

**Improving the Outlook with Better Monetary Policy\***

**Market Technicians Association  
Minneapolis, Minnesota  
April 16, 2013**

**Narayana Kocherlakota  
President  
Federal Reserve Bank of Minneapolis**

---

\* I thank Dave Fettig, Terry Fitzgerald, Rob Grunewald, Brian Holtemeyer and Kei-Mu Yi for their help with these remarks.

Thank you for that generous introduction, and thank you for the invitation to join you here today. It's a pleasure to be here and to share my thoughts on the prospects for the economy and the role of monetary policy going forward. But as you will hear in a minute, I am also interested in your thoughts on the state of the economy and in your questions about Federal Reserve policy. So I look forward to our discussion following my talk.

In my remarks today, I'll first provide some background about the Federal Reserve. I'll then describe the current stance of monetary policy. I'll discuss the macroeconomic outlook for the next couple of years implied by that monetary policy stance. Finally, I'll offer my assessment of the appropriateness of monetary policy in light of that outlook.

But first—a disclaimer. I'm one of the 19 people who have the privilege and honor to participate in the meetings of what's called the Federal Open Market Committee. FOMC meetings shape the course of monetary policy in the United States. But it's very important to understand that my remarks today are only my views and not necessarily those of any other FOMC participant.

### **Federal Reserve Structure**

Let me begin with some basics about the Federal Reserve System. The Federal Reserve Bank of Minneapolis is one of 12 regional Reserve banks that, along with the Board of Governors in Washington, D.C., make up the Federal Reserve System. Our bank represents the ninth of the 12 Federal Reserve districts and includes Montana, the Dakotas, Minnesota, northwestern Wisconsin and the Upper Peninsula of Michigan.

Eight times per year, the Federal Open Market Committee—the FOMC—meets to set the path of short-term interest rates over the next six to seven weeks. All 12 presidents of the various regional Federal Reserve banks—including me—and the seven governors of the Federal Reserve Board contribute to these deliberations. However, the Committee itself consists only of the governors, the president of the Federal Reserve Bank of New York and a rotating group of four other presidents. I won't be on the Committee in 2013, but will be next year. In this way, the structure of the FOMC mirrors the federalist structure of our government, because representatives from different regions of the country—the various presidents—have input into FOMC deliberations.

Congress requires the FOMC to make monetary policy so as to fulfill two mandates: promote price stability and promote maximum employment. Promoting maximum employment means that the Fed is charged with doing what it can to ensure that Americans who want to work can do so. Promoting price stability means that the Federal Reserve is charged with keeping inflation close to a pre-specified target. Price stability ensures that, when people write contracts in terms of dollars like student loans or annuities, they can have certainty about what those dollars will be able to buy in the future.

Now, in describing price stability, I've made reference to a pre-specified target for inflation. I haven't said what the pre-specified inflation target is. In choosing its inflation target, the FOMC weighed the costs of overly high inflation against the need to guard against potentially destructive deflationary spirals. This assessment has led the FOMC to choose an inflation target of 2 percent. Similarly, most central banks around the world have opted for a low but still positive inflation target.

The FOMC acts to achieve its two mandates—maximum employment and price stability—by influencing interest rates through the purchase and sale of financial assets. When the FOMC raises interest rates, households and firms tend to spend less and save more. The fall in spending puts downward pressure on both employment and prices. Similarly, when the FOMC lowers interest rates, households and firms tend to spend more and save less. This puts upward pressure on employment and prices.

However, these pressures on employment and prices from lower interest rates are not felt immediately. Instead, it typically takes a year or two for the effects of monetary policy adjustments to manifest themselves in inflation and unemployment. Hence, the FOMC's decisions about appropriate monetary policy necessarily hinge on the members' forecasts of the evolution of prices and employment over the next year or two—what we typically call our *medium-term* outlooks for inflation and unemployment. I'll discuss the interaction between my outlook and appropriate policy later in my remarks.

### **Current Stance of Monetary Policy**

With that as background, let me move on to describe the current stance of monetary policy. The change in monetary policy over the past five years has been dramatic. At the end of 2007, the Federal Reserve had less than \$900 billion of assets, mostly in the form of short-term Treasuries. It was targeting a fed funds rate—the short-term interbank lending rate—above 4 percent. As of now, the Federal Reserve owns over \$3 trillion of assets, mostly in the form of long-term government-issued or government-backed securities. The Fed is currently targeting a fed funds rate of under a quarter percent.

Both of these changes in the stance of policy are designed to put upward pressure on employment and prices. In particular, the near-zero fed funds rate pushes downward on the interest rate that businesses and households can earn by saving money and downward on the interest rate to borrow money. These low interest rates encourage households to consume today rather than saving to consume in the future. Similarly, firms are encouraged to engage in capital expenditure rather than saving. This higher demand for consumption and investment pushes upward on both prices and employment.

Similarly, the Fed's holdings of long-term assets mean that the private sector as a whole is less exposed to the interest rate risk that's embedded in long-term investments. As a result, some private investors will demand a lower premium for holding other bonds that are exposed to interest rate risk, which puts downward pressure on other long-term yields. Again, faced with these lower yields, households and businesses should be more willing to spend now rather than later.

I've described the Fed's current policy actions. But the impact of monetary policy on the macroeconomy also depends critically on the private sector's beliefs about the Fed's *future* actions. To take an obviously hypothetical extreme: Suppose the private sector believed today that the Fed would return permanently to its 2007 policy stance at its June meeting. Then, the macroeconomic impact of the Fed's highly accommodative stance over the next couple of months would be negligible.

For this reason, the Federal Open Market Committee has gone to great lengths to provide what's called "forward guidance"—communication to the public about the likely future evolution of its monetary policy decisions. Thus, the Committee is currently buying \$85 billion

of long-term assets each month. It has provided forward guidance about its future plans for asset purchases by saying that it intends to continue these asset purchases until there is substantial improvement in the labor market outlook. As Chairman Bernanke indicated in his recent press conference, the rate of these purchases may well vary in response to information about economic conditions.

The Committee has provided even more precision to the public about the likely future path of the fed funds rate. In its December statement, the FOMC announced that it anticipated keeping the fed funds rate at its current extraordinarily low level at least until the unemployment rate fell below a threshold of 6.5 percent, as long as the medium-term inflation outlook remained below 2.5 percent and longer-term inflation expectations remained well anchored. The unemployment rate is currently 7.6 percent, and most private sector forecasters see the unemployment rate staying above 6.5 percent well into 2015. The FOMC's communication tells the public that it should expect the fed funds rate to stay extraordinarily low over that same time frame, and possibly longer.

I was delighted by the FOMC's decision to offer this degree of precision about its forward guidance. I think that one important benefit of this kind of language is that it tells the public how the stance of monetary policy will evolve in response to changes in economic conditions. Thus, if the unemployment rate falls more slowly than expected, and the inflation outlook remains subdued, the fed funds rate will be extraordinarily low for a longer period of time. If the unemployment rate falls more rapidly than expected, the fed funds rate will be extraordinarily low for a shorter period of time. In this way, the FOMC has assured the public that the stance of monetary policy will automatically adjust in an appropriate fashion to the

evolution of macroeconomic conditions. This automatic adjustment is an important benefit of the Fed's thresholds.

I should be clear about a couple of aspects of the thresholds. First, the unemployment rate threshold is not a *trigger* for FOMC action. Thus, the FOMC may choose not to raise interest rates when the unemployment rate falls below 6.5 percent. Second, I see the FOMC's guidance as providing a great deal of protection against undue inflationary pressures. In particular, the commitment to keep interest rates extraordinarily low is off the table if the medium-term inflation outlook ever rises above 2.5 percent. I'll have more to say about this inflation protection later in my remarks.

### **My Two-Year Outlook**

I've described the Fed's current monetary policy stance in some detail, and I've emphasized that the Fed's stance is much more accommodative than it was five years ago. That observation alone might suggest that the Fed's policy is *too* accommodative. But there have been big changes in the economy since 2007. Over the past five years, Americans have lost jobs and a great deal of wealth. Relative to 2007, people remain uncertain about future employment and income. Businesses, too, are less certain about future demand for their goods. These changes and uncertainties make firms and households less willing to spend than in 2007, and so push downward on both employment and prices. This means that, in order to fulfill its dual mandate of promoting price stability and maximum employment, it is appropriate for the FOMC to adopt a more accommodative monetary policy than in 2007. So, the right question is a more subtle one: Is the FOMC overresponding to the changes in the economy since 2007 by providing too much accommodation?

As I noted earlier, the impact of monetary policy on the macroeconomy unfolds only slowly, over the course of a year or two. Hence, my answer to this question about whether the FOMC is providing too much accommodation depends on my outlook for the economy over the next year or two. With that in mind, I'll turn now to describing that outlook, placed in the context of the evolution of the macroeconomy over the past five years. Let's start by looking back at the evolution of national output—as measured by gross domestic product adjusted for inflation (real GDP). As you can see in this chart, national output fell dramatically during 2008 and the first half of 2009. Since the middle of 2009, the national economy has recovered, but only at a moderate rate.

Given the sluggish recovery in national output, it is not surprising that labor markets are also healing slowly. This next chart shows the behavior of the unemployment rate over the past five years. The unemployment rate, which was 5 percent in December 2007, reached 10 percent in the second half of 2009 (October). As of March 2013, the national unemployment rate is at 7.6 percent.

Finally, this next chart shows that inflation has also run below the Federal Reserve's 2 percent target. Over the past five years, the personal consumption expenditure (PCE) price index has grown at an average annual rate of 1.6 percent. Here, I should emphasize that the PCE price index is an index that includes *all* goods and services, including food and energy. So, I'm not talking about so-called core inflation—I'm talking about what's called headline inflation.

That's a brief review of the past five years. Real output has recovered only slowly from the depths of the 2007-09 recession. Unemployment remains well above 2007 levels. Inflation has averaged below the Fed's target.



With that review as background, let me turn to my macroeconomic outlook for the next couple of years. That outlook is predicated on the assumption that the FOMC's monetary policy choices over the next few years will be consistent with the forward guidance about asset purchases and the fed funds rate that the FOMC provided in its March statement. With that assumption about policy, my outlook for the next two years can be summarized as being an ongoing modest recovery. Let me quickly go through the charts again, only this time I will add my forecasts. I see output continuing to grow slowly—at around 2.5 percent in 2013 and around 3 percent in 2014. I expect unemployment to continue to fall only slowly, down to around 7.5 percent in late 2013 and around 7 percent in late 2014. This level of unemployment will continue to constrain wage growth. Consequently, inflation pressures will remain subdued, as I expect PCE inflation to be only 1.6 percent in 2013 and 1.9 percent in 2014.

### **Using the Macroeconomic Outlook to Assess the Appropriateness of Monetary Policy**

I've described my macroeconomic outlook for 2013 and 2014. Let me turn now to discussing how that outlook informs my judgment about monetary policy. As you will hear, my main conclusion is that my outlook implies that monetary policy is currently not accommodative enough.

Recall that the FOMC has a 2 percent inflation target. I do see inflation eventually returning to that 2 percent target under the FOMC's current forward guidance. But I expect a slow rate of progress. As I've said, I anticipate that, conditional on the FOMC's current forward guidance, the PCE inflation rate will be only 1.6 percent in 2013 and 1.9 percent in 2014. The FOMC could facilitate a faster return of the PCE inflation rate to the 2 percent target—that is,

better promote price stability as mandated by Congress—by adopting a more accommodative monetary policy that puts more upward pressure on prices.

In reaching this conclusion that monetary policy should be more accommodative, I've only made reference to the price stability mandate. As I described earlier, the FOMC has a second mandate: to promote maximum employment. In March, most of the 19 FOMC participants believed that the unemployment rate will converge to a level between 5.2 percent and 6 percent within five to six years. But, under the current formulation of monetary policy, I see the rate of convergence to this long-run rate as likely to be slow. In particular, I expect that the unemployment rate will still be close to 7 percent by the end of 2014. The FOMC could facilitate a faster return of the unemployment rate to its lower long-run level by adopting a more accommodative monetary policy that puts more upward pressure on employment. Thus, I would say that my outlook for unemployment and my outlook for inflation both point to a need for more accommodation than is currently being provided by the FOMC.

### **One Way to Provide More Monetary Accommodation**

Based on my outlook for the next two years, I've concluded that the FOMC would better fulfill both of its congressional mandates by adding more monetary policy accommodation. How could it do so? I think that there are several possible approaches available to the Committee. For example, the FOMC could reduce the public's level of policy uncertainty by clarifying the nature of the economic conditions that would lead the Committee to reduce or stop its current asset purchases. Alternatively, the Committee could communicate to the public that, once the removal

of monetary accommodation eventually commences, the rate of withdrawal will be slower than is currently anticipated.

Both of these kinds of changes in communication could potentially provide needed monetary accommodation. However, they would require the FOMC to make relatively complex changes to the language of its current communications. My own preferred approach is considerably simpler. In its current forward guidance, the FOMC has stated that it expects the fed funds rate to remain extraordinarily low at least until the unemployment rate falls below 6.5 percent. The FOMC could provide additional needed stimulus by lowering the threshold unemployment rate from 6.5 percent to 5.5 percent—that is, by changing one number in the existing statement.

To see why I say so, consider two possible scenarios. In the first, the public believes that the FOMC will begin raising the fed funds rate once the unemployment rate hits 6.5 percent. (To be clear: This belief is consistent with, but not necessarily implied by, the FOMC's current forward guidance.) In the second, the public believes that the FOMC will defer the initial increase in the fed funds rate until the unemployment rate hits 5.5 percent. The higher unemployment rate in the first scenario means that monetary policy will be tightened sooner, which, in turn, will lead to the unemployment rate being higher for longer. Foreseeing that, people will save more in the first scenario than in the second, to protect themselves against these higher unemployment risks. Because they save more, they spend less, and there is less economic activity.<sup>1</sup>

---

<sup>1</sup> See Werning (2012, sections 4.2 and 5) for an extensive discussion of this mechanism.

Thus, lowering the unemployment rate threshold to 5.5 percent would increase the demand for goods and thereby push upward on both employment and prices. Would this extra monetary stimulus result in an undue amount of inflation at some point in the future? Here, I find the recent historical evidence to be comforting. The following chart documents that the medium-term inflation outlook has not risen above 2¼ percent in the past 15 years, even though the unemployment rate was at times below 5 percent.<sup>2</sup> To me, this historical evidence suggests that, as long as the unemployment rate remains above 5.5 percent, the medium-term inflation outlook will stay close to 2 percent.

The past is never a perfect guide to the future, of course. But I see the Committee's estimates of *future* long-run unemployment as also being consistent with this historical evidence. Most FOMC participants expect that, over the long run, an unemployment rate of between 5.2 percent and 6 percent is consistent with an inflation rate of 2 percent. These estimates suggest that, as long as the unemployment rate remains above 5.5 percent, wage pressures will not be sufficiently strong to generate a medium-term inflation outlook much in excess of 2 percent.

Of course, these are estimates based on what we know now about current labor market conditions. The FOMC's estimates of the unemployment rate consistent with maximum employment could evolve over time, in response to new information and new analyses. This is why the FOMC's current forward guidance contains what I see as strong protection against undue inflation. As I described earlier, that guidance clearly states that the Committee's

---

<sup>2</sup>For the period 1997-2006, the chart depicts the medium-term outlook for PCE inflation prepared for December FOMC meetings by Federal Reserve staff (Greenbook). Beginning in 2007, FOMC participants released summary information about their projections for inflation conditioned on their individual assessments of appropriate policy. The chart depicts the midpoint of the central tendency of those medium-term outlooks (summary of economic projections, or SEP) for inflation from the fourth quarter of each calendar year.

commitment to a low fed funds rate is off the table if the medium-term inflation outlook ever rises above 2.5 percent.

I've said that I see it as unlikely that this inflation threshold would be breached, even if the Committee were to lower the unemployment threshold to 5.5 percent. Conversely, I would see a breach of this threshold as being a cause for significant concern. We have not seen a medium-term outlook for inflation as high as 2.25 percent over the past 15 years. In that context, a medium-term outlook of 2.5 percent or more should be seen as being highly unusual. In my view, such an unusually high inflation outlook should lead the FOMC to strongly consider an aggressive response.

## **Conclusions**

Monetary policy affects the economy with a lag of one or two years. Hence, a policymaker's views about the appropriate level of monetary policy accommodation depend on his or her forecast for how the economy will evolve over the next year or two. My outlook for inflation and unemployment implies that the FOMC should provide more monetary accommodation. The FOMC could provide that additional accommodation in several different ways. In my remarks today, I've described one particularly simple approach: lowering the unemployment rate threshold in the Committee's forward guidance to 5.5 percent from the current setting of 6.5 percent.

Some might be concerned that this move would give rise to undue inflationary pressures. I see that possibility as unlikely—and, even if I'm wrong in my assessment, the Committee's forward guidance provides tight inflation safeguards.

Thanks for listening, and I look forward to taking your questions.

## Reference

Werning, Iván. 2012. "[Managing a Liquidity Trap: Monetary and Fiscal Policy](#)." Working paper. Massachusetts Institute of Technology.