PURDUE AGRICULTURAL ECONOMICS REPORT

Title	The Outlook for the U.S. Economy in 2023: The Faster Inflation Falls, the Milder the Recession Will Be
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Summary	Professor DeBoer surmises that a recession is likely in 2023, but it may have enough confounding factors (e.g. low unemployment) to make it quite mild.

Will there be a recession in 2023? Wall Street thinks so. The yield curve has inverted, which is a reliable indicator of recession in the near future.

Interest rates on long-term bonds are almost always higher than on short term bonds. Lenders expect a premium for tying up their money for a long time. This reverses when a recession is expected, as lenders try to lock in higher yields by lending long term. The difference between the yields on the 10-year and 2-year Treasury bonds inverted before each of the past six recessions (even for a few days in August 2019—did Wall Street really anticipate the 2020 pandemic?). It inverted in early July 2022 and *is more negative now than it's been in 40 years*. The probability of a recession is high.

Calling a recession is tricky, though. Real GDP fell for two consecutive quarters in the first half of 2022, yet it was not a recession. Employment continued to grow, and the unemployment rate fell to 3.5%, *tied for the lowest reading in 50 years*. It's not a recession without rising unemployment.

Consumers increased their spending by 2.1% above inflation over the past year. Consumers are pessimistic. According to the University of Michigan's survey of consumer sentiment, consumers are more pessimistic now than during the worst of the COVID recession. Pessimistic consumers usually cut their spending.

The pessimism shows in the spending data. Consumer spending grew rapidly in 2021 but has tailed off in the second half of 2022. Still, manufacturers' orders for consumer goods have been rising over the past year. Goods orders are a leading indicator of consumption spending. Businesses think consumers will buy.

Higher interest rates, continued inflation and uncertainly about employment may restrain consumer spending growth further. But consumers still have a lot of savings left over from federal COVID aid, so maybe businesses are right. Expect consumer spending growth to be a little slower in 2023 than in 2022.

Business investment fell in the second and third quarters, and is barely higher now that it was a year ago. Construction of business buildings is 9% lower now than a year ago. The pandemic trend to work-at-home has reduced the need for office space, which must be contributing to the drop in construction. Conversely, business equipment and software purchases are up 5% and 8% respectively. With employees hard to come by, businesses turn to automation, which requires new equipment and the software to run it.

With interest rates higher and work-at-home continuing, structures investment is unlikely to turn upward. The labor shortage will lessen with the turn toward recession, so equipment and software investment growth should slow.

Home construction is the industry first affected by rising interest rates. The mortgage rate rose from 3.1% last December to 6.4% now. As a result, housing starts dropped by 21% from April to November. Building permits are down too, indicating less construction in the near future.

Interest rates will continue to rise at least through mid-year. Slowing sales will cause businesses to pause their expansion plans. Investment spending is likely to fall in 2023.

The federal government's budget is much less expansionary now than it was a year ago, simply because there was no big COVID aid package in 2022. The budget deficit fell from 18% of GDP in the first quarter of 2021, to 4% of GDP in the third quarter of 2022. The deficit will likely grow somewhat in 2023 with slowing income tax receipts, rising Social Security and other transfer payments, and possibly added defense spending. But it will still add much less to spending than was true in 2021.

State and local governments are still flush from the post-COVID revenue boom. Indiana, for example, expects to have almost $5 billion in the bank at the end of fiscal 2023 this coming June, which is double the highest pre-COVID amount. Slower growth in incomes and sales, and falling inflation, will slow revenue growth, but spending should continue to grow.

Exports are likely to fall, and imports rise. Rising U.S. interest rates are raising the exchange value of the dollar, which makes U.S. exports more expensive and imports cheaper. Europe and Britain may already be in recession, which will also reduce U.S. exports. The trade deficit likely will grow in 2023, which will be a drag on GDP growth.

Consumer spending grows more slowly, investment spending falls, government spending holds steady and the trade deficit expands. This adds up to near-zero growth for real GDP in 2023, with a couple of quarters of decline, and a couple with modest growth.

To be called a recession, though, unemployment must rise. Labor force participation has not fully recovered from the pandemic, and labor is scarce. As of October there were 10.3 million job openings and only 6 million people looking for work, a labor shortage of 4.3 million people.

Job openings have been dropping, by 7% over the past year. The number of job searchers—that is, unemployed people—bottomed out in April and has edged upward since. Initial claims for unemployment insurance have increased. Yet the unemployment rate has barely budged. It was 3.7% in November, up from 3.5% in July and September. This makes sense. People who lose their jobs soon find another, even if they collect unemployment insurance while they're looking.

The slowing economy will reduce the 4.3 million employee shortfall. The number of job openings will fall as businesses cut their expansion plans. Job searches will take longer, and some unemployed people will not have the skills needed for the open jobs. Construction workers may be unemployed; job openings may be for nurses. If GDP doesn't grow the gap between job openings and job searchers will close. With the number of openings nearly equal to the number of unemployed people, the unemployment rate will rise to 4.5 percent by the end of 2023.

A rise that big activates the "Sahm Rule." Economist Claudia Sahm found that when the unemployment rate rises by 0.5 percentage points compared to its low the previous year, a recession has begun and the unemployment rate will continue to rise. This is because of the "negative feedback loop" or "vicious cycle." People lose their jobs and spend less. Businesses see their sales fall, cut back on production, and lay off employees. Those people cut their spending, businesses cut more employees, and the recession is on.

Two factors may interrupt the negative loop this time. It will take time to eliminate the labor shortage, so newly unemployed people may find new jobs quickly. They won't have to reduce their spending. And, a study by the Federal Reserve found that households still have more than a trillion dollars in extra savings left over from federal COVID aid. If newly unemployed people can't find new jobs, their savings may sustain their spending. This time, the unemployment rate may rise eight-tenths of a point to 4.5%—but not much further.

The inflation rate is going to fall. The question is how much and how fast. The all-items consumer price index rose 7.1% from November 2021 to this November. This is down modestly from the 12-month rate in June, which was 9%. Still, this is the highest inflation in 40 years.

Prices of durable goods like cars and electronics rose rapidly at the onset of inflation, peaking at 18% in January 2022. People shifted a trillion dollars in spending from services to goods, to avoid the face-to-face contract and crowds required to buy many services. Goods producers couldn't meet the demand, especially with the famous pandemic supply chain problems. Prices spiked upward. Since then durable goods inflation has dropped, to 2.4% in November. While consumers have kept buying goods, supply chain problems have partly cleared. The New York Federal Reserve's Global Supply Chain Pressure Index peaked in December 2021 and has declined in most months since, indicating an easing in transportation costs and manufacturing shortages.

Non-durable goods inflation is dominated by oil prices. The COVID lockdown reduced demand for motor fuel and gasoline prices dropped below $2 in April 2020. The rapid recovery took oil producers by surprise, pushing the U.S. average price to $3.52 in February. Then the war in Ukraine disrupted supplies. The average gasoline price peaked in June, at $4.93. It's come down since then, averaging $3.69 in November.

Inflation in services has not fallen yet. The 12-month inflation rate was 7.2% in November, near the highest rate in 40 years. The services price index is closely related to housing rents and service employee wages. Rents have been rising with increased demand for space from the work-at-home trend. The labor shortage has pushed up wages. Rent inflation may come down as some people return to in-person work and leases expire. Wage growth may slow with rising unemployment. There's no sign of these trends yet though.

Higher interest rates and slower growth will reduce the demand for goods and services. The stronger exchange value of the dollar should reduce the prices of imported goods. Supply chain problems should continue to clear. If oil prices don't spike again, by next June the 12-month gasoline inflation rate will show a 25% decline from the 2021 price peak. Expiring leases and rising unemployment should begin to cut service price inflation. Look for the inflation rate to be 3.5% by this time next year. Most of the drop should occur in the first half of 2023.

The Federal Reserve will increase interest rates in 2023. Again, the question is how much and how fast. At the start of 2022 the Fed's policy interest rate, the federal funds rate, was near zero. Inflation was unexpectedly high, so in March the Fed began raising rates. Inflation continued to increase and the Fed got serious, with four enormous three-quarter point increases starting in June. With December's half-point increase, the federal funds rate stands at 4.3%. This is among the most rapid rate increases in the Fed's history. The Fed is slamming on the brakes.

The Federal Reserve's economists themselves predict that the Federal Funds rate will be 5.1% in 2023. This means only three more one-quarter point increases. These are likely to take place in the first half of the year. If inflation falls as expected, and recession threatens, the Fed might even reduce rates a little towards the end of 2023. If inflation refuses to fall the federal funds rate will rise more.

Short term Treasury interest rates usually move in lock-step with the federal funds rate, so expect the 3 month Treasury bill yield to be 5.1% in the second half of 2023. The 10-year Treasury bond yield is 3.7% in mid-December. Long-term Treasury rates tend to rise by less than the federal funds rate, so the 10-year Treasury bond yield should be 4.2% in the second half of 2023. The yield curve inversion will continue for a while.

A recession is likely. If the unemployment rate remains below 5%, it would be the mildest recession in the post-WWII era. So mild that it might not even be marked as an "official" recession. Durable and non-durable goods inflation will fall—assuming no new spike in oil prices—so a drop in all-items inflation is nearly certain. But reaching the Fed's 2% target rate requires service price inflation to fall, and that is less certain. If it doesn't fall, the Fed might decide to raise interest rates more than expected, and then an official recession is much more likely.