

**Meeting of the Federal Open Market Committee on
September 21, 2010**

A joint meeting of the Federal Open Market Committee and the Board of Governors of the Federal Reserve System was held in the offices of the Board of Governors in Washington, D.C., on Tuesday, September 21, 2010, at 8:00 a.m. Those present were the following:

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

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

Jeffrey M. Lacker, Dennis P. Lockhart, and Janet L. Yellen, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco, respectively

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
Thomas C. Baxter, Deputy General Counsel
Nathan Sheets, Economist
David J. Stockton, Economist

Alan D. Barkema, James A. Clouse, Thomas A. Connors, Jeff Fuhrer, Steven B. Kamin, Lawrence Slifman, Mark S. Sniderman, Christopher J. Waller, and David W. Wilcox, Associate Economists

Brian Sack, Manager, System Open Market Account

Jennifer J. Johnson, Secretary of the Board, Office of the Secretary, Board of Governors

Charles S. Struckmeyer, Deputy Staff Director, Office of the Staff Director, Board of Governors

Maryann F. Hunter, Deputy Director, Division of Banking Supervision and Regulation, Board of Governors; William Nelson, Deputy Director, Division of Monetary Affairs, Board of Governors

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

David Reifschneider and William Wascher, Senior Associate Directors, Division of Research and Statistics, Board of Governors

Eric M. Engen and Michael G. Palumbo, Deputy Associate Directors, Division of Research and Statistics, Board of Governors

Brian J. Gross, Special Assistant to the Board, Office of Board Members, Board of Governors

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

Jennifer E. Roush, Senior Economist, Division of Monetary Affairs, Board of Governors

Penelope A. Beattie, Assistant to the Secretary, Office of the Secretary, Board of Governors

Randall A. Williams, Records Management Analyst, Division of Monetary Affairs, Board of Governors

Gordon Werkema, First Vice President, Federal Reserve Bank of Chicago

Harvey Rosenblum and Daniel G. Sullivan, Executive Vice Presidents, Federal Reserve Banks of Dallas and Chicago, respectively

David Altig, John A. Weinberg, and Kei-Mu Yi, Senior Vice Presidents, Federal Reserve Banks of Atlanta, Richmond, and Minneapolis, respectively

Chris Burke, John Fernald, and James M. Nason, Vice Presidents, Federal Reserve Banks of New York, San Francisco, and Philadelphia, respectively

Gauti B. Eggertsson, Research Officer, Federal Reserve Bank of New York

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CHAIRMAN BERNANKE. Good morning, everybody. I need a motion to close the Board meeting.

MR. WARSH. So moved.

CHAIRMAN BERNANKE. The five at the table are stretching out pretty well here. We're thinking of leasing out a few offices. [Laughter]

I think there is potentially some good news, in that we have some prospect of getting two people appointed before the Congress goes back on break. Peter Diamond will have to have another hearing—he needs to convince Senator Shelby that he's a qualified economist.

[Laughter] Is Linda Robertson here? Any comments?

MS. ROBERTSON. It's a positive step. As one knows with the United States Senate, steps have to add up to actual completion by vote or acclamation with unanimous consent, and these steps can get tricky. But it's definitely a positive step.

CHAIRMAN BERNANKE. We're making progress, and we hope to come to a resolution at some point.

Before we get started, I wanted to address an issue that came up during the intermeeting period relating to the preparation of the minutes. One of our colleagues raised a concern that the first draft of the minutes this time didn't fully reflect the discussion at the meeting, and I wanted to explain what happened and what we did about it. The background is that, based on longstanding tradition and reflecting the Federal Reserve Act's requirement that we explain why the Committee took the action it did, we have always had a so-called "policy paragraph," which explains the action taken by the Committee and gives the specific reasons cited by the members, that is, the voters, for their support of that decision. Normally, there's no issue, because

generally there's a substantial overlap of views between the voting members and nonvoting members, and we're able to represent the full range of the discussion. But in the first round of the review of the minutes from the last meeting, it was felt that that was not the case.

I've had some discussions with Scott and with the Secretariat. This matter was actually raised at the December 2004 FOMC meeting, when we discussed the more rapid turnaround of the minutes. There's a very longstanding tradition of restricting that paragraph to the views of the members.

That being said, I certainly believe, and I'm sure that we all agree, that the minutes ought to reflect the full range of discussion at the table and not just the views of those who happen to be in the voting cycle. We were able to do that this time by looking for overlaps between views expressed by participants and members, by including additional material, and so on. So let me just assure everybody that we will continue to maintain the principle that the full range of views should be reflected in the minutes, and we will find ways to do that.

I think changing the current structure of the minutes is something we would not do lightly. It's a very longstanding tradition, and if we want to change it, I think we need to have a fuller discussion. President Plosser, do you want to comment? If anyone wants to comment, I can take one or two comments, but if we want to go into this in greater detail, we probably need to put it on the agenda for a future meeting. Do you want to make a comment?

MR. PLOSSER. Let me just make one or two comments. I think this is an important issue, because it's about transparency—it's about making sure that the minutes reflect the range of the discussion. Mr. Chairman, you're correct, that, given the turnover in members, oftentimes the differences in views between members and participants aren't that great. This time happened to be more unusual in that regard.

I understand the longstanding tradition of focusing the policy paragraph on why the members chose to do what they did. Because we distinguish between members and participants in other sections of the minutes, I'm not convinced particularly that you can't carry out a similar strategy in that paragraph, talking about what members said, what participants said, and then at the end noting that the members decided "X." The alternative would be, I would think, to expand the economic go-round, where you do talk a lot about members and participants. You could open that section up more to policy discussions between members and participants, even if you kept the policy paragraph focused on the members.

I think we ought to be able to find a way to make sure that this long tradition of distinguishing between what members and participants say gets incorporated, because, otherwise, I do worry that down the road somebody is going to look at the transcripts and the minutes and find a disconnect, and I don't think that would serve us well. So I would encourage continued work on this, and I think we ought to have some process that ensures that this happens in some way. Those are my comments.

CHAIRMAN BERNANKE. Bill, did you have a comment?

MR. ENGLISH. I just wanted to point out one thing. In the structure of the minutes, until you get to the policy paragraph, everything is in terms of the participants. So there isn't a separate discussion of participants versus members at that point.

MR. PLOSSER. Oh, is that right?

MR. ENGLISH. It's all in terms of participants, and then in the policy round, it's in terms of members.

MR. PLOSSER. I stand corrected then.

CHAIRMAN BERNANKE. I agree with what you said, President Plosser. On the one hand you need to have this correspondence of the members because, for one thing, we report their votes.

MR. ENGLISH. Right.

CHAIRMAN BERNANKE. That being said, I think that there are plenty of ways to make sure that there is substantial description of the discussion so that everybody's views are represented. President Lacker.

MR. LACKER. I was a participant in the December 2004 discussion—a member actually. I've always been curious about this disconnect and expressed to the Chairman at the time that it seemed to me more logical to have a broader reporting.

I wasn't aware of Scott's interpretation of the Federal Reserve Act. Personally, I can't see why it would preclude reporting on participants' policy views.

The widespread understanding of anyone who has paid attention to this issue, including people outside the Fed, is that participants' policy views are not reported in the minutes—they do not appear. Are we changing that or finding a way to finesse it? I ask because this overlap strategy leaves open the possibility that a participant may express a view orthogonal to members' views while the minutes remain silent on that.

CHAIRMAN BERNANKE. Well, I just point out this hasn't been a significant problem in the past.

MR. LACKER. Right.

CHAIRMAN BERNANKE. This is the first time this has come up in quite a while. So the principle is that, while the minutes wouldn't cover every single minor point that anyone makes, all of the important views ought to be reflected in the minutes. I think we can do that

without changing the structure of the members' policy paragraphs. First, we can continue to exploit overlaps when they do occur, allowing for a member to express a view that was more widely held. Second, there's obviously no reason why we can't expand the discussion. The structure of the minutes is that first are reports and staff views, and then finally the general discussion of the participants on a variety of topics, including the outlook and policy approaches and so on. I think we ought to work to make sure that that part reflects all the views. The Secretariat has heard from me that that's what we need to do, and the one thing I would suggest to all of you is that you get back your comments on the first draft as quickly as possible to make sure that there's not any kind of logistical issue involved. Okay?

MR. LACKER. The intention is that the expanded content would be in the general discussion, not in the policy section.

CHAIRMAN BERNANKE. The objective is to make sure that everybody's views are represented. We'll find a way to do that. If that involves expanded content prior to the critical paragraph, we will do that.

MR. LACKER. I welcome this change. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Good. Thank you.

MR. PLOSSER. Thank you, Mr. Chairman, again, for responding.

CHAIRMAN BERNANKE. President Evans.

MR. EVANS. I don't want to belabor this point, but I had the same reaction when I looked at the minutes, and then I remembered, "Oh, yeah, that's a members' paragraph, always has been." Then I reminded myself that, in order to get certain views into the minutes, I needed to express those views in the context of the outlook or the inflation discussions, focusing on the merits of what the particular arguments were. I would think that those are the types of

participant comments that could be most readily incorporated. It's really only at the end, where you say, "But you know, in my opinion, X is what we ought to do." So I think what you've described is quite workable, Mr. Chairman.

CHAIRMAN BERNANKE. Okay. Thanks, and if it's not, I'm completely open. Again, I think we share the objective of representing the full range of views. If this continues to be a problem, we will address it somehow, and we'll put it on the agenda if necessary.

MR. EVANS. Thank you.

CHAIRMAN BERNANKE. Moving on to the business of the meeting, the first item is the return of Debbie Danker. We'd like to propose her as Deputy Secretary for the rest of the year until the January 2011 organizational meeting. Debbie served as FOMC Deputy Secretary from November 2004 through August 2009, and she has just recently returned to the Board after spending a year at the Treasury as a Senior Advisor to the Under Secretary for Domestic Finance.

MR. HOENIG. So moved.

CHAIRMAN BERNANKE. Any objections? (No response.) All right. Thank you. Our next item, as usual, is our briefing on financial developments and System facilities. Let me turn to Brian Sack.

MR. SACK.¹ Thank you, Mr. Chairman. Financial markets have demonstrated considerable sensitivity to perceived changes in the economic outlook and to FOMC communications, but financial conditions ended the intermeeting period with only small changes, on net.

As shown in the upper left panel of the first exhibit, longer-term Treasury yields declined notably early in the intermeeting period, as investors became increasingly concerned about economic growth prospects. At one point, the 10-year yield was down about 35 basis points. However, sentiment in recent weeks improved following several positive data surprises, causing yields to retrace a sizable portion of their

¹ The materials used by Mr. Sack are appended to this transcript (appendix 1).

earlier decline. On balance, the 10-year Treasury yield ended the period about 10 basis points lower.

More broadly, Treasury yields remain significantly below their levels of just a few months ago and appear unusually low by historical standards. This broad decline in yields has been driven primarily by downward revisions in the outlook over that period and by the anticipated policy response of the Federal Reserve, in terms of the paths of the federal funds rate and its balance sheet.

The revision to the path of the federal funds rate has been sizable over this period, as shown in the upper right panel. According to current futures prices, a rate hike is not fully priced in until early 2012. A similar pattern is evident in the Desk's primary dealer survey, shown in the middle left panel. The median of the distribution for the timing of the first rate hike moved out into 2012, and respondents now place about 25 percent odds on no policy tightening occurring until the second half of 2012 or later, as can be seen in the far right bucket. It's not a good sign that we need to add more buckets to the range of responses for this question.

The effects of the revision to these expectations can also be seen if we decompose the decline in longer-term Treasury yields since the spring into one-year-forward rates. As shown to the right, forward rates spanning the next several years have fallen the most dramatically, presumably reflecting the shift in the expected funds rate path. However, that has not been the entire story, as even more distant forward rates have moved down appreciably.

There are several potential explanations for the decline in longer-term forward rates. One possibility is that the term premium on Treasury securities has moved down notably, driven in part by the decision by the FOMC to begin reinvesting the principal payments on the SOMA portfolio and the possibility of further balance sheet expansion. As shown in the bottom left panel, the Desk's primary dealer survey indicates that market participants have placed increasing odds on an increase in the size of the balance sheet, with the most recent readings indicating a 40 percent chance by the end of the year and a more than 50 percent chance over the next two years. The median dealer expectation for the size and length of a purchase program, if enacted, was \$625 billion over 12 months.

Another potential explanation for the decline in forward rates is that longer-term inflation expectations are not completely anchored. The bottom right panel shows the evolution of the five-year, five-year-forward breakeven inflation rate since the middle of last year. It may be a concern that this measure has generally drifted lower in recent months and that it swung considerably over the intermeeting period in a manner highly correlated with investors' views on economic prospects. While several factors could be influencing this measure, inflation expectations have likely played some role, as discussed in detail in the Tealbook.

As shown in the upper left panel of the second exhibit, equity prices also swung widely over the intermeeting period in response to shifting sentiment about growth

prospects. At one point, the S&P 500 index was off 7 percent, but it subsequently recovered to finish the intermeeting period about flat.

Bank share prices, also shown in the chart, have fluctuated over an even wider range. Those share prices had moved down notably since the spring, in response to the weakening economic outlook, falling net interest margins, and the ongoing assessment of the implications of the Dodd–Frank legislation. However, they have recovered more recently with the upswing in broader equity markets. In addition, they received a boost in recent weeks from the announcement of further details on the Basel III global capital standards. Investors apparently took comfort from the fact that the transition period for the standards would be longer than anticipated and that the new regulatory capital ratios were on the lower end of expectations. Bank CDS spreads, shown to the right, inversely tracked the movements in equity prices and finished the intermeeting period little changed.

Money markets have shown signs of greater comfort with the banking sector in recent months. As can be seen in the middle left panel, the three-month spread of LIBOR over OIS fell back to around 10 basis points, as investors became more willing to extend short-term term credit to financial institutions. The forward spread, which had widened more sharply in the spring, also improved, although it remains above its levels from earlier this year.

In addition to the improvement in LIBOR, anecdotal reports suggest that term funding has become more readily accessible for a number of European banks that had faced funding pressures in recent months. But while short-term borrowing conditions may be improving for some firms, conditions remain stressed for financial institutions in some peripheral European countries. One sign of this stress is the dependence of those banks on the European Central Bank (ECB) for their euro-denominated funding, shown in the middle right panel. Banks in Greece, Ireland, and Portugal have been heavy users of liquidity provided by the ECB, as funding from market sources remains difficult to find or more expensive for those institutions.

Concerns about the financial institutions in those countries are deeply intertwined with concerns about the financial status of their respective governments. As shown in the bottom left panel, sovereign debt in Ireland and Portugal came under renewed pressure over the intermeeting period. Ireland, in particular, has been a key focal point in the markets, as negative news emerged about additional capital injections that may be needed to support the banking system. Nathan Sheets will discuss this situation in more detail in his briefing.

The bottom line is that peripheral Europe continues to face pressure. However, the pressure this time around seems contained to a smaller subset of countries in the periphery, and the impact on broader financial conditions in Europe has been relatively modest.

Indeed, despite the ongoing problems in some peripheral countries, the euro has held up well, presumably reflecting the strength of core European countries. As

shown to the right, although the dollar appreciated against the euro immediately following the last FOMC meeting, the currency pair has retraced, leaving the dollar only marginally stronger against the euro over the intermeeting period and well below the peak reached in the spring.

In contrast, the dollar has been on a steady trend of depreciation against the yen since the spring, in large part reflecting that U.S. yields have been moving lower, while Japanese yields, already constrained by their low levels, have held relatively steady. In response to this trend, the Japanese Ministry of Finance last week decided to intervene in the dollar–yen market to weaken the Japanese currency, accounting for the jump in the series at the end of the chart. More details about the intervention will be offered in Nathan’s briefing.

Your final exhibit turns to recent developments regarding the Federal Reserve’s balance sheet. The Committee’s decision to begin reinvesting the principal payments from agency debt and agency MBS into longer-term Treasury securities, conveyed in the August FOMC statement, prompted an immediate decline of about 6 basis points in the 10-year Treasury yield, as shown in the upper left panel. Information gathered from interviews the Desk conducted with the primary dealers after the FOMC meeting suggests that the market had moved to price in considerable odds of this decision by the time of the meeting, perhaps accounting for an additional 6 basis points of movement in the yield before the announcement.

Putting these pieces together, our best estimate is that the decision itself accounted for a 12 basis point decline in the 10-year Treasury yield. Since expectations for the federal funds rate adjusted very little, most of this effect appears attributable to the portfolio-balance channel. That response is largely in line with the effects of the earlier rounds of large-scale asset purchases, once scaled for the size of the balance sheet surprise in this case.

The effects of the FOMC statement on markets were more complicated, though. The somewhat downbeat description of the economy, coupled with the somewhat unexpected reinvestment announcement, may have led investors to believe that the Committee’s assessment of the outlook had changed notably. That perception contributed to the heightened concerns about the economic outlook that emerged in the period following the meeting and that prompted sizable movements in yields and other asset prices.

The Desk’s efforts to implement the Committee’s decision to reinvest principal payments on agency debt and MBS have gotten off to a successful start. To date, we have conducted 12 operations and have purchased about \$28 billion of securities, with the majority of those purchases occurring in the four- to ten-year sector of the yield curve, as shown to the right. Our operations to date have been met with very strong interest by dealers, with a median offer-to-cover ratio of about 7.

Based on the procedure outlined at the last FOMC meeting, our purchases are following a monthly calendar. About a week into the month, we announce the

schedule of operations to take place over the subsequent month and the anticipated cumulative amount of purchases from those operations, with that amount calibrated to offset the expected paydown of our agency debt and MBS holdings over that period. As indicated in the middle left panel, purchases this month should total around \$27 billion. We expect purchases to pick up to a pace of around \$30 billion a month over the next several months before falling back in mid-2011.

Looking at the cumulative changes in our holdings, we now anticipate a further paydown of about \$300 billion in agency MBS from now through the end of 2011—slightly above the pace anticipated at the time of the last FOMC meeting. When added to the paydowns that have occurred to date, the cumulative level of agency MBS paydowns is projected to be around \$450 billion by the end of 2011, as shown by the blue line in the right panel. The figure also shows how this projection changes if long-term interest rates were to shift by 50 basis points relative to the Tealbook assumption, indicating that the pace of MBS paydowns is quite sensitive to the level of longer-term yields. In addition to the MBS paydowns, the total cumulative decline in our agency debt holdings through 2011 will be around \$70 billion.

With the paydown of our MBS holdings, our presence in the market will diminish over time. As reported in the bottom left table, our current holdings represent 24 percent of the entire universe of 30-year, fixed-coupon agency MBS, with much higher concentrations in certain coupons. As we receive principal payments on our holdings and as new production of MBS reaches the market, our share of the outstanding amount is expected to fall to 17 percent over the next year. By contrast, our holdings of Treasury coupon securities are only about 12 percent of the market today, and that share is projected to rise only modestly over the next year under the current reinvestment strategy. Both the Treasury and the MBS markets continue to function well, though the high level of gross fails in the MBS market has persisted.

At the last FOMC meeting, members noted that the decision to reinvest in Treasuries as opposed to MBS could be altered if market conditions were to change. One factor that may be relevant to that decision is the relative pricing of MBS to Treasuries. The bottom right panel shows the spread between MBS and Treasuries, adjusted for the prepayment option embedded in MBS. This measure began to move higher around the time of the last meeting, reportedly because the decline in longer-term yields was expected to create a large flow of new supply of MBS to the market. However, the measure has since reversed and is now only marginally higher, on balance, since the last FOMC meeting.

I will close my briefing with a brief update on the development of our two reserve-draining tools.

Following the course of action described at the last FOMC meeting, the Board announced a program of ongoing small-scale operations for the term deposit facility (TDF). Under the announced program, TDF auctions will be held about every other month. Two TDF auctions have been scheduled for the remainder of this year, with each offering \$5 billion of 28-day deposits. The objective of this program is to ensure

the operational readiness of the TDF and to provide eligible institutions with an opportunity to gain familiarity with term deposit procedures.

For reverse repurchase agreements, there have been two notable developments since the last FOMC meeting. First, we completed our set of small-scale operations with primary dealers using MBS collateral. With these operations complete, we now have the capability to operate with the primary dealers using all three types of collateral in the SOMA. Second, we publicly announced the list of money market funds that we have established as counterparties for reverse repurchase agreements. We anticipate conducting small-scale operations with those counterparties in coming weeks.

A primary objective going forward will be to continue expanding the list of counterparties. As the next step in this direction, the Desk would like to publish a new set of criteria that will allow a broader set of money market funds to become eligible counterparties, including funds that are not as large as those that have already been included. Unless there is any objection from the FOMC, the Desk will take this step later this week. That concludes my prepared remarks.

CHAIRMAN BERNANKE. Thank you, Brian. Questions for Brian? President Fisher.

MR. FISHER. Brian, even though we have been through the August period, any comments on the issuance calendar and what's happened in terms of corporate bond spreads, whether it's high-quality or B-rated or junk, over Treasuries,?

MR. SACK. Issuance continues to be heavy—very much the same pattern that we've seen for some time, namely, corporations that can access financial markets are terming out their debt and substituting longer-term debt for shorter-term debt. In terms of spreads, there wasn't much change over the intermeeting period. I know there has been some recent attention in the press, including the *Wall Street Journal*, about the levels of spreads, raising the possibility that they could be too low. But, to us, there's nothing new regarding that issue, and we've been talking about that for six months. We remain comfortable with the level of corporate spreads, given the health of corporate balance sheets.

MR. FISHER. If I may, I'd like to ask a follow-up about your chart on the 10-year Treasury yield. Although that's a very short period, all things being equal, would one have

expected, with rates coming down as they have, in part or in whole in response to our last FOMC decision, that the S&P might have appreciated and the dollar might have depreciated instead of doing what they did?

MR. SACK. Well, the change in yields on net ended up being relatively modest—I cited 10 basis points in the briefing—so that would give a modest upward boost to equities, but not much.

MR. FISHER. And then lastly, is there a way that we can get a reasonable sense, historically speaking, of the percentage of our Treasury securities in the market? As I understand it, we basically come back to levels that we had in terms of Treasury holdings pre-crisis in absolute dollar amounts. But I'm just curious if, at some point, not necessarily this morning, we could just get that information.

MR. SACK. We can. I don't have the long history at my fingertips, but you're correct. Before the crisis, our holdings of coupon securities were about 16 percent of the market. So we're moving back towards that level, but we could take a look at the longer history as well.

MR. FISHER. Thank you. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Before we did the large-scale asset purchase program, we had a group of memos looking at the cross-correlation among mortgage rates, Treasury rates, and corporate rates, and I was just wondering if any work had been done to see if those cross-correlations had changed since those memos were originally done. I'm not suggesting this necessarily for this meeting, but maybe at a future meeting it would be of interest to see whether any of those relationships had changed, given the various changes that have occurred over the last several years. And maybe you have an impression of whether they have changed.

MR. SACK. I obviously don't have it at my fingertips, but I have a few thoughts. As we watch markets, we tend to think that the movements in Treasury yields that are induced either by changes in the outlook or changes in Fed balance sheet policies are feeding through to a broader set of rates. The big story on corporate spreads, of course, has been the narrowing over the past year with the improving economic conditions. On the mortgage side, once we corrected market function, the stories on spreads have been more idiosyncratic to the mortgage market, that is, to the effects of the possibility of a government-sponsored refi program or uncertainty about the futures of the GSEs, and so on. So, from casual observation, we think that most of the movements in spreads aren't some kind of endogenous reaction to movements in Treasury yields—they're due to other factors, which means that policies that push around Treasury yields should be expected to pass through broadly to those other rates. We can take a deeper look at this.

CHAIRMAN BERNANKE. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Brian, what's the Desk's view, based on either the lessons we've learned in the MBS market or from a broader perspective, of the level of LSAPs relative to the pool of, let's say, longer-term Treasuries, where we might be running risks of getting in the way of market functioning? Are there rules of thumb? Are there levels at which, putting policy considerations aside, you'd get less comfortable and the Desk would feel as though we're just matching bids and asks with each other in that market?

MR. SACK. Considerations of large expansions of the balance sheet and large purchases of Treasury securities, of course, raise this issue. I don't think we have a clear sense of a threshold or a trigger, but I'll note a couple things. LSAPs in the range of \$500 billion to \$1 trillion put us up around or possibly above the 24 percent figure of where we are for MBS.

Having said that, I think it's hard to make that comparison directly, because, underlying that 24 percent figure for MBS, we have holdings of certain coupons that are extremely concentrated—we still own 60 to 75 percent of the entire outstanding amount of the 4 and the 4.5 coupons. My guess is that, if Treasury purchases are distributed across the entire curve, we could actually push those readings higher before we get into significant problems with market function, but that will depend very much on how we buy, at what pace we buy, and what maturities the FOMC wants to target. So I think the short answer is that we think we have considerable room, but if we're going to consider very large LSAPs, then that definitely becomes a relevant consideration.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. Just to follow up on that, Brian, there's a certain amount of new issuance that goes on, and sometimes if the central bank is viewed as buying up all the new issuance, then that would be considered interfering with market functioning—matching bid and asked, as Governor Warsh was saying. Does that have any bearing on this? And how much is new issuance monthly at the current pace?

MR. SACK. Again, I think this is another difference between buying MBS and Treasuries. In the MBS market, we operated almost exclusively in the TBA market, because that's where all of the liquidity is. So, by design or by necessity, we ended up buying new issuance. In the Treasury market, we have more flexibility—we buy across the curve, and we actually often end up buying a lot of off-the-run securities because they're relatively cheap if the new ones have an on-the-run premium. With that flexibility, we can allow the market to digest the new issuance, and we can still ramp up our holdings. In terms of the pace of issuance, the

most recent forecast from the primary dealers has about \$1.2 trillion of net issuance over fiscal 2011.

MR. BULLARD. \$100 billion a month.

MR. SACK. \$100 billion a month, right.

MR. BULLARD. Let me sharpen this up a little. Suppose you said, "Well, we're going to buy all of the new cars that come out." And that's okay, because there's a vast market for used cars out there, and cars are being traded all the time. Still, I think you're going to have a big impact in the market for cars if you decide you're going to buy up all the new cars. I would think the same is true of Treasury issuance. Sure, it's a vast market, but a lot of those decisions have been made—they all really want to hold these securities at their current values, and they're not in the market, really, at all, at current prices.

MR. SACK. When you say "a big impact," it depends on what you mean.

MR. BULLARD. Well, for market functioning.

MR. SACK. Okay.

MR. BULLARD. Aside from policy concerns, just market functioning.

MR. SACK. At some point, yes, if you take an excessive amount of Treasury securities onto the balance sheet and out of the market, presumably you'll start to affect market function. What I'm arguing is that we still have a lot of room on the Treasury side, because we can buy across the curve, because we can buy old issues, and because, as you pointed out, there is a lot of new issuance still coming to the market.

MR. BULLARD. Thank you.

CHAIRMAN BERNANKE. Okay. Any other questions for Brian? [No response.] If not, I need a motion to ratify domestic open market operations.

MR. WARSH. So moved.

CHAIRMAN BERNANKE. Okay, it is ratified without objection.

Let me just note that, as usual, the staff circulated several memos on financial stability, including memos on asset valuations, leverage, and risks facing the banking sector. In addition, the Senior Credit Officer Opinion Survey on dealer financing terms made its debut in the Tealbook. Again, we are continuing our efforts to make sure that financial stability issues are integrated into our discussion. Of course, in our meeting this afternoon and tomorrow, we will be talking about very substantial expansion of the Federal Reserve's capacity to monitor financial stability issues, which, again, we will want to integrate, obviously, not only into our oversight and supervision, but also into our monetary policymaking. So I just take note of that, which, I think, is very important. And a number of you, of course, have expressed those concerns as well.

Our next item is the economic situation. Let me turn to Dave Stockton.

MR. STOCKTON. Thank you, Mr. Chairman. On balance, the data that we received over the intermeeting period continued to surprise us to the downside. We now estimate that the growth of real GDP in the second quarter was likely in the neighborhood of $1\frac{3}{4}$ percent at an annual rate, about $\frac{1}{2}$ percentage point below our August projection. And weaker readings on the labor market, softer spending data, and continued lackluster surveys of consumer and business sentiment led us to mark down projected GDP growth in the second half of this year by a similar amount to 2 percent. I thought I'd take a crack at answering three related questions this morning: Where is the weakness occurring? What is causing that weakness? And, how long will it persist? So as to avoid disappointing you almost immediately, let me admit right up front that my answers to these questions are likely to garner me a gentlemen's C at best. But eight o'clock classes were never my strong suit.

Let me begin with the labor market, which has continued to underperform our expectations. Gains in private payrolls averaged 87,000 in July and August, about half the pace that occurred in the spring, leaving the level roughly 50,000 short of our last projection. More recently, initial claims for unemployment insurance appear to have retraced their blip up in August, but, at 450,000, they remain at a level consistent with only modest employment gains.

We have also been surprised by the dismal performance of housing markets.² In response to the weaker data on housing sales and starts, we marked down our residential investment forecast by enough to knock ½ percentage point off of the growth of real GDP in the current quarter. This morning we received the starts data for August. Total starts rose nearly 60,000 units to 598,000 in August. That was stronger than we were expecting, but all of the surprise was in the volatile multifamily sector. Single-family starts edged up to 438,000 units last month from a downward revised level in July; on average over the two months, single-family starts were right in line with our forecast. Meanwhile, single-family permits moved down a bit further and point to somewhat weaker starts in the next couple of months.

The steep decline in sales of new and existing homes in the past few months suggests that the homebuyers' tax credit played a bigger role than we had earlier assumed in holding up the housing market late last year and early this year. With those effects unwinding, underlying housing demand now looks surprisingly weak, especially given the low levels of mortgage rates and house prices and, hence, the favorable state of affordability. High unemployment, the accompanying uncertainty about income prospects reported by many households, and still tight credit conditions have likely damped demand. Moreover, potential buyers may be coming to the same view as we did in this forecast: With sales weak and supply ample, prices are more likely to weaken a bit further than to begin a sustained climb. The anecdotes from the Beige Book and elsewhere reinforce the view that housing activity remains depressed, and we've basically pushed off any meaningful recovery in this sector until next year.

Nonresidential construction also has come in below our expectations. At the time of the last Tealbook, the BEA estimated that nonresidential investment had increased at an annual rate of 5 percent in the second quarter. The incoming information now suggests that spending in this area likely *fell* at an annual rate of about 2½ percent in the second quarter, and the trajectory of the data on construction put in place indicates that, rather than flattening out as we had expected in August, nonresidential investment is continuing to drift lower.

Elsewhere in the business sector, equipment spending appears to have slowed sharply this quarter after posting double-digit gains since late last year. Some of this slowdown reflects a dropback in purchases of motor vehicles, which rose very rapidly in the first half of the year. But the deceleration is broad-based. Shipments of nondefense capital goods excluding aircraft fell in July, and new orders, which had been outpacing shipments for nearly a year, dropped back below the level of shipments. The incoming information on software also has softened of late. The weaker data line up well with the anecdotal reports on capital spending plans and business sentiment, which have been subdued at best. In light of the incoming information, we have lowered projected growth in real E&S spending in the second half of the year to show an increase of just 2 percent at an annual rate, more than 4 percentage points less than in our August forecast.

² A document on the housing data that Mr. Stockton distributed is appended to this transcript (appendix 2).

Not all of the news has been bad. Last week's report on retail sales in August was a modest upside surprise for us. We had been expecting retail control spending to be about flat last month, and instead it increased 0.6 percent. But with employment expanding only slowly, wages subdued, and sentiment at depressed levels, we haven't read too much into the August jump and are expecting more modest gains in coming months. As a consequence, we expect real PCE to increase at an annual rate of just over 2 percent in the second half, about $\frac{1}{4}$ percentage point faster than in our August forecast. At this point, consumer spending seems to be muddling along, with few signs of either a pickup or a deceleration.

Taken together, the constellation of incoming data indicates that the economy is generating less income, less spending, and less production in the near term than we had been expecting. That, in turn, implies less impetus to activity as we enter 2011. In addition to those less favorable dynamics, the projections for the prices of equities and homes are somewhat lower than in our August forecast, and, as Nathan will discuss shortly, growth of foreign activity is projected to be a bit slower and the path of the exchange value of the dollar slightly higher. All told, we reduced our forecast of the growth in real GDP in 2011 by $\frac{1}{4}$ percentage point to $3\frac{1}{4}$ percent, with above-trend growth not expected to emerge until the middle of next year.

Given the substantial and successive markdowns that we have made to the projection since April, concerns that the economy could be approaching a so-called stall speed that will trigger a renewed cyclical downturn are understandable. Stall speeds are not a feature of our largely linear models. But it could well be that at very low growth rates, the economy is more vulnerable to adverse shifts in expectations or other exogenous shocks that could set off the cyclical dynamics associated with recessions. Just looking at the data, one observes that growth of real GDP below 1 percent typically precedes a recession, as does a rise in the quarterly average unemployment rate of more than $\frac{1}{4}$ percentage point. Of course, whether these figures represent thresholds in any meaningful economic sense isn't clear. In any event, our forecast doesn't anticipate breaching either of these limits, but, obviously, we've moved closer in recent projections. Along the same lines, as we noted in the Tealbook, a variety of statistical models indicates that the probability of recession has risen in recent months, though those probabilities are still estimated to be rather low.

While recession still seems like a low probability, an outright contraction in activity is not the only concern raised by the change in the economic landscape in recent months. In June, we thought the economy was in a pause. By August, the evidence suggested we had entered a soft patch. Now, the further downside surprises in a wide array of data could raise a concern that, rather than traversing a soft patch, we may have stumbled into something more like the La Brea tar pit.

So what forces are holding back aggregate demand, and how and when will those forces abate? In the late spring, we thought the pause was largely associated with the European debt crisis and its potential fallout for the United States. We assumed that once it became clear that Europe would muddle through, growth would resume along the lines observed earlier in the year. But evidence that Europe will likely muddle

through seems to have done little to lift spirits or spur a more robust resumption of growth in the United States.

Instead of generating direct spillovers to U.S. activity, events in Europe may have served as a reminder to many economic agents that the economy remains vulnerable to unforeseen events, of which the European sovereign debt crisis is only one. Perhaps as a consequence, heightened uncertainty, increased risk aversion, and the more downbeat sentiment of households and businesses have not significantly receded in recent months. When overlaid on an economy in which households are still in the process of deleveraging, credit remains tight for many borrowers, fiscal stimulus is fading, and the boost from inventories has about run its course, these forces seem to be exerting a more persistent drag on demand than we had expected. Moreover, a larger fraction of the demand that we are generating appears to be flowing to foreign producers than we had earlier anticipated.

I don't want to exaggerate the extent to which the incoming data have fundamentally altered our view of the economy. Much of what we thought would transpire a year ago has come to pass. The economy turned up, driven not only by positive impetus from the inventory cycle and fiscal stimulus, but also by an improvement in private demand. The labor market ended its deterioration and is gradually improving. With plenty of ups and downs, financial conditions have been slowly repairing. So, it doesn't seem like an entirely different economy from the one we were expecting.

But it does seem like a different recovery. The growth of real activity is slower, the headwinds associated with the aftermath of the crisis appear stronger, and the handoff from inventories and fiscal stimulus to private demands is fainter. In contrast to our earlier expectations, the recovery has not been of sufficient strength to reduce the margin of slack materially or prevent some further disinflation.

Could we have overreacted in marking down our forecast by as much as we have since the spring? Certainly. One of the messages that we hoped to convey with our stronger and weaker recovery scenarios that we included among the alternative simulations was our considerable uncertainty about the timing of when growth will pick up. We simply don't have a lot of science to offer you, and we see credible arguments for both an earlier and later step-up than we have incorporated in the baseline forecast.

Let me conclude with a few remarks about the supply side of our forecast. The high level of permanent job loss and the accumulating evidence of a decline in the efficiency of job matching led us to mark up our estimate of the NAIRU by an additional $\frac{1}{2}$ percentage point to $5\frac{3}{4}$ percent. When our estimates of the effects of extended unemployment insurance are added on, we put the effective NAIRU currently at about $6\frac{3}{4}$ percent. In this forecast, we kept the growth rate of potential output going forward unchanged from our previous projection, though, with the revised data from the NIPA revisions now in hand, we are undertaking a more thorough scrubbing of the supply side of the projection for the November meeting.

Taken together, the downward revisions that we made to actual GDP and potential GDP in this projection were roughly comparable, and the level of the output gap is not much different at the end of 2012 than in our August projection.

Likewise, our inflation projection also is nearly unchanged. The incoming data on prices have been very close to our expectations. Taken together, last week's reports on the CPI and PPI for August had little net effect on our core PCE price projection. We expect core price inflation to run just above 1 percent in the second half of this year and then to drift down just below 1 percent in 2011 and 2012. After factoring in food and energy prices, total PCE price inflation is expected to decrease from 1.2 percent this year to 1.1 percent in 2011 and 1.0 percent in 2012.

The basic story behind this pattern also is unchanged. A wide margin of slack and subdued labor costs put some mild downward pressure on price inflation, which is mitigated by our anticipation that inflation expectations will remain largely anchored. Nathan will continue our presentation.

MR. SHEETS. The broad dollar index is only slightly stronger than in our last forecast, but foreign exchange markets have nevertheless been the source of some fireworks. On September 15, the Japanese Ministry of Finance intervened unilaterally to weaken the yen, which had approached record nominal highs against the dollar. The Japanese authorities purchased \$25 billion, their largest one-day operation in history, and the yen depreciated about 3 percent against the dollar in response. Since then, the yen has held steady at about ¥85½ per dollar. Coming so soon after Prime Minister Kan's victory in his party's leadership election, the intervention and its timing clearly had political overtones. That said, the operation seemed to surprise market participants, mainly because it was Mr. Kan's defeated rival who had vigorously advocated intervention.

In justifying the intervention operation, Japanese officials argued that the rising yen was reducing the competitiveness of exports, driving down equity prices, and weighing on business sentiment. They also emphasized the need to ensure that there were "two-sided risks" in the market. On the other hand, the yen was not particularly strong in real effective terms; recent moves in the yen seem reasonably well explained by the evolution of interest rates and shifts in risk appetite; and Japanese exports have been expanding at a solid pace.

Turning to U.S. trade, real exports of goods and services grew at a 10 percent rate in the first half of this year and should continue at that pace in the second half. Imports, on the other hand, exploded in the second quarter, posting 33 percent growth, even faster than the estimate that I reported at your August meeting. Import growth in the second half of the year is projected to fall back to just 4 percent, reflecting payback from several factors that lifted the second-quarter number, including a perplexing seasonal adjustment procedure for oil imports. Notably, the July trade data showed a contraction in imports, broadly consistent with this projection. In 2011 and 2012, imports are likely to strengthen, in line with the projected U.S. recovery.

Driven by the surge in imports, net exports in the second quarter subtracted a staggering 3½ percentage points from real GDP growth. As imports fall back to a more sustainable pace, we expect net exports to contribute ½ percentage point to growth in the second half of this year and to be roughly neutral thereafter. Strong export growth—supported by a depreciating dollar and a moderate foreign recovery—should about offset the contribution from imports, which expand more slowly but from a larger base.

The strength of the recovery abroad surprised us in the second quarter, with real GDP growth rising to nearly 6 percent, a percentage point stronger than we had estimated in August. Activity in the euro area continued to show remarkable resilience, with GDP expanding at almost a 4 percent rate in the quarter and the German economy—boosted by strong external demand—recording its most rapid quarterly growth rate since reunification. Not to be outshone by their advanced economy counterparts, the emerging market economies collectively grew at an annual rate of almost 10 percent in the second quarter, with activity in Mexico posting a particularly sizable gain.

Indicators for the third quarter, however, point to a deceleration in foreign activity, broadly in line with our expectation of a moderate recovery abroad. In emerging Asia, PMIs in a number of the smaller economies have moved down markedly in recent months, and their exports and production have slowed. Early in the intermeeting period, Chinese indicators for July also posted softer readings but generally bounced back in August, with industrial production, retail sales, fixed-asset investment, and the PMI all posting gains. All in all, we see growth in emerging Asia stepping down from its double-digit first-half pace to about 4½ percent in the second half of the year, with growth rising slowly thereafter. This outlook is just a bit weaker than in the last Tealbook. While there is a notable risk that the recent data may be signaling a more pronounced slowdown in emerging Asia than is seen in these projections, we expect that private domestic spending will help support the next stage of the region's recovery, as stimulus from the rebound in trade and inventories abates. And many of these economies have scope to use expansionary policies to stimulate economic growth if the recovery falters.

In the euro area, indicators for the third quarter have been mixed. Manufacturing PMIs edged down in August, and the most recent readings on industrial production have been flat. Retail sales and consumer confidence, however, came in stronger than we had expected. Looking ahead, we see growth in the euro area moving down to around 1½ percent on average through the end of next year. This projection is a bit stronger than in August, in line with our reading of the recent data. We continue to expect that banking sector stresses and fiscal turmoil will restrain the pace of recovery.

Notably, we are also seeing significant divergence within the euro area. As I mentioned, German economic growth boomed in the second quarter, but Spanish and Portuguese GDP eked out only modest gains, and a 7 percent contraction in Greek GDP furthered the country's apparent slide from advanced economy to emerging

market status. We judge that even if Greece adheres to its fiscal adjustment program, further steps will need to be taken to address its debt sustainability problems. Such steps could include a modification in the terms of its debt held by the official sector, the provision of additional funds from European or international institutions, and a restructuring of its obligations to the private sector. Our forecast maintains the working assumption that such steps can be taken without disruptions for the euro area as a whole.

That said, news out of Ireland has taken a turn for the worse in recent weeks. Ireland's two largest banks reported sizable first-half losses and sharp increases in their nonperforming loans. In addition, the authorities announced a large capital injection for Anglo Irish, the third largest bank. Still severe economic conditions, in particular falling house prices and a drop in nominal GDP of nearly 20 percent over the past three years, threaten to weaken the banking system further. While the government has moved resolutely to address these problems, the banking system is very large relative to the economy, and these efforts have raised concerns about the sustainability of the resulting fiscal obligations. S&P now estimates that the gross cost of resolving the banking sector's problems could surpass 50 percent of GDP (excluding future recoveries) and, accordingly, has notched the country's credit rating down from AA to AA-. The thorny challenge of how to support large banks in small countries, which manifested itself most starkly in Iceland, is a notable risk to both global financial stability and the foreign outlook.

In sum, we expect foreign growth to slow from the 6 percent second-quarter pace to about 2¾ percent in the second half of this year. Growth abroad should then rise to a little under 3½ percent in 2011 and 2012, as financial stresses wane and private spending firms. This outlook has been revised down some since August, reflecting the slightly softer outlook for emerging Asia and the weaker path of U.S. activity. While our forecast envisions an anxiety-soothing, soft-landing scenario for foreign growth, we recognize that the risks around this outlook are high. In addition to concerns about the durability of the U.S. recovery, our projections for activity abroad could be pulled down further by banking or fiscal stresses in Europe, a disappointing performance of private demand in emerging Asia, or—in the wake of the Japanese intervention and with Congress now considering trade sanctions against China—an increase in protectionist pressures, trade frictions, and beggar-thy-neighbor policies. Thank you, and we're happy to take your questions.

CHAIRMAN BERNANKE. If a country goes from advanced status to emerging market, is that a submerging market? [Laughter]

MR. SHEETS. I know that over the years Japan has been referred to in those terms, and maybe Greece is raising them a notch.

CHAIRMAN BERNANKE. Questions for our colleagues? President Plosser.

MR. PLOSSER. Dave, I appreciate your discussion. These are very challenging times for forecasting, but I'll ask the question I often ask: You've revised your forecast down, and you've shaped it by the incoming data, but how much of it was driven by your model and how much of it was due to add factors and judgmental factors that you added into the forecast at this point?

MR. STOCKTON. With this forecast, I'd say it's just about half and half. About half of it was surprises from the incoming data that, in essence, drove us off the model. But half was due to the assumption of somewhat weaker stock prices, somewhat weaker house prices, the slightly higher level of the dollar, and the weaker foreign activity. So those were sort of endogenous. Those were revisions consistent with the model.

MR. PLOSSER. Thank you.

CHAIRMAN BERNANKE. When you say "part of the model," how do you treat residuals? Aren't residuals going to be assumed to decay over time?

MR. STOCKTON. They do decay. In this case, we have those residuals decaying over a longer period than we did previously. We're off the model for a longer period of time, as we think the evidence that we've accumulated suggests that the influences that are depressing activity beyond the model's explanatory factors are going to be more persistent.

CHAIRMAN BERNANKE. Okay.

MR. PLOSSER. I'd just like to follow up, because I think the Chairman's point is a better way of getting at what I was trying to say. We use this notion—and forecasters use it—of momentum carrying forward and persistence. Some of that persistence is inherent in the way you write the structural model down. Some of it is based on assumptions about what the shocks themselves are doing over time. Time-series models and time-series variations in GDP growth

from quarter to quarter are pretty volatile. There's some persistence, but the serial correlation is not huge in terms of growth rates. The Chairman's question was about the nature of the persistence of the residuals. Is it an estimated parameter, or is it something that you're just assuming?

MR. STOCKTON. That's a legitimate point. There is sort of an estimated persistence in the residuals that we just know from the basic model's past errors. We attributed more than that level of persistence for this judgmental factor, because we think that this time is different from the average historical experience; specifically, those residuals will fade away more slowly because of the financial crisis.

CHAIRMAN BERNANKE. Other questions? President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. David, do you have notions of how well these judgment factors have improved your forecast historically?

MR. PLOSSER. You made him take off his glasses. [Laughter]

MR. STOCKTON. If I'm going to get hit, at least I have my glasses off. I can't answer that question with any precision. But what I can do is point to the confidence intervals that we have around our forecast. These are based on our actual forecasting record, which includes the behavior of the model itself as well as the judgmental add factors that we've put on it in the past. And, as you can see, those confidence intervals are pretty darn wide.

MR. KOCHERLAKOTA. Thanks.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. Can I just ask a question quickly of Nathan? I recall that data indicated that last year that U.S. FDI abroad was about \$248 billion, and FDI in the United States is about

half that, \$120-some-odd billion. Do we have a sense of how those numbers are tracking this year?

MR. SHEETS. I don't have that at my fingertips, but that's something that we do follow, and we can get you an answer to that.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. Okay. Seeing no other questions, we are ready for our economic go-round. We want the full benefit of everyone's wisdom, but please remember this is a one-day meeting, so please try to keep that wisdom as tightly expressed as possible. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. Business conditions in the Third District have changed very little since our last meeting. There continues to be an uneven pattern of incoming data that has been established during the course of the summer. The outlook among business contacts is still positive but has not improved much since our last meeting; but neither has there been much further weakening in their outlook. Nonetheless, sentiment is cautious in most sectors. Retail activity actually showed some strength in the intermeeting period, and manufacturing fell slightly. Our BOS general activity index came in negative in August for the first time, after nearly a year of being positive. There was a slight rebound in September, but that only suggests that regional manufacturing was essentially flat but not necessarily declining very much.

The incoming data at the national level indicate that the pace of recovery was tepid during the summer, but recent industrial production and consumer spending reports have modestly surprised to the upside. This may signal that the end of the summer may correspond to the low point of this soft patch rather than an imminent return to recession. This prediction,

obviously, must be tempered by reports of ongoing weakness in the labor market, continuing retrenchment in the housing market, and reports of weak real activity from a few of our contacts.

Business leaders continue to stress that the cost of health care reform and other costs are obstacles to hiring. For example, they are concerned about significant increases in unemployment insurance premiums that the states will have to impose to replenish their UI trust funds. Let me also note that labor market activity tends to lag in recoveries, and problems in the housing market are likely related to permanent changes in fundamentals rather than the results of transitory factors. Banks and other financial institutions indicate that hiring, however, is concentrated in compliance officers, legal help, and technology people to meet regulatory rules and their costs.

Monetary policy has been exceptionally accommodative for more than two years. There is a generous supply of liquidity available for financial markets to support real activity. Moreover, the financial markets appear to be in good working order. The incoming information suggested that fewer instances of credit demand going unsatisfied are out there.

The labor market is still, of course, the major concern to us all. Unemployment is much too high and is the cause of real pain and suffering in the U.S. economy. However, private payroll employment growth has been positive since the first of the year, and, in my view, the current state of the labor market is an example of a problem that is not amenable to future monetary policy accommodation. I believe that the sources of the slow adjustment in labor markets are more about persistent supply and wealth shocks, requiring worker reallocations both across time and across space, as well as disparities between skills in demand and workers who are likely to be available. No doubt, aggregate demand is one source of the currently high

unemployment rate. But the role that fundamentals have played in the run-up of the unemployment rate, and its persistence, in my view, looms large and has been underestimated.

I am looking forward to our discussion of these issues in January, and I think it may be presumptuous of us to take further action without having that thorough discussion before going forward. While my current view is that monetary policy has limited ability to improve the pace of this recovery further, I do believe that deflation is a potential problem that monetary policy can, in fact, solve. I say “potential,” because I see little evidence to suggest that sustained deflation is a serious risk.

To update my statement from our previous meeting, nominal GDP growth was about zero in Japan during most of the lost decade of the 1990s. For the last year, the United States has witnessed nominal GDP growth of about 4 percent or a little less. Overall, inflation has slowed somewhat since the beginning of the year. Over the last three months, the commodity component of the CPI has grown at $2\frac{3}{4}$ percent. The durable goods prices in the CPI have grown at 2.1 percent, and the services component is up only about 9 percent. To me, this does not suggest a serious threat of sustained deflation going forward.

I continue to believe that the odds are great that the recovery will remain at a moderate pace over the medium term. I think this forecast is consistent with the Board staff lowering its forecast for real growth by a little less than .05 percentage point.

All in all, I think recoveries are never smooth. Also, I want to stress that the data we use to infer the state of the economy are subject to revision and are highly volatile. I agree with the Board staff that the data available since our last meeting have yielded only marginal increases in the probability of another recession, since we are now out of the last one, let alone serious retrenchment. Growth in the U.S. economy has slowed in the past several months, but it is not

negative. It seems to me that, without an unexpectedly large shock, persistent negative growth going forward seems unlikely. I think it best to wait and see the path of the economy for the rest of the year, including the year-end holiday season, before considering additional steps, whose effects may be highly dubious at best. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. The Eighth District economy showed signs of slowing in the summer. District auto dealers and general retailers reported mixed results. The back-to-school season in particular was middling, according to one major retailer. Optimism is limited for the remainder of the year. Employment in the District has resumed tracking the same trends as the national data. District agriculture is a bright spot, as many areas in the region seem poised to enjoy bumper harvests and relatively strong prices. Residential sales in construction, on the other hand, have weakened over the summer. The promising signs from the spring have largely disappeared. Commercial and industrial real estate markets remain weak, and commercial lending remains stagnant.

Contacts in the transportation industry seem to be optimistic about business prospects. While there has been some slowing during the summer, in general volumes and revenues continue to improve. One contact noted that the intermodal shipping business remains particularly strong, seemingly suggesting that imports remain on track during the third quarter. Large businesses with a presence in or connection to Asia continue to do well. Business uncertainty is important and is affecting capital expenditure decisions.

Turning to the national economy, I concur with much of the Tealbook analysis, which suggests that the economy is working through a softer phase of the recovery and will likely improve toward a more rapid pace of growth in 2011. During this softer phase, we are

susceptible to negative shocks that could derail the recovery, but, so far, I do not think we have encountered such a shock, so I think it is reasonable to base policy on the projection that the economic recovery will continue and, in fact, gather steam next year. It would not be at all unusual to experience an uneven recovery. In fact, the unusual case would be one where economic recovery is perfectly smooth. Also, the current recovery process is in response to a very large shock, and the shock was associated with a financial crisis. Both the size of the shock and the fact that it was associated with a financial crisis suggest that, according to the empirical evidence on these matters, the recovery process will be a long one. In addition, further shocks will hit the economy during this process.

I want to comment for just a minute on the nature of optimal policy. What does the economy look like under an optimal monetary policy? We have talked repeatedly about being away from the dual mandate on two dimensions, both inflation and employment. It is far from clear that this is a good way to think about whether policy is optimal or not. In some simple models of stabilization policy, shocks buffeting the economy can be offset perfectly, so that key variables, such as output, employment, and inflation, never deviate from their steady-state values. Monetary policy in that case completely smoothes the business cycle. This is surely not the world that we live in. The empirical evidence of which I am aware indicates that monetary policy can only mitigate a fraction, and a rather small fraction at that, of the variance of key quantities in the economy. This is an important job, to be sure, and we should strive to carry out the optimal policy, but we should not expect that that policy will completely or even largely stabilize the fluctuations induced by shocks. And for an extremely large shock, such as the one to which we are trying to adjust, it would not surprise me if the trajectories of output, inflation, and employment appeared to be one-sided for a time, even under the optimal policy.

I'm going to give you the geeky version of this, so you can check your BlackBerrys while I—[laughter]. The geeky version would be that you are at steady-state unemployment and inflation, and now you hit the economy with a large demand shock, so unemployment goes way up and inflation goes below target for a long time. You then look at any slice of that, at any point in time, and you say, "We're missing the mandate on both dimensions." But even in that model, with optimal monetary policy, this is not an indication of anything, really, except that you got hit by a large shock. So that's my story on that.

Let me turn to inflation and inflation expectations. Inflation measured from one year ago continues to be about 1 percent by a variety of measures. Inflation expectations measured by market-based TIPS break-even inflation rates seem to be moving somewhat lower. The five-year TIPS break-even inflation rate is about 1.2 percent, somewhat low for a horizon like this, and down substantially from earlier this year. The September expected inflation yield curve produced by the Federal Reserve Bank of Cleveland indicated a shift down in the entire curve from the August level. The whole curve is significantly lower than it was earlier this year. The Cleveland measures adjust for many factors in these data. This curve remains upward-sloping but is rather low. A decline in inflation expectations of this amount is not severe enough at this point to warrant an argument that we are slipping into a Japanese-style deflationary regime. Still, we remain susceptible to negative shocks, and it's not outside the realm of possibility that such an outcome could occur.

I have argued that we should be prepared to take action, should we encounter further negative shocks that raises the risk of such an outcome. One difficulty of deciding monetary policy in this environment is that our largely linear models are not easily adapted to study this issue. Models we use have never heard of an unintended steady state with near zero nominal

interest rates and a slight deflation. In some private-sector analyses, probabilities of 0.25 or 0.3 are put on the Japan-like scenario. But our models do not admit such a possibility, leaving us policymakers with a judgment call on this issue. Even some of the most extensive analysis in this area—Evans, Guse, and Honkapohja, in particular—does not even get the convergence to the trapped steady state to match the Japanese and the U.S. data appropriately.

One might be tempted to argue that policy should be extremely aggressive in order to avoid the unintended Japan-style steady state, and because we are missing our mandate on two dimensions. I have argued that the mandates argument is not necessarily right, as the economy is adjusting back to normal following a very large shock. Even under optimal monetary policy, one might observe low inflation and high unemployment for a long time.

As for avoiding the Japanese-style steady state, I have seen no analysis that suggests “shock and awe” would work or even that it would be helpful. Large policy moves are normally to be avoided expressly because they can be destabilizing. For instance, a very aggressive Treasury purchase program could be viewed as the beginning of a process of competitive devaluation, weakening the dollar and leading to a reaction worldwide. This would likely be counterproductive with respect to our goals.

In this situation, without models that are complete enough, I think we need to rely on what we have learned about optimal monetary policy over the last 25 years. First, optimal policy is state-contingent—it adjusts as information arrives. Second, we adjust in relatively small amounts, because the impact comes not from the adjustment itself, but from the expected policy path out into the infinite future. And, three, rule-like behavior, to the extent possible, is very desirable to keep expectations well anchored. I think following those principles is very important. We are obviously in uncharted territory, but these lessons transfer from the earlier

experience with interest rate targeting, and we should heed them going forward. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. It is never good news when the staff feels that it is necessary to create a box looking at the probability of a recession. Whether or not this is truly a harbinger of a recession, I agree with most forecasters who expect very slow economic growth for the second half of this year, and this is coupled with the not-insignificant risk of a negative tail event. Much slower economic growth could be generated by a combination of fiscal austerity, further deceleration in final sales, or realization of the risk highlighted in the other striking box in the staff documents, namely, the risk implied in the very elevated rate for credit default swaps for sovereigns and banking institutions in Europe.

Slow economic growth for the second half this year implies that we can expect little improvement in labor markets in the short run. In fact, it is quite possible that we end the year with unemployment at or above the very elevated rate we had at the beginning of this year. While some structural dislocation occurs in every recession, this recession has been characterized by a widespread decline in the demand for labor. In the 1990 recession, the only industry to experience a peak-to-trough loss of employment of 5 percent or greater was construction. In the 2001 recession, the only two industries to experience peak-to-trough loss of employment of 5 percent or greater were manufacturing and information technology. However, in this recession there has been a peak-to-trough loss of employment of 5 percent or greater in construction, manufacturing, retail trade, wholesale trade, transportation, information technology, financial activities, and professional and business services. Consistent with job losses reflecting a widespread decline in demand, a survey by the National Federation of

Independent Business asked small businesses whether they had one or more hard-to-fill jobs vacant. Only 10 percent said yes, which remains near the 25-year low for this survey question.

While New England is doing better than many areas of the country, community banks in my District are reporting more home foreclosures and nonperforming residential loans. They report that most of these foreclosures are being triggered less by job loss and more by households finally depleting their resources and giving up on an economic rebound. A very slow recovery can have significant negative long-run implications for both employment and households' financial condition. We continue to see evidence of disinflation. The core CPI is currently just below 1 percent and is expected to remain far below 2 percent through the forecast period of 2012. As President Evans highlighted at the last meeting, large misses for years on the upside of our inflation goal would not be acceptable and would warrant a significant policy response. If so, then large misses for years on the downside of our inflation goal should also not be acceptable and warrant a significant policy response. Fiscal policy may be the most effective policy tool when we hit the zero lower bound for interest rates. However, if fiscal stimulus is not forthcoming, and if we are not making significant progress towards both elements of our policy mandate, then monetary policy should not remain on the sidelines. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. During the intermeeting period, I focused my conversations with directors and other business leaders on the issue of uncertainty. The good news is that many were feeling more certain about the outlook now than they were in the spring. The bad news is that they are now more certain that economic growth will be slower the remainder of this year than they thought in the spring. This is leading many business executives to keep a tight grip on hiring and capital spending.

Most large company executives reported solid earnings, strong balance sheets, and the ability to remain profitable, even at the current operating levels. Many have adjusted their business models several times to be profitable at the current low levels of output, yet they have the financial and physical capacity for more growth. And it is worth noting that GDP profit measures have regained their pre-recession levels, unlike many of the other data series that we have been watching.

Of course, smaller businesses have tended to struggle more in this expansion. It is harder to assess the prospects of small businesses, because they are so diverse, but the survey of small businesses that was conducted by the National Federation of Independent Business is pointing very consistently to a lack of demand as the single most important problem facing the respondents. At this point, they are not expecting more than a gradual pickup in demand. But they are also not expecting a further decline in demand. The bankers I spoke with remain particularly uncertain about their prospects. Continuing regulatory reform discussions and the proposals for further capital requirements were the major sources of their concerns. But they also continue to report weak loan demand, and most of them are still looking for profitable lending opportunities.

On a more positive note, there is growing evidence that higher saving rates and debt reductions are gradually restoring health to household balance sheets. This appears to be reflected in continuing retail sales growth; it is also showing up in reduced delinquencies in the banks in my District. Of course, further improvements in consumer spending are going to require stronger labor markets. Unfortunately, the hiring reports that I am hearing are still consistent with limited employment growth in the near term.

Like others, my staff has been revisiting the natural rate of unemployment, and they applied statistical filters to calculate trends in job-finding and job-separation rates to impute the natural rate. This approach leads to an estimate that is currently similar to the Tealbook's, and it suggests only a slow decline in the unemployment rate, because the underlying trend in the job-finding rate is substantially lower than in past recoveries.

Although my outlook today is a little softer than it was at last month's meeting, I have long expected the recovery to be gradual and bumpy. And the recent information on economic activity is in line with that expectation. My projection for GDP calls for roughly 2 percent growth for the second half of this year, with labor markets improving quite slowly.

On the inflation front, we have been getting early signs that disinflation is abating. This stabilization is evident in the price change distribution of CPI components. On average, just a third of the overall index has been exhibiting outright price declines over the past three months, compared with nearly a half of the index exhibiting outright price declines over the first five months of this year. Although these are encouraging signs, at this point inflation expectations are still well below my longer-run objective of 2 percent. President Bullard commented on the Cleveland model. One more observation from that model suggests that expectations embedded in markets are less than 2 percent from the current year to 30 years out.

In sum, feedback from my contacts and analysis by my staff indicate that neither a stronger second half of the year nor a double-dip recession seems likely. So I continue to see the risks for both output and inflation as tilted to the downside. The current policy environment makes it more challenging to respond to downside risks, and the need to balance the costs and benefits of further policy actions add to my reasoning that the risks to both output and inflation remain to the downside. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, I'll tell a story to frame my comments. Three Texas Aggies apply to be detectives. The Inspector General lines them up, holds up a picture, and says to the first one, "What do you see?" The Aggie replies, "I see a man with one eye." The Inspector General says, "Of course you see a man with one eye. It's a profile." Then, he holds it up in front of the second Aggie. He says, "What do you see?" "I see a man with one ear." "Well, didn't you hear what I said to the other fellow? Of course it's a man with one ear. It's a profile." And then, he turns to the third, and he holds up the picture. "What do you see?" "A contact lens," replies the Aggie. "What do you mean?" He said, "He's wearing a contact lens." He turns to his assistant and says, "Check the book. Make sure that's the case." The assistant comes back and says, "He's absolutely right. He's wearing contact lenses." He turns to the Aggie and says, "Well, how could you tell?" He says, "Well, hello. If he only has one eye and one ear, he can't wear glasses." [Laughter] Now, why did I tell this story? I don't know—it's just a great story.

I think my job at this table is to round out or flesh out some of the perspectives we're getting, so I think it's very important to listen to the operators of businesses to get a sense of what they see going forward to supplement and complement the good work done by our staff and the Board staff, etc. Let me just add parenthetically that I'm not surprised at the downward revisions. This economic scenario is basically what we've been feeling would happen, and I think it's implicit in the numbers we have submitted.

My District, like others, has seen a slowdown in activity, although I cannot help but brag that 41 percent of all the goods-producing jobs in America have been created in my District, and certainly a fifth of all private-sector jobs.

Let me report to you what I'm hearing from my interlocutors, and, Mr. Chairman, you have that list of who they are, in addition to the dozens of small business operators I talk to. I want to complement some of the points made by President Pianaalto. My interlocutors report a slight improvement in the tone change from the last pre-FOMC soundings, with the emphasis being on "slight." I'm going to mention some names of corporations—some of this is inside information. We can talk about expunging it from the record, but I think it's important just to inform the views. One careful observer, who is the CEO of Wal-Mart, feels that, and I quote, "Consumers are becoming more resilient, or maybe just more determined to get through this." And this is confirmed by two of the middle-income quartile retailers that I talked to in "deep dive," J.C. Penney and Michaels. Consumers are opening up their pocketbooks slightly further but remain extremely sensitive to prices. There is a marginally greater willingness to buy nonessential items, but only when they're priced aggressively. And I will add that there was one odd exception, month to date in September—maybe because of my own coffee consumption—Starbucks has experienced the biggest volume surge in history of the company—clearly a discretionary, if addictive, expenditure.

To a person, my interlocutors report their companies have even better access to credit than reported before the last FOMC and enjoy abundant liquidity. Texas Instruments' CFO said that the request for relaxation of payment terms by their customers has completely disappeared. I hear no reports of lagging receivables from small or large companies. I actually asked Wal-Mart specifically if it heard any comments or concerns about access to capital from any of its suppliers, which is a substantial supplier base, and it could think of only one—a very small company that developed a product to clean up garbage and garage oil spills. And once Wal-Mart placed an order with it, every community bank in their district was crawling all over them to lend

them money. Among those that are creditworthy, I sense an even greater propensity for hoarding liquidity. Example: Dell said that it only has \$15 billion on its balance sheet that it doesn't see using in the foreseeable future. Dell recently tapped the markets for another \$1 billion "just because it's so cheap." The last time I looked, its market capitalization, by the way, was only \$24 billion. Balance sheets are being actively re-leveraged at lower costs. Cash as a percentage of market capitalization is at an all-time high. Aggregate asset ratios are at a seven-decade high, and cash flow from current production is 12 percent above total investment expenditures economy wide.

And yet, as all of us have pointed out, few are willing to commit to expanding U.S. payrolls, and all continue to cite nonmonetary factors—that is, fiscal, regulatory, etc., and, for those with a global reach in my sample, better opportunities for ROI elsewhere. To quote one CEO and to take off on Sandy's comment, "Part of it is uncertainty: We just don't know what the new regs are going to cost, what the new rules will be. Part of it is certainty: We know that taxes are eventually going to have to increase to get us out of the fiscal hole that the Congress has dug us into."

I want to give you one specific example, which I thought was eye-opening. Going back to the largest purchaser of food products in the United States, the firm offered to buy an entire apple crop in Washington. I don't know if you know about the economics of apples—there's no reason for you to know it. But 25 percent of any apple crop is not usable in terms of selling apples. You make concentrate out of it. Even though this company offered a specific contract over a multiyear period to this large producer, it would have required building another processing factory. And despite the guaranteed contract and the attractive pricing of the purchase, it came back declining to build a new factory, because it couldn't calculate the cost of

workers and the eventual tax load that might be imposed upon the company, and it turned it down. And guess where the order went? To Chinese apple producers to produce the concentrate.

All of my interlocutors are focused laser-like on enhancing productivity. For example, AT&T just held its three-year budgeting meeting last Tuesday. They agreed to budget all capital expenditures to zero top-line growth over the time horizon, not because they expect zero growth, but because, in the words of their CEO, they want to force-drive productivity. An entirely different type of company, 7-Eleven, reported doing the same, by the way, almost verbatim. Indeed, almost all my interlocutors are budgeting similarly to, quote, “get less people to wear more hats.” Few assign significant probability to a double dip.

Among the retailers, most expect growth of top-line revenue to be positive but subpar in the second half, and then pick up through 2011, though all of my retailers, whether they’re in the bottom quartile or in the middle two quartiles have experienced a surprising and inexplicable pickup in activity following back-to-school sales beyond what they were expecting.

In all but the bottom-income quartile, their same-store top-line increases year-to-date through Friday of last week are pretty much evenly divided between price increases and transactions volumes. This is confirmed by Mastercard’s internal data, and its CEO’s interpretation confirming the general tone of the reports from my retail sources. Having been caught short in last year’s holiday season, retailers have cautiously increased inventories but are very nervous about it. As the CEO of Burlington Northern Santa Fe said, “Either the supply chain is a leading indicator of a better retail quarter in the fourth quarter, or some very big disappointments are in the works.”

On the price front, retailers are reporting rising input prices from imported goods manufactured in China and from high transocean shipping costs. Milk and grain prices are increasing. However, as we might expect, they report insufficient, in their words, “pricing power” and are worried about having their margins squeezed, which provides them another incentive to maintain share prices by using their cash hoards not to hire new people but to buy in new shares or to increase dividends.

Deflation was not mentioned by a single interlocutor. Monetary policy, even among the most erudite, is simply not on the radar screens of nonfinancial businesses that I talked to, as capital is nominally cheap and abundant. Fiscal and regulatory rules issues remain the stuff of concern in planning for payroll and domestic cap-ex expansion and are thwarting the transmission mechanism of hiring more workers.

So, in summary, Mr. Chairman, that’s what I am hearing from my private-sector interlocutors. I think the concern I have is the transmission mechanism, and I will make some comments on the efficacy of our policy when we go to the policy round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. The commentary from my directors this month was quite striking. If we tally up the individual anecdotes, you find more positives than negative reports, and the overall picture you get if you just look at the anecdotes is one of modest improvement in economic conditions. Our directors are speaking with increasing concern and frustration. I’d call it bordering on anger about the restraining effects on business sentiment of uncertainty about potentially adverse government policy changes. In addition to the usual culprits—health care, environment, and tax policies—this month we heard for the first time

worries about forthcoming cuts in defense spending, a particularly important sector in our District. Now, we've been hearing these complaints for months, and there's been a lot of public commentary about them. At first, the logical thing is to think of fear mongering and perhaps political agendas at work, but they're widespread and persistent, and that's what strikes me.

The national economic news since the last meeting has also been mixed. While uniformly positive would have been much better than mixed, I read the current reports as alleviating fears of a double dip and confirming the August outlook for generally sluggish growth going forward. As a result, I find myself very comfortable with the Tealbook's forecast of output growth—a bit slow for the remainder of the year but rising steadily to just above 4 percent by the end of next year. The data so far this year have been consistent with this outlook for sluggish economic growth. Consumer spending has been rising pretty steadily at an annual rate of about a 2 percent. It is likely to continue to expand at that pace.

Although the labor market is still weak, private payrolls are gradually expanding, averaging an additional 95,000 jobs per month since the beginning of the year. Business investment in equipment and software has been expanding briskly as well, and, while it might not contribute as much to economic growth going forward, I think the fundamentals look pretty good there.

Inflation remains pretty steady at 1.5 percent overall on a year-over-year basis. That lines up with my own inflation objective. Various measures of inflation expectations remain about where they were at the last meeting. I don't see any evidence of a sustained disinflation. So with regard to our inflation mandate, I think we're doing just fine.

All in all, my take on the real economy and inflation and where they're going is basically the same as it was at the last meeting. Of course, the strength of the recovery does remain the

issue. When you compare the first four quarters of this recovery to the first four quarters following the two deep postwar U.S. recessions—'74 and '81-'82—you see that real GDP growth falls short this time by about 3 percentage points. If you look at the components, you'll find the shortfall is attributable to slower growth this time in consumption and residential investment. The latter is perfectly understandable, given the overbuilding of the last two decades, and I don't think we should be looking for housing to make any significant contributions to economic growth in the next few years, even if interest rates were noticeably lower. So I think our aspirations should be calibrated to not expecting recovery in housing.

Slower consumer spending growth in this recovery can be attributed in part to the fact that the saving rate hasn't fallen this time the way it did in other recoveries, following deep contractions. Elevated saving seems driven by debt reduction and limited confidence in the strength of income growth rather than by high interest rates, I think. So it seems unlikely to me that lower Treasury yields would do much to discourage saving or slow the rate at which consumers are paying down debt.

Another factor dampening consumption growth is the moderate pace of employment growth. A significant pickup in consumption from its current modest pace, thus, would seem to require a pickup in new hiring. As I indicated in my regional comments, though, I've been struck by the widespread reports of firms being unwilling to commit to new hiring or new investments until there's a bit more clarity about some of the policies that could affect them in the future. Eventually this current heightened level of uncertainty will dissipate, obviously, and I think at that point hiring will expand more rapidly. But until then I think economic growth is going to be limited by forces that are largely beyond our ability to offset. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. Last spring this Committee was hardly optimistic about the pace of recovery. The central tendency of our April projections, for example, showed a persistent failure to achieve anything close to our dual mandate. The anticipated shortfalls vis-à-vis our employment and inflation objectives both widened in the June projections. Unfortunately, the disappointing news this summer—lackluster employment, deteriorating sentiment, anemic retail sales, decelerating investment, and further price disinflation—has pushed the attainment of our policy objectives off even further into the future. The long slog we had been expecting in the spring now looks even longer and more painful.

Furthermore, I think it's clear that a shortfall in aggregate demand is the main culprit behind this bleak outlook. We're recovering from the worst global and economic financial meltdown since the Great Depression. Households, businesses, and banks continue to struggle under debt burdens. So the adverse headwinds holding back aggregate demand remain fierce.

Of course, a negative shock to aggregate supply is also partly to blame, and we could improve our failing grade on our full employment mandate by grading on a curve, that is, by substantially raising the NAIRU. President Kocherlakota noted last time that recent estimates of the Beveridge curve relating unemployment to job openings showed an outward shift relative to the 2000s, suggesting that the labor market is experiencing significant disruptions. The outward shift seems undeniable, but I want to argue that, even so, it's inappropriate to gauge changes in the NAIRU from Beveridge curve shifts alone. In the first place, the Beveridge curve is only one relationship involved in determining equilibrium unemployment. Mathematically, after all, it's one equation and two variables, unemployment and vacancies. Thus, you also need to understand the movement of vacancies to pin down where you are on the Beveridge curve. Most

models of frictional unemployment implicitly or explicitly have a second upward-sloping job-creation relationship. Then horizontal shifts in the Beveridge curve typically result in less than a one-for-one increase in the NAIRU. Consistent with the theory, the Beveridge curve has empirically shifted in and out over history by far more than we think the NAIRU has moved. Indeed, the outward shift in recent quarters is well within the historical range of previous business cycle recoveries.

A second point to emphasize is that shifts in the Beveridge curve may result from either structural or transitory factors. Structural shifts could reflect greater mismatch. But the curve would also be expected to shift out if the pace of layoffs rises, as it did when the economy entered a tailspin. A shift in the Beveridge curve for this reason would likely prove transitory or cyclical.

Ultimately, then, it's an empirical task to figure out how much of the recent movements in the Beveridge curve reflect cyclical factors related to the weak economy and weak aggregate demand and how much reflects more permanent changes affecting the NAIRU. My staff has examined this issue using a variety of approaches. These include analyzing data on vacancies and job-finding rates, asking all of our directors during the intermeeting period about their ability to find qualified workers, and estimating time-varying Phillips curve models. Taking all of these analyses together, we arrive at a medium-term NAIRU of 5.75 percent, identical to the Tealbook. My staff also estimates that the extended unemployment insurance programs add about three-quarters of a percentage point more, bringing the current effective NAIRU to about 6.5 percent. Thus, our best estimate is that there is about 3 percentage points of excess unemployment, considerably more than at this stage of the recoveries in 1975 and 1983, for example.

Furthermore, over the next few years, as extended UI programs expire and mismatch is reduced, the NAIRU falls. So there will be considerable slack remaining for years.

My contacts confirm the conclusion that mismatch is a problem only for small, specialized jobs, and, without exception, they report that it is now easier to identify applicants for such specialized skilled jobs than before the recession. If anything, they see an abundance of qualified workers, not a shortage. As one contact put it, "Sure, we see mismatch. We see many more applicants now who are overqualified relative to job requirements." Indeed, with an abundance of qualified applicants and a lack of sales, firms may well see some option value in holding vacancies open longer as they search for the really exceptional candidate.

Of course, this considerable resource slack is also holding down wages and prices. My contacts expect to raise nominal wages modestly, at best, and they don't think they can raise their prices much, if at all. Recently, they seem increasingly worried about deflation, not about high inflation. I tried to reassure my contacts that deflation is unlikely. That said, I'm not reassured by the Tealbook's inflation confidence intervals, which imply as much as one chance in three that core inflation will be less than 0.5 percent in 2012, and work by my staff, which finds that yields on nominal and inflation-protected Treasuries price in about one chance in six that cumulative CPI inflation over the next three years will be negative. No matter how you look at it, the probability distribution of future inflation outcomes is too low. In sum, there is enormous resource slack, which I expect will persist for years, and inflation is running below desired levels.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. The conditions in the Sixth District are consistent with the national picture of a slowdown in the middle of the year. Generally speaking,

activity in the District has been moving laterally, and there is a bit more pessimism, or at least backpedaling from earlier optimism, regarding the medium-term business outlook.

That said, recent reports have been uneven by industry. Activity in surface transportation or trucking remains especially strong. Business travel also remains very strong. Retail remains soft, but varies by specialty and price positioning. Most notably, sales of retail home improvement material have slowed sharply. Because of the weakness in the housing sector, homeowners appear hesitant to invest in their houses—even in smaller projects—because it amounts to putting additional equity into their homes.

For the most part, however, I do not sense that businesses are preparing for a significant deterioration in the economy. Rather, they seem generally of the mindset that activity will remain marginally positive, but subdued, for some time. Firms continue to position themselves for this lackluster future by cutting costs and streamlining operations. As President Fisher and President Lacker pointed out, a common, indeed, almost universal, theme is that uncertainty about economic policy and the fiscal situation, in particular, is paralyzing employment and investment plans. This has become a mantra in the business community, whether or not fully justified. The great majority of our business contacts seem to be in a “wait and see” mode as regards domestic investment and hiring. This suggests to me that the Committee should be careful to avoid policies or communications that might add to uncertainty.

On this point, in our board meeting last week, we posed the following question to directors: If uncertainty were lifted, but not one additional customer came through the door, would you hire or invest? Most responded in the affirmative, citing taxes, regulations, and costs associated with recent legislation as factors holding them back.

Finally, on the price front, I detect no price pressures to speak of in either direction. No one reports much in the way of pricing power right now. The anecdotal reports in my District have not changed in tone or intensity enough to cause me to alter my current assessment of the economy and forecast. As in August, I continue to believe a recovery is proceeding, if at a very slow pace for the moment. I have not concluded this is something other than a temporary phenomenon absent big surprises. My forecast conforms reasonably closely to the Tealbook through 2011, though I think structural factors and labor markets in certain industries are more significant than the staff seems to have assumed in contributing to a slow recovery and preventing faster achievement of the Committee's mandated objectives.

Hinting at my position in the policy round, the incoming data, while certainly disappointing, along with the anecdotal evidence, have not been sufficiently downbeat to convince me yet that the economy is evolving on a direr path than the Tealbook base case of slow recovery, no double dip, and avoidance of deflation. The economic policy historical moment strikes me as one of hoping for the best but appropriately preparing for the worst.

In a standard upside versus downside balance of risk, I judge the risk to economic growth as being weighted mostly to the downside. I would also judge the risk to the inflation outlook as being biased to the downside, particularly over the medium term. Given the modest growth path we appear to be on and the uncertainties that confront households and businesses, it seems clear the recovery is fragile and the economy remains vulnerable to shocks. And all of this suggests to me a posture of full alert to near-term developments that contradict and further shape one's confidence in the base-case scenario. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. My views have not changed from our last meeting, and I will try to be brief. What I might do is give you a perspective on our region through some anecdotal information that I think is germane. I'll start by saying that, from anyone's perspective, monetary policy is not on the sidelines. Monetary policy is highly accommodative. In talking with bankers in the region, from regional institutions down to the smaller ones, they're saying, "We have more deposits than we can deploy. Liquidity is not an issue for us." One quipped to me that his largest nonperforming asset was his fed funds sold. He can't deploy this stuff. From his point of view, our monetary policy is not the issue.

This situation is showing up in other ways. We're seeing a lot of pickup in activity, as I've said before, in farmland. Properties that were expected to go for maybe \$4,000 an acre are clearing \$6,000 and above. Some that were in lower-quality areas that should be selling for as little as \$1,000 an acre are selling for twice that. The loans on that—and here's where I get worried—are 80 percent of the value of the sale price. You say to the lender, "Well, aren't you worried about that?" And he says, "Well, others are making the loan. The credit system is active." So we're seeing a lot of lending activity out there that is looking to deploy money.

The other thing—and we have verified this in some of the data—is that, as they look for yield, a lot of these banks are under pressure to go longer in their maturity structure, on their government securities. If you look at the average length of maturity, it's going out, so that they're taking on more risk as they look for some form of yield going forward. And I think it's building its own unintended consequences in the long run, if this were to continue. In talking with some of our regional companies, ones that are non-investment-grade, they're finding financing plentiful, especially if they have a strong balance sheet and good audit. So they're not looking for financing.

One of the largest temp companies in our region, which is national in scope, says people are turning to temp help because of the uncertainty. Its sales volume on temp help is up 50 percent again since the first of the year—it was up 50 percent since the middle of last year, towards the end, and now it's up again. It could put more people to work, but the people who are on unemployment will not come off it for those more modest wages, and that's impeding some of the sales that it would otherwise have.

So when you look at these developments, our District is continuing to grow modestly. It is not booming, it is not moving fast. The strong areas are agriculture and energy, but around that the rest of it is steadily up and going forward.

My outlook for the national economy is similar—steady, modest economic growth. I think that's really quite encouraging when you think of the amount of adjustments that are taking place in the economy—the deleveraging that had to occur and the risks to the outlook in terms of the uncertainties that have been discussed by others. We are really on a fairly good path, and, in that context, monetary policy is highly accommodative in facilitating that process. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I have talked to a number of bankers and businesspeople in our District since the last meeting. These conversations have circled around the same basic point, and it echoes much of what President Hoenig was just referring to. Many businesses have resources available for investment, and many banks have resources available for loans. Businesses are choosing not to use these resources to hire or expand, and banks are choosing not to make loans. When asked why, they say the level of risk associated with these new opportunities is too high to make them worthwhile. Instead, they put a lot of those resources into financial investments. In other words, they foresee the risk-adjusted

returns on available 10-year business investments or bank loans to be smaller than the 1 percent return embedded in a 10-year TIPS bond. If you think about a five-year horizon, it means that they find the risks of five-year investments to be so prohibitive that they would rather invest in a five-year TIPS bond that is paying 25 basis points.

I think this is the fundamental question in the recovery. What is the source of the perceived risk? And I agree—President Fisher has emphasized this, and many of you have mentioned this, as well—that some of this risk is attributable to uncertainties about the future tax and regulatory environment. But I also believe that more must be going on. In my view, I think households and firms are right to be uncertain about the likely performance of the U.S. economy over the next five to ten years. For example, the employment-to-population ratio has fallen to 58.5 percent, after being 62.7 percent in late 2007. Before this recession, it had not been this low since late 1983. This change is mirrored in what is usually a more acyclical variable—labor force participation—which has also reached a 25-year low.

In my view, there's a lot of uncertainty about the extent to which these changes in the labor market are likely to reverse over the next five years. The issue is that these changes are in many ways simply accelerations of existing trends. The employment-to-population ratio peaked in 1999. Labor force participation peaked in 2000. The past decade, in some ways, can be seen as one of labor market retrenchment that has accelerated over the past three years. With this perspective, why would we expect significant increases in employment population or labor force participation in the next three or four years?

There are other reasons for concern in the labor market. As I mentioned last time, over the past two years the Beveridge curve has shifted to the right by 3 percentage points, meaning that, for a given rate of job openings, unemployment is now 3 percentage points higher. Will it

shift back as the economy recovers? Well, it's far from clear. The good news is that it's hard to find any single microeconomic cause for this shift, and I can assure you that staff people in Minneapolis have been looking for one, which gives one hope that it is not some transient fluke.

But macroeconomics leads one to be a little less sanguine. In Minneapolis we looked at Beveridge curves in the 1970s, and one of the things you have to do there is to recognize that temporary layoffs were a significant part of 1970s unemployment and are essentially irrelevant in the current recession. So we modified the historical curves by subtracting out the temporary layoffs. Once we did that, we found there was about a 2 percentage point shift in the Beveridge curve during the 1974–1975 recession, and that shift persisted throughout the recovery.

What is the impact of this shift for monetary policy? President Yellen is exactly right—you have to be thinking about the entire equilibrium structure of the labor market. You really need a full model of labor demand, and you need to think about how monetary policy will impact that model of labor demand in a model in which you actually have unemployment. These kinds of models are, at least by my reading of the literature, fairly scarce. The Shimer model to which I referred in my speech last month would imply, unfortunately, a relatively high normal level of unemployment. But again that model doesn't have money in it. So how do you think about the impact of monetary policy on unemployment in that context? I'm not sure.

I will just say that these issues leave me uncertain, and I think households and firms are right to be uncertain about the medium-term performance of the United States labor market. In a similar vein, I think they're right to be uncertain about inflation. There are upside risks. The fiscal situation in the United States might well lead one to worry about inflation over the next five to ten years. Nonetheless, the Tealbook documents that the five-year inflation expectations embedded in TIPS bonds have been drifting downward. There are at least two possible stories

for this downward drift in expectations. The first is conventional and may be due to expectations of increased resource slack. The second is the one that President Bullard and I have been emphasizing recently. This argues that if people expect that the nominal interest rate stays low for a long period of time, their expectations of inflation will drift downward as the real interest rate rises.

Which story is right? Well, we'd better get the right answer to this question, because if we guess wrong, it has the potential to lead us into many years of low or even negative inflation.

How can we begin to resolve these uncertainties about labor markets and prices for households and firms? I don't think we can do so fully, but we can help by being part of the solution as opposed to being part of the problem, by providing more clarity about our own future choices. At a minimum, we need to be clear about our preconditions for any future accommodation, the form that that accommodation will take, and, most importantly in my view, what we expect that accommodation to be likely to accomplish. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. The economy continues to grow, but the pace of expansion is inadequate to meaningfully reduce the rolls of the unemployed at anything but a glacial pace. With inflation significantly underrunning price stability, it takes quite a bit of fortitude to muster a cheery disposition and discuss this outlook in public.

At our directors' meeting last week, my staff had that task. Our forecast had contours much like the Tealbook—weak economic growth in the second half of this year, but an inevitable pickup, with stronger growth rates of 3½ and 4½ percent in coming years. As one director said, “If someone presented me with an industrial business plan that was premised on a rosy national outlook like this, I would throw him out of the room.” All heads nodded in unison.

I'm not saying that our captains of industry are right to be skeptical of such a growth path, but their pessimism represents a significant headwind. Despite their gloomy view of the outlook, our business contacts do continue to report modest growth of their own businesses—not much different from last time—but they have no intention of doing any serious hiring. At best, they are recalling some laid-off workers. For example, Caterpillar laid off 16,000 U.S. workers during the recession. Even though it reports robust sales since the start of the recovery, it has rehired only 3,000. CDW, a discount computer retailer owned by a private equity firm, laid off 200 workers during the recession. Now its sales are at a higher rate than before the crisis, but it has hired back only 25 of these workers. It seems a safe bet that small businesses are doing the same. Businesses continue to fiercely defend their plans and point to substantial gains in productivity as vindication. But much of this is due to aggressive cost-cutting rather than the introduction of new technologies. In other words, they previously had substantial inefficiencies in place, and the recession pushed them to get back on the efficient production frontier. Better late than never, but this hardly seems to bode well for further strong future productivity gains.

I would like to finish up by talking about two important issues. The first is about the way that extreme consumer and business risk aversion have put us in what can be described as a liquidity trap; the second is the extent to which so-called structural factors can be thought to explain our very high unemployment rate.

On liquidity traps, as I have noted, businesses appear to be very cautious in their outlook. The same is true for households, which are displaying enormous degrees of risk aversion due to staggering employment risk, trillions of dollars of lost wealth, and debt levels that were chosen when fundamentals appeared better but are burdensome today. Households have significantly raised their saving rates, even though retail interest rates are effectively zero. Businesses are

content to post hefty profits on the strength of unprecedented cost-cutting rather than growing the top line. Very conservative attitudes reign. Firms are sitting on their cash, and very few are planning to expand workforces.

Although it is trivial to get business contacts to rail against the uncertainties generated by Washington, most that I've talked to can easily be coaxed into admitting that stronger demand conditions would quickly change their plans. This is what is meant by a liquidity trap. Even with short-term nominal rates at zero, the supply of savings exceeds the demand for investment. The real interest rate needs to be lower to adjust that. The modern liquidity trap literature indicates that aggressive monetary accommodation that lifts inflation expectations and reduces real interest rates can stimulate current demand. I think those are the policies we need to consider. Indeed, in the absence of aggressive actions, the factors driving high risk aversion could well stifle a meaningful recovery, keep unemployment high, and reinforce disinflationary pressures.

A second important issue is the extent to which today's very high rate of unemployment merely reflects a substantially higher natural rate that cannot be ameliorated by monetary policy. There are several reasons why the natural rate of unemployment has likely risen over the last couple of years—for example, extra-long extended UI benefits, lower mobility due to homeowners who are under water, and eroded skills due to long spells of unemployment. These factors all suggest at least a temporarily higher natural rate. On the basis of the recent improvements in the job openings data, some have suggested that there is little that monetary policy can do about the current level of unemployment. It is due to skills mismatch. We have already discussed this today. As noted in a recent Cleveland Fed piece, some of the apparent

conflict between unemployment and vacancy data may just be timing. We have seen such loops in the Beveridge curve before, and that goes to President Yellen's comments as well.

But even if you take the job openings data at face value, I don't think they support the conclusion that the natural rate has risen to the vicinity of 9.6 percent. A simple stable Beveridge curve based on a constant-returns Cobb-Douglas matching function—I guess this is the geeky stuff, right, Jim?—estimated on pre-crisis data, captures very well the unemployment-vacancy relationship through the end of last year. This is consistent with the increase in unemployment being primarily due to a cyclical fall in labor demand rather than an increase in mismatch or other structural factors. One might interpret this year's increase in vacancies without a corresponding improvement in unemployment as a shift in the Beveridge curve due to a drop in the efficiency parameter and the matching function, but that doesn't mean we are anywhere near the new normal level of unemployment.

Rather, making some plausible assumptions, my staff estimates that the typical level of unemployment associated with a Beveridge curve passing through recent data is likely to be about 7 percent. They can get a little bit higher—I think that's the University of Chicago influence that my staff has there. This is a figure that incorporates the effect of the temporary UI extensions. I think that's high, and I'm not suggesting that 7 percent is a good estimate of the current natural rate. As I said, there are reasons to discount some of the improvement in vacancy data. And most other attempts to quantify the current level of the natural rate come out lower, like the Board staff's recent adjustments. But even if one takes the vacancy data at face value and accepts that the natural rate has risen to 7 percent, that still leaves a very large margin of slack relative to the unemployment rate. Given this wide margin of slack, and the fact that we

are substantially underrunning our inflation target, I think it's important for us to consider what additional measures we can take to boost aggregate demand. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. The economy's forward momentum continues to be disappointing relative to both our objectives and forecast. The boost to activity from inventory restocking is mostly over, but the apparent desire of households to deleverage further and significant constraints on credit availability remain in place.

That said, in general, I don't view the incoming data since the last meeting as changing the picture very much. Earlier in the intermeeting period, the data were very weak, especially related to housing, but more recently the activity has been stronger, and this has been mimicked by financial markets. First we had a pretty significant tightening of financial conditions. Then there has been a return of the risk appetite so that financial conditions are broadly unchanged since the last meeting. I do think, though, that the sensitivity of markets to the economic outlook is important, because it implies that financial markets are likely to evolve in a way that will reinforce the direction of activity either up or down. So that increases the risk to the outlook.

In terms of the anecdotal evidence from our business contacts, they follow very similar themes. First, businesspeople are very upset about the Administration, probably as angry as I've ever seen them. This reflects both the perception that they're being demonized and policy uncertainty on a wide variety of subjects, such as health care and financial reform. Second, the businesspeople indicate that they will be very quick to batten down the hatches if the economy appears to be softening significantly, but, despite this, they indicate that economic conditions are improving. Thus, their complaints do not seem to be matched by their actions. My view is that this frustrating period, in which the recovery is weaker than we would desire, is likely to

continue for a while longer, but a double dip still appears unlikely. As time passes, the financial system's health should continue to improve, leading to better credit availability. The deleveraging of the household sector continues, so this process is probably now closer to the end than the beginning. Finally, it's hard to have a double dip when the cyclically sensitive sectors, such as housing and consumer durables, are already very depressed, monetary and fiscal policy is accommodative, and the rest of the world is still growing at a decent pace.

Despite that, I don't think we should take too much comfort from this. It is difficult to judge the risk, because we don't have very much experience with this type of business cycle. And, on the other side, every time the unemployment rate has risen by 0.3 percentage points or more on a three-month moving-average basis, we've actually had a downturn. So my point is that it wouldn't take a huge shock to set the dynamics in motion that could actually lead to a recession.

It's difficult to be confident about when a stronger self-sustaining recovery will take hold. I expect that when it finally arrives, it will arrive quickly, but until then, we remain in a very vulnerable position. The persistence of such a sluggish economic expansion creates the real risk of further disinflation, and this is an outcome to be feared, because further disinflation, of course, would raise the real interest rate and, thereby, reduce the degree of monetary policy accommodation at the lower bound. Put simply, we're not that far from outright deflation, and inflation expectations appear to have become less well anchored to the downside since the last meeting. Thus, despite the fact that I believe the risks of a double dip are low, I continue to believe that we should give strong consideration to providing additional accommodation. When combined with how far away we are from our twin mandate, the risk of deflation argues for doing more.

What types of shocks could push the economy downward? Well, one risk certainly remains Europe. While economic growth in the second quarter was generally stronger than expected, it may prove transient. Moreover, there is a risk of further market turbulence there. Already we have seen a substantial widening of sovereign debt spreads in Ireland because of concerns about the cost of recapitalizing the banking system. Another risk here remains the U.S. municipal sector. Although debt instruments typically get the first call on municipal cash flows, there is a risk that voters will start to balk and demand that services be maintained over debt service. Further defaults, such as what took place recently in Harrisburg, could potentially destabilize the municipal bond market, which is mainly supported by retail investors.

In terms of the Basel process in which we recently obtained agreement on capital standards, I think the early reading is encouraging. Investors appear to be confident about the ability of large banks to meet the standards as they gradually come into force, mainly through retained earnings. There's little evidence that the banks are being forced to pull forward meeting the requirements, which do not become fully effective until the beginning of 2019. But there still remains some risk. First, I think market participants don't fully understand how much risk-weighted assets for some banks have actually increased. This is especially true of banks with large trading operations. So market participants are probably understating these banks' capital needs. Also, there remains a risk that, if the standards were pulled forward significantly so that banks could somehow pay dividends more quickly, the standards could still lead to further deleveraging and credit constraint. Finally, I think that it's important that there are also going to be adjustments from the imposition of Dodd-Frank, and some of those changes may have consequences that we do not fully appreciate. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. Let me begin where Dave Stockton ended, which is that we shouldn't be too surprised by the broad arc of the economy. The panic and the subsequent financial crisis are having and have had persistent effects, effects that, even at the time they were occurring, we were going to have a hard time gauging. In addition, macroeconomic policies—some mix of trade, regulatory, and fiscal policies—have not been growth-friendly going back a few years. So we are bearing the consequences of these two fundamental factors.

Demand has certainly been affected by these factors, and there have been a series of attempts over the last few years to plug the hole from demand. But perhaps more consequential, in my view, is the harm that's been done to aggregate supply. NAIRU has, in fact, moved up more, I suspect, than the staff has taken on board, but I certainly share those initial estimates. Potential GDP, I think, has most likely fallen, and the path to get to these new targets is likely to be quite slow and painful.

Incoming data continue to be mixed, with real-time indicators, ex housing, surprising to the upside in the last few weeks and surprising to the downside in the period before that. My sense is that the very near-term data will continue to be a bit better than staff expectations, but that doesn't fundamentally change my view of the economic outlook in the medium term. My own second-half forecast comes close to, perhaps a bit shy of the Tealbook, with improvement in 2011 and 2012 also at a slower pace.

Still, as Bill Dudley just described, I think the prospects of a double dip are quite unlikely. We would need a significant adverse shock, but we should be careful what we're wishing for. There's still a lot of dry tinder out there, and I'm thinking in particular about the

risks that are still paramount in the money market mutual fund industry and risks that Europe's problems could resurface.

I don't fully subscribe to the recent literature on economic crises, particularly the implication that we are inevitably stuck in a low-growth, high-unemployment environment. This doesn't strike me as inevitable. It's a consequence of policy choices, of which monetary policy may be, in fact, the least consequential.

On the inflation front, we're witnessing cyclical disinflation at about a level that we would expect and that's broadly consistent with model-based outcomes. I still think deflation risks are not significant nor should they weigh importantly on our policy judgments in the next round.

At the same time, I would say it's not obvious to me that the extra half a point or point of inflation and corresponding changes to nominal GDP would have a materially positive impact on the real economy. There's been some discussion about inflation expectations and what signal we should be taking from changes in them, particularly in the TIPS market. I would add an additional dose of caution in trying to divine too much from the changes in the five-year, five-year forward and associated measures. It's not obvious to me that marginal investors understand what the Fed's preferences are for TIPS securities relative to nominal Treasuries. And unless and until we communicate that, I take the indications from these measures with a bigger grain of salt than usual.

Let me turn finally to financial market developments. I think both Brian and Bill have talked about the sensitivity of financial markets to incoming data. You know, never have such little changes in data done so much to change asset values to benefit so few. High-frequency indicators have certainly turned up in the last few weeks. Industrial commodity prices are up.

Equity prices are up. Credit spreads continue to be narrow, and, as Brian described, corporate issuance continues to be impressive.

Having said all that, I still don't think that we have found some new market equilibrium for these financial prices. We still are not in a place where financial market prices are durable and we can count on them—and that's a comment not just on U.S. markets, but on markets globally. I think the consequence of that is important to our policy discussions in the next round. The critical question is whether these markets are increasingly integrated or whether these markets are, indeed, separate. Markets appear to be moving back, albeit slowly, to a state in which we have a better sense of what they are telling us; that is, markets that can be more readily arbitrated between one another. However, the Fed's balance sheet strategy relies in part on the presumption that different financial assets are imperfect substitutes in investors' portfolios. If this financial repair process continues, if markets do become more integrated, if the improvements do turn out to be more durable, we might find that the salient presumption is less true, having some real consequence for our decision on further asset purchases. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. The trends in banking continue along the same lines that I've reported before: delinquencies, nonperformers, and charge-offs remain elevated but, with the exception of commercial real estate, are improving. Within commercial real estate, construction and land development loans continue to deteriorate as borrowers run out of cash or simply give up. Loans for income-producing commercial properties and owner-occupied properties seem to be bumping along a rocky bottom, but losses are still growing.

All banks are actively seeking loans, but their efforts are directed primarily at taking market share from other banks rather than adjusting standards to widen the pool of prospective borrowers. Interestingly, the large banks say that they're taking market share from the smaller banks because weakened condition doesn't allow them to keep lending. The small banks say they're taking market share from the large banks with pullback from products or geographies. Uncertainty is high among bankers, their regulators, and their customers. So everyone is willing to make decisions based only on what they can see.

Regulators classify loans that don't have a documented repayment source. Loans are downgraded in response to potential trouble, but upgraded only after demonstrated performance improvement. Bankers, in response, are making loans only when they are supported by current cash flow or collateral. This makes loans for expansion or to cover cash flow shortfalls hard to get, and borrowers are only willing to hire or expand to meet sales that they can see. I heard the same stories others heard about uncertainty about the economy, taxes, regulation, and health care costs, but I agree with President Evans that they could get over all these concerns if sales were just strong enough.

It is true the consumers are steadily deleveraging, but a fair amount of the deleveraging is involuntary rather than voluntary. Signs of voluntary deleveraging show up in higher payment rates on credit cards and a high volume of mortgage refinancing that involves a reduction in the term or the principal balance. One banker reported that, for the first time in his experience, cash-in refinances were more prevalent than cash-out refinances. Involuntary deleveraging can be found in charge-offs, foreclosures, repossessions, higher bankruptcies, and continued credit-line reductions.

The rate of decline in overall bank lending is slowing as C&I lending and nonrevolving consumer credit balances stabilize. While overall commercial real estate loans continue to contract, the 2.3 percent annualized decline in the nonfarm, nonresidential category for the second quarter in 2010 is actually the first noticeable decline in loans on existing properties. All of the decline so far has come in construction and land development, with residential construction falling at an annual rate of 60 percent in the second quarter, following declines at an annual rate of 40 percent in the first quarter and 37 percent for all of 2009. Similarly, commercial construction loans fell at 23 to 26 percent rates in 2010 after falling 17 percent in 2009, which leads me to my own area of uncertainty, namely, the forecast for residential construction.

Despite all efforts to mitigate foreclosure, there are still five million mortgages more than 90 days past due, significantly more than the four million single-family units currently listed for sale. There are an estimated 11 million underwater borrowers, and about a million more vacant houses than the 2000–2007 average. At the same time, mortgage servicers report that acceptance rates for modification short sales and even principal reductions have plummeted and attendance at modification events has fallen off sharply. The foreclosure process has become so protracted that it's hard to judge what any level of foreclosures actually means, but it seems reasonable to project that involuntary dispossession in bank sales of property are likely to climb through the fall and into most of 2011.

With construction lending falling sharply, increases in existing-home inventory on the horizon, and the price declines that would likely result from higher levels of distress sales, it seems perfectly plausible to me that residential investment pickup could be postponed well into 2012 or beyond. I've noticed that a number of the staff's write-downs to the forecast over the

past year have come from pushing out the recovery in housing starts. So if residential investment doesn't materialize in 2011, it looks to me as if that would wipe out much of the projected improvement in GDP. Housing may be a smaller part of the overall economy, but it's still a substantial part of the improvement in our forecast. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. With the dual attraction of doughnuts and an LSAP discussion beckoning [laughter], I'm going to try to truncate my remarks a bit. So I'll begin with a few summary points. First, nothing that has happened in the intermeeting period has changed my view that we can expect continued lackluster economic growth in the face of ongoing balance sheet repairs, business model adjustments, and shaky business and consumer confidence. I don't regard this as good news.

Second, nothing that has happened in the intermeeting period has changed my view that the only open question is how much the economy will underperform for the foreseeable future. Existing upside risks could push us to moderately underperforming status rather than to anything like robust economic growth.

Third, I had prepared some remarks on both structural unemployment and the potential effects of regulatory and tax uncertainty on hiring. With respect to the former, maybe I could just incorporate by reference everything that President Yellen and President Evans earlier said. I congratulate them for the careful and thorough analysis they brought to bear on a question on which people have a tendency, I think, sometimes to leap to conclusions based on selected data or anecdotes. With respect to the claim that regulatory and tax uncertainty are the major culprits inhibiting hiring, this seems to be based principally on complaints voiced by business executives themselves. The well-known social science skepticism of self-reporting of attitudes and

intentions is fully applicable here. The reason people give for an action or omission is often not borne out by third-party observation.

A little perspective can help, and that perspective is nicely provided by the National Federation of Independent Business survey to which Eric alluded earlier in the context of hard-to-fill jobs. As always, the latest monthly survey of small business economic trends by the NFIB includes the answers of its members to the question “What is the single most important problem your business faces.” And, perhaps more tellingly, the survey contains graphs of the responses over the quarter century of the monthly survey. What does it tell us? Not surprisingly, lots of businesses always complain about taxes, and they always complain about regulatory policy. Throughout this period, the percentage of smaller businesses saying that taxes are their biggest problem has always been between 15 and 30 percent. In the August survey, the number was 21 percent. Similarly, over the life of the survey the number of businesses reporting regulation as their biggest problem has almost always been between 10 and 25 percent. In the latest survey, it stood at 15. Interestingly, the high-water mark for complaints about both taxes and regulation was during the Clinton Administration when, as you recall, jobs were being created in unprecedented numbers and the unemployment rate dropped below 5 percent.

In contrast, until the last few years, sales had never been identified as the biggest problem by more than about 18 percent of the respondents. In the past few years, the number has been above 30 percent, where it remains today. I don't place enormous stock in any of these numbers in any absolute sense, but they do remind us that lots of businesspeople always have this view of regulation and of taxes. They don't, however, always complain about poor sales, which they're doing in great numbers today. The absence of actual and expected demand is surely not the only factor inhibiting investment and hiring, but such careful and measured empirical work as has

been possible thus far suggests strongly that it has been the most important factor, and, regrettably, there is no indication that it will fade any time soon. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, and thanks both for very good contributions and for very efficient contributions. Why don't we take about a 20 minute break? We'll continue from there.

[Coffee break]

CHAIRMAN BERNANKE. Okay. Why don't we recommence? Again, thank you for very useful insights. The go-round today was a little more abstract and academic, and I found it pretty hard to summarize. I've got all of these footnotes now. [Laughter] Let me try to summarize what I heard, and then I would like to weigh in a little bit, although a lot of what I wanted to say has been said in some context or another.

Economic growth has slowed moderately further, indicating some additional loss of momentum over the summer. At this pace of growth, progress in reducing the unemployment rate is likely to be quite slow. A range of factors, including economic and policy uncertainty, risk aversion, low levels of confidence, and the weak financial conditions of some households and firms, continue to be drags on economic growth. Recoveries after financial crises often tend to be quite slow. During this weak phase, the economy may be more susceptible to shocks, including financial shocks. However, despite all that, the economy is still expanding, with moderate increases in consumer spending and modest job creation. The recovery is expected to continue into 2011, accelerating thereafter. A double dip is a possibility, but most do not consider it likely. Inflation is expected to remain low, reflecting inflation expectations that are stable to down and continuing economic slack.

Retail sales were a little stronger than expected recently and are generally seen as mixed, although shoppers remain very price-sensitive. Retailers are increasing inventories for the Christmas season. Households are improving their balance sheets by saving, paying down debt, refinancing, and in some cases defaulting.

The labor market remains weak, having started from a deep hole. Employment in many sectors has fallen significantly. Firms have increased temporary hiring, but net permanent hires remain limited. Some companies prefer to hire abroad. Long-term unemployment, along with structural factors, such as skills mismatch and labor force participation, as well as extended UI, may account for some of the increase in unemployment, but how much is due to these factors and how much is due to final demand is difficult to assess. Firms are generally not finding it difficult to find workers with specialized skills. Wage gains remain very limited.

Housing has continued to be very weak, in part because of the end of the housing tax credit. Government programs have had only a limited impact on the rate of foreclosures. Foreclosures are adding to supply, putting downward pressure on prices and construction.

Financial conditions have been mixed, generally improving, but responding sensitively to economic news. Banks have been hurt somewhat by worse earnings, concerns about financial regulation, weak loan demand, and problems with the economy. However, credit problems have mostly peaked, except in CRE, and banks are looking for qualified borrowers. There's confidence that banks can meet new capital standards. In the nonfinancial sector, credit conditions are good for larger firms, and cash holdings remain plentiful. Uncertainty about the economy and policy remain important for investment and hiring, although there's always the question of whether firms' self-reported concerns can be taken at face value. Final demand is certainly an issue for many firms. Firms with Asian connections are doing well. As usual, some

sectors are stronger, including agriculture, business travel, and shipping. Small business confidence has been weak, and concerns about both final demand and access to credit for these firms continue.

Inflation remains low, with measures of underlying inflation having fallen since the start of the recession. Analysis of components suggests that disinflation may be abating. Pricing power is perceived as very limited by most firms, although price pressures on some commodities and imported goods may be rising. Inflation expectations seem reasonably stable, though TIPs breakevens have fallen over the year, and the far-forward term structure of breakevens is quite low. Deflation risks are still considered low but should not be ignored.

Monetary policy is quite accommodative, and policy must take into account the costs and benefits of further actions. Policy cannot address all the real-side issues that we see, in part because of damage to the transmission mechanism. On the other hand, the Committee is far from meeting its mandated objectives. It's missing both in the same direction, and risks may be asymmetric, as a liquidity or deflation trap is a possible risk. We look forward to further discussion about the appropriate framework for communicating and executing policy.

That was my attempt, but there were a lot of subtleties that I'm sure I missed. Any comments? President Lacker.

MR. LACKER. Did you say the transmission mechanism was damaged?

CHAIRMAN BERNANKE. I heard that around the table, yes.

MR. LACKER. Okay. I mean, I didn't hear those exact words. What are you trying to describe there?

CHAIRMAN BERNANKE. Someone commented that the transmission mechanism might not be as effective as it had been in the past.

MR. LACKER. Okay.

CHAIRMAN BERNANKE. Somebody acknowledge saying it?

MR. FISHER. Yes, I did.

CHAIRMAN BERNANKE. President Fisher. There you go. [Laughter] I can always count on President Fisher to make a statement.

MR. LACKER. I'll talk later.

MR. FISHER. Thank you for listening, President Lacker. [Laughter]

CHAIRMAN BERNANKE. All right, let me try to add a little bit. As I said, a lot of what I would say otherwise has already been very well expressed.

I think it's important to note that we've had significant markdowns in the outlook since April. Just using the Greenbook as a baseline, in April we expected about 3.5 to 3.7 percent GDP growth for 2010 and 4.4 percent for 2011. Today it's closer to 2 percent for 2010 and 3.3 percent for 2011. So this is very significant. I think even more significant is the implication of this markdown for the path of unemployment. In April, we said that the Greenbook predicted that the unemployment rate in the fourth quarter would be 9.3 percent, and in the fourth quarter of 2011 it would be 8.2 percent. Those numbers are now 9.7 and 9.1. In other words, we are approaching a pace of economic growth at which unemployment will no longer be improving. We're coming very close to that singularity, if you will.

I also want to point out that a lot of folks around the table said that they were not surprised, more or less, by the current weaker outlook. But I don't recall that there was much disagreement in April about the outlook at that time; therefore, surely, we've almost all been surprised by the weaker incoming data. In addition, as someone noted, the changes in the outlook for the pace of the recovery are somewhat reliant on the equilibrating properties of our

models, and a particular business plan that would rely on this recovery might not be thought to be immune to the potential risks.

To recap, the economy has slowed considerably, the outlook is weaker, and we are approaching the point where unemployment is likely to stay very high for a very long time.

We had quite an interesting discussion around the table about how much of this is unavoidable, how much is cyclical, how much is structural. I think these are important questions, and let me just give a bit of advance notice that the staff is going to present an analysis of these issues at the January meeting, so we're going to have a chance to get into this issue in some detail.

A number of people around the table talked about the Beveridge curve. I'm not going to be able to add too much to what was already said, but, just for your reference, I circulated some charts.³ They show Beveridge curves for every recession back to 1973–1975 based on quarterly data using help-wanted indexes, because that's the only measure of vacancies which is available all the way back. I would point out a couple of things. The first is that every recession has this big loop, as you can see from the pictures. For example, compare the earlier dynamics with what you see on the very last page, which shows the current recession. Given this, I don't think the fact that we've risen above the curve in the last couple of quarters is particularly informative. Rather, it looks to me as if we're just in the normal recovery dynamics in that respect, although, obviously we have a very long way to go, given how far the unemployment rate has increased in this episode.

The other interesting thing—and this is a point a number of people made—has to do with both the location and the slope of the Beveridge curve in the most recent episode. First, if you compare the initial vacancy rates—help-wanted indexes as a percentage of employment—they're

³ The material used by Chairman Bernanke is appended to this transcript (appendix 3).

typically around 100, 110; in this recession, they started out at 70. There seem to be some things going on here—some change, perhaps, in the way that help-wanted indexes are constructed or in the way that vacancy practices are conducted—which are probably not fundamental to the labor market. The other thing that is very striking about the last picture is how flat the Beveridge curve is. That could be interpreted as consistent with the structural unemployment view, in that vacancies haven't fallen nearly as much as you would expect, given how much unemployment has increased. I think there are also other interpretations, including, first, how the help-wanted indexes and these vacancies are measured. But there's a kind of zero-bound issue, which I think might be worth taking into account. Presumably there's always a certain amount of frictional vacancies, a certain amount of frictional turnover. As a result, it may simply be that the curve is asymptoting to the horizontal axis, and that's one reason that it's flatter. I don't mean to conclude anything from this; I just give you this information for your reference, and, as I said, we'll have a more detailed discussion in January. I would just say that, at this point, the question is quite open on how much slack there still is. One piece of evidence in favor of there being significant slack, of course, is that wages and compensation have been very soft.

Again, my first observation, essentially, is that the outlook really has deteriorated fairly significantly, and I am concerned about the fact that we are potentially approaching, as I said, the level where unemployment may not come down significantly or, as Dave Stockton mentioned, we might be approaching a stall speed that might cause the economy to fail to make further progress.

Now, we had a good bit of discussion around the table about how much monetary policy can do about the real side of the economy. I think I am more optimistic than some others are. I do think that there is still some scope to create more aggregate demand and to cause the economy

to strengthen. But there is, of course, the other side of the mandate, which is nominal quantities, and, whatever one might think about the ability of monetary policy to affect unemployment and economic growth, I think almost all economists would agree that we can affect nominal quantities. The simple fact is that almost all nominal measures in our economy are at very low levels and are expected to remain at low levels. I talked last time about nominal GDP, which was completely flat from the fourth quarter of 2007 to the fourth quarter of 2009 and is growing now at a rate of about less than 4 percent, hardly consistent with a strong recovery.

We've talked about inflation measures. There's a wide variety of inflation measures, including some that the Cleveland Fed puts out, and some exclude OER, and some are core measures, headline measures, chain-weighted measures, market-based measures, etc. Based on all of these, I think there's a very strong presumption that inflation is quite low. I would have to argue that, certainly relative to the business cycle peak, there's been a distinct disinflation over the last couple of years, which would be consistent with the paper that Stock and Watson gave in Jackson Hole, which suggested that disinflation is very common in deep recessions. Associated with that, of course, is the decline in breakevens, which is about 50 basis points since the beginning of the year on almost all horizons. Also, there are wages, M2 growth—all of these nominal variables are very weak.

President Bullard preemptively and very astutely pointed out that optimal policy doesn't mean that inflation and employment are on opposite sides of the mandate, and you can see that by looking at any Tealbook simulation of optimal policy, which will show that inflation and unemployment typically approach their targets from the same direction. So that's certainly true.

But I'd just make two comments about that. One is that not only is current inflation low, but also the Tealbook is projecting inflation to be very low for a number of years. As someone

pointed out, if we were 1 percentage point above our inflation target for two to three years into the future, we think we would be a little bit more concerned. So I think it's an important issue that the projection of inflation remains low. Another point is that, if you look at the optimal policy analyses in the Tealbook, of course, they show optimal interest rates of minus 4 percent; in other words, there's not enough stimulus, based on conventional analysis of the economy.

So, bottom line, the economy has slowed. I think we can do something about it. Whether we can or not, however, I think we do have a responsibility to make sure that nominal quantities are, over time, approaching the appropriate levels, and, at this point, our forecasts do not say that. I note also that, as others, including President Bullard, have mentioned, there is a bit of an asymmetry, in that, if inflation gets a little higher, we know how to address that, but if inflation gets too low, there is a certain black hole, a kind of trap, that we might get into, and we certainly don't want to do that. My view, then, is that we need to consider seriously taking measures that will move inflation up from 1 percent or a little lower to something closer to what I think the majority of the Committee would view as a more appropriate longer-term inflation rate, something closer to 2 percent or a little bit below that.

Based on what I've said so far, you could make an argument for taking action today, but there are a number of reasons not to do that. One is that there still is genuine uncertainty about the most recent economic data: Do they, in fact, signal a more persistent decline in the outlook, or are the last few weeks more indicative, and will we see strengthening over the next couple of months? We may have legitimate differences about whether we think at this point the data are sufficiently clear about the outlook.

Beyond that, however, I think there are two other reasons not to take action today. One is that our communication has not prepared the public or the markets for significant action today,

for better or worse. As a result, if we were to take action today, it might be bad for confidence rather than good for confidence; we saw some of that in the effects of our statement from the last meeting. The other reason I think we shouldn't take any explicit action today is that—and I think everyone agrees, even if we don't take action, we should be preparing for the possibility of action—if we're going to be considering going back into additional monetary stimulus, we really need to get more agreement of some kind on what our framework is going to be. President Bullard, once again, has made important arguments about a more continuous reaction function. I think that's an important issue to look at. I think it's important to ask whether or not we might want to give an explicit number for our inflation objective; those two things could be combined, or they could be separate. President Evans has submitted an interesting paper on price level targeting. All of these things have, I think, important advantages.

Given this, I have a recommendation—obviously, I am anticipating a bit, and I'm also hoping to get reactions from you in the next round. My recommendation would be that in this next round we talk a bit about frameworks and think about whether or not we would like to set a process in place, so that, by the next meeting, if we decided that adding further stimulus was necessary, we would be able to do so in the context of a framework that we feel comfortable staying with for a period of time.

Again, I think a new framework is potentially very useful. First, there's a lot of historical experience which suggests that something that looks like a regime break can be very positive for expectations. Examples would be the 1934 Roosevelt change in monetary policy, the 1979 Volcker change in monetary policy. If we were to change our approach, it could very well signal a change in regime that would have a beneficial effect on expectations and confidence. Second, we do need to give more clarity about our reaction function if we're going to come back into this

type of activity, and, certainly, having a more explicit framework that could be communicated not only through the statement but also through other mechanisms could be very helpful there.

The alternative statements we circulated, A1 and A2, were just for illustration and discussion. They showed how one could introduce a numerical inflation target and how one could introduce a continuous adjustment process that responds to changes in economic conditions. Again, they are meant for discussion. Obviously, if we decide we want to proceed with further development of an approach, we have six or seven weeks until the next meeting. Therefore, we have time to get staff input, and we can have an interim discussion, if necessary. But I do think we need to make progress on a framework, irrespective of your views on further stimulus.

To tip my hand, as I already have, I think that we are getting very close to the point, barring relatively good data coming in in the next six, seven weeks, where we should make good our obligation to ensure that nominal quantities, like inflation and nominal GDP, are at levels consistent with a healthy recovery.

Let me stop there and turn to Bill English to introduce the policy round, and then, of course, folks can reply to those comments as they wish.

MR. ENGLISH.⁴ Thank you, Mr. Chairman. I will be referring to the package labeled “Material for FOMC Briefing on Monetary Policy Alternatives” that was distributed during the break. The package includes the four draft policy statements and the associated draft directives. You will note that we made some changes to alternative B relative to the version that was distributed in the Tealbook; those changes are shown in blue.

The conventional approach to these policy briefings has for some time been to take the alternatives in order—A, B, C. But, given that the alternatives we provided in the Tealbook were fairly complicated, starting with alternative A1 seemed like jumping in at the deep end, both for me and for all of you, so I thought I’d start instead with alternative B, before moving to the A alternatives and then to alternative C.

⁴ The materials used by Mr. English are appended to this transcript (appendix 4).

The Committee might choose alternative B, page 4, if it thinks that additional policy accommodation is not called for at this meeting but wants to emphasize that it will act as needed to achieve its objectives. Such a stance might be warranted if the Committee perceives both resource utilization and inflation to be falling short of their mandate-consistent levels by unsatisfactory margins, but still sees economic growth as likely to gain speed relatively soon and inflation as likely to stabilize near current levels before gradually moving higher. Indeed, market participants appear to have taken some reassurance from the economic news in the last few weeks, and the Committee may have done so as well. Members may also see the outlook as particularly uncertain and so choose to wait for additional information before deciding whether further policy action is needed. That said, the Committee may want to indicate that its patience with regard to the pace of recovery and the level of inflation is limited, and if further progress does not become more evident reasonably soon, the Committee will take action.

The statement under alternative B would note the deceleration in equipment and software spending, as well as the reduced rate of contraction in bank lending. The inflation paragraph would emphasize that current levels of underlying inflation are below those the Committee judges to be most consistent, over the longer run, with its dual mandate, but would also note the expectation that inflation will, after some time, return to levels the Committee considers consistent with its mandate. With no change in policy at this meeting, the third paragraph would repeat the “extended period” language, which appears to have clearly communicated the conditional nature of the Committee’s policy outlook, and would note the retention of the reinvestment policy adopted in August. The final paragraph would continue to indicate that the Committee will monitor the economic outlook and financial developments, but would go on to say that it “is prepared to provide additional accommodation as needed to support the economic recovery and to return inflation, over time, to levels consistent with its mandate,” thereby conveying the sense that the Committee could act if the recovery remains weak and inflation stays low.

The Desk’s survey of primary dealers suggests that market participants do not expect significant changes in the statement or additional asset purchases at this meeting, although they put about 40 percent probability on an announcement of additional asset purchases by year-end. A statement along the lines of alternative B would likely cause market participants to price in higher odds of additional asset purchases, perhaps as soon as the November meeting. As a consequence, longer-term interest rates would likely fall some, stock prices would move up, and the foreign exchange value of the dollar would probably decline.

However, if members were inclined to take action now in response to the weakness of the recovery and the lower-than-desired level of underlying inflation, the Committee could choose to provide additional policy accommodation at this meeting, as in alternative A2, page 3. Such a decision could reflect three judgments: first, that the economic situation is not likely to improve sufficiently without further policy action; second, that additional purchases of longer-term Treasury securities will help

support the recovery; and third, that the possible costs of additional purchases do not outweigh the benefits.

Regarding the first judgment, the Committee, like the staff, may see some strengthening in the pace of the recovery next year, but still think that economic growth will not be sufficient to work down the current very high margin of resource slack particularly soon. And the Committee might be even more downbeat about the outlook. As Dave noted, the staff forecast has been marked down considerably since the spring, with the projected start of a sustained decline in the unemployment rate pushed back a few quarters, to the middle of 2011. In addition, some members may be worried that the headwinds that have slowed the recovery will exert greater restraint over the next several quarters than is assumed in the staff forecast. Moreover, some members might read the decline in TIPS-based inflation compensation since spring as a signal that longer-term inflation expectations are at risk of coming unmoored in a downward direction and see further disinflation as a potentially significant impediment to the economic recovery.

With regard to the judgment on the benefits of additional securities purchases, in the Tealbook we estimated that the purchase of \$500 billion of longer-term Treasury securities over the next six months would trim long-term interest rates by about 15 to 20 basis points, though some of that effect already appears to be priced into markets. The result would be roughly an additional $\frac{1}{4}$ percentage point on the growth rate of real GDP in 2011 and 2012 and an unemployment rate that would be a couple of tenths of a percentage point lower at the end of 2012. Inflation would be about a tenth higher in 2012. I should note that our estimates of the effects of purchases have been marked down somewhat since the August meeting to be consistent with the middle of the range of estimated effects of large-scale asset purchases reported in the paper by Gagnon, Raskin, Remache, and Sack. Of course, these estimates continue to be subject to very considerable uncertainty.

The third judgment relates to the possible costs of additional securities purchases. A key concern that the Committee has expressed in this regard is that increases in the size of the balance sheet could undermine the public's confidence in the FOMC's ability to exit smoothly from the current very accommodative policy stance when it is appropriate to do so. If that confidence were significantly undermined, inflation expectations could move higher, and actual inflation could follow suit. To address this concern, the Federal Reserve has developed the term deposit facility and the ability to conduct large-scale triparty reverse repurchase agreements with an expanded set of counterparties in order to allow policy accommodation to be withdrawn even with a very large balance sheet. I should also note that longer-term inflation expectations have not moved higher, on balance, since the announcement of the LSAPs in late 2008 and early 2009, although a number of factors may have contributed to that development. Finally, some of you might find a modest increase in inflation expectations and inflation in current circumstances to be a benefit, not a cost, of the purchases.

The statement under alternative A2 would indicate that the incoming data have confirmed that the pace of the recovery has slowed. Spending on equipment and software would simply be described as having “slowed,” and no mention would be made of the reduced rate of decline in bank lending. The inflation paragraph would note that underlying inflation has been trending lower, indicate that it is below levels most consistent with the dual mandate, and go on to say that, “In the current environment, disinflation is an impediment to economic recovery.” Given concerns about a possible decline in expected inflation, the statement would not indicate a Committee anticipation that inflation will move back up to acceptable levels over time. The statement would indicate that the federal funds rate target was unchanged and retain the “extended period” language. It would go on to say that “To help foster a stronger pace of economic recovery and to move underlying inflation closer, over time, to rates consistent with its mandate, the Committee will increase its total holdings of securities to approximately \$2.5 trillion by purchasing an additional \$500 billion of longer-term Treasury securities over the next six months.” The statement would also note that the reinvestment policy adopted in August would be retained. It could end by stating that “The Committee will continue to monitor the economic outlook and financial developments and will act as needed to support a stronger economic recovery and foster price stability.” The reference to “stronger economic recovery” rather than just “economic recovery,” as in the August statement, would suggest a somewhat greater willingness on the part of the Committee to take policy action.

If the Committee wanted to indicate an intention to adjust the size of the SOMA portfolio more regularly and in smaller increments going forward, it could instead end the statement with the indication that “the Committee will determine, each time it meets, whether an adjustment – either upward or downward – to its holdings of securities is needed to foster maximum employment and price stability.” As discussed in a box in the Tealbook, such an approach has potential benefits and costs. On the benefit side, smaller and more frequent adjustments to the size of the SOMA portfolio should allow a closer match between the actual stance of policy and the stance called for by the economic outlook. Such an approach might also allow investors to better understand the Committee’s reaction function and so price into markets the effects of anticipated future policy decisions, which could help to stabilize the economy. And a gradual approach to purchases might allow the Committee to shift to gradual sales without generating an outsized market reaction. However, some of you may be concerned that, while relatively rare announcements of large purchases could give a substantial boost to consumer and business confidence, helping to support the economy, such announcement effects might be less likely to accompany smaller and more regular purchases. In addition, this approach could pose significant communications challenges: Without more information, perhaps from speeches or the minutes, the Committee’s reaction function would likely remain unclear to investors for some time, limiting the benefits from improved anticipation of future policy actions.

A decision to purchase additional securities at this meeting would come as a considerable surprise to market participants; interest rates would likely fall, stock

prices rise, and the foreign exchange value of the dollar decline. However, if the unexpected decision to provide additional policy accommodation at this meeting led investors to conclude that the Committee was more concerned about the economic outlook than had been thought, the effect on stock prices could be muted.

If the Committee wanted to take an even clearer stand against low and declining underlying inflation, it could do so by providing explicit information regarding its intended level of inflation, as in alternative A1, page 2. This alternative starts out like alternative A2, but in the inflation paragraph it states that “Underlying inflation is now running below the level of 2 percent or a bit less, as measured by the price index for personal consumption expenditures, that the Committee judges most consistent, over the longer run, with its mandate to promote maximum employment and price stability.” This range is consistent with the responses to the June Summary of Economic Projections, which showed a central tendency of long-run projections for PCE inflation of 1.7 to 2.0 percent. As in alternative A2, the inflation paragraph would end by indicating that “In the current environment, disinflation is an impediment to economic recovery.” In this alternative, the policy paragraphs are combined, with the discussion of additional purchases coming immediately after the inflation paragraph, thereby giving greater emphasis to the role of asset purchases in supporting the desired level of inflation. Alternative A1 ends with the simpler of the two final paragraphs offered for alternative A2.

As discussed in the Tealbook, providing greater clarity about the Committee’s desired level of inflation could, if credible, help anchor inflation expectations more firmly. In the current circumstances, such an effect would help to guard against further disinflation. However, a more explicit focus on the inflation outlook has some potential disadvantages. The Committee would presumably have to explain deviations of inflation from the announced range, and at times its policy decisions could be constrained if investors’ views of the inflation outlook did not match its own. Moreover, an increased focus on inflation in Committee communications could lead some to question the Committee’s commitment to the “maximum employment” leg of its dual mandate. The Committee could counteract such concerns by providing more specificity regarding the level of the unemployment rate that it regards as sustainable in the longer run, but it might be hesitant to do so, because the sustainable unemployment rate depends on factors over which the Committee has no control. In any event, the Committee would need to be clear with the public, as well as with the Congress and the Administration, that being more explicit about its intentions for inflation did not mean that it would be attaching greater weight to its price stability objective relative to its goal for maximum employment.

The market reaction to alternative A1 would likely be similar to that for alternative A2. However, the explicit indication of the Committee’s intended level of inflation could give a small boost to expected inflation while reducing uncertainty about inflation over the long run, with potentially offsetting effects on longer-term nominal interest rates.

Finally, if the Committee feels that the economic recovery is continuing and will pick up pace over time, and it sees the current trajectory for the economy as the best that can be expected in current circumstances, then it might be inclined to leave policy unchanged at this meeting and signal that it will likely be appropriate to begin removing policy accommodation before long, as in alternative C, page 5. Members may believe that much of the current unemployment reflects unavoidable lags in the reallocation of labor across sectors and regions and so cannot be effectively addressed by additional monetary stimulus. They may also believe that, with the Committee's intentions with regard to inflation fairly well understood by market participants, providing additional information in the statement would not be particularly helpful in current circumstances.

Some members may also be concerned that keeping policy rates at very low levels for a long time and providing additional stimulus through large-scale asset purchases could lead some investors to take on additional risk to obtain higher yields and that the investors may not understand those risks as well as they should. The result could be mounting imbalances in financial markets that could lead to future financial crises.

The statement for alternative C would revise the forward guidance for the federal funds rate to suggest an earlier-than-anticipated increase in short-term interest rates. In particular, the statement would indicate that the Committee now anticipates that economic conditions would warrant a "low," rather than "exceptionally low," target range for the federal funds rate for "some time," rather than for "an extended period." In the first line of the paragraph, the statement would also change "will maintain" to "decided to maintain" to indicate that the Committee's decision to retain the current low target funds rate range applied only to this meeting. In addition, under alternative C the Committee would continue its policy of reinvesting principal payments from securities held in the SOMA only "for the time being," which would likely be read by investors as suggesting that this policy could be reversed soon.

An announcement along the lines of alternative C would come as a great surprise to market participants. Interest rates would likely rise significantly across the yield curve, although lower long-term inflation expectations might damp the rise in longer-term nominal rates. Equity prices would likely decline substantially, and the dollar probably would appreciate.

Draft directives for the four alternatives are presented on pages 7 through 10 of your handout. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you, Bill. Are there any questions? [No response.]

Okay, seeing none, I'll turn to President Evans.

MR. EVANS. Thank you, Mr. Chairman. I wholeheartedly support your suggestion that we make progress on developing a framework to deliver more accommodative monetary policy

if the Committee decides that that's appropriate. From my comments in August and earlier today, as well as my proposal for a state-contingent price level objective, it should be clear that I believe the current situation should be analyzed as an economy that's stuck in a bona fide liquidity trap. With the federal funds rate approximately zero and the level of excess reserves already at \$1 trillion, only very special monetary policies are likely to be effective, in my judgment. Consequently, although there is much for me to like in the language of alternatives A1 and A2, I worry that another \$500 billion of LSAPs, by themselves, won't be sufficient, but I'm happy to study that more and understand it better.

Let me explain briefly my viewpoints on this. As I look at the optimal policy response generated in the FRB/US charts on page 3 of Tealbook Part B, it looks as if the unemployment rate could fall to 6¼ percent by the end of 2012, if the real federal funds rate were headed for about minus 4 or minus 5 percent at the end of 2011. We can't have negative nominal rates, but an increase in short-term inflation expectations to nearly 3 or 4 percent would get us close to such a negative real rate. This is where I can hear coughing and gnashing of teeth and calls for the Spanish Inquisition. Nevertheless, this is the logic of the liquidity trap analysis. Saving is too high, investment of all types, including employment, is too low, and nominal interest rates cannot move appreciably lower to correct the excess supply of savings. Additional purchases of Treasuries alone may merely swell excess reserves. At best, portfolio-balance effects from further purchases will lower long rates only modestly, not enough to give a significant boost to economic activity, in my opinion. Studying the liquidity trap literature has convinced me that a policy to achieve a state-contingent price level objective is probably the most effective means available to us.

I circulated the skeletal framework of a proposal. For the sake of brevity, I will simply point out three attributes of a price level objective as I see it. First, in announcing a target path for which inflation has already underrun the path, markets should begin to price in an expectation of higher inflation, and thus real rates will decline. The larger the price gap is, the larger will be the decline in real rates. If the market response is delayed, the inflation deficit will increase, and the eventual decline in real rates will be even larger.

Second, a firm, resolute, and credible commitment to the state-contingent price level objective has big benefits. If markets believe in our commitment to respond to an increasing inflation deficit, they will understand the risks they face if they fail to price these actions sooner rather than later. If markets understand our explicit commitment to exit this policy, future inflation expectations will converge to our ultimate price stability objective, which I put at 2 percent.

Third, in the context of a price level objective, additional purchases of Treasury securities can play an important role in signaling the Committee's commitment to achieving the price level objective. So I think we should do both. Also, by clearly laying out the rationale for exiting our state-contingent objective, we present the case for why the public should not fear that we may be monetizing the debt. I personally believe that risk is overblown, but this policy is a strong mitigant to that risk. That's my summary, in brief, of the price level objective proposal. There's much more in the document that I circulated.

I recognize that a proper foundation for such a policy action today has not been laid, so let me point out some language in the current alternatives that seems challenging to me. In alternative B, we continue to include the phrase, "The Committee anticipates a gradual return to higher levels of resource utilization in the context of price stability, although the pace of

economic recovery is likely to be modest in the near term.” Does “context of price stability” mean that we will be within a close neighborhood of $1\frac{3}{4}$ to 2 percent within a few quarters, a few years, or does it mean that we won’t overshoot 2 percent? I think this sentence has become increasingly inoperative. I don’t really know how to interpret or speak about it in public. I think taking out “in the context of price stability” would help, although I recognize that that probably leaves other problems behind.

I also think it’s clearly time to point out that inflation is underrunning our notion of price stability. To the extent that the Committee is not at a consensus on this price stability, is it because our inflation projections differ, or is it our definitions of price stability that differ? I have said 2 percent. President Lacker earlier said $1\frac{1}{2}$ percent. That’s consistent with the way we’ve talked about this in the past. In the past, we’ve had the luxury of finessing this issue because it didn’t matter too much, but I think today it matters. So I worry about that.

The Tealbook discussion of alternative B also says that market participants have indicated a strong desire for greater clarity about the threshold for action. I agree that that’s important. I think we need to be more explicit, and the language here—“additional accommodation”—seems kind of vague, so I’m not quite sure what the reaction will be.

Finally, I have a point on A1. I’m talking about this because you mentioned this as a potential mockup of what we could be looking at. I’m troubled by the analysis of the language in A1 focusing on explicitly mentioning that inflation is running below our mandate of 2 percent or a bit less. I simply don’t believe this could be a game-changer that would reduce real interest rates enough. I think it would be poorly received if our announcement suggested much greater emphasis on inflation alone and, thus, diminished our dual mandate focus, which includes

employment. I know Bill talked about that a little bit. Communicating that confidently will be very important and difficult.

In sum, I think we need an aggressive monetary policy response that has a real hope of reducing real interest rates enough to overcome the excess saving and risk aversion that characterizes liquidity-trapped economies. I strongly agree with your suggestion that we study this more. Thank you very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Yellen.

MS. YELLEN. Thank you, Mr. Chairman. The economic case for one of the A alternatives is compelling. We are far below maximum sustainable employment, and inflation is too low. Not only are we failing on both of our legislated mandates now, but, given current projections, we will continue to fail on both goals for far too long. I don't believe that we are following an optimal policy, and I think this dire situation requires us to act. But we do face a difficult challenge in communicating what we're doing and why, and we do need to prepare the ground. So at this meeting I support alternative B. It acknowledges the reality that the outlook for employment and inflation is unacceptable, and that the situation has on balance gotten worse. It sets the stage for future action unless the situation improves markedly.

Why should we take action now if we did not earlier in the year? As you laid out clearly in your Jackson Hole speech, Mr. Chairman, further action has both benefits and costs. Since the spring, the benefits have gone up as the outlook has deteriorated substantially. But, even more importantly, the costs of acting have come down. When we were expanding our purchases of longer-term assets last year and early this year, there were some fears that the unprecedented expansion of our balance sheet might have inflationary consequences or that inflation expectations might come unhinged. Markets have now digested the notion that the Federal

Reserve can expand its balance sheet without dire inflationary consequences. Indeed, by most measures, inflation expectations are lower today than they were in the spring: Surveys of inflation expectations are lower, and inflation compensation from TIPS is lower; even the number of searches on Google for the term “inflation” has been trending down for months. [Laughter] “Deflation” is also headed up. We’ve also done a lot of important work in preparing and communicating our eventual exit strategy. So the case for A is clear: We’re failing in our mandates, and we have the tools to do better.

It is not that monetary policy is the main problem facing businesses, as many of you have pointed out. But I do think policy can contribute to the solution, even if it isn’t a panacea for what ails businesses these days. And I think that, in addition to lowering the term premium and longer-term rates, it is important that there are channels working through, perhaps, a lower dollar and higher equity prices.

In terms of the various A alternatives, there are a number of choices to make. In principle, I understand the advantages of the second option for A2, paragraph 5, where we use asset purchases as an additional lever that we can move up or down. And I would support this approach if I thought that a \$500 billion initial purchase would put us at neutral, that is, a position where the odds were similar that our next move would be to ease or to tighten. However, I think that we will still be behind the curve with a \$500 billion injection, so that purchases beyond that are more likely than sales. That makes me uncomfortable with the alternative language in paragraph 5 of A2. We might not accomplish much on longer-term rates, because our message would be that we might buy \$500 billion, but we will reassess at the next meeting and might end up buying less. Such a message could add uncertainty to financial markets and gain us little on the term premium. I’m attracted by the reaction function approach,

but it makes more sense to me to wait to introduce it until we have a truly symmetric bias on our desired LSAP stock.

On paragraph 2 of the A options, I prefer A1, where we're explicit about our numerical objective. Because it is more explicit, it should be more effective at anchoring inflation expectations. The value of anchoring expectations to keep them from going too low outweighs the usual concerns that we're putting too much quantitative emphasis on just the inflation half of our dual mandate.

Regarding President Evans' proposal for a state-contingent price level target, I support its goal of increasing inflation and inflation expectations to a level more consistent with our mandate. I also support its willingness to entertain aggressive policies to escape the constraints of the zero bound. However, it seems to me to be a challenging policy to communicate. In addition, I am concerned that the policy might not work as the theory says it should if the policy is not communicated extremely clearly and if agents in the economy form expectations in a way that is not perfectly rational or forward-looking. One concern I have in particular is that an announced increase in our medium-term inflation objective to, say, 3 percent would raise nominal mortgage rates, which do matter for liquidity-constrained homebuyers, and, thereby, would undermine any rejuvenation in the moribund housing market. However, I am certainly open to further analysis and study of this option.

On balance, then, my preference would be for alternative A1, where we commit to pursuing the dual mandate aggressively, where we state a numerical inflation objective, and where we pursue policies that signal the strength of our resolve. And I think they can achieve some of the same benefits as a price level target with fewer potential costs.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Inflation is low and reasonably stable at this level. There is a modest recovery in place—it's slower than we'd like it to be, but the economy is still expanding. I think it's worth noting that inflation is now at a level that characterized most of the 14-year period between the Treasury–Fed Accord in 1951 and 1965. That level is low by the standards we have set since then, but I think that provides good evidence that an inflation rate between 1 and 1½ percent doesn't have to imply a high probability of an impending deflationary spiral.

I understand the geekiness provided to us by Presidents Bullard and Kocherlakota on liquidity traps. I understand the logic of that quite fully—I just don't think it's a present danger. If the prospect of sustained disinflation from where we are now or deflation were to emerge, I would strongly support expanding the monetary base, because, as the Chairman rightly emphasized, no matter where one stands on the efficacy or potency of monetary policy in the present environment for real outcomes, we all agree that we can engineer any arbitrary inflation or deflation we want with the tools at our disposal and on the balance sheet. But I don't think we're anywhere close to seeing sustained deflation or disinflation break out.

Now, real growth is disappointingly low. Unemployment remains stubbornly high. That's true. I've tried to make the case that those outcomes are likely due to an array of real factors outside our control and beyond our ability to offset. So I think if we get something close to the Tealbook forecast for growth for the remainder of the year, we should count our blessings and stick with our current policy stance.

I don't favor moving now, and I don't think I'm going to favor expanding our balance sheet in November unless, as I said, something very unexpected happens on the deflation front. And that seems unlikely to me. I would favor alternative B, but for the language in paragraphs 2

and 4 that strongly signal our openness to moving in November. I think those are going to act like ringing a bell for markets, and they are going to take this as pretty much a signal that action is coming in November.

Now, Mr. English talked about boosting consumer and business confidence. When we took action in August, I think we saw that it had the opposite effect and that it was one of those occasions on which our action to provide more stimulus was read as a signal that we're more worried about the economy, and they should be more worried about the economy than they had been. You mentioned, Mr. Chairman, that you didn't want to move today because you wanted to avoid a repeat of that by preparing markets for the move. I don't quite see the logic behind the notion that preparing markets will make our move any less a negative signal about our views about the strength of the recovery going forward. So I just don't see this as likely to boost confidence or unleash aggregate demand. None of my contacts are mentioning a lack of confidence that our balance sheet is large enough right now.

More broadly, the language in alternative B heightens the prominence of our mandate in the statement. And I think we ought to be very careful about doing that. First of all, we haven't talked about what inflation rate we view as consistent with our mandate or price stability in three years. And the way the language in alternative B is worded now, it doesn't say "Committee members judge." It says, "The Committee judges." It clearly marks this as a collective judgment that we stopped short of doing three years ago. Now, we do report in the Summary of Economic Projections our individual forecast for longer-run inflation and what that's consistent with. But, as I said during our deliberations back then, if the Committee votes on an objective, I'll sign up for that, and I'll participate in this meeting as if that were my objective as well. But

we haven't gotten there yet, so I think this conveys a bit more about our deliberations than we have actually engaged in.

My deeper objection—and here I will add my own geekiness to the conversation—is that we really don't care about unemployment, and we really don't care about inflation. These are shortcuts. These are reduced forms. What we care about is the economic welfare of the American public. That's what we care about. In economic models, one can write down policy functions that treat the policymakers as if they were maximizing a two-argument objective function, and those seem to fit really well. But I think it's worth reflecting on two things. First, we were actually given three mandates, the third being moderate long-term interest rates—I think that's the way it reads. And we've apparently used our own discretion to jettison the third mandate. No one comes clamoring and complaining about it, for sure, but certainly that reflected a substantive economic judgment that the best contribution we can make to low and moderate interest rates is to keep inflation low.

I think a similar case can be made about unemployment as well, namely, that our tools do not have a symmetric relationship to unemployment and inflation. I think there is a danger in elevating the mandate this way, and especially in taking action at this time, both as a general matter and in this particular case. To me, it ties us too closely to having responsibility for economic growth. This reaches beyond the extent to which we should have responsibility for, as you put it Mr. Chairman, nominal measures. I think we need to give that very careful thought and avoid the risk of taking responsibility for the rate of GDP growth and the pace at which the unemployment rate comes down.

I'm going to insert a little more geekiness here. Take the Taylor rule, for example. This and other models frame policy as if it were responding to deviations of inflation and deviations

of unemployment from targets. In New Keynesian Phillips curves models hit by real shocks, the interest rate one needs to keep inflation stable varies in a way that's correlated with the unemployment rate. So the apparent responsiveness to deviations in the gap emerges just because the noninflationary interest rate itself varies with real conditions. I think there's a real substantive issue here about how we treat the mandates in our communications. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. I'll add a small point, which is that we already have in B1 the statement, "The Committee anticipates a gradual return." So there already is some language personalizing the Committee.

MR. LACKER. I understand that.

CHAIRMAN BERNANKE. I understand your point as well. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I support alternative B, though I expect that something like alternative A will be necessary unless we get substantially more positive economic news over the next two months. It is quite likely that we will make little or no progress on the extremely high unemployment rate or the very low inflation rate this year. If so, an option like that in the A alternatives does seem appropriate.

Because I expect that more monetary stimulus may be necessary in the future, it may be worth considering options beyond the quantitative targets in the current A alternatives. One possibility would be to explore what kind of asset purchases would have the largest economic effects. For example, if MBS purchases would have greater economic effects than Treasury purchases of the same magnitude, in the short run that concern would dominate my desire for achieving a Treasury-only portfolio in the long run. It might also be worth considering whether targeting a longer-term interest rate might be more effective than targeting a quantity. Had we

announced we were targeting mortgage rates when we began the LSAP, it is not clear that we would have needed to purchase the same quantity that we eventually purchased. That we could credibly enforce a target is unlikely to be doubted, because we have already been willing to purchase a very sizable proportion of all newly issued mortgages. Obviously, we could, alternatively, choose to target a longer- or a medium-term Treasury rate. Exploring a full set of options at the next meeting would help us to choose the policy option that generates the largest economic impact from further expansion of our balance sheet.

I would just say that, given the wide range of comments we have already heard and are likely to hear over the rest of the go-round, it does seem that we might want to explore using the full two days that we have and not just have the first day be quite so abbreviated. I agree with you—I think it would be useful to have somewhat of a regime change, but we need to get a consensus on actions, we need to get a consensus on intermediate goals, and we need to get a consensus on communication strategies. And that does seem difficult to do unless we have enough time to actually do it. So we might just think about having a more extended two-day meeting.

CHAIRMAN BERNANKE. Thank you. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. My policy preference today is to introduce as few changes as possible in our policy statement. I think the statement needs to continue to convey the underlying theme of watchful waiting. At the moment, I am not in favor of either starting a large-scale LSAP program of Treasury securities or of signaling with the statement that the Committee is preparing to do so in the imminent future. In fact, I would prefer us to back off from that.

Like President Lacker, I am of the view that if the state of the economy, and particularly deflation, becomes a serious problem, I will be in favor of acting both aggressively and appropriately, with all the tools and commitment that we have at our disposal to combat that. But I don't think we're there yet.

Like President Lacker, I kind of like the statement in paragraph B1, with paragraph C2 and C3 from alternative C. I do not wish to convey the view that a new LSAP program is any more likely than markets already believe it's going to be. I think alternative B is likely to create that perception.

There are several reasons for my views. First, as I indicated in the first go-round, I do not believe that monetary policy at this juncture is likely to have much effect on the path of the unemployment rate going forward. In fact, even if we were not at the zero lower bound, such ineffectiveness may be a legitimate concern. Moreover, using monetary policy just because fiscal policy is frozen is not an appropriate way to conduct policy, in my view, particularly if monetary policy is the wrong medicine for the disease. Following on President Fisher's sometimes useful medical analogies, a doctor that prescribes the wrong medicine can actually make a patient worse if he's got the wrong diagnosis. We have already stepped up to a pace where we have applied extraordinarily large doses of accommodation to attack this disease. We must be careful not to overprescribe.

But we are not in a usual regime. Normally, monetary policy acts through marginal changes in short-term interest rates intended to increase liquidity and improve the interbank lending market. We have long recognized that monetary policy's ability to control longer-term interest rates is fairly limited. In fact, I'm not persuaded that there is an easy correspondence between the short-term interest rate rule and its transmission process on the economy, and the

transmission mechanism at the zero lower bound of some measure of quantitative easing operation that has tended to lower long-term interest rates. In fact, I think we know very little about that transmission mechanism.

I think it has been indicated that quantitative easing is operating in a different policy space. Thus, I don't find it very useful to try to compare it with movements in the short-term funds rate, as the staff memo tries to do. My view is that, in a world where the zero bound is binding, quantitative easing is primarily intended, as people have indicated, to raise inflation expectations—in other words, to operate on nominal variables, as the Chairman indicated. In this environment, if we are worried about deflation or significantly falling inflation expectations, that's what we would like to do. If expectations were falling, raising inflation expectations will prevent real rates from rising, or maybe enhance their falling, as a side benefit. Interestingly enough, if we are successful in raising inflation expectations, longer-term interest rates are likely to increase. And that would be a good sign. Bond traders out there currently pushing their book, arguing for more quantitative easing to lower long-term rates, would actually end up facing losses if that policy were successful. Indeed, as the Chairman said, this is an action to manage nominal rates, not so much real rates. Thus, if our desire is to engage in a new quantitative easing program, we need to be absolutely clear about our communication strategy, about why we are doing what we are doing, and what we think the expectations would look like if we are successful.

Continuing to use in our language fine-tuning arguments that we are managing liquidity or trying to achieve unemployment rate targets is not useful. This is about raising inflation expectations, and we need to be prepared to say so if that's what we deem it. Indeed, if our goal is to raise expectations, then we should communicate that that is in fact our goal and do so

explicitly. Making references to other goals that we may think indirectly benefit can be confusing to the public and to the markets, and, in fact, it would undermine our ability to impact those expectations in the way that we want. So, taking steps that don't refer to our desire to raise inflation expectations actually undermines our long-run credibility and the effectiveness of our policy. I think our current language is counterproductive to that ultimate goal, as it is at odds with how we are likely to view what we want the Treasury LSAP program to do. If it works, inflation expectations would rise, as I said. In particular, a successful quantitative easing program would raise longer-term rates and, therefore, our continuing to communicate that our objective is to lower longer-term rates directly contradicts that.

In summary, quantitative easing is a policy to use in extraordinary times when inflation expectations are falling and we are constrained by the zero lower bound. The objective is to raise inflation expectations. This will require focused and clear communication strategies that explicitly talk about that objective, not confusing with other things that may undermine it. My view is that there is not yet sufficient evidence at this point that expectations have fallen sufficiently that we need to undertake such an extraordinary effort. And, therefore, the more we say that we are trying to do other things, the more we undermine our efforts. Indeed, taking small movements and fine-tuning our longer-term interest rate targets is actually counterproductive. I don't believe we have either the theory or the empirical evidence that suggests that by trying to move longer-term interest rates we can achieve our objectives in this context. Perhaps worse, again, as I have just iterated, such an approach to policy actions could actually undermine our credibility to achieve effective quantitative easing, if we came to need it. As I said, I don't believe we have reached that juncture. I am opposed to undertaking that policy today, and, actually, any time in the near future. I appreciate the efforts of the staff in

alternatives A1 and A2 to begin to try to address these communications problems, but I don't think they go far enough, and they remain, I think, confusing.

I agree with the Chairman that there may come a time where we adopt price level target regimes, such as President Evans has suggested, which I am very sympathetic to. But these would constitute a regime shift, and I am concerned that it will take more than one meeting for us to arrive at some agreement on what that regime shift ought to be and how we will have to communicate it. I am looking forward to the meeting in January about structural employment and the challenges we face in the unemployment rate. And it seems to me that, until we understand that better, it would be premature to undertake actions or regime shifts when we are not quite sure what their impact would be or what we want them to achieve. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I support alternative B for today. I do not think the macroeconomic situation has changed sufficiently to warrant further policy action at this juncture. I have a few suggested modifications. In paragraph 2 of alternative B concerning the inflation outlook, I think the language is good, but the language in alternative A1 is better. Alternative A1 says that, "Inflation is now running below the level of 2 percent or less," and then continues from there. I think that language may be very successful in helping to anchor inflation expectations more firmly and, thus, to prevent the types of drift to disinflation and eventual deflation than I am concerned about. The language in alternative B, however, is also good in this regard, but not quite as explicit.

In paragraph 3 concerning policy, the sentence on reinvestment, I think, is very important, and I just wanted to point out that that statement is itself state-contingent. I guess it

sort of implies that we are going to revisit this at each meeting. I'm not sure what to think about that. I just wanted to point that out.

In paragraph 4 in alternative B, we have the sentence "is prepared to provide additional accommodation as needed to support economic recovery and to return inflation over time to levels consistent with its mandate." I think this sentence will be taken as implying that new action is imminent at the next meeting. I'm not sure I would recommend that for today. I think it might be more prudent for the Committee to keep options open on this dimension. Stating things flatly, as this sentence does, has its disadvantages. It is basically saying the Committee is going to do something, but what? And the markets will wonder, "Well, what is this action going to be? Is it going to be a large action? Is it going to be a small action? Is it going to be some kind of quasi-policy rule?" Also, we may face a situation where the data come in much more strongly than expected during the coming weeks and months, at which point we would want to pull back a little bit from that type of announcement. So I'm going to make a suggestion, and I am more serious about this one. I suggest replacing paragraph 4 in alternative B with the language from A2 paragraph 5, the alternative. We would end with the word "developments" period, in alternative B paragraph 4, and then we would start with this language from paragraph 5, the alternative in alternative A2: "The Committee will determine, each time it meets, whether an adjustment—either upward or downward—to its holdings of securities is needed to foster maximum employment and price stability."

I think that if we use that we will still be taken as basically indicating that policy change is very possible and very soon. But it won't be quite as one-sided as saying that we are going to take action at the next meeting, and it might damp down the market speculation about what that action might be. Doing it this way basically states that balance sheet policy is going to be the

main margin for adjustment going forward, without completely committing, at this point, to further action. I don't think there will be much mistake in the markets about what this means, but, still, I think it is a little bit better than what is in the current alternative B. It also sets up the Committee to withdraw accommodation in this dimension in the future, if necessary. That isn't where we're going right now, but it does indicate that it's not just a one-sided policy where we are going to add to the balance sheet, but we wouldn't adjust the other way on this dimension if the time comes and the economy is very robust and things are going swimmingly.

That's my main substantive comment. I have several other smaller comments. In alternatives A1 and A2, we have language like "\$500 billion over six months." I do not think this language is helpful. Instead, I would prefer to say some smaller amount, say \$200 billion, and we will review this at the next meeting. I think that, by doing it this way, we can still set up expectations that we will continue to add to the balance sheet at future meetings, but that we will review it and that the Committee maintains its prerogative to see how the data come in, to see how we are going to adjust policy going forward. One thing I think we have to keep in mind is that we are talking about possible action on top of an already very large quantitative easing program and on top of a very large balance sheet, which up to now we have considered as being a risky and unprecedented endeavor. I would encourage everybody to remember that a sequence of smaller moves can in fact add up to a large move, but only if justified by data developments as they come in. One main disadvantage of a flat amount that spans a series of meetings is that it effectively takes away the Committee's ability to react to incoming information going forward and, thus, sends signals to the private sector about how our judgments are changing about how the economy is improving or not improving. Of course, you can add bigger amounts going forward if you feel that the economy is deteriorating further. I think that that is suboptimal

policy, no matter how you cut it in any kind of model of monetary policy that I have understood in the last 25 years.

Now, just for contrast, consider this. Suppose you're following your normal interest rate targeting policy, and you're going to take this \$500 billion approach over several meetings. If that were interest rate targeting, then the analogy would be that we were going to raise the federal funds rate 150 basis points over a sequence of meetings. If you state it that way, it doesn't make any sense. Of course, we make smaller moves in the interest rate, understanding that we might follow that with moves at subsequent meetings. So it's the path that matters. You do want to set up the path. There should be a state-contingent path, and the Committee should have the ability to adjust as it goes along.

I have some other comments. I do think quantitative easing is effective in altering longer-dated yields on Treasury securities. I think part of the decline in yields we've observed recently is due to the anticipation of possible Fed action, as Brian Sack discussed this morning. And I do want to comment that I agree with others around the table that price level targeting is a real possibility. It would be a game-changer, and it would be difficult. And I do think it needs further study. I do welcome President Evans' very next memo on this.

I think there are some key issues for the Committee—and we have talked about them before. One is whether we could possibly lose credibility on inflation targeting altogether if we tried to switch to price level targeting, which is sort of inflation targeting squared or something. The markets may wonder whether we're changing horses in midstream to try to adopt a policy like that in a difficult situation. Those have been some of the considerations that have been expressed in the Committee before, and I think they would come up again if we tried to go in this direction. I am sympathetic, though, and this does have a lot of theoretical support. It's optimal

in many theories, and, if it really is optimal, and we have a lot of faith in it, then we should find a way to get it done. So this remains a very interesting area for further discussion, and I thank President Evans for his memo. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. I'm basically willing to support alternative B with some minor changes. I think that paragraph 4 in B seems to suggest strongly that we will provide more accommodation in the next meeting. I think we should try to weaken it slightly to indicate that we might not be willing to act. So, instead of saying "is prepared to provide additional accommodation as needed," I would prefer to say something like "be prepared to act as needed to support the economic recovery." But I view that as something of a minor issue.

Why not A? I have problems with A, and it's not that I doubt that the unemployment rate is above its current dual mandate level. I would put that figure closer to 8 percent than 7 or $6\frac{3}{4}$, but it's certainly below 9.6 percent. My concern with A is credibility. What will the American people think if they hear we're doing A? Are they going to expect this move to lead the unemployment rate to fall by 1 or 2 percentage points over the next two years? Do they think of this as being the main governmental response to the unemployment problem in the United States? The estimate that Bill mentioned, the FRB/US estimate of the macroeconomic impact of the purchases in alternative A1 and A2, is a fall of 0.2 percentage point of unemployment over the next two years and an increase of 0.1 percentage point in inflation over that same period. I think we should be clear about what we are hoping to gain by doing A if we go down that path; I have a footnote to that effect in our statement that says, "Our best available economic models estimate that our purchase will generate an additional fall in the unemployment rate of

approximately 0.2 percentage point over the next two years and an increase in the inflation rate of approximately 0.1 percentage point over that same period, if all else remains constant.” We could say “*ceteris paribus*,” if we wanted to be geeky. And I would go on to say that future purchases of a similar magnitude are likely to have smaller effects, but that’s just an option. But I think we should be clear about what we’re actually hoping to achieve by doing this.

We should do whatever is possible to meet our dual mandate. Here I disagree a little bit with President Lacker in that I don’t think we get to make up our mandate—I think that it’s the Congress’s role to tell us what to do. But we should be clear about what we view as our limitations in meeting that mandate. Without that clarity, I think we can only be exposed to a loss of institutional credibility.

Now, as some others around the table said, I’m worried about the possibility of ongoing disinflation. For me that concern is especially over the next year or 18 months, and I’m concerned that simply announcing that we don’t want to have disinflation, saying that we’d like to have prices go up, may not be enough to accomplish that goal. I’m concerned, in other words, not about what price level we want to achieve, but rather about the policy instruments that we have available to achieve what we want to. In your Jackson Hole speech, Mr. Chairman, you spelled out three possible tools: lowering the interest rate on excess reserves, offering stronger forward guidance, and purchasing more Treasuries. I think the first two approaches have their problems. They don’t seem to be on the table at this stage anyway, but they could generate this deflationary steady state of the kind that President Bullard’s article, “Seven Faces of ‘The Peril’” describes. So I think the option that’s on the table to try to confront disinflation is buying more Treasuries.

In terms of the staff estimates of the effects that Bill discussed, as far as I understand them, they're based on taking this portfolio-balance effect that's been estimated in earlier work and putting it in the FRB/US model. If we bought \$2 trillion of Treasuries, it would generate—and this is assuming total linearity in the response, which I think is far too extreme—40 basis points in inflation. I don't view this as a strong dam against significant disinflationary pressures. The usual intuition is that having banks hold more reserves—that is, if we put more stuff on the balance sheet—it will put upward pressure on the price level and inflation expectations. But this intuition is all about scarcity—that reserves are scarce and their associated liquidity advantages are scarce. Instead, banks are currently holding \$1 trillion dollars of excess reserves—reserves are not scarce. I would say that if you look at the staff's balance sheet forecast, they don't see reserves as being scarce until sometime in 2018. So trying to play off the scarcity of reserves is going to be a very subtle device to work with. I don't see these three tools as being highly effective ways to combat significant disinflation. What should we do instead? President Evans talked about the Spanish Inquisition. Here it comes. [Laughter]

MR. EVANS. I wanted to say Teutonic.

MR. KOCHERLAKOTA. The problem with open market operations is that they require the Fed to give up reserves for assets of equal value, given the current price level. These kinds of exchanges put no pressure on the price level when the system is awash in excess reserves. What we need to do is give up the dollars for nothing, to do what Milton Friedman described as a helicopter drop of currency. As the Chairman noted in his famous 2002 speech, this kind of handout of nominal wealth has the potential to generate upward pressure on the price level.

In my view we need to do some “blue sky” thinking about how the FOMC can best approximate a helicopter drop. At the Minneapolis Fed, my research and legal staff have been

combing through the Federal Reserve Act and through a great 2004 working paper by David Small and Jim Clouse in order to figure out how to do so. The outcome of that analysis is that the Federal Reserve Act does provide ways for the Fed to approximate a helicopter drop. For example, Section 10(b) puts few strictures on the quality of collateral that is needed to back advances made at depository institutions for the discount window. By making nonrecourse advances or advances backed by risky collateral, the Fed can implicitly inject—actually, explicitly inject—nominal wealth into the economy. And by specifying particular kinds of collateral, such as residential mortgages or small business loans, the Fed could potentially stimulate particular kinds of real activity.

This sounds radical—let's get more radical. Section 14(b) allows the FOMC to purchase some kinds of state and local government obligations. These purchases need not be in an open market. By exploiting this option, the FOMC could pay face value for state and local government obligations which, in fact, have credit risk. People talk about monetization of Treasury debt. This is talking about monetization—serious monetization—of state and local government debt. This, again, could stimulate inflation and, possibly, real activity.

These ideas are still sketchy. We need a great deal of staff work to figure out their legal and economic ramifications, and they come, obviously, with significant amounts of medium-term and longer-term institutional risk. I will stress that I myself might end up opposing them [laughter] once I see the initial staff work. But I would emphasize that, given the risk of disinflation that we face and given that the tools we have at our disposal do not overwhelm us by their potential, we have to be willing to explore all of these. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. I did actually think about the LTROs, the long-term refinancing operations that the Europeans used. They basically give longer-term loans at

low interest rates to banks. That approach isn't very popular. But, in principle, you could restrict the kind of collateral you'll accept—to do credit, for example. There are practical problems with that. And I'm sure a few of our colleagues would worry about credit applications, so I'm not sure we'd want to jump right into that. But let me just say, in general, that we should think about whether there are other tools besides purchases of assets. We're up to President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. I must tell you that I do agree with you on one thing. [Laughter] I think we should have a discussion around regime change, if we're moving that way. Alternative B strikes me as moving towards a new regime, and some of the other discussions seemed to take that direction, and I think it would be healthy to have a conversation before we get too far. I'll come back to that in just a second.

In listening to this discussion, it reminds me that we are a central planning organization, for monetary policy. We come here; we discuss monetary policy for the nation. And one of my fears is that, as a central planner, we think we can do more than we can. That really bothers me.

I know people don't all agree with this, but, again, I think the crisis we've just suffered was not caused by high interest rates or accelerating interest rates, but by an extended period of exceptionally low interest rates when unemployment was 6.5 percent and we were afraid it was too high.

I think we have to be modest about what we can do. I am not arguing for high interest rates at all—I never have been. I am arguing for getting off of zero, getting away from thinking that if we only added another trillion dollars of high-powered money, everything would be okay. It won't. There are other things going on in this economy that have to adjust, are adjusting, and we want to mitigate the consequences of that, but we can't solve all of those problems. For that

reason, as I've said in other meetings, I judge that it is not appropriate to indicate that the economic and financial conditions warrant basically a zero interest rate and to guarantee that the fed funds rate will be zero for an extended period of time. I think the "extended period" language tells the market and businesses that after a year of recovery, it is not sustainable. I think we're telling them that, and they're acting accordingly.

Also, there's the issue of a commitment to zero rates over time. Zero rates, like any rates, are allocative mechanisms, and they lead to future imbalances and increases in the risks for our long-term macroeconomic and financial stability. That's part of our mandate—longer-run performance, not just performance today. We need to put bounds around ourselves, so that we don't give in to that temptation to think that if we only do more, everything will be okay. The economy is continuing to recover modestly, as most of us anticipated from the beginning. Maybe it's more modest than we would like, but, still, it's recovering systematically.

I believe that we should take a longer-run perspective and allow our balance sheet to decline gradually as mortgage-backed securities are redeemed rather than continuing to make Treasury purchases to keep the size of our asset holdings constant and encourage banks and others to take on the risk of longer-term instruments. Banks are extending their maturities now, because we've given them this guarantee of lower rates for an extended period. There are going to be consequences from that.

Of the statements and the alternatives offered, again, I prefer C. But, even in this instance, I prefer it only as long as it is interpreted, as Bill said, as signaling that we would soon end our investment in maturing mortgage-backed assets. Otherwise I find the statement not acceptable. I realize the implications of that for the markets, and, therefore, I would start with

just removing the “extended period” language—nothing else—because I think it would signal that we’re more confident in the economy, and I think that would be helpful.

I object to alternative B not only because it continues our commitment to zero rates, but also because it, in effect, eases policy further by heightening the expectation of additional asset purchases in November. It just signals to the market that’s what we’re going to do, and, therefore, it will react accordingly. I would be especially concerned with a policy statement like alternative A1 that elevates our inflation goal and could be seen as establishing the Federal Reserve as an inflation targeter when we’ve really not discussed that adequately. At this point, the crisis should have taught us that we need to increase our emphasis on longer-run macroeconomic and financial stability and not just on inflation goals. We have allocative effects, and I think we should be very, very mindful of that. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. I’m going to confine my comments to the decision at this meeting. Coming into the meeting, it was my expectation that we would pretty much settle on alternative B, so I’m not really set on my opinion yet regarding further quantitative easing. I look forward to the November meeting and the work between now and November to harden that decision.

For now, I favor alternative B, and the language presented is acceptable. However, I am somewhat sympathetic to President Kocherlakota’s suggestion to stop the sentence at “support the recovery,” in order to create the sense that we are flexible around that and are not moving headlong into more accommodation.

In support of alternative B, the question in my mind at this meeting is whether the situation in the economy has gone awry so convincingly that the Committee should take action,

and I don't think that is the case. I don't think the accumulated data and the anecdotal evidence that I get calls for action at this meeting. I do accept that there are some risks in not taking action and that we could get behind the proverbial curve if the situation deteriorates rapidly. But, in the absence of a shock, I don't see that happening, so I think the risk of being late by not taking action in this meeting, but waiting until November or later, is acceptable.

I also want to thank President Evans for his memo. I think raising the question of an explicit price level objective is an appropriate thing to discuss at the next meeting, so I certainly hope that will be on the agenda.

As regards the language in alternative B, I think that, if there is any debate at all, it's around paragraph 4. As I said a second ago, I support it and could support President Kocherlakota's suggestion. I think it signals the capacity to act and the willingness to act if conditions require it. I think we can explain this to the market in subsequent communications. I hope this is not too naïve; that is, I hope that it's simply signaling capacity and willingness under certain conditions to act, as opposed to actually heading in that direction.

You asked earlier, Mr. Chairman, for some thoughts on a framework. This would be a decision framework, I presume, for action at a later meeting, and some have described this as essentially moving toward a new regime. Obviously, at this meeting, I don't have definitive answers, but I do have some thoughts regarding what I think the requirements of a discussion of the framework should be. There are a lot of open questions, to my mind, and, therefore, the meeting that we have in November should focus on four requirements.

First, let's get a consensus on the nature of the problem. Are we principally talking about an inflation expectations problem and the potential for deflation, or are we talking about a "gap" way of thinking about the problem, which focuses more on unemployment? Second, what

conditions would call for action? The basic question—and I think President Yellen actually raised this in the economy round—is whether a persistence of current conditions would call for action or whether we'd be looking for deteriorating data in order to pull the trigger. Also, as has been raised earlier, there's the question of whether a rule-like reaction or a more judgmental approach is appropriate. Third would be the estimates of the likely effect of specific policy actions. Would rate reductions result in credit expansion? Some have raised doubts about that. Or would a price level targeting policy raise inflation expectations? Or could we estimate the effects on unemployment? I do think there's enough ambiguity around the effectiveness of monetary policy in these times that we should do our best analytical work to arrive at some measure of what we should expect. Finally, there are communications tradeoffs. As I perceive it, there's a tradeoff between clarity, reducing uncertainty, very explicit programs, and expected policy outcomes on the one hand, and the more incremental approach in which we adjust policy as developments unfold, on the other hand. I think that needs to be debated.

With all of these questions about a framework, I support President Rosengren's idea—let's make sure we take enough time at the next meeting, and, that may mean extending it to two full days, because there is simply a lot to discuss. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I support alternative B. I expect to see the economy expand at a rate of about 3.5 percent next year and for inflation to stabilize at about 1 percent. My projection is that it will take several more years for the economy to reach full resource utilization and for inflation to move back to near 2 percent.

The question is whether this rate of progress towards our longer-term objectives is acceptable. My outlook is certainly acceptable to me, in the sense that I put low probability on

either entering another recession or experiencing a bout of deflation. However, I would certainly prefer the economy to be on a path that achieves our longer-term objectives for price stability and employment much more quickly than the path that I am forecasting. I recognize that, in theory, there are monetary policy strategies that can put the economy on a faster growth path, but any strategy or framework that we choose will need to cope with the fact that central banks have very limited practical experience in dealing with the circumstances that we face. In addition, we need to recognize the potential adverse consequences from unconventional policies. So with these reservations in mind, Mr. Chairman, I agree with you that a new framework would be useful, and I support your recommendation that we work on developing that framework.

President Lockhart just laid out four elements that he would like to see in that framework. I have some similar thoughts just using some different wording. I think a new framework is far more likely to be successful if it has a clear target, an operating procedure, a feedback mechanism for guiding policy adjustments, and a communications plan. Clearly, it's going to be challenging to identify a satisfactory framework that contains all of these elements, but I think that it is critical that we work on developing such a framework.

Adopting alternative B today has several advantages. First, it provides some continuity with the decision we agreed on at our last meeting; also, the language in alternative B is consistent with the language, Mr. Chairman, that you used in your Jackson Hole speech a few weeks ago. Second, alternative B opens the door to further stimulus. Third, choosing alternative B at this meeting also gives us additional time to develop the framework that I would find more suitable for deploying even if the outlook continues to be for moderate but still suboptimal economic growth. Finally, I also am open to President Kocherlakota's language in paragraph 4,

which would say that we are prepared to act as needed to support economic recovery, and then the rest of the statement. Those are my thoughts. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Warsh.

MR. WARSH. Thank you, Mr. Chairman. While I enjoy an unconstrained discussion as much as the next guy [laughter], I will confine myself to what seems to be in the realm of the reasonable, Mr. Chairman, for the purposes of advancing towards our deadline here. Let me make four points about the framework and then turn to the alternatives.

First, the portfolio-balance sheet channel that you described in Jackson Hole is operative and effective even if no new policy announcements are made at any meeting.

Second, it strikes me that it's not the size or composition of the balance sheet that matters. It's the effects of that balance sheet on markets and the resulting accommodation. On that point, the effects of any given balance sheet in markets that are as sensitive as we described earlier are well worth continuing to understand as we go forward. So it's not a bigger balance sheet that's necessary to provide more accommodation in these markets.

Third, I think that the benefit-cost framework of the new regime that we've discussed is critical not only to the judgments we form, but also to our communication about the regime. To have a meaningful chance of being effective, the new regime must be built, communicated, and understood. So, like many others here, I think it would be prudent to give this another six weeks, at least, to take shape. The staff estimates of the gross benefits of an extra \$500 billion are now much closer to what my estimates have been since we began this process, and they can't help but make us feel underwhelmed. On the cost side of the framework, I would say that estimates of the uncertainty and associated risks should not be assumed away, even if they're difficult for us to ascertain. If we've learned anything in the last few years, it's that policy should be highly

attuned to low-probability high-impact events. Given the fear that I have, and that I think many of you have, there is a nontrivial chance of further shocks to global economic systems. My sense is that policymakers would want to use their tools at times of maximum efficacy, and I don't believe that is the case today.

A fourth point on the framework and balance sheet is that the weighing of benefits and cost should take account of the circumstances. I think of this as situational awareness. If the fiscal trajectory were going in a different direction, it would give us, in my view, more degrees of freedom in thinking about how aggressive we can be on balance sheets. I would say an objective assessment of prices and the risks around inflation is hard for us to pin down. If deflation risks were more significant than I currently judge, my own assessment towards balance sheet expansion would be materially different. If markets were in disarray, I would also measure the likely benefits higher. Our policy efficacy in periods of extraordinary times is quite different, it strikes me, from the policy efficacy during benign periods, even if the benign periods involve a suboptimal recovery.

Let me turn now to alternative B. I think the alternative B handed around the table now is an improvement over the alternative B in the Tealbook. My concern with the earlier version is that it basically said that "the conditions precedent for further action have now been established." But it did not ultimately announce the decision to deploy those assets. It's as if the missiles are ready, but we're still waiting for the launch codes, and I think that would have been confusing to markets. The current version of alternative B does a bit better job of saying that we remain open-minded on the data, both on the inflation front and on the employment front, and it does preserve optionality for us and does not overpromise to markets that this judgment is, in fact, locked and loaded.

I would consider it an improvement of this version of alternative B if we were to soften paragraph 4 modestly. While President Kocherlakota and others have offered some ideas about how to do that in a way that doesn't defeat the purpose of our discussion today, my suggestion would simply be to change the word "as" to "if." So paragraph 4 would read, "The Committee will continue to monitor the economic outlook and financial developments and is prepared to provide additional accommodation if needed to support economic recovery," etc. That adds some conditionality that I think a large majority of folks around here want, and, by using the word "prepared," I still think it does show that we have made some progress in comparison to where we were some weeks ago, but, again, it's not locked and loaded. That's just a suggestion, but in either version, I could support alternative B with that suggestion. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Duke.

MS. DUKE. Thank you, Mr. Chairman. I have come around to the opinion that further purchases of Treasury securities are warranted. I'm concerned that a delay in the recovery of the housing market beyond what's assumed in the Tealbook is possible and, perhaps, likely. And while I'm quite skeptical that lower longer-term rates will have a significant effect on overall borrowing, lower rates are the key to success for modifications and restructures of residential and commercial mortgages. So, to the extent that lower rates result in faster, stronger credit recovery, they could on the margins contribute to easier credit terms. But beyond that, I went back to the transcript from the last meeting and was persuaded by two arguments made then: first, that missing both parts of our dual mandate on the same side was hard to defend; second, that the possibility of its not working was not a reason not to try. So, on those points, I concede.

Where I don't concede is on our need to communicate clearly what we're doing if we're establishing a new regime with implied thresholds, reaction functions, and limits. I would be

prepared to vote for alternative A1 or A2 today if I had some idea of the framework we were establishing. But if it's not clear inside this room, I don't see any possibility that it will be clear outside this room. We seem to have ruled out going all-in at once, the "shock and awe" alternative, but in alternative A we are still expressing ourselves in the same way: purchase of X dollars in Y time frame. If we need to adjust this, will we adjust the amount, or will we adjust the time frame? And what will be the trigger for adjustment? If the action doesn't have much impact and the forecast remains the same, will we add more? If it does start to work and the outlook improves for some other reason, will we pull back or will we stop? Or are we prepared to use both purchases and sales and target our balance sheet, as President Bullard suggests? And where does the \$500 billion in alternative A come from, anyway? If our decision at the last meeting was roughly equivalent to \$400 billion by year-end 2011, how do those two compare? And do we have too many regimes going on all at once? Would it make sense to combine all Treasury purchases into one action and say something like, "We will purchase Treasury securities in amounts necessary to replace all maturities and principal repayments, plus \$100 billion per month"?

So I favor alternative B. I'm fully prepared to take action at our next meeting if conditions remain the same or deteriorate, as long as I understand the strategy we're following. I hope that we can once again ask staff to do the heavy lifting of further developing a memo defining the alternative approaches and the methods of communicating them so we can use the two-day meeting to agree on a regime, if not on the precise thresholds. I understand the concern about losing the effects of additional purchases in the intermeeting period, but I, frankly, believe that the accommodation language in paragraph 4, combined with the clarity of our views about inflation in paragraph 2, will do as much good as the \$100 billion or so in securities we might

buy between now and the November meeting. The November meeting has the additional benefit of our published projections, which should tamp down the impression that some had after our last meeting that we knew something bad about the economy that no one else did. In fact, I would suggest that, in addition to announcing a new regime, we consider releasing our projections with the statement rather than waiting for the publication of the minutes.

Finally, it's my hope that we can come out of the November meeting with a common understanding of the regime we are using and a strong communication of that regime. We might still disagree over the action, but it will be clear to me, at least, what it is that we disagree about. It's all well and good to have these geeky conversations as we debate policy, and, in fact, at this end of the table, the three geeks who are here have demonstrated that there is no dearth of ideas. But if our ultimate goal is to effect the day-to-day decisions of non-geeks and folks like me, then we must be able to explain it.

President Lacker suggested that our actions in August damaged confidence. I believe that it was not our actions, but, as I feared at the time, it was the bobbling of the communication that actually damaged confidence. If we are going to get the full potential confidence benefit of a regime change outside of the mechanics of what we do, I would suggest that we consider releasing an additional or expanded statement explaining our new regime, along the lines of the one that President Evans suggested in his memo. I'm not sure that I necessarily prefer his approach, but I'm pleased to report that I could understand it in my own non-geeky way.

Finally, in addition to a statement of regime in our projections, I would suggest that the Chairman find a way to take questions either on or off the record. In this environment, I think we're much better served by having the Chairman and our statements answer the questions than

to have our views, objectives, and disagreements channeled through speculation by reporters and media commentators. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. For the reasons that the Chairman and many of you have already stated, I think that alternative B is the best course of action for today. I'm comfortable with the language as drafted in the package that Bill English distributed a little bit earlier this morning. I would be open to modifications of that language that could engender stronger consensus around the table, particularly if that consensus were to be translated into a stronger perceived consensus by markets and the public.

Mr. Chairman, after listening to the conversation this morning and a lot of the questions and ideas that were raised, I wonder whether it might be useful to try to do a briefing sometime between now and the November meeting—maybe midway through, after Columbus day—in which at least some of the issues that were raised today could be developed a bit and presented so that we wouldn't have to try to pack everything into even an elongated two-day meeting. That's just an idea that occurred to me as I heard so many people evince the desire for a fuller discussion. Thank you.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Mr. Chairman, just to take things sort of backwards, first, I'm encouraged by the desire at this table to discuss a regime change. I think it's timely. It might be significantly effective. Some proposals have been put on the table. I read very carefully President Evans' paper on price level targeting, although to my knowledge, other than Sweden in 1930, it has never been successfully employed, but I think it is worth discussing. My own staff seems eager to put together a paper on the possibility of targeting nominal income or nominal

spending. I'm not sure I'm convinced that that's the right approach, but we would be happy to add to the discussion.

I think it's necessary because these statements that we're providing are becoming more and more convoluted and, I think, run the risk of painting us into a corner or of further confusing the market. So I'm all in favor of your very thoughtful recommendation, and I like Governor Tarullo's suggestion that we may not do this only at meetings, but that we may have some interim stages where we develop this further so that we can do it efficiently.

I want to go back very quickly to the implied debate we had earlier in the go-round about final demand and whether or not government regulations and random refereeing are inhibiting investment. One factor that is clearly not inhibiting businesses is access to liquidity or the cost of money. The other thing that is clear is that you can't have final demand unless you have consumption, and in a period of high unemployment, you can't have consumption unless you have job creation. So I think our objectives are all the same on that front, and I don't find much distinction among them.

I am concerned that, as we pursue the business of, in essence, subsidizing risk—trying to lower the premiums by providing accommodation—in the globalized community, we may be, in fact, subsidizing job creation elsewhere rather than here in the United States. That's what I'm hearing from those who hire and those who are utilizing their resources in terms of finding an ROI elsewhere that is superior, not available in the United States. It's not clear to me that further accommodation is going to change that equation. I just wanted to put those points on the table.

With regard to the statements, I find myself lining up, not surprisingly, with President Lacker and President Plosser. I thought that Governor Warsh made a very good suggestion. But I want to go back to a point that President Lacker made, which is very important, and also pick

up on the statement Governor Duke made. Governor Duke said if it's not clear inside this room, it won't be clear outside this room. President Lacker correctly pointed out we have not discussed what the inflation levels that we agree to at this table in three years. I'm very uncomfortable with the sentences in paragraph 2 in alternative B where we refer to levels twice even though we do not have agreement internally as to what they might be. We talk about 1 to 2 percent, around 1½, 1.7 to 2 percent. We have never had a thorough discussion of that, and I believe we should. I would be uncomfortable with alternative B if we were to reference those levels that the Committee considers consistent with its mandate. If we haven't agreed to it internally, I don't know how we can convince people externally as to what they might be.

I would suggest especially dropping it in paragraph 4. If we were to go in the direction of alternative B, I would suggest we take into consideration Governor Warsh's point of substituting "if" for the word "as," and I would drop the rest of the sentence and include President Kocherlakota's editorial suggestion. Actually, my preference would be just to issue a one-sentence statement if you want to set up your regime change. "The Committee met and decided not to change the policy articulated at the last meeting." Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. I can go one better. We used not to issue any statement at all. [Laughter]

MR. FISHER. I agree.

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN DUDLEY. Thank you, Mr. Chairman. I believe we should provide additional monetary policy accommodation. The economy is too weak, inflation is too low, and we are too far away from our full employment objective. But I believe that there are several competing options for action on the table that are open to us, and we haven't reached consensus

on them. I also think each option does have some risks associated with it, so I agree that we do need more time, especially for the staff to do the necessary work, for us to reach a consensus, and for us to prepare market participants for what we are ultimately going to do. I support alternative B at this meeting, and, unless the economy improves markedly soon, I would expect to prefer a statement like alternative A at the November FOMC meeting.

With any policy move there are both costs and benefits, and the Chairman made that clear very nicely, I thought, in his speech at Jackson Hole. In this regard, there are several things we can do to reduce the cost of further monetary policy accommodation. First, I think one of the most important ones is that we can be a lot more disciplined in terms of how we communicate to markets. I was very unhappy about the press stories that came out after the last FOMC meeting, because some of the stories delved all too accurately into the specifics of the meeting—who said what and what the staff briefings were—and I think that is completely privileged information. It's completely inappropriate for any of that to be disclosed to market participants. If it's going to be disclosed, that should only happen in the minutes, after all of us have had a chance to comment on the draft—that's the way that should get out. I think it's noteworthy in that regard that in our survey of primary dealers we got the lowest grade in terms of the quality of our communications since we began asking the dealers that question in early 2009, and I think that was in spite of the Chairman's efforts. At Jackson Hole I think he gave a very good, clear speech that was on target, and despite that we got a very low grade. So I think the leaks very much hurt us in that regard.

Second, I think we can do a better job in providing more clarity to market participants about the framework we're using to shape policy. People around the table laid out a number of choices. We can keep the current framework, continue to emphasize our dual mandate, and

explain a little bit better how further disinflation is inconsistent with achieving full employment. We also can shift the framework a bit, if we decide that that adjustment would make it easier for us to achieve our dual mandate. The only reason to shift it is if we think that's going to make it more likely that we're going to accomplish our objective. In this regard, I would strongly encourage the staff to investigate a lot of the things that have been raised today, such as moving to an explicit inflation targeting regime per alternative A1 or using the price-level regime that President Evans laid out. My own opinion is that exploring a price-level target regime is worthwhile, because such a regime does have advantages relative to an inflation targeting regime. It's more powerful in keeping longer-term inflation expectations well anchored, because shortfalls in inflation have to be made up in future periods. It also may have a potential advantage in terms of credibility, because by introducing it you're admitting the prospect that you will miss your inflation objective over the short run, while having an inflation target and then missing it does have potential risks for credibility. On the disadvantage side for price-level targets, as President Yellen laid out, they're a lot more complicated, there are a lot more moving parts, a lot of communication challenges. The devil is in the details on this one. So I'd like the staff to work on the details so we can see how big a devil it is.

Third, I think we can do more to reduce the risk that market participants will be unsettled by further balance sheet expansion. That means we need to explain more clearly how it would work. For example, if we decide to do it on a continuous basis, what does that mean? What are the units of change that we might like to use? That is, we don't move the funds rate 7 basis points, and then 12 basis points, then 18 basis points—we move in increments of 25 basis points. So presumably there has to be some sort of analogue to that in terms of how we adjust the balance sheet. I think that doing all of these things, so that market participants understand why

we're doing what we're doing and how the process will unfold over the longer term—not just between this meeting and next meeting—should help improve the probability that inflation expectations will be well anchored and that policy will achieve the desired results.

Regarding the language for today's statement, I think the key issue is: What are we trying to shoot for in terms of what the markets think about what's going to happen in November? I'm sure everyone around the table has a different view of what they're shooting for. In my own opinion, I want to have the markets view us as likely to move at the next meeting if we don't get an acceleration, a meaningful improvement, in economic activity. So I want language that is consistent with that. If, after this meeting, the market thought there was a 60 percent probability that we were going to move at the next meeting, I think that would be about right. I don't want it to be much higher than that, because I don't want it to be a foregone conclusion, where we're sort of locked in. But I don't want it to be much lower than that. I think it's really important to remember that policy isn't symmetric now—being late is far worse than being early. I don't want us to get in a position where we just temporize from meeting to meeting, saying that things are a little stronger, so we can wait another meeting. Then we'd get further and further behind, and, if a shock arose, we'd actually have a deflation problem. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. Thanks, everyone, for your input. This is very, very difficult. We don't have good options. It feels safer not to do anything, but then, on the other side, we have an economy which is underperforming very severely—we have very high unemployment. So there's no safe option. Whatever we do, we're going to have to make our best judgment and hope for the best.

I certainly appreciate the comments that President Hoenig and Governor Warsh and others have made about the risks and uncertainties associated with these monetary policies that we're using. At the same time, as I said, I'm concerned about the state of the economy, and I don't think that these policies are necessarily marginal in their impact. There's more to the effects than just the portfolio-balance effects, for example. Inflation expectation effects, for example, could be very powerful if they took us back up to, say, 2 percent. I do think we should be moving in this direction, and I'm glad to hear that there's broad support for trying to develop a framework that will give more certainty and more clarity to the public about what we're doing. With respect to that, I'm certainly open to a longer meeting next time, and I also was going to suggest the possibility of a video meeting sometime in between, if the staff were ready to go over some preliminary discussion points—we certainly can consider that.

I have one final comment on the substance. I just disagree with the view that we should not do anything until deflation is upon us. First of all, zero is only a number. Low inflation is also costly, because it creates low inflation expectations, higher real interest rates, higher debt burdens, and has, therefore, negative effects on the real economy as well as being not at the level of inflation that I think most of us consider consistent with our mandate. Moreover, of course, these things have a lot of momentum, and, if you wait too long, then you may find yourself seriously behind the curve. So I feel comfortable with moving in this direction. I think, broadly speaking, it's the right direction.

Sorry, I have a couple of additional things. There were a lot of interesting specific points on the framework, and I think the main thing is that we need to keep working at it. President Bullard suggested we undertake a few things today. I understand his point, but I take his comments as being input to the discussion we need to have during the intermeeting period and at

the next meeting. Some of the issues were about whether or not the appropriate measure is the flow of new purchases or the stock size of the balance sheet; I think those are good questions that we need to think through.

The statement is also a little risky, because it changes quite a bit. The reaction to our last statement wasn't very good. I, obviously, have to take some responsibility for that. I think partly it was bad luck, but partly it was that we didn't convey exactly the appropriate tone in terms of our outlook for the economy. I think a risk in this statement is that, by talking about inflation below our preferred levels, we may convey a greater fear of deflation than we want. I thought about a very small change in paragraph B2 where it says "Measures of underlying inflation have declined." Maybe we could change that to "have come down over time"—something like that that's a bit less dramatic? "Decline" sounds as if it happened since the last meeting. So it would read, "Measures of underlying inflation have come down over time and are currently at levels..." My hope, therefore, is to mitigate that risk. As we communicate, we should be clear that we are looking at an inflation level that is not yet deflation, of course, and that we don't necessarily anticipate it to be deflation, but, nevertheless, it is too low for the best performance that we can achieve.

By the way, on this issue of what rate the Committee judges to be appropriate, I realize that we haven't discussed it for a few years, but this Committee has discussed these issues three or four times in the last decade, I think, and the conclusions have been pretty much the same in each case: PCE inflation is the right measure, and the level is something around 2 percent, or a little less than 2 percent. Certainly this is something we want to clarify at the next meeting if we decide to go in this direction. But it's also true that the current inflation rates are below virtually

everybody's estimate of what the appropriate longer-run inflation rate is in your projections, so I don't think we are going, really, too far from what's appropriate.

Finally, I heard the comments on the last paragraph, B4. It's a very delicate calculation. Like the Vice Chairman, I'd like to be sure to leave some optionality. Since we circulated the first version of this a week ago, we have tried to tone it down twice. The Tealbook was substantially moderated, and then we made changes yesterday that were intended to make the future action less certain. I guess I'm open to a groundswell, but my recommendation would be to stay with the language we currently have. Vice Chairman?

VICE CHAIRMAN DUDLEY. Can we just ask Brian and Bill their view of how the market would take this? Obviously, it's just an opinion, but I think it would be useful to hear it.

MR. ENGLISH. My sense would be that just changing the paragraph will get people's attention, for sure. They will notice, and they will assume that the thought is that further easing is going to be more likely. You suggested 60 percent. I think it could be higher—I was guessing two-thirds. I think last night as I was messing around with stuff in preparation for my briefing, some number like that came up—probably less than 80 percent but more than 60 percent, I would guess.

MR. SACK. Yes. We discussed this last night, and I think that's the range. With optionality, I think it would adjust as the data come in. But your starting point is probably around 70 percent.

CHAIRMAN BERNANKE. Okay. So, after all that discussion, my recommendation is to stick with alternative B as written, with the change I suggested: "Measures of underlying inflation have come down over time." Do you have any concern about deflation fear, Michelle, Bill, Brian, anyone?

MR. ENGLISH. One thing we discussed is whether the “trended lower” phrase gave a sense that maybe there was an ongoing process, that is, that it gave a greater sense of the risk of getting to deflation, and “have come down over time” maybe has a little of that flavor. I guess the question is what the Committee thinks. I could live with either.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. I don’t want to be too much of a squeaky wheel here, but I notice that paragraph 2 focuses on it twice. First we’re saying it’s below that which we judge consistent with our longer-run mandate, and, second, we say “before rising to levels the Committee considers consistent with its mandate,” even though I don’t believe we have agreed on the levels; but, ceding that, I think that probably says enough. What bothers me is adding it at the end of that sentence in paragraph 4. I think that may be overkill, because it is implicit that we’re not satisfied. But, by having it at the end of paragraph 4, I think it becomes a little bit too explicit. After all, we are saying “is prepared to provide additional accommodation.” I assume we’re going to substitute the word “if,” which I would recommend, as Governor Warsh did: “if needed to support economic recovery.” We’ve already talked about inflation twice in paragraph 2. And that’s a change.

CHAIRMAN BERNANKE. Right. But the purpose of introducing it there is to say that that’s one of our policy objectives.

MR. FISHER. I think that’s clearly understood by just mentioning it in paragraph 2. It’s less than subtle in paragraph 2—we mention it twice.

CHAIRMAN BERNANKE. You could put a period after “subdued for some time.”

MR. FISHER. Well, I just wanted to make that point.

CHAIRMAN BERNANKE. Okay.

MR. FISHER. At a minimum, I would at least put the word “if.” President Bullard mentioned the idea of having two-way conditionality. I think that’s not important. I don’t think we can quite do it in the way he wanted to, but at least the word “if” indicates that it may not happen, rather than the confidence that’s expressed with the word “as.” So that would be my ultimate fallback, if I were negotiating, but I’m not negotiating. I’m just saying that it’s a little bit too much to add it in all three places, twice in paragraph 2 and once in paragraph 4.

I think the jury is still out on us. We have worked very hard to restore confidence. This may offend people at the table, but I think we’re probably the only government entity that has any public confidence right now, and I’m just a little bit worried that this confidence is thin and that, if we press this argument too much, we might send a shiver up the spine of the marketplace. That’s solely my judgment, but I wanted to put it on the table.

CHAIRMAN BERNANKE. I appreciate it. In the spirit of President Bullard, “as needed” suggests that we will calibrate our response to the need of the economy.

MR. FISHER. “As and if needed.”

MR. BULLARD. Mr. Chairman, let me see if I can get a groundswell going for “if.” I think it would help soften it a little bit. I think estimates of the probabilities that we’re going to take action at the next meeting with this statement are a little low. I think they’re going to go to 0.9 or 0.95 or something. Maybe that’s okay, but the Committee sounds a little more tentative than that—I think President Dudley was about right, in that we’re thinking two-thirds or something. So I do think it’s still a little too strong. Maybe “if” would help mitigate it a little bit—it probably doesn’t make too much difference—but I’d support that.

CHAIRMAN BERNANKE. Other comments? President Yellen, do you have a comment? Are you okay?

MS. YELLEN. Sure. Whatever you want.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. Yes, I support what President Bullard said. I'd also point out that this statement is going to be read in the context of reports last week of economists predicting essentially what this does and what we plan. And I support fully, of course, what Vice Chairman Dudley said about the communications after the last meeting.

CHAIRMAN BERNANKE. Vice Chairman, are you okay with it?

VICE CHAIRMAN DUDLEY. Yes.

CHAIRMAN BERNANKE. Okay. The two changes are "if needed" and "come down over time." If no one else has any comments, President Lockhart.

MR. LOCKHART. It does improve dramatically, I think, from "decline," which suggests that it occurred in the intermeeting period. But I wonder if you can drop the whole thing and just have it read this way: "Measures of underlying inflation are currently at levels somewhat below the Committee..." and don't make it subject to interpretation.

CHAIRMAN BERNANKE. I like that. "Measures of underlying inflation are currently at levels somewhat below." By the way, putting the word "levels" in the plural is meant to capture the notion that people may have somewhat different estimates.

Okay, I think we are going to run into hard constraints. Anything else? [No response]
All right. Matt, would you please read where we are now?

MR. LUECKE. Yes. The vote will encompass both alternative B, as on page 4 of Bill English's handout, as well as the directive on page 9 of the handout. There are two changes to alternative B on page 4. In paragraph 2, it would read, "Measures of underlying inflation are

currently at levels somewhat below,” and continuing as written. In paragraph 4, the word “as” would be changed to “if.” Otherwise, the statement would be as indicated on page 4.

CHAIRMAN BERNANKE. Okay. Would you call the roll?

MR. LUECKE.

Chairman Bernanke	Yes
Vice Chairman Dudley	Yes
President Bullard	Yes
Governor Duke	Yes
President Hoenig	No
President Pianalto	Yes
President Rosengren	Yes
Governor Tarullo	Yes
Governor Warsh	Yes

CHAIRMAN BERNANKE. Thank you very much. The next meeting is November 2 and 3. We will be in touch with you about appropriate scheduling. Lunch is available. At 3:00 p.m. we will reconvene for the System conference on implementation of financial reform in Dining Rooms E and F. Is that right, President Lacker?

MR. LACKER. Right. It's on the terrace in the Martin Building.

CHAIRMAN BERNANKE. Okay, thank you very much.

END OF MEETING