INVESTMENT PERFORMANCE SERVICES, LLC

Operating Engineers Local No. 77 JATC

Investment Performance Report

Period Ended September 30, 2023

TABLE OF CONTENTS

Market Discussion 3Q | 2023

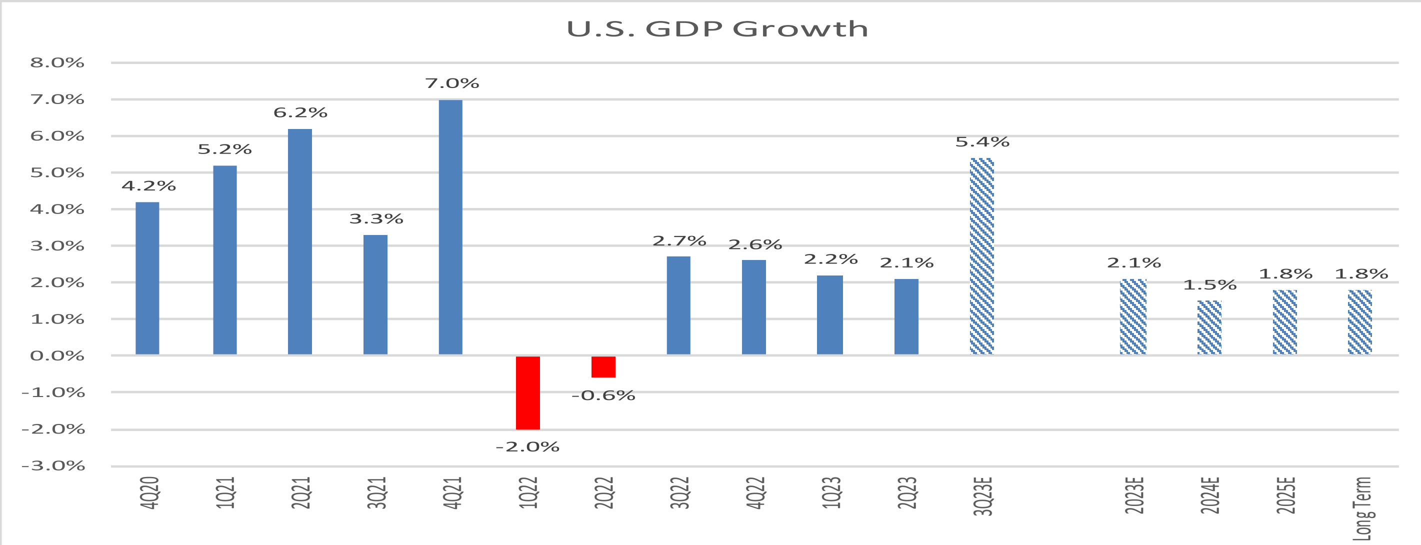
INVESTMENT PERFORMANCE SERVICES, LLC

Financial Market Performance

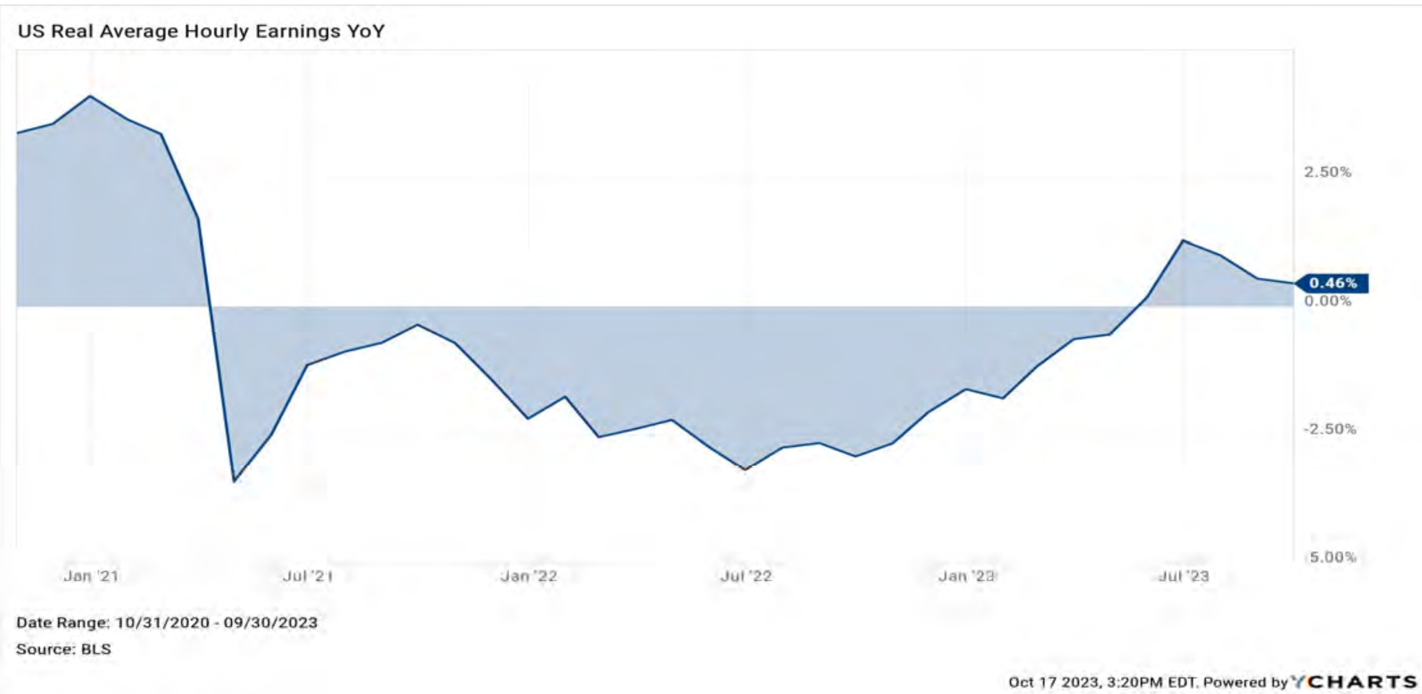
Periods Ending September 30, 2023

Strategy	Sector	Index	QTR	YTD	2022	2021	2020	2019	2018	2017	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	US Large Cap	S&P 500	-3.3%	13.1%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	21.6%	10.1%	9.9%	11.9%	9.7%
	US Small Cap	Russell 2000	-5.1%	2.5%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	8.9%	7.1%	2.4%	6.6%	8.1%
	All Country	MSCI All Country World (net)	-3.4%	10.1%	-18.4%	18.5%	16.3%	26.6%	-9.4%	24.0%	20.8%	6.9%	6.5%	7.6%	7.7%
	Non-US Developed	MSCI EAFE (net)	-4.1%	7.1%	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	25.6%	5.8%	3.2%	3.8%	5.9%
	Emerging Markets	MSCI EM (net)	-2.9%	1.8%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	11.7%	-1.7%	0.6%	2.1%	7.3%
	Int'l Small Cap	MSCI EAFE Small Cap (net)	-3.5%	1.8%	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	17.9%	1.1%	0.8%	4.3%	7.2%
Bonds	Treasury	Bloomberg US Govt	-3.0%	-1.4%	-12.3%	-2.3%	7.9%	6.8%	0.9%	2.3%	-0.7%	-5.7%	-0.0%	0.7%	2.4%
	Broad Market	Bloomberg Aggregate	-3.2%	-1.2%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	0.6%	-5.2%	0.1%	1.1%	2.8%
	Intermediate	Bloomberg Gov/Credit Int.	-0.8%	0.7%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.1%	2.2%	-2.9%	1.0%	1.3%	2.7%
	High Yield	Bloomberg HY BaB 2% IC	0.2%	5.0%	-10.6%	4.6%	7.7%	15.2%	-1.9%	6.9%	9.8%	1.3%	3.3%	4.3%	6.1%
	Short Duration HY	ICE BofA 1-3 Yrs BB US Cash Pay HY	1.1%	4.7%	-3.1%	3.2%	5.4%	8.7%	1.3%	3.6%	7.5%	2.8%	3.6%	3.7%	5.4%
	Global Bonds	FTSE WGBI	-4.3%	-2.7%	-18.3%	-7.0%	10.1%	5.9%	-0.8%	7.5%	1.0%	-8.7%	-2.6%	-1.2%	1.8%
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	-3.7%	6.1%	-18.1%	11.0%	14.6%	19.9%	-5.8%	17.0%	14.4%	2.1%	4.0%	5.1%	6.0%
Real Estate	Core	NCREIF ODCE Equal Weighted (net)	-2.1%	-8.5%	7.6%	21.9%	0.8%	5.2%	7.3%	6.9%	-13.1%	6.7%	5.2%	7.6%	6.6%
Hedge Fund of Funds	Diversified FOFs	HFRI FOF Composite	0.5%	2.8%	-5.3%	6.2%	10.9%	8.4%	-4.0%	7.8%	4.6%	3.8%	3.4%	3.3%	3.3%
	Equity Long-Short	HFRI Equity Hedge	-1.0%	4.7%	-10.1%	11.7%	17.9%	13.7%	-7.1%	13.3%	9.1%	6.5%	5.2%	5.1%	5.3%
Commodities	Commodities	Goldman Sachs Commodity	16.0%	7.2%	26.0%	40.4%	-23.7%	17.6%	-13.8%	5.8%	10.9%	29.5%	5.6%	-2.5%	-0.4%

U.S. Economy



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



U.S Economy Remains Resilient

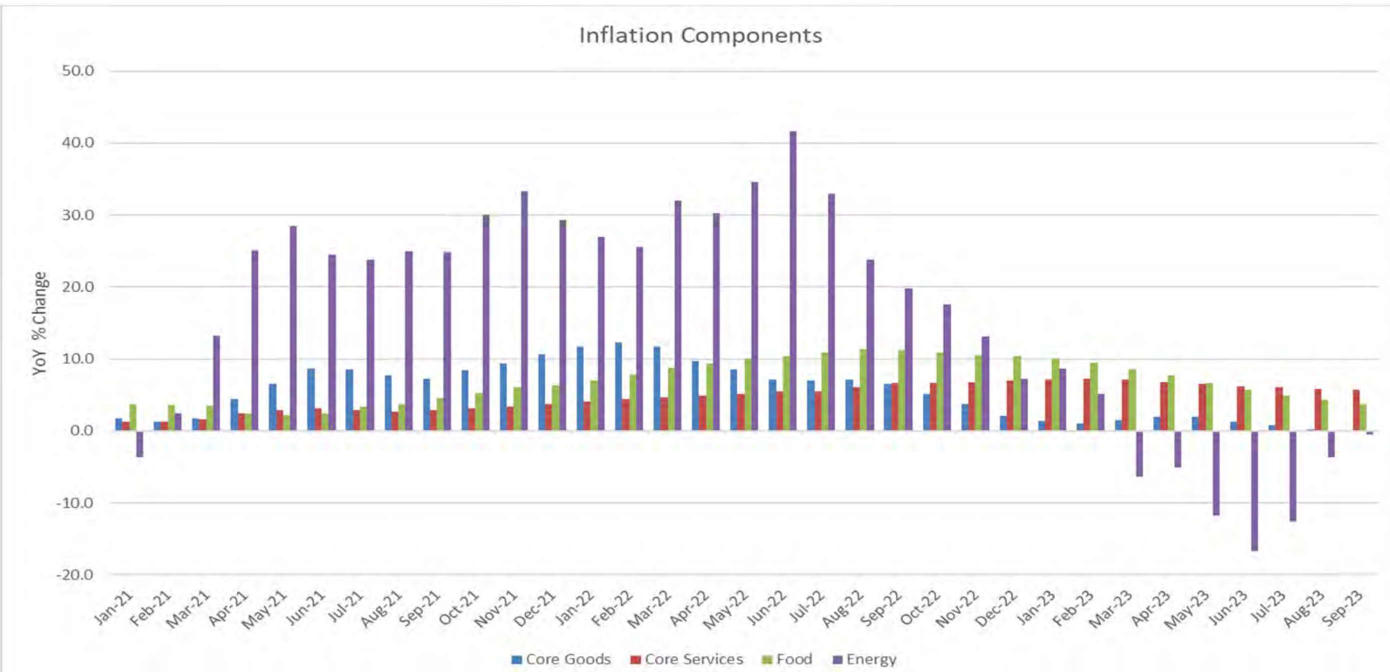
- Despite widespread predictions at the start of the year that a recession was imminent, U.S. economic growth has remained positive, with GDP increasing by over 2.0% in each of the first two quarters of 2023.

- Economic growth likely accelerated in Q3 2023 with the Atlanta Fed GDPNow model forecasting 5.4% growth for the quarter as of October 17, 2023.

- In their most recent projections, the U.S. Federal Reserve increased projected growth for 2023 from 1.0% to 2.1% and increased 2024 from 1.1% to 1.5%.

- Rising inflation resulted in 25 consecutive months of negative real wage growth for U.S. workers through early 2023. However, higher earnings and slowing inflation have resulted in five consecutive months of real wage growth more recently which has helped fuel stronger than expected economic growth.

U.S. Economy



Inflation Continues Downward Trend but Remains Above Target

- Inflation continues to trend downward with year-over-year CPI of 3.7% in September, down from the peak of 9.1% in June 2022. The September CPI print was up from a 3.0% reading in July, primarily driven by a spike in energy prices in August.

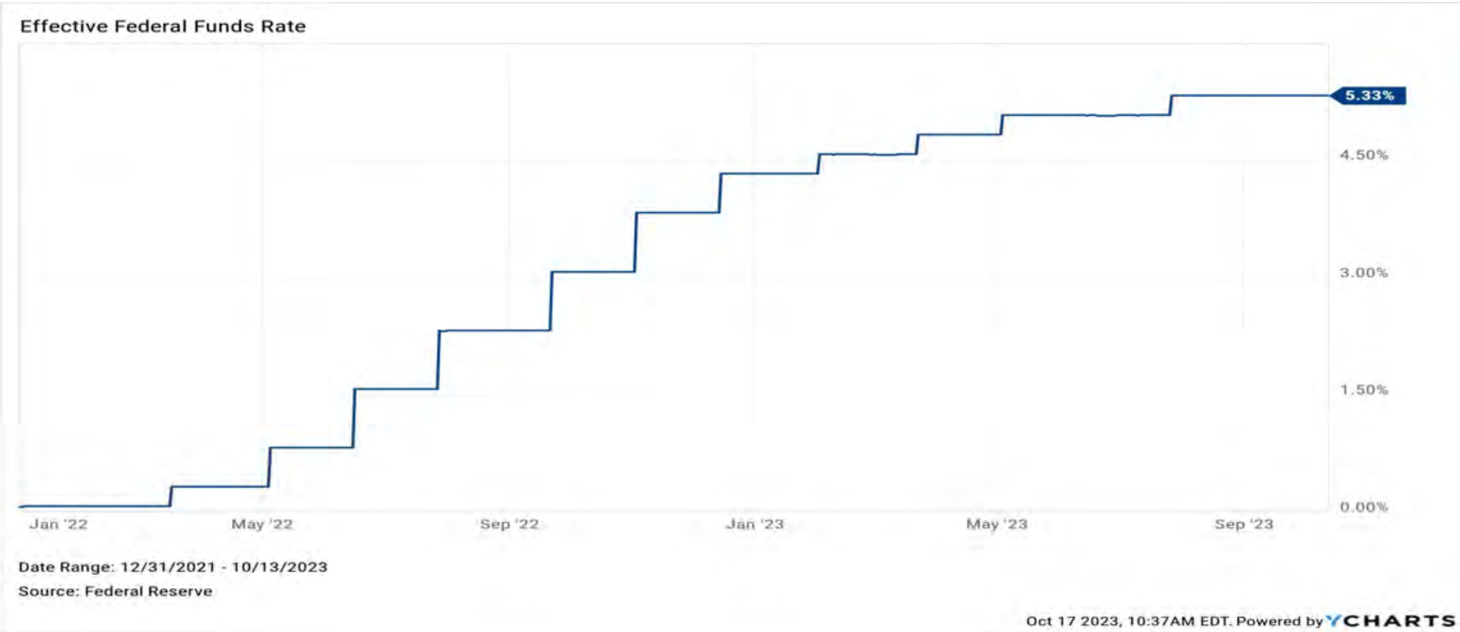
- Excluding food and energy, core inflation increased by 4.2% vs. a year ago, down from 4.9% in June 2023.

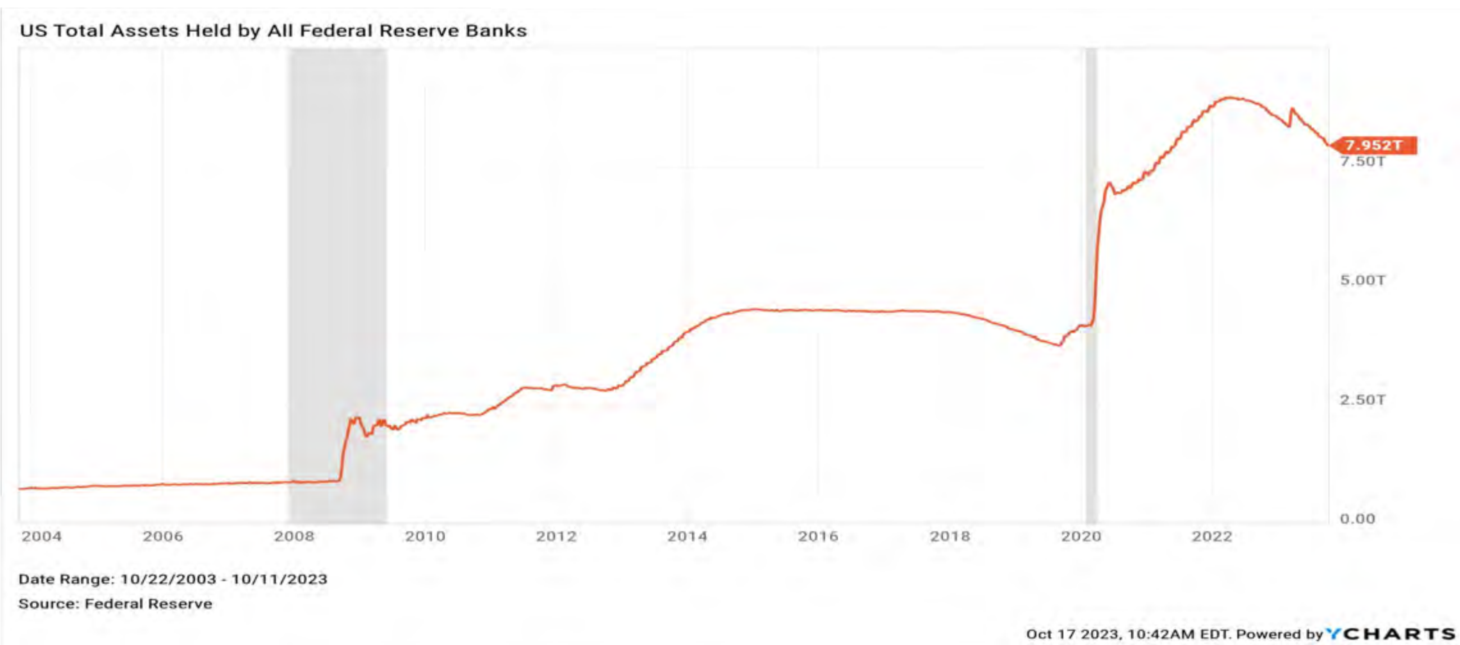
- Year-over-year core goods inflation was flat in September, driven by falling used car prices.

- Service inflation remains elevated, driven by the shelter component, which tends to lag real time prices.

- PCE, the Fed's preferred inflation measure, increased by 3.9% over the last year through July, the lowest level since May of 2021.

U.S. Economy





End of Rate Hikes on the Horizon

- The U.S. Federal Reserve raised rates from 0.0% to 5.25% since the beginning of 2022, with the most recent 0.25% increase occurring at the July meeting, leaving the effective Fed Funds Rate at 5.33%, the highest level since 2007.
- While the Fed paused at the September meeting, forward guidance alluded to the possibility of an additional hike before year end.
- The reduction in the size of the Fed's balance sheet that began in 2022 was briefly interrupted in March 2023 when the Fed provided a liquidity injection to banks following three of the four largest bank failures in history.
- By the end of Q2 2023, the increase was reversed and the quantitative tightening program resumed with the balance sheet at the lowest level since May 2021.

U.S. Economy

Date Range: 10/20/2018 - 10/07/2023

Sources: DoL, BLS

Oct 17 2023, 10:45AM EDT. Powered by YCHARTS

Employment Remains Robust

- Despite significant increases in the Fed Funds rate, various measures suggest the labor market remains strong.
- Weekly claims for unemployment averaged 232,000 in Q3 2023, compared to 240,000 in Q2 2023 and an average of 214,000 for calendar year 2022.
- The unemployment rate increased slightly from 2023 lows; however, increases were primarily driven by higher participation rates, and the unemployment rate remains close to historical lows.
- While off the highest levels of 2022, job openings in the U.S. remain elevated by historical standards.

U.S. Economy

Skyrocketing Mortgage Rates Slow Home Sales

- Rising interest rates have resulted in the highest 30-year mortgage rates in over twenty years.
- Current mortgage rates are nearly five percentage points higher than the historical low in early 2021, but are in line with the long term average, which is heavily influenced by the double-digit rates of the 1970s and 1980s.
- Increasing mortgage rates have tempered home buying, with many current homeowners hesitant to part with sub-4% mortgages to purchase properties with higher mortgage rates. Consequently, monthly sales of existing homes declined to the lowest levels since 2010.

U.S. Equity Market

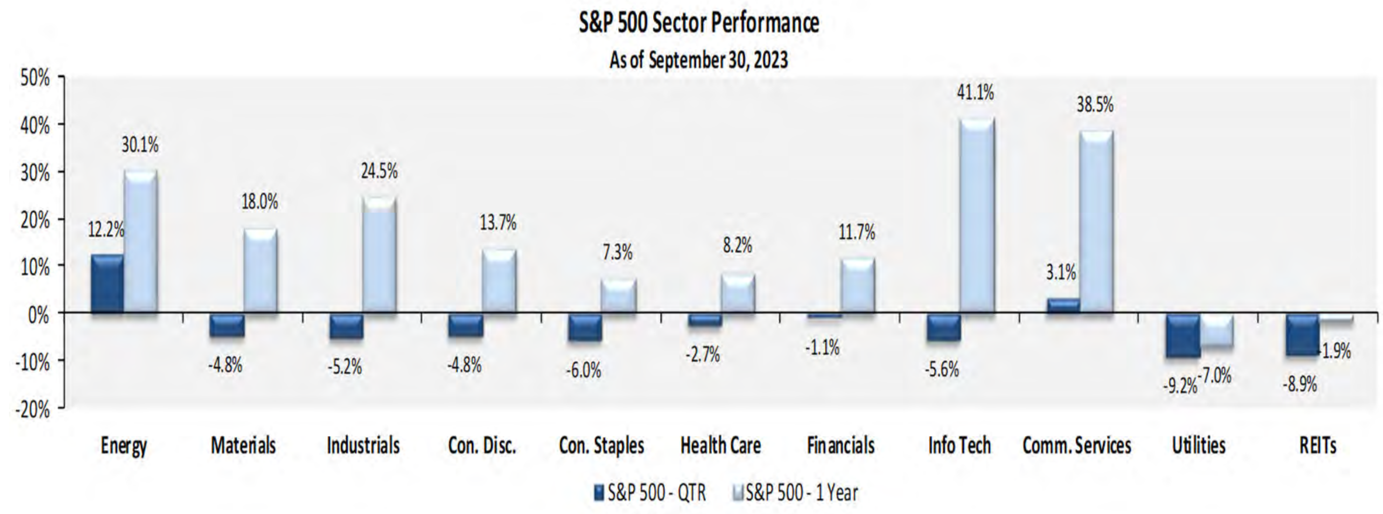
Sector	Index	3Q23	YTD	2022	2021	2020	2019	2018	2017	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	-3.3%	13.1%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	21.6%	10.1%	9.9%	11.9%
	Russell 1000	-3.1%	13.0%	-19.1%	26.4%	21.0%	31.4%	-4.8%	21.7%	21.2%	9.5%	9.6%	11.6%
	Russell 1000 Value	-3.2%	1.8%	-7.6%	25.1%	2.8%	26.5%	-8.3%	13.6%	14.4%	11.0%	6.2%	8.4%
	Russell 1000 Growth	-3.1%	25.0%	-29.1%	27.6%	38.5%	36.4%	-1.5%	30.2%	27.7%	8.0%	12.4%	14.5%
Mid Cap	Russell Mid-Cap	-4.7%	3.9%	-17.3%	22.6%	17.1%	30.5%	-9.1%	18.5%	13.4%	8.1%	6.4%	9.0%
	Russell Mid-Cap Value	-4.5%	0.5%	-12.1%	28.3%	5.0%	27.0%	-12.3%	13.3%	11.0%	10.9%	5.2%	7.9%
	Russell Mid-Cap Growth	-5.2%	9.9%	-26.7%	12.7%	35.6%	35.5%	-4.8%	25.3%	17.5%	2.6%	7.0%	9.9%
Small Cap	Russell 2000	-5.1%	2.5%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	8.9%	7.1%	2.4%	6.6%
	Russell 2000 Value	-3.0%	-0.6%	-14.5%	28.2%	4.6%	22.4%	-12.9%	7.8%	7.8%	13.3%	2.6%	6.2%
	Russell 2000 Growth	-7.3%	5.2%	-26.4%	2.8%	34.6%	28.4%	-9.3%	22.1%	9.6%	1.1%	1.5%	6.7%
Total Market	Wilshire 5000	-3.3%	12.5%	-19.0%	26.7%	20.8%	31.0%	-5.3%	21.0%	20.5%	9.7%	9.4%	11.5%
	Russell 3000	-3.3%	12.4%	-19.2%	25.6%	20.9%	31.0%	-5.2%	21.1%	20.4%	9.4%	9.1%	11.3%

Major Index Total Return as of September 30, 2023

Asset Class	Name	2023 YTD	% off Low	% Off All Time High
U.S. Large Cap	S&P 500	13.1%	21.9%	-8.0%
U.S. Mid Cap	Russell Midcap	3.9%	16.6%	-16.1%
U.S. Smid Cap	Russell 2500	3.6%	11.7%	-19.4%
U.S. Small Cap	Russell 2000	2.5%	9.3%	-24.9%
International Large Cap	MSCI EAFE	7.1%	26.7%	-10.6%
International Small Cap	MSCI EAFE Small Cap (gross)	2.3%	20.5%	-23.5%
Emerging Markets	MSCI Emerging Markets	1.8%	16.0%	-29.2%
Global Equity	MSCI World (gross)	11.6%	23.1%	-8.7%

- Global equities declined in Q3 2023 following a strong H1 2023. Headwinds included rising bond yields, a stronger U.S. Dollar, and consumer spending worries due to higher energy prices resulting from oil supply cuts.
- The S&P 500, comprised of U.S. large-cap stocks, was negative in Q3 2023 for the first time in four quarters as investors conceded high interest rates could persist longer than anticipated.
- The S&P 500's 13.1% year-to-date gain has been mainly attributed to a handful of tech stocks boosted by optimism in artificial intelligence. However, in Q3 2023, most of the "Magnificent Seven" declined, impacting the overall market. Conversely, energy stocks displayed resilience, standing out as one of the few sectors that avoided losses in the quarter.

U.S. Equity Market



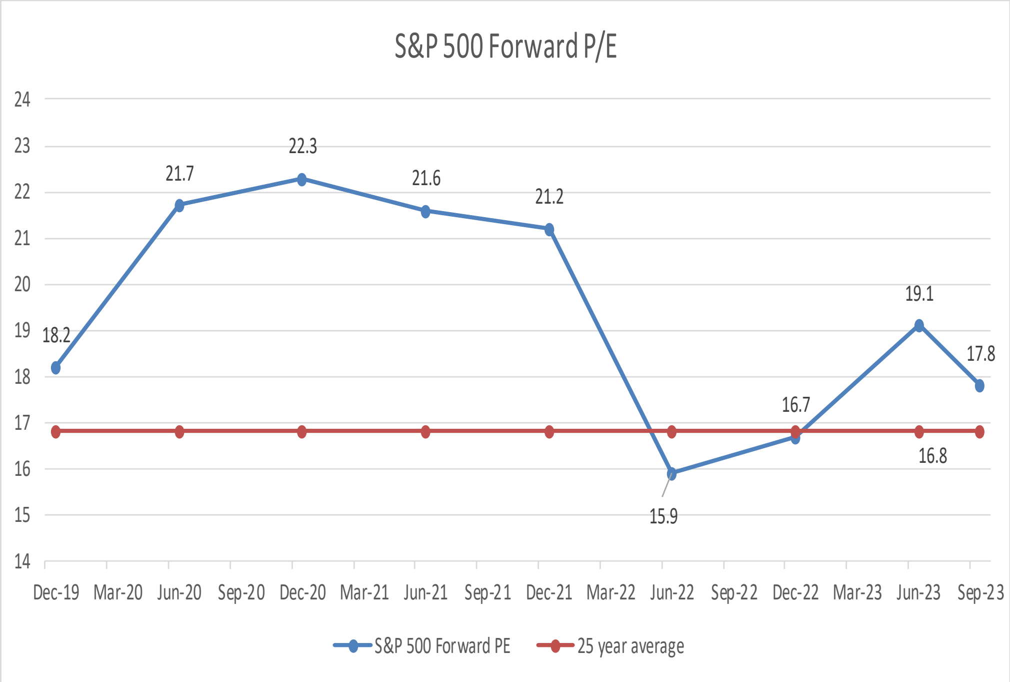
Tech and Comm. Services Lead YTD Gains; Defensive Sectors/Bond Proxies Struggle

- Sector performance displays a clear divide, with Comm. Services and Technology up +40% and +35% YTD, respectively, while defensive sectors like Utilities and Staples are down -14% and -5%, respectively. With some segments of the fixed income market offering their highest yields in 15 years, the attractiveness of "high-dividend" defensive sectors as bond alternatives has diminished relative to the period of near-zero interest rate policy (ZIRP).

- Buoyed by extended supply cuts from OPEC+ and Russia, oil prices, as measured by WTI crude, surged by 29% in Q3 2023, and are up 40% since late June. The energy sector, comprising just 4.4% of the S&P 500, outperformed all other sectors in Q3 2023.

Earnings Growth Returns?

- The S&P 500 is anticipated to post a modest 0.4% year-over-year earnings growth for Q3 2023, marking its first positive year-over-year growth since Q3 2022, albeit by a narrow margin. The S&P 500's forward P/E ratio decreased in the past quarter as stock prices fell and currently stands at 17.8x forward earnings, in the vicinity of its 25-year average.



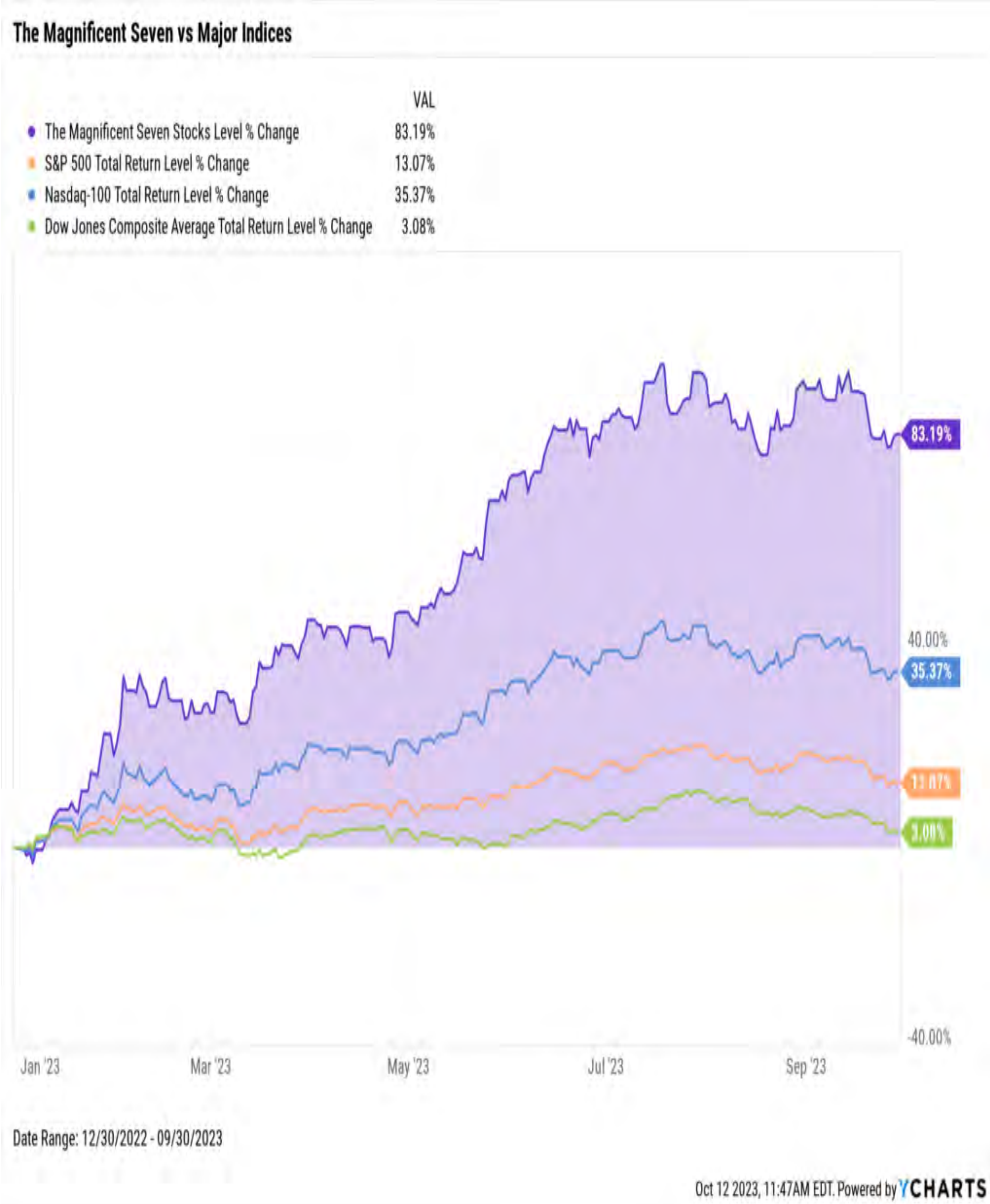
Source: J.P. Morgan Asset Management

U.S. Equity Market

Tech Giants Pull Back but Maintain Market Leadership

- The "Magnificent Seven," a term recently coined by investors, comprises high-growth technology giants Alphabet (Google), Amazon, Apple, Meta Platforms (formerly known as Facebook), Microsoft, NVIDIA, and Tesla. Representing about 28% of the S&P 500, this group is responsible for 84% of the S&P 500 index's 13.1% year-to-date gain.

- The concentrated nature of the S&P 500 expands beyond the Magnificent Seven as the top 50 stocks constitute an astonishing 57% of the total index value. Such a high degree of concentration is a rarity, occurring only twice in the past century, specifically in 1932 and 2000.



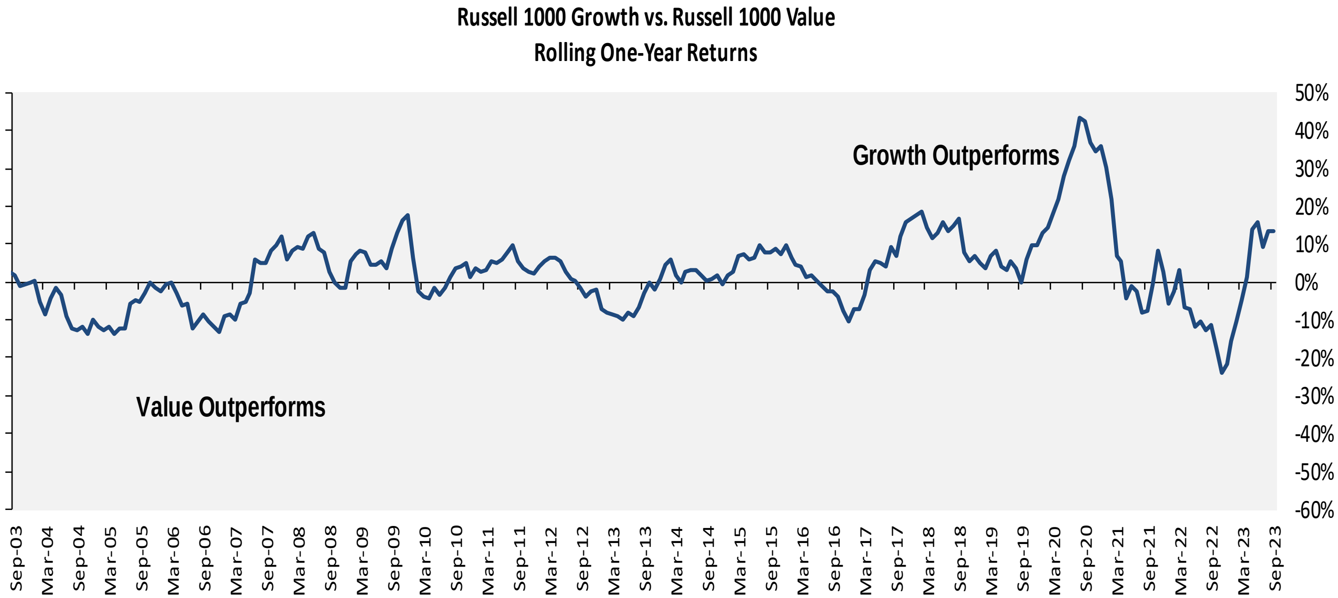
Mega-Cap Stocks Benefiting from Better Debt Profile

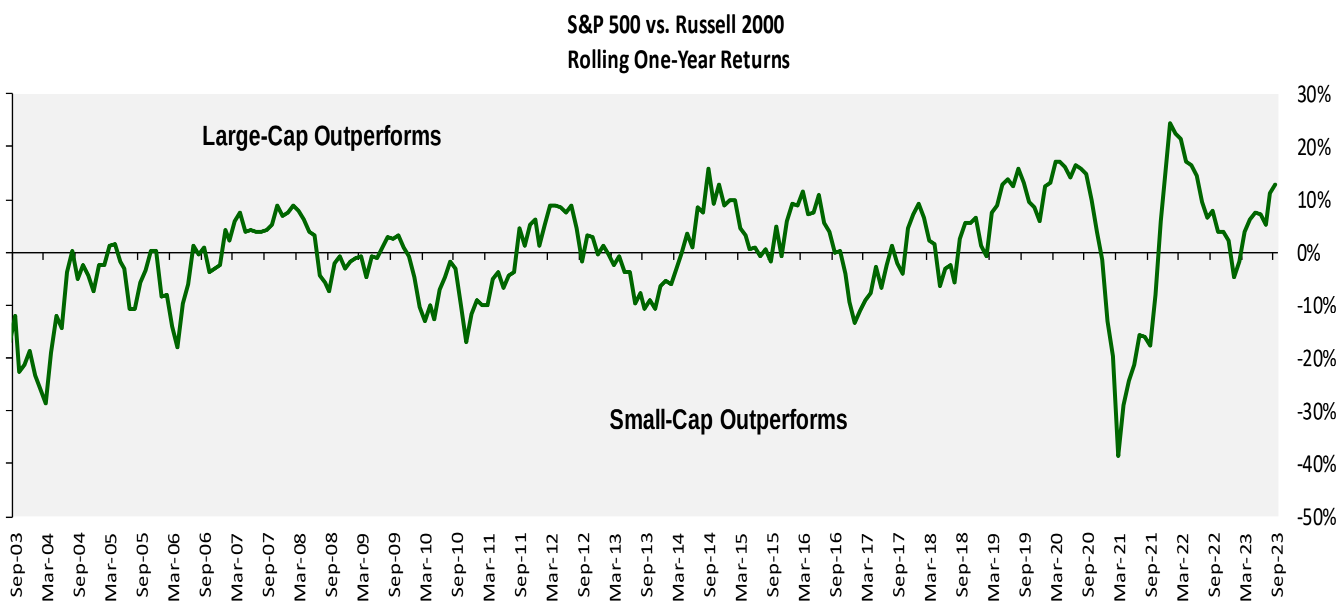
- The Q3 2023 equity market pullback led to losses across most equity categories and erased year-to-date gains in vulnerable areas like leveraged smaller companies.

- Mega-cap companies took advantage of pandemic-era low interest rates by securing long-term fixed-rate bonds, leading to increased cash reserves. Currently, S&P 500 companies pay an average effective interest rate of 3.3% on their long-term debt, with nearly half maturing after 2030, while their corporate cash reserves earn 5%.

- Conversely, smaller companies are grappling with the impact of rising floating rate debt and an impending refinance wall over the next few years.

U.S. Equity Market





Growth and Quality Attributes Lead in 2023

- Q3 2023 proved to be a challenging period for equity assets, with few positive factors and lackluster performance from both growth and value segments. The quarter failed to narrow the gap between Russell Top 200 Growth (Mega Cap Growth) and Russell 2000 Value (Small Cap Value), leaving a substantial 30% spread in year-to-date returns.
- In the past quarter, high-beta securities pulled back after a strong start to the year. Companies with growth and quality attributes are still leading in 2023, while those stocks that display low volatility factors and high dividend factors are trailing.
- In 2023, the Russell 2000 index, representing U.S. small-cap stocks, initially rebounded before dropping 11% from mid-summer, highlighting the impact of rising interest rates on smaller firms. This marked a nearly two-year bear cycle for the asset class as it re-entered bear territory in Q3 2023, with a 25% decline from its peak on November 8, 2021.

International Equity Market

Sector	Index	3Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	-3.4%	10.1%	-18.4%	18.5%	16.3%	26.6%	-9.4%	20.8%	6.9%	6.5%	7.6%
	MSCI World Small Cap (net)	-4.4%	2.9%	-18.8%	15.8%	16.0%	26.2%	-13.9%	14.0%	6.2%	3.1%	6.3%
	MSCI World ex US (net)	-4.1%	6.7%	-14.3%	12.6%	7.6%	22.5%	-14.1%	24.0%	6.1%	3.4%	3.8%
	MSCI World ex US Small Cap (net)	-3.5%	1.8%	-20.6%	11.1%	12.8%	25.4%	-18.1%	17.3%	1.8%	1.3%	4.1%
Developed ex US	MSCI EAFE (net)	-4.1%	7.1%	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.6%	5.8%	3.2%	3.8%
	MSCI EAFE Value (net)	0.6%	9.9%	-5.6%	10.9%	-2.6%	16.1%	-14.8%	31.5%	11.1%	2.8%	3.0%
	MSCI EAFE Growth (net)	-8.6%	4.3%	-22.9%	11.3%	18.3%	27.9%	-12.8%	20.0%	0.4%	3.2%	4.4%
	MSCI EAFE Small Cap (net)	-3.5%	1.8%	-21.4%	10.1%	12.3%	25.0%	-17.9%	17.9%	1.1%	0.8%	4.3%
Emerging Markets	MSCI Emerging Markets (net)	-2.9%	1.8%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	11.7%	-1.7%	0.6%	2.1%

- Due to concerns about the adverse impacts of rising interest rates on economic growth, most European markets declined in Q3 2023. Europe is grappling with persistent inflation, elevated interest rates, and recession concerns, with Germany expected to report negative economic growth for the full year 2023.

- Japanese equities displayed some resilience amid the Q3 2023 market correction, outperforming most developed nations. The weak yen and resurging inflation provided strong support, allowing Japanese companies to increase prices. Furthermore, Japan's attractiveness to global investors seeking Asian exposure without the geopolitical and regulatory risks of China has grown.

- Chinese stocks, a significant part of emerging markets, struggled due to declining retail sales, stagnant house prices, rising household debt, and sluggish private-sector investment.

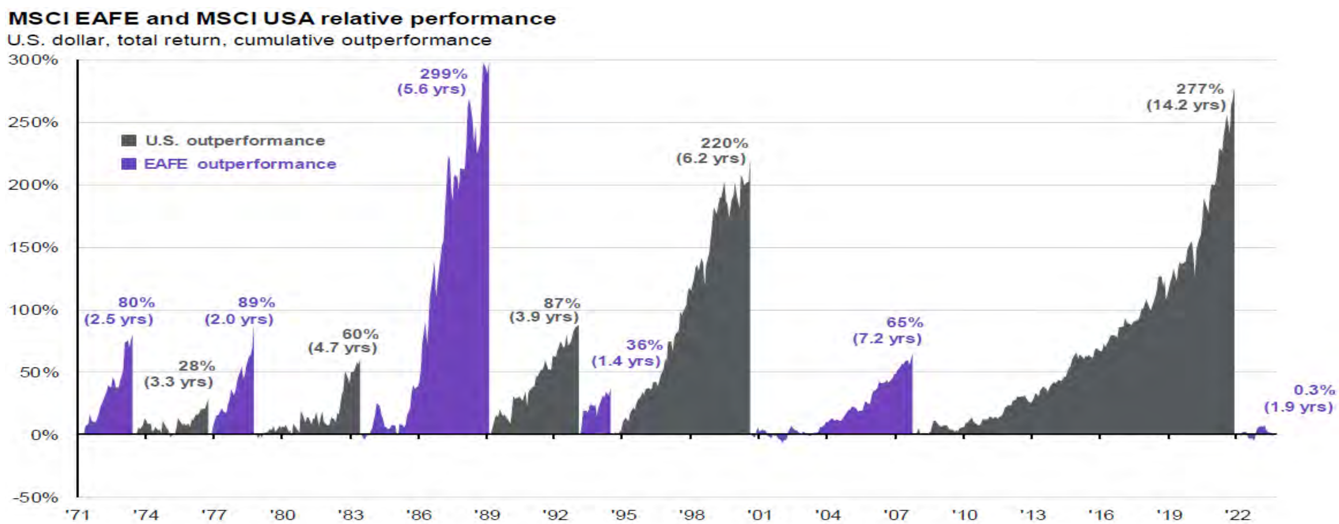
International Equity Market

Dollar Index Soars on Expectations of Tight Monetary Policy

- As investors braced for prolonged high interest rates, the U.S. Dollar surged against major currencies, hitting its highest point since late 2022.
- The U.S. Dollar Index (DXY) ended Q3 with an impressive eleven-week winning streak, the second longest in over 50 years, and achieved new highs for 2023, strengthening against nine out of ten G10 currencies and most emerging market currencies.

Regime Change or Just a Pause?

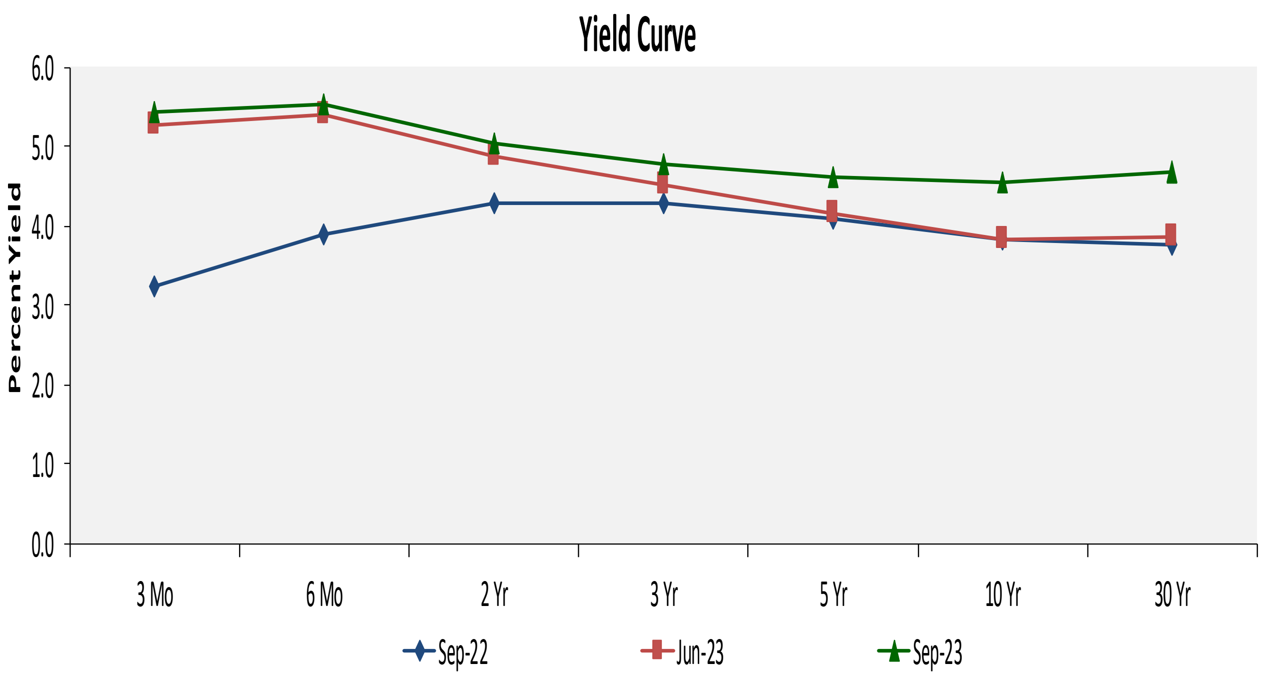
- U.S. equity markets outperformed international markets by 277% in the past 14.2 years, marking the longest duration of outperformance in 50 years; however, this trend may have ended by the close of 2021.
- Over the last two years, international and U.S. markets had similar performance, with neither consistently overtaking the other.



Source: J.P. Morgan Asset Management

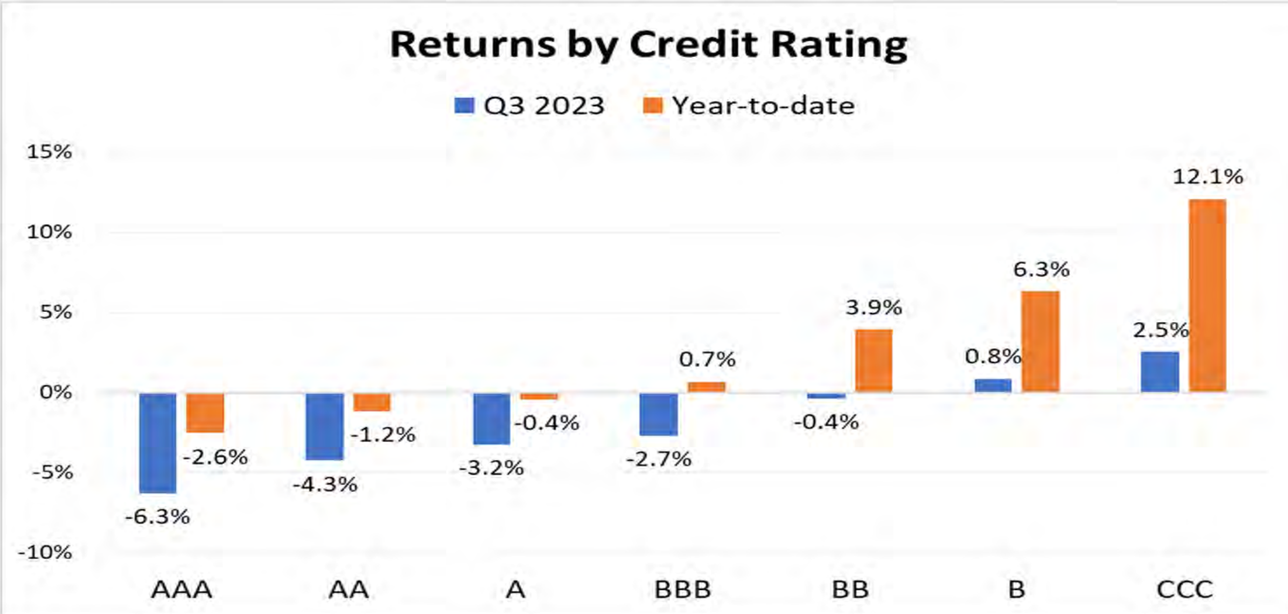
Bond Market

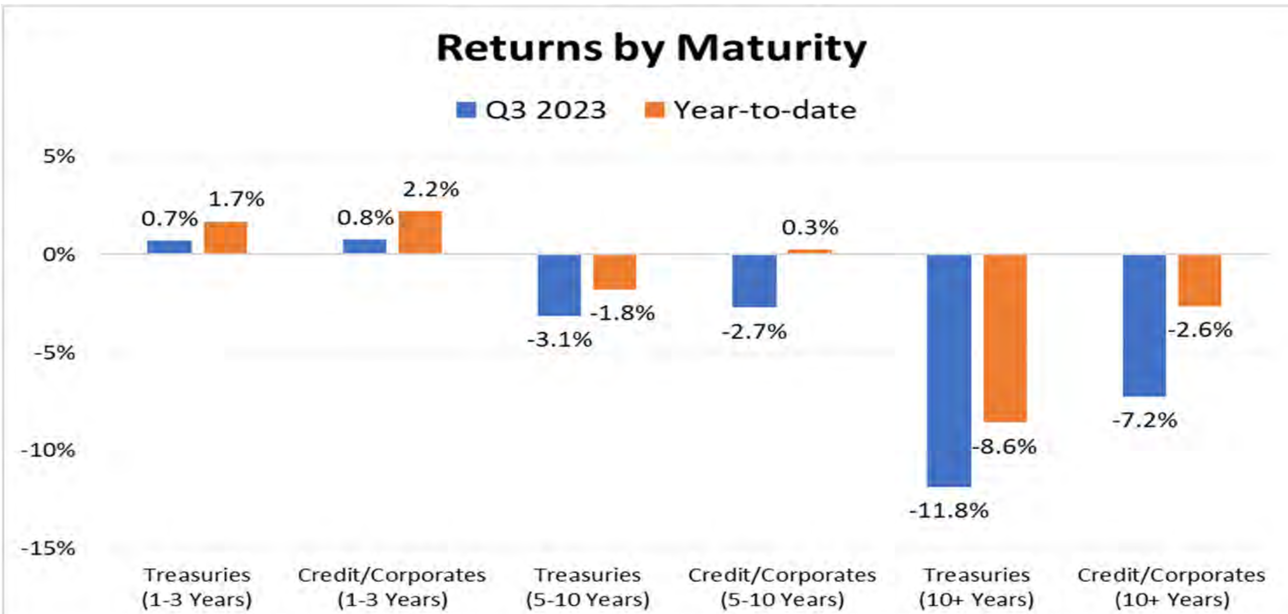
Index	Duration (years)	Yield	3Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Bloomberg Aggregate	6.2	5.39%	-3.2%	-1.2%	-13.0%	-1.5%	7.5%	8.7%	0.0%	0.6%	-5.2%	0.1%	1.1%
Bloomberg Govt/Credit	6.3	5.30%	-3.0%	-0.9%	-13.6%	-1.7%	8.9%	9.7%	-0.4%	0.9%	-5.3%	0.4%	1.3%
Bloomberg Int Agg	4.7	5.36%	-1.9%	-0.3%	-9.5%	-1.3%	5.6%	6.7%	0.9%	1.4%	-3.7%	0.4%	1.1%
Bloomberg Int Govt/Credit	3.9	5.23%	-0.8%	0.7%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.2%	-2.9%	1.0%	1.3%
Bloomberg U.S. Corporate	7.0	6.04%	-3.1%	0.0%	-15.8%	-1.0%	9.9%	14.5%	-2.5%	3.6%	-4.9%	0.9%	2.2%
Bloomberg HY Ba/B 2% IC	4.1	8.26%	0.2%	5.0%	-10.6%	4.6%	7.7%	15.2%	-1.9%	9.8%	1.3%	3.3%	4.3%
ICE BofA 1-3 Yrs BB US Cash Pay HY	1.9	7.41%	1.1%	4.7%	-3.1%	3.2%	5.4%	8.7%	1.3%	7.5%	2.8%	3.6%	3.7%
Bloomberg Mortgage	6.3	5.57%	-4.1%	-2.3%	-11.8%	-1.0%	3.9%	6.4%	1.0%	-0.2%	-5.1%	-0.8%	0.6%
Bloomberg Treasury	6.0	4.85%	-3.1%	-1.5%	-12.5%	-2.3%	8.0%	6.9%	0.9%	-0.8%	-5.8%	-0.1%	0.6%
Bloomberg US TIPS	6.6	5.02%	-2.6%	-0.8%	-11.8%	6.0%	11.0%	8.4%	-1.3%	1.2%	-2.0%	2.1%	1.7%
BofA ML 91 day T-Bills	0.3	5.46%	1.3%	3.7%	1.5%	0.0%	0.7%	2.3%	1.9%	4.6%	1.8%	1.8%	1.1%



- The U.S. treasury yield curve shifted higher in Q3 2023 with yields on longer maturity bonds seeing the largest increase.
- The yield curve remains heavily inverted, reflecting a view that a slow-down in growth and/or lower levels of inflation will arrive at some point in the next 5-10 years.
- Returns for U.S. bond markets were mostly negative in Q3 2023. Riskier, higher yielding bonds outperformed while safer, longer duration bonds underperformed. High Yield and bonds with short maturities (under 3 years until maturity) generated positive returns in Q3 2023 while longer maturity bonds experienced losses.

Bond Market

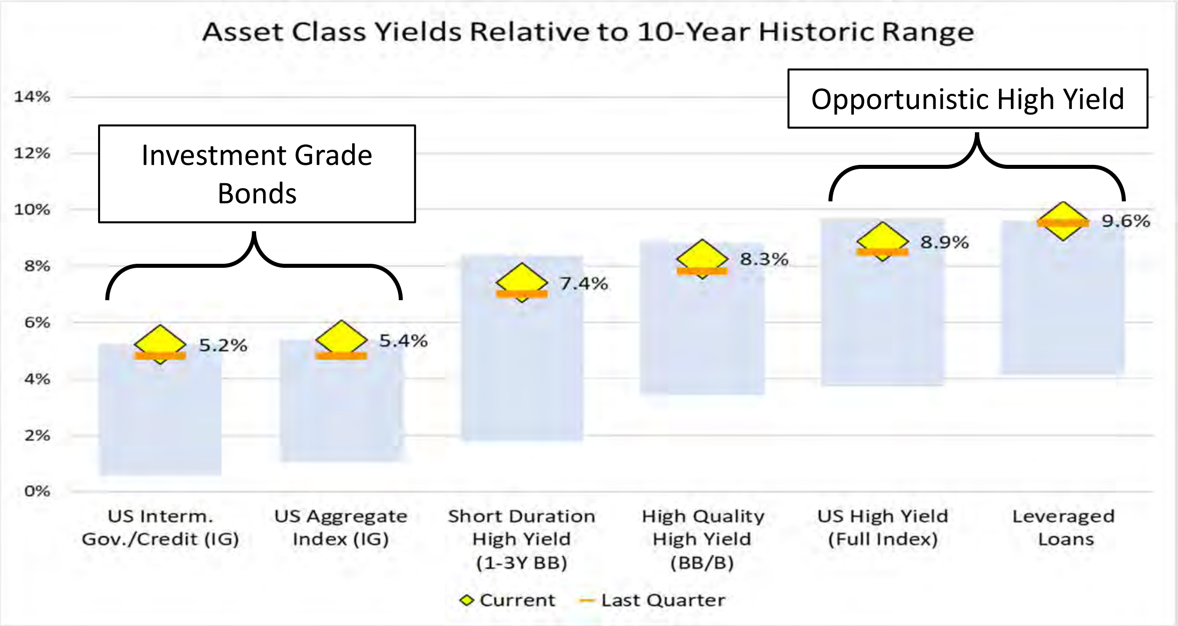


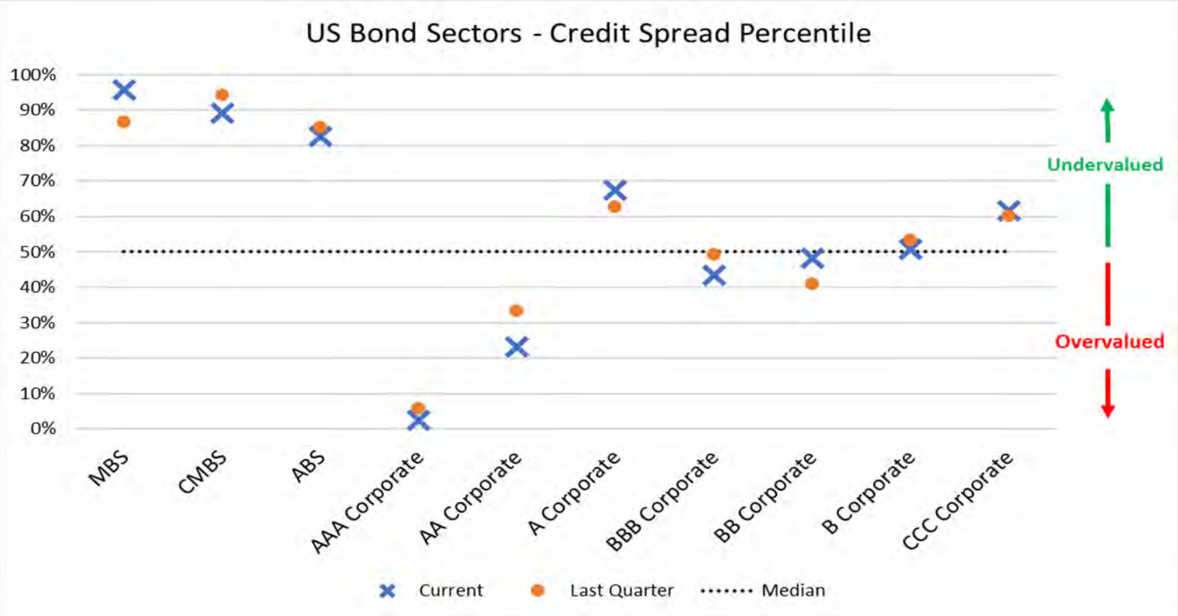


Lower Quality & Shorter Maturity Bonds Continue to Outperform

- High Yield corporate bonds generated positive returns in Q3 2023 while investment grade corporate bonds experienced losses for the quarter.
- Credit spreads held steady with some tightening (bond prices increasing) in Q3 2023.
- Rising interest rates across the yield curve were the primary driver of returns in Q3 2023. Longer maturity bonds experienced a greater increase in yields.
- The rise in interest rates put pressure on high quality credit (AAA-BBB) and longer maturity bonds. Long maturity bonds with little credit risk (US Treasuries, 10+ Year AAA-rated corporate bonds) experienced the largest losses in Q3 2023.
- Year-to-date, the riskiest bonds are outperforming by a wide margin due to high levels of interest income and relatively low levels of defaults. Shorter maturity bonds outperformed longer maturity bonds due to lower sensitivity to rising interest rates.

Bond Market





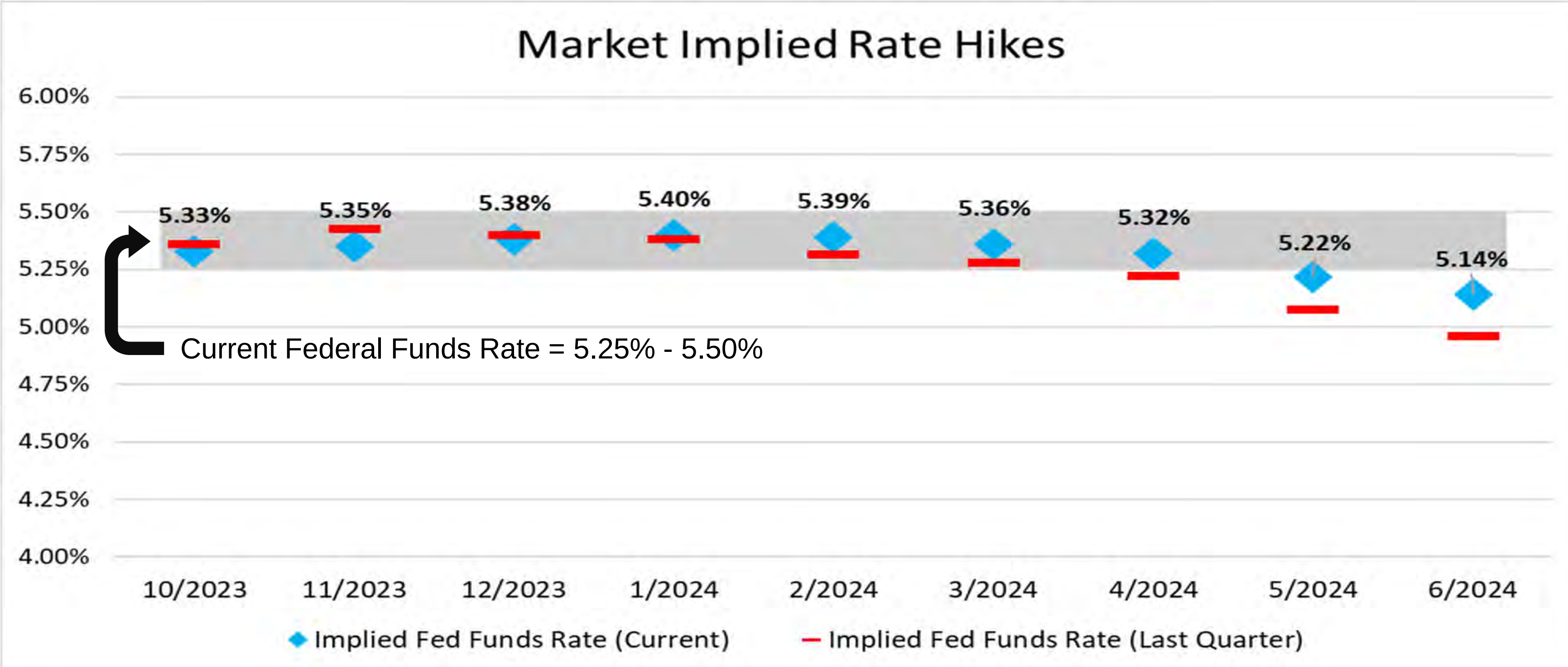
Bond Yields

- due to the move higher in U.S. interest rates, yields across bond sectors moved slightly higher in Q3 2023.
- Investment grade bonds are currently yielding more than 5% with investment grade corporates yielding closer to 6%.
- Investors can earn an additional yield pick-up of 200 to 300 bps in higher-quality high yield bonds relative to U.S. investment grade bonds.
- The broader high yield & leveraged loan universes are currently yielding ~9%, offering the potential for equity-like returns in future years.

Credit Spreads/Valuations

- Credit spreads were mixed in a volatile quarter.
- Most corporate bonds offer spreads in-line with their 10-year median. AAA/AA-rated corporates offer less value versus their 10-year history, suggesting investors are more defensively positioned.
- Spreads in structured credit (MBS, CMBS, ABS) remain well above their pre-2022 lows. MBS remains just below the widest spreads experienced in the past decade.

Bond Market

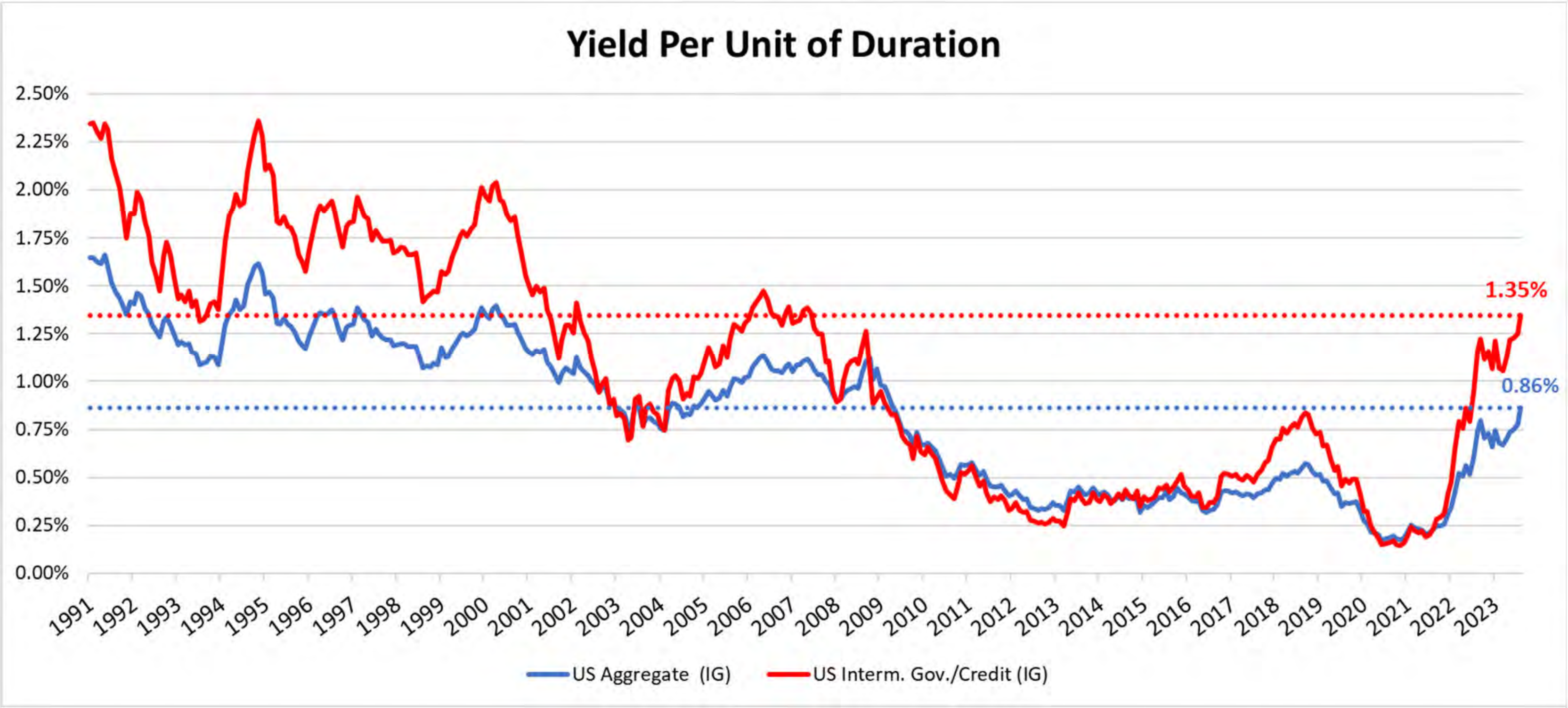


As of 10/11/23

- The FOMC raised interest rates by another 25 bps in late July, but elected to pause at their September meeting. The current target federal funds rate is now at 5.25-5.50%, up from 5.00-5.25% at the end of Q2 2023 and up from 4.25-4.50% in Q4 2022.
- The Fed Funds Rate futures market is currently pricing in no additional rate hikes for the next two quarters, indicating the Federal Reserve is done raising rates for the near term.
- The Fed Funds futures market continues to price in the potential for a 25 bps rate-cut in the 1st half of 2024; however, we have seen these pricings dissipate over time as Federal Reserve members continue to emphasize that the probability of future rate cuts is extremely low.
- Market expectations based on Fed Fund futures align with the sentiment and views of most bond managers. The general consensus is that the Federal Reserve is likely done raising short-term interest rates, but uncertainty remains around how long the Federal Reserve will keep rates at this level and under what circumstances would they feel obligated to lower interest rates.

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 ~85 bps higher before core bond investors (US Aggregate Index) start to realize negative returns on their portfolio in the near-term while intermediate investment grade investors can withstand a ~135 bps rise in interest rates before realizing losses on their portfolio.
- Given yields are equal for the US Intermediate Gov./Credit Index and the US 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 (US 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 9/30/2023

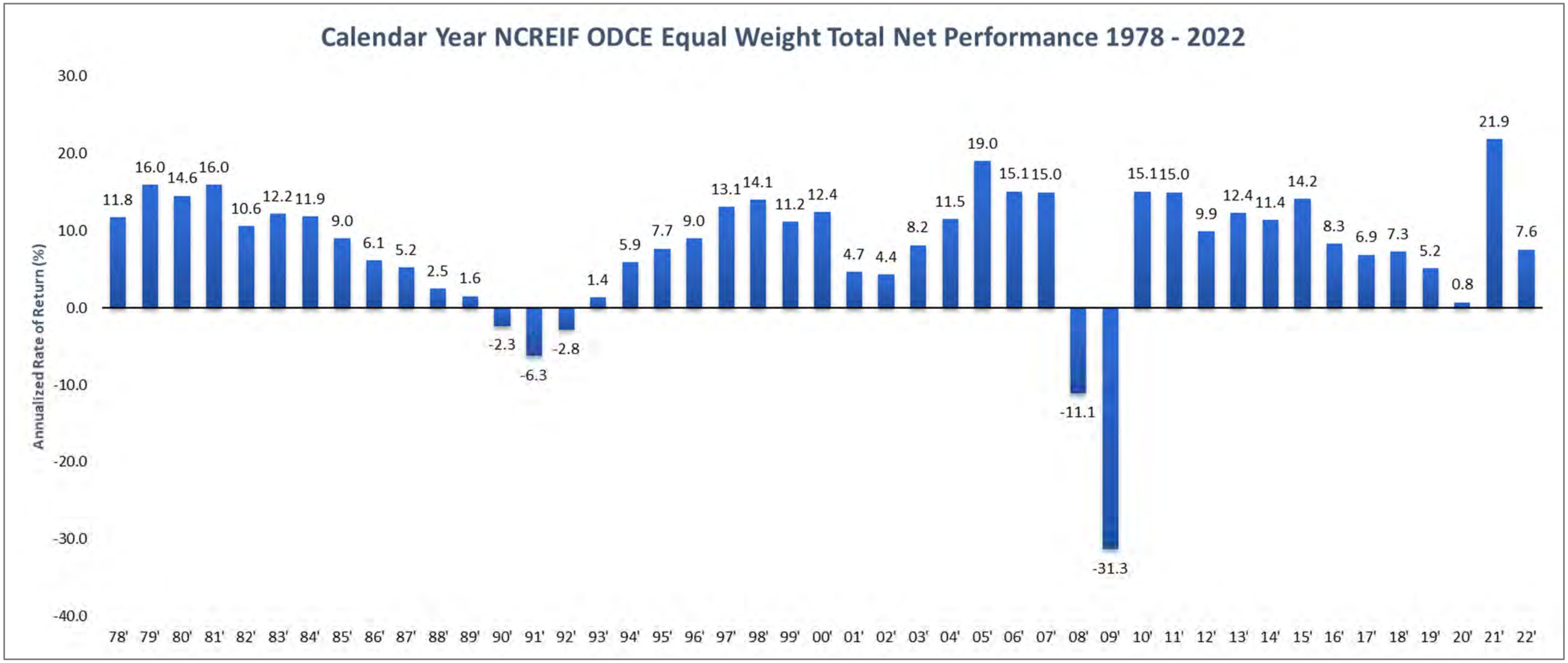
Yield Change (bps)	10 Year Treasury	Bloomberg Aggregate	Bloomberg Int Govt/Credit	ICE BofA Gov/Corp Master	ICE BofA 1-3 yr Gov/Corp	Defensive ICE BofA US HY BB/B ND	Short Duration ICE BofA US HY BB/B 1-3 yr
-300	28.62	24.09	16.87	23.89	10.89	19.92	13.72
-250	24.62	20.98	14.93	20.79	9.97	17.96	12.80
-200	20.61	17.86	12.99	17.70	9.06	15.99	11.87
-150	16.60	14.74	11.05	14.60	8.14	14.02	10.94
-100	12.59	11.62	9.11	11.51	7.22	12.06	10.02
-75	10.59	10.06	8.14	9.96	6.76	11.07	9.55
-50	8.58	8.50	7.17	8.41	6.30	10.09	9.09
-25	6.58	6.95	6.20	6.86	5.84	9.11	8.63
0	4.58	5.39	5.23	5.31	5.38	8.12	8.17
25	2.57	3.83	4.26	3.77	4.92	7.14	7.70
50	0.57	2.27	3.29	2.22	4.46	6.16	7.24
75	-1.44	0.71	2.32	0.67	4.00	5.17	6.78
100	-3.44	-0.85	1.35	-0.88	3.55	4.19	6.31
150	-7.45	-3.97	-0.59	-3.98	2.63	2.22	5.39
200	-11.46	-7.08	-2.53	-7.07	1.71	0.26	4.46
250	-15.47	-10.20	-4.47	-10.17	0.79	-1.71	3.54
300	-19.47	-13.32	-6.42	-13.26	-0.13	-3.68	2.61
Duration	8.02	6.24	3.88	6.19	1.84	3.93	1.85

FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 9/30/2023 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 9/30/2023 multiplied by the percentage point change in the yield curve (basis point change divided by 100) 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

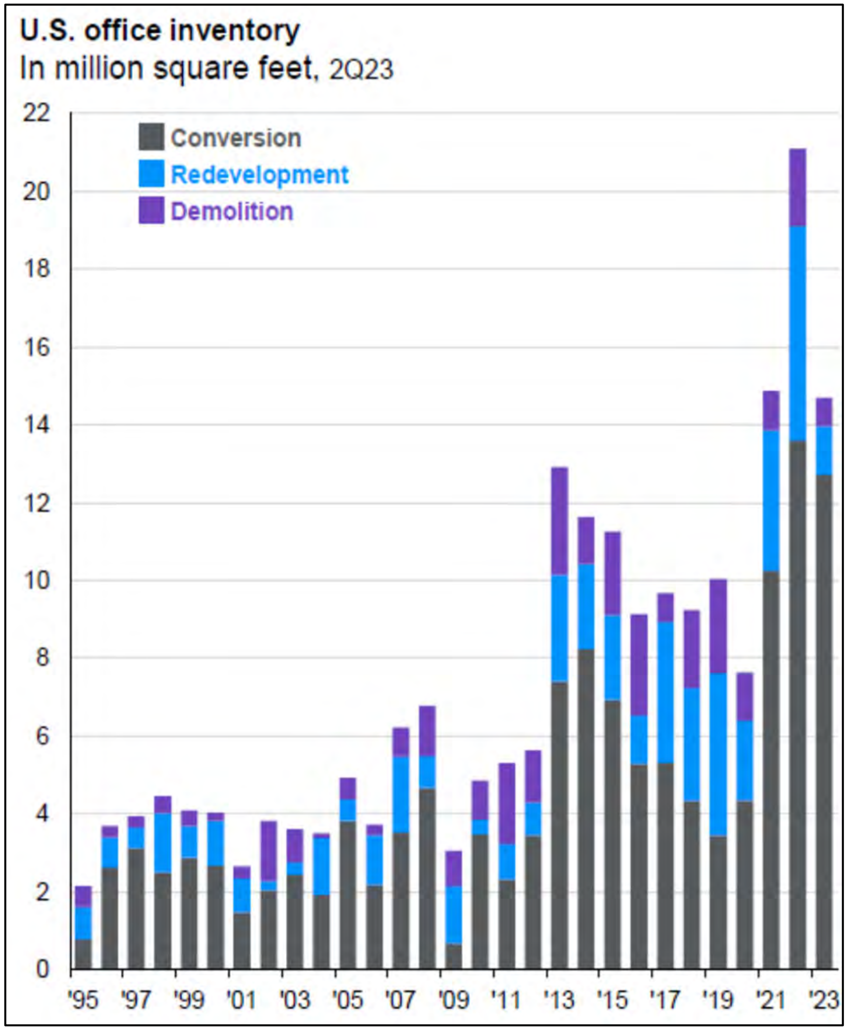
Sector	Index	3Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted (net)	-2.1%	-8.5%	7.6%	21.9%	0.8%	5.2%	7.3%	-13.1%	6.7%	5.2%	7.6%
	NCREIF ODCE EW Income Index	0.9%	2.6%	3.5%	4.1%	3.6%	3.5%	3.5%	3.4%	3.7%	3.7%	3.8%
	NCREIF ODCE EW Appreciation Index	-2.8%	-10.4%	4.8%	18.3%	-2.4%	1.7%	3.7%	-15.4%	3.7%	2.1%	4.0%

- The NCREIF ODCE Equal Weighted Index (net) declined for the fourth quarter in a row, generating a return of -2.1% in Q3 2023 and -8.5% YTD through the third quarter.
- 2023 is expected to be just the sixth negative calendar year for the index since 1978 and first since 2009, when the index declined by more than -31%.

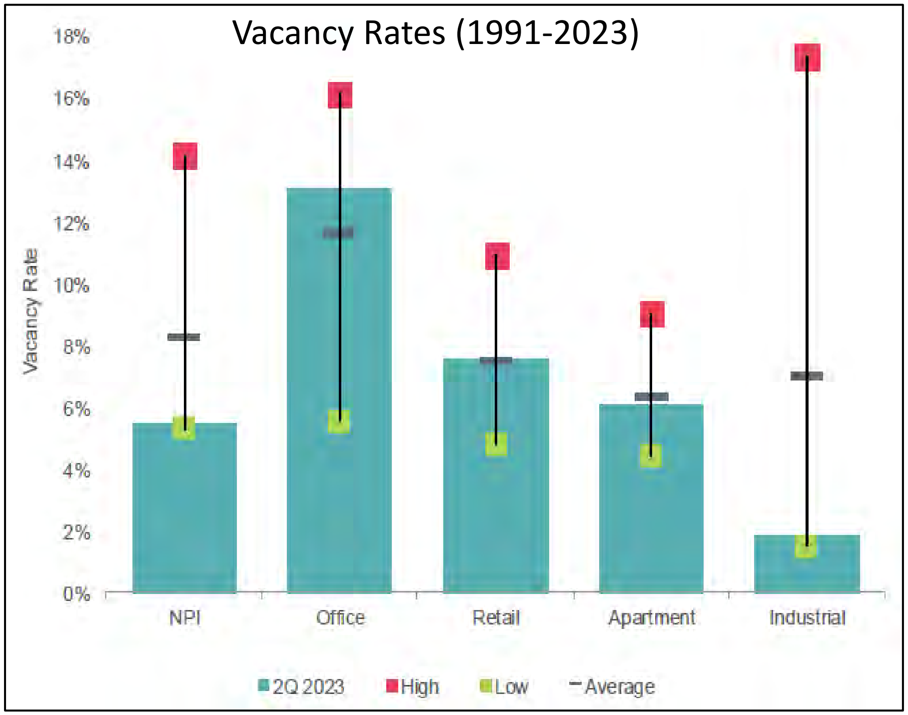


Real Estate Market

- Vacancy rates have largely declined from their early pandemic (2020) peaks in apartment, industrial and retail assets, while remaining elevated in U.S. office assets at approximately 13%. Industrial and apartment vacancies are below their long-term averages, as shown to the right.



Source: J.P. Morgan Asset Management, August 2023.



Source: NCREIF, via DWS, as of June 2023.

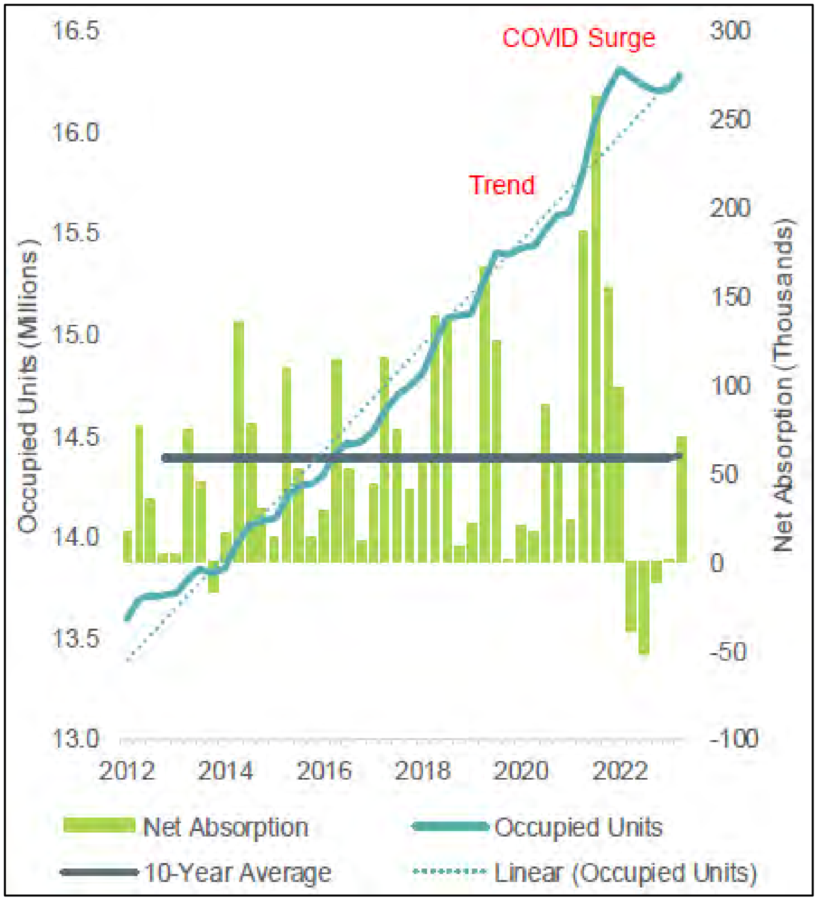
- Office properties were again the largest contributor to valuation declines in Q3. Office owners are attempting to keep existing tenants in place (though potentially at reduced footprints) and sign new leases on vacant space, which continues to be challenging due to companies' changing need for office space amid higher levels of remote work. This environment has put downward pressure on office rents, and often owners need to provide lease concessions to attract tenants. Lower rents, combined with high vacancy rates and higher borrowing costs, continue to put downward pressure on office valuations.

- A significant amount of office assets, relative to historical norms, have been slated to be repurposed, redeveloped or demolished since the onset of the COVID-19 pandemic, as shown in the chart to the left.

Real Estate Market

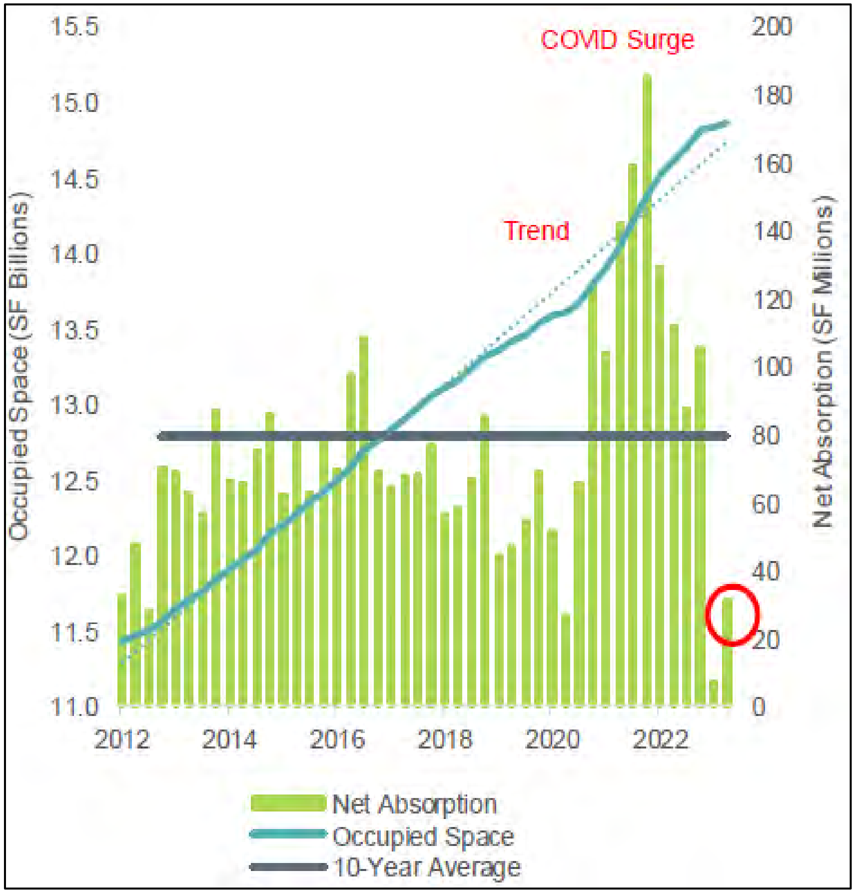
- Though valuation writedowns have occurred in other real estate sectors outside of the office sector, fundamentals in these sectors appear stronger relative to office and should recover faster.
- Apartments had negative net absorption following the pandemic surge, but net absorption has again turned positive in 2023, with strong demand for apartments driven by high mortgage rates, lower levels of development and a reduced supply of existing homes for sale.
- Industrial demand has softened from its pandemic peak, though net absorption remains positive.
- Retail vacancy rates have declined from their pandemic highs, and new supply remains limited.

Apartment Demand



Source: CBRE (via DWS), as of June 2023.

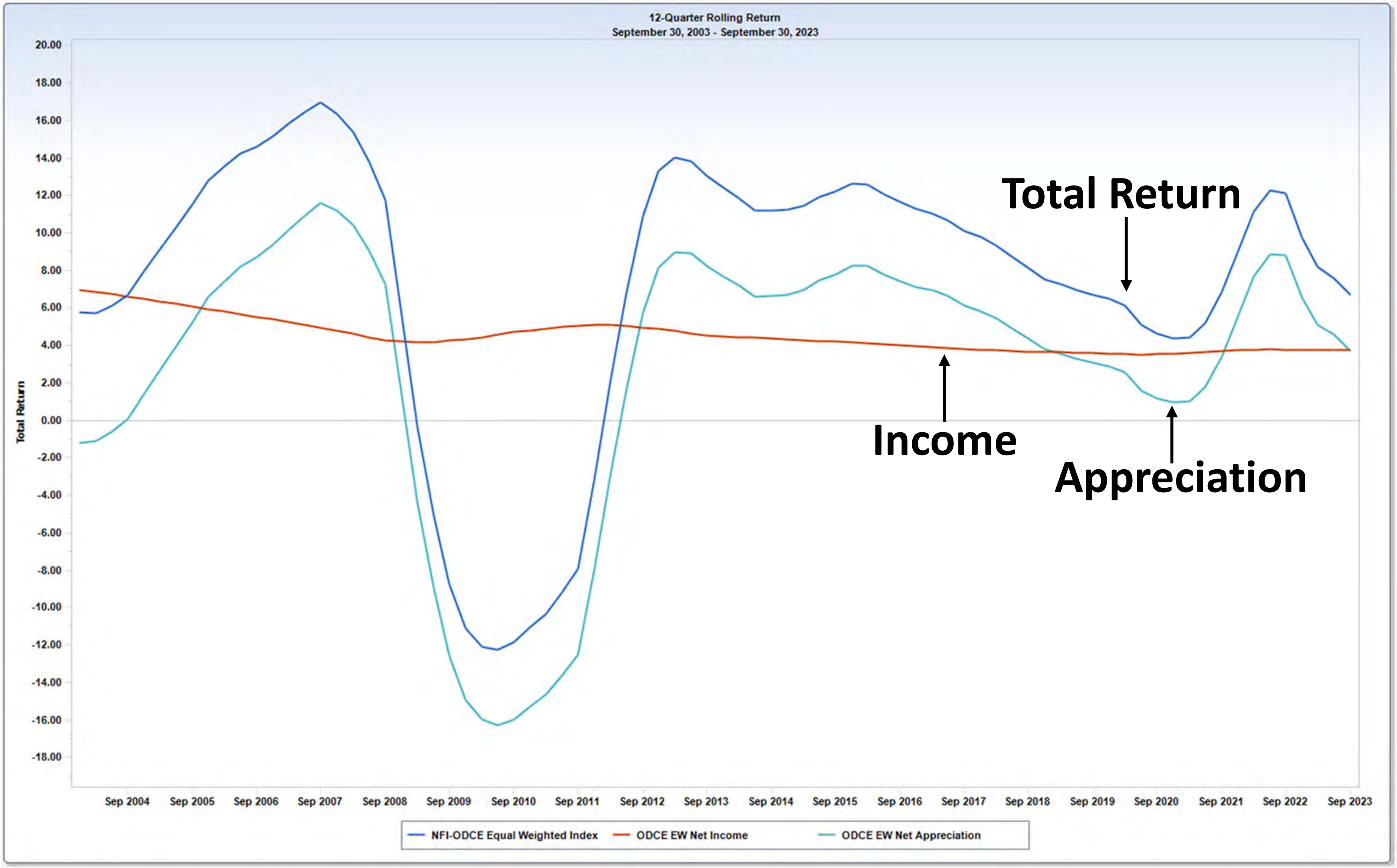
Industrial Demand



Source: CBRE, DWS as of June 2023.

Real Estate Market

- The income component of real estate returns continues to remain stable, providing a buffer against the recent periods of negative appreciation. Appreciation was positive in the first half of 2022 and drove the positive calendar year return for the index last year but was flat in Q3 2022 and has been negative since Q4 2022, driving the negative returns for the ODCE index over the last four quarters.



Hedge Fund Market

Strategy	Index	3Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI FOF Composite	0.5%	2.8%	-5.3%	6.2%	10.9%	8.4%	-4.0%	4.6%	3.8%	3.4%	3.3%
Equity Long-Short	HFRI Equity Hedge	-1.0%	4.7%	-10.1%	11.7%	17.9%	13.7%	-7.1%	9.1%	6.5%	5.2%	5.1%
Event Driven	HFRI Event Driven	2.4%	4.9%	-4.8%	12.4%	9.3%	7.5%	-2.1%	8.2%	7.8%	4.6%	4.5%
Global Macro	HFRI Macro Index	1.4%	0.6%	9.0%	7.7%	5.4%	6.5%	-4.1%	-0.7%	7.4%	5.3%	3.4%
Relative Value	HFRI Relative Value	1.5%	4.1%	-0.7%	7.6%	3.4%	7.4%	-0.4%	5.6%	5.4%	3.6%	4.0%
Credit	HFRI Credit Index	1.6%	4.4%	-2.6%	7.9%	6.3%	6.5%	-0.0%	5.8%	5.3%	3.8%	4.1%

- Hedge fund strategies were mostly positive in Q3 2023, providing a safe haven to investors amid a period of losses for global stocks and investment grade bonds. The HFRI Fund of Funds Composite generated a 0.51% return in Q3 2023 and is up 2.81% YTD.
- Gains during the quarter were broad-based, as event-driven, global macro, relative value and credit strategies all generated positive performance. Hedge funds seemingly found opportunities amidst choppy markets during the quarter that saw an increase in interest rates, slowing inflation, mostly higher commodity prices (particularly in energy) and a strengthening U.S. Dollar.
- Long-short equity strategies were negative during the quarter, as the HFRI Equity Hedge Index returned -0.97% but remains up 4.65% YTD. Fundamental stock pickers have been challenged by a market lacking breadth; while technology and AI stocks have been the winners this year, they largely stumbled through Q3. Hedge funds with exposures in energy and financials fared better during the quarter.

Operating Engineers Local No. 77 JATC Fund

Investment Performance Report

Period Ended

September 30, 2023

Total Fund Growth of Assets

	Third Quarter	Fiscal Year-To-Date	One Year	Three Years	Inception 11/30/19
Beginning Market Value	$3,093,341	$2,837,503	$2,736,926	$3,199,096	--
Net Cash Flow	-$22,241	$106,650	$129,324	-$357,351	$2,712,238
Net Investment Change	$12,359	$139,306	$217,209	$241,714	$371,221
Ending Market Value	$3,083,459	$3,083,459	$3,083,459	$3,083,459	$3,083,459

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

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending September 30, 2023					
			2023 Q3	Fiscal YTD	1 Yr	3 Yrs	Inception	Inception Date
Total Fund	**$3,083,459**	**100.0%**	**0.4%**	**4.6%**	**7.5%**	**2.5%**	**2.9%**	**Nov-19**
Total Domestic Large Cap Equity	**$314,149**	**10.2%**	**-3.3%**	**13.1%**	**21.6%**	**10.2%**	**10.2%**	**Nov-19**
Total Investment Grade Fixed Income	**$1,227,405**	**39.8%**	**0.7%**	**2.8%**	**4.0%**	**0.3%**	**1.1%**	**Nov-19**
Total Short Duration High Yield Fixed Income	**$1,110,801**	**36.0%**	**0.9%**	**4.1%**	**6.9%**	**--**	**0.9%**	**Jul-21**
Total Cash Equivalents	**$431,104**	**14.0%**	**1.1%**	**2.8%**	**3.5%**	**1.4%**	**1.1%**	**Nov-19**

Performance Summary

	Fiscal Year Ending December 31st (Gross of Fees)			
	Fiscal YTD	2022	2021	2020
Total Fund	**4.6%**	**-5.8%**	**6.1%**	**5.7%**
Total Fund Benchmark	*5.8%*	*-5.4%*	*5.6%*	*6.5%*

	Fiscal Year Ending December 31st (Net of Fees)			
	Fiscal YTD	2022	2021	2020
Total Fund	**4.5%**	**-6.0%**	**6.0%**	**5.6%**
Total Fund Benchmark	*5.8%*	*-5.4%*	*5.6%*	*6.5%*

Current vs. Policy

	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	$314,149	10.2%	10.0%	5.0% - 15.0%	0.2%	$5,803
Investment Grade Fixed Income	$1,227,405	39.8%	40.0%	35.0% - 45.0%	-0.2%	-$5,979
Short Duration High Yield Fixed Income	$1,110,801	36.0%	35.0%	30.0% - 40.0%	1.0%	$31,590
Cash Equivalents	$431,104	14.0%	15.0%	10.0% - 20.0%	-1.0%	-$31,415
Total	**$3,083,459**	**100.0%**	**100.0%**			

- Policy adopted May 2023; effective July 2023.

Performance Detail (Net of Fees) - Annualized

			Ending September 30, 2023					
	Market Value	% of Portfolio	2023 Q3	Fiscal YTD	1 Yr	3 Yrs	Inception	Inception Date
Total Fund	**$3,083,459**	**100.0%**	**0.4%**	**4.5%**	**7.3%**	**2.3%**	**2.8%**	**Nov-19**
Total Domestic Large Cap Equity	**$314,149**	**10.2%**	**-3.3%**	**13.0%**	**21.6%**	**10.1%**	**10.2%**	**Nov-19**
Vanguard 500 Index Fund Admiral Shares	$314,149	10.2%	-3.3%	13.0%	21.6%	10.1%	10.2%	Nov-19
S&P 500			*-3.3%*	*13.1%*	*21.6%*	*10.1%*	*10.2%*	*Nov-19*
Total Investment Grade Fixed Income	**$1,227,405**	**39.8%**	**0.6%**	**2.6%**	**3.8%**	**0.1%**	**0.9%**	**Nov-19**
Chartwell Investment Partners	$1,227,405	39.8%	0.6%	2.6%	3.8%	0.1%	0.9%	Dec-19
Bloomberg US Credit 1-3 Yr TR			*0.8%*	*2.2%*	*3.5%*	*-0.3%*	*0.6%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$1,110,801**	**36.0%**	**0.8%**	**3.7%**	**6.4%**	**--**	**0.4%**	**Jul-21**
Carillon Chartwell SDHY Fund	$1,110,801	36.0%	0.8%	3.7%	6.4%	--	0.4%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*1.1%*	*4.7%*	*7.5%*	*--*	*1.0%*	*Jul-21*
Total Cash Equivalents	**$431,104**	**14.0%**	**1.1%**	**2.8%**	**3.5%**	**1.4%**	**1.1%**	**Nov-19**
PNC Cash	$431,104	14.0%	1.1%	2.8%	3.5%	1.4%	1.1%	Nov-19

Account Information

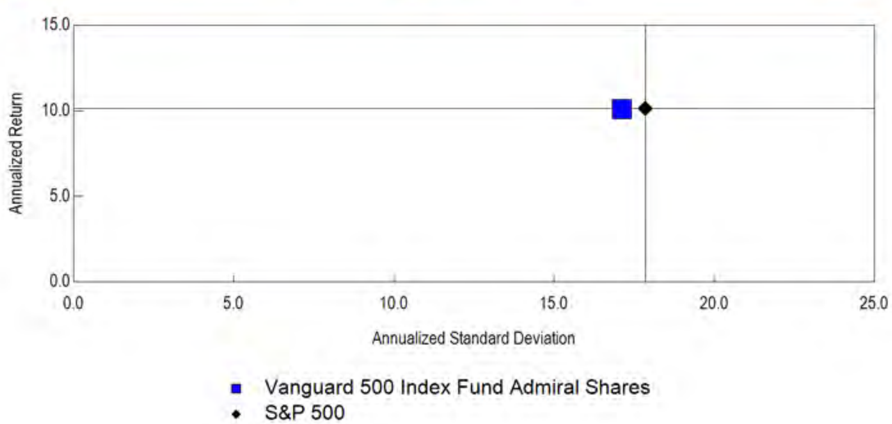
Account Name	**Vanguard 500 Index Fund Admiral Shares**
Account Structure	**Mutual Fund**
Investment Style	**Passive**
Inception Date	**11/30/19**
Account Type	**Domestic Large Cap Core Equity**
Benchmark	**S&P 500**
Universe	**Large Blend MStar MF**

Vanguard 500 Index Fund Admiral Shares

Ending September 30, 2023

	Third Quarter	Inception 11/30/19
Beginning Market Value	$324,807	--
Net Cash Flow	$0	$54,281
Net Investment Change	-$10,658	$259,868
Ending Market Value	$314,149	$314,149

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2023



3 Years Ending September 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Vanguard 500 Index Fund Admiral Shares	10.1%	17.1%	39.1%	35.0%
S&P 500	10.1%	17.9%	100.0%	100.0%

											Calendar Years											
	2023 Q3	Rank	YTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	2018	Rank	Inception	Inception Date
Vanguard 500 Index Fund Admiral Shares	-3.3%	50	13.0%	27	21.6%	31	10.1%	35	--	--	-18.1%	50	28.7%	23	18.4%	39	--	--	--	--	10.2%	Nov-19
S&P 500	*-3.3%*	*49*	*13.1%*	*25*	*21.6%*	*29*	*10.1%*	*34*	*--*	*--*	*-18.1%*	*48*	*28.7%*	*22*	*18.4%*	*38*	*--*	*--*	*--*	*--*	*10.2%*	*Nov-19*

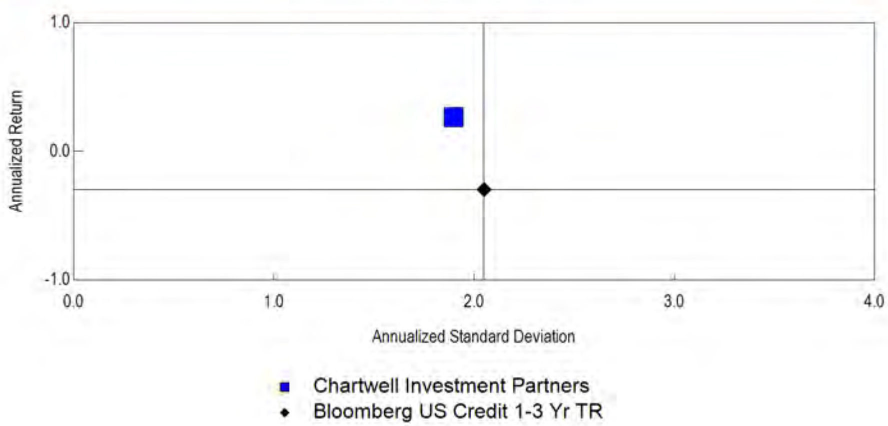
Note: Returns are net of fees.

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 September 30, 2023

	Third Quarter	Inception 12/31/19
Beginning Market Value	$1,218,998	--
Net Cash Flow	$0	$1,150,564
Net Investment Change	$8,407	$76,840
Ending Market Value	$1,227,405	$1,227,405

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2023



3 Years Ending September 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners	0.3%	1.9%	103.3%	83.1%
Bloomberg US Credit 1-3 Yr TR	-0.3%	2.1%	100.0%	100.0%

	2023 Q3	YTD	1 Yr	3 Yrs	5 Yrs	Calendar Years 2022	2021	2020	2019	2018	Inception	Inception Date
Chartwell Investment Partners	0.7%	2.8%	4.0%	0.3%	--	-2.8%	0.0%	4.2%	--	--	1.1%	Dec-19
Bloomberg US Credit 1-3 Yr TR	*0.8%*	*2.2%*	*3.5%*	*-0.3%*	--	*-3.4%*	*-0.2%*	*3.7%*	--	--	*0.6%*	*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 September 30, 2023

	Third Quarter	**Inception 7/31/21**
Beginning Market Value	$1,101,833	$0
Net Cash Flow	$0	$1,100,000
Net Investment Change	$8,968	$10,801
Ending Market Value	$1,110,801	$1,110,801

						Calendar Years						
	2023 Q3	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Carillon Chartwell SDHY Fund	0.8%	3.7%	6.4%	--	--	-3.2%	--	--	--	--	0.4%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	*1.1%*	*4.7%*	*7.5%*	--	--	*-3.1%*	--	--	--	--	*1.0%*	*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 September 30, 2023

	Third Quarter	Inception 11/30/19
Beginning Market Value	$447,703	--
Net Cash Flow	-$22,241	$407,659
Net Investment Change	$5,642	$23,445
Ending Market Value	$431,104	$431,104

						Calendar Years						
	2023 Q3	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
PNC Cash	1.1%	2.8%	3.5%	1.4%	--	1.2%	0.1%	0.0%	--	--	1.1%	Nov-19

Note: Returns are gross of fees.

Operating Engineers Local No. 77 JATC Fund

Appendix

Performance Detail (Gross of Fees) - Annualized

			Ending September 30, 2023					
	Market Value	% of Portfolio	2023 Q3	Fiscal YTD	1 Yr	3 Yrs	Inception	Inception Date
Total Fund	**$3,083,459**	**100.0%**	**0.4%**	**4.6%**	**7.5%**	**2.5%**	**2.9%**	**Nov-19**
Total Domestic Large Cap Equity	**$314,149**	**10.2%**	**-3.3%**	**13.1%**	**21.6%**	**10.2%**	**10.2%**	**Nov-19**
Vanguard 500 Index Fund Admiral Shares	$314,149	10.2%	-3.3%	13.1%	21.6%	10.2%	10.2%	Nov-19
S&P 500			*-3.3%*	*13.1%*	*21.6%*	*10.1%*	*10.2%*	*Nov-19*
Total Investment Grade Fixed Income	**$1,227,405**	**39.8%**	**0.7%**	**2.8%**	**4.0%**	**0.3%**	**1.1%**	**Nov-19**
Chartwell Investment Partners	$1,227,405	39.8%	0.7%	2.8%	4.0%	0.3%	1.1%	Dec-19
Bloomberg US Credit 1-3 Yr TR			*0.8%*	*2.2%*	*3.5%*	*-0.3%*	*0.6%*	*Dec-19*
Total Short Duration High Yield Fixed Income	**$1,110,801**	**36.0%**	**0.9%**	**4.1%**	**6.9%**	**--**	**0.9%**	**Jul-21**
Carillon Chartwell SDHY Fund	$1,110,801	36.0%	0.9%	4.1%	6.9%	--	0.9%	Jul-21
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*1.1%*	*4.7%*	*7.5%*	*--*	*1.0%*	*Jul-21*
Total Cash Equivalents	**$431,104**	**14.0%**	**1.1%**	**2.8%**	**3.5%**	**1.4%**	**1.1%**	**Nov-19**
PNC Cash	$431,104	14.0%	1.1%	2.8%	3.5%	1.4%	1.1%	Nov-19

Account	Fee Schedule	Market Value As of 9/30/2023	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	**-**	**$314,149**	**10.2%**	**--**	**--**
Vanguard 500 Index Fund Admiral Shares	0.04% of Assets	$314,149	10.2%	$126	0.04%
Total Investment Grade Fixed Income	**-**	**$1,227,405**	**39.8%**	**--**	**--**
Chartwell Investment Partners	0.18% of Assets	$1,227,405	39.8%	$2,209	0.18%
Total Short Duration High Yield Fixed Income	**-**	**$1,110,801**	**36.0%**	**--**	**--**
Carillon Chartwell SDHY Fund	0.49% of Assets	$1,110,801	36.0%	$5,443	0.49%
Total Cash Equivalents	**-**	**$431,104**	**14.0%**	**--**	**--**
PNC Cash	-	$431,104	14.0%	--	--
Investment Management Fee		**$3,083,459**	**100.0%**	**$7,778**	**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.
- In December 2019, $1.75M was transferred from PNC Cash to investment grade fixed income (Chartwell Investment Partners) for initial funding.
- In December 2019, $450K was transferred from domestic large cap equity (Vanguard 500 Index Fund Admiral Shares) to PNC Cash.
- In December 2019, Federated Short Term Bond was terminated and all assets transferred to PNC Cash.
- In July 2021, $1.0M was transferred from domestic large cap equity (Vanguard 500 Index Fund Admiral Shares - $200K) and investment grade fixed income (Chartwell Investment Partners - 800K) to short duration high yield fixed income (Carillon Chartwell SDHY Fund) for initial funding.
- In May 2023, $300K was withdrawn from domestic large cap equity (Vanguard 500 Index Fund Admiral Shares).

- In June 2023, $200K was transferred from PNC Cash to investment grade fixed income (Chartwell Investment Partners).
- In June 2023, $100K was transferred from PNC Cash to short duration high yield fixed income (Carillon Chartwell SDHY Fund).

Glossary of Investment Terminology

Total Return	The annual return on an investment including appreciation, depreciation and income (interest, dividends, net operating income).
Alpha	The excess return (positive or negative) generated by active portfolio management and security selection, relative to a benchmark.
Beta	A historical 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.
Standard Deviation	Standard deviation is a statistical measurement of the dispersion of a set of data from its mean. The more spread apart the data are, the greater the standard deviation.
Risk	For an investment portfolio, risk is typically defined as the volatility of the returns, as measured by calculating the standard deviation. The risk does not necessarily indicate the risk of loss, but does indicate the risk of inconsistent returns.
Capture Ratio	Calculates how well a manager performs in a rising or falling market as a percentage of a benchmark. In a rising market, a percentage of 100 or better is preferred, and indicates the manager exceeded the benchmark (upside capture ratio). In a falling market, a percentage of less than 100 is preferred, indicating that the manager lost less than the benchmark (downside capture ratio).
Correlation	A statistical measure of how two asset classes perform in relation to each other. Asset classes with a correlation of 1.0 have perfect positive correlation (exactly the same). Assets with perfect negative correlation of -1.0 will perform equally but in opposite directions.
Efficient Frontier	A series of portfolios with the maximum expected return for any level of risk, which is calculated based on assumptions of risk, return and correlation. These portfolios are shown graphically on a risk and return chart, and represent the most efficient tradeoff between risk and return.
Market Cap	The dollar value of a corporation, which is calculated by multiplying the share price and the number of outstanding shares.
Large Cap	Stocks which typically have a market capitalization of $10 billion or higher.
Mid Cap	Stocks which typically have a market capitalization of $2 to $10 billion.
Small Cap	Stocks which typically have a market capitalization of $2 billion or less.
Geometric Calculation	Geometric Calculations are used when determining an annualized investment return and 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.
Compound Annual Returns	Compound annual returns show the annual investment return, assuming the investment grew at a constant rate, and reflects the impact of the time in the calculation of an investment return.
Return/Risk Ratio	The return/risk ratio is 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

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.

The Fund's performance is attributable to factors other than the advice of IPS because, among other things, (a) IPS may act in an advisory capacity (i.e., IPS may not have discretion over Fund assets), (b) the Fund may or may not follow advice provided by IPS, and (c) returns may include investments made prior to the Fund's relationship with IPS. Nothing contained herein constitutes investment, legal, accounting, actuarial, or tax advice, or a recommendation to buy, sell, or hold a security or pursue a particular investment vehicle or any trading strategy. Past performance is no guaranty of future results.

EPIC

May 3-5, 2023

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.

Amalgamated Bank of Chicago
American Realty Advisors
Ares Management
Aristotle
ASB Real Estate Investments
Atlanta Capital Management
Barrow Hanley Global Investors
BentallGreenOak
BNY Mellon Asset Management (Mellon)
Boston Partners Global Investors
Boyd Watterson Asset Management
Capital Group
Chartwell Investment Partners
Christenson Investment Partners
Columbia Threadneedle Investments
Constitution Capital Equity Partners
Corbin Capital Partners
Earnest Partners
Empower
EnTrust Global
Fidelity Investments
First Eagle Investment Mgmt.
Foundry Partners
Fred Alger Management
GAMCO Asset Management
GCM Grosvenor
Glouston Capital Partners
GoldenTree Asset Management
Great Lakes Advisors
Hamilton Lane Advisors
Hardman Johnston Global Advisors
HPS Partners
Intercontinental Real Estate Corp.
Invesco Advisers, 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
Manning & Napier
Manulife
Mesirow Private Equity
National Investment Services
National Real Estate Investors
Neuberger Berman
Northern Trust Asset Management
Nuveen Investment Group
Oaktree Capital Management
Old Glory Asset Management
Partners Group
Patriot Financial Partners
PNC Capital Advisors
Post Advisory Group
Principal Financial Group
Principal Life Insurance
Raymond James Investment Management
Richmond Capital Mgmt
Schroders Investment Management
Segall Bryant & Hamill
Sierra Investment Partners
Smith Graham & Co.
State Street Global Advisors
Stonepeak Partners
Ullico Investment Company
Vanguard
Victory Capital Management
Vista Underwriting
Washington Capital Management
WEDGE Capital Management
Wellington Management Company
Westfield Capital Management
Westport Capital Partners
William Blair & Company
Xponance