

Economic & Market Outlook

Executive Summary

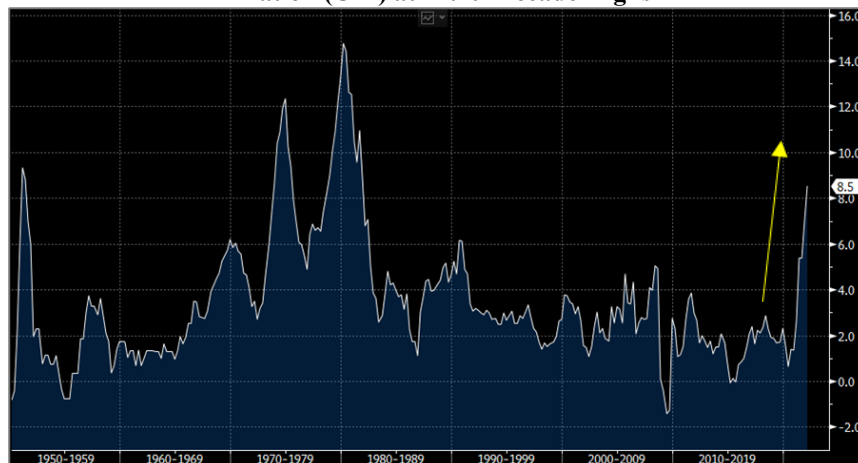
- ~ The first quarter was tough for financial markets. Global stocks fell by -5.3% and investment-grade bonds fared even worse at -5.9%. Except for commodities, and stocks linked to commodities, virtually every asset class lost money.
- ~ Inflation continues to climb, surpassing the market's original expectations. Policymakers have also been surprised by the persistence and magnitude of price hikes in our economy. As a result, the Federal Reserve's willingness/need to combat inflation, via tighter monetary policy, appears to be increasing. At present, the market is pricing in multiple rate hikes in both 2022 and 2023.
- ~ Whether or not today's bout of inflation will prove transitory remains to be seen. With time, supply-driven inflationary shocks should subside, but the longer-term impact of years of loose monetary policy remains unknown.
- ~ Growing inflation expectations have led to a dramatic rise in interest rates. Bond markets are experiencing one of their worst selloffs in history. The silver lining of this bond market is the relative attractiveness of investment-grade bonds has increased, and they once again offer real diversification benefits to a diversified portfolio.

Q1		
Global Stocks	MSCI ACWI	-5.3%
US Stocks	S&P 500	-4.6%
Int'l Developed Stocks	MSCI EAFE	-5.8%
Emerging Mkt. Stocks	MSCI EM	-7.0%
Investment-Grade Bonds	Barclays Agg.	-5.9%

Flashback to Early April

Yesterday (April 5th), the S&P 500 and Nasdaq fell -1.2% and -2.3% respectively. Today things are looking even worse. As I write, the two indices are down an additional -1.4% and -2.7%. The cause cited for the selloff, hawkish comments from two of the Federal Reserve's most dovish members. Fed Governor Lael Brainard said, "it is of paramount importance to get inflation down" and that the Fed may begin reducing its balance sheet "as soon as our May meeting." And San Francisco Fed President Mary Daly, assured: "we're not going to let this (i.e., inflation) go forever." I am usually skeptical of the media's ability to explain day-to-day market movements. It presupposes a level of knowledge that no single pundit or market participant has, but today I find the explanations less off-putting. Inflation, and in turn interest rates, are one of the most powerful forces in financial markets. And as sad as the news is coming out of Ukraine, rampant inflation is the 100-pound gorilla in the room.

Inflation (CPI) at Multi-Decade Highs



Source: Bloomberg

Why Inflation Matters

Inflation is a tax, just as real as the income taxes you pay to the government. For instance, an individual whose wages grow 3.0% per annum living under a 5.0% inflation regime will find that after 10 years they will have lost 18% of their purchasing power. Furthermore, inflation affects individuals differently depending upon their consumption basket and where inflation is the most pronounced in the economy. To most, a sudden spike in the price of designer handbags matters a lot less than an equivalent change in the price of milk, or as Charlie Munger eloquently put it, “nobody needs a damn Rolex.” In the United States, the average citizen spends 30% of their pre-tax income on housing, 14% on transportation, and 10% on food. Keep in mind these statistics are skewed by the expenditures of those with considerable wealth. For the median household (not the average), generating \$68,000 in annual income, housing, transportation, and food represent an even larger percentage of their consumption basket, which is troubling given these are the areas where inflation is most pronounced. A recent NBC poll asked voters to rank what issues mattered most, and 21% of those polled cited the rising cost of living. By comparison, the war Russia has waged in Ukraine was top of mind for only 14% of respondents.

Inflation is Top of Mind in the US

<i>RANKED BY % MOST IMPORTANT – FIRST CHOICE</i>		
	<u>First Choice</u>	<u>Combined Choice</u>
Cost of living	21	35
Jobs and the economy	16	33
War between Russia and Ukraine ...	14	28
Voting rights and election integrity ...	13	24
Climate change	10	17
Taxes and spending	8	18
Border security and immigration	7	18
The coronavirus	3	8
Abortion	3	6
Some other issue (VOL)	-	3
All equal (VOL)	4	4
None are important (VOL)	-	-
Not sure	1	1

Source: NBC

And let's not forget inflation is currently a global phenomenon. The United Nation Foods and Agriculture Price Index has almost doubled since mid-2020, which poses serious challenges for poorer, less-developed economies. In Peru, armies have been deployed and curfews established to quell riots over rising food and transportation prices. Inflation is not only a tax, but it is also a contributor to political instability both big (the Weimar Republic) and small (Biden's re-election prospects).

Inflation Expectations

Within the realm of finance, few things matter more than interest rates. It doesn't matter if we are talking about bonds, currencies, or even stocks. Interest rates are the epicenter of the financial universe, and nominal interest rates are a function of the real rate of interest plus expected inflation. Said differently, if you had the power to predict inflation expectations (nobody does) then you are well on your way to predicting interest rates and in turn, maybe even asset class returns. Here is a general rule of thumb, meaningful inflation is bad for financial assets, particularly bonds.

The question everyone is pondering, is inflation here to stay or is it transitory? Financial markets suggest inflation will peak this year and then retreat to the 2.5% to 3.0% range in a few years. We can see this by looking at the difference in yields between nominal Treasuries and Treasury Inflation-Protected Securities (TIPS). That said, the market's implied inflation forecast is higher today than it was just a month ago, when 20 and 30-year inflation breakeven rates hovered around 2.3% and 2.1%, respectively. Thus far, financial markets and policymakers have underestimated the strength

and duration of inflation, and as a result, once dovish Federal Reserve officials (like Lael Brainard and Mary Daly) are turning hawkish. There is tremendous political pressure to reign in prices as well.

TIP Break-even Inflation Rates

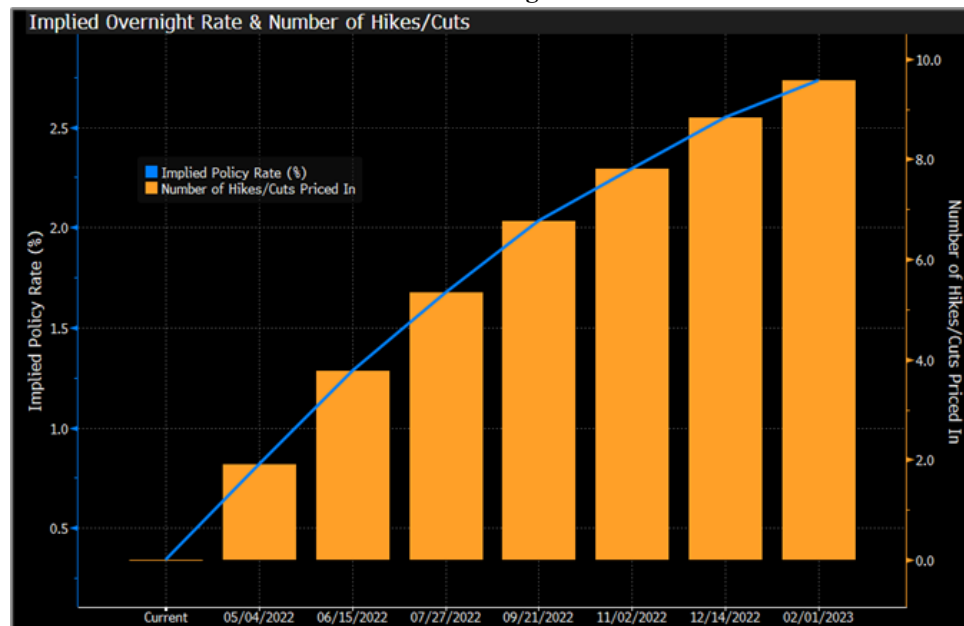


Source: Bloomberg

When Your Only Tool is a Hammer, Everything Looks Like a Nail

The Federal Reserve's primary tool for combatting inflation is hiking the Federal Funds Rate, the interest rate that banks charge each other to borrow or lend excess reserves overnight. In theory, increasing the Federal Funds Rate drives up the cost of borrowing for businesses and consumers, leading to less borrowing, and a slowdown in the economy. It tackles inflation by reigning in demand. At present, the market is betting the Federal Reserve will hike rates nine more times this year, implying a policy rate of 2.25% to 2.50%. If this plays out, it will be one of the largest tightening cycles on record.

Financial Markets are Pricing in Several Rate Hikes



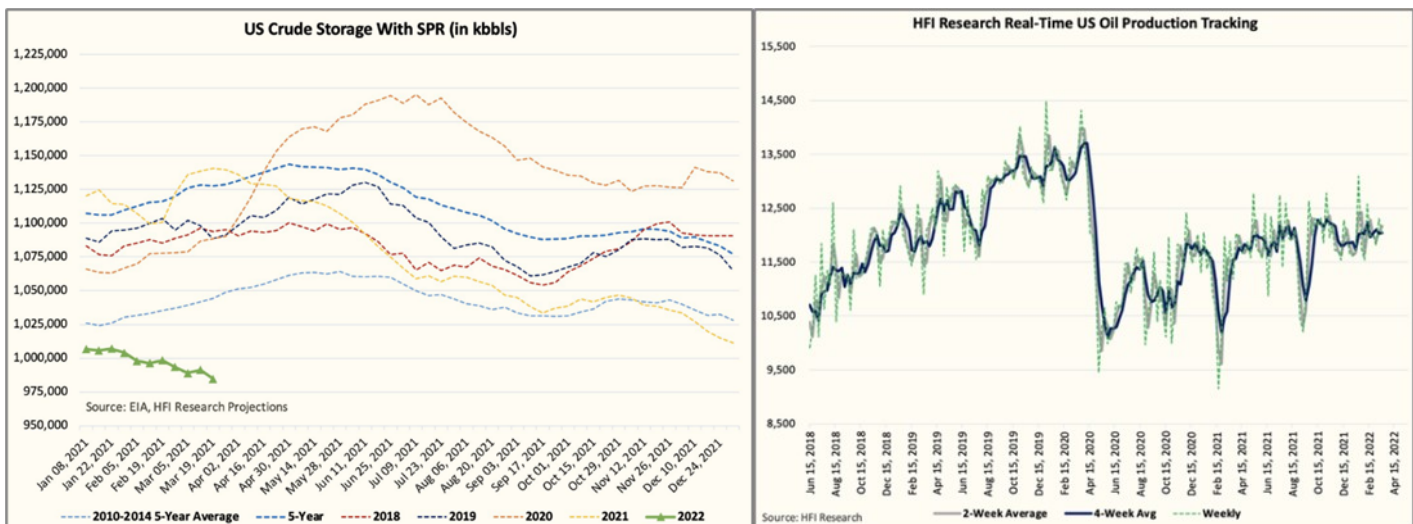
Source: Bloomberg

The problem with the prescription for inflation, higher rates, is its efficacy is unclear. Inflation can be driven by demand, an increase in the number of dollars chasing the same amount of goods, or supply, the same number of dollars chasing fewer goods. There are other causes, but they are outside the scope of this letter. Traditional policy tools (like rate hikes) are effective at quelling demand-driven inflation, but it is unclear if they are appropriate for slowing supply-driven inflation.

The Oil Market

Look at the energy markets. US gasoline prices are the highest they have been in two decades because the global economy is producing too little oil. At year-end, the world consumed 100.3 million barrels of oil per day. Global oil production sat at 98.3 million barrels a day, 2 million barrels less than global production. To fund the supply deficit, countries have had to draw on crude oil inventories sitting in storage. As a result, US crude oil inventories are the lowest they have been in decades and continue to deplete. Furthermore, OPEC's spare capacity (their room to produce more) is relatively low. Saudi Arabia is the only OPEC member believed to have meaningful spare capacity, which the US Energy Information Administration ("EIA") estimates total 2.1 million barrels a day. We would note that these estimates have a history of being overly optimistic. For now, the marginal producer of oil is US shale, which despite an attractive price environment is increasing production at a tepid pace.

Low US Oil Inventories & a Partial Rebound in US Oil Production



Source: HFI Research

Rate hikes, aimed at slowing the economy, may reduce our oil demand, but they will not address the root of the problem which is the lack of supply. We hate to sound cheesy, but sometimes the cure for high prices is high prices. The longer crude oil prices remain elevated, the more incented energy companies are to bring on incremental production. US rig counts continue their slow, but steady climb upward, and incremental production should follow. Furthermore, implied demand for oil products appears to already be faltering, indicating finished products (like gasoline) already trade at levels where consumers alter their driving habits when possible.

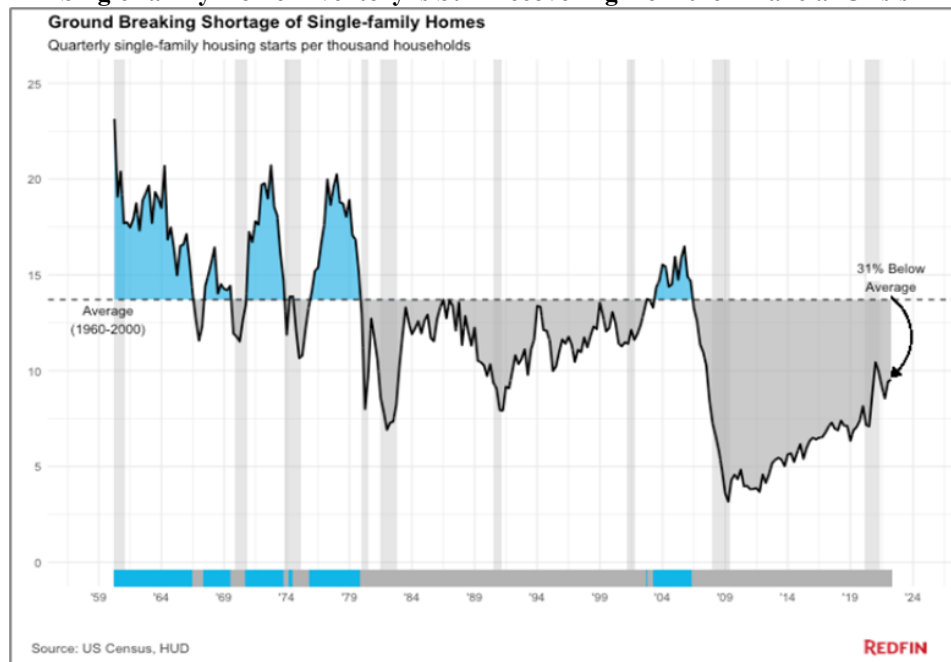
Take note that the supply challenges we are experiencing in the oil markets are pervasive across the broader commodity complex. The world is undersupplied gas, food, lumber, and metals. The resulting inflationary pressures take time to cool, but they can be solved by natural market forces. Intervention might even exacerbate the problem longer-term.

The Housing Market

Another interesting case study is the US housing market. At a roughly 40% weight, housing is by far the largest component of the consumer price index. Like oil, the US housing market is suffering from a lack of supply. Post the global financial crisis, we saw a dramatic slowdown in the construction of new housing units for now obvious reasons. Historically (since 1960), the US would build roughly 1.4 million housing units per year but following the crisis, we needed to work off the excess inventory that had accumulated. The number of new residences steadily declined troughing in 2010/2011 around 500,000 housing units per year. New construction would not return to its historical averages until late 2020. At the same time, the US population continued to grow. The net result was a shortage of homes when buyers wanted them most, during the pandemic.

< See Chart on Following Page >

Single-family Home Inventory is Still Recovering from the Financial Crisis



Source: Redfin

Since the onset of COVID (domestically), US home prices have increased at a 15.9% compound rate. The aforementioned lack of supply, record-low mortgage rates, and COVID were some of the catalysts that contributed to the sudden surge in housing inflation (*note – home prices are indirectly reflected in CPI via owners' equivalent rent*). As with the oil markets, the likely cure for high housing prices is high housing prices. Homebuilders are generating record profits. DR Horton, one of the nation's largest homebuilders, consistently averaged 11% EBITDA margins before COVID. Today their margins are almost double. Given record levels of profitability, homebuilders are incited to bring new homes online, which in due time will alleviate the market's supply constraints. We would also add that mortgage rates have climbed precipitously in recent weeks. Higher prices coupled with higher rates could serve as a governor on continued price escalation; it certainly doesn't increase demand.

30-Year Mortgage Rates are on the Rise



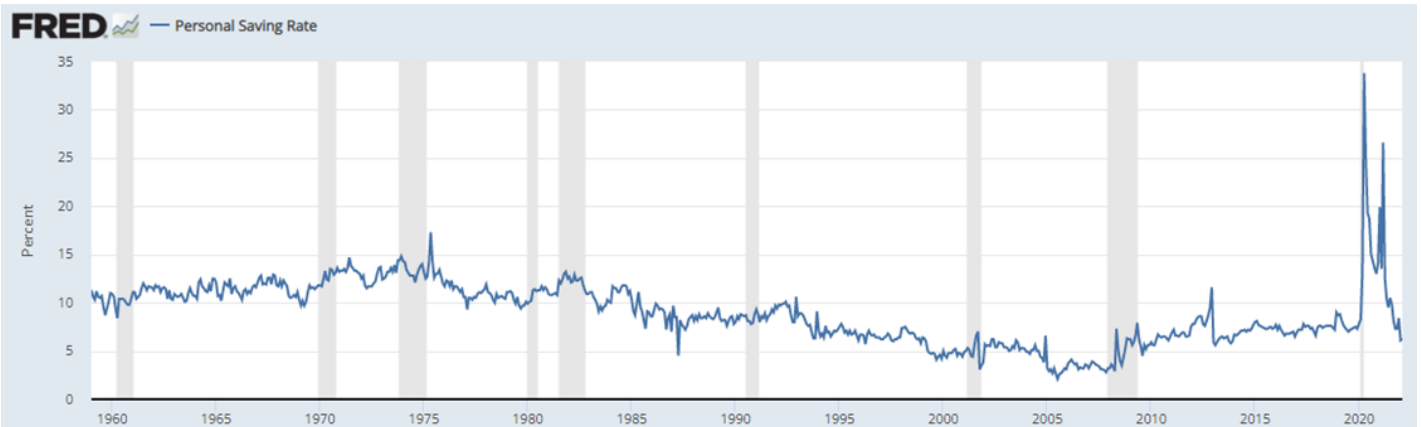
Source: Bloomberg

A Confusing Inflation Outlook

Given our discussion of oil and housing, you may think we fall into the transitory camp. The truth is we don't have a strong opinion on where inflation is heading in the immediate or long-term. There are numerous examples, beyond what we outlined, of COVID-induced supply shocks that should heal on their own but coming out of COVID, we also witnessed \$4.6 trillion (26% of GDP) in stimulus. That stimulus was financed via government bonds that were

indirectly purchased by the Federal Reserve. It was the greatest monetary/fiscal stimulus package to ever exist. For perspective, US money supply (M2) increased at a 6.4% annual clip from 2009 through March of 2020 despite multiple rounds of quantitative easing. Since the onset of COVID, the money supply has grown at a 17.5% annual rate, and to reiterate, much of that money went directly into the hands of businesses and consumers via government transfer payments. By definition, this policy response should cause demand-driven inflation; that is more dollars chasing the same amount of goods and services.

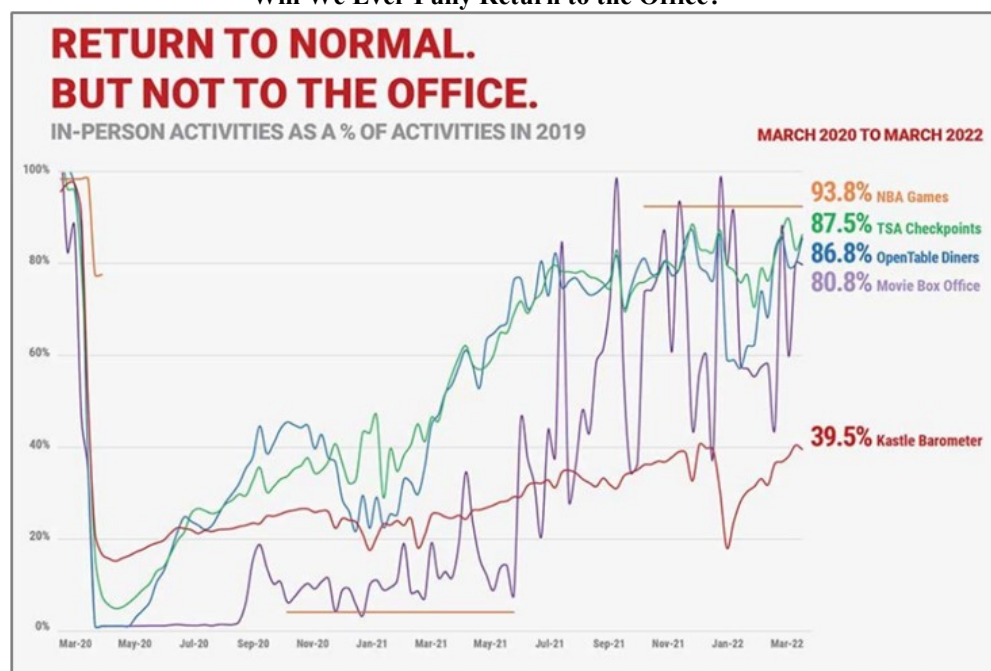
COVID Relief was a Direct Cash Infusion for Individuals



Source: Federal Reserve Bank of St Louis

Lastly, we want to mention an interesting argument we saw articulated by Jim Bianco, a popular macroeconomic strategist. He poses a simple question, what if employees never return to the office? Life is back to normal in many parts of the economy. Travel has mostly recovered, people are eating out again, but employees are still choosing to work from home (see graph below). Bianco notes that our entire pre-COVID economy is engineered around an in-office environment. The economy is built around our daily commute patterns and habits as if we worked in an office. But when we work from home our consumption patterns change. The places you visit, where you eat, how you eat, and the clothes you wear. Everything changes. His point is simple, if our consumption patterns have changed in a lasting way, then the structure of our economy must also change (distribution, manufacturing, etc...), which will take time and lead to inflation along the way. We would summate this situation as follows, forecasting inflation before COVID was a difficult task. Today it's a fool's errand.

Will We Ever Fully Return to the Office?



Source: Jim Bianco, Kastle

Investing Under Uncertainty

Here is a tough question. Given inflation is the 100-pound gorilla in the room, how do you invest in fixed income (or other asset classes) without a view of where prices are heading? We think there are two ways to manage a fixed income portfolio.

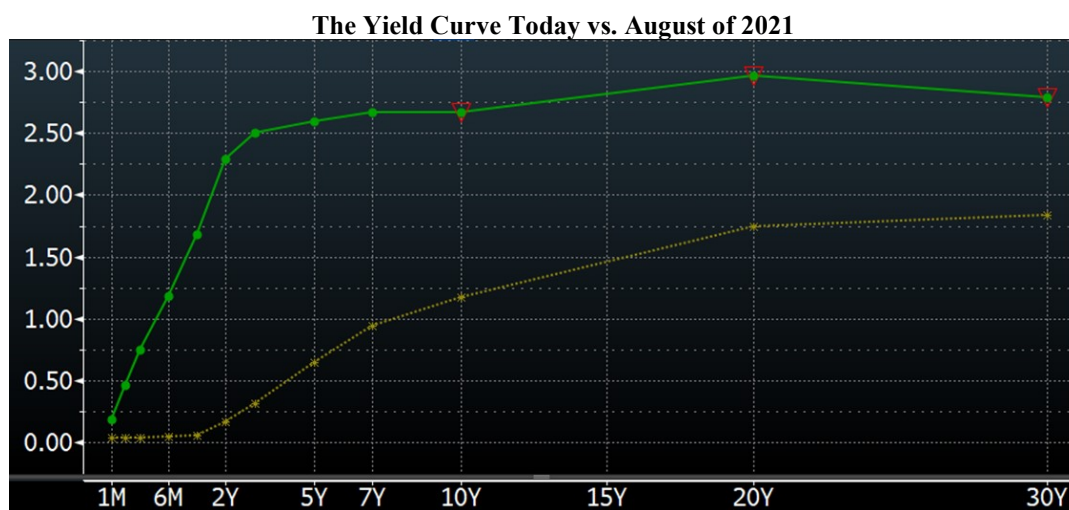
The first, and by far tougher method is to prognosticate. That is, to take a view on the path of inflation and, in turn, interest rates and act accordingly. If you think inflation is going to be strong and persistent, then you might avoid longer-duration bonds. What makes this method difficult is the accuracy of your prognostication isn't the only variable that matters. On top of being directionally correct, you must also outguess the market, which represents the collective opinion of its participants. The real question the prognosticator must ask themselves is, has the market appropriately priced in my forecast? Then there is the secondary question, what's the payoff if my prognostication proves correct and vice versa. You may very well make the consensus bet and be right only to discover that you made a few cents for every dollar you put at risk.

The second method and our default position is to react. The reactionary investor seeks risks they feel fairly compensated for. For example, if credit spreads are high, meaning the market is pricing in the likelihood of missed coupon payments, then we may choose to take on credit risk by purchasing lower credit quality bonds to earn excess returns. Conversely, if credit spreads are low, why take that risk when you can earn commensurate returns holding safe bonds like US Treasuries and/or mortgage-backed securities? The reactionary investor looks at everything as a set of tradeoffs.

"Investors should always keep in mind that the most important metric is not returns achieved but the returns weighed against the risks incurred. Ultimately, nothing should be more important to investors than the ability to sleep soundly at night." - Seth Klarman

The Shape of the Curve

Growing inflation expectations have led to a dramatic shift upward in the yield curve and a repricing in bonds. As a result, bonds are one of the worst-performing asset classes this year. From the bond market peak (August of 2021) till today (April 2022), US investment-grade bonds have fallen -9.2%. This decline represents the second-largest peak-to-trough loss since the inception of the Aggregate Bond Index in 1976. Only the 1979/1980 bond bear market ranks worse. The silver lining is bonds now offer a meaningful spread above cash and improved diversification benefits.



Source: Bloomberg

The graph above shows today's yield curve (green line). Treasury tenors of two years or greater offer yields in the 2.3% to 3.0% range. This is a profound change since the markets August 2020 peak, when short-term yields (cash substitutes) sat just over 0.0% and intermediate and long-term yields ranged from 0.3% to 1.8%. Given we can't forecast

future interest rates, how should we be positioned? How should we react to what the bond market is offering us? Let's start with an easy question, should we hold cash or a short-term Treasury (like a 2-year) over the next 12 months? Cash will earn 0.0%, but it gives us the option to buy into fixed income at more attractive valuations if things get worse. The 2-year Treasury will return roughly 2.3% or greater unless interest rates move unfavorably. Thus, the pertinent question is how much do 2-year rates need to rise to make cash a better alternative? By our calculations, the breakeven rate is 4.9% meaning, 2-year yields would need to climb 2.6% before cash won out. While possible, we view this as a low-probability scenario. Furthermore, there is always the possibility that interest rates move in our favor (maybe due to a recession) slightly increasing investor returns.

A tougher question is what tenor bonds should a fixed income portfolio own? The answer depends on your objectives. If your answer is positive absolute returns, then you can only hold bonds capable of withstanding the most extreme interest rate shocks. If you want fixed income to help diversify away equity risk in the event of a recession, then you will need to look at relatively longer maturities. We fall somewhere in the middle. That is, we want fixed income to provide a source of returns, but also offer a meaningful buffer in the event of a recession. To that end, let's compare the tradeoffs of owning 2, 5, and 10-year Treasuries. 2-year Treasuries have the highest probability of delivering a positive absolute return, but their diversification benefits are muted. The 10-year Treasury offers the greatest diversification benefit but is quick to accrue losses. From the perspective of a reactionary investor, the 5-year Treasury appears to offer the best of both worlds, manageable downside risks, and meaningful diversification benefits in the event of a recession.

How Treasury Bonds Respond to Various Interest Rate Shocks

	2- Year	5-Year	10-Year
Yield	2.30%	2.70%	2.70%
(+) 1.5%	0.9%	-2.7%	-8.8%
(+) 1.0%	1.4%	-0.9%	-5.1%
(+) 0.5%	1.9%	0.9%	-1.3%
No Change	2.3%	2.7%	2.7%
(-) 0.5%	2.8%	4.5%	6.6%
(-) 1.0%	3.2%	6.4%	10.8%
(-) 1.5%	3.7%	8.3%	15.0%

Source: Bloomberg, Annandale

The Fed Tightening Cycle

Wall Street believes the Federal Reserve is backed into a corner and has no choice but to engage in an aggressive round of tightening. Federal Fund futures put the probability of nine rate hikes in 2022 at 97%. In other words, the market thinks the coming tightening cycle is a near certainty. And the tightening cycle doesn't stop there. In 2023, the market is placing greater than 50% odds we will see an additional four hikes. Since 1977, the average tightening cycle has been nine hikes, but over 18 months, not under a year. If the Federal Reserve hits nine hikes and continues to hike into 2023, as the market suspects, it will be the second largest tightening cycle on record, at potentially the fastest pace ever. This has the market nervous. In every past cycle, the Federal Reserve has gone too far in choking off the economy and we have subsequently entered a recession of varying degrees. If you look back at the prior 13 tightening cycles you will find recessions have, on average, started 25 months after the first-rate hike.

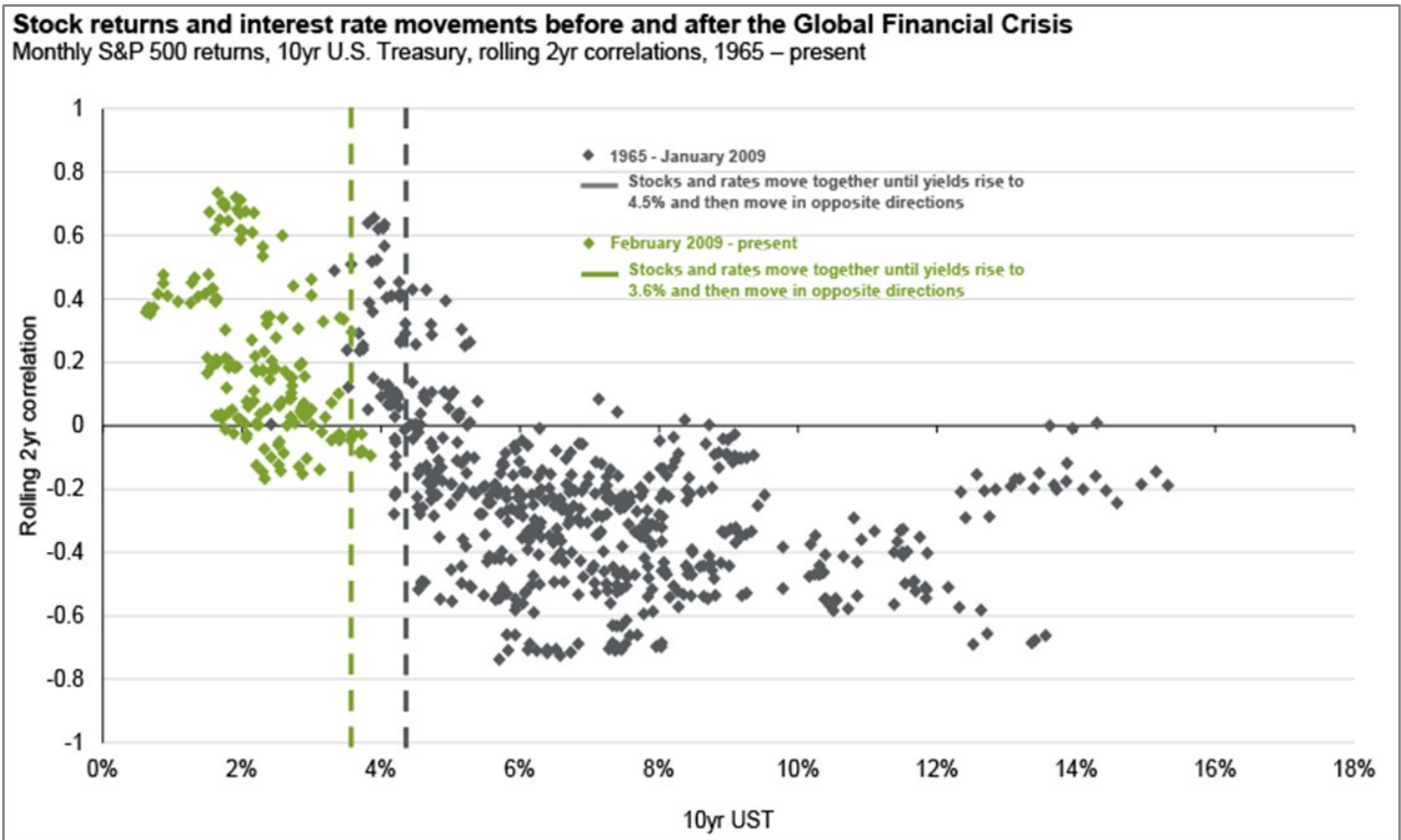
We wouldn't put much stock in the historical numbers. There is no law saying the Federal Reserve must hike 9 to 13 times, just market probabilities that can change. There are also a handful of instances where tightening cycles had little to no impact on the economy. Lastly, the sample size from which to draw conclusions is small and variable. Is the tightening cycle a potential red flag? Of course, and for us another reminder that fixed income, despite its recent past, still plays a role in portfolios.

Conclusion

In our decades of managing money, we have yet to meet someone with a positive track record of betting on macroeconomic events that is also statistically significant. We have seen our share of one (and two) hit wonders that called major events, like the subprime housing crisis, but nobody who has done it with any degree of repetition. Forecasting the macroeconomy is tough, but forecasting how financial markets will react to the macroeconomy is even tougher. With time, we have grown more convicted in our view that the best investors simply react to what the market is offering them, akin to the poker player who only plays high probability hands. We don't know what lies ahead, but we feel confident we have constructed our portfolios in a manner that optimizes reward relative to risk.

We appreciate the trust you have placed in us, and we are hard at work managing your portfolio.

As Yields Rise So Will the Diversification Benefits of Bonds



Source: JP Morgan

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