

**Conference Call of the Federal Open Market Committee on
October 15, 2010**

A conference call of the Federal Open Market Committee was held on Friday, October 15, 2010, at 2:30 p.m. Those present were the following:

Ben Bernanke, Chairman
William C. Dudley, Vice Chairman
James Bullard
Elizabeth Duke
Thomas M. Hoenig
Sandra Pianalto
Sarah Bloom Raskin
Eric Rosengren
Daniel K. Tarullo
Kevin Warsh
Janet L. Yellen

Christine Cumming, Charles L. Evans, Richard Fisher, Narayana Kocherlakota, and Charles I. Plosser,¹ Alternate Members of the Federal Open Market Committee

Jeffrey M. Lacker and Dennis P. Lockhart, Presidents of the Federal Reserve Banks of Richmond and Atlanta, respectively

John F. Moore, First Vice President, Federal Reserve Bank of San Francisco

William B. English, Secretary and Economist
Deborah J. Danker, Deputy Secretary
Matthew M. Luecke, Assistant Secretary
David W. Skidmore, Assistant Secretary
Michelle A. Smith, Assistant Secretary
Scott G. Alvarez, General Counsel
Nathan Sheets, Economist
David J. Stockton, Economist

Alan D. Barkema, James A. Clouse, Steven B. Kamin, Lawrence Slifman, Christopher J. Waller, and David W. Wilcox, Associate Economists

Brian Sack, Manager, System Open Market Account

Linda Robertson, Assistant to the Board, Office of Board Members, Board of Governors

¹ Left meeting at point indicated.

Michael Leahy, Senior Associate Director, Division of International Finance, Board of Governors; Andrew T. Levin, Senior Associate Director, Division of Monetary Affairs, Board of Governors; David Reifschneider and William Wascher, Senior Associate Directors, Division of Research and Statistics, Board of Governors

Stephen A. Meyer, Senior Adviser, Division of Monetary Affairs, Board of Governors

Christopher J. Erceg, Deputy Associate Director, Division of International Finance, Board of Governors; Michael T. Kiley, Deputy Associate Director, Division of Research and Statistics, Board of Governors

David H. Bowman, Assistant Director, Division of International Finance, Board of Governors

David H. Small, Project Manager, Division of Monetary Affairs, Board of Governors

Edward M. Nelson, Senior Economist, Division of Monetary Affairs, Board of Governors

Ryan S. French, Senior Research Assistant, Division of Monetary Affairs, Board of Governors

William H. Stone, First Vice President, Federal Reserve Bank of Philadelphia

Loretta J. Mester and John C. Williams, Executive Vice Presidents, Federal Reserve Banks of Philadelphia and San Francisco, respectively

David Altig, David A. Marshall, Margaret M. McConnell, Mark E. Schweitzer, John A. Weinberg, and Kei-Mu Yi, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Chicago, New York, Cleveland, Richmond, and Minneapolis, respectively

Evan F. Koenig, Giovanni Olivei, and Michael Schetzler, Vice Presidents, Federal Reserve Banks of Dallas, Boston, and New York, respectively

Argia M. Sbordone, Assistant Vice President, Federal Reserve Bank of New York

**Transcript of the Federal Open Market Committee Conference Call on
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CHAIRMAN BERNANKE. Thank you, everybody, for joining us on a Friday afternoon. This was a hard meeting to schedule, and this seemed to be the only time that worked, so I apologize for any inconvenience. We've told everyone we are going to try to finish by 5:30, and, depending on how things go, perhaps we can do better than that. Is President Plosser on the line?

MS. DANKER. We think so, but we'll check back later. We have Philadelphia represented.

CHAIRMAN BERNANKE. President Plosser is on vacation. He'll be listening in. As you know, he submitted a memo expressing his views, which I hope you've seen.

A theme of our meeting in September was the possibility that we might want to modify our policy and communication framework to help provide clarity in the current situation, which is one where interest rates are essentially at the zero lower bound. A number of you suggested starting the next FOMC meeting earlier on the first day in order to discuss this possibility further. But it seemed to me that the topic was big enough that we might have questions and want the staff to go back and look at various issues. So I thought it made sense to meet in advance of the regular meeting, which would give the staff and the Committee time to consider whatever comes out of this discussion. Depending on how things go today, I'm prepared to schedule additional time in November as well, but I'd like to see what kind of progress we can make today. Again, our focus today is our monetary policy framework and the associated communication issues. The staff has also done some work on tools, which is a somewhat separable issue, though not entirely.

As Debbie's memo indicated, my hope is that we can leave discussions of the current economic outlook and policy situation to the regular meeting in November and focus as much as possible today on the framework issues. I'm sure people won't be shy about talking about these

issues, but I want to reassure you that anything you say does not commit you to any particular policy position in November.

I'd like to structure the meeting as follows. In a moment, we'll start with a presentation by Board staff, followed by Q&A. Then we'll have a go-round of participants to get your feedback on those presentations as well as on the material you received that was prepared both by the Board and by a few Reserve Banks. I don't anticipate having any votes or final decisions today—this meeting is really just for information-gathering and getting initial impressions. That being said, as Debbie properly indicated, this is a meeting, not a briefing, in that we would expect you to make comments relevant to policy. I'm not going to ask for presentations from the authors of the two Reserve Bank memos, but, certainly, if you have questions for them, or if you would like to refer to their work in your own discussion, that's obviously appropriate.

Before we get into the main content of our meeting, I did want to ask your assent to add another item to the agenda of the November 2 and 3 meeting on the subject of external communications by both participants and staff of the FOMC. Just to give you a bit of advance notice, let me tell you a couple of things I'm concerned about and would like to talk about at more length. First, I was very disappointed, as I know many of you were, to see a few months ago some stories in the press that showed access to considerable inside information, including quotes of what people said at FOMC meetings, staff materials, and the like. I did circulate a memo on this problem, but we never discussed it as a group. I think it might be worthwhile to have some discussion of those kinds of issues collectively. Second, I think many of you also saw a Reuters article that suggested—and I don't know if this is true or not—that there may be leaks to non-media outsiders, including market participants, former officials, consultants, and others, some of whom stand to make money by their inside access either to participants or to staff. If this is in fact true, it's

obviously a serious problem and one that could even have legal consequences. So I think we need to discuss that issue as well at the November 2 meeting.

A third and final issue that I'd like to include in that item on the agenda for November is not really a security issue, but it does concern me, in any case. I perceive an increasing tendency of FOMC participants to stake out strong policy positions in advance of our meetings. Now, it's perfectly fine for people to give their own views, and that has been a long-standing tradition; but I think that it has also been our tradition that when participants express their individual views, they do so in a way that emphasizes the collegiality of our process, the consensus nature of our process, and the fact that our decisions are made collectively in the FOMC. If everybody has already made up their mind before the meeting, why don't we just phone in the votes and save ourselves the travel? This idea of trying to maintain at least some plausible deniability and some reference to the Committee's prerogative to make decisions is in the memorandum that Michelle put together and that all participants receive when they join. You can review that for your reference, if you'd like. Now, we may decide that this implicit contract, if there is one, has become outdated. In any event, it does strike me that, although it's good for people to know what our views are and for us to air differences and so on, the public may perceive the Committee to be more fractured than it, in fact, is, and that clarity and communication may suffer as a result.

This issue is really a subjective one, and it may or may not warrant any further action. The other two issues, though, obviously raise security issues, and we need to make sure we're comfortable with how things are going. I will want to raise with you on November 2 the possibility that we might, for example, appoint a small subcommittee to look into strengthening our rules or strengthening our procedures to make sure that we have adequate confidentiality. I don't want to discuss these issues now, but I wanted to get your assent to put this on the agenda for, say,

45 minutes—not too much time, I hope—at the beginning of our next meeting. Will that be acceptable to the Committee? I'm seeing nods. Okay, we will begin our discussion next time with some of these communication issues. Thank you for that.

I will now turn back to the main subject of our meeting, which is the policy framework, communication, and tools. To repeat, you received two memos from the Board, one on the framework, one on policy tools. Let me turn first to Michael Kiley, who will give a short presentation. Mike Leahy will then present material on tools, and then we'll have Q&A from the Committee. Michael.

MR. KILEY. Thank you, Mr. Chairman. One of the background notes sent to the Committee earlier this week discussed issues related to the possible adoption of a new policy framework, including the specification of objectives, tools, strategy, and communications.

With regard to the specification of objectives, the memo highlighted three approaches, each of which includes a summary of the FOMC's interpretation of the statutory mandate to promote "maximum employment, stable prices, and moderate long-term interest rates."

Under the qualitative mandate approach, the FOMC statement would provide a qualitative assessment of current inflation and unemployment in light of the Committee's statutory objectives. It would also indicate whether employment and inflation are expected to converge toward the Committee's longer-run goals at an acceptable rate without further policy action in the near future. Such an approach would not require much change in the FOMC's decisionmaking process, but it also might not deliver much additional clarity about the Committee's objectives and its plans for achieving them.

Under the second approach, the statement would include an explicit numerical inflation objective. An explicit inflation objective could help keep inflation expectations well anchored by increasing the public's confidence that the Federal Reserve will keep inflation close to its objective and, thus, could allow the Committee greater flexibility to put in place more stimulus in the near term. To avoid the misperception that the FOMC was downweighting its statutory mandate to promote maximum employment, the statement also would summarize participants' views about the longer-run sustainable rate of unemployment. Participants' estimates of the sustainable rate of unemployment could be drawn from the Summary of Economic Projections (SEP), provided the Committee were willing to interpret its long-term projections in that way; the inflation objective also could be taken from the SEP, or the Committee could periodically vote on its inflation goal.

Under the third approach, the statement would provide an explicit target path for the price level along with a summary of participants' judgments about the longer-run sustainable unemployment rate. A target path for the price level could aim to raise inflation temporarily above the Committee's longer-term desired rate to compensate for inflation having previously fallen short of that rate. For example, if the target path starts in late 2007 and rises at an annual rate of 2 percent, then moderately higher inflation of around 2½ percent for three years would be sufficient to bring the PCE price index back up to the target. In theory, price level targeting would lead inflation expectations to adjust in ways that help stabilize the economy, but how it would perform in practice is an open question, given that no country has recently used this approach.

Under any of these options, the Committee might also wish to reconsider its strategy for adjusting its policy stance. The Committee has made substantial adjustments to its large-scale asset holdings on only three occasions: November 2008, March 2009, and August 2010. Taken together, these choices may have suggested to the public that the Committee prefers large and infrequent adjustments to the SOMA portfolio. Such an approach has possible benefits, including potentially eliciting more sizable macroeconomic responses and clarifying the FOMC's intentions for the size of the balance sheet for longer stretches of time. Large, infrequent policy actions also may have costs. Because policy actions would be triggered only by large shifts in the outlook, the approach may prove insufficiently responsive to a gradual accumulation of "bad" or "good" news. In addition, such actions could increase economic volatility because the effects of large portfolio shifts may prove to be different from what the Committee intended. Finally, the Committee may judge that its experience with this approach has underlined the difficulty of explaining infrequent policy adjustments.

Alternatively, the FOMC could adopt a strategy of making more frequent and (typically) smaller policy adjustments. This approach might better calibrate policy to incremental changes in the outlook. It also may reassure the public that policy will be adjusted more promptly, thereby helping to keep the economy on track through better management of expectations. Finally, it would allow the Committee to initiate incremental sales in response to improvements in the economic outlook, if desired.

The background note also highlighted how a strategy for adjusting the SOMA portfolio (or alternative instruments) more frequently could be informed by quantitative benchmarks. Such benchmarks are familiar in the context of the target federal funds rate, and the note illustrated several points regarding "rule-based" or "optimal-control-based" policy prescriptions for the SOMA portfolio. First, benchmarks that embed a moderate sensitivity to gaps between current inflation and employment from their objectives would not necessarily prescribe additional stimulus at this time. Second, more activist rules would imply more stimulus, potentially substantially more, and hence would push inflation and activity toward their objectives more quickly. And finally, strategies that involve credible forward guidance that policy will likely remain accommodative for a sustained period of time,

as is assumed in the optimal control simulation, are particularly effective because of their impact on expectations.

Indeed, the importance of managing expectations under all the possible specifications of objectives and strategies implies that the Committee's communications may need to evolve in conjunction with any change to the policy framework. To illustrate how this might be done, the background note presented three draft statements, reflecting hypothetical decisions regarding objectives and the magnitude and timing of policy adjustments; the draft statements also emphasized the potential role of guidance regarding possible future balance sheet actions.

To facilitate its communication, the Committee might also consider enhancing the SEP to include information about participants' assessments of the appropriate path of policy, potentially with regard to both the funds rate and the balance sheet. Such a step, coupled with the announcement of an explicit inflation objective and quantitative information about the long-run sustainable unemployment rate, might be particularly effective because the policy projections would help the public understand how the Committee intends to set policy to foster its objectives over time. The Monetary Policy Report might also shift in emphasis with a change in the policy framework, providing information on the Committee's assessment of the outlook relative to its objectives and on the role played by policy in that outlook.

Finally, a number of major central banks, such as the ECB and the Bank of Japan, regularly use press conferences as part of their communication policies. Post-FOMC press conferences could offer an opportunity for the Chairman to inform the public about the Committee's decisions in more detail. If the Committee decided to adopt a new quantitative framework, participants may wish to consider this possibility. That concludes my remarks.

MR. LEAHY. The second note we prepared for this meeting, "Strategies for Targeting Interest Rates out the Yield Curve," examines ways to provide additional monetary stimulus through targeting or capping market interest rates. It looks at three possible approaches that would use outright purchases of Treasury securities to achieve interest rate targets. These three vary chiefly in terms of how far out the yield curve they seek to target rates. They also offer different combinations of expected benefits that might be achieved in terms of economic stimulus and risks to the Federal Reserve balance sheet. Other variations and approaches are possible, of course; we briefly consider one of those, the use of options, at the end of the note.

One approach to targeting interest rates that we discuss, the policy-signaling approach, seeks to cap at low levels interest rates on all Treasury securities that mature during the period over which the Committee expects to keep the federal funds rate near zero. For example, under this approach, the FOMC might seek to target interest rates at, say, 25 basis points for all Treasuries that mature on or before June 2014, or whatever other date the Committee anticipated would be the liftoff date for the federal funds rate. This approach is self-extinguishing in the sense that, if monetary policy unfolds as anticipated, the range of targeted interest rates shortens

with the passage of time, terminating just as the Committee anticipates that it would begin raising its target for the federal funds rate. The approach might be used if the Committee sought to clarify its expectations regarding the “extended period” over which the federal funds rate was likely to be at an exceptionally low level.

The second approach described in the note, the incremental approach, begins with setting interest rate targets at the short end of the yield curve and moves out in steps at the discretion of the Committee. The first step of this approach might be to set a cap of 25 basis points for interest rates on Treasury securities that mature on or before October 2012, the maturity date of the current two-year note. As the targeted rates decline in response to the policy, rates on Treasuries further out the yield curve should also move lower. If the effects on the yield curve and the economy were seen as sufficient, no further steps need be taken. If the effects were seen as desirable but insufficient, the horizon of targeting operations could be extended. Like the policy-signaling approach, this approach terminates with the passage of time.

Like the policy-signaling approach, the objective of the incremental approach is to cap rates on Treasuries at low levels. However, the intent under the incremental approach is not to signal the length of the “extended period.” This approach might be preferred if the Committee feels more comfortable setting explicit targets for near-term rates, and moving incrementally may be viewed as a prudent way to discover how far out the yield curve targeting operations would need to occur to achieve the desired effect on the economy.

The third approach described in the note is that of targeting a longer-term Treasury yield. For example, the FOMC could announce a cap that is 100 basis points below the current yield on the 10-year Treasury security. The Committee might prefer this approach if it believes that targeting longer-term interest rates is likely to stimulate economic activity more directly than targeting short- and intermediate-term rates. Unlike the other approaches discussed, the expiration date of this approach is not tied to the maturity of the assets targeted.

All three approaches work to lower yields through two channels: the signals they send about the expected path of the federal funds rate and the compression of term premiums. The policy-signaling approach would deliver the most explicit signal about expected future short rates, although the other two approaches might also influence expectations about the Federal Reserve’s commitment to low interest rates. To the extent that such signaling shifts expectations, the increase in the size of the SOMA portfolio needed to keep rates near the desired targets can be smaller. Term premium effects may be largest in the case of long-term interest rate targets, where the scope to lower term premiums is the greatest.

The three approaches offer a range of benefits and risks. A key benefit of targeting a long-term interest rate stems from its capacity to affect directly the part of the yield curve most likely to influence economic activity. The incremental approach is likely to be weakest in its ability to influence long-term rates, at least initially. The policy-signaling approach might influence longer-term interest rates significantly if it

prompts an adjustment of the expected future path of short rates, which may work to lower a broad range of interest rates across the yield curve.

The balance sheet risks associated with each of these policies are lowest for the incremental and policy-signaling approaches and highest for the policy of targeting long-term yields. The differences reflect the maturities of the securities likely to be purchased under each program. The note discusses ways to mitigate balance sheet risks, all of which involve limiting the degree to which interest rates are controlled. However, none of these means eliminates balance sheet risk entirely.

Finally, the note offers a few thoughts about the possibility of selling put options on Treasury securities. The Federal Reserve could impose an interest rate target by selling options with a strike price consistent with the target. Moreover, by aligning financial consequences with rate objectives, selling options could reinforce and clarify the Federal Reserve's communications about interest rate targets and the expected path of the federal funds rate. Selling options also withdraws risk from the market, which should reduce term premiums and so reduce interest rates via that channel as well. Against these benefits, there are balance sheet risks related to uncertainty about the quantity of options needed to achieve a measurable effect in markets and about the extent to which options sold would be exercised. The use of options could also pose communications and operational challenges.

CHAIRMAN BERNANKE. Thank you very much for those summaries. Are there any questions for presenters? [No response.] Everybody has fully assimilated the material? [No response.] All right, seeing no questions, we can turn to a go-round. Again, you were given some suggested questions to address, but, of course, you are free to talk about whatever you'd like. One point I would like to make is that the decisions we make at the coming meeting or subsequently about our framework will probably be with us for a while, so we need to think about how they will work not only immediately but also at other stages of our policy cycle. Let me begin with President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I'll try to be brief in answering the questions you asked.¹ In terms of specifying the objectives, I find myself between option 1 and option 2. In some respects, I view option 2 as a concrete version of option 1. I think many observers already view our longer-run goals for inflation as a target, so we currently operate with

¹ A list of the questions addressed by meeting participants is attached to this transcript (appendix 1).

what amounts to a fuzzy target. There are certain advantages to speaking with one voice on where we expect to go with both inflation and unemployment, so I'd lean a bit more towards option 2 than option 1, but I could be comfortable with either of those two.

I think price level targeting is an interesting proposal and has some advantages, but, at least for now, I think it has some challenges as well. I'll just highlight three issues that I'd want to think hard about if we were going to move in that direction. First is the challenge of communicating; I think we need to make sure that we really believe we can communicate the concepts in a clear way, not only to economists but also to other people who matter. Second, I do have some questions about our ability to bind future FOMC members to whatever path we get started on. Third, I'm a little concerned about how easily we can bring inflation down once we get to that point.

In terms of the LSAPs, I am in favor of doing more. Actually, I'd be open to doing mortgage-backed securities or possibly even investigating whether SBA loans could also be used for purchases. I know that market is relatively small, but it would signal that we are interested in credit availability more generally. If we decide that we are focusing on Treasuries, I don't think it makes too much of a difference which of the long-term maturities we choose to do, since we will be taking duration out of the long end of the market. But I do have a preference for focusing on rates rather than quantities. If we don't go the route of fixing rates, I would prefer to do the purchases in medium-sized amounts; that is, I would not want to be fine-tuning the amounts. I wouldn't want to go much smaller than purchases of \$500 billion. That seems like an amount that could have a material effect, and, hopefully, we wouldn't have to change it in a very high-frequency way. It would highlight that this is an unconventional policy, and we'd want to see what the effects are. But I think that, if we try to fine-tune things with very small amounts, we might see relatively little

effect, and it might actually undermine some of the goals that we're trying to achieve in terms of getting interest rates to move.

Regarding the suggestion of a postmeeting press conference, I think that might be a good idea—that's easy for me to say, because you'd be the one doing the press conference, not me. If you were willing to do it, I do think there are some advantages to providing a little more clarity to what was discussed at the meeting; furthermore, it dovetails with some of the concerns about interpretations of what came out of the meetings.

CHAIRMAN BERNANKE. Go ahead, Eric, sorry.

MR. ROSENGREN. Can you still hear me?

CHAIRMAN BERNANKE. Yes, we can hear you now.

MS. DANKER. President Plosser? If you could drop off, President Plosser, that would be great.

MR. ROSENGREN. Am I back on?

MS. DANKER. We'll keep our fingers crossed. Yes.

MR. ROSENGREN. I'm about to conclude anyway. In terms of interest rates, if we were to go the route of targeting, I would prefer to work in the area where we thought we would have the biggest impact, so I'd prefer to be at the long end of the market, not the short end of the market. Finally, I think we need to get more clarity on some of the options before we worry too much about communication strategy. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Charlie, if that feedback happens again, you might have to go off. Okay. It's quiet, anyway. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I'm going to address the four questions that you outlined—frameworks for specifying objectives, whether I favor additional LSAPs, methods of adjustment, and how to communicate, including sample statements.

Before I start, I want to say thanks very much for the staff memos. I thought they were very informative, especially the memo by Kiley, Meyer, Levin, and Nelson. I don't agree with every single thing in them, but I appreciate them nonetheless.

I think the good news is that we are not far from a viable framework that will work for the Committee and for the economy. I'm going to give you an overview of what I'm going to say, then I'm going to go into a few details, and then I'll conclude.

In the big picture, as far as objectives are concerned, I think we have successfully said that price stability provides the best backdrop for maximum sustainable economic growth and employment. This language was born of the experience in the 1970s, when we had high and volatile inflation, which caused substantial turmoil in the U.S. and global economies. My view is that, at this juncture, I wouldn't mess with the success that we've had by using this language, because I think it's true and I think it works fairly well. I'll come back to that in a minute.

On tools, I would prefer just asset purchases, not large-scale asset purchases. I think they do provide our best choice at the current juncture. I do think they would be effective. I would note that inflation expectations have been rising as we've been discussing the possibility of additional quantitative easing during the autumn; for example, the five-year TIPS expected inflation rate is up to about 164 basis points today from a low of about 120.

Regarding strategy, as all of you know, I'm in favor of smaller state-contingent purchases with a twist—I'm going to suggest that we provide guidance for future meetings. I'd prefer numbers in the range of \$100 to \$150 billion for an intermeeting move—I'd say that that should be

the basic unit that we talk about. That corresponds roughly to the amount of new issuance and, in fact, to many numbers that were discussed in the memos that were distributed. Then, as part of the future guidance, we could also include a promise to continue purchases at the next meeting with language that would sound like the following: “The Committee anticipates that this pace of purchases is very likely to be/is likely to be/could be/may not be/is unlikely to be reaffirmed at the next meeting subject to an assessment of economic conditions at that time.” This would be an open-ended approach. There would be no long-term level mentioned. I think any mention of the long-term target is inconsistent with the idea that you want a state-dependent policy. You’re essentially committing to go to a certain level of the balance sheet, regardless of what the data tell you. The data could come in much stronger or much weaker than you thought, and you should be able to adjust in the meantime.

Starting with a smaller but realistic amount, one that’s consistent with what’s in the memos, and then giving some forward guidance will set up expectations of a path of purchases, and it will give the Committee a chance to review the policy at each meeting and make adjustments. Later, maybe much later, when it’s time to reduce the size of the balance sheet, you can reduce it in the same way by saying that we’re going to move the balance sheet to a smaller level in an effort to get back to normal, and we’re going to reassess that at each meeting, and we are going to give forward guidance on that as well. This kind of approach would correspond most closely to draft statement 1, and I’ll have more to say on that as I go through these remarks in more detail.

To address these issues in more detail, let me come back to the frameworks for specifying objectives. Let me just reiterate, as I have many times, that I do support inflation targeting and an explicit numerical inflation goal. Even so, I’m not sure that we should try to make that maneuver right at this juncture. I’m not completely opposed to it—you might be able to talk me into it—but

this may not be the right moment to try to force that into the discussion. We do have an implicit inflation target emanating from our quarterly forecast exercise, and I think that's satisfactory for now, and it does work fairly well for us. A lot of issues arise if we want to mention specific numbers—for example, what price index to use and whether to target a core inflation measure versus an overall inflation measure. I think the latter is a difficult issue and one that has not been faced up to well by the Committee or by the macroeconomic literature. There's an issue about time horizons. There are issues about biases and inflation measures that haven't been revisited very much since they were heavily discussed in the 1990s. So I don't think we've really set up a process to come to an agreement on these types of issues, and maybe it's not the right juncture to try to force this into the process. Also, what matters is the credibility of the target, not the fact that you name a target at all. Even if you name a target, people may not believe you, at least initially, and it may take time to work out that credibility.

Again, we've long said that promoting price stability is the best contribution the Fed can make to maximum sustainable economic growth and employment. I really do believe that. I think that's supported by overwhelming evidence of the experience in the 1970s and the experience since 1984 up until the current financial crisis. The current crisis is certainly extremely serious, but this was born of financial instability and poorly functioning financial markets, and inflation wouldn't fix that problem. So I'm saying: Why mess with success? Let's just keep our normal description of the importance of low and stable inflation to our dual mandate.

I think it's especially dangerous to tie monetary policy too closely to unemployment. Even though we care a lot about obtaining better labor market performance, persistently high unemployment rates can and do occur in the industrialized countries. Let me give you some examples. Germany has been above 7 percent unemployment since 1993. Canada was below 7

percent for only two months between 1977 and 2005. Spain averaged 19 percent unemployment over a period of 25 years; today Spain is over 20 percent again. These persistently high unemployment rates can be driven by factors that are not well understood, in my view, and that have to do with demographics, labor market structure, unemployment insurance policy, policies relating to hiring and firing workers; that is, they're due to real factors that are outside the central bank's control. So, if you tie monetary policy too closely to unemployment, even though we obviously have our eye on unemployment, this can pull inflation policy far off course and lead to disaster for everyone involved. I would put the U.S. in the 1970s as an example of that.

Let me turn to methods of adjustment and how to proceed. Again, I'm for smaller state-contingent purchases with forward guidance. And, again, I think this will set up expectations of a whole policy path. At the same time, as data come in and the economic situation evolves, this will allow both the FOMC to adjust policy and the markets to adjust their expectations about policy going forward. Again, \$100 to \$150 billion is the unit of purchases. It could be adjusted if desired, although I wouldn't anticipate that we'd want to get into arguments about small changes in these numbers. One thing I like about this kind of a unit is that we're sort of purchasing all of the new issuance. That might be controversial in itself, but it gives us a metric for where we need to be or where we'd like to be on our purchases. It will add up to a substantial move over time, but only if it's supported by the data as they come in. For example, you could easily get much bigger numbers with this approach, but you wouldn't just announce the number up front; instead, you would announce a policy that would lead to a path, and that path could end up being a large amount. Markets will immediately pencil in some expectations and then refine those expectations going forward as the data come in about how much the Fed is eventually going to do with this policy, and I think that's exactly what we would like them to do.

The forward guidance also helps set this path of expectations. For example, we might say that the Committee anticipates that the pace of purchases “is very likely to be” reaffirmed at the next meeting subject to an assessment of economic conditions. If the data came in stronger, you could give that guidance less emphasis by changing the wording to just “is likely to be” or “could be.” If there was instead more doubt about the pace of the recovery, we could change these words around and change the extent of forward guidance. Of course, we would relate qualitatively, as in draft statement 1, to progress toward price stability and maximum sustainable employment. I think the open-ended nature of what I’m suggesting gives us plenty of size, even though we’re starting off with a small amount, \$100 billion. Some people might think that’s not enough to have an influence, but it’s the whole path that matters, not just the initial number. And, again, we’d sell off in the same way, that is, in a state-contingent way.

The best analogue for this approach is interest rate targeting. When we’re in normal times and we’re targeting interest rates, we would say we’re going to move in increments of 25 basis points, even in an environment where we might eventually expect to move interest rates much higher or much lower. I think markets will immediately see that this approach is analogous to interest rate targeting and Taylor-type policy rules, and that will help us communicate so that our policy is well understood going forward.

Regarding draft statements, I’m closest to draft statement 1 with a few tweaks—for instance, there would be no mention of a date like May 2011. What I like about draft statement 1 is that, even though this is a momentous decision for this Committee, it represents the least change from existing policy, so I think it will be the most reassuring and gain the most acceptance in the economy and in financial markets. If we went ahead with this, we’d be causing no more turmoil than necessary, even though we’re adopting an unconventional policy.

On “shock and awe,” I’ve often said that “shock and awe” is not likely to be an optimal policy. I thought there was a good discussion of (S,s) policies in this memo. (S,s) is going to be optimal only if there are fixed costs of policy actions—I didn’t see very much talk about what the fixed costs of policy actions would be. Again, we do not normally operate this way. Furthermore, (S,s) policy has a large range of inaction—you don’t do anything in the middle, because you don’t want to pay the fixed cost, and, if you get to one of the borders, then you do take action, and it’s a fairly large action. Also, even if you follow an (S,s)-type policy, the markets are still going to form expectations about when you might hit one of the boundaries and when you might take further action, so it’s still a dynamic process. It’s actually very difficult to figure out completely optimal policies under this kind of approach. But I think probably the bigger point is that the 2008–2009 period has passed—we’re not in free fall, we’re not in as dire a situation as we were then—so I think it’s time for a more disciplined approach to quantitative easing.

I think that the memo did a good job of saying that a “shock and awe” policy could fall flat, or it could cause dramatic instability. Those also are reasons why we don’t normally behave that way. In addition, consider what a “shock and awe” policy would have looked like in, say, the summer of 2004, when we were on the brink of starting tightening actions—we would have announced in June 2004 that we were planning to raise the federal funds rate by 400 basis points by June of 2006. We just don’t operate that way. Instead, we said, “We’re going to go up 25 basis points, and we’re going to review further moves in the future.” But we didn’t give forward guidance that we probably would continue to raise rates if the economy continued to improve.

I have just two other issues to cover. On targeting longer-term rates, I am sympathetic to this, but I don’t think it would be a good move at this juncture. I’d like to see a lot more analysis on this—I think this is a great topic for research. On price-level targeting, I’m also sympathetic to it

and would like to see more work on it, but I also would not adopt it at this juncture. Price-level targeting is something that might be a possibility if the situation deteriorated substantially from what it is now and if we felt that we had to take further and more dramatic action, but, for now, I don't think it's the right move. I know I rambled on a little bit. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Like President Bullard, I want to thank the staff for preparing two outstanding memos on these challenging issues. I was delighted to see the thoughtful input from the Dallas and Cleveland Feds, especially because the lead author on the Cleveland memo was my first Ph.D. advisee at Iowa. I like to think of these memos as the important initial responses to Governor Warsh's call a few meetings ago for more input from regional Feds other than New York.

My remarks focus on the following limited question: If the FOMC were to undertake further accommodation, how should it do so? And how should it communicate about that accommodation? In particular, I will not discuss at this time whether it's a good idea to undertake further accommodation. Since I've joined these meetings, I've been consistently supportive of the "extended period" language. At the same time, at meetings earlier in the year I expressed support for shrinking the size of the balance sheet, and, in a similar vein, I argued in the Committee against the August reinvestment decision. I would say that my attitude towards further accommodation mirrors these past positions. I have significant reservations about any further use of asset purchases, and I would prefer, instead, that any further accommodation be done through forward guidance. In particular, I would prefer to be quantitatively explicit about what we mean by "extended period," and then implement accommodation by varying that quantity in response to shocks.

Why am I concerned about quantitative easing—I was in Britain, and they like to call it “QE”—as a vehicle of accommodation? In my view, its risk–return tradeoff does not warrant its use. First, its expected upside is limited. The theoretical baseline result in, for example, Eggertsson and Woodford, is that quantitative easing has no effect on the economy other than through forward guidance. On the empirical side, there is some evidence that the LSAPs can achieve modest short-term reductions in the term premium. Now, these estimates are imprecise and may well be quite short-term in nature. Even when we feed these estimates into FRB/US, these reductions imply, at best, modest improvements in economic performance.

Relative to these modest benefits, I see many possible risks. I’ll talk about five that came to me, I would say, over the course of a minute—I’m sure by thinking more deeply, we could come up with others. Here’s the first concern. The New York Fed has emphasized that the impact of LSAPs is primarily related to the expected accumulated stock of purchases. I’ll add that I think that’s right. I believe that once we initiate any new LSAP, whether we use a small purchase or a large purchase, there will be huge uncertainty about that expected accumulated stock of purchases. So that’s one concern. Another concern is: How will other large holders of United States Treasuries react to our move? If they were to decide to sell much of their holdings, would that undo or even swamp our attempt to remove duration risk from the market? Third, how will foreign exchange markets react? I realize that one benefit of this policy is some downward movement in the dollar. But there could well be too much movement in the dollar. In fact, one could imagine the extreme outcome where the dollar’s place as a reserve currency might well be in jeopardy. Moving to another concern, if we have a \$3 to \$4 trillion balance sheet, can we effectively raise rates? Will our new reserve-draining tools work as we expect when we’re faced with an inflationary threat? Finally, a large-scale asset purchase exposes our balance sheet to interest rate risk. That is, in fact, the point of it, in some

sense—we're taking duration out of the market and onto our balance sheet. That exposes our payments to Treasury to interest rate risk and exposes taxpayers to interest rate risk. How will taxpayers react to that extra source of risk that confronts them?

Those are five possible risks, and, as I said, if we thought more, we could come up with others. I would say that there is tremendous uncertainty about all of these questions, so further large-scale asset purchases seem to be an approach with limited upside potential and possibly large downside risks.

In contrast, forward guidance is a relatively low-risk alternative to LSAP. I talked to market participants, and they seem to interpret the FOMC's statement as saying that our plan is to keep the fed funds rate near zero for six months. If we wanted to offer further accommodation, I would use more precise language and change the last sentence in the fourth paragraph of draft statement 1 to read, "...are likely to warrant exceptionally low levels of the federal funds rate into mid-2012." We can readily vary this length of time in a continuous way in response appropriately to shocks.

As we build towards the November meeting, I think the staff has done an excellent job of telling us about how a given amount of purchases of long-term securities maps into our conventional monetary policy tool; specifically, a purchase of \$150 billion of long-term securities seems to map into a fed funds rate reduction of about 25 basis points. It would be great to have some kind of similar equivalence between quantitative formulations of "extended period" and conventional monetary policy. I would encourage the staff to help us understand that connection better.

Why do I like forward guidance? First, unlike the LSAP, it has a firm grounding in recent economic theory, such as that of Eggertsson and Woodford or Adam and Billi. Those papers show that if a central bank is currently at the zero lower bound, it should respond to adverse shocks by

committing to future accommodation. I think this approach could go well beyond those papers—the basic idea of using forward accommodation to substitute for current accommodation is likely to emerge as a robust heuristic in a wide class of economic models, as long as participants in those models are forward-looking. The second reason I like forward guidance is that we’re already using this tool, so it would represent a natural extension to our current approach. All I’m doing is suggesting is that we be more precise about what our language means. I think going to the LSAP would introduce large policy uncertainties into an environment that is already rife with them, whereas merely changing the length of time corresponding to the “extended period” language would introduce far fewer uncertainties.

I’ll close with some thoughts about communication. I prefer draft statement 1 with the first version of paragraph 5. Echoing the thoughts we’ve heard from President Bullard, as well as, I think those in President Plosser’s memo, I certainly could be persuaded in more usual circumstances that we should adopt a quantitative inflation or price-level target—in fact, I would lean towards a price-level target. In the current circumstances, however, we would need to include a corresponding target for unemployment. I think such a target would be difficult to determine, given the range of views in the Committee about this. Even more importantly, I think it would be politically challenging ever to adjust this target upwards once we establish it.

My second thought about communication is that I really like the idea of the Chairman explaining the majority’s thinking in a press conference. As I’ve indicated in public remarks, I think in August the markets failed to understand exactly our rationale for making the move we did. Eventually it became clear, but I think we could have clarified it in 15 minutes after the meeting. I don’t see any reason why the Chairman has to be responsible for explaining minority views. But I think it would be very helpful to explain the majority’s thinking in a press conference. As President

Rosengren pointed out, of course, this is easy for me to say, because I'm not the one doing the press conference, but I have a lot of confidence that the Chairman will do a good job on this.

One thing did not show up in any of the memos, but I think it's really important in terms of thinking about communication, and that is that we need to have some clear way of communicating our best estimate of the impact of any further accommodation that we undertake. I originally suggested this as a footnote to the statement, and later several of my colleagues told me that that probably was not a workable idea, but I think the minutes would easily accommodate such estimates. If we actually do undertake further accommodation, we could easily have a paragraph or two that says something like, "...staff estimates of the impact of that accommodation are as follows..." I think we need to be clear with the public about what we expect to achieve through our actions, especially given that what we expect to achieve is rather limited. That would leave the floor clearer for other actors in the policy space to get involved. To summarize, if we were to undertake further accommodation, I would recommend that we translate the "extended period" language into a precise number that we could then adjust in response to positive or negative shocks as needed. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I've stated my views at previous meetings, so perhaps I can keep my remarks today brief.

We should adopt a framework that will last throughout the current period, which I think of as a liquidity trap. That probably means it should last until the unemployment rate is in the 6 to 6½ percent range. I think a new framework can help a lot. I think it could help today. I think it's risky to remain complacent about the current situation, but I won't go into that too much today. We could use this framework to help increase accommodation soon. I believe being explicit about our

dual mandate objectives is always preferred. But given our current situation, I would say it's as important now as ever. Therefore, on question 1, I continue to prefer option 3, a state-contingent price-level objective; for maximum effectiveness in hitting both elements of our dual mandate, we would target a specified price level. Once we reach that price level, we would clearly revert to a 2 percent inflation target, in which future misses on either side of 2 percent would be bygones—that would be option 2. I know this is viewed as a communications challenge. I've found that, at least among academics who hear about this, they seem to get it pretty quickly. I think we could work hard and regularly to enhance understanding of it among the public. I won't downplay the challenge, but I think it's doable. If we were to adopt option 2, we'd leave open the possibility of choosing option 3—price-level targeting—next year if the situation continues to be unsatisfactory. I'd be concerned that we'd have to do that.

Turning to questions 2 and 3, we need to construct additional policy actions to be consistent with the chosen framework. I think we should start with more LSAPs. I'm not sure I appropriately grasp the distinctions between “shock and awe” and a flexible approach. Let me just describe my preference. I would prefer to start with a total volume of asset purchases calibrated to be on the order of a 100 basis point cut in the funds rate. Using the staff's rule of thumb, this would be about \$700 billion. I'd announce the overall level of purchases now and say that they would be expected to be completed by May 2011. Then, we'd review events at each meeting. We'd want to take some time to see how the overall purchase announcements affect the economy. As we get closer to the May 2011 completion, we'd begin to comment on any further actions that would be necessary.

This would be difficult for everybody to understand. But if we have a framework that indicates very clearly what our objectives are, that would help a lot—for example, if we had a price-level target, or even an inflation target at 2 percent, or whatever number was agreeable, that

would be helpful. That would provide forward guidance about what our future actions are likely to be and presumably about the LSAP path. I don't think option 1 would help us at all in that regard—it would make it more difficult.

For question number 4, I think the statements are good structures. Statement 3 is the closest to the option that I prefer; I think it needs slight wording edits, but I won't go into that now. I think the language on the dual mandate is important as long as it is our legislated mandate. I don't know how we get around that.

Finally, I acknowledge that communicating what we're doing will be challenging, but I don't think it's impossible. I would suggest some kind of press conference following the announcement as long as we have a framework, and you, Mr. Chairman, could clearly state what the sense of the Committee was and that it was relatively narrow—that is, not too divergent. I think a framework would help. I think speeches can help, as can technical reports. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much, and my apologies to you and Eric for taking you away from the conference in Boston. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I, too, applaud all the staff's work. I think it was a great idea to work hard at this juncture to try to move towards some coherent change in the framework around our monetary policy actions.

I'm very sympathetic to the idea of a mandate-consistent inflation objective, and I think that putting the objective in the statement or in our communications, as in statement 2, could really help. We were on the verge of adopting a numerical objective for inflation four and a half years ago. Events intervened, so it would be great to find a good opportunity to get back to that and to cross the line to making it explicit.

I'm against a price-level target at this time. I think it's sort of complicated. I think it's hard to communicate, and it's hard to prevent secondary accounts that would boil our decision down to a statement of, "Well, they want to increase inflation for a couple of years." I think that's inevitably going to be the headline version of how a price-level target would be communicated. Also, it would look sort of opportunistic, and it would convey a sense that we have a regime where we move our near-term inflation rate target around a lot, and I think that would be detrimental to our credibility.

As for putting some numerical information about an unemployment rate in a public communication of ours, I strongly object. I don't think we're ready for that, I don't think it's a good idea, and I think it's dangerous for some of the reasons that Presidents Bullard and Kocherlakota have articulated. I think that, even with the qualifications that you articulated this morning in your speech, Mr. Chairman, and that are in the statement, it would inevitably be viewed as a target equal in stature and importance to our inflation target but somewhat above the "moderate long-term interest rate" objective that is part of our mandate as well. I think that the language that's in the proposed statement about the unemployment rate is confusing and potentially highly misleading in very dangerous ways. It describes it as "sustainable in the longer term." When I think about "sustainable" inflation rates—that's where we use the term, after all—I think of a longer-run average inflation rate. Yet I don't think people think of this unemployment rate, 5 to 5¼, as the longer-run average unemployment rate. I think what you have in mind is full employment—the language that was used in the 1963 *Economic Report of the President*. From the data, it doesn't look as if it's going to be easy for us to sustain an unemployment rate of 5 percent—the unemployment rate gets down there, but in recessions it goes up again. It's also not clear to me that we need to talk about the unemployment rate in our statement. Our mandate says "maximum employment" after all. A lot of other things go into the unemployment rate, as others have noted.

Let me take a crack at articulating something I tried to convey at our last meeting. This notion of a sustainable longer-run inflation rate seems to me to be motivated by the NAIRU idea; that is, the NAIRU is a latent variable to which the unemployment rate returns, and it's slow moving—maybe it responds to demographic factors or productivity growth or the like, but it does so only over long time horizons and in a smooth and gradual way. But I think it's important to recognize that this slow-moving characteristic is an assumption that's imposed on the model—maybe there are some technological assumptions that lead to it—and it's not verifiable or testable within that framework, because it's a latent variable.

If you relax that assumption, as the New Keynesian Phillips curve models do—the ones built on preferences, endowments, and technologies—you find that this latent variable, the NAIRU, responds to all the shocks that affect business cycle fluctuations in output and inflation. What's important to recognize is that there's a bunch of theory built into the way the NAIRU has been constructed, and it is theory that is very, very open to debate, and I don't think we've seen enough by way of staff analysis of alternative approaches. The approach built into this NAIRU idea is one that goes back to Samuelson and Solow and to the models that, I think, got us into trouble in the 1970s. I thought the debate about this was sort of settled in the 1980s, so I'm surprised that it lingers for so long in our thinking. As I said, I think this is a somewhat dangerous and misleading idea, because it's going to lead people to believe that we need to reduce the unemployment rate rapidly to its longer-run sustainable rate. I don't think it's going to be easy to communicate the sense that that's something that we don't expect to be able to get to for four or five years.

Let me emphasize that, for me, this isn't a matter of not caring about unemployment. I think unemployment is a problem. But I'm with President Bullard on this—and I think it's the consensus in the field—namely, that our best contribution is to keep inflation fluctuating around a level that's

low and stable. Inevitably, there's theorizing when you make the transition from economic models that allow you to evaluate the well-being of people to a reduced form, such as thinking of policy as pursuing an objective of low inflation and unemployment. I'm not against theorizing, and I'm not against basing what we do on some theory. But we ought to be explicit about it and put our cards on the table. I don't think we've had enough time to do that, and I don't think the staff is focused on that step of the movement from maximizing welfare to the point where we say, "All right, here's how we're going to operationalize the mandate Congress has given us."

My preference would be to leave any numerical discussion of the unemployment rate to the SEP, as we do now. I found myself drawn to the idea of an option that wasn't on the table—you might call it 1.5—where we're explicit about our inflation rate but not numerically explicit about the unemployment rate. If being explicit about our inflation rate is something that needs to be held hostage to being explicit about the unemployment rate, then I'm with President Kocherlakota and say that we just ought to defer that step for the time being and communicate about inflation as we do now. After all, we're very, very close to having articulated the target rate as 2 percent or a little under that.

On LSAPs, I agree with President Bullard. Let's drop the L or else add an MSAP to our arsenal. If more accommodation is needed, the arguments President Kocherlakota articulated are quite persuasive to me. I think it depends on what we're worried about and what we're trying to achieve. If we're worried about preventing a deflationary spiral, then the size of our balance sheet in the next couple of months is probably much less important than what people believe about the future path, and, in this case, the far future path, of our policy. In the model where people are forward-looking and we have perfect credibility, it's sufficient to convince people that we will not let the money supply decline in a way that's consistent with deflation, at least relative to how the

demand for money evolves. I've always viewed quantitative easing as operating at least as importantly through the channel of convincing people that we're focused on the quantity of money and not going to let it decline, as through the portfolio balance mechanics that the staff has spent so much time quantifying. If we do go down the path of asset purchases, I do like the idea of the type of small-scale program that President Bullard outlined. I think that has the advantage of conveying that we're engaged in more rule-like behavior, that is, that we're engaged in a consistent pattern of behavior, rather than acting on our own discretion and moving opportunistically.

I've sort of expressed my preference about the proposed statements. I do like the idea of press conferences—I think you'd be great at it, Mr. Chairman. I do not think we're ready at this time for other social media, like Twitter or Facebook, for communicating our monetary policy, but maybe down the road we'd want to consider it. Thank you very much.

CHAIRMAN BERNANKE. “Rates up”—under 140 characters. [Laughter] President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I also want to commend the staff for putting together a very useful set of materials and questions to guide our discussion today about a new policy framework. I favor adopting an inflation objective as described in the second option in the staff memo. An explicit inflation objective would provide us with more flexibility to achieve our dual mandate, and I think it would be helpful in anchoring inflation expectations around our objective. Option 1 leaves our inflation objective too vague, and, in the case of option 3, I am not sure we could effectively communicate about the transition to and from a price-level target. Additionally, the memo that I circulated suggests that a price-level target could result in a fairly large overshoot, which could complicate the management of inflation expectations.

While I support specifying an inflation objective, like others, I would prefer that we not provide quantitative information about maximum employment. As others have already noted, measures of the natural rate of unemployment are not observable, they are subject to various conceptual differences, and they pose considerable measurement challenges. Putting greater emphasis on our employment objective, I think, also creates some additional policy risks; for example, it is fairly typical to begin a tightening cycle even when the unemployment rate is high, because the unemployment rate tends to be a lagging indicator. I think we should, instead, argue that the two mandates are generally complementary and that maintaining stable inflation helps to promote maximum employment over the long run.

Although I favor option 2, a number of important issues still need to be resolved. I found the contingent policy approach in option 3 attractive, but, as I said, I personally find the price-level target a bit too aggressive. I would advocate a state-contingent action based on medium-term inflation objectives rather than a price-level path. The statement could provide forward guidance by linking the removal of accommodation to exceeding a pre-stated inflation threshold. I think this approach would clarify what we are committed to achieving over the next several years. This approach would most likely lead to some overshoot in inflation rates, as price-level targeting would, but it would help to center inflation expectations around our longer-term objective or target. We would have to determine as a Committee the specifics of how we interpret our inflation objective. Is it an annual objective as measured by core PCE? Do we need to center inflation around the target, as the Bank of England does? Or do we want to set an upper bound, more like the ECB? We have discussed these issues before, so I think it is feasible that we could agree on an approach to a numerical objective for inflation at our November meeting.

Turning to questions 2 and 3, if additional accommodation is necessary for the timely achievement of our dual mandate, I would support additional asset purchases. I would prefer large, discrete adjustments, consistent with those that are proposed in the draft statements. We have had experience with this approach, and I have some confidence that it would be sufficiently reliable. However, I think that the uncertainties around the effects of purchases make trying to formulate a rule to calibrate them somewhat problematic.

On question 4, I certainly find draft statement 2 an effective statement structure, particularly if we leave the numerical unemployment rate out of the statement. A version of statement 2 would be enhanced if we provided some supplementary information and media communications, such as a press conference. Obviously, these remain challenging times, and I believe that clarity in our framework will aid in setting monetary policy, both now and once the economy is on a more sustainable recovery path.

Let me close with a comment on setting precedents. As we move forward with our work, I think we should recognize that some of the steps that we are contemplating are intended to be temporary, while we may want to make others more permanent. So, if possible, I think we should try to identify these issues before we move forward with a new policy framework. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I, too, have to thank the staff for putting these memos together. They were well done and interesting and helpful. They are, by necessity, however, somewhat asymmetric in terms of the actions that they outline, because they read as if further action is pretty much in train, and there's no acknowledgement of how you move in and out of this and what the effects of doing so will be. And that leaves me a little uneasy.

I would prefer to view the memos as laying out a contingency plan should we reencounter a crisis when we are constrained by the zero lower bound. As a contingency plan, we develop the elements in a comprehensive manner, looking at our targets, potential instruments, our balance sheet size and composition, and looking, if you will, at conditions in the market. For example, if there were another financial crisis, I could, perhaps, support a “shock and awe” policy of quantitative easing. As a contingency plan, though, I believe we need to keep asset purchases in reserve and not get them out as an operating tool. As Charlie Bean said earlier this year, “...asset purchases aimed at flattening the yield curve are probably best kept in a locker marked For Emergency Use Only.” Because in my opinion we are not in an emergency, I would reject introducing asset purchases at the November meeting. I believe that, at this point, they would needlessly increase market uncertainty about monetary policy, both in terms of our objectives and in terms of our operating procedures.

Let me turn, then, to the discussion of how to specify the objectives for monetary policy. My obvious preference at this point is to maintain the status quo. The qualitative dual mandate approach that is outlined in draft statement 1 is preferable for me. I’m not convinced that there would be any significant benefit from providing anything more explicit than the estimates we already provide of long-run values for inflation, growth, and unemployment. And there could be significant costs if we go forward; for example, as others have mentioned, with respect to quantitative long-run employment goal, I question whether we can estimate the current natural rate of unemployment, much less what it might be in the long run. In addition, I am concerned that our long-run objectives will be viewed as short-term to intermediate-term goals—and that could be too confusing for many. Those objectives will be used to justify policy actions directed at the short to medium run, rather than the medium to longer run that I prefer as our policy horizon.

We need to be cognizant of the possibility that taking large action based on gaps between current conditions and fixed long-run objectives may lead to undesirable asset price movements, financial imbalances, and uncertainty. Such imbalances ultimately undermine our ability to achieve our longer-run objectives in the first place. Acting aggressively based on these gaps may also lead to significant overshooting of our ultimate objectives. A related concern is that such a framework will make it harder for the Committee to continue using a risk-management strategy to address tail risk. This is particularly important to me because I believe that maintaining our current policy is likely to lead to imbalances and lower economic activity and higher inflation sometime down the road. But I know that others may worry about deflationary risk. I also worry whether we would be happy with an explicit objective when unemployment someday falls to 4½ percent with low inflation. In that circumstance, would we really want to increase interest rates, or would we feel compelled not to?

I have a few more comments regarding the various options for providing additional policy accommodation. As I mentioned earlier, I view quantitative easing as an emergency tool rather than a normal operating tool. However, given that this will be viewed as a new framework, let me discuss a couple of other quantitative easing concerns. I understand that asset purchases would lower long-term rates to some degree, but I think the effect would be relatively small. For example, we have a zero interest rate today and significant quantitative easing already in place. With this degree of stimulus, in time this 9.6 percent unemployment rate will decline towards the natural rate. I would suggest that adding stimulus now will have a marginal impact on accelerating this decline in the unemployment rate, as much as we would like to force it down, and, in doing so, it also may invite negative consequences that we cannot ignore. We've talked about those negative consequences—the imbalances and the issues related to our independence—and I know that this

isn't the time for discussing that. But I think we need to be mindful of those issues as we think about quantitative easing as an operating tool.

Another issue that needs to be considered before adopting this framework is a clear statement of our exit strategy. While I agree that the tools to reduce excess reserves are available, we haven't really talked about how they would be used. We also haven't talked about what the impacts would be, and I think that's very important to do also. The Federal Reserve just doesn't have a good track record of withdrawing policy accommodation in a timely manner. In addition, without a clear exit strategy, and with decisions made by a Committee, the natural tendency is and will be to maintain an accommodative policy longer than we think we will now, as has been the case in the past.

These are some of the concerns I have about adopting this as a framework. I think it's something we need to be very mindful of going forward. As far as other points are concerned, such as press conferences and so forth, I don't have any problem with those. But that's not where my main concerns lie. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Let me add my thanks to the staff for their excellent preparation of materials for the meeting. In my comments, I'm going to express, at a fairly high level, what I favor and am sympathetic to versus what I'm skeptical about.

At this point, I favor an explicit inflation objective. I could see it as possibly a step in the direction of a price level objective, with which I have some sympathy, but, at this point, I think it's best to stay with an inflation objective. I do think it's timely to introduce an inflation objective. I believe it would shore up concerns about the growth of the balance sheet in the event that we do

implement new LSAP programs. As I said, I am sympathetic to price-level targeting, but I think the public needs much more preparation to understand that and to be able to factor it into expectations.

I am very concerned and very skeptical about quantitative guidance related to the unemployment rate. As I think President Lacker said, I think this would be construed as a target, and one where we have little if any flexibility. I'm not clear how useful the concept of a longer-run unemployment rate is. As regards communication, because I'm skeptical about this, my skepticism also applies to draft statements 2 and 3. Again, President Lacker said something that I had considered: Although it wasn't in the staff's materials, I wonder if the statement could combine a quantitative inflation target with some fortified qualitative treatment of unemployment. That might produce a satisfactory model for the statement.

I do favor additional LSAPs at this time. For my part, it would be preferable to do so with an inflation objective, but, if necessary, we could do so without. I think LSAPs will have some positive effect through a variety of channels.

I'm skeptical at this stage about interest-rate targeting. But if we go there, I would prefer a 10-year Treasury rate option. I see that as almost a benchmark for the curve in the minds of market participants in many respects.

Regarding the method of adjusting policy, I favor the smaller, more continuous approach. I think we can do the same kind of thing with LSAP adjustments that we have done with the federal funds rate: We can accustom the markets to small, discrete, incremental adjustments. I do think it's important to introduce conditionality or state-contingency, which I think will help with communication. We can manage the communication and the market reaction to some extent by assessing the program at each meeting and trying to communicate that assessment as clearly as possible. I think we are best served by estimating the cumulative size of the LSAP, announcing this

as the size, and then treating this number as the most likely outcome, barring any clear evidence that conditions have changed enough to alter the stated direction.

As regards communication issues, I don't have a lot of comments today. As I said, I think it's important that we make clear the conditionality of an LSAP as well as the notion that it goes both ways. I favor the idea of the Chairman conducting press conferences, particularly to explain any regime change that comes out of these meetings.

I do want to bring up a question that I thought was close to being on the table a few months ago, which may seem in some respects a digression at this stage. I think at that point we were at least beginning to entertain the idea of introducing some treatment of interest on reserves in our communication and in our statement. I think at some stage in the future, during an exit period or even earlier, that might serve us. I raise this issue because, if we're going to make substantial changes in how we communicate, or if we're going to try to socialize a new approach to monetary policy, this might be the time to introduce more treatment of interest on reserves. Those are my thoughts at this stage. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, President Lockhart. First Vice President Moore from San Francisco.

MR. MOORE. Thank you, Mr. Chairman. We had a Board meeting yesterday, and during the discussion, one of our Directors was talking about the use of temporary employees. He turned to me and asked if I knew the ratio of permanent status employees to temporary employees in the Federal Reserve. I told him I didn't know the answer for the System as a whole, but I did for the FOMC, and the ratio is 17 to 1. And as that one temp on the FOMC at this moment, I will limit my comments to the specific questions that have been posed.

First, regarding the description of our objectives for monetary policy as they relate to price stability, I see benefits to going with option 2, the explicit numerical inflation objective. I regularly hear from our directors and other business contacts about all of the uncertainty they face, especially stemming from the government sector, in which they tend to include us. So it seems to me that, at the margin, one thing we could do to help matters a bit is to add more clarity, especially if it could help dispel fears about deflation. I'd be inclined to do this in as clear and straightforward a manner as possible, with the Committee ideally arriving at and communicating a single number rather than a range.

Communicating the Committee's views on what constitutes maximum employment seems to me to be a far more challenging question, because this number changes over time and because there's such a wide divergence in views. Although FOMC participants seem to be in some rough agreement about their unemployment rate forecasts five to six years from now, there's much less agreement about the current full employment benchmark. This communication, therefore, may be best left to the description of the projections. However, at this juncture, we also think it's important not to give the appearance of giving less weight to our employment objective.

Turning to the second question, I think the LSAPs have done their job at getting borrowing rates down, and I would favor additional purchases if needed. I'm also open to other policy tools as well, especially clear communication of the conditions under which the Committee will raise rates, which can complement and reinforce our other policy actions.

On the subject of communication, I would make one observation that hasn't been brought up today, and that is that I think it would also be desirable to be explicit to the Congress about the possibility of losses at some point in the future. The implication of a bigger balance sheet with a longer duration may not be well understood by the Congress and the broader public and may be the

source of reputational risk for the System if we are successful enough with our policy moves to require a fairly quick exit down the road. It seems to me that the most favorable time to get this point across is when our policies are yielding substantial earnings for the Treasury rather than when the opposite could occur.

The answer to the third question of how to adjust the level of LSAPs is less clear in my mind. It appears that it is the stock of these assets that affects rates and, thereby, the economy. So it makes sense to me that in our first communication we would announce the maximum amount of the stock that we are highly confident we will need to add, and then we would make it clear that, beyond that, we will be adjusting depending on how events unfold. So I guess I fall into the “large and discrete” camp for the first adjustment, but I’m more open to how we would handle subsequent adjustments if they are needed.

Overall, I thought the draft statements presented a good set of alternatives. If we think the initial announcement amount is probably not going to do the trick entirely, I would recommend language that conveys the likely direction of future policy moves. This is accomplished in the second and fourth alternatives in paragraph 5 of draft statement number 1, where it says, “The Committee is prepared to expand its security holdings as necessary.”

And, finally, it would be helpful to have a special description of the Committee’s discussion and agreement on a numerical inflation objective in the minutes. Thank you.

CHAIRMAN BERNANKE. Thank you very much, and very good temporary work there.
[Laughter] President Fisher.

MR. FISHER. Thank you, Mr. Chairman. In the third line of the speech that you gave this morning in Boston, you emphasized that we had “increased independence from short-term political influences” and that that had historically assisted with the containment of inflation. I welcome this

discussion. I thank the Board staff as well as the staff at the Cleveland and Dallas Feds for their papers, because it seems to me very important now that we also become increasingly independent of market expectations and, may I add parenthetically, of creating market expectations that we then have to deliver on.

I think it's good to have a broader framework. Because so much has been said by so many, all of which are wise words, I'm just going to make a few limited comments. I can do that because I agree 100 percent with what President Kocherlakota said early in the conversation, not because I was in Minneapolis last week—he wasn't there—but because every single one of his arguments about quantitative easing I think is absolutely on point. I would add one other risk that I think we're running with quantitative easing—the risk of front-running being done by large money managers and perhaps foreign governments in terms of our announced intentions on quantitative easing. I think it's a mistake. I think we should stop. The five risks that President Kocherlakota pointed out are exactly the points that I would have made, and, therefore, I won't repeat them. Therefore, I'm certainly in favor of considering a different format for forward guidance.

I want to dispense up front with the idea of price-level targeting. I think it would be confusing to the public. I think the paper from Cleveland gave us some academic underlining of the risks that we'd be taking if we engaged in price level targeting. I think it would undermine confidence in the Fed. I think it would also provide a lot of red meat to those who do worry that we are somehow biased towards inflation and who have yet to develop full confidence in our capacity to develop an exit strategy. I would just add my support for Mr. Hoenig's point that having a clearly articulated exit strategy should be part of whatever we decide to do.

We did have discussions on inflation targeting quite some time ago, Mr. Chairman, at the very beginning of your tenure, as Mr. Lacker pointed out, that were waylaid by the crisis that we

faced. One of the difficulties with inflation targeting and being specific, if you recall from the discussion, was that we had to be sensitive to the fact that we did have a dual mandate. And one of the issues that I raised at the time was the possibility that, if we did proceed down the path of inflation targeting, we might then have the Congress ask us to be more specific about our views on unemployment. I have listened to President Kocherlakota, President Lacker, President Pianalto, President Hoenig, President Lockhart, and others, point out the risks of being specific with regard to any statement of what we consider to be an acceptable rate of unemployment.

It's for that reason that the Dallas Fed and Evan Koenig, who is sitting on my left, put forward a slightly different approach from just having inflation targeting. We put forward the idea of targeting nominal spending out of respect for the need to be sensitive to the problem of unemployment (which is the issue we're trying to address), to the mandate given by the Congress, and to the impracticability of discussing only inflation targeting and not discussing employment. I don't expect my colleagues to accept it, and I'm not sure I accept it, but, for the sake of argument, I think it's important just to consider this as an option. By the way, in this proposal, we're talking about nominal PCE rather than nominal GDP targeting. The reason is that PCE estimates are available monthly and they're subject to smaller revisions. The target path for PCE would very likely tie down the PCE price index more tightly than would a target path for GDP, and there are other reasons.

Let me give you some sample language that might avoid having to be specific on unemployment, and it also might even avoid specific mention of inflation targeting. We might say in a statement that "measures of nominal spending have fallen well short of a path that the Committee judges consistent with its mandate to promote maximum employment and long-term price stability. Given the size of the shortfall, the Committee anticipates it will take some time

before spending returns to satisfactory levels.” And then, we could go on to say that the Committee plans to maintain the target range, or whatever wording we decide to use there in terms of what we plan to do in terms of the forward guidance. My point is that I’m in favor of making an attempt to capture both of our mandates and doing so in a way that doesn’t raise the concerns that were expressed by at least five of my colleagues about stating a specific unemployment target, while also respecting the fact that Congress demands of us that we live up to our dual mandate.

With regard to having spoken so strongly against quantitative easing, again, I would just double underscore and highlight what President Kocherlakota and some of the others mentioned. The difference between large and small adjustments to me is the difference between being hit over the head with a baseball bat and being hit 20 times by a ruler. The latter may be preferable simply because you might decide after three whacks of the ruler that things didn’t work and you can withdraw it. But I do find the entire concept to be very, very troublesome. I have great respect for President Bullard, but, to me, the idea of buying the entire increment of Treasury issuance would just put a big red sign in front of the public saying that we’re monetizing the deficits, and I think that’s a significant mistake. I don’t want to go down that path.

With regard to number 4, in terms of the statements, I am in favor, Mr. Chairman, of your having press conferences. You are our leader. You do summarize for us. Some of us dissent on occasion, and I have been known to dissent on occasion. Some of us disagree and provide different arguments. I don’t doubt for a minute your ability to pull it together and speak for us as a whole. I certainly think that would be preferable to the kind of dissonance that we have been having, to which I may have contributed and to which, by the way, some nonmembers of the FOMC may have contributed, including some of the people who receive instructions to operate on our behalf.

So I'm certainly in favor of providing greater clarity, whatever we decide to do. My preference leans towards alternative 1, with the consideration, perhaps, of including the concept of nominal spending. And my preference would be for you to help clarify after we issue our statement, and perhaps before the minutes come out, and certainly for you to use your testimonies before the Congress for further elucidation.

I would just add one other point. This is an urgent situation. The urgency, however, I think can be overemphasized. I think the urgency is for us to get a new regime and have it clearly articulated and take the time to formulate it. I go back to a little Latin I tried to work on with President Pianalto, given her Italian heritage, a long time ago, which is *festina lente*—I would make haste slowly in this process. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. Turning to the first question, I don't have strong views concerning the proper policy framework—I see pros and cons for each. The qualitative dual mandate approach of option 1 is most consistent with what we've done up to now, so it probably has the least risk of unintended consequences, but it's not very robust. The inflation objective approach provides more structure, but I worry about a few things. For example, what would happen if there were a commodity price shock that temporarily pushed headline inflation above our target? How would we explain that? What would the implications for policy be? There's also the issue of credibility if we were to keep falling short of our target. In addition, as has been raised already, if we're going to express our inflation objective, don't we also have to share our objective with respect to the NAIRU? But what is the NAIRU? Right now, it presumably differs in the short run when we have extended unemployment compensation benefits and a depressed housing sector versus the longer run when presumably it's lower. At the same time,

taking the NAIRU out and just going with an inflation objective seems to elevate the importance of inflation at a time when the very high unemployment rate would seem to be our first priority. With respect to price level targeting, I find the regime potentially attractive as a device to anchor inflation expectations better, but I do worry about our ability to communicate the framework clearly.

In addition to thinking about the framework, though, I think there's another important issue to discuss. Assuming that we do proceed with additional LSAPs, I think it's at least as important that we reach a consensus about how this policy is likely to evolve in response to different sets of economic developments over time. I think we need to do this to serve ourselves, so we have some understanding about our reaction function going into this process, as well as to enhance our ability to communicate our thinking clearly to market participants. If the market evolves in line with our forecast, do we stick with what we've already announced? If it's weaker, do we escalate? If it's stronger, do we reverse course? What are the thresholds to moving? How often are we willing to adjust? Are the thresholds to doing more versus reversing course symmetric? Or is there some inertia to policy that creates a bias to keep going in the same direction? If we embark on another round of quantitative easing, market participants will want to know how this policy is likely to evolve in light of incoming information. I think we want to be as clear as we can to them about this in advance, because without such clarity, the risk premium would be higher and there would be more volatility and uncertainty about our future actions.

The second question is: Would you favor more LSAPs? Yes. I believe that the experience since the last FOMC meeting should make us more confident that LSAPs are a useful tool to ease financial market conditions. We've essentially run an experiment. Before the last meeting, the market put a low probability on additional LSAPs. Now the market puts a significantly higher probability on additional LSAPs. Since that meeting, we've seen a rise in the equity market of

about 3 percent and a decline in 10-year Treasury yields of about 15 to 20 basis points. The dollar has also weakened. So, whatever you thought of additional LSAPs four weeks ago, I think you'd be more favorably inclined today. The markets have reacted in a way that is consistent with our desire to push the economy closer to our objectives, and I think there's not much evidence that the decision to do additional LSAPs has created anxiety about our ability to exit smoothly. Although five-year, five-year-forward TIPS break-evens have increased a bit since the FOMC meeting, this just reverses the declines that we saw during the summer, so we should actually be heartened rather than disheartened by this. Also, implied volatility on a forward basis remains very low, signaling a lack of uncertainty about the path of long-term rates in the future; for example, the implied volatility of the 10-year swap rate three years ahead—which, presumably, would be around the time we might want to start to exit—is at a post-crisis low point.

Against the benefits of LSAPs and easing financial market conditions, of course, we have to be cognizant of the cost. But I think it's important to stress that the costs aren't invariant—we can affect the cost by how well we communicate with market participants and the public. We can explain clearly why we're doing this, what we think it will and will not accomplish, lay out how our program is likely to evolve in light of the incoming information, and explain how we will be able to exit smoothly without an inflation problem over the long run. To the extent that we communicate effectively, this will reduce the cost of an LSAP program to an acceptable level, so I think that the benefits will clearly exceed the costs.

How would we implement such a program? I'm not in favor of either the “shock and awe” approach or the continuous adjustment approach—I want something in the middle. I want something that's broadly consistent with the way we've adjusted the federal funds rate over time—typically in 25 basis point increments but sometimes larger, mostly in the same direction so there's

some autocorrelation, sometimes with higher thresholds to reverse course or to start an easing or tightening cycle. In the current environment, we might think of operating in \$250 billion increments or perhaps slightly smaller. At first, I'd do a bit more, because I think we're far away from our objectives, so we'd want to do the equivalent of the stimulus that we'd want to provide if we could actually push the funds rate as low as we'd like it to be. I would be very hesitant about having lots of volatility in the LSAP program—I wouldn't want us to increase the program at one meeting, then cut it at the next meeting, and then, at the next meeting, increase the program again. I think that would be bad for the program's effectiveness, because, as we've seen, this is about the market's expectations of how much we're ultimately going to do. If we keep toying with those expectations, we're probably going to increase the risk premium and make the program less effective.

Do the statements work? I'm happy with the statements. I think they provide a better grounding to explain our actions, but, as I noted before, I think we need to do more to communicate how the LSAP program would work in practice over time, from meeting to meeting, answering questions such as, "What might cause us to do more?" and "What might cause us to reverse course?" I think the statement isn't going to be sufficient for that purpose, so I very much favor press conferences by the Chairman. I think that's the one point we discussed today where we pretty much have a consensus, assuming the Chairman is up to doing it. But there are other options. The Chairman could give a speech in the days immediately following the meeting that could accomplish the same goal before anybody else spoke and potentially muddied the waters. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I, too, want to express my appreciation for the excellent memos, including those from Cleveland and Dallas. Let me take the questions in order. On question 1, my preference is for option 2. I would make the Committee's objective for inflation and our assessment of the unemployment rate corresponding to maximum employment quantitative and explicit. I think this would improve the public's understanding of our goals, helping to combat any tendency that could develop for inflation expectations to decline over time, which would exacerbate the zero-bound problem and impede recovery. It would also help contain the risk that, as our balance sheet expands, inflation expectations could become unhinged on the upside. But if we quantify our inflation objective, I consider it essential to do so in a way that emphasizes our balanced commitment to both parts of the dual mandate. So I see the proposed statement that also includes unemployment as a way of achieving the needed balance.

Including the Committee's quantitative assessments represents in some ways a relatively small communication step, because we already regularly publish participants' longer-term assessments of these variables in the Summary of Economic Projections. But taking this step is still consequential. If we set sail in this direction, we will probably end up tying ourselves to the mast, in the sense that such numerical assessments will become a permanent feature of our communications framework.

On the inflation objective, I don't think we need to seek Committee agreement on a single specific inflation target at this point. To say it is "about 2 percent," or "2 percent or a bit less," strikes me as an accurate characterization of our SEP responses. But should a day come when our preferred longer-run inflation objectives don't cluster in a narrow range, the Committee would have to agree on a single objective. That would be a more significant step, I think, requiring consultation with the Congress. While I prefer numerical objectives, I could also support the qualitative dual

mandate approach embodied in statement 1. The Committee's objectives are already pretty well understood by markets, so they'll probably get the message without the numbers. I would not pursue either price level targeting or nominal GDP targeting at this time, although I understand the attractions. The staff memo shows that, with forward-looking expectations and a high degree of credibility, a price level targeting strategy could be extremely effective. However, these strategies entail very significant risks, so I would not pursue them at this point.

Turning to question 2, which concerns the form that accommodation would take, my preference would be to provide additional policy accommodation via further purchases of longer-term securities rather than by setting interest rate targets. There is substantial uncertainty about their effects, but I am persuaded by the staff analysis that further purchases will have a meaningful impact on aggregate demand. And I agree with President Dudley that we are probably right now seeing the impact that such purchases would have, given the heightened market anticipation that they will occur. Interest rate targets also have some appeal, though; and the approach described in the staff memo, where we would cap rates at the front end of the yield curve to signal our policy intentions, is a strategy I would hold in reserve if further stimulus proves necessary and if we see market expectations concerning the length of "extended period" diverge significantly from the Committee's own views.

Turning to question 3, on the method of adjustment, President Bullard has won me over to the continuous approach. If we implement and communicate it properly, I think it will be seen by markets as an extension of our long-standing strategy for adjusting the federal funds rate. As Jim has emphasized, it will be important to communicate a reaction function, so that markets understand how our policy moves will be calibrated to changes in the outlook. If we succeed in communicating such a reaction function, market responses to incoming data will anticipate our eventual policy

actions, thereby enhancing and speeding the transmission mechanism. On the issue of calibration, I would choose a number like \$200 billion or \$250 billion as the size of our basic step, the equivalent of our 25 basis point step for changing the federal funds rate, and I would look for a way to communicate this calibration to markets. We do sometimes move the federal funds rate by 50 basis points, or even more, so I think we should be open to this possibility if we resume purchases. My own view is that we're behind the curve, so a move equivalent to 50 basis points would certainly make sense to me at the outset, and I would not consider this "shock and awe."

More generally, if we pursue the continuous strategy, I think it is important for the Committee to issue some forward-looking guidance in the statement; in other words, we need to enunciate a policy bias or tilt with respect to future LSAPs, just as we have done in the past with the federal funds rate. The market effect of our actions will depend on the entire expected path of future policy actions, and we'll undercut the effects of our purchases if we suggest that further moves in either direction are equally likely—that is, if we convey right away that we're at neutral when the odds instead are far more heavily weighted in one direction. The options in paragraph 5 of draft statement 1 offer constructive suggestions for communicating such a bias. My final point on this topic is that I think we need in every FOMC statement to state the intended size of the SOMA portfolio in addition to the time period over which we plan to reach that target. Theory suggests it is our stock of longer-term assets, and not the flow of purchases, that matters to market yields and asset prices.

Finally, turning to the fourth question, on communications, I do think the sample statements do a good job at implementing both the qualitative and inflation target approaches, and they're good models to follow. However, given their brevity and the novelty of a continuous LSAP approach, many questions will immediately arise about our strategy, and the three-week lag until the minutes

come out is much too long to leave such uncertainties unresolved. My preference would be for the Chairman to conduct a press briefing immediately following the announcement. It could take the form that was used, I believe, when we moved fed funds rate down to the lower bound. It need not be a full-blown press conference. It could be remarks to the press that are either on the record or on background. I think such a briefing would accomplish what we need at this stage. A press conference does have some appeal, but it would probably become obligatory on a regular basis and would be quite a commitment for the Chairman to undertake.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. I'll begin by saying that, on substance, I find myself increasingly out of step with the views of the Committee. My own views haven't changed much since we met last time, but, after hearing comments from others in the intermeeting period, I think there is a growing divide. I'm going to try to answer the questions, but they do seem, as a couple of people suggested, to point towards a more aggressive policy action. I don't mean to dwell on the underlying substance, but it will creep into these remarks a little bit.

I think the big question, which stands on top of the four that were listed, is: What's the objective of the new framework? Newness in and of itself doesn't seem to me to be a sufficient virtue. So I've been able to gather a couple of objectives of changing frameworks at this time. The first purportedly is to demonstrate a clearer commitment to a desired inflation level. In this case, I tend to think we run the risk of "protesting too much" by waving our arms around with renewed commitments—I thought the old commitment was pretty serious. I'm confident that we have the strong will and capability and leadership to deal with risks to price stability, should they arise. So that makes me a little less inclined to a dramatic new framework, unless we consider ourselves fully ready and on board.

The second objective of a new framework would be to communicate clearly the economic circumstances that would drive our balance sheet expansion, which would then transmit presumed benefits to the real economy. I'm not sure how well the illustrative statements accomplish that objective. It's not the fault of the statements, mind you. Rather, I think the problem is that none of us are all that comfortable with our level of understanding of the dynamics between changes in the balance sheet and resulting changes in economic performance.

Let me turn to the questions. Question 1: Which alternative way of specifying monetary policy appeals to you? Let me dismiss a couple of them. I do not favor the adoption of an explicit inflation objective and quantitative judgment about maximum employment. I think we shouldn't expect our credibility to be enhanced on inflation from a more explicit target. Inflation expectations are a function of how we act and are perceived to act. They aren't strengthened by making midcourse changes in policy formulation that make more explicit the issues that folks and markets already well appreciate. It also strikes me as a particularly bad time to change a framework. This is not our moment of maximum certainty on prices, so perhaps we're trying to do too much.

What about maximum sustainable employment? At this moment, it doesn't strike me as predominantly determined by the stance of monetary policy, whereas price stability does. And introducing them both explicitly into our framework suggests to me an apples-to-apples comparison that belies the reality. Moreover, putting the unemployment rate or the NAIRU in our statement strikes me as putting still more burden on ourselves, and I think there is agreement among a large majority of us that that burden needs to be shared more broadly among other policymakers, and I worry about letting them off the hook. What about price-level targeting? I don't favor that either. I think it could be too easily perceived as changing the goalposts and allowing higher inflation on a more permanent basis, even though the literature and staff memo presume it would be temporary. I

guess that leaves us with the third alternative, the qualitative dual mandate approach. To me, it's certainly the least objectionable, but I don't really see compelling reasons why it is preferred over our current standard or framework. But I suppose there are various gradations in between that we could all grow comfortable with.

Question 2: If additional policy accommodation is needed, would you favor additional LSAPs? In a word: No, not now. I won't dwell, Mr. Chairman, on the risk-reward tradeoff. My sense is that none of us really know the probabilities of the downside risks associated with a second round of quantitative easing, but I do think we have an idea of how bad the situation could get if those downside risks materialized. How bad would it be in foreign exchange markets? How bad would it be for capital flows to the U.S.? What would other policymakers around the world do to react and overcompensate? What would the impact on headline commodity prices be? What about removing the burden from our fiscal authorities? I can go on and on.

Unlike some others, I'm not terribly heartened by the market movements since our last meeting. They certainly prove that the Federal Reserve can move market prices, but, other than that, it doesn't tell me too much. It's these prices over the long horizon, it's the anxieties that could build over time, that are really more of a concern.

But I think your second question in number 2 is a good one: "What other tool do you think would be more effective?" My first instinctive answer, Mr. Chairman, is that there are a lot of tools—they're just not principally related to what the Federal Reserve does. But what about us? That doesn't mean we should just sit here and do nothing. I must say, I strongly support the idea that providing forward guidance, without an absolute commitment on a second round of quantitative easing, paves the way for us to take action, if necessary. I, for one, could be very supportive of more quantitative easing if the inflation picture warranted it or if an exogenous shock warranted it;

as before, we would be well placed to take these actions. But I don't think undertaking more quantitative easing in advance of such events does much to dissipate the prospects of those shocks.

Question 3: What about larger discrete adjustments or smaller more continuous ones? In all candor, I would say my answer to that is burdened by my policy disposition. If the FOMC does decide to go in the direction of expanding our balance sheet, it strikes me that, if the additional purchases are more limited, more circumscribed, then that provides us some more flexibility—not a lot but some more—allowing us the opportunity to walk back should there be a shock along the lines that many of us have talked about. I realize that some may say, “Well, markets have now come to expect very big numbers. Markets have come to expect some version of ‘shock and awe.’” But I think we don't have “shock and awe” left at this point. And it seems to me that, almost regardless of what we do, markets will be “disappointed” by what ends up happening after our next meeting. So I think it's best to preserve our options, and, if risks become more obvious after our November meeting, our having taken more limited actions does provide you, Mr. Chairman, and the rest of us with the proper ability to turn back.

Question 4: Are the sample statements good models? Well, I think the statements are quite provocative. I would say that draft statement 1 expresses more serious concerns about deflation risks than I believe are warranted. But, again, I think the problem isn't in the statements or the structures. I think the problems really are in our understanding, namely, what is our objective, how is that accomplishing it, and what weights do we put on the benefits and the costs?

Lastly, on the question of press conferences, my own view is much closer to Governor Yellen's. I think a press briefing, where you choose the venue and time, minimizing the chance for reporters to play a game of “gotcha,” might be the best way forward. It preserves the ability to go more broadly with press conferences in the future. I think the purpose of the press briefing isn't to

show that we're out there and happy to take all comers—I think you do that frequently—but rather the purpose of the press briefing is to describe what we've done, why we've done it, and I think doing it in a way that's quiet and around a table—perhaps on the record, perhaps off—is the best way to go for now. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. Beginning with the question of how we should specify our objectives, I favor option 2. I think an interesting case was made for option 3, price-level targeting, but the communication job is going to be tricky enough without adding that as a complication. I think the actual outcomes have a good chance of following the trajectory that this option would imply, but expressing it in this way runs the risk that we will be suspected of inflating our way to recovery.

I do prefer option 2, an explicit inflation objective, along with quantitative information regarding sustainable rates of unemployment over the longer run. I just don't see how we can specify an inflation objective alone and not talk at all about unemployment. I think part of the logic for choosing a framework depends on what you think you're trying to accomplish. If I viewed the low level of inflation as an objective to be tackled directly, and if I were choosing a tool to increase inflation and inflation expectations, I might choose price-level targeting as the strongest tool available, as the Cleveland paper indicated. But I actually view the low level of inflation as reducing the cost of doing everything possible to attack unemployment, so I would choose a framework that amounts to a limit on how far we're willing to go in that effort. Therefore, setting forth numerical objectives should communicate the limits on our willingness to continue to add stimulus if inflation does emerge, and should be our actual agreement of how far we're willing to go.

Turning to the statement alternatives, I would be reluctant to put these communications into the postmeeting statement. Having heard the debates over structural versus cyclical unemployment effects in previous meetings, I can envision a statement with dissents over the unemployment number alone. And having been taught by Governor Tarullo to pay attention to the words in red, I took a highlighter and actually highlighted all of the items in each statement that would require agreement. I found that statement number 1 had the fewest points of potential for disagreement. So I moved on to the possibility of using the SEP more directly to express both these judgments as well as opinions about the proper course of policy, and that seemed like a good place for us to be quantitatively specific about the range of judgments. The SEP would also be a place for everyone, voters and nonvoters alike, to express their views for the record. And the readers of the minutes might finally be able to figure out how many “many” or “some” actually means. One alternative to using the SEP or the statement could be to specify the targets in the semiannual Monetary Policy Report to the Congress.

Finally on the subject of communication, I think the press call on background held by the Chairman the last time we changed our framework was particularly effective. I’m not in favor of an open press conference, where the attention is as much on the questioners as on the person answering the questions, and I’m especially opposed to beginning a tradition of them.

Returning to question 2, I could support additional LSAPs, though I’m still skeptical about their effectiveness, and I would prefer incremental over large announcements. But I was most intrigued by the interest rate targeting approach and, specifically, the policy-signaling approach, as a way of calibrating and communicating our purchases. It has the advantage of being completely different from the way we used the LSAPs the last time, so it doesn’t appear to be a more tepid use of the same tool. It allows us to target interest rates directly, and it seems to me that certainty on the

rate would be more effective than certainty on quantity. And there's at least the chance that it requires less in purchases, and, therefore, less additional reserve creation.

Targeting the shorter end of the curve would put us in the part of the curve with the most issuance, so it would have a lower risk of disturbing market functioning, it would shorten the duration of our portfolio, something we've already discussed, and it would provide us with a smoother exit. It's not quite so targeted at longer-term rates—and I'll talk more about this at the next meeting—but I don't see lower rates doing much for the housing market, because I think the forces acting on the housing market are much, much different. Furthermore, longer-term rates are already low enough to be a danger to the banks that put them on their balance sheets, so further lowering the rates on new mortgages could actually become a disincentive for one class of lenders.

Finally, interest-rate targeting would be something the general public could understand. While markets may be able to interpolate purchase quantities into a rate expectation, ordinary people cannot. When we used to announce the fed funds rate, it meant something to people, even people who had no idea what the fed funds rate was. If we have a strategy we can communicate in terms of interest rates, I believe that ordinary people will react to that as well. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, Governor Duke. I was a little confused about your view on the explicit numerical inflation target. You said first that you liked it, but then you went on to—

MS. DUKE. I do like it, but I would like to work it into the SEP somehow rather than putting it in the statement.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I want to begin by underscoring something Bill Dudley said a few minutes ago, namely, that the most important thing about our structure for communication and for specifying objectives of monetary policy over the near to medium term is less about inflation targeting or price-level targeting and more about giving people a pretty clear indication of how we would make decisions subsequent to a further accommodative policy step.

That actually was my initial thought—just to agree with Bill’s observation. But having listened to many of you who preceded me, I’m now almost affirmatively of the view that it would be a bad idea to try to specify some further objective for monetary policy in the near term. It seems to me that significant disagreements have been voiced today and that an effort to resolve those disagreements may be more difficult than actually getting ourselves onto a path where people understand why we’re making a large-scale asset purchase and what to expect about what we may do in the future. Both Bill and Janet laid out potential paths that could be followed—though they were somewhat different, either path would allow markets to project with fair assurance how they could anticipate our reactions to subsequent market or economic developments. I will just state that I would be opposed to enunciating any inflation target while omitting any reference to the maximum employment mandate. I have feared for some time—a fear that has now been reinforced—that there’s a tendency to want to read the second part of the dual mandate out of the Federal Reserve Act, and I’m unalterably opposed to that. That feels to me the way some people are conceiving of an inflation target. I thought Richard Fisher put the point very well, and, whether or not you agree with Richard’s alternative, I think one has to be sensitive to his identification of the problem.

With respect to the second question, yes, I would favor additional LSAPs. As a couple of people have said earlier, we do have some basis now for evaluating their efficacy. Surely, LSAPs

might not be one of the measures that people would favor were they able to control all policy, fiscal and monetary. But we can control only monetary policy, and we have to respond to whatever situation we find, using the tools available to us.

I was inclined to say that I favor large, discrete adjustments made infrequently as opposed to smaller, more continuous adjustments made more often. But I want to be very clear that I don't think "shock and awe" is on the table. I don't think anybody is going to be shocked and awed by \$500 billion, given talk and market expectations already. I do think, for the reasons that a couple of people have stated so far, that there is merit in committing to a particular quantum, which, by my lights, would be larger rather than smaller, in order to have the maximum effect on markets. If, as John said, stock effects have been shown to be the principal channel by which effects are transmitted to the market, then presumably you want to give as much certainty about the stock as you can at the outset.

With respect to communication, I share in the broad agreement that having the Chairman communicate explicitly and reasonably quickly with the press after the FOMC meetings is a good idea. I wouldn't say I'm agnostic about the best form of this communication, but I don't think we need to decide that now. I think Kevin identified a good point, namely, that if you have Q&A that's on the record, the opportunities for off-the-wall Qs that then dominate not just the As, but also the press conference, become pretty significant. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Raskin.

MS. RASKIN. Thank you, Mr. Chairman. As the newest Governor, and therefore the last to speak, we're at the point where everything has already been said, but not everyone has had the chance to say it. [Laughter] So I will make a couple of comments.

I would lean towards option 2, the explicit inflation objective, which has two virtues: one is that it has the goal of anchoring inflation expectations, and the other is that it potentially has greater flexibility as an alternative form of stimulative policy, if credible. If credible, I think an explicit inflation objective above the current target would raise inflation expectations, leading to a reduction in real interest rates. As we know, an advantage of this tool is that we don't run into the lower bound problem because real interest rates can be negative. Credibility on this policy option is critical. What is going to happen if there's a divergence between the targeted inflation rate and the actual inflation rate? Would we follow through? For example, if we were in a situation where we had targeted, say, a 3 percent inflation rate, and in two years the unemployment level had miraculously fallen to 5½ percent, and inflation, say, were 2 percent, would we allow unemployment to fall to get the inflation rate at 3 percent, or would we declare victory and say we are now at 5½ percent unemployment, so we can now aim for 2 percent? So I think the credibility component of using this objective in a stimulative way has some challenges.

On option 3, price-level targeting, I think it might be difficult for us to have tight control on inflation on a year-to-year basis, because inflation changes with significant inertia. Also, as the Cleveland paper points out, there could be a significant degree of overshooting, which also makes tight control difficult.

The current approach has a problem, namely, how to keep inflation expectations anchored. In other words, I think there are benefits in terms of increased demand, but those benefits may be small, and the future costs could be large. I know this Committee is aware of those costs, which would be related to a post-recovery unwinding. For example, banks' excess reserves could fuel enormous expansion in private credit and demand, and unwinding could be practically or politically difficult to achieve. As an aside, let me note that the unwinding problem itself that's inherent in the

current approach could be helping to stimulate spending today by raising inflation expectations today. But, again, the problem with this approach is that inflation expectations are not being anchored the way they could be, if we were to move to option 2. So I prefer the explicit inflation objective, but I think we want to make sure we are dealing with the credibility issue. Therefore, following through, once a recovery is under way, is important. The financial markets don't know if the Fed is going to put on the brakes and start raising interest rates.

I also wonder whether there's any virtue to telling markets explicitly that an inflation target will be maintained until certain events occur, so that the inflation target formulation would be conditioned upon a certain unemployment threshold—or, if there are difficulties with quantifying an unemployment threshold, then it would be conditioned upon certain qualitative features having to do with the maximum employment goal. Then, once unemployment crossed that threshold, or once certain qualitative features were met, as would be described very specifically, the target would be removed and reevaluated. This would all need to be laid out ahead of time, so that there would be clarity regarding what the Committee may do in the future. I'll stop there.

CHAIRMAN BERNANKE. Okay. Thank you very much. I'm not going to attempt a summary. I do thank everyone quite sincerely for taking this very seriously. The comments were extremely helpful. There are obviously a lot of differences among the participants on the Committee, and one thing I can predict with 100 percent certainty is that whatever we end up doing will not satisfy everybody—I think that's a fair guess. Nevertheless, there were a number of themes throughout the discussion, and it was very, very helpful. We'll try to go back to the drawing board and see how we can modify what has been done to try to find as much of a center of gravity as possible. I think that's the best I can offer—a center of gravity. I don't think I can offer something that everybody will find 100 percent acceptable.

We've had a number of these broad metaphysical discussions since I became Chairman. I think that is one of the taxes that I impose on participants, and I appreciate your patience and willingness to participate in such an active and thoughtful way. We will take all of this into account—I've got pages of notes here—and try to figure out a way forward. Unless someone else would like to make a comment or raise a question, I will adjourn the meeting. Are there any additional comments? [No response.] Okay. Well, again, thanks very much. Enjoy your weekend. The meeting is adjourned.

END OF MEETING