2023 ECONOMIC & MARKET OUTLOOK

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MACRO-ECONOMIC OUTLOOK

The economic and market landscapes continue to evolve, and we expect some significant changes as we make our way through 2023. So, as always, we suggest focusing on key market signals, which we define as:

+ Economic growth rates
+ Inflation expectations
+ Monetary policy
+ Interest Rates
+ Corporate earnings growth rates

And we provide our thoughts for 2023 on:

+ Equities
+ Fixed income
+ Real assets and alternatives

At the time of this writing, there are also some "known unknowns" that could significantly affect our perspective. These include:

1. Fed-induced volatility
2. The Russian invasion of Ukraine
3. China's "zero COVID" policy and its economic and internal political repercussions
4. Simmering geopolitical challenges between the U.S. and both China and Iran

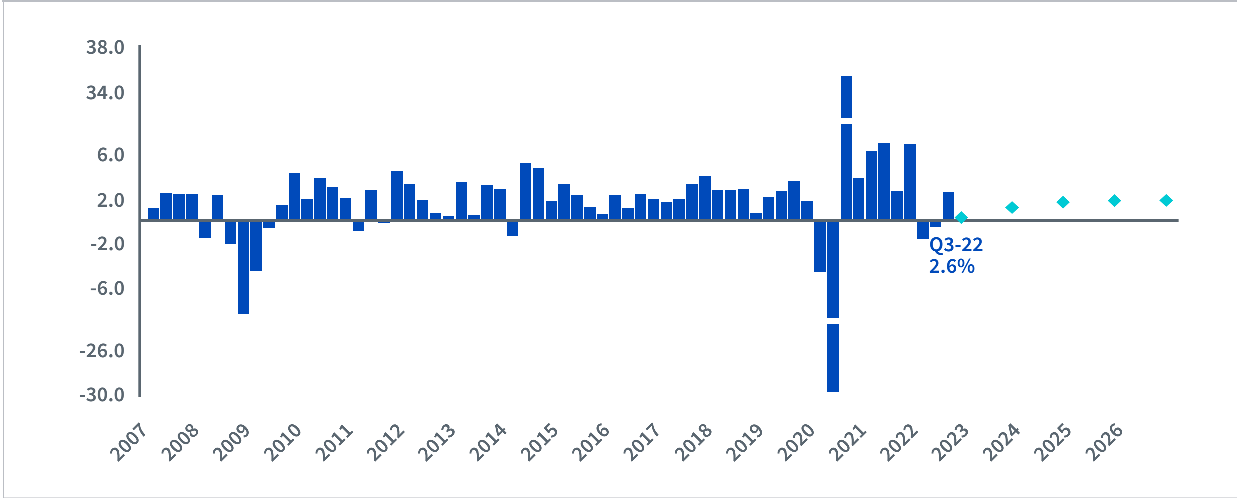
Glossary found at end for terms and Index definitions.

The following are our views on the signals we can currently observe:

ECONOMIC GROWTH RATES

In the U.S., after two consecutive quarters of negative gross domestic product (GDP) growth followed by a third quarter of modest economic growth, overall growth for all of 2022 is expected to be positive over the course of the full year—the consensus estimate is 1.5%–2%.

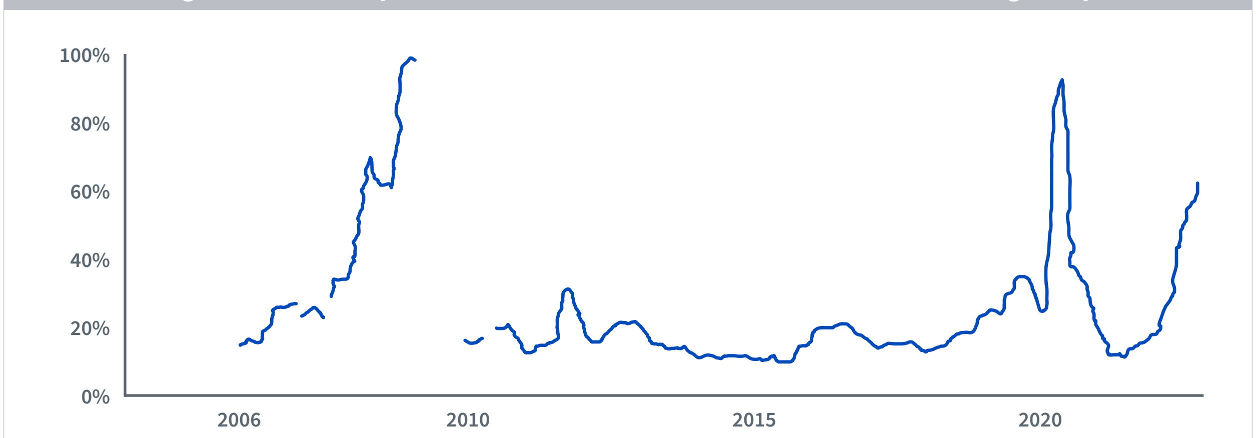
Figure 1: U.S. Real Gross Domestic Product (GDP)



Source: The Richmond Fed "National Economic Indicators," as of 11/14/22. Note: Projection is the median, central tendency and range from the March 2022 Summary of Economic Projections. Teal dots indicate median projections. Projections of change in real gross domestic product (GDP) are from the fourth quarter of the previous year to the fourth quarter of the year indicated.

Expectations for 2023 are less sanguine. According to the Wall Street Journal Economic Forecasting Survey (as of October 16, 2022—the most recent release), there is a rising consensus opinion that the U.S. will fall into recession within the next 12 months.

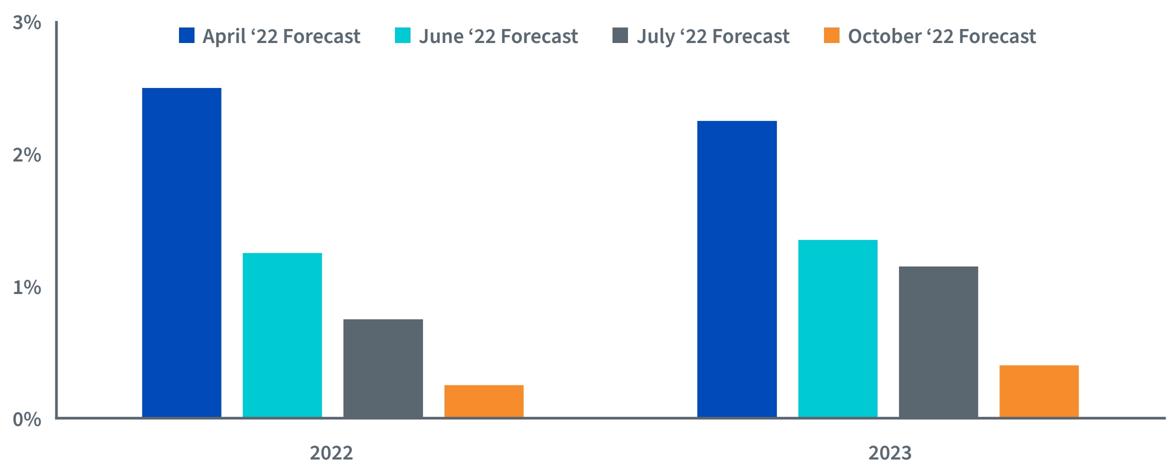
Figure 2: Probability the U.S. is in a Recession in Next Two Months Including Today



Source: Wall Street Journal surveys of economists as of November 2022. Note: Gaps indicate question not asked or data unavailable. There is no guarantee that any projection, forecast or opinion will be realized. Actual results may vary.

This translates to a consensus estimate for 2023 GDP growth of only 0.4%.

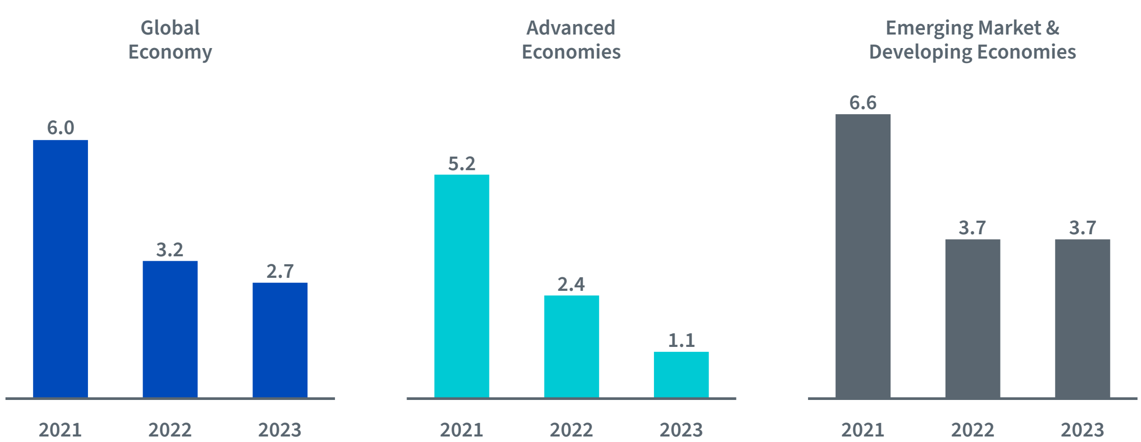
Figure 3: GDP Expectations



Source: Wall Street Journal surveys of economists, as of November 2022. Note: Change from fourth quarter to fourth quarter. There is no guarantee that any projection, forecast or opinion will be realized. Actual results may vary.

Likewise, outside the U.S., the Russian invasion of Ukraine, the stagnating economy in China and a European recession brought down global growth expectations for 2023.

Figure 4: Global Growth Projections

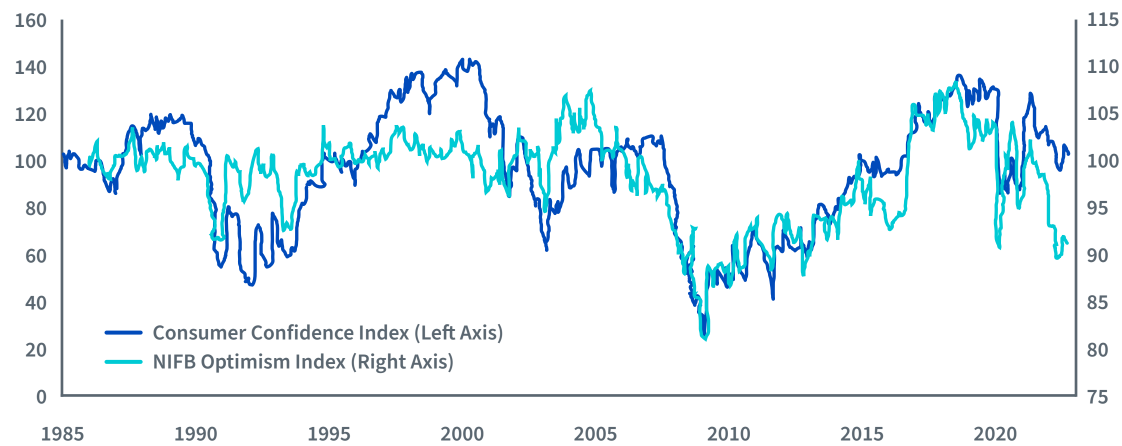


Source: International Monetary Fund Global GDP forecast, as of October 2022. There is no guarantee that any projection, forecast or opinion will be realized. Actual results may vary.

WisdomTree®

Small business owners and consumers represent the bulk of economic activity in the U.S., and we see a distinct downward trend in both groups, driven by fears over inflation, rising interest rates and a potential recession in 2023. These trends may prove to be dominating factors in overall economic activity as consumers, business owners and investors take a "seek shelter" approach in their behavior.

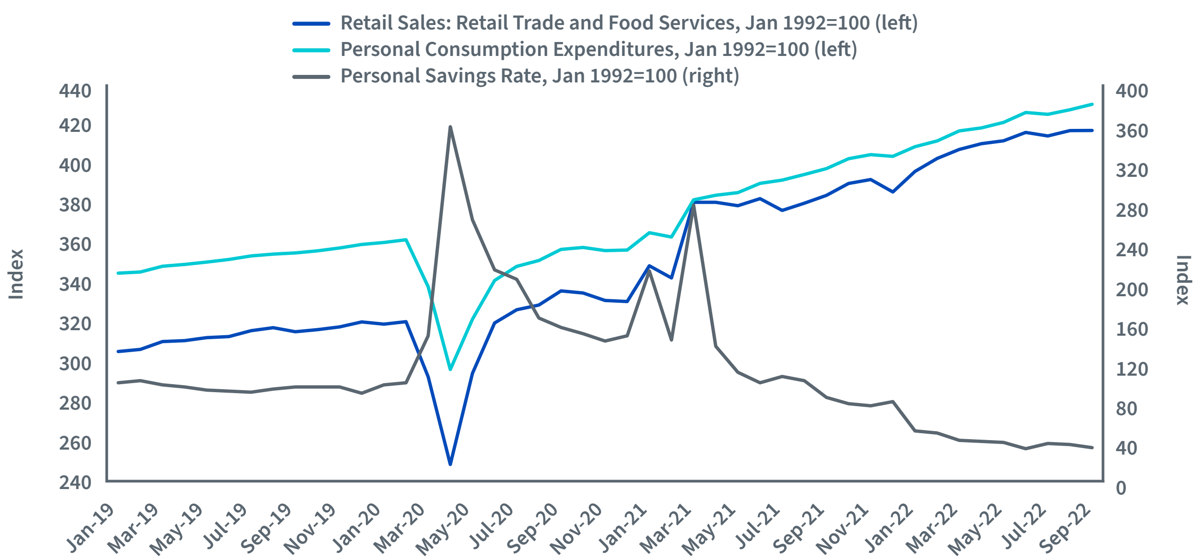
Figure 5: Conference Board Consumer Confidence Index/NFIB Small Business Optimism Index



Source: VettaFi Advisor Perspectives, data through October 2022.

At the same time, retail consumption generally remains positive. However, households could face mounting challenges in 2023, which could lead to more cautious behavior next year.

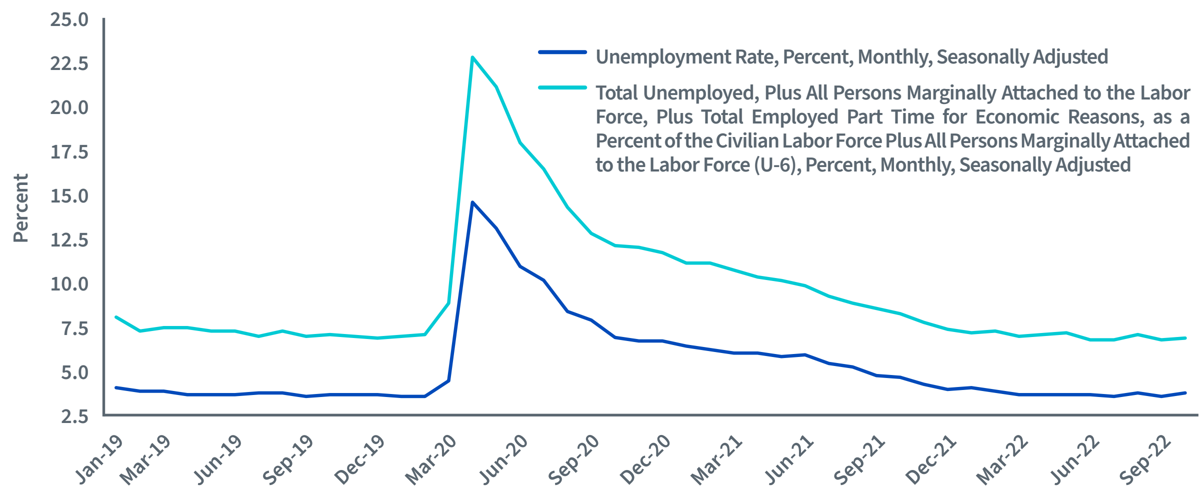
Figure 6: Retail Sales, Personal Consumption Expenditures vs. Personal Savings Rate



Source: St. Louis Fed (FRED), data through September 2022.

Finally, let's look at the U.S. employment situation. The "headline" U-3 unemployment rate suggests we remain in a tight labor market, and even the less-followed "U-6" partial employment level (workers who are involuntarily working at less than full employment) suggests the continuation of a positive employment market. In addition, weekly jobless claims (one of the leading economic indicators) remain at historically low levels.

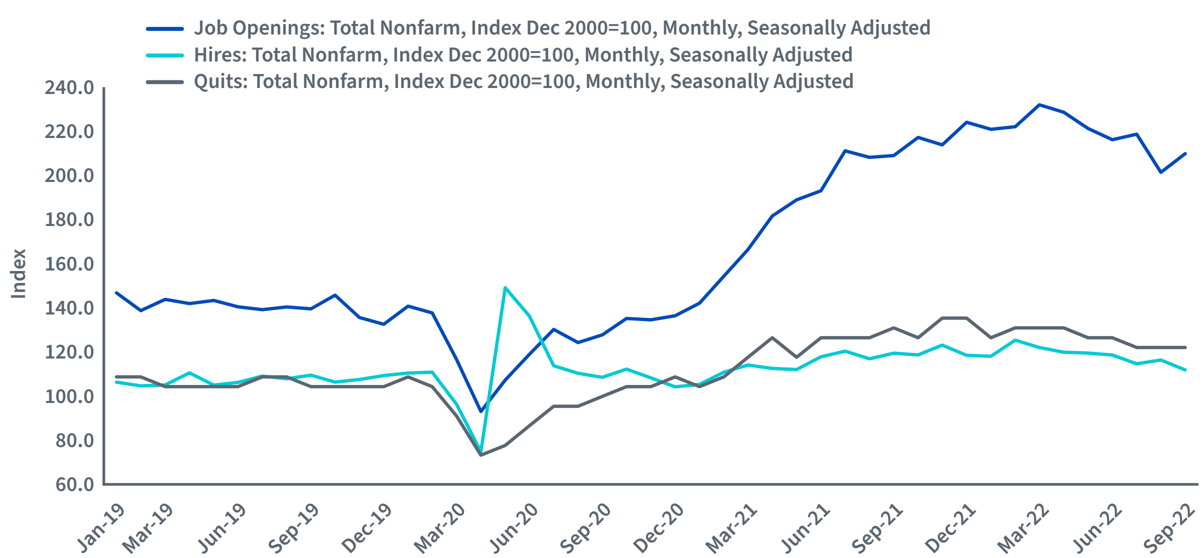
Figure 7: Unemployment Rate



Source: St. Louis Fed (FRED), data through October 2022.

At the same time, while there appear to be plenty of jobs available, the relative "flat-lining" of both the "hires" and "quits" rates suggest a potential cooling—trends we expect to continue as we head through 2023.

Figure 8: Job Openings, Hires & Quits



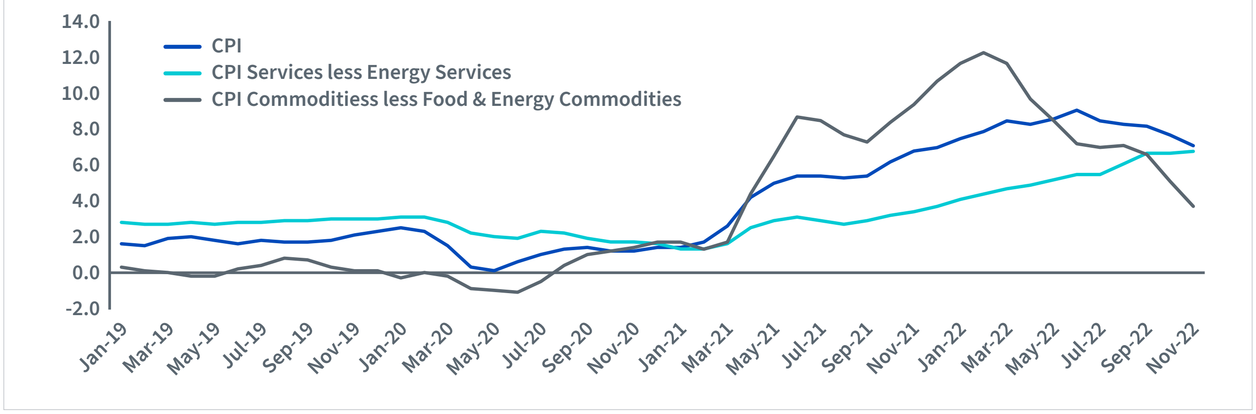
Source: St. Louis Fed (FRED), data through September 2022.

INFLATION EXPECTATIONS

In our opinion, inflation here in the U.S. has more than likely reached its zenith and is poised to continue to decelerate in 2023. The shift in demand from the goods side of the ledger to services has become increasingly apparent. According to Consumer Price Index (CPI) data, commodities less food and energy commodities have seen its annualized rate of increase plummet over the last nine months, falling from +12.3% to +3.7% in November. We expect this trend to be sustained in the year ahead as the effects of the COVID-19 lockdown continue to recede into the past.

While getting inflation back down toward the Fed's "2% threshold" may remain elusive due to the service sector, the aforementioned shift in demand is expected to reduce overall price pressures in 2023.

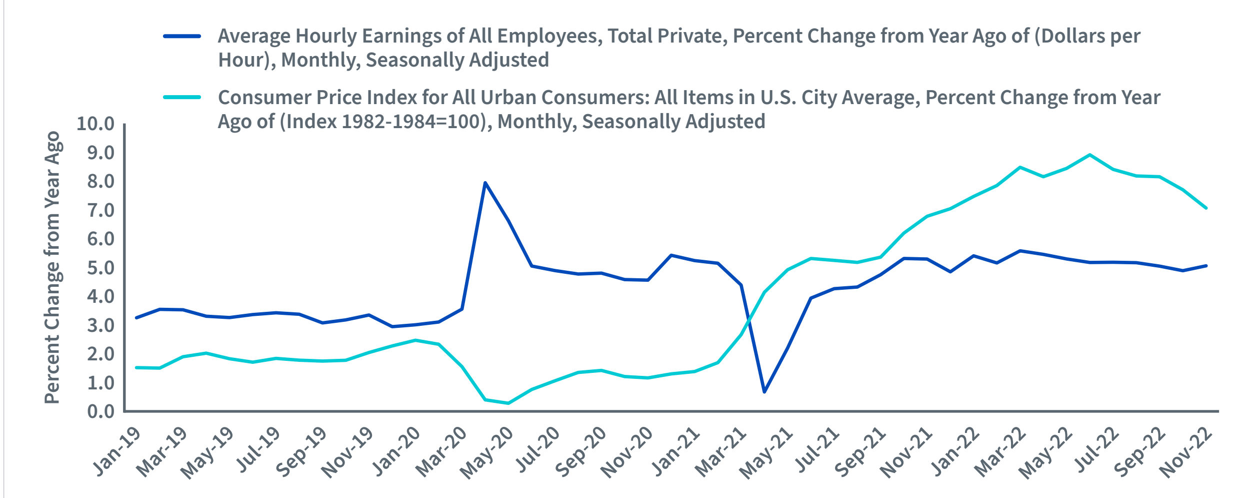
Figure 9: CPI Data 12-Month % Changes



Source: Bureau of Labor Statistics, data through November 2022.

One source of concern from the U.S. consumer outlook has been the fact that wage growth has not kept pace with the rise in inflation. While there's been no visible evidence of any adverse impacts on household spending as yet, eventually, this discrepancy, if continued, will more than likely take its toll.

Figure 10: CPI Data 12-Month % Changes

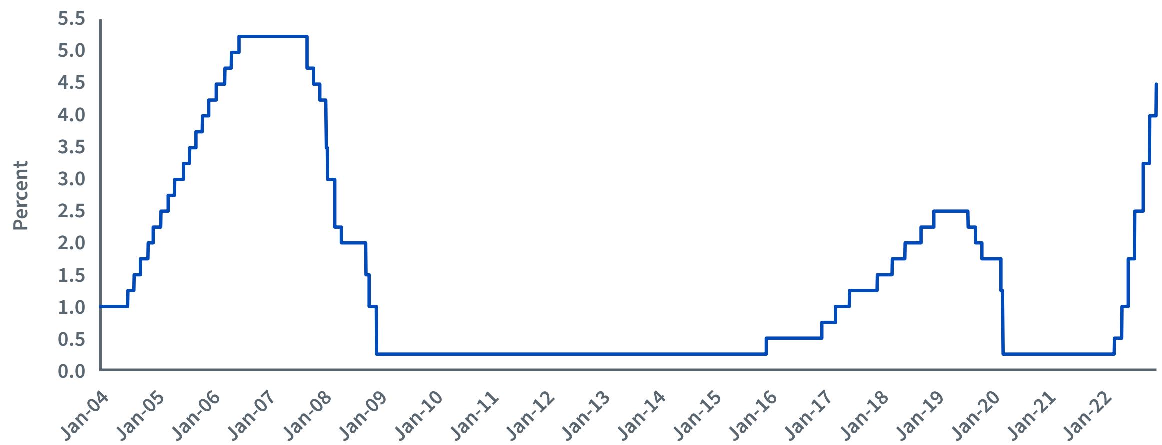


Source: St. Louis Fed (FRED), data through November 2022.

MONETARY POLICY

The Fed has been leading the charge on the tightening front within the developed market (DM) universe and has implemented a rate hike cycle that investors haven't witnessed since the "Volcker" years[1] of the 1980s. Incredibly, the "Volcker-esque" increase in Fed Funds this year has resulted in the Fed Funds target range going from a zero interest rate policy (ZIRP) as recently as March to 4.50% in December, a total of 425 basis points (bps) in rate hikes. The graph below highlights how the current aggressive tightening cycle has compared to the previous two more methodical rate hike episodes.

Figure 11: Fed Funds Target Rate – Upper Bound



Source: Bloomberg, as of 12/15/22.

In terms of the eagerly awaited "Powell Pivot," we have always been of the opinion that it was never about 50- or 75-bp rate hikes. Instead, what truly matters is where the terminal rate is going and how long it will stay there. Monetary policy acts with a lag, and the Fed appears to be now taking this "officially" into account in its decision-making process. As of this writing, a reasonable case scenario has the voting members taking the Fed Funds trading range up to 4.75%–5% before hitting the pause button. The next unknown will be whether the Fed goes into "raise and hold" mode in 2023 or entertains rate cuts during the second half of next year. Based on recent Fed speak, at the present time, there seems to be a consensus not to reverse course too soon, but as we've seen, things can change quickly.

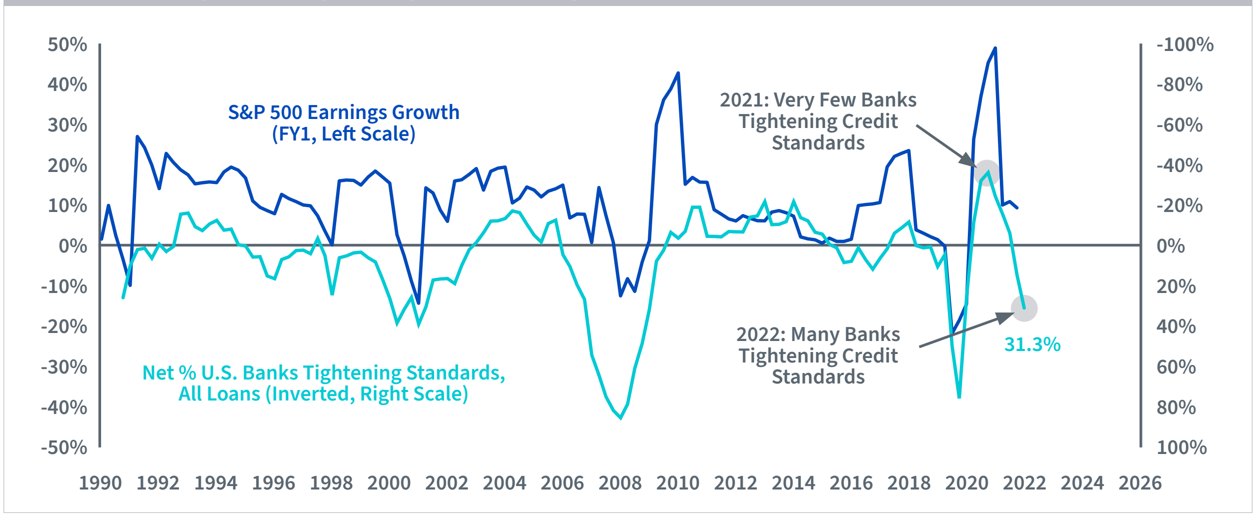
[1] Refers to the years that Paul Volcker Jr., an American economist, served as the 12th chairman of the Federal Reserve from 1979 to 1987. During his tenure as chairman, Volcker was widely credited with having ended the high levels of inflation seen in the United States throughout the 1970s and early 1980s.

EQUITY MARKETS: CORPORATE EARNINGS & MACRO OUTLOOK

Our primary concern with regard to the S&P 500's earnings outlook for 2023 is that banks are indicating a buttoning up of their lending standards, an occurrence that sometimes indicates corporate profit trouble. The fourth quarter marked the fifth in a row in which banks' total loan books witnessed a tightening in the Fed's Senior Loan Officers Survey, to a net 31.3%. That reading matches levels seen in 2001, 2007 and 2020, each of which witnessed a fall in S&P 500 earnings thereafter (figure 12).

Should a broad market earnings decline come to pass in 2023, that would pose a sharp contrast to the current Street consensus estimate, which sees Index-level operating earnings growing from $201.45 in 2022 to $228.61 next year, a 13.5% boost.[2]

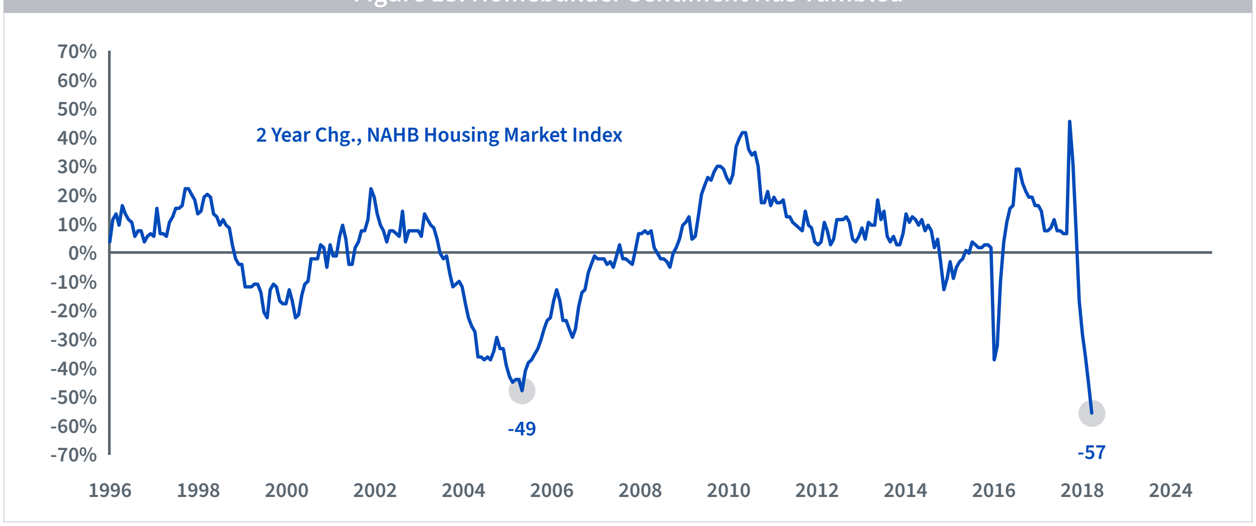
Figure 12: Tightening Bank Lending Standards Bodes Poorly for S&P 500 Profits



Source: Refinitiv, with the S&P 500 as of Q3/2022 and the Federal Reserve Senior Loan Officer Survey, Q4/2022. Data as of January 1990 through November 2022. You cannot invest in an index and past performance is no guarantee of future results. Estimates of earnings or revenue growth are limited and not guaranteed and should not be relied upon when making investment decisions.

Another issue the market will need to confront is the speed with which the wind has come out of housing's sails. The National Association of Home Builders (NAHB) Market Index peaked in November 2020[3], collapsing thereafter.

Figure 13: Homebuilder Sentiment Has Tumbled

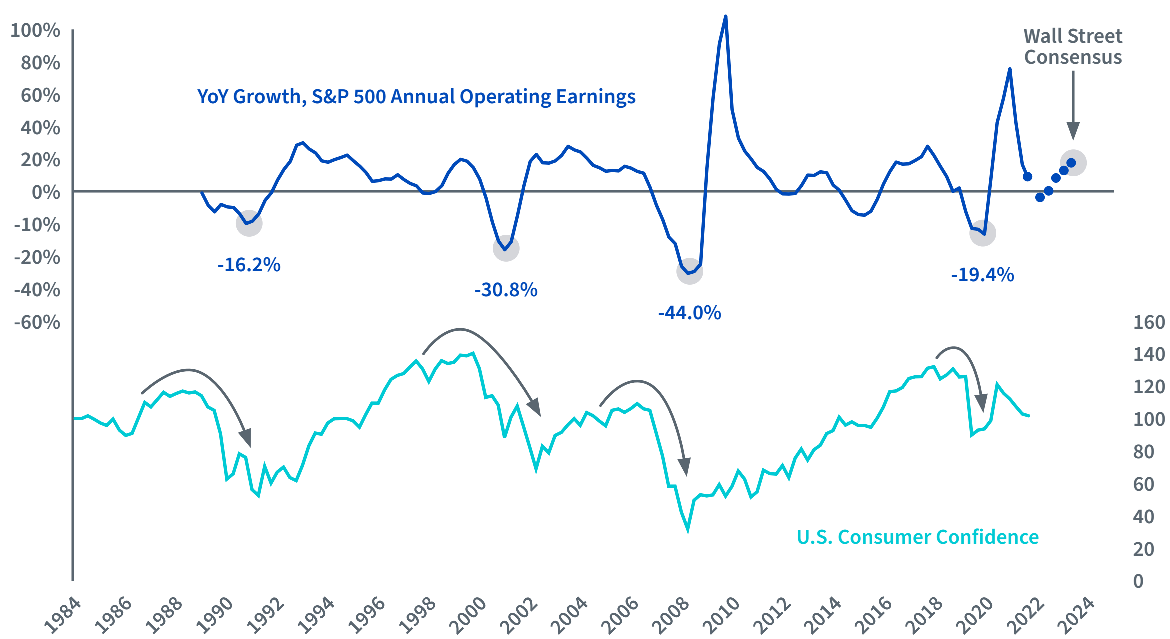


Sources: Refinitiv, National Association of Home Builders. Data as of January 1996 through November 2022. Gray circles represent lowest and most recent figures on record. You cannot invest in an index and past performance is no guarantee of future results.

[2] Source: Refinitiv.
[3] Source: Refinitiv, National Association of Homebuilders.

Because housing tends to lead consumer confidence, we anticipate risk to public sentiment in 2023. This, too, poses downside potential for the S&P 500's earnings prospects (figure 14).

Figure 14: Waning Consumer Confidence May Weigh on S&P 500 Earnings



Source: Conference Board, with earnings from Standard & Poor's. Data as of January 1984 through November 2022. You cannot invest in an index and past performance is no guarantee of future results.

Estimates of earnings or revenue growth are limited and not guaranteed and should not be relied upon when making investment decisions.

Over the last decade, it was nearly impossible not to make money in U.S. stocks. Across cap spectrums, S&P 500, 400 and 600 components reporting negative earnings managed to return 8%–13% as a collective, depending on their market cap grouping (figure 15).

But notice what happened in asset classes that did not have a great bull market. The MSCI Emerging Markets Index returned 0.79% over the last decade; inside it, companies that were unable to turn a profit posted annualized losses of 5.76%.

If S&P 500 earnings disappoint in 2023, as we anticipate, we are hard-pressed to see expensive stocks and those with negative earnings presenting themselves as a haven.

Figure 15: 10-Year Returns, by Price-to-Earnings (P/E) Ratio

	U.S. Large Cap	U.S. Mid Cap	U.S. Small Cap	International Large Cap	International Mid Cap	International Small Cap	Emerging Markets	Emerging Markets Small Cap
Grouping	S&P 500	S&P 400	S&P 600	MSCI EAFE	MSCI EAFE Mid Cap	MSCI EAFE Small Cap	MSCI Emerging Markets	MSCI Emerging Markets Small Cap Index
Lowest P/E	11.13%	10.79%	10.07%	4.89%	5.53%	6.90%	-0.11%	4.43%
2nd Quintile	11.38%	11.51%	11.84%	2.11%	3.41%	5.94%	1.65%	3.42%
3rd Quintile	13.00%	11.37%	11.56%	3.87%	3.81%	4.02%	1.32%	3.59%
4th Quintile	12.93%	10.58%	11.21%	5.59%	5.73%	6.75%	-0.41%	5.33%
Highest P/E	14.08%	11.61%	11.44%	4.41%	3.51%	6.52%	4.54%	3.48%
Negative Earners	11.13%	8.21%	13.34%	2.07%	4.85%	1.80%	-5.76%	-2.81%
Total	12.79%	11.23%	11.61%	4.13%	4.52%	5.62%	0.79%	3.06%

Source: WisdomTree Digital Portfolio Developer, as of 10/31/22. You cannot invest in an index and past performance is no guarantee of future results.

As these negative earners encounter what we believe to be a choppier market than the one witnessed from 2009–2021, the market will need to confront a potential rotation to small-cap leadership in the 2020s. Over the 15 years to the end of the bull market, the top decile of stocks by market capitalization outperformed the bottom decile by five percentage points per year, a feat only surpassed by the 1984–1999 window that ended with the dot-com blowup. We expect figure 16 to mean revert, but it's important to avoid land mines inside small caps. An Index such as the Russell 2000 has 26% of its market capitalization in companies with negative earnings, a far greater proportion than the S&P 500 or the Russell 1000. The small-cap rotation, should it come to pass, may leave many unprofitable firms behind.

Figure 16: 15-Year Annualized Return Differential, Largest Stocks Minus Smallest Stocks

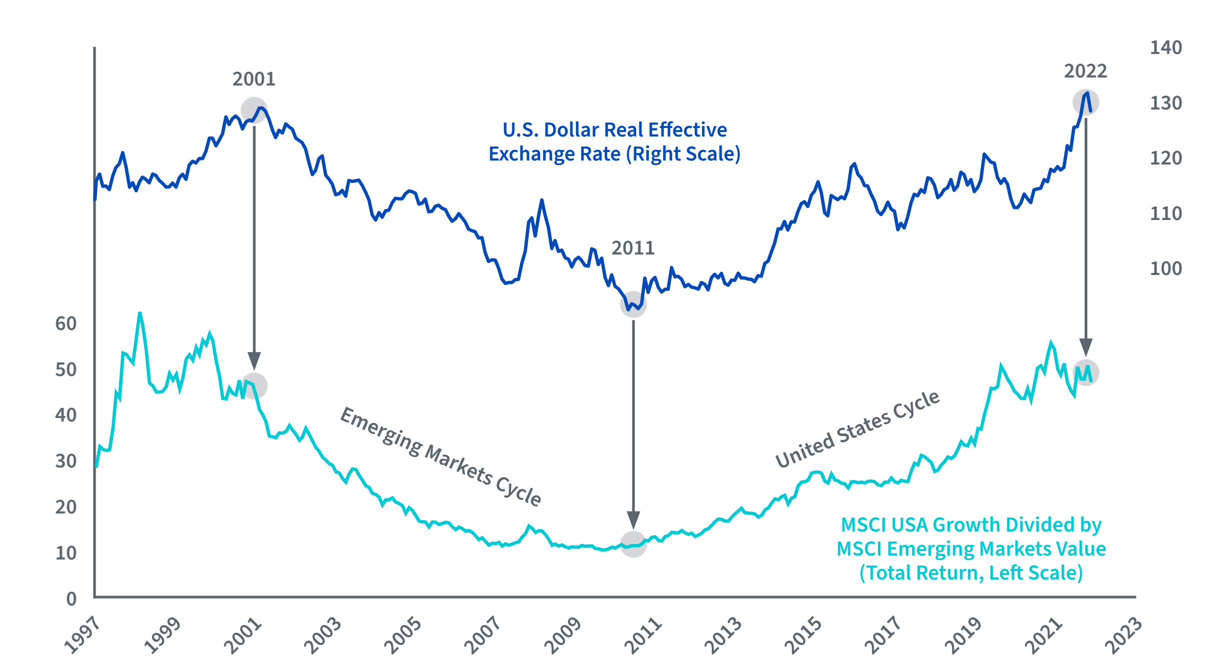
Source: Ken French (Dartmouth) Data Library, using the 202007 CRSP database, measuring the top and bottom deciles of stocks, 7/31/1941–9/30/2022.

As for emerging markets, we continue to believe China is investable, though the further concentration of political power breeds risk in equities. However, there's significant inefficiency in the market's pricing of China risk; overreactions to both good and bad news are common.

We continue to assess very low risk of US-China conflict over Taiwan. At this juncture, due to the unknown path of the reopening process and the fact that China's political calendar starts around March, it is premature to put too much conviction behind the Street's tepid economic forecasts.

We keep coming back to the dollar's bull market, which got itself to the point where its real effective exchange rate (REER) reached highs last seen at the turn of the century. Should the dollar come off the boil, it may be the setup needed for MSCI Emerging Markets Value to get the upper hand on MSCI USA Growth (figure 17).

Figure 17: U.S. Growth Stocks May Soon Give Way to Emerging Markets Value Stocks



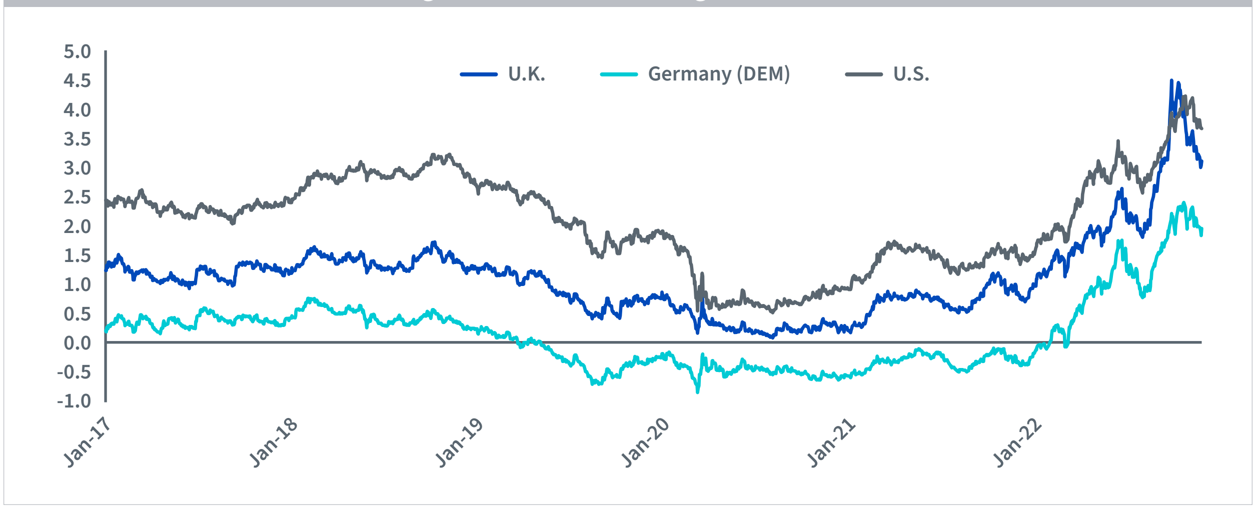
Sources: Refinitiv, JPM, as of 1/1/1997 through 11/22/2022. You cannot invest in an index and past performance is no guarantee of future results.

This concept also applies to non-U.S. developed market stocks, though we are still cautious on the group, owing to our trepidation with regard to the duration and severity of the Russian invasion of Ukraine. Nevertheless, we have eyes on two major DM components—Britain and Japan—both of which are showing valuation appeal and potentially some newfound competitiveness owing to the collapse in the British Pound Sterling (GBP) and Japanese Yen (JPY).

FIXED INCOME

The global sovereign debt markets have arguably experienced their worst year on record. However, an interesting development has occurred in the process; the era of negative rates has seemingly drawn to a close. With the exception of Japan, government bond markets in the developed world have now seen yield levels move into positive territory for the key 2-, 5- and 10-year maturity sectors.

Figure 18: 10-Year Sovereign Debt Yields



Source: Bloomberg, as of 1/1/2017 through 11/28/2022.

This development has created an interesting phenomenon: there's "income back in fixed income." The recent rise in U.S. Treasury (UST) rates has brought yields to levels not seen since 2007–2008, or a period spanning roughly 15 years. In other words, there is a whole generation of investors who have never experienced UST yields at these elevated levels.

Figure 19: U.S. Treasury Yields

Source: Bloomberg, as of 1/1/2007 through 11/28/2022.

The natural question becomes: is there more to come? In other words, can UST yields continue rising from here? Let's put the answer in the context of future Fed policy. If the aforementioned expectation for a 5% Fed Funds terminal rate does come to fruition, Treasury yields will more than likely continue to rise, especially along the front end of the curve, as yields need to adjust to this potential higher Fed Funds Rate.

For investors, these higher Treasury yields, both currently and potentially even higher in 2023, are creating a scenario in fixed income that investors have not been presented with in one-and-a-half decades. As a result, opportunity could be knocking on the door for bond investors in 2023.

While our base case is for the Fed to continue to raise rates in the first half of 2023, around the end of second quarter, we expect the Fed to pause which could lead to a modest rally in rates along with a steeper curve. Rate volatility will remain elevated; however, we believe we will not experience the rise that we witnessed this year.

As discussed, income is back in Fixed Income. We favor corporate issuers combining strong fundamentals and resilient balance sheets with debt seeking to offer attractive income. Selectivity remains key for investors, as the slowing in the economy will create a differentiated set of opportunities.

We also believe with the rise in rates and mortgage borrowing rates, opportunities will develop to increase exposure in mortgage-backed securities sometime this year. Wide mortgage spreads and positive convexity, a phenomenon that hasn't been seen in a while in agency MBS, hint at potential value, but the lack of potential institutional buyers and the threat of MBS sales from the Fed's balance sheet remain risks to this view.

The outlook for emerging market debt hinges on the magnitude of any global recession that emerges. If the landing is soft, valuations in currencies, local debt, and USD corporates provide attractive opportunities. But movement towards a hard landing provides a more substantial headwind.

THE DOLLAR

The rapid pace of Fed tightening this year injected carry back into USD-assets (particularly relative to other Developed Market assets). Bonds suffered near-term pain in the transition to higher rates, but the US Dollar rode the Fed rate hikes to one of best years in recent memory. Unfortunately, it has also pushed the Dollar, which started 2022 as expensive to extreme valuation levels.

Carry will likely continue to be supportive, but it is unlikely to the driver that it was for 2022. The Fed is on pace to continue raising rates, but the chance for the eventual rate level to be 400bp higher than one-year ahead market forecasts is very unlikely to say the least. In fact, the outlier risk of a 400bp drop in the Fed Funds rate on a hard landing would be assigned greater odds.

In the last month, momentum has also faded and started to turn negative. In 2023, valuation levels could prove a challenging obstacle without carry surprises to offset and the tailwind of momentum to support them.

But the world is still a tenuous place, with abundant geopolitical and economic risks, and it is hard to see the surge in global growth and risk-on appetite that would a trigger a large unwinding of the Dollar's valuation premium in the near-term.

While not our base case, a sharp reversal in Federal Reserve policy amid a hard landing for the domestic economy could turn carry into a negative driver and lead the Dollar lower. Thus, a more lackluster showing by the Dollar is likely for 2023 when compared to 2022, but the expectations of a sharp reversal could be disappointed.

Figure 20: Top 5 Differences Changes in Dollar vs. Bond Returns, 1977-YTD 2022

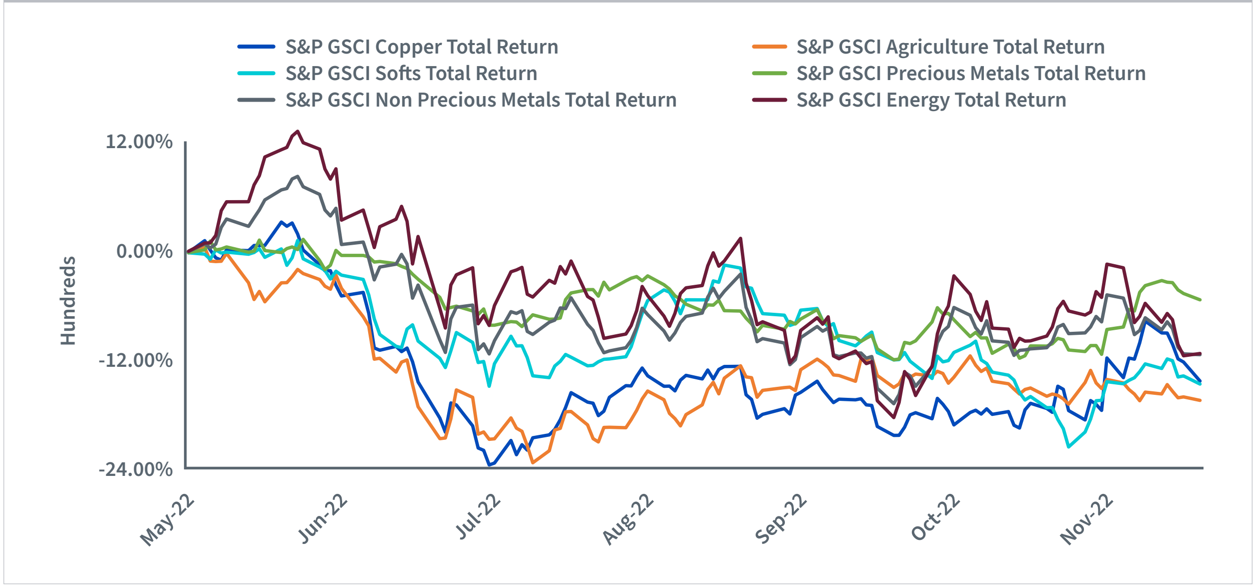
When the Dollar beats Bonds…						
	U.S. Dollar Index	Bloomberg US Aggregate Bond Index	Difference	Yield at Start of Year	Yield at End of Year	Difference
2022	10.7%	-12.6%	23.4%	1.75	4.56	2.81
2005	12.8%	2.4%	10.3%	4.38	5.08	0.70
1981	15.8%	6.2%	9.6%	13.03	14.64	1.61
1999	8.2%	-0.8%	9.0%	5.65	7.16	1.51
2015	9.3%	0.5%	8.7%	2.25	2.59	0.34
When the Bonds beats the Dollar…						
	U.S. Dollar Index	Bloomberg US Aggregate Bond Index	Difference	Yield at Start of Year	Yield at End of Year	Difference
1985	-18.5%	22.1%	40.6%	11.37	9.31	-2.06
1986	-16.1%	15.3%	31.4%	9.31	7.75	-1.56
2002	-12.8%	10.3%	23.0%	5.60	4.06	-1.54
1995	-4.5%	18.5%	22.9%	8.21	6.01	-2.21
1982	12.1%	32.6%	20.5%	14.64	10.95	-3.69

Source: Bloomberg; as of November 2022. The U.S. Dollar Index (USDX) indicates the general international value of the USD. The USDX does this by averaging the exchange rates between the USD and major world currencies. The ICE US computes this by using the rates supplied by some 500 banks. You cannot invest in an index and past performance is no guarantee of future results.

REAL ASSETS AND ALTERNATIVES

Global supply shortages driven by the Russian invasion of Ukraine, combined with restrictive U.S. domestic energy policies, would normally provide a solid macroeconomic backdrop of support for global commodity prices. But a global economic slowdown, particularly in China, provides an offsetting counterbalance. Copper is often viewed as a leading indicator of expected future economic growth—in which case, we are in for a weak global economy in 2023.

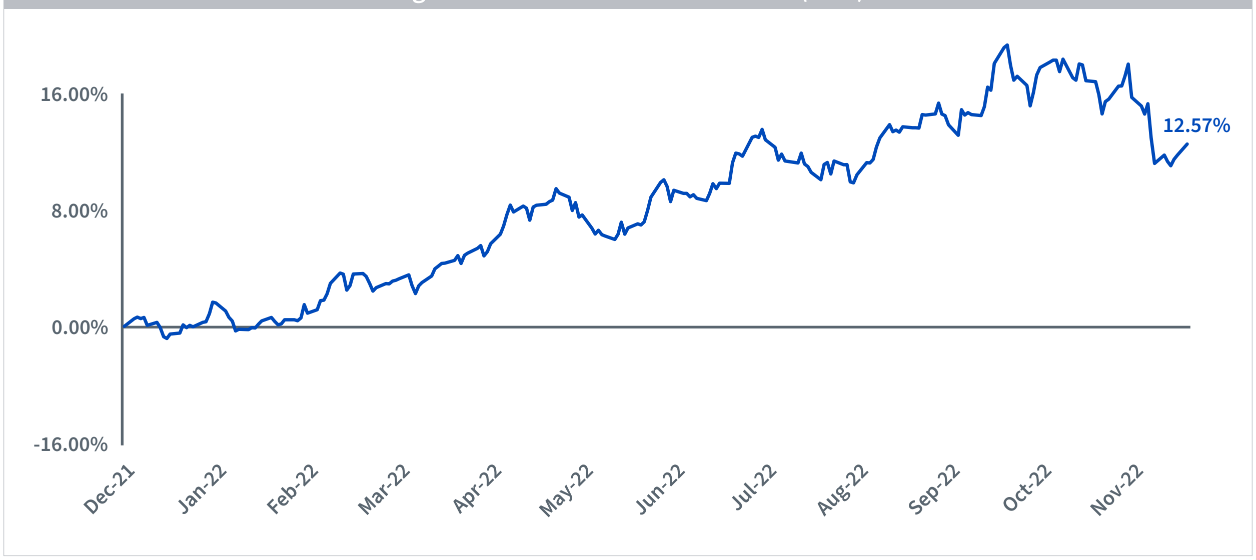
Figure 21: Commodities Performance as Shown Through Various S&P GSCI Indexes



Source: YCharts, six-month data through 11/21/22. You cannot invest in an index and past performance is no guarantee of future results.

The recent decline in the U.S. dollar (which we have been expecting and continue to believe will continue) has not helped global commodity prices.

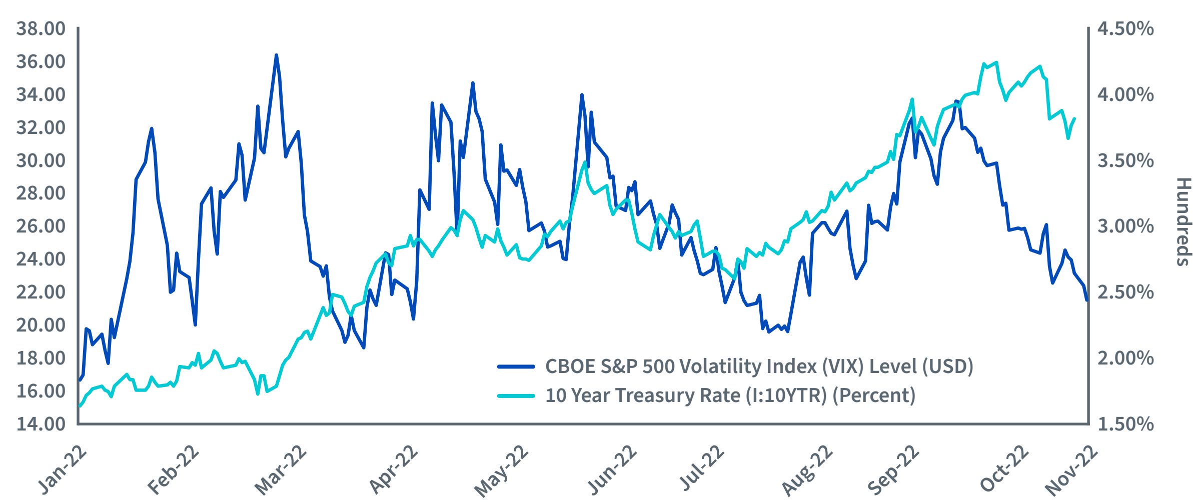
Figure 22: ICE US Dollar Index Level (USD)



Source: YCharts, YTD data through 11/21/22. You cannot invest in an index, and past performance does not guarantee future results.

Non-traditional strategies may perform best in rising interest rate and increased volatility market environments. We believe we are in just such a regime, though volatility has fallen recently—a trend we do not expect to continue.

Figure 23: 10-Year Treasury Rate vs. CBOE Volatility Index® (VIX®)



Source: YCharts, YTD data through 11/21/22. You cannot invest in an index, and past performance is no guarantee of future results.

SUMMARY AND ASSET ALLOCATION IMPLICATIONS

Summary: *We believe we are headed into recession (again) at some point in 2023. It is too early to tell if it will be a "hard" or "soft" landing with respect to the slowdown in economic growth, but history suggests that "soft landings" are few and far between.*

Investment Implications: *We may see much more volatility and market disruptions as consumers and investors adjust to a new economic environment. Quality, value and dividends should remain important for equity investors, while bond investors, though facing increased volatility, may find themselves in a more "normal" fixed income environment—one in which they may be able to or have the potential to generate an acceptable level of income for the risk they are willing to take.*

As we potentially enter a new market regime marked by rising rates, unstable commodity prices and increased volatility, investors should consider incorporating real assets and alternatives into their portfolios for both diversification and potential return purposes.

The current market environment is one of uncertainty and mixed signals—a trend we believe will continue well into 2023. We believe a recession is on the nearer-term horizon, though we do believe inflation has peaked and will trend downward through next year. The Fed publicly states it remains firm in its policy to aggressively curb inflation, but we believe the primary "story" for 2023 will be recession, not inflation. And not just in the U.S.—we believe we are headed toward a global economic slowdown.

In a terrible year for both stocks and bonds, some things have stood out. After years (maybe even a decade or more) of being "in the wilderness," factors such as value, dividends, size and quality have generally performed much better on a relative basis. We believe this trend will continue throughout 2023, especially in light of increasing economic uncertainty.

This has two explicit implications for advisors and investors:

1. A continued need for diversification[2] within the portfolio, both at the asset class and risk factor levels.
2. A re-emergence of active management (or non-cap-weighted beta) within the portfolio. This is a time when advisors and investors have the potential to add real value in their asset allocation, portfolio construction and security selection decisions.

Our current asset class outlook is represented in the graphic below:

Equities	-	Neutral	+	Change QoQ
Equities vs. Bonds				▼
U.S. Large Cap Growth				
U.S. Large Cap Value				
U.S. Mid/Small Cap Growth				
U.S. Mid/Small Cap Value				▲
Developed International				▼
Developed International Small Cap				
Emerging Markets				
Emerging Markets Small Cap				
Fixed Income	**-**	**Neutral**	**+**	**Change QoQ**
Duration				
U.S. Treasuries				
Investment Grade Credit				
High Yield Credit				
Securitized Credit				
Non-U.S.				
Alternatives	**-**	**Neutral**	**+**	**Change QoQ**
Commodities				
Managed Futures				
MLPs				

Source: WisdomTree, as of 11/21/22. Evaluations are subject to change as market conditions change. This is for illustration purposes only and does not represent investment advice. All evaluations are on a relative and not absolute basis. Red = a negative relative evaluation; gray = a neutral relative evaluation; green = a positive relative evaluation. You cannot invest in an index, and past performance does not guarantee future results.

Our primary investment themes for 2023 are as follows:

1. Investing with Fed-induced volatility and an uncertain inflation regime:
   + The "Dividend Decade": we believe value and dividends continue to outperform
   + Increased importance of quality as the economy cools
   + Treasury FRNs: potential income without the volatility
   + Alternatives (including commodities) to seek hedge against inflation risk and volatility in stocks and bonds
2. The return to "normal" in fixed income:
   + We would prefer to be late than early to the "duration party"
   + We believe there is income back in fixed income
3. Don't overlook the opportunity in small caps, where we continue to see attractive valuations

[2] Diversification and asset allocation do not guarantee a profit or prevent loss.

Glossary:

Basis points (bps): 1/100th of 1 percent. Beta: A measure of the volatility of a security or a portfolio in comparison to a benchmark. In general, a beta of less than 1 indicates that the investment is less volatile than the benchmark, while a beta of more than 1 indicates that the investment is more volatile than the benchmark. Bull market: A market in which share prices are rising, encouraging buying. Commodity: A raw material or primary agricultural product that can be bought and sold. Earnings growth: The annual compound annual growth rate of earnings from investments. Federal Funds (Fed Funds): Excess reserves that commercial banks and other financial institutions deposit at regional Federal Reserve banks. Federal Reserve (Fed): The Federal Reserve System is the central banking system of the United States. Floating rate notes (FRNs): A debt instrument with a variable interest rate. Gross domestic product (GDP): The total monetary or market value of all the finished goods and services produced within a country's borders in a specific period. Growth stocks: Stocks whose share prices are higher relative to their earnings per share or dividends per share. Investors are willing to pay more because of their earnings or dividend growth expectations going forward. Inflation: Characterized by rising price levels. Market capitalization: Market cap = share prices x number of shares outstanding. Firms with the highest values receive the highest weights in approaches designed to weight firms by market cap. Maturity: The amount of time until a loan is repaid. Monetary policy: Actions of a central bank or other regulatory committee that determine the size and rate of growth of the money supply, which in turn affects interest rates. Operating earnings: The profit earned after subtracting from revenues only those expenses that are directly associated with operating the business. Price-to-earnings (P/E ratio): The ratio for valuing a company that measures its current share price relative to its per-share earnings (EPS). Quality: Characterized by higher efficiency and profitability. Typical measures include earnings, return on equity, return on assets and operating profitability. This term is also related to the quality factor, which associates these stock characteristics with excess returns versus the market over time. Real effective exchange rate (REER): The weighted average of a country's currency relative to an index or basket of other major currencies, adjusted for the effects of inflation. Recession: Two consecutive quarters of negative GDP growth, generally characterized by a slowing economy and higher unemployment. Return on assets (ROA): Firm profits (after accounting for all expenses) divided by the firm's total assets. Higher numbers indicate greater profits relative to the level of assets utilized to generate them. Return on equity (ROE): Measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. Size capitalization: A measure by which a company's size is classified. Large caps are usually classified as companies that have a market cap of more than $10 billion. Mid-caps range from $2 billion to $10 billion. Small caps are typically new or relatively young companies and have a market cap between $200 million and $2 billion. Sovereign debt: Bonds issued by a national government in a foreign currency in order to finance the issuing country's growth. Terminal rate: The peak spot where the benchmark interest rate—the federal funds rate—will come to rest before the central bank begins trimming it back. Treasury Inflation-Protected Securities (TIPS): A type of Treasury security issued by the U.S. government. TIPS are indexed to inflation in order to protect investors from a decline in the purchasing power of their money. U.S. Treasury (UST): Debt that is issued by the United States. U-3 unemployment level: The official unemployment rate. It measures the number of people who are jobless but actively seeking employment. U-6 partial employment level: The percentage of workers who are involuntarily working at less than full employment. Value: Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future. This term is also related to the value factor, which associates these stock characteristics with excess returns versus the market over time. Yield: The income return on an investment. Refers to the interest or dividends received from a security that is typically expressed annually as a percentage of the market or face value. Zero interest rate policy (ZIRP): A monetary policy whereby interest rates, such as Fed Funds, are kept close to or at zero.

Index Definitions:

Bloomberg Aggregate Bond Index: A broad-based fixed-income index used by bond traders and the managers of mutual funds and exchange-traded funds (ETFs) as a benchmark to measure their relative performance. CBOE S&P 500 Volatility Index® (VIX®): A key measure of market expectations of near-term volatility conveyed by S&P 500 stock index option prices. It is the premier benchmark for U.S. stock market volatility. Conference Board Consumer Confidence Index: The monthly Consumer Confidence Survey®, based on a probability-design random sample, is conducted for The Conference Board by Nielsen, a leading global provider of information and analytics around what consumers buy and watch. The Conference Board is a global, independent business membership and research association working in the public interest. Consumer Price Index (CPI): A measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food and medical care. Dow Jones FXCM Dollar Index: The value of the United States dollar relative to a basket of four currencies: the euro, the British pound, the Japanese yen and the Australian dollar. ICE U.S. Dollar Index: A geometrically-averaged calculation of six currencies weighted against the U.S. dollar. MSCI ACWI Index: A free float-adjusted market capitalization-weighted index that is designed to measure the equity market performance of developed and emerging markets. MSCI EAFE Index: A market cap-weighted index composed of companies representative of the developed market structure of developed countries in Europe, Australasia and Japan. MSCI EAFE Mid Cap Index: A free float-adjusted market capitalization-weighted equity index that captures mid-cap representation across developed market countries around the world, excluding the U.S. and Canada. MSCI EAFE Small Cap Index: A free float-adjusted market capitalization-weighted equity index that captures small-cap representation across developed market countries around the world, excluding the U.S. and Canada. MSCI Emerging Markets Index: A broad market cap-weighted index showing the performance of equities across 24 emerging market countries defined as "emerging markets" by MSCI. MSCI Emerging Markets Small Cap Index: A market capitalization-weighted subset of stocks in the MSCI Emerging Markets Index that includes small-cap representation across 24 emerging markets countries. MSCI Emerging Markets Value Index: A market capitalization-weighted subset of stocks in the MSCI Emerging Markets Index that have lower share prices relative to their earnings or dividends per share or lower prices relative to other financial metrics. MSCI USA Growth Index: A large and mid-cap U.S. equity index aiming to capture securities exhibiting overall growth-style characteristics. National Association of Home Builders (NAHB) Market Index: The National Association of Home Builders (NAHB) Housing Market Index (HMI) rates the relative level of current and future single-family home sales. The data is compiled from a survey of around 900 home builders. A reading above 50 indicates a favorable outlook on home sales; below 50 indicates a negative outlook.

NFIB Small Business Optimism Index: NFIB Research Foundation has collected Small Business Economic Trends Data with quarterly surveys since 1973 and monthly surveys since 1986. The sample is drawn from the membership files of the National Federation of Independent Business (NFIB). Purchasing Managers' Index (PMI): An indicator of the economic health of the manufacturing sector. The PMI is based on five major indicators: new orders, inventory levels, production, supplier deliveries and the employment environment. A reading above 50 indicates an expansion of the manufacturing sector compared to the previous month, below 50 represents a contraction, while 50 indicates no change. Russell 1000 Index: A measure of the performance of the 1,000 largest companies by market capitalization in the Russell 3000 Index.Russell 2000 Index: Measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index, representing approximately 10% of the total market capitalization of that index. S&P 500 Index: A market capitalization-weighted benchmark of 500 stocks selected by the Standard and Poor's Index Committee designed to represent the performance of the leading industries in the United States economy. S&P 400 Index: A market capitalization-weighted index that serves as a gauge for the U.S. mid-cap equities sector. S&P 600 Index: A market capitalization-weighted index that serves as a gauge for the U.S. small-cap equities sector. S&P Global Infrastructure Index: Designed to track 75 companies from around the world chosen to represent the listed infrastructure industry while maintaining liquidity and tradability. To create diversified exposure, the index includes three distinct infrastructure clusters: energy, transportation and utilities. S&P Global REIT Index: Serves as a comprehensive benchmark of publicly traded equity REITs listed in both developed and emerging markets. S&P GSCI Index (Copper/Agriculture/Softs/Precious Metals/Non-Precious Metals/Energy): A leading measure of general commodity price movements and performance over time. S&P US Preferred Stock Index: Designed to serve the investment community's need for an investable benchmark representing the U.S. preferred stock market. Preferred stocks are a class of capital stock that pays dividends at a specified rate and has a preference over common stock in the payment of dividends and the liquidation of assets.

IMPORTANT INFORMATION

Unless otherwise stated, all data as of November 2022.

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There are risks associated with investing, including the possible loss of principal. Foreign investing involves special risks, such as risk of loss from currency fluctuation or political or economic uncertainty. Investments in emerging or offshore markets are generally less liquid and less efficient than investments in developed markets and are subject to additional risks, such as risks of adverse governmental regulation and intervention or political developments. Funds focusing their investments on certain sectors and/or regions and/or smaller companies increase their vulnerability to any single economic or regulatory development. This may result in greater share price volatility.

Fixed income investments are subject to interest rate risk; their value will normally decline as interest rates rise. High-yield or "junk" bonds have lower credit ratings and involve a greater risk to principal. Fixed income investments are also subject to credit risk, the risk that the issuer of a bond will fail to pay interest and principal in a timely manner or that negative perceptions of the issuer's ability to make such payments will cause the price of that bond to decline.

You cannot invest directly in an index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns.

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