ACCESS FINANCIAL SERVICES, INC.

Quarterly Review and Outlook

April 12, 2022

First Quarter, 2022

Index Returns as of March 31, 2022	3 Mo.	6 Mo.	12 Mo.
US STOCKS			
S&P 500 Index (large-cap stocks)	(4.60)	5.92	15.65
Dow Jones Select Dividend Index	5.27	13.43	16.30
Russell 2000 Index (small-cap stocks)	(7.53)	(5.55)	(5.79)
FOREIGN STOCKS			
MSCI EAFE Net Total Return Index (US$)	(5.91)	(3.38)	1.16
S&P Europe 350 Index Net TR Index (US$)	(7.47)	(2.08)	3.64
MSCI Japan Net Total Return Index (US$)	(6.61)	(10.31)	(6.47)
MSCI Emerging Markets Net TR Index (US$)	(6.97)	(8.20)	(11.37)
COMMODITIES & CURRENCIES			
US Dollar	2.76	4.33	5.45
Euro	(2.66)	(4.43)	(5.65)
Gold	5.92	10.27	13.45
Oil (West Texas Intermediate)	33.33	33.65	69.51
MVIS CryptoCompare Bitcoin	(3.74)	6.38	(22.56)
BONDS			
Bloomberg US Aggregate Bond (inv. grade)	(5.93)	(5.92)	(4.15)
Bloomberg US Treasury 20+ Year	(11.01)	(7.88)	(1.15)
Bloomberg US Treas. Inflation Protected Secs	(3.23)	(0.73)	4.29
Bloomberg Municipal Bond	(6.23)	(5.55)	(4.47)
Bloomberg US Corporate TR	(7.42)	(7.21)	(4.16)
BBgBarc US Corp. High Yield Bond	(4.84)	(4.16)	(0.66)
S&P International Sov Ex-US Bond US$	(7.12)	(8.74)	(10.16)

BBgBarc: Bloomberg Barclays; Source: Bloomberg and Morningstar

In the opening paragraphs of our last *Quarterly Review and Outlook*[1], I commented that:

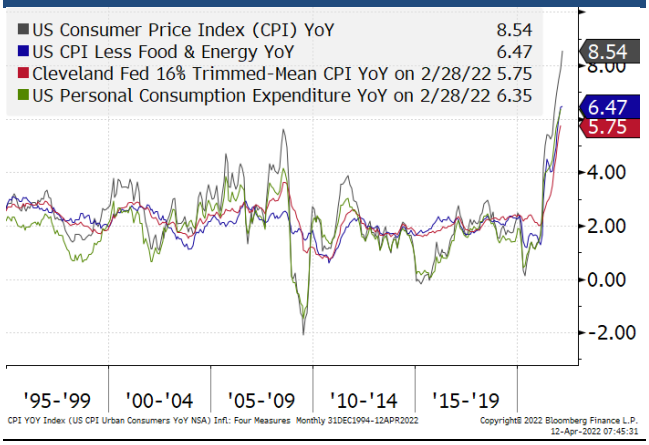
Arguably, two of the most important macro factors for financial markets this year are inflation and employment. More specifically, their impact on monetary policy and interest rates. In an environment where financial assets are richly valued as a result of the massive fiscal stimulus and central bank liquidity injections since February 2020, along with ultra-low interest rates, risk assets have a history of stumbling when liquidity is withdrawn and interest rates rise.

Later, I noted that:

With the rollback in government spending programs put in place at the height of the pandemic, the Fed's ending its quantitative easing (emergency bond buying program) and beginning its quantitative tightening program while lifting short term interest rates, 2022 will see the economy and financial markets learning to live without the stimulus that has unquestionably driven the strong gains in risk assets since the beginning of the pandemic.

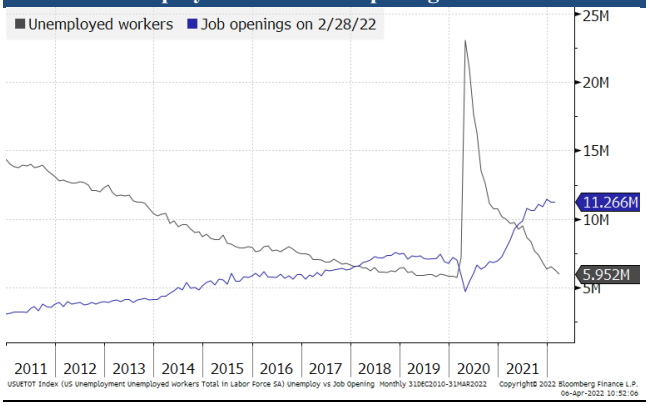
Over the last three months, inflation has continued its ascent (Chart 1), the employment market has continued to tighten (Chart 2), and the Fed has ramped up its hawkish rhetoric. We now also have a war in Europe which is having and will continue to have major economic and geopolitical consequences.

Chart 1: Four Measures of Inflation



Source: Access Financial Services using Bloomberg Software & Data

Chart 2: Unemployment and Job Openings



Source: Access Financial Services using Bloomberg Software & Data

Toward the end of 2021, short term interest rates as measured by the two year Treasury note had risen from around 0.20% in September to 0.73% on December 31 and the financial markets had moved from pricing zero increases in the fed funds rate (the short term interest rate set by the Federal Open Market Committee – the "Fed") over the following twelve months in mid-September to three quarter point (0.25%) hikes over the next twelve months by year end. Today, the two year Treasury note yield is 2.42% (an increase of 232%) and the markets are pricing the equivalent of ten quarter point increases over the next twelve months (Chart 3).

The stock market has not taken this transition well. Between December 31, 2021, and February 23, the S&P 500 Index (SPX) declined -11.3% with most of the damage

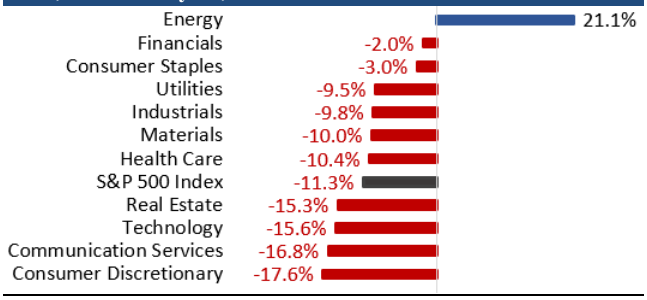
[1] Available at: http://accessafs.com/useful-info/newsletter/

done in the technology related space (technology, communication services and consumer discretionary) where valuations are the most sensitive to changes in interest rates (see page six of our last *Quarterly Review and Outlook* for an explanation of how interest rates have an outsized impact on the stock prices of companies whose earnings are expected to materialize at some unknown future date). During this period, only the energy sector posted positive returns (Chart 4).

Chart 3: Expected Fed Funds Rate In 12 Months

Source: Access Financial Services using Bloomberg Software & Data

Chart 4: 2021 S&P 500 Sector Total Returns: December 31, 2021, to February 23, 2022

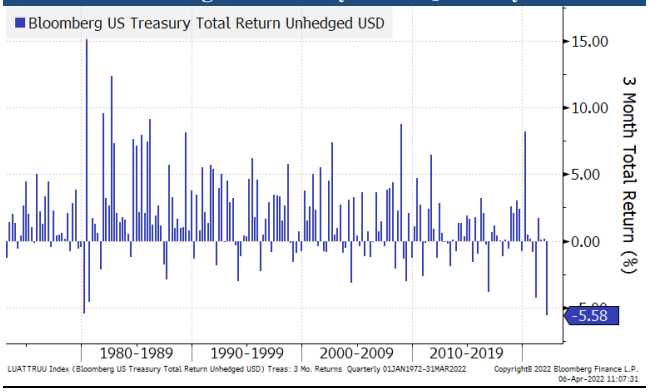


Source: Access Financial Services using Bloomberg Data

Typically, major wars and terrorist acts depress risky assets via flight-to-safety effects. Rising interest rates and inflation risks, however, mean that sovereign bonds offered no cover during the quarter. The Bloomberg US Treasury Index which measures 271 debt securities issued by the US Treasury with an average maturity of 8.2 years and a duration of 6.8 years suffered its worse quarterly loss in decades (Chart 5). Its -5.6% return represented a 2.5 standard deviation move to the left of the mean (Chart 6). Long term treasuries as measured by the Bloomberg US Treasury Long Index (66 securities; average maturity: 23.8 years; duration: 17.8 years) declined -10.6%. Bloomberg's corporate and municipal bond indices were down -7.7% and -6.2%, respectively. At -2.5%, even short term bonds posted their worst quarterly return in the history of the Bloomberg US Aggregate 1-3 Years Index (01/01/93 inception date). The worst prior quarterly return for the Index was -1.1% (Chart 7).

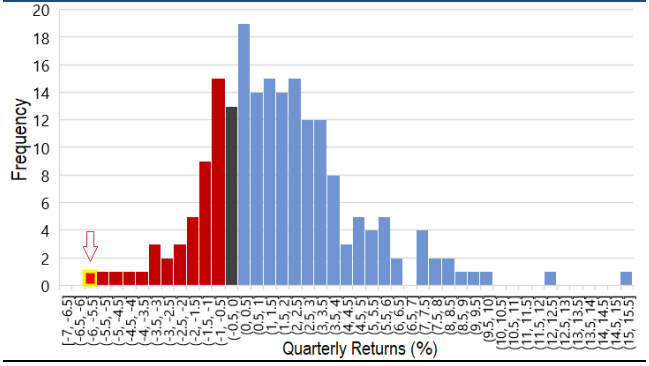
Rising interest rates also sent mortgage rates up over 80% from their low of 2.85% in February 2021 to 5.14% as of April 12 (Chart 8). This equates to an additional $607/month for a 30 year loan versus one year ago ($1,902 at 2.85% vs. $2,509 at 5.14%) for the current average loan size of $460,000.

Chart 5: Bloomberg US Treasury Index Quarterly Returns



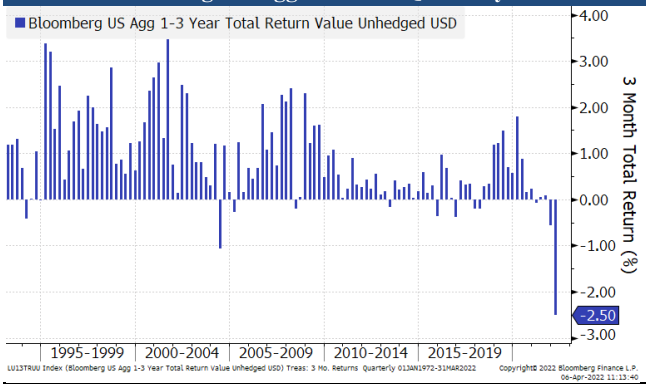
Source: Access Financial Services using Bloomberg Software & Data

Chart 6: Bloomberg US Treasury Index Quarterly Return Distribution



Source: Access Financial Services using Bloomberg Data

Chart 7: Bloomberg US Agg. 1-3 Year Quarterly Returns



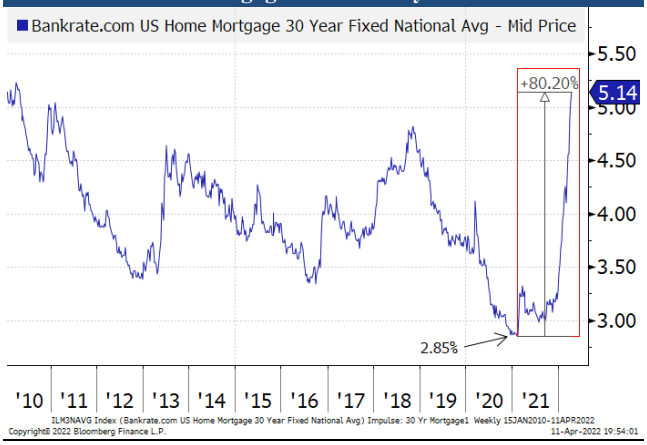
Source: Access Financial Services using Bloomberg Software & Data

The day before Russia invaded Ukraine on the morning of February 24, the SPX closed at its lowest level since late June 2021. While risk assets initially sold off on the news (SPX futures were -2% on the news of the invasion), the SPX actually finished +1.5% by the end of the day and has closed below its February 23 low only three times despite

the economic and geopolitical implications of Russia's invasion.

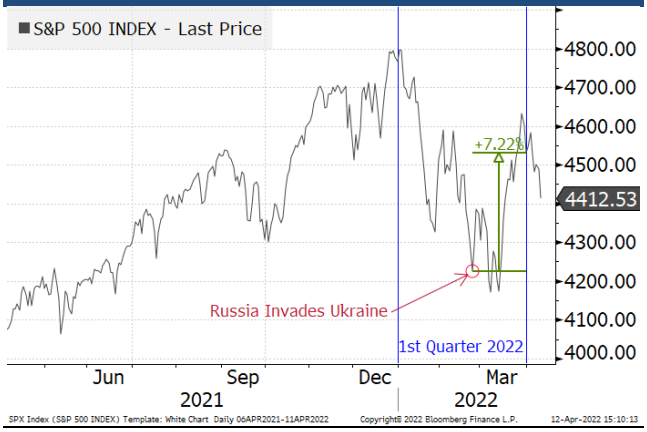
The SPX correction between December 31 and February 23 is understandable for the reasons outlined above. The recovery since the invasion is more difficult to reconcile. It is hard to believe that the SPX never went lower than its intra-day low on the day of the invasion and was up 7.2% between February 23 and March 31 (Chart 9).

Chart 8: 30 Year Mortgage Rate History



Source: Access Financial Services using Bloomberg Software & Data

Chart 9: S&P 500 Price Index



Source: Access Financial Services using Bloomberg Software & Data

Russia's invasion of Ukraine is a continuation of a regional war that started in 2014. The war has been contained within Ukraine since then and the latest expansion of the war is also contained so far.

The war broke out because Russia claims a western-allied Ukraine is an intolerable threat to its national security. Its grand strategy calls for buffer space against western military forces. Moscow feared that time would only deepen Ukraine's bonds with the West, making military intervention difficult now but impossible in the future.

Putin underestimated the costs of Russia's invasion by miscalculating in several respects:

> He did not anticipate that the US would declassify the amount of intelligence that it did, which focused the world's attention on the region and Russia's duplicity in denying that it would invade.
> He misjudged, on the one hand, the operational capability of the Russian military and, on the other hand, the cohesion of Ukraine's population and the effectiveness of its armed forces.
> He did not expect that Western countries would provide Ukraine with the amount of military support that they have which has substantially strengthened Ukraine's ability to resist Russia's attack.
> Most importantly, he did not anticipate that the international outrage to the war would be so severe that it would allow Western countries to impose such heavy sanctions against Russia without major domestic political consequences.

Following Russia's invasion, Western governments imposed a flood of sanctions on Russia, effectively cutting its ties to global capital markets. Additionally, many multinationals have ended all activities with Russia while major shipping lines are refusing to carry raw materials and processed goods from Russia.

Of the many sanctions in effect, one of the most significant was the decision to freeze the foreign reserve holdings of Russia's central bank as Russia holds half of its foreign assets in Europe, North American and Japan. By preventing the bank from selling these assets to stabilize the ruble, the move has triggered a currency and banking crisis.

The bad news is that Putin now has a very strong political need to present at least a minimally plausible "victory" to the Russian people. So far Ukraine's battlefield successes and military support from NATO make a Russian victory appear unlikely. As long as Russia fails to neutralize Ukraine in a military-strategic sense, the war will continue. Putin cannot accept defeat or the current stalemate and will likely intensify the war until he can declare some sort of victory.

If Ukraine and Russia provide each other with acceptable security guarantees, a ceasefire is possible. But up to now Ukraine is unwilling to accept de-militarization and the loss of Crimea and the Donbass, which are core Russian demands.

In *The Art of War*, Sun Tzu argued that military success could be more readily achieved when the enemy is given a way to back down while still saving face: "Build your opponent a golden bridge to retreat across." For now, it seems that even if a bridge were presented to Putin, it is doubtful he would cross it.

It is unlikelhy that Russia will expand the Ukraine war to other states unless it faces regime collapse and grows desperate. The war is clearly a stretch for Russia's military capabilities and a larger war would weaken rather than

strengthen Russia's national security. NATO totally overwhelms Russia's military capacity. As things stand, Russia still has the hope of controlling Ukraine without destroying its commodity exports which are the backbone of its economic foundation. An expansion of the war beyond Ukraine would destroy Putin's regime – and possibly large swathes of the world given the risk of nuclear weapons in such a scenario.

Putin's constraints are positive, but only marginally. The strongest law governing war is the law of unintended consequences. As we think about Russia's limited means and ends, we have to remember this. If Russia fails or grows desperate, if its mistakes and miscalculations continue, if NATO is unresponsive or becomes more aggressive, or if lesser powers attempt to provoke greater American or European security guarantees, then the war could still spiral out of control.

For now, it seems likely that Russia will redouble its efforts to achieve its aim of breaking Ukraine's resistance. But if and when its commodity revenues dry up or Russia's economic burden becomes unbearable, then it may eventually opt for ceasefire and use Ukrainian military losses as proof of its success in de-militarizing the country.

From an economic perspective, Russia and Ukraine account for less than 2% of global GDP in dollar terms. Even if the war reduces Russian and Ukrainian GDP by 10% and 30%, respectively this year, it would only shave one-third of a percentage point off global growth.

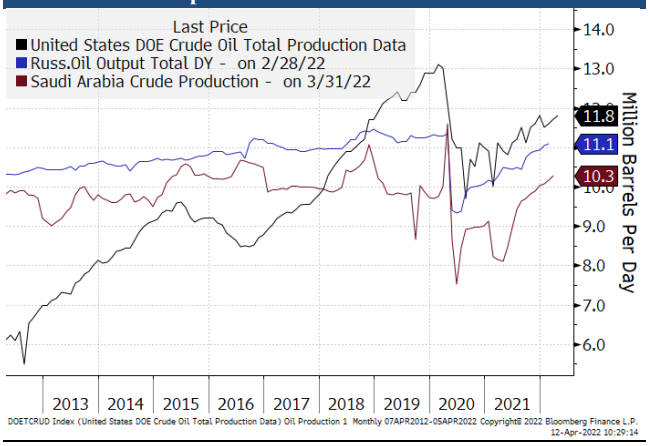
The direct impact on growth from decreased exports is also likely to be small. Exports to Russia and Ukraine accounted for only 0.2% of G7 GDP in 2021. Even Central European countries such as Poland, Czechia, and Hungary export only 2% to 3% of GDP to Russia and Ukraine.

Similarly, most multinational companies have limited direct sales exposure to Russia. Among those that do, Apple generated 1.3% of its sales from Russia, Samsung 1.7%, Nestle 2.0%, PepsiCo 3.4%, Coca-Cola 1.5%, and McDonalds 4.5%. Among automakers, Renault generated 8.6% of its sales from Russia, Kia 6.8%, and Hyundai 3.1%. Tobacco companies have the biggest exposure to Russia. Japan Tobacco International generated 21% of its sales from Russia last year, while Philip Morris generated 8%.

In contrast to the direct effects on growth, exports, and corporate sales, the indirect effects of the ongoing conflict have the potential to be significant.

Russia is the world's second largest oil producer, accounting for 12% of annual global output (Chart 10). It is also the world's top exporter of natural gas. Russian natural gas represents close to half of European gas imports.

Chart 10: Oil Output



Source: Access Financial Services using Bloomberg Software & Data

A critical factor in limiting the war to Ukraine is Europe's continued energy trade with Russia. Russia earns more than $1 billion a day exporting its oil and gas, much of which goes to Europe. Of the 197.7 billion cubic meters of pipeline gas exported by Russia in 2020, 73% went to the EU with 28% going to Germany alone.

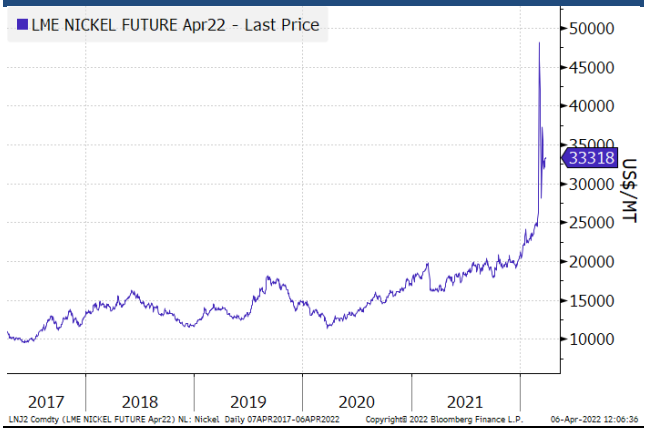
While the European Union plans to curb the region's import needs from Russia by two-thirds this year, it is nevertheless highly reliant on Russian oil and gas and it only takes a single member to veto EU sanctions making oil and gas sanctions against Russia unlikely – at least at this point. If either Russia or Europe cuts off energy flows, it will cause an economic crash that will destabilize the societies and increase the risk of military miscalculation.

Fortunately, the world is not as addicted to cheap energy as it once was. The global economy today produces about 50% more output per gigajoule[2] of energy than it did in the 1970s. Nevertheless, higher energy prices will depress household disposable incomes. They will also weigh on manufacturing activity. Goldman Sachs estimates that soaring electricity prices have already taken down 900,000 tonnes of aluminum capacity and 700,000 tonnes of zinc capacity in Europe.

Russia is also a major player in the metals markets. It is the third biggest producer of nickel. Nickel prices soared in early March due to threats of supply disruptions, compounded by a margin call on a major Chinese nickel producer that had accumulated a large short position through forward contracts in order to lock in a price for future delivery (Chart 11). Elon Musk has said that a shortage of nickel is the "biggest challenge" in "producing high-volume, long-range batteries."

[2] The gigajoule is a unit for comparing the amount and cost of heat energy provided by different types of energy

Chart 11: Nickel Price Chart



Source: Access Financial Services using Bloomberg Software & Data

Russia accounts for over one-third of global palladium output that is widely used in catalytic converters, electrodes, and other types of electronics. Palladium prices are up 54% since the start of the year.

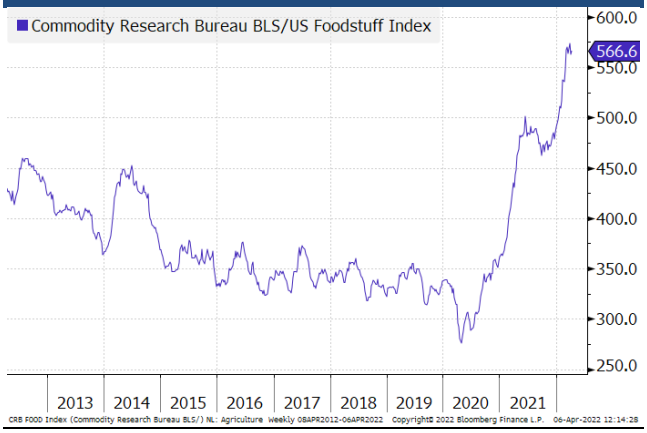
Russia and Ukraine both produce significant amounts of steel. ArcelorMittal and Metinvest have suspended production at their Ukrainian plants.

Ukraine is a major producer of automotive wire harnesses. Volkswagen, BMW, and Porsche have all had to curtail auto production due to a lack of harnesses.

Then there are the more esoteric commodities. The bulk of semiconductor grade neon that is used in high precision lasers comes from Ukraine. A shortage of this critical gas could worsen the semiconductor shortage.

Russia and Ukraine are also major agricultural producers. Together, they account for a quarter of global wheat exports. They are also significant producers of potatoes, sunflowers, and sugar beets. Global food prices were rising even before Russia invaded Ukraine. They have since gone parabolic (Chart 12).

Chart 12: CRB Foodstuff Index



Source: Access Financial Services using Bloomberg Software & Data

Lenin called wheat the "currency of currencies," implying that those who control the distribution of wheat can control the political system. With countries in the Middle East and North Africa heavily dependent on Russian and Ukrainian wheat exports, a shortage of this critical staple could lead to political turmoil in a number of nations already suffering from geopolitical instability. Countries are now scrambling to block agricultural exports to ensure that their own citizens have adequate food supplies. The situation is reminiscent of the time during the pandemic when some countries barred vaccine exports.

The rest of the world could try to compensate for lost agricultural output, but there is a major snag: Russia, Ukraine, and Belarus are significant producers of fertilizer. There are three types of fertilizers, each based on a particular macro nutrient: potassium, phosphorus, and nitrogen. Together, Russia and Belarus account for about 40% of global potash production, a key ingredient in potassium-based fertilizers. Russia also produces two-thirds of all ammonium nitrate, the main source of nitrogen-rich fertilizers.

The war and subsequent sanctions have important implications for global growth, inflation, monetary policy, and therefore, investment strategy. Elevated geopolitical risks lower global growth via weaker consumer sentiment and postponed investment decisions. Weaker economic sentiment and high energy prices, in turn, should lower global GDP by around 1% in 2022. In particular, EZ GDP could fall by over 2% due to weaker private spending and surging input costs.

Beyond the war in Europe, inflation and its implications for monetary policy is getting much of the attention.

For decades we have been living in a world in which most problems are solvable with money – and lots of it, particularly money from the world's richest countries and their central banks. From quantitative easing to swap lines to bank bailouts to national bailouts, it has been an era of the power of the printing press. Starting in 2020 with Covid and accelerating in 2022 with Russia's invasion of Ukraine, we're now in an era of problems that can't be solved by money – or at least not money alone.

For example, when it comes to avoiding Russian energy, there is no simple solution. Money simply cannot buy an instant energy changeover. Whatever direction the European Union goes with its energy strategy, the problem is not money. It is engineering, physics, shipping, geopolitics, etc. The same is true for battery technology, the global wheat market, and so on.

The sharp rise in inflation we have experienced over the last year has been attributed to supply chain issues related to Covid which were magnified by consumers shift in spending from services to goods. The latest surge in energy, metals and grain prices is also the result of supply issues – prices have spiked because vital supplies of Russian and Ukrainian commodities have been cut.

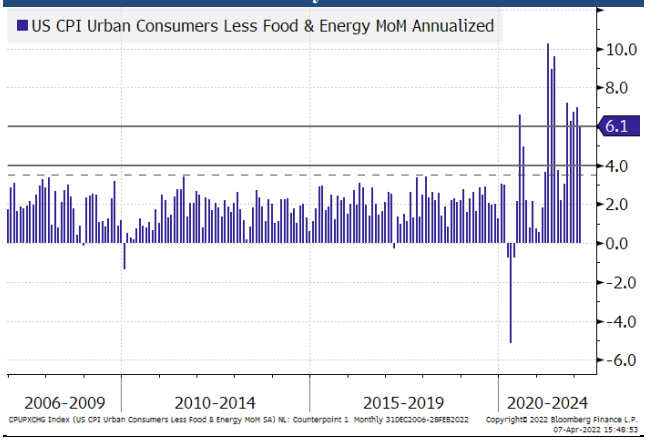
This is important from a central bank monetary policy perspective. The Fed's dual mandate is full employment and price stability. With full employment now a reality, and inflation running at the highest levels since the early 1980s, the Fed is gearing up to tighten monetary policy by raising short term interest rates and reducing the size of its balance sheet to bring inflation down. The problem is that to the extent central bankers can bring down inflation, they can do so by depressing demand. They can do nothing to turn the supply side of the equation around.

Inflation is a non-linear system, meaning that you cannot just dial it up or down gradually like the volume on a sound system. Instead of gradual changes, non-linear systems suddenly phase-shift from quiet to loud, from cold to hot, from stability to instability, and so on.

Developed economies have experienced a phase shift in inflation. For over a decade, US core monthly inflation remained consistently below 3.5% (annualized monthly inflation prints). Then came the pandemic related shutdowns combined with massive policy stimulus which phase shifted inflation to over 6% as consumers shifted their spending to durable goods in a supply constrained environment.

Chart 13 illustrates the phase shift. Since 2007 there have been 173 annualized monthly core inflation prints below 4% and 9 prints above 6%, but just 1 print between 4% and 6%.

Chart 13: Annualized Monthly Core Inflation

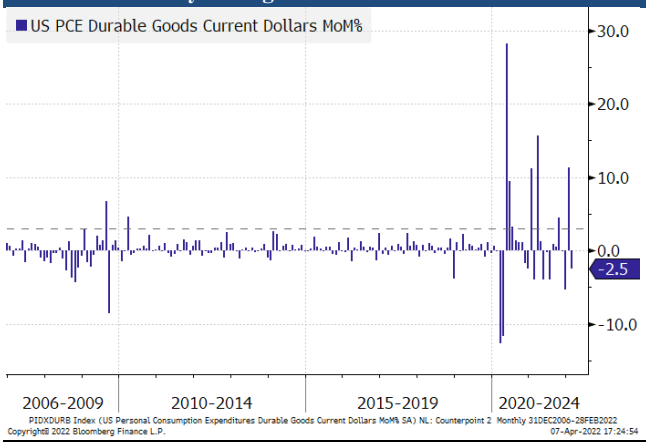


Source: Access Financial Services using Bloomberg Software & Data

During most of this period, the monthly increase in US consumer spending on durable goods remained consistently below 3%. Then came the pandemic's shutdowns and stimulus checks, and the growth in durables demand did not gradually rise above 3%, it phase shifted to over 10% (Chart 14).

As we have written in the past, the pandemic driven surge in demand for durable goods is expected to normalize to its pre-pandemic trend. Indeed, this trend seems to have started based on retail sales data, consumer sentiment, consumer expectations, and other indicators. The upshot is that monthly core inflation prints are likely to phase-shift from high to low in the months ahead – even if the monthly headline inflation prints remain high due to high commodity prices stemming from the Ukraine crisis.

Chart 14: Monthly Change in Durable Goods Prices



Source: Access Financial Services using Bloomberg Software & Data

Meanwhile central banks and markets generally focus on the 12-month inflation rate. If the new month over month core inflation prints phase-shift back to their prior low phase, the historic high phase prints will disappear from the last twelve month window. Specifically, by June 2022, the three high phase prints of April, May, and June 2021 – 10%, 9%, and 10% respectively – will no longer be included in the 12-month core inflation rate, with the arithmetic impact of pulling year over year inflation down.

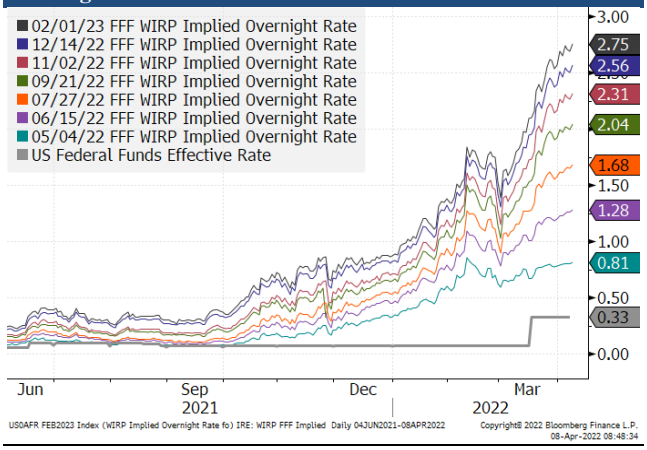
By the second half of 2020, most of the key markers of systemic stress in the economy and financial markets had subsided. By early 2021, measures of economic growth were surging and economists were forecasting the quickest rebound in decades and inflation was accelerating. Yet, the Fed continued flooding the system with liquidity.

Now, the Fed is gearing up to tighten policy aggressively as the economy is showing signs of slowing. Chart 15 illustrates the level of the federal funds rate anticipated by the financial markets at each of the next seven FOMC meetings while Chart 16 captures the evolution of the market's expectations for the federal funds rate over time. If the Fed were to raise rates to the degree the market expects, economic growth should slow dramatically.

While the US stock market – at least as measured by the SPX – is treating the outlook for policy tightening more like an unwelcome house guest that will eventually just leave without doing any real damage, the bond market disagrees with this assessment.

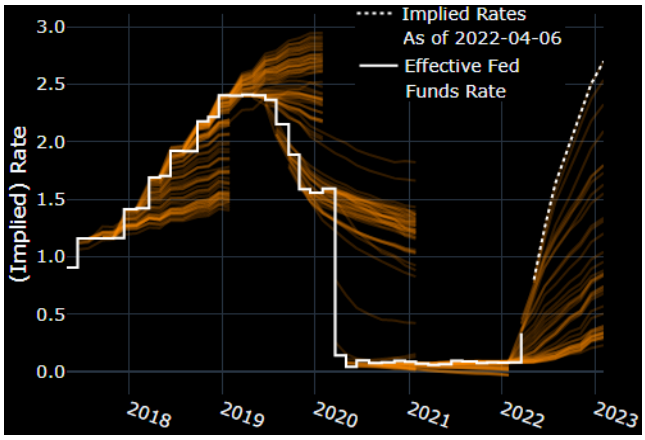
One indicator of this is the shape of the Treasury yield curve which illustrates the term structure of interest rates. Chart 17 shows the shape of the curve on June 30, 2021, December 31, 2021, and April 12, 2022.

Chart 15: Futures Implied Fed Funds Rate at Next 7 Meetings



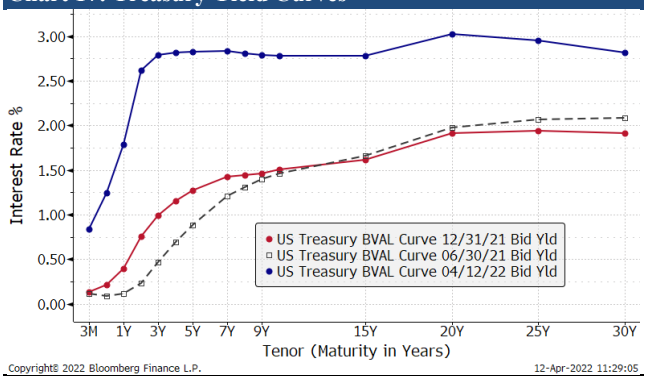
Note: WIRP is Bloomberg's world interest rate probability function
Source: Access Financial Services using Bloomberg Software & Data

Chart 16: Evolution of Fed Funds Market Pricing



Source: Bloomberg

Chart 17: Treasury Yield Curves

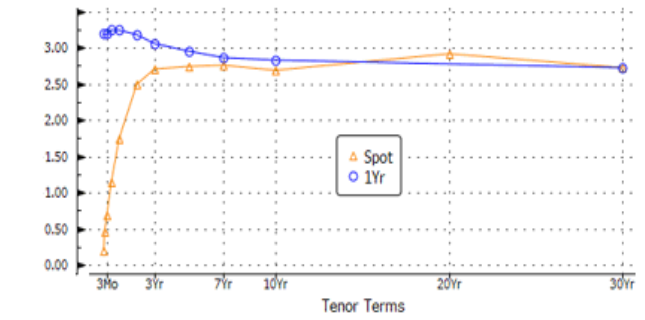


Source: Access Financial Services using Bloomberg Software & Data

Under normal circumstances the curve slopes upward and to the right as investors demand higher yields from longer term bonds than shorter term bonds. While the Fed sets interest rates at the short end of the curve, the yields on securities with longer maturities are a function of investor demand. The June and December curves can be described as "normal". The current curve is abnormal in that it is not only flat for maturities three years and beyond, but parts of the curve are also inverted (shorter maturities have a higher yield than longer maturities).

Chart 18 illustrates the current curve as an orange line and the market's expectations of what the curve will look like one year out in blue: full inversion.

Chart 18: Current and 1 Year Forward Yield Curves



Source: Access Financial Services using Bloomberg Software & Data

Short term yields that are higher than long term yields signal that the high levels of short term interest rates are unlikely to be sustained as growth slows. Historically, a recession has not happened without an inversion.

The steep front end of the Treasury curve giving way to back end inversion is a sign that an economic slowdown is expected. The shift at three years from very steep to inverted suggests an abrupt economic slowing and a reversal in Federal Reserve policy.

The Fed sees long term interest rates as a reflection of future Fed policy plus a term premium which is "the extra return that investors require to be willing to hold a longer-term security to maturity compared with the expected yield from rolling over short-term securities for the same period" (Ben Bernanke, 2013). So, a steep Treasury curve out to three years, with over 200 basis points (2%) separating the three month from the three year yield is signaling to the central bank the market expects an aggressive policy response to bring inflation under control from the Fed's perspective.

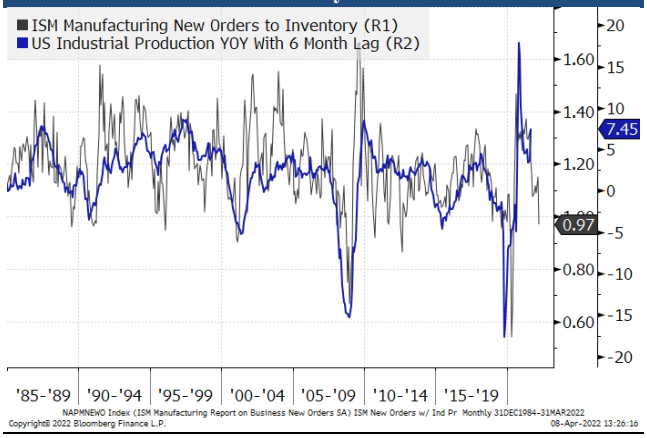
My view is that the high rate of change in prices – which is what inflation measures – will start receding during the second half of the year. That doesn't imply that the actual price of goods will come down from their current elevated levels as prices do not have to decline for inflation to retreat as the rate of inflation simply compares current price levels to those one year ago.

From an investment strategy perspective, we need to pay attention to what Fed Chairman Powell said: "Financial conditions need to tighten." It is the impact of inflation, higher interest rates and tightening financial conditions on consumer sentiment, economic activity and corporate earnings that we are trying to determine.

For the last year and a half, investors have taken strong economic growth as something of a given. It now appears that growth may be stumbling at a time when monetary and fiscal policy tailwinds of the recent past are switching to headwinds.

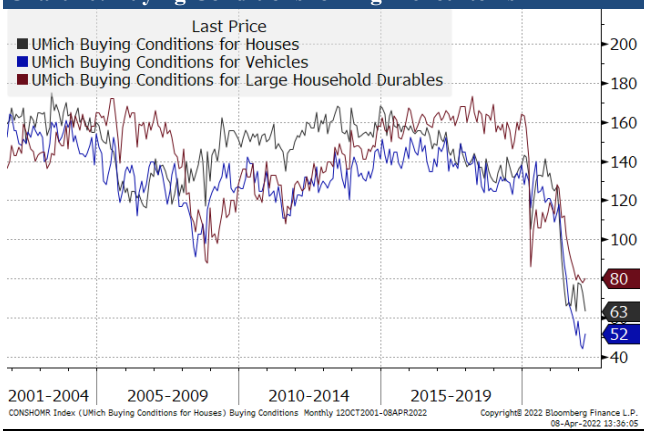
> The recent release of the ISM manufacturing survey showed that the new orders to inventory ratio, which has a history of leading industrial production slipped lower (Chart 19)
> Consumers have become wary of purchasing big ticket items (Chart 20) and the rise in mortgage interest rates is likely to cool the overheated housing market
> Profit margins are at multi-decade highs that are likely to be challenged given the tight labor market (Chart 21) and the surge in wages and input costs along with declining consumer sentiment
> The outlook for GDP growth has materially declined recently according to the Atlanta Fed GDPNow forecast (Chart 22) and Bloomberg surveys (Table 1)

Chart 19: New Orders/Inventory Ratio and Industrial Prod.



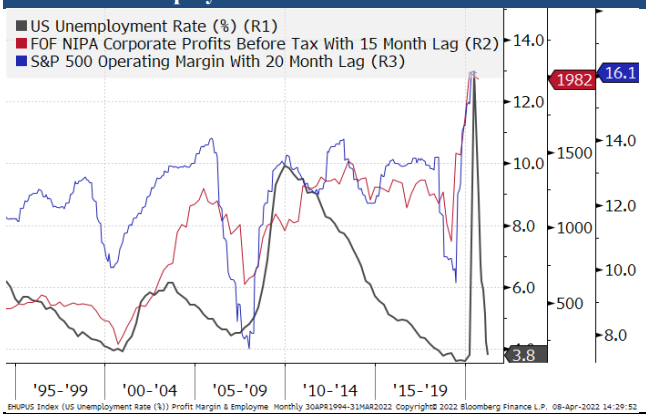
Source: Access Financial Services using Bloomberg Software & Data

Chart 20: Buying Conditions for Big Ticket Items



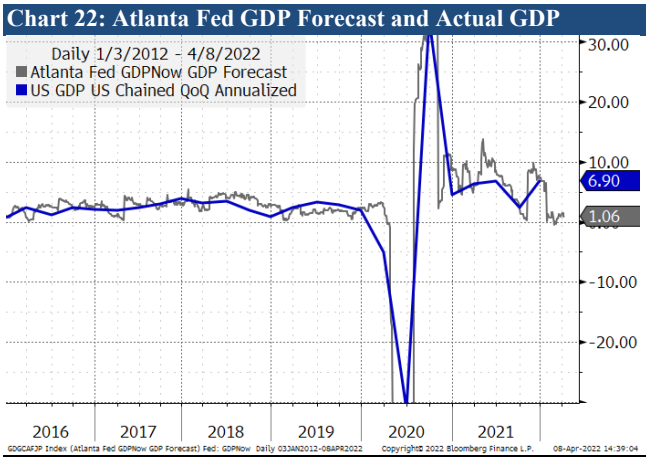
Source: Access Financial Services using Bloomberg Software & Data

Chart 21: Unemployment Rate Leads Profits



Source: Access Financial Services using Bloomberg Software & Data

Chart 22: Atlanta Fed GDP Forecast and Actual GDP



Source: Access Financial Services using Bloomberg Software & Data

Table 1: GDP Growth Forecasts

	1Q	2Q	3Q	4Q	1Q	2Q	Full Year		
Survey Date	2022	2022	2022	2022	2023	2023	2022	2023	2024
April	1.00%	3.00%	2.50%	2.40%	2.10%	2.00%	3.30%	2.20%	2.00%
March	1.50%	3.30%	3.00%	2.50%	2.40%	2.10%	3.60%	2.30%	2.10%
February	1.60%	3.80%	3.00%	2.50%	2.30%	2.20%	3.70%	2.50%	3.10%
January	2.80%	3.70%	3.20%	2.50%	2.30%	2.20%	3.80%	2.50%	
December	3.95%	3.60%	3.10%	2.60%	2.40%	2.30%	3.90%	2.50%	
November	4.45%	4.00%	3.20%	2.60%	2.50%	2.35%	3.90%	2.50%	
October	4.00%	3.90%	3.00%	2.50%	2.40%	2.20%	4.00%	2.40%	
September	4.15%	3.25%	2.85%	2.40%	2.35%		4.20%	2.40%	

Source: Access Financial Services using Bloomberg Data

Circling back to the surprising (at least to me) performance of the US stock market following the start of the war in Europe and a more hawkish Fed, there are a few narratives being laid out by analysts in search of an explanation.

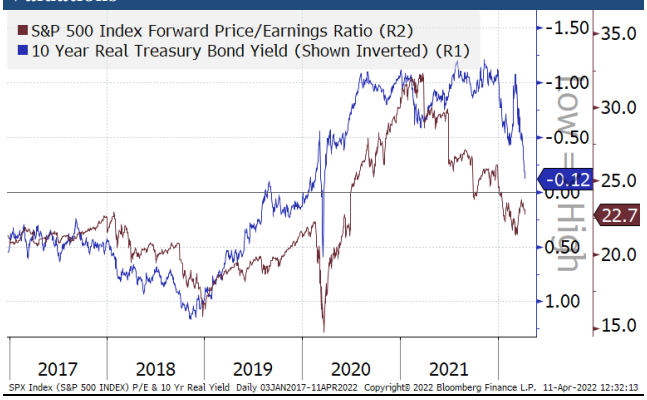
One theory gaining traction is that stocks are among the best assets to hold when inflation is spiraling to the upside because companies can raise prices on their goods and services.

Another is that stocks had recovered because the Fed will be aggressive enough to bring inflation under control and that higher interest rates are better than entrenched inflation.

It can be amusing how quickly market narratives shift. For most of the maximum stimulus Covid era, stocks were negatively correlated with real (inflation adjusted) interest rates and inflated stock market valuations were justified through the prism of stocks being the ultimate long duration asset where the present value of future profits discounted back at very low rates were supposedly compelling.

Digging a little deeper into this, the real yield on the 10 year Treasury declined from 1.2% in 2018 to -1.1% at the end of 2020 and stayed there for most of 2021. Stock market valuations soared as the real yield declined and remained negative throughout 2021. Chart 23 illustrates this strong negative correlation between the real yields (shown inverted) and stock market valuations.

Chart 23: Inverse Relationship Between Real Yields and Valuations



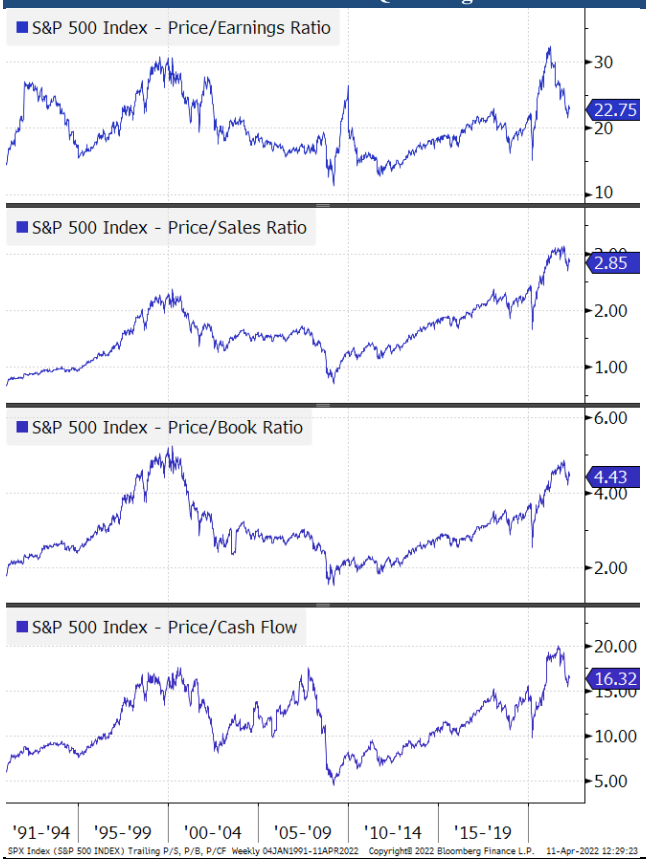
Source: Access Financial Services using Bloomberg Software & Data

The recent (March 14 to March 29) stock market recovery that took the SPX to within 3.5% of its all-time high on January 3 has seen the correlation flip to being positive with the new narrative that pricing power in an inflationary environment is positive for stocks.

At the start of 2022, the real yield increased from around -1% to around -0.4% and valuations contracted as would be expected. Following the invasion of Ukraine, however, real yields moved sharply lower as bonds briefly rallied and stocks followed suit by rallying into the end of the quarter. Since then, real yields have again risen and we are again experiencing weakness in the stock market with higher interest rates again exerting downward pressure on valuations.

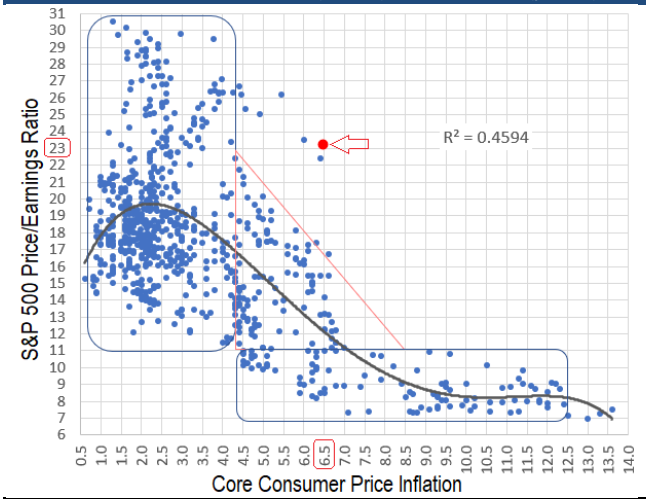
While valuations have improved a bit over the last year by some measures, stocks remain expensive relative to earnings, sales, book value and cash flow (Chart 24). In fact, the real earnings yield (the inverse of the price/earnings ratio adjusted for inflation) for the SPX is at all-time lows going back to 1954. While this is no guarantee of losses to come, over this entire period when the real earnings yield has been negative, the average six month forward change in the SPX has been -3.9%, with a median of -3.4%. As further evidence that stocks remain rich, Chart 25 shows that high levels of inflation are generally associated with much lower valuations. Finally, there is also a correlation between Fed balance sheet growth and high stock valuations which is something the "stocks as an inflation hedge" crowd might want to consider as we are going to get a contraction in the Fed's balance sheet along with a substantial rise in short term interest rates starting as early as May.

Chart 24: S&P 500 Valuations Still Quite High



Source: Access Financial Services using Bloomberg Software & Data

Chart 25: S&P 500 P/E Ratio (x-axis) & Core CPI (y-axis)

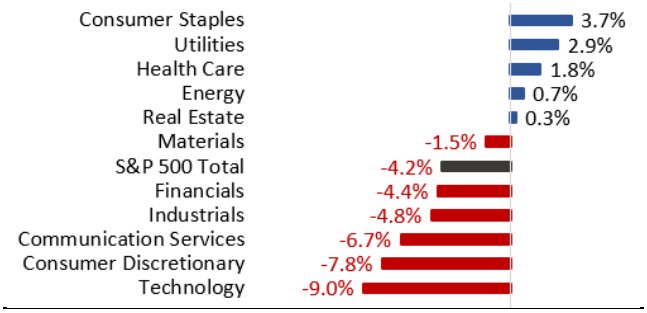


Note: red marker is most recent observation.
Source: Access Financial Services using Bloomberg Data

The bottom line is that we should probably be a bit wary of the narrative that stocks are a good deflation hedge AND a good inflation hedge.

The March 14 to March 29 rally saw all 11 sectors post positive results with technology related sectors generating the strongest gains after suffering the worst losses prior to February 24 invasion. Since March 29, the SPX is down -4.2% with defensive sectors again outperforming technology related stocks (Chart 26).

Chart 26: 2021 S&P 500 Sector Total Returns: March 29, 2022, to April 11, 2022



Source: Access Financial Services using Bloomberg Data

While a lot of the attention paid to higher inflation understandably focuses on the negative consumer income shock and the loss of real spending power, we need to decipher the implications for financial markets when formulating investment strategies.

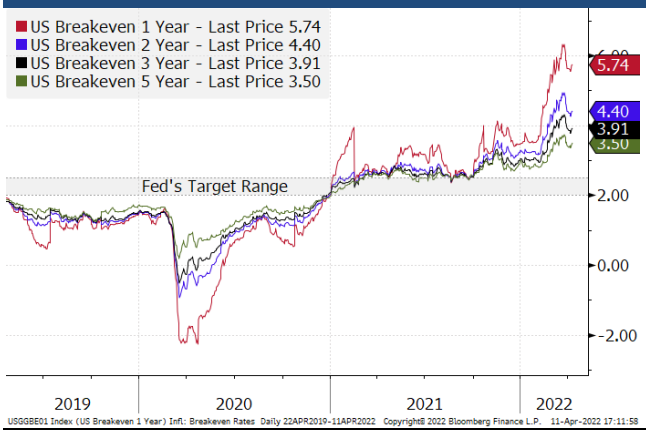
For stocks, it is not only the multiples that we should be willing to pay for earnings, but also the net present value of earnings themselves.

For example, at the beginning of the year the consensus SPX earnings per share (EPS) estimate for 2022 was $220. As the year has progressed, the 2022 estimate has crept up to $226 which is a nice lift. Yet, at the same time the consensus inflation forecast for year-end has also risen from 2.75% to 5.4%. In other words, the rise in EPS expectations this year is really just an adjustment for higher inflation expectations. In real terms, 2022 earnings expectations are barely above those from the end of last year. Add in elevated volatility and uncertainty, and it is understandable why investors would demand a higher risk premium (via lower stock prices) from the stock market.

With the release of March inflation data, we are probably going to read and hear about that marking "peak inflation." And thanks to oil price dynamics, base effects, and reduced demand for durable goods, that is most likely true. But we need to look beyond that because, after all, year over year inflation figures tell us about the past, and what really matters is what happens moving forward.

Based on breakeven inflation rates[3] and inflation swap markets, inflation is expected to average over 5.5% during the next 12 months, 4.4% over the next two years, 3.9% over the next three years and 3.5% over the next five years (Chart 27), all of which imply an extended period of elevated inflation.

Chart 27: Breakeven Inflation Ratees



Source: Access Financial Services using Bloomberg Software & Data

The combination of weak growth and high inflation is referred to as stagflation and represents one of the most important risks to monitor this year. While stagflation is not our base case scenario going forward, it is the only macro regime associated with negative average real returns for both stocks and bonds (Table 2).

Table 2: Average Real Yearly Returns by Regime Since 1967

	Overall Avg.	Recession	Recovery	Reflation	Overheating	Stagflation	Goldilocks
S&P 500 Index	7.6%	3.0%	15.0%	8.4%	5.8%	-4.8%	18.0%
BofAML Bond Index	3.4%	8.9%	5.4%	1.4%	-0.5%	-1.3%	4.2%

Source: Numera Analytics

In evaluating stock markets, sectors and individual securities, we start with three broad categories of indicators: valuations, liquidity and technical factors.

Valuation-based indicators tell us from a structural perspective how over or undervalued the stock market, sectors and individual securities are. Liquidity-based indicators identify whether the broad macro backdrop is supportive or not for stocks and other risk assets. Technical factors give us an idea of how over or underbought stock markets, sectors and securities are on shorter term timescales.

To put it another way, valuation tells us how far an asset might fall, liquidity tells us whether there is something that will break or prevent the fall, and technical indicators tell us when it might fall.

[3] Breakeven inflation rates are calculated by subtracting the real yield of the inflation linked Treasury maturity curve from the yield of the closest nominal Treasury maturity. The result is the implied inflation rate for the term of the stated maturity.

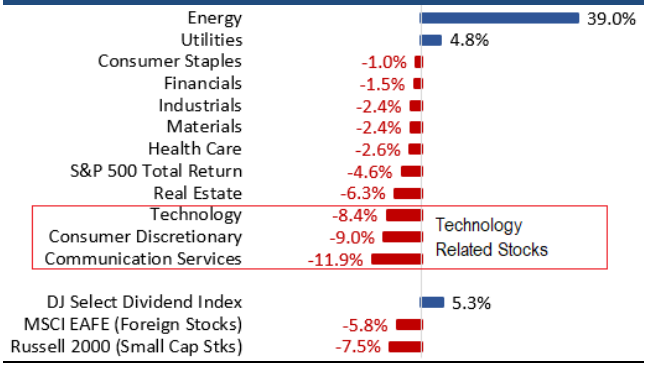
From a macro perspective, valuations are high and the liquidity backdrop is deteriorating. While technical factors vary depending on the asset, it does not appear it will be smooth sailing for risk assets in the coming months.

Generally speaking, our clients' portfolios were conservatively positioned as we started the year. We were overweight cash and underweight stocks with a neutral allocation to fixed income.

Our clients' stock allocation was overweight energy and dividend paying stocks and underweight technology related stocks, small cap stocks and foreign stocks while our fixed income allocation was light on Treasuries and shorter than benchmark duration.

These allocations worked out well as our overweights outperformed and our underweights underperformed (Chart 28).

Chart 28: 2021 S&P 500 Sector Total Returns: First Quarter, 2022



Source: Access Financial Services using Bloomberg Data

We enter the second quarter a bit more underweight stocks, a slightly higher allocation to cash and a higher allocation to floating rate fixed income securities which are less sensitive to rising short term interest rates than fixed rate bonds.

For now, the Fed is intent on raising interest rates aggressively and that is no doubt the path they will go down for some time. According to Bill Dudley who served as president of the Federal Reserve Bank of New York from 2009 to 2018, served as vice chairman of the Federal Open Market Committee, and was previously chief US economist at Goldman Sachs: "To be effective, the Fed will have to inflict more losses on stock and bond investors than it has so far."

Looking a ways out, however, my view is that the projected increases in the fed funds rate are too high and unlikely to be realized. However, as long as the market is pricing such aggressive monetary tightening, economic indicators are pointing to a slow down, and interest rates are rising, there is little reason to believe that risk assets will make a sustained advance.

This should change when the financial markets begin pricing the end of policy tightening. Unfortunately, it will probably take more weakness in the financial markets for that to happen.

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