# The Complications of Liftoff

BY JOHN M. BERRY

The Federal Reserve's struggle to normalize interest rates.

he Federal Reserve's target for overnight interest rates has been held close to zero for almost seven years. Now, with the nation's unemployment rate around 5 percent and the economy growing modestly, most of the central bank's Federal Open Market Committee had signaled by mid-November that they were ready to raise the federal funds rate target when they met in December. As most investors accepted that likelihood, the financial market's attention turned to what would happen next.

Several Fed officials, including Chair Janet L. Yellen and Vice Chairman Stanley Fischer, have said repeatedly that they expect the path of rates to rise very gradually. Several others on the FOMC, such as Esther L. George, president of the Kansas City Federal Reserve Bank, who wanted rates to go up long ago, clearly would prefer a much steeper trajectory. So the sharp disagreements within the committee over when the "lift off" should occur aren't going to go away just because it has happened.

In September, when FOMC participants last estimated where they thought the "appropriate pace of policy firming" would leave the fed funds rate target at the end of next year, the answers were all over the lot. One said the target should still be close to zero a year from now. Another said nearly 3 percent. Eight estimated between 1 and 1.5 percent, and the remaining seven fell between about 1.75 percent and 2.5 percent.

At the subsequent FOMC meeting in October, the Fed Board staff presented the results of extensive research directly related to that policy path. The research strongly indicated that it would take much lower interest rates than prior to the financial crisis to slow economic growth.

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And that in turn suggested the more aggressive rate trajectories could wreak havoc with the relatively modest amount of growth most of the policymakers expect over the next couple of years.

According to the FOMC minutes, the research showed that the level of the overnight interest rate adjusted for inflation-that is consistent with full employment and stable inflation is now is close to zero. This real rate, first described in the late nineteenth century, is known as the "natural rate."

The nominal fed funds rate is just above zero, and the inflation rate the Fed targets, the core personal consumption expenditure price index, is rising at an annual rate of a little less than 1.5 percent. That means that the real fed funds rate is roughly a negative 1.5 percent. With the natural rate around zero, that negative 1.5 percent difference is one measure of how much stimulus Fed policy is providing to the economy. It will diminish, of course, as the nominal rate target increases.

A key problem with this analysis is that the natural rate cannot be measured directly. It can only be estimated indirectly using econometric techniques. Nevertheless, there is broad agreement that it currently is around zero. At a Brookings Institution seminar just after the October FOMC meeting, John C. Williams, president of the San Francisco Federal Reserve Bank and formerly an economist at the Fed Board, and Thomas Laubach, director of the Board's Division of Monetary Affairs, released the latest results of research they have been doing on the natural rate since 2003. Their conclusion: After the start of the Great Recession, the estimated natural rate of interest fell sharply and shows no sign of recovering to its earlier level.

At a Cato Institute conference in mid-November, Jeffrey M. Lacker, president of the Richmond Fed, agreed. "At this point, he said, "there is a fair amount of uncertainty around common estimates, but most estimates of the natural rate of interest in the United States have clustered at or just above zero."

All the analyses, including one described in another paper presented at the Brookings seminar, concluded that the natural rate has changed significantly over extended periods of time. Shortly after the crisis hit, it plummeted

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to below zero. With the actual nominal Fed rate target unable to fall below zero, this meant that the central bank couldn't reduce its fed funds target far enough to give the economy the boost needed to spark a strong recovery. That reality was one reason why the Fed turned to some extraordinary measures, such as the large-scale purchases of government and mortgage-backed securities, to reduce longer-term interest rates. The gradual economic recovery likely is one reason the natural rate estimate has moved back up to zero, and some Fed officials, including Yellen, say it probably will continue to rise in coming years. But no one can be fully sure of that, or if it does move higher how quickly it might do so.



## **Defining "Gradual"**

**T**ed Chair Janet Yellen believes that some of the forces that have kept inflation so far below the central bank's target will dissipate in 2016 as the FOMC raises the fed funds rate "at a quite gradual pace over the next few years." At the same time, like Evans, she said that persistent very low inflation could unanchor expectations and make it harder to achieve the inflation goal. Last year, Yellen observed that expectations "well anchored near 2 percent [will] provide a natural pull back to that level. But the strength of that pull in the unprecedented conditions we continue to face is something we must continue to assess."

—J. Berry

Fed Chair Janet Yellen

In a column published on the website of the Center for Economic and Policy Research late last month, Williams further said that not just the natural rate but real rates in general may remain exceptionally low.

"While an unequivocal answer is not possible with the information at hand, the evidence suggests a significant decline in the trend in real interest rates. And there is little, if any, sign of a return to a more normal trend. Taken together, this evidence suggests that it is likely that the trend in real short-term interest rates is lower than it was in previous decades, with the possibility that it may even have fallen below 1 percent," Williams wrote.

It's hardly surprising that Yellen, Fischer, Williams, and some others on the FOMC want to raise the nominal fed funds target only very slowly after the liftoff. If the natural rate is zero, and inflation does not pick up, policymakers might not want to see the nominal overnight rate higher than, say, 1 percent or 1.5 percent unless they want seriously to restrain economic growth. If the inflation measure were moving up toward the Fed's 2 percent goal, perhaps the nominal overnight rate target should be somewhat higher, perhaps also 2 percent or a bit more, according to this analyses.

But the core PCE inflation rate has stayed stubbornly low. It has increased at only a 1.4 percent annual rate over the past seven years. A policy path showing the fed funds target rising to roughly a range of 2 percent to 3 percent by the end of 2016, which was favored by five of the FOMC participants at the September meeting, seems too aggressive in light of the new research. Getting to those levels of rates would require a quarter-point rate hike at each of each meeting through the end of next year, with perhaps a couple of half-point increases thrown in.

Most on the committee, however, did indicate in the September projections that they expect economic growth to accelerate somewhat next year. According to the Bureau of Economic Analysis, the gross domestic product increased 2.2 percent in the year ended in September. Estimates by FOMC participants for the change over the four quarters of 2016 ranged from 2.1 percent to 2.8 percent. Most officials also expected the core PCE price index to rise between 1.5 percent and 1.8 percent, with one or two saying it could be as high as 2.4 percent. Finally, by the fourth quarter of next year, unemployment was expected to remain around 5 percent or perhaps fall to 4.5 percent.

This whole process of lifting the overnight rate target for the first time in seven years is called "normalization." That is, keeping the target at a rock bottom level is hardly what one would call normal. But in many ways, the U.S. economy—indeed, the world economy—is hardly normal even after seven years of a sometimes halting recovery and expansion. Interest rates in Japan and Europe are at or near rock-bottom levels. Growth has slowed in China, as well as

in many emerging market nations. Some previously strongly growing countries, including Brazil and Russia, are in serious recessions. And the collapse of world oil prices has hurt Canada and oil-exporting nations in the Middle East, Africa, and South America. This faltering growth has knocked down most commodity prices. All these developments have fed back on the United States via an increase in the value of the dollar, which is now the strongest it has

### There could still be some miscues.

been in a dozen years. That makes American exports more costly, reducing demand for them; indeed, world trade overall has declined.

On top of everything else, the terrorist attacks in Paris and elsewhere that have spread fear and even panic in many places could well have a further depressing effect on consumer spending and other economic activity.

Charles L. Evans, president of the Chicago Fed, gave a speech in mid-November entitled, "A Cautious Approach to Monetary Normalization," in which he mentioned many of these issues. In it, he noted that the Fed was close to achieving its maximum sustainable employment goal but that he is "far less confident about reaching our inflation goal within a reasonable time frame." Most of his FOMC colleagues expect core PCE inflation to come close to the 2 percent target by the end of 2017, but he doesn't expect that to happen until a year later. As a result, he would prefer not to begin to raise rates until inflation does begin to rise—in other words, to delay liftoff until later. He is a voting member of the committee this year, but he signaled that he would not dissent if a majority wants to go ahead this month.

"While I favor a somewhat later liftoff than many of my colleagues, the precise timing for the first increase in the federal funds rate is less important to me than the path the funds rate will follow over the entire policy normalization process," Evans said. "After all, today's medium- and longer-term interest rates depend on market expectations of the entire path for future rates, not just the first move." With that in mind, he added, "I think it could well be appropriate for the funds rate to still be under 1 percent at the end of 2016."

Meanwhile, Williams is also a voting member, but he too indicated at the Brookings seminar that he was prepared to go along with those who favor a December liftoff.

Evans probably is the most dovish among those on the FOMC except perhaps for Narayana Kocherlakota at the Minneapolis Fed, who has resigned effective at the end of 2015. Nevertheless, the path for policy implied by the fed

funds futures market in late November was more in line with Evans' preferences, not those of most of the committee. One way to interpret that is that investors and some analysts are less optimistic about the economy's performance next year than most Fed officials.

For example, F. Ward McCarthy of Jefferies Group told his clients last month, "When the FOMC does liftoff, we expect that they will provide guidance about a very low trajectory for the future path of the fed funds rate. We do not expect another hike before June 2016 and by the end of the year we expect the funds rate target range to be 0.75-1.00 percent."

Chicago Fed President Evans also made another important analytical point about controlling inflation: Historically the Fed and other central banks have built their credibility by taking actions to hold inflation when it threatened to rise too high. "Today, policy needs to defend our inflation target from below," he said. "This is necessary to validate our claim that we aim to achieve our 2 percent inflation target in a symmetric fashion. Failure to do so may weaken the credibility of this claim. The public could begin to mistakenly believe that 2 percent inflation is a ceiling and not a symmetric target. As a result, expectations for average inflation could fall, lessening the upward pull on actual inflation and making it even more difficult for us to achieve our 2 percent target."

Actually, it may be that more than a few FOMC participants do think of 2 percent as a ceiling. Certainly plenty of Fed critics do so.

In a September speech, Yellen said she believes that some of the forces that have kept inflation so far below the central bank's target will dissipate in 2016 as the FOMC raises the fed funds rate "at a quite gradual pace over the next few years." At the same time, like Evans, she said that persistent very low inflation could unanchor expectations and make it harder to achieve the inflation goal. Last year, Yellen observed that expectations "well anchored near 2 percent [will] provide a natural pull back to that level. But the strength of that pull in the unprecedented conditions we continue to face is something we must continue to assess."

Whenever liftoff occurs, operationally it is going to be a much more complicated matter than in the past. Prior to the crisis, the Fed controlled the fed funds rate by varying

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the amount of reserves—essentially cash—in the banking system as a whole over two-week periods. Officials estimated how many reserves banks collectively were required to hold and always kept the total available somewhat less than that. At the margin, therefore, some institutions were short and had to borrow overnight from others who had excess reserves or directly from a Fed bank. The interest rate paid on the borrowed money was the fed funds rate. When the Fed needed to add more cash to keep the rate from rising, they did so by buying government securities from private dealers who deposited the cash in banks. When cash had to be withdrawn, the process was reversed.

But during the crisis financial markets ceased to function normally and reserves weren't traded. In response, the Fed got Congress to remove a Depression-era prohibition on paying interest on reserves. That allowed the Fed to compensate banks to hold excess reserves. Today they hold about \$2.5 trillion worth on which the Fed pays one-quarter of a percent in interest. The old approach of keeping the system slightly short of reserves can't work now.

So the first step in increasing the funds rate will be raising the quarter-point interest paid on excess reserves. For a number of technical reasons, that alone won't do the job. For instance, government-sponsored enterprises such as Fannie Mae, the Federal Home Loan banks, and some other institutions have accounts at Federal Reserve banks but cannot earn interest on them. And money market mutual funds, which cannot have Fed accounts at all, hold huge amounts of highly liquid short-term investments that affect overnight rates. So the Fed has been experimenting with a new mechanism to extend its influence over the rates. For years the Fed has traded securities known as repurchase and reverse repurchase agreements as part of the process of adding or subtracting cash from the banking system. The institutions which cannot get interest on their Fed bank accounts nevertheless regularly do trade in these securities

What is new is that, in the past, market conditions have determined the interest rates on these transactions. But the Fed has been experimenting instead with setting the interest rate. That way it effectively puts a floor under overnight rates received by money market mutual funds and that other entities can get when they invest cash overnight.

For all the preparations, though, there could still be some miscues as the Fed, the banks, the money market funds, and securities dealers all learn how to adapt themselves to this new regime. Meanwhile, investors everywhere will still be trying to divine how fast Fed policymakers will choose to raise rates while the policymakers with their differing views still struggle to reach a consensus. Given the continuing uncertainties, including the apparent level of the natural rate and the persistence of low inflation, they shouldn't be in a rush.