



2022 Market Review

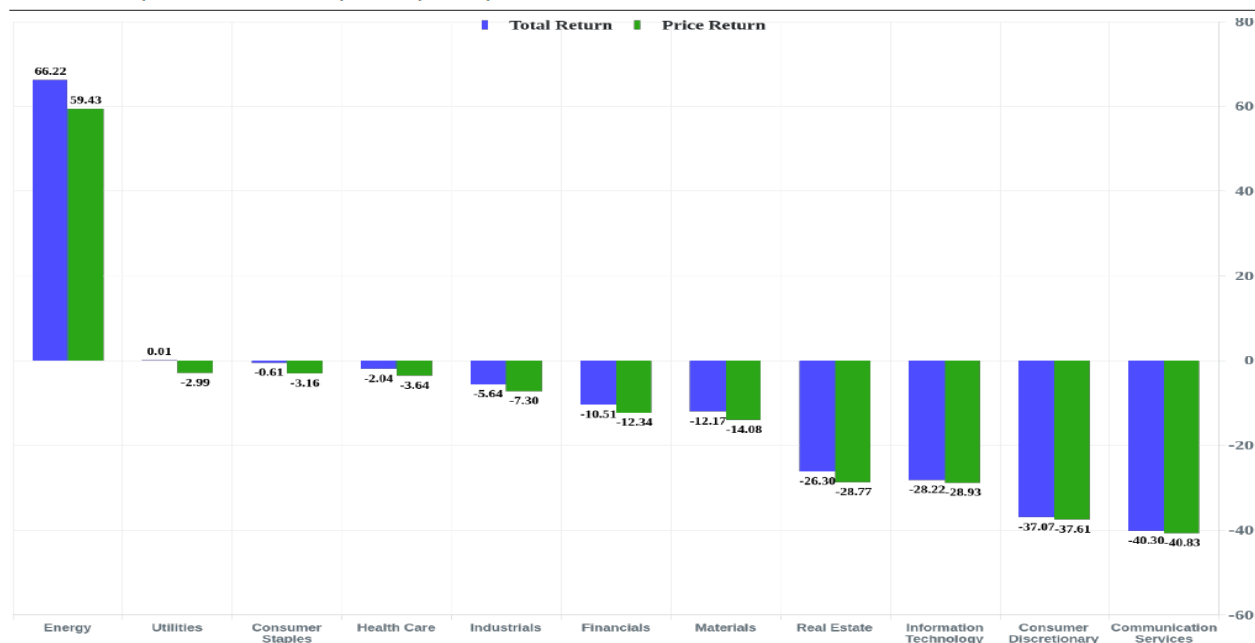
Winston Churchill once said “I am always ready to learn, although I do not always like being taught.” This is likely how many investors felt about the financial markets in 2022.

2022 will undoubtedly serve as an important reminder of the broad reaching influence that monetary policy decisions hold on the financial markets. Investors had become accustomed to the Federal Reserve providing support to the markets and limiting downside during periods of crisis. As a result, the term “The Fed Put” had been coined, meaning that the Federal Reserve would always be there to intervene by keeping rates low and liquidity ample if pain developed in the markets. The result was a lack of attention to fundamentals and valuations, as they had been deemed irrelevant by many investors. Those investors were reminded of the lesson that those metrics do matter, even if it is not always clearly visible in the short-term. It was a painful, but important reminder for many investors that will not soon be forgotten, however it’s certain that they did not enjoy being taught this lesson.

The S&P 500 posted a disappointing loss of 18.1% for the year, and if dividends are removed, the index was down more than 19.4%. These headline results don’t fully represent the turmoil that was felt in the equity market. The Energy sector lead the market with a positive return of over 66%. When compared to the worst performing sector, Communication Services, there was a return differential of 106%. At the start of the year, it would have been hard to imagine a situation when the difference between the best and worst performing sectors was even half of what was the actual result of 2022.

iShares Core S&P 500 ETF vs iShares Core S&P 500 ETF

Total Return
 31-DEC-2021 - 30-DEC-2022 | Economic Sector - GICS - Multi Sourced | Excluded: Multiple Securities | U.S. Dollar



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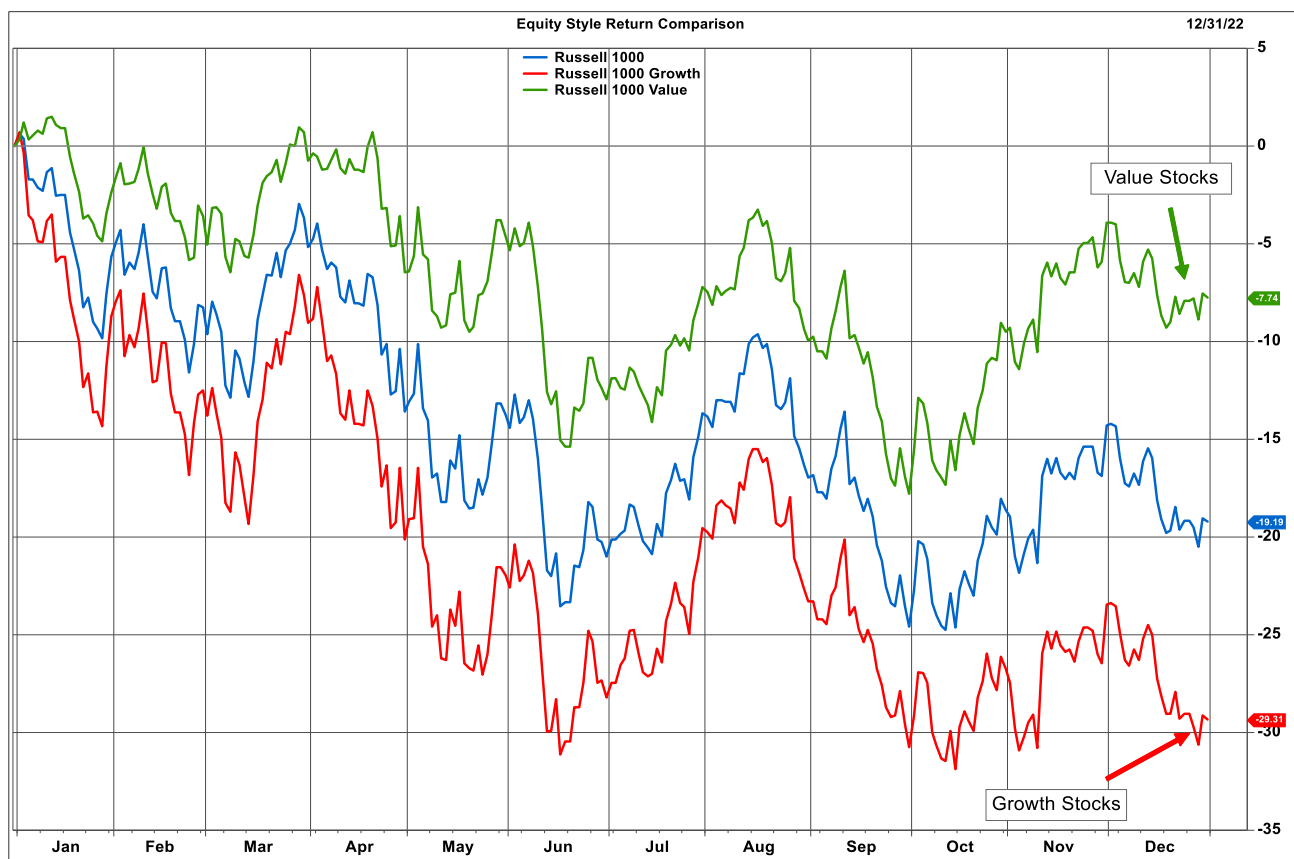
Total Return

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Broadly speaking, defensive and value based areas of the market held up better, while cyclical and growth style names were punished. The three worst performing sectors make up 43% of the S&P 500, while the

three best performing sectors make up only 16% of the index. If the disproportionate weighting of the mega-cap growth stocks is removed from the index, the S&P 500 was down only 11.5% on an equal-weighted basis.

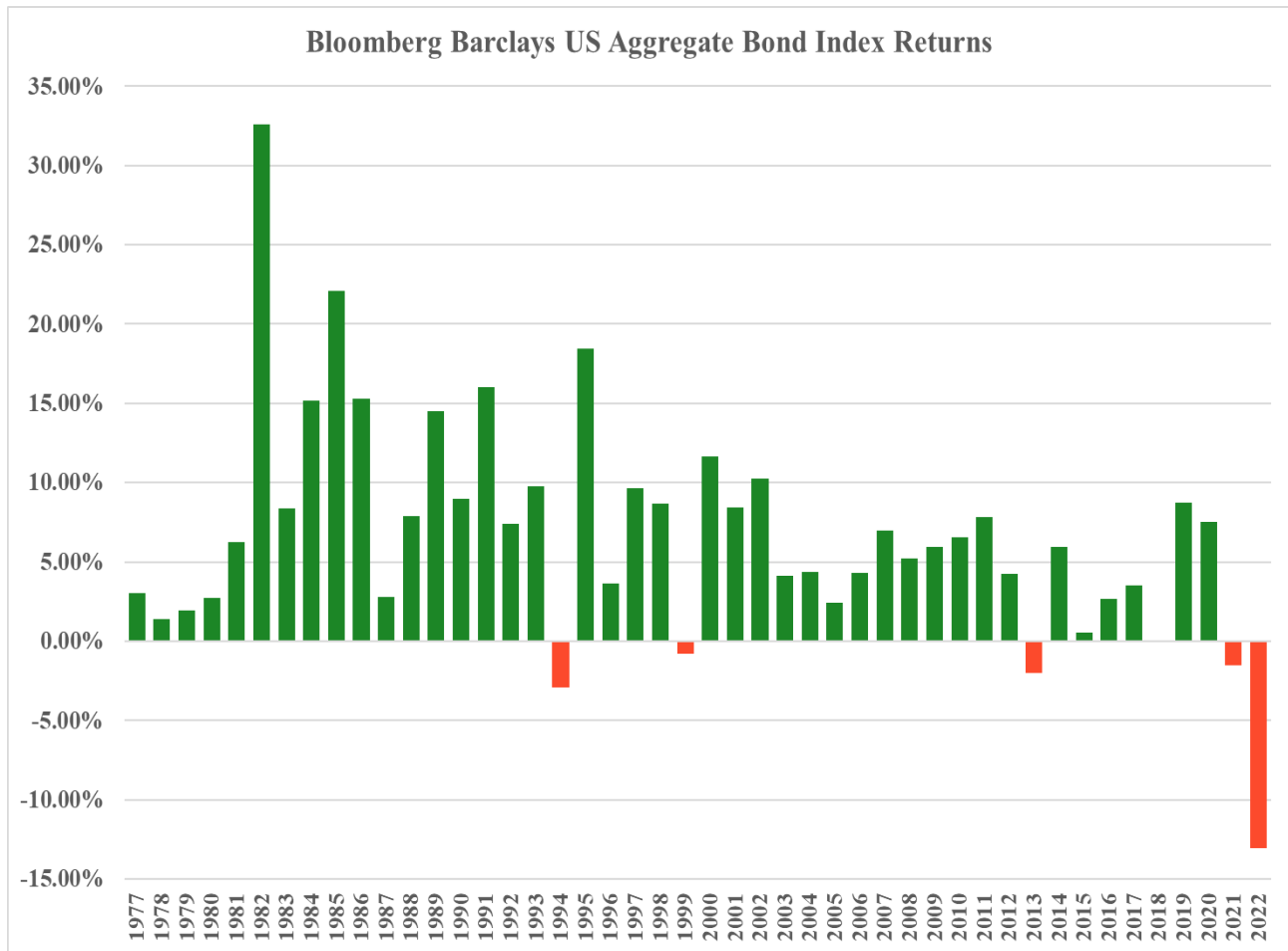
One of the prominent forces behind the poor performance of growth stocks was the higher interest rate environment that developed throughout the year. The Federal Reserve commenced with the tightening of financial conditions in March in response to rapid inflation through a series of interest rate increases and allowing the bonds that were purchased through Quantitative Easing (QE) to roll off their balance sheet. Akin to a long duration bond, growth stocks are more sensitive to changes in interest rates than value stocks. A greater proportion of their earnings will occur in the future, and higher current interest rates lowers the value of those future earnings when performing a discounted cash flow based valuation. In short, investors are less willing to wait for a growth stock's future earnings when there is an attractive current risk-free return.



As painful as the equity markets were, bear markets have occurred in the past, and they will certainly occur again in the future. This is the trade-off that equity investors make and accept in pursuit of higher long-term returns compared to investments with lower risk profiles. Bond investors however did not benefit from this trade-off, and were stunned with what unfolded throughout the year. This was the true anomaly of 2022.

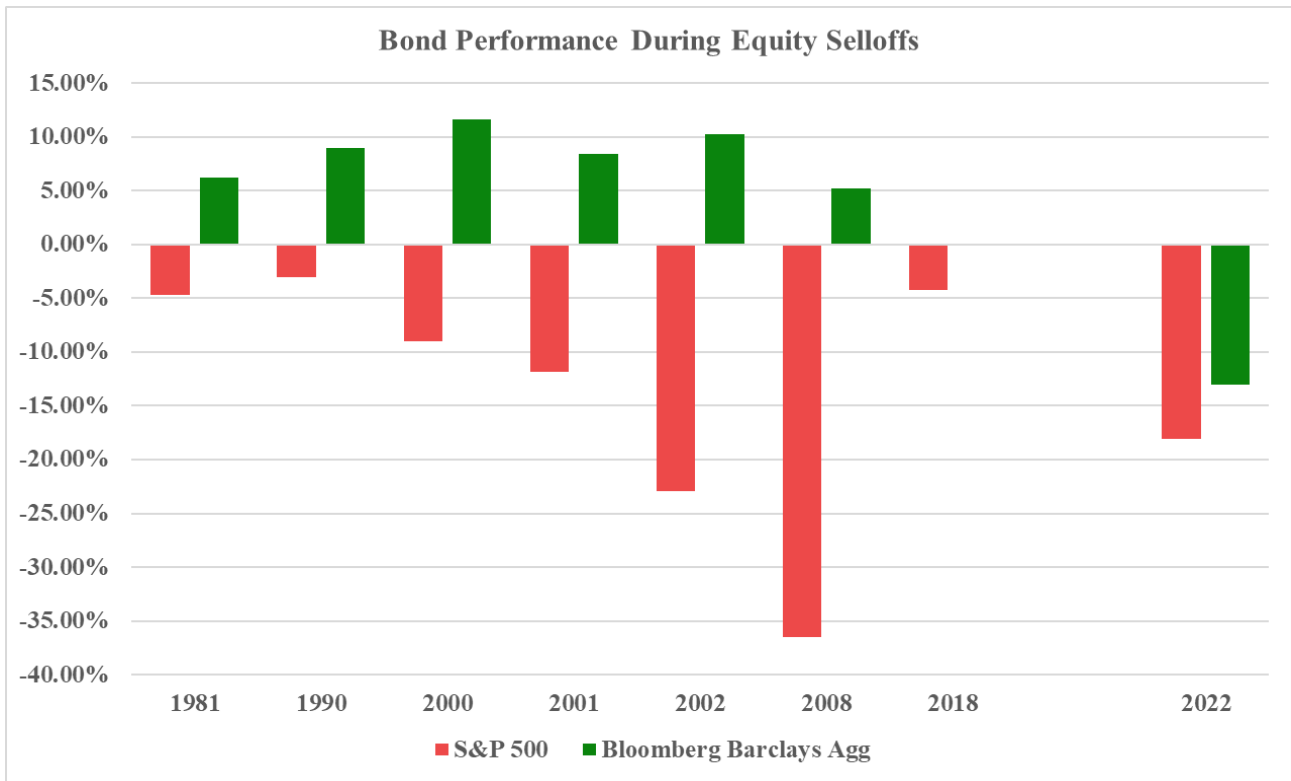
The Bloomberg U.S. Aggregate Bond Index generated a 13% loss during the year. This was the worst return on record since the inception of the index in the late 1970's. No other year has generated even a 5% loss, let

alone greater than a 10% loss. The culprit behind the historic bond market losses was the rapid rise in interest rates during the year.

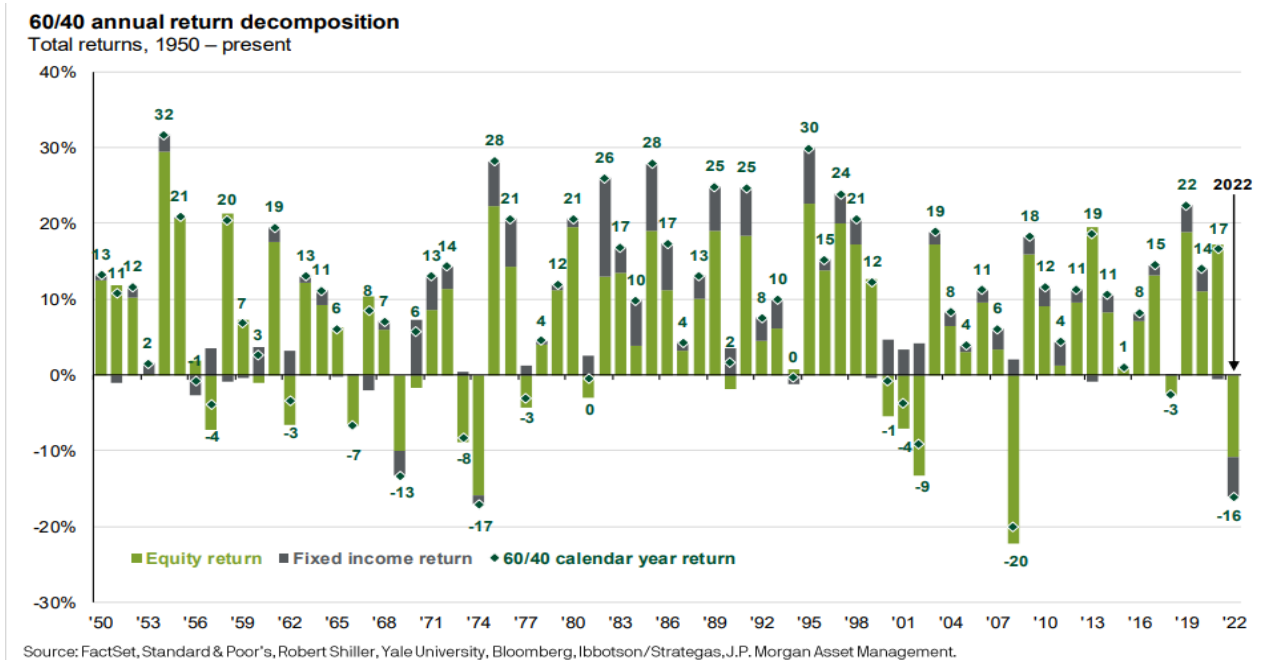


The yield on a 10-year US Treasury bond started the year at 1.5% and reached a peak of more than 4.2% before ending the year at 3.8%. If a 10-year treasury was purchased at the beginning of the year and sold at the peak in yields, that bond would have generated a price loss that was greater than 20%. It was the highest quality bonds that experienced the greatest losses during the year. Junk bonds weathered the rise in interest rates better than investment grade bonds due to their higher coupon rates and lower sensitivity to rate changes. The path that generated the losses in the bond market was not a smooth nor controlled descent. 2022 exhibited volatility in the bond market the likes which we haven't witnessed since the 2008/2009 Financial Crisis. There were 46 trading days when the yield of the 10 year treasury changed by at least 10 basis points. For perspective, this means that almost one out of five trading days in 2022 had the 10 year treasury experiencing yield changes of 10 basis points or more.

In isolation, either the stock or bond market returns would have made 2022 a memorable year. The immense difficulty of 2022 was that both the significantly negative stock market and bond market returns happened simultaneously. Historically, during periods of equity market stress, the bond market has been there to provide diversification and support to portfolios. In every past significant equity market decline since 1981, the bond market has generated a positive return. This negative correlation between the two markets failed in 2022.



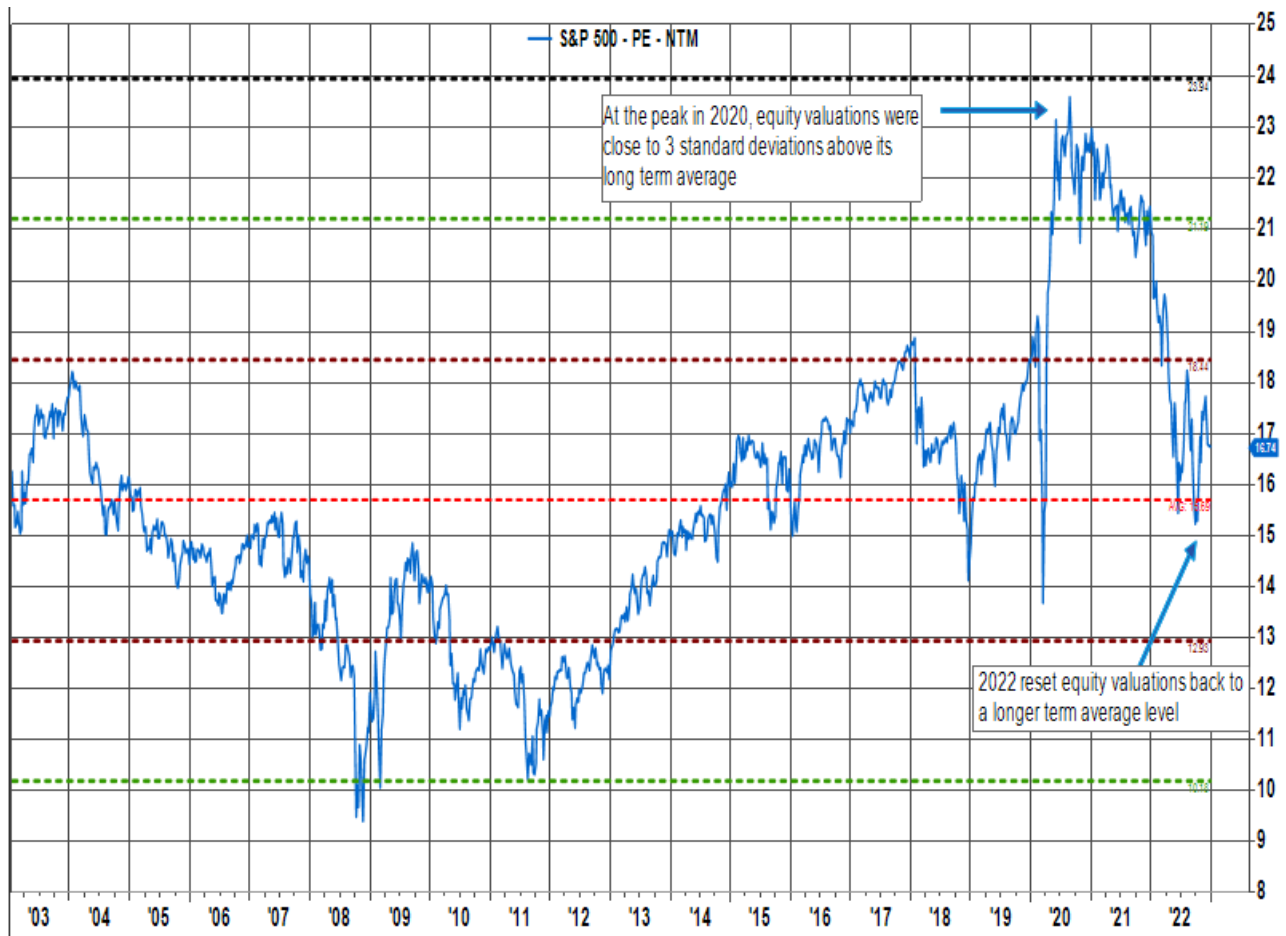
This breakdown led to diversified stock and bond investors experiencing the third worst results on a 60% equity/40% fixed income portfolio since 1950, with a loss of 16%. Only the results in 1974 (17%) and 2008 (20%) were worse. It should be noted that the negative equity market return in 2008 was almost double that of 2022, but the 60/40 portfolio return in 2008 was only 4% worse than what was experienced last year.



2023 Outlook

Controlled burns are useful tools employed by state and federal forest services to remove old vegetation to make room for new growth. They help prevent the spread of pests and invasive plant species, and consume excess fuel such as dead trees and other debris, reducing the potential intensity of wildfires. Of course, there is always the risk that weather conditions can shift quickly, causing the fire to burn outside of the planned perimeter and threaten the environment it was hoping to protect.

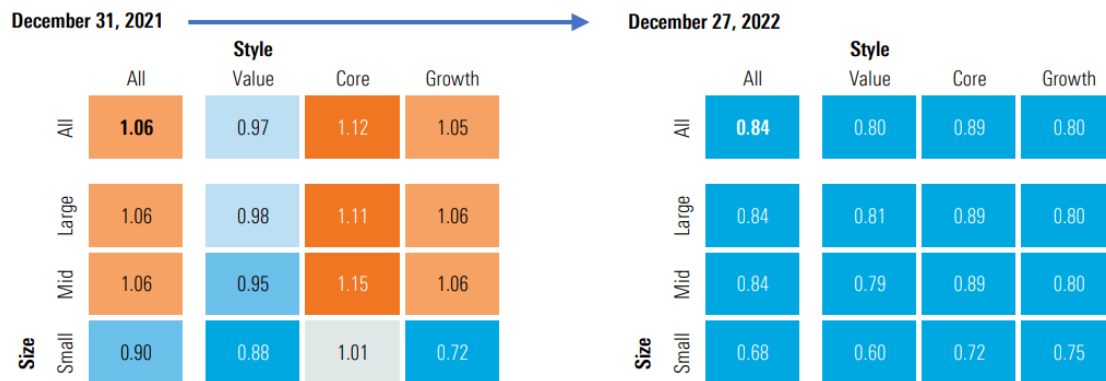
The Federal Reserve's "controlled burn" that began, belatedly, in 2022, certainly helped rid the markets of many of the excesses that were fueled by unsustainable negative real interest rates and massive amounts of monetary and fiscal stimulus. Day traders in meme stocks, NFTs and crypto are returning to their old day jobs, price/sales ratios of unprofitable companies have collapsed, and the stock market's traditional valuation



measures have retreated back to within historical norms. The S&P 500 now trades at just under 17 times forward earnings estimates, down from over 22 times at the market's peak. Morningstar's estimate of the market's current price / fair value has dropped to 0.84 (16% under-valued), which is down from 1.06 (over-valued) at the end of 2021.

Change in Morningstar Equity Research Coverage Price/Fair Value Estimates Over the Course of the Year

All categories are now trading at various degrees of undervaluation.



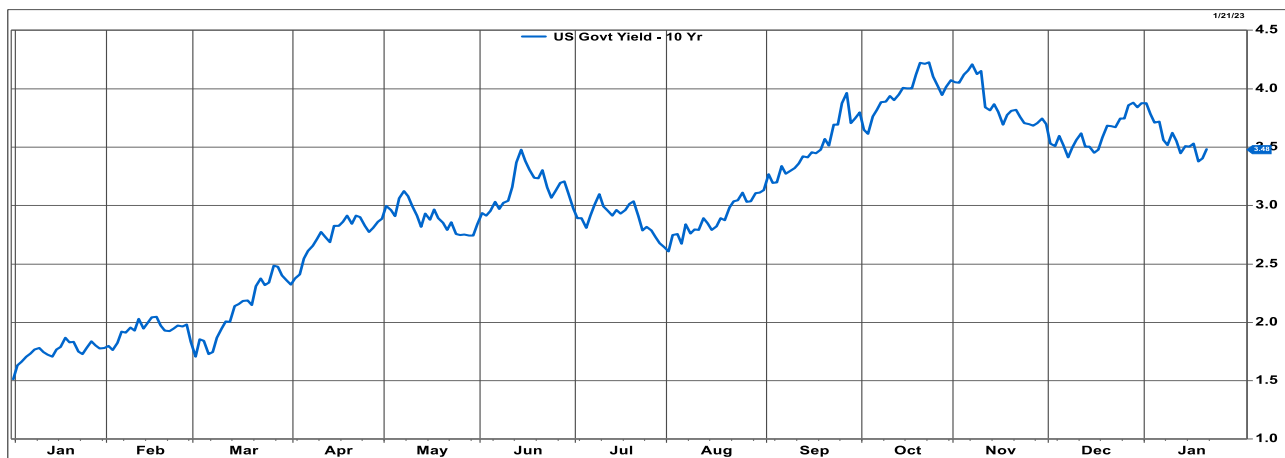
Source: Morningstar, Data as of Dec. 27, 2022.

Much of the air has been taken out of the mega-cap growth stocks that drove the market averages skyward following fiscal and Federal Reserve stimulus. Alphabet has fallen to \$91 from its high of \$152. Amazon currently trades below \$100, down almost 50% from its high of \$190. The same is true of Nvidia, whose current price of \$174 is barely half of its peak price of \$340 just a year ago. Tesla has lost 68% of its market value over the last year, with most of that decline occurring in the last four months. On balance, it's fair to say that the equity market begins the year in a much better place than it was a year ago, at least with respect to valuations.

In the real economy, the annual inflation rate has fallen from its 40-year high of 9.1% in June to 6.5% in December, raising hopes in some quarters that the Fed might "pivot" from its current course and begin to lower rates sooner rather than later. The bad news is that inflation remains well above the Fed's long term target of 2.0%.

Real GDP growth rose to 3.2% in the 3rd quarter, following two consecutive quarters of economic contraction, and above the consensus estimate of 2.9%. Jobs gains continue to be steady and the unemployment rate has fallen back to its pre-COVID low of 3.5%. The bad news is that the lag effects of the rate hikes already implemented by the Fed have yet to be fully felt, and good news on the jobs front is considered bad news by the Fed in its battle to bring inflation under control.

Despite the strong results for the economy and jobs, the yield on the 10-year U.S. Treasury has fallen from a high of 4.2% in October to around 3.5% currently, providing some welcome relief for bond investors. Stocks



have rallied 12% from their October lows, as well, but we view the recent strength as a cyclical rally within a bear market that has yet to run its course.

What Others Are Saying

Despite the recent series of encouraging reports on inflation, interest rates, jobs and the economy, Wall Street is beginning the year with low expectations for equities and the economy in general. Strategists and economists see a Fed induced economic slowdown, likely leading to a recession, causing corporate earnings to collapse. There are those who cling to the idea that the economy can avoid a recession this year, but even they acknowledge that the path to a soft landing has narrowed, and the risks to their outlook are skewed to the downside.

Morgan Stanley is in that latter group, with a year-end S&P target of 3,900, almost identical to its current level, but warning that getting there “will not be a smooth ride.” Michael Wilson, their Chief Equity Strategist, writes that, “We remain highly convinced that 2023 bottom up earnings estimates are materially too high.” He sees the S&P 500 falling to 3,000-3,300 (minus 15%-23%) in early 2023, breaking the October 2022 lows, as the market fully discounts the growing risk to earnings.

According to Yardeni Research, the current consensus among analysts is that S&P earnings for 2022 will come in \$215, barely 3% above 2021’s results. Expectations for 2023 are that earnings will rise another 5% to \$225. Factset’s estimates for ’23 are even higher at \$228, which would represent a 6% increase over 2022’s level. Either source is reflective of expectations that are unrealistic if the economy were to slow significantly, which is all but certain, or slide into recession, which is increasingly likely. Morgan Stanley has lowered its 2023 earnings estimate to \$195, which is 13% below the current consensus and 9% below 2022’s results. And even this lower estimate may not be achievable, as earnings declines have averaged 16.4%, on average, during the last ten recessions, and the average market decline has been more than 30%.

Recession	EPS Degradation	P/E Compression	S&P 500 Drawdown
Aug 1957 – Apr 1958	-12.1%	-18.5%	-21.6%
Apr 1960 - Feb 1961	-12.4%	-22.1%	-5.2%
Dec 1969 – Nov 1970	-17.0%	-21.8%	-36.1%
Nov 1973 – Mar 1975	18.4%	-61.9%	-48.2%
Jan 1980 – Jul 1980	7.1%	-26.8%	-17.1%
Jul 1981 – Nov 1982	-11.8%	-19.7%	-27.1%
Jul 1990 – Mar 1991	-39.7%	-7.7%	-19.9%
Mar 2001 – Nov 2001	-25.9%	-27.7%	-49.1%
Dec 2007 – Jun 2009	-50.1%	-38.0%	-56.8%
Feb 2020 – Apr 2020	-20.3%	-15.5%	-33.9%
Mean	-16.4%	-26.0%	-31.5%
Median	-14.7%	-22.0%	-30.5%

Sources: Bloomberg, NBER.

PIMCO, the largest active bond manager in the world, writes that “tighter financial conditions will likely cool inflation and lead to a recession across developed markets.” In this scenario, they consider bonds to be attractive again, with higher yields and lower expected volatility for the “highest quality assets,” while “equities have become less attractive.”

Northern Trust presents a more optimistic view than most, while acknowledging that there is “a downside skew to macroeconomic outcomes,” and “some additional downside risk to corporate fundamentals, as well.” Their optimism is based on investor sentiment improving as inflation readings improve, Fed policy rate increases pausing, and hopes that a possible recession will be relatively shallow and short.” They go on to say, “We think equity investors may be willing to ‘look across the valley’ of weak fundamentals if it appears short lived.” It seems to us that *hopes* and *ifs* and assumptions about what investors *may* do are not a sound basis for optimism.

The chief economist at Moody’s has also moved into the “soft landing” camp, citing continuing strength in the job market data and unemployment at a 50-year low.

Back in April of 2022, JPMorgan CEO Jamie Dimon warned of “storm clouds” gathering on the economic horizon, and upgraded his forecast to an “economic hurricane” in June, largely due to the Fed’s increasingly hawkish policies and Russia’s invasion of the Ukraine which, he said, could drive the price of oil up to \$150 or \$175 per barrel. He has recently cast some doubt on his meteorological skills, saying in a recent interview that he should not have used the word, hurricane, and is now calling for a mild recession later this year. We would also note, for the record, that oil prices peaked at just under \$120/barrel, and have recently fallen back below \$80, which is below their pre-invasion levels.

In their 2023 outlook, Goldman Sachs analysts noted that disagreements exist within their own circles. Bill Dudley, former Goldman partner and president of the New York Fed, puts the odds of a recession this year at 70%, while Jan Hatzius, Goldman’s chief economist and head of global research, says it’s only 35%. Much like JPMorgan, Goldman analysts pivoted to the science of meteorology in advising their clients “facing the fog of uncertainty to avoid unnecessary lane changes, and allow extra time to reach their destination.” How cute is that?

Our conclusion is that highly paid analysts purporting to be weathermen is a very bad sign for the markets, indeed.

William J. Bernstein, the founder and principal of Efficient Frontier Advisors (minimum account size: \$25-million, and not accepting new clients at this time), and the author of *The Four Pillars of Investing* and numerous other books, once said this:

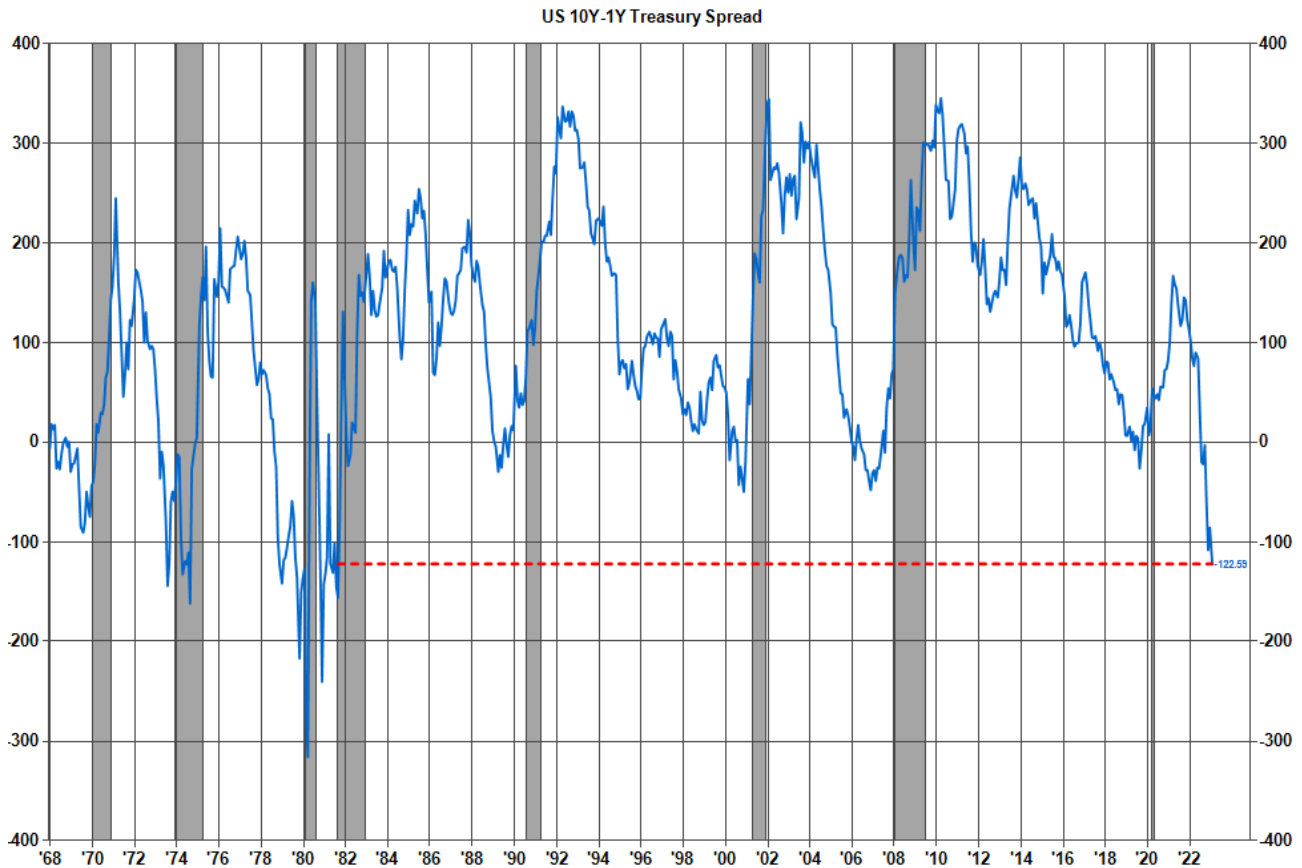
“There are two kinds of investors: those who don’t know where the market is headed, and those that don’t know that they don’t know. Then again, there is a third kind: those who know they don’t know, but whose livelihoods depend on appearing to know.”

Recession Is Our Base Case

At his press conference after the central bank’s December policy meeting, Fed Chair Jerome Powell said, “I don’t think anyone knows whether we’re going to have a recession or not. It’s just unknowable.”

Perhaps that is so, in the sense that no one can predict the future with any certainty. But we do have history as a guide, and economic indicators that have foretold past recessions with reasonable accuracy that are now flashing red.

The U.S. Treasury yield curve first inverted in July 2022 when short term rates rose above long term rates, and has become more deeply inverted as the pace of rate hikes by the Fed quickened. Different analysts use

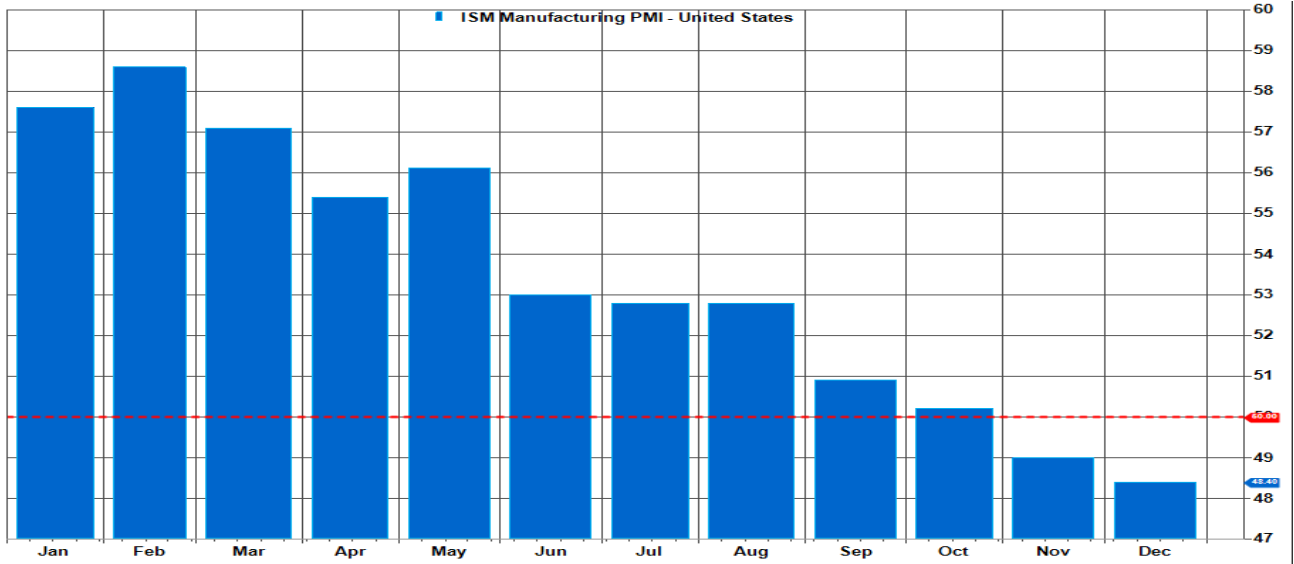


different proxies for short and long term rates, but the most useful guide in anticipating the onset of recessions has been the spread between the 10-year and 1-year Treasury rates, and that spread is now more deeply inverted than it has been since the early 1980s, which was also the last time inflation was as high as it is now. We have shown this chart in every *Outlook* we have written in the last 6-9 months because it shows clearly that, **in the last fifty years, the U.S. economy has never experienced a recession that was not preceded by an inversion of the yield curve.** And more directly to the point, at least for the purpose of formulating an outlook under current conditions, **we have never experienced an inversion of the yield curve that was not followed by a recession.** To plan for any scenario that did not include a recession in the near future would be to say – “this time is different.” Given the indicators as well as the Fed’s stated intentions, that sounds more like a prayer than a plan.

Secondary Indicators Are Ominous, As Well

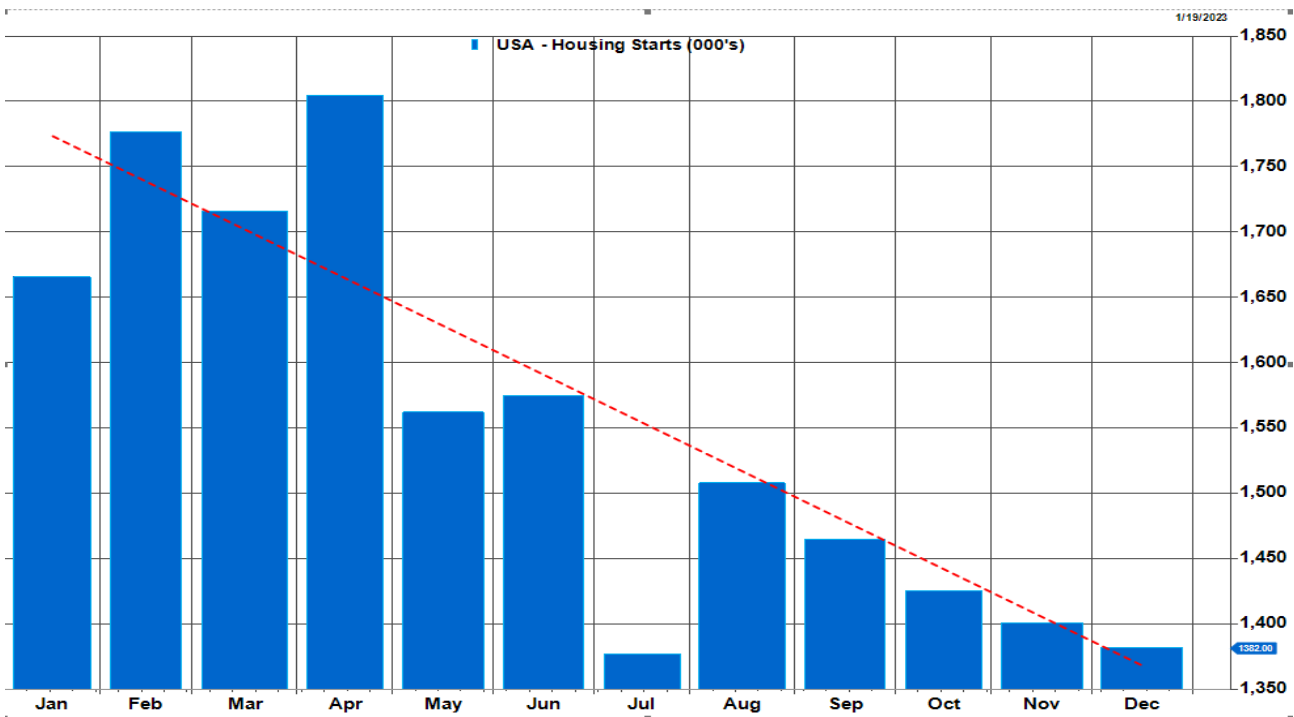
The Institute for Supply Management (ISM) performs a monthly survey of supply chain managers, and senior executives at more than 400 companies across 19 industries, which are weighted by their contribution to GDP. Its findings are reported in a monthly Purchasing Managers Index (PMI), which is an index of the prevailing direction of economic trends in the manufacturing and service sectors. An index reading of

greater than 50 is indicative of a manufacturing sector that is growing. The chart, below, evidences a manufacturing economy that has been growing at a decelerating pace throughout the last year, and actually

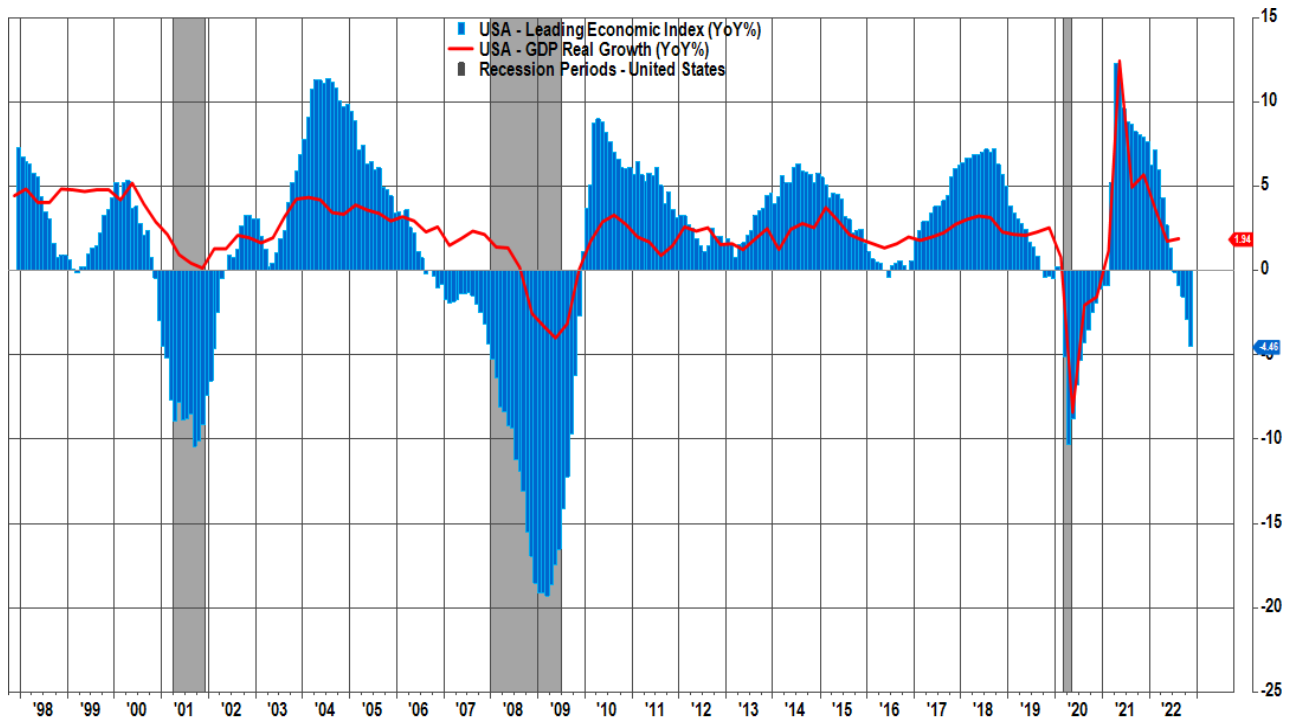


began to contract in November. The December reading of 48.4 was the lowest since May 2020, when the Index registered 43.5 in the depths of the COVID recession. Separate indices in December for New Orders, Production, Backlog and Supplier Deliveries all evidenced contraction, and were below the levels reported in November. The Employment Index was the only one that remained above 50, which is, ironically, more bad news for the Fed.

Housing starts, another leading indicator and sensitive to changes in interest rates, continue to decline on a month/month basis.



In fact, the Conference Board’s index of Leading Economic Indicators (LEI), comprised of a wide variety of manufacturing, housing, labor, interest rate and financial market data, fell sharply in November and has been in a steepening down trend since the middle of last year.

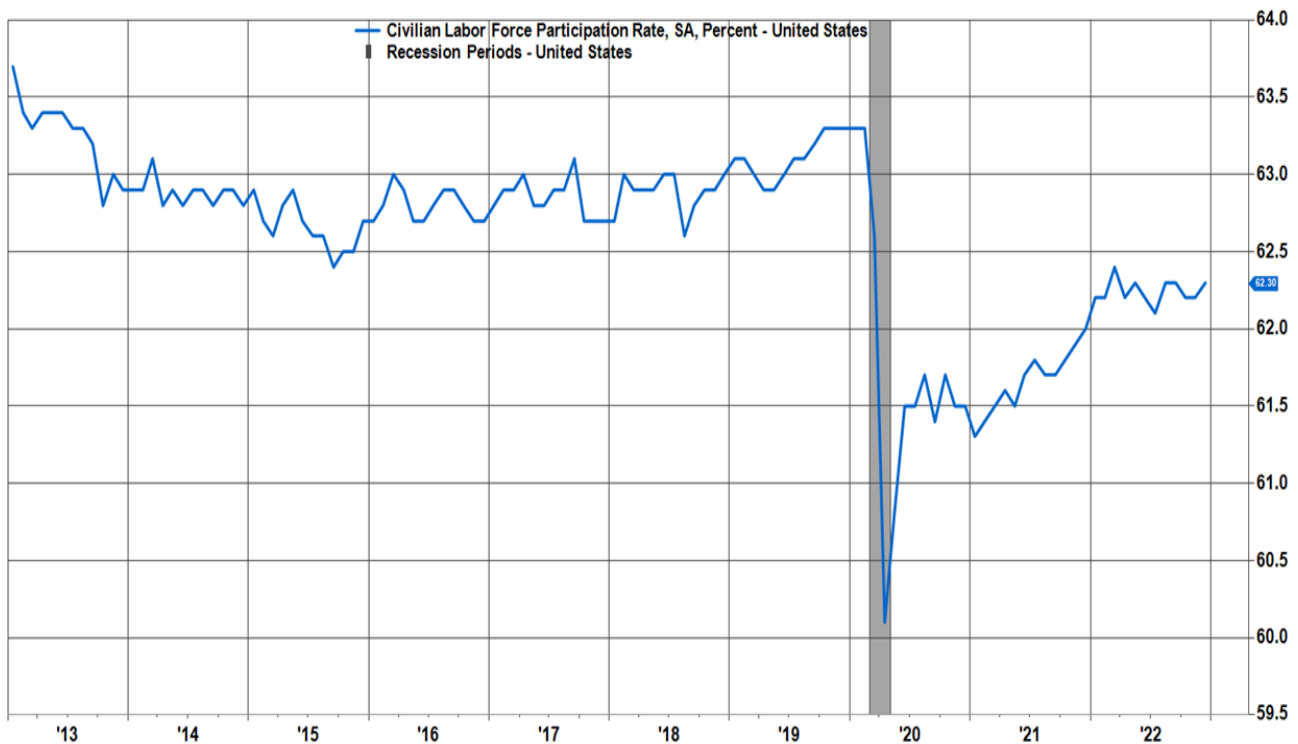


Listen to What the Fed Is Saying

Those who still cling to the belief that the Federal Reserve can accomplish its mission of reining in inflation while avoiding a recession, most often point to a strong labor market as the basis for their optimism. How can the economy slide into recession when we are at full employment and the number of job openings is higher than it was three months ago? Hourly wage gains have been steady on a month-over-month basis since March 2022 and consumer confidence continues to rise, as it has throughout most of the post-COVID period.

The problem is that the Fed views strong markets – including a strong labor market – as major obstacles to returning inflation back to its long term 2% target. What the soft landing adherents point to as the basis for their optimism, is precisely what the Fed points to as the crux of the problem. The Fed cannot rein in inflation while maintaining unemployment at its current level.

The wage gains that ensue from an economy at full employment risk increasing demand in an economy that is already supply-constrained. The Fed’s mission is to destroy demand to the extent necessary to bring supply and demand back in balance, not only in the markets for goods and services, but in the labor market, as well. The Fed is hampered in this instance by the fact that there simply aren’t enough workers. The labor force participation rate has not fully recovered to pre-pandemic levels, and the labor force itself is not growing fast enough to replace workers who are leaving or retiring.



The Fed’s stated objective, in short, is to do whatever is necessary to cool jobs and wage growth. It has stated explicitly that it is committed to higher unemployment and a weaker labor market, and has also warned that “any unwarranted easing in financial conditions would complicate (the Fed’s) efforts to restore price stability.”

What might the Fed consider to be an “unwarranted easing in financial conditions?” Given that that warning was issued in the wake of the 4th quarter rallies in both the stock and bond markets, we would certainly include higher stock prices and lower long term interest rates to be among the Fed’s concerns. Strengthening stock markets and falling bond yields make financial conditions easier, as does the weaker dollar that generally accompanies them. We believe that the Fed’s strategy is to continue to squeeze liquidity out of the economy and the markets by driving the Fed Funds rate to 5% or higher, subduing risk appetites and denying cheap capital to companies to slow growth and hiring, until the number of jobs falls to a level that is more in balance with the supply of workers that are available to fill them. According to the latest JOLTS (Job Openings and Labor Turnover Survey) report, there are currently 1.7 open jobs for every unemployed worker. That is down from 2:1 ratio at its peak, but it is also indicative of how far we are from achieving the balance that the Fed seeks.

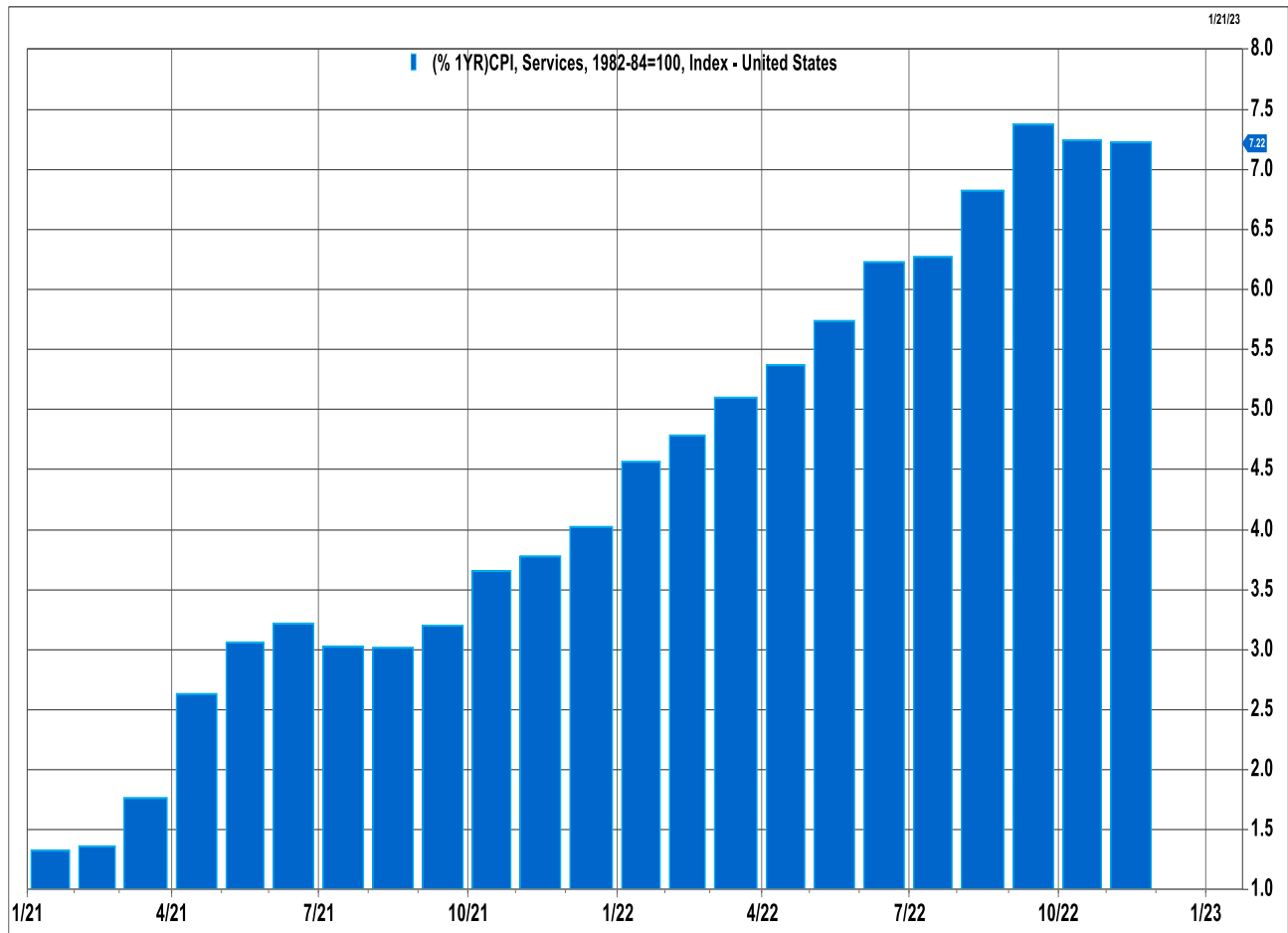
Simply put, we think that the Fed waited so long to act decisively that a soft landing scenario was never a realistic goal, and there are now just two possible outcomes: recession or inflation. The Fed has stated clearly and repeatedly that only one of these outcomes – inflation - is unacceptable.

Inflation Expectations

The Consumer Price Index fell to 6.5% in December, the sixth consecutive month of decline. The consensus is that inflation will continue to fall to near 3.5% by the end of 2023 if the economy slows, as we expect.

Goods inflation is slowing in reaction to the Fed’s rate increases. Food price growth slowed for the third straight month, and gasoline prices actually fell 9.4% in December, and are below their levels of a year ago. Goods inflation excluding food and energy has fallen in each of the last three months, and is now down to an annual rate of 2.1%.

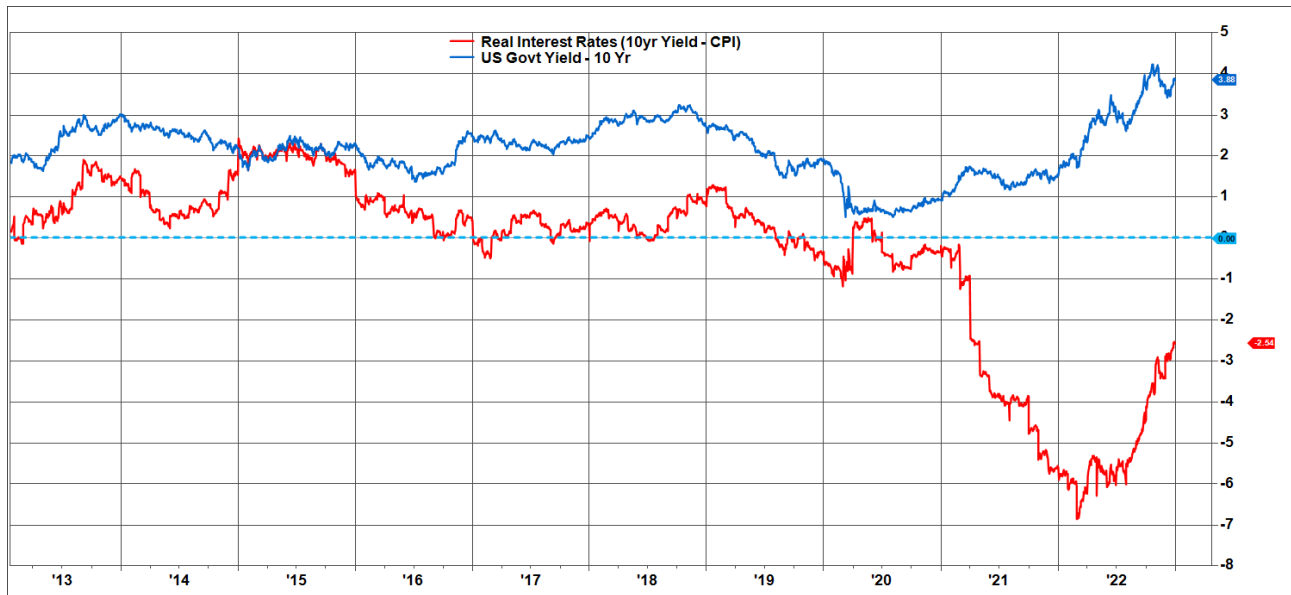
Services price inflation remains persistently high, however, and has not yet begun to decline. Instead, services price inflation rose to 7.5% in December, the highest since August of 1982. Given that the U.S.



economy is increasingly service-based, and service industries are much slower to react to Fed rate increases, we think that the road to the Fed’s 2% inflation target will be longer and bumpier than most expect. The Fed may reduce future increases to 0.25%, down from the 0.50-0.75% levels of recent months, but we do not expect a pause in - or a pivot from – its current course.

Long Term Interest Rates

While short term rates continue to rise and the Fed tightens, long term rates are likely to remain in a tug-of-war between recession and inflation. Even as nominal rates rose sharply over the last year, rising inflation caused *real* rates to become even more negative. An economic slowdown should put downward pressure on



nominal rates, but negative real rates aren't sustainable on a long term basis, particularly when they're so deeply negative. Negative real rates are also a form of easing which would be contrary to the Fed's current intentions. Short term, we have no real conviction as to the direction of long term rates, and will respond to circumstances as they present themselves. Longer term, we expect that there is a serious risk of rising market rates until it is clear that the Fed's 2% inflation target is an attainable goal.

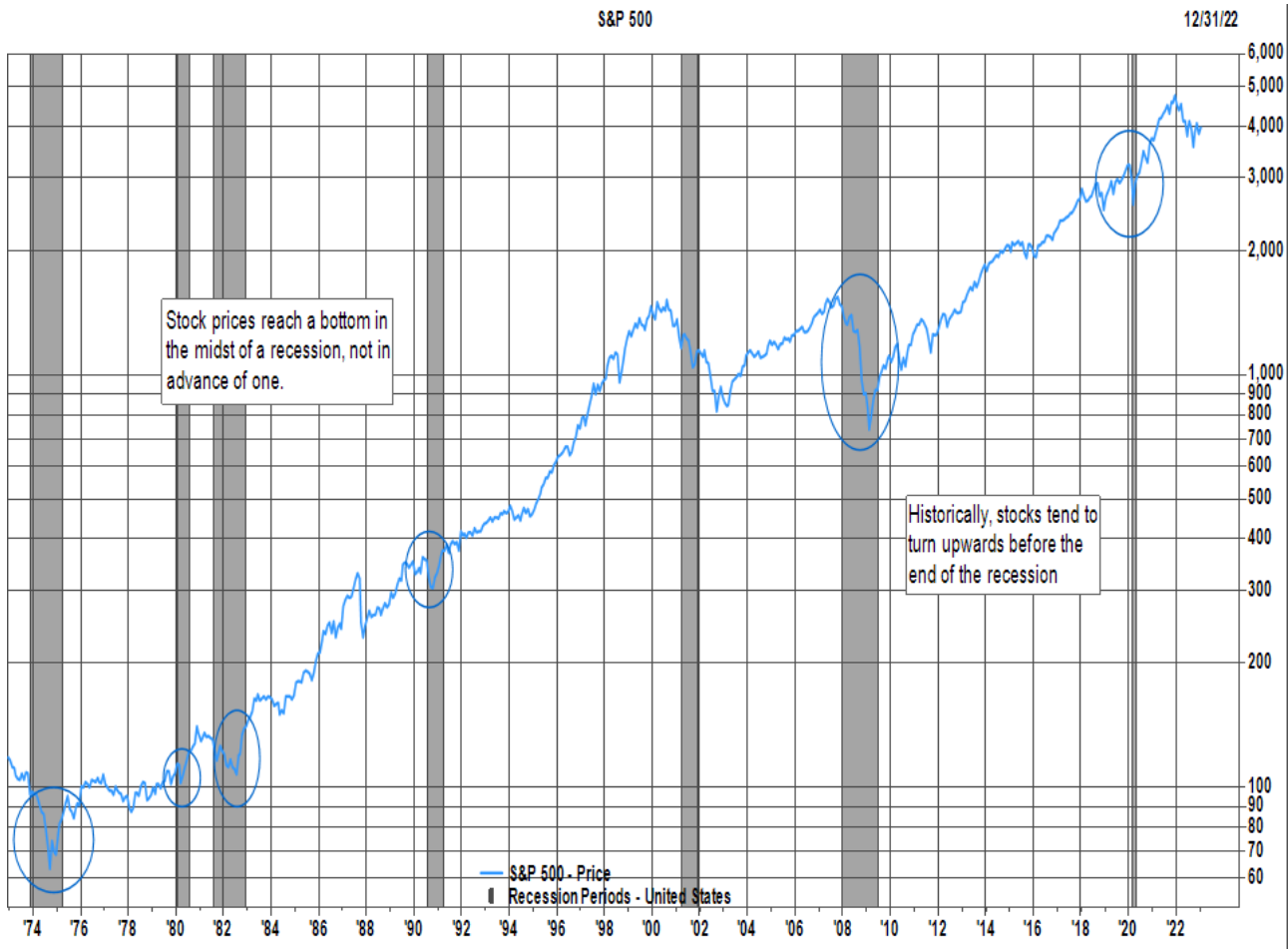
Outlook for Equities

The overwhelming preponderance of indicators pointing to a recession in the foreseeable future does not bode well for equities, even at these levels. At its current level of 3,933, the S&P 500 rests 18% below its January 2022 high. As we saw in a previous chart, the average drawdown over the last ten recessions has averaged 31%, which would bring the S&P down to 3,324 – which is 15% below its current level. The average market decline over the last three recessions has exceeded 46%, but the 2001 and 2008 recessions resulted from bubbles that don't exist in the current cycle, and the 2020 recession was a one-off that resulted from a global pandemic.

The market's price/earnings multiple has fallen back within its normal range at about 17 times forward earnings. But as we have cited previously, the market's forward earnings estimates are unrealistically high if, in fact, we are headed toward a recession, which is likely, or even a severe slowdown, which is a virtual certainty. If, instead of rising 5% next year, earnings were to fall even 10% from 2022's level, the implied price/earnings ratio rises above 20. If earnings decline by the average of the last ten recessions, or 16%, the implied P/E rises above 22, which is higher than the market's P/E at its peak last January and is clearly not sustainable.

Optimists will respond that the market's current weakness already discounts a slowing economy and the earnings declines that will inevitable occur. But, as is the case with those who are holding out hope for a soft landing while ignoring the inversion of the yield curve and the other indicators, the "already priced in" adherents are, too, arguing that - this time is different.

The chart, below, shows clearly that over the last seven recessions spanning almost 50 years, stock prices reached their bottom either during or after a recession, and *never* in advance of it.



Maybe this time *will* be different, and the yield curve will have sent a false signal. Or perhaps earnings will continue to grow through an economic slowdown, as they did in the recessions of 1973-75 and 1980. Maybe inflation readings will surprise on the downside, and the Fed can pause or pivot. But the odds are against any of these eventualities occurring, much less all of them.

Former Magellan Fund manager, Peter Lynch, once said that “Far more money has been lost by investors in preparing for corrections, or anticipating corrections, than has been lost in the corrections themselves.” In normal markets that is probably true, but he is talking about lost opportunity. But in the current market environment, we are more concerned about preserving the capital that our clients have already accumulated, than in the opportunity cost if, indeed, this time turns out to be different.

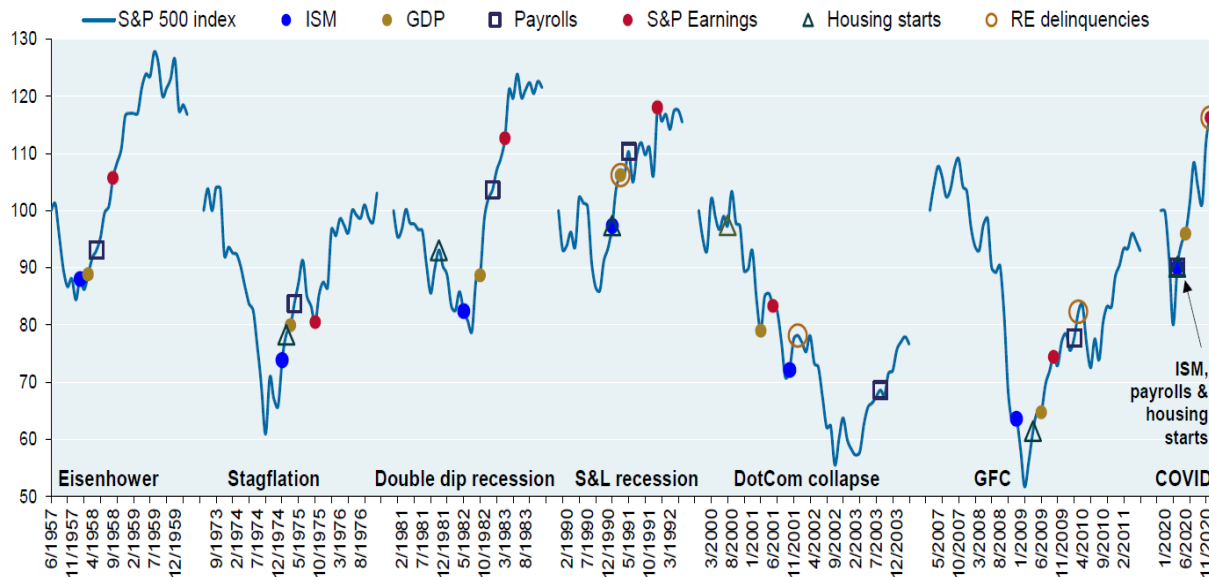
The Good News

That equity markets have historically bottomed during recessions contains more than a fair amount of good news, as the next bull market is already gestating and opportunities will abound at lower prices than exist today. We are constantly asked what will cause us to become less cautious or more inclined to restore equity allocations to normal levels, and there are no simple answers for that.

It is virtually certain that stock prices will begin to rise sharply while the economic indicators are still falling. Sentiment and consumer confidence surveys will be at their most bearish, and retail investors will be most skeptical about the market's rally. Astrologers will be looking to the stars and analysts will be looking at second derivative changes to an assortment of leading indicators, the most useful of which seems to be ISM manufacturing surveys, if past cycles can be relied upon (chart below).

Michael Cembalest
JP Morgan Asset Management

When recessions occur, the ISM survey has been the best coincident indicator of a bottom in equities
S&P 500 indexed at 100 at start of each period, dots show when each indicator bottomed



Source: BEA, Census, NAR, Shiller, Bloomberg, S&P Dow Jones, JPMAM. 2022.

We will be watching all of this and more, and still have no realistic expectation that we will see the bottom of this bear market until it's behind us. In the end, it always boils down to one basic rule: Don't fight the Fed.

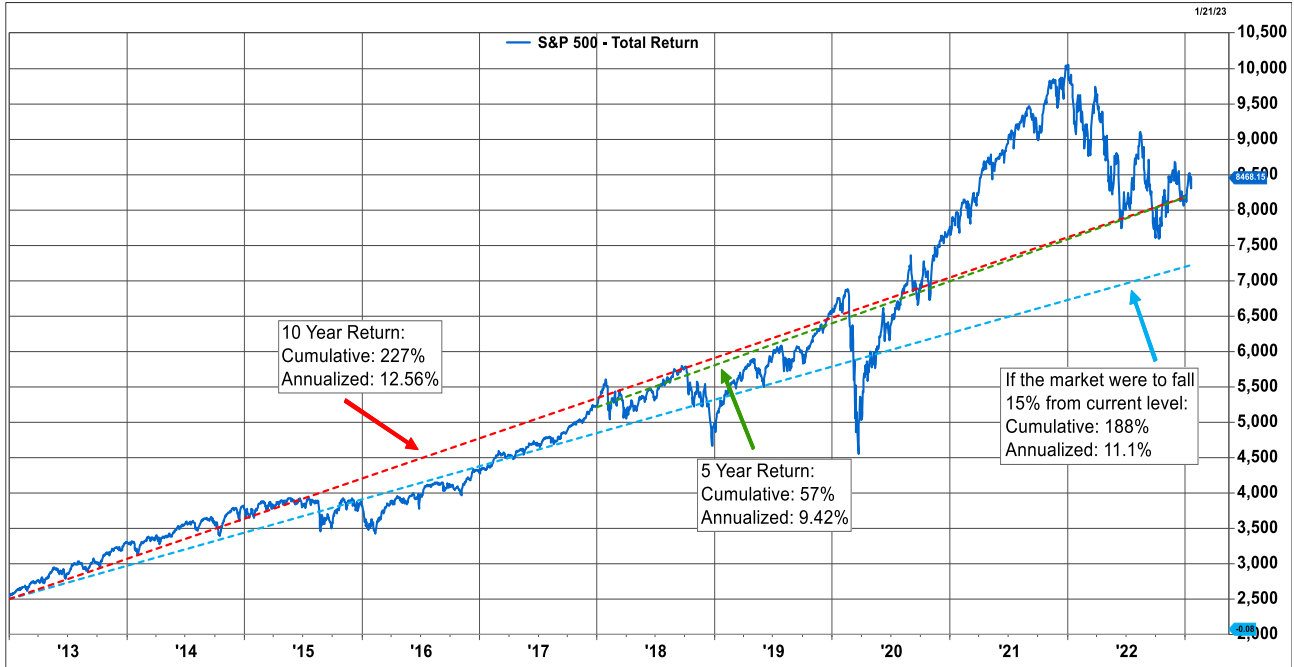
Stanley Druckenmiller, noted investor and hedge fund manager, put it thus:

"Earnings don't move the overall market, it's the Federal Reserve... focus on the central banks and focus on the movement of liquidity ... most people in the market are looking for earnings and conventional measures. It's liquidity that moves markets."

We'll be ready when the Fed turns the spigot back on.

Final Thoughts

The last year in the markets has been painful, following, as it did, the even deeper decline of 2020. One can easily find company among those feeling uncertain and perhaps even a bit fearful. It is important to remember that volatility goes hand-in-hand with stock market investing. Also important to note is that if you had invested in the stock market 10 years ago, your investment would have returned 227% over the last ten years, including dividends and that if you had invested in the stock market 5 years ago, your return would have been 56% over the last 5 years, as volatile as they were, including dividends.



Investing in stocks is a long-term proposition. Only over time have the peaks and valleys of the stock market “smoothed out” into a long term upward historical trend-line extending for decades.

While the past is no guarantor of the future, if you’ve been in the stock market for any appreciable length of time, you’ve seen recessions followed by recoveries, and losses followed by ever greater gains. It is the nature of the beast.

However guarded our current near-term outlook may be, there is nothing that should cause you to lose faith that stock prices will recover in time and eventually reach new highs. They always have.

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