

Making Monetary Policy¹

Narayana Kocherlakota
President
Federal Reserve Bank of Minneapolis

Sidney, Montana
October 13, 2011

¹ I thank Doug Clement, David Fetting, Terry Fitzgerald and Kei-Mu Yi for very helpful comments.

Thank you for that generous introduction, John. As Paul Drake described earlier, the board of directors of the Helena Branch of the Federal Reserve Bank of Minneapolis is meeting here in Sidney to commemorate John Franklin's last meeting as a member of that board. I would like to take this opportunity to publicly thank John for his generous service to the Federal Reserve, as well as other members of the board, past and present. It is important for people to realize that the Federal Reserve is represented by dedicated citizens like John and his colleagues on all of the System's bank and branch boards. In addition, each Federal Reserve bank has a number of advisory councils representing Main Street businesses, agricultural producers, labor groups and community banks and thrifts, among other constituencies. As I will describe later, the input from these citizens plays an important role in the development of monetary policy. So thank you, once again, to John and the rest of the Helena board of directors, as well as others in the audience who have served us so well.

I'd also like to offer congratulations, on behalf of myself and the Federal Reserve Bank of Minneapolis, to Thomas Sargent and Christopher Sims, winners of the 2011 Prize in Economic Sciences in Memory of Alfred Nobel. In the 1970s, in separate research, Sargent and Sims developed systematic approaches to distinguishing between cause and effect in macroeconomic data. Now, almost 40 years later, their thinking informs the making of macroeconomic policy around the world. I'm especially proud that much of the work recognized by the prize committee was done at the Federal Reserve Bank of Minneapolis and the University of Minnesota. My predecessors at the Federal Reserve Bank of Minneapolis deliberately fostered a research environment that could give rise to such important work, and this tradition continues today.

In the rest of my remarks today, I'd like to touch on several topics. I'll begin with a quick description of the structure of the Federal Reserve System and the deliberative process of the Federal Open Market Committee, the Fed's policymaking group. Then I'll describe the FOMC's objectives and discuss its recent performance with regard to those objectives. I'll close with a discussion of my dissents on recent FOMC decisions. After that, I'll be pleased to answer any questions you may have. And before I begin, I should remind you that my comments here today reflect my views alone and not necessarily those of others in the Federal Reserve System, including my FOMC colleagues.

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 by area, we're the second largest—thanks in no small part to the great state of Montana. Our district also includes the Dakotas, Minnesota, northwestern Wisconsin and the Upper Peninsula of Michigan.

Eight times per year, the FOMC meets to set the path of monetary policy 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, including Chairman Bernanke, contribute to these deliberations. (Currently, there are only five governors—two positions are unfilled.) However, the Committee itself consists only of the governors, the president of the Federal Reserve Bank of New York and a group of four other presidents that rotates annually. Right now, that last group consists of the presidents from the Minneapolis, Philadelphia, Dallas and Chicago Federal Reserve Banks.

I've said that the FOMC meets (at least) eight times per year. But how do these meetings work? At a typical meeting, there are two so-called go-rounds, in which every president and every governor has the opportunity to speak without interruption. The first of these is referred to as the economics go-round. It is kicked off by a presentation on current economic conditions by Federal Reserve staff economists. Then, the presidents and governors describe their individual views on current economic conditions and their respective outlooks for future economic conditions. The presidents typically start by providing information about their district's local economic performance. We get that information from our research staffs, but also from our interactions with business and community leaders in industries and towns from across our districts.

The chairman speaks at the end of the first go-round. He briefly but thoroughly summarizes the preceding 16 perspectives. I can assure you that this is no easy task—and the chairman's balanced and thoughtful treatment of our remarks is one of the many reasons that he commands such respect among his colleagues. He then provides his own views on the economy.

The Committee next turns to the second go-round, which focuses on policy. Again, the staff begins, with a presentation of policy options. After that, each of the 17 meeting participants has a chance to speak on what each views as the appropriate policy choice. This set of remarks is followed with a summary by the chairman, in which he lays out what he sees as the Committee's consensus view for future policy. The voting members of the FOMC then cast their votes on this policy statement and thereby set monetary policy for the next six to seven weeks.

I think that this description of an FOMC meeting highlights how the structure of the FOMC mirrors the federalist structure of our government. Representatives from different regions of the country—the various presidents—have input into FOMC deliberations. And, as I've described, their input relies critically on information received from district residents. In this way, the Federal Reserve System is deliberately designed to give the residents of Main Street a voice in national monetary policy.

I've said that FOMC participants seek to adopt what they view as the appropriate policy choice. That provides a natural segue into my next topic: the policy objectives of the FOMC. The FOMC has a dual mandate, established by Congress: to set monetary policy so as to promote price stability and maximum employment. In my view, the heart of implementing the price stability mandate is to formulate and communicate an objective for inflation. The central bank then fulfills its price stability mandate by making choices over time so as to keep inflation close to that objective.

Of course, the central bank's job is complicated by economic shocks that may lower or raise inflationary pressures. The central bank provides additional monetary accommodation—like lower interest rates—in response to the shocks that push down on medium-term inflation. It reduces accommodation in response to the shocks that push up on inflation. By doing so, it works to ensure that inflation stays close to its objective.

It is not enough to have an objective—the Federal Reserve must also communicate that objective clearly and credibly. That communication serves to anchor the public's medium- and long-term inflationary expectations. Put another way, without clear communication of objectives, the public can only guess at the intentions of the FOMC, and inflationary

expectations and inflation itself will inevitably end up fluctuating—and perhaps by a lot. It is possible to undo these shifts in expectations, but doing so entails significant economic cost. The nation saw this all too clearly in the early 1980s, when tighter monetary policy necessary to rein in high inflation resulted in painful employment losses.

The Federal Reserve communicates its objective for inflation in a number of ways. For example, at quarterly intervals, FOMC meeting participants publicly reveal their forecasts for inflation five years hence, assuming that monetary policy is optimal. Those forecasts usually range between 1.5 percent and 2 percent per year. They are often collectively referred to by saying that the Federal Reserve views inflation as being “mandate-consistent” if it is running at “2 percent or a bit under.”

Congress has also mandated that the FOMC set monetary policy so as to promote maximum employment. Some see an intrinsic conflict between the FOMC’s price stability mandate and maximum employment mandate. But there is actually a deep sense in which the price stability and maximum employment mandates are intertwined. Imagine that inflation runs at 3 or 4 percent per year for three or four years. The public will then start to doubt the credibility of the Fed’s stated commitment to a 2-percent-or-a-bit-under objective. The public’s medium-term inflationary expectations will consequently begin to rise. As we saw in the latter part of the 1970s, these changes in expectations can serve to reinforce and augment the upward drift in inflation. At that point, the Federal Reserve will have to tighten policy considerably if it wishes to regain control of inflation. But we learned in the early 1980s that the resultant tightening—while necessary—generates large losses in employment. In other words,

failing to meet its price stability mandate can also lead the FOMC, over the medium and long term, to substantial failure on its employment mandate.²

Over the past year, the FOMC has communicated through its statements that it perceives the current unemployment rate to be elevated relative to levels that it views as consistent with its dual mandate. However, an important and ongoing communications challenge for the FOMC is that it is much harder to quantify the maximum employment mandate than the price stability mandate. Changes in minimum wage policy, demography, taxes and regulations, technological productivity, job market efficiency, unemployment insurance benefits, entrepreneurial credit access and social norms all influence what we might consider “maximum employment.” Trying to offset these changes in the economy with monetary policy can lead to a dangerous drift in inflationary expectations and ultimately in inflation itself.

How has the FOMC performed relative to its dual mandate over the past three and a half years, since the onset of the Great Recession at the end of 2007? In terms of price stability, the answer is: remarkably well. The personal consumption expenditure (PCE) inflation rate has averaged 1.8 percent per year from the fourth quarter of 2007 through the second quarter of 2011. In my view, this outcome is essentially consistent with price stability.

Now, I want to be clear here about what I mean when I say “inflation.” That number I just gave you, 1.8 percent per year for more than three years, refers to what’s termed *headline*

² The discussion in this paragraph is largely consistent with the following quote from Chairman Bernanke’s response to a reporter’s question in April about the Fed’s ability to lower the rate of unemployment more rapidly: “even purely from an employment perspective—that if inflation were to become unmoored, inflation expectations were to rise significantly, that the cost of that in terms of employment loss in the future, as we had to respond to that, would be quite significant.” (See [transcript](#) of Chairman Bernanke’s April 27, 2011, press conference, p. 14).

inflation. It includes all goods and services, including food and energy. When the Fed says that it is committed to keeping inflation at 2 percent or a little less, it means prices for *all* goods and services, including the gas we put in our cars and the food we put on our tables. When we make reference to year-over-year *core* inflation—that is, inflation without food and energy—it’s only because we believe that core inflation is a helpful predictor of headline inflation over the next three or four years.

The FOMC’s admirable performance on the price stability mandate is not due to luck. Since mid-2006, residential land prices in the United States have fallen by over 50 percent.³ Falling land prices were at the heart of the financial crisis from 2007 to 2009 and have generated a persistent fall in wealth and borrowing capacity for households. The associated declines in demand for consumption goods and investment goods pushed downward on prices and inflation.

Confronted with this enormous shock to the economy, the Federal Reserve followed an unprecedentedly and imaginatively accommodative policy. It kept interest rates near zero. It provided “forward guidance” by explicitly expressing its expectation that interest rates would stay extraordinarily low for an extended period. It bought over \$2 trillion of longer-term government securities. Through these actions, the Fed provided an extraordinary amount of monetary stimulus—and so was able to meet its price stability mandate in the face of challenging circumstances.

Unemployment does remain disturbingly high—over 9 percent. However, I am sure that it would be even higher without the enormous amount of monetary stimulus being provided by

³ See [Lincoln Institute of Land Policy](#), LAND-PI (CSW) series.

the Fed. Moreover, I believe that the FOMC could only have systematically lowered the unemployment rate further by generating inflation rates over a multiyear period that were higher than its communicated objective of 2 percent. Such an outcome could potentially lead the public to lose faith in the credibility of the FOMC's communicated objective and thereby increase the probability that the FOMC would lose control of inflation. As I discussed earlier, this scenario would require a policy response that would generate substantial losses of employment.

I want to close my discussion of FOMC performance by explaining why there is no longer an intrinsic connection between the size of the Fed's balance sheet and inflation. I've mentioned how the Federal Reserve has bought over \$2 trillion of government securities. It has funded that purchase by tripling the amount of deposits held by banks with the Fed—what are called bank *reserves*. The standard reasoning is that this kind of reserve creation is inflationary. Banks are only allowed to offer checkable deposits in proportion to their reserves. Economists view checkable deposits as a form of money because, like cash, checkable deposits make many transactions easier. In this sense, bank reserves held with the Fed are essentially *licenses* for banks to create a certain amount of money. By giving out more licenses, the FOMC is allowing banks to create more money. And if you took any economics in school you learned: more money chasing the same number of goods—*voilà*, inflation. Indeed, I think I'm pretty safe in saying that after four years in economics grad school, I've uttered this phrase—more money chasing the same number of goods creates inflation—more often than anyone else in this room.

But this connection between bank reserves and inflation is simply not operative right now. Banks have few good lending opportunities, and so they're not trying to attract deposits. As a result, they are keeping nearly \$1.6 trillion of reserves at the Fed in excess of what they need to back their deposits. In other words, banks have the licenses to create money, but are choosing not to do so.

I'm confident, though, that at some point in the future, the economy will improve and banks will once again have good lending opportunities. Some observers are concerned that once this happens, the banks' excess reserves will serve as kindling for an inflationary fire. This concern would have been entirely appropriate three years ago. But in October 2008, Congress granted the Federal Reserve the power to pay *interest on bank reserves*. Right now, that interest rate is 25 basis points, or 0.25 percent. By raising that rate judiciously, the Fed has the ability to deter banks from using their reserves to create money, and through this mechanism, the Fed can prevent inflation. The Fed's ability to pay interest on reserves means that the old and familiar link between increased bank reserves and higher inflation has been broken.

Of course, this requires the Fed to raise the interest rate on reserves in response to changes in economic conditions. You might well ask: Will the Fed raise interest rates in a sufficiently timely and effective manner to keep inflation at 2 percent or a little less? But that's *always* been the key question to ask about Fed policy, even when the Fed had a much smaller balance sheet. And that's my point: Because the Fed can pay interest on reserves, the size of its balance sheet does not, in and of itself, undercut the credibility of its commitment to keep inflation at 2 percent or a bit under. I believe that's why both survey and market-based

measures of expected inflation over the next five to 10 years have remained remarkably stable as the Fed has expanded its liabilities.

Let me summarize my review of FOMC performance since the beginning of the Great Recession in December 2007. My assessment is that, despite some profound economic shocks, the FOMC—led by Chairman Bernanke—has successfully met its price stability mandate by engaging in imaginative forms of monetary accommodation. These actions have also helped lower the unemployment rate. As part of its accommodative policy, the FOMC has greatly expanded its balance sheet. But it is important to understand that this expansion need not trigger inflation now or in the future, because the Federal Reserve can now pay interest on bank reserves.

With all that said, I've dissented from the FOMC's decisions in the past two meetings. As I mentioned earlier, I believe that the FOMC's ultimate effectiveness relies critically on its communication and the credibility of that communication. I've dissented at the last two meetings because I believe that the Committee's decisions at those meetings diminish that requisite credibility. I'll close my remarks today by explaining my thinking on this matter.

The FOMC's dual mandate, as I've said, is to keep inflation at 2 percent or a bit under and to promote maximum employment—that is, to keep unemployment low. Over the past few years, the Fed has quite appropriately provided a historically unprecedented level of monetary accommodation. However, as inflation rises and unemployment falls, the FOMC should respond by lowering the level of accommodation. This kind of systematic response to changes in economic conditions is an essential part of good monetary policy for at least a couple of reasons. First, there is a great deal of empirical evidence and theoretical support for the idea

that following a systematic policy rule, as economists call it, is what enables the Committee to achieve its dual mandate goals. Second, and perhaps more importantly, actions speak louder than words. The Committee can *claim* that it intends to make monetary policy so as to fulfill its dual mandate. But the public will watch its actions carefully in this regard. If the Committee fails to reduce its immense amount of accommodation in a timely fashion, the public will begin to doubt the Committee's claims about its goals.

In November 2010, the FOMC undertook a second round of purchases of long-term government securities—an action that has become known as QE2. This was a controversial move in some quarters, but I supported it—and I believe that it played a valuable role in reducing what seemed at the time to be a large risk of deflation. Let's look back at economic conditions at that November 2010 meeting. The unemployment rate was 9.8 percent and was expected to be 9 percent a year later. The year-over-year core PCE inflation rate was less than 1 percent and was expected to rise to 1.3 percent over the course of 2011.

Now, fast-forward to October 2011. The unemployment rate is 9.1 percent and is expected to be near 8.5 percent by the end of 2012. The year-over-year core PCE inflation rate is 1.6 percent and is expected to stay near that level—or even higher—over the course of the coming year.⁴ So, since November 2010, the unemployment rate and the outlook for the unemployment rate have improved. Inflation and the outlook for inflation have both risen closer to 2 percent. As I've just discussed, in response to these changes in economic conditions, the Committee should have *lowered* the level of monetary accommodation over the course of the year. Instead, through actions taken at its last two meetings, the Committee has *raised* the

⁴ I'm using current core inflation as a way of measuring medium-term pressures on headline inflation. See May 25, 2011, [speech](#) for more details.

level of monetary accommodation. In this sense, the Committee's recent actions in 2011 are inconsistent with the evolution of the economic data in 2011.

I want to be clear about one additional point. Along with many private sector forecasters, the FOMC has overestimated the strength of the recovery over the past two years. Some have suggested that the unexpected slowness of the recovery is a justification for the FOMC's increasing the level of monetary accommodation over the past couple of months. But I disagree with this argument. I've described how, as the economy recovers, the FOMC should respond by reducing the level of monetary accommodation. Logically, it follows that if the economy recovers more slowly than expected, then the FOMC should respond by reducing the level of monetary accommodation more slowly than expected. The FOMC should only *increase* accommodation if the economy's performance, relative to the dual mandate, actually *worsens* over time.

To sum up: The Committee's actions at the last two meetings are inconsistent with a systematic pursuit of its communicated objectives. It follows that these actions diminish the Committee's credibility and so reduce the effectiveness of future Committee actions and communications. And that's why I've dissented from the Committee's actions at those meetings.

Thank you very much for your attention, and I look forward to taking your questions.