3CHOPT INVESTMENT PARTNERS

Market Perspectives

May 2022

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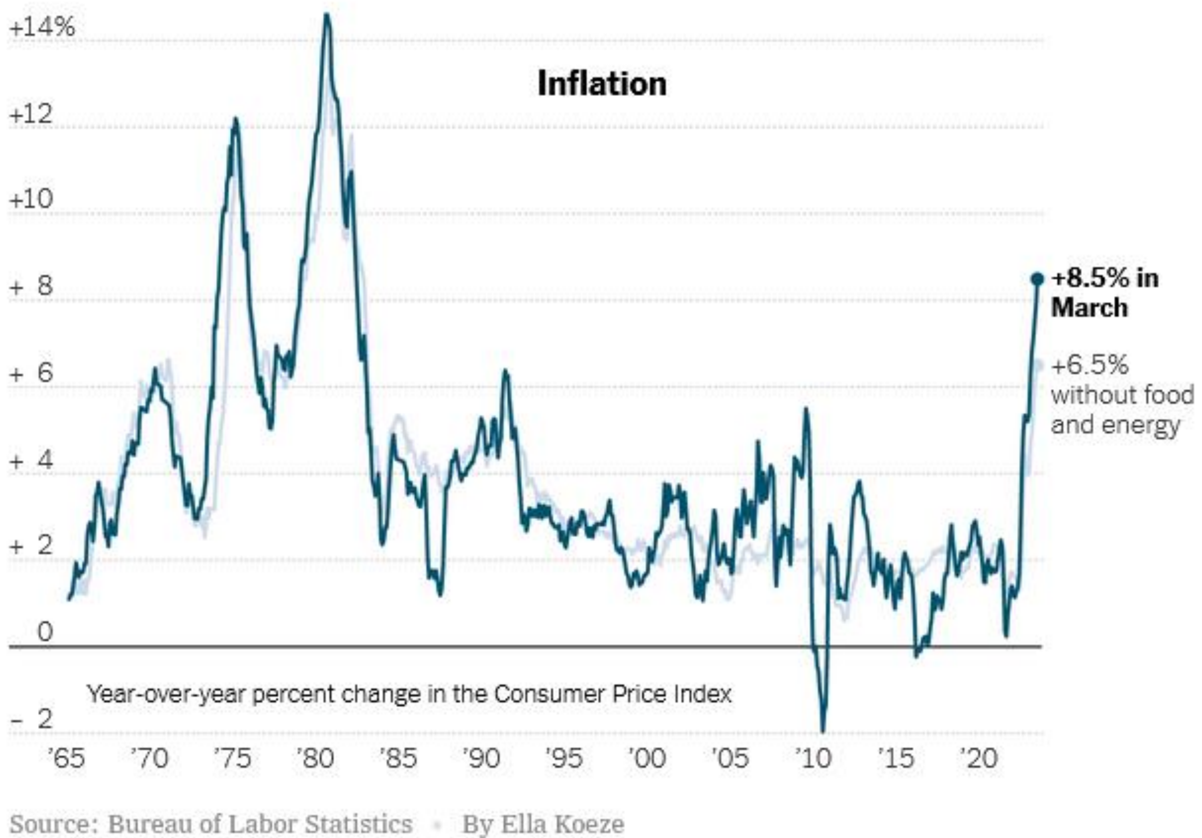
Economic Developments & Insights

Inflation

U.S. inflation currently stands near a 40-year high.



Additional Source: The New York Times; data as of March 31, 2022.

Factors contributing to the surge in inflation:

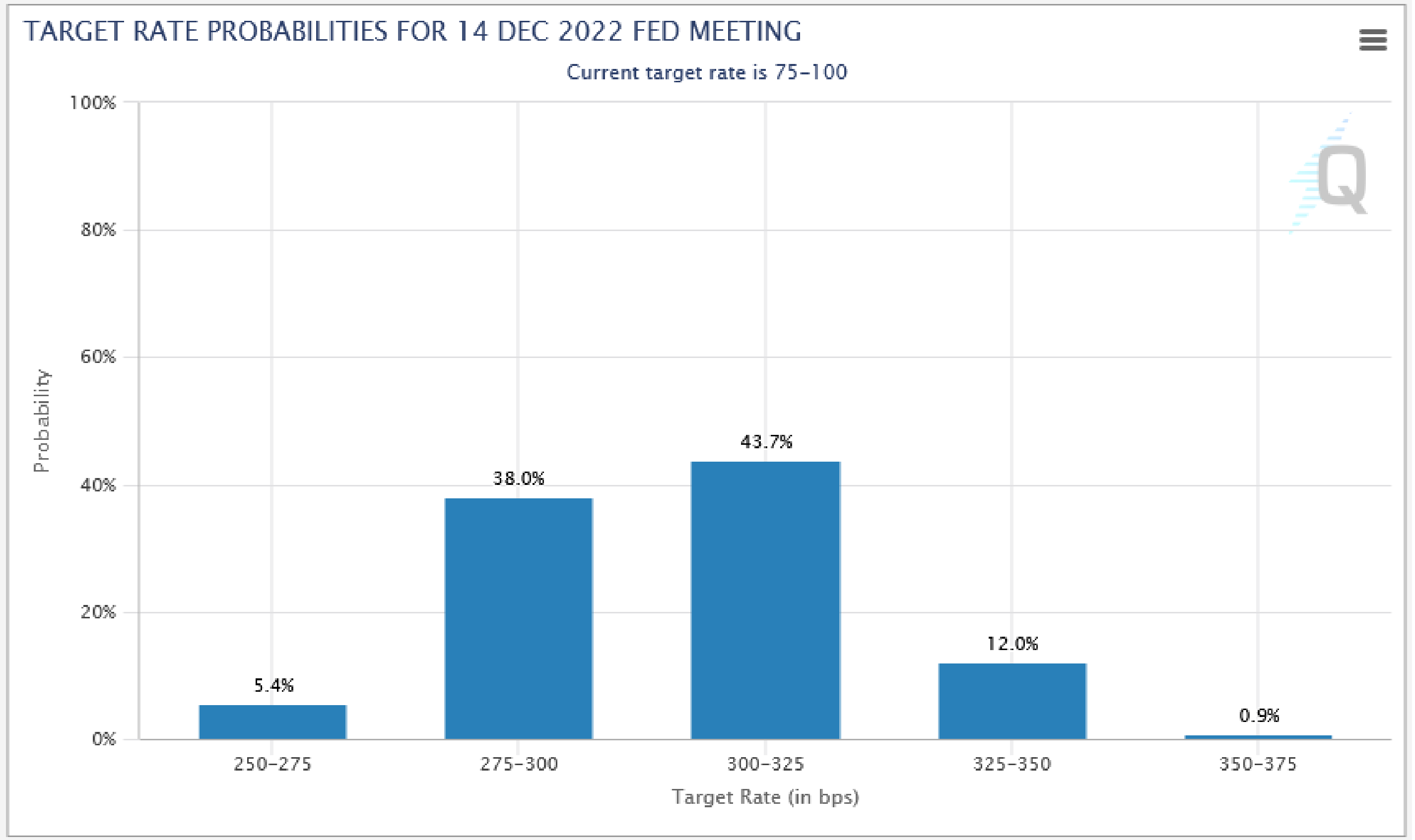
- Supply chain disruptions
- Previous Government stimulus programs
- Russian invasion of Ukraine (impacting energy and food prices)
- China's "Zero COVID" policy (further complicating supply chain issues)

Inflation

While some investors may fear that the current environment will be a reboot of early 1980s inflation, it is worth noting the market-implied 10-year breakeven rate for inflation stood at 2.88% as of April 29, 2022.

Inflation and the Federal Reserve's Response

Amid much-elevated inflation, expectations are for the Federal Reserve to significantly increased the federal funds rate to combat inflation. The chart below outlines year-end 2022 expectations for the federal funds rate (based on probabilities as of May 5, 2022).



Source: CME FedWatch Tool; figures as of May 5, 2022.

Inflation and the Federal Reserve's Response

According to an early May 2022 CNBC survey: "Respondents, who include economists, fund managers and strategists, see the [federal] funds rate hitting 2.25% by year end and rising to a terminal rate of 3.08% by August 2023….Rates come down after that, ending 2023 at 2.6%.

….The Fed is forecast to run a total of $2.7 trillion off its near $9 trillion balance sheet over 2 years and 5 months, more quickly than previously forecast. And 57% believe the fed will eventually sell assets, rather than just allowing the balance sheet to runoff."

Source: CNBC, "The Fed's aggressive hiking campaign will lead to a recession, according to CNBC survey" (May 3, 2022)

U.S. GDP

The first estimate for Q1-2022 GDP showed a decline of -1.4%, on an annualized basis. The decline was largely attributable to a widening trade deficit, a reduction in retailers' inventory purchases, and a reduction in government spending. However, the GDP report masked some positive elements, such as consumer spending and business investment.

	% of real GDP	1Q22 real GDP	4Q21 real GDP
▪ Consumer spending	70.5%	2.7%	2.5%
▪ Government spending	16.9%	-2.7%	-2.6%
-Federal: 6.6%		-5.9%	-4.3%
-State/local: 10.3%		-0.8%	-1.6%
▪ Net exports of goods and services	(-7.8%)	-3.2*	-0.2*
-Exports: 11.9%		-5.9%	22.4%
-Imports: (19.7%)		17.7%	17.9%
▪ Fixed investment	18.6%	7.3%	2.7%
-Nonresidential: 15.1%		9.2%	2.9%
-Residential: 3.6%		2.1%	2.2%
▪ Change in private inventories	--	-0.8*	5.3*
	Real GDP	**-1.4%**	**6.9%**

Source: Charles Schwab, Bureau of Economic Analysis, as of 3/31/2022. *Represents contribution to percent change in real GDP. Numbers may not add up to 100% due to rounding. Real (inflation-adjusted) GDP based on annualized Q/Q % change.

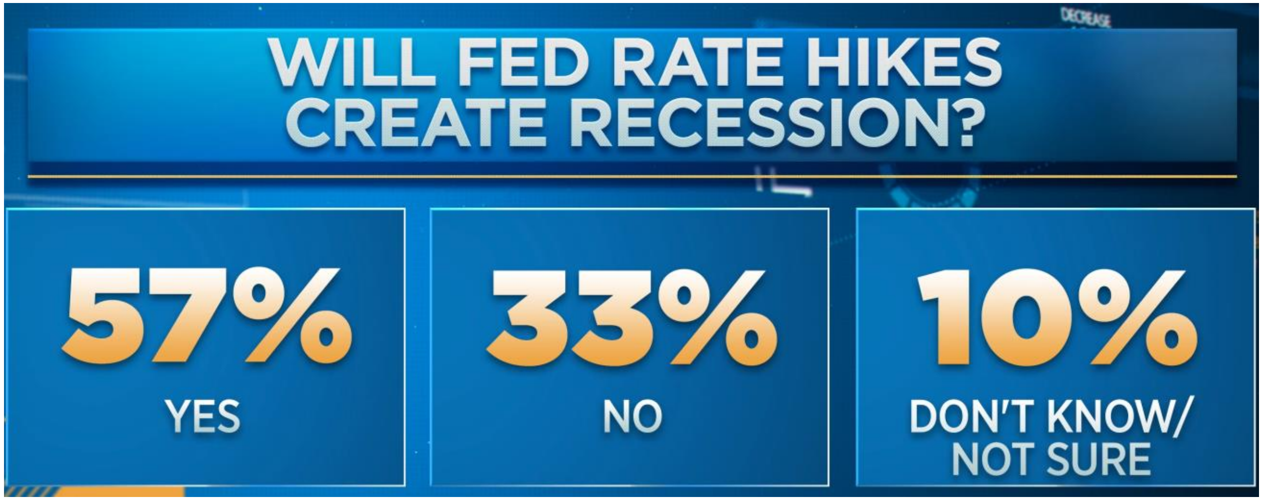
Recession Ahead?

The "million-dollar question" is whether the Federal Reserve can achieve a "soft landing" – bringing down inflation without producing an economic contraction.

According to a recent CNBC survey of economists, fund managers and strategists:

"The quick pace of tightening and the stubbornness of inflation leads a majority to believe the Fed will not achieve a soft landing.

August 2023 is the average starting month among those who think a recession is coming and 53% say it will be moderate while 43% believe it will be mild."



Source: CNBC, "The Fed's aggressive hiking campaign will lead to a recession, according to CNBC survey " (May 3, 2022)

Per Schwab's Liz Ann Sonders, "**Of the past 13 rate hiking cycles, a recession has unfolded 10 times, with soft landings only three**; as such, a recession is typically the "safer bet." If the current period's unique additives—a 40-year high in inflation, growth already weak as the Fed ramps up rate hikes, the simultaneous shrinking of the Fed's nearly $9 trillion balance sheet, a pandemic that isn't over and the Russia/Ukraine war—it arguably moves the needle more toward recession. Key to the ultimate answer is likely to be the labor market."

U.S. Corporate Earnings

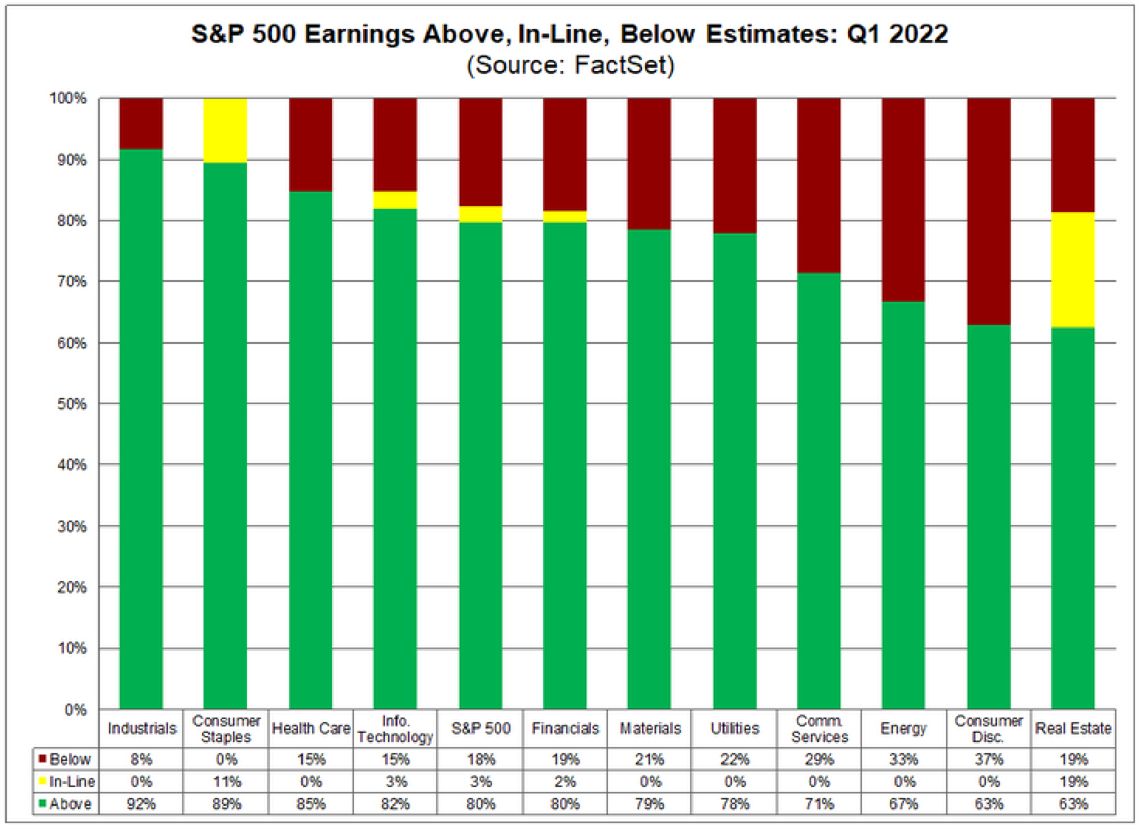
Q1-2022 corporate earnings have generally been better than anticipated; however, with companies issuing cautious or negative forward guidance, the earnings announcements haven't been sufficient to enable a market rebound.

Per FactSet, as of April 29th:

"Overall, 55% of the companies in the S&P 500 have reported actual results for Q1 2022 to date.

Of these companies, 80% have reported actual EPS above estimates, which is above the five-year average of 77%.

In aggregate, companies are reporting earnings that are 3.4% above estimates, which is below the five-year average of 8.9%."

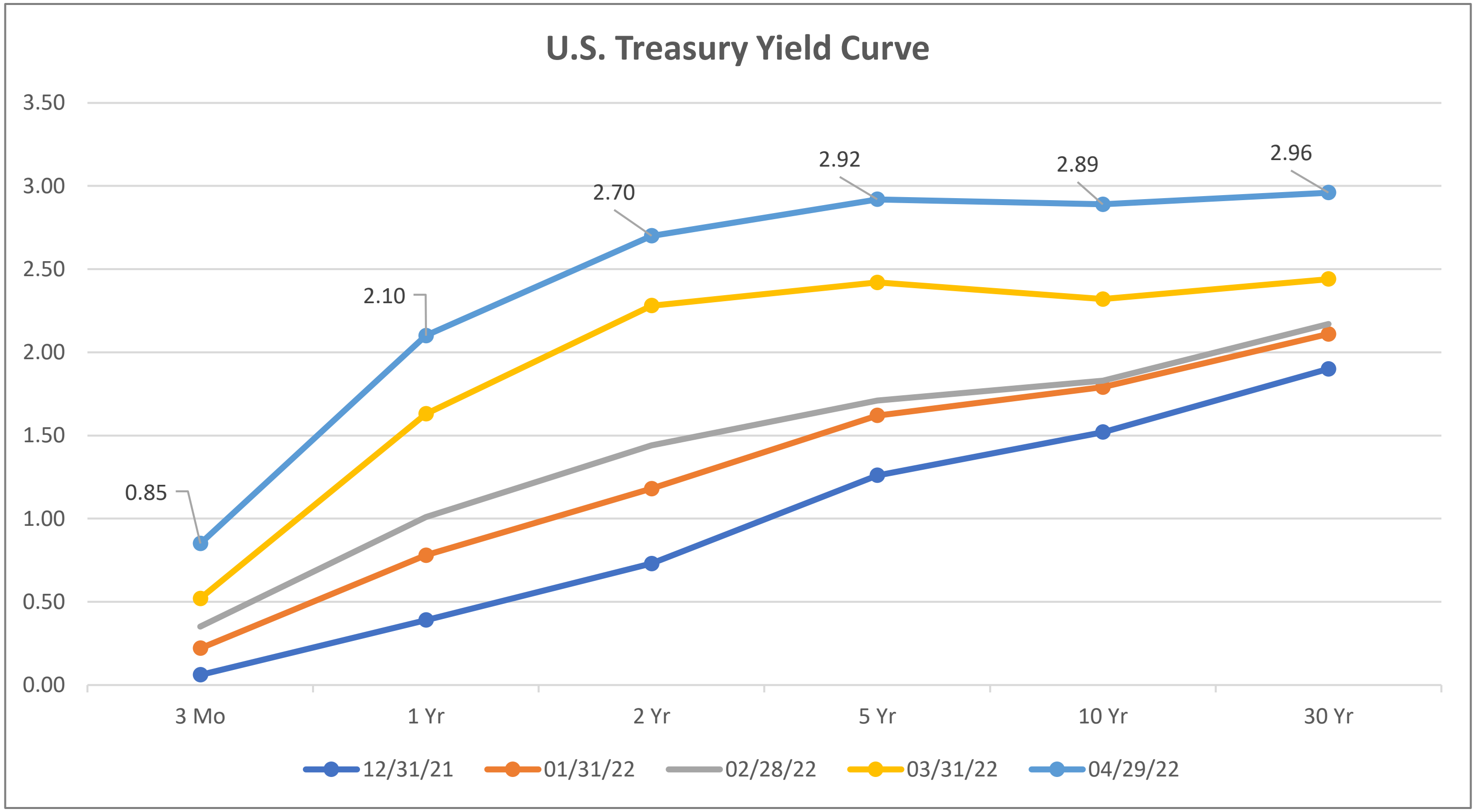


Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains.
Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Market Developments & Insights

Rising Bond Yields

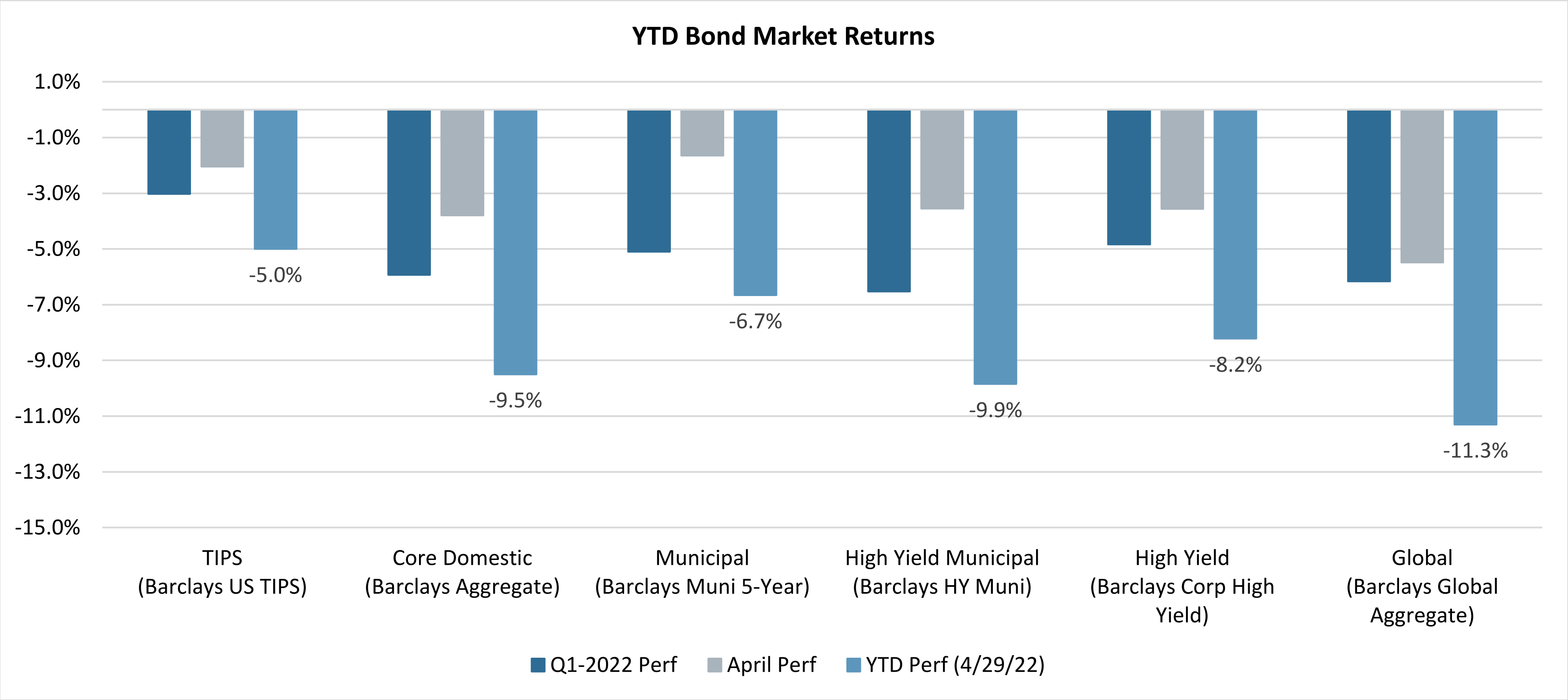
Given expectations for a series of rate hikes by the Federal Reserve, bond yields have shifted considerably from the beginning of the year.



Source: Treasury.gov; figures as of April 29, 2022.

Rising Bond Yields and Impact on YTD Returns

The dramatic jump in the yield on the 10-year Treasury note (from 2.324% at the end of March to 2.885% at the end of April) represented the biggest monthly increase since December 2009 and follows a quarter (Q1) in which bond indexes posted their worst quarterly returns since the early 1980s.

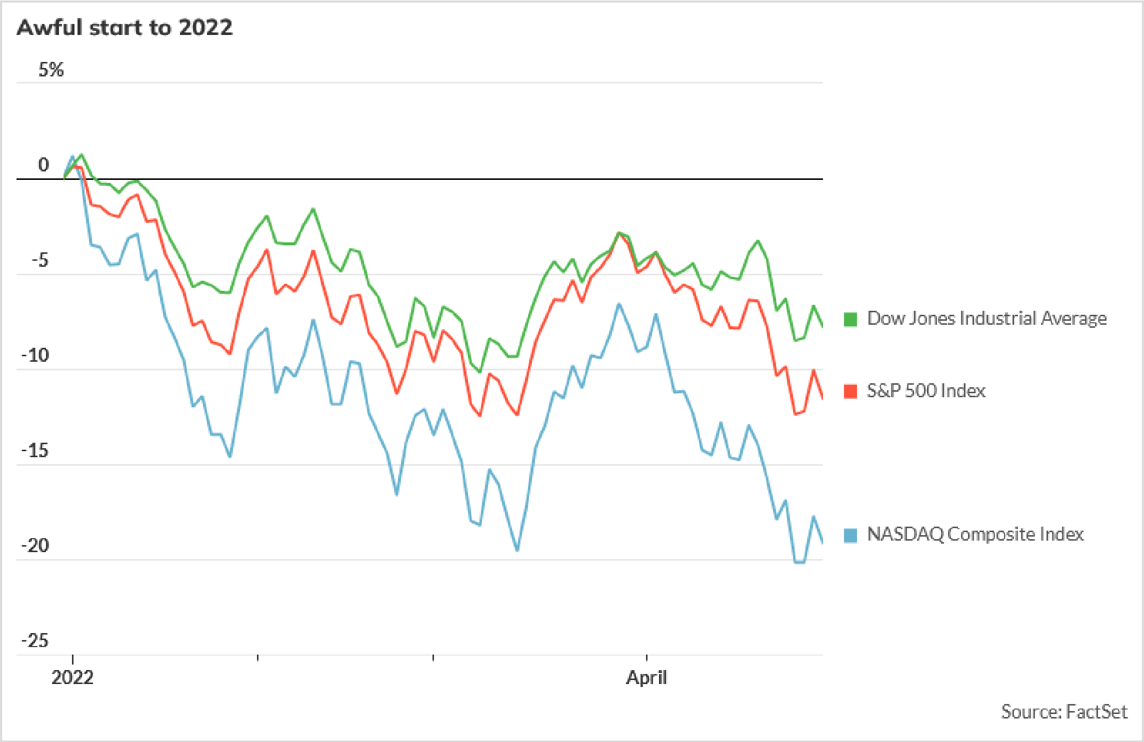


Source: Morningstar, returns through April 29, 2022. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Market Malaise

Amid a host of uncertainties, equity markets have suffered, with selling pressure gaining momentum in April.

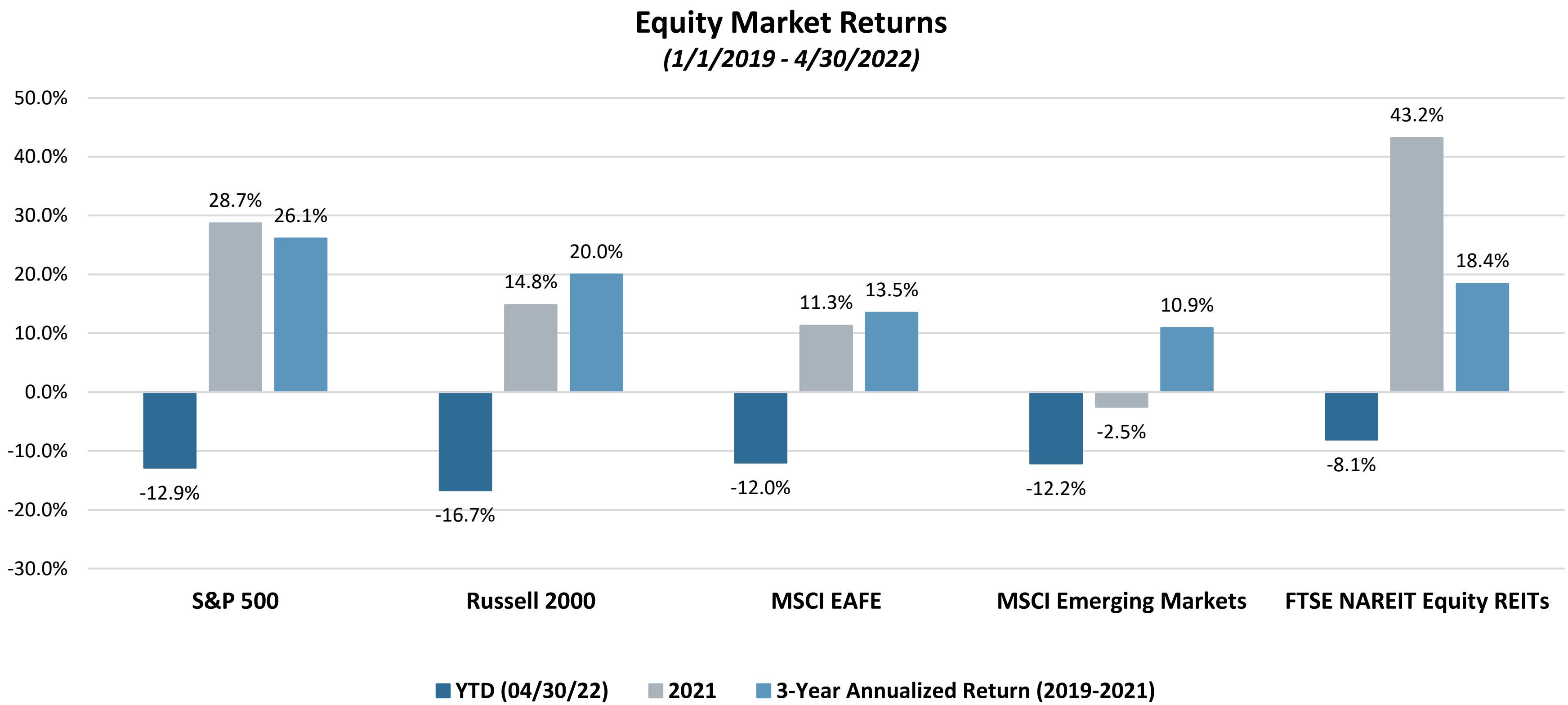
The S&P 500 Index fell 8.8% in April and stood at -13% through the end of April, which marked its worst four-month start to a year since 1939.



Returns through April 29, 2022. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

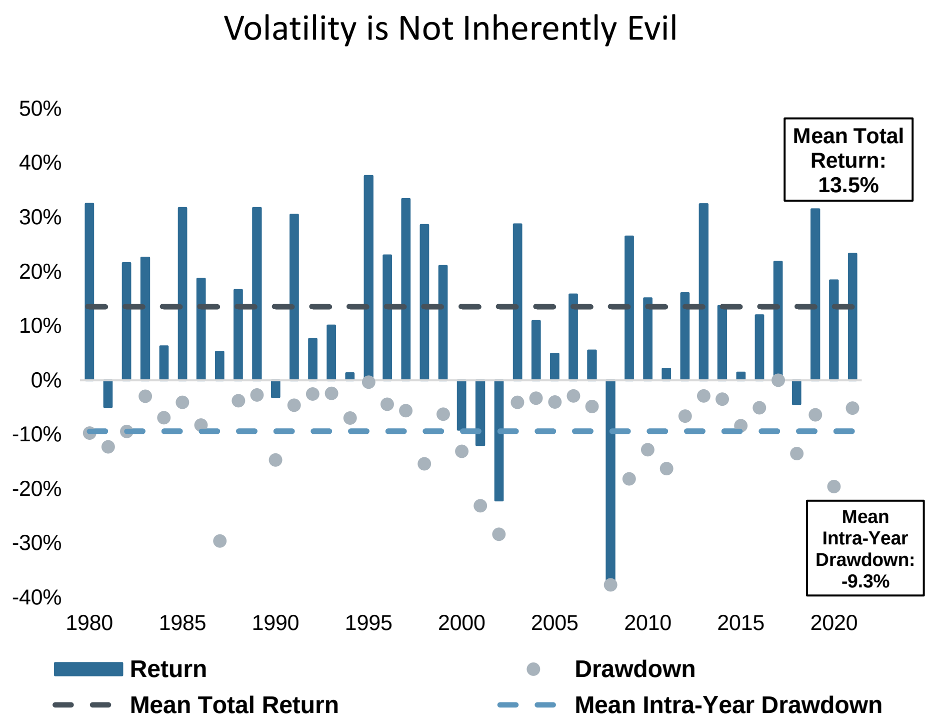
Keep Perspective

While YTD-2022 market returns have been challenging, investors should remember that portfolios benefited significantly from equity market exposure over the prior three years.



Source: FactSet & Morningstar, as of April 30, 2022. All returns are in U.S. dollar terms. Returns through April 29, 2022. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Volatility Ahead: Be Comfortable with Your Risk Exposure



Volatility is a necessary evil in the investing landscape. However, more volatility is not always a recipe for lower market returns. Since 1983, the mean intra-year drawdown was 9.3 percent. However, the mean calendar year return was 13.5 percent.

Higher volatility means a higher likelihood of making an emotional decision at the wrong time when allocating capital. Reassessing your ability to bear risk ahead of volatility helps stay the course when it arrives.

Source: Morningstar, as of December 20, 2021. Returns represented by S&P 500 Index. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Portfolio Impact

Generally, increasing allocations to U.S. equities, diversifying away from concentrated interest rate risks present in fixed income indexes and further distributing allocations across real assets can help guard against the potential for higher volatility across global markets and the numerous ways in which it can manifest. However, we continue to remind investors that timing markets rarely proves to be a successful investment strategy. Rather, understanding your ability to bear risk and thoughtfully managing risk exposures can lead to more persistent success over time.

Pullbacks Should Be Expected (Over Time)

In the context of longer-term market cycles, pullbacks are a fairly normal occurrence.

Steeper market declines (which require a more substantial subsequent recovery) are most commonly associated with economic recessions.

Declines in the S&P 500 since 1945

Decline	# Occurrences	Approximate Frequency	Average Decline	Average Length of Decline (in months)	Average Time to Recover (in months)
5%-10%	84	~ 1x per year	-7%	1	1
10%-20%	29	~ Every 2.5 years	-14%	4	4
20%-40%	9	~ Every 8.5 years	-28%	11	14
40%+	3	~ Every 25 years	-51%	23	58

Source: Guggenheim Investments; data through 3/3/2022. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Analyzing Past Corrections

Since 1950, the S&P 500 Index has experienced 26 corrections (defined as a 10-19 percent pullback), with declines averaging 14% over 4 months.

Peak	Trough	Decline	Duration (Months)
Jun-50	Jul-50	-14.0%	1
Jan-53	Sep-53	-14.8%	8
Sep-55	Oct-55	-10.6%	1
Aug-56	Feb-57	-14.8%	6
Aug-59	Sep-60	-13.6%	14
Aug-62	Oct-62	-10.5%	2
Sep-67	Mar-68	-10.1%	5
Apr-71	Nov-71	-13.9%	7
Nov-74	Dec-74	-13.6%	1
Jul-75	Sep-75	-14.1%	2
Sep-76	Mar-78	-19.4%	17
Sep-78	Nov-78	-13.6%	2
Oct-79	Nov-79	-10.2%	1

Peak	Trough	Decline	Duration (Months)
Feb-80	Mar-80	-17.1%	1
Oct-83	Jul-84	-14.4%	9
Jan-90	Jan-90	-10.2%	1
Jul-90	Oct-90	-19.9%	3
Oct-97	Oct-97	-10.8%	1
Jul-98	Aug-98	-19.3%	1
Jul-99	Oct-99	-12.1%	3
Nov-02	Mar-03	-14.7%	3
Apr-10	Jul-10	-16.0%	2
Apr-11	Oct-11	-19.4%	5
Nov-15	Feb-16	-13.3%	3
Jan-18	Feb-18	-10.2%	0
Sep-18	Dec-18	-19.8%	3

Source: Y Charts, Awealthofcommonsense.com. Data based on S&P 500 Index price returns. Data through 12/31/2021. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Analyzing Past Bear Markets

Since 1945, the S&P 500 Index has experienced 12 bear markets, with declines averaging 34% over 14 months.

As noted below, bear markets have frequently coincided with recessions (six of the last seven occurrences).

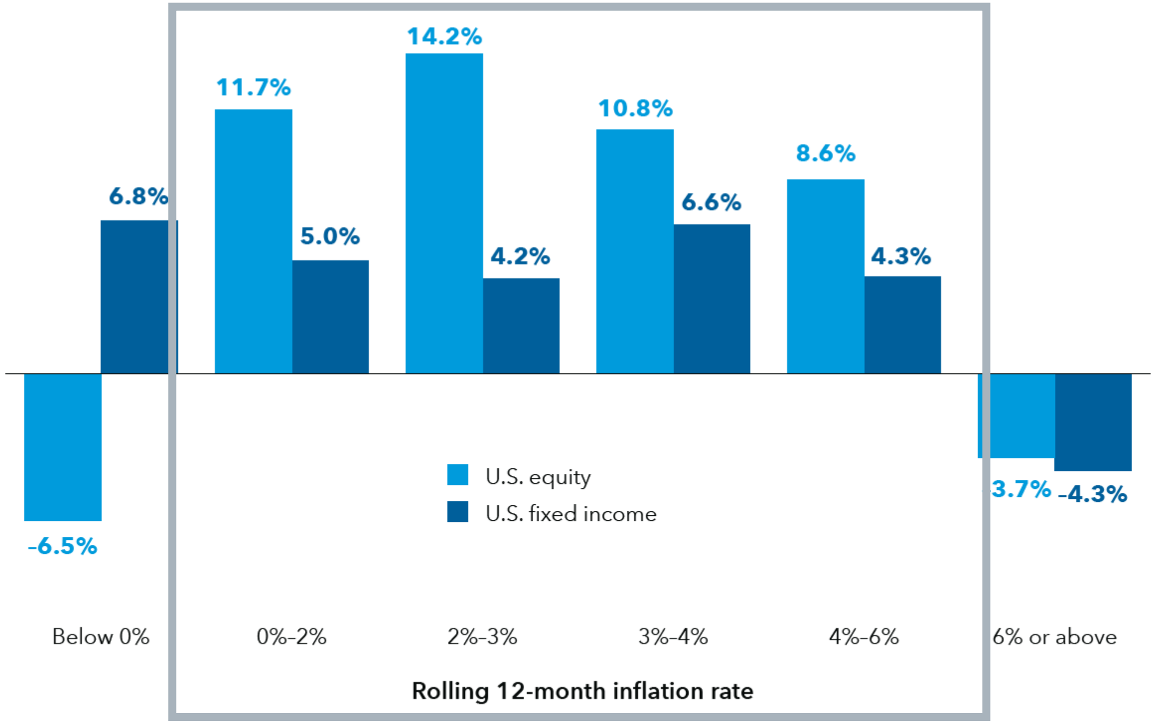
Starting Peak	Bear Market Low	Amount of Decline	Duration (Months)	Recession?	Return 1 Year after Low	Time to Regain Prior Peak (Months)
May-46	May-47	-28%	12	No	19%	37
Jun-48	Jun-49	-21%	12	Yes	42%	12
Aug-56	Oct-57	-22%	15	Yes	31%	11
Dec-61	Jun-62	-28%	6	No	33%	14
Feb-66	Oct-66	-22%	8	No	33%	7
Nov-68	May-70	-36%	18	Yes	44%	21
Jan-73	Oct-74	-48%	21	Yes	38%	69
Nov-80	Aug-82	-27%	20	Yes	58%	3
Aug-87	Dec-87	-34%	3	No	23%	20
Mar-00	Oct-02	-49%	31	Yes	34%	56
Oct-07	Mar-09	-57%	17	Yes	68%	49
Feb-20	Mar-20	-34%	1	Yes	75%	5
Average		**-34%**	**14**		**42%**	**25**
Median		**-31%**	**13**		**36%**	**17**

Source: ISI, Bloomberg, National Bureau of Economic Research, Haver Analytics, FMRCo (Asset Allocation Research Team). Data based on S&P 500 Index price returns. Recessions are defined by the National Bureau of Economic Research. Data through 12/31/2021. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Stock and Bond Returns During Different Inflationary Environments

"….even during times of higher inflation, stocks and bonds have generally provided solid returns as shown in the chart. **It's mostly at the extremes — when inflation is above 6% or negative — that financial assets have tended to struggle.** And sustained periods of elevated inflation are rare."

Average annual returns at different inflation rates (1970-2021)



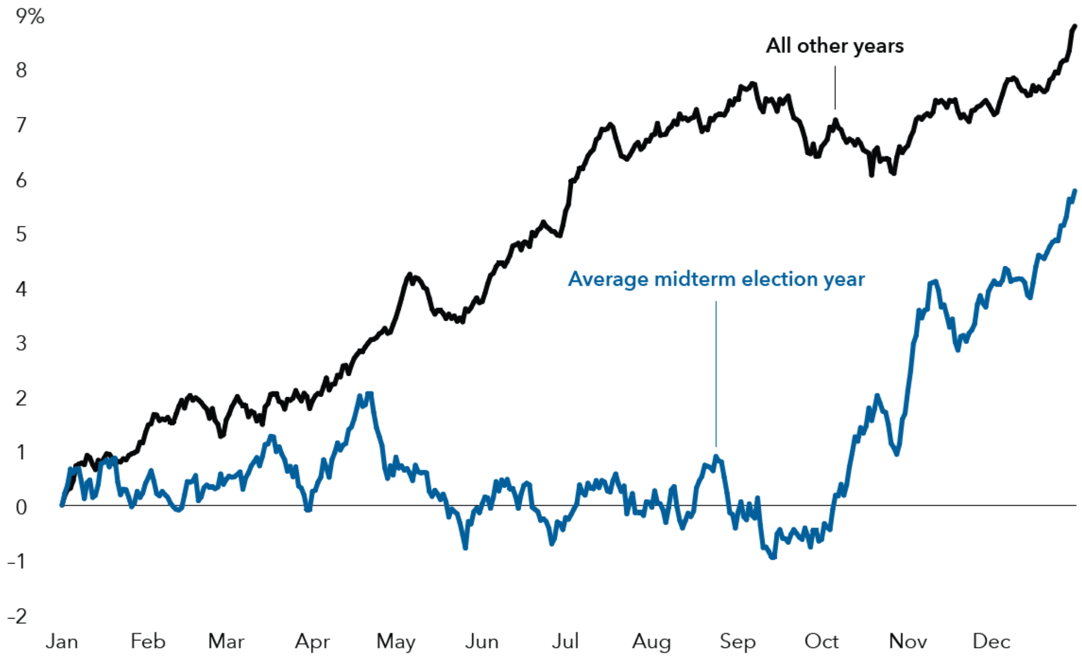
Sources: Capital Group, Bloomberg Index Services Ltd., Morningstar, Standard & Poor's. As of 11/30/21. All returns are inflation-adjusted real returns. U.S. equity returns represented by the Standard & Poor's 500 Composite Index. U.S. fixed income represented by Ibbotson Associates SBBI U.S. Intermediate-Term Government Bond Index from 1/1/70–12/31/75, and Bloomberg U.S. Aggregate Bond Index from 1/1/76–11/30/21.

Inflation rates are defined by the rolling 12-month returns of the Ibbotson Associates SBBI U.S. Inflation Index. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Stock Market Volatility During Mid-Term Election Years

"….political uncertainty often has a noticeable short-term effect on markets. An analysis of more than 90 years of equity returns reveals that **stocks tend to have lower average returns and higher volatility for the first several months of midterm election years.** As results at the polls become more predictable, this trend often reverses, and markets have tended to return to their normal upward trajectory. But these are just averages, so investors shouldn't try to time an entry point into the market."

S&P 500 Index average returns since 1931



Sources: Capital Group, RIMES, Standard & Poor's. The chart shows the average trajectory of equity returns throughout midterm election years compared to non-midterm election years. Each point on the lines represents the average year-to-date return as of that particular month and day, and is calculated using daily price returns from 1/1/31–11/30/21. Use of Indices and Benchmark Return Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss. See disclosure page for indices representing each asset class.

Disclosures

Comparisons to any indices referenced herein are for illustrative purposes only and are not meant to imply that actual returns or volatility will be similar to the indices. Indices cannot be invested in directly. Index performance is reported gross of fees and expenses and assumes the reinvest dividends and capital gains. Past performance does not indicate future performance and there is a possibility of a loss.

- **The S&P 500** is a capitalization-weighted index designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
- **Bloomberg U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **The NASDAQ** is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.
- **Russell 2000** consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- **MSCI EAFE** is an equity index which captures large and mid-cap representation across Developed Markets countries around the world, excluding the U.S. and Canada. The index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI Emerging Markets** captures large and mid-cap representation across Emerging Markets countries. The index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **FTSE Nareit Equity REITs Index** contains all Equity REITs not designed as Timber REITs or Infrastructure REITs.
- **Bloomberg U.S. TIPS Index** is an unmanaged market index comprised of all U.S. Treasury Inflation-Protected Securities rated investment grade (Baa3 or better), have at least one year to final maturity, and at least $500 million par amount outstanding.
- **Bloomberg Barclays Muni Index** is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade by at least two ratings agencies.
- **Bloomberg Barclays Muni 5 Year Index** is the 5 year (4-6) component of the Municipal Bond index.
- **Bloomberg Barclays High Yield Municipal Bond Index** covers the universe of fixed rate, non-investment grade debt.
- **Bloomberg Barclays U.S. Corporate High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **Bloomberg Barclays Global Aggregate ex. USD Indices** represent a broad-based measure of the global investment-grade fixed income markets. The two major components of this index are the Pan-European Aggregate and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds and Canadian government, agency and corporate securities.
- **IA SBBI U.S. Intermediate-Term Government Bond Index** is a custom index designed to measure the performance of intermediate-term U.S. government bonds. Bloomberg Barclays (BBgBarc) Short Treasury Index includes aged U.S. Treasury bills, notes, and bonds with a remaining maturity from 1 up to (but not including) 12 months.