

Too Little Too Late? The Two-Pronged Approach of the Federal Reserve

Bulat Gafarov and Jens Hilscher

At its most recent scheduled meetings, the Federal Reserve raised interest rates by 0.25%, 0.5%, and 0.75%. The last three readings of U.S. inflation were 8.5%, 8.3%, and 8.6%—the highest levels in 40 years. So, it is high time to act. However, the Fed has another tool in its arsenal: selling assets on its balance sheet.



How quickly will the Fed raise rates and unwind its balance sheet to fight inflation?

Photo Credit: Alex Bierwagen on Unsplash.

The Federal Reserve (the Fed) has, finally, some say, started raising rates. The rate hikes of March, May, and June at the last three scheduled meetings were perhaps long overdue. Inflation over the previous 12 months was equal to 5% in June 2021 and reached 7% in December 2021; in May it stood at 8.6%. Unemployment, meanwhile, dropped below 5% in September 2021 and below 4% in December 2021; in May it was equal to 3.6%. In the last 60 years it has never been below 3.4%.

The Fed has a dual mandate of promoting full employment and price

stability. However, even as inflation was rising from 4.2% in April 2021 to 7.9% in February, the Fed did not act. For a long time, they believed that inflation was temporary and argued that premature rate increases could damage the recovery from the pandemic. In effect, the Fed was focusing too much on the recovery and too little on price stability, even though the economy was doing well and was near full employment. Meanwhile, inflation was high, continued rising, and is now increasingly out of control. Price stability, which had been so successfully achieved since the early 1980s, is no longer something that consumers can count on. It is not too late to act. The question now is whether Fed action will be sufficient.

Why Is High Inflation Problematic?

High inflation is often also variable inflation. Indeed, while the all-items consumer price index (CPI) has increased by 8.6% over the last 12 months, gasoline is up 48.7%, whereas education and communication are up only 0.8%. In an environment like this, planning for future expenses, for example to figure out what prices to set so that profit margins are sufficiently high to meet variable and fixed costs, becomes nearly impossible. At a minimum, it is much more difficult than when prices are stable. More importantly, wages have not kept up with inflation. Over the previous 12 months, private sector average hourly earnings increased by 5.2%, much below inflation. In effect, U.S. workers have been subjected to a large pay cut. The situation the U.S. economy finds itself in, at least with regards to inflation, is not desirable, and many hope that it will change soon.

Lower Aggregate Demand Can Lower Inflation

If inflation is too high, the Fed raises interest rates, reducing aggregate demand and decreasing inflation. Higher interest rates make it more costly for companies and individuals to borrow. At the same time, they make it more desirable to save. Desired consumption, and therefore demand, decrease. At the same time, higher interest rates can result in an appreciation of the exchange rate. In June of 2021, one Euro cost \$1.21; in June 2022, after the United States started raising interest rates, the exchange rate is equal to \$1.04. A stronger dollar reduces demand for U.S.-produced goods since they become more expensive abroad.

Individuals base their decisions not only on the current short-term interest rate. As important is expected future Fed policy. One way to get a quick sense of the expected path of interest rates over the next couple of years is to look at the yield curve. It plots the interest rates paid on Treasury debt of different maturities. If, for example, the current one-year rate is 1% and the current two-year rate is 2%, the market expects the one-year rate in one year to be approximately equal to 3%. That way, the two-year rate is the average of the one-year rate today and the one-year rate next year.

Both the one-year and the two-year rates were close to zero in June of 2021 (see Figure 1), meaning that the market did not expect the Fed to raise rates significantly in the near future. In June 2022, the situation is very different. The one-year rate stands at 3.15%, and the two-year rate is equal to 3.45%, suggesting that the one-year rate in one year will be close to 3.75%, an

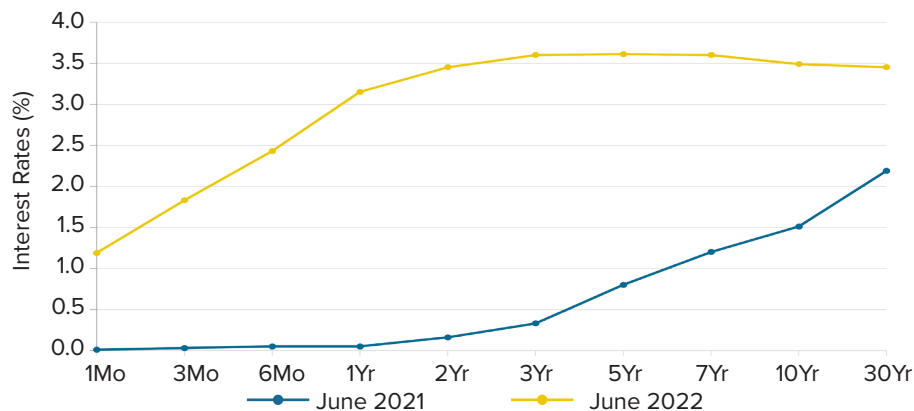
increase of 0.6%. The same logic can also be applied to rates over the next six months and rates over six months in half a year. Those numbers imply that 6-month rates will increase from 2.43% in the middle of June to 3.88% in six months. In other words, if the yield curve is very steep at the short end, then the market expects the Fed to raise rates quickly.

Short-Term Nominal Rates Are Increasing; Real Rates Have Dropped

So, now that the Fed has started to act and is expected to continue to do so, are we in the clear? Not so fast. What matters for the decisions of individuals is the tradeoff between consumption today and consumption tomorrow. Specifically, what matters to investors saving, and to companies or individuals borrowing to invest or purchase a home, is the real interest rate. This is commonly approximated as the difference between the nominal interest rate—what the Fed sets—and the inflation rate.

By some measures, it is more attractive to borrow now than it was 12 months ago. In March 2021, inflation was equal to 2.6%, and interest rates out to a three-year maturity were all close to or below 0.3%. Assuming that inflation would continue at that rate, the real interest rate was -2.5% (the one-year rate was a bit below 0.1%). Today inflation is equal to 8.6%, while the one-year interest rate is equal to 3.15%, resulting in a much more negative real rate (assuming that current inflation is a good predictor of inflation over the next year). In other words, if mortgage rates are equal to 4%, but I think that my wages track inflation, which is equal to 6%, I am in better shape than if mortgage rates are equal to 2.5%, but I expect my wages to increase only by 2% a year. In the first case, the real interest rate that I face is -2%, while it is 0.5% in the second case.

Figure 1. Treasury Yield Curve



Note: Interest rates over various maturities from 1 month to 30 years.

Source: U.S. Department of the Treasury. Available at: <https://home.treasury.gov/>.

A key question, therefore, is if inflation will start coming down soon or if it will remain at the current level. If it comes down, and if interest rates increase at the same time, real interest rates will increase, the economy will slow down, and inflation will decline. But there is an important catch. This argument assumes that inflation will start declining somehow by itself. And, importantly, real interest rates will increase only if inflation decreases, at least assuming the current expected path of interest rates. If that does not happen, real interest rates will stay low and most likely negative, aggregate demand will not slow down, and inflation will remain high.

An often-used rule of thumb is John B. Taylor’s rule which implies that positive real rates are needed to bring inflation down. Thus, if rates are not increased very quickly, and above what the market currently expects, inflation will not come down, and real rates will continue to be negative, making it less likely that inflation will decline in the future.

Asset Purchases and Quantitative Easing

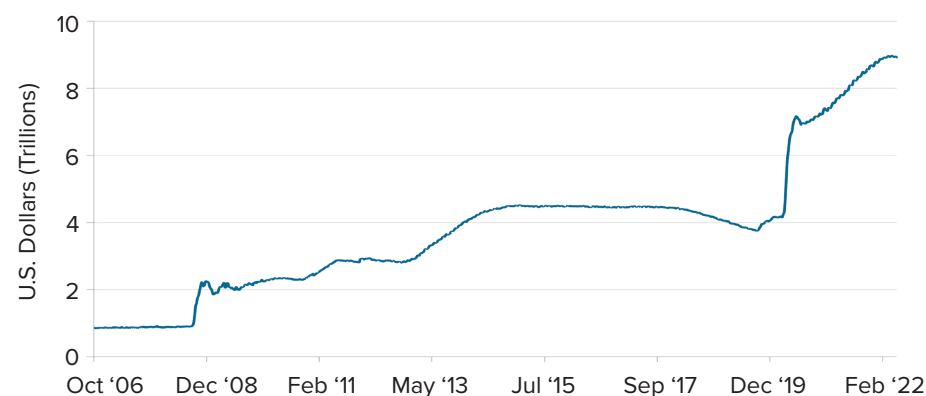
However, the Fed has another tool in its arsenal. When short-term rates hit zero after the collapse of Lehman Brothers in 2008, the Fed was unable

to decrease rates by more, an effect sometimes referred to as the ‘zero lower bound.’ Successive waves of quantitative easing, officially called ‘large-scale asset purchases,’ started. This is a policy whereby the Fed purchases longer-term fixed income securities such as long-term Treasury securities, federal agency debt, and mortgage-backed securities. These policies were designed to decrease long-term interest rates since they increase demand for, and thus the prices of, long-dated debt. As prices of bonds increase, the yield (the effective interest rate if held to maturity) of those bonds declines, thus leading to reductions in long-term market interest rates.

Figure 2 (on page 8) plots the total assets held by the Federal Reserve. The initial sharp increase happened only weeks after the collapse of Lehman Brothers in September 2008. In the following years, purchases continued. The Fed started to raise rates in December 2015; then, in 2018 and 2019, there was a steady decline in the assets held by the Fed. In early 2020, in response to COVID, there was another sharp increase.

In June 2022, the balance sheet of the Fed stood at \$9 trillion. For comparison, the 2020 U.S. GDP was close to \$21 trillion, while the total debt

Figure 2. Federal Reserve Total Assets, 2006–2022



Source: Federal Reserve. Available at: <https://fred.stlouisfed.org/>.

of non-financial corporations in the United States was \$7.4 trillion in 2021. Suffice it to say that this is a lot of debt.

Now that there is no longer any reason to support the economy, the Fed will unwind it—meaning that assets held will decline either by bonds reaching maturity or by the Fed actively selling them. Once that happens, the supply of debt will increase, the price will fall, and long-term interest rates will increase. At the same time, mortgage interest rates and companies' borrowing costs will increase in response. This second tool—selling off securities from a large balance sheet—has only been available since these assets were amassed starting in 2008. But the presence of these assets on the balance sheet does give the Fed a unique opportunity to raise rates both at the short and the long end of the yield curve simultaneously. Indeed, the 10-year interest rate has increased from 1.51% in June 2021 to 3.49% in June 2022 (see Figure 1), which, for such a long-dated bond, is a substantial change. Perhaps more importantly, the TIPS (Treasury Inflation Protected Securities) real interest rate, a proxy for the real interest rate over the next ten years, has increased sharply from -1% in March 2022 to 0.9% in June 2022. The last time this rate was positive was over two years ago.

But what will happen if the Fed sells much of its bond holdings and the interest rate on long-dated securities increases substantially? It will result in the Fed selling bonds at a loss, at least if the Fed decides not to hold the securities until maturity. The Fed will then have engaged in a buy high, sell low strategy which, even though it may be saving the economy, is potentially tricky to explain politically.

Indeed, raising short-term rates generally results in higher long-term rates, too. And herein lies a possible catch to the clear-cut path in front of the Fed. The potential for large losses on its balance sheet may be preventing the Fed from being more aggressive in raising short-term rates and not wanting to unwind its asset portfolio quickly. The Fed knows that raising rates quickly, selling off its assets, and bringing inflation under control will most likely result in substantial balance sheet losses that could then result in realized losses for the Fed. Not an enviable spot to be in, and one the Fed recognizes. A memorandum from 2009 states, "Holding a large portfolio of long-term securities exposes the Federal Reserve (and thus taxpayers) to appreciable capital losses if interest rates rise quickly as the economy recovers." Importantly, however, this difficulty does not alter the need for quick, decisive, and, at this point, overdue action.

Going forward we will all be watching short- and long-term interest rates as well as inflation very closely. Will short and long-term real rates increase quickly enough to make real rates positive and slow down the economy? Will aggregate demand decline sufficiently to bring inflation under control? Or are we in for a repeat of the 1970s when the Fed did not act decisively, inflation got out of control, and the economy had to endure a severe recession in the early 1980s with high real interest rates to reestablish price stability?

Suggested Citation:

Gafarov, Bulat and Jens Hilscher. 2022. "Too Little Too Late? The Two-Pronged Approach of the Federal Reserve." *ARE Update* 25(5): 6–8. University of California Giannini Foundation of Agricultural Economics.

Authors' Bios

Bulat Gafarov is an assistant professor and Jens Hilscher is an associate professor, both in the Department of Agricultural & Resource Economics at UC Davis. They can be reached at bgafarov@ucdavis.edu and jhilscher@ucdavis.edu, respectively.

For additional information, the authors recommend:

Hilscher, Jens, Alon Raviv, and Ricardo Reis. 2022. "Inflation Risks Are on the Rise." *ARE Update* 25(3): 9-11. University of California Giannini Foundation of Agricultural Economics. Available at: <https://bit.ly/3hfsKTD>.

Bhattarai, Saroj, Gauti B. Eggertsson, and Bulat Gafarov. 2015. "Time Consistency and the Duration of Government Debt: A Signalling Theory of Quantitative Easing." *NBER Working Paper No. 21336*. Available at: <https://bit.ly/39EAWw8>.