Globicus Leading Economic Index

Outlook September 2022

Theme; Recession by Christmas but Not at Present

Globicus Inc.

New York

September 2022

Table of Contents

Monthly Highlight-Recession by Christmas 2022

1. Executive Summary

Globicus Leading Economic Indexes were all negative in July, suggesting that the US recession may start around December 2022. The model has a good track record and have predicted all recessions since the 1960s except the Covid 19 "recession" 2020. The coincident index shows moderating growth.

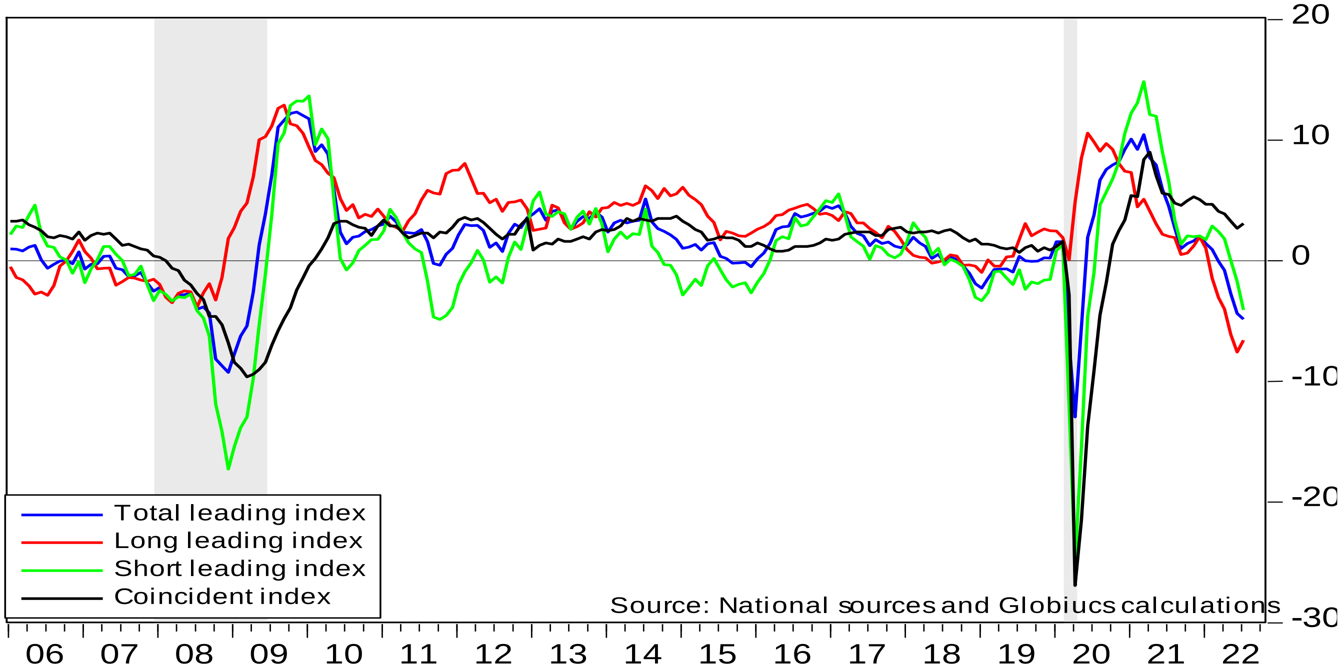
With inflation at the highest rate in four decades, the Fed is unlikely to reverse course anytime soon. However, the "market" has not seemed convinced of the Fed's commitment, so Fed Chairman Jay Powell used his Jackson Hole speech to make it clear that fighting inflation is the Fed's top priority even if some pain is required. He said the central bank will continue raising interest rates and shrinking its balance sheet until inflation returns to its 2 percent target.

Inflation is a lagging indicator and does not usually decline until unemployment rise and the economy enter a recession. The historic norm and experience show that higher unemployment is required to reduce inflation.

2. GLEI index declined in July

Globicus Leading Economic Indexes (Total- Long- and Short leading index)[1] all had negative readings for July, suggesting an increasing risk for a recession. The coincident Index (designed to coincide or measure the overall economy, i.e., the business cycle) is moderating from strong numbers earlier this year but still edged up slightly in July from its recent low in June. The coincident index is showing that the economic is still expansion, although at a slower pace.

Globiucs Leading Economic Indexes

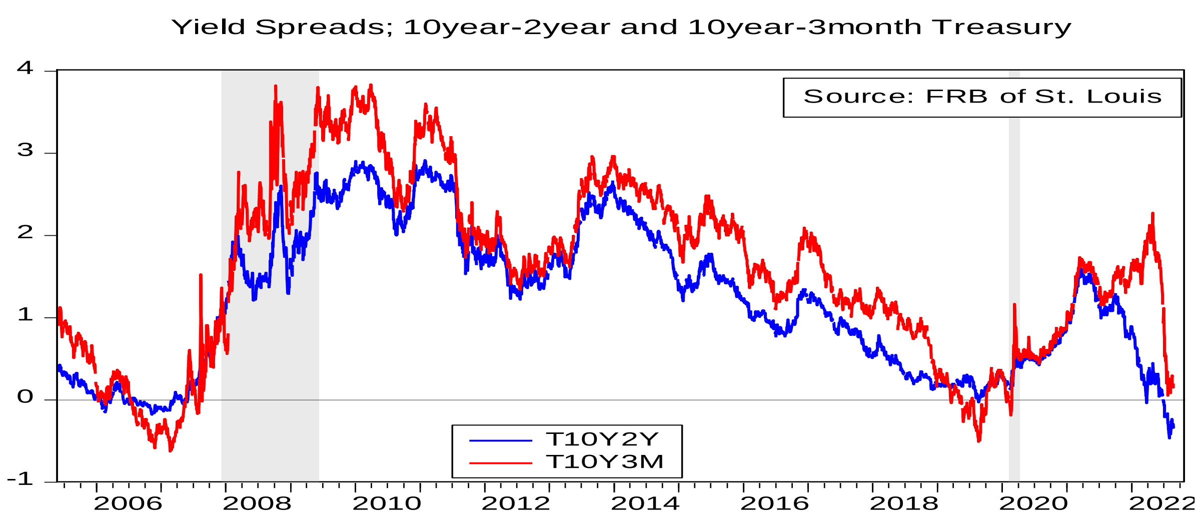


[1] We are using three leading indexes. The reason for this is that leading indicators have different lead time, and it can be useful to disaggregate what the long and short leading indexes indicates. The total leading index is a combination of the short and the long leading index and is constructed to smooth out the volatility of the individual indexes and to get a timely indication.

The total leading index's six-month smoothed growth rate ("SMGR")[2] fell to -4.9 in July from -4.5 in June, the fifth consecutive monthly fall, new and revised data showed. The long leading index rose modestly to -6.7 in July from -7.7 in June, its sixth negative reading. The short leading index, declined for the third consecutive month and fell to -4.2 SMGR in July from -1.8 in June. The coincident index, a measure of the current economic activity, rose slightly to 3.0 SMGR in July, from June's cyclical low of 2.6 SMGR.

3. Yield Curves Narrowed in August

An inverted yield curve usually precedes a recession, especially the spread between 10year and the 3month treasury securities (T10Y3M). This spread has narrowed dramatically since the Fed got religion. It narrowed to 19 basis points as of August 31 from 230 basis points in early May. The 10year–2year (T10Y2Y) spread usually tightens before the 10y/3m spread and the 10y/2y spread was -30 on August 31. These spreads usually turn from negative to positive before the recession starts but have always been negative for a period before all recessions since the 1980s.



[2] For input series X the formula for six-month smoothed growth rate is: Xsmgr= (X(t)/Avg of previous 12 months)^(12/6.5)-1

4. Fed Late but Now Committed

With the highest inflation rate in four decades, it is unlikely that the Fed will back down from its planned rate hikes and quantitative tightening before they see convincing signs of price stability.

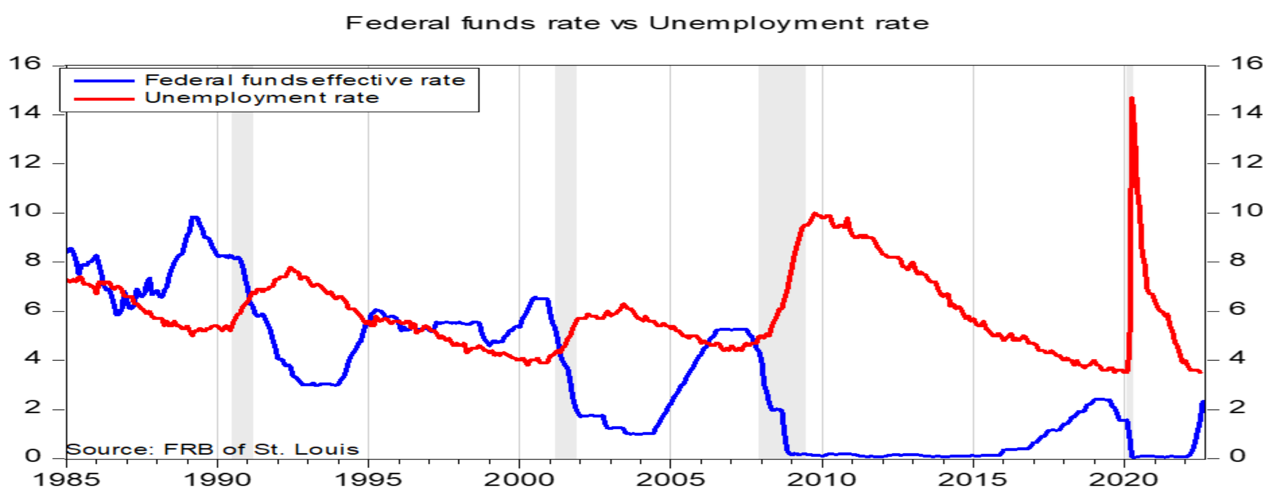
In a short and concise speech at the annual Jackson Hole Economic Symposium on August 26, Powell seemed to try to convince the exuberant stock market participants that the Fed will reverse course in the near term. “The Federal Open Market Committee's (FOMC) overarching focus right now is to bring inflation back down to our 2 percent goal. Price stability is the responsibility of the Federal Reserve and serves as the bedrock of our economy.” Powell added; “Reducing inflation is likely to require a sustained period of below-trend growth. Moreover, there will very likely be some softening of labor market conditions. While higher interest rates, slower growth, and softer labor market conditions will bring down inflation, they will also bring some pain to households and businesses. These are the unfortunate costs of reducing inflation. But a failure to restore price stability would mean far greater pain.”[3] Unfortunately, we believe the Fed is right that reducing inflation require some pain with both substantially higher unemployment and a recession.

5. Unemployment Lags Fed Tightening

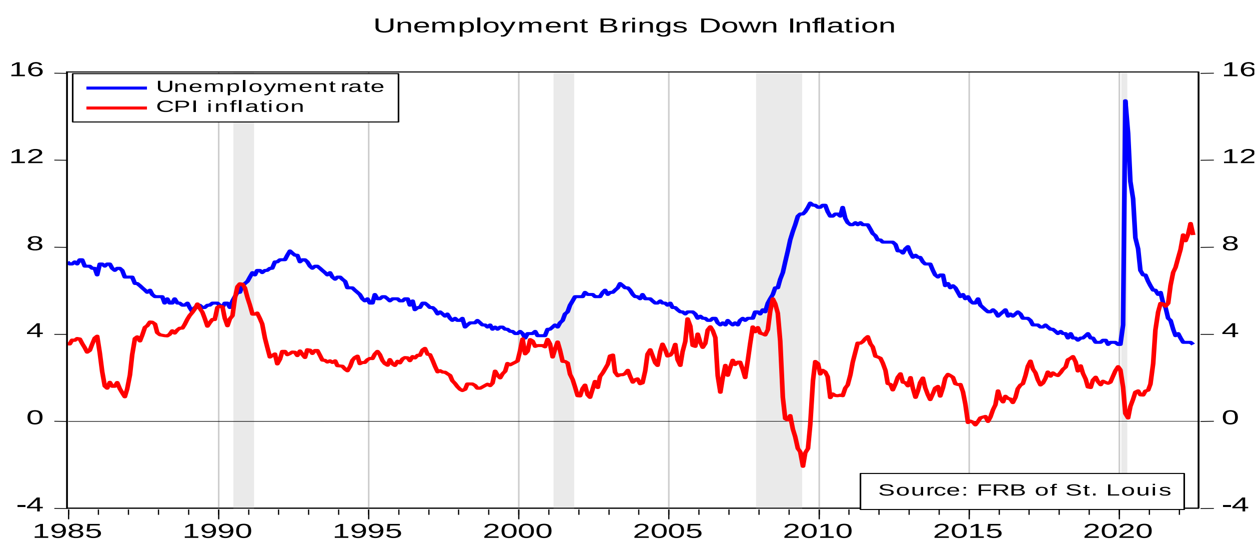
From the chart below, we can see that there is a substantial lag from when the Fed starts increasing the Fed funds rate (the blue line) to when the unemployment rate increases (the red line). It is not until unemployment rate substantially increases that inflation is brought down. Inflation is such menace, not only does it affect most

[3] Monetary Policy and Price Stability Chair Jerome H. Powell https://www.federalreserve.gov/newsevents/speech/powell20220826a.htm

people negatively (except debtors) but to cure it, unemployment increases and economic activity declines.

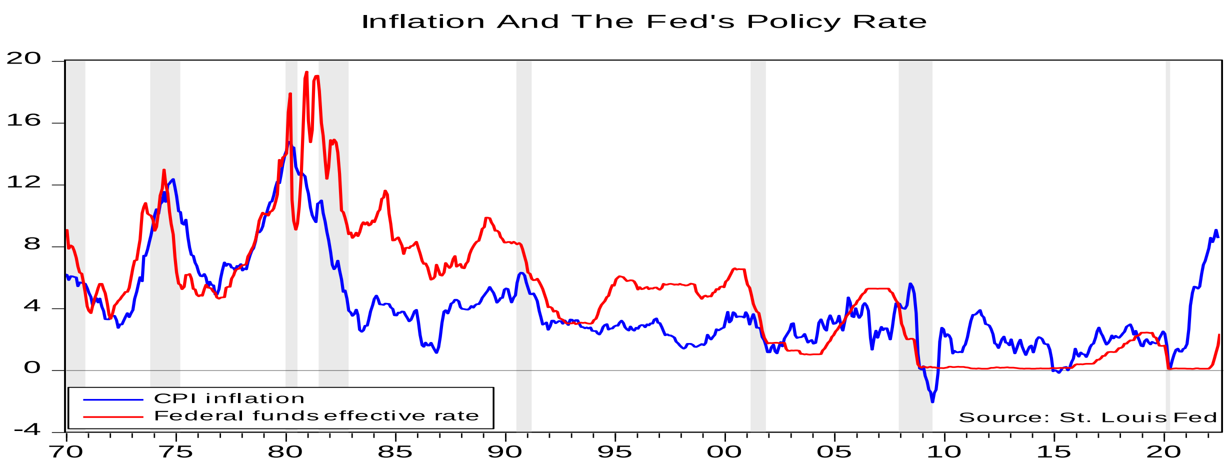


The rise in unemployment rate, which usually leads to the recession, is what finally brings down inflation. When unemployment (the blue line) start rising it usually some time before inflation (the red line) falls. inflation does not fall until recession starts (the shaded areas).



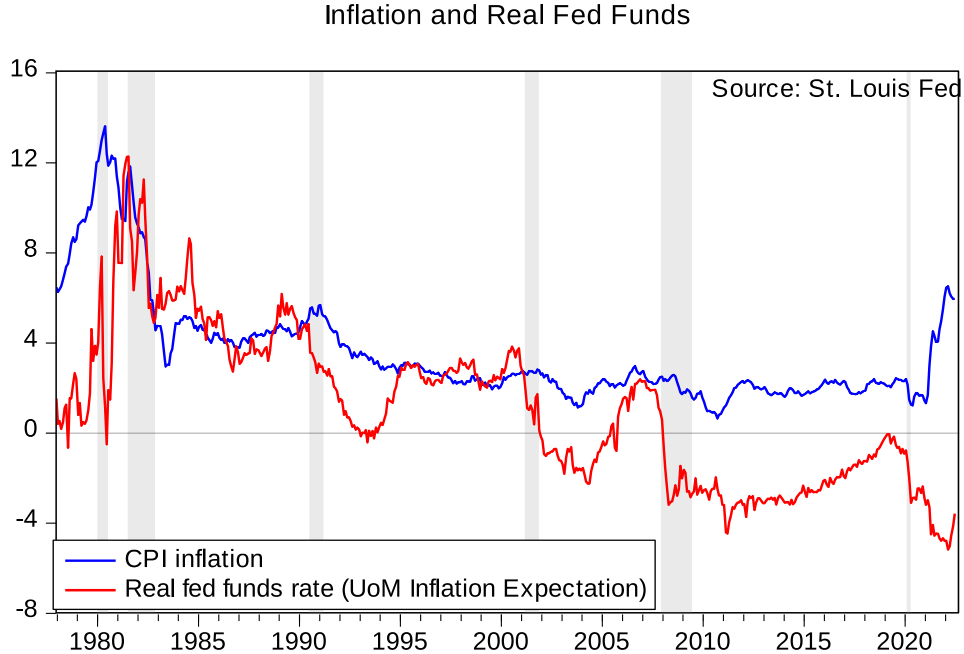
6. The Fed is Still Behind the Curve

Before the 2001 recession the Fed policy rate (FFR) were mostly above the inflation rate but since the Great Recession 2008 Fed's policy rate has mostly been below the inflation rate.



Since the pandemic the spread between inflation and FFR has widen to very extreme levels. Indicating that the Fed is very much behind the curve and despite more hawkish talk from Chairman Jerome Powel as we mentioned above, the Fed has a long and difficult road ahead. As he stated in Jackson Hole; it may well be painful. Looking at the chart above we can see that historically it has taken a recession to lower inflation. What makes it even more cumbersome this time around is that the Fed has let the genie out of the bottle, by its idea of letting the economy "run hot" and ideas about social policies not usually part of monetary policy. And although the last few months have been encouraging from the standpoint of the Fed increasing the fed funds rate it is still way below the inflation rate.

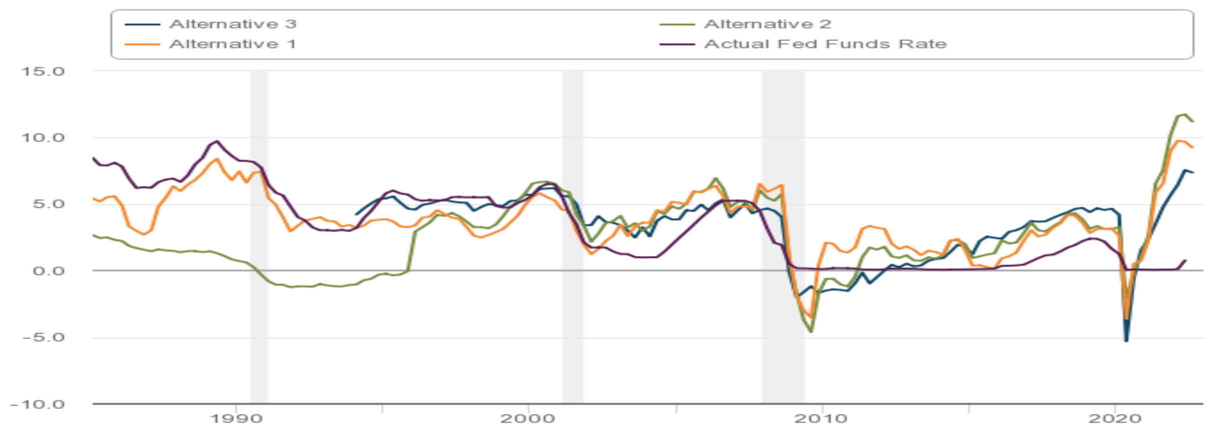
Most economists believe, to cure inflation the real rate must be positive. One can debate what the real rate is. Here we use FFR deflated by University of Michigan's inflationary expectations. Real FFR has been negative since the Great Recession. And following the pandemic rates fell to new lows. At minus 3.7% FFR in July, it is clear that Fed has some work to do.



We don't believe in immaculate disinflation policies, the idea that we can get easing price pressure without significant economic and labor market slack as the Fed thought just a few months ago, when it predicted lower inflation with unchanged unemployment rate It is possible, even likely, easing commodity prices and transitory effects will shave off a few points of the inflation, but the difficult part will be returning inflation to the Fed's stated goal of 2 percent from say 6 or 7 percent.

A Taylor Rule simulation, provided by the Atlanta Fed[4], suggests that rates in the 7% to 11% would be appropriate for the fed funds rate. For the Fed this may be TINA (there is no alternative) as positive real rates may be the only way to cure inflation. It is unlikely that the fiscal side will come up with policies that stimulate the supply side. Hence, our conclusions from the policy deadlock are that the Fed will not get any help from supply-side policies, regulatory or tax relieves, that would increase supply and therefore help reduce inflation from either the White House or Congress. Hence, the only way to reduce inflation is demand destruction and recession.

Actual Fed Funds Rate and Taylor Rule Prescriptions



	Alternative 1	Alternative 2	Alternative 3
Inflation Target Measures:	2PercentInflation	2PercentInflation	2PercentInflation
Natural Real Interest Rate Measures:	TwoPercentNatural	TwoPercentNatural	TwoPercentNatural
Resource Gap Measures:	CBOGDPgap	U3gapBoardModel1side	U6gapCBO
Inflation Measures:	PCEInflation	PCEInflationRTest1	ExpectedPCEInflation
Weight on Gap:	0.5	0.5	0.5
Interest Rate Smoothing:	0	0	0

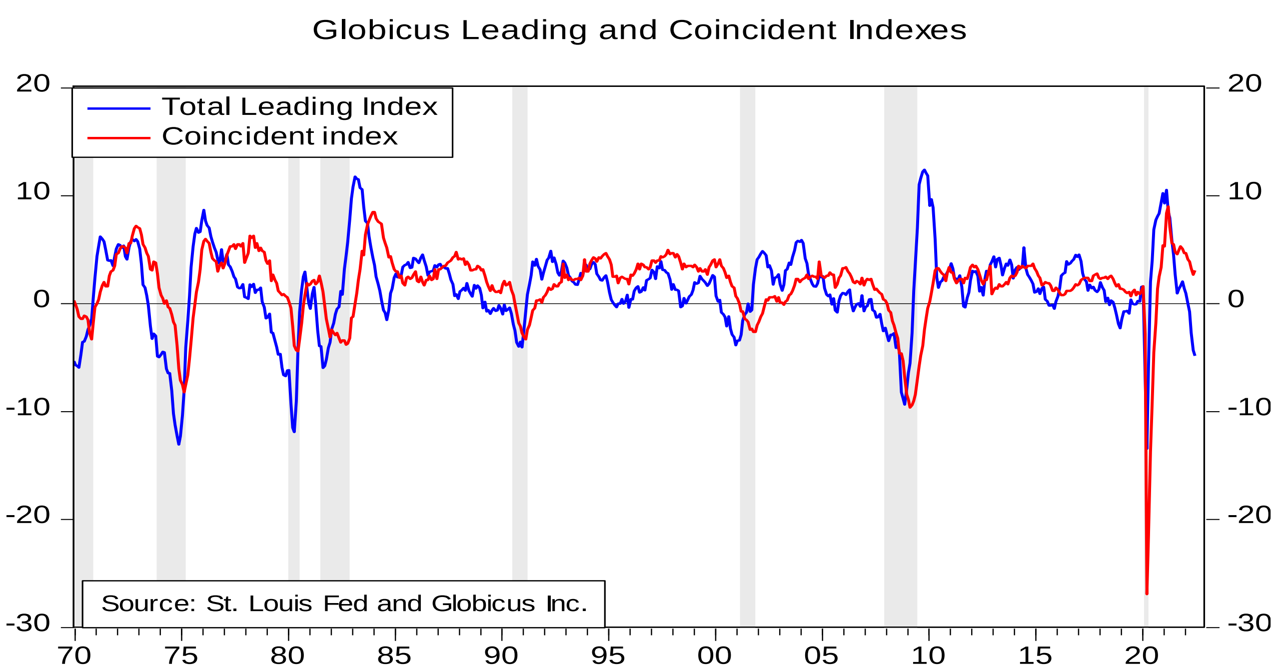
Source: Atlanta Fed

[4] Taylor Rule Utility
http://atkabta.orgcqer/research/taylor-rule

7. How the LEI Model Works

Below are the model's results since 1970. The blue line is the model's total leading growth rate, designed to forecast economic activity and recessions. The red line is the coincident index, designed to measure current economic activity.

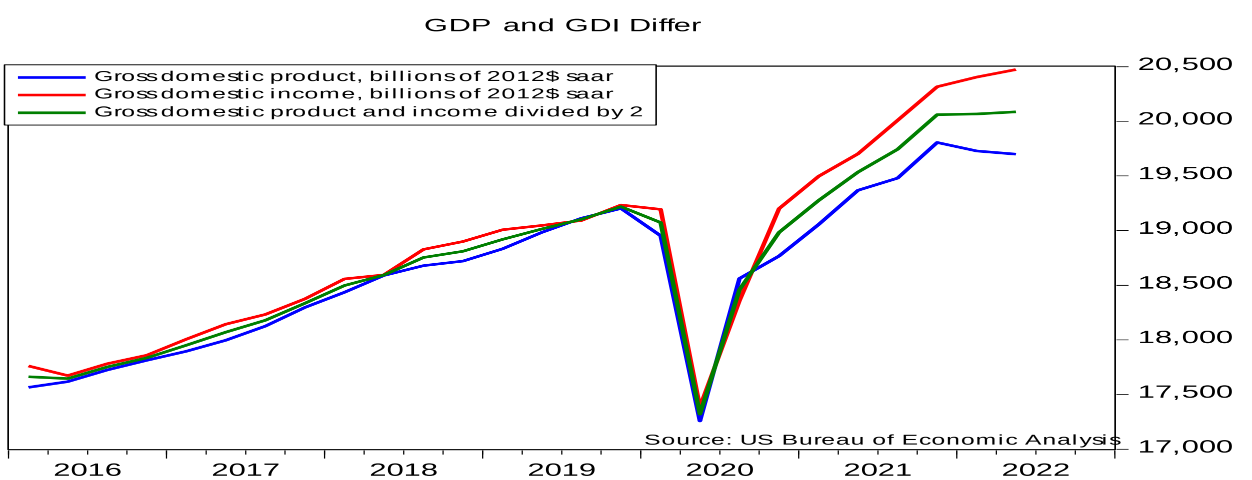
The model has predicted all recessions since the 1970s, As the leading index turned negative it precedes the coincident index and the following recession. There were two false positive or indications that the recession was imminent in 1984 and 2019, on both occasion growth slowed down significantly but no recession was declared. There was of course a very sharp contraction in 2020 but it was not a recession of the usual kind, more a lockdown ordered by the government. In 1984 and 2019 the total leading index never fell below -2. However, since the 1970s, a recession has always followed when total leading index has been below -2 SMGR and in the July reading it is -4.9 SMGR, so it would be unprecedented if this decline would not turn into a recession.



8. Technical Recession vs Official Recession

Some pundits believe we already are in a recession. Two consecutive negative quarters of GDP growth is a popular definition of recession. If that is your definition of recession, we are of course in a recession. However, the NBER's Business Cycle Dating Committee maintains a chronology of the US business cycles. The committee's definition of a recession is "a significant decline in economic activity that is spread across the economy and that lasts more than a few months."[5] There has never been two consecutive contracting GDP quarters that was not declared a recession, but we have had recession without two contracting quarters.

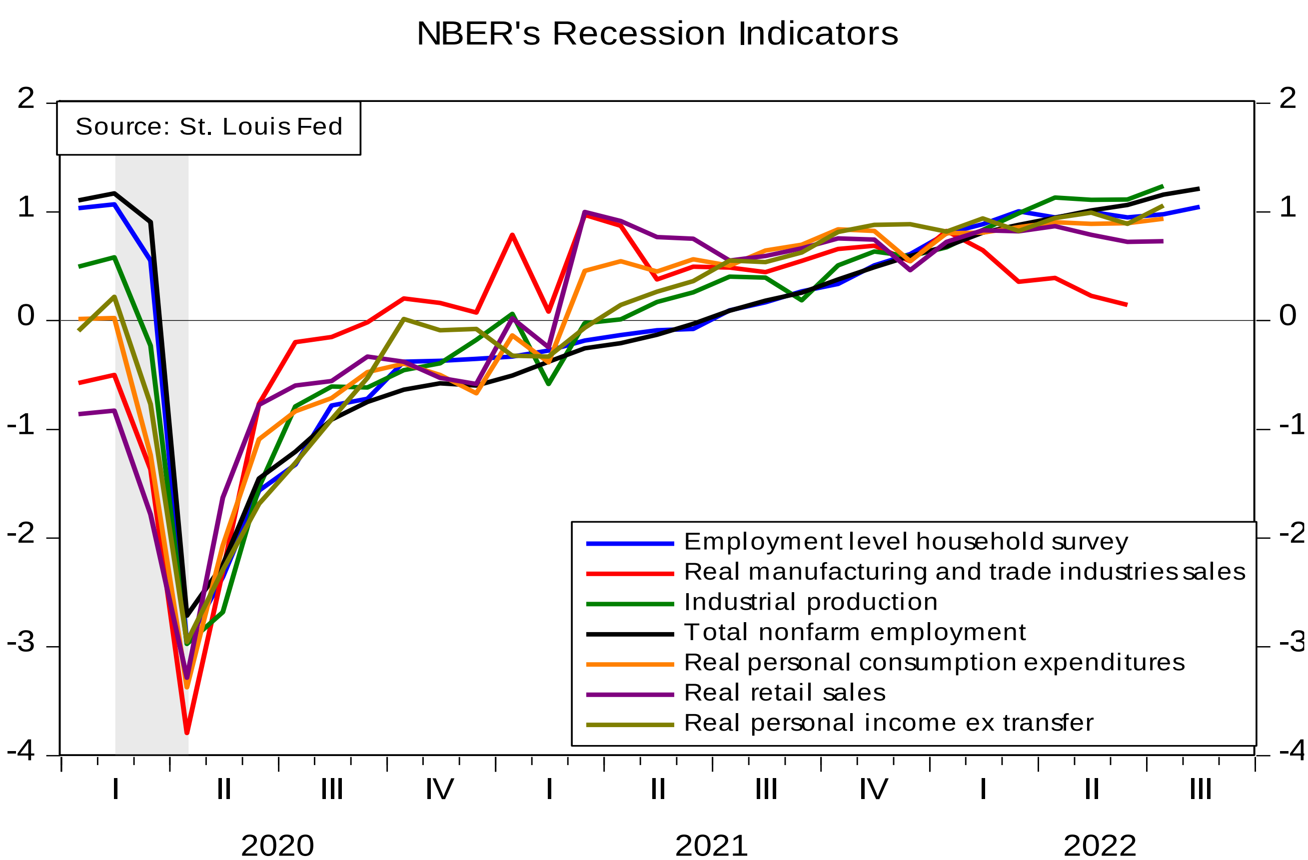
NBER identifies 6 monthly economic indicators to date the recession. In addition to the monthly indicators, they use two quarterly indicators, gross domestic income (GDP) and gross domestic income (GDI). These are two measures of national output and should in theory be equal. However, since the pandemic they have been diverging more than usually. We don't know which of these two quarterly series will turn out to be closer to the final estimate of output, so we split the difference.



[5] NBER Business Cycle Dating; https://www.nber.org/research/business-cycle-dating

The average of the two measures shows modest growth but is not declining.

The monthly indicators the Dating Committee uses are shown in the graph below and doesn't seem to convincingly show a significant and widespread decline yet. They look like they are mostly growing as of their latest reading which are July and August.



Don't expect the Dating Committee to come out with a verdict anytime soon. They will wait for updates and revisions.

9. Conclusions

In summary, we still expect the recession to start at the end of the 4th quarter, most likely in December 2022, which is the same as our earlier predictions. The Fed's tightening cycle is unlikely to reduce inflation until unemployment rises significantly and that does not usually happen until the economy enter a recession. However, Fed is still behind the curve and needs to tighten policy significantly as indicated both by the real fed funds rate and Taylor rules.

As what we can see from data used to track recessions and released so far for, it is unlikely that the economy is in a recession now. And even more unlikely that the economy was in a recession in the first half of 2022, using the indicators NBER's Dating Committee uses.

Appendix A.

The Leading Index Approach

Macroeconomic forecasts attempt to provide useful information on aggregate economic conditions. When it succeeds it can provide clients with specific information that allows him or her to make better decisions.

One approach to forecasting is to construct a theoretical model, build an econometric model around it and identifying economic relationships, and then use the model to forecast economic activity. A different approach to economic forecasting involves using explicit statistical model that requires little economic theory. Examples of this atheoretical approach are vector autoregressive (VAR) models, ARIMA models and the leading index approach. The leading economic index approach, unlike standard economic models, is not to primarily predict the magnitude of future economic growth, but rather to recognize and predict major turning points for the economy.

The leading index approach was originated in the mid-1930s by Arthur F. Burns & Wesley C. Mitchell associated with the National Bureau of Economic Research (NBER)[6]. Their research explored cyclical patterns of economic fluctuations that consist of expansions followed by recessions which then merge into the expansion phase of the next cycle. Leading indicators are series that tend to change direction in advance of the business cycle and lead the overall economy. Coincident indicators are the series that coincide and move in sync with the overall aggregate economy. A coincident economic index should turn at the same time as the general economy and rise and fall at a similar pace as the overall economy. A leading economic index should decline before recessions and increase before a recovery and forecast change in the overall economy's pace.

The leading index approach is designed to predict the direction of the economy in future months by predicting turning points in economic activity. For that purpose, indexes are developed from economic variables that leads the general economic activity. To better determine the turning points, we use six-month smoothed growth rate as it better represent turning points than regular moving averages.

---

[6] "Measuring Business Cycle" by Arthur F. Burns & Wesley C. Mitchell is their classical 1946 Book.