WELLS FARGO

The Private Bank

# Economic and Market Review

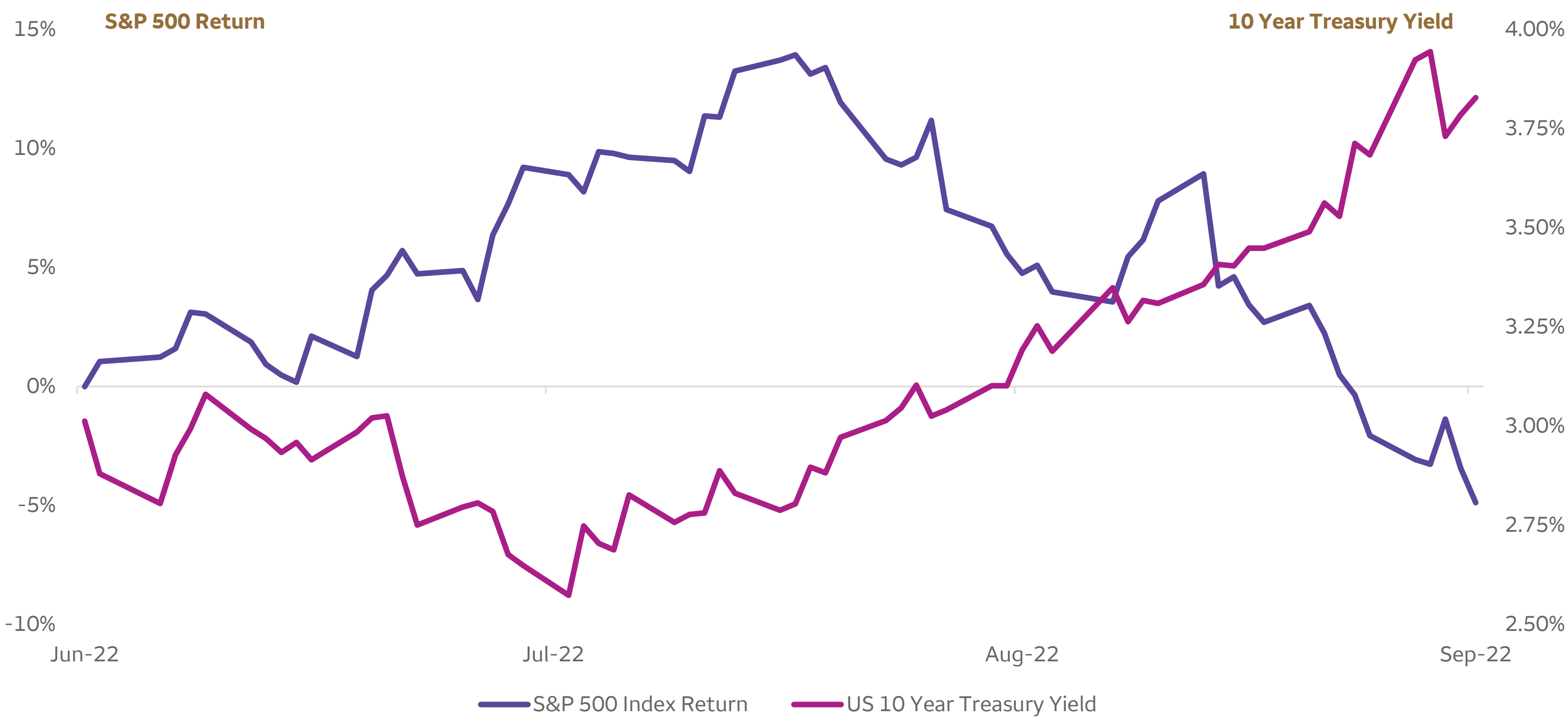
October 2022

Investment and Insurance Products are:

- Not Insured by the FDIC or Any Federal Government Agency
- Not a Deposit or Other Obligation of, or Guaranteed by, the Bank or Any Bank Affiliate
- Subject to Investment Risks, Including Possible Loss of the Principal Amount Invested

# 3rd Quarter 2022: A Tale of Two Halves

The stock market moved, as measured by the S&P 500, with interest rates and therefore expectations for the Federal Reserve during Q3. Initial hopes of a quick pivot led equities higher and rates lower in the first half but Chairman Powell's speech in Jackson Hole, WY in late August displayed the Fed's resolve in dampening inflation.



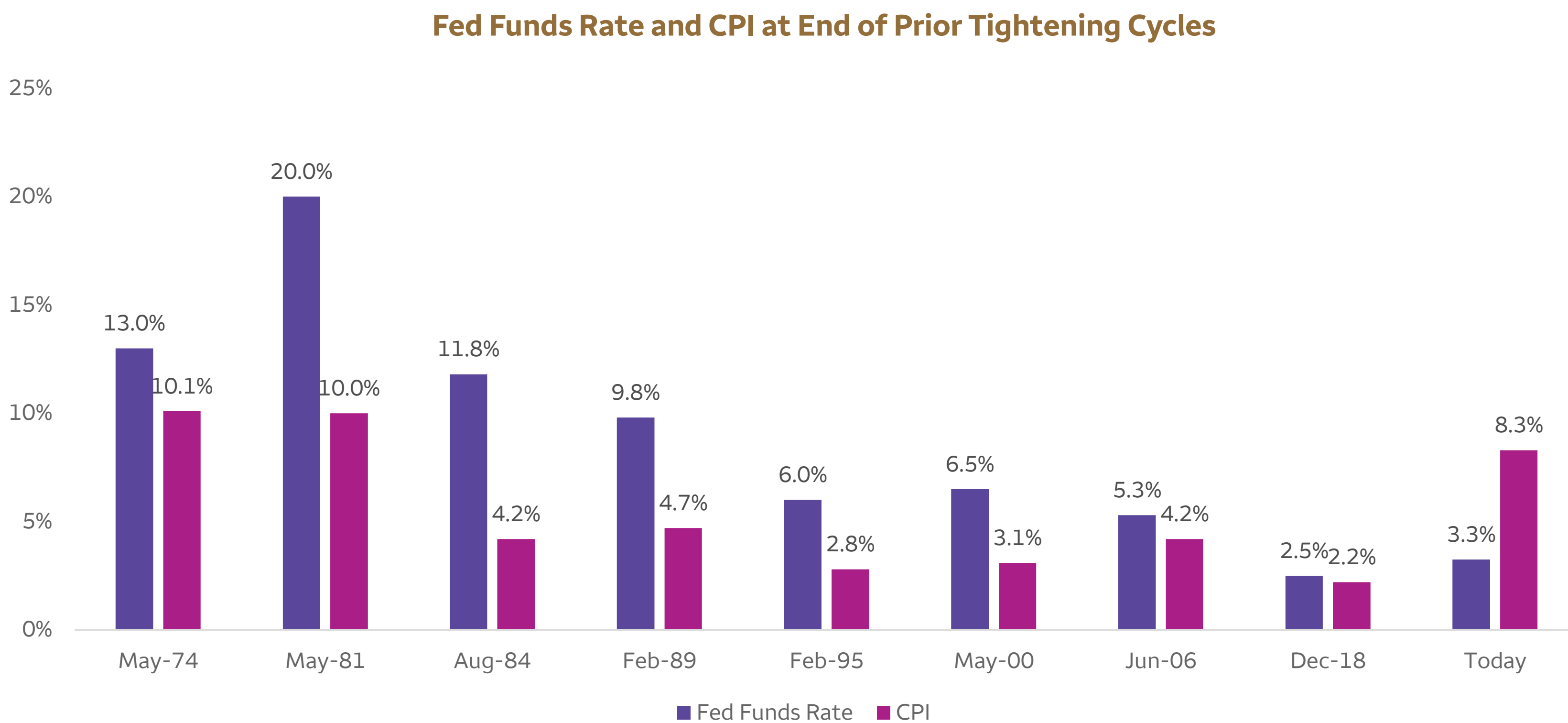

Source: Bloomberg, as of 9/30. Data is daily data calculated from June 30, 2022 to September 30, 2022. All investing involves the risk of loss of principal.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

Please see end of document for important disclosures, disclaimers and definitions.

# Quick Pivot From Federal Reserve Appears Unlikely

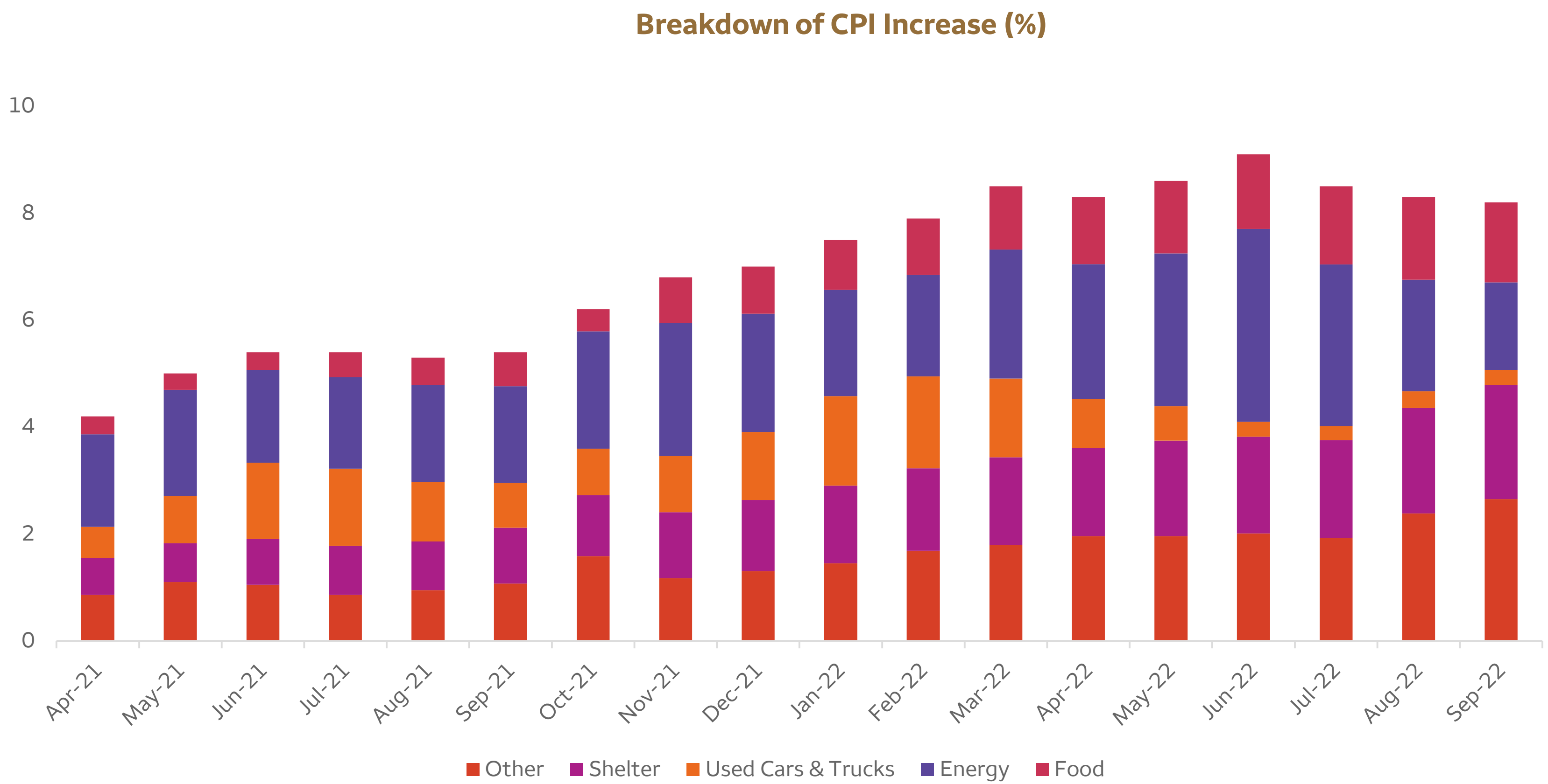
The market seemed to get overly optimistic from July's CPI report, anticipating that the Federal Reserve may quickly pivot from tightening. Historically the Fed has not pivoted until the Fed Funds Rate is above CPI.




Source: Strategas, “Investment Strategy Report – Bullet Point Base Case”, August 29, 2022.

# Inflation Remains Elevated Through September

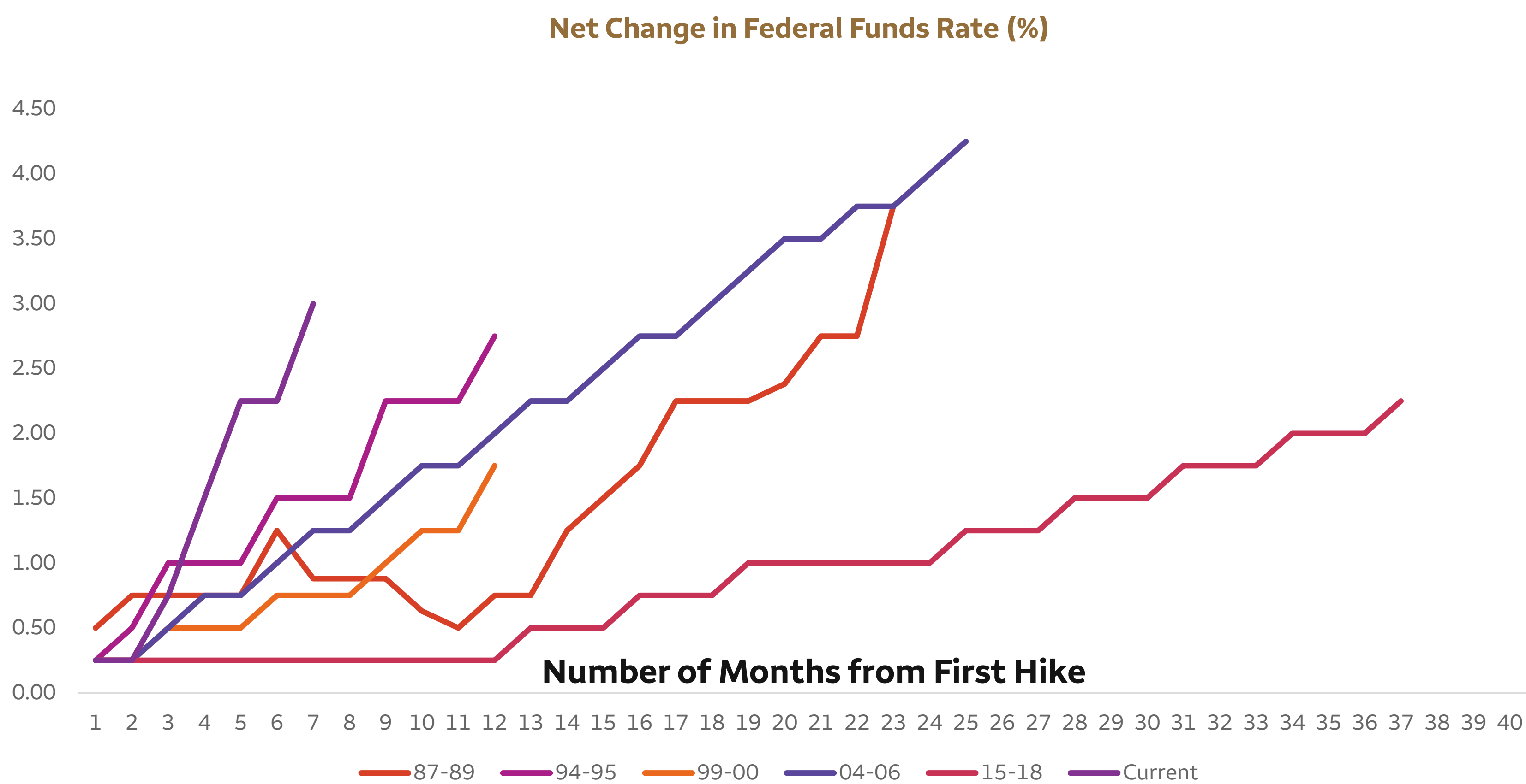
Energy and food costs no longer make up the majority of year-over-year inflation with more stable items, such as Shelter, starting to increase more meaningfully.




Source: Bloomberg, as of 09/30. The Consumer Price Index (CPI) is a measure of the cost of goods purchased by the average U.S. household. It is calculated by the U.S. government's Bureau of Labor Statistics. Data represents monthly data from April 2021 to September 2022.

# Fed Has Hiked Quicker Than Previous Cycles

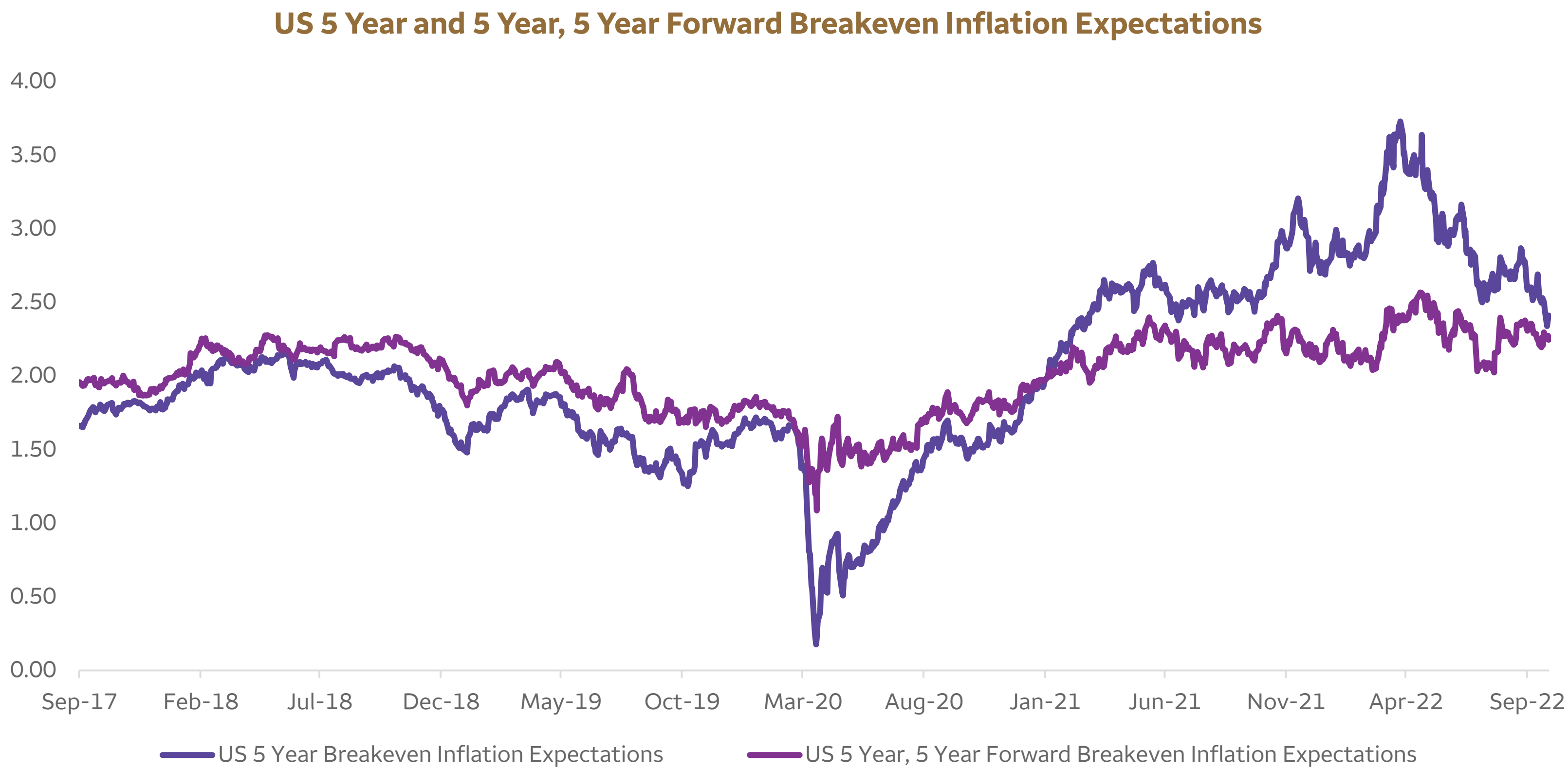
The current hiking cycle is the fastest the Federal Reserve has raised the Federal Funds Rate by 3% since the early 1980s, pointing to their resolve in combatting inflation.




Source: Bloomberg, as of 09/30. Data is daily data calculated from the point of the first Federal Funds Rate hike in 1987, 1994, 1999, 2004, 2015, and 2022.

# Which Has Brought Down Inflation Expectations

The actions of the Federal Reserve, both current and forward guidance, seemed to have quelled fears of structurally elevated inflation over the next decade.

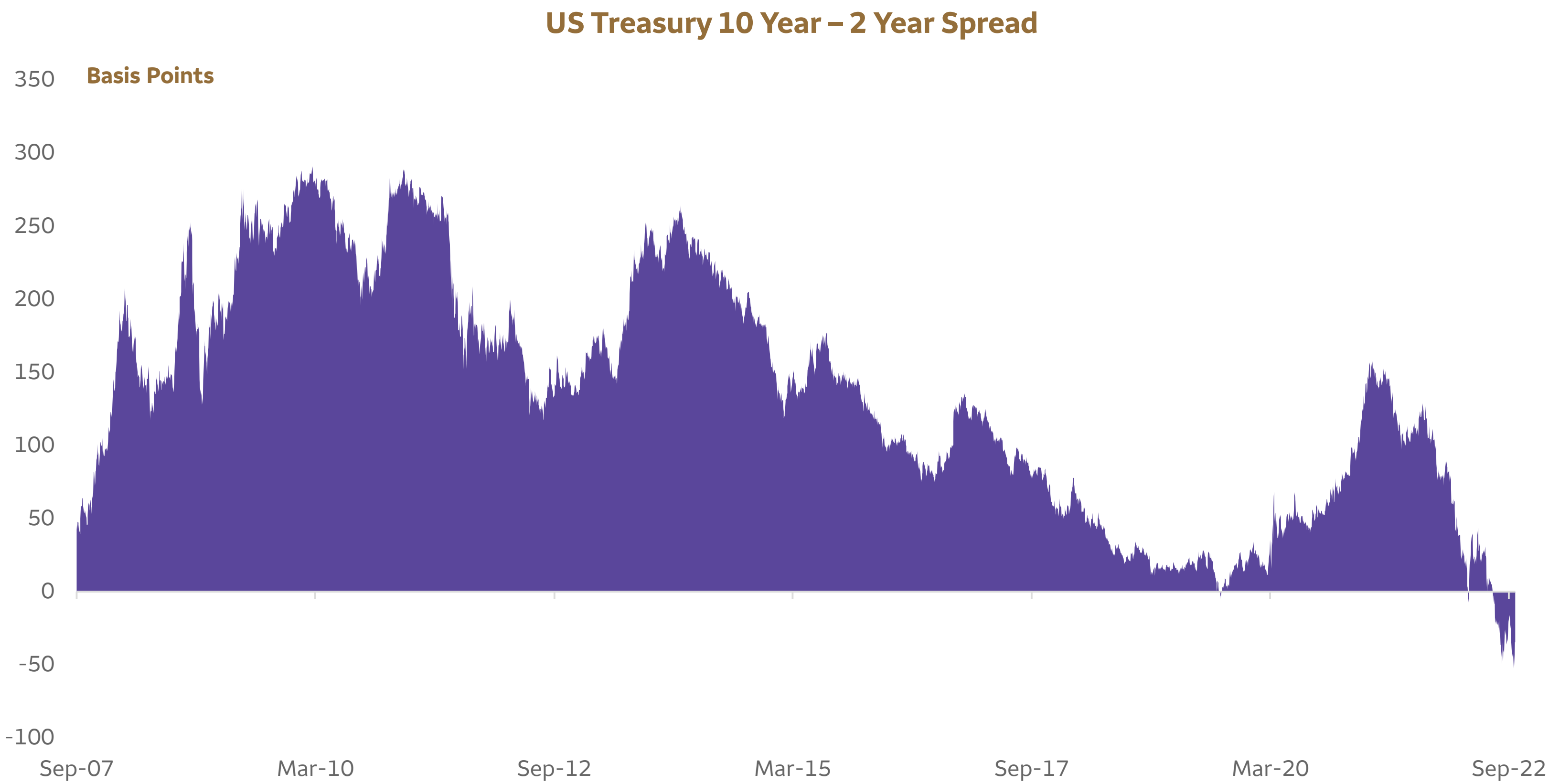



Source: Bloomberg, as of 9/30. Data represents daily data from September 4, 2017 to September 30, 2022.

The breakeven inflation rate represents a measure of expected inflation derived from 5-Year Treasury Constant Maturity Securities and 5-Year Treasury Inflation-Indexed Constant Maturity Securities. The latest value implies what market participants expect inflation to be in the next five years, on average. Starting with the update on June 21, 2019,the Treasury Bond data used in calculating interest rate spreads is obtained directly from the U.S. Treasury Department.

# The Yield Curve Points to a Contracting Economy

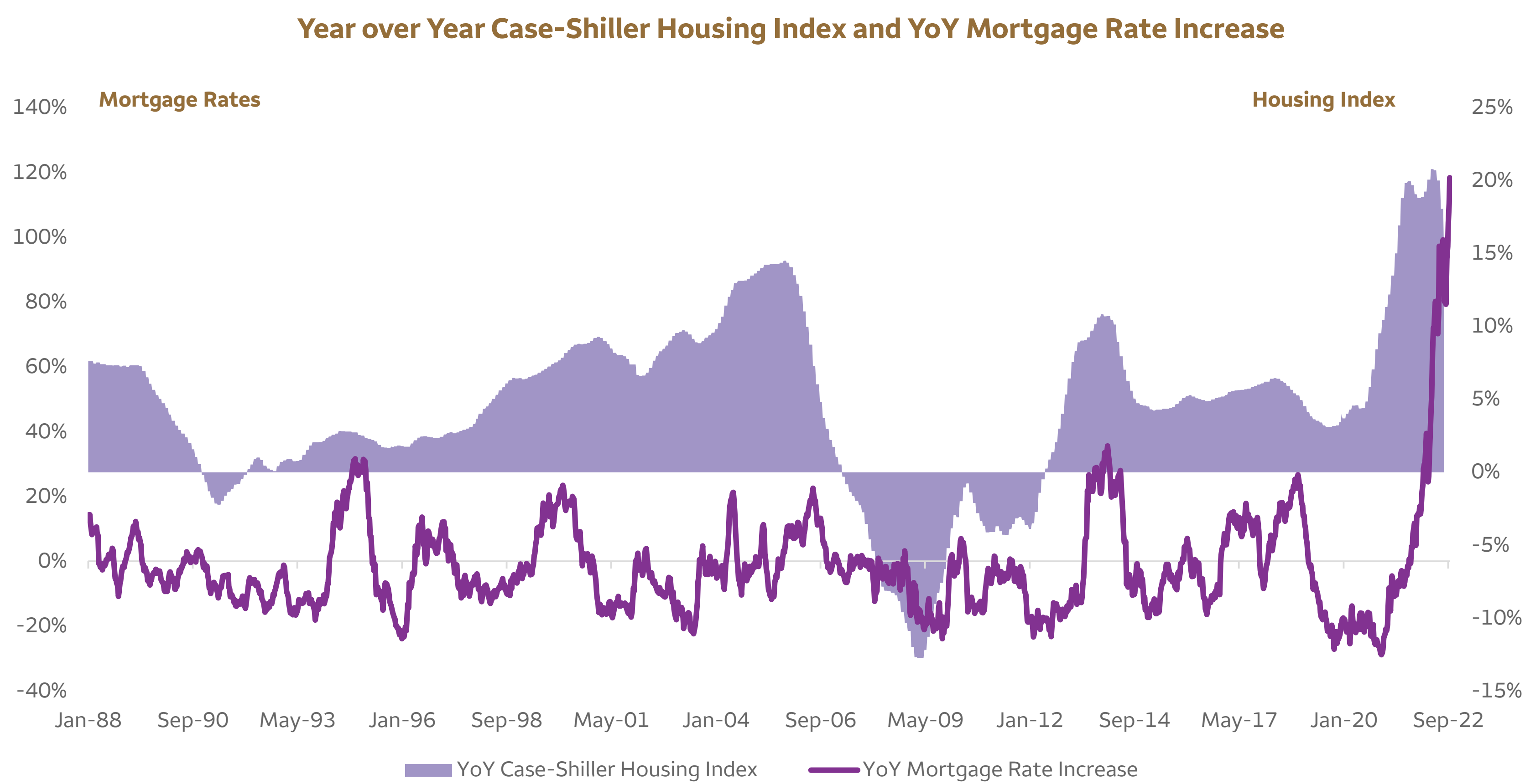
As the market anticipated further hikes the yield curve continued to flatten and is now inverted, having been so since July. Historically an inverted yield curve has generally been followed by a recession.




Source: Bloomberg, as of 09/30. Data is daily data calculated from September 4, 2007 to September 30, 2022.

# Record Growth in Both Mortgage Rates and Home Prices

Potential homebuyers could be feeling squeezed as a result of mortgage rates doubling over the past year and significant increases in home prices.



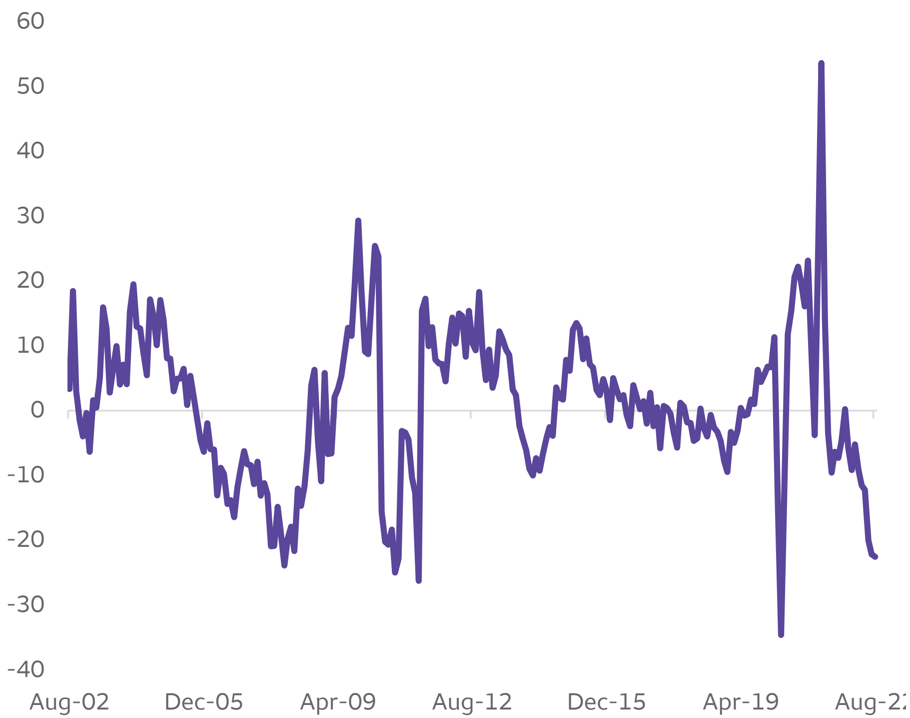

Source: Bloomberg, as of 09/30. Data is monthly data calculated from January 1988 to September 2022.

.

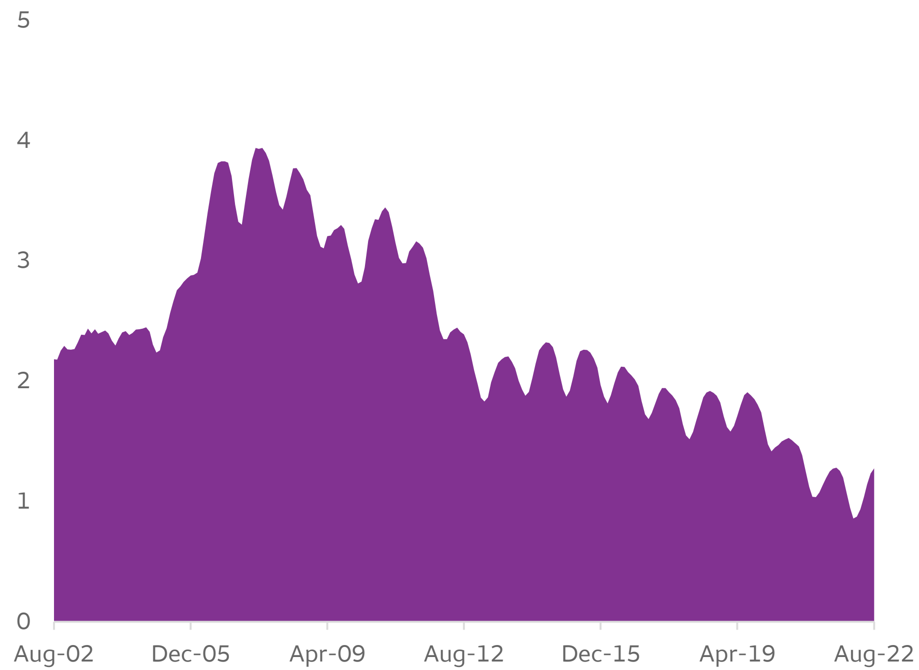
# Prices Have Yet to Adjust, But Housing Activity Slowing

Pending Home Sales have fallen more than -20% over the past year, with early signs of inventories beginning to move higher.

**Pending Home Sales YoY (%)**




**Existing Housing Inventory (in millions)**



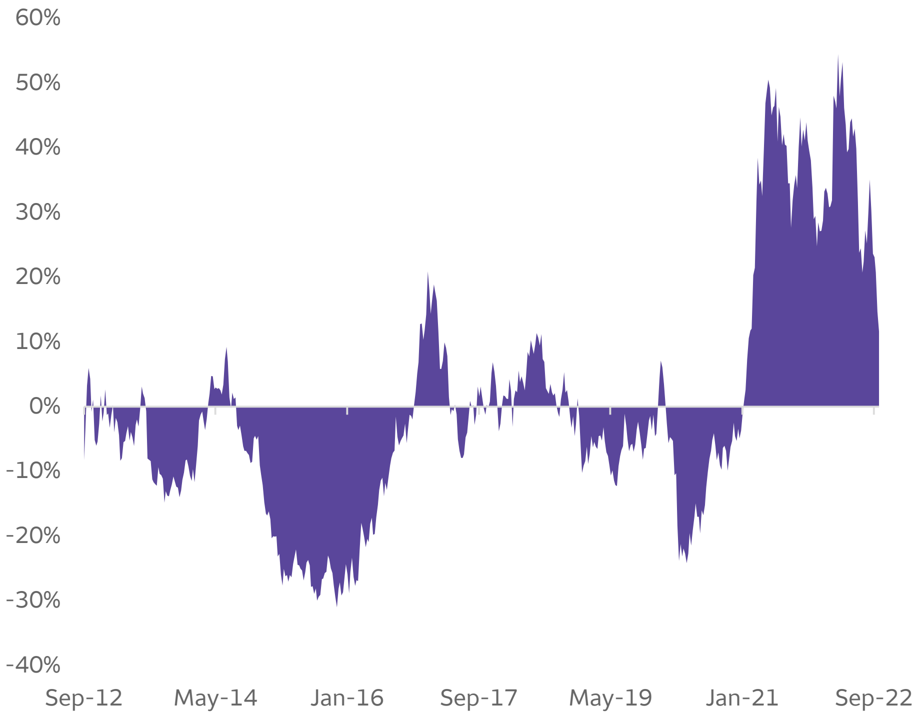

Source: Bloomberg, National Association of Realtors, as of 08/31. Data is monthly data calculated from August 2002 to August 2022. Pending Home Sales tracks signed real estate contracts for existing single-family homes, condos, and co-ops that have not yet closed. As such it is a leading indicator for existing home sales.

Source: Bloomberg, National Association of Realtors, as of 08/31. Data is monthly data calculated from August 2002 to August 2022. Existing Housing Inventory tracks the number of homes that are currently on the market.

# Commodity Returns Diverging, But You Can't Eat Gold

Year over year commodity returns have fallen to around 15% but year to date increases have concentrated in more consumer-heavy products.

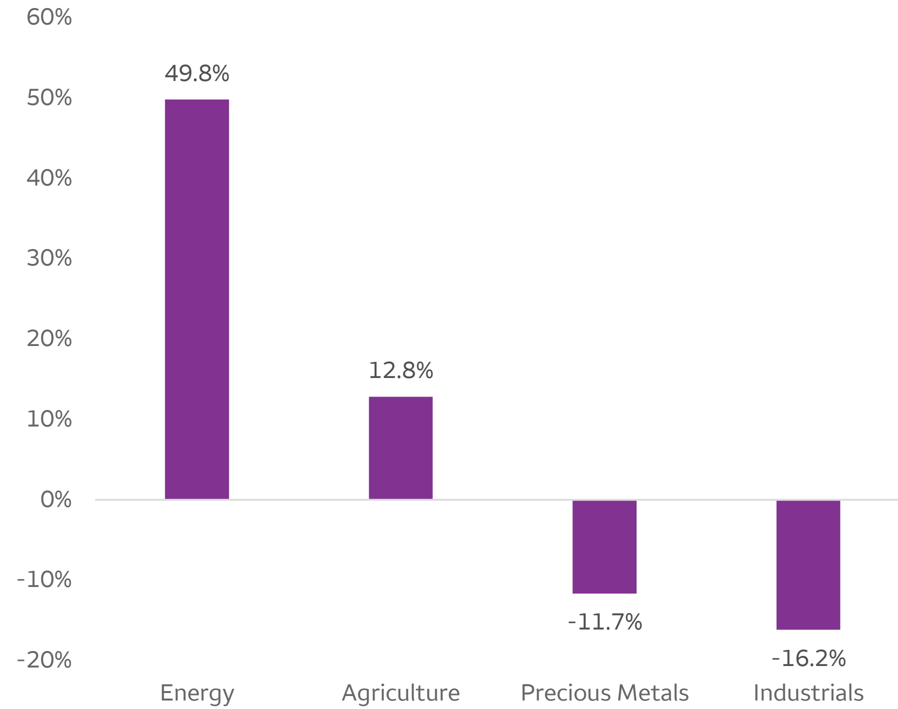
## 52 Week Bloomberg Commodity Index Return




Source: Bloomberg, as of 09/30. Data is weekly data calculated from September 7, 2012 to September 30, 2022.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

## Year to Date Sub-Index Performance (Bloomberg Commodity Total Return)



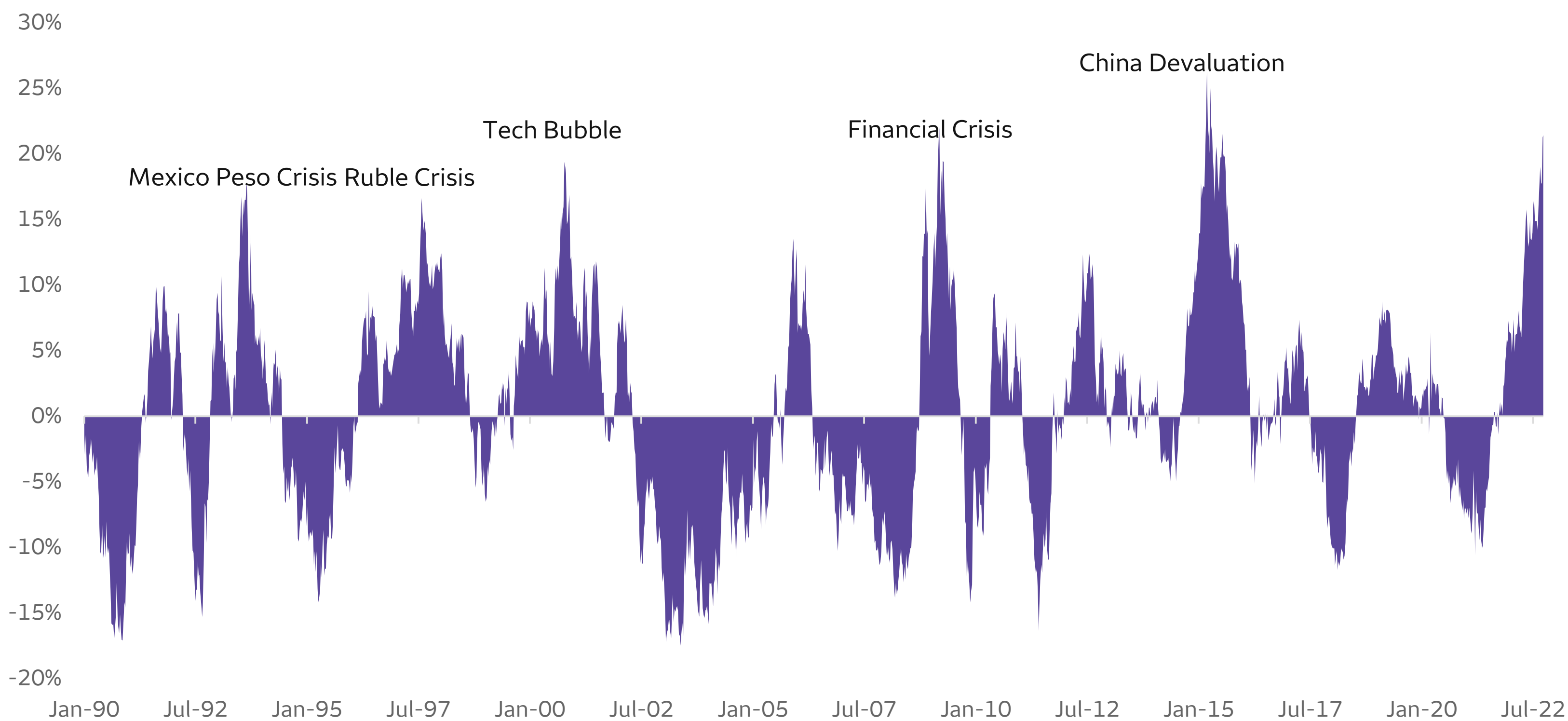

Source: Bloomberg, as of 09/30. Data is daily data calculated from December 31, 2021 to September 30, 2022.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

# Spiking Dollar Has Historically Aligned with Elevated Risk

Whether it is a cause or symptom, moves in the US Dollar like we have seen over the past year have generally coincided with major market events.

**52 Week Change in US Dollar Index**



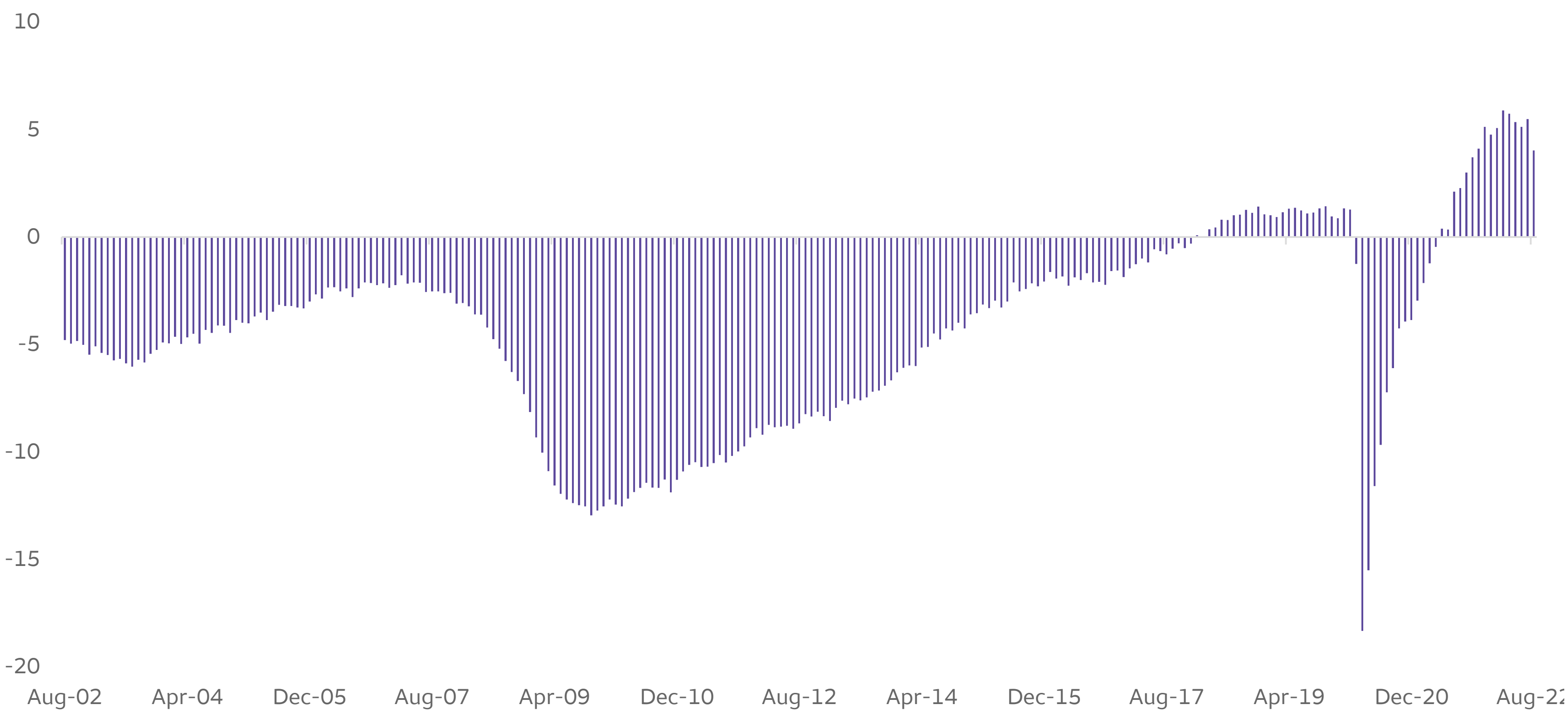

Source: Bloomberg, as of 09/30. Data is data calculated weekly from January 5, 1990 to September 30, 2022. All investing involves risk including the loss of principal. **Mexico Peso Crisis**: December 1994 to March 1995. **Ruble Crisis**: August 1998 to November 1998. **Tech Bubble:** March 2000 to October 2002. **Financial Crisis:** December 2007 to June 2009. **China Devaluation:** August 2015 to March 2016.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

# Labor Market Continues to Improve, Remains Tight

The number of job openings exceeds unemployed people in the labor market by more than 5 million, which is an all-time high and reverses the multi-decade trend of general deficits for job seekers in the labor market.

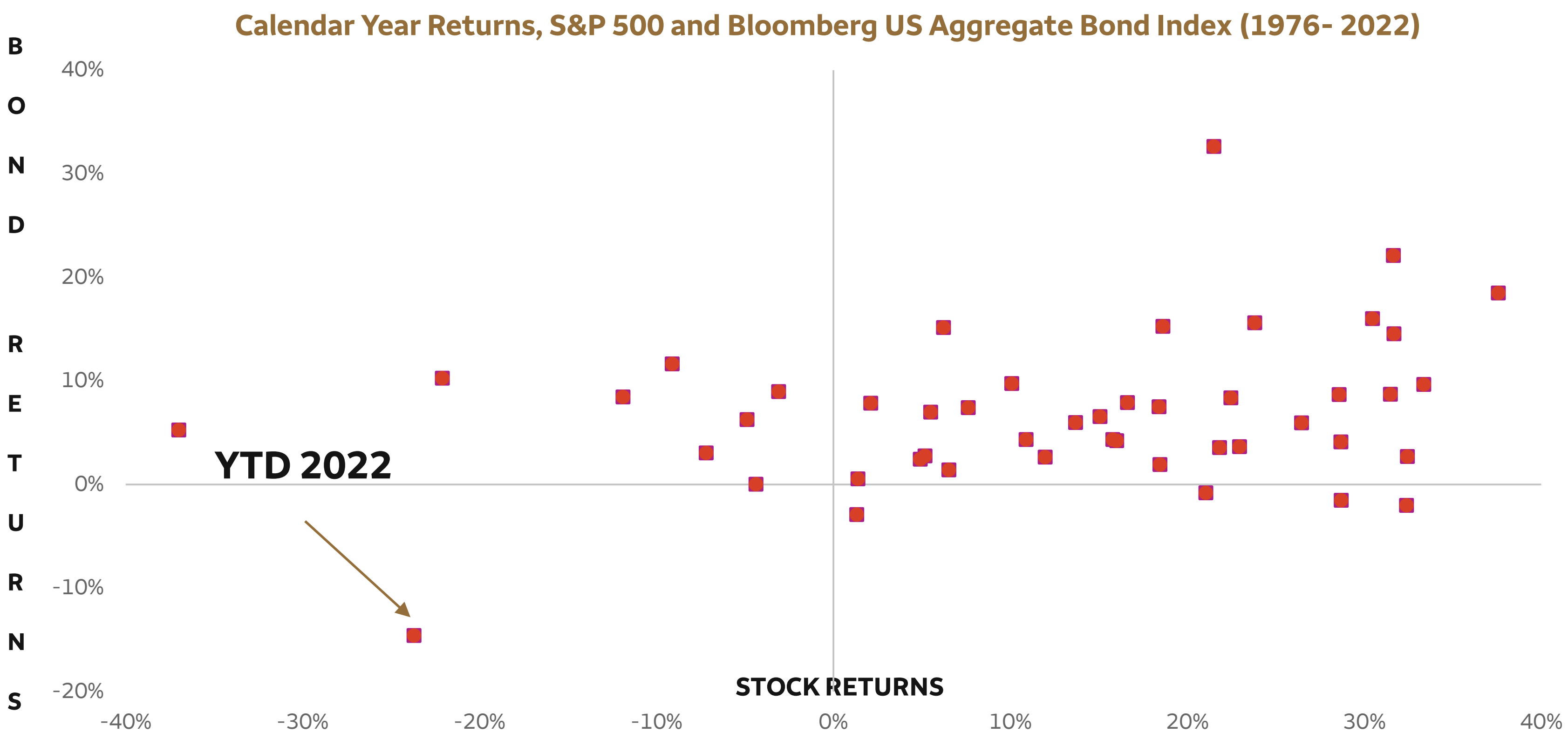
**JOLTS Job Openings minus Unemployed People in Labor Force (in millions)**




Source: Bloomberg, Bureau of Labor Statistics, as of 8/31. Data represents monthly data from August 2002 to August 2022. Job Openings and Labor Turnover Survey (JOLTS) is a monthly survey of U.S. job vacancies, hiring, and job separations released by the Bureau of Labor Statistics of the U.S. Department of Labor. Unemployed people in labor force refers to the number of people who are without work (not in paid employment or self-employed), currently available for work and seeking works (taking specific steps to find work).

# 2022 Has Spelled Trouble for the Stock/Bond Portfolio

Historically, investors have generally seen either stocks or bonds provide positive returns, with this year bringing new experiences to investors.




Source: Morningstar, as of 9/30. Data represents annual data from 1976 to 2021, and year to date data for calendar year 2022.

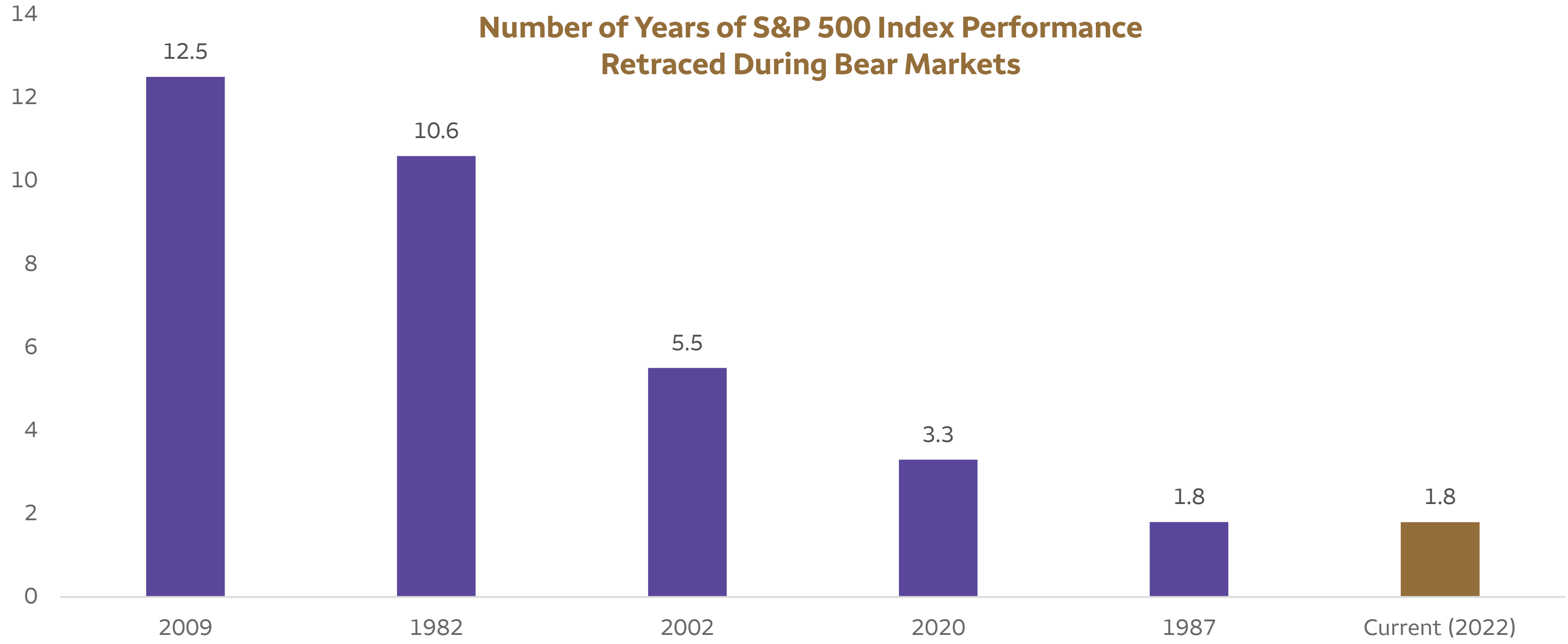
***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**



Please see end of document for important disclosures, disclaimers and definitions.

# S&P 500 Total Return Now Back to 2020 Levels

The S&P 500 has given back 1.8 years of returns, going back to December 2020 levels. In comparison to previous bear markets this has been relatively muted, although not all of these bear markets were preceded by the strong returns we saw in 2021.




Sources: Bloomberg, as of 9/30.. Performance calculated daily and backwards from the market bottom in each year listed above. An index is unmanaged and not available for direct investment. Past performance is no guarantee of future results.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

Please see end of document for important disclosures, disclaimers and definitions.

# Multiple Contraction Appears to Drive Equity Returns

Earnings continue to expand across most sectors of the S&P 500, but multiple contraction – likely as a result of higher than expected inflation and rising interest rates – has led to negative equity market returns year to date.

## US Equity Return Decomposition

| Sector | Revenue | Margin | Earnings | Buybacks | EPS | P/E | Price Return | Dividends | Total Return |
|---|---|---|---|---|---|---|---|---|---|
| **S&P 500** | **8.2** | **-2.1** | **5.9** | **0.5** | **6.5** | **-29.4** | **-24.8** | **1.2** | **-23.9** |
| **Energy** | 37.1 | 36.1 | 86.6 | -0.2 | 86.1 | -29.8 | **30.7** | **3.2** | **34.9** |
| **Utilities** | 7.2 | -3.2 | 3.8 | -0.2 | 3.6 | -11.7 | **-8.6** | **2.3** | **-6.5** |
| **Staples** | 6.4 | -4.5 | 1.6 | 0.3 | 1.9 | -15.1 | **-13.5** | **2.0** | **-11.8** |
| **Healthcare** | 3.8 | -5.3 | -1.6 | 0.4 | -1.2 | -13.1 | **-14.1** | **1.2** | **-13.1** |
| **Industrials** | 4.4 | 1.7 | 6.1 | 0.8 | 7.0 | -26.8 | **-21.7** | **1.3** | **-20.7** |
| **Financials** | 14.8 | -7.7 | 5.9 | 1.4 | 7.3 | -27.7 | **-22.4** | **1.5** | **-21.2** |
| **Materials** | 6.9 | -4.2 | 2.5 | 0.9 | 3.4 | -27.4 | **-24.9** | **1.5** | **-23.7** |
| **Real Estate** | 8.9 | 1.3 | 10.3 | -1.6 | 8.5 | -35.9 | **-30.4** | **2.3** | **-28.8** |
| **Discretionary** | 5.1 | -6.2 | -1.5 | 1.1 | -0.4 | -30.1 | **-30.3** | **0.6** | **-29.9** |
| **Technology** | 4.4 | -0.9 | 3.5 | 0.4 | 3.9 | -34.5 | **-31.9** | **0.7** | **-31.4** |
| **Communication Services** | 1.5 | -9.5 | -8.1 | 0.2 | -8.0 | -34.2 | **-39.4** | **0.6** | **-39.0** |

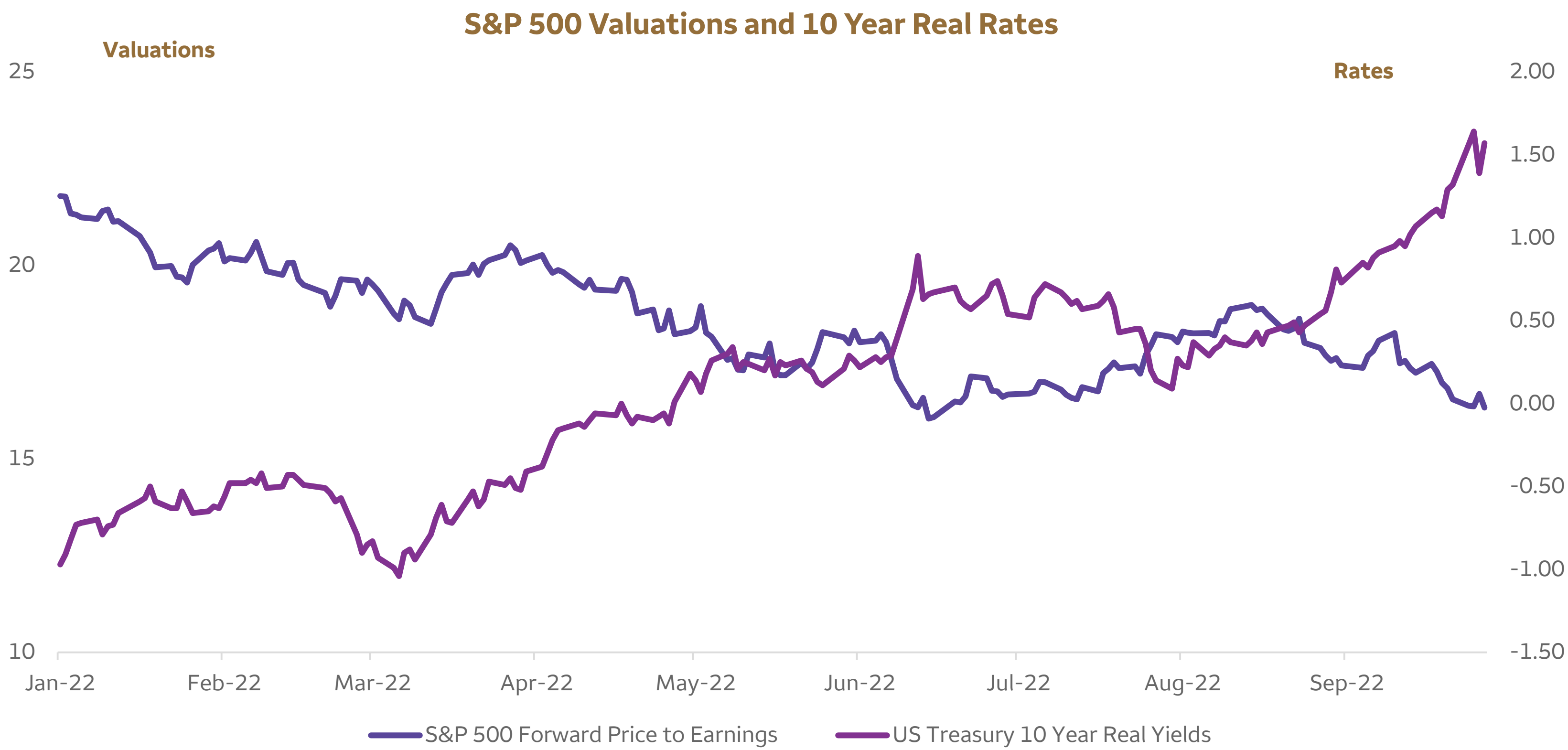
Sources: Credit Suisse, “US Return Decomposition”, 10/4/2022. Performance calculated daily from December 31, 2021 to September 30, 2022. An index is unmanaged and not available for direct investment. Past performance is no guarantee of future results.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

Please see end of document for important disclosures, disclaimers and definitions.

# Valuations Continue to Move Inversely to Real Rates

Expectations for higher interest rates have driven down equity valuations, with valuations falling (rising) as real interest rates have rose (fell).




Source: Morningstar, as of 9/30. Data represents daily data from January 4, 2022 to September 30, 2022..

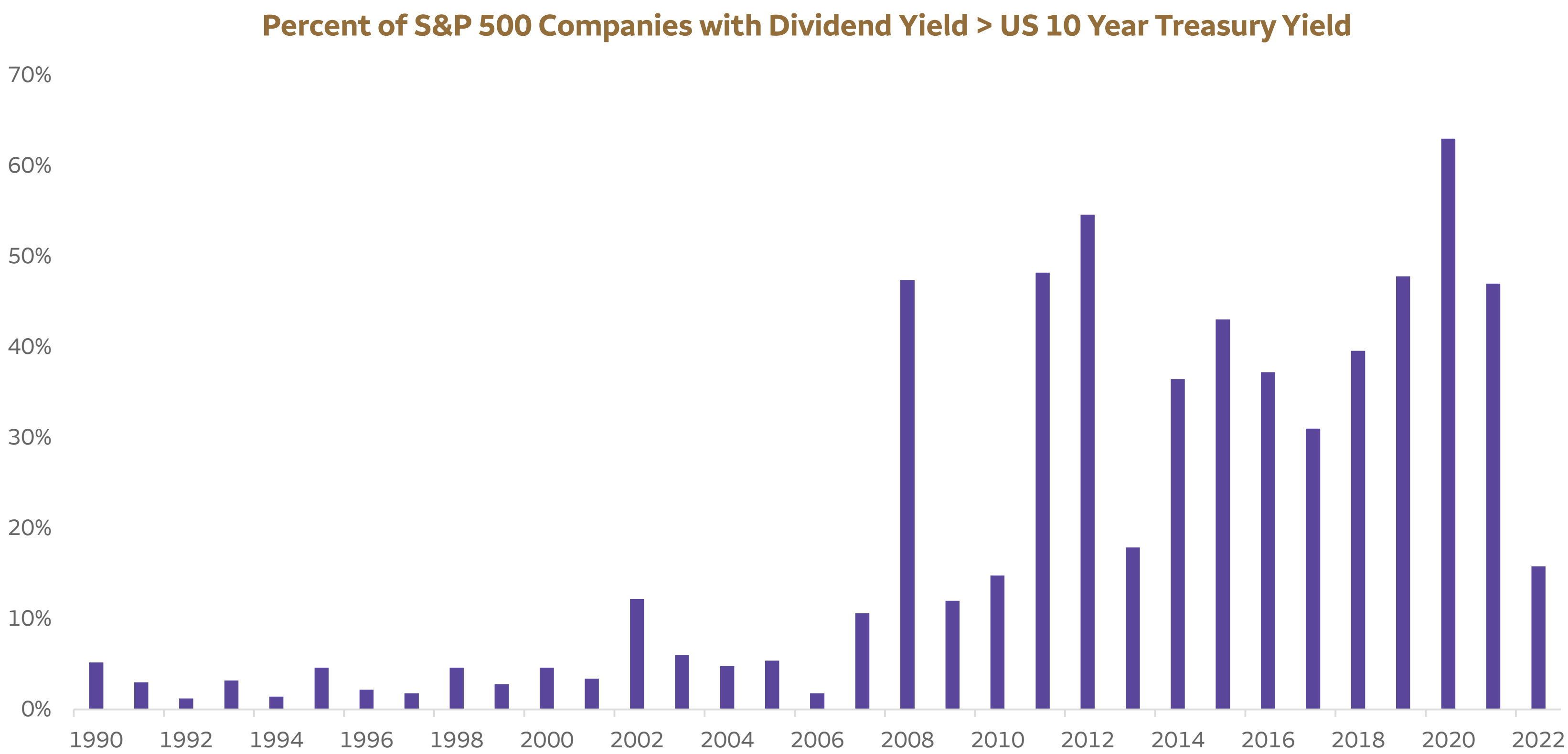
***60/40 Portfolios are hypothetical and for illustrative purposes only. Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**



Please see end of document for important disclosures, disclaimers and definitions.

# TINA (There is No Alternative) No Longer in Play

The percent of S&P 500 companies whose dividend yield is higher than the US 10 Year Treasury Yield has fallen from a high of more than 60% in 2020 to just over 10% today.



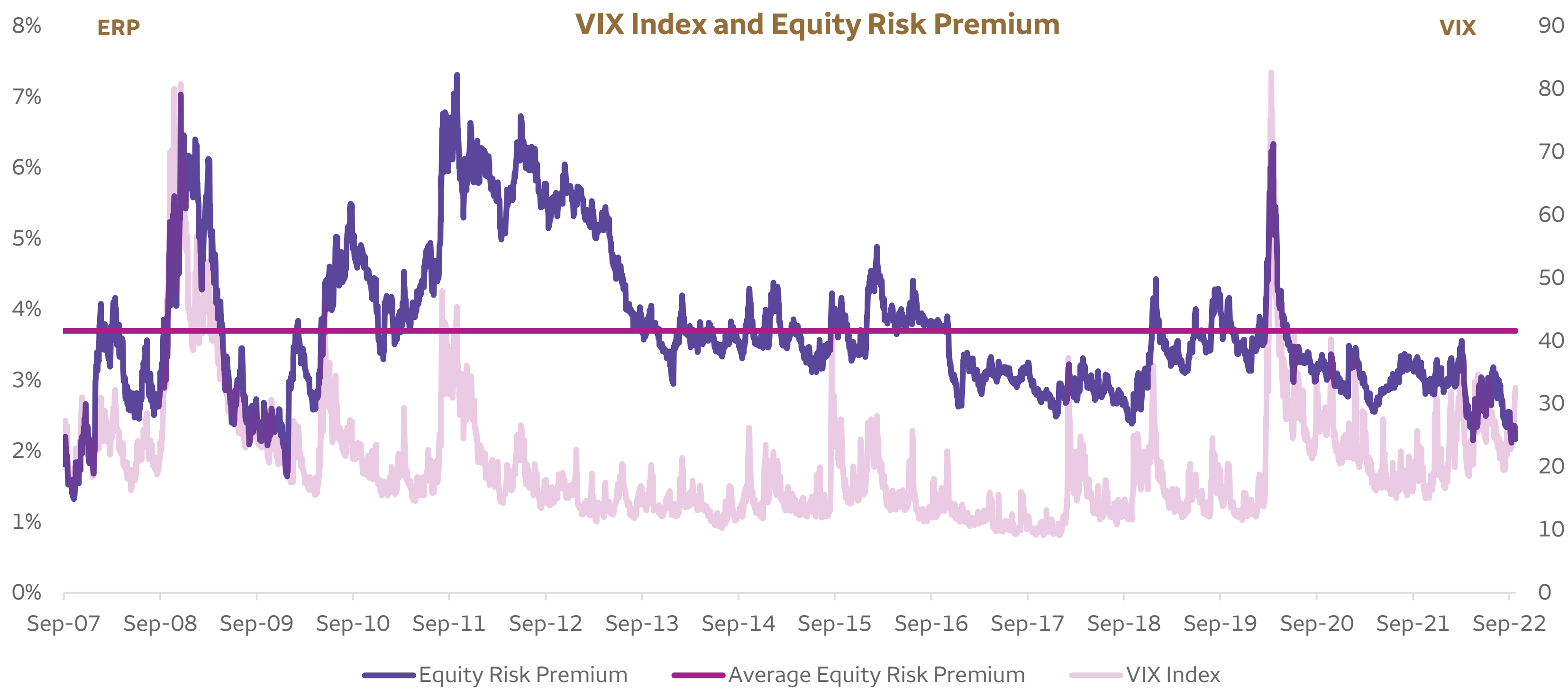

Source: Strategas, “Quarterly Review in Charts”, October 3, 2022.



Please see end of document for important disclosures, disclaimers and definitions.

# Unusual Relationship Between the Volatility Index and Equity Risk Premium

Historically the Equity Risk Premium (ERP) generally rises along with the Volatility Index (VIX). However, in 2022 implied volatility has increased while the Equity Risk Premium continues to fall.



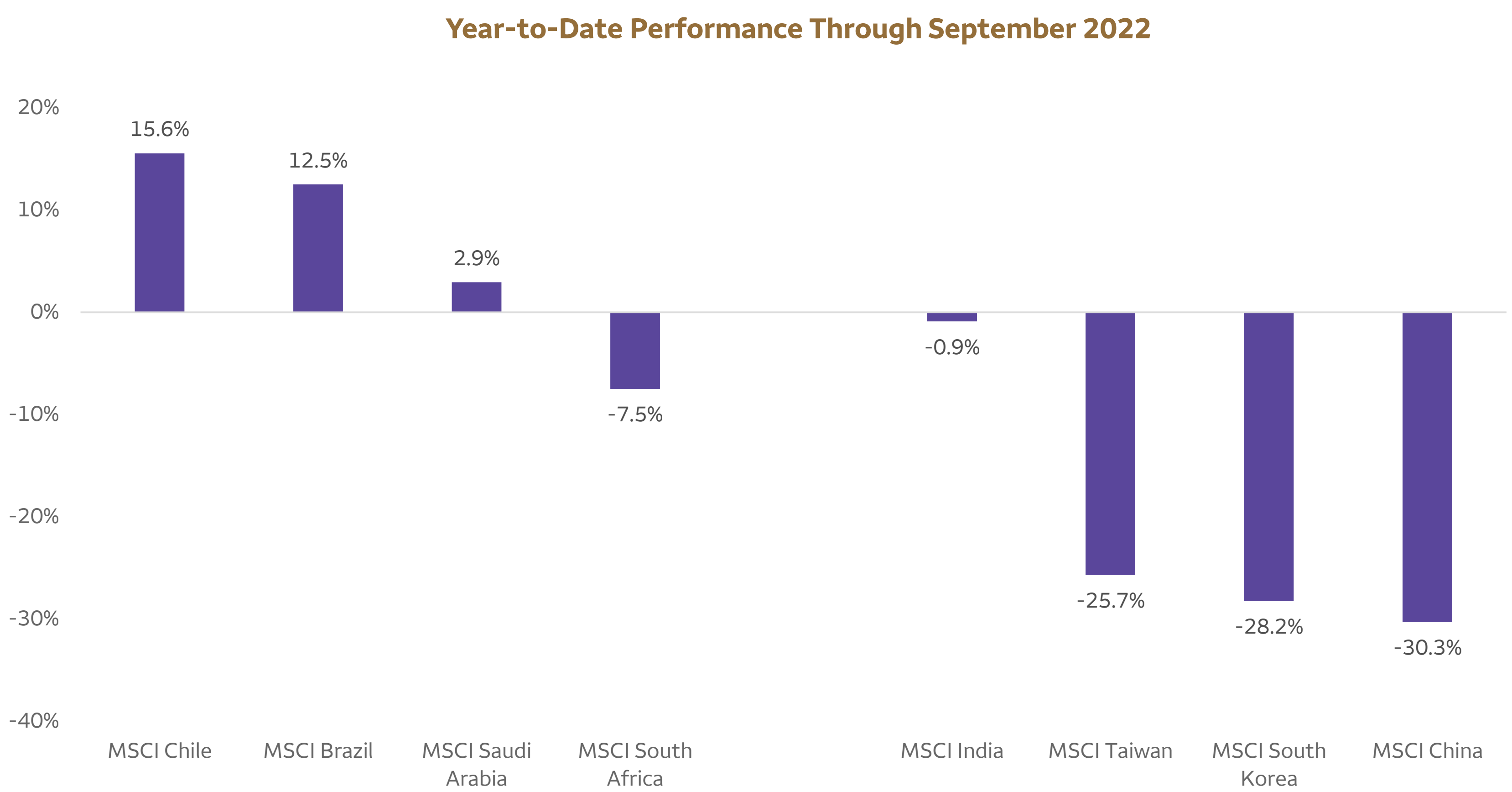

Sources: Bloomberg, as of 9/30. Data is daily data calculated from September 4, 2007 to September 30, 2022. The Equity Risk Premium (ERP) is a measure of compensation provided to investors for the risk of owning equities and is derived by taking the Forward Price to Earnings Ratio for the S&P 500 Index minus the 10 Year Treasury Yield.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

Please see end of document for important disclosures, disclaimers and definitions.

# Divergence in Performance Within Emerging Markets

Emerging Market equities are not all the same, with this year providing a stark reminder of the difference between commodity exporters and commodity importers.



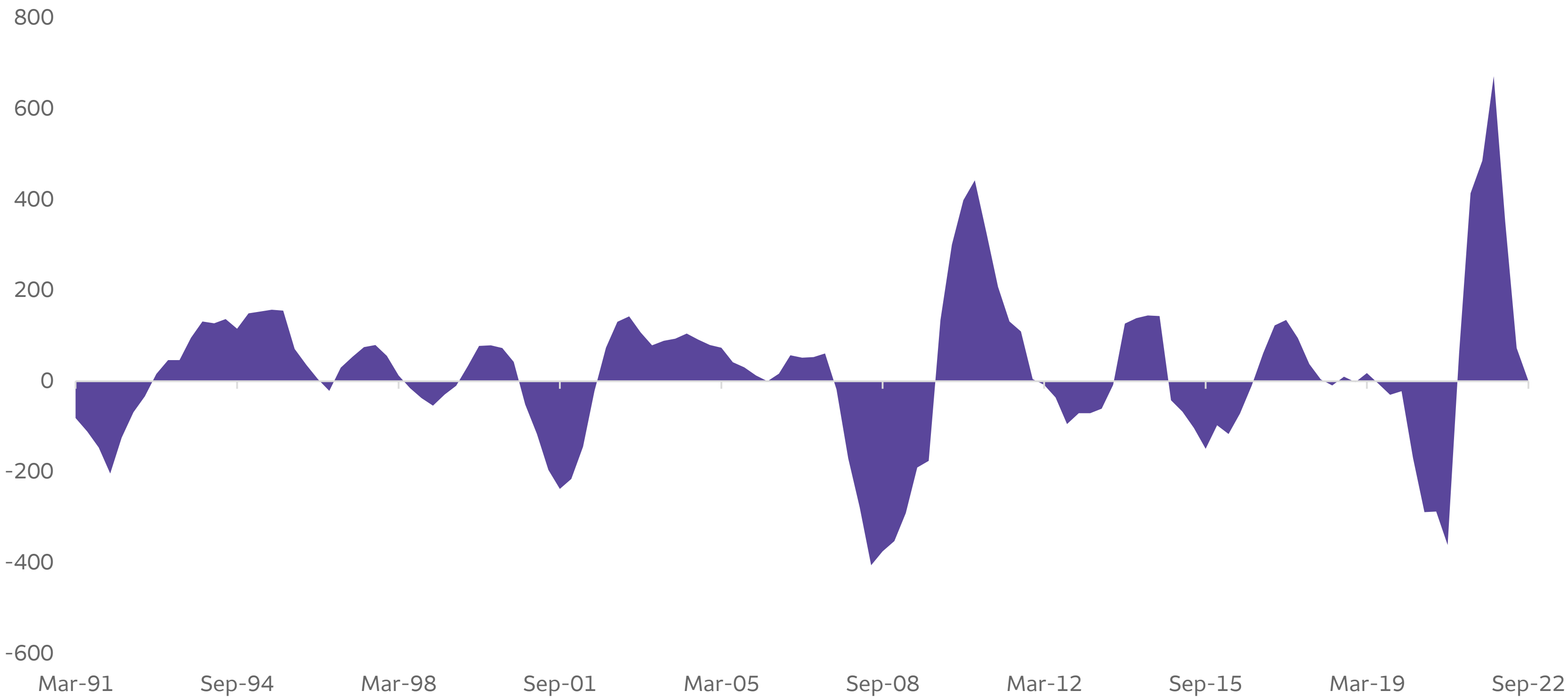

Source: Bloomberg, as of 09/30. Data is data calculated daily from January 3, 2022 to September 30, 2022. All investing involves risk including the loss of principal.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

# Operating Margins Generally Fall During Recessions

Higher labor and input costs and slowing demand could reduce operating margins for S&P 500 companies, potentially leading to the next leg down.

**Year over Year Change in S&P 500 Operating Margins (in basis points)**

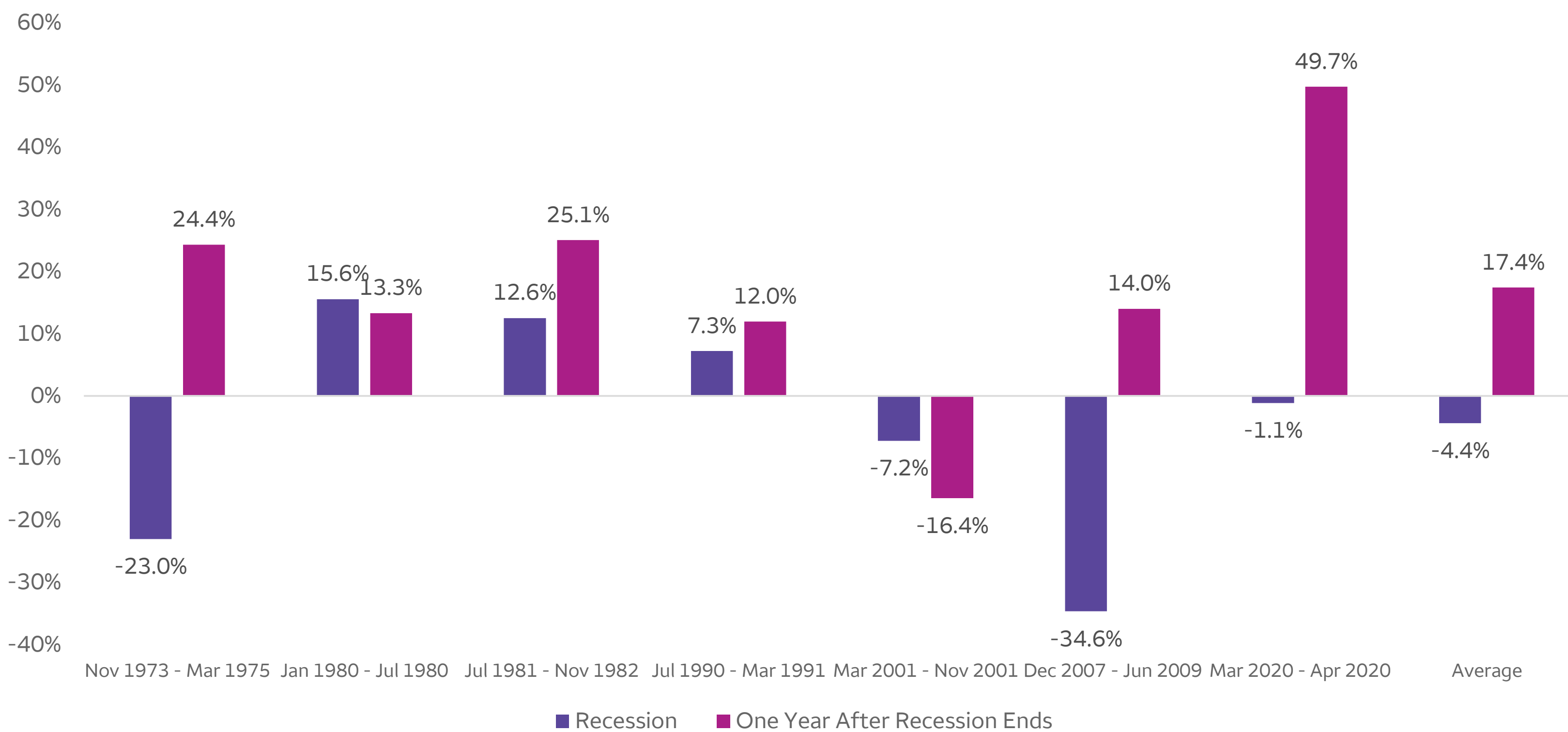



Sources: Bloomberg, as of 9/30. Data is quarterly data calculated from March 1991 to September 2022.

# Equity Investing During Recessions Has Been Mixed

Investors are increasingly concerned about the possibility of a recession, and while the longer ones have impaired equity returns, for the most part investing during recessions has not been too painful.

**S&P 500 Total Return During and After Recessions**




Source: Bloomberg, as of 7/31/2022. An index is unmanaged and not available for direct investment. All investing involves risk including the loss of principal.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

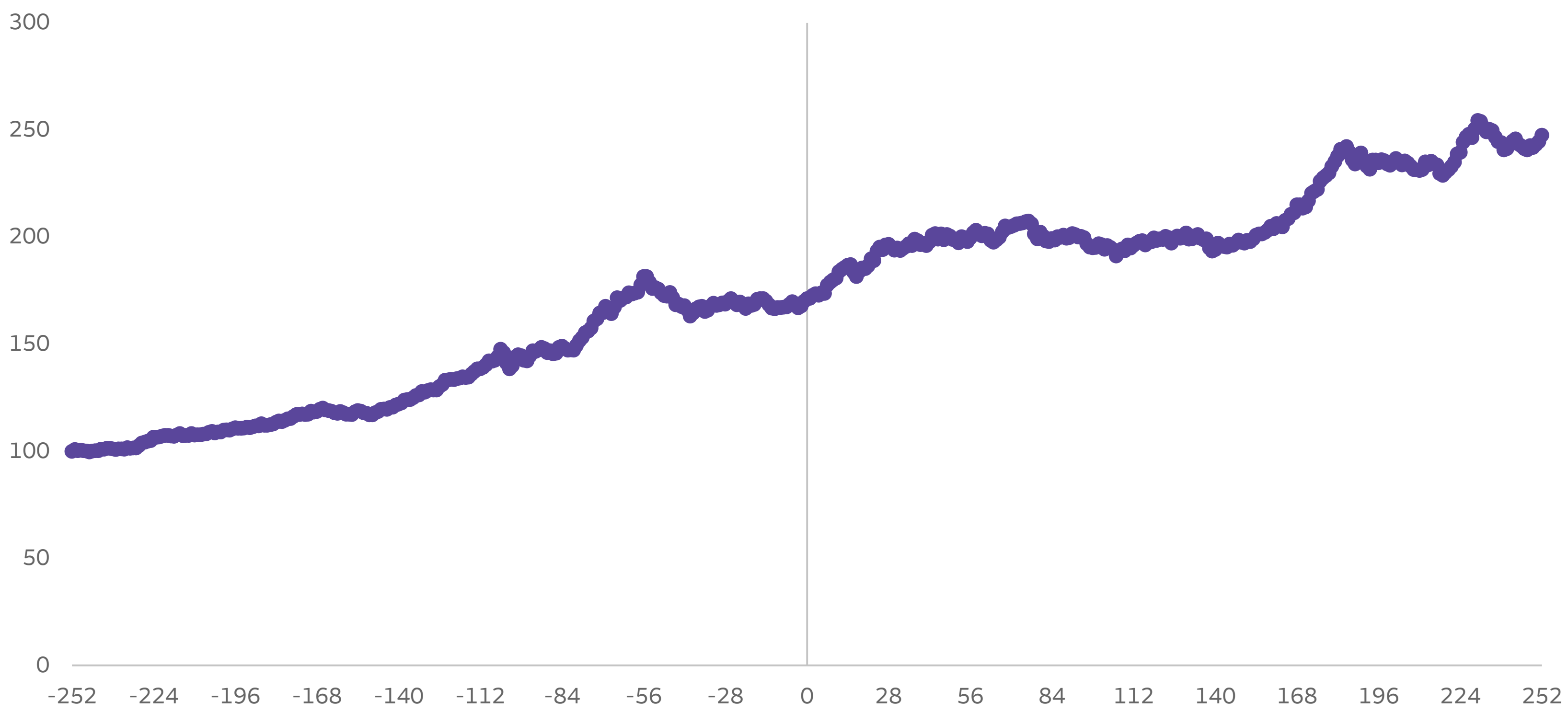


Please see end of document for important disclosures, disclaimers and definitions.

# Recessions Do Not Necessarily Bring Lower Commodity Prices

Recent recessions that were driven by higher commodity prices saw falling prices heading into the recession followed by a re-acceleration thereafter.

**Growth of $100 Based on the Performance of Bloomberg Commodity Total Return Index**
**252 Trading Days Prior to and After 1973, 1980, and 1991 Recessions**




Source: Bloomberg. An index is unmanaged and not available for direct investment. All investing involves risk including the loss of principal.

***Index return information is provided for illustrative purposes only.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a fund might experience. Index returns reflect general market results, assume the investment of dividends and other distributions, and do not reflect deduction for fees, expenses, or tax applicable to an actual investment. An index is unmanaged and not available for direct investment. **Hypothetical and past performance does not guarantee future results.**

Please see end of document for important disclosures, disclaimers and definitions.

# Economic and Market Review Disclosures

**General Disclosures**

Wells Fargo Private Bank (The Private Bank) offers products and services through Wells Fargo Bank, N.A., Member FDIC, and its various affiliates and subsidiaries. Wells Fargo Bank, N.A. is a bank affiliate company of Wells Fargo & Company.

The information in this report was prepared by The Private Bank. Opinions represent The Private Bank's opinion as of the date of this report and are for general information purposes only and are not intended to predict or guarantee the future performance of any individual security, market sector or the markets generally. The Private Bank does not undertake to advise you of any change in its opinions or the information contained in this report, and Wells Fargo & Company affiliates may issue reports or have opinions that are inconsistent with, and reach different conclusions from, this report.

The information contained herein constitutes general information and is not directed to, designed for, or individually tailored to, any particular investor or potential investor. This report is not intended to be a client specific suitability analysis or recommendation, an offer to participate in any investment, or a recommendation
to buy, hold or sell securities. Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone. Past performance is no guarantee of future results. Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance,
liquidity needs and investment time horizon. The material contained herein has been prepared from sources and data we believe to be reliable but we make no guarantee to its accuracy or completeness.

# Economic and Market Review Disclosures

## Risk Considerations

***All investing involves some degree of risk, whether it is associated with market volatility, purchasing power or a specific security. There is no assurance any investment strategy will be successful. Asset allocation does not guarantee a profit nor does diversification protect against loss.***

**Equities:** Equity securities are subject to market risk which means their value may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. Investments in equity securities are generally more volatile than other types of securities. There is no guarantee that dividend-paying stocks will return more than the overall stock market. Dividends are not guaranteed and are subject to change or elimination. These risks are heightened in emerging markets.

**Emerging Markets:** Stock markets, especially foreign markets, are volatile. Stocks may fluctuate in response to general economic and market conditions, the prospects of individual companies, and industry sectors. Foreign investing has additional risks including those associated with currency fluctuation, political and economic instability, and different accounting standards. These risks are heightened in emerging and frontier market

**Fixed Income:** Investments in fixed-income securities are subject to market, interest rate, credit and other risks. Bond prices fluctuate inversely to changes in interest rates. Therefore, a general rise in interest rates can result in the decline in the bond's price. Credit risk is the risk that an issuer will default on payments of interest and/or principal. This risk is heightened in lower rated bonds. If sold prior to maturity, fixed income securities are subject to market risk. All fixed income investments may be worth less than their original cost upon redemption or maturity. Income from municipal securities is generally free from federal taxes and state taxes for residents of the issuing state. While the interest income is tax-free, capital gains, if any, will be subject to taxes. Income for some investors may be subject to the federal Alternative Minimum Tax (AMT)

**High Yield Bonds:** High-yield bonds, also known as junk bonds, are subject to greater risk of loss of principal and interest, including default risk, than higher-rated bonds. Investors should not place undue reliance on yield as a factor to be considered in selecting a high yield investment.

# Economic and Market Review Disclosures

**Commodities:** Investing in commodities, futures, and managed futures is not suitable for all investors. Exposure to the commodities markets may subject an investment to greater share price volatility than an investment in traditional equity or debt securities. The prices of various commodities may fluctuate based on numerous factors including changes in supply and demand relationships, weather and acts of nature, agricultural conditions, international trade conditions, fiscal monetary and exchange control programs, domestic and foreign political and economic events and policies, and changes in interest rates or sectors affecting a
particular industry or commodity. Products that invest in commodities may employ more complex strategies which may expose investors to additional risks, including futures roll yield risk.

**Alternative Investments:** Alternative investments, such as hedge funds, funds of hedge funds, managed futures, private capital, real assets and real estate funds, are not suitable for all investors. They are speculative, highly illiquid, and are designed for long-term investment, and not as trading vehicle. These funds carry specific investor qualifications which can include high income and net-worth requirements as well as relatively high investment minimums. The high expenses associated with alternative investments must be offset by trading profits and other income which may not be realized. Unlike mutual funds, alternative investments are not
subject to some of the regulations designed to protect investors and are not required to provide the same level of disclosure as would be received from a mutual fund. They trade in diverse complex strategies that are affected in different ways and at different times by changing market conditions. Strategies may, at times, be out of market favor for considerable periods with adverse consequences for the fund and the investor. An investment in these funds involve the risks inherent in an investment in securities and can include losses associated with speculative investment practices, including hedging and leveraging through derivatives, such as futures, options, swaps, short selling, investments in non-U.S. securities, "junk" bonds and illiquid investments. The use of leverage in a portfolio varies by strategy. Leverage can significantly increase return potential but create greater risk of loss. At times, a fund may be unable to sell certain of its illiquid investments without a substantial drop in price, if at all. Other risks can include those associated with potential lack of diversification, restrictions on transferring interests, no available secondary market, complex tax structures, delays in tax reporting, valuation of securities and pricing. An investment in a fund of funds carries additional risks including asset-based fees and expenses at the fund level and indirect fees, expenses and asset-based compensation of investment funds in which these funds invest. An investor should review the private placement memorandum, subscription agreement and other related offering materials for complete information regarding terms, including all applicable fees, as well as the specific risks associated with a fund before investing.

**Real Estate:** Investment in real estate securities include risks, such as the possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions.

# Economic and Market Review Disclosures

**Index Definitions**

***The benchmark performance shown is for illustrative purposes only and is not reflective of any investment.*** Index returns do not represent investment returns or the results of actual trading nor are they forecasts of expected gains or losses a portfolio might experience. Index returns reflect general market results, assume the reinvestment of dividends and other distributions, and do not reflect deduction for fees, expenses or taxes applicable to an actual investment. Comparisons to benchmarks have limitations because benchmarks have volatility and other material characteristics that may differ from those of the portfolio. Because of these
differences, benchmarks should not be relied upon as an accurate measure of comparison. There is no guarantee that any of the securities invested in the portfolio are included in the Index. ***Past performance does not guarantee future results.***

An index is unmanaged and unavailable for direct investment.

**S&P 500 Index (US Large Cap Equities)**: The S&P 500 Index consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market value weighted index with each stock's weight in the Index proportionate to its market value

**Russell Midcap® Index (US Mid Cap Equities)**: The Russell Midcap® Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000® Index.

**Russell 2000® Index (US Small Cap Equities)**: The Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

**MSCI EAFE® Index (Developed Global Markets excluding US)**: The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada..

**MSCI Emerging Markets Index (Emerging Global Markets)**: The MSCI Emerging Markets Index is designed to represent the performance of large- and mid-cap securities in 24 Emerging Markets

# Economic and Market Review Disclosures

**Index Definitions Continued**

**Bloomberg U.S. Aggregate Bond Index (US Investment Grade Fixed Income)**: Bloomberg U.S. Aggregate Bond Index is a broad-based measure of the investment grade, US dollar-denominated, fixed-rate taxable bond market.

**Bloomberg Total Return Commodity Index (Commodities)** Bloomberg Commodity Total Return Index is composed of futures contracts and reflects the returns on a fully collateralized investment in the Bloomberg Commodity Index. This combines the returns of the Bloomberg Commodity Index with the returns on cash collateral invested in 13 week U.S. Treasury Bill. The Bloomberg Commodity Index is a broadly diversified index comprised of 22 exchange-traded futures on physical commodities and represents 20 commodities weighted to account for economic significance and market liquidity.

**US Dollar DXY (US Dollar) Index:** The DXY index measures the value of the U.S. dollar relative to major developed market currencies, notably the euro, the Japanese Yen, and the British pound. An index is unmanaged and not available for direct investment.

**HFRI Fund Weighted Composite Index** is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net-of-all-fees performance in U.S. dollars and have a minimum of $50 million under management or a 12-month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds. The HFRI Fund Weighted Composite Index is a composite of the hedge funds that employ the alternative strategies and who report their performance figure to HFRI. The number of hedge funds reporting may vary between each reporting period.

**HFRI Equity Hedge Index** includes investment managers who maintain both long and short positions in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. EH managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities, both long and short.

# Economic and Market Review Disclosures

**Index Definitions Continued**

**HFRI Event Driven Index** includes investment managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

**HFRI Macro Index** includes investment managers which trade a broad range of strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard currency and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top down and bottom up theses, quantitative and fundamental approaches and long and short term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposes to EH, in which the fundamental characteristics on the company are the most significant are integral to investment thesis.

**HFRI Relative Value Index** includes investment managers who maintain positions in which the investment thesis is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. RV position may be involved in corporate transactions also, but as 22 1st Quarter 2021 | Common Disclosure Guide opposed to EV exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

# Economic and Market Review Disclosures

**Index Definitions Continued**

**Note:** HFRI Indices have limitations (some of which are typical of other widely used indices). These limitations include survivorship bias (the returns of the indices may not be representative of all the hedge funds in the universe because of the tendency of lower performing funds to leave the index); heterogeneity (not all hedge funds are alike or comparable to one another, and the index may not accurately reflect the performance of a described style); and limited data (many hedge funds do not report to indices, and, therefore, the index may omit funds, the inclusion of which might significantly affect the performance shown. The HFRI Indices are based on information self-reported by hedge fund managers that decide on their own, at any time, whether or not they want to provide, or continue to provide, information to HFR Asset Management, L.L.C. Results for funds that go out of business are included in the index until the date that they cease operations. Therefore, these indices may not be complete or accurate representations of the hedge fund universe, and may be biased in several ways. Returns of the underlying hedge funds are net of fees and are denominated in USD.

The **CBOE Volatility Index® (VIX®)** shows the market's expectation of 30-day volatility. It is constructed using the implied volatilities of a wide range of S&P 500 index options. This volatility is meant to be forward looking and is calculated from both calls and puts. The VIX is a widely used measure of market risk and is often referred to as the "investor fear gauge.

The **Standard & Poor's CoreLogic Case–Shiller Home Price Indices** are repeat-sales house price indices for the United States. There are multiple Case–Shiller home price indices: A national home price index, a 20-city composite index, a 10-city composite index, and twenty individual metro area indices**.**

# Economic and Market Review Disclosures

**Sector Disclosures**

**Consumer Discretionary:** Risks associated with investment in the Consumer Discretionary sector include, among others, apparel price deflation due to low-cost entries, high inventory levels, and pressure from e-commerce players; reduction in traditional advertising dollars, increasing household debt levels that could limit consumer appetite for discretionary purchases, declining consumer acceptance of new product introductions, and geopolitical uncertainty that could affect consumer sentiment.

**Consumer Staples** industries can be significantly affected by competitive pricing particularly with respect to the growth of low-cost emerging market production, government regulation, the performance of the overall economy, interest rates, and consumer confidence.

**Energy:** The Energy sector may be adversely affected by changes in worldwide energy prices, exploration, production spending, government regulation, and changes in exchange rates, depletion of natural resources, and risks that arise from extreme weather conditions.

**Financials:** Financial services companies will subject an investment to adverse economic of regulatory occurrences affecting the sector.

**Healthcare:** Some of the risks associated with investment in the Healthcare sector include competition on branded products, sales erosion due to cheaper alternatives, research and development risk, government regulations and government approval of products anticipated to enter the market.

**Industrials:** There is increased risk investing in the Industrials sector. The industries within the sector can be significantly affected by general market and economic conditions, competition, technological innovation, legislation, and government regulations, among other things, all of which can significantly affect a portfolio's performance.

**Materials:** Materials industries can be significantly affected by the volatility of commodity prices, the exchange rate between foreign currency and the dollar, export/import concerns, worldwide competition, procurement, and manufacturing and cost containment issues.

**Real Estate:** Real estate investments have special risks, including the possible illiquidity of the underlying properties, credit risk, interest rate fluctuations, and the impact of varied economic conditions.

**Technology:** Risks associated with the Technology sector include increased competition from domestic and international companies, unexpected changes in demand, regulatory actions, technical problems with key products, and the departure of key members of management. Technology and Internet-related stocks that are smaller, less-seasoned companies, tend to be more volatile than the overall market.

# Economic and Market Review Disclosures

## Sector Disclosures

**Telecommunications:** The Telecommunications sector is subject to the risks associated with rising interest rates which could increase debt service costs, competition, increased costs to providers due to potential for large equipment upgrades.

**Utilities:** Utilities are sensitive to changes in interest rates, and the securities within the sector can be volatile and may underperform in a slow economy.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts

| | 2022 Year-End Target | 2023 Year-End Target |
|---|---|---|
| **US GDP Growth** | 1.6% | -1.3% |
| **US CPI Inflation** | 7.7% | 2.4% |
| **US Unemployment Rate** | 3.8% | 5.2% |
| **Global GDP Growth** | 2.4% | 0.9% |
| **Developed Market GDP Growth** | 2.3% | -1.3% |
| **Eurozone GDP Growth** | 2.7% | -3.4% |
| **Emerging Market GDP Growth** | 2.4% | 2.6% |

Source: FactSet, Bloomberg, Wells Fargo Investment Institute, as of October 3, 2022. The targets are Wells Fargo Investment Institute forecasts, as of October 3, 2022. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions, which are subject to change.

# Wells Fargo Investment Institute's 2022 & 2023 Market Forecasts

| | 2022 Year-End Target | 2023 Year-End Target |
|---|---|---|
| **S&P 500 Index** | 3800 – 4000 | 4300 – 4500 |
| **S&P 500 earnings per share** | $215 | $205 |
| **Russell Mid Cap Index** | 2500 – 2700 | 2900 – 3100 |
| **Russell Mid Cap earnings per share** | $130 | $145 |
| **Russell 2000 Index** | 1500 -1700 | 1800 – 2000 |
| **Russell 2000 earnings per share** | $65 | $75 |
| **MSCI EAFE Index** | 1550 – 1750 | 1700 – 1900 |
| **MSCI EAFE earnings per share** | $135 | $145 |
| **MSCI Emerging Markets Index** | 800 – 1000 | 900 - 1100 |
| **MSCI EM earnings per share** | $85 | $95 |

Source: FactSet, Bloomberg, Wells Fargo Investment Institute, as of October 3, 2022. The targets are Wells Fargo Investment Institute forecasts, as of October 3, 2022. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions, which are subject to change.

# Wells Fargo Investment Institute's 2022 & 2023 Market Forecasts

| | 2022 Year-End Target | 2023 Year-End Target |
|---|---|---|
| **10-Year Treasury** | 3.75% - 4.25% | 3.50% - 4.00% |
| **30-Year Treasury** | 3.75% - 4.25% | 3.50% - 4.00% |
| **Federal Funds Rate** | 4.25% - 4.50% | 3.50% - 3.75% |
| **West Texas Crude** | \$90 - \$110 | \$100 - \$120 |
| **Brent Crude** | \$95 - \$115 | \$105 - \$125 |
| **Gold Price** | \$1800 - \$1900 | \$1900 - \$2000 |
| **Bloomberg Commodity Index (TR)** | 260 – 280 | 270 – 290 |
| **Dollars per Euro** | \$0.92 - \$1.00 | \$0.94 - \$1.02 |
| **Yen per Dollar** | ¥140 - ¥150 | ¥137 - ¥147 |

Source: FactSet, Bloomberg, Wells Fargo Investment Institute, as of October 3, 2022. The targets are Wells Fargo Investment Institute forecasts, as of October 3, 2022. Forecasts are based on certain assumptions and on our views of market and economic conditions, which are subject to change. See end of report for important definitions and disclosures. Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions, which are subject to change.

# Wells Fargo Investment Institute's Tactical Guidance and Current Positioning

| Most Unfavorable | Unfavorable | Neutral | Favorable | Most Favorable |
|---|---|---|---|---|
| **Developed Market ex-US Equities** (as measured by the MSCI EAFE) | **High Yield Taxable Fixed Income** (Bloomberg U.S. Corporate High-Yield Index)<br><br>**Developed Market ex-U.S. Fixed Income** J.P. Morgan Non-U.S. Global Government Bond Index (Hedged)<br><br>**Emerging Market Equities** (MSCI Emerging Markets Index)<br><br>**U.S. Small Cap Equities** (Russell 2000 Index)<br><br>**Hedge Funds – Event Driven** (HFRI Event Driven (Total) Index) | **Cash Alternatives** (Bloomberg U.S. Treasury Bills (1–3M) Index)<br><br>**U.S. Long Term Taxable Fixed Income** (Bloomberg U.S. Treasury Bills (1–3M) Index )<br><br>**U.S. Taxable Intermediate Term Taxable Fixed Income** (Bloomberg U.S. Aggregate 5-7 Year Bond Index)<br><br>**Emerging Market Fixed Income** (J.P. Morgan Emerging Markets Bond Index (EMBI Global))<br><br>**Private Real Estate** (NCREIF Property Index)<br><br>**Hedge Funds – Equity Hedge** (HFRI Event Driven (Total) Index)<br><br>**Private Debt**<br><br>**Private Equity** (Cambridge Associates LLC U.S. Private Equity Index®) | **U.S. Taxable Investment Grade Fixed Income** (Bloomberg U.S. Aggregate Bond Index)<br><br>**U.S. Mid Cap Equities** (Russell Midcap Index**)**<br><br>**Hedge Funds – Macro** (HFRI Macro (Total) Index)<br><br>**Hedge Funds – Relative Value** (HFRI Relative Value (Total) Index) | **U.S. Short Term Taxable Fixed Income** (Bloomberg U.S. Aggregate 1-3 Year Bond Index<br><br>**U.S. Large Cap Equities** (S&P 500 Index) |

Source: Wells Fargo Investment Institute, as of 10/03/2022. The designated ratings are a reflection of Wells Fargo Investment Institute's respective view of each asset class at the time of publication, ranking from Most Unfavorable (lowest) to Most Favorable (highest). Forecasts, targets, and estimates are not guaranteed and are based on certain assumptions and on our views of market and economic conditions, which are subject to change.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts Disclosures

**General Disclosures**

Wells Fargo Investment Institute, Inc. is a registered investment adviser and wholly-owned subsidiary of Wells Fargo Bank, N.A., a bank affiliate of Wells Fargo & Company.

Forecasts, targets and estimates are based on certain assumptions and on WFII's current views of market and economic conditions, which are subject to change.

**WFII Asset Allocation and Tactical Guidance Legend**

**Most Favorable:** WFII's highest conviction guidance that indicates a strong desire to overweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors attractive risk/reward opportunity.
**Favorable:** Guidance that indicates a desire to overweight an asset class within a portfolio. It also communicates, over a tactical time frame, WFII views the asset class (or sector) as providing investors with an attractive risk/reward opportunity.
**Neutral:** Guidance that indicates a desire to maintain an asset class near the long-term (strategic) allocation guidance within a portfolio. It also communicates that, within a tactical time frame, WFII views the asset class (or sector) as providing investors with an acceptable risk/reward opportunity.
**Unfavorable:** This WFII guidance level indicates a desire to underweight an asset class (or sector) within a portfolio. It also communicates that, over a tactical time frame, WFII does not view the asset class (or sector) as providing investors with an attractive risk/reward opportunity.
**Most Unfavorable:** WFII's highest conviction guidance indicating a strong belief in underweighting an asset class in a portfolio. This also communicates that, over a tactical time frame, WFII views the asset class (or sector) as offering investors an unattractive risk/reward opportunity.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts Disclosures

**WFII Asset Allocation and Tactical Representative Index Definitions**

**MSCI EAFE® Index:** The MSCI EAFE Index is a free float-adjusted market capitalization index that is designed to measure the equity market performance of developed markets, excluding the US & Canada.

**Bloomberg US Corporate High Yield Bond Index:** The Bloomberg High Yield Bond Index is an unmanaged index that includes all fixed income securities having a maximum quality rating of Ba1, a minimum amount outstanding of $100 million, and at least one year to maturity.

**JP Morgan Global Bond Ex. US Index**: The JP Morgan Global Bond Index is a total return, market capitalization weighted index, rebalanced monthly consisting of the following countries: Australia, Belgium, Canada, Denmark, France, Germany, Italy, Japan, the Netherlands, Spain, Sweden, the United Kingdom, and the United States.

**MSCI Emerging Markets Index:** The MSCI Emerging Markets Index is a free float-adjusted market capitalization index that is designed to measure equity market performance of emerging markets.

**Russell 2000® Index:** The Russell 2000® Index measures the performance of the 2,000 smallest companies in the Russell 3000® Index, which represents approximately 8% of the total market capitalization of the Russell 3000 Index.

**HFRI Event Driven Index** includes investment managers who maintain positions in companies currently or prospectively involved in corporate transactions of a wide variety including but not limited to mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated, and frequently involve additional derivative securities. Event driven exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company specific developments. Investment theses are typically predicated on fundamental characteristics (as opposed to quantitative), with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts Disclosures

**WFII Asset Allocation and Tactical Representative Index Definitions**

**Bloomberg U.S. Treasury Bills (1–3M) Index:** The Bloomberg US Treasury (1-3 Month) Bills Index is representative of money market accounts.

**Bloomberg U.S. Aggregate 5-7 Year Bond Index** is composed of the Bloomberg U.S. Government/Credit Index and the Bloomberg U.S. Mortgage-Backed Securities Index, and includes Treasury issues, agency issues, corporate bond issues, and mortgage-backed securities with maturities of 5-7 years.

**J.P. Morgan Emerging Markets Bond Index (EMBI Global):** currently covers more than 60 emerging market countries. Included in the EMBI Global are U.S.-dollar-denominated Brady bonds, Eurobonds, traded loans, and local market debt instruments issued by sovereign and quasi-sovereign entities.

**NCREIF Property Index**: is a quarterly time series composite total rate of return measure of investment performance of a very large pool of individual commercial real estate properties acquired in the private market for investment purposes only.

**HFRI Event Driven (Total) Index:** Maintains positions in companies currently or prospectively involved in corporate transactions of a wide variety including mergers, restructurings, financial distress, tender offers, shareholder buybacks, debt exchanges, security issuance or other capital structure adjustments. Security types can range from most senior in the capital structure to most junior or subordinated and frequently involve additional derivative securities. Exposure includes a combination of sensitivities to equity markets, credit markets and idiosyncratic, company-specific developments. Investment theses are typically predicated on fundamental (as opposed to quantitative) characteristics, with the realization of the thesis predicated on a specific development exogenous to the existing capital structure.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts Disclosures

**WFII Asset Allocation and Tactical Representative Index Definitions**

**Cambridge Associates LLC U.S. Private Equity Index®:** uses a horizon calculation based on data compiled from more than 1,400 institutional-quality buyout, growth equity, private equity energy, and subordinated capital funds formed between 1986 and 2017. The funds included in the index report their performance voluntarily and therefore the index may reflect a bias towards funds with records of success. Funds report unaudited quarterly data to Cambridge and Associates when calculating the index. The index
is not transparent and cannot be independently verified because Cambridge Associates does not identify the funds included in the index. Because Cambridge Associates recalculates the index each time a new fund is added, the historical performance of the index is not fixed, can't be replicated and will differ over time from the day presented. The returns shown are net of fees, expenses and carried interest. Index returns do not represent fund performance.

**Bloomberg US Aggregate Bond Index:** Bloomberg U.S. Aggregate Bond Index is a broad- based measure of the investment grade, US dollar-denominated, fixed-rate taxable bond market.

**Russell Midcap® Index:** The Russell Midcap® Index measures the performance of the 800 smallest companies in the Russell 1000 Index, which represent approximately 25% of the total market capitalization of the Russell 1000® Index.

**HFRI Macro (Total) Index:** Encompass a broad range of strategies predicated on movements in underlying economic variables and the impact these have on equity, fixed income, hard-currency, and commodity markets. Managers employ a variety of techniques, both discretionary and systematic analysis, combinations of top-down and bottom-up theses, quantitative and fundamental approaches and long- and short-term holding periods. Although some strategies employ RV techniques, Macro strategies are distinct from RV
strategies in that the primary investment thesis is predicated on predicted or future movements in the underlying instruments rather than on realization of a valuation discrepancy between securities. In a similar way, while both Macro and equity hedge managers may hold equity securities, the overriding investment thesis is predicated on the impact movements in underlying macroeconomic variables may have on security prices, as opposed to Equity Hedge (EH), in which the fundamental characteristics on the company are
the most significant are integral to investment thesis.

# Wells Fargo Investment Institute's 2022 & 2023 Economic Forecasts Disclosures

**WFII Asset Allocation and Tactical Representative Index Definitions**

**HFRI Relative Value (Total) Index:** Strategy is predicated on realization of a valuation discrepancy in the relationship between multiple securities. Managers employ a variety of fundamental and quantitative techniques to establish investment theses, and security types range broadly across equity, fixed income, derivative or other security types. Fixed income strategies are typically quantitatively driven to measure the existing relationship between instruments and, in some cases, identify attractive positions in which the risk adjusted spread between these instruments represents an attractive opportunity for the investment manager. Relative Value (RV) position may be involved in corporate transactions also, but as opposed to Event Driven (ED) exposures, the investment thesis is predicated on realization of a pricing discrepancy between related securities, as opposed to the outcome of the corporate transaction.

**Bloomberg U.S. Aggregate 1-3 Year Bond Index:** the one to three year component of the Bloomberg U.S. Aggregate Bond Index, which represents fixed-income securities that are SEC-registered, taxable, dollar-denominated, and investment-grade.

**S&P 500 Index:** The S&P 500 Index consists of 500 stocks chosen for market size, liquidity, and industry group representation. It is a market value weighted index with each stock's weight in the Index proportionate to its market value.

CAR-1022-00956