BETTER POLICY THROUGH BETTER COMMUNICATION

TWO CONVERSATIONS WITH
NARAYANA KOCHERLAKOTA

2012 ANNUAL REPORT
FEDERAL RESERVE BANK OF MINNEAPOLIS

2012 ANNUAL REPORT • FEDERAL RESERVE BANK OF MINNEAPOLIS

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TWO INTERWOVEN MONETARY POLICY JOURNEYS

THE FIRST JOURNEY IS MY OWN

MESSAGE FROM THE PRESIDENT

This year's annual report is about two interwoven monetary policy journeys.

The first journey is my own. Early in 2012, I suggested in public remarks that the Federal Open Market Committee might need to raise the fed funds rate considerably earlier than it was currently contemplating. Several months later, in September 2012, I gave a speech in Ironwood, Mich., recommending that the FOMC should commit to keeping the fed funds rate extraordinarily low until the unemployment rate fell below 5.5 percent, as long as the medium-term inflation outlook stayed sufficiently close to the Federal Reserve's long-run 2 percent target and longer-term inflation expectations continued to be well anchored. (My proposal was closely related to one advanced by Charles Evans, president of the Federal Reserve Bank of Chicago, about a year previously.) The annual report provides details about why I favored the Ironwood proposal at the end of 2012, as opposed to my prior recommendations.

The second (and much more important) policy journey is that of the FOMC itself. In its January 2012 policy statement, the FOMC said that it

> " … currently anticipates that economic conditions—including low rates of resource utilization and a subdued outlook for inflation over the medium run—are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014."

With this statement, the Committee gave information to the public about how long it intended to maintain the fed funds rate at extraordinarily low levels. But in its December 2012 policy statement, the FOMC switched to a different kind of communication. Instead of saying

PHOTOGRAPH BY GLEN STUBBE, STAR TRIBUNE

how long it expected the fed funds rate to remain low, it described economic conditions that would need to prevail before it would consider raising the fed funds rate. More specifically, the Committee announced that it

> "… currently anticipates that this exceptionally low range for the federal funds rate will be appropriate at least as long as the unemployment rate remains above 6-1/2 percent, inflation between one and two years ahead is projected to be no more than a half percentage point above the Committee's 2 percent longer-run goal, and longer-term inflation expectations continue to be well anchored."

The annual report provides my thoughts about the significance of this change in Committee communications.

The report has a somewhat unusual structure. It consists of edited versions of two distinct interviews with me, conducted by Doug Clement of the Federal Reserve Bank of Minneapolis. The first took place in November 2012, after my Ironwood speech but before the Committee's change in communications. Consequently, it focuses more on my policy journey. The second interview took place in December 2012, about a week after the Committee's change in communications. It's more informative about the other monetary policy journey, the FOMC's.

But it would be a mistake to draw too sharp a distinction between these two journeys. My Ironwood proposal and the Committee's new communication strategy have much in common. They both frame communication about the future course of policy in terms of quantitative goals—specific macroeconomic objectives the FOMC is seeking to achieve. I see this results-oriented approach to monetary policy as especially valuable in light of current U.S. macroeconomic conditions. But I believe it will likely continue to be valuable long into the future.

Narayana R. Kocherlakota

President

THE SECOND (AND MUCH MORE IMPORTANT) POLICY JOURNEY

IS THAT OF THE

FOMC ITSELF

BETTER POLICY THROUGH BETTER COMMUNICATION

TWO CONVERSATIONS WITH NARAYANA KOCHERLAKOTA

On Sept. 11, 2012, the Federal Open Market Committee announced that it anticipated keeping the fed funds rate extraordinarily low at least until mid-2015. Shortly after that announcement, I gave a speech in Ironwood, Mich., in which I suggested that the Committee could provide more current stimulus by describing what kinds of economic conditions would have to be met before it would consider raising the fed funds rate above its current extraordinarily low level. This kind of communication was proposed in September 2011 by Charles Evans, president of the Federal Reserve Bank of Chicago, and has hence been termed "the Evans rule." The FOMC did in fact adopt a version of the Evans rule in its December 2012 meeting.

The following is based on two interviews with me that were both conducted by Doug Clement of the Federal Reserve Bank of Minneapolis. The first interview took place on Nov. 19, 2012—after the Ironwood speech but before the December FOMC decision. The second interview took place on Dec. 19, 2012, a week after the December FOMC decision.

*—Narayana Kocherlakota**

* I thank Doug Clement for his excellent questions—and I thank David Fettig, Terry Fitzgerald, Sam Schulhofer-Wohl and Kei-Mu Yi for comments that helped improve my answers.

BEAR IN MIND THAT

TWO GOALS

HAVE BEEN ASSIGNED TO US BY CONGRESS

ONE IS TO

PROMOTE

PRICE

STABILITY

AND THE OTHER IS TO

PROMOTE

MAXIMUM

EMPLOYMENT

NOVEMBER INTERVIEW

CURRENT MONETARY STANCE

Doug Clement: Perhaps we could start with your current view on how the Fed should be setting its monetary policy.

Narayana Kocherlakota: In thinking about that question, bear in mind that two goals have been assigned to us by Congress when we—and by "we," I mean members of the Federal Open Market Committee—make monetary policy. One is to promote price stability, and the other is to promote maximum employment. And we face limitations on what our tools can accomplish. Monetary policy impacts the economy with a lag of one to two years. So we're aiming to achieve those goals over a one- to two-year time frame.

Now, what does this mean quantitatively? Well, the Fed has a target of 2 percent inflation over the longer run. And right now most FOMC participants are forecasting that personal consumption expenditure inflation, which is the Fed's preferred measure of inflation, will run at or below 2 percent over the next year or two.[1] Over that same time frame, unemployment is predicted to be elevated relative to where it's going to be in the long run, again, based on our FOMC participants forecast.

So, right now we have inflation forecast at or below our 2 percent target over the next year or two and unemployment high relative to where we want to be in the longer run, expect it to be in the longer run.

By providing more monetary stimulus, the FOMC can facilitate a faster transition of unemployment to its long-run lower level while keeping inflation close to target. I think there's a question of how we can do that. And that's what the proposal that I made in Ironwood [Michigan, in September 2012] is designed to accomplish.[2]

Could you restate the liftoff plan you proposed in Ironwood?

Sure. The liftoff plan is to sustain low interest rates; that is, we'll keep the fed funds rate extraordinarily low at least until unemployment falls below 5½ percent, as long as the medium-term outlook for inflation remains within a quarter of a percentage point of 2 percent, the long-run target. "Medium term" meaning—I'm very precise on this in the speech—but it basically means a two-years-ahead outlook for inflation.

So, those are the numerical thresholds.

Those are the thresholds. So, generally, people would be thinking about the thresholds of 2¼ percent and 5½ percent. And these are thresholds in that you're committing to keeping interest rates low as long as you remain within those zones.

After hitting one of the thresholds, you're not making any commitment about what's going to happen. There's going to be a policy conversation. I would say it's a return to business as usual, frankly. It's the point at which we'd have a serious discussion about the trade-offs we face, et cetera.

But in that zone defined by the thresholds, you keep interest rates low.

Why have you provided explicit economic conditions, you call them "thresholds," rather than the calendar dates the Fed has relied on more traditionally?

Well "traditionally" … [laughter]. Boy, things become traditions very rapidly.[3]

But, joking aside, that's a good question: What was the benefit of this proposal as opposed to saying "the FOMC will keep interest rates low until, say, mid-2016." Right now the Committee is saying mid-2015.[4] Let's say we extend it to mid-2016.

Well, I think that change in the date would be confusing. And the reason it's confusing is that people don't know if the FOMC changed the date because it thinks conditions are worse, or because the FOMC is simply providing more accommodation given the same conditions.

So it's ambiguous about the state of the economy.

It's ambiguous about the state of the economy, exactly. If people think it's because we have information about the state of the economy that they don't have, and we convey to them that that information tells us the economy is going to be bad, then this will not necessarily be a stimulative policy; it could actually be the opposite of that.

The other thing is that we're making no commitments. Whenever we use a date, we're very careful to say it's not a commitment. We said this is what we anticipate will be true. That gives rise to a lot of ambiguity and speculation about "the Fed might raise rates before 2016, maybe raise the rates after that." We're not really conveying much information. These thresholds, on the other hand, I think deliver exactly the kind of information we want to provide. That is, they set forth the conditions we will need to see before we would even begin to consider raising rates.

CHOOSING THRESHOLD NUMBERS

Can we talk about the numbers themselves, especially the inflation figure? Your liftoff plan raises the possibility of exceeding the Fed's long-term inflation target of 2 percent that was made very explicit quite

A BALANCED APPROACH MEANS YOU SHOULD BE WILLING TO ALLOW INFLATION ABOVE ITS 2 PERCENT TARGET TO FACILITATE A **FASTER** **TRANSITION** OF UNEMPLOYMENT TO LOWER MORE DESIRABLE LONGER-RUN LEVELS

recently. And you say, "Perhaps we can raise inflation a bit higher than that." I think that raises a concern about how seriously the public should take targets that the FOMC sets.

I think this is a great question. The FOMC, the way it states the target in its long-run goals and strategy statement is that over the longer run, inflation should be at 2 percent.[5] It then also says it's going to follow a balanced approach to the two mandate objectives of maximum employment and price stability.

What does this mean? Let's suppose we didn't have a maximum employment mandate. We only had the price stability mandate. That would indicate that we should try to keep inflation close to 2 percent. But if you look around the world at inflation-targeting banks, they are often willing to allow for small deviations, over the medium term, between where inflation goes and their longer-run inflation target.

Why is that? It's because they don't want to cause undue damage to the real economy by tightening too much or by providing too much accommodation if they're trying to get the rate of inflation up. That by itself would argue for some deviation. That is, even if you just had a single

HOW MUCH UNEMPLOYMENT IS CAUSED BY EACH STRUCTURAL FACTOR?

GENERALLY, THE ANSWER IS NOT A LOT

mandate, you might well be thinking about the real economy in trying to set monetary policy.

Now, obviously, the existence of the second mandate pushes even more toward allowing for some deviation. Having a balanced approach to the two mandates means that you should be willing to allow inflation to be above its 2 percent target in order to facilitate a faster transition of unemployment back to its lower, more desirable longer-run levels.

Why not bring it up to 3 percent if that will bring unemployment down more quickly? Why did you decide on a quarter percentage point above 2 percent?

I set it at a quarter percentage point because, actually, given how high unemployment is, I think it's unlikely we could ever get the medium-term inflation outlook to be as high as 2¼ percent, frankly.

We have our long-run goal of 2 percent, and if we have as much slack as we do in the economy that's pushing downward on wages relative to where people think they're going to be in the longer run, it's hard for that inflation outlook to get up to 2¼ percent. We could say 3 percent, but I don't think we'd get to 3 percent. So, I think 2¼ percent is allowing as much leeway as we really need.

What about the second figure, for the rate of unemployment? The liftoff plan specifies a threshold of 5½ percent. How did you arrive at that figure?

So that number … I think I got the reaction to that number I wanted to have. People were shocked at the idea that the Fed would keep rates low for that long. That's exactly the reaction I wanted to have. I wanted to surprise people with that number because if you want a policy to be truly stimulative relative to the current policy stance, to be actually helpful, you have to be surprising people with what you were saying on that dimension.

I think there is a question about why not a lower number than 5½ percent. The answer to that is, then I did start to worry about the tensions with the 2¼ percent. Over a longer time horizon, you have to start to think about whether the Committee would be willing to have the inflation outlook go even higher than 2¼ percent to get unemployment even lower than 5½ percent.

Given the Committee's thinking, typically, about how it views its longer-run objectives, the 2¼ percent/5½ percent numbers were consistent with how I thought the Committee would behave in the future, basically. And you don't want to lay out something that seems implausible for the Committee to deliver on.

THRESHOLDS, NOT TRIGGERS

You said that these are "thresholds," not "triggers." Would you explain that distinction?

If I said 5½ percent was an unemployment "trigger," I'd mean that we would automatically raise the fed funds rate as soon as the unemployment rate fell below 5½ percent. Similarly, if I said 2¼ percent was an inflation "trigger," I'd mean that we would automatically raise the fed funds rate as soon as the inflation outlook rose above 2¼ percent.

By using the term "threshold," I'm trying to communicate that the policy commitment is one-sided. The public does have a guarantee that we won't raise interest rates until the unemployment rate falls below 5½ percent, as long as the medium-term inflation outlook stays below 2¼ percent. But we have not said we will necessarily raise the fed funds rate when those conditions aren't met. We've only said that we will have a serious policy conversation about raising the fed funds rate at that point.

I guess that leads to a follow-up question. In your Ironwood speech, you also said that if a threshold is reached, the FOMC would have a "delicate cost-benefit calculation to make." And that conversation would be a "challenging one."

Well, we hope not; if the world is good to us, no. But I think you can imagine circumstances in which it would be. I'll talk about the unemployment threshold, for example. Suppose unemployment fell below 5.5 percent to 5.3 or 5.2 percent, while your outlook for inflation is still at 1.6 percent. Certainly, we've had shocks to the economy, changes in the economy, where that configuration doesn't seem impossible.

Would you necessarily raise the fed funds rate at that stage? I wouldn't see a need for it myself. Others might have a different view. I think, then, that's the sense in which you'd want to have a dialogue about how exactly you want to balance the two mandates against each other.

I think my vision, Doug, was that as long as we're in this zone defined by the two thresholds, I didn't really see a tension between the two mandates. I think being a quarter percentage point above 2 percent—that's within range of the target even if I were just thinking about that mandate by itself. And unemployment being anywhere above 5½ percent I thought about as being too high. So neither mandate was forcing me to raise interest rates in that zone. Once I got out of that zone being defined by the two thresholds, then I think it's less clear how the Committee would reach its decisions. You'd have to start to think about how you're weighing the two mandates against each other.

ARE OBJECTIVES COMPLEMENTS OR TRADE-OFFS?

In past speeches, you've referred to each objective in the dual mandate as complementary to the other. But here you talk about the potential for tension between them, a trade-off, like the Phillips curve. How do you reconcile that seeming discrepancy? Are the objectives complementary or alternatives, trade-offs?

I think that it depends on the nature of the shocks that hit the economy. The FOMC has said that it typically sees the two mandates as being complementary.[6] That's because it sees most shocks to the economy as being shocks to the demand for goods and services, not the supply of goods and services. Downward shocks to demand lead to downward pressures in both employment and prices. To keep inflation close to target after such a shock, you'd need to ease monetary policy. But by doing so, you'd automatically be mitigating the adverse consequences of the shock for employment. It's in this sense that the two mandates are typically complementary. And that is exactly why I would suggest that right now we do not have a tension between the two mandates.

PERCEPTION THAT YOUR VIEWS HAVE DRAMATICALLY SHIFTED

We've talked a lot about your Ironwood proposal. Let me ask you about public reaction to your position. People were surprised by that, a bit shocked really, in the sense that you seemed to have changed your view

EVOLUTION
OF THE DATA HAS LED ME TO PUT
LESS WEIGHT
ON STRUCTURAL
FACTORS
THAN I DID EARLIER IN 2012

quite significantly, and fairly quickly. In speeches as recent as April 2012, and in various interviews, you had strongly advocated a position of tighter monetary policy. But in Ironwood, your view had changed to a position of easing policy, providing more monetary accommodation.

Did that public reaction surprise you? And I guess more importantly, how do you respond to that perception that your view had shifted significantly?

In some ways, yes, I was surprised.

I was surprised by the reaction in the sense that I felt I was putting a lot of weight on the price stability mandate by suggesting that even an inflation outlook—medium-term outlook, two-year outlook—that is a quarter percentage point higher than 2 percent should be viewed as a cause for concern. I'm not saying we're going to raise rates at that point, just to be clear. But I'm saying it's a time to consider raising rates.

I felt that I was actually being highly respectful of the price stability mandate, and properly so. With that said, I think it is true that to suggest that unemployment could get as low as 5½ percent without pushing inflation above 2¼ percent, that was a change in my thinking relative to where I was in April. That change in my thinking came just because of the data on inflation and reading a ton of work that had been done on the factors generating high unemployment.

FOMC PARTICIPANTS
MAY HAVE DIFFERENT VIEWS

BUT THE ESSENCE OF WHAT
ENSURES
CREDIBILITY
AND CONSISTENCY
IS THAT WE'RE ALL WORKING TOGETHER, ON THE
SAME PAGE
TO ACHIEVE THOSE OBJECTIVES
OF KEEPING INFLATION AT 2 PERCENT
AND PROMOTING MAXIMUM EMPLOYMENT

EVOLUTION OF VIEWS

Why don't we move to that process, then, and discuss how and why your views evolved from 2011.

Sure. In its January 2012 long-run goals and strategy statement, the FOMC said that its goal over the longer run is to maintain 2 percent inflation.[7] In the beginning of this year, I was concerned that the stance of monetary policy was sufficiently accommodative that it would push us noticeably above that over the next year or two. A lot of that thinking was driven by what I saw in the labor market and my concerns about structural impediments to decreases in unemployment, to the (pre-crisis) levels of, say, 2007.

What do you mean by "structural impediments"?

That's a good question. I think one aspect of it has been the issue of whether or not the kinds of workers are available that firms want to hire. So "job mismatch," as it's called—that's one aspect of it.

Another aspect, though, is that firms will cut back on hiring if they are very worried about increases in the future costs of workers—increases that could be driven by future taxation or future regulation. Trying to mitigate that kind of fall in employment using monetary policy will lead to inflation.

Monetary policy can't have an impact on structural impediments?

It's that the trade-offs between inflation and unemployment become ones that are much less desirable. It would take a lot bigger increase in inflation to generate a desired fall in unemployment.

What changed your perception of the importance of structural unemployment?

I gave a speech about structural unemployment in August 2010 in which I pointed to the shift in the "Beveridge curve." [8] This is a plot of unemployment and vacancies over time. It has shifted outward, meaning that, roughly speaking, it looks like firms are having a surprisingly hard time filling their job openings given how many people are looking for jobs. There are other interpretations of this, though, as there always are in economics. So, I laid out my concerns about that shift in August 2010. That shift is still there in the data.

But what's changed since August 2010 is that there's been a lot of research trying to parse out what is responsible for this shift. That work goes through a number of factors. It's summarized in a paper that Professor Edward Lazear gave at the Kansas City Fed's Jackson Hole Conference earlier this year [2012].[9] As a Fed president, I was already aware of a lot of that work because much of it has been done within the [Federal Reserve] System.

What this work usually does is look, factor by factor, at how much unemployment is caused by each structural factor. Generally, the answer is not a lot. You can get to maybe a percentage point, or point and a half, of the increase in unemployment since 2007, due to structural factors, something like that.

Those studies were very important in shaping my thinking. Another thing that happened was that inflation over the course of 2012 came in considerably lower than I had anticipated. Both of those things mattered in shaping how I thought about inflation going forward.

I should be clear—it's not that I used to think structural factors were the sole source of elevated unemployment, and now I think they don't matter. It's more nuanced—the evolution of the data has led me to put less weight on structural factors than I did earlier in 2012.

CHANGING AND CONFLICTING FOMC VIEWS

You've clearly changed your view over time. Other Fed leaders have as well. This past Friday [Nov. 13, 2012], and earlier, different Fed presidents and FOMC participants were changing and clarifying their positions.

FORWARD GUIDANCE IS AN ATTEMPT TO USE WORDS TODAY TO DESCRIBE WHAT **YOUR ACTIONS** ARE LIKELY TO BE IN THE FUTURE

Several of them voiced support for thresholds. Others are strongly opposed to thresholds and/or greater quantitative easing.

Does FOMC credibility suffer when its members shift their positions or when there's public discord among them? And does it raise concerns, do you think, that policy won't be consistent over time, which in itself can undermine policy effectiveness?

I think that there's no problem as long as participants are clear about how their policy recommendations/choices will allow the FOMC to achieve its desired outcomes, and that we all have a collective understanding of what those desired outcomes are.

It's true that different participants may have different views about the level of structural employment, for example. That's why you have 19 people in a meeting room—to bring those different visions to bear.

But the essence of what ensures credibility and consistency is that we're all working together, on the same page, to achieve those objectives of keeping inflation at 2 percent and promoting maximum employment. If everyone's working toward that, then I don't think there's any reason for the public to worry about inconsistency.

But conflicting participants' public statements from one FOMC meeting to the next—is that a concern?

Again, I'd say that there's no problem if some participants stand up and say, "I think inflation's going to run up above 2 percent if we keep on this same path, and we should be scaling back on monetary accommodation," or others say, "Boy, I think inflation's going to be running at 1 percent; we have to be adding accommodation." Or they're talking about the employment mandate in the same way. This is showing that we all have the same objectives. We're all working toward the same goals.

There would be a problem if we were trying to achieve different goals than the ones we've stated as our long-run objectives. But it could well be that we're led to different views about how to achieve those goals, because we have different views about what factors are affecting the economy. And that's life. I mean, that's why we have 19 people at the table. But those 19 people should be on the same page about what we're trying to achieve as a committee.

RISKS TO STATE-CONTINGENT THRESHOLDS?

Obviously, one of the concerns about greater monetary accommodation is possibly fueling inflation. I gather you don't agree with that concern.

Are there other possible risks to state-contingent forward guidance? And maybe we should talk about that term "forward guidance" later.

I have a great set of policy advisers here in Minneapolis, and we've talked a lot about the potential costs of a state-contingent forward guidance policy. It's very hard for us to come up with anything, given that you're laying out inflation protections and unemployment thresholds—you protect yourself on both sides. It's been hard for us to come up with anything on that dimension.

Now, I guess people wonder about the effectiveness of laying out forward guidance along these lines. Will it help stimulate the economy? And I think the Fed is always engaged in forward guidance. Suppose for example …

EXPLAINING FORWARD GUIDANCE

Let me step back a bit.

Sure.

This is really about explaining the term "forward guidance." The last slide of your Ironwood speech says: "The Fed should clearly communicate its intention to pursue policies that are fully supportive of much higher levels of economic activity." Would such a statement be considered "forward guidance"—a very deliberate strategy to manage public expectations about future policy? How would you explain "forward guidance"?

WE WERE ALWAYS ENGAGED IN FORWARD GUIDANCE USING OUR INTEREST RATE MOVES COMBINED WITH OUR WORDS

NOW WE'RE USING WORDS ALONE

THAT'S THE ONLY DIFFERENCE

I think forward guidance is an attempt to use words today to describe what your actions are likely to be in the future.

And how does that, in and of itself, stimulate the economy?

Let me give an example, and just for the sake of simplicity, I'll use a trigger statement rather than a threshold statement—not "we'll consider taking a certain action," but rather "we will pull the trigger."

One possibility is to say to the public, "We're going to raise rates above their current extraordinarily low level as soon as unemployment gets to 7 percent."

The other possibility is to say, "We're going to raise rates when unemployment hits 5½ percent."

Those are the two possibilities. The first plan for interest rates tells the public that the FOMC is going to start to choke economic activity as soon as unemployment hits 7 percent. After all, that's the whole point of raising rates—to dampen down economic activity. The other possibility is that they'll wait to an unemployment rate of 5½ percent before beginning to dampen down economic activity.

Upon hearing those two different plans for interest rates, people should have different expectations for what the paths of economic activity and unemployment are going to be. And, in particular, between the 7 percent plan and the 5½ percent plan, the second suggests that times are going to be better for them in general, going forward. It means that individuals don't need to save as much for bad times ahead. That's the basic point of providing such forward guidance, to convey the expectation that because times will be better in the future, individuals don't need to save as much and therefore can spend more now.

That's what stimulates economic activity.

That's what stimulates economic activity. I think it's really important to understand that we are always engaged in forward guidance. If we were to raise interest rates at the next meeting by 25 basis points, a rise in one-day interest rates by a quarter percentage point, that would have enormous consequences for markets and the way people are thinking about spending, et cetera.

Why is that? Not because they think that quarter-percentage-point move really has any impact on their decision-making right now. It's because it tells them something about what we're going to do in the future. It's the path of what they think is going to happen based on that.

We were always engaged in forward guidance, using our interest rate moves combined with our words. Now we're using words alone. That's the only difference.

SUPPORT FOR FORWARD GUIDANCE

So, you've long supported the idea of forward guidance, simply as inherent to monetary policy.

Yes.

But now you're changing your view about the type of forward guidance that should be provided—from guidance through words regarding calendar dates to words regarding economic thresholds.

I've always been sympathetic to the threshold idea since President [Charles] Evans of the Chicago Fed first laid it out in September of 2011.[10] And I think that any economist would say that the idea of using economic conditionality as a way to express a likely plan of attack in the future is preferable to using calendar dates.

But I would say two things about President Evans' plan. I didn't necessarily like his num-

QUANTITATIVE EASING
WORKS IN THE RIGHT DIRECTION BUT GAUGING ITS IMPACT REMAINS CHALLENGING

FORWARD GUIDANCE
IS THE MORE TRADITIONAL TOOL

bers, and so I've come to my own choice of what I think the numbers should be. And, as I've described earlier in our conversation about the evolution of my thinking on the stance of policy overall, I now see a need for stimulus that I did not see in September 2011.

QUANTITATIVE EASING

You mentioned quantitative easing earlier. How effective has it been, and is forward guidance an alternative to QE or do they work in concert? What's the nature of that relationship?

In a speech at Jackson Hole this past August, Chairman [Ben] Bernanke provided an excellent assessment of the effectiveness of quantitative easing.[11] I think what you take away from his remarks is that, directionally, quantitative easing has the impact of pushing down on longer-term interest rates. And that should be directionally stimulative to the economy because by pushing down on market interest rates, people are led to think, “Hmm, maybe I shouldn’t be buying those assets that are paying such a low yield. I should spend money instead.”

With that said, these impacts are very complicated compared to forward guidance. Forward guidance is a much more typical way for us to do monetary policy. It’s basically telling the public about the path of future short-term interest rates. How we’re able to influence longer-term interest rates using QE—well, it’s actually much more sophisticated to see how that works, in terms of the economic mechanisms involved.

The benchmark thinking about QE, actually, was done by Neil Wallace and later by Gauti Eggertsson and Mike Woodford, following up on Neil’s work.[12] And that baseline economic modeling would say these kinds of interventions should have no impact on yields and no impact on the economy at all.

Now, the empirical work that I mentioned has validated that there does seem to be an impact on yields. What that means in terms of the impact on economic activity, I’m still sorting through, to be honest. As of now, I would say that I think quantitative easing works in the right direction, but gauging the actual magnitude of its impact remains challenging.

Really, forward guidance is the more traditional tool for monetary policy, and quantitative easing is more unconventional. But with all that said, they work together very well. In particular, being clear about when we’re likely to start raising rates gives very important information about how long we’re likely to hold any assets we purchase. That’s critical in how effective they’re going to be in terms of stimulating the economy. If we buy assets and hold them for a day, they are not having any impact on the economy. If we buy assets and hold them for three years, yes, they can start to have an impact on the economy.

OTHER POLICY OPTIONS

Other economists have proposed intentional policies to raise the rate of inflation, basically to make spending in the future more expensive and thereby encourage stimulative spending now. Is this idea consistent with a liftoff plan that could raise the potential inflation rate to 2¼ percent?

As long as unemployment is remaining above 5½ percent, it’s going to be very challenging to actually deliver on the rates of inflation that some observers have mentioned. You see people talking about 3, 4, 5, 6 percent. If unemployment is above 5½ percent—well, this depends on your view of structural unemployment, of course—but given the FOMC’s forecast that it expects long-run unemployment to fall to between 5 and 6 percent, and that unemployment rate to be consistent with our long-run target of 2 percent inflation, it’s going to be very challenging to generate high inflation, 3 to 4 percent kind of numbers, as long as unemployment stays above 5½ percent.

Basically, given current measures of structural unemployment and long-term inflation expectations, we can’t get a medium-term inflation outlook of 3 percent or 4 percent unless the unemployment rate has fallen noticeably below 5 percent. I don't think such a monetary policy is believable. In other words, I'm confident that if unemployment starts to get that low, the FOMC would want to tighten to rein in inflation well before the medium-term outlook rose to 3 percent.

RAISING CONSUMPTION TAXES

You've spoken in past speeches regarding the idea of raising future consumption taxes, a proposal essentially intended to make future spending more costly and thereby encourage current spending.[13] Is that idea, a fiscal policy really, consistent with a liftoff plan idea? And in fact, is there a need to coordinate monetary policy with fiscal policy, assuming there's a possibility of doing that?

I think what we have seen in Japan and in the United States is that when you get to the zero lower bound for interest rates, it's more challenging for the monetary authority to provide stimulus. Typically, that's why the interest rate is at zero; we'd like to push it down further and can't.

That should be a signal to the fiscal authority to be more interventionist in the economy than it would otherwise be. The consumption tax idea that I've talked about is certainly not my idea alone. Bob Hall and Susan Woodward have talked about this, and Martin Feldstein has. And there's the work done here on it by Juan Pablo Nicolini with some co-authors.[14] That idea seems like an eminently sensible way to stimulate the economy using fiscal policy.

And there are other ideas, too, but my point is mainly that the monetary authority, which I think plays a very useful role in stabilizing the economy typically, when the economy faces the zero lower bound, it doesn't mean central banks are out of weapons. They do still have tools. But it does mean that they're not going to be as effective as they typically would be. And I think that should be a signal to the fiscal authority. I don't know if you want to call that coordination, but I'd like to think they're watching what we're doing with interest rates, and they should be helping us out at that point.

What I mean by helping us out is they should be taking steps to enable us—we're going to have a harder time achieving our congressionally mandated goals of 2 percent inflation and low unemployment. They should be providing policy support of some kind to allow us to better achieve those objectives, which they clearly think of as being important. That's why they set them out for us.

OUT OF POLICY TOOLS?

Some observers noted that when Vice Chair Janet Yellen gave her speech recently in support of thresholds …[15]

It was an excellent speech.

It was; it really was. … But some economists noted that stock markets barely moved after the speech. And they suggested that, that seemed to indicate that perhaps the Fed had no more power, no more "dry powder," in a sense. As one blogger put it, "If the economy stumbles, will the Fed pull a new trick out of its policy bag, or is that bag finally empty?"

I'll say two things; one I just mentioned. I think that the Fed's tool kit is not as—we would prefer to reduce interest rates further; I think that would be the most natural way for us to try to stimulate the economy, to achieve our objectives. We would like to lower interest rates further than the zero we're currently at. With that said, we still do have tools.

Vice Chair Yellen used a threshold of 6½ percent in her speech. I don't think that the stock market reaction to 6½ percent reveals much about how it would react to 5½ percent.

A COLLECTIVE OUTLOOK

One other question occurred to me. In a speech that you gave in Great Falls in October, you said your proposed operational definition of price stability hinges on the Committee's formulating and communicating a quantitative collective outlook.[16] Do you see that as a possibility?

Certainly, conversations continue on that kind of topic. I think Vice Chair Yellen made clear in her speech that that's something we continue to talk about. I think it would be very valuable for us to formulate a collective vision of how we're doing. That's essentially what that would be: a collective vision of how we're doing in terms of our goals. Does the Committee think inflation is going to be at 2 percent over the next two years? If not, why aren't they doing something about it? Do they think unemployment is going to be higher than its long-run values over the next two years? If so, why aren't they doing something about it?

I think having a collective sense of that, in a quantitative way, would lead to more accountability on the part of the FOMC.

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DECEMBER INTERVIEW

WHAT LED TO FOMC THRESHOLD ADOPTION?

Doug Clement: Well, a lot has happened since our last conversation.

Narayana Kocherlakota: Yes, indeed.

And first and foremost, at its December 2012 meeting, the FOMC as a whole adopted thresholds for inflation and unemployment. The numbers are different from those you laid out in your Ironwood speech, but the strategy is consistent. Do you view this as a change in policy or as a change in communication, a recasting of forward guidance?

I think it is a change in communication. If you go back to the October statement, it said that the FOMC anticipated keeping interest rates extraordinarily low at least through mid-2015. And now, instead, the FOMC has replaced that date with thresholds for unemployment and inflation, saying that it anticipates that it'll keep interest rates extraordinarily low until unemployment falls below 6½ percent as long as what I'm going to call the medium-term outlook for inflation—one to two years out—that medium-term outlook remains below 2½ percent.

Now, there's a sense in which that's an equivalent level of accommodation to the mid-2015 date. It's equivalent in the sense that right now I would say the Committee roughly expects that we will get to 6½ percent unemployment around mid-2015. The statement has that rough equivalence in it. Going forward, I would anticipate we would drop any reference to dates at all and only maintain this language about the thresholds.[17]

Now, the beauty of thresholds, as the Chairman noted in his press conference, is that even when they stay fixed, the level of accommodation, of monetary policy stimulus associated with them, varies with the state of the economy. He used the language "automatic stabilizer," which I think is very apt.[18]

So if things were to worsen for some reason, if conditions were to evolve less favorably than we expect in 2013 or 2014, well, then, it's going to take longer, and people are going to realize it's going to take us longer to get to 6½ percent unemployment than we think right now. And that means interest rates are going to stay low for longer.

On the other hand, if conditions evolve more favorably than we expect in 2013, 2014, we're going to get to 6½ percent unemployment. People will start to learn: We're going to get to 6½ percent unemployment more rapidly than anticipated. And they'll learn that interest rates are going to be raised sooner than they had anticipated.

I think that's the benefit, even though it's roughly the same level of accommodation right now. You can leave these numbers fixed, and the level of stimulus is varying automatically with the evolution of the economy in a way that we would like.

IT'S JUST A VERY HEALTHY WAY OF COMMUNICATING

I THINK IT ENHANCES TRANSPARENCY ACCOUNTABILITY & EFFECTIVENESS OF POLICY

So people will be focused on the state of the economy rather than the calendar.

Yes. The calendar date relies on the Fed's forecast, and that's going to be changing over time. With this new approach, we tell the public how we're looking at the economy and they form the forecast about when we're likely to get there. Then that shapes their thinking about our policy. It's just a very healthy way of communicating. I think it enhances transparency, accountability and effectiveness of policy.

What led to threshold adoption by the full FOMC? Could you trace the FOMC's evolution in terms of moving to communicating policy through explicit economic conditions rather than calendar dates?

So, in December of 2008, the Committee lowers interest rates to their current level, with the fed funds rate being targeted to a zero to 25 basis point band, about as low as it can go.[19] I believe it was in March of '09 when the Committee said that it anticipated keeping rates extraordinarily low for an extended period.[20] This is an attempt to provide some guidance to say it's not just this meeting, it's not the next meeting, where you might expect interest rates to rise.

In August of 2011, the Committee became more concrete about that, switching from talking about an "extended period" to instead saying that the fed funds rate would stay extraordinarily low at least through mid-2013.[21] And then there was some evolution in the date after that.

I would say that there was some unhappiness with the date almost immediately. And, right after that August meeting, President Evans offered a different approach to formulating in terms of thresholds.[22] There was a lot of analysis of that approach after he made his suggestion.

Basically, you want to put some thought into it that it's going to work the way you want it to. The way you can do that is through model-based analysis, study, et cetera, and that was what was going on over that time frame.

I think the Chairman noted in his press conference that this was a difficult change to explain, and a press conference allowed an opportunity …

Yes, well, we have a press conference every two meetings. I've expressed the belief in the past that the FOMC should consider having a press conference after every meeting. Certainly, I think that this kind of change in communication is sufficiently rich and complicated that a press conference is vital.

ARE THE NUMBERS TOO HIGH?

The thresholds that were set out by the FOMC are 6½ percent for unemployment and 2½ percent for inflation. Those are somewhat higher than the numbers you mentioned in your Ironwood speech. Are you concerned that the FOMC thresholds are higher than yours?

On the inflation front, I suggested an inflation threshold of 2¼ percent and the Committee went to 2½ percent. As I suggested in my speech, I saw this conversation about what the appropriate inflation threshold should be as being very much an ongoing one. I would say my thinking was still evolving. I'm comfortable with 2½ percent as the outcome of the Committee discussion. There's always a give and take in a committee, and we ended up with 2½ percent. So I guess I think that's an appropriate place to be.

And unemployment?

I'm more concerned about the unemployment threshold. I think that we have left an opportunity out there for improvement by setting it as high as we did. I think the public is left thinking that the Committee could well be planning to retard the pace of economic recovery while the unemployment rate remains noticeably above our long-run estimates.

This dampens current stimulus because people think that times are not going to be as good as they could be if we had more aggressive policy, more stimulative policy, so they'll believe

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they have to save now for worse times ahead. That dampens the amount of stimulus we're going to provide today. So, I would have preferred 5½ percent.

That opportunity is not one that's foreclosed to us. What I mean by that is, in terms of the inflation threshold, I think it would be very challenging for us to lower that now that we've set it where it is. We've made a commitment essentially that, barring unusual circumstances, we're not going to start to raise rates as long as the inflation outlook remains below 2½ percent. If you now lower that to 2¼ percent, you change the nature of that commitment.

It's different with lowering the unemployment threshold. If we were to raise it, we'd face the same problem, but lowering it is perfectly in keeping with what we've said so far. I worry that we'll come to a point where we're going to want to do this later anyway—that is, lower the unemployment threshold—and we'll have lost all the stimulus we could have provided in the intervening period by lowering it ahead of time. So I would have preferred us to go to the threshold I mentioned in Ironwood: 5½ percent.

You spoke before about wanting to shock or surprise the public, in a sense, with the threshold numbers.

Yes, yes.

Would a lower unemployment number have done that?

Yes, I believe so. Based on the reaction to my Ironwood talk, I think the answer is yes to that [laughter].

No, more seriously, I think that the equivalence we talked about earlier between our earlier communication of mid-2015 and the 6½ percent unemployment rate meant that while there's an automatic stabilizer gain that we've talked through, there's no gain really in the anticipated path of stimulus. With 5½ percent, you'd get that gain.

Now, I don't want to be too negative. I mean I'm very heartened by the switch in our basic communication framework. I think it was the right move. And as I said, I think our communication leaves open the possibility of improving policy by lowering the unemployment threshold. But that is an opportunity for improvement that is out there for the Committee, I think.

"TARGETS?"

I'd like to raise a question about confusion of terms. In media reports following the press conference on December 12 and at the press conference itself, the media used the term "target" in relation to what the Chairman clearly referred to as thresholds.

You've taken great pains to distinguish "thresholds" from "triggers," but it seems there's still confusion as to whether these numbers for inflation and unemployment are "targets," implying that the Fed is aiming for inflation at 2½ percent and unemployment at 6½ percent, as the word "target" implies. Can you clarify that point?

I can try [laughter]. Let me talk first about the inflation threshold. Our long-run objective—our target—for inflation is 2 percent. So what is this 2½ percent about? I view it as a safeguard, a guardrail—protection against what I see as being an unlikely risk of unduly high inflation.

Over the past 15 years, the medium-term outlook for PCE inflation, personal consumption expenditure inflation, has never risen above 2.3 percent. That's been true even though the unemployment rate actually fell below 5 percent. Even though we had such high resource utilization in the economy that the unemployment rate fell below 5 percent at times during that 15 years, that wasn't sufficient pressure on prices to drive the medium-term PCE inflation outlook above 2.3 percent.

Given how much slack we have currently, how are we going to get to a medium-term outlook of 2½ percent as long as longer-term inflation expectations stay well anchored? So I just view the inflation threshold as really being a protection. I'm not saying we shouldn't have it in there. We should always be making policy with an eye toward protecting the economy against unlikely adverse outcomes. But it's only that—a protection to say our medium-term outlook is never going to get that far out of whack, to the point where people should be starting to worry about our commitment to the 2 percent long-run target, which is really the key thing.

THE INFLATION THRESHOLD

I VIEW IT AS A SAFEGUARD

A GUARDRAIL

PROTECTION AGAINST

WHAT I SEE AS BEING AN UNLIKELY RISK OF

UNDULY HIGH INFLATION

OK, so, as you said, it's a "guardrail," something that you're not likely to hit, but just in case …

Right, just in case.

Now, in terms of the unemployment threshold, I guess I understand the possibility of confusion in the sense that I articulated earlier. I thought it would be better policy to set the unemployment rate threshold lower. If we think the long-run unemployment rate is going to settle down between 5.2 percent and 6 percent, why would we begin to raise rates when the unemployment rate is as high as 6.4 percent so that it's remaining clearly elevated above our target, the long-run goal for unemployment? Well, "goal" is too strong a term; it's the place where we think unemployment is going to settle down, long term.

Right, what the FOMC participants expect will happen.

Now, the only reason I can see where we'd want to raise rates is if we're worried about inflation. That's why we have the inflation safeguard in there.

So, I understand the possible confusion on the unemployment threshold. I think if you set it at 5½ percent, you won't have that confusion anymore. I think it's clearly smack dab in the middle of where the Committee sees the unemployment rate settling down to in the long run.

INITIAL PUBLIC REACTION

Critics of this new FOMC policy have already suggested that thresholds are going to have too little impact, as evidenced by the fact that the stock markets didn't move very much after it was announced, long-term Treasuries rose just a bit and I think expected inflation increased only slightly.

Another critic said that if markets have already discounted the impact of monetary easing on unemployment, that's an indication that "the expectations effect won't work."

And other critics are concerned that inflation has just been unleashed, that thresholds will do too much in terms of fueling inflationary expectations beyond the control of monetary policy.

What's your sense of this initial public reaction to the December 12 announcement, which was intended to stimulate economic activity?

I think that the behavior of inflation expectations is pretty much in keeping with what I would have anticipated. I think, under current conditions, we have a lot of room to influence economic activity without generating inflation that's noticeably above 2 percent.

Where does that room come from? It comes from the relationship between resource utilization, unemployment and inflation. As of now, that relationship is relatively flat, meaning that monetary stimulus can achieve desired reductions in the unemployment rate without generating big movements in inflation. This is the Phillips curve, which in some quarters has a bad reputation, but that's how I think of the relationship that emerges at any given moment in time that's traced out between resource utilization and inflation.

So I am not surprised by inflation expectations not rising that high. As I pointed out earlier, in the past 15 years, even though unemployment's fallen below 5 percent, we still did not have an inflation outlook that was noticeably above 2 percent.

Now, there's talk by many observers that monetary easing can't lower the unemployment rate. I think that the issue, really, is the opposite. The issue is, does the public think that the Fed can increase the unemployment rate by raising interest rates? I would submit the answer to that is yes. If that's true, shouldn't we let the public know that we don't plan on fostering unemployment through our policy actions until such time as unemployment has normalized?

That's what I think this policy is about: letting the public know that we're not going to get in the way of the economic recovery by raising rates, until such time as the recovery is closer to being complete.

Let me say a couple of things about inflation. I think there's this vision out there—this was one of the reactions to my 5½ percent number in Ironwood—that somehow we have to raise

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rates before we get to full employment. We have to do it. Otherwise, we're going to have inflation unleashed.

"Taking away the punch bowl just when the party [is] really warming up," as the Fed has been said to do.[23]

But this is dependent on the set of shocks that are affecting the economy. That's what shapes the appropriate level of monetary policy: How adverse are the shocks that are hitting the economy? If the shocks are adverse enough, then you might need a lot of monetary stimulus in order to offset them so as to keep inflation at 2 percent instead of falling too low.

Hoping to keep it as high as 2 percent, avoiding deflation.

As high as 2 percent—and to keep unemployment from being too high. If you say you're always going to be raising rates before you get to full employment, you're defeating yourself. You're tying your hands behind your back.

What determines where we should be in terms of monetary policy is that we want to be doing our best to mitigate and offset the shocks that face the economy so as to achieve our objectives: the long-run objective of 2 percent inflation and keeping unemployment low in the face of shocks.

Personally, as somebody who's been termed an inflation "hawk," a central banker who worries a lot about inflation, I think thresholds are fantastic news. That's true for two reasons.

First, suppose the pace of recovery were to quicken over the next few months, and we saw a significant decline in unemployment and significant upticks in inflationary pressures associated with that. That would be the good-news scenario, so to speak. Would the Committee have been willing to move the mid-2015 date in quickly?

I think there would have been a lot of concerns about doing so. I think there would have been a concern in the Committee that we would have unraveled all the accommodation in one fell swoop if we start to move that date in. What would we be communicating? I think it would be very challenging for us.

Now, with thresholds, even if we do nothing, a fall in the unemployment rate, or an increase in inflationary pressures, automatically brings forward that first day of tightening. The automatic nature of policy is beneficial if you're worried that inflation could be going too high.

The other thing is, I think it's really good for accountability. I think the Committee has never really clearly marked out a true worry zone for inflation. We haven't said we're going to raise rates when the outlook gets above 2½ percent. For example, I'll say for myself that if unemployment was 11 percent and the outlook for inflation was at 2½ percent, I might not want to raise rates at that stage.

But, with that said, we've marked out what is clearly a worry zone. And given the history that I've reviewed about the medium-term inflation outlook, it is a worry zone. It's very different from what we've seen in the past.

FUTURE MOVES

You've just used the word "automatic" a number of times. That leads me to wonder about future policy moves given that the policy steps taken at the December meeting—the boost in long-term asset purchases as well as more explicit forward guidance—were quite significant.

Do you think the FOMC is likely to make further large changes in policy over the next couple of years, or will it simply be a matter of monitoring economic activity relative to the thresholds? In other words, is

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monetary policy essentially on autopilot now? In your view, are thresholds "automatic stabilizers," as the Chairman said at the press conference?

I think that the FOMC statement does build a lot of "automaticity," if that is a word, into monetary policy.

But as I've said, I also think that the statement gives us the freedom to do more—for example, by lowering the unemployment threshold.

I really do think this is, I hesitate to use the term "gold standard," but it's really leading edge in terms of central bank communication methods right now. I think we should take a lot of pride in that. I've certainly been surprised by things in the past, but I don't see us making changes in our basic communication framework going forward. Nonetheless, I think that communication framework certainly leaves open the possibility of changes in policy.

CONSENSUS STATEMENT?

Coming back to a question I asked in our first conversation, about a consensus FOMC statement on inflation expectations and unemployment expectations. According to recent statements by some FOMC members, it seems that not all foresee the likelihood of, or see the value in, a consensus statement. Do you still consider it a useful thing?

Oh, I think we're going to have a consensus statement. Let me be clear by what I mean by that though. I think the Chairman answered this question in his press conference. He said specifically that we're going to have to go through the intellectual exercise. Actually, I have it right here: "In terms of inflation forecasts, what the Committee will do on a regular basis is include in its statement its views of where inflation is likely to be …"

That's exactly what I had in mind. "For example," he continued, "currently we already say that, you know, we expect inflation to run at or below the Committee's objective in the longer term. The intellectual exercise we'll be doing is asking ourselves, if we maintain low rates along the lines suggested by this policy, would we expect inflation to cross the threshold or reach that—reach that level?"

That's it. That's exactly what I had in mind by a consensus outlook: The Committee offers guidance about it, and has to, given the formulation of policy. So, I'm comfortable where we ended up on that, given what the Chairman said.

ENDNOTES

[1] Personal consumption expenditure (PCE) inflation is a measure of inflation based on the rate of price appreciation of all goods and services, including those related to food and energy.

[2] See Kocherlakota (2012a).

[3] The FOMC first adopted date-based guidance in August 2011.

[4] In its September and October 2012 FOMC statements, online at federalreserve.gov/newsevents/press/monetary/2012monetary.htm.

[5] January 2012 FOMC long-run goals and strategy statement, online at federalreserve.gov/newsevents/press/monetary/20120125c.htm.

[6] See the January 2012 long-run goals and strategy statement, online at federalreserve.gov/newsevents/press/monetary/20120125c.htm.

[7] See the January 2012 long-run goals and strategy statement, online at federalreserve.gov/newsevents/press/monetary/20120125c.htm.

[8] See Kocherlakota (2010a).

[9] See Lazear and Spletzer (2012).

[10] See Evans (2011).

[11] See Bernanke (2012).

[12] See Wallace (1981) and Eggertsson and Woodford (2003).

[13] See Kocherlakota (2010b).

[14] See Woodward and Hall (2008), Feldstein (2002) and Correia, Farhi, Nicolini and Teles (2012).

[15] See Yellen (2012).

[16] See Kocherlakota (2012b).

[17] The FOMC did take this step in January. See the press release at federalreserve.gov/newsevents/press/monetary/20130130a.htm.

[18] See the press conference at federalreserve.gov/monetarypolicy/fomcpresconf20121212.htm.

[19] See the press release at federalreserve.gov/newsevents/press/monetary/20081216b.htm.

[20] See the press release at federalreserve.gov/newsevents/press/monetary/20090318a.htm.

[21] See the press release at federalreserve.gov/newsevents/press/monetary/20110809a.htm.

[22] See Evans (2011).

[23] See the Address of Wm. McC. Martin, Jr., chairman, Board of Governors of the Federal Reserve System, before the New York Group of the Investment Bankers Association of America, Waldorf Astoria Hotel, New York City, Oct. 19, 1955. Online at fraser.stlouisfed.org/docs/historical/martin/martin55_1019.pdf.

THIS POLICY IS ABOUT

LETTING THE PUBLIC KNOW
WE'RE NOT GOING TO
GET IN THE WAY
OF
RECOVERY

BY
RAISING RATES
UNTIL RECOVERY IS
CLOSER TO BEING COMPLETE

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FEDERAL RESERVE BANK OF MINNEAPOLIS

2012

OPERATIONS REPORT

MESSAGE FROM THE FIRST VICE PRESIDENT

The Federal Reserve System continues to face a complex and dynamic outlook as it fulfills its mission to foster the stability, integrity and efficiency of the nation's monetary, financial and payments systems. To achieve this mission, the Federal Reserve sets the nation's monetary policy, supervises and regulates banking institutions, and provides financial services to depository institutions, the U.S. government and foreign official institutions. The Federal Reserve Bank of Minneapolis leverages its strengths in order to make important System contributions while at the same time pursuing financial and operational strategies directed at ensuring that all Bank and System objectives are met efficiently and with high quality.

The Bank has consistently achieved outstanding operating results, and 2012 was no exception. We managed our expenses effectively, maintained a strong internal control environment and met most operating metrics. The accompanying "2012 by the Numbers" highlights the scope of some of the Bank's operations and the importance of excellence in conducting our operations. In a variety of areas, such as the FedACH, the Customer Contact Center and the National Service Desk, we have operational responsibilities that support the System more broadly. In a similar vein, as the Federal Reserve Treasury Retail Securities site, we support the Bureau of the Public Debt's retail program by servicing electronic and paper U.S. Savings Bonds, and Treasury marketable securities. Managing these consolidated operational responsibilities requires effective coordination and collaboration with stakeholders beyond our Bank.

Technological change creates opportunities for greater efficiency, and the System continues to refine, reorganize and consolidate its operations to take full advantage of these opportunities. We are engaged in several multiyear IT initiatives, including the consolidation of our server and network infrastructure, the upgrade of our desktop computers and the strengthening of our information security infrastructure. Change also continues in the Bank's FedACH and Treasury Retail Securities operations as a result of technology advances, marketplace dynamics and evolving business plans.

For the System's supervision and regulation area, assuming expanded responsibility

2012
BY THE NUMBERS

IN 2012
THE FEDERAL RESERVE BANK
OF MINNEAPOLIS PROCESSED

- 12.3 billion ACH (Automated Clearing House) payments worth approximately $24 trillion. FedACH is a nationwide system, developed and operated by Minneapolis staff on behalf of the entire Federal Reserve System, which provides the electronic exchange of debits and credits.

- $10.8 billion of currency deposits from financial institutions, destroyed $2.8 billion of worn and torn currency and shipped $12.6 billion of currency to financial institutions.

- 178,000 transactions for the 56 million investors who hold $177 billion in U.S. Savings Bonds and answered 577,000 calls and written inquiries from investors as the Treasury Retail Securities site for the Federal Reserve System.

- 250,000 customer support calls handled and 26,000 credentials issued for Federal Reserve payment and information services as one of two national Customer Contact Centers.

- 312,500 calls answered and 324,600 tickets created by the National Service Desk; Minneapolis is one of two sites that provide frontline IT support for the Federal Reserve System.

pursuant to the Dodd-Frank Act as systemic risk regulator, supervisor of thrift holding companies and supervisor of systemically important financial market utilities has required significant additional resources. Evolving regulatory and supervisory frameworks require increased emphasis on the analysis and review of financial organizations' risk profiles. In this regard, the Bank has engaged in a multiyear initiative to strengthen the analytical and technical skills of staff in order to address these new demands.

The Bank's Office of Minority and Women Inclusion established under Section 342 of the Dodd-Frank Act continues its work to ensure equal opportunity and racial, ethnic and gender diversity in our workforce and senior management, and the participation of minority- and women-owned businesses in our procurement activities. These efforts reinforce the Bank's long-standing and ongoing commitment to diversity and inclusion in our workforce and suppliers.

Another area of ongoing emphasis is the Bank's outreach efforts. We continue to work with communities, nonprofit organizations, lenders, educators and others in the district and across the nation to encourage financial and economic literacy, address housing problems, promote equal access to credit and advance economic and community development. In 2012, we expanded our outreach activities in the district; at the national level, one particularly notable event was the Indian Country Summit held in Washington, D.C.

In 2012, we expanded our contributions at the System level to policy discussions in a variety of areas, including monetary policy, supervision and regulation, and financial services. We also assumed a new responsibility as the System's Enterprise Content Management Support Office and will implement technology that will enable System users to better capture, store, preserve and deliver content and documents.

Looking forward, the System and the Bank will be commemorating 100 years of service with the signing of the Federal Reserve Act in December 1913 and the chartering of Reserve Banks in 1914. As we look to the future, our employees' unwavering commitment to our core values will allow us to successfully address challenges and achieve the System's mission to foster the stability, integrity and efficiency of the nation's monetary, financial and payments systems.

James M. Lyon
First Vice President

2012
FINANCIAL STATEMENTS
FEDERAL RESERVE
BANK OF MINNEAPOLIS

federalreserve.gov/monetarypolicy/files/BSTMinneapolisfinstmt2012.PDF

federalreserve.gov/monetarypolicy/bst_fedfinancials.htm

AUDITOR INDEPENDENCE

The Board of Governors engaged Deloitte & Touche LLP (D&T) to audit the 2012 combined and individual financial statements of the Reserve Banks and those of the consolidated LLC entities.[1] In 2012, D&T also conducted audits of internal controls over financial reporting for each of the Reserve Banks, Maiden Lane LLC, Maiden Lane III LLC, and TALF LLC. Fees for D&T's services totaled $7 million, of which $1 million was for the audits of the consolidated LLC entities. To ensure auditor independence, the Board requires that D&T be independent in all matters relating to the audits. Specifically D&T may not perform services for the Reserve Banks or others that would place it in a position of auditing its own work, making management decisions on behalf of the Reserve Banks, or in any other way impairing its audit independence. In 2012, the Bank did not engage D&T for any non-audit services.

[1] In addition, D&T audited the Office of Employee Benefits of the Federal Reserve System (OEB), the Retirement Plan for Employees of the Federal Reserve System (System Plan), and the Thrift Plan for Employees of the Federal Reserve System (Thrift plan). The System Plan and the Thrift Plan provide retirement benefits to employees of the Board, the Federal Reserve Banks, and the OEB.

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BETTER POLICY THROUGH BETTER COMMUNICATION

TWO CONVERSATIONS WITH NARAYANA KOCHERLAKOTA

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