



Globicus Leading Economic Index

Outlook August 2023

Where is the Recession?

Globicus Inc.

New York

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1. Executive Summary

Globicus Leading Economic Indexes were mostly negative in the latest reading for June, suggesting that a US recession may start in the second half of 2023 and may be deeper than most people expect. The model has an excellent historical record having predicted all recessions since the 1960s. The coincident index showed continued growth although at a slower pace in June. The US economy is not in recession as of June as indicated by the coincident index, Sahm's rule as well as the National Bureau of Economic Research's Business Cycle Dating Committee's recession indicators (NBER)¹.

As expected, the federal funds rate was lifted 25 basis points (bps) to a range of 5.25 to 5.50% when they met July 26. The Fed did not release a new economic forecast. The economy has progressed largely in line with what the Fed projected back in June, when the Fed thought it would be appropriate to raise rates two more times before year end. In other words, only one more 25 bp hike unless their view has changed. During the press conference, Chair Jerome Powell faced several questions about the timing of the next rate move, but Powell didn't want to commit and stuck to the Fed's data dependent mantra. He stated that between now and the Fed's next meeting in September there will be two more employment reports, two more CPI reports, and a report on employment costs. In our opinion, he gave the impression he thought the Fed was close to the end of its hiking cycle and that the committee is divided on the future path. However, when it comes to rate cuts, he was firm that there would be none this year.

Inflation is a lagging indicator and does not usually decline sufficiently until unemployment, also a lagging indicator, rises and the economy enters a recession. The historical record is that higher unemployment is necessary to reduce inflation significantly. This time we have seen headline CPI inflation drop significantly

¹ National Bureau of Economic Research is a private, nonpartisan economic research organization. The NBER's Business Cycle Dating Committee maintains a chronology of US business cycles as well as decides the dates of the recessions.

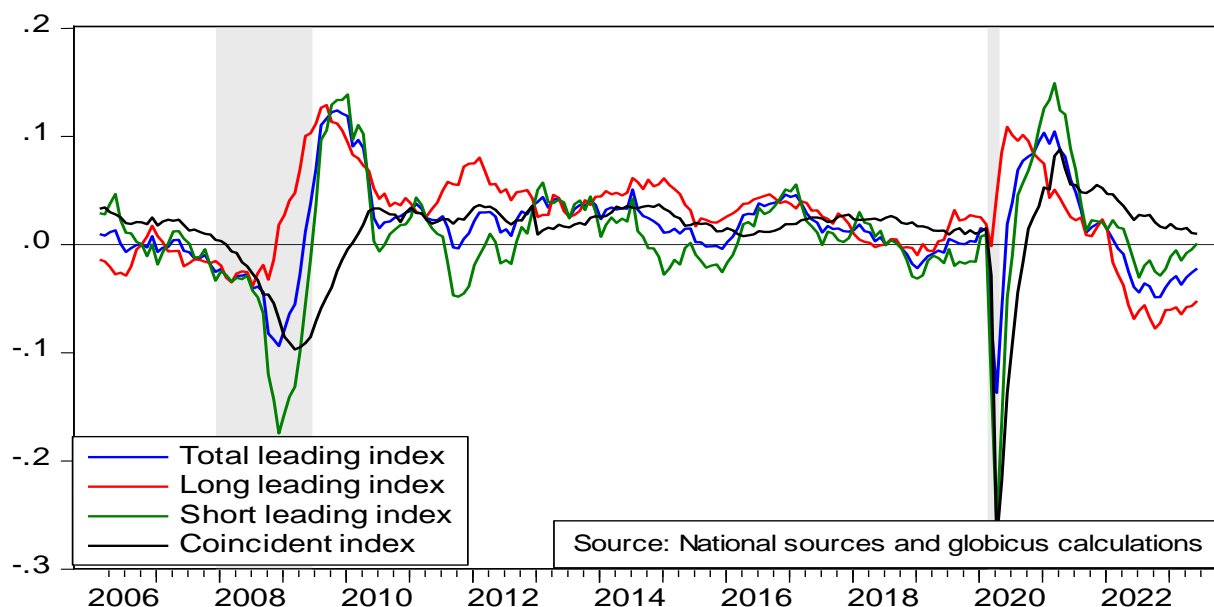
without higher unemployment. This is of course a positive development, but our fear is that this is the result of the opening of supply chains and the easing of covid restrictions and further improvement on inflation may be more difficult as other indicators of inflation are less friendly. Therefore, the Fed's success so far may slow. The cure for inflation may still be higher unemployment to finally crush inflation, in other words a recession. The Fed's dilemma is that it is exceedingly difficult for the FOMC to tighten appropriately to reduce inflation without at the same time causing a recession.

2. Globicus Leading Indexes

Globicus Leading Economic Indexes (Total- Long- and Short leading index)² were mostly negative in June, still indicating an impending recession. The coincident Index (designed to coincide or measure the overall economy), is moderating from stronger numbers last year and showed relatively weak growth in June.

² 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.

Globicus Leading Economic Indexes



In June the total leading index’s Six-Month Smoothed Growth Rate (“SMGR”)³ rose to -2.3 from -2.7 in May, the sixteenth consecutive monthly negative reading, new and revised data showed. The long leading index grew to -5.0 in June from -5.3 in May. The short leading index rose to 0.0 from -0.6 in May. The coincident index slowed to 0.9 in June following 1.0 in May. Despite the improvement in the leading indexes, we believe the economic slowdown will intensify and spread more broadly throughout the US economy over the coming months with a recession starting as early as the 3rd quarter and no later than the fourth quarter 2023.

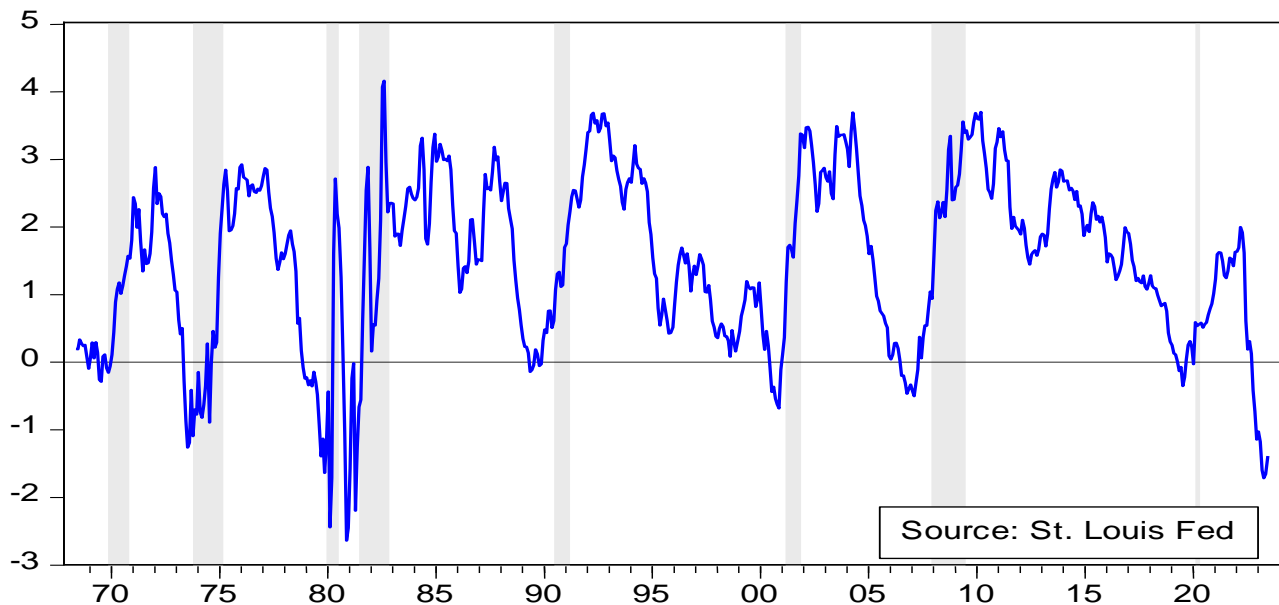
³ For input series X the formula for six-month smoothed growth rate is: $X_{smgr} = (X(t) / \text{Avg of previous 12 months})^{(12/6.5)-1}$

3. Yield Curves Sharply Negative in July

Inverted yield curves usually precede a recession, particularly the spread between 10-year and the 3-month treasury securities turns negative before a recession. This spread has narrowed dramatically and turned negative on October 25 and as of July 28 it was -1.56. This is the lowest level since 1981 when Paul Volker was the chair of the Fed. Usually it turns from negative to positive before the recession starts and has always done so since the 1990 recession. However, that was not the case during the four recessions in the 1970 to 1982 period. These four recessions were all preceded by high inflation in contrast to the following recessions that were accompanied by more modest inflation. Therefore, we may not see a reversal of the negative spread before the recession starts as the high inflation rate today is more reminiscent of the high inflation recessions during the seventies and eighties rather than the more recent lower inflation recessions.

More importantly, since the late 60s the inverted yield curve has always been followed by a recession. There have been 8 recessions since 1970 (including the Covid recession), on average the yield spread was negative 10 months before the recession begun. The longest lead was 14 months before the 1980 recession and the shortest 4 months before the 1970 recession. July 2023 is the 10th consecutive month with a negative 10-year/3-month yield spread. Not unprecedented but long in the tooth.

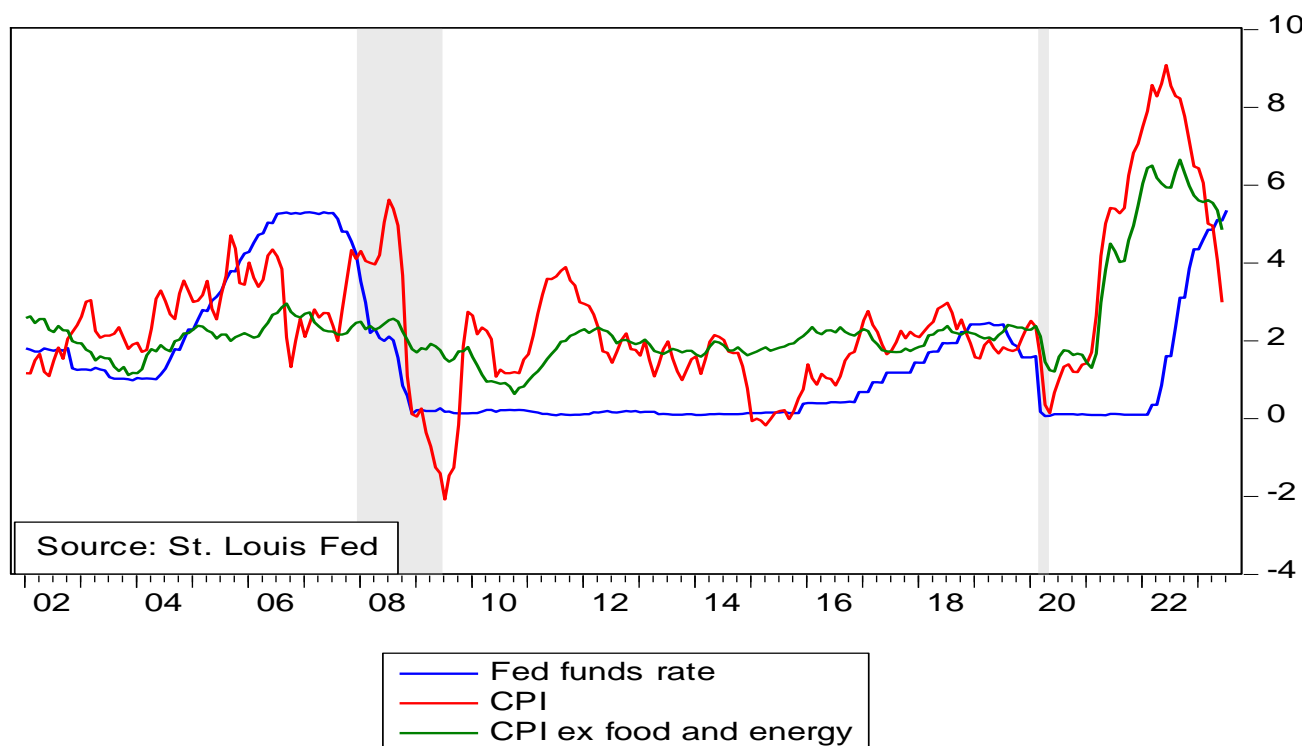
10-year - 3-month Treasury Yield Curve



4. The Fed Hikes to a 22-year High

As expected, the federal funds rate was increased 25 basis points to a range of 5.25% to 5.50% at the Fed's July 26 meeting. At the press conference Fed Chairman Jerome Powell was clear on that no rate cuts were likely but said that further increases would be data dependent. Since 2002 the Fed's policy rate, the federal funds rate (FFR) has mostly been below the inflation rate. The exceptions were 2006-2007 before the Great Recession and a few months in 2019 before the Covid 19 recession. Now, as you can see from the chart, the CPI is well below, and core CPI is marginally below the FFR.

Fed Funds Rate and Inflation

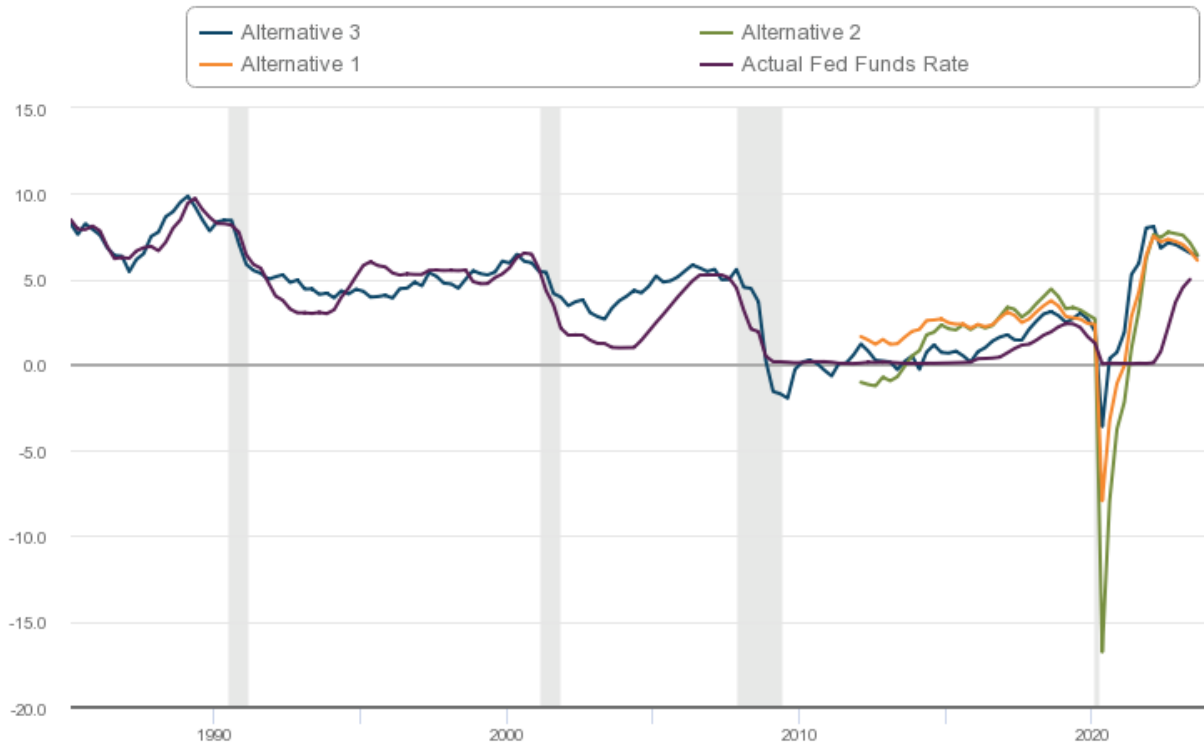


From this measure monetary policy could be considered restrictive. Other measures of inflation have not declined as much as CPI. As you can see from the Atlanta Fed table below, some inflation measures are stickier.

Measure of underlying inflation	12-month growth rate	
	22-Jun	23-Jun
Core CPI	5.9	4.9
FRB Cleveland Median CPI	6.1	6.4
FRB Cleveland 16% Trimmed-Mean CPI	6.9	5
Atlanta Fed Sticky CPI	5.6	5.8
Core PCE	5	4.1
Market-Based Core PCE	5.1	4
FRB Dallas Trimmed-Mean PCE	4.5	4.2
FRB San Francisco Cyclical Core PCE Inflation	6.6	7.8
Cyclically Sensitive Inflation (Stock and Watson (2019))	6.2	5.6

Another monetary policy indicator is the Taylor Rule, which indicates that the FFR should be 6.5% or higher.

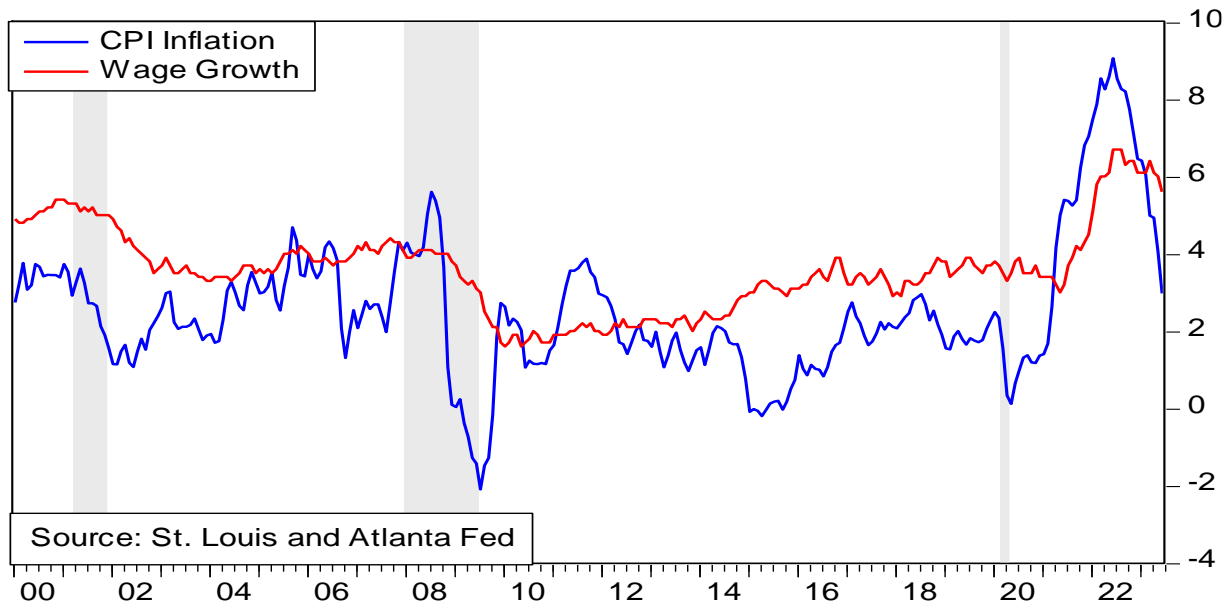
Actual Fed Funds Rate and Taylor Rule Prescriptions



	Alternative 1	Alternative 2	Alternative 3
Inflation Target Measures:	2PercentInflation	2PercentInflation	2PercentInflation
Natural Real Interest Rate Measures:	RstarFOMCMedian	RstarFOMCMedian	LWRstar1side
Resource Gap Measures:	U3gapFOMC	U3gapFOMC	CBOGDPgap
Inflation Measures:	CorePCEInflation	CorePCEInflation	CorePCEInflation
Weight on Gap:	0.5	1	0.5
Interest Rate Smoothing:	0	0	0

Wage growth is also high. Atlanta Fed's Wage Growth Tracker showed that median wage growth was 5.6% in June. While good for workers, if deflated by 3% CPI, but may not be so good for progress on inflation.

Inflation and Wage Growth



We do not believe in immaculate disinflation, the idea that we can get easing price pressure without significant economic and labor market slack. Despite the timely progress from supply constraints easing, we think progress on inflation may be slow unless we see deterioration in the labor market.

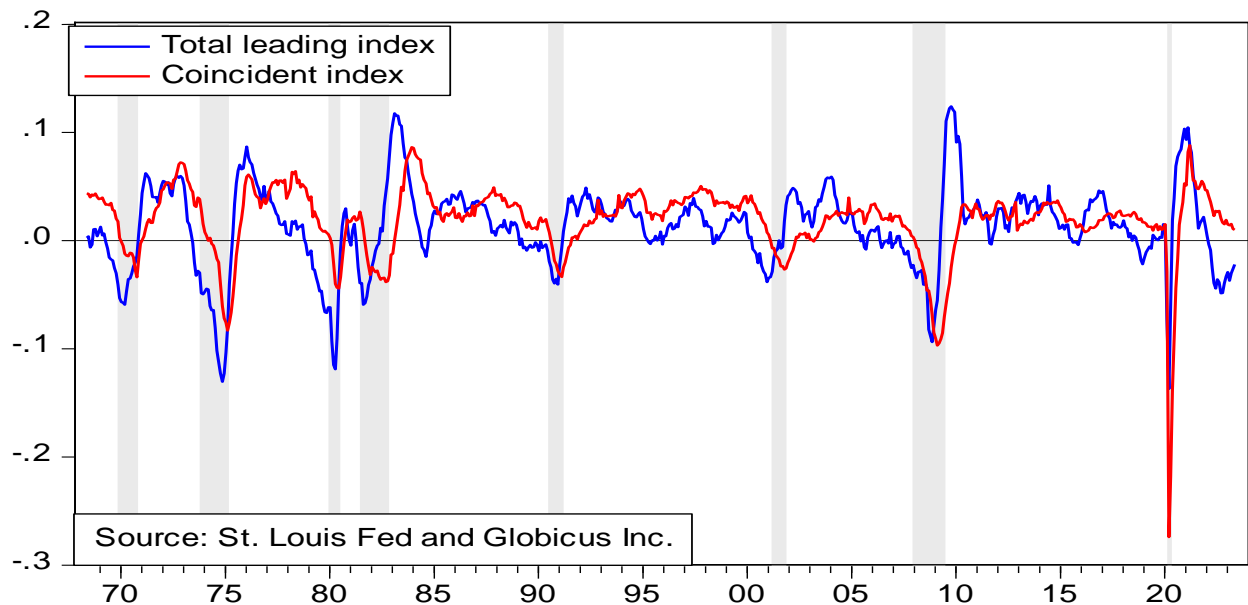
5. The Recession Develops Slowly

Below are the model's results since the late 1960s. 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. How reliable is the model? We have high confidence in the recession prediction. The model has predicted all recessions since the 1970s. And we do not think it is different this time. However, the exact timing of the start of a recession is more challenging. When the total leading index turns negative it precedes a recession on average by 9 months. However, these leads vary. The total index turned negative in April, so the recession could already have started if there was an average lead. There have now been 15 months of negative growth in the total leading index, which is close to the longest since the 17 months before the 1990 recession. The strong labor market and unprecedented stimulus programs by the government and the Fed have probably postponed the recession.

The great economist Rudi Dornbusch once said, "the crisis takes a much longer time coming than you think, and then it happens much faster than you would have thought."⁴ We have experienced the first part of Dornbusch's dictum. The future will determine the rest. Still, we are convinced that the recession will come but the timing is uncertain and conclude that there will be a recession and it will probably start in the second part of 2023.

⁴ United States. Congress. Senate. Committee on the Budget (2012). Concurrent Resolution on the Budget Fiscal Year 2013. p. 95

Globicus Leading and Coincident Indexes



6. The US Economy Is Still Expanding

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

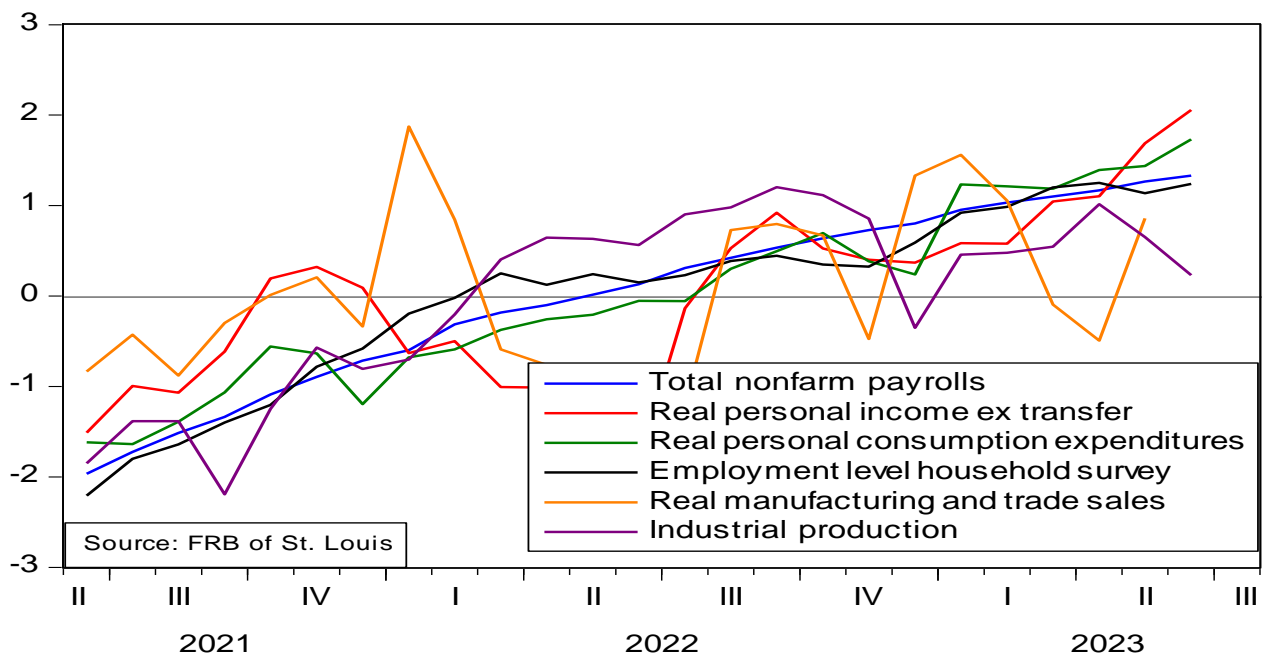
The committee's determination of the months of peaks and troughs is based on a range of monthly measures of aggregate real economic activity. These include real personal income less transfers, nonfarm payroll employment, employment as measured by the household survey, real personal consumption expenditures, wholesale-retail sales adjusted for price changes, and industrial production. In addition to the monthly indicators, they use two quarterly indicators, gross

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

domestic income (GDP) and gross domestic income (GDI). GDP rose 2.4% saar in the second quarter and GDI⁶ has not yet been released.

The monthly indicators that the Dating Committee uses to determine recessions are shown in the graph below. Except for industrial production they were all strong for June. There is no chance the Dating Committee will call a recession on these numbers as the economic weakness is not widespread and has not lasted more than a few months.

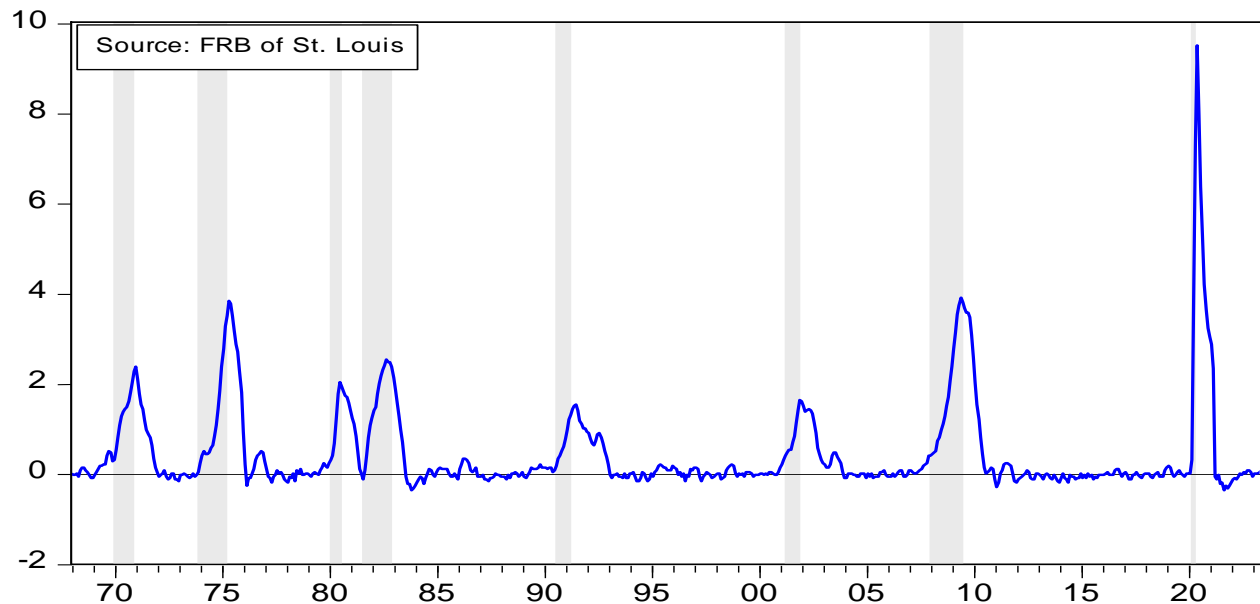
NBER's Indicators to Determine Recessions



⁶ The 2 previous quarter showed negative growth for GDI.

The Sahm Rule⁷ identifies signals related to the start of a recession when the three-month moving average of the unemployment rate rises by 0.5% or more from its low during the previous 12 months. This is not a leading indicator but coincides with recessions and as you can see it indicates no recession as unemployment has not risen yet. This indicator also corroborates the coincident index and the NBER recession indicators which also show the US economy still expanding.

Sahm Rule: Unemployment and Recession



⁷ Sahm, Claudia, Sahm Rule Recession Indicator [SAHMCURRENT], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/SAHMCURRENT>

7. Conclusions

In summary, the total leading index suggests that a recession will start in the second half of 2023. It will not be different this time unless it is time to forget about history. We don't think so. Instead, the missing recession is probably best understood in the light of the 25% of GDP stimulus by the Trump, the Biden administrations and the Fed. This is the largest economic policy experiment at least since the New Deal and WWII. The strength in the labor market, the strength in the coincident index and the consolidation in the leading indexes may support the economy for another few months but will eventually yield to the leading indexes.

The Fed's tightening cycle is probably coming closer to the end, but there is unlikely to be any rate cuts unless unemployment increases considerably. The higher rates are not likely to reduce inflation until unemployment rises significantly and that does not normally happen until the economy enters a recession.

10-year/3month yield spread turns negative several months before the recession and since the 90s turns positive again before the recession starts. However, this was not the case in earlier recessions when inflation was as high as it is today. Therefore, we may not see a reversal in the spread before the recession starts.

The Fed's monetary stance is getting restrictive. Many measures show positive real interest rates, but some measures of inflation are still above the fed funds rate and the Taylor rule indicates that rate should be least 100 bps higher.

From Globicus' coincident index, Sahm's rule and NBER's Dating Committee's data used to track recessions it is clear that the economy is not in a recession now.