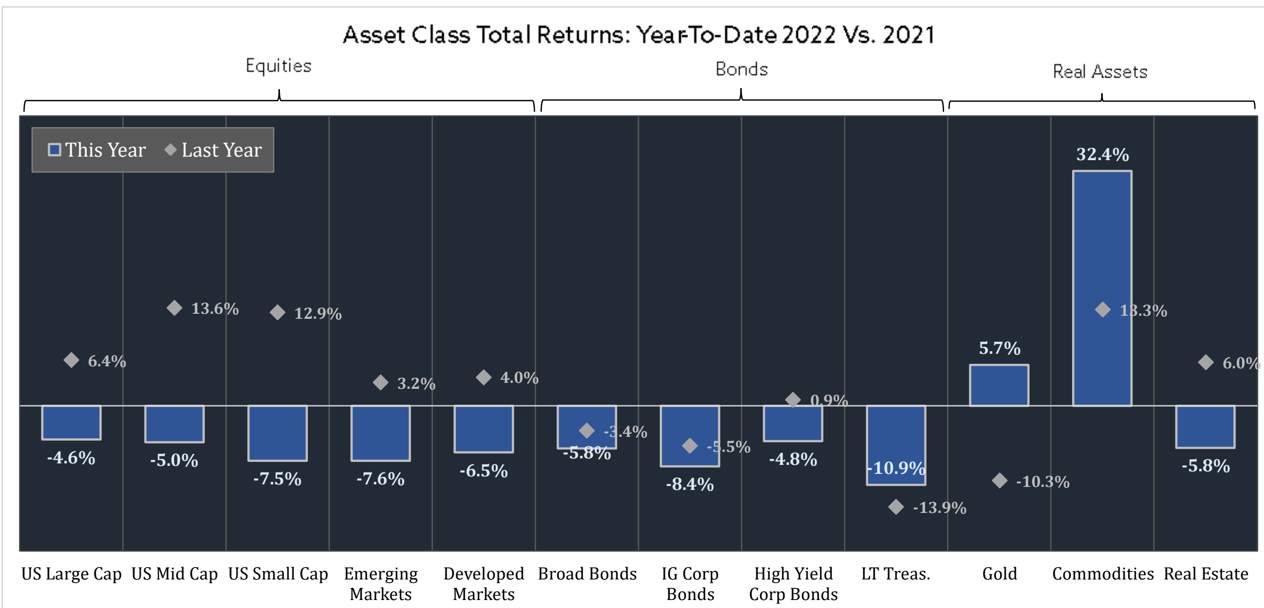
Pendleton Street Advisors
1st Quarter 2022 Investment Commentary
April 14, 2022

During the first quarter of 2022, economic and geopolitical headwinds to future growth and stability grew in number and magnitude, and increased uncertainty drove market volatility higher. Some investors who had become used to (seemingly) tap-dancing through the markets over the last few years are now likely asking: **Is the party over?** Markets have recently served up a difficult truth to many of those investors (if they are willing to hear it): **Investing has never been a party.** Buzzwords like "meme stock" and "yolo" have given way to timeless classics such as "geopolitical risk," "wage-price spiral," and "stagflation." Heading into Q2, we revisit the market drivers discussed in last quarter's commentary; how they have changed; and how those drivers impact our team's management of your portfolio.



Market Summary:

Coming off the heels of a 28.7%[1] increase in 2021, the S&P 500 index of US Large Cap stocks declined by -4.6% during the first quarter. Bonds returned -5.8% as measured by the Bloomberg US Aggregate Bond Index, <u>declining more severely than stocks for the only quarter other than Q1 2018 in the history of the index</u> as the Federal Reserve Open Market Committee made good on its commitment to begin raising short-term interest rates to combat inflation.

The only broad asset class to escape downward pressure was Commodities (up 32.4%) which had lagged both stocks and bonds by any conventional measure of performance for at least a decade. While the conflict in Ukraine and the related sanctions targeting Russia's economy definitely play a role in the current trend of rising energy and food prices, commodities in aggregate exceeded pre-COVID prices in early 2021 and have risen by over 55% since then. **<u>War dominates the headlines, but in order to understand what is driving volatility in the prices of commodities and financial assets more broadly it is necessary to look wider and further back.</u>**

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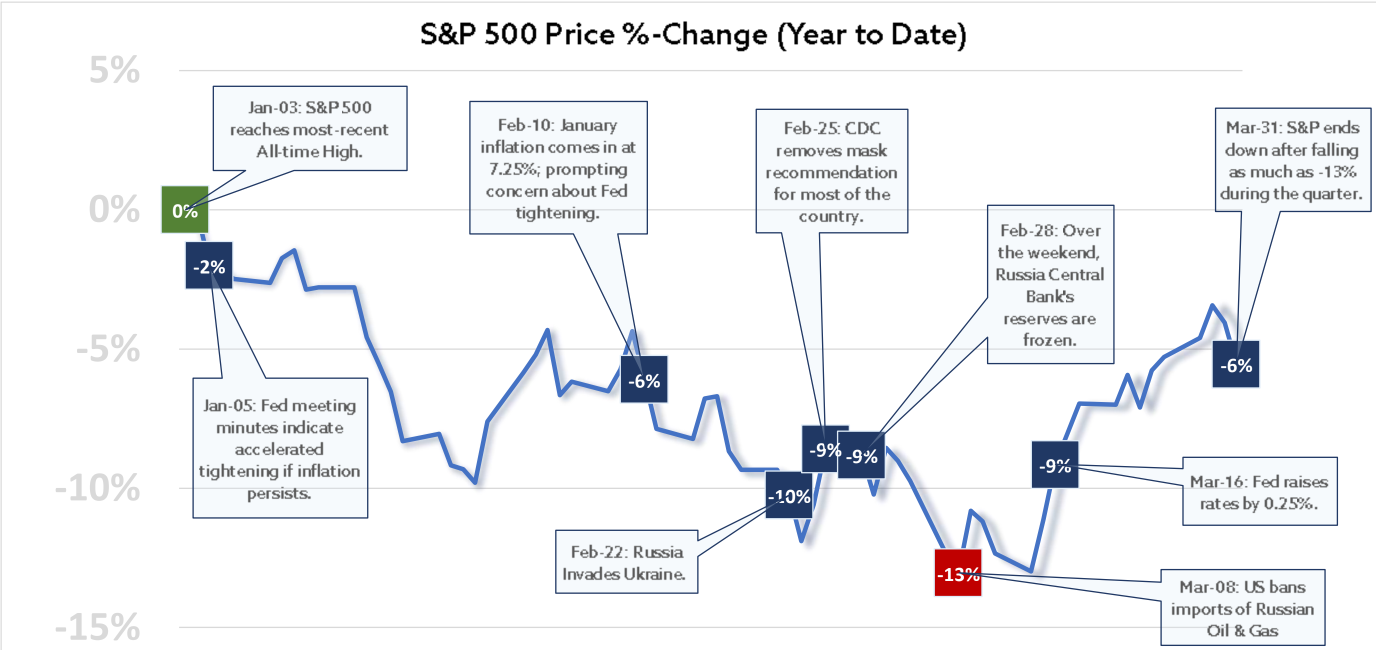
[1] All return figures are presented on a Total Return basis, which assumes reinvestment of dividends as opposed to Price Return, which excludes dividends all-together.

Market Drivers:



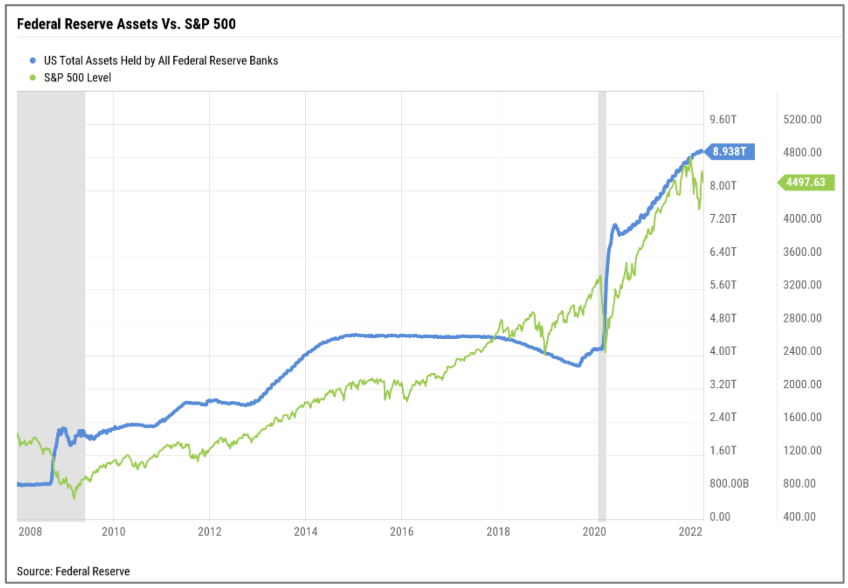
In last quarter's commentary we discussed the importance of shifts in key financial variables that drive markets; and that those drivers appeared to be at a critical turning point. Shifting expectations around Inflation, Interest Rates, and Growth drove large changes in how markets view and value stocks, bonds, and everything in between.

	Indicator Levels As Of...			
	5-Year Average	Year-Ago	2021 Year-	Most-Recent
Inflation (CPI Year-Over-Year %-Change)	**2.5%**	**1.7%**	**7.0%**	**7.9%**
Source: Bureau of Labor Statistics		*2/28/21*	*12/31/21*	*2/28/22*
Effective Federal Funds Rate	**1.09%**	**0.06%**	**0.07%**	**0.33%**
Source: Federal Reserve		*3/31/21*	*12/31/21*	*3/31/22*
FOMC 2022 Estimated Real GDP Growth		**3.30%**	**4.00%**	**2.80%**
Source: Federal Reserve		*3/17/21*	*1/5/22*	*3/31/22*

The table above indicates that those drivers are, for the most part, signaling a **challenging road ahead** for both markets and the underlying economy. We discuss these in more detail below, but from a birds' eye view:

- **Inflation** is at its highest level in 40 years and has not begun to normalize, as had previously been expected.
- **Interest rates** have increased and are expected to continue climbing based on recent statements by Federal Reserve officials.
- **Growth** in the economy is expected to continue, albeit at a slower pace given the existing challenges presented by COVID in our country as well as globally, most notably China; supply chain/raw materials constraints; and the real economic impacts of the war in Ukraine and the associated economic sanctions on Russia.

Interest Rates/Yields Drill-Down: On March 16th, The Federal Reserve Open Market Committee ("FOMC") announced the first of potentially seven hikes to its target for the Federal Funds Rate – from 0% to 0.25%. If the FOMC follows through with the other six, the target Fed Funds rate will be 1.75%, assuming that all of the rases are 0.25% (*some members of the committee have stated that 0.5% hikes are not out of the question*).



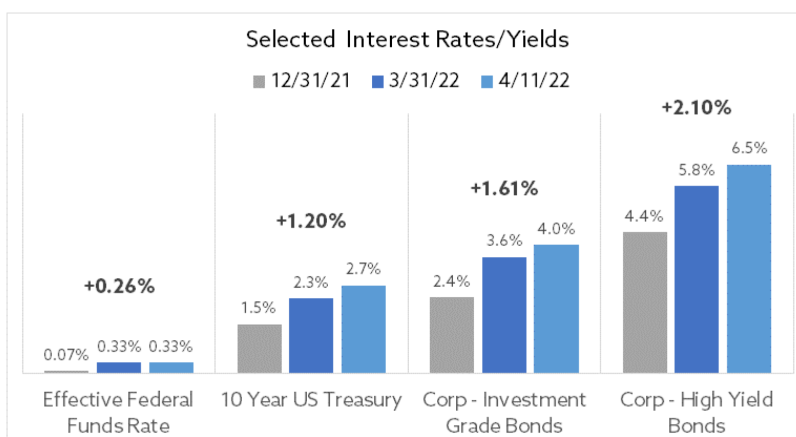
Source: Federal Reserve

The Committee also indicated that it would take a more accelerated approach to winding down bond purchases and reducing the size of its balance sheet. As opposed to the Fed's cautious and measured approach to raising (*and communicating about raising*) the Fed Funds Rate and reducing its Balance Sheet assets during the last wave of rate increases and Quantitative Tightening (QT) from late 2015 to early 2019, FOMC members including Chairman Jerome Powell have been outspoken regarding their willingness to be more aggressive in raising rates to combat inflation. From Powell's press conference on March 16th: *"The framework is going to look very familiar to people who are familiar with the last time we did this, but it will be faster than the last time and of course it's much sooner in the cycle than last time."*

Balance Sheet Reduction: Reducing the balance sheet marks a more aggressive approach to ending the most recent round of Quantitative Easing (QE) - implemented in March, 2020 to lessen the impact of COVID on markets and the economy – and a course reversal towards QT.

After purchasing more than **$4.5 Trillion** of US Treasury Bonds and agency Mortgage Backed Securities, the Fed began slowing its purchases of bonds in November, 2021 (i.e. "tapering"). Due to persistence of elevated inflation and historically low unemployment, the Fed doubled its targeted reduction in bond purchases in December and indicated it would cease the purchases all-together by early March. Now, since inflation has crept even higher and the labor market remains tight, the Fed has indicated it will go one step further and sell bonds that it had purchased during QE. The Fed removing itself from the market for Treasuries and MBS will result in the loss of a major source of demand in the markets for those securities. Depending on the willingness and ability of others to pick up the slack, the result of diminished demand in any free market is lower prices, or in the case of bonds, higher yields.

Rate Hikes: The Fed Funds Rate (set by the FOMC) serves as a key short-term interest rate benchmark for lenders, borrowers, and investors. Bonds (and other debt instruments) are priced to ensure that their rates are higher than that short-term benchmark. Why? Because the Federal Funds Rate is the rate banks earn from lending/depositing funds to the Federal Reserve. **In the eyes of banks and markets all-together, the Fed Funds Rate represents the lowest rate one should earn for parting with**

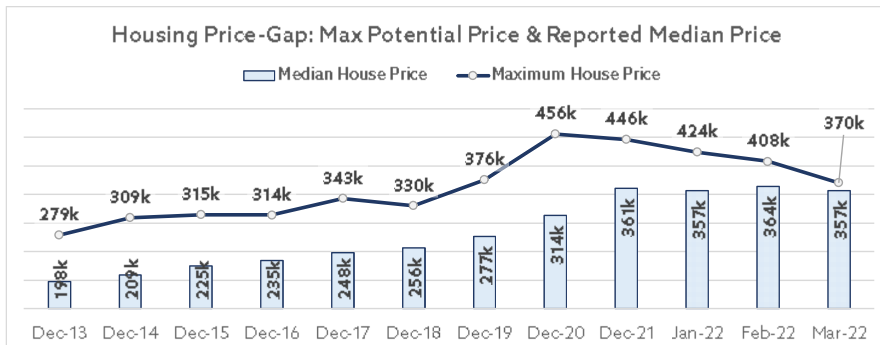


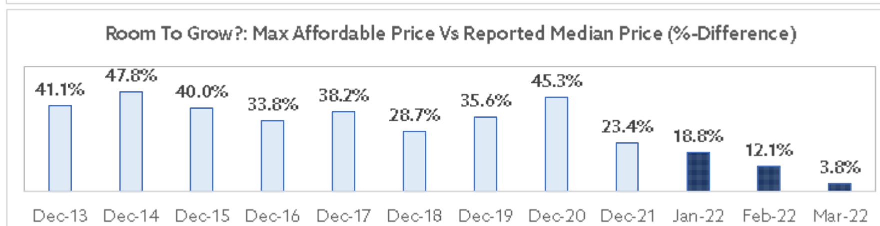
money over the <u>shortest term</u> and to the <u>most credit-worthy borrower</u>.

So, when the Fed Funds Rate increases, lenders and bond investors require a higher rate of interest from other borrowers too, <u>including interest earned on existing bonds</u>. That last point is a major reason why bonds performed as poorly they did in the first quarter: **<u>The only way a bond issued during a lower rate environment can match the higher rates of newly issued bonds is to have a lower price</u>**. As a result of higher interest rates, bond prices have declined.

Rising interest rates not only result in a higher cost of borrowing; they also result in a higher cost of capital across the board. Higher cost of capital can cause businesses to reassess current and prospective growth efforts as higher costs of debt and equity eat into profitability. Rising rates (higher cost of capital) impact consumer behavior in similar ways…

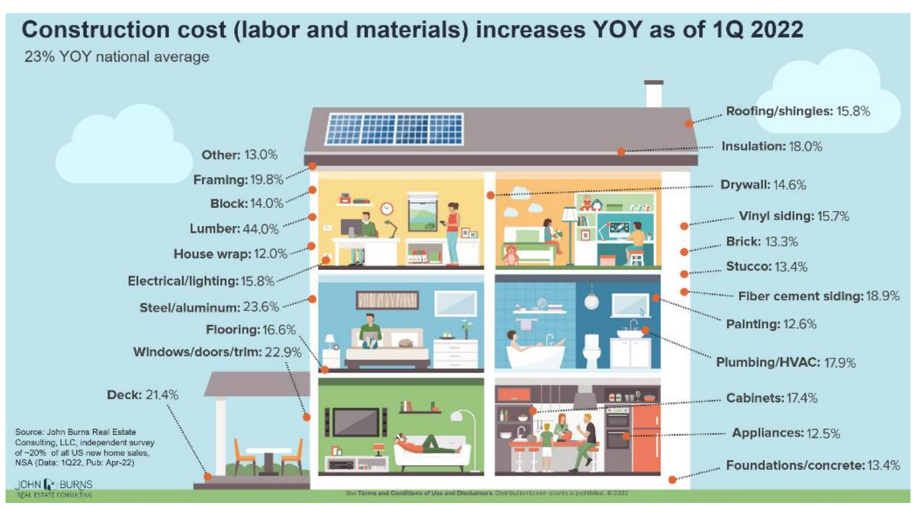
The Housing Example: For example, one reason the median house price grew approximately 30% from 2019-2021 was the extremely low cost to borrow. Coupled with demographic and other drivers of demand, the low cost to borrow drove prices to the higher end of affordability. Now that rates are increasing, current price levels in the housing market don't just feel like they are at nosebleed levels.





In very practical terms, the increase in rates and associated debt-service means houses are barely-to-not affordable to households in the median income range or below. Assuming a 30-year mortgage, maximum mortgage payment-to-income of 25% (*at median household income*); and a down payment of 5%, **<u>the %-gap between maximum affordable price and the reported median house price has declined from an average of 38% from 2013 – 2020, to 3.8% based on current mortgage rates and the most recent median income and house price data from the National Association of Realtors</u>**.

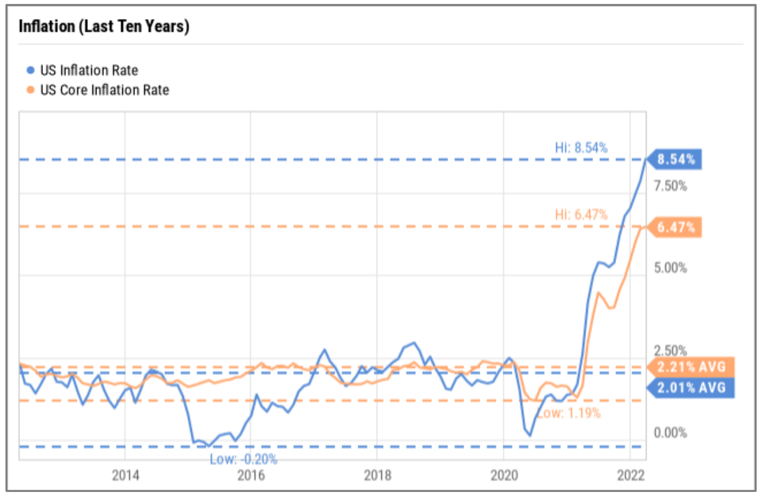
To be fair, low interest rates were not the only factor driving house prices higher: **<u>Rising costs of labor and materials have also driven up the cost to construct new houses</u>**, which brings us to the next market driver:



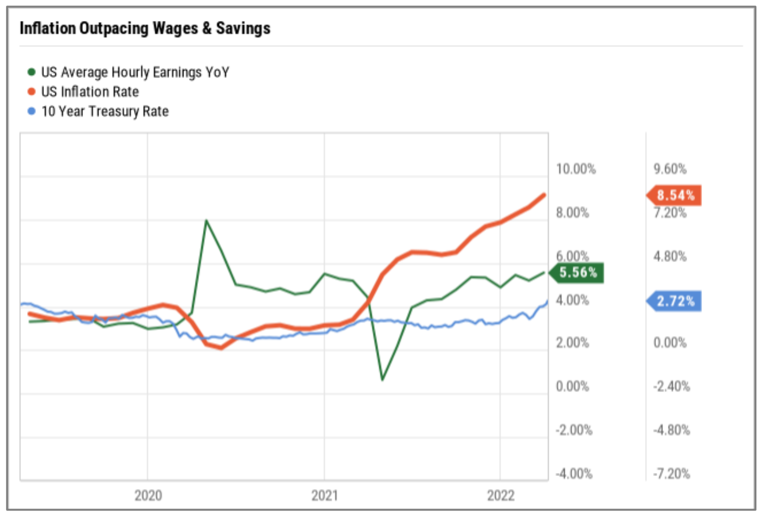
<u>Inflation Drill-Down</u>

Inflation began its upward trajectory in June, 2020. Since that time, the year-over-year change in the US Consumer Price Index has increased from 0.65% to 8.54% in March (6.47% excluding food & energy). Inflation is bad for consumers, and thus bad for the economy as consumer spending represents 68% of GDP.

If wages and savings do not grow at a rate comparable to inflation, the negative impact on purchasing power is worse. US Average Hourly Earnings have lagged behind inflation since March, 2021. Yields on 10-year Treasury bonds (a commonly used benchmark for fixed income yields) have lagged inflation since August, 2019.



Despite the pickup in inflation, personal consumption expenditures have continued to grow at a rate above inflation (6.9% in February); which means that <u>higher prices have not yet stopped people from buying more</u>. While this is one green shoot, it does not mean that spending growth will continue to meet/exceed inflation, because the longer inflation remains at these elevated levels the more consumers will have to use debt or spend their savings for the future in order to fund consumption in the present.



If inflation persists, eventually spending and investment will slow, which will result in an honest-to-goodness economic-shutdown-free recession. The near and long-term impacts of inflation are why the Fed is approaching interest rate and balance sheet normalization so aggressively. But, this medicine has side effects; some of which we are already witnessing:

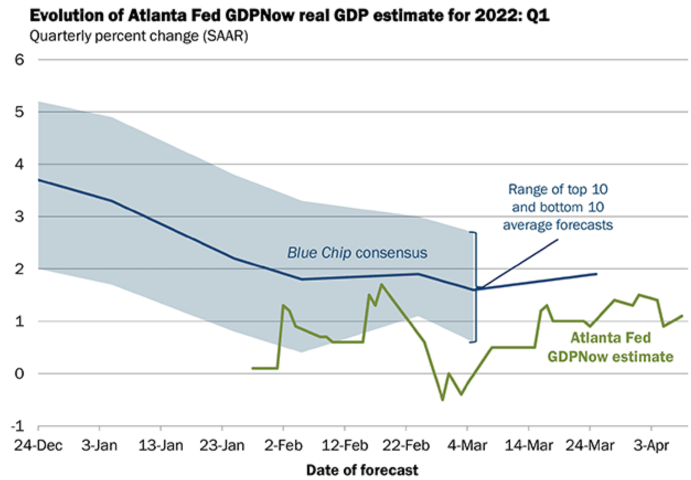
1) Heightened volatility and a downturn in the stock market reflect a mix of fundamental changes in the cost of capital (opportunity cost discussed above); and investors' uncertainty about how far the Fed is willing to go and whether their maneuverings will produce the results they want without bringing about a recession.

2) Heightened volatility and a downturn in the bond market reflect a mix of investors adjusting to new higher rates as the Fed's rate hikes ripple through the credit risk and maturity spectrums; and uncertainty regarding the impact on supply and demand of the Fed's exit as a regular buyer.

Growth Drill-Down:

Given established trends in inflation and the Fed's roadmap for interest rates, Growth is the wildcard. Elevated inflation and rising interest rates are both detrimental to economic growth, but there is a difference between a moderation in growth (what the Fed is attempting to bring about) and a recession (negative growth in GDP). While challenges to both economic and corporate profit growth persist, **<u>the data currently suggest moderate slowing - not recession</u>**:

- **GDP:** The Atlanta Federal Reserve Bank's GDPNow forecast of quarterly GDP is updated throughout the quarter with data from higher frequency inputs. The growth estimate from the latest release (April 8th) puts annualized GDP growth for Q1 of 2022 at 1.1%, down from an average of 5.45% over the last four quarters but up from the January 28th initial Q122 GDPNow estimate of 0.1%. The improvement in the estimate is the result of strengthening in Personal Consumption Expenditures as well as Business and Residential Fixed Investment. **Outlook: Slower, but positive.**



Sources: *Blue Chip Economic Indicators* and *Blue Chip Financial Forecasts*
Note: The top (bottom) 10 average forecast is an average of the highest (lowest) 10 forecasts in the *Blue Chip* survey.

- **Corporate Earnings/Profits:** S&P 500 Operating Earnings Per Share are expected to grow by approximately 8% in 2022[2], compared to average annualized growth of approximately 15% in 2020 and 2021. Analyst consensus[3] estimates from major US banks average 8.9%, with only one bank out of 13 (Bank of America) forecasting negative growth. **Outlook: Slower, but positive.**

The GDP and earnings estimates above have been updated beyond the date of Russia's invasion of Ukraine and includes expectations regarding the impact of elevated inflation and runaway commodities prices. Yet, the inversion of the yield curve (discussed also in Q1-2019) for two days in early April is seen by many as a surefire recession indicator. Based on the data, they are not wrong; they are just leaving out facts that provide meaningful context: a) recessions have historically begun anywhere between 5 to 18 months **after** the inversion of the yield curve, and b) in every previous case except for August, 2019 the curve has remained inverted for weeks or months – not days – before a recession. We are watching the yield curve closely for signs of sustained inversion, but since the 2 days of inversion in early April, the curve has climbed back into positive territory and remained there.

While volatility and downturns are uncomfortable, our own experience and our understanding of historical market environments both remind us that periods of declining and volatile prices a) are normal, and b) present opportunities. We are likely entering a market environment that is unlike the last decade, which was dominated by accommodative Fed policy and market pandering at times. Easy monetary policy could be reasoned at the time, and it could have lasted longer had the Fed's doubling of its balance sheet not been massively accelerated due to COVID. To some extent, the Fed **intends** to jolt markets into being reasonable about prices paid for everything from houses to cryptocurrencies. And markets have obliged; in many cases going too far - whether that means the bond market pricing in too many rate hikes too quickly out of fear, or investors selling the stocks of high quality, growing companies along with the horribly-run, zero-cash flowing companies that have somehow found investors until now.

Our firm values frequent communication with you to discuss changing conditions and to ensure that we understand and stay updated on your objectives. Our client-service staff will be reaching out to you as usual to schedule a meeting. If you would like to set up a meeting sooner, please contact us at your convenience. We look forward to hearing from you.

[2] S&P Global, Index Earnings tables.
[3] Aswath Damodaran, Spreadsheet to Compute Current ERP for Current Month