Wealth Management Group
2022 Investment Outlook

Chemung Canal Trust Company

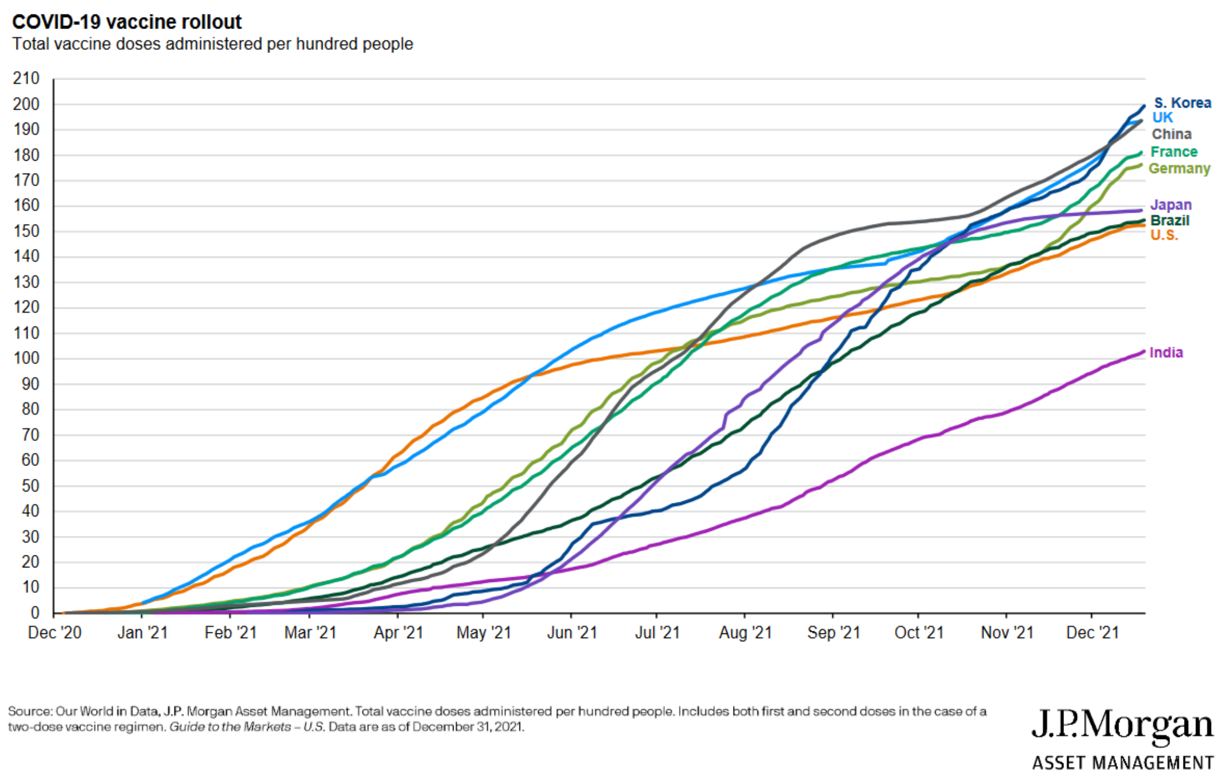
CAPITAL BANK

A division of Chemung Canal Trust Company

COVID-19

2021 began with rising hopes that new, effective COVID-19 vaccines – free and available to all – would resolve the worst public health crisis in more than a century before the year was out. Instead, we enter the fourth calendar year of the crisis still coping with a virus that is capable of disrupting our lives and our economy. Last year was even deadlier than the year before, and 820,000 have now perished in the U.S., alone. The Centers for Disease Control and Prevention (CDC) is predicting another 44,000 will die in the first month of 2022, and the once unthinkable specter of 1-million American lives lost is becoming depressingly credible. Globally, more than 5.4-million deaths have been attributed to this virus and its mutations. The U.S., with barely 4% of the world's population, has accounted for 19% of the world's cases, and 15% of its deaths.

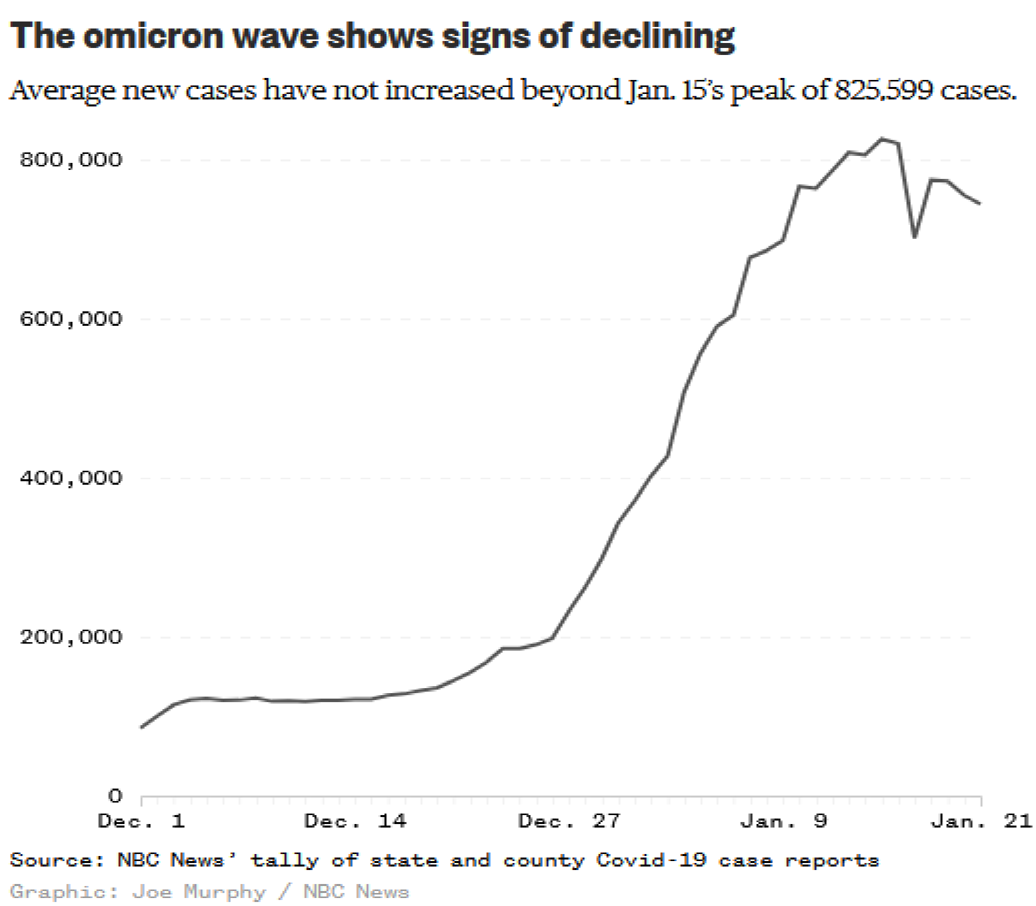
The Peterson Center on Healthcare and the Kaiser Family Foundation are partners in monitoring how well the U.S. healthcare system is performing. A Peterson-KFF study of hospitalizations in the June-November period, during which time COVID-related hospitalizations more than tripled, showed that 85% of this increase was attributable to unvaccinated adults. There are still 90-million unvaccinated



Americans who are 4-7 times more likely to be infected than those who are fully vaccinated, depending on age, and 15-18 times more likely to require hospitalization. The encouraging news is that each new surge in the virus seems to result in an uptick in vaccinations, apparently validating Churchill's observation that Americans can always be counted on to do the right thing, but only after they've tried everything else.

Even as the original virus and its Delta variant continue to cause periodic, localized hotspots, a new variant, less lethal to vaccinated persons but many times more infectious than the previous strains, created a new and even greater surge in infections as the new year beckoned . Omicron, though less dangerous than previous variants, represented a new threat to our over-stressed and demoralized care healthcare system and the economy in general, due to its ability to spread so rapidly. Goldman Sachs lowered its 2022 GDP growth estimate from 4.2% to 3.8% due to Omicron. College campuses began closing again and sporting events were postponed or canceled. School districts in Detroit, Los Angeles, Atlanta, Cleveland and Washington returned to virtual learning or delayed reopening after the Christmas break. More than 8,000 flights were canceled during the recent holiday season, largely due to an increase in infections among airline employees and crews.

From its outset, however, scientists had advanced the possibility that the increased transmissibility of Omicron could mean that its wave would pass relatively quickly, and, indeed, case counts are already



showing signs of cresting here in the U.S. There is every reason to believe that our experience will be similar that of South Africa and the UK, where cases and hospitalizations rose rapidly over the course of just a month before falling back quickly.

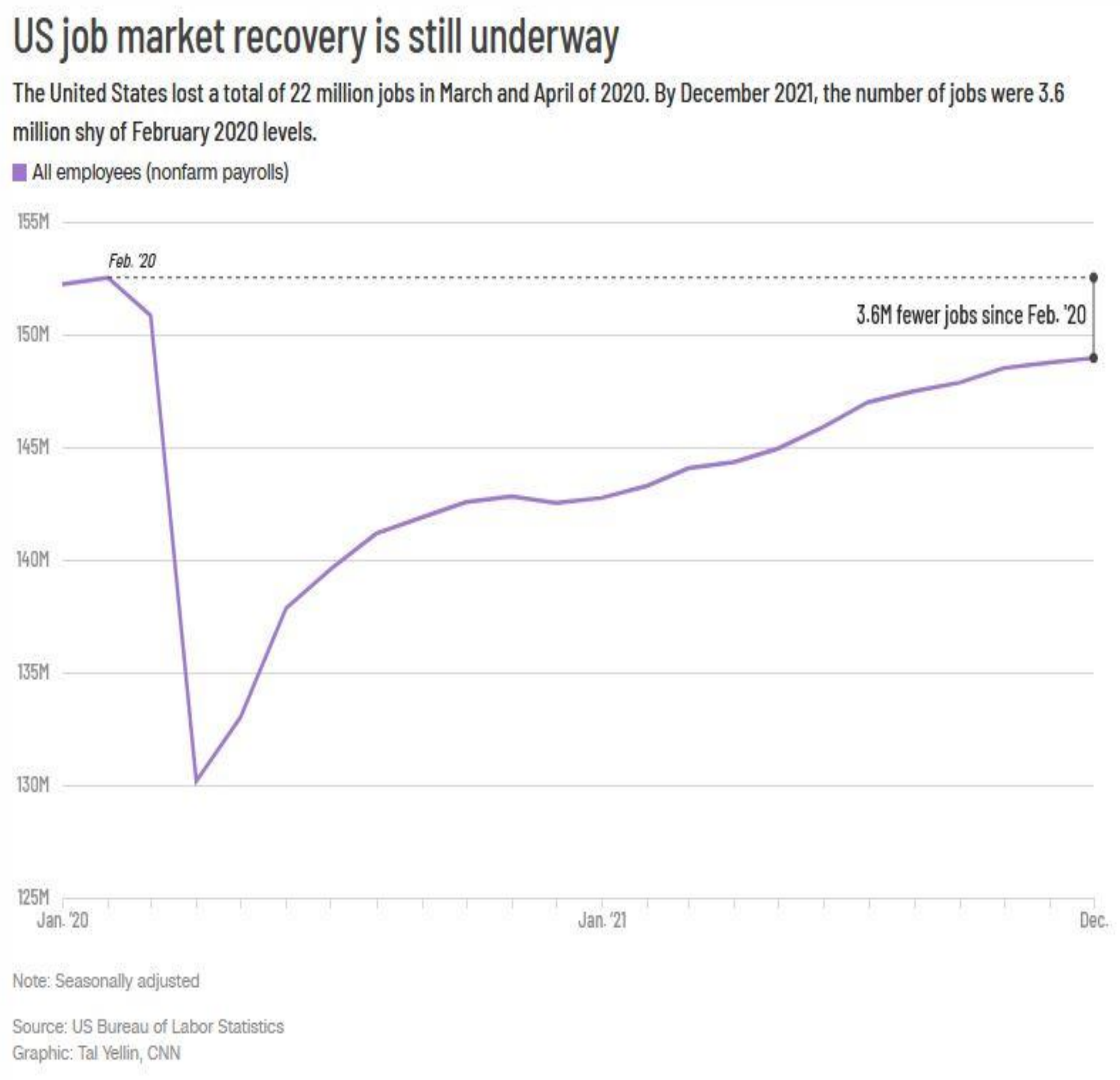
Finally, it should be said that if the fight against COVID has not gone exactly as planned, we are still immeasurably better off than we were a year ago. We have vaccines, if only people would get them. We no longer have morgues set up outside of hospitals, where people were dying alone at alarming rates. We are required to don masks and practice distancing in public, but we *are* once again in public, not isolated. Science's efforts to produce a more sustainable response to the virus are bringing us closer to the day when we will be able to live with COVID as background noise, not a life-threatening event. And, the economy is much stronger today than it was a year ago, despite the COVID headwinds.

Jobs and the Economy

Non-farm payrolls underperformed consensus expectations (again) in December, adding just 199,000 new jobs versus expectations for a 450,000 advance. That was the fewest number of new jobs added in any month of 2021. But the headline number understated (again) much of the underlying strength in the labor market. This has been a recurring theme throughout 2021, with jobs reports missing expectations, only to be revised upward in subsequent months. In the December release, the prior two months' reports were revised upward by 141,000 jobs. As has been the case in past months, the household survey, which counts workers not jobs and from which the unemployment rate is calculated, showed a strong gain of 650,000 jobs for the month, and a 3-month average for employment gains of 723,000. The unemployment rate dropped to a post-recession low of 3.9%. Personal income (wages paid time hours worked) rose 0.8% month/month, suggesting continued robust demand.

Still, as the labor market continues to tighten, job vacancies and the number of people leaving their jobs remains at record highs. Baby boomer retirements are one reason for this, but so is worker discouragement over mask and vaccine mandates, COVID fears and childcare concerns. Many others left the work force to start their own small businesses, as the number of start-ups grew as COVID spread. It's estimated that up to 6-million who left their jobs earned enough from stock market or crypto gains to leave the labor force, at least temporarily. Many of these will return. Whatever the reasons, worker shortages persist in critical industries such as retailing, restaurants, airlines, law enforcement, nursing homes and hospitals, where workers are most at risk.

Despite the unevenness in the monthly reports and the variability in the competing surveys, 2021 will go down as a year of record-breaking jobs growth. The U.S. economy officially added 6.4-million jobs last year, the most since 1939 when the government began keeping such records. Some analysts believe that the reported numbers understate the real numbers by at least a million jobs, but we are still not yet back to the employment levels that existed pre-COVID (chart, following). Assuming that workers return to the workforce as COVID's threat wanes over time, the shortage of workers that is currently hamstringing businesses across many sectors of the economy is a relatively good problem to have, since it means that there are jobs available as the economy continues to reopen. That is the opposite of the challenge we faced following the Great Recession of 2008-09.



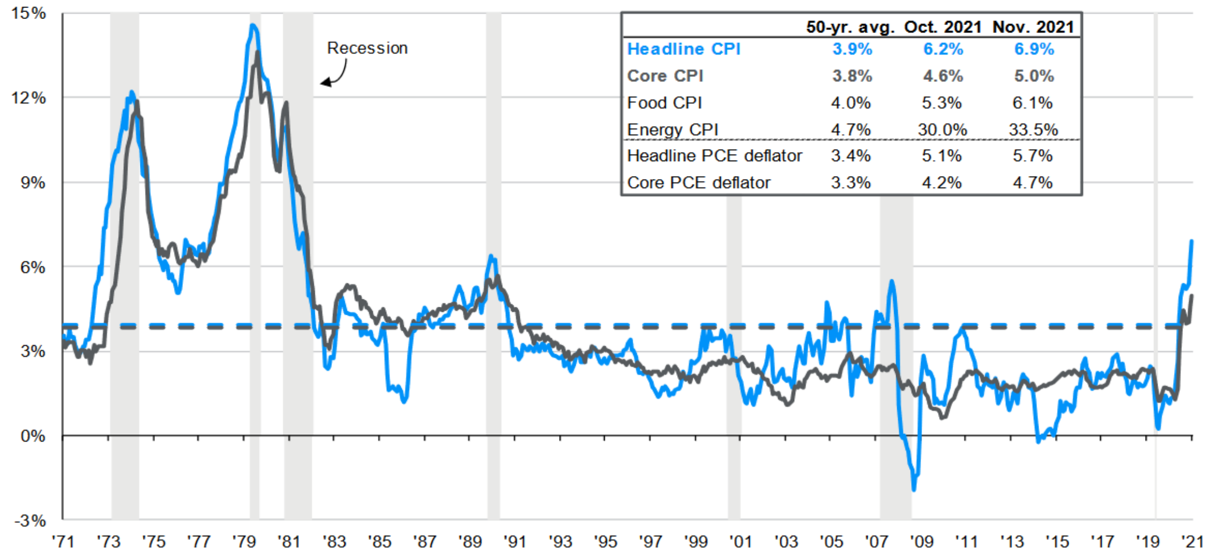
Other economic data is supportive of continuing strength in the economy. The ISM Manufacturing Index eased slightly in December, but is still elevated at a healthy 58.7. A reading above 50 is indicative of an expanding manufacturing sector. The New Orders Index, which is forward looking, remained above 60, suggesting continued strength in both capital spending and rising earnings expectations. Retail sales missed expectations for the second straight month in December, but employment trends and wage gains are supportive of strong demand going forward. The Conference Board's Consumer Confidence Index increased sharply in December, following a slight increase in November.

Inflation, Interest Rates and the Federal Reserve

The second biggest story of 2021 was the scourge of rising prices which turned the term, “transitory” into a punch line and drove inflation to levels not seen since the 1980s. A key difference between then and now, of course, is that the Fed Funds rate was close to 20% then, and is near 0% now.

CPI and core CPI

% change vs. prior year, seasonally adjusted



	50-yr. avg.	Oct. 2021	Nov. 2021
Headline CPI	3.9%	6.2%	6.9%
Core CPI	3.8%	4.6%	5.0%
Food CPI	4.0%	5.3%	6.1%
Energy CPI	4.7%	30.0%	33.5%
Headline PCE deflator	3.4%	5.1%	5.7%
Core PCE deflator	3.3%	4.2%	4.7%

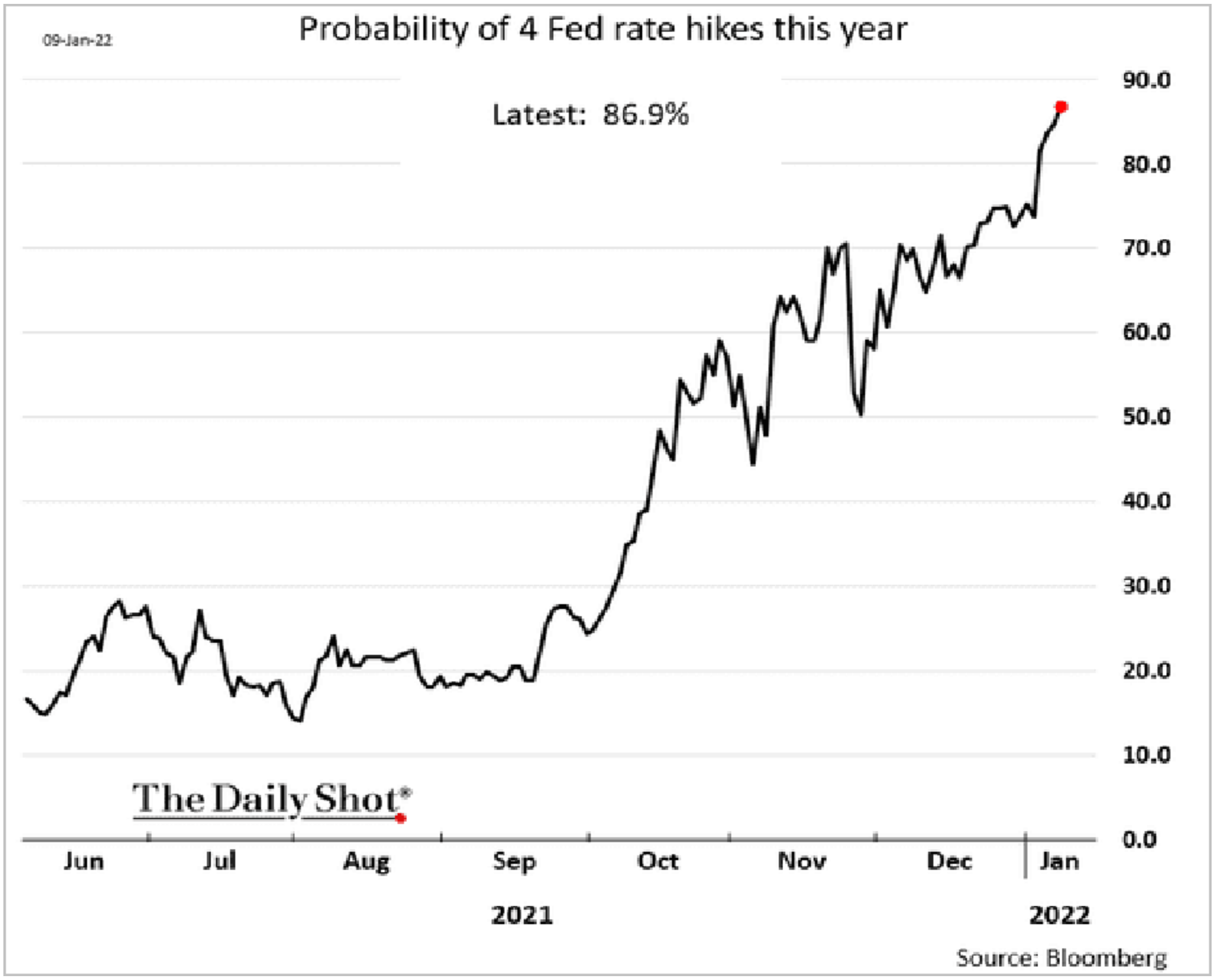
Source: BLS, FactSet, J.P. Morgan Asset Management.
CPI used is CPI-U and values shown are % change vs. one year ago. Core CPI is defined as CPI excluding food and energy prices. The Personal Consumption Expenditure (PCE) deflator employs an evolving chain-weighted basket of consumer expenditures instead of the fixed-weight basket used in CPI calculations.
Guide to the Markets – U.S. Data are as of December 31, 2021.

J.P.Morgan
ASSET MANAGEMENT

The Federal Reserve is behind the curve relative to the last cycle based on both growth and current employment metrics. The December jobs reports showed the unemployment dropping to 3.9%, and rate hikes aren’t expected to begin until June, or possibly March. When the unemployment rate fell below 4% during the last expansion phase, the Fed was already two years into a rate hike cycle. Even if the Fed were to begin to shrink its balance sheet after the first quarter and hike rates four times this year (faster than previously expected), its policy would still be considered “accommodative” relative to the last cycle, when jobs – not inflation – were the main concern.

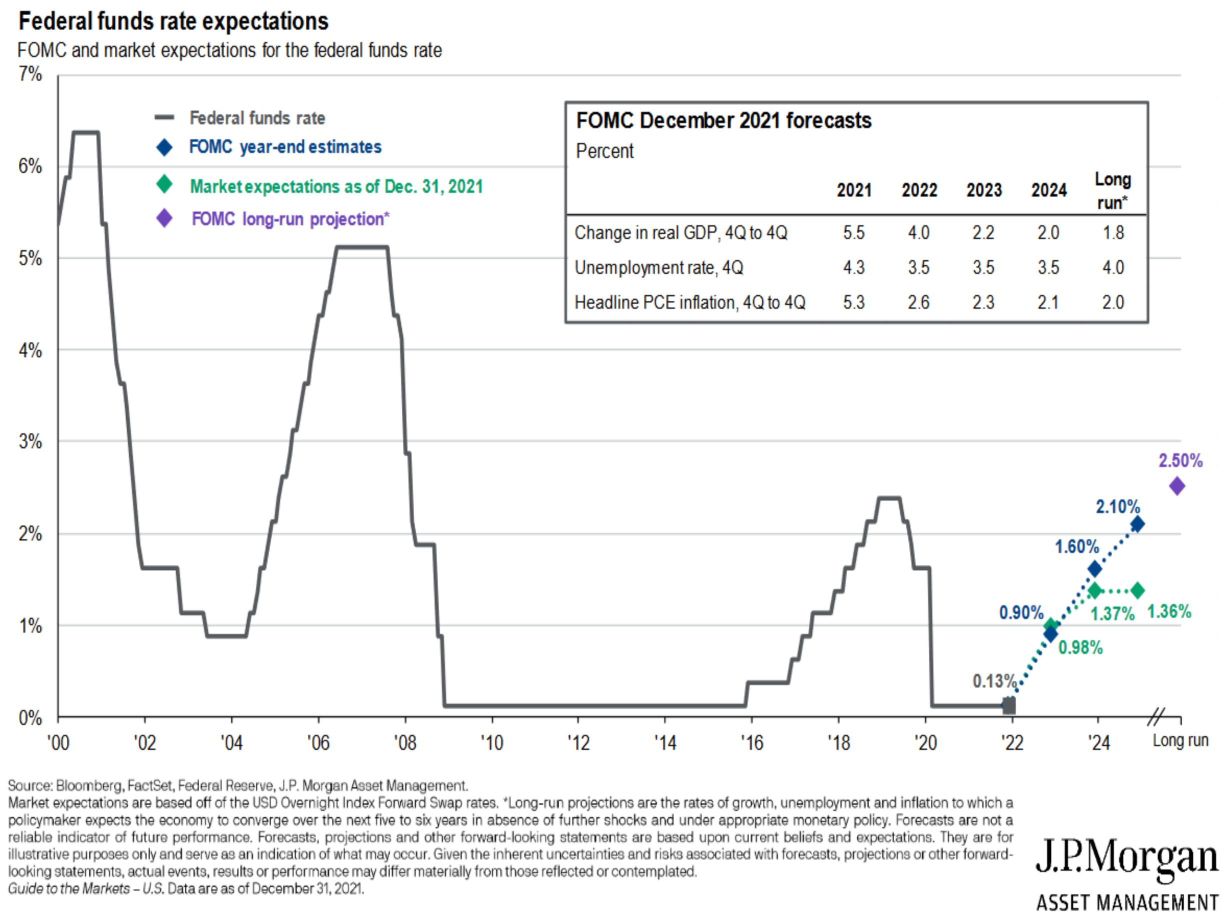
Incomes are rising and the labor force is expanding, despite near-record numbers of people leaving their jobs. Omicron could temporarily slow growth for a period, but in the current economic environment weakness in one period would likely give way to a bounce in the next. The trend in demand growth is still rising faster than the economy’s ability to produce goods in the face of persistent shortages of both supplies and labor.

Still, the Federal Reserve is giving mixed signals despite its announced willingness to hike rates as necessary to restrain inflation. On the one hand, minutes from the Fed’s December policy-making meeting indicate growing concern over rising prices, and an acknowledgment that the labor market is already very tight and inflationary factors such as wage growth won’t be transitory. Several Fed officials have said that the March FOMC meeting could be the time to begin raising short term rates, and the financial markets are increasingly discounting the probability of four rate hikes this year (chart, following).



On the other hand, the Fed's latest official projections, which accompanied the minutes of the December meeting, were for an economy with above trend growth and unemployment below the level consistent with the Fed's inflation target, and inflation falling to 2.6% in 2022, 2.3% in 2023, and 2.1% in 2024.

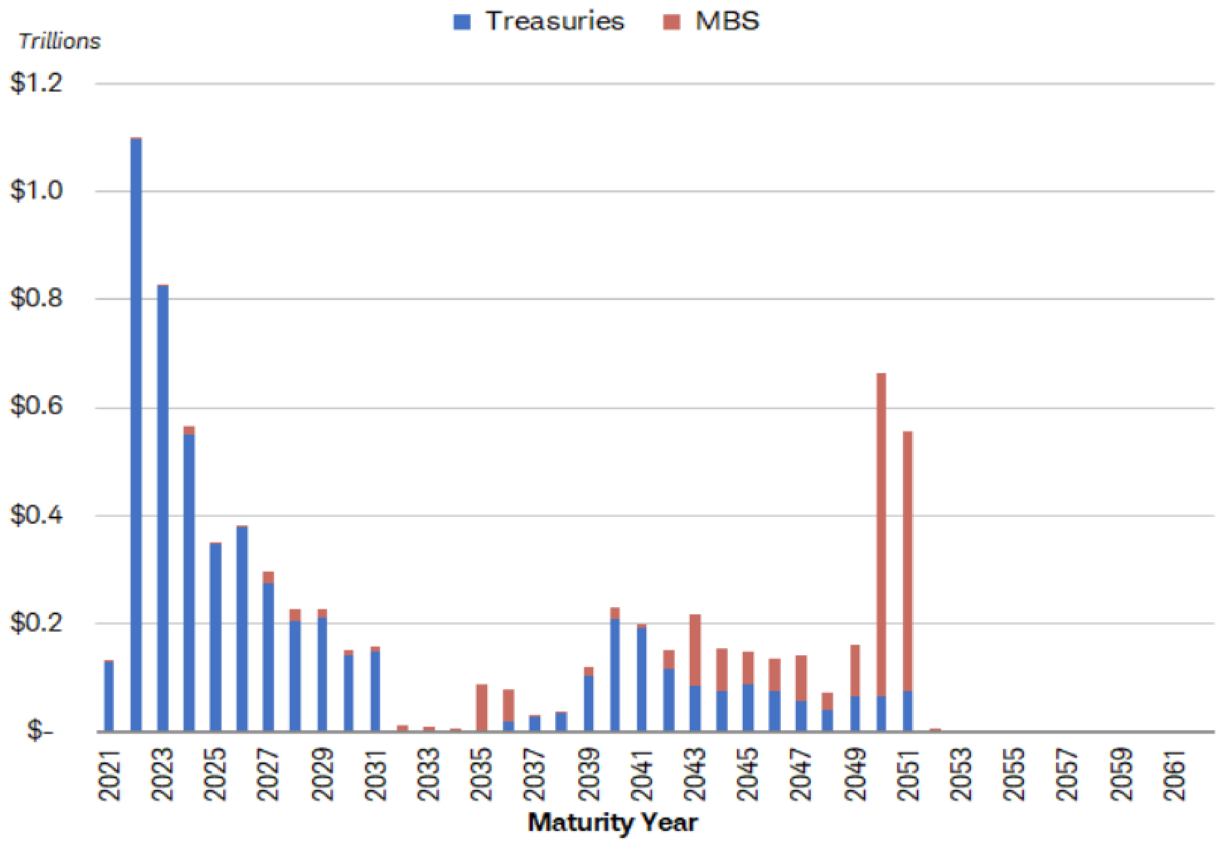
The incongruity lies in the fact that the Fed is projecting a fed funds rate of just 2.1% by the end of *2024*, a pace of tightening far slower than most analysts deem necessary to restore price stability. Consensus expectations are that short term rates will rise to near 2% by the end of 2023, a year earlier than the Fed's projections (chart, following).



It's been said that economic expansions have never died a natural death – rather, the Fed has killed them. Raising rates too aggressively is a risk to the economy and jobs, but the optimistic view in this instance is that the Fed has a greater margin for error than is generally thought. With incomes, earnings and nominal GDP growth indicators strong and "real" interest rates deeply negative, the Fed has plenty of hiking leeway before it risks sending the economy into another downturn. By that view, inflation will remain elevated in 2022, but a level below 3% in 2023 will seem plausible as the economy slows, but doesn't stall. The negative view is that the Fed has waited too long, and more aggressive tightening will be required than would have been necessary otherwise. It's a fine line to tread, and rate hikes that begin sooner rather than later and proceed at a quicker pace than the Fed currently projects would not be a surprise.

A final point to be made about interest rates at the longer end of the curve is that the Fed is reducing the amount of its Treasury purchases just as the level of maturities is spiking. Other investors will need to step up to buy new Treasury issuance, further putting upward pressure on interest rates. The 10-year Treasury yield rose to 1.87% from 1.63% at the beginning of the year, and the 2-Year rate rose to 1.08% from 0.78% at the same time. Inflation and expectations for improving global growth are already creating upward pressure on market interest rates, and the Treasury's growing refinancing needs will likely increase that pressure (chart, following).

Large amounts of Treasuries will mature during the next few years



Source: Bloomberg. Federal Reserve SOMA Maturity Distribution. Data as of 12/31/2021.

A Timely Tax Tip

Since you have read this far, we thought that those of our readers with an appreciation of the absurd would enjoy the following bit of tax advice offered by the Internal Revenue Service. This is apropos of absolutely nothing else in this *Outlook.*

On December 16th, The IRS put out Publication 17 to assist individuals in preparing their 2021 tax returns. Page 76 of this helpful document includes the admonition that, "If you steal property, you must report its fair market value in your income in the year you steal it, unless you return it to its rightful owner in the same year. It is to be included on Schedule 1, Form 1040, or on Schedule C if from a self - employment activity."

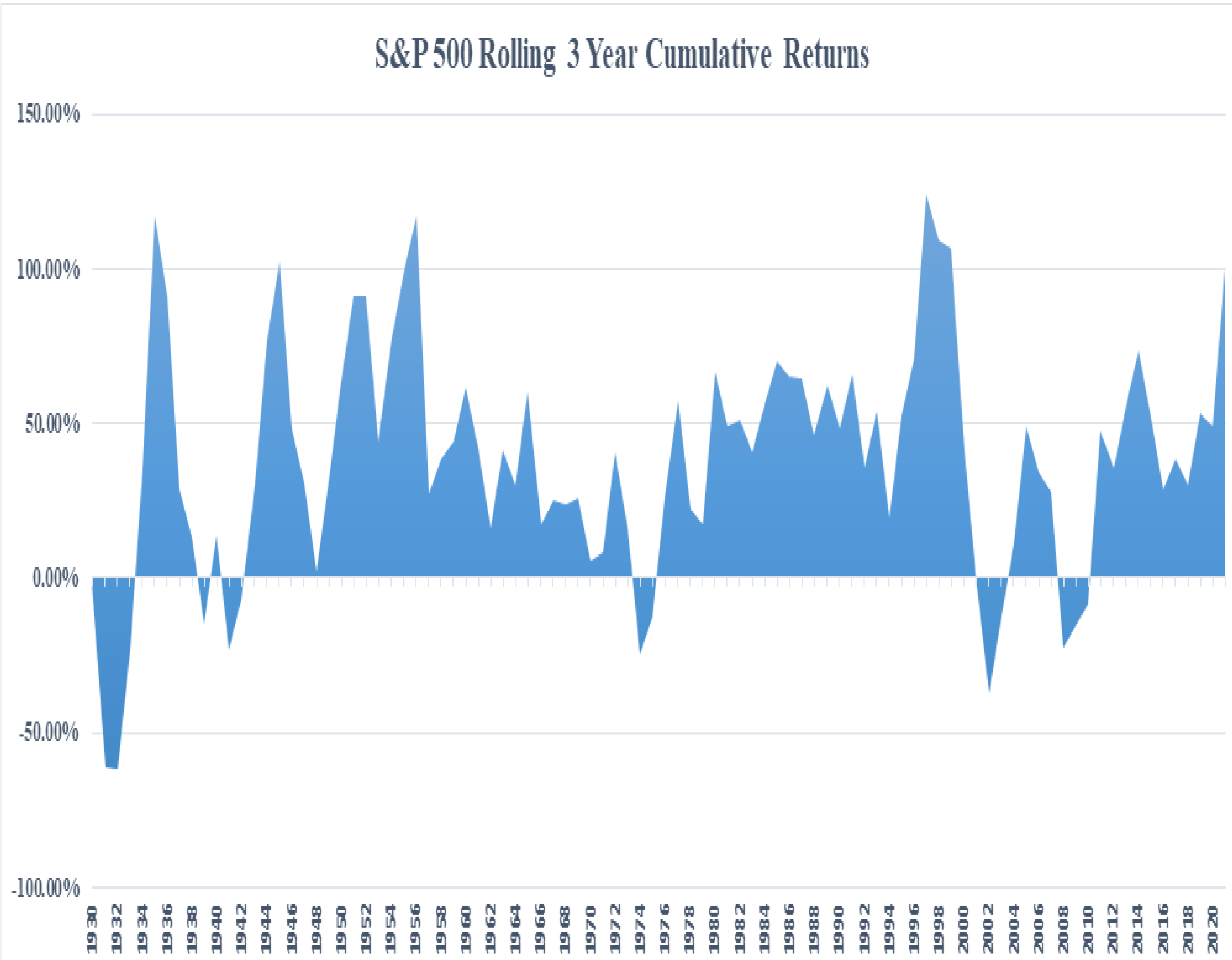
In a related Facebook post, the Erie County Sheriff's Office in Buffalo has offered support for all car thieves who need help with an itemized list of property they stole, so it can be reported on their income taxes. The post includes a dedicated phone line, and an assurance that a Deputy or Detective would be happy to meet you with your list.

We did not make either of these things up.

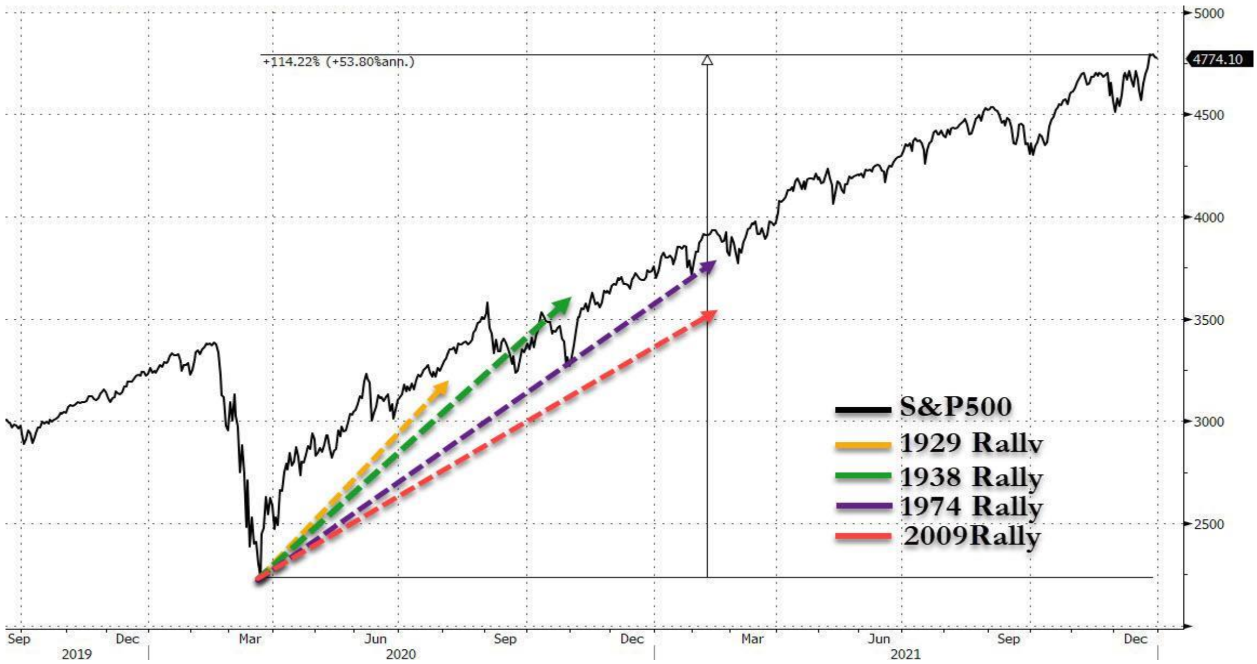
The Stock Market

By any standard, the current bull market is approaching historical proportions. The S&P 500 delivered double-digit gains for the third straight year in 2021, generating a return of 28.7% including dividends. Over the last three years, the S&P has more than doubled on a total return basis, marking its first 100%+ 3-year return since the tech bubble of the late 1990s.

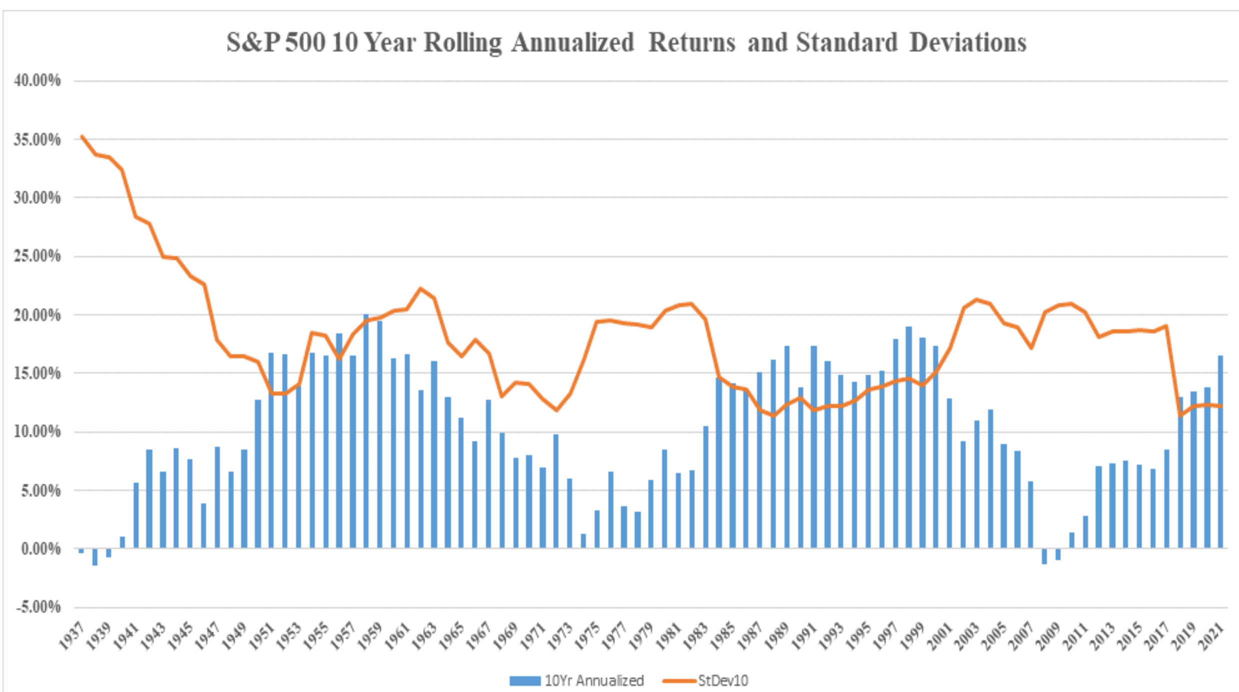
There have been 92 rolling 3-year periods since 1928, and the S&P 500 has returned 100% or more just 7 times, mostly during the period of recovery from the 1929 crash, the post-World War II boom, and the dot-com bubble of the late 1990s. What makes the most recent period so remarkable is that the Index had



to overcome a 34% decline as COVID shut down the economy in early 2020, wiping out all the gains that had been earned over the prior four years. This means that all of the market's most recent performance was the result of the 113% gain it achieved in just 21 months from the March 2020 low to its recent December high! (chart, following).



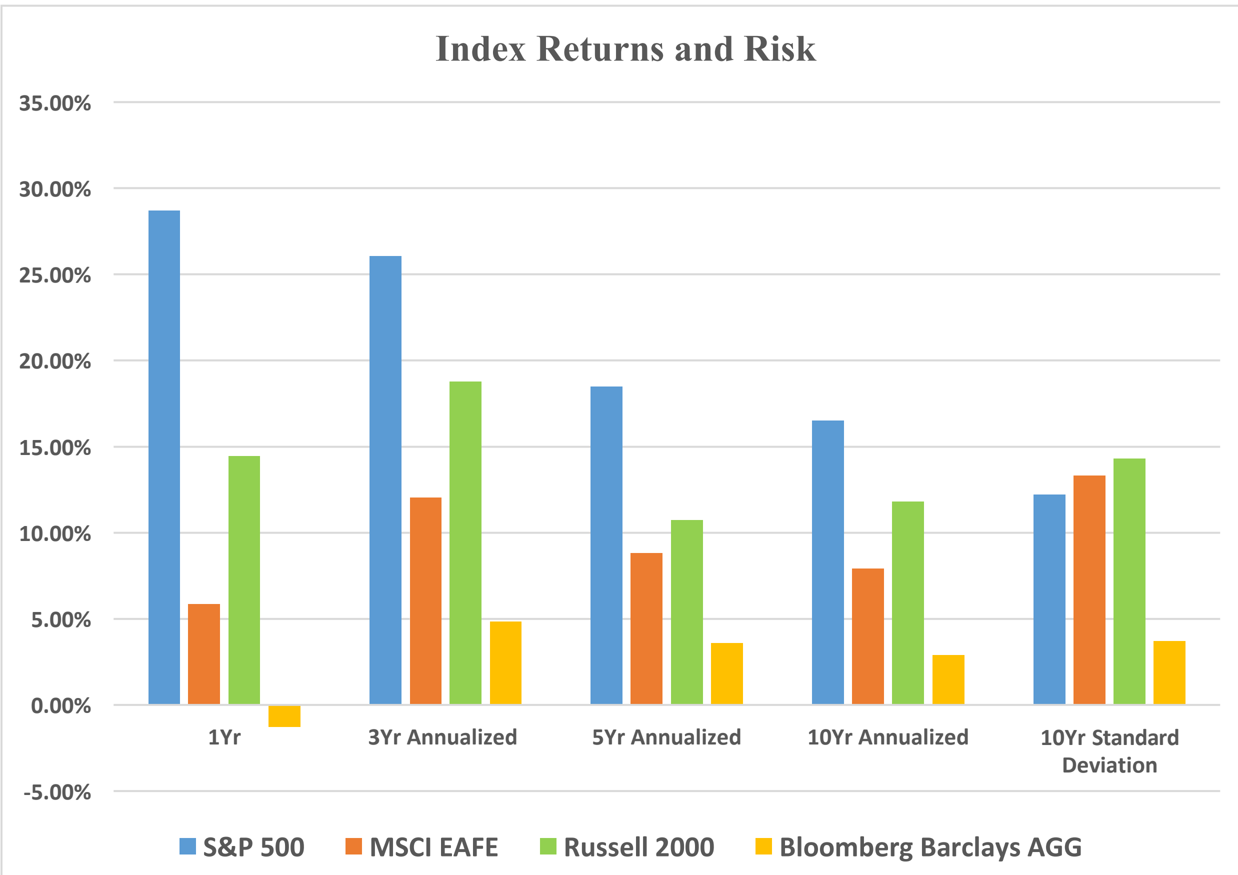
The trailing 5 and 10-year returns are approaching historic levels as well. The S&P 500's annualized return of 16.5% over the last decade equates to a 361% return over that time, surpassing the post-'29 recovery period and approaching the levels achieved during the post-war years and the pre-dot.com era. Equally noteworthy is the fact that as returns have accelerated, volatility, as measured by the standard deviation of annual returns has fallen to historically low levels as well.



Diversification Has Not Helped

If the market has been exceptionally rewarding to investors over the last decade, and particularly the latter stages of the last decade, it has also presented a number of challenges for investment managers.

Investments in U.S. large company stocks form the core of most domestic portfolios, including ours, but allocations to a variety of other asset classes such as small cap and international stocks are commonly seen as a way to minimize volatility and optimize risk-adjusted returns. Diversification is explicitly required of fiduciaries under the Uniform Prudent Investor Act in managing trust assets. But on a trailing 3-, 5-, and 10-year basis, diversification has significantly detracted from investment performance as small cap and international equity benchmarks have underperformed the S&P 500 by wide margins – and have experienced greater volatility, as well.

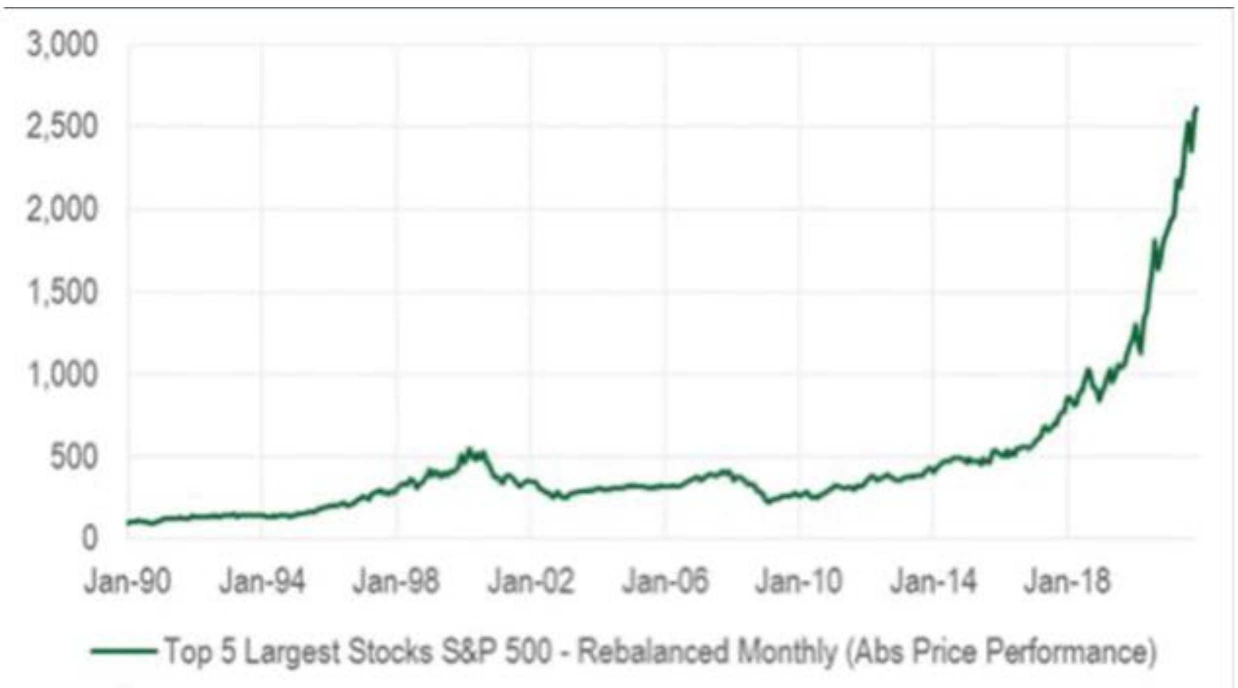


On a year-by-year basis, small cap stocks have not been additive to performance since 2016, and international stocks have underperformed U.S. stocks every year since 2017. Bonds still provide a measure of risk control in portfolios, but current yields provide a lower level of income than a conservative stock portfolio, and bonds are unlikely to generate positive total returns if interest rates rise as expected and bond prices fall. Emerging markets, every analyst's favorite a decade ago, have generated annualized returns of less than 5%. Hedge Funds have experienced only mid-single digit returns on an annualized basis, and gold less than 2%. The U.S. stock market over the recent period has often been referred to as the TINA market – **T**here **I**s **N**o **A**lternative. We would not disagree.

Active Managers Have Under-performed

Another challenge for active managers has been that the S&P 500 has been an increasingly difficult benchmark to match. According to Morningstar, 85% of active U.S. stock funds were trailing the S&P 500 through November, a worse performance than 2020 when 64% of active funds under-performed. In a way, this is similar to the diversification issue discussed above – just as diversification into asset classes other than U.S. large cap stocks has negatively affected performance, so too has diversification within the U.S. stock market lessened the chances of generating better-than-market returns.

We have commented repeatedly in past Outlooks that market performance is being increasingly driven by just a handful of stocks whose large market capitalizations disproportionately affect the index. The 10 largest stocks in the S&P 500, 2% of its members, account for 30% of its capitalization and contributed 49% of all of the price gains in the Index in 2021. Microsoft (+52%), alone, accounted for more than 10% of the S&P 500's performance; and Microsoft, along with the next 4 largest stocks, Apple (+35%), Nvidia (+125%), Alphabet (+65%), and Tesla (+50%), accounted for 42% of the market's rise for the year. In fact, this is a phenomenon that has been accelerating over the last 5 years. Performance has been so concentrated in the largest stocks that if one had simply owned the 5 largest companies in the index each year during that time, he or she would have quintupled their money, a return of 400%. By comparison, The S&P 500 returned "only" 133% during that time.

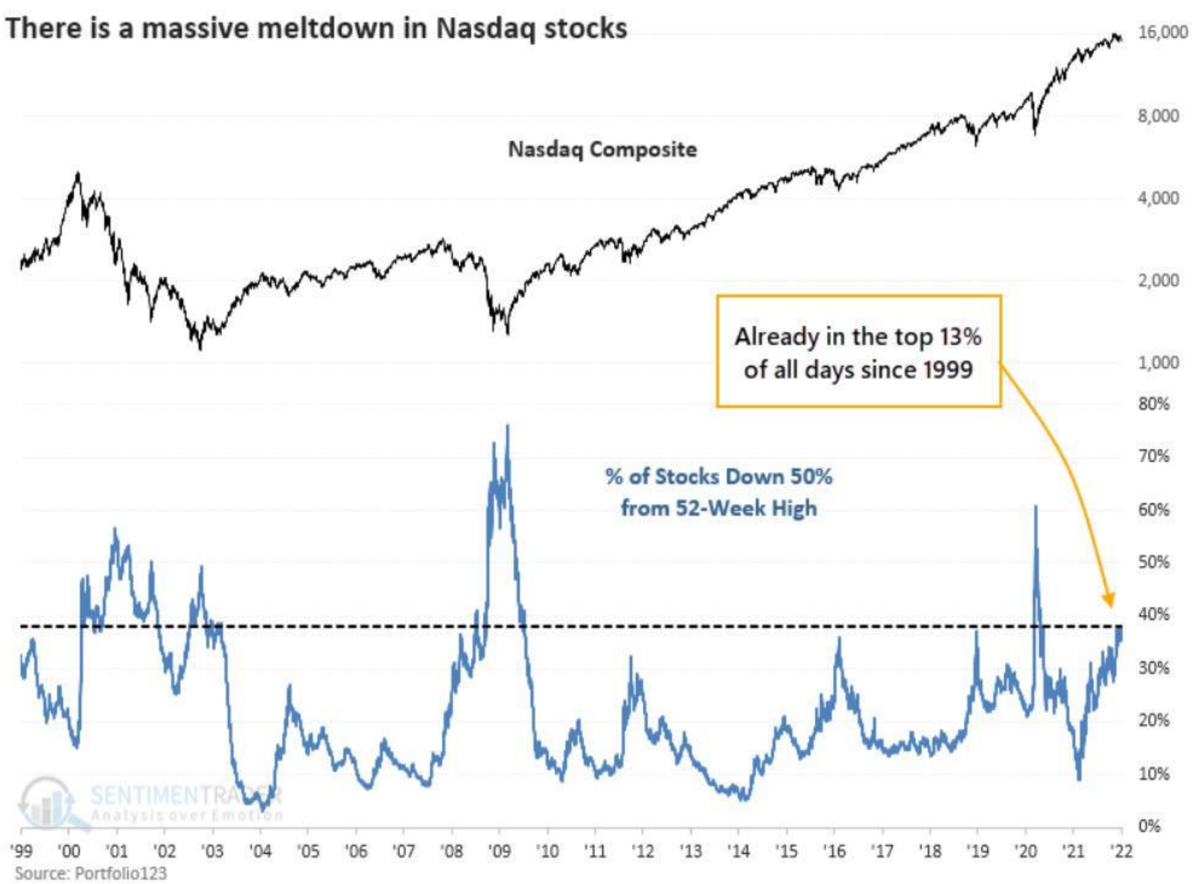


There are a number of important takeaways from the increasing concentration of mega-cap growth stocks at the top of the S&P 500 Index.

The first is that investors should not be misled into thinking that their own experience should mirror the "market", so long as they define the market as the S&P 500. For example, when the S&P 500 was just

4% below its 52-week high recently, nearly half of the 500 stocks in the index had declined at least 10% from their highs, and nearly 1 in 5 had declined at least 20%.

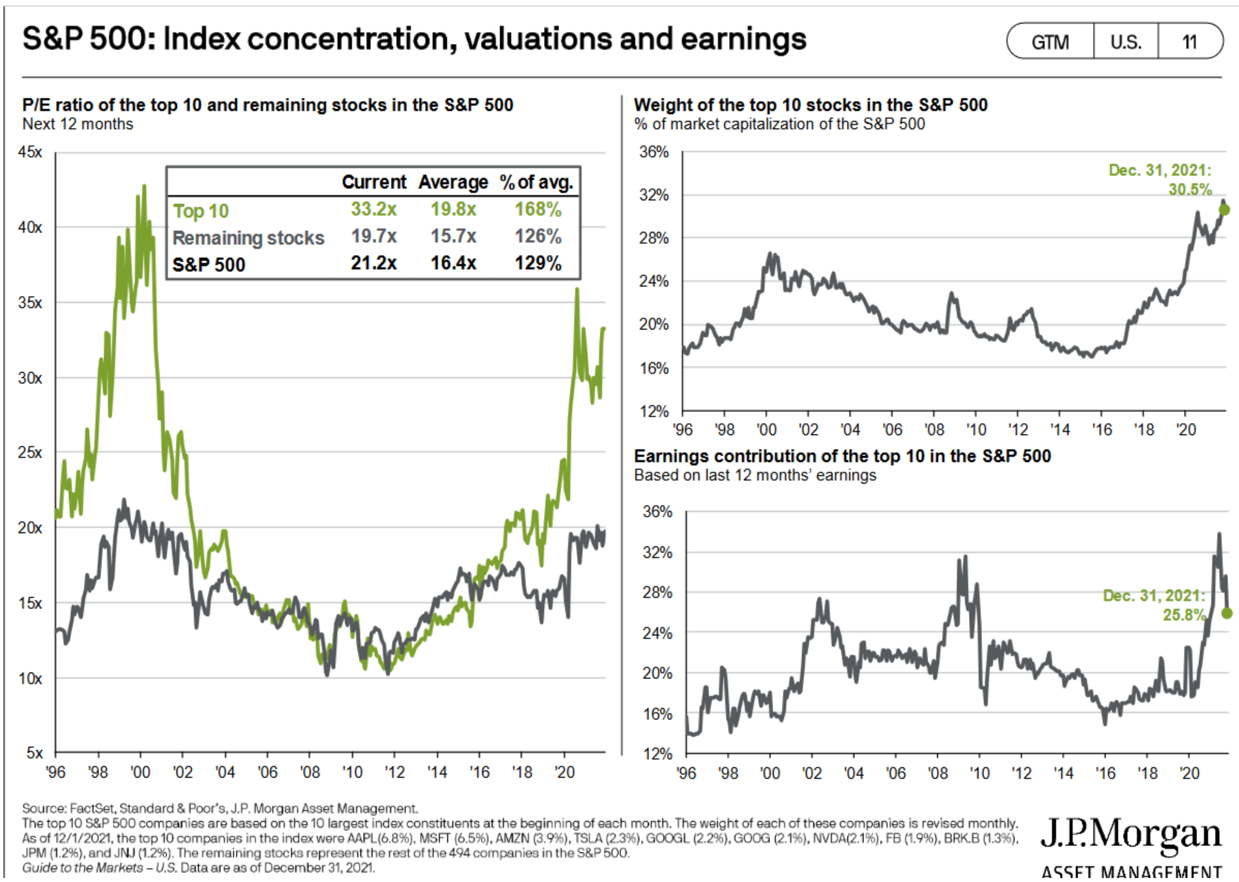
For investors who follow the NASDAQ composite, the divergence is even more striking as that index is even more top-heavy than the S&P. Of the 10 largest stocks in the S&P 500, 6 also trade on the NASDAQ. Apple, which carries a 6.83% weighting in the S&P 500, accounts for 10.67% of the NASDAQ Composite. While the 10 largest stocks in the S&P 500 comprise just over 30% of the index, the 10 largest NASDAQ stocks comprise 47% of that index, which lists more than 2,500 stocks as members. This has allowed a recent meltdown in the NASDAQ to go virtually unnoticed, as 40% of the stocks in the composite fell 50% or more below their 52-week highs while the NASDAQ Composite, itself, charged merrily upward.



Indexers Beware: Valuations Matter - Eventually

Investors in index funds must be feeling especially validated these days, given the inability of most investment managers to outperform their benchmarks during the markets stunning rise over the last 3 years – and particularly over the last 21 months. But passive investors would be well advised to take a serious look at what they really own.

They are now invested in an index that is concentrated to a greater degree than ever before in a few large, expensive growth stocks (chart, below). Their 10 largest holdings, which comprise nearly one-third of the index, are now trading at more than 33 times forward earnings estimates, a multiple that is 68% above their weighted average over the last 25 years, and nearly 60% greater than the index, itself. Note, also, that as the weighting and P/E multiples of these few stocks have expanded, their collective contribution to S&P earnings has begun to decline as the economy improves and cyclical value stocks benefit. Meanwhile, virtually ignored in the market's steady march to 68 new highs in the last year, alone, is the universe of the remaining 490 stocks which are trading at a nearly 10% discount to the index and a 41% discount to the so-called top 10. Valuations – especially relative valuations – are not necessarily good predictors of near term performance, but they matter in the long run.



"Probable Surprises"

Byron Wien, former Senior U.S. Investment Strategist at Morgan Stanley and currently Vice Chairman of Blackstone Advisory Partners, annually publishes a list of economic, market and political surprises, which he defines as events that the average investor would probably assign a 1 in 3 chance of occurring, but which he believes are probable. Sadly, no record exists of his career batting average, but the list is always thought provoking and we are enclosing an edited list of the more relevant "probable surprises" from his 37th edition, published earlier in January.

- "The combination of strong earnings clashes with rising interest rates, resulting in the S&P 500 making no progress in 2022. Value outperforms growth. High volatility continues and there is a correction that approaches, but does not exceed, 20%."

- "While the prices of some commodities decline, wages and rents continue to rise and the Consumer Price Index increases by 4.5% for the year. Declines in prices of transportation and energy encourage the die-hard proponents of the view that inflation is "transitory," but persistent inflation becomes the dominant theme."

- "The bond market begins to respond to rising inflation and tapering by the Federal Reserve, and the yield on the 10-year Treasury rises to 2.75%. The Fed completes its tapering and raises rates four times in 2022."

- "In spite of the Omicron variant, group meetings and convention gatherings return to pre-pandemic levels by the end of the year. While COVID remains a problem in both the developed and the less-developed world, normal conditions are largely restored in the U.S. People return to theaters, concerts and sports arenas en masse."

- "The price of gold rallies by 20% to a new record high. Despite strong growth in the U.S., investors seek the perceived safety and inflation hedge of gold amidst rising prices and volatility."

- "While the major oil-producing countries conclude that high oil prices are speeding up the implementation of alternative energy programs, these countries can't increase production enough to meet demand. The price of West Texas crude confounds forward curves and analyst forecasts when it rises above $100 per barrel."

- "The digital economy gets a major boost when Jamie Dimon reverses his position on cryptocurrencies and J.P. Morgan seeks to become a leader in the space. Crypto becomes a major factor in the financial markets."

2022 Outlook

There seems to be no consensus regarding the market's outlook in the coming year. Bank of America believes that the S&P 500 will be at or near current levels a year from now, held back by tightening monetary policy but supported by the fact that the expected returns from other asset classes, i.e., bonds, are even less appealing. BofA believes that the economy is over-stimulated, noting that policymakers added $9-trillion to the economy in 2021 after injecting $23-trillion in 2020, support that is now being withdrawn.

Morgan Stanley is in the same camp, citing strong earnings growth of 8-10%, but P/E multiples compressing back closer to their historical norms. Their year-end target of 4400 for the S&P is virtually flat with current levels.

Others, like Northern Trust, JP Morgan and Federated Hermes are more constructive, basing their view on a global economy returning to trend growth as COVID becomes less disruptive and supply chain issues are gradually resolved. Federated's year-end target is 5300 on the S&P, more than 20% above current levels despite projected earnings gains of just 9%. The market's P/E would have to expand to 23 times earnings to support their price target, which they claim is justified in view of negative real interest rates.

What is striking about the current round of forecasts is that, while the various firms have wildly divergent views of market performance going forward, there was general consensus among them on corporate earnings, inflation, Fed policy, COVID's path and GDP growth. Their differences lay mainly in how the analysts thought the market would react to each of these concerns; in other words, what would matter and what would not. This brings to mind an observation, often made, that the optimist believes that we live in the best of all possible worlds. The pessimist fears that this is true.

Apart from historically high equity valuations, our primary concerns for the economy and the capital markets remain COVID, supply chains, inflation, and Federal Reserve policy. And we need to be aware that these are interdependent - not independent – concerns.

COVID is a mutating virus, and it is likely now a permanent part of our lives. But even as the virus in its various forms retains the ability to create temporary disruptions to some sectors of our economy, the market appears to be increasingly unfazed by this risk. We expect COVID's impact will continue to fade as more tests and new treatments come on line in the coming months and years.

We expect that supply chain issues will persist so long as COVID remains a global concern, as the variant waves are not synced from country to country, nor are the policies that countries implement to deal with its public health effects. There is near universal agreement that supply chains will remain stressed at least through 2022, but there are too many moving parts to this to have great confidence in any projection of when this will cease to be a concern. We will simply have to deal with what is in front of us.

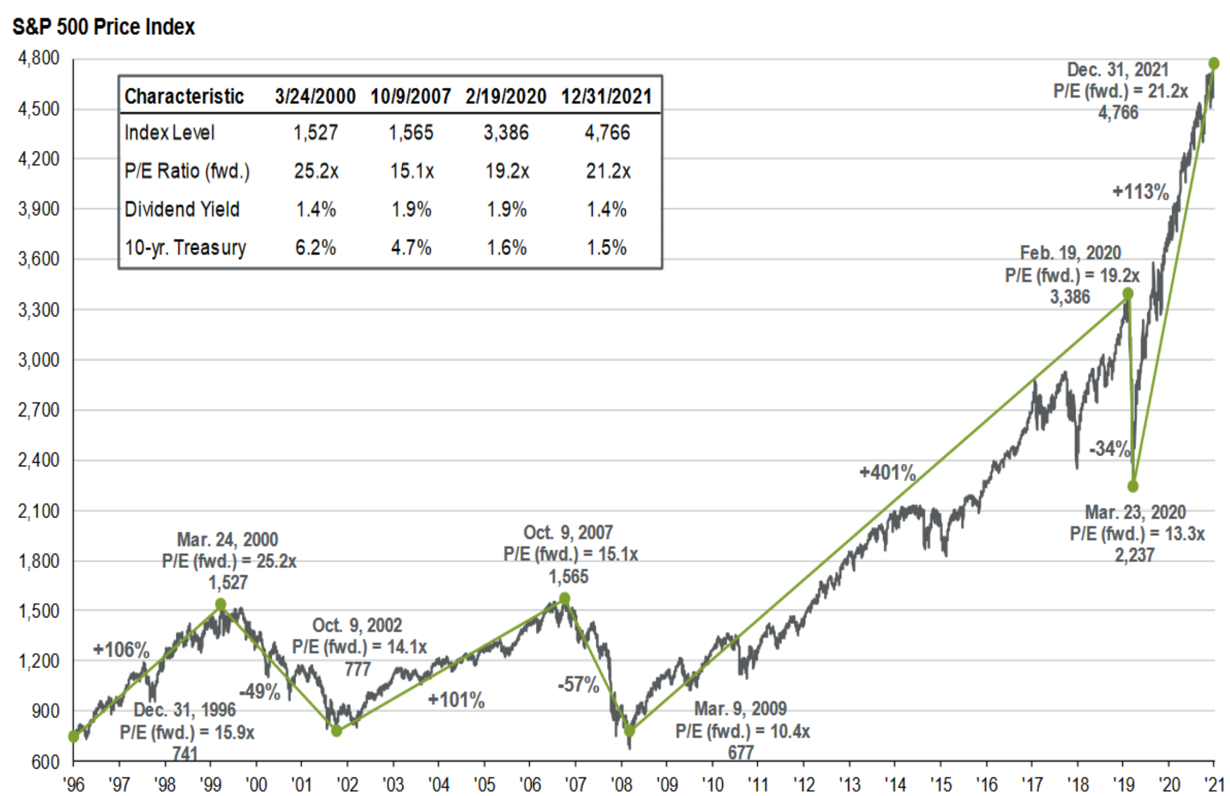
Regarding inflation, our position could best be described as "guardedly concerned." This is to say that we are willing to be pleasantly surprised if the Fed's own projections of 2.6% in 2022 and 2.3% in 2023 are actually achieved, but we are not preparing for that eventuality. Shortages of goods are persisting and demand shows no signs of slowing down, based on the available data. Overlay this with the fact that the Fed is so far behind the curve compared to past cycles that even an acceleration of Fed rate hikes beyond what is currently expected could still be considered "accommodative" in the context of the current economic data. Analysts' opinions are mixed on whether the Fed can keep inflation from being imbedded at current levels, but they are virtually unanimous in saying that Fed policy error is the single greatest threat to the economy and the markets.

The Elephant in the Room

No outlook would be complete without an objective look at valuations. Everyone acknowledges that valuations have been stretched to their extremes, but there seems to be far more interest in finding facts to justify current valuations than in actually considering what current valuations may portend for future returns. As Homer Simpson once said, "Facts are meaningless. You can use facts to prove anything that's even remotely true. Facts schmacts."

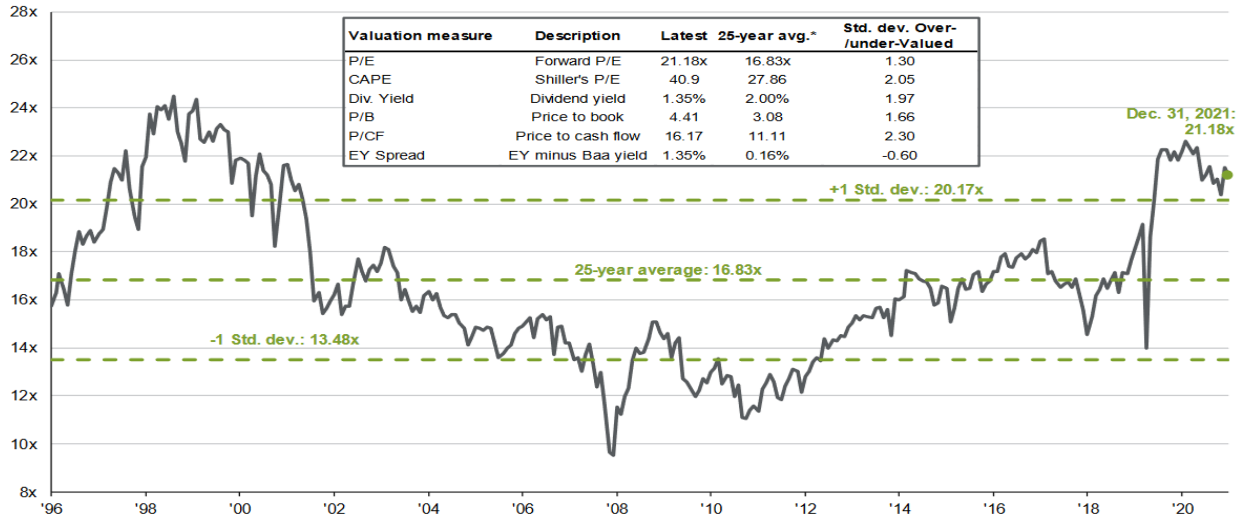
We have been guilty of brushing aside valuation concerns, ourselves, arguing in past *Outlooks* that the market's high valuations were inflated by the out-performance of that handful of mega-cap growth stocks we spoke about at length earlier. If we look past those names, we reasoned, valuations for the rest of the market were reasonable. That is all true, but for many investors, particularly those with short time horizons, it may not matter. A severe market correction would almost certainly bring down the prices of all stocks, not just the over-valued and over-hyped growth stocks. The likelihood that "value" sectors would decline much less in such an event would probably be scant comfort to those whose risk tolerance is low, or whose time horizon is not long enough to recover their losses. You can't pay the rent with "relative" performance.

The fact is that the market's rise over the last 10 years, and particularly over the last 21 months, has resulted in the highest valuation levels since the dot.com bubble of 1999-2000. This is true not just on a price/earnings basis, but also relative to book value, cash flow and dividends. It is only when comparing the current earnings yield (the reciprocal of the P/E ratio) to current bond yields do stocks appear to be undervalued, but bond yields have almost surely bottomed (charts, following).



Source: Compustat, FactSet, Federal Reserve, Refinitiv Datastream, Standard & Poor's, J.P. Morgan Asset Management.
Dividend yield is calculated as consensus estimates of dividends for the next 12 months, divided by most recent price, as provided by Compustat. Forward price-to-earnings ratio is a bottom-up calculation based on J.P. Morgan Asset Management estimates. Returns are cumulative and based on S&P 500 Index price movement only, and do not include the reinvestment of dividends. Past performance is not indicative of future returns.
Guide to the Markets – U.S. Data are as of December 31, 2021.

S&P 500 Index: Forward P/E ratio



Valuation measure	Description	Latest	25-year avg.*	Std. dev. Over-/under-Valued
P/E	Forward P/E	21.18x	16.83x	1.30
CAPE	Shiller's P/E	40.9	27.86	2.05
Div. Yield	Dividend yield	1.35%	2.00%	1.97
P/B	Price to book	4.41	3.08	1.66
P/CF	Price to cash flow	16.17	11.11	2.30
EY Spread	EY minus Baa yield	1.35%	0.16%	-0.60

Source: FactSet, FRB, Robert Shiller, Refinitiv Datastream, Standard & Poor's, Thomson Reuters, J.P. Morgan Asset Management.
Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1996, and J.P. Morgan Asset Management for December 31, 2021. Current next 12-months consensus earnings estimates are $228. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure. *P/CF is a 20-year average due to cash flow availability.
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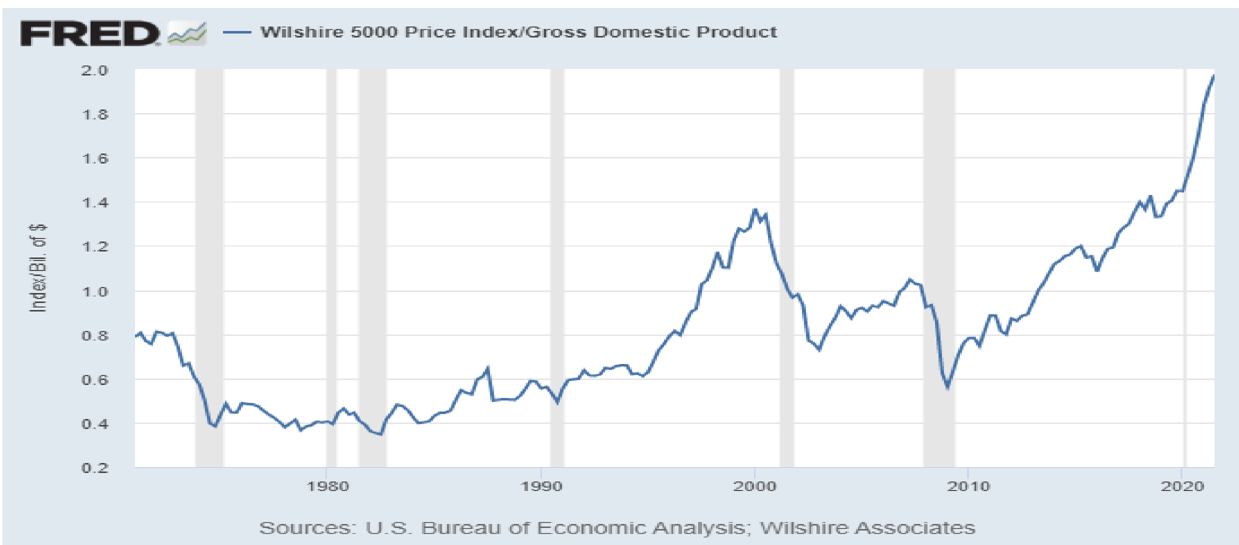
J.P.Morgan
ASSET MANAGEMENT

On a macro basis, the total market capitalization of all U.S. stocks has grown to almost 200% of GDP. The last (and only) time this broad measure approached even 140% of GDP was, again, during the period leading up to the bursting of the tech bubble at the end of the last century. The average ratio of stock



market capitalization / GDP, globally, is barely 105%, based on the average of the world's 62 largest economies. U.S. stock market capitalization now represents 61% of the world's total, despite the fact that the U.S. accounts for only 23% of the world's GDP.

As recent market weakness has brought the S&P 500 down very close to the 10% threshold that defines an official "correction," we should remember that the market had not experienced a pullback of more than 5% from any high in more than 16 months. Considering the market's previous gains and its historically high valuation in the face of the headwinds of a less accommodative Fed and rising market interest rates, a meaningful market correction should not really be a surprise.

For long term investors with the patience, means and fortitude to remain fully invested through the market's inevitable cycles, we stand by our observation that there are fairly valued opportunities that are obscured by the S&P's inflated multiple. Drug stocks with generous dividend yields are trading at multiples of below 10 times earnings; shares of medical device companies which collapsed as elective surgeries were postponed due to COVID, should rebound as the virus' effects lessen in the coming years. Manufacturing activity remains strong despite supply chain issues, supporting the share prices of industrial stocks, and this sector should benefit even more as the global economy returns to trend growth, however slowly. Rising interest rates, which would crunch the valuation models of ultra- high P/E growth stocks, would benefit financials and many other sectors of the market. Increasing inflation expectations tend to be more supportive of cyclical value sectors than growth sectors, although technology stocks have been relatively immune to rising prices. And value stocks have tended to outperform growth stocks in the early stages of a new Fed rate hike cycle. For long term investors, an increase in market volatility can be as much a friend as a threat.

Finally, we should say that, in all likelihood, the most important driver of market performance in the coming year has not even been identified in this piece. Not a single 2020 market forecast cited an emerging pandemic as a threat to the economy or the capital markets; nor did anyone anticipate at the beginning of 2021 that rising inflation expectations would cause the Federal Reserve to abruptly change course, or that stocks would continue to surge to new highs in spite of its course correction.

Aldous Huxley said that, "There are things known and things unknown, and in between are the doors of perception." Our perception is that investors should lower their expectations, as increasing headwinds have raised risk levels near term, and high valuations have lowered expected returns long term. Byron Wien's expectation of a market that remains flat despite another year of strong earnings growth may not only be the best outcome we can expect this year, it may also be the best possible outcome for the market's long term view, as well.

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