



QUARTERLY MARKET INSIGHTS
4TH QUARTER 2022



CRYPTO MELTDOWN

For years, cryptocurrency enthusiasts claimed digital currencies were uncorrelated assets that should be viewed in similar fashion to safe haven assets like gold. Cryptocurrencies failed to back up those claims as their value fell over the last year along with other risk assets. The price of bitcoin is down around 75% since its November 2021 peak, and crypto assets have lost over \$2 trillion in value. The decline in crypto prices and subsequent unravelling of enthusiasm created turmoil among crypto exchanges and brokerages as customers withdrew funds and interconnected businesses caused rapid contagion.

The crypto selloff accelerated in May after the stable coin TerraUSD broke its \$1 per coin peg and caused a wave of investor redemptions across the world of digital currencies. Stable coins aim to maintain a stable value, often pegged to the U.S. dollar, so crypto investors can store their money between trades without price volatility or converting to traditional currencies. Their stable value is often achieved by stable coin issuers holding cash to match their coins' total value.

TerraUSD's downfall stemmed from usage of an algorithm that would increase and decrease supply of its coin to maintain a \$1 price instead of backing it with hard currency reserves. A large sale of TerraUSD of around \$84 million in early May destabilized the coin's price which caused a crypto-equivalent bank run as nervous investors rushed to withdraw their money. The price of TerraUSD collapsed to near \$0 within weeks and investors in the coin and its sister coin Luna, which also collapsed, lost around \$60 billion. The chain reaction following TerraUSD's crash contributed to the price of bitcoin plummeting nearly 30% in a week and the crypto market losing around \$500 billion in two weeks.

The downward spiral of TerraUSD led to crypto hedge fund Three Arrows Capital going bankrupt because of its concentrated investment in the coin. Crypto lender, Voyager Digital, also went bankrupt due to Three Arrows Capital defaulting on a large loan from Voyager. After the TerraUSD debacle, contagion spread to other crypto companies. The extreme crypto market conditions caused Celsius Network, one of the largest crypto lenders, to freeze all account transactions in June. In May, the company's website said it managed \$11.8 billion in assets and had 1.7 million users. Celsius filed for bankruptcy in July and still owes its users \$4.7 billion.

The crypto market received another shock in November when Sam Bankman-Fried's FTX crypto empire imploded. FTX was one of the largest crypto exchanges and was valued at around \$32 billion in early 2022. Prior to creating FTX, Bankman-Fried

founded the crypto trading firm Alameda Research and owned 90% of the business. Bankruptcy filings revealed FTX's close ties with Alameda included secret exemptions that enabled the trading house to take on more risk than other FTX customers. Alameda's financial health quickly deteriorated amid the crash in crypto prices and was unable to meet its debt obligations. Bankman-Fried tried to bail out Alameda by secretly using FTX's customer deposits to give the troubled company a loan reportedly worth \$10 billion. According to Reuters, more than \$1 billion of the financing is missing. FTX and Alameda filed for bankruptcy in November after crypto firms CoinDesk and Binance publicly questioned FTX's financial health which triggered a wave of customer withdrawals from FTX's cryptocurrency, FTT. Bankman-Fried is facing multiple criminal charges from U.S. prosecutors claiming he committed fraud and a range of securities and derivatives law violations.

"THE PRICE OF BITCOIN IS DOWN AROUND 75% SINCE ITS NOVEMBER 2021 PEAK."

FTX's alleged fraud and the crypto industry's series of recent bankruptcies have increased pressure on regulators and lawmakers to ramp up government oversight. The industry has operated in a mostly unregulated environment in the U.S. thus far. Crypto proponents, including Bankman-Fried, lobbied lawmakers to pass legislation giving the Commodity Futures Trading Commission (CFTC) regulatory oversight of cryptocurrencies. CFTC oversight is a preferable path for the crypto industry since it would be less stringent than regulation from the Securities and Exchange Commission (SEC). SEC Chair Gary Gensler argued most cryptocurrencies should be considered securities like stocks and bonds. Labeling cryptocurrencies as securities would require crypto firms to register their digital token offerings with the SEC, provide investors with rigorous reporting prior to being sold to the public, and be subject to continuous SEC examination. As the calendar flips to 2023, the future of crypto regulation remains highly uncertain amid ongoing discussions in Congress.

YEAR IN REVIEW

EXECUTIVE SUMMARY

- Three shocks defined 2022: inflation, interest rates, war.
- Growth concerns have overtaken inflation anxiety.
- The Fed might be quick to pause, but long to hold.
- Wage growth and profit margins will be key in 2023.

The past year was easily the most challenging for investors since the global financial crisis era of 2007-2009. Even the gut-wrenching market uncertainty of early 2020 was washed away by unprecedented stimulus and the arrival of COVID-19 vaccines. In 2022, however, market participants were forced to contend with inflationary pressures not seen since the early 1980s, 425 basis points of Fed rate hikes, and the outbreak of war on the doorstep of NATO. There were also rolling COVID-19 lockdowns of major population centers in China and heightened anxiety that Russia would turn off the natural gas supplies to Germany and other European nations ahead of winter. When the dust settled, broad U.S. equity and fixed income benchmarks both suffered double-digit percentage declines. In only five years from 1928 through 2022 have the S&P 500 and the 10-year U.S. Treasury note both suffered negative returns (1931, 1941, 1969, 2018, 2022).

THE BUILD UP

In many ways, the events of 2020 and 2021 provide a framework for reviewing the economy and investment markets in 2022 and looking forward to 2023. The public health, monetary, and fiscal policy responses to the COVID-19 pandemic in 2020 almost certainly allowed the global economy to avoid a deep and prolonged recession. But, in hindsight, the magnitude and duration of these responses were probably excessive and sowed the seeds of many imbalances. The combination of early lockdowns, the work-from-home surge, ultra-low interest rates, and overwhelming stimulus laid the groundwork for the supply chain disruptions, overheated demand for goods, and surging inflation that characterized 2021 and most of 2022. Several rounds of largescale direct transfer payments allowed U.S. consumers to build up an estimated \$2 trillion of excess savings from April 2020 through March 2021 compared to the pre-pandemic trend. This was somewhat of a double-edged sword, because while it prevented the economic despair of 2008 and 2009, it also created the conditions for a surge in goods-based inflation and excessive risk-taking. Speculative activity became the norm across

traditional investment markets in 2021 focused on pre-profit (and in some cases pre-sales) technology-oriented firms. It also spawned widespread investor engagement with more peripheral areas ripe for blind speculation including so-called Meme stocks, blank check Special Purpose Acquisition Companies (SPACs), non-fungible tokens (NFTs), and cryptocurrencies.

REALITY CHECK

As inflationary pressures began to pick up steam in early 2021, U.S. Federal Reserve officials (and most market participants) overlooked, or even outright dismissed them as “transitory.” It is worth recalling that the year-over-year U.S. consumer price index (CPI) eclipsed 4% in April 2021 for the first time since 2008. The consensus thinking at the time held that overshooting inflation was very likely to be temporary because it was predominantly driven by pandemic-related kinks in global supply chains that produced images of miles-long container ship lines in the ports of southern California. By the fourth quarter of 2021, it became painfully clear that elevated measures of inflation were unlikely to subside any time soon. In the final months of 2021, Fed Chairman Jerome Powell and his colleagues abandoned the term “transitory” and began to talk about “policy normalization” as annual CPI approached 7%. Throughout the first months of 2022, a steady drumbeat of Fed officials stressed the need to begin hiking the policy rate and wind down the Federal Reserve’s balance sheet, which had ballooned 112% from \$4.2 trillion on the eve of the pandemic to \$8.9 trillion in late February.

The reaction of bond and equity markets to events in the first quarter was particularly important because, in many ways, they set the tone for the entire year. U.S. Treasury yields climbed sharply in the first half of 2022, but in an uneven manner as yields on shorter-dated maturities rose at a much faster rate than longer-term yields. This dynamic, known as a yield curve inversion, would remain in place throughout 2022 as the entire U.S. Treasury term structure shifted higher led by the one-month to two-year segment of the curve. The upward pressure on government bond yields in the face of accelerating inflation was made abundantly clear by a 50-basis point rise in 10-year U.S. Treasury yields in the four weeks following Russia’s February 24 invasion of Ukraine. Most market participants probably expected the outbreak of war (especially one involving a nuclear superpower) would lead to lower U.S. Treasury yields considering most safe haven assets were bid higher in prior periods of geopolitical stress in recent decades.

Equity markets were already in a clear downtrend before Russian tanks began rumbling toward Kyiv in late February. Stocks were taking their cue from sharply higher market interest rates and a building consensus that the Federal Reserve was preparing to end its

two-year commitment to ultra-accommodative policy. The S&P 500 declined 11.9% from its all-time closing high of 4,796.56 on January 3 to February 23. Over this roughly seven-week period, the S&P 500 energy sector (+13.9%) was the benchmark's only major group to record a positive return. Meanwhile, the consumer discretionary (-19.3%), communication services (-17.0%), and technology sectors (-15.5%) were its weakest groups. The Nasdaq entered bear market territory for one day on March 14 before surging 13% to finish March in positive territory. This set of sector leaders and laggards would remain in place for the entire year despite several sharp countertrend rallies led by the beaten down technology sector and the "tech-adjacent" darlings of 2021. The outbreak of war in Ukraine amplified concerns about runaway inflation given Russia and Ukraine's importance to key global commodities including crude oil, natural gas, wheat, and potash. On March 16, exactly three weeks after the first shots were fired on Ukrainian soil, the Federal Open Market Committee (FOMC) delivered its initial quarter-point rate hike of the cycle. Six weeks later, on May 4, the 13th Fed rate cycle since World War II gathered steam when the FOMC raised its

benchmark rate by 50 basis points to a range of 0.75% to 1.00% (see Chart 1).

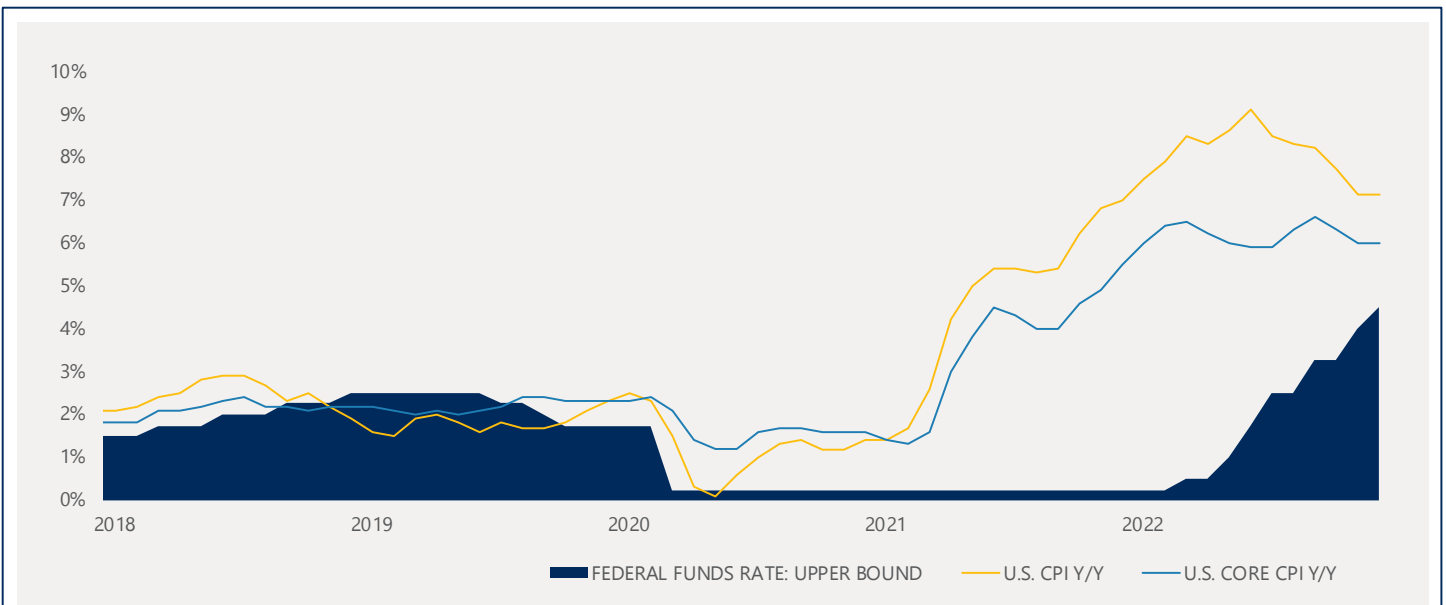
STORMY SPRING

The second quarter was arguably the most difficult stretch in 2022 for investors as financial conditions tightened rapidly. The S&P 500 declined 16.5%, while the technology-dominant Nasdaq plunged 22.4%. Treasury yields continued to push higher despite growing recession fears. Corporate credit spreads widened dramatically, oil prices shot higher, and by late June the U.S. Dollar Index had climbed to its highest level in 20 years.

Monetary policymakers were clearly in tightening mode, but the Federal Reserve was increasingly seen as "behind the curve" in the early stages of its battle to tame inflation. Calls for "peak inflation" were repeatedly rebuffed by hotter-than-expected CPI readings, with annual U.S. headline consumer inflation above 8% for seven straight months, from March through September. Meanwhile, economic growth abruptly stalled, as U.S. Gross Domestic Product (GDP) contracted in both the first and second quarters, meeting the unofficial criteria for a recession. The economic downturn ultimately

CHART 1

THE FED'S DELAYED AND AGGRESSIVE RESPONSE TO SURGING INFLATION



SOURCE: Bloomberg. Data as of 12/31/22. Past performance does not guarantee future results.

proved to be short-lived, however, as a sharp unwind of inventory build-ups and a substantial decline in exports driven by the Omicron variant both dissipated by the summer. Nonetheless, fears of recession and “stagflation” ran rampant throughout the financial media and the collective investor psyche. Google Trends data showed more people in the U.S. searched the word “recession” in the week of June 13-19 than at any time since 2004. Meanwhile, a 60% surge in West Texas Intermediate (WTI) crude oil prices from \$76 per barrel in the first days of January to \$122 per barrel on June 8 created considerable pain at the pump for U.S. consumers ahead of summer vacation season. The AAA average daily national gasoline price climbed from \$3.29 per gallon on January 1 to an all-time high of \$5.02 per gallon on June 13. A doubling in the average 30-year fixed mortgage rate in the U.S. from 3.00% in late September 2021 to 6.00% in late June 2022 brought refinancing activity to a near halt and drove sales of existing homes sharply lower. The combination of a sudden surge in mortgage rates and a 45% rise in the S&P CoreLogic Case-Shiller 20-City Composite Home Price Index from February 2020 through June 2022 crippled housing affordability.

Skyrocketing gas and food prices weighed heavily on survey-based measures of U.S. consumer confidence, bringing forth a chorus of bearish strategists calling for a sharp recession and an imminent collapse in S&P 500 earnings. Indeed, the University of Michigan’s consumer sentiment index dropped in June to its lowest level on record. At the same time, however, higher frequency, less formal consumer data like Open Table reservations and TSA check volumes did not indicate any meaningful pullback in consumer spending. The disconnect between how poorly consumers said they felt about their situation and generally resilient consumer spending data remained in place for the rest of 2022. Meanwhile, corporate profits defied expectations as S&P 500 earnings grew at year-over-year rates of 8.0% and 4.6% in the second and third quarters, respectively. U.S. retail sales (which are not adjusted for inflation) did not contract the way many forecasters expected. This suggests U.S. companies passed a good portion of price increases on to customers, who spent most of 2022 shifting spending away from goods and toward services.

POWELL PUSHES BACK

As the calendar approached July, negative sentiment dominated the investment landscape. It seemed an unlikely time for the S&P 500 to stage a 13% rally and briefly push above 4,200. But that is precisely what happened between June 16 and August 16, as an exhaustion of sellers created a favorable backdrop for

a countertrend rally led by consumer discretionary and technology stocks. Growing hopes of finally reaching “peak inflation” and a substantial decline in long-term U.S. Treasury yields helped clear a path for stocks to move higher during this 8-week period. Better-than-feared second quarter earnings and cooling commodity prices seemed to give the rally legs. The latter was probably heavily influenced by a wave of strict lockdowns in China to combat outbreaks of COVID-19. Largescale releases of crude oil from the U.S. Strategic Petroleum Reserve, and Russian oil exports finding their way to India and other countries not fully aligned with NATO also likely put downward pressure on oil prices. In an almost too-perfect coincidence, the S&P 500 closed at its near-term low of 3,666.77 four days after the AAA average daily national gasoline price peaked at \$5.02 per gallon (see Chart 2).

Fed Chair Jerome Powell threw cold water on the late rally in risk assets with his August 26 remarks at the Kansas City Federal Reserve Bank’s annual symposium in Jackson Hole, Wyoming. In a possible reference to the pernicious inflation of the 1970s, Powell stated, “Restoring price stability will likely require maintaining a restrictive policy stance for some time. The historical record cautions strongly

CHART 2
THE S&P 500 AND AVERAGE GAS PRICES

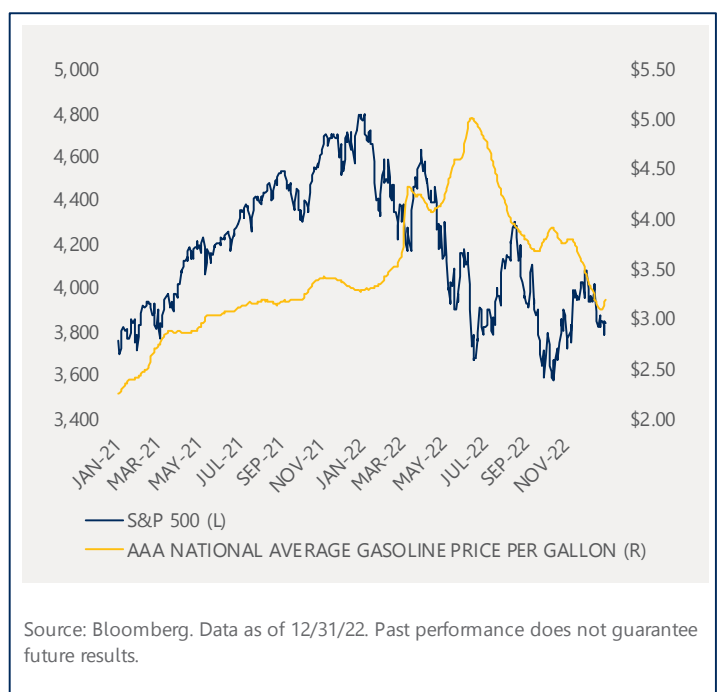
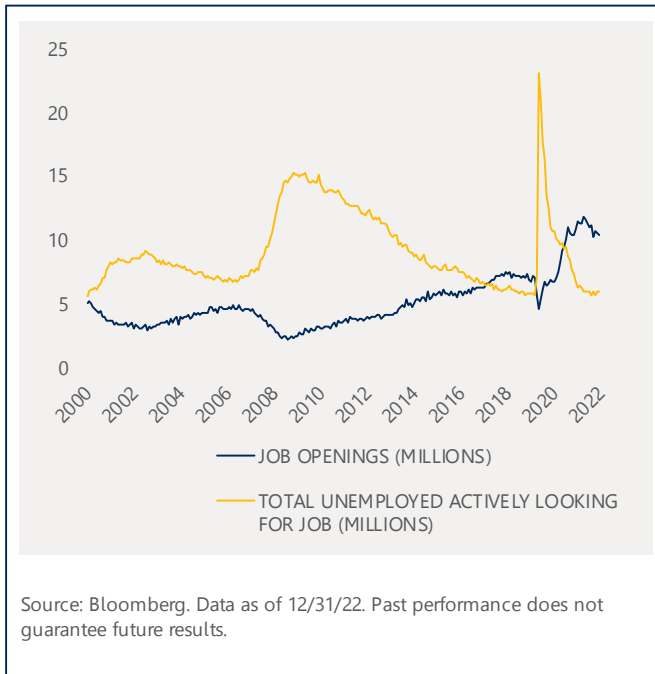


CHART 3

U.S. JOB OPENINGS AND TOTAL UNEMPLOYED



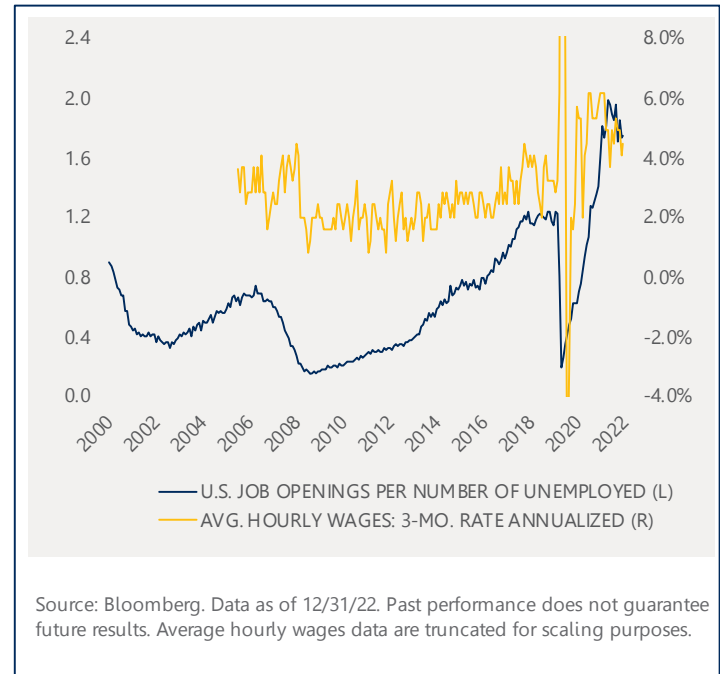
against prematurely loosening policy.” Negative market sentiment was reinforced by hotter-than-expected August CPI data released September 13. A week later, the FOMC delivered its third consecutive 0.75% rate hike, pushing its benchmark rate to a range of 3.00% to 3.25%. In the final days of September, the 10-year U.S. Treasury yield was approaching 4.00% and the S&P 500 had broken below its prior closing low of 3,666.77 on June 16. By mid-October, the market consensus seemed to be that Fed rate hikes were destined to “break something” on the way to an economic “hard landing.”

THE LIMITS OF PESSIMISM

The bears probably got too far out over their skis once again, however, as economic data and market conditions turned more favorable in the second half of October and November. Led by energy sector profits, third quarter corporate earnings started to come in better than expected. On October 27, the 2.6% initial estimate of third quarter annualized real U.S. GDP growth exceeded the median forecast. U.S. midterm election results eventually confirmed a divided federal government, reducing the risk of market-moving legislation in 2023 and 2024. October CPI data released November 10 showed an encouraging deceleration in year-over-year headline inflation to below 8% for the first time since February. On November 2, the FOMC implemented a fourth straight 0.75% hike to its policy rate to a

CHART 4

OPENINGS PER UNEMPLOYED PERSON AND WAGES



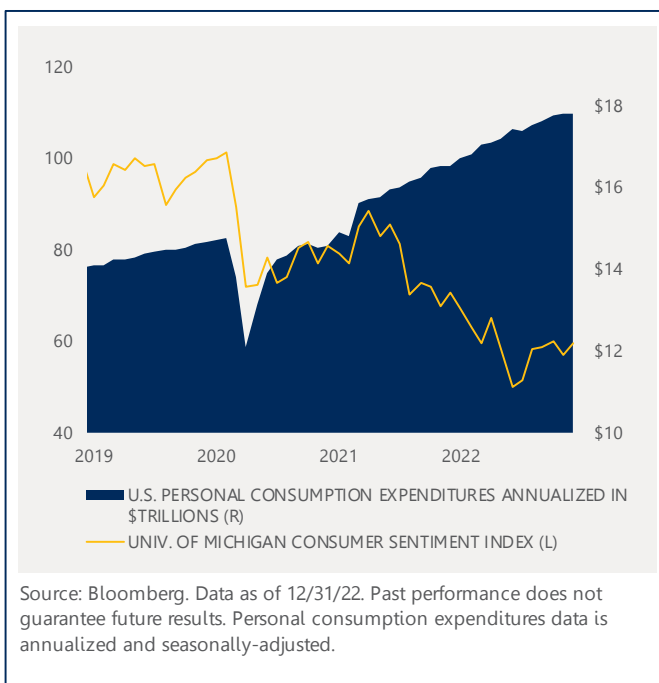
range of 3.75% to 4.00%, its highest level since 2007. Throughout November, however, a growing number of Fed officials publicly spoke about the need to slow the pace of rate hikes. From its October 14 low of 3,577.03, the S&P 500 advanced 13.9% to a 4,080.11 close on November 30, marking the third rally of at least 11% during a year in which the index fell 19.4%. On December 14, FOMC participants put through their final rate increase of the year, downshifting to a 0.50% hike that sent the policy rate to a range of 4.25% to 4.50%. In his post-FOMC press conference, Fed Chairman Powell put on his Grinch costume and squashed any hopes of a substantial Santa Claus rally by reminding everyone that “we still have some ways to go” in returning U.S. inflation closer to 2.0%.

TEN IMPORTANT STORYLINES OF 2022

- 1) The policy excesses and supply chain disruptions of 2020 and 2021 awoke inflationary forces after a nearly four-decade slumber.
- 2) The Fed was compelled to shift its focus from promoting full employment to the price stability component of its mandate.
- 3) The inflationary impulse was temporarily amplified by the effect that Russia’s invasion of Ukraine had on global energy prices.
- 4) Sharply higher interest rates drove a downward re-rating in stocks and bonds, resulting in double-digit losses for the both the S&P 500 and Bloomberg U.S. Aggregate Bond Index.
- 5) Higher rates and a bid for safe haven assets drove a relentless 20% rally in the U.S. Dollar Index during the first nine months of the year.

- 6) Longer duration assets with a majority of cash flows far into the future fared the worst in 2022. High profile examples included the Nasdaq and long-dated U.S. Treasury bonds.
- 7) Volatility was elevated in both equity and rates markets. Nearly 90% of trading days saw the S&P 500 advance or decline by more than 1% on an intraday basis. The yield on the 10-year U.S. Treasury note surged by more than 135 basis points from March 3 (1.73%) through May 6 (3.13%) and then again from August 1 (2.57%) through October 24 (4.24%).
- 8) Earnings held up better than expected in 2022. The S&P 500's 19.4% decline was driven exclusively by a 20% contraction in its forward 12-month earnings multiple.
- 9) Energy and agricultural commodity prices shot higher in the wake of Russia's full-scale invasion of Ukraine only to steadily fall in the second half of 2022 as near-term supplies proved more resilient than expected and demand a bit weaker.
- 10) Russia's invasion of Ukraine, the U.S.-led sanctions regime against Moscow, and Europe's belated acknowledgement of an overreliance on cheap Russian energy exports, were examples of an acceleration away from globalization to so-called "regionalization."

CHART 5
CONSUMER SPENDING VS. SENTIMENT



SAME OLD SONG AND DANCE

We expect several key themes from the second half of 2022 to persist into 2023. First, it seems reasonable to expect a further deceleration in domestic inflation considering signs of deflation in goods prices and the lagged effects of cooling shelter prices. Next, we think the "good news is bad news" market narrative probably has some staying power. This view assumes better-than-expected economic data (especially from the labor market) will lead Fed policymakers to keep their benchmark rate higher for longer. We also expect the disconnect between resilient "hard" economic data (nonfarm payrolls, industrial production, retail sales, etc.) and weak "soft" data (purchasing managers' indexes, consumer sentiment readings) to remain in place as sentiment continues to recover from the inflation and interest rate shocks of 2022 (see Chart 5). The trend of U.S. consumer spending shifting from goods to services should continue in 2023 and put a floor under average hourly wage growth. This could make it difficult for annual CPI to move substantially below 4% in over the next 12 months. The housing market should continue cooling as 6%-plus 30-year mortgage rates and a significant pulling forward of home purchases in 2020 and 2021 work through the system. Finally, we think investors will be rewarded again in 2023 for focusing on the securities of companies that are expected to generate durable cash flows over the next several years, enjoy highly visible earnings streams, and have reasonable leverage profiles.

WINDS OF CHANGE

In reverence to the ancient adage "the only constant in life is change," we expect several new or updated storylines to ascend in 2023. First, the Federal Reserve will very likely move from an aggressive tightening stance to a wait-and-see posture in coming months. This seems baked into current market expectations. Second, the trajectory of China's reopening after three years of strict COVID-19 restrictions and widespread social unrest could be just as important as the path of Federal Reserve rate hikes in determining economic, policy, and market trends this year. The global impact of a Chinese Communist Party that remains committed to reopening the world's second-largest economy could be decidedly inflationary. This assumes some level of initial supply constraints due to a large wave of infections followed by a surge in demand as Chinese consumers resume normal spending, traveling, and work activity after a 36-month hiatus. Next, we expect the focus of equity investors will shift from the substantial contraction in the S&P 500 price-to-earnings multiple in 2022 to the magnitude of earnings growth (or contraction) in 2023. As seen in Chart 6, sharply higher interest rates caused the multiple on expected forward 12-month earnings for the S&P 500 to contract roughly 20% last year. The question in 2023 will be if (and by how much) the impact of those higher rates causes corporate profits to roll over. Expectations for

year-over-year fourth quarter S&P 500 earnings growth have deteriorated considerably over the last six months from 10.8% in late June to -3.1% in the first week of January. Year-over-year S&P 500 earnings growth is now expected to contract in both the first quarter (-1.5%) and second quarter (-2.2%) before resuming growth in the second half of the year. Lastly, we expect interest rate volatility to subside from very elevated levels in 2022 as the Federal Reserve most likely approaches a peak or pause in the current rate hike cycle in the first half of 2023. This should create a more favorable total return landscape for high quality segments of the bond market over the next several quarters.

OUTLOOK AND POSITIONING

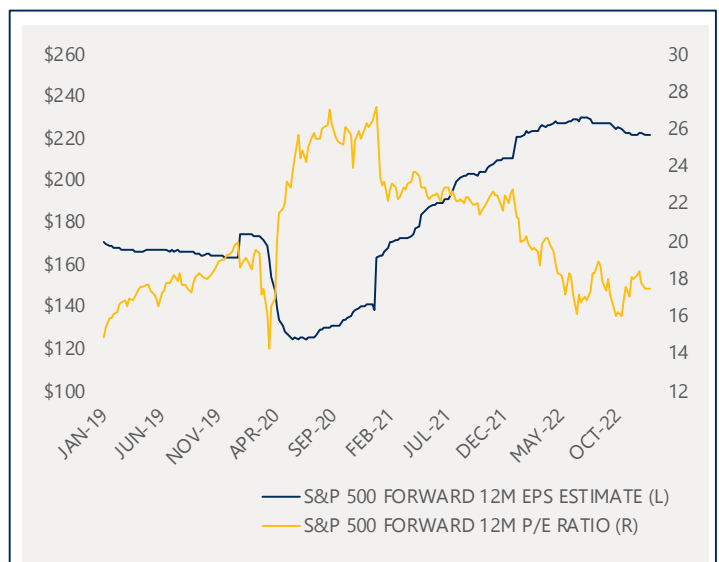
In the first half of 2023, we expect an economic environment in which inflationary pressures continue to steadily subside, but the labor market remains too strong for the Fed to justify easing policy. On the inflation front, restocked inventories, repaired global supply chains, and the lagged effect of cooling home prices should create a scenario in which the year-over-year consumer price index (CPI) falls from its current level near 8% to between 4% and 5% by the summer of 2023. This should allow Fed policymakers to slow the pace of rate hikes to the traditional quarter-point increments in the first half of 2023 before pausing at a level between 5.00% and 5.50%. Encouragingly for Fed Chairman Powell and his colleagues, inflation expectations remain tame. While slowing inflation should put a lid on additional Fed rate hikes next year, overall labor market strength is likely to push the timeline for Fed rate cuts into 2024. U.S. employers added 742,000 workers to their payrolls in the fourth quarter. This is a clear deceleration from the 1.10 million workers added in the June through September period, but significantly higher than the 542,000 jobs created in the final three months of 2019. Meanwhile, the number of open positions in the U.S. still exceeds the total number of unemployed persons in the labor force who want a job by roughly 4 million.

An environment of decelerating inflation, moderately higher policy rates, and a labor market that gradually slows from overheated territory should provide a decent backdrop for U.S. consumer spending and economic growth in the first half of 2023. It is for this reason that calls for an imminent recession and collapse in corporate earnings over the next 2-3 quarters seem premature to us. In this environment, we think a modest overweight to equity and credit should benefit diversified portfolios. Within both equity and fixed income allocations, we believe investors should focus on higher quality areas of the market. In fixed income markets, examples include shorter

duration high quality investment grade corporate bonds and agency mortgage securities. In equity markets, the healthcare sector, and selected parts of the industrial, financials, and materials sectors strike an attractive balance between quality, near-term cash flow visibility and reasonable valuations. We continue to believe investors should pay close attention to trends in U.S. wage growth because 1) Fed officials have told us they are focused on wages as a sign of their progress toward cooling the labor market and 2) compensation expense tends to be one of the most important components in the profit margin calculation of S&P 500 companies. If wage growth does not dramatically accelerate, and U.S. companies can pass through most of their total input costs, U.S. corporate profits could avoid the 10% to 20% contraction that typically occurs during business cycle slowdowns.

As we progress toward the second half of 2023, we expect the cumulative effect of what will likely be 500 basis points of Fed rate hikes to begin weighing on economic activity and corporate earnings. At that time, it could make sense to consider shifting diversified portfolios toward a more defensive posture depending on the prevailing level of interest rates, credit spreads, earnings expectations, and equity valuations.

CHART 6
S&P 500 EXPECTED EARNINGS AND P/E MULTIPLE



Source: Bloomberg. Data as of 12/31/22. Past performance does not guarantee future results.

ECONOMIC OUTLOOK AND INVESTMENT POLICY

ECONOMIC FACTORS	CURRENT OUTLOOK
U.S. GDP Growth	The median estimates for 1Q23 and 2Q23 annualized real U.S. GDP growth in a Bloomberg survey of forecasters are 0.1%, and -0.6%, respectively.
Federal Funds Rate	Fed funds futures markets currently project Fed officials will increase the policy rate to around 5% by June 2023 followed by several 0.25% rate cuts later in the year.
Inflation	Market-based expectations for average annual inflation over the next two years declined from 2.9% in early November to 2.1% in the first week of January.
Employment	According to NFIB survey data, the net proportion of U.S. small businesses with plans to hire dropped to 17% in December, the lowest level since January 2021.
Consumer Confidence	In January, the Univ. of Michigan's consumer sentiment index touched its highest level since April 2022 amid sharply lower gas prices and more stable interest rates.
Oil	A policy pivot in China toward economic reopening and OPEC's October production quota cuts could push WTI crude oil closer to \$90 per barrel in coming months.
Housing	A doubling in 30-year mortgage rates in 2022 should continue to weigh on mortgage originations, building permits, new home starts, and housing sales in 2023.
International Economies	Real GDP growth in 2023 is expected to be 0.4% in the U.S., 0.0% in the euro zone, 4.8% in China, and 1.6% in Japan based on a recent Bloomberg survey of forecasters.

	MINIMUM	NEUTRAL	MAXIMUM	CURRENT OUTLOOK
FIXED INCOME				
Core Bonds				In late August 2022, we recommended a modest increase to fixed income and a shift in the composition of bond allocations in client portfolios. Short-term Treasury Inflation-Protected Securities (TIPS) were replaced with short-term Treasuries, credit exposure was trimmed, and duration was reduced. This week (January 17-20), we further increased our allocation to short-term Treasuries in our three most conservative portfolios by reallocating proceeds from the sale of a merger-arbitrage strategy. If signs of a substantial deterioration in U.S. labor market data or corporate profit expectations emerge, we would likely consider further increasing our recommended allocation to high-quality segments of the fixed income world.
TIPS				
Non-Investment Grade				
International				We believe most fixed income portfolios should target a neutral duration relative to benchmark given how aggressive the Federal Reserve has been with policy tightening over the last nine months and growing signs of disinflation across the economy. The risks of a downside move in yields seem more balanced against further increases in yields than at most times over the last several years. Depending on the path of Treasury yields, it may make sense to selectively add duration exposure depending upon a portfolio's objective. Treasuries remain preferred over agencies given compressed spreads in the agency market. Treasuries also remain favored over corporates when purchasing maturities less than one year, given corporate illiquidity in this maturity range.

	MINIMUM	NEUTRAL	MAXIMUM	CURRENT OUTLOOK
EQUITIES				
Large Cap				In our view, a moderate equity overweight remains justified given the Federal Reserve is likely near the end of its rate hike cycle and inflationary pressures are likely to continue cooling off in the first half of 2023. The nearly 30% contraction in the S&P 500 forward 12-month price-to-earnings ratio from 21.5 in the first week of January to 15.2 mid-October likely discounted most of the economic and profit damage associated with a moderate recession. An environment of decelerating inflation, high, but relative stable policy rates, and a labor market that gradually slows from overheated territory should provide a decent backdrop for U.S. consumer spending and economic growth in the first half of 2023.
Mid Cap				
Small Cap				
Developed International				We expect investors to be rewarded in 2023 for focusing on higher quality areas of the equity market with above average near-term cash flow and earnings visibility. We think this can be supplemented by selective exposure to sectors and industries exposed to productivity/automation, commodity prices, increases in capital expenditures, and the so-called "re-shoring" of global supply chains. As we progress toward the second half of 2023, we expect the cumulative effect of what will likely be 500 basis points of Fed rate hikes to begin weighing on economic activity and corporate earnings. At that time, it could make sense to consider shifting diversified portfolios toward a more defensive posture depending on the prevailing level of interest rates, credit spreads, earnings expectations, and equity valuations.
Emerging Markets				

	MINIMUM	NEUTRAL	MAXIMUM	CURRENT OUTLOOK		
ALTERNATIVES*						
Gold	CAP PRES	IWSG	BAL	GWSI	GROWTH	In late August, we recommended that hedged equity allocations be sold in client portfolios and reallocated to a combination of short-term Treasuries and cash. This week (January 17 - 20), we recommended that merger-arbitrage allocations be sold and reallocated to short-term Treasuries. The ultra-low interest rate world of the last 12 years appears to be shifting to one in which market interest rates establish trading ranges meaningfully higher than existed for most of 2009 through 2021. In this environment, we expect the risk-adjusted return benefits of most alternative strategies to subside especially compared to assets traditionally viewed as risk-free including cash and short-term U.S. Treasury notes.
Hedged Equity						
Arbitrage						

Although gold did not produce positive absolute returns in 2022, it did hold up considerably better than both broad equity and fixed income indexes. This helped limit the downside of diversified portfolios with exposure to equity market drawdowns. We continue to believe a moderate allocation to gold should benefit portfolios given its low historical correlation with stock prices and its tendency to behave as a safe haven asset in periods of equity market stress. Recent weakness in the U.S. dollar as the Federal Reserve likely approaches a peak or pause in its current rate hike cycle should also provide a tailwind for gold. Our alternatives allocations, as seen in the table to the left, are designed to decrease the overall risk profile of our five investment objective-based portfolios (CAP PRES, IWSG, BAL, GWSI, and GROWTH).

The above minimum/neutral/maximum recommendations represent MainStreet Advisors' current positions relative to our Strategic Asset Allocation ranges. Views expressed have a 6-12 month horizon and are those of the MSA Investment Committee.

*Cap Pres: Capital Preservation, IWSG: Income with some growth, Bal: Balanced, GWSI: Growth with some income

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DEPOSIT	INSURED	VALUE	GUARANTEED
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