STONEBRIDGE
Capital Advisors

Stonebridge Economic Outlook
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Overview

There are several scenarios for the economy's outlook in 2023 currently being proposed by analysts, including a short and shallow recession, a more severe recession, or no recession (the proverbial soft landing). The different scenarios seem to rely primarily on the underlying assumption about how quickly and to what extent inflation improves in the near term. Knowing the inflation outlook will be key to being accurate about the outlook for real growth and employment. Under all three scenarios, inflation on a year-ago basis will be substantially lower by the end of 2023 than at the end of 2022; the question is what it will take to get there.

The one scenario closer to a consensus forecast than any other is a short and shallow recession starting sometime early next year. Such a recession would be one of the most widely anticipated recessions on record. After all, the U.S. economy is typically shocked into a recession, not orchestrated into one. I suspect that the outlook for next year has been influenced by comments from Federal Reserve officials suggesting that some economic pain may be needed to achieve its definition of price stability. Pain, in this case, has been inferred to be a recession. Naturally, policymakers and investors hope that such a recession will be short and shallow and that it will come sooner rather than later. Unfortunately, it is seldom that straightforward.

Higher interest rates can engineer an economic slowdown but engineering a recession requires a shock. In that regard, it is extremely difficult for a transparent Fed to be shocking. If the Fed tells us what it will do before they do it, market participants are never surprised and have time to adjust before the Fed acts. The shock that will push the economy into a recession next year is more likely to be an unanticipated consequence (shock) of higher interest rates. In particular, a prolonged period of high-interest rates could expose a source of financial stress that shocks the economy. I do not know what that shock could be. If I knew, it would not be shocking. Some issues discussed more recently with higher interest rates are potential liquidity problems in Treasury debt markets or the soaring cost of servicing the massive level of private and public debt issued when interest rates were near zero.

Of course, the shock could be totally independent of monetary policy, including a geopolitical shock or a demographic shock. Putin's threats to use nuclear weapons in Ukraine, China's more aggressive rhetoric toward Taiwan, or another deadly virus outbreak are examples of such potential shocks. Even if the event that triggers an economic slowdown is anticipated, the timing of such an event could be a shock.

The recent data on employment, income, business activity, and growth still seem very robust, suggesting that the conditions needed to derail the pricing power of businesses still need to be put in place. Supply disruptions earlier this year were problematic enough to deny real output growth in the first half but not to cause a recession. Most analysts point to Russia's invasion of Ukraine or COVID restrictions in China as the primary causes of supply disruptions in 2022.

In 2023, a potentially more important supply constraint the Fed must face is the ongoing shortage of workers. Monetary policy cannot do anything about finding more workers to fill job openings, but it can eliminate the job openings by destroying aggregate demand. The issue is that under such circumstances, the destruction of demand needed to eliminate job openings may be extensive and more painful than a mild recession.

Indeed, the economic outlook for 2023 reflects that monetary policy's impact on the economy is more like wielding an axe than using a scalpel. In other words, monetary policy has a very broad impact on the economy. It cannot pick and choose the channels of

Table 1
U.S. Economic Forecast

	2022 Q1	2022 Q2	2022 Q3	2022 Q4f	2021	2022f	2023f
Real Gross Domestic Product	-1.6	-0.6	**2.9**	**3.0**	5.7	**0.9**	**-0.5**
Consumer Price Index, All	9.2	10.5	5.7	**3.0**	6.7	**7.1**	2.8
Consumer Price Index, Core	6.5	6.6	6.5	4.5	5.0	6.0	2.8
GDP Chain-Type Price Index	8.3	9.0	4.1	3.7	6.1	6.2	2.4
Civilian Unemployment Rate	3.8	3.6	3.6	3.7	4.2	3.7	**4.3**
Price of WTI crude oil ($/bbl)	95.2	108.8	93.2	90.1	77.4	90.1	91.5
Trade-Weighted Dollar	115.6	119.1	123.6	**125.1**	115.0	**125.1**	115.0
S&P 500 Operating Earnings	49.4	46.9	52.8	**55.0**	208.2	**204.2**	**200.0**
Percent vs. Year Ago	4.1	-10.0	1.5	**-2.8**	64.6	**-1.9**	**-2.1**
91-Day Treasury Bill Rate	0.3	0.9	2.7	3.7	0.1	3.7	**2.8**
10-Year Treasury Note Yield	2.0	2.8	3.1	3.8	1.5	3.8	3.4
30-Year Mortgage Rate	3.8	5.3	5.5	6.9	3.2	6.9	**6.5**
Bank Prime Rate	3.3	3.9	5.4	7.0	3.2	7.0	**6.5**

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Standard and Poor's, Federal Reserve Board, Department of Energy, and Federal Home Loan Mortgage Corporation.

Annual changes in real gross domestic product (GDP) and all measures of inflation are percent changes from the fourth quarter of the previous year to the fourth quarter of the year indicated. The annual estimates of the unemployment rate, the price of crude oil, the trade-weighted dollar, and all interest rates are averages for the last quarter of the year indicated. S&P 500 operating earnings per share are for the period indicated.

Quarterly changes in real GDP and all measures of inflation are percent changes from the previous quarter at annual rates. For the unemployment rate, the price of crude oil, the trade-weighted dollar, and all interest rates, quarterly estimates are averages for the quarter indicated. S&P earnings are per share for the period indicated. Trade-weighted dollar is the new broad index from the Federal Reserve Board.

monetary policy transmission. At the moment, it looks as if the U.S. economy, despite the extensive rate hikes by the Fed so far this year, still accommodates higher prices. When the Fed wields its axe, the outcome most likely will not be as precise as targeted. In this case, the Fed ends up eliminating more than job openings. It destroys jobs. Such a combination of elevated inflation and unemployment could be somewhat similar to the stagflation of the 1970s. Interestingly, former Minneapolis Fed President Narayana Kocherlakota suggested recently that the Fed is aiming for a period of elevated unemployment and inflation—so-called stagflation. Such an objective by the Fed seems unlikely. As demonstrated by the Fed's policies orchestrated by Paul Volcker from 1979 to 1982, the only way to end stagflation is a shockingly restrictive monetary policy. Arguably, four consecutive 75 basis point hikes in the federal funds by the Fed could be considered shocking enough to derail stagflation before it got started. Whether it was shocking enough to cause, a recession is unclear.

Of course, the Fed could succeed at avoiding a recession in 2023 by engineering a soft landing, which is when inflation slows without a rise in unemployment. Although the likelihood of this outcome is higher than in previous episodes of monetary tightening, it still is very low. After all, if the economy remains solid, unemployment stays low, and inflation continues to move toward the Fed's target of 2 percent with interest rates where they are, why should the Fed be in a hurry to cut the interest rates? After all, how long will inflation stay low if the Fed cuts interest rates with the economy still operating at full employment?

Inflation Challenge

Given the Fed's focus on inflation again in 2023, a more detailed discussion of the inflation outlook and monetary policy seems appropriate. Fed officials, who historically have errored in thinking that monetary policy can engineer a soft landing, seem convinced that a mild recession will be needed to achieve price stability. When the Fed talks of the need for a recession, it should serve as a warning that the recession most likely will be more painful than most anticipate.

The key to how severe the recession will be next year depends on how much inflation slows in the next few months. The quicker and faster inflation improves, the less aggressive the Fed will need to be about further rate hikes, reducing the risk of a more serious shock to the economy. On the other hand, if inflation remains stubbornly elevated or reaccelerates, the Fed will need to do more than now expected.

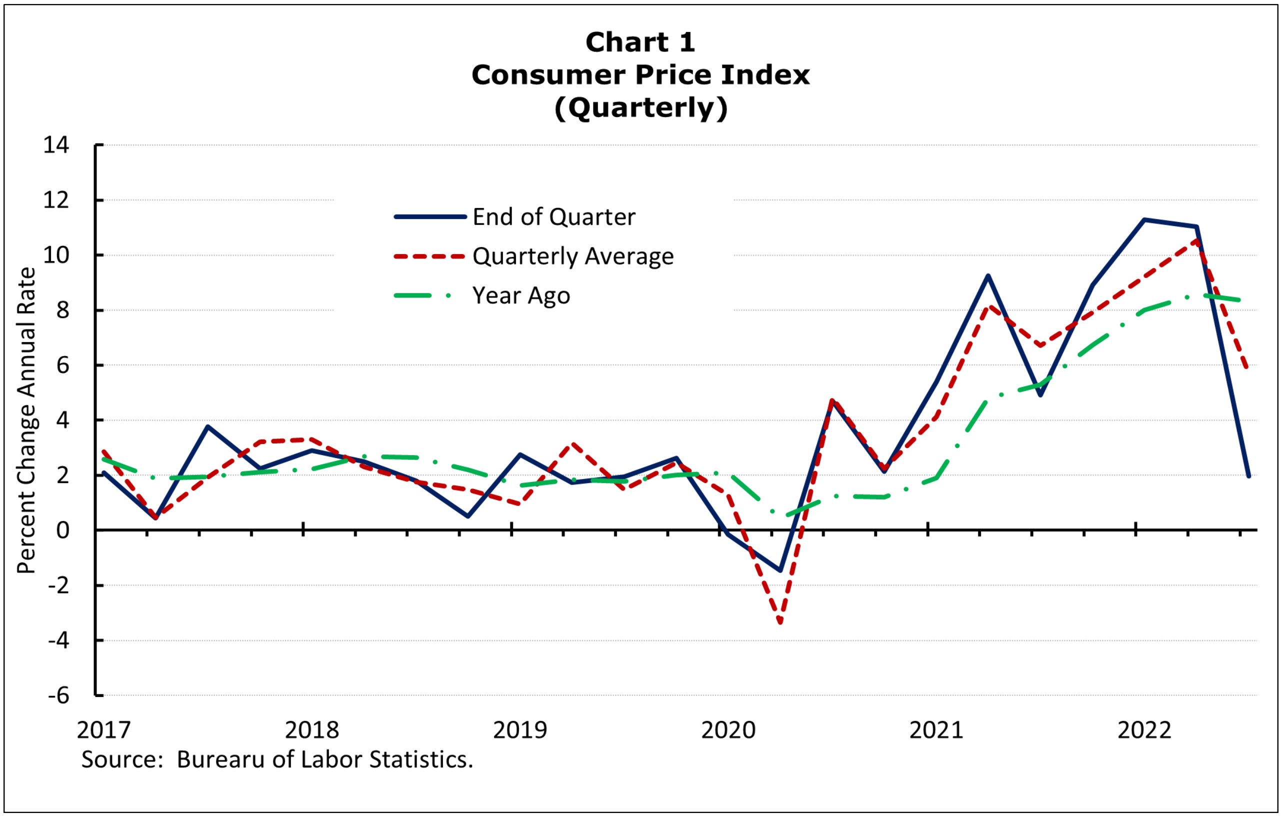
In that regard, inflation has already shown substantial improvement in the second half of 2022 from the torrid pace in the first half. How much it has improved depends on how it is measured. Economic data do not lie, but they can be confusing. For example, consumer price inflation in the third quarter of 2022, based on different ways of measuring the same data, varied considerably. The measures ranged from a low of 2 percent to a high of 8.3 percent, as shown by the three ways of measuring the consumer price index (CPI) in Chart 1; the same data series is used to calculate all three. The first measure (End of Quarter) is the percent change at an annual in the last month of a quarter from the last month of the previous quarter. The second measure (Quarterly Average) is the percent change at an annual rate of the three-month average of a quarter from the three-month average of the previous quarter. The third measure (Year Ago) is the percent change from the same quarter a year earlier.

Analysts less commonly use the End of Quarter measure of CPI inflation. Still, it sometimes provides a helpful summary of what happened to inflation during the quarter's three months. Interestingly, according to this measure, CPI increased at an annual rate of over 11 percent in the first two quarters of 2022 before plunging to less than 2 percent in the third quarter. Interestingly, inflation in the third quarter by this measure was very near the Fed's target of 2 percent. However, more recent monthly data suggest that the End of Quarter measure of the CPI is on track to increase over 5 percent at an annual rate in the fourth quarter. A few analysts will use this measure to express concern that inflation is reaccelerating and that monetary policy needs to be even more destructive toward aggregate demand.

Analysts more commonly use the quarterly average measure of inflation to assess inflation. According to this measure, also shown in the forecast (Table 1), inflation peaked in the second quarter at 10.5 percent before falling to 5.7 percent in the third quarter. In this regard, the percent change of the fourth-quarter average of the CPI is expected to slow to about 4.9 percent at an annual rate. In this case, analysts could point to the data to support the view that inflation is slowing but not fast enough to put the Fed on hold but enough to encourage the Fed to let up on the brakes.

The Year Ago, the measure of inflation shown in Chart 1, also is used extensively by analysts in their assessment of the inflation outlook. According to this measure, the CPI was at a level in the third quarter of 2022 that was 8.3 percent higher than its level in the third quarter of 2021. As shown in Chart 1, the measure a year also tends to be the least volatile but should be expected to continue to drift lower over the next several months.

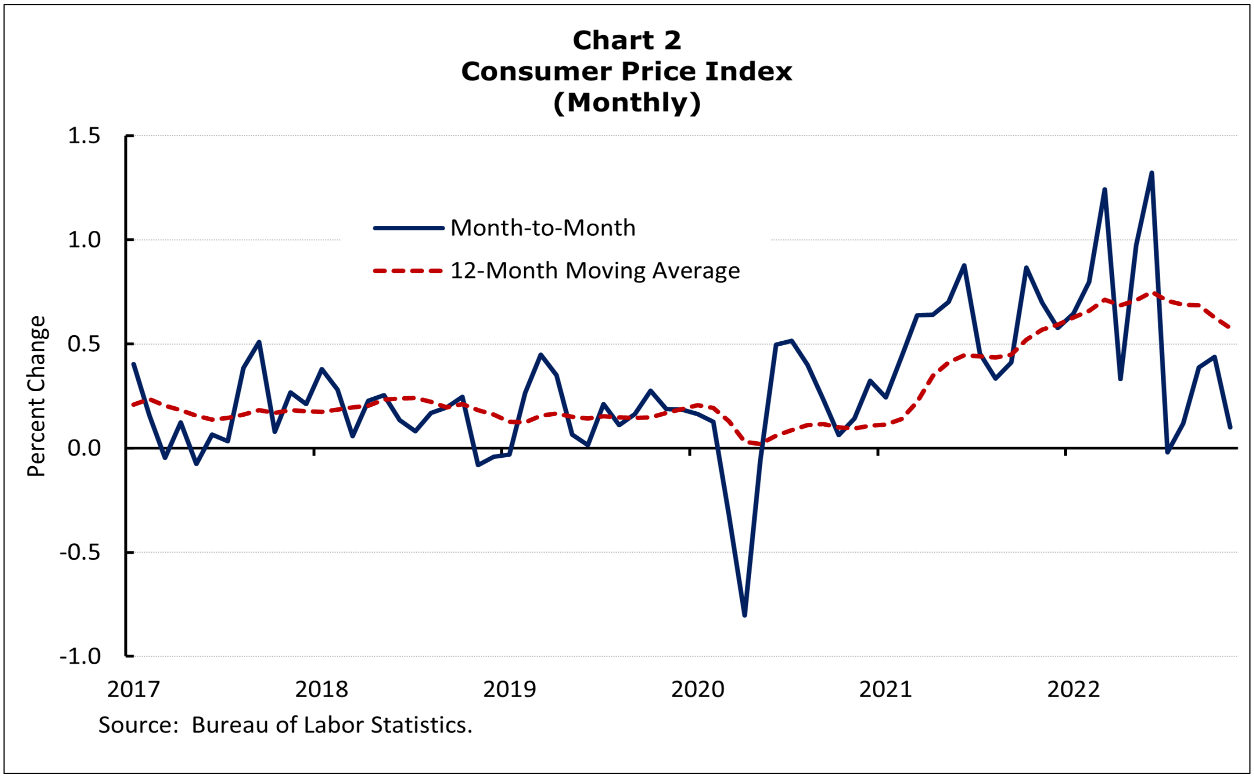
This expected fourth-quarter slowdown in the percent change in the CPI from a year ago may be more obvious in the monthly data for the CPI. In particular, the consumer price index (CPI) increased an average of 0.625 percent a month over the 12 months ending in November (the most recent data available) or 7.5 percent from a year ago in November. However, the stickiness of inflation on a year-ago basis is a tale of two halves. . In the first half of 2022, the CPI rocketed upward by an



average of 0.9 percent a month, led by surges of over 1.2 percent in March and June (see Chart 2). Based on data available for the second half (five months through November), the CPI increased an average of roughly 0.4 percent a month, led by no change in the price index in July and a very small increase in August. Moreover, in December 2021, the CPI increased by 0.6 percent. If the CPI increases less than that in December 2022 (released in January 2023), the CPI increase from a year ago in December will slow further. The consensus forecast for the December CPI is a monthly increase of 0.4 percent. More of the same is expected through the first six months of 2023, leading to the year-ago measure of inflation to fall further to about 3.5 percent by next June. By the end of next year, the year-ago percent change in the CPI is expected to be roughly 3.0 percent, certainly a marked improvement from what is expected at the end of this year but still well above the Fed's target.

As I have mentioned, next year will depend on its source. Is it excess demand or supply shortages that continue to push prices higher? Suppose an outward shift in aggregate demand is the factor behind inflation. In that case, the lagged effects of the restrictive monetary policy may be sufficient to engineer the widely anticipated mild recession that will get inflation down to near 2.0 percent. After all, the various channels of monetary policy transmission to the economy are demand related. They include interest rates, wealth, credit availability, foreign exchange, and inflation expectations. I am not going to explain each. Instead, it is sufficient to say that all of the various channels work to slow aggregate demand, which in turn will make it more difficult for businesses to raise prices to offset higher input costs.

A more complicated inflation situation is when aggregate supply effectively shifts inward, suggesting less supply available at any price or a higher price at any level of supply. In this case, demand destruction can still be used to lower price inflation, but it will require far more to get the job done. The crude oil disruptions of the 1970s may provide a guide to forecasting the economy's outlook in 2023. I am concerned that supply disruptions, in concert with considerable pent-up demand, have complicated the Fed's task of returning inflation to its 2 percent target.



[1]The Black Death in the 1300s provides some insight into the economic effects of pandemics. In the first outbreak in 1347-48, the disease spread so rapidly that before any physicians or government authorities had time to reflect upon its origins, about a third of the European population contracted the illness and died. With such a large decline in the work force from the plague, wages soared in response to a labor shortage. On the other hand, wages suffered in real terms owing to rampant inflation caused by sluggish output relative to demand. The impact on the labor force owing to the COVID pandemic was a surge in retirees rather than deaths. Nevertheless, the size of the labor force in November 2022 was still less than the size of the labor force in February 2020 when the pandemic began. Wages have increased but so too has inflation. Real wages have suffered as a result.

Complicating the situation further for the Fed is the labor shortage continuing into 2023. In recent comments by Fed Chair Powell, he highlighted the low participation rate as a challenge to the Fed's efforts to relax labor market conditions. Over the last 13 years, we have discussed the stickiness downward of the labor force participation rate owing to an aging population and boomers retiring. It seems that the pandemic accelerated Boomer's retirement, which in conjunction with the very slow growth of the working-age population of the U.S., has contributed to the labor shortage.[1]

On the other hand, businesses historically have been very resilient to changing circumstances and may prove to be so again this time. In this case, a more transparent Fed policy may allow businesses time to adjust and avoid serious pain. The best way for businesses to accomplish this would be to alter their production processes to improve labor productivity, which would raise the potential growth rate of the U.S. economy and ease the tightness in labor markets. In other words, business increase supply, tempering the need for demand destruction to achieve price stability. Typically, businesses are less likely to increase output by improving productivity when they enjoy some degree of pricing power, especially when the Fed is perceived as pushing for a recession. It is far easier for businesses to shift the higher costs of production to customers than to risk investing in more productive technology.

A Very Volatile 2023

The economic outlook for 2023 has changed somewhat from the previous forecast released in early October, even though the numbers shown for 2023 in Table 1 have changed very little. The reason is that the outlook for the year is now expected to be divided into two parts, with something similar to stagflation being the theme of the first half and a substantial recession being the theme of the second half. The Fed will be forced to hike interest rates more than currently expected to fight the prospect of stagflation. However, if the Fed succeeds, do so because the economy plunges into a recession in the second half. The recession will cause inflation to slow to a sustainable level closer to the Fed's target. As a result, interest rates will have an opportunity to roll over in the second half, explaining why interest rates for the fourth quarter of 2023, as shown in Table 1, are a little different from interest rates for the fourth quarter of 2022. This rollercoaster path of interest rates could contribute markedly to the volatility expected next year.

A similar scenario is in store for consumer inflation in 2023. Inflation will likely remain stubbornly elevated in the first half as supply disruptions continue to haunt operating costs and business plans. However, production levels could still be constrained by supply disruptions, especially the difficulty in finding workers. The assumption in the second half of 2023 is that a devastating shock to aggregate demand will overwhelm lingering supply disruptions, causing inflation to slow. To the extent that labor shortages are restricting output, the shock needs to be meaningful. There are only two ways to resolve a labor supply shortage: destroy demand for the products produced by workers or make labor more productive. However, both sustainable gains in productivity take more work to achieve in the near term. If businesses have pricing power, less productive and inefficient businesses can raise prices in the face of higher costs to survive. Only when pricing power wanes are these businesses pressured to improve efficiency or shut down.

Of course, if the Fed follows the federal funds rate path outlined here, the entire U.S. Treasury yield curve will invert sharply, which would provide the necessary condition for a recession to follow. The peak federal funds rate could easily be at least 5 percent in the first half, causing the 3-month Treasury bill yield to climb even higher. At the same time, the 10-year Treasury note yield likely will peak at a level closer to 4.8 percent before slipping lower, most likely in the second half once a recession is underway. By the end of 2023, the yield curve is expected to be flat, assuming the recession could slide into early 2024. In this case, the recovery starts sometime in early 2024. Finally, corporate profits are likely to be sluggish in 2023. S&P 500 operating earnings per share are expected to do okay in the year's first half due to lingering pricing power. Still, a recession in the second half will most likely hammer operating earnings in the second half.

The quarterly details of the economic outlook for 2023 will be provided in the March 2023 forecast. By then, we hope to have a clearer view of Fed policy and inflation. Hopefully, I will be wrong, and inflation will slow as easily as many, including the Fed, seem to expect.