Investment Performance Services

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Operating Engineers Local No. 77 JATC Fund

Investment Performance Analysis - GCS
Period Ended
March 31, 2025

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Operating Engineers Local No. 77
JATC Fund

Market Discussion Q1 | 2025

Financial Market Performance – Periods Ending March 31, 2025

Strategy	Sector	Index	QTR	2024	2023	2022	2021	2020	2019	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	US Large Cap	S&P 500	-4.3%	25.0%	26.3%	-18.1%	28.7%	18.4%	31.5%	8.2%	9.0%	18.6%	12.5%	10.2%
	US Large Cap Growth	Russell 1000 Growth	-10.0%	33.4%	42.7%	-29.1%	27.6%	38.5%	36.4%	7.8%	10.1%	20.1%	15.1%	12.2%
	US Large Cap Value	Russell 1000 Value	2.1%	14.3%	11.4%	-7.6%	25.1%	2.8%	26.5%	7.2%	6.6%	16.1%	8.8%	8.0%
	US Small Cap	Russell 2000	-9.5%	11.5%	16.9%	-20.5%	14.8%	19.9%	25.5%	-4.0%	0.5%	13.2%	6.3%	7.5%
	Non-US Developed	MSCI EAFE (net)	6.9%	3.8%	18.2%	-14.5%	11.3%	7.8%	22.0%	4.9%	6.0%	11.8%	5.4%	5.2%
	Emerging Markets	MSCI EM (net)	2.9%	7.5%	9.8%	-20.1%	-2.5%	18.3%	18.4%	8.1%	1.4%	7.9%	3.7%	6.1%
	Int'l Small Cap	MSCI EAFE Small Cap (net)	3.7%	1.8%	13.2%	-21.4%	10.1%	12.3%	25.0%	3.1%	0.9%	9.9%	5.3%	5.7%
Bonds	Treasury	Bloomberg US Govt	2.9%	0.6%	4.1%	-12.3%	-2.3%	7.9%	6.8%	4.5%	0.0%	-1.6%	1.0%	2.7%
	Broad Market	Bloomberg Aggregate	2.8%	1.3%	5.5%	-13.0%	-1.5%	7.5%	8.7%	4.9%	0.5%	-0.4%	1.5%	3.2%
	Intermediate	Bloomberg Gov/Credit Int.	2.4%	3.0%	5.2%	-8.2%	-1.4%	6.4%	6.8%	5.7%	2.2%	0.9%	1.8%	3.1%
	High Yield	Bloomberg HY BaB 2% IC	1.2%	6.8%	12.6%	-10.6%	4.6%	7.7%	15.2%	6.7%	4.6%	6.7%	4.8%	6.2%
	Short Duration HY	ICE BofA 1-3 Yrs BB US Cash Pay HY	1.4%	6.7%	8.9%	-3.1%	3.2%	5.4%	8.7%	6.7%	5.5%	6.1%	4.4%	5.6%
	Global Bonds	FTSE WGBI	2.6%	-2.9%	5.2%	-18.3%	-7.0%	10.1%	5.9%	2.1%	-2.9%	-3.0%	-0.0%	1.5%
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	-0.2%	10.8%	17.0%	-18.1%	11.0%	14.6%	19.9%	5.4%	3.9%	9.3%	6.3%	5.9%
Real Estate	Core	NCREIF ODCE Equal Weighted (net)	0.8%	-2.4%	-13.4%	7.6%	21.9%	0.8%	5.2%	0.7%	-5.3%	2.3%	5.0%	5.4%
Hedge Fund of Funds	Diversified FOFs	HFRI FOF Composite	-0.6%	9.2%	6.1%	-5.3%	6.2%	10.9%	8.4%	4.1%	3.9%	7.1%	3.5%	3.3%
	Equity Long-Short	HFRI Equity Hedge	-1.4%	11.9%	11.4%	-10.1%	11.7%	17.9%	13.7%	4.9%	4.9%	11.2%	5.9%	5.4%
Commodities	Commodities	Goldman Sachs Commodity	4.9%	9.2%	-4.3%	26.0%	40.4%	-23.7%	17.6%	3.8%	1.3%	20.7%	2.6%	-2.6%

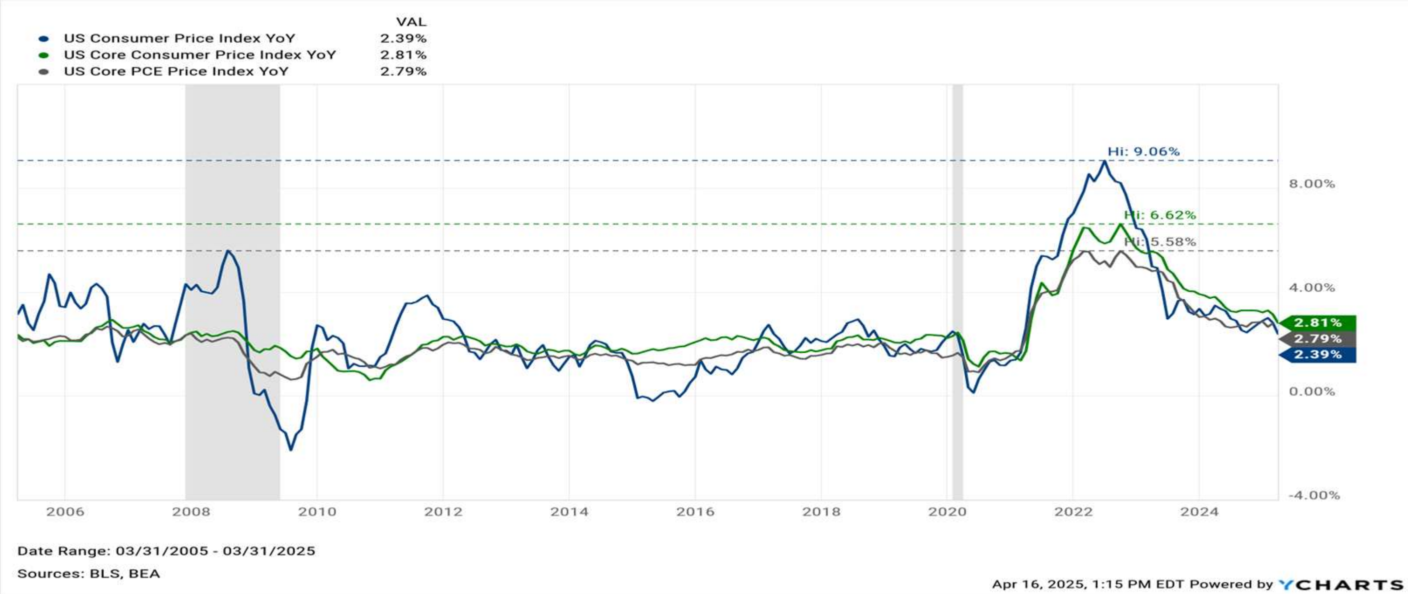
U.S. Economy

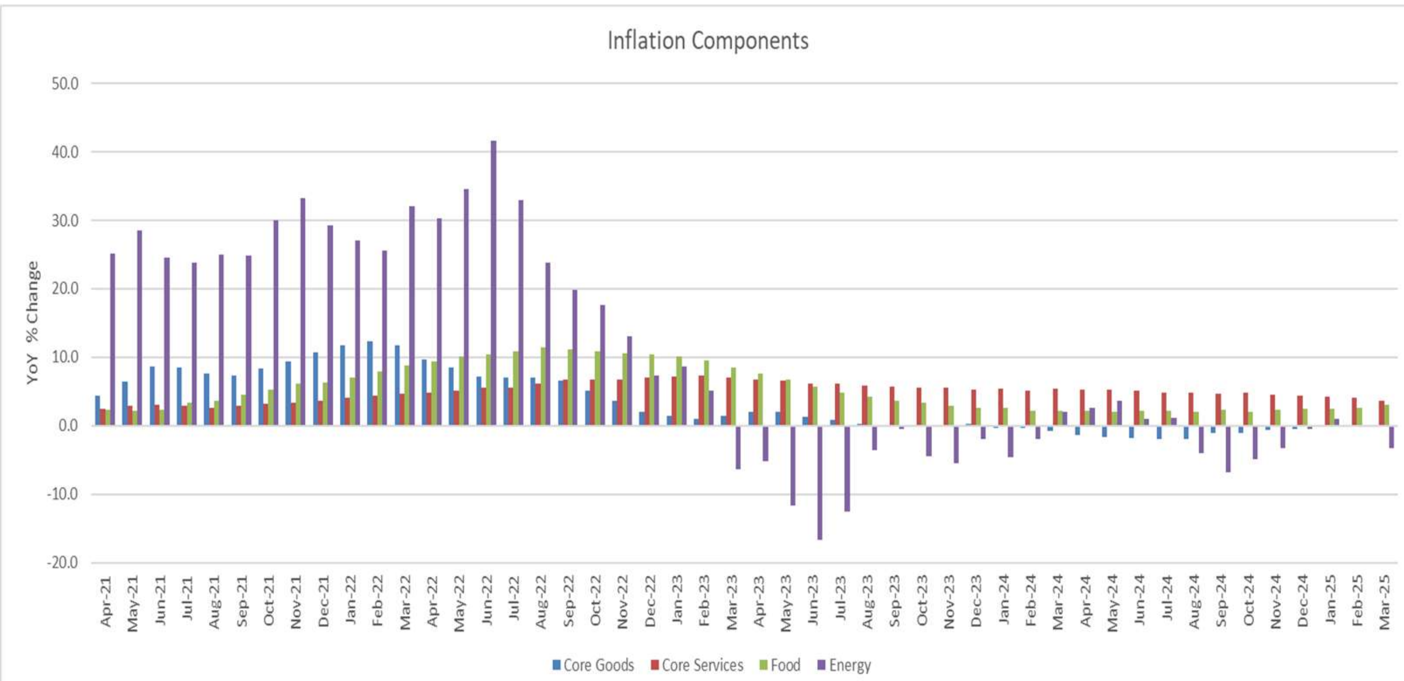
Sources: U.S. Bureau of Economic Analysis, Federal Reserve, Atlanta Federal Reserve

U.S. Economic Growth Slowing?

- U.S. GDP grew at a rate of 2.4% in Q4 2024, exceeding 2.0% for the ninth time in the last ten quarters. In 2024, GDP grew by 2.8%, compared to 2.9% in 2023.
- Q4 2024 GDP growth was primarily driven by increases in consumer and government spending, partially offset by a decrease in investment.
- Despite strong growth in 2024, the Federal Reserve has recently downgraded their 2025 growth forecast in from 2.1% to 1.7% due to "uncertainty around the economic outlook has increased."
- As of April 9th, the Atlanta Federal Reserve projects GDP growth of -2.2% for 1Q 2025.
- After 25 consecutive months of negative real wage growth for U.S. workers, higher wages and slowing inflation have more recently resulted in 23 consecutive months of real earnings growth, supporting consumer spending to date.

U.S. Economy

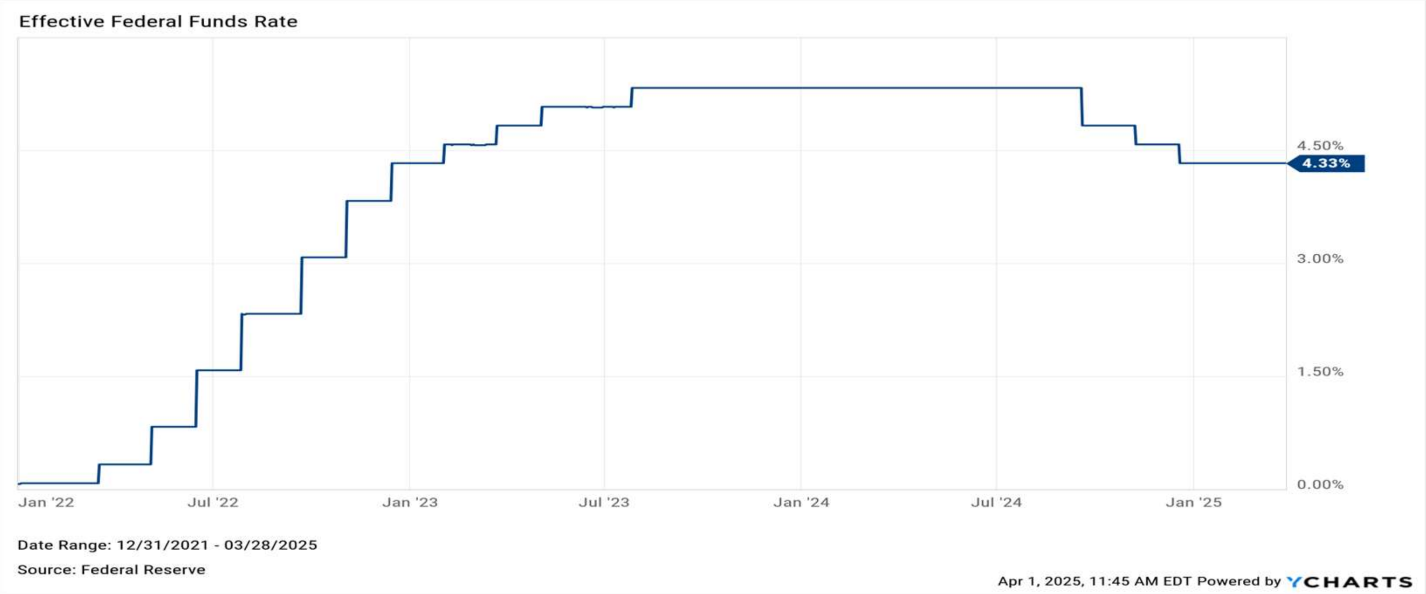


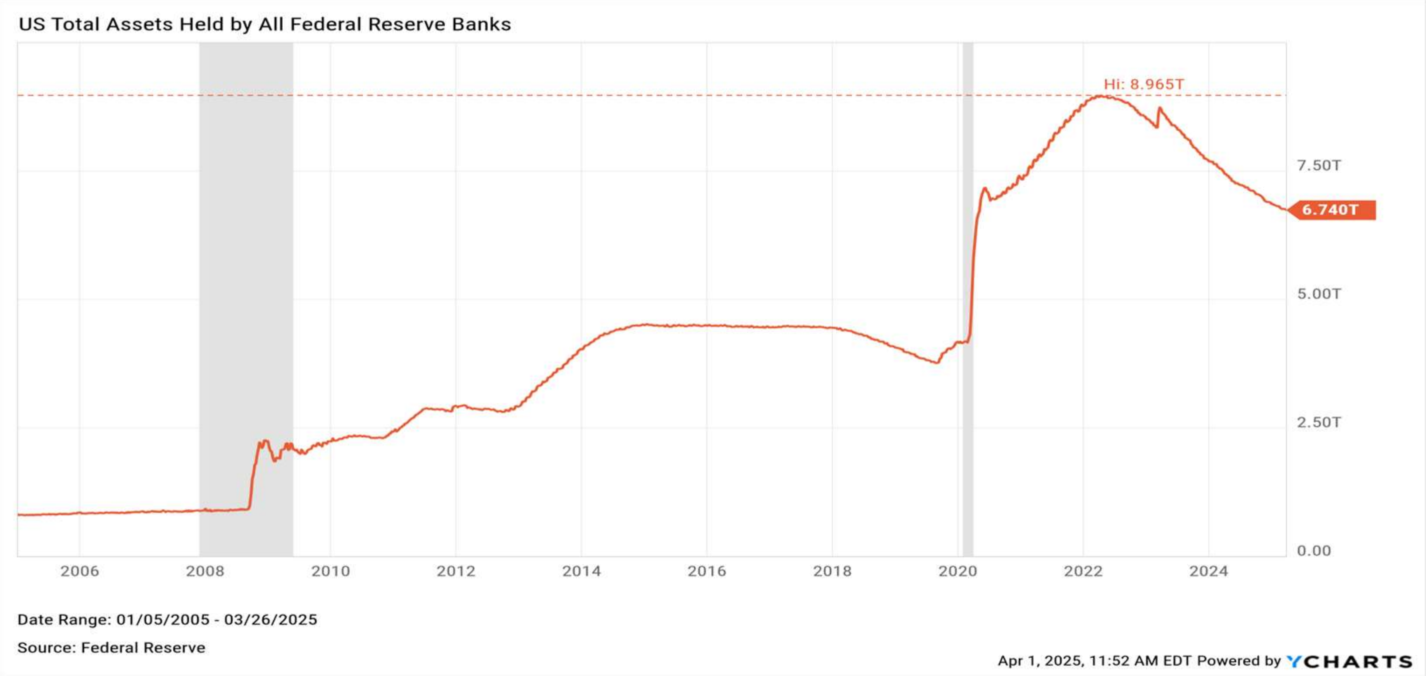


Inflation Cools in Q1 2025

- March CPI declined by 0.1% month-over-month and year-over-year inflation fell from 2.8% in February to 2.4% in March.
- A decline in the cost of energy, driven by lower gasoline prices, contributed to the lower-than-expected inflation reading. The increase in the cost of shelter moderated to 4.0% year-over-year, the smallest increase since November 2021.
- Excluding food and energy, core inflation increased by 0.1% in March and 2.8% vs. a year ago, the lowest since March 2021.
- Year-over-year core goods inflation has now been negative for 15 consecutive months, driven by falling auto prices. Service inflation remains elevated; however, the March reading of 3.7% was the lowest since November 2021.
- Core Personal Consumption Expenditures (PCE), the Fed's preferred inflation measure, increased by 2.8% over the last year through February.

U.S. Economy

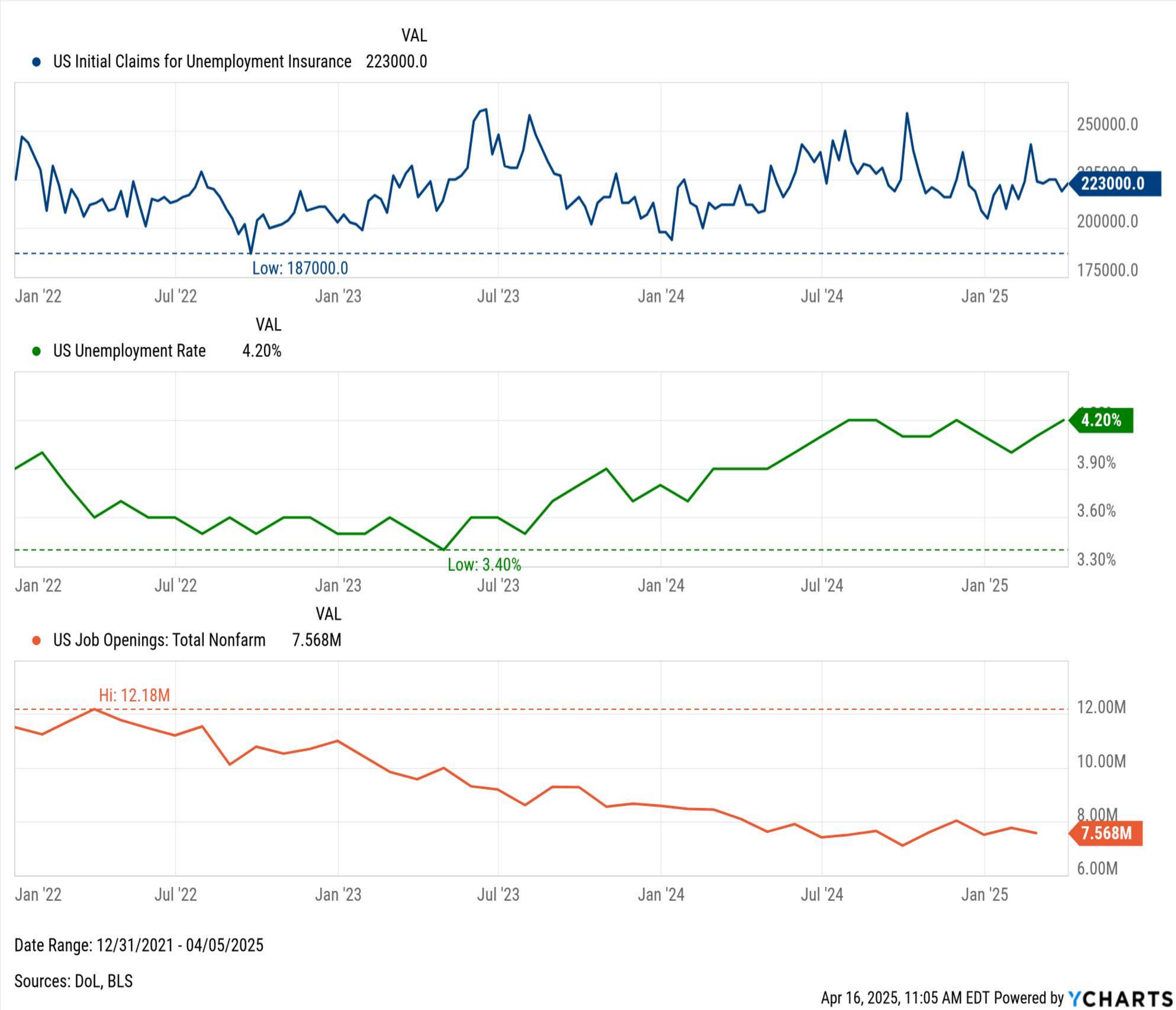




Fed Remains on Hold Amid Growing Economic Uncertainty

- The Fed unanimously voted in March to hold interest rates steady at 4.5% for a second consecutive meeting, following three consecutive rate reductions that began last September.
- Fed Chairman Powell cited steady economic progress and a solid labor market as reasons for no change to the Fed Funds rate.
- The Effective Fed Funds Rate remains at the lowest level since January 2023.
- Forward guidance from the Fed at the March meeting was unchanged, suggesting 50 bps in cuts in 2025 followed by an additional 50 bps in cuts in 2026. Market expectations are for 75 bps in cuts in 2025.
- The Fed reduced the size of the balance sheet through quantitative tightening by approximately $2.3 trillion since the peak in April 2022.
- The balance sheet is at the lowest level since May 2020, but remains significantly larger than pre-COVID.

U.S. Economy



Labor Market Remains Reasonably Healthy in 2025

- Nonfarm payrolls surged by 228,000 in March, up from an average of 114,00 in the first two months of the year and above the forecast of 140,000.
- Weekly claims for unemployment averaged 221,214 year to date in 2025, in line with the 2024 average of 223,000.
- Despite strong job gains in March, the unemployment rate increased to 4.2% as labor force participation also increased. The unemployment rate has been at or above 4.0% since May 2024, following 27 consecutive months below 4.0%.
- Despite a small uptick in 2025, job openings are approximately 4.5 million below the peak in 2022 of 12.2 million.

U.S. Equity Market

	Index	1Q25	2024	2023	2022	2021	2020	2019	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	-4.3%	25.0%	26.3%	-18.1%	28.7%	18.4%	31.5%	8.2%	9.0%	18.6%	12.5%
	Russell 1000	-4.5%	24.5%	26.5%	-19.1%	26.4%	21.0%	31.4%	7.8%	8.6%	18.4%	12.2%
	Russell 1000 Value	2.1%	14.3%	11.4%	-7.6%	25.1%	2.8%	26.5%	7.2%	6.6%	16.1%	8.8%
	Russell 1000 Growth	-10.0%	33.4%	42.7%	-29.1%	27.6%	38.5%	36.4%	7.8%	10.1%	20.1%	15.1%
Mid Cap	Russell Mid-Cap	-3.4%	15.3%	17.2%	-17.3%	22.6%	17.1%	30.5%	2.6%	4.6%	16.3%	8.8%
	Russell Mid-Cap Value	-2.1%	13.1%	12.7%	-12.1%	28.3%	5.0%	27.0%	2.3%	3.8%	16.7%	7.6%
	Russell Mid-Cap Growth	-7.1%	22.1%	25.9%	-26.7%	12.7%	35.6%	35.5%	3.6%	6.2%	14.9%	10.1%
Small Cap	Russell 2000	-9.5%	11.5%	16.9%	-20.5%	14.8%	19.9%	25.5%	-4.0%	0.5%	13.2%	6.3%
	Russell 2000 Value	-7.7%	8.0%	14.6%	-14.5%	28.2%	4.6%	22.4%	-3.1%	0.0%	15.3%	6.0%
	Russell 2000 Growth	-11.1%	15.2%	18.6%	-26.4%	2.8%	34.6%	28.4%	-4.9%	0.8%	10.7%	6.1%
Total Market	Wilshire 5000	-4.8%	23.8%	26.1%	-19.0%	26.7%	20.8%	31.0%	7.1%	8.2%	18.3%	12.0%
	Russell 3000	-4.7%	23.8%	25.9%	-19.2%	25.6%	20.9%	31.0%	7.2%	8.2%	18.2%	11.8%

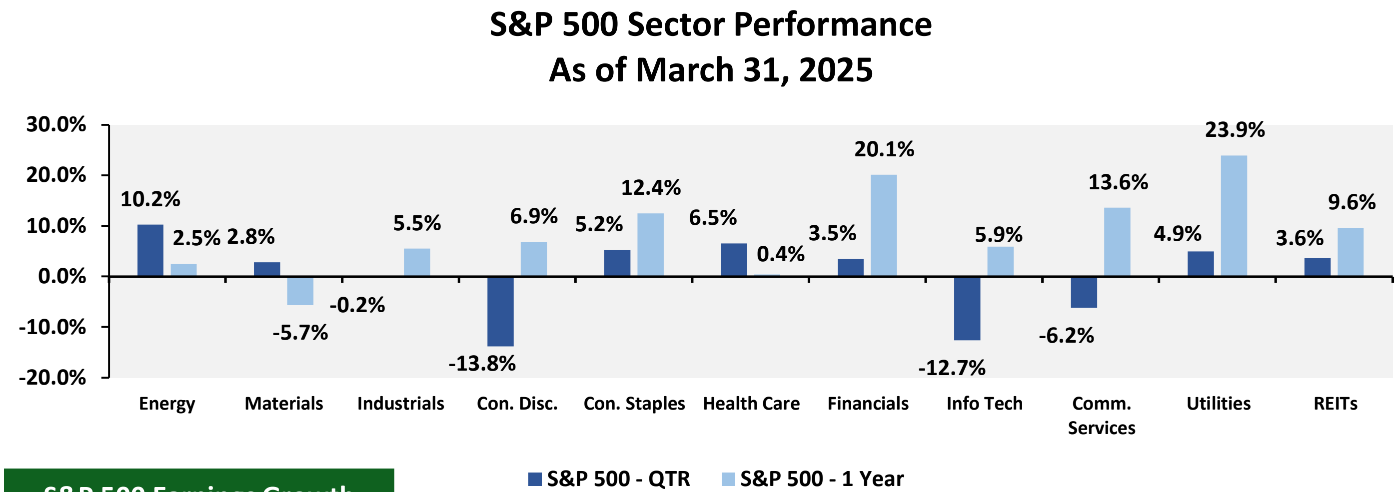
Russell 3000 Top Ten Holdings

Name	Weight*	2024	Q1 2025	% Off High
APPLE	6.3%	30.7%	-11.2%	-14.2%
NVIDIA	5.6%	171.2%	-19.3%	-27.5%
MICROSOFT	5.5%	12.9%	-10.8%	-19.7%
AMAZON	3.6%	44.4%	-13.3%	-21.4%
ALPHABET	3.6%	35.6%	-17.9%	-24.8%
META	2.3%	66.0%	-1.5%	-21.8%
TESLA	2.0%	62.5%	-35.8%	-46.0%
BROADCOM	1.9%	110.4%	-27.6%	-33.0%
BERKSHIRE HATHAWAY	1.5%	27.1%	17.5%	-0.4%
JPMORGAN	1.2%	44.3%	2.9%	-12.4%

* As of 12/31/24

- After a 58% cumulative return over the past two years—the best since 1998—the S&P 500 endured a 10% pullback in the latter part of Q1 2025, resulting in a -4.3% quarterly return, its steepest quarterly drop since the peak of the rate-hiking cycle in Q3 2022.
- The Q1 2025 selloff was driven by a few main factors: 1) momentum unwind, 2) growth slowdown, and 3) tariff uncertainty. These combined forces have stalled the market's previous one-way direction for mega-cap companies.
- Strong earnings expectations for 2025 initially drove the market higher at the start of the quarter. However, tariff uncertainty dampened consumer and business confidence, while waning optimism around artificial intelligence (AI) also shifted market sentiment, contributing to the S&P 500's correction in Q1 2025.

U.S. Equity Market

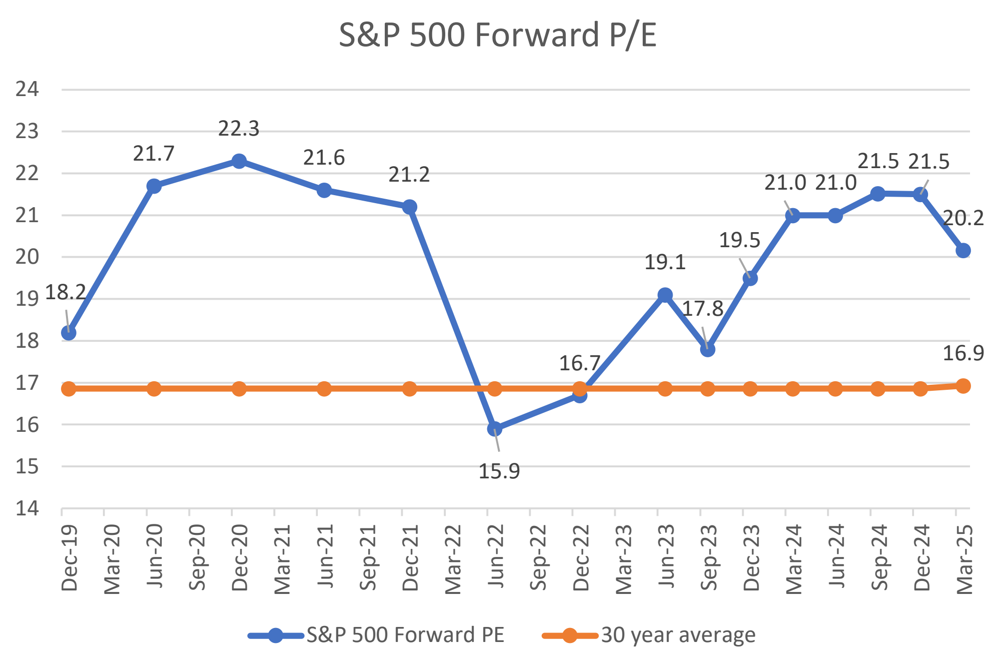


Sector Gains Overshadowed by Tech Losses

- Many sectors outside of mega-caps/Magnificent Seven were positive in Q1 2025, but the substantial weight of tech, consumer discretionary, and communication services—over 52% of the index—meant their sizable declines had a considerable negative impact on overall performance, outweighing gains in other sectors.
- The AI model "DeepSeek," created in China, was shown to rival market leaders at a fraction of the cost, prompting investors to reassess expectations around AI and U.S. market dominance.
- The rise of an affordable Chinese AI model led market participants to question the value of hyperscalers' massive investments in AI, semiconductors, data centers, and utilities.
- This AI "Sputnik" moment began deflating the AI narrative, weighed heavily on the Magnificent Seven, and caused the rotation of assets elsewhere.

S&P 500 Earnings Growth Expectations Moderate

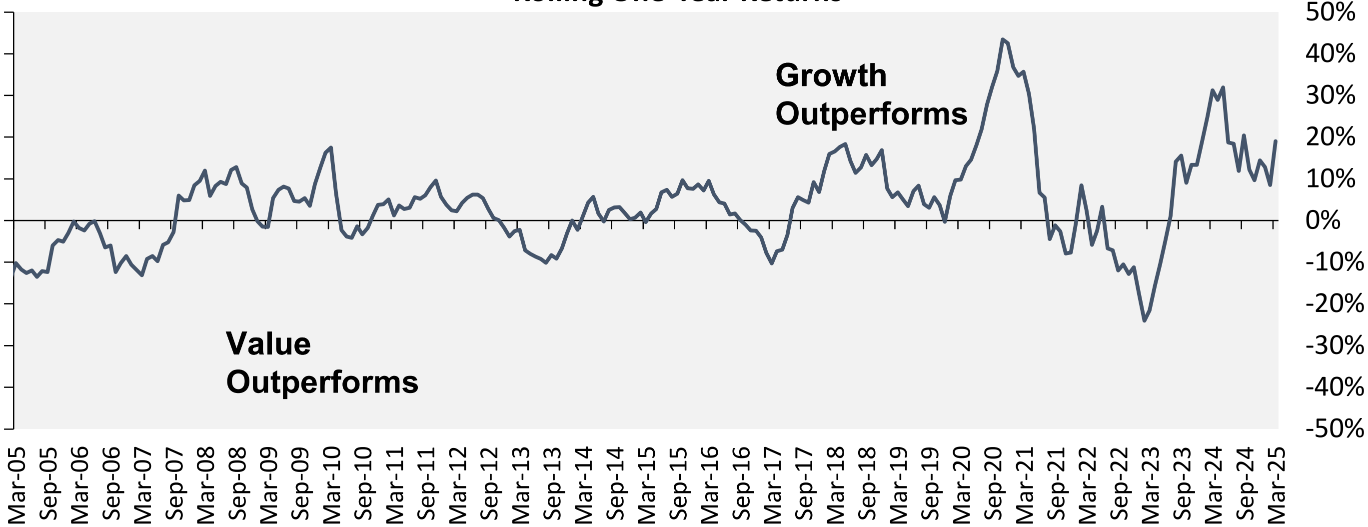
- Analyst estimates for S&P 500 earnings growth for 2025 have moderated from 14.8% at the start of the year to 11.5%, while revenue growth has seen a slight drop from 5.8% to 5.4%. For Q1 2025, analysts anticipate EPS growth of 7.3% and revenue growth of 4.2%.
- The S&P 500's forward P/E ratio remains above its historical average, having decreased as stock prices have fallen more than earnings expectations, which, while not as optimistic, remain solid.



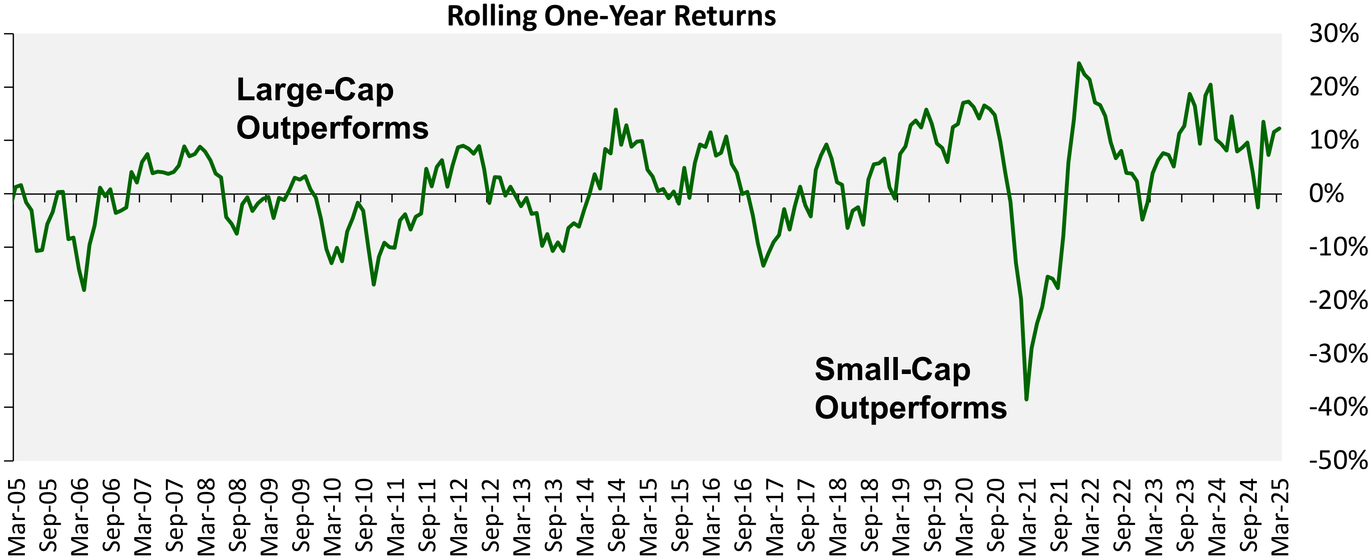
Source: J.P. Morgan Asset Management

U.S. Equity Market

Russell 1000 Growth vs. Russell 1000 Value
Rolling One-Year Returns



S&P 500 vs. Russell 2000
Rolling One-Year Returns



Rotation Benefits Large Value, Small Caps Lag

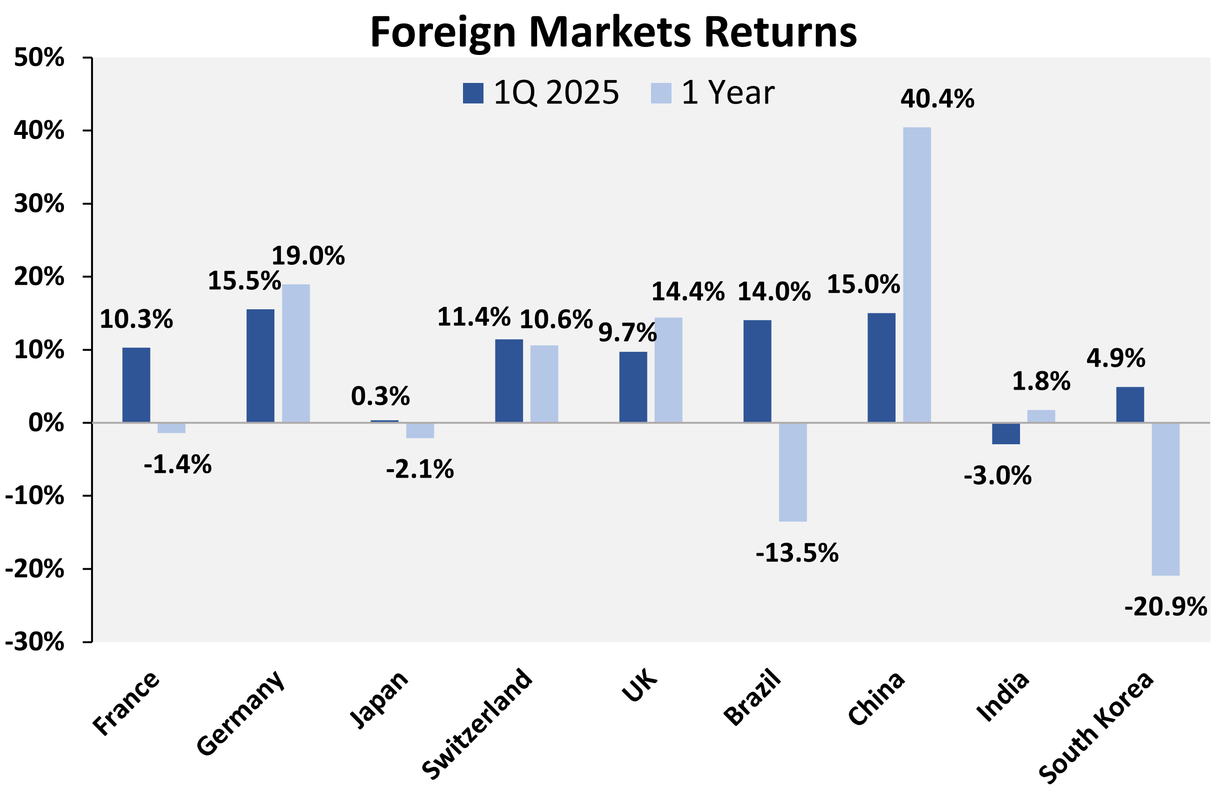
- The rotation out of mega-cap growth stocks bypassed small caps, with most flows directed towards U.S. large value (+2.1%) and non-U.S. markets. Tariff uncertainty, volatile policy shifts, and continuous inflation fears weighed heavily on small stocks in Q1 2025.

- Unlike its large-cap counterparts, the Russell 2000's Q1 2025 sell-off was more broad-based across sectors. Ten of the eleven sectors detracted from performance, with the most significant declines in information technology, industrials, health care, and consumer discretionary. Utilities were the only sector to generate a positive return, albeit modestly.

- The market recognized that smaller companies, with limited pricing power, revenue diversification, and financing options, were less equipped to navigate these policy challenges, maintaining pressure on them.

International Equity Market

	Index	1Q25	2024	2023	2022	2021	2020	2019	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	-1.3%	17.5%	22.2%	-18.4%	18.5%	16.3%	26.6%	7.2%	6.9%	15.2%	8.8%
	MSCI World Small Cap (net)	-3.7%	8.2%	15.8%	-18.8%	15.8%	16.0%	26.2%	-0.3%	1.6%	13.4%	6.5%
	MSCI World ex US (net)	6.2%	4.7%	17.9%	-14.3%	12.6%	7.6%	22.5%	5.3%	5.7%	12.2%	5.5%
	MSCI World ex US Small Cap (net)	3.4%	2.8%	12.6%	-20.6%	11.1%	12.8%	25.4%	3.6%	0.8%	10.7%	5.4%
Developed ex US	MSCI EAFE (net)	6.9%	3.8%	18.2%	-14.5%	11.3%	7.8%	22.0%	4.9%	6.0%	11.8%	5.4%
	MSCI EAFE Value (net)	11.6%	5.7%	19.0%	-5.6%	10.9%	-2.6%	16.1%	12.8%	9.7%	14.8%	5.1%
	MSCI EAFE Growth (net)	2.1%	2.0%	17.6%	-22.9%	11.3%	18.3%	27.9%	-2.6%	2.4%	8.5%	5.5%
	MSCI EAFE Small Cap (net)	3.7%	1.8%	13.2%	-21.4%	10.1%	12.3%	25.0%	3.1%	0.9%	9.9%	5.3%
Emerging Markets	MSCI Emerging Markets (net)	2.9%	7.5%	9.8%	-20.1%	-2.5%	18.3%	18.4%	8.1%	1.4%	7.9%	3.7%

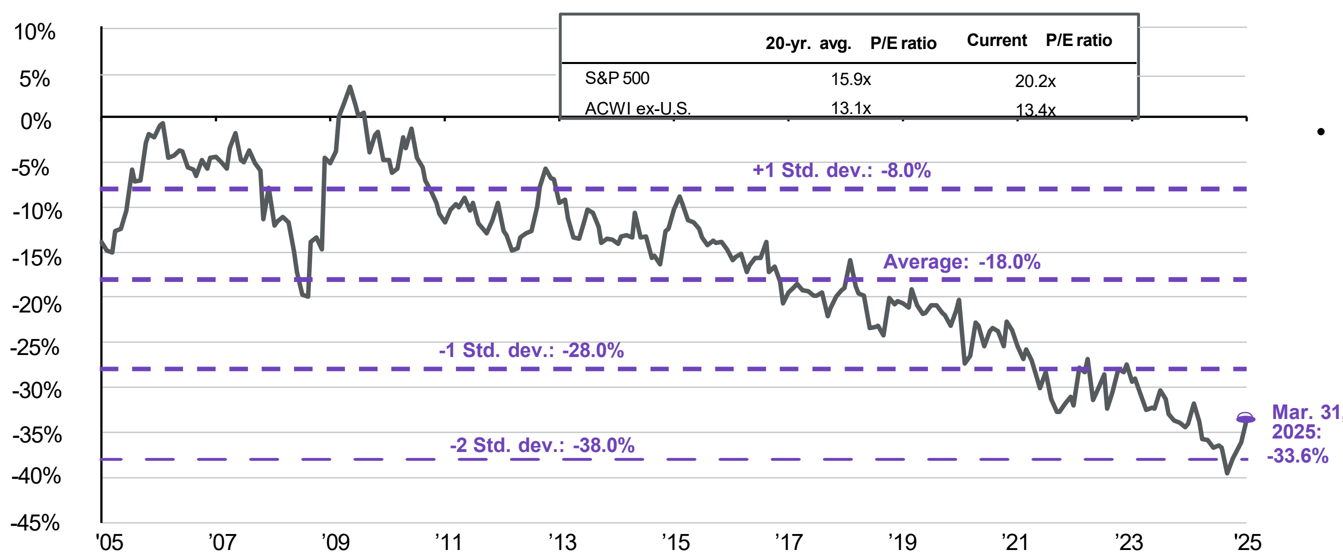


- Non-U.S. stocks experienced a significant rebound in Q1 2025, bouncing back from a difficult finish to the previous year. This recovery was partially attributed to the depreciation of the U.S. dollar, although other contributing factors also played a role in boosting international equities' performance.
- Germany and other European nations are expected to ramp up fiscal stimulus, increase defense spending, and reduce their dependence on long-standing EU constraints. While European equity markets have begun to reflect growth expectations, this comes after a period of relative underperformance. It remains to be seen if the momentum can be sustained, particularly if the U.S. tariffs that were announced post-Q1 are lasting.
- Chinese equities saw a strong rally in Q1 2025, driven by impressive returns in major tech and discretionary stocks following the DeepSeek AI model release and a series of government stimulus measures. An escalating trade war with the U.S. has the potential to undercut these gains.

International Equity Market & Currencies

International: Price-to-earnings discount vs. U.S.

MSCI All Country World ex-U.S. vs. S&P 500, next 12 months



Source: J.P. Morgan Asset Management.

U.S. Dollar Faces Sharp Reversal in 2025

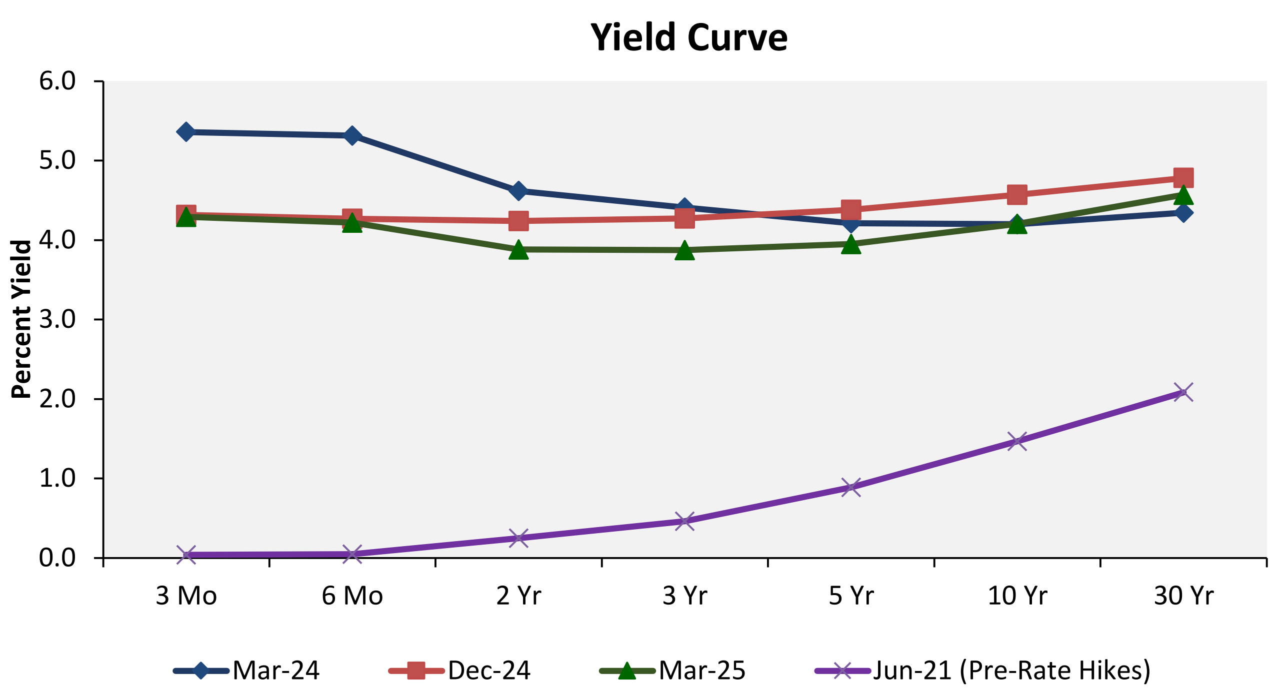
- The U.S. dollar experienced one of its strongest rallies in recent memory in late 2024. However, in Q1 2025, it faced a sharp reversal, driven in part by continued uncertainties surrounding tariff policies. This shift created a favorable environment for non-U.S. assets, particularly stocks, benefiting U.S. investors.

- Narrowing growth and interest rate gaps between the U.S. and other economies helped fuel broad foreign currency gains against the U.S. dollar. The Euro surged on improving economic conditions and strong fiscal support. In comparison, the Japanese yen benefited from rising inflation, higher rates, and diverging monetary policies with the U.S.

- Gold rallied past $3,100 per ounce as investors sought safety amid tariff concerns, rising deficits, and geopolitical risks. Prices in New York exceeded those in London due to fears of potential U.S. gold import tariffs. This gap led traders to buy gold in London at lower prices, refine it in Switzerland, and sell it in New York at a premium, further driving up U.S. prices.

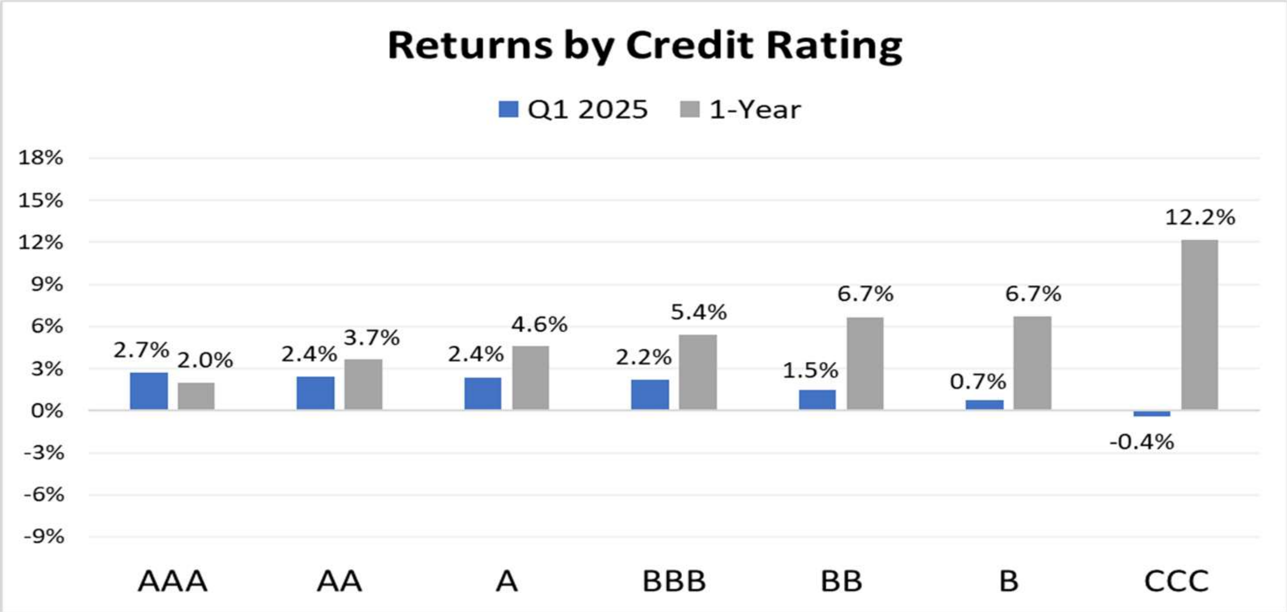
Bond Market

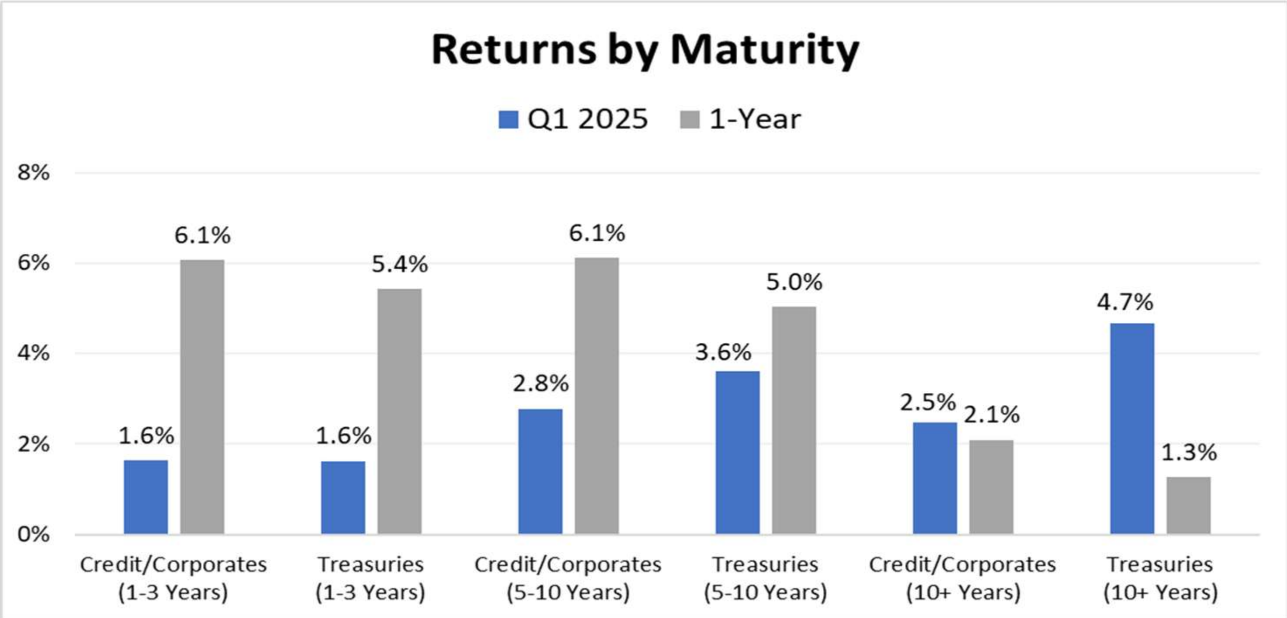
Index	Duration (years)	Yield	1Q25	2024	2023	2022	2021	2020	2019	1-Year	3-Year	5-Year	10-Year
Bloomberg Aggregate	6.1	4.60%	2.8%	1.3%	5.5%	-13.0%	-1.5%	7.5%	8.7%	4.9%	0.5%	-0.4%	1.5%
Bloomberg Govt/Credit	6.2	4.48%	2.7%	1.2%	5.7%	-13.6%	-1.7%	8.9%	9.7%	4.7%	0.4%	-0.3%	1.6%
Bloomberg Int Agg	4.4	4.47%	2.6%	2.5%	5.2%	-9.5%	-1.3%	5.6%	6.7%	5.6%	1.6%	0.4%	1.6%
Bloomberg Int Govt/Credit	3.8	4.26%	2.4%	3.0%	5.2%	-8.2%	-1.4%	6.4%	6.8%	5.7%	2.2%	0.9%	1.8%
Bloomberg U.S. Corporate	7.0	5.15%	2.3%	2.1%	8.5%	-15.8%	-1.0%	9.9%	14.5%	4.9%	1.1%	1.5%	2.4%
Bloomberg HY Ba/B 2% IC	3.5	6.98%	1.2%	6.8%	12.6%	-10.6%	4.6%	7.7%	15.2%	6.7%	4.6%	6.7%	4.8%
ICE BofA 1-3 Yrs BB US Cash Pay HY	1.9	6.02%	1.4%	6.7%	8.9%	-3.1%	3.2%	5.4%	8.7%	6.7%	5.5%	6.1%	4.4%
Bloomberg Mortgage	5.8	4.92%	3.1%	1.2%	5.0%	-11.8%	-1.0%	3.9%	6.4%	5.4%	0.6%	-0.7%	1.1%
Bloomberg Treasury	5.9	4.11%	2.9%	0.6%	4.1%	-12.5%	-2.3%	8.0%	6.9%	4.5%	-0.0%	-1.7%	1.0%
Bloomberg US TIPS	6.5	4.22%	4.2%	1.8%	3.9%	-11.8%	6.0%	11.0%	8.4%	6.2%	0.1%	2.4%	2.5%
BofA ML 91 day T-Bills	0.2	4.30%	1.0%	5.3%	5.2%	1.5%	0.0%	0.7%	2.3%	5.0%	4.3%	2.6%	1.9%



- In Q1 2025, U.S. Treasury yields fell by approximately 30-40 bps in a “flight to safety” as investors braced for equity market volatility.
- Fixed Income returns were positive in Q1 2025 as the decline in interest rates offset changes in credit spreads.
- Despite the volatility in equity markets, credit spreads only widened modestly in Q1 2025.
- Longer duration bonds and higher-quality credit were the best performing areas in fixed income.

Bond Market

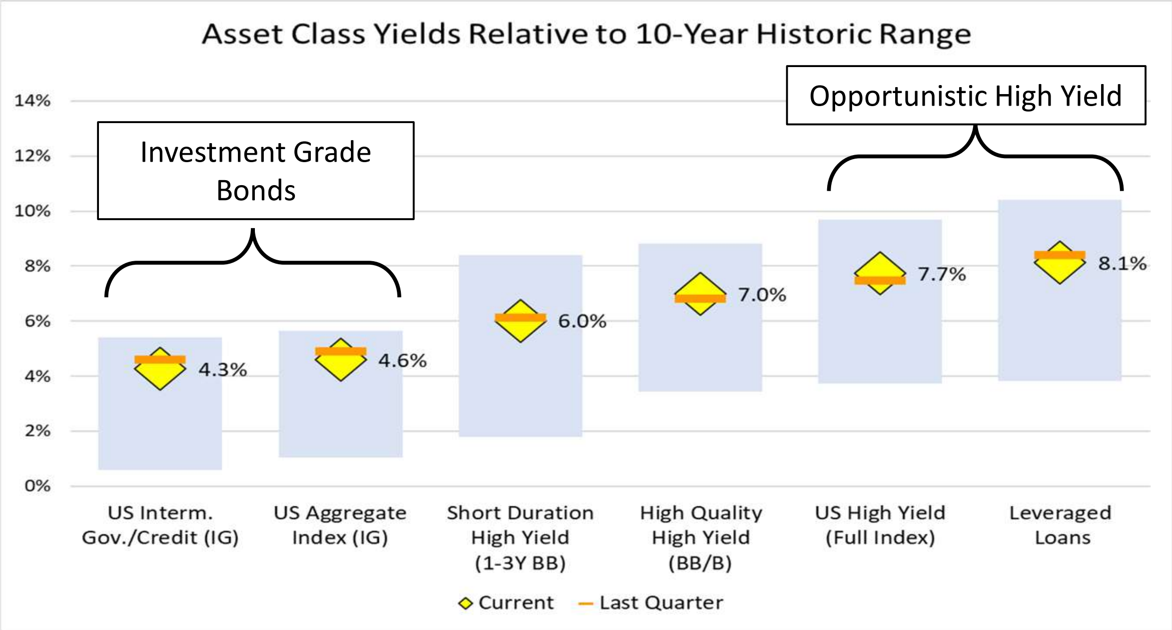


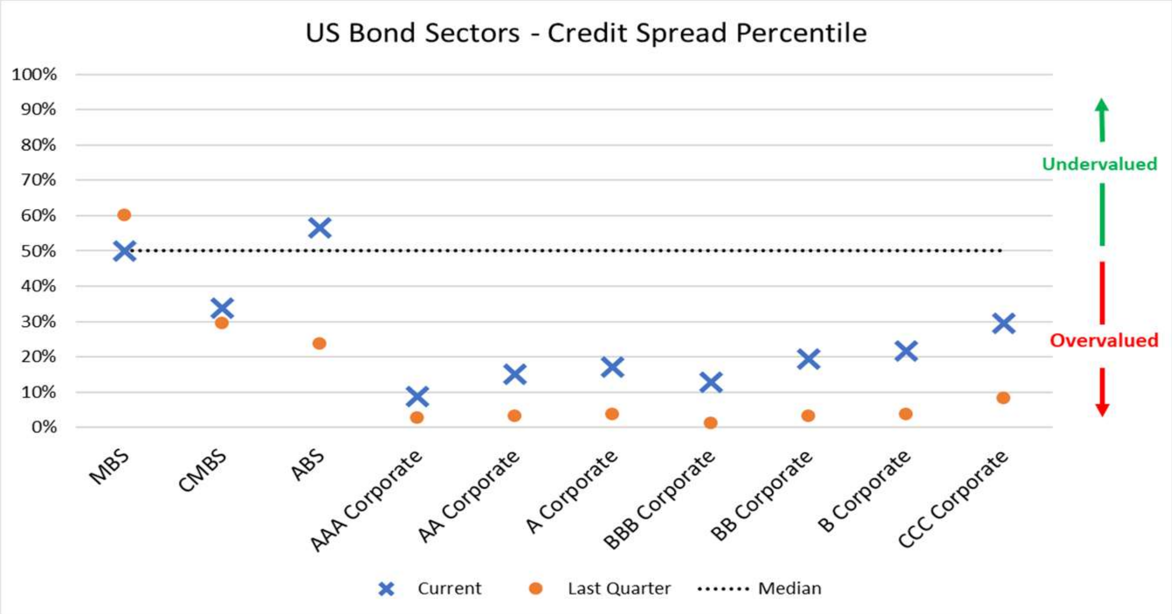


A Flight To Safety In Q1 2025 Led To Strong Fixed Income Returns

- U.S. Treasury yields fell in Q1 2025, as investors sought protection from declining equity markets.
- Investment grade fixed income outperformed high yield as longer maturity/duration bonds and higher-quality credit were the best performing areas of fixed income.
- Outperformance of longer duration bonds and high-quality credit is a reversal of what has been experienced in recent quarters.
- Higher starting yields and the decline in interest rates offset the effects of credit spread widening in Q1.
- High yield (BB-CCC) experienced more spread widening, relative to investment grade, but higher starting yields reduced the impact, resulting in positive returns for BB & Single-B rated bonds.
- Despite the volatility in equity markets, credit spreads experienced only modest widening during the quarter.

Bond Market





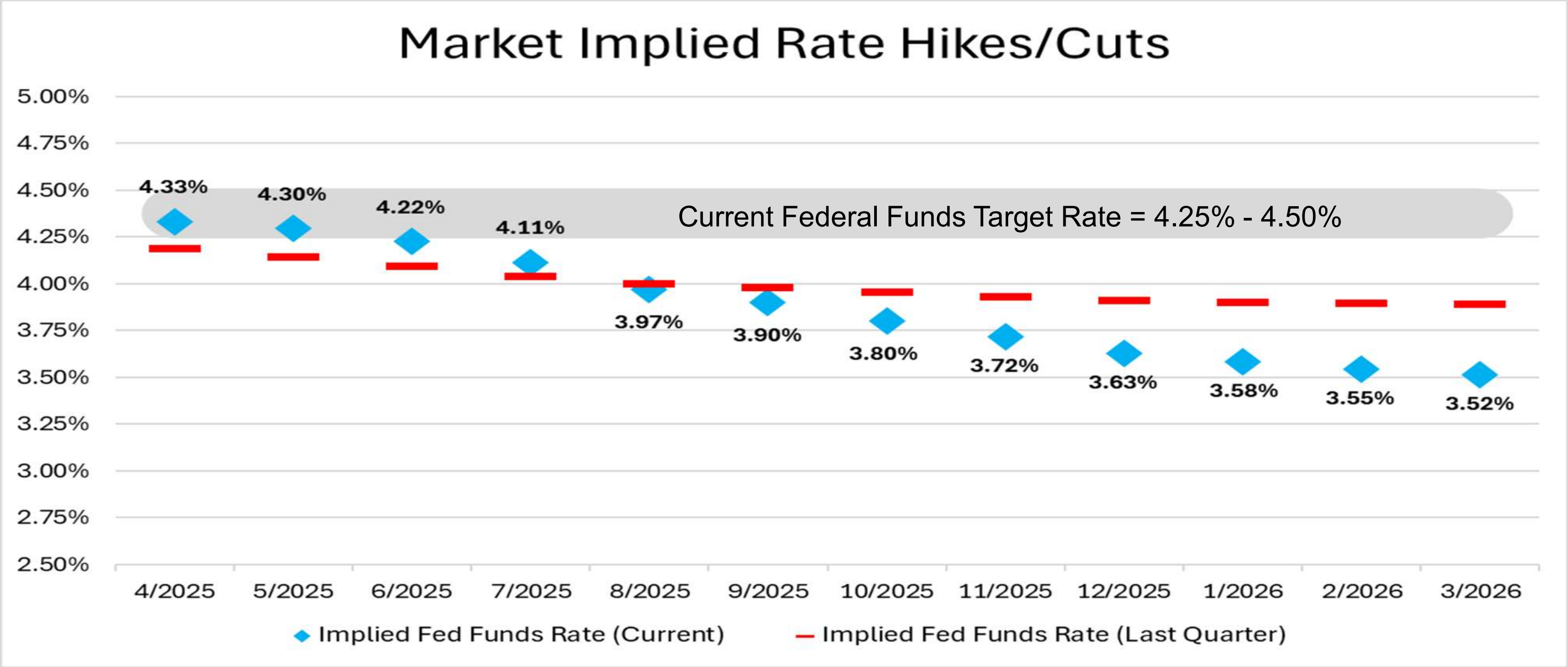
Bond Yields

- Investment grade yields moved lower in Q1 2025, largely driven by lower treasury rates. Non-investment grade yields pushed marginally higher due to modest credit spread widening.
- Investment grade (IG) bonds now yield between 4.0% and 4.5%, while non-IG credit yields range from 6% to 8%.
- Yields across fixed income continue to sit above their historical 10-year average, despite tight credit spreads.

Credit Spreads/Valuations

- Corporate credit experienced modest spread widening in Q1 2025. Credit spreads continue to remain tight relative to history.
- Credit spreads widened more for lower rated bonds in Q1 2025.
- Spreads in structured credit (MBS, CMBS, ABS) remain elevated, continuing to trade more cheaply relative to corporate credit.
- The spread widening in ABS markets in Q1 2025 is worth monitoring. This outsized move could potentially be liquidity driven or potentially signals broader concerns over the U.S. consumer as credit cards and auto loans make up a large portion of the market.

Bond Market

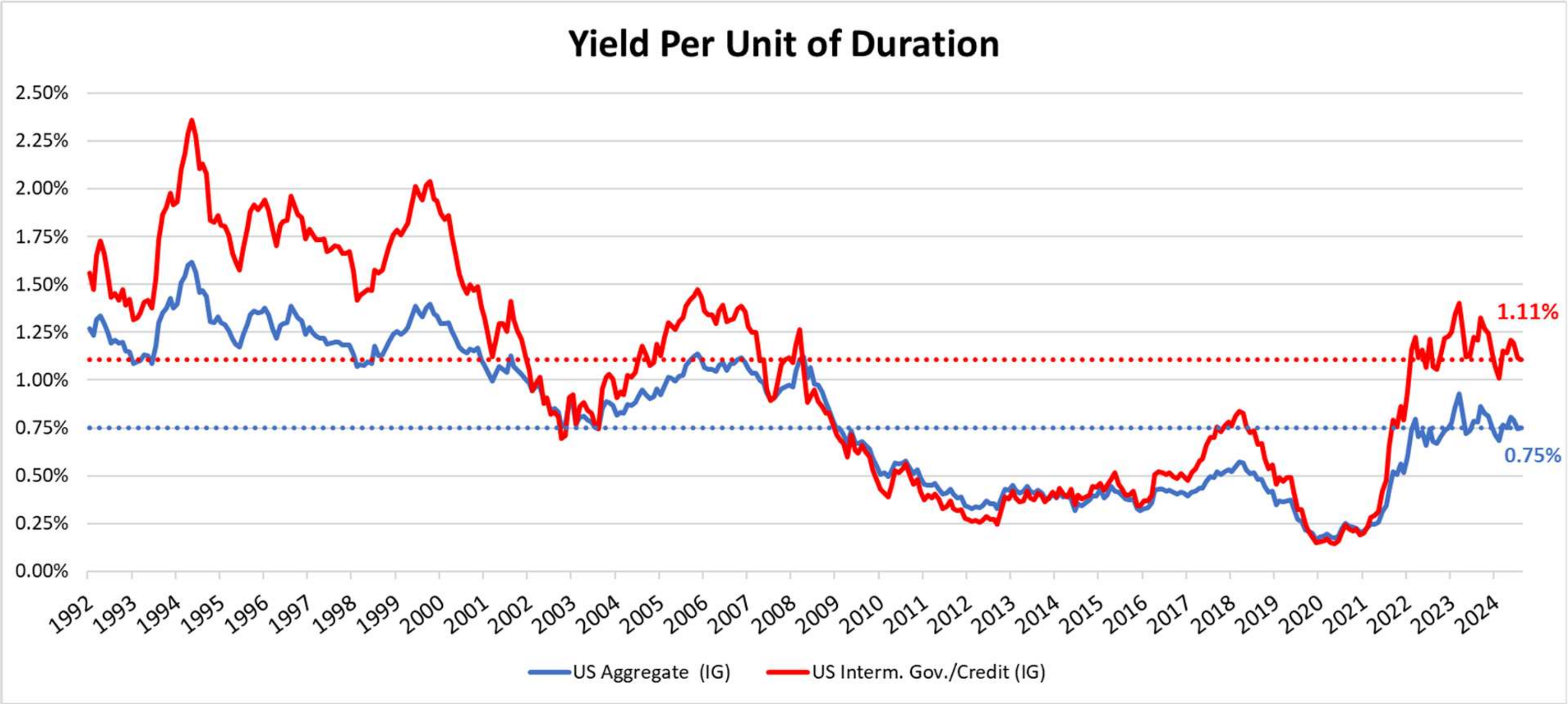


As of 3/31/25

- The FOMC left the Fed Funds target rate unchanged in Q1 2025. The current target Federal Funds rate sits at 4.25% - 4.50%.
- At the January FOMC press conference, Fed Chair Jerome Powell indicated the Federal Reserve was not in a rush to adjust their policy stance, indicating the Fed Funds rate could remain at its current level until inflation dropped below the 2% target. This tone was adjusted at the March FOMC meeting when the Fed acknowledged the potential impact from tariffs, leading to economic uncertainty.
- Following the initial 50 bps cut in September 2024, markets began to immediately price in a more aggressive rate-cutting cycle. Those expectations dissipated in Q4 2024 and continued into January and February of 2025. Following the March FOMC meeting, expectations of future rate cuts increased once again.
- As of the end of Q1 2025, the Fed Funds futures market is pricing in an additional 75 bps reduction in the Fed Funds rate through 2025, which would bring the Fed Funds target rate to 3.50% - 3.75%.

Bond Market

Investment Grade Investors Are Now Compensated For Duration Risk



- Investment grade bond returns were susceptible to a rise in interest rates for most of the past decade. With the recent surge higher in bond yields, investment grade bond investors are now being adequately compensated for duration risk.
- Interest rates can now move ~75 bps higher over a one-year period before core bond investors (U.S. Aggregate Index) start to realize negative returns on their portfolio while intermediate investment grade investors can withstand a ~110 bps rise in interest rates over a one-year period before realizing losses on their portfolio.
- Given yields are roughly equal for the U.S. Intermediate Gov./Credit Index and the U.S. Aggregate Index, intermediate investment grade bonds (US Interm. Gov/Credit) are seemingly better positioned to limit downside risk in the near-term while core bonds (U.S. Aggregate) can provide more upside if interest rates fall but have less protection in the event interest rates continue to rise.

Bond Market

Interest Rate Sensitivity

12 Month Holding Period - Annualized Returns as of 03/31/2025

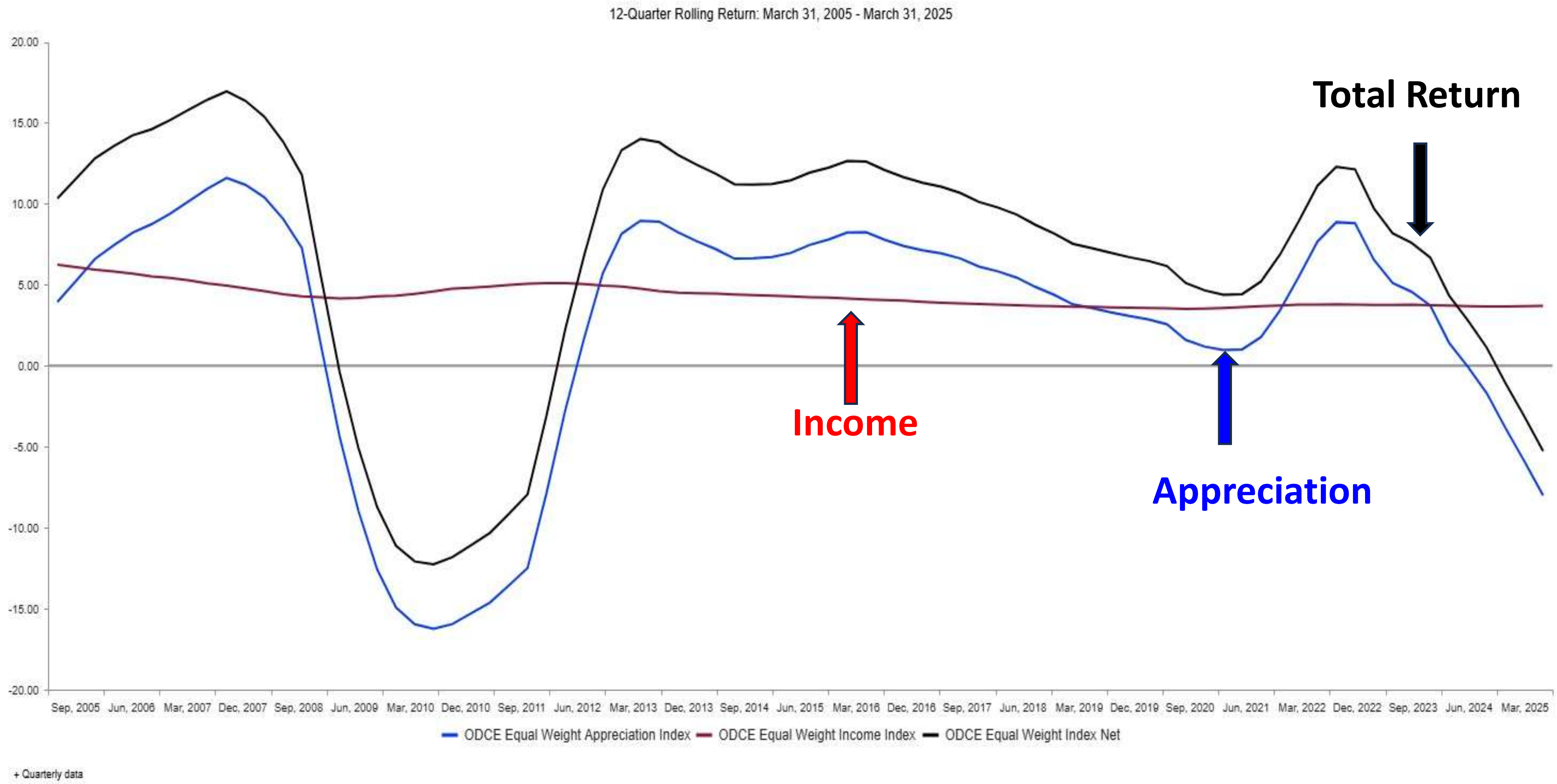
Yield Change	US Treasuries Bloomberg Treasury	Short-Term IG Bloomberg 1-3 Yr US Govt/Credit	Intermediate IG Bloomberg Interm Govt/Credit	Core Bond Bloomberg Aggregate	Short Duration HY ICE BofA 1-3 Yrs BB US Cash Pay HY	High-Quality HY Bloomberg HY BB/B 2% Capped	Full High Yield Bloomberg US Corporate HY
-300	25.49%	10.01%	16.70%	25.33%	10.81%	16.85%	17.52%
-250	21.45%	9.00%	14.50%	21.55%	10.14%	15.31%	15.99%
-200	17.60%	8.00%	12.35%	17.90%	9.42%	13.73%	14.41%
-150	13.94%	7.00%	10.25%	14.38%	8.65%	12.11%	12.80%
-100	10.47%	6.02%	8.21%	10.99%	7.83%	10.44%	11.15%
-75	8.81%	5.54%	7.20%	9.34%	7.39%	9.59%	10.31%
-50	7.20%	5.05%	6.21%	7.73%	6.95%	8.73%	9.46%
-25	5.63%	4.57%	5.23%	6.15%	6.49%	7.86%	8.60%
0	4.11%	4.09%	4.26%	4.60%	6.02%	6.98%	7.73%
25	2.63%	3.61%	3.30%	3.08%	5.54%	6.09%	6.85%
50	1.21%	3.14%	2.36%	1.59%	5.04%	5.19%	5.97%
75	-0.17%	2.67%	1.43%	0.14%	4.53%	4.28%	5.07%
100	-1.50%	2.20%	0.52%	-1.28%	4.01%	3.36%	4.17%
150	-4.02%	1.27%	-1.28%	-4.03%	2.92%	1.48%	2.33%
200	-6.35%	0.35%	-3.03%	-6.65%	1.78%	-0.44%	0.45%
250	-8.48%	-0.57%	-4.72%	-9.14%	0.59%	-2.40%	-1.46%
300	-10.43%	-1.47%	-6.37%	-11.50%	-0.66%	-4.41%	-3.41%
Duration	5.99	1.91	3.85	6.14	1.91	3.54	3.49
Convexity	0.76	0.04	0.20	0.52	-0.21	-0.17	-0.15

FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 3/31/2025 was used as the base case annualized return. The annualized return sensitivity to a uniform increase or decrease in the yield curve was calculated by taking the index's Option-Adjusted Duration as of 3/31/2025 multiplied by the percentage point change in the yield curve (basis point change divided by 100), while adjusting for convexity effects using the index's Option-Adjusted Convexity as of 3/31/2025, and then appropriately adding or subtracting this implied percentage change in the value of the index (due to the shift in the yield curve) to the base case annualized return. This is a rough approximation of the annual return sensitivity to parallel shifts in the yield curve.

Real Estate Market

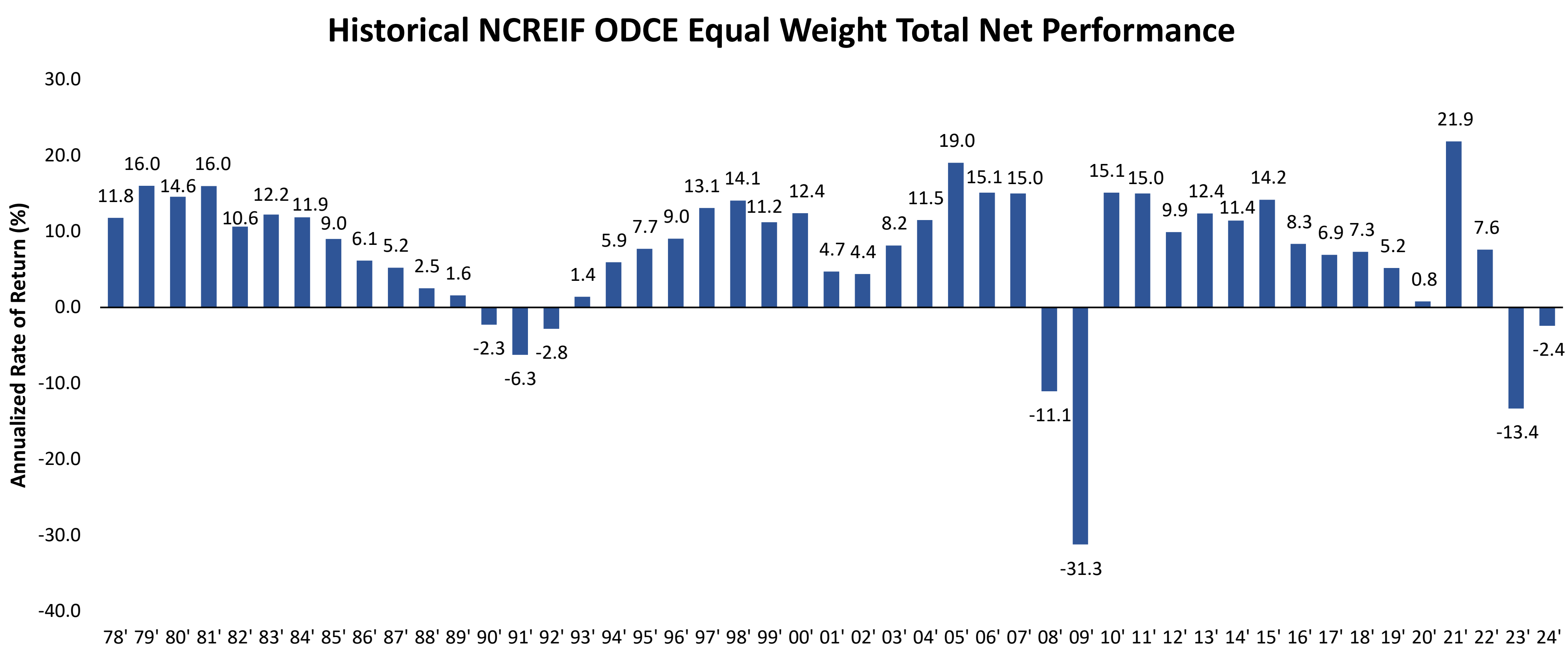
Sector	Index	1Q25	2024	2023	2022	2021	2020	2019	1-Year	3-Year	5-Year	10-Year	15-Year	20-Year
US Private	NCREIF ODCE Equal Weighted (net)	0.8%	-2.4%	-13.4%	7.6%	21.9%	0.8%	5.2%	0.7%	-5.3%	2.3%	5.0%	7.7%	5.4%
	NCREIF ODCE EW Income Index	1.0%	4.0%	3.5%	3.5%	4.1%	3.6%	3.5%	4.1%	3.7%	3.8%	4.2%	4.0%	4.2%
	NCREIF ODCE EW Appreciation Index	-0.0%	-5.5%	-15.8%	4.8%	18.3%	-2.1%	1.7%	-2.5%	-8.0%	-0.7%	1.7%	3.9%	1.4%

- The NCREIF ODCE Equal Weighted Index (net) posted a second consecutive positive quarter in Q1 2025, up +0.80%. The total return was primarily from income, as appreciation was essentially flat (-0.02%) for the second consecutive quarter (+0.03% in Q4 2024).



Real Estate Market

- 2024 was the second consecutive negative year for the NCREIF ODCE core real estate index, but just the seventh negative calendar year for the index since inception in 1978. The ODCE index has experienced only three meaningful drawdowns in its history.
- The most recent downturn was driven by higher borrowing costs and less access to debt financing, low transaction volumes, lingering effects of the Covid-19 pandemic on urban centers and the office sector, and oversupply in some sectors constraining rent growth and valuations. These factors are generally improving, and that is reflected in more recent real estate valuations. The total return for the index was positive in Q4 2024 and Q1 2025.

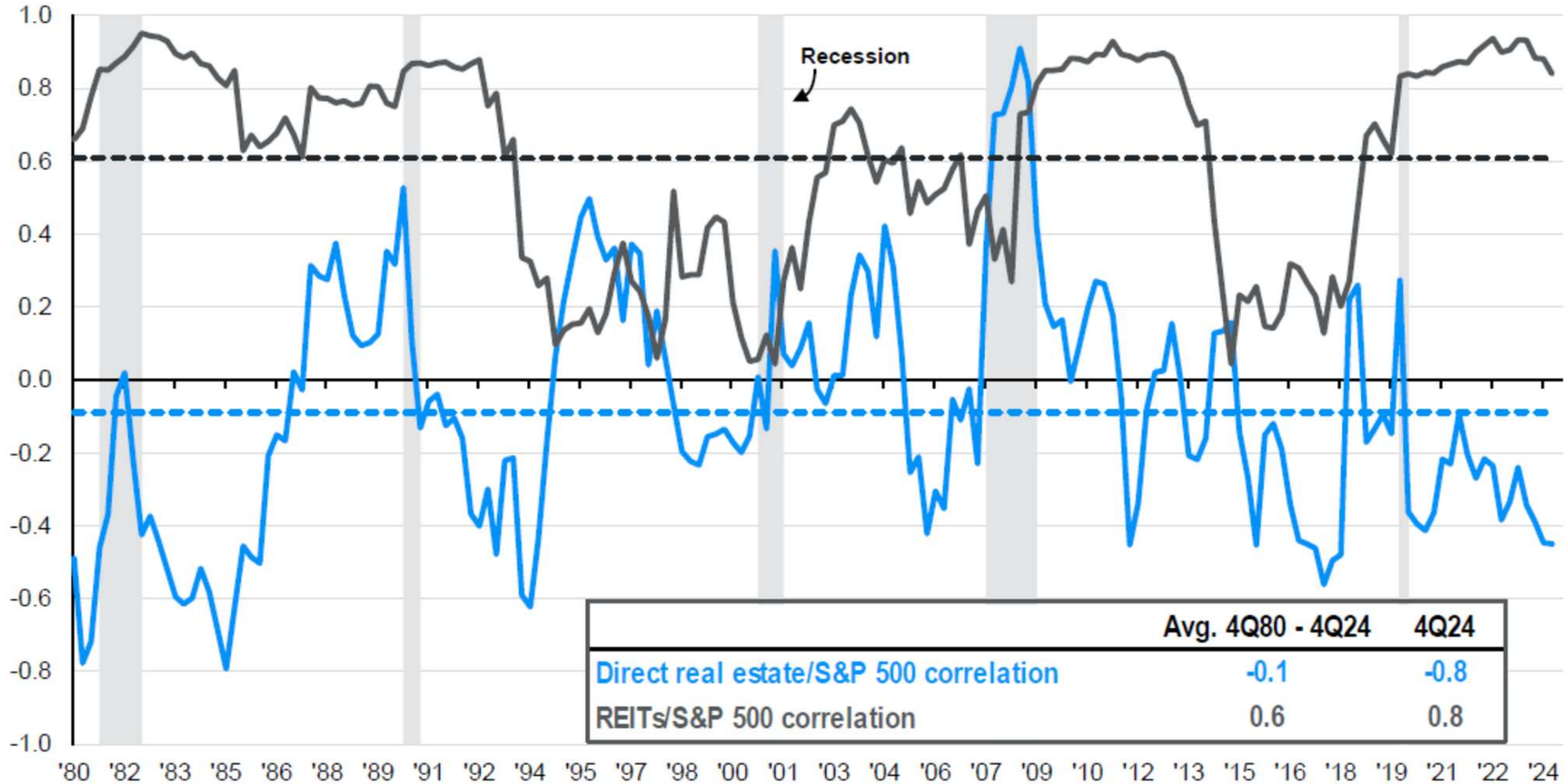


Real Estate Market

- One of the benefits of allocating to private real estate is diversification: real estate returns tend to have a low to negative correlation with other asset classes. During times of equity market stress like investors have endured thus far in 2025, real estate can help to offset losses in other parts of a diversified portfolio and provide some stability in total returns.

- The chart below compares the correlation of listed U.S. REITs (gray line) and direct/private real estate (blue line) to the S&P 500. Note the significantly lower correlations for direct real estate.

U.S. REITs, Direct Real Estate and Equities
12-quarter Rolling Correlations, Total Return

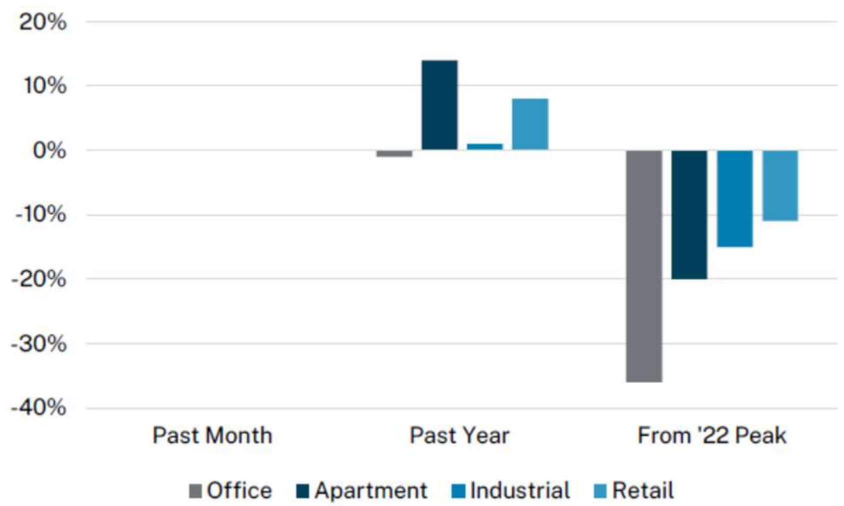


Source: FactSet, NAREIT, NCREIF, Standard & Poor's, JP Morgan Asset Management. As of February 28, 2025.

Real Estate Market

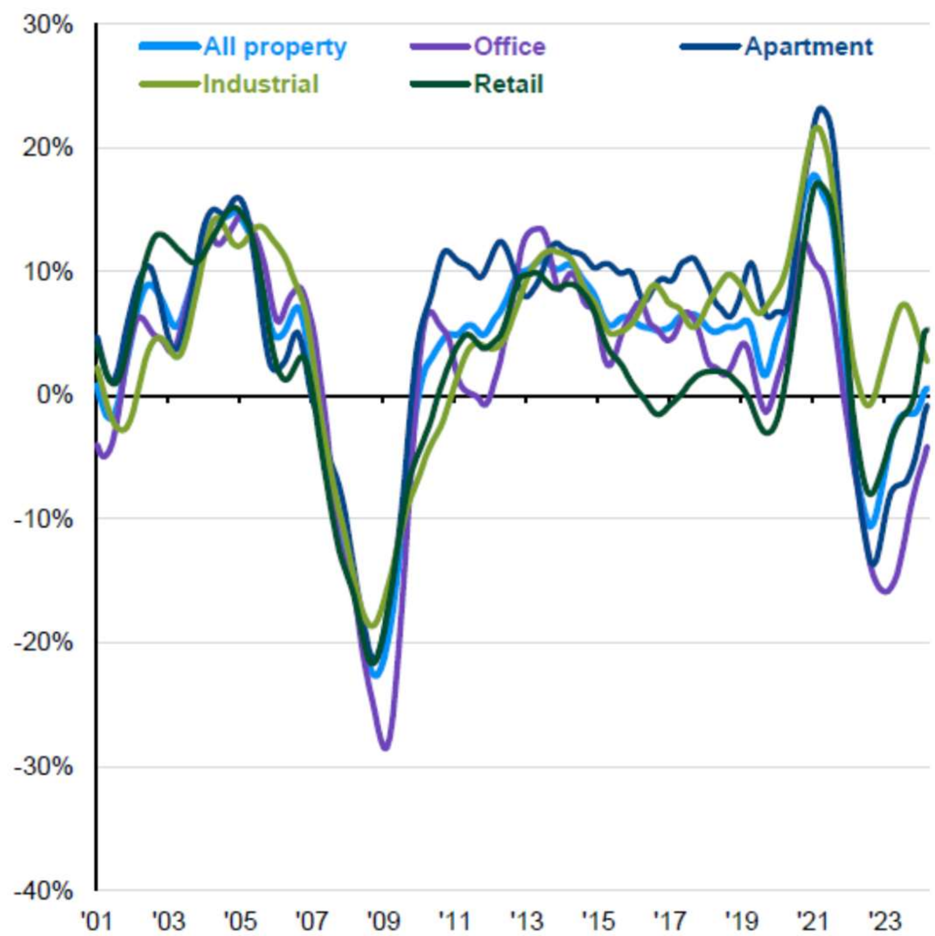
- Though all sectors of commercial real estate have experienced valuation declines from their 2022 peaks, most have seen higher pricing over the last year (office remains the outlier), with little/no change in January 2025.

Change in Property Values



Source: ARA based on data from Green Street Advisors, Macrobond and NCREIF as of January 2025.

U.S. Commercial Real Estate Property Prices, YoY Change

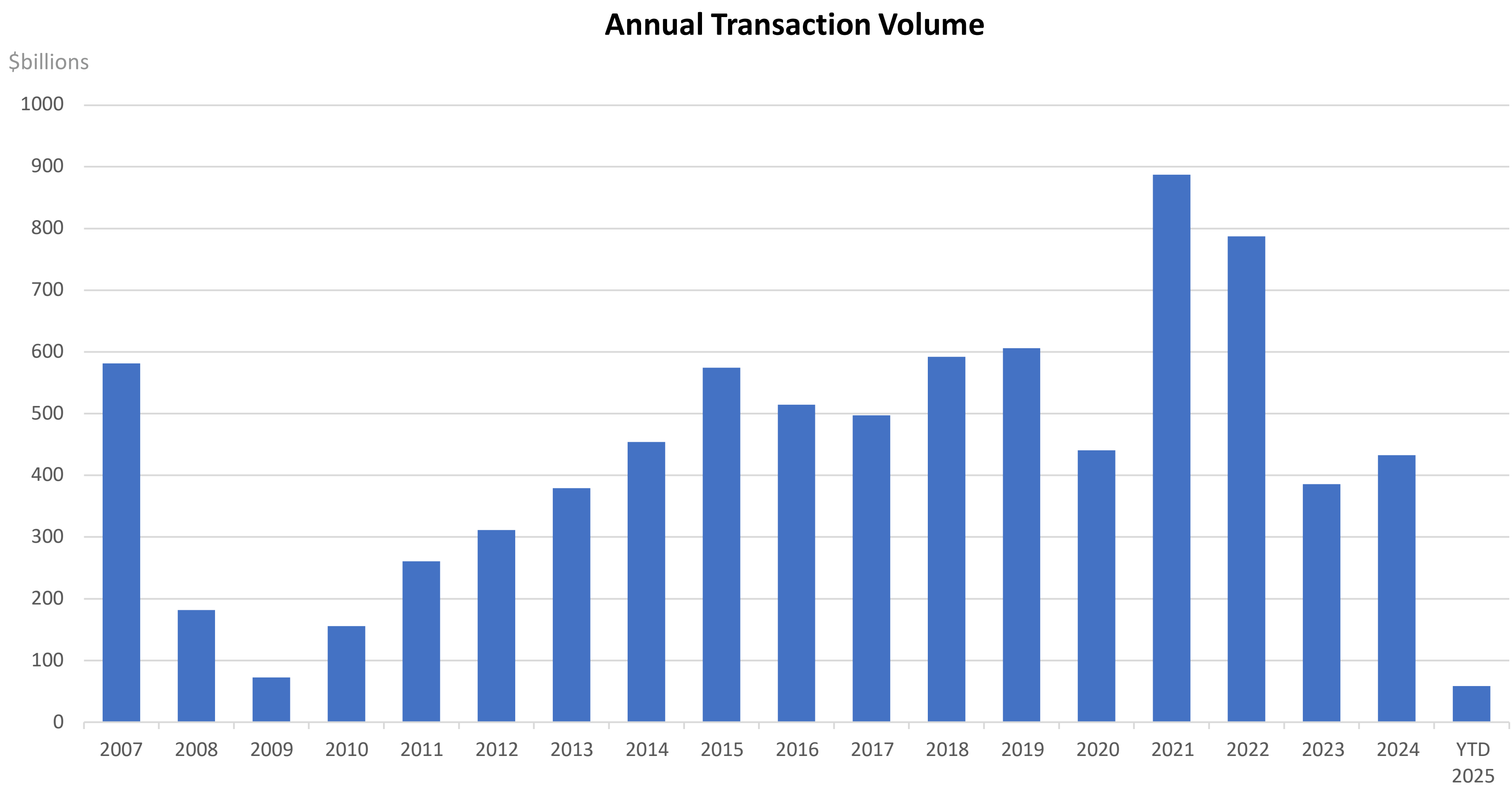


Source: JP Morgan Asset Management. As of February 2025.

Real Estate Market

- While real estate transaction volumes remain will below the post-Covid peak of 2021-2022 and below the years immediately preceding the pandemic, volumes in 2024 were more normalized and up about 12% compared to 2023.

- Most of the volume occurred in the second half of 2024, with Q4 2024 transaction volumes up more than 30% compared to Q4 2023. Though it is still early in 2025, transaction volumes were higher in the first few months of the year when compared to early 2024, signaling a continuing recovery in commercial real estate and an increasing number of institutional buyers returning to the market.



Source: Real Capital Analytics, via DWS Real Estate. As of February 2025.

Investment Performance Services

Operating Engineers Local No. 77 JATC Fund

Investment Performance Report

Period Ended

March 31, 2025

Total Fund Growth of Assets

	Fiscal Year-To-Date	One Year	Three Years	Five Years	Inception 11/30/19
Beginning Market Value	$3,189,011	$3,318,313	$3,041,473	$2,594,046	--
Net Cash Flow	-$5,402	-$301,262	-$251,592	-$237,622	$2,458,397
Net Investment Change	$22,843	$189,401	$416,571	$850,027	$748,055
Ending Market Value	$3,206,452	$3,206,452	$3,206,452	$3,206,452	$3,206,452

- The Fund's fiscal year end is December 31st.

Performance Summary (Gross of Fees) - Annualized

			Ending March 31, 2025					
	Market Value	% of Portfolio	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	Inception	Inception Date
Total Fund	**$3,206,452**	**100.0%**	**0.8%**	**6.2%**	**4.4%**	**5.6%**	**4.4%**	**Nov-19**
Total Domestic Large Cap Equity	**$419,663**	**13.1%**	**-4.3%**	**8.3%**	**9.0%**	**18.6%**	**13.2%**	**Nov-19**
Total Investment Grade Fixed Income	**$1,293,889**	**40.4%**	**1.7%**	**5.8%**	**3.9%**	**3.0%**	**2.5%**	**Nov-19**
Total Short Duration High Yield Fixed Income	**$1,138,073**	**35.5%**	**1.5%**	**6.5%**	**5.2%**	**--**	**3.8%**	**Jul-21**
Total Cash Equivalents	**$354,828**	**11.1%**	**1.0%**	**4.3%**	**3.5%**	**2.1%**	**2.0%**	**Nov-19**

Performance Summary

	Fiscal Year Ending December 31st (Gross of Fees)					
	Fiscal YTD	2024	2023	2022	2021	2020
Total Fund	**0.8%**	**7.6%**	**8.7%**	**-5.8%**	**6.1%**	**5.7%**
Total Fund Benchmark	*0.9%*	*7.6%*	*10.0%*	*-5.4%*	*5.6%*	*6.5%*

	Fiscal Year Ending December 31st (Net of Fees)					
	Fiscal YTD	2024	2023	2022	2021	2020
Total Fund	**0.7%**	**7.3%**	**8.4%**	**-6.0%**	**6.0%**	**5.6%**
Total Fund Benchmark	*0.9%*	*7.6%*	*10.0%*	*-5.4%*	*5.6%*	*6.5%*

Current vs. Policy

	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	$419,663	13.1%	10.0%	5.0% - 15.0%	3.1%	$99,018
Investment Grade Fixed Income	$1,293,889	40.4%	40.0%	35.0% - 45.0%	0.4%	$11,308
Short Duration High Yield Fixed Income	$1,138,073	35.5%	35.0%	30.0% - 40.0%	0.5%	$15,814
Cash Equivalents	$354,828	11.1%	15.0%	10.0% - 20.0%	-3.9%	-$126,140
Total	**$3,206,452**	**100.0%**	**100.0%**			

- Policy adopted May 2023; effective July 2023.

Performance Detail (Net of Fees) - Annualized

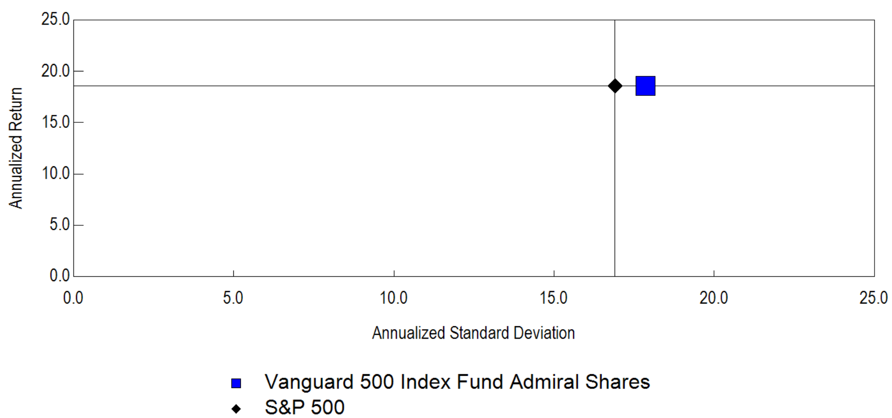
			Ending March 31, 2025					
	Market Value	% of Portfolio	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	Inception	Inception Date
Total Fund	**$3,206,452**	**100.0%**	**0.7%**	**6.0%**	**4.2%**	**5.3%**	**4.2%**	**Nov-19**
Total Domestic Large Cap Equity	**$419,663**	**13.1%**	**-4.3%**	**8.2%**	**9.0%**	**18.6%**	**13.2%**	**Nov-19**
Vanguard 500 Index Fund Admiral Shares	$419,663	13.1%	-4.3%	8.2%	9.0%	18.6%	13.2%	Nov-19
S&P 500			*-4.3%*	*8.3%*	*9.1%*	*18.6%*	*13.3%*	*Nov-19*
Total Investment Grade Fixed Income	**$1,293,889**	**40.4%**	**1.6%**	**5.6%**	**3.7%**	**2.8%**	**2.3%**	**Nov-19**
Chartwell Investment Partners	$1,293,889	40.4%	1.6%	5.6%	3.7%	2.8%	2.4%	Dec-19
Bloomberg US Credit 1-3 Yr TR			*1.6%*	*6.1%*	*3.7%*	*2.5%*	*2.3%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$1,138,073**	**35.5%**	**1.4%**	**6.0%**	**4.7%**	**--**	**3.3%**	**Jul-21**
Carillon Chartwell SDHY Fund	$1,138,073	35.5%	1.4%	6.0%	4.7%	--	3.3%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*1.4%*	*6.7%*	*5.5%*	*--*	*3.9%*	*Jul-21*
Total Cash Equivalents	**$354,828**	**11.1%**	**1.0%**	**4.3%**	**3.5%**	**2.1%**	**2.0%**	**Nov-19**
PNC Cash	$354,828	11.1%	1.0%	4.3%	3.5%	2.1%	2.0%	Nov-19

Account Information	
Account Name	**Vanguard 500 Index Fund Admiral Shares**
Account Structure	**Mutual Fund**
Investment Style	**Passive**
Inception Date	**11/30/19**
Account Type	**Domestic Large Cap Core Equity**
Benchmark	**S&P 500**
Universe	**Large Blend MStar MF**

Vanguard 500 Index Fund Admiral Shares
Ending March 31, 2025

	First Quarter	Inception 11/30/19
Beginning Market Value	$438,439	--
Net Cash Flow	$0	$54,281
Net Investment Change	-$18,776	$365,382
Ending Market Value	$419,663	$419,663

Annualized Return vs. Annualized Standard Deviation
5 Years Ending March 31, 2025



3 Years Ending March 31, 2025

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard 500 Index Fund Admiral Shares	9.0%	16.4%	41.2%	39.8%
S&P 500	9.1%	17.3%	100.0%	100.0%

5 Years Ending March 31, 2025

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard 500 Index Fund Admiral Shares	18.6%	17.9%	36.5%	19.1%
S&P 500	18.6%	16.9%	100.0%	100.0%

									Calendar Years											
	Fiscal YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	2024	Rank	2023	Rank	2022	Rank	2021	Rank	2020	Rank	Inception	Inception Date
Vanguard 500 Index Fund Admiral Shares	-4.3%	44	8.2%	16	9.0%	24	18.6%	25	25.0%	24	26.2%	27	-18.1%	50	28.7%	23	18.4%	39	13.2%	Nov-19
S&P 500	*-4.3%*	*43*	*8.3%*	*14*	*9.1%*	*22*	*18.6%*	*24*	*25.0%*	*24*	*26.3%*	*25*	*-18.1%*	*48*	*28.7%*	*22*	*18.4%*	*38*	*13.3%*	*Nov-19*

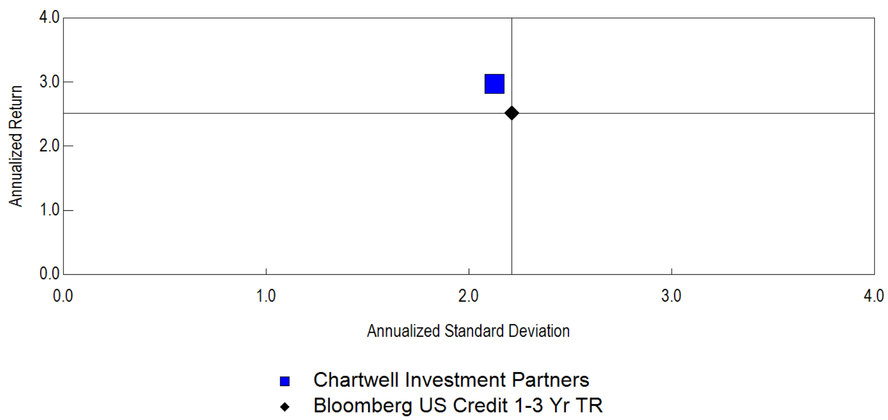
Note: Returns are net of fees.

Account Information	
Account Name	**Chartwell Investment Partners**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**12/31/19**
Account Type	**Investment Grade Fixed Income**
Benchmark	**Bloomberg US Credit 1-3 Yr TR**
Universe	

Chartwell Investment Partners
Ending March 31, 2025

	First Quarter	Inception 12/31/19
Beginning Market Value	$1,322,787	--
Net Cash Flow	-$50,500	$1,100,064
Net Investment Change	$21,602	$193,824
Ending Market Value	$1,293,889	$1,293,889

Annualized Return vs. Annualized Standard Deviation
5 Years Ending March 31, 2025



3 Years Ending March 31, 2025

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners	3.9%	2.1%	95.3%	78.0%
Bloomberg US Credit 1-3 Yr TR	3.7%	2.4%	100.0%	100.0%

5 Years Ending March 31, 2025

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners	3.0%	2.1%	103.2%	83.8%
Bloomberg US Credit 1-3 Yr TR	2.5%	2.2%	100.0%	100.0%

					Calendar Years						
	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020	Inception	Inception Date
Chartwell Investment Partners	1.7%	5.8%	3.9%	3.0%	4.8%	5.7%	-2.8%	0.0%	4.2%	2.5%	Dec-19
Bloomberg US Credit 1-3 Yr TR	*1.6%*	*6.1%*	*3.7%*	*2.5%*	*5.1%*	*5.3%*	*-3.4%*	*-0.2%*	*3.7%*	*2.3%*	*Dec-19*

Note: Returns are gross of fees.

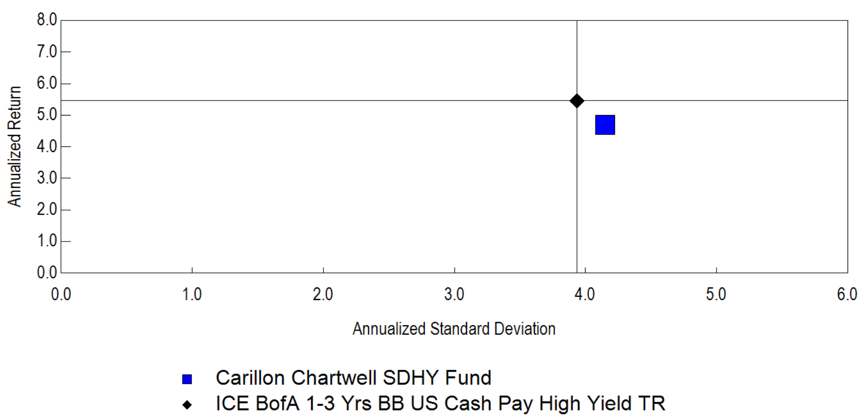
Account Information	
Account Name	Carillon Chartwell SDHY Fund
Account Structure	Mutual Fund
Investment Style	Active
Inception Date	7/31/21
Account Type	Short Duration High Yield Fixed Income
Benchmark	ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR
Universe	

Carillon Chartwell SDHY Fund

Ending March 31, 2025

	First Quarter	Inception 7/31/21
Beginning Market Value	$1,221,333	$0
Net Cash Flow	-$100,000	$1,000,000
Net Investment Change	$16,739	$138,073
Ending Market Value	$1,138,073	$1,138,073

Annualized Return vs. Annualized Standard Deviation
3 Years Ending March 31, 2025



3 Years Ending March 31, 2025

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Carillon Chartwell SDHY Fund	5.2%	4.2%	58.4%	-3.0%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	5.5%	3.9%	100.0%	100.0%

	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	Calendar Years 2024	2023	2022	2021	2020	Inception	Inception Date
Carillon Chartwell SDHY Fund	1.4%	6.0%	4.7%	--	5.8%	7.8%	-3.2%	--	--	3.3%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	*1.4%*	*6.7%*	*5.5%*	--	*6.7%*	*8.8%*	*-3.1%*	--	--	*3.9%*	*Jul-21*

Note: Returns are net of fees.

Account Information	
Account Name	**PNC Cash**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**11/30/19**
Account Type	**Cash Equivalents**
Benchmark	
Universe	

PNC Cash
Ending March 31, 2025

	First Quarter	**Inception 11/30/19**
Beginning Market Value	$206,451	--
Net Cash Flow	$145,098	$304,318
Net Investment Change	$3,279	$50,509
Ending Market Value	$354,828	$354,828

Current Yield as of March 2025, is 4.28%

					Calendar Years						
	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	2024	2023	2022	2021	2020	Inception	Inception Date
PNC Cash	1.0%	4.3%	3.5%	2.1%	4.4%	4.0%	1.2%	0.1%	0.0%	2.0%	Nov-19

Note: Returns are gross of fees.

Operating Engineers Local No. 77 JATC Fund

Appendix

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	Inception	Inception Date
			Ending March 31, 2025					
Total Fund	**$3,206,452**	**100.0%**	**0.8%**	**6.2%**	**4.4%**	**5.6%**	**4.4%**	**Nov-19**
Total Domestic Large Cap Equity	**$419,663**	**13.1%**	**-4.3%**	**8.3%**	**9.0%**	**18.6%**	**13.2%**	**Nov-19**
Vanguard 500 Index Fund Admiral Shares	$419,663	13.1%	-4.3%	8.3%	9.1%	18.6%	13.3%	Nov-19
S&P 500			*-4.3%*	*8.3%*	*9.1%*	*18.6%*	*13.3%*	*Nov-19*
Total Investment Grade Fixed Income	**$1,293,889**	**40.4%**	**1.7%**	**5.8%**	**3.9%**	**3.0%**	**2.5%**	**Nov-19**
Chartwell Investment Partners	$1,293,889	40.4%	1.7%	5.8%	3.9%	3.0%	2.5%	Dec-19
Bloomberg US Credit 1-3 Yr TR			*1.6%*	*6.1%*	*3.7%*	*2.5%*	*2.3%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$1,138,073**	**35.5%**	**1.5%**	**6.5%**	**5.2%**	**--**	**3.8%**	**Jul-21**
Carillon Chartwell SDHY Fund	$1,138,073	35.5%	1.5%	6.5%	5.2%	--	3.8%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*1.4%*	*6.7%*	*5.5%*	*--*	*3.9%*	*Jul-21*
Total Cash Equivalents	**$354,828**	**11.1%**	**1.0%**	**4.3%**	**3.5%**	**2.1%**	**2.0%**	**Nov-19**
PNC Cash	$354,828	11.1%	1.0%	4.3%	3.5%	2.1%	2.0%	Nov-19

Account	Fee Schedule	Market Value As of 3/31/2025	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	**-**	**$419,663**	**13.1%**	**--**	**--**
Vanguard 500 Index Fund Admiral Shares	0.04% of Assets	$419,663	13.1%	$168	0.04%
Total Investment Grade Fixed Income	**-**	**$1,293,889**	**40.4%**	**--**	**--**
Chartwell Investment Partners	0.18% of Assets	$1,293,889	40.4%	$2,329	0.18%
Total Short Duration High Yield Fixed Income	**-**	**$1,138,073**	**35.5%**	**--**	**--**
Carillon Chartwell SDHY Fund	0.49% of Assets	$1,138,073	35.5%	$5,577	0.49%
Total Cash Equivalents	**-**	**$354,828**	**11.1%**	**--**	**--**
PNC Cash	-	$354,828	11.1%	--	--
Investment Management Fee		**$3,206,452**	**100.0%**	**$8,073**	**0.25%**

Note: The above fee schedules may not include incentive fees, operating expenses, custodian fees, or other administrative costs.

Note: The above information utilizes net expense ratio for any mutual fund investment. Management fee is used for all other investment types.

Benchmark History

Total Fund		
7/1/2023	Present	S&P 500 10% / Bloomberg US Credit 1-3 Yr TR 40% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 35% / 91 Day T-Bills 15%
7/1/2021	6/30/2023	S&P 500 20% / Bloomberg US Credit 1-3 Yr TR 35% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 30% / 91 Day T-Bills 15%
11/30/2019	6/30/2021	S&P 500 20% / Bloomberg US Credit 1-3 Yr TR 65% / 91 Day T-Bills 15%

Index Disclosures

- Total Fund Benchmark - The Total Fund Benchmark is comprised of the respective market indices for each asset class weighted at the percentage the asset class represents in the Policy. It is important to acknowledge that not all asset classes have a corresponding market index due to the specialized nature of the asset class (i.e. private equity, private debt, infrastructure, hedge funds) and/or the specialized nature of the investment (opportunistic investments, global tactical asset allocation, absolute return strategies). In such cases, a traditional asset class index may be used as a proxy in the Total Fund Benchmark. The Total Fund Benchmark illustrates how an indexed portfolio with a similar allocation to that of the Policy would have performed during a specific period. The Total Fund Benchmark does not account for ongoing changes in the allocation percentages of the Total Fund resulting from market gains/losses, cash flows, and rebalancing during the same period. While a useful tool in examining performance, due to the static nature of the allocation percentages in the Total Fund Benchmark, the fact that not all asset classes have a representative index, and considering that some indices in the Total Fund Benchmark are not investable, the Total Fund Benchmark should not be used as the primary measure of a Total Fund’s success or failure.

Footnotes

- Values, flows, and returns for all commingled funds, mutual funds, partnerships, and all other alternative assets are provided by the firm managing the assets and cannot be independently verified by IPS. Separately managed account returns are calculated by IPS using custodian data.
- The net of fees returns in this report are estimated. Fees do not include: The investment consulting fee paid to IPS, custodian fees, or other administrative costs.
- The information contained in this report is proprietary and confidential information. You are hereby notified that any dissemination, distribution, or copying of this document is strictly prohibited.
- Effective 4Q 2021, mutual fund returns are calculated utilizing the net expense ratio. Prior to 4Q 2021, mutual fund returns were calculated utilizing the mutual fund's management fee.

Glossary of Investment Terminology

Alpha	The amount of an investment's return that is independent of the return of the market. Alpha is generated by active management through security selection and may be positive or negative relative to a given benchmark.
Beta	A measure of an investment's volatility relative to the market. The beta of the market is 1.0 (as represented by a benchmark such as the S&P 500 Index). A beta of greater than 1.0 indicates an investment with greater volatility than the benchmark. A beta of less than 1.0 indicates less volatility than the benchmark.
Capture Ratio	A measurement (usually based on monthly or quarterly time periods) of an investment manager's performance relative to their benchmark in a rising or falling market. Upside capture illustrates how a manager has performed when their benchmark index is positive. In a rising market, a percentage over 100% indicates the manager exceeded the benchmark, while a percentage below 100% indicates the manager lagged the benchmark. Downside capture illustrates how a manager has performed when their benchmark index is negative. In a falling market, a percentage of less than 100% indicates that the manager lost less than the benchmark, while a percentage above 100% indicates the manager lost more than the market. Index funds, in theory, should have 100% upside and downside capture ratios before fees.
Compound Annual Returns	A time-weighted measure of the annual investment return, assuming the investment grew at a constant rate.
Correlation	A statistical measure of how two investments perform in relation to each other. Investments with a correlation of 1.0 have perfect positive correlation (exactly the same). Investments with perfect negative correlation of -1.0 will perform equally but in opposite directions.
Distribution to Paid-In (DPI)	The value of all distributions to limited partners divided by the amount limited partners have contributed to the fund. Often expressed as a ratio, DPI plus the unrealized value of limited partners' investments (RPI) equals the Total Value to Paid In (TVPI) multiple. A DPI of 1 indicates the investor has received capital back equal to what they invested while a DPI over 1 indicates an investor has received more capital back than they invested. DPI is most relevant for closed-end fund structures such as private equity.
Efficient Frontier	Represents the set of possible portfolios that have the greatest expected return for each level of risk (standard deviation of returns).

Glossary of Investment Terminology

Geometric Return	A calculation used when determining an annualized investment return, which tends to dampen the effect of very high or very low values. The result is a number that is smaller than (or equal to) the arithmetic average of the values.
Internal Rate of Return (IRR)	The discount rate at which the net present value of an investment's cash flows is equal to zero (0). IRR is commonly used to gauge fund performance.
Market Cap	The dollar value of a corporation, which is calculated by multiplying the share price of the stock by the number of outstanding shares.
Residual to Paid-In (RPI)	The unrealized value of limited partners' investments divided by the amount limited partners have contributed to the fund. Often expressed as a ratio, RPI plus the amount distributed back to investors (DPI) equals the total value to paid in (TVPI) multiple.
Return/Risk Ratio	The expected return of an investment divided by the expected standard deviation (risk). When comparing return/risk ratios, a higher value is presumed to be better than a lower value.
Standard Deviation	A statistical measurement of the dispersion of a set of data from its mean. The more spread apart the data is, the greater the standard deviation. Standard deviation is the most commonly cited measure of volatility or "risk" in investment returns. It measures total volatility, meaning it does not differentiate "bad" volatility associated with negative returns from "good" volatility associated with positive returns.
Total Return	The annual return on an investment, including appreciation, depreciation and income (interest, dividends, net operating income).
Total Value to Paid in Multiple (TVPI)	A measure of return that expresses how much a fund has made relative to how much was contributed. It is calculated by dividing the sum of the amount of capital distributed to investors and the amount of remaining value by the amount of invested capital. A TVPI below 1 indicates the current value of the investment plus the capital returned to the investor is less than the investor contributed. A TVPI greater than 1 indicates the current value of the investment plus the capital returned to the investor is more than the investor contributed. For closed-end funds such as private equity, DPI and TVPI will be the same at the end of the fund's life.

Impact of Negative Cash Flows

- Most defined benefit pension funds payout more in benefits and expenses than they take in via contributions, resulting in **negative net cash flows** on an annual basis.
- Plans with negative net cash flows require a much higher return in Year 2 following a loss in Year 1 to get back to the starting fund value.
- For example, a plan with a neutral net cash flow that returns -10.0% in Year 1 would require an **11.0% return in Year 2 to break even**.
- A plan with -5.0% net cash flows that experiences a -10.0% return in Year 1 would require a **24.0% return in Year 2 to breakeven (Year 2B).**
- An 11.0% return for a -5.0% net cash flow plan in Year 2 following a -10.0% return in Year 1 would result in an ending value **that is $10.5 million less (Year 2A)** than the neutral cash flow plan, assuming a starting value of $100 million.

Return Needed in Year 2 to Breakeven

Year 1 Return	Cash Flow as Percentage of Beginning Assets: 0.0%	-2.5%	-5.0%	-7.5%	-10.0%
0.0%	0%	5%	11%	16%	22%
-5.0%	5%	11%	17%	23%	29%
-10.0%	**11%**	17%	**24%**	30%	38%
-15.0%	18%	24%	31%	39%	47%
-20.0%	25%	32%	40%	48%	57%

	Neutral Cash Flow Fund		Negative Cash Flow Fund		
	Year 1	Year 2	Year 1	Year 2A	Year 2B
Beginning Assets	$100,00,000	$90,000,000	$100,000,000	$85,000,000	$85,000,000
Net Cash Flows	NA	NA	($5,000,000)	($5,000,000)	($5,000,000)
Investment Return (%)	-10%	11%	-10%	11%	24%
Investment Return ($)	($10,000,000)	$10,000,000	($10,000,000)	$9,444,350	$20,000,000
Ending Value	**$90,000,000**	**$100,000,000**	**$85,000,000**	**89,444,350**	**$100,000,000**

Common Market Capitalization Categories for Equities

Mega Cap	Greater than $250 Billion
Large Cap	$50 Billion to $250 Billion
Mid Cap	$10 Billion to $50 Billion
Small Cap	$1 Billion to $10 Billion
Micro Cap	Less than $1 Billion

Bond Ratings & Classifications

	Standard & Poor's	Moody's
Investment Grade	AAA	Aaa
	AA	Aa
	A	A
	BBB	Baa
High Quality High Yield	BB	Ba
	B	B
Low Quality High Yield	CCC	Caa
	CC	Ca
	C	C

Real Estate Asset Class

Higher Returns

More Risk

Core

Diversified, high quality, mature holdings with little debt and high income.

- Diversified tenant base
- Well-leased properties
- Minimal capital expenditures
- Stable cash flows
- Market rents
- Class A & B properties
- 0-35% leverage

Core-Plus

Core, with higher leverage and/or small allocations to value-add strategies.

- Stable cash flows
- Light renovations
- May include construction/development with a cap
- 30-40% leverage

Value-Add

Focus on potential of upgrading individual properties.

- Development/redevelopment
- Light/heavy renovation
- Property repositioning and/or operational improvements
- Substantial initial or near-term vacancy
- Construction and/or lease-up risk
- Low initial yield
- May require major capital expenditures
- Lower income but higher appreciation potential
- 40-75% leverage

Opportunistic

Highest risk/return strategy that encompasses a variety of opportunities which are often cyclical.

- Strategies may include new development, major renovations, distressed properties
- May invest across geographies and property types
- Prioritizes upside/appreciation, with limited/no income
- 75-90% leverage

High Yield Credit Asset Class

Higher Returns

More Risk

Below Investment Grade (High Yield)

Investment Grade

"High Quality" High Yield

Primarily corporate bonds and loans rated BB/B

- Focused on public market issuers
- Readily liquid ("tradable credit")

Opportunistic High Yield

Broader mandate to invest across high yield bonds, loans, structured products, lower-quality securities and non-US issuers

- Primarily publicly traded credit securities
- Larger companies with higher levels of debt
- Complex debt structures that require expertise to evaluate
- May invest opportunistically in private loans

Private Credit

Privately negotiated loans or debt transactions made directly to companies or non-corporate borrowers.

- Non-traded, private loans/debt
- Debt unable to be financed by banks due to regulatory reasons or complexity
- Smaller companies or unconventional lending situations
- Smaller loans typically made by a single lender or a small group
- Loans typically held to maturity by the original lender

Disclaimer:

This report has been prepared by Investment Performance Services, LLC (“IPS”). Certain information, including information relating to market indices, was provided by sources external to IPS and may not have been verified. While IPS has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of source information contained herein. Information provided in this report is as of the date of the report unless noted otherwise, and IPS is under no obligation to update the information or communicate that any updates have been made. If this report contains information regarding a matter that is outside of the description of services in the written agreement between IPS and the Fund, such information is included for informational purposes only and, the inclusion of such information does not alter or expand the scope of the services provided by IPS.

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EPIC

April 30 - May 3, 2024

The following investment managers and providers attended and helped to defray the cost of IPS' annual conference EPIC. EPIC is an educational conference addressing various issues related to employee benefit plans. IPS does not give preferential treatment to investment managers or any other provider that pays to attend EPIC.

400 Capital Management
Alliance Bernstein
Amalgamated Bank of Chicago
Amalgamated Bank of NY
American Realty Advisors
Apogem Capital
Arena Capital
Aristotle
ASB Real Estate Investments
Atlanta Capital Management
Barrow Hanley Global Investors
BentallGreenOak
Blackstone Infrastructure
BNY Mellon Investment Management
Boston Partners
Boyd Watterson Asset Management
BPEA Private Equity
Brown Advisory
Chartwell Investment Partners
Christenson Investment Partners
Columbia Threadneedle Investments
Constitutional Capital Partners
Corbin Capital Partners
Crux Point
Dana Investment Advisors
Earnest Partners
Empower
EnTrust Global
F/M Investments
Fidelity Investments
First Eagle Investments
Fisher Investments
Foundry Partners
Fred Alger Management
GCM Grosvenor
Glouston Capital Partners
GoldenTree Asset Management
Great Lakes Advisors
Hamilton Lane Advisors
Hardman Johnston Global Advisors
HPS Investment Partners
Income Research & Management
Intercontinental Real Estate Corp.
Invesco Advisors, Inc.
Janus Henderson Investors
John Hancock
JP Morgan Asset Management
Kearney Capital LLC
Kelson Group
Lazard Asset Management
Loomis, Sayles & Company
Lord Abbett & Co.
LSV Asset Management
Lyrical Asset Management
MacKay Shields
McMorgan & Company
Manulife
MGG Investment Group
Mesirow Private Equity
National Investment Services
National Real Estate Advisors
Neuberger Berman
Northern Trust Asset Management
Nuveen Investment Group
Oaktree Capital Management
Old Glory Asset Management
One America Financial
Partners Group
Patriot Financial Partners
PNC Capital Advisors
Portfolio Advisors LLC
Post Advisory Group
Principal Financial Group
Principal Life Insurance
Richmond Capital Management
Schroders Investment Management
Segall Bryant & Hamill
Sierra Investment Partners
Siguler Guff & Company, LP
State Street Global Advisors
Stonepeak Partners
Ullico Investment Company
Victory Capital Management
Wasatch Global Investors
Washington Capital Management
WEDGE Capital Management
Wellington Management Company
Westfield Capital Management
Westport Capital Partners
William Blair & Company
Xponance