

## **Narayana Kocherlakota: Making monetary policy – public contingency planning using a mandate dashboard**

Speech by Mr Narayana Kocherlakota, President of the Federal Reserve Bank of Minneapolis, at the Stanford Institute for Economic Policy Research (SIEPR), Stanford, California, 29 November 2011.

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*I thank Doug Clement, Ron Feldman, David Fetting, Terry Fitzgerald and Kei-Mu Yi for their many insightful comments and ideas.*

John, thanks for the introduction and for the invitation to be here today. It's great to be back on the Farm. I have to say that there have been lots of changes. I've been away only six years, but I hardly recognize the place. This building is, in particular, a fantastic addition to the economics scene here on campus.

In 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 Committee that makes monetary policy for the nation. Then I'll describe the FOMC's objectives. Next, I'll discuss how the FOMC can enhance the pursuit of its objectives by formulating a public contingency plan, based on what I term a "mandate dashboard". Finally, I'll close with a discussion of considerations for near-term monetary policy actions.

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.

### **Some FOMC basics**

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 by area, we're the second largest. Our district includes Montana, 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 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.

My 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.

### **FOMC objectives**

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. The heart of the price stability mandate is the Federal Reserve's inflation objective. The FOMC communicates its inflation objective to the public in a number of ways. Most prominently, at quarterly intervals, FOMC meeting participants publicly reveal their forecasts for inflation in the longer run (maybe five or six years), 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. 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".

It is important to keep in mind that these changes in maximum employment can be short run or long run in nature. Like the rest of my colleagues on the FOMC, I expect unemployment to normalize at 5 percent or 6 percent in the longer run under optimal monetary policy. But I want to stress that that estimate of long-run unemployment does not reflect my assessment of the *current* level of "maximum employment".

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. In this situation, there is a trade-off involved in the making of monetary policy. On the one hand, adding monetary accommodation reduces unemployment, other things equal. On the other hand, adding accommodation increases the risk of generating inflation markedly higher than the Committee's objective of 2 percent for a significant period of time. In choosing whether to add monetary stimulus or not, the Committee must resolve this trade-off between reducing unemployment and increasing the risk of inflation.

### **Public contingency planning based on a mandate dashboard**

I've described how an FOMC meeting works, the FOMC's objectives and the tensions that currently exist between those objectives. I now want to turn to the formation of policy designed to achieve the FOMC's objectives.

Right now, the FOMC has two types of accommodation in place. First, it is targeting a short-term interest rate, the federal funds rate, between 0 and 0.25 percent, and it plans to keep that interest rate that low at least through mid-2013 – that is, for at least the next six to seven quarters. This low interest rate is intended to stimulate consumption by households and investment by firms.

Second, the FOMC has bought a large amount of long-term government-issued and government-backed assets. These asset holdings are designed to stimulate longer-term investment. More specifically, any holder of a long-term bond is exposed to interest rate risk, because the value of that bond fluctuates as interest rates vary. When the Fed buys long-term bonds from the private sector, the private sector as a whole is exposed to less interest rate risk. As a result, some private investors will demand a lower premium for holding other bonds that are exposed to interest rate risk. Consequently, all long-term yields fall – and corporations should correspondingly lower their hurdle rates for long-term investment projects.

The FOMC does have additional tools. It could exert further downward pressure on long-term market interest rates by buying more long-term Treasury securities or securities issued by government-sponsored enterprises like Fannie Mae and Freddie Mac. Alternatively, the Committee could extend its prediction for how long it will keep its target short-term interest rate exceptionally low. So, tools – and choices – remain.

However, I believe that the FOMC should do more than simply decide at each meeting whether or not to buy more assets or to keep interest rates low for longer. Any current decision is based on the FOMC's forecast for the future, and no forecast can be perfect. The Committee should provide a *public contingency plan* – that is, provide guidance on how it will respond to a variety of relevant scenarios. I believe that public contingency planning would have many benefits. Let me mention two.

First, without appropriate context, the FOMC's actions may at times suggest that its formulation of its dual mandate objectives has changed. For example, I've spoken to many members of the public who believe that the FOMC's current highly accommodative policies imply that the FOMC's inflation objective has shifted upward. I've certainly argued that they're wrong. But I'm sure that, by articulating a clear public contingency plan and sticking to it, the FOMC can inspire greater public confidence that FOMC actions represent the systematic pursuit of its dual mandate objectives.

Second, I've heard from businesses that policy uncertainty is curbing their incentive to hire or invest. Similarly, I've heard from consumers that policy uncertainty is curbing their incentive to spend. An FOMC public contingency plan can help reduce the contribution of monetary policy to this general background of uncertainty. But how should the FOMC formulate this public contingency plan? I believe that it is useful to think of a driver who is trying to maintain a car speed. To do so, he'll vary pressure on the accelerator in response to changes in road conditions, current and expected: hills, valleys, rough pavement, headwinds. In the same way, the FOMC varies its chosen level of monetary accommodation in response to changes in current and expected economic conditions.

This kind of systematic response to changing economic conditions strikes me as an essential part of good monetary policy for at least two reasons. First, there is a great deal of empirical evidence and theoretical support for the idea that following a 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 can and does watch its actions carefully in this regard. If the Committee fails to adjust its chosen level of accommodation appropriately in response to changes in economic conditions, the public may well begin to doubt the Committee's claims about its goals.

What economic conditions are relevant? Again, I think that it's useful to think of a car driver who is trying to maintain his speed. To know how much (or how little) acceleration to provide,

the driver would certainly like to know his current speed. As well, he would like to know how future road conditions – like hills – are likely to affect his future speed. The FOMC’s problem is quite similar. Just like the driver needs to know his current speed, the FOMC needs an accurate measure of current inflation and unemployment. Just as the driver needs an estimate of his future speed, based on anticipated road conditions, the FOMC should have an assessment of the future levels of inflation and unemployment.

I find it helpful to summarize the relevant information in what I term a *mandate dashboard*. The dashboard provides real-time readings on current and expected inflation and unemployment. Here’s what the dashboard looked like in the FOMC meeting earlier this month.

**Table 1. Current Mandate Dashboard**

Date	Inflation (percent)			Unemployment Rate (percent)		
	Current year	Next year	Two years ahead	Current year	Next year	Two years ahead
Nov. 2011	1.9	1.8	1.7	9.1	8.6	8.0

Inflation measured as percent change in PCE excluding food and energy, fourth quarter over previous fourth quarter. Unemployment rate measured in fourth quarter.

I’ll explain the dashboard starting with the inflation side. The first cell from the left is current inflation. The second cell is what inflation is projected to be in one year’s time. Finally, the third cell contains a forecast for inflation in two years’ time. The unemployment side is similar. The first cell from the left represents current unemployment. The second cell represents a forecast for unemployment in one year’s time, and the third cell is a forecast for unemployment in two years’ time.

Of course, I have to be a little more precise in what I mean by inflation and unemployment. By “inflation”, I mean the change in the Personal Consumption Expenditure Price Index over the preceding four quarters, excluding changes in the prices of food and energy.<sup>1</sup> Hence, my measure of inflation in the dashboard is what is commonly called “core inflation”. I’m using core inflation because I view it as a good measure of overall inflationary pressures over the next two to three years.

By “unemployment”, I mean the unemployment rate averaged over the three months in the current quarter.<sup>2</sup> The forecasts for future inflation and unemployment are the midpoints of the central tendencies of the projections of FOMC participants that they released in November.

It is important to note that the dashboard includes information from other current variables besides inflation and unemployment. The forecasts for inflation and unemployment could potentially be based on a wide range of information – anticipated changes in fiscal policy, changes in European financial markets and so on. So, basing policy on the mandate dashboard does allow policy to react to changes in these other economic variables.

<sup>1</sup> The fourth quarter of 2011 has not ended. Hence, what I’m calling “current inflation” is actually the FOMC’s projection of inflation from fourth quarter 2010 to fourth quarter 2011. With three quarters of data already in, this projection is likely to be an accurate one.

<sup>2</sup> The fourth quarter of 2011 has not ended. Hence, what I’m calling “current unemployment” is actually the FOMC’s projection of the average unemployment rate in this quarter.

However, using this kind of dashboard does require monetary policy to respond to any economic variable only insofar as that variable affects current and future inflation or unemployment. This restriction seems appropriate given the limited nature of the FOMC's statutory assignment from Congress.

Given this mandate dashboard, how should the level of accommodation evolve over time in response to changes in dashboard readings? There are many subtleties associated with providing a general answer to this question, including the key trade-off that I mentioned earlier between the two mandates. But there are two relatively common and important instances in which the mandate dashboard becomes straightforward to use in a qualitative way. Suppose inflation and expected inflation rise and unemployment and expected unemployment fall, as is often true in a recovery. Then, regardless of how it weights the two mandates, the FOMC should *reduce* the level of accommodation. In contrast, suppose inflation and expected inflation go down and unemployment and expected unemployment go up, as is often true when the economy slows. Then, regardless of how it weights the two mandates, the FOMC should *increase* the level of accommodation.

A public contingency plan for 2012 would specify the FOMC's actions under a number of scenarios for the mandate dashboard in a year's time. It is natural to start with the scenario that the current FOMC's projections for 2012 turn out to be correct.

**Table 2. Current and Projected Dashboard**

Date	Inflation (percent)			Unemployment Rate (percent)		
	Current year	Next year	Two years ahead	Current year	Next year	Two years ahead
Nov. 2011	1.9	1.8	1.7	9.1	8.6	8.0
Nov. 2012	1.8	1.7	1.8	8.6	8.0	7.3

Inflation measured as percent change in PCE excluding food and energy, fourth quarter over previous fourth quarter. Unemployment rate measured in fourth quarter.

Notice that the second cell of the November 2012 row is the forecast for inflation over the course of 2013, and the second cell of the November 2011 row is the forecast for inflation over the course of 2012. We generally think that monetary policy operates with a one- or two-year lag. Accordingly, the dashboard keeps track of what we expect the economy to be like in a year or two.

By comparing the second row of the table with the first row, we can see that in this scenario, core inflation, and its outlook, will be about the same in a year's time. Unemployment will be lower. These changes in the dashboard readings suggest that, in the scenario that the economy evolves in 2012 as the Committee expects, the Committee should reduce the level of monetary accommodation over the course of 2012.

How would the Committee accomplish this reduction? Right now, the Committee is projecting that it will keep its target short-term interest rate extraordinarily low for at least six to seven

quarters. In my view, it would be simplest to reduce the level of accommodation by changing that estimate to a shorter period of time.<sup>3</sup>

But, like those of many private sector forecasters, the FOMC's projections have proven imperfect over the past few years. With that in mind, the Committee should provide public guidance on how it will respond to other scenarios in 2012. Suppose, for example, that the following scenario occurs in 2012, in which economic conditions are worse than expected.

**Table 3. Current and Alternative Scenario Dashboard**

Date	Inflation (percent)			Unemployment Rate (percent)		
	Current year	Next year	Two years ahead	Current year	Next year	Two years ahead
Nov. 2011	1.9	1.8	1.7	9.1	8.6	8.0
Nov. 2012	1.5	1.4	1.5	9.3	8.8	8.1

Inflation measured as percent change in PCE excluding food and energy, fourth quarter over previous fourth quarter. Unemployment rate measured in fourth quarter.

In this alternative scenario, inflation has fallen since November 2011 and unemployment has risen since November 2011. These changes imply that the Committee should *increase* the level of accommodation over the course of the year. Recall that the Committee is currently projecting that it will keep interest rates extraordinarily low for at least six to seven quarters. The Committee could increase the level of accommodation in 2012 by changing the estimate of at least six to seven quarters to some longer period of time. Alternatively, it could increase accommodation by purchasing additional long-term securities issued by the federal government or by government-sponsored enterprises.

### **An inconsistency in the making of recent monetary policy**

I've been talking about how a mandate dashboard can be helpful in formulating a public contingency plan for monetary policy in 2012. However, the mandate dashboard also clarifies an important inconsistency in the making of recent monetary policy.

I became president of the Federal Reserve Bank of Minneapolis in October 2009. I attended my first FOMC meeting in November 2009, as a nonvoter. So, when I think about current monetary policy, I find it natural to look back at the position of the mandate dashboard at my first meeting:

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<sup>3</sup> Under this scenario, the economy has evolved over the coming year as the Committee expected in November 2011. Hence, it would be natural for the Committee to continue to reduce the anticipated duration of the period of extraordinarily low interest rates by one year – that is, to two or three quarters instead of six to seven quarters.

**Table 4. Current and Past Dashboards**

Date	Inflation (percent)			Unemployment Rate (percent)		
	Current year	Next year	Two years ahead	Current year	Next year	Two years ahead
Nov. 2009	1.5	1.3	1.3	10.0	9.5	8.4
Nov. 2011	1.9	1.8	1.7	9.1	8.6	8.0

Inflation measured as percent change in PCE excluding food and energy, fourth quarter over previous fourth quarter. Unemployment rate measured in fourth quarter.

The dashboard points out that economic conditions were quite grim at that meeting. The Committee expected low inflation, and ongoing disinflation, over 2010 and 2011. Unemployment was expected to average well above 9 percent over 2010 and 2011.

The situation two years later, while hardly ideal, has improved markedly. Hence, I would say that the evolution of the dashboard readings suggests that monetary policy should be less accommodative now than it was in November 2009. But in fact, through choices dating back to last November, the Committee has made monetary policy considerably *more* accommodative.

I should underscore one point. Like many private sector forecasters, the FOMC has overestimated the strength of the recovery over the past two years. Thus, in November 2009, the Committee expected the unemployment rate in the fourth quarter of 2011 to be 8.4 percent instead of around 9 percent. This observation does imply that the Committee's current level of accommodation should be larger than what the Committee *expected* it to be two years ago. It does not imply that the Committee's current level of accommodation should be higher than what the Committee had in place two years ago.

How should an outside observer interpret this inconsistency between the evolution of the mandate dashboard's readings and the Committee's actions? Earlier in my speech, I set forth what I see as a key trade-off involved in the making of monetary policy. There is a benefit to adding monetary accommodation: It reduces unemployment. There is a cost to adding monetary accommodation: It increases the risk of inflation running above the Committee's objective of 2 percent for multiple years. The FOMC's actions in 2011 suggest that the Committee is now more concerned about high unemployment, and correspondingly less concerned about the possibility of higher-than-target inflation.

Just to be clear: I view the Committee's current resolution of the trade-off between inflation and unemployment as being justifiable. I also viewed the Committee's resolution of this trade-off in 2009 as being justifiable. However, what I see as problematic is that the Committee's resolution of this trade-off seems to be *changing over time*. In particular, the Committee's actions in 2011 suggest that it is now more willing to tolerate higher-than-target inflation than it was in 2009. If this possible drift in inflation tolerance were to persist, or were expected to persist, it could give rise to a damaging increase in inflationary expectations. Undoing such an increase in inflationary expectations, as Americans discovered in the early 1980s, requires drastic policy steps that have extremely painful consequences for employment. It is exactly in this sense that I have said in earlier speeches that the Committee's actions in 2011 served to weaken the Committee's credibility.

I believe that it is critical for the Committee to avoid further drift in its resolution of the key trade-off between inflation and unemployment. It can accomplish this goal by formulating and following a public contingency plan that is explicitly grounded in metrics like the mandate



dashboard. Of course, no contingency plan can ever be definitive. Inevitably, the FOMC will learn things that it did not expect to learn. And so there may be conditions that force the FOMC to deviate from a chosen plan. However, having a public plan, and couching its decisions against the backdrop of that plan, will enhance Federal Reserve transparency, credibility, accountability and consistency.

In May 2010, Chairman Bernanke stated, “Transparency regarding monetary policy ... not only helps make central banks more accountable, it also increases the effectiveness of policy”.<sup>4</sup> I agree completely with this sentiment. And I see a public contingency plan, based on the explicit use of metrics like the mandate dashboard, as promoting exactly the kind of transparency that Chairman Bernanke then described.

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

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<sup>4</sup> See Chairman Bernanke’s May 25, 2010, speech, “*Central Bank Independence, Transparency, and Accountability*”.