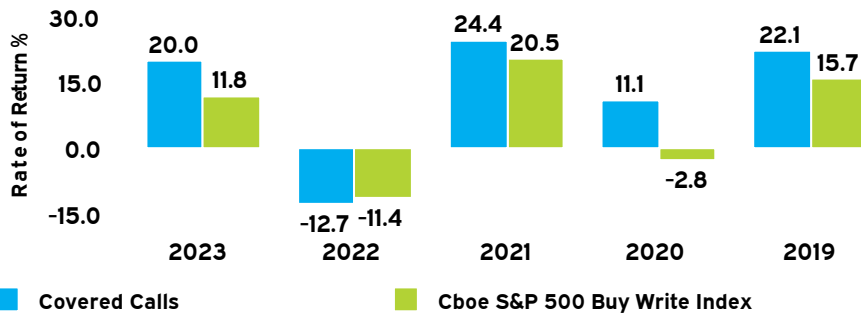
Trailing Period Performance



Growth of a Dollar



Calendar Year Performance



Performance shown is net of fees.

Crisis Risk Offset | As of September 30, 2024

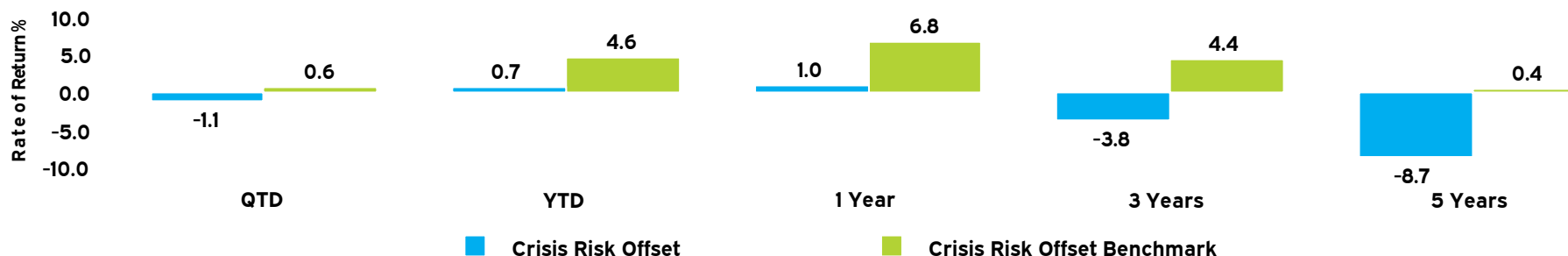
	Return	Standard Deviation	Alpha	Beta	Information Ratio	Tracking Error	Up Capture	Down Capture	Inception Date
Crisis Risk Offset	-6.6	10.5	-6.8	0.8	-0.7	9.7	31.5	128.5	08/01/2018
Crisis Risk Offset Benchmark	0.8	5.3	0.0	1.0	-	0.0	100.0	100.0	
Kepos Alternative Risk Premia	8.0	6.4	1.9	0.9	0.2	4.8	101.9	80.4	02/01/2022
SG Multi Alternative Risk Premia Index	7.0	5.0	0.0	1.0	-	0.0	100.0	100.0	
Versor Trend Following	-4.3	14.4	-6.4	1.0	-1.0	6.7	77.2	113.9	04/01/2022
SG Trend Index	2.4	12.5	0.0	1.0	-	0.0	100.0	100.0	
Vanguard Long-Term Treasury ETF	-2.7	14.9	0.0	1.0	0.0	1.0	100.9	100.9	07/01/2019
Blmbg. U.S. Government: Long Term Bond Index	-2.7	14.8	0.0	1.0	-	0.0	100.0	100.0	

Correlation Matrix

3 Months Ending September 30, 2024

	Crisis Risk Offset	MSCI AC World Index Value	S&P 500 Index	Blmbg. Global Aggregate Index
Crisis Risk Offset	1.00			
MSCI AC World Index Value	0.16	1.00		
S&P 500 Index	-0.61	-0.88	1.00	
Blmbg. Global Aggregate Index	-0.24	0.92	-0.62	1.00

Trailing Period Performance



Performance shown is net of fees.

Benchmark History

From Date	To Date	Benchmark
OPFRS Total Plan		
07/01/2024	Present	34.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 44.0% Blmbg. U.S. Universal Index, 10.0% Crisis Risk Offset Benchmark
06/01/2022	07/01/2024	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA (Net), 31.0% Blmbg. U.S. Universal Index, 2.0% Blmbg. U.S. Corp: High Yield Index, 5.0% Cboe S&P 500 Buy Write Index, 10.0% Crisis Risk Offset Benchmark
01/01/2019	06/01/2022	40.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 31.0% Blmbg. U.S. Universal Index, 5.0% Cboe S&P 500 Buy Write Index, 2.0% Blmbg. U.S. Treasury: Long, 10.0% Crisis Risk Offset Benchmark
05/01/2016	01/01/2019	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 20.0% CBOE BXM
10/01/2015	05/01/2016	43.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 15.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
01/01/2014	10/01/2015	48.0% Russell 3000 Index, 12.0% MSCI AC World ex USA index, 20.0% Blmbg. U.S. Universal Index, 10.0% CBOE BXM, 10.0% CPI - All Urban Consumers (unadjusted) +3%
03/01/2013	01/01/2014	40.0% Russell 3000 Index, 10.0% MSCI AC World ex USA index, 17.0% Blmbg. U.S. Universal Index, 33.0% ICE BofA 3 Month U.S. T-Bill
08/01/2012	03/01/2013	20.0% Russell 3000 Index, 7.0% MSCI AC World ex USA index, 18.0% Blmbg. U.S. Universal Index, 55.0% ICE BofA 3 Month U.S. T-Bill
10/01/2007	08/01/2012	53.0% Russell 3000 Index, 17.0% MSCI AC World ex USA index, 30.0% Blmbg. U.S. Universal Index
04/01/2006	10/01/2007	35.0% Russell 3000 Index, 15.0% MSCI AC World ex USA index, 50.0% Blmbg. U.S. Universal Index
01/01/2005	04/01/2006	35.0% Russell 3000 Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI AC World ex USA index
04/01/1998	01/01/2005	20.0% Russell 1000 Value Index, 10.0% Russell 1000 Index, 5.0% Russell Midcap Index, 50.0% Blmbg. U.S. Aggregate Index, 15.0% MSCI EAFE (Net)
01/01/1978	04/01/1998	40.0% S&P 500 Index, 55.0% Blmbg. U.S. Aggregate Index, 5.0% FTSE 3 Month T-Bill

Benchmark History

From Date	To Date	Benchmark
Domestic Equity		
01/01/2005	Present	100.0% Russell 3000 Index
04/01/1998	01/01/2005	57.1% Russell 1000 Value Index, 28.6% Russell 1000 Index, 14.3% Russell Midcap Index
09/01/1988	04/01/1998	100.0% S&P 500 Index
International Equity		
01/01/2005	Present	100.0% MSCI AC World ex USA (Net)
01/01/1998	01/01/2005	100.0% MSCI EAFE Index
Fixed Income		
04/01/2006	Present	100.0% Blmbg. U.S. Universal Index
01/01/1976	04/01/2006	100.0% Blmbg. U.S. Aggregate Index
Covered Calls		
04/01/2014	Present	Cboe S&P 500 Buy Write Index
Crisis Risk Offset		
01/01/2023	Present	33.3% SG Trend Index, 33.3% SG Multi Alternative Risk Premia Index, 33.3% Blmbg. U.S. Government: Long Term Bond Index
08/01/2018	01/01/2023	100.0% SG Multi Alternative Risk Premia Index
Cash		
03/01/2011	Present	FTSE 3 Month T-Bill

Manager Monitoring / Probation Status

Managers on Watch / Probation Status

Manager & Strategy	Concern Triggering Watch Status	Date of Corrective Action ¹	Months Since Placement	Performance ² Since Placement	Peer Group Rank Since Placement
Versor Trend Following	Organization / Performance	9/27/2023	12	-17.0	N/A
<i>Benchmark: SG Trend Index</i>	--	--	--	-2.9	--

Investment Manager Monitoring Criteria³

Investment managers are evaluated on ongoing and periodic basis using both quantitative performance criteria and qualitative aspects of the managers. The quantitative criteria for different asset classes are as follows:

Asset Class	Short-term (Rolling 12 months)	Medium-term (Rolling 36 months)	Long-term (60 + months)
Active US Equity	Fund return < benchmark return by 3.5%	Annualized Fund return < benchmark return by 1.75% for 6 consecutive months	VRR ⁴ < 0.97 for 6 consecutive months
Active Non-US Equity	Fund return < benchmark return by 4.5%	Annualized Fund return < benchmark return by 2.0% for 6 consecutive months	VRR < 0.97 for 6 consecutive months
Passive Non-US Equity	Tracking Error >0.50%	Tracking Error >0.45% for 6 consecutive months	Annualized Fund return < benchmark return by 0.4% for 6 consecutive months
Fixed Income	Fund return < benchmark return by 1.5%	Annualized Fund return < benchmark return by 1.0% for 6 consecutive months	VRR < 0.98 for 6 consecutive months

¹ Date when the Board voted to either monitor a manager at a heightened level or place it on probation.

² Performance Since Placement starts at the beginning of the full month following the date of corrective action. Performance shown is net of fees and annualized after one year mark.

³ Per Investment Policy Statement and Manager Guidelines ("IPS"), Revised 5/31/2023, section H. Currently, only Domestic Equity, International Equity, and Fixed Income have stated quantitative monitoring criteria in the IPS.

⁴ VRR (Value Relative Ratio) is calculated as manager cumulative return/ benchmark cumulative return.

Appendix

Additional Information

Performance Return Types: Performance shown is net of fees, except for OPFRS Total Plan, Domestic Equity, and International Equity Composites, which have a mix of gross and net of fees performance. Performance shown for OPFRS Total Plan and International Equity composite is gross of fees prior to January 2016. Performance shown for Domestic Equity composite is gross of fees prior to January 2017.

Inception Date: Since inception date and performance begin in the month following an investments initial funding.

Fiscal Year: Fiscal year begins on July 1.

Fair Value Pricing Methodology: Though Vanguard Developed Markets ETF is a passive strategy, short-term performance may appear to diverge from the index it tracks more than would be expected. This is due to Fair Value Pricing (FVP) adjustments that address the pricing discrepancies that may arise from time-zone differences among global securities markets. The resulting temporary divergence is expected to correct itself when the foreign markets reopen.

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PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security).

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: [Investment Terminology](#), International Foundation of Employee Benefit Plans, 1999.
[The Handbook of Fixed Income Securities](#), Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

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Values shown are in millions of dollars, unless noted otherwise.