# Quarterly Economic Update

## March 8, 2023

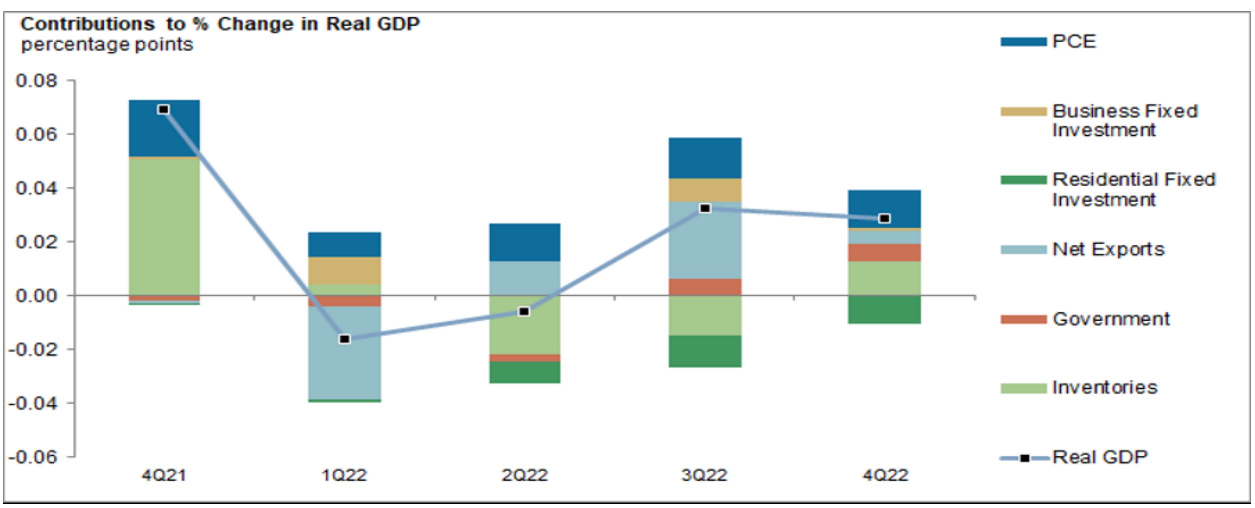
## *MACROECONOMIC COMMENTARY*

# Economic Outlook

***By Bobby Long***

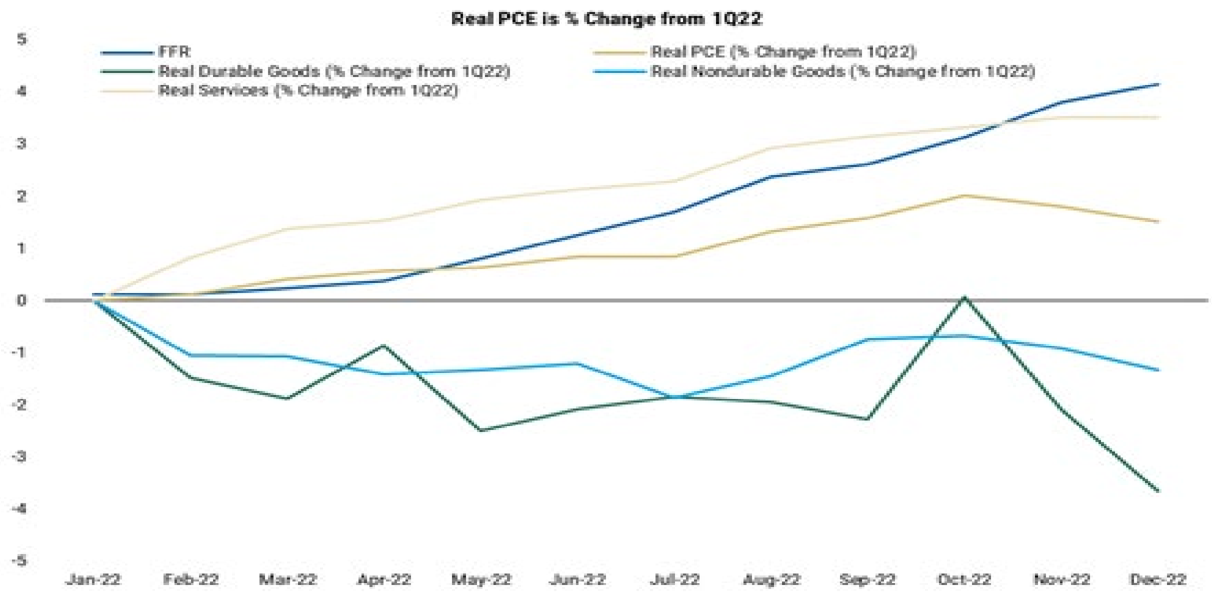
There has been much discussion over the past year about an impending economic recession occurring in 2023. A quick google search will point you to an abundance of recession commentary and surveys that place the odds of a recession occurring during the calendar year well above 50%. Bloomberg News ran a survey of economists at the end of the year that placed the odds of a 2023 recession at 70%. A Wall Street Journal poll of economists in January placed the odds at 61%. Much of this is due to the Federal Reserve's shift to tighten policy in their efforts to reign in inflationary pressures and the impact of elevated levels of money supply now contracting. The Federal Reserve's goal is not to put the economy into a recession, but they have acknowledged it could be a casualty in the inflation fight and stated a willingness to accept slower growth and job losses in this process. While this google search was populated mostly with articles discussing the higher risk of a recession, a couple of other search results stood out with titles such as *2023 Could Be the Year of the Recession That Never Happened* and *The 2023 Recession Just Got . . . Cancelled?* One of these articles went on to parody that "the economic recession of 2023 will not be televised. That's because it appears unlikely to happen, despite predictions of its inevitability from economists, bankers, analysts and others." These articles highlight that with so much attention given toward calling an upcoming recession, economic conditions remain healthy overall with labor markets still very strong and consumers largely in good shape. This is leading some to dismiss any concerns of a recessionary slowdown as overblown. Contracting money supply, rising interest rates, and a higher level of persistent inflation most likely will have a dampening effect on economic activity. Whether it is enough to push the economy into a recession or simply act as a more restrictive governor on the pace of economic growth is uncertain.

Fourth quarter Gross Domestic Product (GDP) grew at 2.7%, slightly lower than the prior quarter but still a solid rate of growth supported primarily by personal consumption and inventory investment.




*Source: Bureau of Economic Analysis, Morgan Stanley Research*

Consumer spending continues to be a big contributor to economic growth. Real personal spending for the month of January was up an impressive 1.1% over the prior month. Consumers appear to still be riding the tailwinds of fiscal stimulus and excess savings from the past couple of years even as savings is now falling. The strong labor market and plentiful job availability is also providing a confidence that is supportive of spending habits. While total personal consumption has continued to rise over the past year, the mix of spending has shifted as interest rates have moved higher. The chart below shows the divergence between consumer spending on goods versus services as the federal funds rate has increased. Rising interest rates have a more immediate impact on durable goods such as motor vehicles and housing-related goods. As financing costs remain high and likely rise further, accompanied by slower housing activity, this should continue to weigh on durable goods spending.

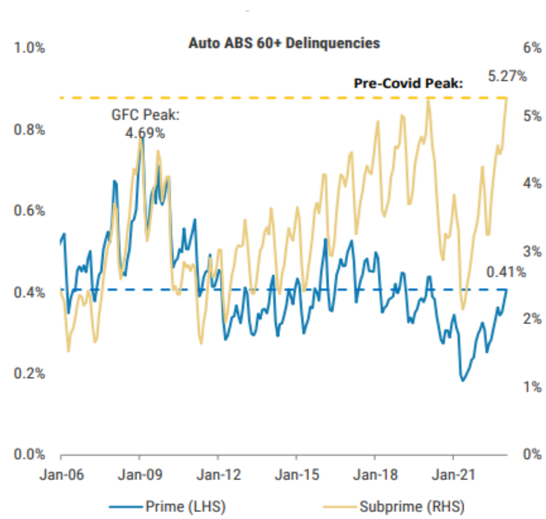


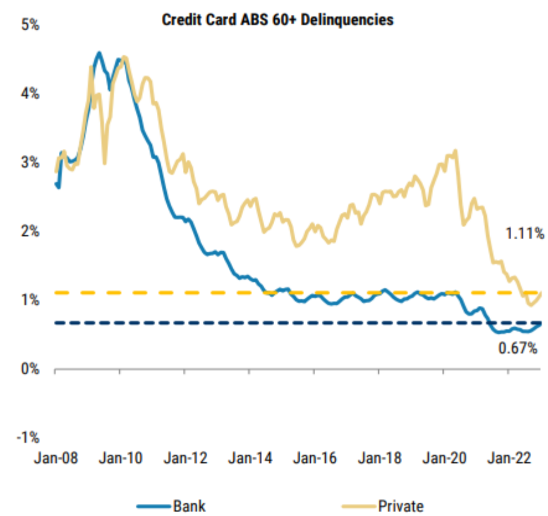
*Source: Morgan Stanley Research*

Housing, food, and energy inflation have weighed on consumer sentiment with broader inflation offsetting any wage gains. The chart on the right shows how these rising costs have historically placed additional stress on the consumer that have often preceded a recession. While consumers have felt this impact, moderating inflation and retreating energy prices are supportive for real disposable incomes moving forward, alleviating some of this stress. Many consumers have also locked in a low fixed-rate mortgage, making the sharp rise in mortgage rates less impactful.

*Source: Strategas Research Partners*

Consumer balance sheets have taken a hit as financial markets have weakened over the past year, but are still in relatively decent shape. Debt service costs are rising for households with increasing interest rates. Non-mortgage interest payments have increased over 34% from the prior year, a significant jump whose pain has only been blunted by higher wages making the impact more bearable as a percentage of income. Credit card balances have been ticking up modestly; however, delinquencies are still low overall. As the chart below shows, subprime auto delinquencies have increased sharply, whereas the increase in prime delinquencies is less concerning. Credit card delinquencies have not shown an alarming trend developing. These should be watched for any changes that may indicate growing stress for consumers and signal an increasing headwind for spending.



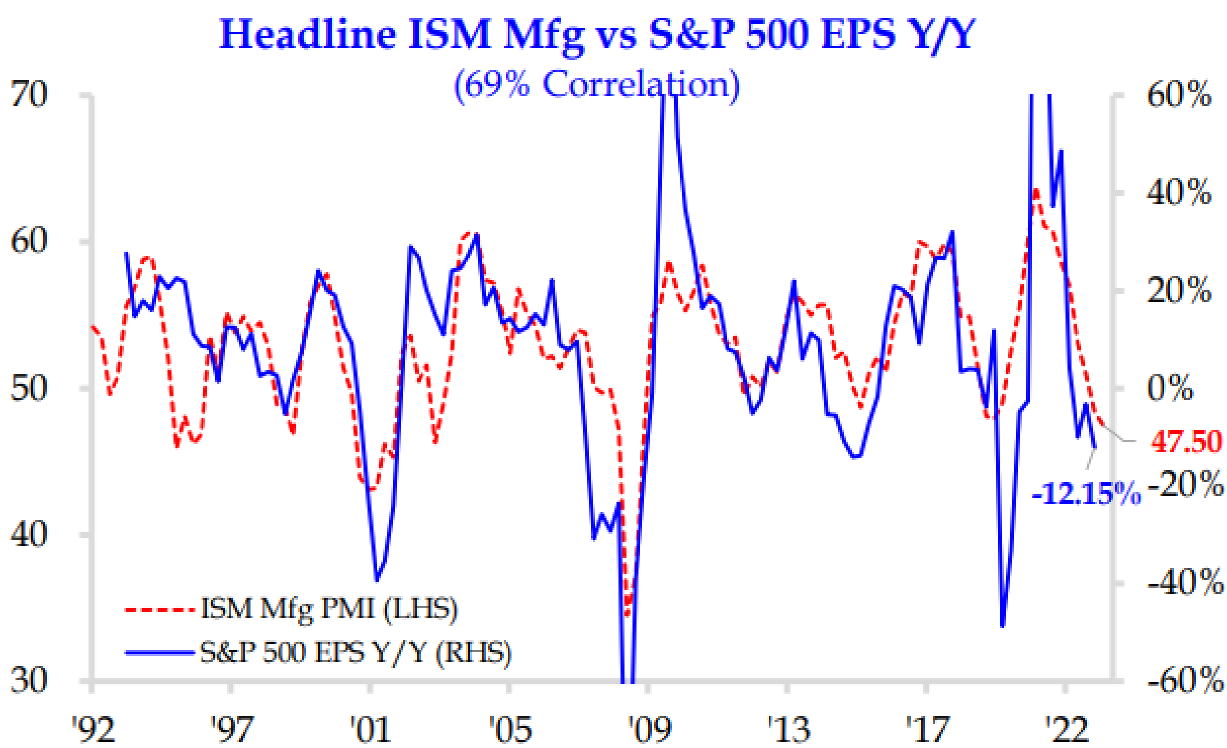




*Source: MS Research*

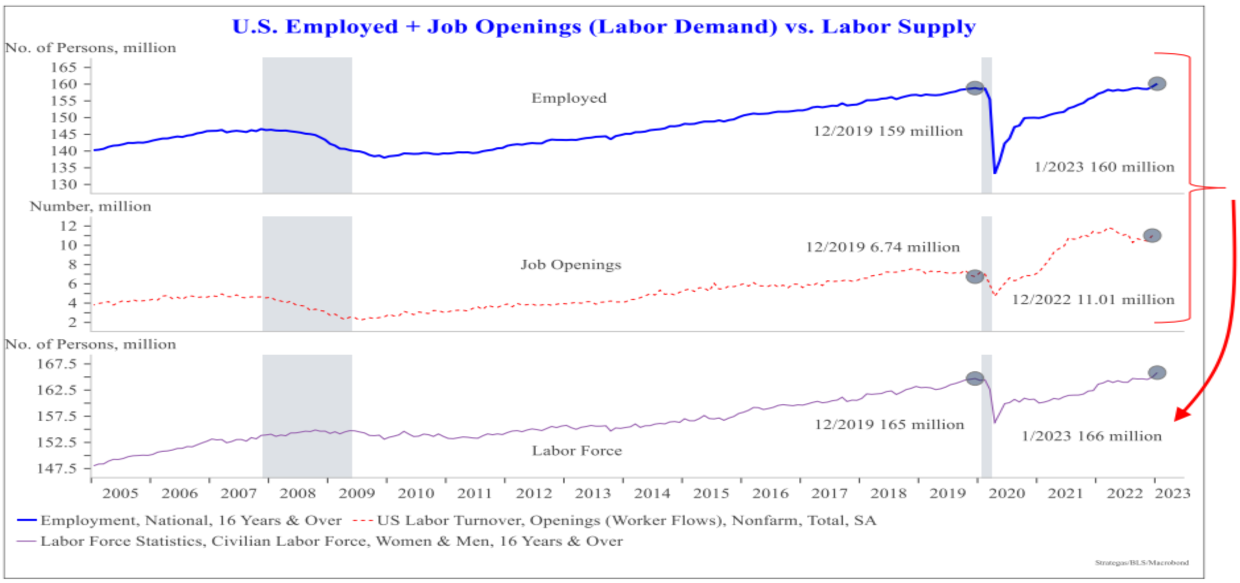
A slight uptick in the National Federation of Independent Businesses (NFIB) Small Business Optimism Index indicated some stabilization but remains weak and below longer-term averages where it has trended over the past 13 months. Inflation and a lack of qualified workers continue to be cited as their most important problems. These are contributing to a net 45% of small businesses carrying a negative outlook for general business conditions over the next six months. While sales have held up okay and expectations for sales over the next three months are only modestly weaker, earnings have shown a more significant deterioration with increased costs cited as the main contributor. Capital spending plans are fairly weak with only 21% of small businesses surveyed planning an investment over the next three to six months. Inventories have also moved higher and businesses indicated declining inventory investment needs over the next several months.

CEO confidence also remains weak as measured by both The Conference Board and Business Roundtable. The Conference Board's most recent survey found 93% of CEOs indicated they are preparing for a recession over the next 12-18 months. The percentage preparing for a deep recession declined, indicating less pessimism than previous surveys. Sixteen percent of CEOs viewed economic conditions as having improved over six months ago, while 55% said conditions had deteriorated. Forty-eight percent indicate they expect conditions to weaken further over the next six months. With CEO confidence skewed toward the cautious side, only 14% said they expect capital spending budgets to increase by more than 10% over the next year. Capital expenditures have still been supportive with help from intellectual property investment and equipment. However, both small businesses and larger corporations point to a more muted contribution from capital investment to overall growth ahead. A positive is corporate balance sheets are in good shape with CFOs having locked in lower fixed rates on debt and extended maturities, so this can provide management some comfort to move forward with capex plans.

Manufacturing activity has slowed and been in contraction territory since November. The most recent release from the Institute of Supply Management's (ISM) manufacturing index showed a slight improvement at 47.7, although the measure did remain firmly below 50 on the contraction side of the ledger. ISM New orders also bounced, although employment weakened some. ISM prices paid increased, which does not help alleviate inflation concerns. Don Rissmiller with Strategas Research Partners has pointed out that the ISM manufacturing index has shown a 69% correlation with S&P 500 earnings over the past 30 years, with negative earnings trends developing when the index has dropped below 50. We have seen deterioration in earnings already as the index has fallen. Further deterioration in earnings would likely lead to reduced capital spending by businesses, which would then feed into a broader slowdown in economic activity. It would be positive for the index to hold in the mid-40s or reverse back towards expansion levels. A further drop toward the 30s may signal increasing odds of a recession.



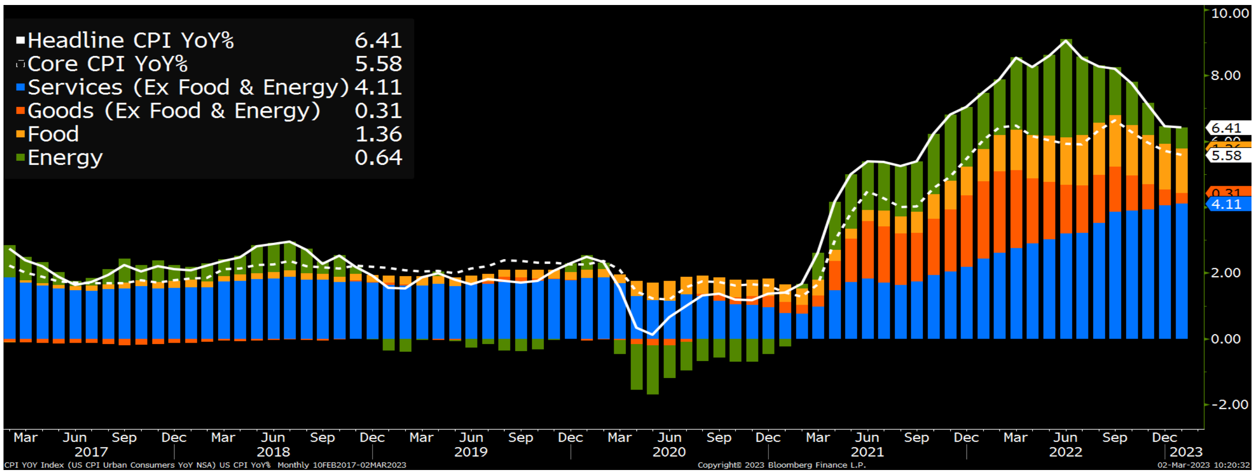
Despite layoff headlines, jobless claims remain low and labor markets remain tight. The unemployment rate for January made a new cycle low at 3.4%. U.S. payroll employment for the month of January increased 517,000 over the prior month. The information sector, where many layoff headlines have been concentrated, recorded a loss of 5,000 jobs. However, the leisure and hospitality sector added 128,000 jobs. Health and education also reported a strong gain of 105,000 jobs. The labor market remains very strong by almost all measures. Where layoffs are being announced, it appears these workers are largely able to find other employment rather quickly. The chart below illustrates the simple math underlying labor conditions. The labor force is simply not enough to meet the combined demand of employed workers plus job openings.




For labor tightness to ease, we need the difference between these to narrow. Slower economic activity can rebalance this through reduced labor demand, either by job losses as those jobs are no longer needed, or preferably by the termination of job openings. Alternatively, increased productivity from workers could meet these labor needs. Labor supply is somewhat restricted by demographics. Additional workers can be drawn into the labor force, but this is likely done with higher wages. Wage growth has moderated some but is still too high. The employment cost index increased at an annualized quarterly rate of 5.1% in the fourth quarter. Average hourly earnings ticked down further to a 4.4% annualized rate in January, but remain elevated. This is contributing to broader inflationary pressures and will cut into corporate profits if businesses are pushed to continue raising wages in their efforts to attract and retain workers.

The combination of higher wages and strong consumer spending is keeping inflation elevated. Inflation has been decelerating and appears to have peaked; however, it continues to run at levels much too high. January's personal consumption expenditure price index did unpleasantly surprise us with fairly sharp move higher, increasing 0.6% over the prior month and 5.4% over the prior year with the support of strong consumer spending. CPI only moved slightly lower in January with headline CPI at 6.4% and core

CPI at 5.6%. The chart below shows how CPI has trended over the past several years and breaks down some of the components for a better understanding of what has been driving inflation. Goods inflation has contracted significantly, helped as supply chains have cleared and a moderation of consumer spending on goods. Services inflation has continued to accelerate, proving more problematic. A decline in energy prices over the past six months has alleviated some pressure. However, food inflation has remained stubbornly high.




The Federal Reserve has expressed frustration with the stickier components of inflation and indicated they are not satisfied with the lack of progress moving inflation lower. They did slow the pace of tightening at their last meeting, raising the federal funds target rate by only a quarter of a percent, but have indicated their expectations for continued rate increases over the next couple of meetings. Higher interest rates will eventually weigh heavier on economic activity, dampening consumer spending and reducing labor demand. This should help tame inflationary pressures, but it does come with a cost. Banks have also been tightening their lending standards, signaling a reduced willingness to lend across commercial real estate, mortgage, and consumer markets. This will also serve to dampen activity. Corporations have extended out debt maturities. Smaller businesses and consumers with revolving debt will be more impacted by rising rates and face challenges rolling over loan maturities. The undersupply of housing provides some support for activity, but affordability has become an issue and housing activity is unlikely to be the tailwind that it has been for the past several years.

Economic conditions are proving to be more resilient than anticipated in the face of these headwinds and making an argument that they are strong enough to absorb tighter policy without a recession. A "soft-landing" with a period of weak economic growth is still on the table and current conditions argue that the odds for this scenario have increased. However, there is risk that the combination of higher persistent inflation, more restrictive lending, and rising interest rates slowly erode profit margins, weaken consumers, and weigh down spending that ultimately feeds into a cycle of declining revenues and weaker profits with contracting economic activity. We continue to believe that expectations should account for weaker activity going forward and acknowledge the elevated risk of recessionary conditions.

# *RSA PORTFOLIO STRATEGY*

## Interest Rates and Fixed Income Strategy

***By Julie Barranco***

When we last met in December, we were closing in on the end of the first quarter of the new fiscal year. While the mood was still fairly sour after the painful performance within the equity and fixed income markets the prior fiscal year, conditions were finally starting to improve, and we were seeing positive returns across the board. Inflation data was looking better, and the Federal Reserve felt comfortable with a smaller 50bp increase in rates at their December meeting after four consecutive 75bp increases. December closed out with all sectors of the bond market producing positive returns, with the credit sector performing the best. For the quarter as a whole, performance looked even better; risk-on was in favor again which led to equities outperforming, but fixed income showed solid returns as well. On a relative basis, high-yield performed the best, closely followed by high-grade corporates. Government securities returned the least during the quarter. The chart below shows a summary of returns for the quarter ended December 31:


As we entered January and the new calendar year, the employment report early in the month was the first big data point. While non-farm payrolls were slightly higher than consensus, the market focused on the average hourly earnings, which came in well below expectations. This led to a significant rally in Treasuries with the short end of the curve declining roughly 20bps and the longer end declining around 12bps just that day. Before the employment report, Fed Funds futures were pricing in a terminal rate of 5.05%, but by the end of the day, it had declined to 4.95%. This move implied that odds of a 25bps rate hike rather than a 50bps rate hike at the February FOMC meeting had improved.

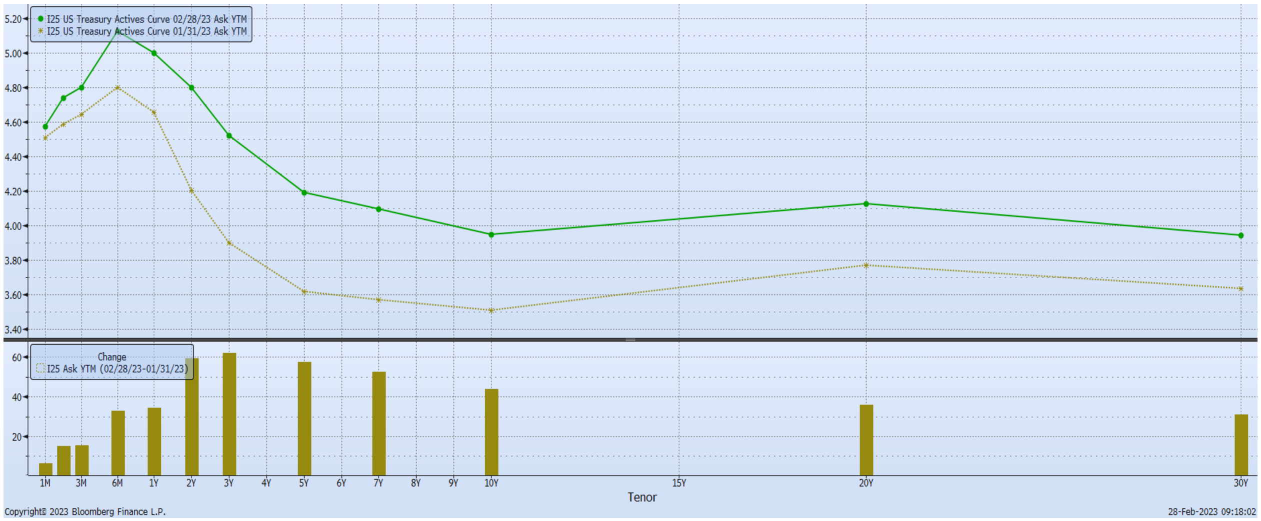
Over the next week or so, rates continued to move lower due in part to the Treasury's auctions of new securities meeting strong demand across most maturities. December consumer inflation data met expectations with headline CPI coming in at (.1) % and core CPI at .3%. Treasuries rallied on the news along with equities to help extend the risk-on tone.

For the remainder of the month, rates across the curve were range-bound. For the month of January, the ten-year Treasury yield dropped 35bps while the two-year yield declined roughly 20bps. While Treasury yields were declining, credit spreads were also tightening, boosting total returns even further. For the month of January, all sectors of the bond market were positive again. High-grade and high-yield performed the best, with both sectors returning almost 4% for the month. Mortgages also performed well at 3.1%, while other government-related securities were slightly higher as well.

February kicked off with the Federal Reserve meeting and as expected, the announcement of a 25bp increase to lift the fed funds target range to 4.50% - 4.75%. The Fed made no changes to the language about "ongoing increases in the target range," and the committee said that they would consider the cumulative policy tightening, the lagged effects to activity and inflation, and financial developments when assessing the "extent" of future rate hikes. Any mildly hawkish reactions to the Fed's statement were soon overtaken by the dovish tone of the press conference, particularly after the Chairman mentioned that the "disinflationary process has started." Treasuries rallied significantly after these comments, with yields falling 10bps across the curve.

A few days later, the January employment report was released with 517,000 new jobs added – significantly higher than consensus expectations of 188,000 jobs. The largest addition was from the hospitality and leisure sector, which is still lagging pre-pandemic levels. The unemployment rate declined from 3.6% to 3.4%. The decline in interest rates we saw after the Fed meeting was quickly reversed as the market began to digest this data and what it means for future central bank policy. The two-year Treasury note sold off more than longer-dated notes and the yield curve flattened. Credit spreads continued to move a bit tighter over the course of the week.

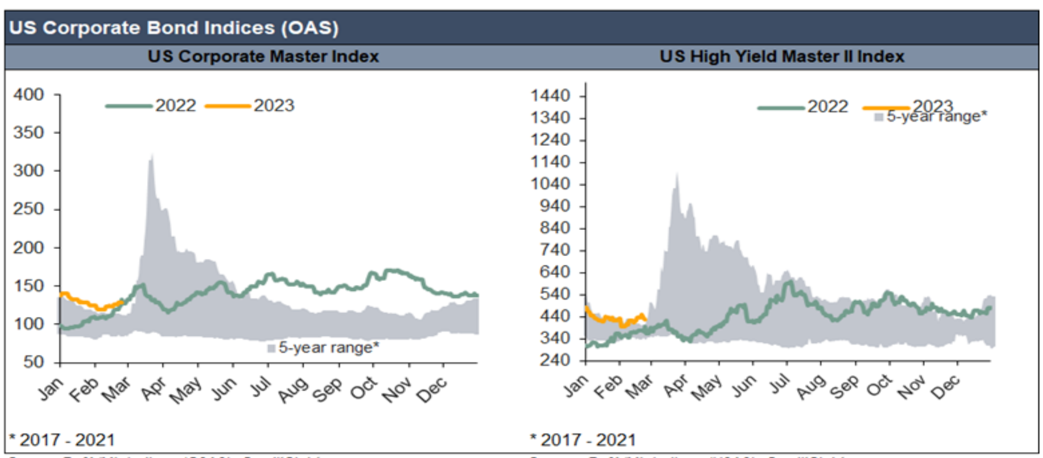
On the heels of the strong employment report, we received the January consumer and producer inflation data, which came in higher than December's data. This was followed by January retail sales, which came in well above consensus at 3%. Later in the month, the Fed minutes from the January meeting were released and confirmed that members believed further rate increases were still needed. Additional strong data followed, including the fourth quarter PCE price index which rose 5.4% from a year earlier. Treasuries sold off and yields rose further after these data prints as investors began to realize the Fed's work was not done and further rate increases were indeed likely. The chart below depicts the increase in rates over the month of February.




*Source: Bloomberg*

For the month of February, returns across all asset classes moved back into negative territory as yields rose significantly. Two-year yields rose 60bps during the month to end at 4.82%, while ten-year yields rose 40bps to end at 3.92%. High-grade credit delivered the worst results at -2.91%, followed by mortgages at -2.61% and Treasuries at -2.4%. High-yield corporates declined the least during the month, mainly due to their shorter duration profile.

The charts below depict credit spread movement for 2022 and year-to-date 2023, as well as the 5-year average:




Source: BofA/ML Indices (C0A0), CreditSights

Source: BofA/ML Indices (H0A0), CreditSights

| | Feb 24 2023 | Change (bp) | | |
|---|---|---|---|---|
| | | Week | Month-to-date | Year-to-date |
| **High Grade** | 128 | 2 | 3 | -10 |
| **Financials** | 127 | 3 | 0 | -19 |
| **Industrials** | 126 | 1 | 4 | -7 |
| **Utilities** | 138 | 2 | 2 | -6 |

| | Feb 24 2023 | Change (bp) | | |
|---|---|---|---|---|
| | | Week | Month-to-date | Year-to-date |
| **High Yield** | 428 | -10 | -2 | -53 |

*Source: CreditSights*

Uncertainties about growth and inflation continue to be high right now and the prospect of a recession is still on investors' minds. There are currently arguments for a soft landing, a hard landing, and even a "no" landing scenario where growth remains steady, inflation is sticky, and rates remain higher. As recently as January, it was widely believed that the Fed's numerous rate increases over the past year would lead to recession, and the central bank would then be required to reverse course and cut rates late in the year. Now short-term futures contract rates have reversed course, and the market is fully pricing in a 25bp rate increase in June, following expected 25bps moves in March and May. A higher peak Fed Funds rate of roughly 5.5% is currently priced in for September.

The 2-year/10-year area of the yield curve remains very inverted at roughly 88 basis points. This part of the curve has inverted before all of the last ten recessions, and it typically takes 12-18 months after inversion for a recession to begin, but some cycles can run longer. The strong January data has repriced Fed policy in a more hawkish direction and may have pushed a recession out a little further as well. The markets will continue to be reactionary around economic and inflation data in the coming months, and we expect things to continue to be bumpy going forward.

With rates near the highs we were seeing back in the fall, we have been active within the fixed income portfolio as we try to best position ourselves in the current environment. We have been adding money to the portfolio and increasing our overall allocation to fixed income to take advantage of these higher yield levels. Within the corporate sector, we have added several new positions from the secondary as well as the new issue market. Issues purchased have been mainly in short to intermediate maturities and include stable names such as Ford, Phillip Morris, Hyatt, Amgen, and others. These purchases were offered at attractive spreads within their sectors and allowed us to add yield without a large amount of credit risk. The new issue calendar has been fairly robust since the beginning of the year, with issuers taking advantage of risk-on windows in the market when the opportunity arises. Corporate spreads have remained fairly stable over this time period, tightening some in January as Treasury yields were declining but widening again in February after strong data prints led to higher yields and firmer talk from Fed members. If the economy moves into recession later this year or into next year as some believe, we would likely see corporate spreads continue to move wider, especially in riskier sectors. We continue to be overweight the credit sector, with a shorter duration position than that of the Index. We will continue to look for attractive names/maturities to selectively add to the credit sector, particularly if we get any further weakness in spreads that provides an opportunity.

In the agency debt sector, we have seen spreads remain fairly stable and overall levels are still somewhat narrow. With higher yield and stable spreads, there is still demand in this sector, particularly among the shorter maturities since the yield curve remains inverted. We have added to the sector since our last meeting, purchasing a Federal Home Loan Bank 2023 issue, a Federal Farm Credit 2024 issue, and a Federal Farm Credit 2031 issue. These issues were offered at attractive spreads within the agency sector and helped to better diversify the maturity structure of the portfolio along the curve while keeping duration close to neutral. Because issuance within this sector remains fairly low, we expect spreads to remain stable. Given that spread levels are not as attractive as those offered from corporate bonds or mortgage backed securities, we do not expect to add significant new money here, but we will continue to do maintenance type trades to replace a call or maturity, or perhaps a swap to adjust interest rate risk.

Spreads have widened again recently within the mortgage sector as well. With Treasury yields rising through February and mortgage rates back near their recent highs, demand for new mortgages has declined after a brief uptick in January when rates had dipped below 6%. Mortgage rates have risen faster than ten-year Treasury rates, raising the cost of home financing to among the highest levels in over a decade. Prepayments have remained low, and the average duration of the sector has extended. With all this said, we have been fairly active in the sector as yields have been attractive versus other government-related sectors. In December, we swapped out of a 30yr 5.0% pool and purchased a 30-year 3.0% to position the portfolio for a potential drop in interest rates as inflation and economic growth appeared to slow down. In January, we purchased a 2% 30-year pool as rates continued to move lower. More recently, as rates reversed course and moved higher, we have added 5% and 5.50% 30-year pools to shorten duration versus the mortgage index and add higher yields to the portfolio. Despite adding money to the sector, we are still underweight versus the index, and therefore have room to add to the sector when opportunities arise. We will also continue to monitor interest rate movements and adjust duration as needed.

Lastly, within the Treasury portfolio, we added new positions over the past quarter. In January as rates were declining, we added intermediate and longer-dated issues to increase our duration a bit. Into February, as yields were rising, we added again, purchasing mainly intermediate maturities to fill in our underweight there and also to take advantage of the higher levels. These purchases allowed us to diversify positions a little better along the curve and increase our overall weighting of Treasuries within the portfolio. We continue to be underweight the index, and our duration is a bit lower than the index, which we think is prudent at this time. We continue to watch yield levels closely and will adjust our Treasury positions and duration as needed.

## Domestic Equity Strategy

***By Hunter Bronson***

U.S. equity markets continue to roil through the first half of fiscal year 2023. The fourth calendar quarter's rally fizzled out in December with the S&P 500 down 5.77% for the month, only to rally hard again in January (Up 6.28%) and chop somewhat violently back and forth through much of February. We think a number of factors were at play, as most economists and strategists were caught off-sides hinting that a light recession could begin in the first half of 2023. With the confluence of heavy tax-loss selling and negative sentiment reaching their peaks in mid-to-late December, January's buyback should not have been all that surprising, especially considering the stronger-than-expected consumer data we have gotten since then.


*Figure 1: S&P 500 price performance since December 8, 2022; Source: Bloomberg*

The way we see it, there is still a great debate ongoing between equity bulls and bears. The bulls are hopeful that a friendly Fed can shoot the "soft landing" gap by gently probing forward from here to find a neutral level of interest and letting inflation continue to fall back to normal levels of its own accord. They argue that consumers are still in decent shape with a strong job market, personal balance sheets are still buoyed from post-COVID policy help, inflation has peaked, and recessions typically don't occur in this kind of backdrop. On the other hand, bears would have you believe that margins are stretched, earnings have topped, and the Fed is no longer your friend, usually not a great recipe for equity market returns. To a certain extent, we believe that both camps are right in many respects, and the market will continue to chop back and forth as fresh data comes in to support one camp or the other.

Ultimately, equity market returns over any given time period are driven by two things:

1. Earnings/Cash Flow
2. How much more (or less) investors are willing to pay for those earnings from the beginning to the end of the period

Over the long-run and through the swings of a full cycle, only #1 matters. Paying a fair or better price for a consistent stream of cash is how we generate market meeting-or-beating returns. As long-term investors, that should always be (and is) our central focus.

Unfortunately, we live in the real world, and over the course of months, quarters, and years, #2 matters quite a lot. Short-term returns are driven by market sentiment, notoriously tough to gauge and forecast. This is almost always where many of the most interesting market puzzles lie, and we think we live in just such a world today.

**Earnings**

First, on the earnings front, due to the incredibly tough earnings comparisons on the back of historic levels of fiscal and monetary COVID policy easing, it is hard to imagine earnings surging higher from here, even given rapid nominal GDP growth.

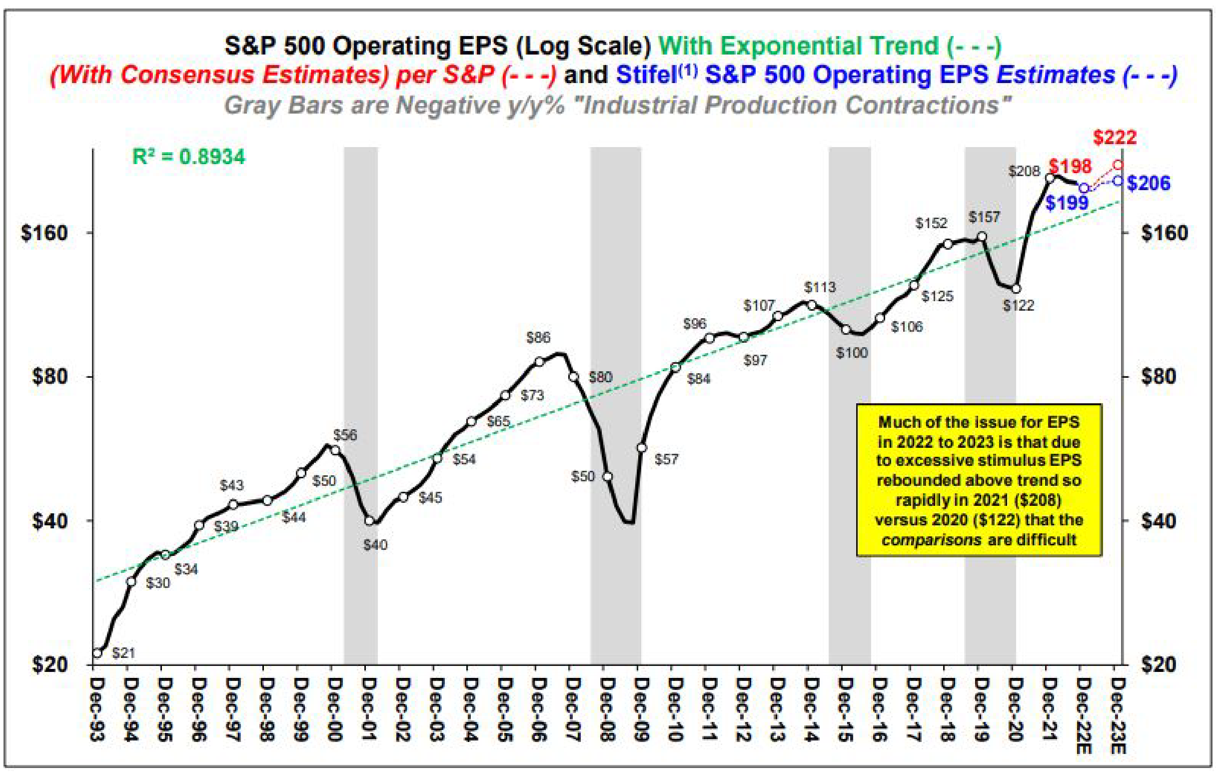



*Figure 2: Operating earnings recovered historically quickly post-COVID, leaving tough comps for 2023; Source: Stifel*

As you can see in the chart above, once earnings break below trend, they usually don't break back above trend for roughly three years. Due to the policy easing post-COVID, we managed to do so in twelve months. The likelihood that we continue to accelerate through these levels is low, we believe. The gravitational pull of the trend is too much to overcome.

On the other hand, unless conditions for the consumer deteriorate quickly (mass job losses, exogenous shock, etc.) or businesses decide to stop investing (credit problems or inventory mis-matches), neither of which we view as highly likely in the short run, earnings and economic growth are also unlikely to fall out of bed. Therefore, at the macro level, we think earnings should reasonably be forecast within a relatively tight range. While top-down estimates are usually a touch high to start the year, we think somewhere in the low $200s is appropriate on the Operating EPS line for mid-single digit year-on-year growth. Applying a 20x multiple (the average FCF multiple over the last 20 years) gets us around 4000 on the S&P 500, or around where we stand today.

While neither the upside nor downside tail is our base case, it is probably true that risk to the forecast skews to the downside. For earnings to surprise to the upside in a meaningful way, inflation would need to fall of its own accord, consumers continue to spend, businesses continue to invest, while the Fed is left feeling comfortable that inflation is anchored. That seems like an awfully fine tightrope to walk. But, absent anything shocking, the earnings outlook leaves us thinking the market is fairly valued. Now to the fun part.

**IF/THEN Hall of Mirrors (Inflation/Fed Reaction)**

There are many days that feel like we are operating in a fun house, as predicting the market's meta-reaction to the latest growth and inflation data or Fedspeak is just as, if not more, important than the data itself. But, ultimately, we think the outcome for equity market investors over the medium run is tightly bound to one of a few outcomes for inflation and the Fed's reaction function to that underlying level.

If Inflation has Peaked

In the most bullish case, inflation has peaked and will continue to wind its way down. This was clearly the predominate view of the market in January, and it is essentially the same soft-landing case for earnings laid out above whereby inflation eases, real rates fall, and the consumer continues to drive forward growth in the economy.

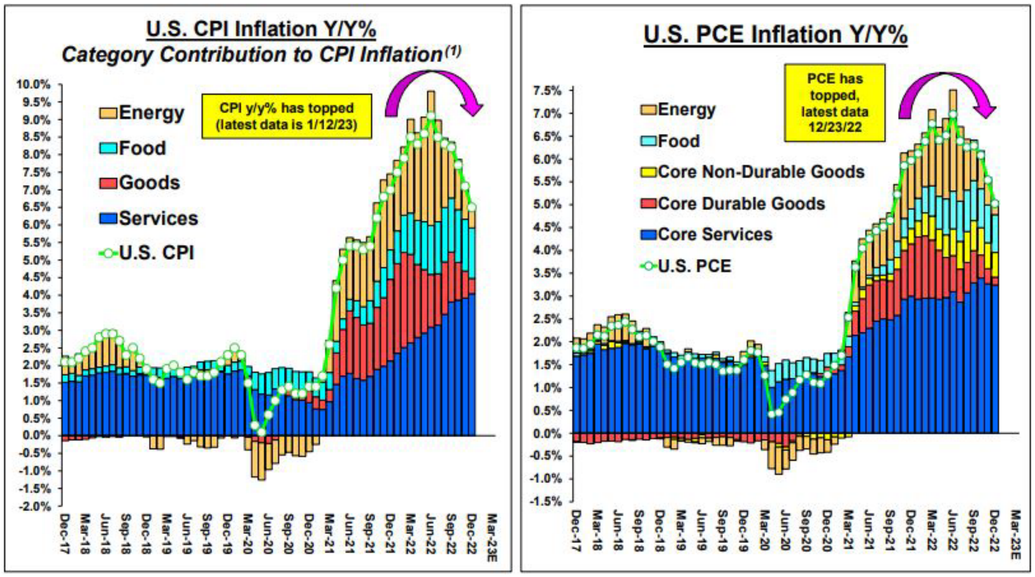



*Figure 3: Inflation tends to rise & fall symmetrically; Source: Stifel*

As Don Rismiller from Strategas has demonstrated to us, inflation cycles tend to be remarkably symmetric, but the intra-month periods can be messy. The Fed likes to remind us that monetary policy works on long and variable lags. If we look closely at the chart above, we can see plenty of false signals and inflation readings that didn't necessarily fit the narrative in the moment, but the overall picture looks incredibly orderly. It took 16 months for inflation to peak at 9.1% in June 2022, and we should expect it will take 16 months to fall to normal levels, or by the 4th quarter of this year.

As mentioned, there is still a great debate as to the persistence of inflation going forward. Since the 4th quarter of last year, the market has tended to over-react to each new data point. January growth and inflation surprised a bit to the upside, and the market reacted negatively, but we don't view the debate as settled.

Monetarism tends not to be well-regarded on Wall Street, but Evercore's famed economist Ed Hyman thinks it matters in the extremes – when M2 growth is at very high levels, inflation tends to follow, and the opposite is true for very low (or negative) levels of M2 growth.

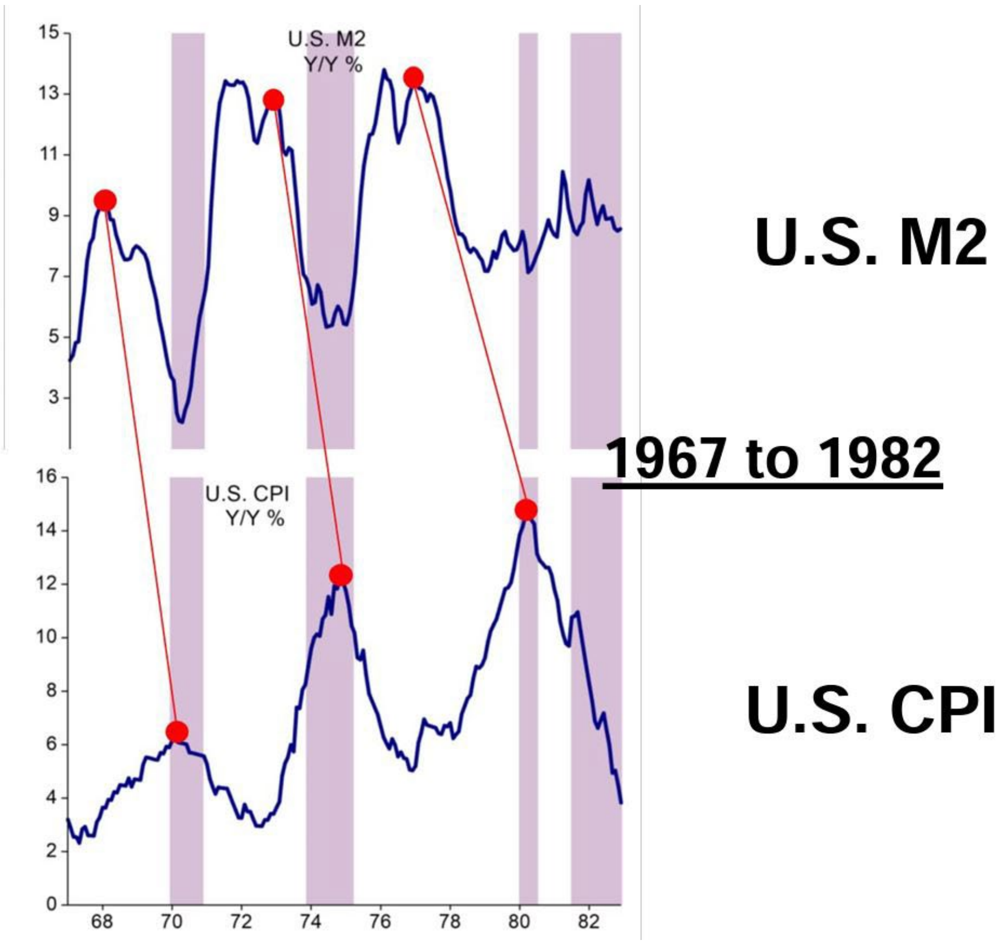


*Figure 4: Waves of money growth drove inflation in the 1970s; Source: Evercore ISI*

As you can see in Figure 4, three waves of money growth in the 1960s drove three waves of inflation in the 1970s. If you'll look at Figure 5 below, over the past two years, M2 growth has plunged 30 percentage points from +27% in February 2021 to -3%, the lowest in over 10 years. This is an incredibly profound reversal, and if it is predictive at all, should portend continued softening inflation.

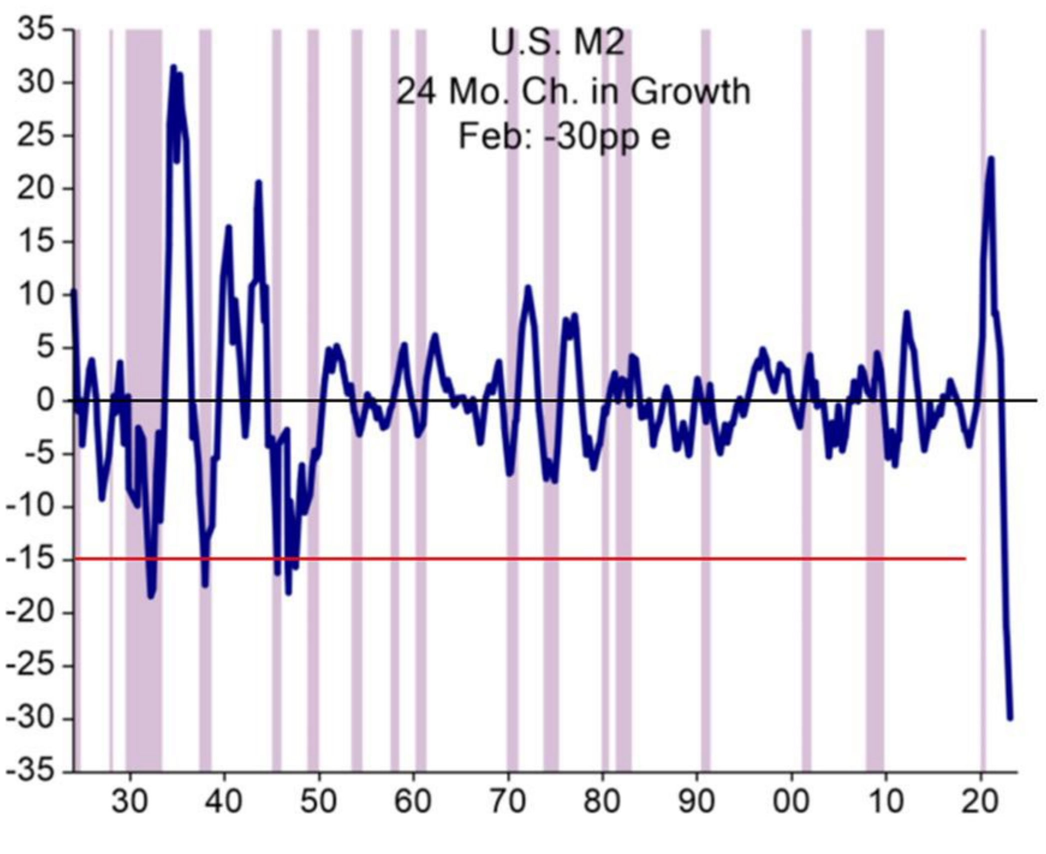



*Figure 5: One of the largest money growth reversals in history in the last 24 months; Source: Evercore ISI*

In this case, the job remaining for the Fed is relatively easy, as there aren't many decisions left to make. A few more 25bp hikes might make sense, but it would probably have a chance to pause later in the year, and maybe even begin easing in late 2023. This would be a nice setup for equities as discount rates should fall, multiples expand, and earnings growth should have the opportunity to stabilize at a sustainable level.

<u>If Inflation is Sticky</u>

On the other hand, the simplest and most compelling argument that inflation could be stuck around 4% today is that wage growth tends to be sticky, and the labor market is still too unbalanced in favor of workers for wages to fall from that level. In this case, the Fed's job becomes quite nuanced - in order to stick a soft landing, the Fed would need to engineer a collapse in job **openings** without also triggering a collapse in **jobs** and a subsequent recession**.** The unemployment rate is near record lows, and despite numerous anecdotal headlines, as you can see in Figure 6 below, new unemployment claims are not yet signaling any slack in the labor market.

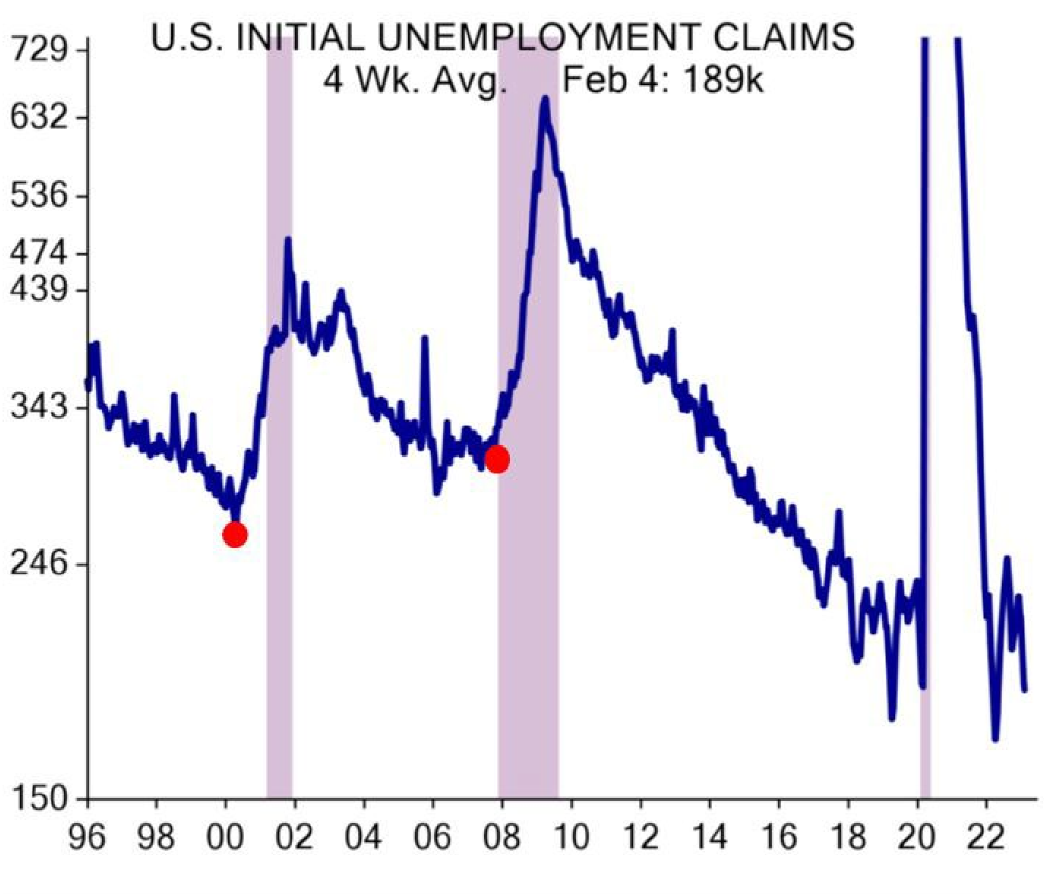



*Figure 6: Unemployment claims remain stubbornly low (In the Fed's view); Source: Evercore ISI*

In 2016, billionaire tech founder Peter Thiel quipped that the media didn't take Donald Trump seriously, but they took him literally. We think this is an interesting framework with which to view the Fed's 2% inflation target today.

If it is true that inflation is "stuck" around 3-4% today, the last 1% reduction in inflation could be very expensive in terms of jobs and growth. In the next few months, the Fed will have raised rates by nearly 5%, a fairly monumental effort. However, the yield curve is now deeply and stubbornly inverted, as you can see in Figure 7, below – a historically strong predictor of future trouble. This limits the Fed's ability to push much harder without running the risk that something breaks.

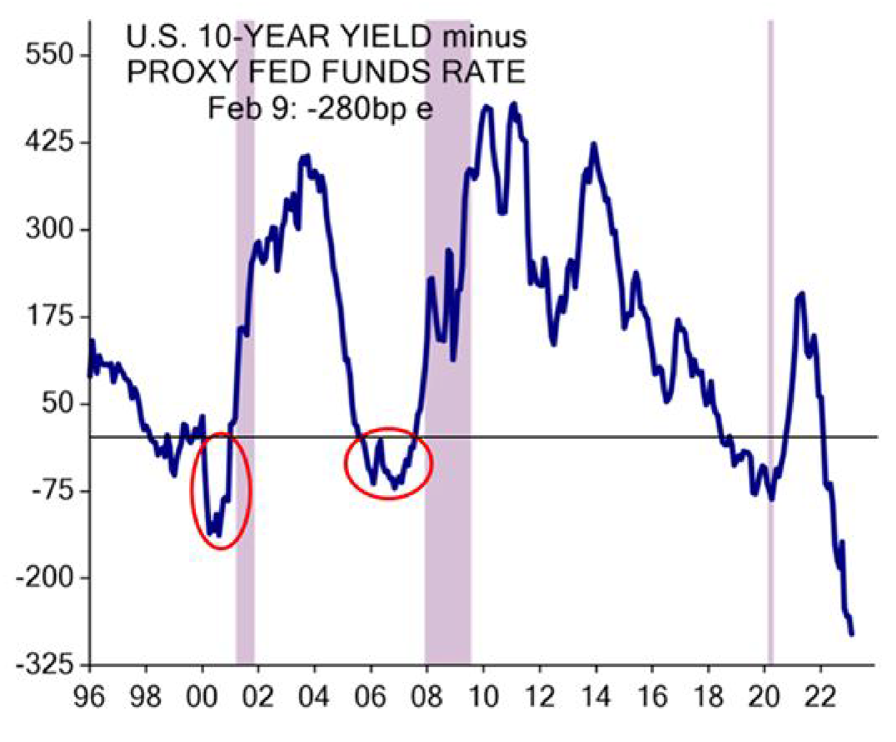



*Figure 7: Persistent yield curve inversion usually precedes recessions; Source: Evercore ISI*

If the Fed is serious, but not literal about its 2% inflation target, we believe that opens many more degrees of freedom for the economic trajectory going forward. We think the arguments for this stance are reasonable. The 2% target rate, after all, is only an arbitrary level – all that really matters is that inflation is anchored at a level that has minimal effects on ordinary business decisions. Who is to say that 2.5% or even 3% doesn't make just as much sense?

In the case that the Fed is only **serious** and not **literal**, we think it makes sense to forecast a long period over which policy-makers probe cautiously forward with small tweaks to rates as needed. Real discount rates could slowly work themselves down as the Fed lets its previous efforts play out over the "long and variable lag," and growth rates could slowly churn down to sustainable levels. The most likely outcome for equities in this scenario would probably not be one of outright stagnation, but a long period of acceptable, but not outstanding returns.

The key is that inflation remain anchored. As you can see again at the bottom of Figure 4 above, an outright resurgence of inflation is not an acceptable outcome to the Fed. It learned its lesson as an institution in the 70s and 80s that this would probably lead into a period of rolling recessions, and it would lose credibility if it allowed that to reoccur.

If inflation were to resurge at any point soon, and if the Fed was not already **literal** about the 2% inflation target, we believe they would become so quickly. In the case that the Fed is literal about the inflation target – or becomes so, the risk of recession rises substantially.

We believe the Fed would view itself as having little choice but to continue pressing rates higher. At some point, new business activity becomes uneconomic.

## Summary & Strategy

It does feel as though U.S. equity markets are perched somewhat precariously now – and that isn't to say all the risk is to the downside. We've laid out several scenarios - which we believe to be reasonable - for equities to work higher from here. Most economists have recession risk pegged somewhere north of 50%, some as high as 75%. It feels a bit like sticking your finger in the air to judge the wind direction, but we believe there is a greater chance that we avoid recession than we enter it- at least until the end of 2023. However, there are so many inter-related variables at critical points today: Ukraine and major geopolitical power tensions, the Chinese re-opening's countervailing effect on both growth and inflation, global monetary policy, commodity inflation/deflation - and on and on. So far in 2023, the market has agreed with us, as it is up 4% calendar year-to-date. Spreads and the equity risk premium are relatively tight. Fund flows into equities are still strong. Hedge funds have de-grossed, reducing both their bullish and bearish bets. So far, equity investors are mostly complacent. We firmly believe that nobody really knows.

With that in mind, we will return to our opening point. Over the long run, we can only control our fundamental process. In our active funds, we will continue to focus on selecting equities with good earnings quality, strong balance sheets, good business models, and resilient cash flows. Your staff tends to be value-oriented by nature, and we think the environment going forward is going to be favorable for active management with a value tilt.

As Kevin pointed out in our last update, growth stocks have had a 14-year relative run of out-performance over value, driven by liquidity injections and financial repression. Jason Trennert's TINA (There is no alternative – to equities) paradigm was a brilliant one in an age of low rates. We (and he) think that period has likely ended, but that is not yet widely accepted. The fact that investors can earn solid risk-free nominal returns is very different than what was true even just one year ago. This is just another way of saying that taking on risk now has a much higher opportunity cost.

As we mentioned before, we think this continues to be an ideal setup to layer in put-spread collar protection on our index holdings that have higher exposure to the very largest names in the S&P 500 than our active funds. We think the market will continue to chop back and forth, as bears and bulls fight it out over how to interpret fresh inflation data and Fedspeak, and we think it continues to make sense to layer on protection after periods of strong market performance.

# International Equity Strategy

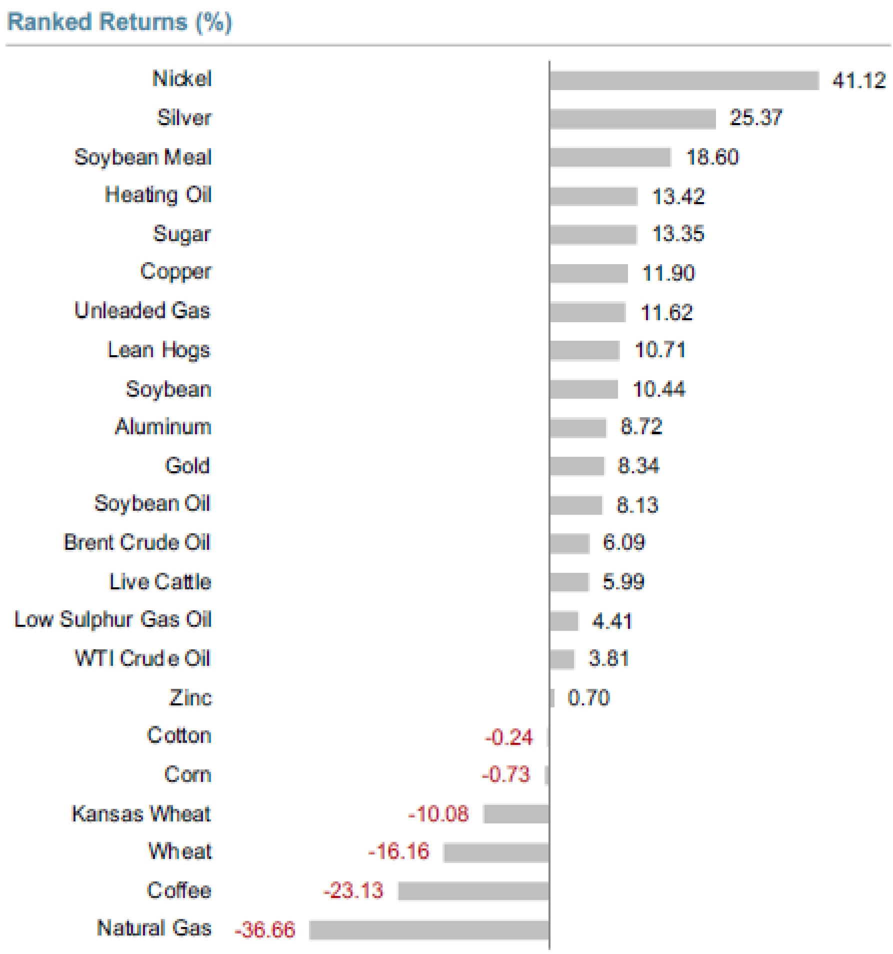
***By Steve Lambdin***

The global equity markets staged a strong recovery in the fourth quarter as signs emerged that inflation may have peaked in many parts of the world, giving investors something to cheer about. Also, an unexpected improvement in the energy situation in Europe coupled with the Chinese government's decision to significantly relax its zero-COVID policies help fuel this rally. Even though most of the major central banks continued to raise interest rates in the quarter, rhetoric around the magnitude of future rates hikes in 2023 being smaller brought some comfort to investors and pushed the "risk on" trade. In general, supply chains continued to improve in the period, but on a more industry-by-industry basis. The European energy crisis improved on the margin as supply capacity was near full to start winter, and thus far, the early-mid winter weather has been better than expected. This served to keep supply drawdown much less than forecasted. The abrupt change in China's government policies toward COVID-19 led to the best return of Chinese equities in two years as expectations for increasing economic activity and spending spurred investors. In the quarter, all the major central banks continued to hike interest rates to thwart rising inflation. However, it now seems inflation readings may have peaked out in many of the major economies in the fourth quarter, leading investors to anticipate a change in future interest rate expectations that pushed equity market significantly higher in the period. Many of the economic and consumer confidence readings in the quarter continued to indicate a weak economic climate going forward as global growth is set to fall in 2023 from year earlier levels. The war in Ukraine continued to escalate as casualties are mounting on each side as a fresh Russian offensive is taking place right now. Further escalation seems to be the base case at this point with no resolution in sight. This is a significant source of risk going forward for all investors. All in all, we are off to a great start in our current fiscal year and will see if this momentum can be sustained over the next few quarters.

| | December 2022 | | 4Q 2022 | | 2022 | |
|---|---|---|---|---|---|---|
| Equity index returns (%) | U.S. dollar | Local currency | U.S. dollar | Local currency | U.S. dollar | Local currency |
| S&P 500 | –5.8 | –5.8 | 7.6 | 7.6 | –18.1 | –18.1 |
| MSCI ACWI | –3.9 | –4.7 | 9.8 | 7.4 | –18.4 | –16.0 |
| MSCI ACWI ex USA | –0.7 | –2.9 | 14.3 | 7.8 | –16.0 | –9.6 |
| MSCI World | –4.2 | –5.1 | 9.8 | 7.5 | –18.1 | –16.0 |
| MSCI Emerging Markets | –1.4 | –2.0 | 9.7 | 6.6 | –20.1 | –15.5 |
| MSCI EAFE | 0.1 | –3.0 | 17.3 | 8.7 | –14.5 | –7.0 |
| MSCI Europe | 0.0 | –2.7 | 19.3 | 10.4 | –15.1 | –8.5 |
| MSCI Pacific | 0.3 | –3.5 | 14.1 | 5.9 | –13.0 | –3.7 |

*Source: RIMES; Capital Group*

The MSCI EAFE Index (net dividend) and the MSCI Emerging Markets Index returned +17.3% and +9.7%, respectively, during the fourth quarter of 2022 vs. +7.6% for the S&P 500 Index. This is the largest outperformance of large-cap global equities vs. U.S. stocks over a quarter that we can remember in many years. Investors sought out risk outside of the U.S. to take advantage of falling inflation globally and a shift in the future projection of central bank interest rate increases. This led to a significant fall of -8.6% in the U.S. dollar, which enhanced returns for unhedged U.S. investors in the MSCI EAFE Index and to a lesser extent, in the emerging markets. The European region was much stronger than the Asian region as the large European markets had outsized benefits from these shifts in central bank projections. All eleven sectors of the MSCI EAFE Index posted positive returns, with financials, energy, and basic materials leading the way. Commodity prices reversed course in the period as the Bloomberg Commodity Index rose +2.2%, led by many of the metals.



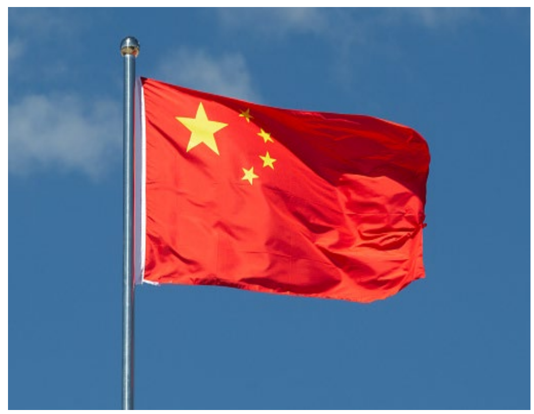

*Sources: Arcadia Wealth Management*

Quarter-to-date through the end of February, the global equity markets have been in a bit of a seesaw pattern, but the rally continues on the hopes of falling inflation and a somewhat mild recession in 2023. Investors are welcoming this on the heels of a rough 2022. The MSCI EAFE Index and the MSCI Emerging Markets Index are up +5.9% and +1.0%, respectively, while S&P 500 Index is up +3.7%. This is a great five-month start to our new fiscal year!

Presented below is a list of issues facing global equity investors as we enter 2023 that could push the equity markets in either direction over the next few months.

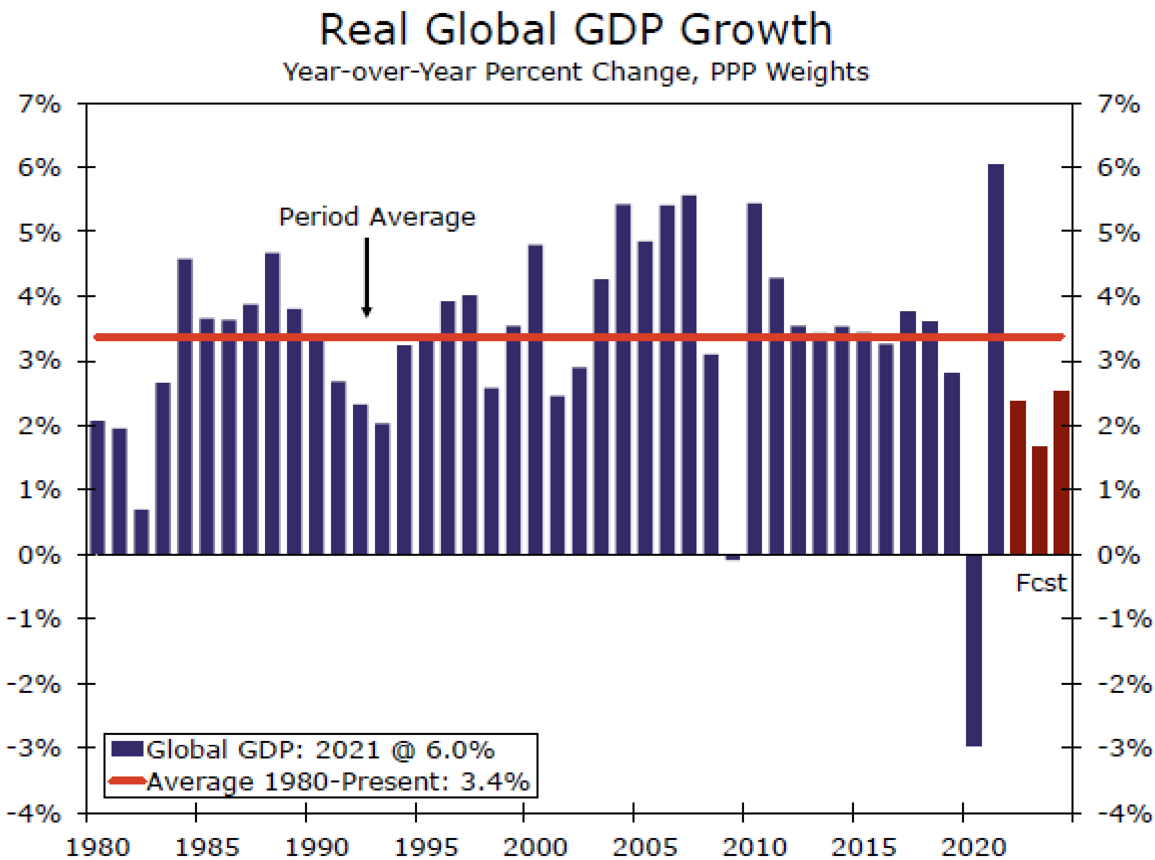
Potential Problems/Issues:

**Geopolitical Risks** – The Russian/Ukraine war is an ongoing tragedy with little hope of any near-term peaceful solution. While we won't measure civilian and combat losses here, it's simple to say it's the worst war in Europe since WWII. The economic toll has been tremendous as lost economic output, soaring energy prices, and supply chain problems have gripped the global economy from this conflict. In addition, China/U.S. relations continue to sour over Taiwan as well as trade issues. The risk is investors could exit equities in a hurry if these "hot zones" take an abrupt turn for the worst.



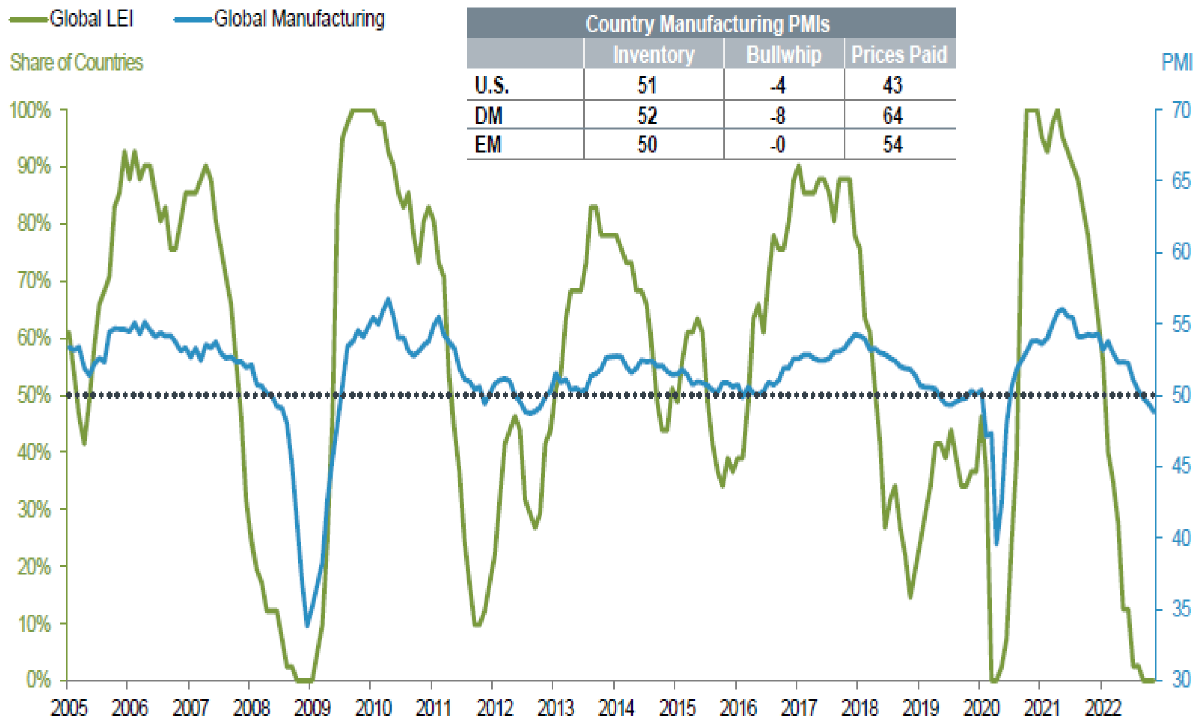
**Falling GDP Growth** - According to the International Monetary Fund (IMF), global GDP growth is estimated to fall to 2.9% in 2023, from 3.4% in 2022. With the long-term average of +3.4% since 1980, anything below this level will feel like a recession. The economies of Japan and China are the only two regions expecting a growing economy for the year. Estimates for 2023 GDP growth by the IMF are below:

U.S. +1.4%
Euro Area +.7%
U.K. -.6%
Japan +1.8%
China +5.2%




*Source: IMF; Wells Fargo Economics*

**Global Leading and Manufacturing Indicators**




| Country Manufacturing PMIs | | | |
|---|---|---|---|
| | Inventory | Bullwhip | Prices Paid |
| U.S. | 51 | -4 | 43 |
| DM | 52 | -8 | 64 |
| EM | 50 | -0 | 54 |

*Source: Fidelity Investments; Haver Analytics; ISM; Markit; S&P Global*

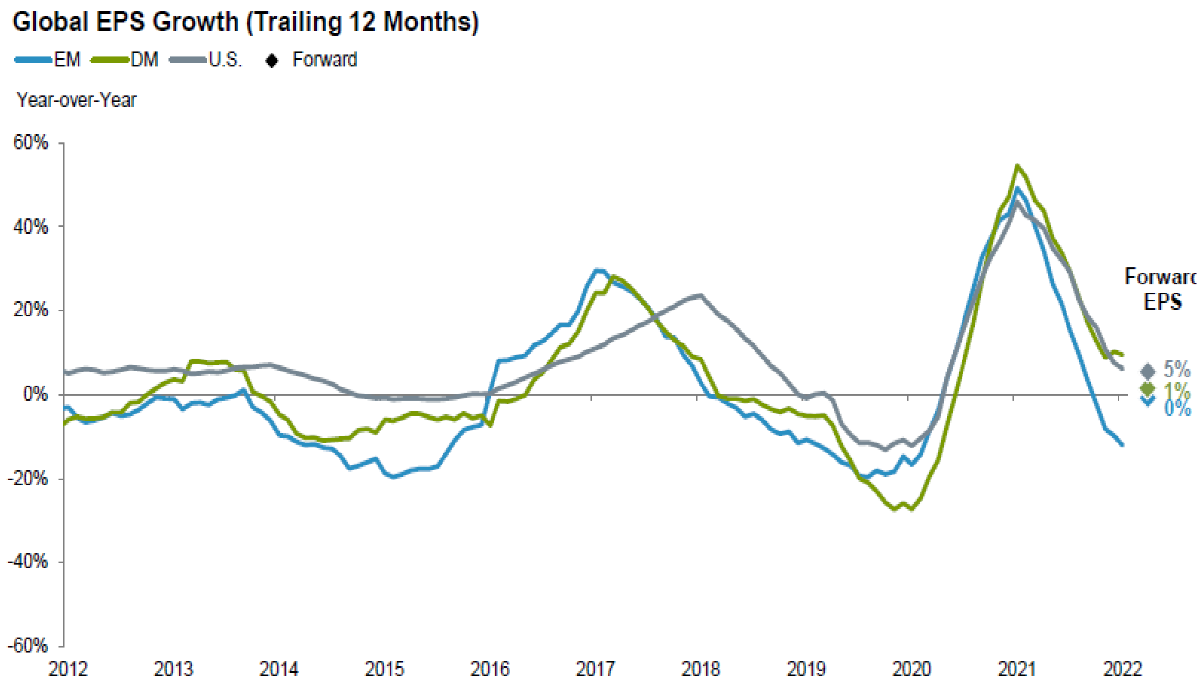
**Equities Have Competition** – Just to re-mention what Kevin said at our last economic update, for the first time in several years, as bond yields have risen substantially over the last six months, equities have got some competition. This could dampen investor appetite for taking risk over the short term if yields look attractive enough.

## 2 Year Gov't Bond Yields

| Region | Yield | Low | High | 3M Chg |
|---|---|---|---|---|
| Israel | 4.560 | 3.350 | 4.600 | 125.0 |
| Ireland | 3.042 | 1.851 | 3.042 | 116.4 |
| Finland | 3.086 | 1.863 | 3.087 | 111.3 |
| Netherlands | 3.097 | 1.899 | 3.097 | 106.7 |
| Austria | 3.086 | 1.906 | 3.086 | 106.2 |
| France | 3.192 | 1.986 | 3.192 | 103.3 |
| Denmark | 3.161 | 2.029 | 3.161 | 103.0 |
| Germany | 3.119 | 1.966 | 3.119 | 102.3 |
| Belgium | 3.124 | 2.003 | 3.124 | 102.3 |
| Portugal | 3.134 | 2.085 | 3.134 | 101.8 |
| Spain | 3.336 | 2.196 | 3.336 | 98.5 |
| Italy | 3.574 | 2.420 | 3.574 | 93.7 |
| Sweden | 3.180 | 2.237 | 3.180 | 76.1 |
| Greece | 3.249 | 2.398 | 3.249 | 74.7 |
| Singapore | 3.632 | 2.888 | 3.645 | 57.0 |
| United States | 4.816 | 4.082 | 4.816 | 50.6 |
| Switzerland | 1.267 | 0.767 | 1.267 | 49.1 |
| Australia | 3.617 | 2.878 | 3.620 | 49.0 |
| United Kingdom | 3.665 | 3.138 | 3.968 | 44.8 |
| Canada | 4.199 | 3.464 | 4.266 | 33.0 |
| New Zealand | 4.960 | 4.198 | 4.985 | 32.2 |
| Norway | 3.551 | 2.865 | 3.581 | 20.8 |
| Japan | -0.045 | -0.074 | 0.038 | -1.7 |

*Source: Bloomberg*

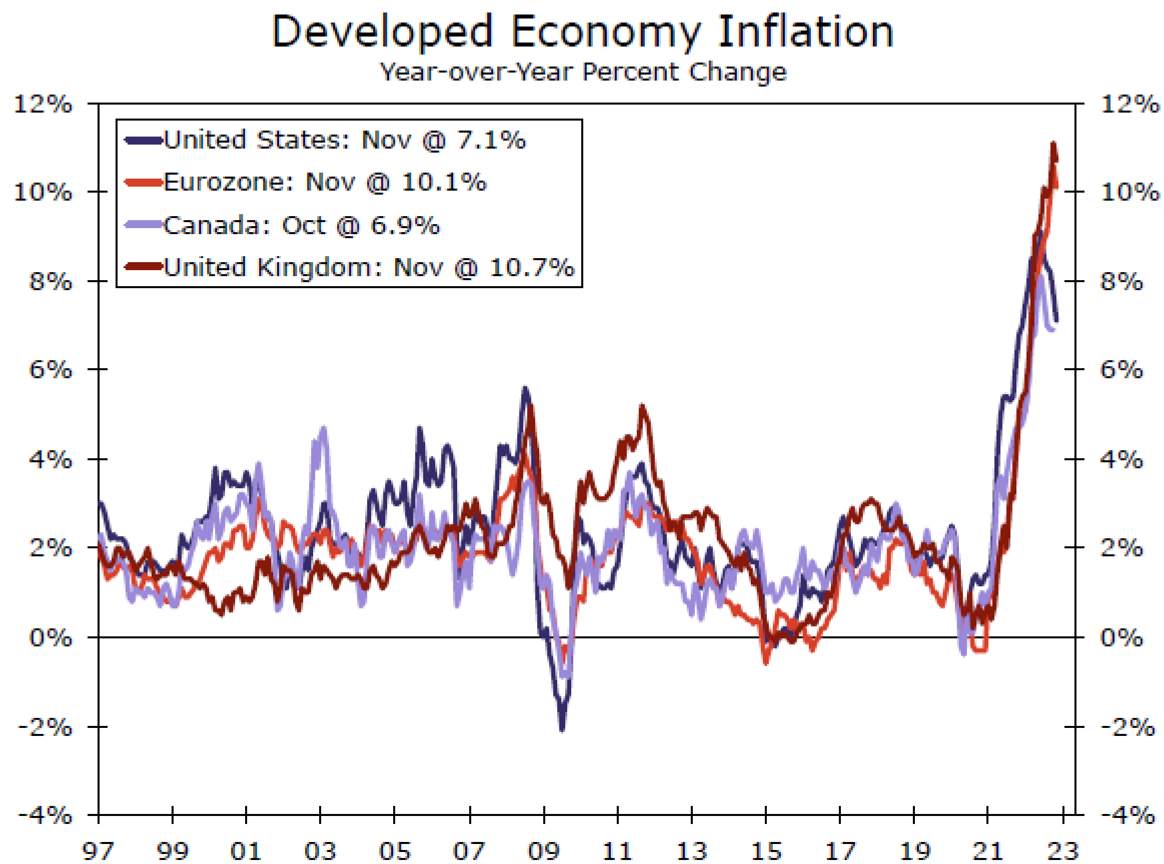
**Corporate Earnings Growth** – At this point, we see corporate earnings as a source of risk for the global equity markets as earnings expectations seem a bit aggressive to us for 2023. The combination of a slowing global economy, elevated cost structures accumulated over the last couple of years, and rising interest costs from variable-rate debt will probably come together to force the trajectory of earnings growth downward as we move through the year.




*Source: Fidelity Investments; Bloomberg; MSCI*

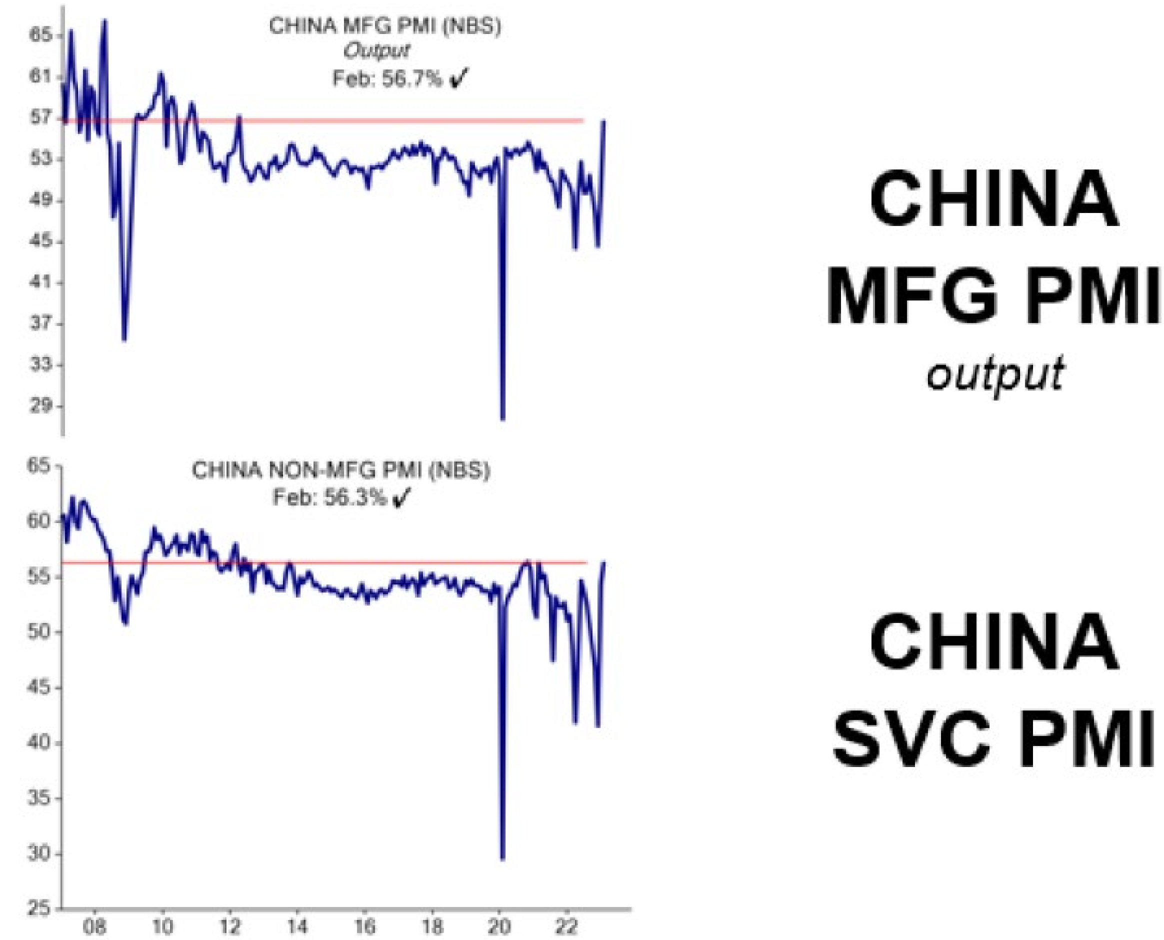
<u>Potential Catalysts</u>:

**Falling Inflation** – We believe inflation probably peaked in the fourth quarter of 2022. As global inflation falls from +8.8% in 2022 to somewhere in the +6.6% area estimated by the IMF, this should be accompanied by less future tightening by the various central banks around the globe. This can be a powerful force for good equity market performance. We should see cooling fuel and commodity costs as demand falls. However, inflation will remain well above long term averages and pre-pandemic levels and could wind up stickier than expected and being more of a problem than a catalyst. We will have to watch to see how this shakes out.




*Source: Bloomberg; Wells Fargo Economics*

**China Re-Opening** (The Year of the Rabbit) – We expect economic growth to pick up as we move the 2023 from subpar levels of the previous year. President Xi's announcement of a move away from its zero-COVID policies should allow for citizens to freely re-engage in the economy. The road will probably be a bumpy ride in the beginning before becoming smoother throughout the year. This is important as China will resume being the world's growth engine as other large economies are set to decelerate. This will fuel growth throughout the Asian basin as China is a big trading partner with many of these countries.

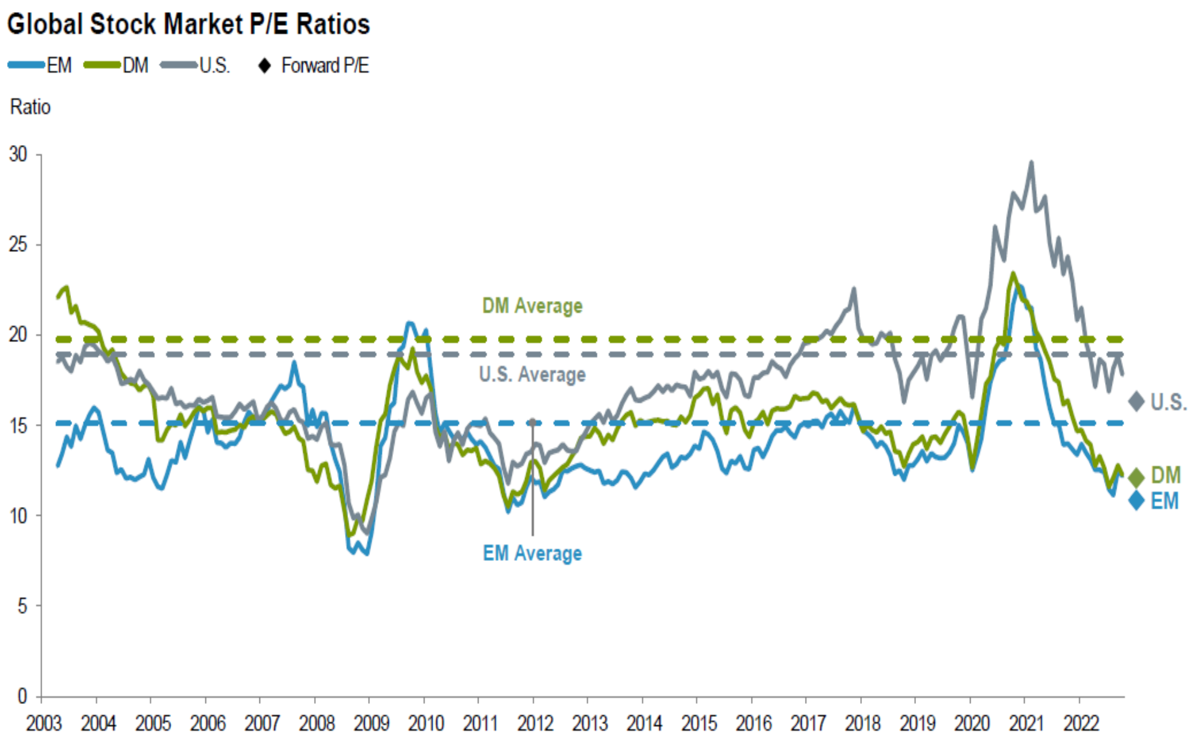



*Source: ISI*

**Global Employment is Strong** – Most regions around the globe have experienced significant growth in jobs over the last 10 years. This has pushed unemployment rates very near historic lows in many of the largest economies of the world. As a result, the bar for layoffs has been moved a bit higher than in previous economic slumps. The Eurozone, U.K., U.S., and Japanese economies are all experiencing historic lows in unemployment. If people have a job and are getting wage hikes, this should be good for consumption. We believe global demographics have a lot to do with this as many of the largest economies have a fundamental shortage of working-age people.

**Supply Chains** – Ever since COVID-19 surprised us nearly three years ago, global supply chains have shown just marginal improvement in many industries. This progress surprised most of us as we thought most chains would be back to running near optimal levels by now. Obviously, this proved not to be the case. However, we believe 2023 will be the year where normalcy returns. Inventory management will return to routine levels, lead times for production will shrink, and manufacturing inputs will be more readily available. All of this will lend itself to smoother and more predictable processes as we move through 2023. As a result, this could be a positive data point for the global equity markets.

**Global Equity Valuations** – At this stage of the economic cycle, equity market valuations look fair to decent to us presently, but not by wide margin. Valuation levels look a bit better in Europe and China than the rest of the world. However, earnings expectations still need to be calibrated downward for 2023 to account for slowing economies in the U.S. and Europe.




*Source: Fidelity, Factset, Bloomberg*

**U.S. Dollar** – If the U.S. Dollar continues to weaken and moves back toward its 10-year average, this could be good for equity assets outside of the U.S. However, predicting currency movements can be a difficult task as a multitude of issues come into play to create currency movements.

*Source: Bloomberg*

## Final Thoughts/Summary

Over the next few months, we still see central bank rhetoric as a key determinant of the direction for most global equity markets. It's becoming clearer to us we have passed the peak in inflation in late 2022 and investors will be looking for changes in interest rate outlooks to push equities further ahead. However, while inflation may have peaked, it may prove to be stickier than many forecasts, which in turn could spook investors. This will be a delicate navigation process going forward for the central banks as the investment world watches. Economic data points still seem somewhat weak to us on an overall basis and indicate some level of softening in many of the global economies. At this point, we just do not know how soft these economies will get. In addition, the geopolitical environment remains a mess with little to no improvement from a few months back. The war in Ukraine is now a year old as fresh Russian offensives are being met with a heavier flow of more advanced western military hardware to Ukraine. The human and economic costs of this conflict are almost immeasurable. We still see no near-term solution that would amount to any de-escalation. Also, U.S./China relations have not improved much over the last few months as both sides remain far apart over Taiwan. Our base case on the global economy has not changed from a few months back as we still expect some level of a European slowdown in early/mid 2023 and could be followed by a slowdown in the U.S. later in 2023 or early 2024. On a positive note, we believe the end of lockdowns in China will push economic growth back to the +5% level in 2023, significantly better than 2022.

We continue to sell a few out of the money calls on the Emerging Markets Index in order to bring in some small income as well as sell just a bit of exposure in a decent short-term rally if this happens. Premiums remain attractive in the current equity market. Emerging market equities remain an asset class that looks attractive to us going forward over the long term. Our current allocation to Emerging Market equities is approximately 3.1% of total assets and approximately 11.6% for MSCI EAFE equities across our TRS, ERS, and

JRF portfolios for a total international equity exposure of approximately 14.7%. This is nearly at our target allocation within our investment policy statement.

*(Credit is given to the following entities for charts provided: IMF, Bloomberg, Haver Analytics, S&P Global, Markit, Fidelity Investments AART, MSCI, Wells Fargo Economics, Factset, ISI, Russell Investments, Arcadia Wealth Management, RIMES, Capital Group)*

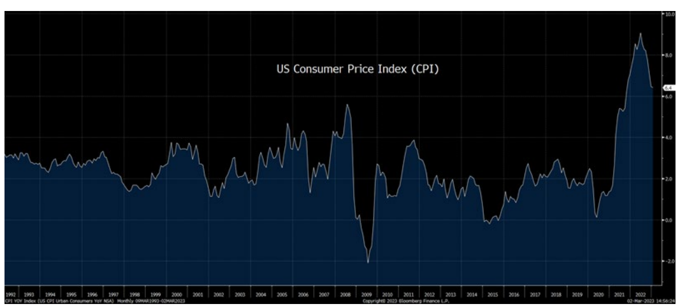
# Understanding the Economy's Perplexing Behavior and Resilience

***By Michael McNair***

In recent years, the global economy has experienced a series of unusual events that have left many people perplexed and uncertain about the future. One of the most significant anomalies has been the seemingly contradictory behavior of inflation and economic resilience in the face of numerous recessionary forecasts. This situation has generated a great deal of confusion and concern among economists, policymakers, and investors alike. To explain this odd behavior, our simplified explanation posits that the stimulus measures taken in response to the pandemic created rapid, unbalanced growth that increased consumption without a commensurate rise in production capacity. Additionally, the economy was hit by a wave of supply shocks that further prevented the rebalancing of supply and demand. In this essay, we will explore these phenomena in greater detail and attempt to shed light on the causes of this perplexing economic behavior.

Understanding Inflation

Inflation has surprised most forecasters, including the Fed, over the past few years. What makes the current inflation environment difficult to understand is the sheer number of major phenomena that have occurred over the past three years. Any one of these drivers would be significant for a given three-year period, but to have so many of them occur during the same period makes this current environment unique.



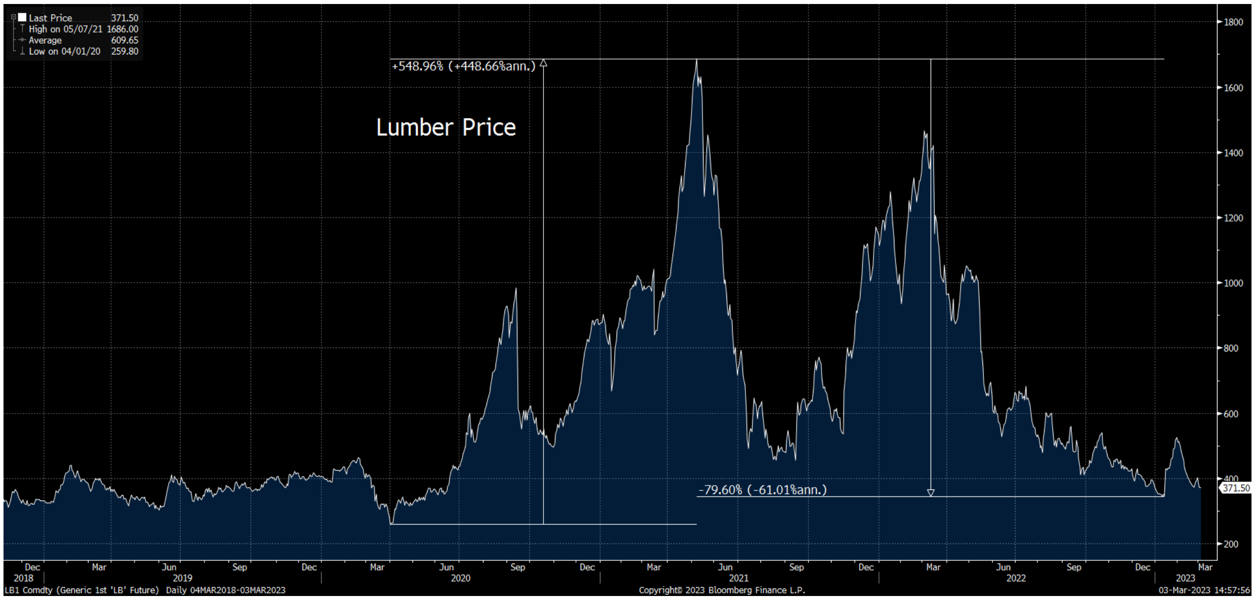

There are many factors that have contributed to inflation rising to the highest rate in over 30 years, but any examination of the current inflation environment should begin with the pandemic and its direct and indirect impact on inflation.

Capacity shutdowns due to quarantines played a role – though often overstated – in increase inflation.

The pandemic also caused a rapid shift in the consumption basket from services to goods. Goods jumped from 36.1% of consumption in late 2019 to 40.5% in the first half of 2021, while the services share dropped from 63.9% to 59.5%.

Shifting consumption patterns caused supply and demand to tighten in areas that were pandemic "beneficiaries" while demand for travel-related services collapsed.

The best example is the surge in demand for housing-related goods and services that pushed lumber prices up 550%.




Production capacity was built based on the pre-pandemic demand preferences and it takes time for resources to be redeployed to meet the changing demand. Prices adjust more quickly than productive activity; thus, rapid shifts in activity, or consumption patterns, can generate large price spikes that are not informative about long-run production possibilities.

The more important indirect impact of the pandemic is that the US government responded by orchestrating the largest stimulus in US history, with the budget deficit peaking at 18.2% of GDP in 2020.

The US stimulus was the critical factor that allowed the US economic performance during the pandemic to be the best in the world. Yet, it should not be ignored that the large US fiscal stimulus played a significant role in leading to the recent outbreak of inflation. However, our explanation of the stimulus' impact on inflation is more nuanced than is generally portrayed in mainstream discussion.

It is often stated that government deficit spending will cause inflation. The truth is that all spending (public or private) can cause inflation if it causes demand to rise faster than the real production capacity of the economy.

The real reason that the US fiscal spending caused an outbreak of inflation is a result of the unbalanced nature of growth that resulted from the stimulus. The German economist Albert Hirschman explained that all rapid growth is unbalanced growth.[1]

[1] The imbalance we are referring to is the relative growth rates of investment versus consumption. The term investment, as it relates to GDP or aggregate demand, is defined as the purchase of goods which themselves assist in

The spectacular growth rates achieved by the US economy in 2020 and 2021 was aided by government stimulus which was focused on transfer payments, which increased consumption. Since inflation is the result of demand exceeding supply, the result of a rapid rise in consumption relative to the production capacity of the economy created an inflationary impulse. In contrast, the rapid economic growth rates achieved by China in the decades prior to the pandemic were investment-driven, which created a deflationary impulse.

In our 2015 report, 'The Chinese Economy and the Path to Rebalancing,' we explained that the Chinese economic growth model successfully generated rapid but unbalanced economic growth:

"At the start of the economic reforms in the 1980s, consumption in China was already very low at 52% of GDP. However, as China began implementing the reforms that suppressed household income and subsidized investment, the consumption share of China's economy dipped to an alarming 46% of GDP by the late 90s. This was a level only a handful of countries have ever experienced, and even then, only during a financial crisis. The imbalance reached a staggering 34% in 2011. This is the lowest level ever recorded in any economy, let alone in an economy as large as China's.

The result is that the consumption share of the economy is the lowest ever recorded in any economy, and the investment share of the economy is the highest ever recorded in any economy. In other words, the Chinese economy is the most unbalanced economy in history.

This imbalance is important because of the impact that it has on the rest of the world. A natural consequence of China's investment growth model is that the economy tends to create far more production than it consumes."

*The Modern Monetary Theory (MMT) Connection*

In our 'MMT Madness' Report, we explained that there is a widespread misunderstanding about MMT.

"It's easy to see why people are skeptical of MMTers suggesting that printing money and running deficits are the solutions for low economic growth. You might ask, "If deficit spending is so good for the economy, then why don't we just always run large deficits?" The answer is that government deficits will only increase economic wealth when the economy is operating below full capacity, and there are ample idle resources, such as unemployed workers or unused factories, that can be brought on to meet the increased demand from government spending. When actual GDP is near potential GDP, then any

the production process. The purpose of investment is to increase production to meet future consumption. For example, an investment would be the purchase of manufacturing equipment or the construction of new real estate or infrastructure. This does not mean the purchase of financial assets like stocks or bonds.

increase in spending from the government will be inflationary as it will only increase prices and not output.

A common question on social media is how the government can hand out large stimulus checks. The assumption is that if they can send stimulus checks during the pandemic, then they can do it anytime. But this is a false conclusion. The reason that the government can send out stimulus checks and run trillion-dollar deficits during a pandemic is that household spending has collapsed, leaving large spare production capacity in the economy.

MMT is not saying that deficits are a free lunch and can be increased without constraint. MMT explicitly states that idle productive resources are the real constraint. Government deficits are only able to increase real GDP when demand is below the production capacity of the economy. The economy has already used real resources to increase production capacity, but a demand deficiency is "artificially" constraining GDP below the real wealth-producing capacity of the economy. Government deficits are just a means of removing that artificial constraint and allowing the economy to produce at its full potential.

The proper position of fiscal policy depends on the state of the economy. When the economy is suffering from deficient demand relative to the full production capacity of the economy, government deficits - via debt or money printing – can support incomes and generate higher real GDP without the negative consequences of price instability or a rising debt burden.

When demand in the economy is higher than the ability of the economy to produce at stable prices, the government should reduce spending or raise taxes."

Our 'MMT Madness' report focused on the misunderstanding of MMT critics, but as MMT has become fashionable of late, it has accumulated misunderstands among its newfound propends. MMT, does not tell us that government debt doesn't matter, even if far too many naïve supporters of MMT mistakenly believe is that is the case. MMT, correctly understood, simply tells us that there are no legal or practical funding constraints on the ability of a government that controls its central bank to service its debt in monetary terms.

Critically, this does not mean that debt doesn't matter or that spending has no cost. To the extent that increases in government debt or money create real purchasing power in some sectors of the economy without creating an equivalent amount of additional production, servicing debt will still involve real transfers from other sectors of the economy.

Consider the example of the government borrowing $100 to invest in a project that only generates $40 in terms of the value of the consequent increase in the production of goods and services. Many MMT supporters mistakenly believe this isn't a problem because the real cost of government debt is zero because governments can always print enough to service the debt without the risk of insolvency.

The government can print as much money as it likes to service the debt nominally. The story, in real terms, is quite different. The government created purchasing power that absorbed $100 of goods and services from the economy but only created $40 of additional goods and services, resulting in a $60 gap between the two - a net absorption of $60 of goods and services. This shortfall must come from somewhere since an economy cannot consume more than it produces or imports.

The resolution of this gap requires real transfers from other sectors within the economy. These real transfers can occur in the form of inflation, but - unrecognized by most MMTers - it can also occur in the form of financial repression or wage suppression. The only requirement is that there be a transfer of real resources from some sector of the economy to cover the gap.

In fact, financial repression and wage suppression, not inflation, are the two mechanisms the Chinese have typically used to resolve nonproductive investment.

The Chinese growth model generates disinflationary pressure worldwide, but the US government's deficits in response to the pandemic have had an opposite effect, creating inflationary pressure globally. The US stimulus created spending power that was not – initially - matched by a rise in productive capacity. As a result, the real transfers needed to cover the gap has come in the form of inflation.

Critically, the Chinese growth model provided a consistent disinflationary force as consumption was implicitly taxed in order to subsidize production and investment. However, the US stimulus created a one-off surge in spending power, and production capacity is now expanding relative to consumption. As a result, the inflationary impulse from the US stimulus is fading. Note that we will respond to the impact of tightening employment later in the report.

There are several reasons why production has not kept pace with consumption. First, businesses were slow to increase investment due to uncertainty around the pandemic. Second, the transfer payments increased spending power almost immediately, but adding production capacity takes time. However, as we will later discuss, businesses eventually responded to the tight supply and demand conditions that occurred in 2021 as business fixed investment grew relative to goods consumption in 2022, which will better align supply and demand and reduce inflation. Yet, the most important reason that supply has not kept pace with demand is due to a series of supply shocks.

Economic Reverse Salient

Initially, it appeared that the pandemic would result in an output gap that even the unprecedented fiscal stimulus wouldn't be capable of causing aggregate demand to exceed aggregate supply. However, using aggregate supply and demand to measure economic slack can lead to erroneous conclusions because of what we have termed an "economic reverse salient."

The late Hungarian economist, János Kornai, showed us that the aggregate output gap can be misleading. If no spare capacity exists in an essential industry, then total output cannot rise even if there is significant spare capacity in every other industry. In our report from November 2021, we referred to this situation as a "reverse salient." The term reverse salient has military origins but can be used to describe any system in which a part holds back the progress of the entire system. An example is General Patton's 7th Army outrunning its fuel supply lines during the Allied advance through Western Europe. Patton had the necessary supplies in place for a rapid advance but was unable to proceed until his reverse salient, fuel supply, was relieved.

*Southeast Asian Power Crisis*

In our 'Shortages and the Reverse Salient' note from 2021, we argued that the origins of the global supply chain bottlenecks could be traced back to market distortions in the semi-liberalized power markets of East Asia, which caused severe destocking of coal inventories that eventually resulted in a short squeeze that sent the price of thermal coal soaring. Higher coal prices created unprecedented demand in South East Asia for Liquified Natural Gas (LNG), which caused a rise in global natural gas prices. Higher coal and natural gas prices increased power prices, which lead to inflation via an increase in the cost of production. Economists are used to modeling the impact of rising energy prices on inflation. What was unique about 2021 is that the energy crisis led to widespread power rationing in the manufacturing center of the world in East Asia, as well as parts of Europe and many other places around the world. Power rationing removed a significant supply of materials critical in the production of downstream goods, leading to widespread shortages and contributing to inflation.

János Kornai focused on the Soviet economy where "economic reverse salient" were pervasive phenomena. Kornai noted the difficulty of tracing the reverse salient back to its true source. In our 'Shortages and the Reverse Salient' note, we used the homebuilding industry to illustrate how supply disruptions at the bottom of the supply chain have a cascading effect, bottlenecking the entire supply chain.

"An example of this can be seen in the housing sector. Homebuilders have been unable to complete houses because of shortages of essential products such as truss plates. A truss plate is a simple manufactured product that connects wood to a truss, yet, it is an essential part needed to build a house. If builders can't source truss plates, they can't finish a job. If they can't finish a job, they can't get paid. If they can't get paid for their previous job, they can't start a new job. As a result, this seemingly insignificant part has bottlenecked the US housing market.

What was the cause of the truss plate shortage? According to MiTek, a leading truss plate supplier, "a worldwide steel shortage has impacted our production capacity. In 2021 steel producers severely curtailed tonnage allocations – and lead times jumped from the typical 8 weeks to 4 to 5 months. By way of example, MiTek has received just 55% of committed steel deliveries from our supplier base."

To summarize: a thermal coal shortage caused coal prices to spike. Unable to pass along the cost, East Asian power producers rationed electricity to energy-intensive industrial users, such as the 200mt of EAF steel mill capacity in the country. The significant reduction in steel supply during a time of booming demand resulted in a 230% increase in steel prices, increased lead times, and reduced allocation of steel by the mills (i.e., a shortage of steel). Two companies have 80% of the market share for truss plates. The inability of these companies to secure sufficient steel raw materials has reduced the production of truss plates. Finally, truss plates bottlenecked the housing market.

Housing is not unique. A similar process has played out across countless industries. Importantly, the cause is power rationing, not COVID-induced lockdowns."

Kornai explained that measuring the change in prices for particular goods and services will not show you the true source of inflation. The rise in the price of truss plates, for example, occurred because of a lack of access to steel, while the steel price rise was a result of steel capacity being constrained due to power rationing. If the reverse salient is a critical component which feeds into a wide range of other critical processes in the economy, then a supply/demand imbalance in that single component can create supply constraints which cascade through the economic network. The critical lesson is that the pervasiveness of inflation is insufficient to determine its persistence.

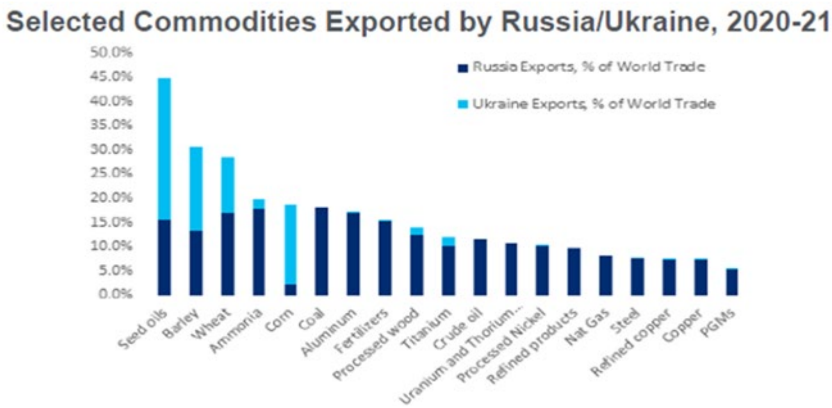
The East Asian Power Crisis also reminds us of the importance of allowing prices to ration production to the most critical areas. In a capitalistic economy, the market rations scarce resources, such as power, to its most critical sources by changes in relative prices. Consider an example of how markets would ration power in response to a power shortage and resulting power price spike. If aluminum prices rise even more than power prices, then aluminum producers will continue producing because higher selling prices compensate them for the higher production costs. Meanwhile, if the chemical industry is not as tight as aluminum, chemical prices will not rise enough to compensate the producers for the higher power prices; therefore, chemical producers will shut down production. In this way, markets ration power to its most critical source - aluminum in our example. However, Beijing did not allow markets to allocate resources; instead, the visible hand of the Chinese regulators rationed power without respect to the resulting price changes. According to Kornai, the defining characteristic of socialism is shortages, while capitalism is characterized by surplus, which is a result of the markets' superior ability to efficiently allocate resources. It is no coincidence that the extreme governmental intervention in the economy sitting at the bottom of every global supply chain led to shortages around the globe that are typically only seen in centrally planned, socialist economies.

Economic reverse salient was a common occurrence in the command economy of the Soviet Union, but it is much rarer in capitalistic economies. The most common source of an economic reverse salient in capitalistic economies comes from commodities, such as oil. When people talk about stagflation, what they are really describing is an economic reverse salient.

As the effects of the government-directed power rationing began to diminish, the economy was hit by another economic reverse salient in the form of a commodity supply shock triggered by the Russian invasion of Ukraine.

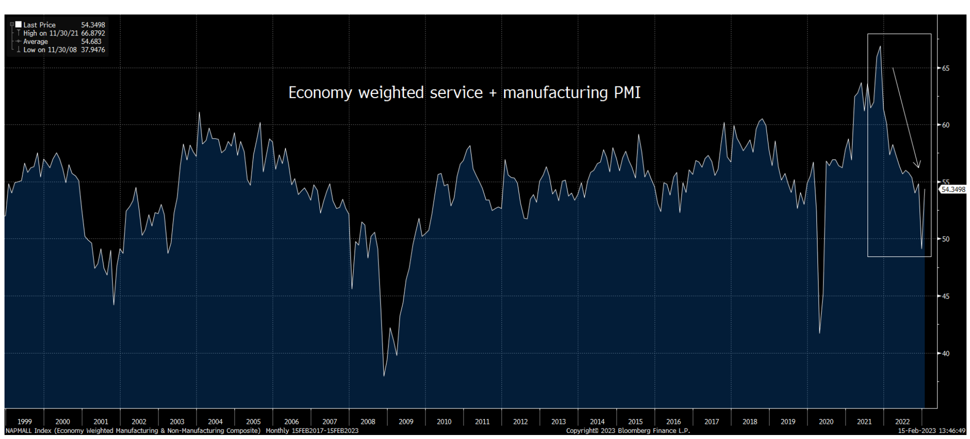
*Russo-Ukrainian War*

Russia was the biggest commodity exporter in the world. The combined effect of sanctions on Russia and Belarus, as well as war-related logistical constraints placed on Ukraine, significantly reduced the supply and increased the price of commodities.



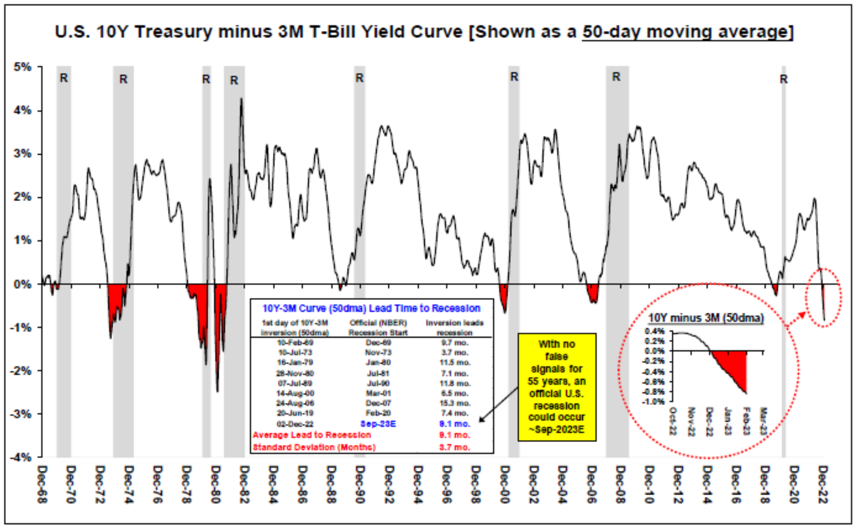

<u>The Economy's Unbalanced Recovery and Resilience</u>

In 2022, the economic momentum decelerated at a historic rate, yet the deceleration occurred from such a high base that economic growth continued in 2022. The PMI (a common leading indicator of economic growth) stayed above 55 for most of the year, which indicates solid growth (sub-50 typically represents negative growth), but the trend is just as important as the level. A PMI of 55 represented a dramatic deceleration of the economy relative to the growth rates experienced at the end of 2021. From November 2021 to December 2022, the PMI dropped from 67 to 49 - a sharper drop than in 2008 (though 2008 came from a lower base). If the 2022 trajectory had continued, the US economy would have entered a recession in 1Q23.



However, some of the best longer leading indicators, such as the yield curve, suggested that a recession was more likely an end of the 2023 story.

Our analysis of the 3M-10Y yield curve[1] *(50dma) and* other curves/re-steepening point to a recession ~Sep-2023 +/- 4mo.



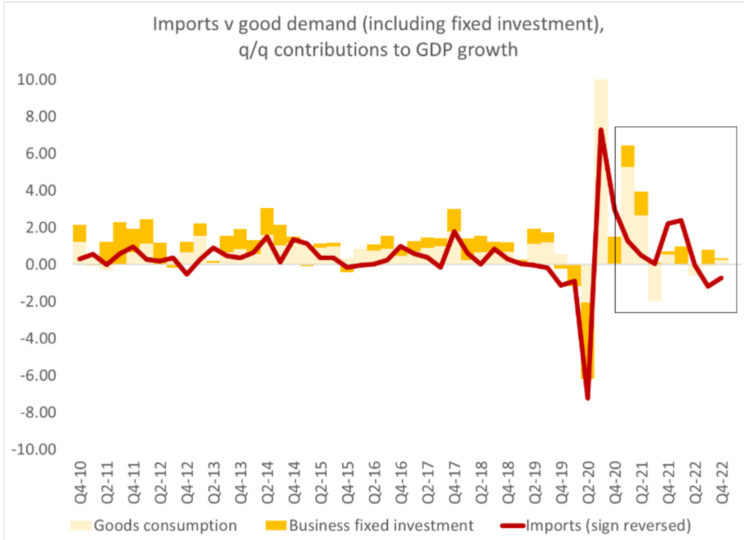

Source: Bloomberg data, Stifel estimates.

(1) The 3M-10Y curve, written backward as is typical for Wall Street, is the 10-year U.S. Treasury note yield *minus* the 3-month U.S. Treasury bill yield.

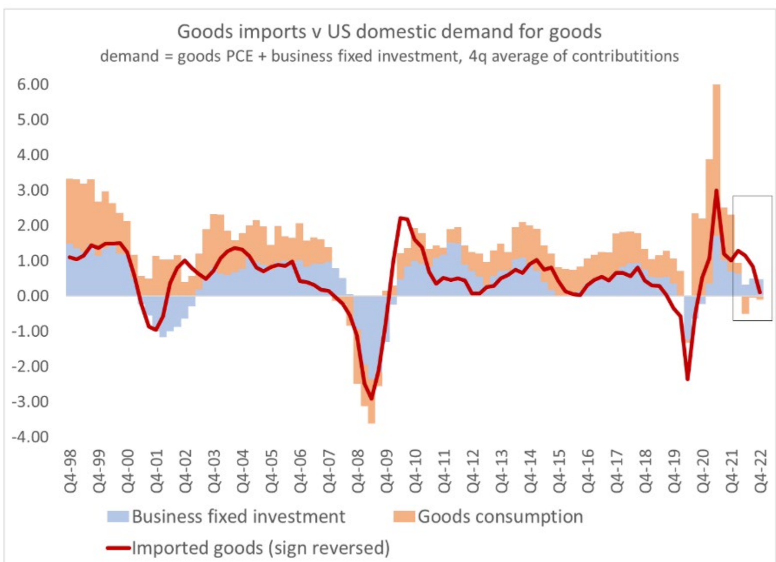
We believe the high economic growth bar is responsible for much of the confusion over the state of the economy in 2022. Those focused on the rate of change were calling for an imminent recession, while others pointed to the high growth numbers. However, the other source of confusion around the economy is due to the unique demand trends of the past two years. What's notable about 2022 is the bifurcated demand trends between industries.

The pandemic caused a historic rise in US goods demand via 1) stimulus and 2) demand switching from services to goods. But the Southeast Asian power crisis and subsequent government shutdowns of manufacturing capacity distorted the typical pattern of trade by creating a historic lag between goods imports and goods demand.

Goods trade in 2021 and 2022 don't follow the normal pattern of the economy. The chart below shows imports vs proxies of final goods demand. Imports in the summer of 2021 were too low relative to underlying demand, and imports in 2022 were too high.



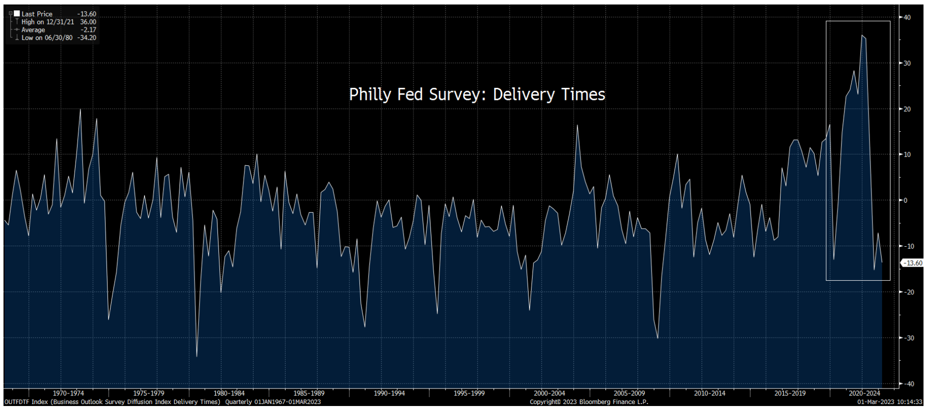

Goods demand is either consumption or investment. A chart of the four-quarter sum of contributions to goods demand shows just how unusually weak goods demand was in 2022 – particularly consumption (orange bar). Goods imports are following goods demand with a lag.



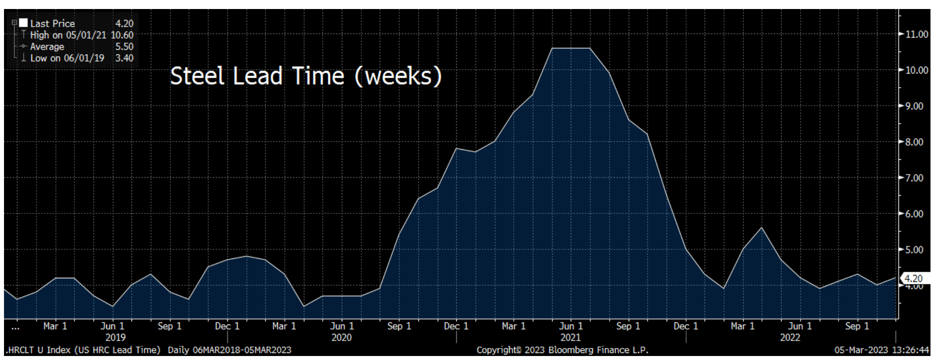

Systems analysts are fanatical about delays because they are capable of creating volatility in the system.

To quote Donella Meadows in, Thinking in Systems, "Delays are pervasive in systems, and they are strong determinants of behavior. Changing the length of a delay may make a large change in the behavior of the system…The most important delay in the system is the one that isn't under the direct control of the company. It's the delay in delivery from the factory."

Anyone who bathed in a shower with a delay in the temperature will relate to the volatility delays can create in the system. In the case of the shower, it is a repeated pattern of being too hot and then too cold. When delivery times extend in global supply chains, volatility occurs in inventories.




Steel lead times (i.e., the average time from ordering to delivery) expanded from the typical four weeks to eleven weeks by the summer of 2021.

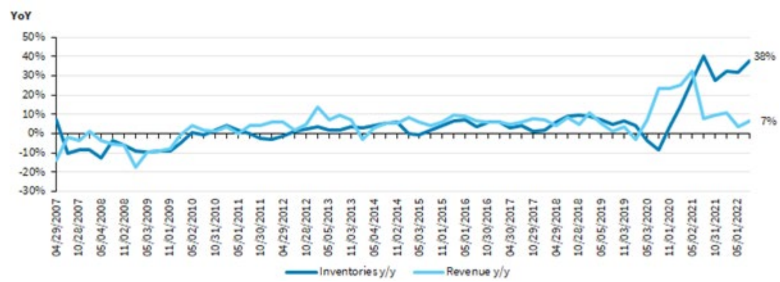



Businesses responded to the surge in demand and delivery delays by over-ordering. However, just as the delayed inventory finally started arriving, businesses noticed drop in demand.

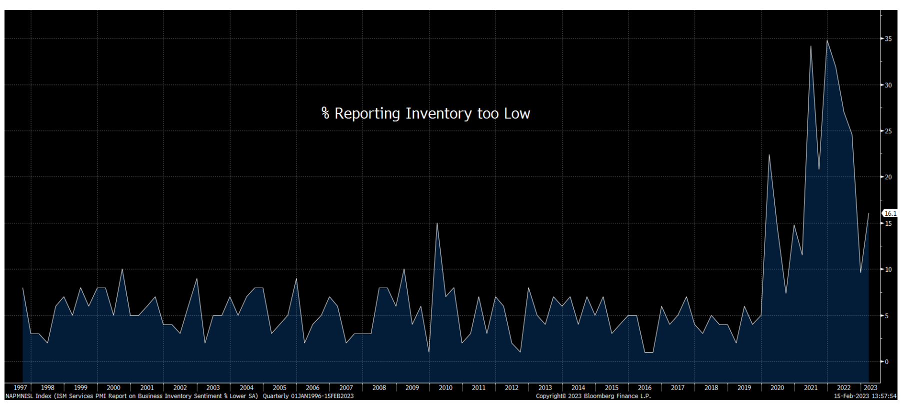
For example, in the third quarter of 2022, Home Depot's inventories increased by 38%. Home Depot noted on their earnings call that they double-ordered for 250-day lead times, but lead times on Asian imports had almost been cut in half (250 days to 150 days). With demand slowing and a surge of delayed shipments arriving, Home Depot went from having extreme inventory shortages in 2021 to being stuck with a glut of inventories by the second half of 2022. As a result, Home Depot slashed new orders.

## Home Depot Inventory to Sales Ratio:


## Home Depot Inventory growth vs Sales growth:

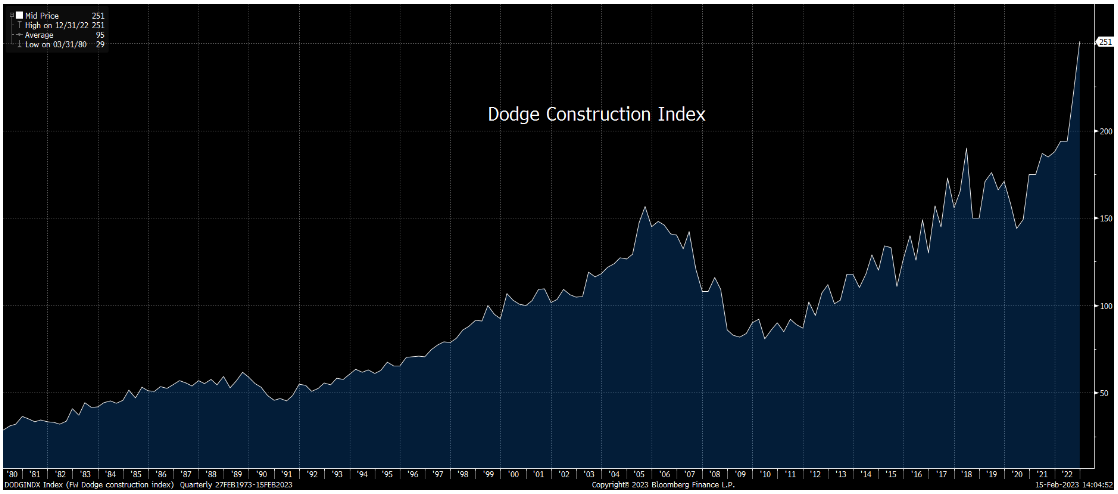



Home Depot's inventory experience was indicative of almost all retail. This inventory destocking was the primary cause of weak manufacturing orders over the second half of 2022 and arguably the biggest driver of the economic slowdown in general.




Another strange aspect of the economy over the past year has been the bifurcated nature of the slowdown. Goods consumption and manufacturing data have been recessionary; however, construction and demand for services have been booming.

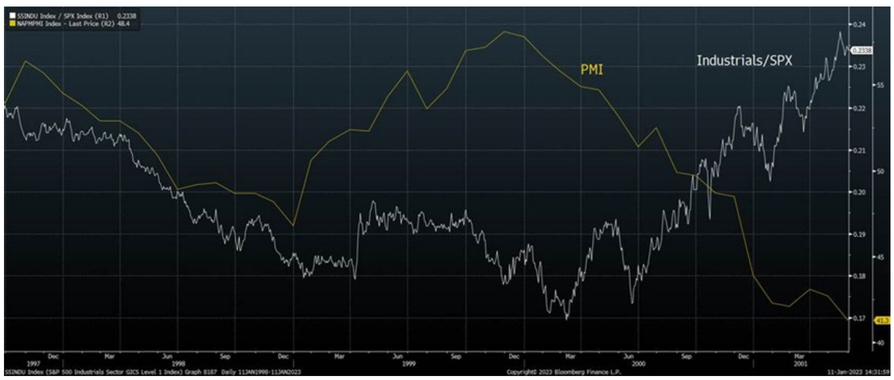
The Dodge Construction Index measures US residential and non-residential construction activity. The chart below shows that construction spending went parabolic in 2022.




Strength in construction has been matched by the strength in "late cycle" companies, which refers to businesses tied to increasing production capacity in the economy. A few examples of late-cycle companies are Caterpillar Inc, Steel Dynamics, and Illinois Tool Works. The chart below shows the performance of a basket of these late-cycle companies (called cyclical industrials in the chart) relative to the S&P 500 (white line, note white line going up represents an outperformance of these late-cycle stocks) plotted against the Manufacturing PMI, which measures the acceleration or deceleration in manufacturing production in the US. Typically, the relative performance of cyclical industrials will positively correlate with the Manufacturing PMI. However, cyclical industrials significantly outperformed in 2022 despite the deterioration in the Manufacturing PMI.


The decoupling of cyclical industrials relative performance and the Manufacturing PMI is relatively rare, but last occurred prior to the past two recessions (excluding the 2020 COVID recession) in 2007:

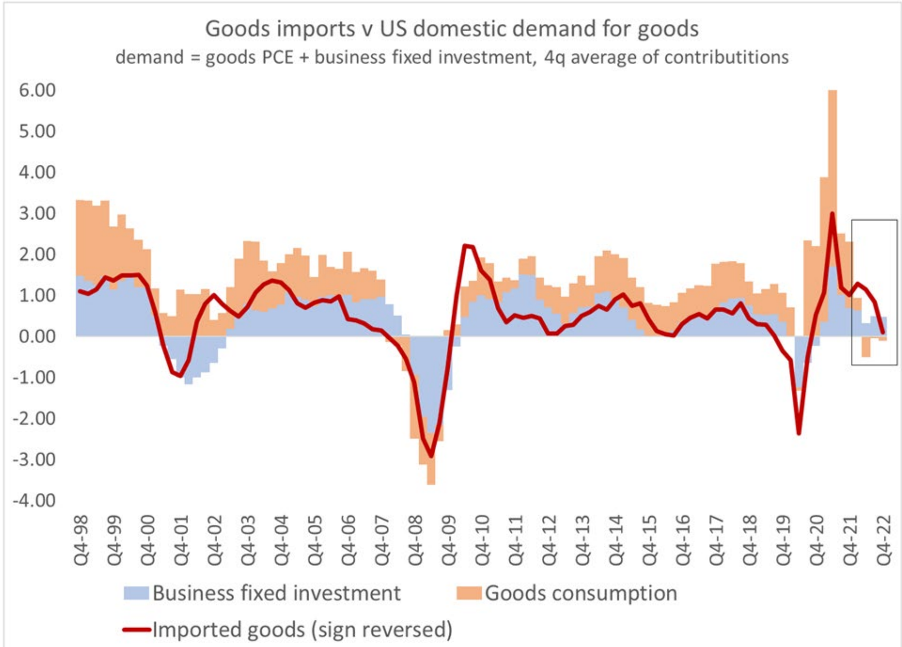

And 2000-2001:




The outperformance of late-cycle companies, amid an otherwise economic slowdown, is indicative of the economy being in the late stage of the economic cycle when the economy is said to be "tight" – which refers to the position of aggregate demand relative to the production capacity of the economy. It is also the point in the cycle when inflation peaks. Inflation is a result of demand exceeding production capacity. When demand exceeds production, the output cannot rise so only price will increase – i.e., rising inflation.

After rapid, unbalanced, consumption-driven growth in the second half of 2020 - 2021, and a series of supply shocks over the past three years, the economy was decidedly in the late stage of the cycle by 2022.

Production capacity expanding relative to consumption represents a natural process of rebalancing, which should lead to lower inflation (absent further supply shocks).

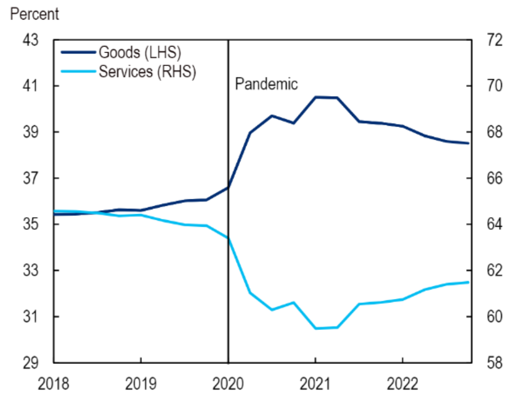



The economy is also rebalancing back from goods to services. We previously stated that the pandemic caused a shift in the consumption basket from services to goods. Goods jumped from 36.1% of consumption in late 2019 to 40.5% in the first half of 2021, while the services share dropped from 63.9% to 59.5%.

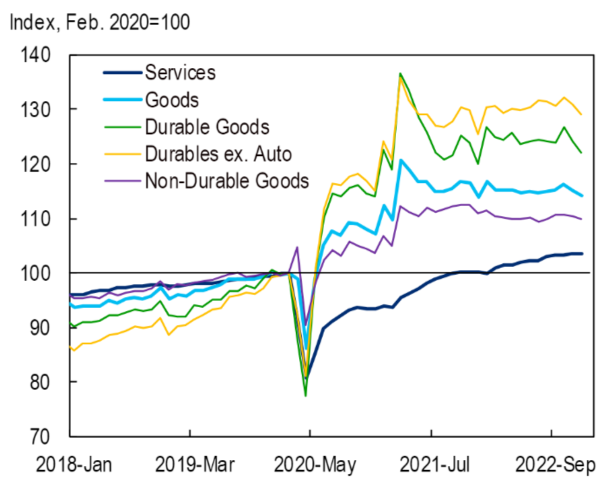
By mid-2021, however, the surge in goods had played through, with spending on durable goods flatlining about 25% above pre-pandemic levels and non-durables up 11%. Excluding autos (which were in short supply through much of the pandemic), durables spending is up 29%.

However, since the second half of 2021, the goods share has reversed nearly half its previous gains, edging back to 38.5%, as the services share has recovered to 61.5%.

**Real goods and services consumption (share of total consumption)**




Early in the pandemic, spending on services fell by $1.5 trillion (at an annual rate). And, by early 2021, services spending was still down more than $500 billion. However, over the past two years, services spending has risen significantly and is now running $450 billion above its pre-pandemic pace. Notably, durables and non-durables are up by broadly similar amounts.



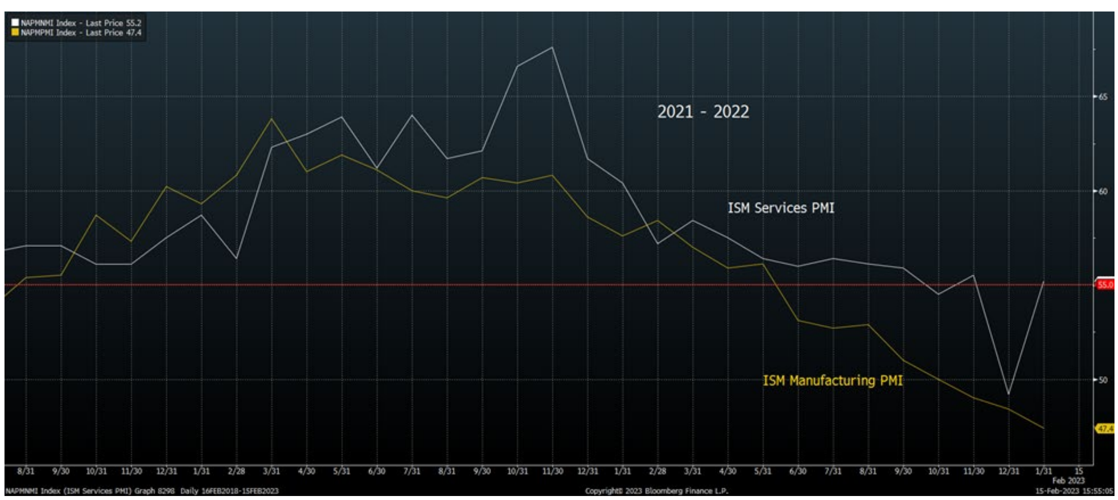

The relative price of goods to services is also an important consideration. As shown in the chart below, the years before the pandemic saw goods prices post a sustained decline relative to services. The pandemic interrupted that trend, with goods prices first surging and services prices now catching up.

**The ratio of PCE Goods and Service Deflators:**


The relative shift back to service spending in 2022 also helps explain the resiliency of employment in the US.

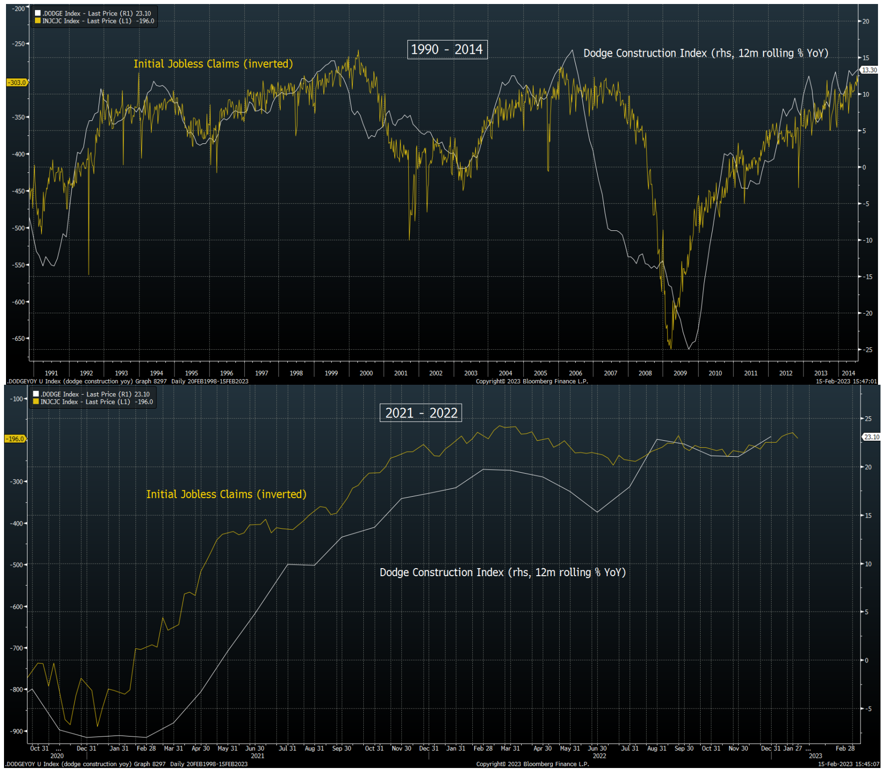
According to a study by Citigroup, services sectors are, on average, nearly 25% more labor intensive than goods. For example, Leisure & Hospitality is three times more labor intensive than the average goods sector. Retail Trade, Education & Health Services, and Other Services are all about twice as labor intensive as goods.

While the Manufacturing PMI has been sub-55 since June of 2022, the Service PMI only dropped below 55 in December of 2022, before bouncing back in January 2023. A service PMI reading of 55 is a level that is more indicative of adding jobs than shedding jobs.



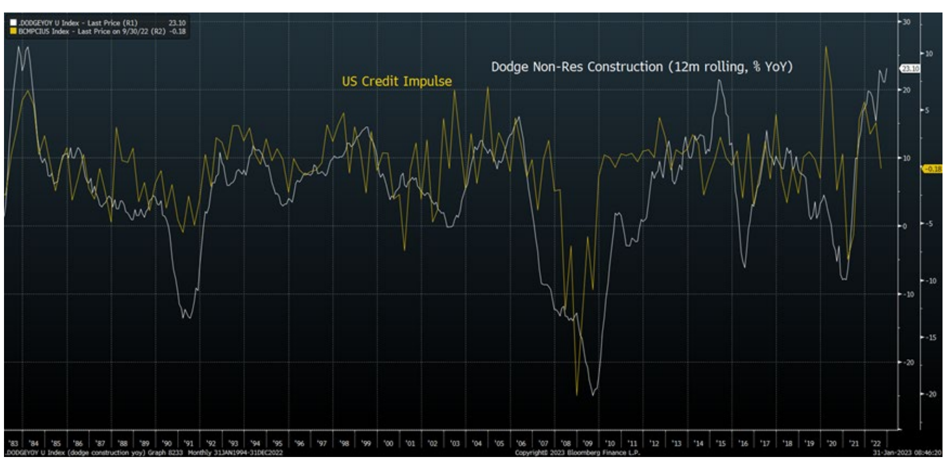

The other reason for the resiliency of US employment is the strength in construction. While construction does not represent the largest component of employment, it represents the largest contributor to the change in employment. Historically employment will not deteriorate until construction weakens. In the charts below, we plot Initial Jobless Claims (yellow, inverted in the chart) relative to the year-over-year change in the Dodge Construction Index (white) to illustrate the relationship between construction and employment.

The dramatic rise in claims during the pandemic makes a long-term chart difficult to read, so we break the chart up into two sections (pre and post-pandemic):

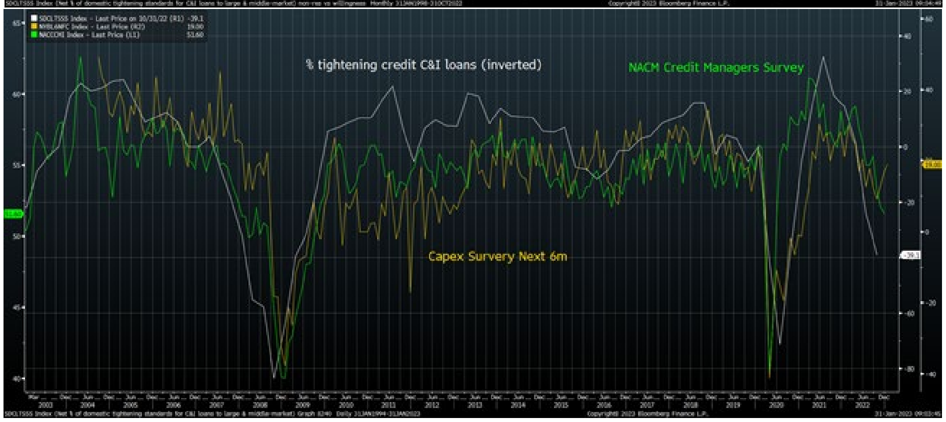



The strength of construction explains why jobless claims have not surged like many forecasters expected.

However, leading indicators are pointing to a deceleration in construction spending, which will jeopardize the continued resiliency of the US jobs market.




% Tightening Credit for C&I Loans (inv, 8m lead)
Dodge Non-Res Construction (12m rolling, % YoY)


% tightening credit C&I loans (inverted)
NACM Credit Managers Survey
Capex Survery Next 6m