Communication, Credibility and Implementation:
Some Thoughts on Past, Current and Future Monetary Policy[1]

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As you just heard, I'm the president of the Federal Reserve Bank of Minneapolis. The Federal Reserve Bank of Minneapolis is one of the 12 regional Reserve banks that, along with the Board of Governors, make up the Federal Reserve System. The Minneapolis bank is the headquarters of the System's operations in the ninth of the 12 districts. This district is a far-flung one that includes Montana, the Dakotas, Minnesota, northwestern Wisconsin and the Upper Peninsula of Michigan.

One of the aspects of my job that I enjoy most is the opportunity to visit communities across the Ninth District. I have had the pleasure of traveling to each state in the district in my nearly two years as president, but this is my first trip to Bismarck in that time. I want to express my thanks to the National Association of State Treasurers for this invitation. I also want to extend my thanks to the area business and civic leaders who have taken time from their busy schedules to meet with me today to discuss the area's economic conditions, as well as those who will join me later this afternoon to tour areas hit by this year's Missouri River flooding.

The flooding experienced by North Dakota communities—most notably along the Missouri and Souris rivers, but also along other state waterways—has dealt an unfortunate economic setback to many cities in a state that has otherwise experienced very good economic outcomes in recent years. We have been monitoring the economic impact of the 2011 floods at the Federal Reserve Bank of Minneapolis and will continue to do so, in North Dakota as well as Montana and South Dakota. It will be some time before we have a complete reckoning of all associated costs.

However, one thing seems certain: The same cooperative attitude and resilience that has characterized communities' responses to the flooding suggests that their recovery will be a strong one. In his *History of North Dakota,* Elwyn B. Robinson cites a late-19th century British statesman, who described the prevailing spirit of optimism of the people who settled west of the Mississippi River: "Men seem to live in the future rather than in the present: not that they fail to work while it is called for to-day, but they see the country not merely as it is, but as it will be, twenty, fifty, a hundred years hence."[2]

I'm reasonably confident that Mr. Robinson would view this as an awkward segue, but his quote is also instructive to the operations of monetary policy. The Federal Open Market Committee—the FOMC—meets eight times per year 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. (Actually, right now, 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 rotating group of four other presidents (currently Minneapolis, Philadelphia, Dallas and Chicago).

As I said, the Committee meets eight times per year. Its deliberations concern the appropriate readjustment of monetary policy to the new information received since the last meeting. But, as was true of the early settlers of our great continent, the

[2] See Robinson (1966).

Committee has to keep in mind its medium-term and indeed long-term goals when making those readjustments. And it must also keep in mind the public's understanding of those goals.

This perspective—that good policy responds to the current conditions so as to achieve certain well-communicated future goals—will be a key theme for the remainder of my remarks. They will be divided into three parts. The first part is about the FOMC's objectives and my thoughts regarding them. In the second part, I discuss the FOMC's performance relative to those goals in the past three and a half years since the beginning of the Great Recession. Finally, I close with an analysis of recent FOMC decision-making. Here, my discussion is perhaps a little more disengaged than usual, since I dissented from—that is, formally disagreed with—the last FOMC decision. And here it seems especially à propos to remind you that my remarks here today reflect my thoughts alone, and not necessarily those of others in the Federal Reserve System, including my colleagues on the Federal Open Market Committee.

FOMC Objectives

Let me turn first to a discussion of FOMC objectives. Congress has mandated that the Federal Reserve 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 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.

As I said, though, it is not enough to have an objective—the Federal Reserve must also communicate that objective clearly. That communication serves to anchor 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. Inflationary expectations and inflation itself will inevitably end up fluctuating—and possibly by a lot. As I'll discuss later, it is possible to undo these shifts in expectations, but only at significant economic cost.

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." But the Fed has also communicated its intentions more directly and more broadly. Last December, for example, on the television program *"60 Minutes,"* Chairman Bernanke explained the dangers of letting inflation fall too low relative to this 2-percent-or-a-bit-under range. In

the same interview, he also emphasized that the FOMC is unwilling to allow inflation to rise above this range.[3]

As I'll describe in more detail later in my speech, the economy was hit in the past three and a half years by shocks that had the potential to drive inflation significantly downward. I believe that the FOMC's clear communication of its inflation objective has helped the FOMC keep inflation from falling too low in the face of those shocks. At the same time, clear communication of its objective has also allowed the FOMC to follow highly accommodative monetary policies—like keeping interest rates near zero for nearly three years—without triggering large upward movements in inflationary expectations.

I've been emphasizing the importance of communication—and communication matters greatly. But, ultimately, the public's beliefs about the FOMC's inflation objective will also depend on inflationary outcomes. If annual inflation averages less than 1.5 percent for more than three or four years, onlookers will begin to suspect that the FOMC's true objective for inflation is lower than its declared "two percent or a bit under." Correspondingly, if inflation is persistently higher than 2 percent, then the public will begin to believe that the FOMC's true objective for inflation is higher than 2 percent. In either case, inflation expectations could become unmoored, and the FOMC could lose control of inflation itself. *Communication* can only be effective if the FOMC also retains *credibility*.

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[3] In particular, when asked if keeping inflation in check was any less of a priority for the Federal Reserve, Chairman Bernanke responded: "We've been very, very clear that we will not allow inflation to rise above two percent or less." See *"60 Minutes"* transcript online at federalreserve.gov/newsevents/other/2010publiccommunication.htm.

As I mentioned, Congress has also mandated that the FOMC set monetary policy so as to promote maximum employment. In the past, some have seen an intrinsic conflict between the FOMC's price stability mandate and its maximum employment mandate. In contrast, my thinking accords with the more modern viewpoint that there is relatively little tension between these two goals. The modern paradigm recognizes that monetary policy should allow the natural supply-and-demand forces in the economy to operate without impediment. For example, if energy costs spike, the basic forces of supply and demand dictate that firms will cut back on production and demand less labor, creating higher unemployment. It is inefficient for any policy—including monetary policy—to attempt to interfere with this natural adjustment process. It follows that the Federal Reserve's operational definition of "maximum employment" has to vary over time.

Nonetheless, the modern paradigm does view price stability as playing a crucial role in ensuring maximum employment. It is well-documented that different firms adjust their prices at different times and in different ways in response to the ebb and flow of inflationary pressures in the economy. This asynchronous adjustment of prices across firms generates economic inefficiencies, including losses of employment. By ensuring that prices follow a steady, well-understood path, the Federal Reserve eliminates the variation in inflationary pressures and the need for firms to respond to

that variation. In this way, the Federal Reserve's mission of achieving price stability is entirely consistent with its mission of achieving maximum employment.[4]

But there is another, deeper 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.[5]

An important communications challenge for the FOMC is that it is much harder to quantify the maximum employment mandate than the price stability mandate. I've already talked about how a change in energy costs can push down on maximum

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[4] The preceding two paragraphs are my attempt to describe the so-called divine coincidence that optimal policy in New Keynesian models involves the simultaneous elimination of output gaps and inflation variability. (See Blanchard and Galí 2007.) This characterization is only literally true under relatively strong assumptions. However, Justiniano, Primiceri and Tambalotti (2011) document that it also provides a good approximation to optimal policy in a New Keynesian model that is estimated to fit U.S. data from 1954 to 2009.

[5] 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, online at http://www.federalreserve.gov/FOMCpresconf20110427.pdf).

employment. But 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.

Monetary Policy since the Great Recession

As I discussed earlier, the Federal Reserve is mandated to set policies that promote price stability. With that in mind, how has the Federal Reserve done in terms of its price stability mandate since the Great Recession began in December 2007? 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. I would say that this outcome is essentially consistent with price stability.

This admirable performance is not due to luck. Since mid-2006, residential land prices have fallen by over 50 percent.[6] Falling land prices were at the heart of the financial crisis from 2007 to 2009 and have generated a persistent fall in wealth and

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[6] See Lincoln Institute of Land Policy, LAND-PI (CSW) series, online at http://www.lincolninst.edu/subcenters/land-values/price-and-quantity.asp.

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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 has followed an unprecedentedly and imaginatively accommodative policy. It has kept interest rates near zero. It has provided "forward guidance" by explicitly expressing its expectation that interest rates would stay extraordinarily low for an extended period. It has bought over 2 trillion dollars of longer-term government securities. Through these actions, the Fed has provided an extraordinary amount of monetary stimulus—and so has been able to meet its price stability mandate.

But what about the future? There are a number of ways to measure inflationary expectations, which all—unfortunately—come with caveats. Last December, a Cleveland Fed study analyzed several such measures.[7] It concluded that the Survey of Professional Forecasters' (SPF's) projections[8] tend to forecast relatively well. The most recent SPF survey (conducted before the August FOMC meeting) predicted that PCE inflation would average 2.1 percent per year for the next five years.

Thus, in the face of challenging circumstances, the Federal Reserve has met its price stability mandate and is expected to continue to do so. Unemployment does remain disturbingly high. Yet, I am sure it would be even higher without the enormous amount of monetary stimulus that the FOMC has provided. Moreover, I believe that the FOMC could only have systematically lowered the unemployment rate further by

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[7] See Meyer and Pasaogullari (2010).

[8] Survey conducted by the Federal Reserve Bank of Philadelphia. See results at http://www.philadelphiafed.org/research-and-data/real-time-center/survey-of-professional-forecasters/.

generating inflation rates higher than 2 percent over a multiyear period. Such an outcome could well lead the public to lose faith in the credibility of the FOMC's inflation objective and thereby increase the probability that the FOMC would lose control of inflation. As I stressed earlier, this scenario would require a policy response that would generate substantial losses of employment.

Recent FOMC Decisions

Much of my discussion so far has been a look back over the past three and a half years, since the start 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 and thereby helped lower the unemployment rate. Now I'd like to turn to my assessment of the most recent round of FOMC decision-making. To put this part of my talk in the proper context, I want to ask another key question: *How* did the FOMC achieve its success over the past three and a half years with regard to price stability?

The answer, I believe, is that the FOMC consistently made choices in response to changes in short-term economic conditions that were designed to support its medium-term objectives. Getting these choices right is certainly more of an art than a science. With that said, economists have suggested a number of *rules* that tell central banks how to respond to changes in economic conditions so as to keep inflation near some target

level. I generally find these rules useful in guiding policymaking, and especially so when they arrive at the same recommendation. (Unfortunately, that's not always the case.)

But here's one instance in which most of the rules *do* deliver the same recommended course of action. Suppose the FOMC observes an increase in available measures of inflationary pressures and a decrease in labor market slack—that is, the gap between maximum employment and observed employment. Then many monetary policy rules would recommend that the FOMC not ease policy further and in fact consider reducing the level of monetary policy accommodation. That recommendation—don't ease further if you're doing better on your mandates—makes sense to me.

With that recommendation in mind, let's go back to November 2010. At that date, the FOMC took a significant policy step by announcing its intention to buy $600 billion of longer-term Treasury securities. Until the most recent meeting in August, this was the last major policy step undertaken by the Committee. What did available measures of inflationary pressures and labor market slack—the "mandate dashboard"—look like back in November?

In terms of inflation, I generally think that core inflation does a better job of tracking underlying inflationary pressures, because it does not include the highly volatile and transitory fluctuations in food and energy prices. In November, PCE core inflation over the preceding 12 months had been less than 1 percent and had decelerated throughout the year. Of course, a good mandate dashboard should also include some measure of the future course of inflationary pressures. Here, it is worth noting that,

even with the large-scale asset purchase in place, FOMC participants expected core inflation to remain very low: less than 1.3 percent over the upcoming calendar year of 2011.

In terms of labor market slack, I've argued elsewhere that it's hard to find reliable measures of this key variable.[9] But the FOMC statement makes specific reference to the unemployment rate as a gauge of labor market slack, and so I'll use that measure on my notional mandate dashboard. The unemployment rate was 9.8 percent in November 2010. With the help of the large-scale asset purchase, FOMC participants expected it to fall to about 9 percent a year hence.

How had the mandate dashboard changed in August 2011? PCE core inflation rose sharply: From December 2010 through July 2011, the annualized core PCE inflation rate was over 2 percent. FOMC participants did not submit forecasts of core PCE inflation in August. However, the most recent Survey of Professional Forecasters, done before the August FOMC meeting, predicted that core PCE inflation will average 1.7 percent in 2011 and 1.6 percent in 2012. It seems clear that inflationary pressures were higher in August than in November. My own current forecast for core PCE inflation is even higher than the SPF's—I expect that it will average around 2 percent per year over 2011 and 2012.

What about labor market slack? The unemployment rate was 9.1 percent in July 2011, as opposed to 9.8 percent in November 2010. Again, we don't have FOMC participant projections available from the August meeting. However, the Survey of

[9] See Kocherlakota (2011).

Professional Forecasters predicts that unemployment will be 8.6 percent in just over a year's time. Going into the August FOMC meeting, my own forecast for unemployment was a little more optimistic, in the sense that I do expect unemployment to be under 8.5 percent by the end of next year. But, even with the more pessimistic SPF forecast, labor market slack is smaller than in November 2010, when the FOMC expected unemployment to remain around 9 percent in a year's time.

So, measures of past and forecasts of future inflationary pressures were higher in August than at the time of the FOMC's last major policy move in November. Measures of current labor market slack and expectations of future labor market slack were smaller in August. The monetary policy rules that I described earlier would suggest, again, "Don't ease further if you're doing better on your mandates." Indeed, they'd recommend that the level of policy accommodation be *reduced*.

Instead, at its August meeting, the FOMC decided to adopt a more accommodative policy stance. From March 2009 through June 2011, the FOMC statement said that the Committee expected to keep interest rates extraordinarily low for an "extended period," which was generally interpreted as meaning "at least for two or three meetings." In August 2011, the FOMC changed its statement to say that it now expected to keep interest rates extraordinarily low for at least 16 meetings. Given what I've said, it is not surprising that I dissented from this decision.

I would be remiss if I did not mention one subtlety in my discussion of changes in the mandate dashboard since November 2010. I've treated the decline in the unemployment rate as representing a decline in labor market slack. This view is not

uncontroversial. From an accounting perspective, the unemployment rate can fall for two reasons: People can find jobs, or people can stop searching for jobs. Much of the decline since November is attributable to people who were formerly unemployed choosing to no longer look for work.

Nonetheless, it still seems appropriate to me to view this change in labor market conditions as representing a decline in labor market slack. Intuitively, people who are non-employed, but not actively looking for work, are less likely to apply for any given job opening. Hence, the recent departures from the labor force imply that there is less downward pressure on wages. Almost by definition, from an economic perspective, this means that there is less slack in the labor market.

The rise in core inflation in the first part of the year is consistent with the view that labor market slack has fallen. But some observers argue that core PCE inflation is only temporarily high because of the tragic events in Japan or transitory spikes in commodity prices. If so, the disinflationary pressures of 2010 should soon reappear in the form of a sharp decline in current and expected core PCE inflation rates. In that eventuality, increasing policy accommodation might well be appropriate.

I've argued here that the Committee increased the level of accommodation when standard rules seem to call for standing pat or even reducing accommodation. What are the costs of such a move? The standard rules are meant to guide the economy toward the Committee's medium-term objectives. If monetary policy is consistently overly accommodative relative to these rules, the Committee risks generating inflation higher than 2 percent for several years. As I've discussed, such an outcome could have

significant consequences for inflation and inflation expectations. Future Committees might have to endure large losses in employment in order to fix these consequences.

Conclusion

I mentioned that I dissented from the Committee's last decision in August. Two other presidents dissented—and there have not been as many dissents at one meeting in nearly 20 years. In my view, this level of disagreement reflects two aspects of the current setting. The first is related to the leadership of the Committee. Chairman Bernanke strongly welcomes the airing of disparate views within the meeting. He clearly believes—as I do—that the United States has a decentralized central bank because we will get better monetary policy if decision-making is grounded in a wide range of views. I think that the chairman should be applauded for this approach to policymaking.

The second is related to the nature of the economic data that we've seen in the first part of this year. I've described how inflation rose and unemployment fell. It's also true that real GDP grew at less than 1 percent at an annualized rate in the first half of the year. And the outlook for real GDP growth has slipped too. Last November, my forecast for annual real GDP growth was similar to that of other FOMC participants: I expected that real GDP growth would average above 3 percent per year, and probably closer to 3.5 percent per year, over the following two years (that is, from the fourth quarter of 2010 through the fourth quarter of 2012). Now, I expect that real GDP growth will average around 2.5 percent per year over that same period of time.

It’s unusual to see an increase in inflation and a fall in unemployment occur when GDP growth is so sluggish and when the outlook for real GDP growth has slipped so much. It is hardly surprising that there might well be some disagreement about the appropriate monetary policy response to this conflicting mix of information.

As we go forward together on the Committee, I see no reason to revisit the decisions of August 2011. The Committee has included what I regard as a two-year conditional commitment in its statement. I believe that undoing this commitment in the near term would undercut the ability of the Committee to offer similar conditional commitments in the future—and this ability has certainly proved very useful in the past three years. So, I plan to abide by the August 2011 commitment in thinking about my own future decisions. Of course, the case for any additional easing would have to be made on its own merits. And, like the 19th century settlers of the American West, the Committee will have to keep its eye on the future when deciding about the present.

Thanks for your attention. I’m happy to take your questions.

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