

On Long and Variable Lags in Monetary Policy



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Starting in March, the [Federal Open Market Committee](#) (FOMC) has raised the federal funds rate six times—from a range of zero to 0.25 percent, to a range of 3.75 to 4 percent. In June, the Committee began reducing the Fed's holdings of securities, shrinking the balance sheet, another tool to pull money out of the economy and thus slow inflation.

For numerous reasons, it is difficult to predict exactly when these policy moves will significantly reduce the inflation rate. I will discuss here one of the complicating factors that is especially salient, the "long and variable" lag between a monetary policy action and its impact on the economy, and on inflation in particular. As the [November FOMC statement](#) noted, for the first time in this policy tightening cycle, the Committee will consider lags as it determines the pace of future increases in the federal funds rate.

The funds rate is the interest banks charge one another for overnight loans from their reserves at the Federal Reserve. It influences rates lenders charge borrowers. The basic idea is that higher borrowing costs will slow overall demand in the economy, which in turn will reduce inflationary pressures.

That happens gradually. A large body of research tells us it can take 18 months to two years or more for tighter monetary policy to materially affect inflation. You may be wondering: Why does it take so long?

The US economy is a vast, complex ecosystem of interrelated forces. So, it takes businesses and consumers time to recognize, feel, and act on changes in financial conditions. For instance, firms are continually making capital investments that require financing. If a company has already started to build a factory or

introduce a new product line, it will often continue to move forward rather than halt the project in midstream, even though financing costs have changed since it launched the venture.

The bite comes for planned projects or expansions down the road; companies may be less likely to start these. Also, we know pricing decisions for many businesses not only hinge on current costs but are also what we call "sticky"—they don't change often even as economic conditions shift.

Both examples make clear that it can take many months for these decisions to affect the economy and prices.

To be sure, there is considerable uncertainty about how these policy lags will play out. We are still learning about an economy that is rapidly changing after an unprecedented global pandemic and other surprising events, such as the war in Ukraine, that shocked important economic sectors. In fact, one school of thought suggests that the lags may be shorter in part because of policy guidance that, in effect, allows financial markets to react to policy before we implement it. We tell them it's coming, so financial conditions in the marketplace begin changing in anticipation.

Still, monetary policy unquestionably works with a lag. So, we at the FOMC calibrate policy today knowing we won't see its full impact on inflation for months. In those circumstances, we must look to economic signals other than inflation as guideposts along our path.

Parts of the economy that are especially sensitive to interest rates, such as residential real estate, show the effects of monetary policy first. Indeed, the [latest data from the Bureau of Economic Analysis](#) tell us private residential fixed investment—mostly home buying—fell more than 25 percent in the third quarter at an annual rate. Recently, my staff and I have seen clues that tighter financial conditions may be pinching other sectors such as commercial real estate development and banking. By and large, though, it appears tighter money has not yet constrained business activity enough to seriously dent inflation.

Because today's inflation is a by-product of an imbalance between supply and demand, our job at the FOMC is to bring them into better balance. We will achieve this by attaining a monetary policy stance that is sufficiently restrictive to return inflation to our target. We are not there now, and so I anticipate that more rate hikes will be needed. How will I know when we are close to that mark?

I will need to see indicators of broad-based easing of inflation.

There are glimmers of hope. After the pace of increases in goods prices accelerated in every month but one for 19 months, it slowed in July, August, and September, the last three months for which data are available, according to the [Personal Consumption Expenditures price index](#), the FOMC's preferred inflation gauge.

We will need to see increases in services prices slow, too. So far, we haven't. The PCE price index shows the pace of monthly increases in services prices ticked up in three of the past four months.

One key to easing pressures on services prices will be a better balance between demand and supply in labor markets because most service industries are labor intensive. There, recent evidence is mixed. Despite some declines in the huge number of job vacancies, the labor market remains tight as openings still far exceed the number of job seekers. That creates upward pressure on wages.

Right now, job number one for the FOMC is to tame inflation that is unacceptably high. If high inflation persists for too long and becomes entrenched in the economy, we know that more prolonged and deeper economic pain will ensue. So, while there are risks that our policy actions to tame inflation could induce a recession, that would be preferred to the alternative.

But, as I noted in [recent remarks](#), a recession is not a foregone conclusion, and we will try to avoid one if at all possible. And there are many scenarios in which a recession, if it does occur, could turn out to be mild by historical standards.

Once we reach the appropriately restrictive policy stance to tame inflation, I think our course of action is clear. As I explained in [this October speech](#), the FOMC will need to maintain this stance until we see convincing evidence that inflation is firmly on track toward our 2 percent objective.