Meeting of the Federal Open Market Committee on
October 29–30, 2013

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, October 29, 2013, at 1:00 p.m. and continued on Wednesday, October 30, 2013, at 9:00 a.m. Those present were the following:

Ben Bernanke, Chairman
William C. Dudley, Vice Chairman
James Bullard
Charles L. Evans
Esther L. George
Jerome H. Powell
Eric Rosengren
Jeremy C. Stein
Daniel K. Tarullo
Janet L. Yellen

Richard W. Fisher, Narayana Kocherlakota, Sandra Pianalto, and Charles I. Plosser, Alternate Members of the Federal Open Market Committee

Jeffrey M. Lacker, Dennis P. Lockhart, and John C. Williams, 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
Steven B. Kamin, Economist
David W. Wilcox, Economist

Thomas A. Connors, Michael P. Leahy, Stephen A. Meyer, Daniel G. Sullivan, Christopher J. Waller, and William Wascher, Associate Economists

Simon Potter, Manager, System Open Market Account

Michael S. Gibson, Director, Division of Banking Supervision and Regulation, Board of Governors

James A. Clouse, Deputy Director, Division of Monetary Affairs, Board of Governors

Jon W. Faust, Special Adviser to the Board, Office of Board Members, Board of Governors

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

Trevor A. Reeve, Senior Associate Director, Division of International Finance, Board of Governors

Ellen E. Meade and Joyce K. Zickler, Senior Advisers, Division of Monetary Affairs, Board of Governors

Eric M. Engen, Michael T. Kiley, Thomas Laubach, and David E. Lebow, Associate Directors, Division of Research and Statistics, Board of Governors

Marnie Gillis DeBoer, Deputy Associate Director, Division of Monetary Affairs, Board of Governors

Rochelle M. Edge, Assistant Director, Office of Financial Stability Policy and Research, Board of Governors

Eric Engstrom, Section Chief, Division of Research and Statistics, Board of Governors

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

Mark A. Carlson, Senior Economist, Division of Monetary Affairs, Board of Governors; Robert J. Tetlow, Senior Economist, Division of Research and Statistics, Board of Governors

Blake Prichard, First Vice President, Federal Reserve Bank of Philadelphia

David Altig, Glenn D. Rudebusch, and Mark S. Sniderman, Executive Vice Presidents, Federal Reserve Banks of Atlanta, San Francisco, and Cleveland, respectively

Craig S. Hakkio, Evan F. Koenig, Lorie K. Logan, and Kei-Mu Yi, Senior Vice Presidents, Federal Reserve Banks of Kansas City, Dallas, New York, and Minneapolis, respectively

Anna Nordstrom and Giovanni Olivei, Vice Presidents, Federal Reserve Banks of New York and Boston, respectively

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

Andreas L. Hornstein, Senior Advisor, Federal Reserve Bank of Richmond

Satyajit Chatterjee, Senior Economic Advisor, Federal Reserve Bank of Philadelphia

Transcript of the Federal Open Market Committee Meeting on October 29–30, 2013

October 29 Session

CHAIRMAN BERNANKE. Good afternoon. I'd like to start by asking President Rosengren and President Bullard what they bet on the outcome of the World Series. [Laughter]

MR. ROSENGREN. Traditional beer bet.

MR. BULLARD. Local brews.

CHAIRMAN BERNANKE. Today is Debbie Danker's last FOMC meeting. Of a total of 66 meetings, most of them sitting right here to the right of the Chairman, Debbie has done a commendable job of keeping the Chairman and the FOMC mostly on track, although I wish she had a more elastic policy about recording every comment I make in the transcripts. [Laughter] Over her career, Debbie has brought expertise that's led her on a tour of the major policymaking institutions, including the New York Fed, the Council of Economic Advisers, the World Bank, the Treasury, and, of course, the Board, where she has worked her way up through the ranks to be deputy director and deputy secretary for the FOMC. So, for 66 meetings, we thank you for putting up with this group and wish you the very best in your retirement. [Applause]

MS. DANKER. Can I just say, it's been a great privilege. Thank you very much.

CHAIRMAN BERNANKE. Thank you. Before we get started, I want to say a couple words on external communications. The first is that I'm tentatively planning to announce very shortly a press conference at the January meeting, which will be my last meeting. That will give us three consecutive meetings with press conferences and, I hope, will enhance our communication over the next few months.

The second thing is that I'd like to ask folks—I know it's tempting to comment on when the FOMC may or may not take a first step toward reducing asset purchases, but it's probably not

a wise thing to do. In fact, our policy on communications explicitly precludes making comments about "a prediction . . . about Committee action in advance of the Committee's announcement of such decisions." What I hope you will do rather than speculate on timing is to articulate a set of principles, and I would recommend three. First, data dependence. We're going to be tying our decisions, as always, to the incoming data—not one particular piece of data, of course, but the whole general outlook. The second principle I would suggest would be noting that our criterion of "substantial improvement in the outlook for the labor market" has a retrospective and a prospective component. Retrospectively, we have seen a good bit of improvement—the term I've used is "meaningful" improvement—since September 2012. It's worth pointing that out. I recollect where we feared we might be at this point, and we're actually in much better shape in the labor market than we thought a year ago. There's also a prospective component to our criterion. We're hoping to see evidence that the recovery and the improvement in the labor market will continue—and I hope that's not an excessively high burden, but simply that the outlook for the labor market will continue to improve. And the third principle I'd recommend to folks is—it's a phrase I don't care much for, but—tapering is not tightening, necessarily. Even as we make the shift from asset purchases to rate policy going forward—and I think this is reflected in our statements—the Committee intends to maintain a highly accommodative policy as needed to achieve recovery and hit our inflation target. Again, I recognize that there's a lot of temptation, a lot of speculation. I think we're probably better off if we stick to some principles on this issue. Any comments or questions on that? [No response]

If not, why don't we go now to our agenda? Item 1 is "Financial Developments and Open Market Operations," and let me call on Simon Potter.

MR. POTTER.[1] Thank you, Mr. Chairman. Domestic financial conditions eased over the intermeeting period as market participants revised up their expectations for future monetary policy accommodation. The shift in expectations was driven largely by the outcome of the September FOMC meeting, combined with the implications of the federal government shutdown and the weaker-than-expected September employment report. The debt limit impasse dominated market attention and affected a number of money markets and institutions for a time. The direct effect in other markets appeared to be relatively limited, though market participants highlighted the potential long-term implications for U.S. financial markets of repeated standoffs over the debt limit. Foreign financial conditions were driven primarily by U.S. developments and also eased over the period.

As shown in the top-left panel of your first exhibit, domestic financial markets were driven by several key developments that led market participants to revise their outlook for U.S. monetary policy. The Committee's decision not to reduce the pace of its asset purchases at the September meeting evidently surprised many market participants, and other Federal Reserve communications that day—including the 2016 target rate projections—were also perceived as more accommodative than expected. The shutdown of the federal government delayed the publication of key economic data and increased uncertainty about the economic outlook. These effects, along with a resolution to the shutdown and debt limit that could put both fiscal issues back into play in early 2014, reportedly increased expectations for no reduction in the pace of Federal Reserve asset purchases at the next few meetings. These expectations were reinforced by the weaker-than-expected nonfarm payrolls release last week.

Changes in most domestic asset prices over the period are consistent with expectations for a more accommodative future stance of monetary policy. As shown in the top-right panel, the 10-year nominal Treasury yield decreased 34 basis points. Option-adjusted spreads on agency MBS narrowed 17 basis points, and interest rates on 30-year fixed-rate mortgages declined 44 basis points. High-yield corporate credit spreads narrowed 14 basis points, the S&P 500 index increased 3 percent, and the DXY dollar index depreciated 2 percent. Roughly half of these changes came on the day of the September meeting. TIPS yields declined in line with comparable-maturity nominal Treasury yields over the period, leaving measures of inflation compensation little changed and within their recent ranges.

The results from the Desk's Survey of Primary Dealers and other surveys show large shifts over the period in expectations for the timing of the initial reduction in the pace of asset purchases, the path of SOMA holdings, and the path of the target federal funds rate.

As shown in the middle-left panel, averaging across dealers' probability assessments from the most recent Desk survey, they now see a roughly 90 percent chance that the initial reduction in the pace of purchases will be announced at some point in 2014 or later, with the highest average probability on the March meeting.

[1] The materials used by Mr. Potter are appended to this transcript (appendixes 1 and 2).

Dealers' probability assessments over meetings in 2014 are quite flat, indicating either relatively little conviction in their views on the timing of the initial reduction or data dependence. The median response for the most likely total amount of purchases through 2014 increased nearly $400 billion—the largest such intermeeting increase since the announcement of outcome-based purchases at the September 2012 meeting. Once reductions start, dealers continue to expect roughly equal-size reductions in each asset class, as discussed in the memo on the composition of reductions in purchase pace that was sent to the Committee, though a few expect reductions to occur more quickly in Treasuries than in MBS.

The revisions to dealer expectations for the path of the federal funds rate over the period were also sizable. As indicated in the middle-right panel, more than half of the dealers pushed out their expectation for the most likely timing of the initial target rate increase. Moreover, the average expectation for the most likely level of the target rate in 2016 and 2017 declined as much as 37 basis points. This is the largest intermeeting-period decline in the expected target rate path since September 2012. The dealer expected path now lies below the path from the survey ahead of the April–May FOMC meeting, prior to the rise in interest rates over the spring and summer.

Market pricing also reflects large revisions to expectations for the path of the target rate. As shown in the bottom-left panel, the path of the federal funds rate implied by a straight read of interest rate futures shifted down, retracing a substantial portion of its rise from early May. Market-implied rates in 2016 and beyond remain a bit above their pre-JEC levels, in contrast to the dealer survey.

Following the September meeting, many market participants expressed a lack of confidence in their ability to forecast the Committee's future actions. For example, many were surprised that the 7 percent unemployment rate guidepost for the end of asset purchases that was suggested following the June meeting appeared to have been downplayed. As shown in the bottom-right panel, on the most recent dealer survey the average rating of the Committee's communication with the markets and the public was the lowest on record. Nevertheless, most dealer survey measures of uncertainty and disagreement about the path of SOMA holdings and the target federal funds rate were little changed or a bit lower, and measures of interest rate–implied volatility also declined around the September meeting and over the period. These declines may reflect the resolution of uncertainty about future Federal Reserve leadership, as well as reduced investor demand for hedging interest rate risk, as a near-term change in the pace of asset purchases is seen as unlikely.

Turning to exhibit 2, developments related to U.S. fiscal policy were followed closely overseas but had limited direct market effects. As shown in the top-left panel, financial conditions in the United States and Europe eased some following the resolution of the debt limit, in contrast to the experience in 2011, when conditions tightened sharply. The divergence is attributable to the considerable differences between the economic and market backdrops in the two episodes, including S&P's downgrade of the U.S. sovereign credit rating and a more tenuous financial stability

situation in Europe in 2011, as well as a more accommodative current global stance of monetary policy relative to then.

This easing of financial conditions can also be seen in longer-dated global sovereign yields, shown in the top-right panel. U.K. and German yields were reportedly driven primarily by developments in the U. S. In Japan, government bond yields extended recent declines and are now at levels last seen in early May, prior to the elevated volatility following the start of the BOJ's asset purchase program. The declines in Japanese yields have been accompanied by improved secondary-market liquidity and reduced interest-rate-implied volatility.

While longer-dated sovereign yields have recently moved in line with U.S. yields, shorter-dated U.K. and euro-area forward rates appear to have become somewhat less sensitive to changes in analogous U.S. forward rates since the introduction of the BOE's and ECB's forward guidance. The middle left panel shows one simple illustration of this, plotting daily changes in German one-year-forward one-year rates on the y-axis against daily changes in U.S. one-year-forward one-year rates on the x-axis. Dates before the announcement of the ECB's forward guidance are shown in light blue, and dates after are shown in dark blue. As seen from the best-fit lines drawn through each set of points, the pass-through of changes in U.S. rates has fallen somewhat since the forward guidance was introduced. A similar pattern is observed for U.K. rates.

In addition to forward guidance, ECB officials have continued to discuss other actions they might take to prevent increases in money market rates that they view as inconsistent with economic fundamentals. This is of particular concern to them as LTRO repayments have reduced excess Eurosystem liquidity, shown in the middle-right panel. A significant further drop in excess liquidity could cause EONIA rates to rise some, in which case the most likely policy response would be for the ECB to add liquidity back to the system, such as with LTROs.

The outlook for Chinese economic policy has also been in focus. While the acceleration in third-quarter GDP, which Steve will discuss in his remarks, alleviated some near-term concerns over the direction of the Chinese economy, much of the expansion was fueled by rapid credit growth that many market participants view as unsustainable. These developments have been accompanied by an increase in financial inflows. Chinese authorities have responded by allowing interbank funding rates to rise, taking macroprudential steps to stem upward pressure on housing prices, and resuming gradual appreciation of the renminbi against the dollar, shown in the bottom-left panel.

As shown in the bottom-right panel, emerging market currencies appreciated over the period, reflecting both actions by foreign authorities and the shift in market expectations for U.S. monetary policy. Some of the sharpest recent appreciation has been in the currencies of emerging market countries with large external funding needs that came under the greatest pressure between May and August—such as the Indian rupee—suggesting an increased willingness for some investors to take on risk.

Emerging market equity and bond markets also rose sharply following the September FOMC. Market participants have reported that these moves are consistent with a broader increase in demand for high-yielding assets, through a return of so-called carry trades predicated on low volatility and expectations for highly accommodative U.S. monetary policy.

Your next exhibit briefly reviews primary dealer expectations for the size of the SOMA portfolio, then moves on to Desk operations. It concludes with a discussion of the possible conversion of temporary swap arrangements into standing ones.

Consistent with the revisions to dealers' expectations for the pace of Federal Reserve asset purchases that I noted earlier, their probability assessments of the likelihood of significantly higher balance sheet outcomes increased. As shown in the top-left panel, averaging across their probability assessments, dealers now place a 25 percent chance on the SOMA portfolio exceeding $4.5 trillion at the end of 2014. Dealers, on average, assess a less than 10 percent probability of a portfolio below $4 trillion, compared with an assessment of about 60 percent before the September meeting.

The top-right panel shows the median dealer expectation for future MBS purchases over recent surveys as a percentage of the contemporaneous TBA-eligible stock. With the increase in purchase expectations since September, projected future purchases represent about 15 percent of the outstanding purchasable stock. This suggests that, even if MBS purchases were to be significantly higher than current dealer expectations, lack of availability of TBA-eligible securities would be unlikely to pose a constraint on the Desk's ability to operate. That said, increasing the Federal Reserve's ownership share in an environment of declining gross issuance could possibly cause some disruptions to liquidity.

Turning to Desk operations over the intermeeting period, execution metrics in both Treasury and MBS purchases were within recent ranges, with no notable disruptions even during the period of debt limit–related stress. Broad liquidity conditions in longer-term Treasury securities and MBS were about unchanged on net.

Looking ahead to the end of the year, trading volumes in both Treasury and MBS markets typically decline in December and early January, as shown in the middle-left panel. There are also some signs of modestly thinner liquidity in Treasury markets over that period, as bid–asked spreads tend to widen a bit. Last year, the Desk adjusted its purchase calendar so that the majority of Treasury and MBS purchases would not occur during the days with the lowest trading volumes, and we plan to take a similar approach this year. We do not expect this to garner much market attention, given that the practice is communicated in advance and is in line with Desk operations in recent years.

The next two panels provide some details on the overnight reverse repo exercise the Desk is currently conducting. As noted in the memo we sent to the Committee, last month, the Desk began offering fixed-rate overnight investments to 139 eligible

counterparties at 1 basis point, with a maximum allotment of $500 million each. Early operations were executed smoothly, with no technical problems; as such, after consulting with the Chairman, the maximum bid amount was raised to $1 billion, and recently the rate offered was raised to 2 basis points.

Counterparties' participation in the operations has been influenced by their desire to test systems and to park funds over quarter-end. As shown in the middle-right panel, peak participation thus far came on the quarter-end date of September 30, with $58 billion allotted to 87 counterparties. Participation in the operations has been sensitive to the spread between overnight money market rates—proxied in the bottom-left panel by the GCF repo rate—and the operation's fixed rate. This has been particularly true for government money market mutual funds, and to a lesser extent for prime funds and the GSEs. These institutions have been the largest lenders in the operations to date and are expected to find investment in it more attractive, given that they are not eligible to earn interest on reserves.

The overnight RRP operations do not appear to have had any meaningful impact on money market rates or market functioning, and participation has been small relative to the size of the market. The staff will continue to monitor market activity.

Your final panel illustrates that, while the current usage of dollar swap lines is minimal, they have been important tools during times of market stress. I would like to ask for a vote to approve the resolution on the swap line arrangements that was in the memo Steve Kamin and I sent the Committee on October 21. A copy of the resolution is in the handout titled "Action on Liquidity Swap Lines." It would convert the existing temporary dollar and foreign currency liquidity swap arrangements with the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank to standing swap arrangements and would remove the quantity limits in the agreement with the Bank of Canada.

Standing swap lines would reduce uncertainty among market participants as to whether and when these arrangements would be renewed and would limit the risk that decisions regarding the renewal of these arrangements would be misinterpreted. I would emphasize that moving to a standing arrangement in no way diminishes the FOMC's control over these lines. Drawings on these swap lines will be approved by the Chairman in consultation with the Foreign Currency Subcommittee and with the FOMC prior to the initial drawing, if possible under the circumstances then prevailing. In this context, I should note that we anticipate that the ECB will continue to make small draws on its dollar liquidity swap line, reflecting the modest bids it receives at its dollar-providing operations. The FOMC will have the opportunity to reauthorize the lines on an annual basis. The Chairman may change the rates and fees on the swap arrangements by mutual agreement with the foreign central banks and in consultation with the Foreign Currency Subcommittee. I should note that if you vote for approval, the coordinated public announcement will be at 2:00 a.m. eastern daylight time on Thursday, October 31. Thank you, Mr. Chairman, that completes my prepared remarks.

CHAIRMAN BERNANKE. Thank you very much. Are there questions for Simon or for Steve Kamin? President Fisher.

MR. FISHER. Thank you, Mr. Chairman. Simon, could you repeat what you mentioned when you were talking about slide 14, and then you rolled over to slide 15, with regard to year-end activity—that "increasing the Federal Reserve's ownership share could possibly cause. . .". Would you repeat that sentence, please?

MR. POTTER. One of the things we found in our operations recently is that, even though we're approaching the monthly issuance in the market, we haven't experienced any liquidity problems.

MR. FISHER. Right.

MR. POTTER. Exhibit 14 shows you that the outstanding stock that we could still purchase is large. It wouldn't be a large percentage of that. However, we don't know, if we sustained this for a long period of time, where we're purchasing out of stock, whether that would perhaps affect liquidity conditions in the MBS market.

MR. FISHER. So we'll just feel our way along the stones?

MR. POTTER. We will, as always, monitor and alert you if we're seeing any market malfunctioning from it, but so far it has gone better than we expected.

MR. FISHER. And then your comment on slide number 6—the slide shows the dealer survey, but you also said "and the public." How do we determine how the public would respond?

MR. POTTER. Oh, that's just the way that we ask the question.

MR. FISHER. Okay. Of the dealers. And then the last question I have—which may be based on ignorance, Mr. Chairman—you did mention, Simon, that we've increased the quantity limits with regard to the swap lines with the Bank of Canada, correct?

MR. POTTER. We are going to take the caps off. They have not used those lines. So it's hard to say exactly how much usage there will be.

MR. FISHER. And the natural question for me is: Mexico is not included—is that because we continue on with the program that we currently have? And is there a reason to differentiate between Canada and Mexico?

MR. POTTER. Within the foreign currency arrangements that Canada has with the other four central banks, there were no caps. So what we were trying to do is make the arrangements look symmetric across those six central banks. The NAFTA lines that were introduced in '94 are really for a separate purpose.

MR. FISHER. Is there a need to communicate with Mexico at all to make that clear, or have we done so—or does it matter?

MR. POTTER. I believe that if the Committee approves this resolution, if the Bank of Japan approves tomorrow, and we announce, there will be a lot of interest from other central banks in this standing relationship that we have. I don't believe the Mexicans will view this as a really big change, given that they weren't in this temporary network that we have.

MR. FISHER. My sensitivity tells me—or maybe it's too sensitive—that it might be advisable, at least. Are we giving them advance notice?

MR. KAMIN. No, we're not. We never provide advance notice.

MR. FISHER. Well, we might provide them simultaneous notice.

MR. KAMIN. I take your point. I think that the announcement will certainly remind many emerging market economies of these swaps, some of whom have requested it, and so I think taking some proactive action just to—

MR. POTTER. I could certainly give a call to my counterparty at the central bank.

MR. FISHER. Mr. Chairman, I would recommend that. They're highly sensitive, and, again, it is part of NAFTA, and with any differentiation between Canada and Mexico, I would suggest politely that we let them know at the earliest opportunity, and before others, if possible. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you for that suggestion. Are there other questions? President Kocherlakota.

MR. KOCHERLAKOTA. Is this the appropriate time to comment on the swap lines?

CHAIRMAN BERNANKE. Certainly.

MR. KOCHERLAKOTA. I generally favor them, but one thing that struck me about the proposal is that a lot of the arguments that were being made to convert the temporary swap line into a more permanent standing arrangement could also be used to argue in favor of having a standing term auction facility as well. When we had this discussion about the term auction facility in our teleconference call, I was struck by the length of time that it would take the staff to stand up such a facility. A lot of the concerns that we have about the temporary liquidity lines in terms of the signaling, et cetera, would also be true if we tried to stand up a TAF in the midst of a crisis. That would send a signal that maybe we're concerned about things, whereas if we have a permanent facility that's being run at a relatively small level, we have staff expertise always there, and we don't really have to worry as much about the signaling content of our decision.

The memo makes a very strong case for that being true for the temporary liquidity lines being converted to a standing situation. That was my only comment. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker, would you like to comment?

MR. LACKER. Thank you, Mr. Chairman. The Richmond Fed is traditionally opposed to foreign swap lines. In the past, my predecessor and I have voted against these on the grounds that they were an adjunct to foreign exchange operations that were essentially fiscal policy and should be the responsibility of the U.S. Treasury subject to the authorization of the U.S. Congress. Today we're being asked to make these things that were adopted on a renewable basis in the midst of the crisis into a relatively permanent arrangement. Their purpose is not for exchange market intervention this time, but the provision of dollar funding by foreign central banks to overseas financial institutions. I recognize that the SOMA would not bear exchange risk or credit risk in these transactions, but nonetheless, we'd be facilitating yet another expansion of central bank backstop lending commitments, and I don't think that's the best path to financial stability. So I would oppose authorizing the manager's request.

CHAIRMAN BERNANKE. Thank you. Any other questions or comments? President Plosser.

MR. PLOSSER. I share some of Richmond's concern about it. I have a question: I gather from the discussion that because we've already coordinated with all of the foreign banks that will announce on the 31st, it's kind of a foregone conclusion that we're going to do this?

MR. POTTER. No. They're all aware that it's dependent on the vote here and the vote that the Bank of Japan is taking.

MR. PLOSSER. I'm still not convinced why renewing these things on a regular basis or approving caps is problematic from a management standpoint. Would you care to elaborate a little bit more on that?

MR. POTTER. I find it hard to think what the caps would be in all of the circumstances that might happen over the next few years. That's assuming that they would be reauthorized. Among the things that we discussed with you last year about a financial market utility in another area—London was the example we gave you—was that it's very difficult to contact people in real time to do that. Now, in terms of how big the swaps could be, that's really going to be up to the people around this table if we again get into a financial crisis like we saw in 2008. There's nothing in here that prevents you from standing up an individual swap arrangement, to put in place some cap, to effect the fees, and so on.

MR. PLOSSER. But just as a matter of process, though, there's a difference between saying that we have the right to change something, or we have to proactively act to do something either less or more, or change the price, as opposed to there being a request that has to come in.

MR. POTTER. I would distinguish between a continuing request, where we put the framework in place—which is where we are right now with the temporary swap lines, with the pricing in there and the lack of caps, which is supposed to give the impression of a backstop, and has been very successful in that way—and other circumstances in which—it's hard to think of it—in which the FOMC might decide it would limit what the individual swap draw could be, even within these arrangements. It doesn't prevent you from doing that. What the cap with the Bank of Canada prevented you from doing was having a backstop without a limit on it.

CHAIRMAN BERNANKE. Any other questions? [No response] If not, let me first ask us to vote to ratify the domestic open market operations. Any objection? [No response] Seeing

none. On the liquidity swap lines, President Lacker has expressed his concern. Is there anyone else who would like to be on record? [No response] All right. If there's no objection, I'm going to call for a voice vote, not an individual vote. All those in favor of approving the swap line directive as given in the handout, please say aye. [Chorus of ayes] Opposed. [No response] Okay. Thank you very much. I hope you'll all be up at 2:00 a.m. to hear the announcement. [Laughter]

All right. Moving on to item 2, "Economic Situation," let me call on David Lebow.

MR. LEBOW.[2] Thank you, Mr. Chairman. I'll be referring to the single exhibit marked "Forecast Summary." As you know, the government shutdown disrupted the production of a number of key economic statistics, and thus the amount of data available at the time the October Tealbook was finalized was somewhat more limited than usual. But we did receive the September jobs report in time for the Tealbook, and some other important data were not available for the Tealbook but are available now.

As you can see from the top-left panel, given the data in hand when the Tealbook was closed, we marked down this year's expected pace of real GDP growth by about ¼ percentage point relative to our previous projection. The downward revision to real private spending was concentrated in personal consumption—shown in the top-right panel—which appears to be on a somewhat weaker trajectory than we had anticipated in September. This morning's data on retail sales for September did not change that assessment; while nominal sales posted a larger gain than the average of recent months, we had already conditioned our forecast on such a reading.

As for the other data published after the Tealbook closed, the September figures on orders and shipments of capital goods were disappointing, and the increase in manufacturing output last month was more modest than we anticipated, but the international trade data for August were a little stronger than expected; so, on net, the post-Tealbook news had little implication for our near-term projection of GDP growth.

Beyond the effect of incoming data, we have reduced our forecast of fourth-quarter GDP growth by about ½ percentage point to reflect the effects of the government shutdown. Most of that shutdown effect comes from the direct hit to government activity. While there are a variety of channels through which the shutdown plausibly could have affected the private economy, our guess is that such spillover effects are quite small. We could certainly be wrong about that judgment, but in any event, we think that any spillover effects, as well as the direct effects of the

[2] The materials used by Mr. Lebow are appended to this transcript (appendix 3).

shutdown, ought to be temporary. Thus, as you can see from our fiscal impetus estimates in the middle-left panel, the effect of the shutdown is basically to shift real GDP growth out of this year and into 2014, with no net change to the level of output.

Beyond the near term, we made small upward revisions to our projection for real GDP growth. Except for the small swing induced by the government shutdown, our fiscal policy assumptions are essentially unchanged from the September Tealbook; in particular, we continue to believe that fiscal policy is providing considerable restraint to the growth of aggregate demand this year, but that this restraint will diminish substantially in the coming years. Our monetary policy assumptions are also essentially unchanged from the previous Tealbook: We continue to assume that the federal funds rate will lift off from its effective lower bound in the second quarter of 2015 and rise gradually thereafter, reaching 2 percent in the last quarter of 2016. We also continue to assume that the Committee will end its asset purchases under the current LSAP program by the middle of next year. That said, we slightly increased our estimate of the cumulative amount of purchases under this program, to about $1.3 trillion. Overall financial conditions are expected to be a little more accommodative in this forecast, primarily reflecting downward revisions to the projected paths of longer-term interest rates and the foreign exchange value of the dollar—revisions that, in part, reflect market perceptions of a more accommodative monetary policy. We also slightly revised up our projections for house prices and equity prices.

Taken as a whole, the revisions that we have made to our conditioning factors are a positive for GDP growth over the medium term. However, their effect is partly offset by a downward revision that we have made to next year's consumer spending forecast (back in the top-right panel). Specifically, because consumer spending has not yet shown a clear sign of the faster growth we have been expecting, we think that factors such as tight credit conditions or consumers' pessimism about their future income prospects may have been weighing on consumption by more than we had previously assumed, and that such factors could be somewhat persistent. A memo sent to the Committee by my colleagues Andrew Figura and Geng Li discusses many of the issues surrounding our projection for consumer spending.

All told, the revisions that we have made to our various conditioning assumptions, to the near-term outlook, and to next year's consumption growth forecast combine to leave the level of real GDP at the end of 2016 just slightly lower than in our September projection.

Turning to the labor market, we read the September employment release as a little weaker than we had anticipated overall. *Total* nonfarm employment was about in line with our expectations, but *private* payrolls—which we think provide a better signal of the underlying momentum of labor demand—rose only 126,000 in September; taking into account revisions to July and August, private payroll gains averaged 130,000 per month in the third quarter, about 20,000 less than we were expecting. The unemployment rate ticked down to 7.2 percent last month, a tenth lower than we

expected, while labor force participation was unchanged, which also was a touch lower than we had expected.

We think that the labor data for October will show some imprint of the government shutdown, with the government furloughs pushing the unemployment rate up about ¼ percentage point to 7½ percent and associated temporary job losses among private contractors holding down payrolls by about 25,000. Looking through those temporary effects, we now project total payroll gains to average 150,000 per month in the fourth quarter, 15,000 per month less than in our previous projection. We project that the unemployment rate will be 7.2 percent in November and December—the same as in our September forecast.

Over the medium term—and in line with previous Tealbook projections—we expect that labor market conditions will improve further as actual real GDP growth outpaces potential. As you can see from the middle-right panel, the projected path of the unemployment rate is about unchanged in this forecast relative to September, reflecting the fact that the projected path for real GDP is also little changed. Hence, as in the previous Tealbook, we project that the unemployment rate will cross the Committee's 6½ percent threshold in the first quarter of 2015. At the end of 2015, our current projection is ¾ percentage point lower than the forecast we made in September of last year, when the FOMC first tied its asset purchase decisions to an improvement in the labor market outlook. The level of total payroll employment over the medium term—shown in the bottom-left panel—is also little changed from the previous Tealbook, and we continue to expect monthly total payroll job gains to average about 200,000 next year, 250,000 in 2015, and 200,000 in 2016—a contour that broadly matches that of projected output growth. By the end of 2015, the level of payroll employment is expected to be a little more than 500,000 higher than our September 2012 projection.

Finally, the limited incoming data on inflation have been in line with our expectations—and I should note that we will receive the September CPI, whose release was also delayed by the government shutdown, tomorrow morning. We continue to expect headline PCE inflation—the bottom-right panel—to average 1½ percent over the second half of this year, pushed higher by an upturn in energy prices and a modest projected pickup in core inflation from the low readings seen earlier in the year. Further out, our inflation forecast is little changed from September; in particular, we expect inflation to be about 1½ percent per year through 2016, though if you look carefully you can see the slight uptilt in that projection. The headline index runs a tenth below the core index (not shown) through 2016, as projected declines in crude oil prices put downward pressure on retail energy prices. Thus, PCE inflation is anticipated to remain below the Committee's 2 percent longer-term objective throughout the medium term. Steve Kamin will now continue our presentation.

MR. KAMIN. During the annual meetings of the IMF and the World Bank that took place a few weeks ago, the attention of policymakers from around the world was squarely focused on the United States: Would the debt ceiling be raised, and when

would the Fed start tapering? By comparison, developments abroad have been reasonably tranquil since your previous meeting: Financial conditions in the euro area remain suspiciously calm, stresses in emerging markets have eased, and incoming economic data have been largely in line with our expectations. Thus, for the most part, we have not altered our forecast for economic growth abroad to pick up over the next few years—from only 2 percent in the first half of this year to a healthy 3½ percent by 2016—but our faith in this outlook has been strengthened.

In the advanced foreign economies, GDP had already expanded a solid 1¾ percent in the second quarter—a little above what we estimate to be the trend rate for those economies—and we estimate that growth posted a similar pace in the third. To be sure, the third-quarter growth partly reflected a rebound of the Canadian economy from serious flooding back in June, while the pace of expansion in both Japan and the euro area appears to have fallen back. However, we aren't taking a lot of signal from these decelerations.

Starting with the euro area, we had always expected that economy to emerge from recession only haltingly, and we understood that its expansion of 1 percent in the second quarter was boosted by transitory factors. Accordingly, we were not that surprised by data pointing to a slowing of growth to about ½ percent in the third quarter. Although the euro area faces numerous headwinds that will keep the recovery quite subdued, several factors, including diminishing financial strains, reduced fiscal drag, and accommodative monetary policies, should push GDP growth up to 2 percent by 2015. Naturally, this forecast depends on the euro-area crisis continuing to wind down. We are encouraged that financial stresses in the region have indeed continued to ease, and policymakers are making progress, albeit slowly, on important reforms. Last week, the ECB released its long-awaited blueprint for assessing the health of euro-area banks, a prerequisite for its assuming supervisory control over these institutions next year.

In Japan, growth has also slowed, but from an unusually high 4 percent rate in the first half of this year. Moreover, at an estimated 2 percent in the third quarter, the pace of expansion—driven by yen depreciation, rising stock prices, and improved confidence—remains far above its trend rate of about ½ percent. Going forward, we are looking for output to decelerate to a little over 1 percent over the next three years as the consumption tax is doubled, thereby offsetting much of the BOJ's aggressive monetary stimulus. Even so, this should be sufficient to make significant inroads into Japan's resource slack and help push inflation up to 1½ percent by 2016, a performance that, if sustained, would mark the end of Japan's long deflation.

All told, we are looking for growth in the advanced foreign economies to edge up to just over 2¼ percent by 2016. Together with the acceleration we are projecting for the U.S. economy, this should provide further impetus to the emerging market economies. GDP growth in the EMEs has already picked up considerably from its slowdown earlier this year, rising from 2½ percent in the second quarter to an estimated 3¾ percent in the third. Part of that acceleration reflected an apparent rebound in Mexican GDP from its surprise contraction in the second quarter.

But perhaps more significantly, Chinese GDP soared an estimated 9½ percent in the third quarter, nearly 2 percentage points higher than our September forecast. To be clear, we do not believe the Chinese economy is returning to the days of double-digit growth rates. In fact, we are projecting growth to fall back to about 8 percent in the current quarter and to edge down further over the next few years. However, when Chinese growth downshifted to about 7 percent in the first half of this year, we had been worried that this might presage a further sharp slowing that could drag down many of China's trading partners as well. Accordingly, although China's economy faces many challenges—including still-rapid credit growth and a resurgence of property prices—its recent pickup reassures us that a hard landing is more of a risk to the outlook than a near-term certainty, and this is good news for EMEs more generally. In our projection, total EME growth rises further to 4½ percent next year and beyond, roughly its trend pace, as the recovery in the advanced economies leads to a strengthening of global trade.

Besides a hard landing in China, another risk to this outlook is that a resurgence of financial stresses might push one or more especially vulnerable economies into crisis, provoking a pullback by investors and triggering more-generalized turmoil in the EMEs. We are encouraged that emerging markets appear to have settled down a bit in the past couple of months, as Simon discussed. But a number of open questions remain. First, how will emerging markets respond when you finally reduce the pace of asset purchases? By our reckoning, a small reduction in these purchases should not be all that consequential, but we know that anticipations of tapering roiled emerging markets starting last spring, and that your decision not to taper in September helped diminish these stresses. Second, even if tapering proceeds smoothly, how vulnerable are emerging markets to the longer-term normalization of global interest rates that will take place as the recovery in advanced economies matures? In principle, the current configuration of bond yields and exchange rates should incorporate market expectations for future rises in global interest rates, but especially after developments since May, we cannot be so sure. And finally, how assiduously will the more fragile EMEs work to correct their underlying vulnerabilities? Years of low interest rates and ready access to international capital diminished the zeal with which EME policymakers addressed their fiscal and other structural problems, and it remains to be seen how quickly these countries can pivot toward more aggressive reforms. Thank you. David and I will be happy to answer your questions.

CHAIRMAN BERNANKE. Thank you. Questions for the staff? President Lacker.

MR. LACKER. Thank you, Mr. Chairman. First let me say, I appreciate the special memo on consumption. It got me curious about productivity, though. Your outlook is for productivity growth to pick up going forward. Nonfarm business productivity has averaged 0.7 percent per year over the past three years, and is at an annual rate of 1.7 percent, I think, over

the next three years in your forecast. I wondered if you could help us understand what drives that acceleration.

MR. LEBOW. Sure. Some of our interpretation of the performance of the labor market, as you know, is the story of normalization following unusually rapid job losses during the recession itself. We've seen a somewhat faster improvement of the labor market than would be expected under normal circumstances, given the GDP growth as it's measured over the past period, and that's reflected in the productivity figures that you've seen. Going forward, it's very hard to know when this period of normalization will end—what the right timing really is—but our projection is that it is coming to an end, and that we'll see GDP growth picking up, going forward, bringing it more into line with the pace of labor market improvement. So we'll see the faster productivity growth reflecting the end of that normalization period.

MR. WASCHER. The other thing I might note is that, if you're comparing the forecast with recent years, we do think that the financial crisis and deep recession had an effect on the supply side of the economy, and that structural productivity was weaker than, say, it had been prior to the crisis. A lot of that occurred through capital deepening—just very low rates of investment affecting the capital stocks and capital services. We also think there is probably some slowing in multifactor productivity that was associated with the deep recession through things like reduced R&D spending or reduced business formation. Going forward we have the growth rate of structural productivity reverting back to where it had been prior to the crisis. We're not catching up in terms of the level, but we are assuming a return to the growth rate that was evident prior to the crisis. So we are projecting structural productivity growth at a little less than 2 percent, and we think it fell to about 1¼ percent in, say, the 2008–10 period.

MR. LACKER. Okay. Could I follow up, Mr. Chairman? In your narrative what happened during the recession was the opposite of labor hoarding. It was sort of overly aggressively labor dis-hoarding in some sense, right? And since then firms have been able to meet a given expansion in demand. They want to hire more workers to get back to the normal level of staffing relative to the demand that they're seeing. Intuitively I'd picture that tailing off as looking like demand growth continuing to be met, but with lower employment growth. In my mind, that would conjure up a narrative in which demand keeps growing at the same rate—we've been getting 2 percent—and employment growth falls, rather than output growth rising for a given employment growth.

MR. LEBOW. I think that's right. I think that this story of labor market normalization is not an argument for faster GDP growth going forward. I think our projection of faster GDP growth stems from other reasons.

MR. LACKER. Okay.

CHAIRMAN BERNANKE. Other questions? President Williams.

MR. WILLIAMS. Just a question about how to read the market's expectations for the fed funds rate: It was striking that the primary dealer survey shows a huge number of people expecting the funds rate liftoff to be in the third or fourth quarter of 2015. But when you look at the expected fed funds rate, while it is consistent with liftoff around then, it is also consistent with the fed funds rate at about 1½ percent at the end of 2016. The primary dealers are saying around 2 percent at the end of 2016. When we look at the mode, it looks like liftoff won't be until 2017. This is a question for Simon, or for anybody: How am I supposed to understand what the market expectations for monetary policy are when there is such a big difference

between the mode and the implied fed funds rate—which is, I think, the reasonable view given the zero bound—as well as between the mean and the primary dealer survey?

MR. POTTER. The term premium could account for some of this, but it seems it would have to account for a lot of it. The model that produced this is the floor and caps—is that right, Bill? This is in Tealbook, Book A, I think.

MR. ENGLISH. No. I think the chart that you're showing is just based on the means and assuming no term premium.

MR. POTTER. I think President Williams is looking at the chart from Tealbook A, that has the mode and the closing caps.

MR. WILLIAMS. I'm actually looking at the Monday morning briefing chart.

MR. ENGLISH. I think on that chart we showed both the mean and the mode. For the means, we have done exercises looking at the term premiums implied by our yield curve models applied to OIS. Those term premiums have moved around over time and have accounted for some of the run-up and then some of the run back down again in those charts, which are plotted assuming no term premium. So there is some effect of term premiums there. On the modes, I actually am not exactly sure. Jim, can you tell us what's assumed there?

MR. CLOUSE. Yes. We don't make any adjustment for term premiums in the modes either. We have a lot of difficulty in teasing out the correct term premium for these futures paths, so we tend to show the straight readings.

MR. WILLIAMS. A question I also have is just how low these expectations are. The mode has the fed funds rate at zero through 2016 and at basically 75 basis points in the middle of 2017. What is your interpretation of why that is so low compared with the primary dealer survey?

MR. ENGLISH. I read the primary dealer survey as telling us something about the mean, like the mean values that are in that chart. And the difference between the mean and the mode is largely the zero bound. It's just that if you think the most likely path is some trajectory, you can't go below zero. But if the economy picks up and the funds rate goes up, you can end up quite a bit above that mode, and so the mean is going to just be pulled above the mode by the zero bound.

MR. POTTER. So is it possible the mode is still not that likely?

MR. ENGLISH. Well, yes, absolutely. And there is probably considerable uncertainty, so there may not be that much weight around the mode. There's a lot of uncertainty about the outlook for the funds rate, for sure.

MR. CLOUSE. Just for what it's worth, the models that we use to try to tease out the true underlying expected path were actually shown in one of the memos we sent to the Committee. And those models would have the term premium being negative, so that means the actual expected path is higher. At least according to that particular model, the expected funds rate at the end of 2016 is more like 2½ percent, which is actually a bit above where the Committee's expectations were and seemingly a little bit better aligned.

MR. WILLIAMS. Okay. Thank you.

CHAIRMAN BERNANKE. Any other questions for our colleagues? [No response] If not, then we can begin our economic go-round, and I have Charlie Plosser at the top of my list. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. There has been little change in Third District conditions since our previous meeting, with our region continuing to grow at a moderate pace. Indeed, this has been true since our June forecasting exercise as well. The partial

shutdown of the federal government has yet to show any noticeable adverse impact on our overall economic activity or the outlook for the region. Housing and commercial real estate activity continue to pick up; manufacturing continues to expand. Philadelphia leading indexes point to continued growth over the next six months, and the outlook among our business contacts remains positive. Our October Business Outlook Survey came in about as strong as our September survey did. The general activity index has now posted five consecutive positive readings and shows broad-based strength. The indexes of new orders, shipments, and employment remain well into positive territory, suggesting improving conditions. The robust growth in housing activity in July did show to a somewhat more modest pace than in August and September, although the data have not permitted us to be more precise about September housing permits as yet. The pace of commercial real estate activity has actually improved over the past couple of months. Our business contacts in the retail and service sectors continue to report modest growth through early October. Third District banks continue to report modest increases in loan volumes. Labor markets in our three-state region continue to slowly strengthen. Payroll employment has expanded over the past three months, and my staff forecast is for modest improvement in the regional labor markets over the next year.

On the national front, the outlook has changed little since June as well. The near-term outlook for 2013 has been marked down slightly, but the medium-term outlook for 2014 and ’15 remains pretty much the same as it has been for several forecasting periods. The September jobs report received more than its share of attention, given the delays in other important data releases. Although the report was perceived as weak, the overall state of the labor market continues to improve. It’s important to recognize that since the recovery began, the first estimates of payroll increases have been revised up, on average, by 29,000 jobs each month. I would also note that

the standard deviation of the revisions between the first print and the last print is more than 46,000. So I think we would be well advised to put very little weight on these initial estimates and avoid letting them play a large role in our policy decision process.

Looking past the monthly ups and downs, the economy continues to add jobs, and unemployment continues to fall. In this context, the recent drop in labor force participation rates has been viewed with some concern. The decline in participation rates leads some to view the fall in unemployment as overstating the progress being made in the labor market. There is also some concern that the unemployment rate might even reverse and move back up as discouraged workers return to the labor force. Research by my staff, using micro data from the Current Population Survey on the reasons for nonparticipation, questions this view. Since the start of 2012—that is, over about the past year and a half or two years, roughly speaking—the unemployment rate has declined a little more than 1 percentage point, and the participation rate has declined about 0.5 percentage point. Research by my staff indicates retirements can entirely accounted for the decline in the participation rate. Now, the decision to retire may well be affected by the state of the economy, but reentry rates from retirement are historically very, very low and indeed have not changed very much, even over this cycle. Thus, it appears unlikely that those who left the labor force, at least over the past couple of years, will seek employment and return to the labor force as the economy improves.

Overall, my view is that the medium-term outlook has changed very little since June. Output continues to grow; unemployment continues to fall; employment continues to grow; and we still forecast inflation to return toward our goal. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The Federal Reserve Bank of Boston's forecast is quite similar to the staff's Tealbook forecast, including some of the interesting contours of that forecast. Like the Tealbook, we expect that the second half of this year will look much like the first and that we will finally live up to our New Year's resolutions over the past few years and GDP growth will rise from 2 percent to 3 percent beginning in the new year. But just how confident can we be that this time we will achieve our resolution?

Looking at some of the initial conditions, one can certainly argue that an uptick to growth is a realistic expectation. An important component of this forecast is the increase in consumer spending due to a variety of factors that, by historical standards, appear to be quite favorable. Consumers are wealthier, as both the stock market and housing prices have surprised on the upside over the past year. While the recent payroll employment numbers have been disappointing, total payroll employment has risen by more than 2 million jobs over the past year. Oil prices have come down, leaving more disposable income to purchase other items. Finally, consumer balance sheets are healthier, and interest rates on auto loans and home loans remain quite low by historical standards.

I would have expected these same positive events to have carried over to improved consumer sentiment. However, that has not been the case. Work by the Boston staff finds that sentiment remains surprisingly low, not only by historical standards but also relative to factors that normally drive consumer sentiment. If one forecasts sentiment using economic variables that capture income, employment, inflation, commodity prices, and stock prices, there is a fairly tight in-sample fit. However, currently sentiment is roughly 10 points lower than what would be expected from the out-of-sample forecast equation. The source of the depressed consumer is hard to pinpoint, but it does raise a concern that after New Year's Eve, the morning-after

hangover may not lead consumers to spend as currently projected by models using historical data. Certainly, one might conjecture that another prolonged discussion about the debt ceiling and government shutdown will do little to boost consumer confidence in the future.

This highlights a second potential risk to the forecast: the outlook for fiscal policy. Even during less fiscally entertaining times, forecasts of government spending have economically meaningful standard errors. Work by the Boston staff looked at how well forecasts of government spending captured subsequent government spending. One might have expected that with an improved budget process, government spending would be fairly predictable. However, the standard errors for both semiannual and annual forecasts of spending since 1979 are relatively large and indicate a fairly high degree of uncertainty about the accuracy of government spending forecasts. In many cases over the past 25 years, the forecast errors have indicated that when the economy is weaker than expected, government spending tends to be larger than forecast. I am concerned that this time the correlation may switch sign. Government spending remains difficult to predict. But while the precise timing and nature of the next fiscal agreement remain quite uncertain, the risk that we will experience disruptive fiscal discussions followed by more short-term fiscal austerity than is needed in the current economy remains quite elevated.

In fact, my own recent forecast errors suggest that that pattern is something to worry about for the coming year. Over the past few years, my baseline forecasts up to the actual fiscal decisions were that the 2011 debt ceiling discussion would not be disruptive, that the sequestration would not be implemented, and that this year we would avoid a government shutdown and another disruptive debt ceiling discussion. That I have consistently assumed that irrational fiscal policy that damages the economy would be avoided, and that those errors have all gone in one direction with downside consequences for the economy, makes me pause as I

think about a 2014 forecast that once again assumes that fiscal shocks will not drag down growth next year.

Despite these concerns, I still expect the 2014 economic data to be better than the series of disappointments we experienced in the 2013 economic data, with real GDP growth accelerating from the 2 percent rate we expect in the second half of this year to 3 percent next year. However, my forecast, based on an optimistic expectation of improved consumer spending and fewer headwinds from fiscal policy, does not have balanced risks. The downside risks should make us unwilling to reduce stimulus until the economic growth we are expecting is clearly in the data, not just in the forecast. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. Data collected during the past six weeks suggest that economic activity in the Eighth District has grown at a moderate pace. Most business contacts in the District think their businesses are performing better than a year ago, but that business conditions in the third quarter were similar to those in the second quarter. In other words, there does not appear to have been any marked upturn in business performance so far during the second half of 2013, contrary to the Committee's hopes earlier this year.

Some signs from the District's formidable transportation industry do seem to indicate that improved macroeconomic performance is possible during the coming quarters. One large firm indicated that capital expenditure outlays will likely double next year, even in the face of relatively lackluster business conditions currently and relatively high levels of business uncertainty. This was a clear case of trying to put cash to work rather than allowing it to lie idle on a firm's balance sheet. Another large firm indicated some difficulty in attempting to hire about 4,000 temporary seasonal workers to handle increased holiday traffic. This could be an

indication that labor markets are somewhat firmer than the Committee has been expecting recently.

Reports for planned activities in manufacturing and most services have been positive. Real estate conditions in the District continue to improve in terms of both quantity and price. District job growth has been modestly slower than job growth in the nation as a whole. The District's unemployment rate, measured across District MSAs, was 7.4 percent in the latest reading, somewhat above the national unemployment rate. One concern of mine during 2013 has been that the District unemployment rate has begun to run slightly above the national rate, while historically, the District rate was well below the national rate. This is a trend to watch going forward.

Nationally, the economy shows few signs of the momentum swing to the upside that the Committee has been hoping for during 2013. Nonfarm payrolls were weaker than expected in September. Furthermore, there has been a marked slowing in the pace of private nonfarm payroll hiring over the past few months, relative to the first half of the year and the last quarter of 2012. Consumption spending is likely to come in lower than we would like during the third quarter, with especially slow spending in the service sector. Also worrisome, as mentioned earlier: There is, at this point, little evidence of a sustained rebound in labor productivity growth.

I still see inflation running well below our target of 2 percent. I view it as important to the credibility of our inflation target that we be able to hit the target over a reasonable time frame. With crude oil prices having recently turned down, it is probable that consumer energy prices will follow. Although inflation-sensitive data are sparse because of the government shutdown, available data have mostly come in lower than expected. Market-based inflation

expectations over the next five years remain around 1¾ percent, with inflation expectations over the next two years lower, a bit less than 1½ percent. I take that number very seriously.

Residential and nonresidential construction activity nationally appeared to advance at a fairly healthy pace during the third quarter. Still, continued declines in the housing affordability index are expected to dampen growth in residential housing.

Despite the lackluster data available as of this meeting, I caution the Committee to wait until the dust has settled on 2013 outcomes before judging the results, and on this dimension I agree with President Plosser. As always, our readings on the economy are highly variable and could be substantially revised.

I continue to see the case for an improved macroeconomic outlook in 2014 as good. In particular, with Europe finally exiting its recession and global growth prospects generally improving, a reasonable forecast is that 2014 U.S. GDP growth will top 3 percent. While it is true that many forecasts of U.S. GDP growth in recent years, including my own, have tended to be overly optimistic, I think it is unlikely that the U.S. economy will continue to surprise on the downside, barring a catastrophic event.

Speaking of catastrophic events, let me now turn to make a few comments on the national pastime. I refer not to the St. Louis Cardinals and Boston Red Sox World Series matchup, although I have recently marked up my probability of a disaster outcome in that sector [laughter] significantly. In particular, I may soon be forced to pay off my bet with President Rosengren concerning a six-pack of the "local brew" to the winner. No, I refer not to baseball but to the other national pastime: partisan bickering in Washington. While I agree with much of the analysis in the Tealbook concerning the potential effects of the government shutdown and the associated brinkmanship on macroeconomic outcomes, I am very cautious about any intimation

from this Committee that partisan volatility is a new variable governing monetary policy. This Committee may well need to make key monetary policy decisions at junctures when the level of partisan volatility is higher than desired, as it has in the past. And, accordingly, I think it is undesirable to suggest that the Committee will necessarily remain on hold until Washington waters are completely calm. That may be a very, very long wait. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. Before I get to my economic report, I want to get a jump on the praise and honors that you will deservedly be receiving over the next three months. It turns out, in 1932, the Coca-Cola Company sponsored a portrait of Santa Claus, and they have decided to update it this year to make it more modern. And my deadline for input is in early November. So with your permission—

CHAIRMAN BERNANKE. We'd have to check with my Yiddish grandmother on that. [Laughter]

MR. LOCKHART. By the way, just to prove the point, that's what Santa Claus used to look like. Next year— [Laughter]

The tone of anecdotal reports from a pretty large sample of contacts in the Sixth District over the past three weeks was downbeat compared with the period before the September meeting and earlier in the year. Many had expected a pickup in activity in the second half. That acceleration has not materialized. While most anticipate continued slow growth in the near term, many of our contact reports sounded the themes of increased uncertainty and greater caution.

The fiscal drama seems to have adversely affected household and business sentiment at least for a while. The Affordable Care Act, the sequestration, and the regulatory environment were also cited as factors weighing negatively on confidence.

A trucking firm expressed concern over a soft holiday season as some of its large customers, notably big-box and dollar stores, recently began cutting shipments. A national distributor of maintenance and replacement industrial parts described flat demand from its 150,000 industrial customers and offered that manufacturers are building for orders, not for inventory. Retail industry reports were mixed, but most contacts reported a decline in sales and demand following a slower-than-expected summer and back-to-school season. Some retailers also indicated that they planned to hire fewer seasonal staff, reflecting less optimistic expectations about the upcoming holiday season. We did hear reports of strength in consumer spending at the high end, reinforcing the perception of a two-tier consumer spending picture. We heard concern expressed that households with tighter budgets may incur a hit to disposable income because of higher health care insurance expense.

Business investment appetite and intentions remain soft, with outlays aimed at equipment replacement rather than expansion. We heard a number of reports of deferred investment decisions. Our anecdotal feedback on employment trends and intentions was mixed. Sectors such as energy, IT, auto, and construction continue to report incremental hiring. In the auto sector, however, a provider of temporary labor reported a slowdown in manufacturers' converting temporaries to permanent employees. A director in the hospital industry reported layoffs due to reduced Medicare reimbursement. Otherwise we mostly heard reports of delaying additions to employment levels and resorting to increased hours to meet business demand.

As regards price pressures, our contacts reported little concern about inflation. Cost pressures seemed to be well contained. Isolated industries, including fast food, grocery, and commodity construction materials, reported being able to get the market to accept small price increases. Wages remained stable across most industries.

To sum up, many of our business contacts this cycle reported revising down their expectations for the fourth quarter and 2014. I think it is prudent not to overreact to mood swings among our public contacts, particularly directly after the spectacle of fiscal impasse here in Washington. That said, my sense of the data points to continued slow growth in the vicinity of 2 percent rather than the hoped-for acceleration to something closer to 3 percent. So I am once more marking down my near-term outlook and struggling with the question of whether to scale back economic growth projections for the medium term. At the very least I feel I have to put more weight on downside risk for economic growth and inflation at this juncture than I did in September.

The Tealbook's economic growth projection was revised downward a touch in 2013, but revised up marginally in 2014 and 2015. My forecast continues to be less optimistic over the medium term than the Tealbook, and I admit to growing embarrassment with my persistently overly optimistic growth forecasts. I'm increasingly skeptical that the explanation is an unusual sequence of one-off events and temporary headwinds, and even if the reality is not something more persistent, I'm finding it hard to convince myself that the economy will not limp along, if not indefinitely, then for quite a while longer. This makes a tapering decision look more like a policy choice requiring extremely deft explanation, and I'll elaborate more in the next round on that.

In the very near term, we may not get much help in clarifying the economic picture from incoming data, some of which are likely to be less reliable. Also, the potential for some kind of replay of the fiscal drama clouds the near term through February at least. These are frustrating circumstances in which to wrestle with the question of appropriate monetary policy, and I look

forward to the next two rounds for enlightenment from my colleagues. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. I hope all don't take that attitude. [Laughter] President Fisher.

MR. FISHER. Thank you, Mr. Chairman. I had suggested in a note to our colleagues that we put our ear to the ground and try to get a feeling for how the government shutdown is actually affecting businesses and consumers, and I'll just give my own little report. First, with regard to our District, the 11th Federal Reserve District, most firms reported that the government shutdown had little to no effect on their business. The most severe impact was in airlines, energy permitting, and small business lending largely because of the e-system delays. A subsequent follow-up of our investigation indicates that at least in airlines and energy permitting there has been a snapback.

I then asked whether or not MasterCard could include a question in its spending pulse survey, which, as you know, I hold in high regard, as to whether or not it showed an impact of the government shutdown. It's a more thorough database, more national, obviously; it extends way beyond our District. And this gets to a point that President Rosengren raised. It's not clear that there was a direct impact, but there is a constant corrosive effect as we go through time. We're in for our ninth commission since 2010 investigating how we might deal with the budget issues, and although it's not clear from the analysis of those data, there does seem to be a cumulative depressive effect on consumers as well as on business operators. I just wanted to mention that because I think it's important for us to keep our ear to the ground in the Districts when we don't have reliable data that might come from central authorities because the government was shut down. My summary is pretty much that which the CEO of MasterCard

provided. I think it just wears you down, President Rosengren, over time. I don't think it augurs well for the future as long as this keeps going on and we revive it again in February and March.

With regard to my own District, we just completed and reported this morning the third of a series of our surveys. Just so that everybody is on the same plane, our survey collection period is October 15 to 23. So, Mr. Chairman, it's the most up-to-date of the surveys. I know Kansas City's is October 16 to 21. The rest of them are a little bit earlier. There is a bifurcation in what we discovered in our own surveys. Manufacturing activity in the 11th District picked up further in October. The production index, which is a key measure of state manufacturing, rose, and it suggests that output increased at a slightly faster pace than in September. New orders came in slightly higher than in September—that's the sixth consecutive month of increased demand. The labor market indicators are interesting: They reflect continued employment growth and longer workweeks and some upward pressure on prices and compensation costs. This differs somewhat from, and actually is somewhat contrary to, what we released this morning with our service-sector data and the subsurvey we do on retail sales. As opposed to the manufacturing sector, which I suspect is largely driven by exports, and particularly energy-sensitive exports, and which seems so positive still, service-sector activity slowed somewhat in October. The revenue index dipped a little bit. The employment index, however, increased, but hours worked decreased, in sharp contrast to what happened in the manufacturing sector. Price pressures increased while wage pressures, as you would expect, eased in October. So we have a mixed signal again in terms of the difference between what happened in the manufacturing survey and the service-sector survey. With regard to retail prices, we're seeing them begin to increase, but again, wage pressures are easing in October. So there's a bifurcation, as I suggested earlier, between the manufacturing sector and the more important service and retail sector.

I also asked Dunkelberg's organization to do a special survey of our District. What I found most interesting is that 55 percent of the businesses in the National Federation of Independent Businesses in my District have no desire to take on loans, and only 2½ percent cite credit as a problem in terms of the issues that they're faced with as businesses. So it doesn't appear that credit is an issue for the small businesses covered by that survey as it applies to the 11th Federal Reserve District.

With regard to my corporate interlocutors and the broader group that I personally survey across the nation, from all Federal Reserve Districts, I would say, as President Lockhart said earlier, that the assumption for the growth rate is roughly in the 2 percent range—not much acceleration. The highest I heard was actually from the express companies, including one in your District, President Lockhart—maybe 2½ percent—but in terms of the activity, it's still rather sluggish. I would say that the generic answer to my question "Why are you not hiring?" is as follows: "Why should I? My stock is up 150-plus percent. My margins are high and stable. My productivity is excellent, and I keep driving it"—and I'll come back to that in just a second. "My balance sheet is uberstrong and ubercheap, restructured, strongly financed." Nobody is telling me that we're about to see significant macroeconomic growth, as President Lockhart pointed out earlier. "Capacity utilization is not much of a strain. I'm not sure what my taxes are going to be, but I think they're going to go up. I have no idea how I'm going to be regulated." And here's an interesting point that somewhat differs with theory. "Nobody, including you, President Fisher, is telling me that inflation is about to be a problem, but I'm absolutely convinced it will be a problem long-term unless you manage the exit more thoughtfully than I believe the Federal Reserve is capable of doing."

So what am "I" doing in the meantime? One would think that, if one feared that we might have some inflation that resulted from our policy, one would begin to hire and one would begin to commit capital. Instead what they're doing is hoarding, and they're just driving their current workers to the maximum productivity before they add further. I know it seems like it's antitheoretical, but I think we have to put ourselves in the mindset of how CEOs actually think and how they actually act, and the way they're acting right now is basically harboring resources, manipulating the price of their stock by buying it back in or increasing dividends, and using the cheap cost of capital rather than putting people back to work.

I remain convinced, Mr. Chairman, that the combination of fiscal policy and monetary policy is working principally for the benefit of the higher-income groups, not of the two middle-income quartiles. And I want to just conclude on a personal note. Next week I'm going to be in Australia. I'm going to visit the courthouse in which my father was sentenced to prison, at the age of six, for seven years—you know the story—and I'm actually going to go to the railway station where he was picked up. This was after the Panic of 1907. The Fed was founded three years after he was arrested and imprisoned. One of the reasons the Fed was founded was to make sure that we didn't have these kinds of massive movements that resulted in—and you know more about this history than I do—these huge swings of recession and depression, and we created a central bank that would help and would aid stability. And it may be a chip on my shoulder, but I remain convinced—looking at the S&P 500; looking at the Nasdaq; looking at the spread, which, as pointed out earlier, has narrowed on triple-C credits; looking at what's happening in the credit markets and the disjunction that occurs now between that and our second mandate of employment—that the policy that we pursue is aiding and abetting the rich and the quick, but it is not benefiting the middle-income quartiles and in the end will be damaging to the

poor. This is my biggest concern. I'll discuss it a little bit tomorrow. I thank you for letting me speak, Mr. Chairman.

CHAIRMAN BERNANKE. Okay. Thank you. President Pianalto.

MS. PIANALTO. Thank you. I don't see the economic outlook much differently today than I did at our previous meeting. So I suppose I could stop there, but I will offer a few reasons as to why I don't see the outlook as changed.

As has been mentioned, the government shutdown has interfered with the flow of data that we would typically receive during an intermeeting period. Based on our Beige Book calls and outreach to my business contacts, economic activity in my District has generally continued to expand at a fairly steady pace, with particular strength in autos and shale gas extraction activities. But many District contacts emphasize the uncertainty about the outlook that rose as the government shutdown dragged on. They stated that they were waiting to see how that dispute would be resolved before making larger investment and hiring decisions. The postponement of finding a satisfactory resolution to the fiscal problems is being taken as just that—a postponement rather than a resolution. Depending on how business confidence evolves, there is room for either stronger economic growth, as the recent ISM data show, or more of the same slow growth trajectory.

Of course, the BLS did eventually release the September labor market report, and in my view it was a mixed bag of information. The employment gains continued at a rate of 148,000 in September, which is not statistically different from the average pace of gains over the previous six months. The media coverage following that release focused on whether that 148,000 pace might persuade this Committee to delay the slowing of our purchase programs. Because of that, it was hardly noticed that the unemployment rate dipped another tenth, to 7.2 percent. While it

certainly would be more encouraging to have stronger employment growth, the progress in the unemployment rate over the past 12 months has been primarily the result of employment gains that cumulatively, in my view, have been substantial.

As the staff memo on alternative simple rules for large-scale asset purchases demonstrates, expectations for the labor force participation rate are critical to any assessment of substantial progress in the outlook for labor markets. Despite the fact that participation rates remain about 3 percentage points lower than prior to the recession, a strong case can be made that much of the reduction in the participation rate has been due to demographic trends, not the business cycle. The reductions in participation that have occurred generally have been consistent with models of trend participation that are maintained by my staff and that were published in research done by the Board's staff several years ago. Relative to recent declines in participation, and the demographic trend that is pushing the participation rate lower, the Tealbook's projection of only gradual declines in the participation rate from today's level actually represents a small cyclical rebound in participation. And it's worth noting that even when we did see those relatively stronger employment gains during this recovery, we didn't see evidence that there would be a cyclical rebound in participation.

Now, in addition, my Bank's analysis of labor market flows continues to show a fundamentally less dynamic labor market, as measured by the churn rate, compared with either the 1980s or the 1990s. These changes look to be a part of a longer-term trend and, thus, are less likely to represent cyclical factors. My Bank's analysis suggests that the less dynamic labor market and a flat-to-declining participation rate make job gains of about 150,000 per month the expected outcome. In this model, these moderate employment gains result in steady progress in the unemployment rate, as we have in fact experienced over the past six months. So as much as

we'd all prefer a faster pace of job growth, we should not view the recent pace of job gains as inadequate for making progress in labor markets. While these results are model dependent, the labor market data of the past few years have repeatedly shown that this recovery does not require 200,000 jobs per month to make progress on the unemployment rate. Indeed, the unemployment rate has declined 2.8 percentage points since its peak at 10 percent in 2009. Again, although a faster decline would have been helpful, given the high starting rate of unemployment, the decline in the unemployment rate in this recovery turns out to be comparable to or faster than that in the prior two recoveries.

Turning to inflation, we will have to be cautious in interpreting incoming price reports for some time. While people are generally discussing the effects of the shutdown on employment figures, the shutdown of the BLS also has the potential to add more noise to our price data. Analysis at my Bank suggests that the errors due to missed price observations at the individual item level will be the largest in the October data, but that errors can persist for up to six months, as not all items are surveyed every month. Of course, errors in the CPI will also affect the PCE price index, given the common source data for these indexes. Given these issues, it seems most likely that the somewhat reduced signal in incoming data will lead us to conclude that the inflation rate has remained low but should gradually head higher.

While uncertainty has increased, and data releases over the next few months will have more noise than usual, my forecast is little changed from the previous FOMC meeting, and I continue to see slow but steady improvements in labor markets and a gradual rise in inflation toward our 2 percent longer-term objective. I continue to judge the overall risk to economic growth, unemployment, and inflation as broadly balanced. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. The partial government shutdown has complicated our job, but only in three relatively minor ways. First, the drop in government-worker hours creates a one-time dip in fourth-quarter real GDP. But with retroactive paychecks for all federal employees, fourth-quarter nominal GDP and GDI are unaffected, and those measures are arguably the more relevant ones that are determining aggregate demand in this situation. The indirect impact on private-sector contractors and suppliers also seems modest. Second, the budget and debt ceiling battles had a broader effect on confidence and sentiment, but that effect appears to have been transitory. Daily measures of policy uncertainty spiked in mid-October, but then they fell back rapidly after the government reopened. Similarly, daily Gallup polls of consumer confidence bounced back significantly after dropping in the first half of October. Such ephemeral shifts in uncertainty and consumer confidence should leave relatively little imprint on household and business spending. Third, the shutdown delayed some macroeconomic data releases, but we are far from flying blind. Only two releases are still missing: September new home sales and the September CPI. The CPI will be released tomorrow morning, but already private-sector data have helped fill the gap. We have the September and October inflation readings from the Billion Prices Project developed at MIT. Each day this initiative scrapes Internet price data and creates an index that closely tracks the CPI. Its latest readings, running through near the end of October, show a CPI-consistent inflation rate of about 2 percent, indicating that overall inflation remains in line with recent trends. I might add that the initial read on third-quarter GDP, which won’t be available tomorrow as originally scheduled, is mostly an aggregation of publicly available monthly data, plus BEA assumptions about missing months. And it typically doesn’t add much to our existing information set.

Now, to further make up for any remaining data shortfall, we have the Beige Book and other business reports. My contacts suggest that the forces driving a pickup in economic growth remain on track. For one, demand for housing and home-related products has remained resilient despite the run-up in mortgage rates. Similarly, in commercial real estate, the rise in CMBS spreads is not hampering activity, but merely prompting developers to switch to bank loans as a source of funding. More broadly, my business contacts do not see significant changes in financial conditions. Large corporations can still readily find funds at low rates, and credit availability for smaller firms and those with below-average credit qualifications has not deteriorated either. More broadly, with record highs in the stock market, a depreciating dollar, and shrinking junk bond yield spreads, I see little evidence of a significant tightening of overall financial conditions since the spring. This conclusion is supported by measures of aggregate financial conditions compiled by Bloomberg, the Chicago Fed, and Goldman Sachs, which are little changed or even looser than earlier this year.

Let me turn to labor market conditions; I'm going to echo some of the comments President Pianalto just made. That is, to interpret recent employment reports, it is important to set a realistic benchmark. Researchers at the Chicago and San Francisco Feds have estimated that job gains of more than 125,000 jobs per month should be enough to continue pushing down the unemployment rate. September payrolls rose more than that. Likewise, a range of other measures, including the unemployment rate, have shown diminishing labor market slack. As I have noted previously, the unemployment rate is a highly reliable, though not perfect, measure of labor market strength.

Recent work by my staff at the San Francisco Fed has studied the reliability of the unemployment rate by reexamining the relationship between GDP and unemployment, otherwise

known as Okun's law. Over the past several years, we have heard repeatedly that Okun's law is dead, but because it is one of the few things I learned in economics, I really want to keep to it, so I'm going to argue that it's still alive. The main evidence for the demise in Okun's law is a surprising divergence in the movements of unemployment and GDP during the recession and recovery. Early in the recession, the unemployment rate rose rapidly, while GDP fell more slowly. As the economy recovered, the reverse occurred, and the unemployment rate has come down significantly while GDP growth has been moderate at best. My staff revisited this issue using both real-time and revised data, and they found some pretty interesting results. They found that in real time the initial data releases on the growth in real GDP per capita and changes in the unemployment rate did indicate some breakdown in Okun's law. However, revised data showed no such disruption in the typical relationship between GDP and unemployment. GDP now shows a sharper decline during the recession and faster growth during the recovery than the original estimates, restoring the normal Okun's law relationship. This analysis also found that the recent behavior of Okun's law is remarkably consistent with the pattern in other deep recessions, looking back at 1973 and 1981–82. Interestingly, if you use real gross domestic income as a measure of output rather than GDP, Okun's law was never particularly out of line, either in real time or with the revised data. Altogether this evidence suggests that the unemployment rate is not out of line with signals from the aggregate output and income statistics. This reassures me that the unemployment rate continues to provide a reasonably accurate signal about the strength of the labor market and the degree of slack in the economy. Thank you.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. As best I can tell from the data in hand and my business contacts, the economic situation hasn't changed a great deal since our September meeting, so in some respects, like President Pianalto, I could stop at this point. I'll go on briefly.

It's still difficult to assess the strength of the economy, especially the effect on activity of the financial market tightening overall since last spring. Not only was the data flow interrupted by the government shutdown, but it is also hard to interpret the data and anecdotal information we do have, because they are colored by households' and businesses' reactions to the drama in Washington. With that caveat, and as in the Tealbook, it looks to us like economic growth is continuing to muddle along at about a 2 percent rate. Two thousand thirteen will likely turn out to be yet another example of events intervening to dash our beginning-of-year hopes for a meaningful step-up in activity. The recent labor market data are consistent with this assessment. My conversations with directors and business contacts also reinforce this view of muddling along.

On the positive side, auto sales continue to be relatively strong. Demand and pricing for steel has remained solid. Businesses have breathed a sigh of relief with Europe finally beginning to grow again, and there are fewer worries now about slowing in China. But the downside risks remain substantial. In addition to the usual suspects—perhaps it is a national pastime—there is the new risk that Washington will schedule quarterly tournaments in brinkmanship. It's sort of exasperating. In such circumstances, businesses and households are exceedingly unlikely to accelerate their spending plans. Indeed, none of my business contacts expressed plans to increase hiring or capital expansion through the first half of 2014 and certainly not before customer demand increases substantially, as President Fisher also alluded to. And inflation continues to be low.

In this environment, accommodative policies remain essential to supporting the economic growth prospects that we do have. In sum, the limited information we have received since our September meeting did not strengthen the case for making an initial reduction in the pace of asset purchases. We are still very much in a wait-and-see mode for our long-awaited virtuous cycle. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. During the intermeeting period, we heard numerous reports in the Ninth District that indicated that employers were finding it more challenging to find workers. Both small and large businesses from around the District told us that they saw the pool of available workers as being smaller and systematically lower quality than a year ago. These reports are congruent with the low unemployment in our District. As of August, the District unemployment rate was around 5 percent.

However, despite the reports of labor market tightness, there is little evidence yet of accelerating wage pressures. Businesses largely continue to think of wage growth in the 3 to 4 percent range as being appropriate. Indeed, the Ninth District Beige Book reports that, just like over a year ago, more than 40 percent of companies report no plans to raise wages. We should, of course, be cautious about generalizing to the entire country from the small Ninth District. But that said, I do see these observations as suggesting that wage and goods inflation pressures will remain muted nationally, even when unemployment is considerably lower and when workers have become much harder to find.

In passing, I will comment on some of the work that President Williams summarized and the work that President Pianalto summarized. I think that this work is very valuable in trying to provide a benchmark look at the labor market, but I also think that wage pressures and

inflation really are a very important guide in terms of thinking about whether or not labor markets are improving too rapidly or insufficiently rapidly. And I will come back to that when I talk about the national picture, which I am about to turn to now.

So let me turn to the national economy. It's tempting at this point in my remarks to spend a great deal of time on the evolution of labor market indicators since last September. After all, our communication—indeed, our thinking—about the asset purchase program has tended to center on the following question: Has the labor market improved sufficiently relative to last September to warrant reducing the flow of purchases? But the reactions of markets and the public to our communications over the past six months have convinced me that our focus on this backward-looking question is leading us astray. In my view, the markets and the public see the FOMC as being forward-looking decisionmakers. As a result, markets and the public are not all that interested by what we meant in September 2012 by the words "substantial improvement," or even what we mean by those words now. Instead, they operate under the presumption that we will reduce the flow of purchases whenever we believe that doing so is necessary to curb an overly rapid rate of expansion of prices and/or employment.

This assumption by markets and the public that we will taper when we feel the economy is in danger of overheating is exactly what makes near-term tapering so challenging. Under what I perceive to be the Committee's monetary policy stance, my outlook for the national economy is not all that different from Tealbook, Book A's. I see inflation remaining below target for the next four to five years, and unemployment falling only slowly to its lower, long-run level. How should the Committee respond to such an outlook? Both prices and employment are too low relative to the Committee's long-run goals. With this outlook, talking about tapering sends the

following message: "The Committee is trying to slow the recovery down even though the economy remains far from the FOMC's stated long-run goals."

And just forget about the employment picture for the moment. There is a long-standing debate in economics about the effect of monetary policy on employment. That debate has gone on for many years and will continue to go on. There is much less of a debate on our ability to influence prices. So let's just focus on inflation. It is running at about 1.2 percent, and we expect it to rise only slowly back to 2 percent. Reducing accommodation, given that outlook for prices, tells the public that we actually prefer to see persistent gaps between realized inflation and our target. With that messaging in mind, I don't think we should be surprised that our recent communications have created considerable policy uncertainty.

Now, as it turns out, I think the markets and the public are right that the FOMC is ultimately a forward-looking body of decisionmakers. I think what the markets and public are missing is that there is something else in our thought processes, that our choices about asset purchases are not based solely on our assessment of the economic outlook, or whether the economy is overheating or not. Instead, our decisions about this tool are being influenced in important ways by costs and efficacy considerations. In my view, our real communication problem is that we have not been sufficiently transparent about the importance of these other factors in our thinking. So what I'm suggesting here, Mr. Chairman, is that in addition to the three principles you laid out, we should consider adding a fourth principle of communication: that we should emphasize the cost and efficacy considerations that make LSAPs distinct in our mind from the fed funds rate. I will have more to say about this issue of transparency in the next go-round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President George.

MS. GEORGE. Thank you, Mr. Chairman. The District economy continues to grow. It has been supported by a notable pickup in construction. Employment continues to expand at a moderate pace in most District states, although those gains have slowed somewhat over the past six months in part because of job losses in the federal government and energy sectors. District manufacturing activity expanded in September and October, and manufacturing survey respondents expect a similar pace of expansion over the next six months. Energy activity remained steady in September, with rig counts roughly flat and coal production improving slightly. The corn and soybean harvest is well under way across the Midwest. Yields are healthy, and as a result we are experiencing lower crop prices, which have helped the livestock industry to surpass breakevens for the first time in over a year. But despite projected lower farm incomes, District farmland values have continued to rise to about 20 percent higher than a year ago.

My District business and labor contacts met last week, representing a variety of national and global businesses in areas such as children's apparel, supplying stores like Wal-Mart, Target, and Kohl's; fueling stations and convenience stores; sawmill and wood products; cement manufacturing; and an electrical workers union. Most are optimistic about business profits, although all noted growing regulatory burdens, leading some of them for the first time in their company history to add regulatory compliance departments and staffing. A number of them highlighted the direct or indirect effects of the government shutdown on their businesses, focusing particularly on heightened uncertainty and lower confidence levels. And, finally, contacts expressed concerns that they were experiencing now, or would soon experience, shortages of skilled labor in trade professions as construction activity continues to pick up.

Turning to the national economy, my overall assessment is largely unchanged from September. The challenge, as others have noted, over the next few months will be to sort through the likely temporary shifts in employment related to the government shutdown and debt ceiling debate and to assess the underlying momentum for the economy. When I look at the August 2011 debt ceiling crisis as a proxy, I note that the three-month moving average of monthly payroll growth slowed from 210,000 in June to 140,000 in August. And yet within three months the measure of employment growth bounced back to 190,000, and it further accelerated to 270,000 by February 2012. Measures of consumer confidence followed a similar pattern, down sharply in August 2011 but back to earlier peaks by February 2012.

As I look beyond current fiscal headwinds and disruptions, my outlook for the labor market continues to improve. I would note that the Survey of Professional Forecasters' one-year-ahead forecast for nonfarm payroll growth was 149,000 in the third quarter of 2012, and it is now 181,000. I expect inflation to pick up in the second half of this year and next year as labor market conditions continue to improve, private demand strengthens, and inflation expectations remain stable.

And, finally, a comment on banking conditions based on banking contacts' and supervisory staff's feedback: I continue to watch the challenges that the banking industry faces around these extraordinarily low interest rates as their net interest margins compress and the search for yield continues. Among smaller banks, I see renewed interest in commercial real estate lending, with particularly stiff competition resulting in longer maturities and fixed rates. Among larger banks, a sizable release of reserves related to better asset quality now suggests very thin coverage of future losses at a time when lending to commercial and industrial customers is growing, and some of those quite leveraged. Results of our shared national credit

review and the Senior Loan Officers Opinion Survey corroborate some of these concerns. Of course, I see plenty of evidence that examiners have this in focus, but to stem the tide of search-for-yield incentives will be difficult as long as this low-rate environment persists. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Our survey indexes haven't changed much in the past month. Manufacturing numbers are essentially flat, and our services numbers remain positive without much change. Our anecdotal reports are generally consistent with the sense that little has changed, with the exception of widespread reports of slowing activity in the D.C. area due to the government slowdown, but these are not at all inconsistent with the staff assessment reported by David Lebow—essentially that this will be virtually entirely a transitory affair. We have also heard reports of some offsets in the form of increased traffic at private amusement parks, private Civil War sites and museums, hardware stores, and fishing supply stores, where the increase in weekday traffic was particularly noted.

In addition, we have heard a lot from our contacts about the fallout from the Affordable Care Act. There have been many reports of employers' keeping staff levels under 50 and cutting employees' hours to under 30. In fact, we heard of a pair of franchises that were arranging to share some full-time employees to keep them under 30 hours each at each firm. More broadly, many contacts reported that the ACA was having a chilling effect on business because of the general uncertainty about its implementation.

We have also heard ubiquitous reports of shortages of skilled labor from our contacts. In addition to the usual stories about IT workers, many reports center on skilled trades, such as maritime maintenance, sewer workers, pipefitters, auto mechanics, plumbers, and carpenters.

Contacts say that the entry of younger workers is not keeping up with the need to replace retiring workers.

Turning to the national economy, this Tealbook's narrative is a familiar one. First, it acknowledges that real economic growth has not been as strong as had been predicted. Second, it pulls down the near-term forecast. And, third, it reiterates that growth will pick up significantly within a couple of quarters—in this case, one or two quarters—and will continue at that higher rate for several more years. But real GDP growth was 2.0 percent in 2011, 2.0 percent in 2012, and is now predicted to be 2.0 percent in 2013. I recognize that reasonable people can disagree on the relative weight to place on recent experience versus the more distant past, years when significantly higher growth rates were more typical, but for me the current data loom large.

The staff prepared a very helpful memo for this meeting providing more detail on the underpinnings of their forecast of an acceleration in consumer spending. I very much appreciated the additional insight into their thinking. While the story hangs together given the underlying premises, I find myself unpersuaded by the premises. One key driver of the acceleration is improvement in consumer optimism. This has been commented on around the table so far. This is an intangible factor that forecasts are inherently subjective on, so a wide range of views are possible. Another premise of the acceleration-around-the-bend hypothesis is the pickup in growth in real disposable income. Some of this represents anticipated fiscal policy shifts, but the bulk appears to stem from a persistent pickup in productivity growth in the Tealbook, as I was asking about earlier. Growth in output per hour in the nonfarm business sector has averaged 0.7 percent per year for the past three years, and the Tealbook has it averaging 1.7 percent for the next three years. To me, productivity growth seems likely to be 0.7

in the years ahead rather than 1.7, particularly given the extent of anecdotal reports of regulatory impediments to investment and economic growth.

All of this leads me to believe that consumer spending is unlikely to accelerate much at all in the near term. And outside of consumer spending, it's difficult to find any other components of demand that are likely to fuel a significant pickup in top-line economic growth. As a result, my outlook is very much like the projection I sent in for the most recent SEP, which had growth at only slightly above 2 percent for next year and beyond. I think we need to take very seriously for our policy deliberations the possibility that growth continues to come in at 2 percent. If we get 2 percent rather than the acceleration projected by the Tealbook and others, I think it's likely to be because productivity doesn't accelerate to the late-20th-century average. If so, I don't think 2 percent growth should be taken as any sort of monetary policy failure. And tying balance sheet policies to a pickup in growth that may never come may keep us on a hamster wheel of asset purchases for a long time to come. Thank you.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. I certainly don't want to stay on a hamster wheel. [Laughter] That doesn't sound very attractive.

I don't have much to add to what has already been said. On the economic growth side, we still seem stuck around 2 percent, as President Lacker has said. And this pickup that most of us anticipate has not yet been realized. It remains a forecast. Focusing on the growth side of the ledger, I am a bit disappointed by the recent data, to the extent that we have data. Three areas have gotten my attention. First, payroll employment growth appears to have slowed, even before the effects of the government shutdown. Second, it looks like the earlier rise in mortgage rates has taken some of the zip out of housing. I'm particularly struck by the weakness in pending

home sales. And, third, capital spending is a bit weaker than I would have anticipated, given the favorable fundamentals of the corporate sector—a high level of profitability, very liquid balance sheets, and readily available credit at low interest rates. In particular, with respect to capital goods orders, the most recent durable goods orders report was quite weak when you look past the big upsurge in aircraft orders.

Now, all of that said, prospectively, I am still becoming more optimistic, once again. First, financial conditions have eased significantly over the past few months. Longer-term interest rates are down, stock prices are up, and the dollar is a bit softer. Second, it appears that credit availability is improving. This is evident not only in the results of the Senior Loan Officer Opinion Survey, but also in my conversations with some of the smaller but well-established businesses in my District, who say that the banks are now tripping over themselves in their willingness to do business. Third, we have had a recent drop in gasoline prices, and that will help support real disposable income growth. Fourth—and this is one I say with great trepidation—I do think the risk of another debt ceiling debacle has fallen, given the negative political consequences for those who have wanted to use it as a weapon. We'll see if that turns out to be right or not, but that's my presumption. And, fifth, every month we get a little bit further through this period of significant fiscal restraint. As the staff has noted, the fiscal restraint in 2014 will be roughly half of what we experienced in 2013. As the degree of fiscal restraint wanes, I think that should lead to a somewhat stronger growth pace. So despite my having been wrong before, I continue to expect that economic growth will be a bit faster in 2013.

On inflation, given the delay in the release schedule caused by the government shutdown, there is very little new information since the previous meeting. But I will look at the Billion Prices data set. Anecdotally, when I talk to businesspeople, there seems to be very little price

pressure in terms of inputs or in terms of their ability to raise the prices on outputs, and the situation doesn't really seem to have changed materially in recent months. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. It's challenging to make monetary policy in the fog, and at the moment that fog is especially dense. The latest employment report did show an upward revision to the rather tepid payroll gains originally reported for August. Even so, the pace of monthly payroll gains shows a worrisome downward trend: 185,000 over the past 12 months, 163,000 over the past six, and 143,000 over the past three. The unemployment rate in September rounded down one-tenth from August, but the participation rate failed to reverse any of its earlier declines. Given the noise that the government shutdown will introduce into the next employment report, it may be some time before we get a clearer read on whether the slowing we are seeing in the pace of labor market improvement is just a temporary step down along a path that will eventually exhibit greater momentum, as in the Tealbook baseline, or whether the data instead portend a more lasting shift to a scenario of slower progress.

In June, the central tendency of our GDP growth projections for the second half of 2013 was about 2¾ percent. Now the Tealbook projects just 2¼ percent, and only a small portion of this downward revision is due to the effects of the government shutdown. Once again, the hope for acceleration appears to have receded into the future. I recall President Rosengren drawing an analogy to *Waiting for Godot* in the previous meeting. This observation is sobering not only because the current state of the labor market is unacceptably weak, but also because of what it says about our ability to forecast the economy's future course. It thus raises questions not only

about the appropriate stance of policy today, but also about the appropriate conduct of policy in a world characterized by such great uncertainty.

At the risk of oversimplifying, perhaps it is useful to consider four scenarios for the economy going forward, all of which, to me, have some plausibility. In scenario 1, the run of bad luck we have experienced over the past several years is about to end, and we are poised to see a notable pickup in growth along the lines of the Tealbook's faster-recovery scenario. In scenario 2, growth picks up as the various headwinds restraining demand abate, but more gradually, as in the Tealbook baseline. In scenario 3, we are already at the new normal as far as economic growth is concerned because structural damage to the economy from the recession and the financial crisis exceeds that in the baseline. In this supply-side-damage scenario, the job market, along the lines that President Lacker described, will continue to tighten even absent any meaningful pickup in demand because structural productivity growth has declined. Finally, in scenario 4, structural productivity growth has not declined, but private spending picks up over time by less than the staff project, a scenario that seems entirely possible given the huge uncertainties surrounding our forecasts of private consumption and investment spending. In this scenario we remain stuck in the mud, with economic growth continuing at a trendlike pace and little further progress in the labor market.

Thoughtful arguments have been made around the table in support of each one of these scenarios. Of course, like the Tealbook, many of us have been making overly optimistic predictions over the past several years. Although there are some tangible factors we can point to, such as the European economic and financial situation and the course of federal fiscal policy in the U. S., I believe it's fair to say that we do not fully understand why growth has remained so persistently slow.

My own modal outlook follows scenario 2, something similar to the Tealbook baseline. I see the economy developing momentum, but only gradually and only in a context in which monetary policy continues to provide accommodation for a long time. To be sure, I'm quite uncertain about this outlook, as it reflects more a tendency to draw inferences from past forecast errors than any clearly articulated view of exactly why aggregate demand is picking up so slowly.

The other scenarios that I outlined also seem possible. For example, as the staff have noted, the fact that growth of gross domestic income has outpaced GDP growth suggests that demand may already have picked up more than we recognize. The structural-damage scenario also strikes me as a realistic possibility. It is entirely plausible that the weak productivity growth we have seen since 2010 reflected at least in part the reversal of productivity toward its structural level following outsized gains in 2009. But if payroll gains continue at the pace we saw last year in the face of only 2 percent GDP growth, could that still reflect catch-up? The longer productivity keeps growing in the 1 percent range, the greater the likelihood that we may find ourselves in a world similar to that characterized in the supply-side-damage scenario of the Tealbook. Scenario 4 is, to me, the most worrisome possibility. There, productivity growth does pick up, but GDP growth does not, and the pattern of improvement we have seen in the labor market over the past year continues to stall out.

Given the plausibility of all these scenarios, we need to ensure that policy will be appropriately positioned no matter which one unfolds. In this respect, our current plans with respect to asset purchases and our threshold-based forward guidance work reasonably well, as I see it, in the first three scenarios. If the headwinds lift more rapidly—scenario 1—we will be able to wind down the asset purchase plan as envisioned in June, and if unemployment reaches

6½ percent sooner than we anticipate, we could begin to remove accommodation sooner than in the baseline, as would be appropriate. In scenario 2—the Tealbook baseline—our current plan to taper asset purchases as more evidence accumulates that we are on track and to maintain an accommodative policy for some time thereafter will get us back to our full employment and inflation goals, although the projected pace of progress is quite slow. If slow productivity growth continues because of structural damage—scenario 3—our plan should also work. The labor market would continue to improve even though growth may not pick up, but we can taper asset purchases as we see that progress, and if unemployment declines quickly, it would likely also be appropriate to remove accommodation sooner than in the baseline.

What worries me most is scenario 4, in which we're stuck in the mud and progress stalls, because here the risks of stagnation and disinflation are significant, and policy does not seem appropriately positioned right now to respond. In particular, we may not then be able to end our asset purchase program with a declaration of victory, and the outlook, absent further policy measures, would be unacceptably weak. Tomorrow I will reflect a bit more on how we might respond to such a scenario.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. I think a good many of the interventions in this go-round have continued the theme of the past several meetings of asking two questions. The first is: How much underlying momentum is there in the economy for faster economic growth in the near to medium term? And the second is: To the degree that momentum is lacking, what's the relative persuasiveness of explanations based on some form of structural damage—which is presumably not susceptible to repair through monetary policy—as opposed to continuing or post-crisis headwinds, which monetary policy accommodation should be able to

offset, at least in part? I agree with those of you who have already suggested that there may not be a whole lot that is useful to add to explanations on either of those questions since the previous meeting. It's only been six weeks. Some of the relevant data are unavailable or potentially inaccurate because of the shutdown, and it's likely that the shutdown and fiscal cliff dramas themselves have affected economic activity and confidence.

I actually didn't feel as though there was much useful that I could add in terms of economic analysis at this meeting. In fact, it was kind of summed up for me last week when I was in a supervisory meeting at which senior managers of a large financial firm observed that there was a noticeable uptick in inquiries from clients on both IPO and M&A activity. And then as soon as that was noted, the senior managers themselves began to disagree as to whether this interest would actually ripen into a lot of deals and whether, even if it did, those potential deals were a one-time surge that had built up over some longer period or the beginning of a steadier flow of transactions. At that point I just became the observer as these people within the same firm argued back and forth, and after about 10 or 12 minutes, they all agreed that they'd have to wait a few months to make a more informed judgment because everything recently was sort of distorted.

So I thought about using this time to address areas—labor market or housing or business investment topics—that are less dependent on current information, but because I'm going to have a good bit more to say during the second go-round, I'll stop here on the theory that it does one's colleagues a service not to say much if there's not much useful to say.

CHAIRMAN BERNANKE. Thank you. Governor Stein.

MR. STEIN. Thank you, Mr. Chairman. The current picture and recent news seem to be, as many people have said, somewhere between mixed and tepid. I won't try to review the particulars, because they've been well explored by others.

Looking forward, my baseline outlook is broadly similar to the Tealbook in that I'm still holding to my belief in unicorns and faster economic growth in 2014. But for the purposes of thinking about policy, I thought about it very much as Governor Yellen did, which is that the interesting and challenging scenario for us to spend time thinking about is the one where the next six to nine months evolve kind of like the previous period, where there's this muddle, and we have this difficult identification problem—is it structural, is it demand? It's really hard to tell when things are just not going all that well. And given that: What are we going to do in December? What are we going to do in March? What are we going to do in June? I think the answer is pretty clear for December at this point—that we will be sitting tight. I think as we get toward March, this muddle scenario becomes a really interesting and open set of questions, and as President Lockhart said, I think this is where we're going to have to really be very deft.

I want to mention very briefly one specific issue with regard to the issue of deftness. Whenever we get to the point to start talking about tapering again, what might this do to markets? How much of a further leg up in rates might it cause? What might that, in turn, mean for our ability to pull the trigger? In other words, the now famous market dynamics that were unleashed in May and June—are we going to revisit those? On the one hand, if you think about it in terms of the level of rates or term premiums, I think you draw a fair amount of comfort. In other words, rates are still—even though they've backed down a bit—substantially higher than they were in May. So if you think that that's the measure of froth, I think you could feel quite a bit more comfortable about where we are. On the other hand, I've been wondering if there's any

independent information in the fact that interest rate volatility as implied in swaptions has actually come down quite significantly since the September meeting. What might that do to the willingness of various market players to take on leverage, to reengage in carry trades, and all of that?

This is obviously hard to do systematically. On the notion that the plural of anecdote is data, I looked at eight of the research reports put out by the broker–dealers in the last month on rates. It's interesting. It's just a collection of stories, but the uniform theme that comes across very, very strongly in these eight reports is that the levered-yield-curve carry trade seems to be back, at least as an item of discussion. To be clear, these eight reports were divided on what they were telling their clients to do. Five of them said, "You should max out on the carry trade, five to seven years; take leverage, do that." The other three said, "Don't do that. Everybody else is doing that, and if you do that, you're going to get hurt." So there's no implied investment advice in any of this, but it was clear that this was a topic of conversation. Again, you take this all with a fairly large grain of salt, and even if I was sure it was right, I don't mean to suggest that there's a clear-cut normative implication for what we should do. I think it's just a way of underscoring what Dennis said earlier. It's going to be an environment where we're going to have to be pretty deft because I think as we go along longer, especially if we go out to March, there's just going to be more of this kind of uncertainty built up in the markets—uncertainty from our perspective as to how markets will respond to anything we do. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Nobody does that trade anymore. It's too crowded. [Laughter] Governor Powell.

MR. POWELL. Thank you, Mr. Chairman. My conversations with bankers and other business executives and financial market participants suggest continued gradual improvement in

conditions. Not one of my correspondents offered a narrative of significant improvement, nor did anyone see significant weakening in conditions. On the other hand, many offered negative comments about the course of events in Washington, and there was a division between those who saw the shutdown and the debt ceiling standoff as having hurt their results and those who did not. It is not at all implausible to me that there will be another confrontation over the debt ceiling early in the new year. For those who engineered the last confrontation, maybe not much has changed. I would agree with Bill that the likelihood of such a confrontation has fallen, but I actually think it is higher than people think it is.

Turning to the data, at the time of the September meeting there was some evidence of weakening in the economy. And since then, in my view, at the margin there are additional signs of weakness as, perhaps, more accommodative financial conditions have not quite offset the drag from the confrontation.

I believe that there has been significant progress in the labor markets since September 2012, and for me payroll gains in the range of 150,000 to 175,000 would be sufficient for a taper in the right circumstances. Nonetheless, if you look at the private payroll numbers, private payrolls were about 212,000 per month in the first quarter, 190,000 in the second quarter, and 129,000 in the third quarter. And there is no denying that that is troubling. My own version of the unicorn that Governor Stein referred to is wondering whether there isn’t a remaining element of the seasonal adjustment algorithm problem that we talked about in the past couple of years, which would suggest that payrolls should strengthen as we go into the cold months. I want to believe that; I guess we’ll see.

The narrative around higher economic growth in 2014, on the other hand, depends, as it must, on a significant increase in consumer spending. And like others, I thought that the memo

on the staff forecast for PCE by Andrew Figura and Geng Li was very well done and useful in thinking about this issue. My own takeaway is that there are plenty of good reasons—and they are set forth pretty clearly in the back end of the memo—why consumption may remain on a lower trajectory than that included in the forecast. I would include uncertainty about the effects of increasing house prices, lingering concerns about future income, uncertainty about government fiscal and regulatory policy, and rising inequality. I thought that the consumer restraint alt-sim captured that scenario pretty well. And I would echo Governor Yellen's and others' concerns that that is really the troubling situation, and I have to say it's not at all unlikely.

My bottom line is that I am not inclined to change my September SEP forecast of 2 percent growth for 2013, modestly increasing to about 2½ percent in 2014. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. Thank you all for a very efficient go-round.

Coffee is ready. Why don't we take a break and come back at 3:30? Thank you.

[Coffee break]

CHAIRMAN BERNANKE. Okay. Why don't we recommence? Let me try to give a brief summary of the go-round on the economy. The outlook doesn't appear to be much changed, with continued moderate economic growth in the second half of this year. Some saw improved growth in 2014, reflecting less fiscal restraint and more consumer spending. However, this upswing is at best a forecast at this stage, and some, of course, were more pessimistic. Important questions are whether productivity will pick up and whether there has been structural damage to the economy. Inflation, on the other hand, remains subdued and below target.

In the household sector, labor markets are improving slowly, with unemployment declining. Participation rates are also declining, in part because of retirement and other demographic factors. Retirees are unlikely to return to the labor force. Employment gains have also been held down by a less dynamic labor market with less churn. Those are structural interpretations. On the other hand, payroll gains have been slowing recently; wage growth has also been slow, suggesting that slack is playing some role. Housing activities continue to pick up, although affordability is weakening as prices and mortgage rates have risen. Household finances seem better, with balance sheets improved, wealth and income up, and gas prices down. However, consumer sentiment remains unusually low, perhaps because of the fiscal risks. Whether consumption will pick up is a key question for the outlook. A number of people discussed that point.

In the business sector, we have reported for a number of meetings that businesses do see continued slow economic growth but remain generally cautious. Fiscal and regulatory issues are weighing on their confidence. Hires and cap-ex are, therefore, being delayed accordingly. Some firms reported difficulty in finding skilled workers. Retail firms reported mixed results, and some retailers expect to hire fewer seasonal employees this Christmas. Manufacturing indexes suggest some degree of optimism in that sector. Auto demand is strong. Energy and agriculture are doing well. And commercial real estate activity improved in some Districts.

There was more than the usual discussion of fiscal policy today. The direct effects of the shutdown appear to have been limited and localized, except perhaps for the effects on data availability. Further fiscal disruptions do pose a downside risk, including to confidence. Fiscal policy more broadly should become less restrictive, although government spending is difficult to forecast.

Looking around the world, Europe is exiting recession and global economic growth is improving, all of which should help U.S. growth. And there are also fewer worries about a slowdown in China.

In the banking sector, slow loan growth may reflect weak credit demand rather than tight supply. Most firms can find credit, and financial conditions have eased recently. Business balance sheets are strong. Compressed net interest margins are pressuring banks into a search for yield, and interest rate volatility is down, which is also indirectly a potential risk to financial stability.

Finally, on inflation, the shutdown of the BLS will add noise to the price data, although private-sector measures like the Billion Prices Project are available as substitutes. Inflation continues to run below the Committee's target. Businesses have little pricing power. Wage gains remain slow. Inflation expectations are stable. Nevertheless, some businesses fear inflation in the long term, depending on the management of the Fed's balance sheet.

Any comments, reactions, questions? [No response]

Let me make just a few remarks about the outlook. Because a number of things have been already discussed, I'll try not to be repetitive. First, I want to say a word about financial conditions. There wasn't too much discussion of the fact that financial conditions have eased pretty significantly since our previous meeting. In introducing that point I would make the distinction between clarity and credibility. We may not have been terribly clear in communicating our action at the previous meeting, but I think actually our credibility was enhanced, not reduced, because we did what we said we would do, which was tie our policy decisions to the data. And the evidence for that is that the rate expectations embedded in the financial data, which were inconsistent with our forward guidance before the meeting, are now

pretty much in line with our forward guidance. And that, together with a partial retracing of the increase in the term premium that occurred over the summer, led to fairly significant—but not complete, obviously—retracing of the general tightening in financial conditions that we saw over the past five months or so.

Those improvements in financial conditions since September are, I think, economically meaningful. Just one metric is that the staff's assessment of the effect of changes in financial conditions since September on the level of GDP at the end of 2015 is 45 basis points—almost ½ percentage point, which is fairly meaningful. So our action did ease financial conditions in a meaningful way and in doing so better aligned market expectations with our forward guidance, all of which is positive. At the same time, as we will discuss in the next go-round, we will face challenges in keeping expectations aligned with our guidance and in managing expectations for policy from here.

I'll skip a couple of things and just talk a little bit about the longer-term effects of fiscal policy on this recovery. In the context of this, I asked the staff to give me more details about their projection that the federal funds rate would remain very low out to 2016 and beyond. As you know, similar to what many of us submitted in the Summary of Economic Projections, the Tealbook has the federal funds rate at 2 percent at the end of 2016, compared with 4 percent, which is more or less the neutral level, in 2020. And there is a box in the Tealbook about that, but I asked for a little bit more quantitative analysis of what was going on there, and I got some helpful simulations from John Roberts of our staff.

What he did was essentially ask the question: How can you change the 2016 projection in order to get the funds rate that is implied closer to a more neutral level? So he did three things. The first was that the equity premium remains above normal in the projection as of 2016.

In 2016, it's about 40 basis points above the 2020 value, which is a more normal long-term historical value. And he set that equal to the 2020 value. That appears to account for about ¼ percentage point on the funds rate, about 25 basis points of the low funds rate. In other words, the remaining risk aversion is one factor. The second thing he did was that he took away the negative add-factors affecting business fixed investment, which you can think of as being business confidence, uncertainty, credit availability—any issue that would affect business investment conditional on interest rates and output. He set those add-factors equal to the 2020 levels, and that gives you another ¼ point. Putting those two things together suggests that the persistent effects of the financial crisis and the recession on confidence, uncertainty, credit availability—all of those factors—seems to account for about ½ percentage point of the 2 percentage points by which the funds rate in 2016 is below the longer-run normal level.

Now, the bigger factor—and this is the punch line I'm coming to here in a moment—is fiscal policy. If you set the structural fiscal deficit in 2016 equal to the 2020 value—it's just a way of trying to look at a more long-run value for the fiscal deficit—that by itself adds a percentage point to the equilibrium funds rate in 2016. Now, this is a complicated calculation because, on the one hand, the fiscal deficit in 2020 is not on a sustainable path. That's one concern. On the other hand, this is relative to a zero benchmark, and it's not taking into account the normal response of fiscal policy to a recession and a recovery. If you look at that—I've discussed this point before; it's an obvious point, but it's really worth mentioning, given the comments that were just made around the table—it's true that real GDP has grown at a little over 2 percent rate in this recovery, as has been noted by several people. Real GDP, less government consumption and investment, has grown at a 3.2 percent rate during this recovery. So fiscal restraint has been an important and ongoing factor that has held back the economy. My

calculation there implicitly assumes a multiplier of 1. Another way of looking at this—again, a point that I've made elsewhere—is that, from the trough of the recession until now, total government employment, including state and local, is down 600,000. At the same stage of the recovery in the 2001 recession, it was up 400,000. So that's a difference of about 1 million in the cyclically adjusted, if you will, fiscal response.

What I conclude from this is that one important factor that we should not forget about is that fiscal policy, for potentially good reasons—obviously, we started with a much higher debt-to-GDP ratio this time than we have in previous recessions—has been more restrictive than normal, and we should take that into account as we think about policy. In particular, as we think about the 2 percent economic growth for 2013, if you take the CBO's estimate of the fiscal drag in 2013, something like 1½ percentage points, we overcame, in some sense, quite a bit of fiscal drag. So I don't think you can fairly conclude from the 2013 economic performance that monetary policy has not had any beneficial effect on economic growth.

Those are just a couple of points I wanted to make. I had a discussion on the rationale for the pickup in 2014 and the importance of consumption growth. That's been touched on by a number of people. And I think it's fair to say that, while reduced restraint on the fiscal side should provide some benefit—and we'll get even more benefit if the current negotiations, through some miracle, end up loosening the effects of the sequestration a bit in exchange, for example, for some longer-term cuts—a good bit of the projected increase in economic growth in 2014 still does depend on consumers behaving more as they have in the past, given their wealth, income, and other factors. We've been watching labor markets very carefully, which is appropriate, but we should also be paying close attention to consumer behavior and trying to assess whether, in fact, they will become the source of more-rapid economic growth going

forward. Any questions or comments? [No response] Again, thank you for your input in that last go-round.

While I have the floor, let me say a couple more words to introduce the next go-round, which we'll start in a moment with a staff presentation. I thought this would be a good meeting to have a general discussion of our policy tactics and strategy. As I mentioned, we have press conferences for the next three meetings, and those meetings are a little bit more constrained in terms of time. So in this meeting, we'll have, I hope, the opportunity to get the participants' views on some of these issues.

As Governor Yellen was saying, we have several scenarios going forward. Ideally, we'll see some strengthening of the economy, or at least some continued improvement in the labor market, which will allow us to begin the process of winding down our asset purchases. I think there is a reasonable chance that it will happen, but, obviously, it's not certain. The other possibility is that the data will remain weak, in which case we'll need to communicate—as President Kocherlakota has already indicated—other criteria, including costs and efficacy criteria, for modifying our policy. In either case, an important issue in the transition is going to be addressing the signaling effect of reduced purchases. This is something that we tried to address. We weren't unaware of this in June. But, nevertheless, the reduction in purchases had the effect of bringing in market expectations of when short-term rates would rise. And if we want to mitigate the effect of slowing purchases on overall financial conditions, we'll need to address that signaling issue.

There are a number of ways to do that, and these are some of the things we can talk about in this go-round. Obviously, we've already talked quite a bit on several occasions about strengthening the forward guidance. A new suggestion is to use balance sheet tools, market

interventions of some type, to strengthen the guidance. One set of tactics involves trying to mitigate the effects of slower asset purchases via the signaling channel on expectations about policy tightening. Another strategy for exit is to improve our communication about the asset purchase program itself. There are a number of possibilities, and there's an open question among the ones that were circulated to you for ideas about how we could better explain the criteria for reducing asset purchases. One specific possibility is that we do something more mechanical, and the staff presentations discuss that possibility. Finally, there is the issue that we've talked about a few times, which is the composition of a reduction in asset purchases—what combination of Treasuries and mortgage-backed securities we would want to use in our reduction of purchases.

So there are a number of issues here. Let me say one last thing before I turn it over to the staff. Some of these issues—like strengthening the forward guidance, the IOER, and the mix of Treasuries and MBS—are things that we've talked about a number of times already in this Committee. I hope today that we'll get some clarity from participants on where you are on these issues that can help us think about future tactics and future staff work. There are a couple of things on this list that are relatively new, like the market interventions and the mechanical adjustments of the balance sheet. Here I assume that most people would agree that the value of such tools will depend on the context and how things evolve. So for those things, I'd be interested just to hear some impressionistic views. We don't have to make any decisions on anything today—certainly not on those ideas that are being introduced, essentially, for the first time. Again, the purpose of this go-round is to do what we call "blue-sky" thinking around here and get some input from participants on some different approaches to our communication and

our tactics going forward. So with that fairly lengthy prologue, let me turn it over to the staff to present some of their background work.

MR. TETLOW.[3] Thank you, Mr. Chairman. I'll be referring to the handout titled "Material for Policy Planning." Turning first to forward guidance, as noted in the box at the top of the first exhibit, the Committee may wish to consider adding an inflation floor to its forward guidance for the federal funds rate to signal its commitment to price stability when inflation is unusually low. Importantly, because an inflation floor would be an *addition* to existing forward guidance, which already includes an inflation threshold, an inflation floor would not amend prior commitments and could clarify that the Committee is committed to defending its inflation objective both from above and from below.

The model-based analysis in the memo suggests that an inflation floor of 1½ percent would produce economic benefits more often than not, but those benefits are likely to be small. In the stochastic simulations, the floor is binding in only about one-fourth of the draws, and in only about one-half of the cases where it is binding does it shift out the liftoff date for the federal funds rate by more than one quarter. That said, those simulations in which the inflation floor is particularly helpful—ones in which inflation is low, of course, but also when the unemployment rate stalls near its threshold value—are simulations in which losses without the floor are high. Accordingly, an inflation floor might be best thought of as a hedge against certain bad states of the economy.

With regard to communications, adding an inflation floor would help clarify the symmetry of the FOMC's inflation objective, but it might also present communications challenges. To the extent that forward guidance is already complex, the addition of an inflation floor could further tax the public's understanding. Moreover, the rollout of an inflation floor could be taken as signaling that the Committee is more worried about inflation remaining persistently low.

The lower panel discusses the provision of more information about the post-liftoff behavior of the federal funds rate. As you know, monetary conditions today depend on the entire path of the future funds rate, not just the date of liftoff. Hence, a policy that defers liftoff of the funds rate for longer than otherwise can nevertheless result in a tightening of the stance of monetary policy if the subsequent increase in rates is steeper. In the staff memo, we examined the implications of committing to a policy for the federal funds rate, for the period after liftoff up to the point when the unemployment rate falls to 5½ percent, that is more inertial than the inertial Taylor rule that we normally use. We found that this more gradual post-liftoff rule would not likely affect the liftoff date but would result in a more gradual climb in the federal funds rate for some time after liftoff. This results in small improvements, on average, in economic performance.

[3] The materials used by Messrs. Tetlow and Clouse are appended to this transcript (appendix 4).

Implementation and public communication of such a change in post-liftoff policy would present challenges for the Committee, not the least because that event is likely to be well off in the future. The meaning of a state-contingent gradual increase in the federal funds rate may be difficult for the public to understand. At the same time, this addition to forward guidance, if timed appropriately, could be used to draw a distinction between federal funds rate and asset purchase policies.

The second page of the handout covers the material on simple policy rules to guide decisions on reducing the pace of asset purchases. The memo you received on this subject introduced three rules for purchases: one based on the unemployment rate and two others based on changes in payroll employment. As you know, different measures of labor market conditions can send different signals, which can present pitfalls for simple rules that are written in terms of one variable, to the exclusion of others. Revisions to the data aside, the choice among these rules matters when the unemployment rate and payroll gains co-move unusually. If recent declines in the labor force participation rate (LFPR) continue, while payroll gains stay near current levels, the unemployment-based rule would call for faster reductions in LSAPs than would the payroll-based rules. But if recent declines in the LFPR are largely cyclical and are reversed, the unemployment-based rule might call for slower reductions, even if payroll gains are strong.

Communicating an LSAP policy rule would present some challenges for the Committee, some of which are summarized in the bullets at the bottom of the exhibit. The most obvious concern would be handling conflicts in the signals coming from different labor market indicators. A second issue is the coordination of an LSAP rule with existing thresholds for the funds rate, at least for employment-based rules. Under some conditions, those LSAP rules could prescribe purchases to continue *after* the 6½ percent unemployment rate threshold governing funds rate guidance has been crossed. Based on our stochastic simulations, we computed the likelihood of this occurring to be roughly 7 percent. A third issue pertains to communication of whether the new rule only allows the pace of purchases to ratchet down. In the memo, we suggested that these and other obstacles might argue for a measure of vagueness in the initial communication of a rule, vagueness that could be shaped and clarified in longer-form discussions—potentially including press conferences, speeches, and testimony—and through repetition. Thank you.

MR. CLOUSE. Thanks very much. I'll be referring to the bullets on the third page of your packet that summarize two background memos prepared for this meeting: one focusing on possible actions that the FOMC could take to strengthen its forward guidance for the federal funds rate and another focusing on issues the Committee may wish to consider in developing plans for reducing the pace of asset purchases.

As noted in the bullets at the left, under the first potential approach to strengthening its forward guidance, the Committee would announce that it is prepared to conduct long-term repurchase agreement operations against all OMO-eligible collateral at a pre-announced fixed rate. By committing to conduct term repos to a

fixed end date and over a defined period—for example, until the end of 2014—the Committee would likely put a cap on term repo rates and provide dealers with certainty about their financing costs for a considerable period. Arbitrage by dealers should then tend to drive down yields on any shorter-term Treasury securities whose yields initially exceed the Federal Reserve's term repo rate. However, market participants have noted that balance sheet constraints of various types may limit this arbitrage process to some degree.

In a second alternative, the Federal Reserve would simply announce that it stands ready to purchase shorter-term Treasury securities, perhaps those with maturities prior to the end of 2014, at a price corresponding to a pre-established yield of, say, 20 basis points. By purchasing all eligible securities offered at this pre-announced rate, the Federal Reserve would establish a cap on short-term Treasury yields. In a variation of this approach, the FOMC would not attempt to establish a formal cap on yields but rather would conduct operations as necessary to try to prevent the path of short-term rates from departing significantly from the Committee's policy intentions.

As discussed in the memo, choosing the end dates for such date-based programs in a way that is consistent with the FOMC's threshold-based forward guidance for the federal funds rate presents some challenges. For example, while the current staff forecast suggests that the thresholds in the FOMC's forward guidance will not be crossed until mid-2015, one of the thresholds could be crossed considerably earlier if the economy were to strengthen substantially. In such a scenario, the Federal Reserve might need to end these programs earlier than originally announced, and market uncertainty about whether programs such as these would remain in place could undermine their effectiveness.

Alternatively, the FOMC could announce that it stands ready to conduct *overnight* repo operations at a predetermined rate as long as the economic thresholds have not been crossed. For example, the Desk could commit to conducting overnight repos with the primary dealers at a fixed rate of 20 basis points until one of the thresholds is crossed. This type of program should put a cap of 20 basis points on overnight repo rates. Alternatively, the Federal Reserve could sell options that provide the holder with the right to participate in overnight repos with the Federal Reserve at a pre-established rate until one of the thresholds is crossed. Threshold-based programs such as these would address the difficulty with the fixed end dates discussed in the first two alternatives but would require being very clear, ex ante, about what would constitute "crossing a threshold."

Under a fourth program, analogous to the foreign exchange operations of some central banks, the Federal Reserve could conduct operations in the forward market for Treasury securities. For example, the Federal Reserve could contract today to purchase six-month Treasury bills one year from now at a price agreed upon today. Such operations would allow the Federal Reserve to address pressures at particular points on the yield curve without expanding its balance sheet in the near term. This type of operation could be conducted in various ways and, similar to alternative 2, might allow the FOMC to follow a fairly flexible approach in addressing unwarranted

upward pressures on short-term yields. A program like this would require careful consideration of technical issues, such as a process for establishing appropriate margins for such forward positions.

As a final alternative, the first memo also discussed the possibility of lowering the interest rate on excess reserves (IOER) and, at the same time, implementing a standing overnight reverse repurchase facility with no size limits. For example, the IOER could be lowered to 15 basis points, and the rate on the overnight reverse repurchase facility could be set at perhaps 5 basis points. Cutting the IOER would put downward pressure on the federal funds rate and many other money market rates, while the overnight reverse repurchase rate would establish a firmer floor on money market rates. This action would amount to a modest easing in the stance of monetary policy and could have important signaling effects on expected future levels of short-term rates. As noted in previous staff memos, a full-scale overnight reverse repurchase program could help address strains in financing markets that would otherwise push repo rates below zero, but it could also have implications for activity in the federal funds market and for dealer financing.

As a final note, various policy, legal, and operational issues would need to be addressed before implementing any of these programs. The staff could do more analysis of such issues for any of the alternatives that are of interest to policymakers.

The second staff memo reviewed a number of factors that the FOMC may wish to consider in developing plans for reducing the pace of asset purchases. The memo discussed the benefits and costs of alternative time paths for reductions in the pace of total asset purchases, and the benefits and costs of trimming the monthly purchases of either Treasury securities or MBS more quickly than the other, along any given path for total asset purchases.

In staff models, the effect of LSAPs on market yields stems from investors' expectations for the current and future stock of longer-term Treasury securities and MBS available to the public. And in this framework, small variations in alternative paths for reductions in the pace of total asset purchases or in the composition of asset purchases should have only modest effects on yields. Nonetheless, as noted in the bullets at the right, the FOMC might prefer to announce a modest initial reduction in the pace of asset purchases, rather than a large initial reduction, as a way to signal that further reductions in the pace of asset purchases are likely to be gradual. Policymakers might also favor this approach if they judged that it could mitigate the potential for an outsized market reaction to the first reduction in the pace of purchases.

On issues related to the composition of reductions in asset purchases, the memo notes several considerations that could argue for initially trimming monthly purchases of one asset class by more than the other, along any given path for total asset purchases. For example, a decision to pare the pace of Treasury purchases relatively rapidly while maintaining a somewhat higher path for MBS securities might be viewed as a way to signal the Committee's continued strong interest in fostering

> recovery in the housing market. It might also be appropriate if the FOMC views purchases of MBS to be a somewhat more powerful tool than purchases of Treasury securities. Alternatively, the FOMC might prefer to reduce its pace of MBS purchases relatively more rapidly than Treasuries if it believed that elevated purchases in the MBS market could have important adverse consequences for market functioning or if MBS purchases were viewed as more likely to result in credit misallocations. Of course, the Committee might prefer to cut purchases of Treasuries and agency MBS in roughly equal increments; that approach seems to be about what markets expect and, as noted in the memo, would allow for the gradual reduction in the pace of purchases for both types of securities.

CHAIRMAN BERNANKE. Thank you very much. Let me thank the presenters, Bob Tetlow and Jim Clouse, and the very many staff members who were involved in developing these background memos. A great deal of work went into that, and we're very grateful for that work. Are there any questions for the staff? [No response] I see no questions. Then we can begin a go-round, and I'll start with President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. The Red Sox have had a striking turnaround from last year. The most visible signal of their commitment to start that turnaround was to choose to increase beard production. The one option left out of the memos was for more of us to follow the Chairman's lead, but let me turn to the options the staff has actually suggested.

This spring I was surprised by the market's reaction to the discussion of the possibility that we would reduce purchases if our forecast of a stronger, more sustainable recovery occurred. The increase in long-term rates of over 100 basis points was more than was predicted or needed, given the still-weak economic recovery. Even more surprising was the increase in shorter-term rates. In effect, our desire to get a small rotation of the yield curve resulted in more of a large steepening in the yield curve, including at the shorter end, which only complicated our economic and communication challenges.

Where did our communications go wrong? One area of confusion is something I don't think the FOMC itself has settled yet, and that is whether decisions about policy changes were being driven primarily by costs and efficacy or whether they were being driven primarily by data consistent with a more optimistic forecast. In my own view, it is the latter that should be driving our decisions and our communications. However, I realize that not everyone on the Committee will agree with me. I worry that our lack of consensus has made it difficult to provide the public with a clear view of the Committee's assessment of the costs of the balance sheet size.

While markets have certainly reacted strongly to our communication, the recent fluctuations in rates certainly suggest that markets view purchases as quite efficacious in moving interest rates and asset prices. The problem is not whether we affect rates, but that the effects are still not well described by our models. Why did we affect rates so much, both in July and, more recently, at the September meeting? One potential explanation is that communication is a potentially powerful tool but is much more difficult to manipulate than the instruments we are used to, in part because we can communicate along so many dimensions, but also because we have to have some reasoned assessment of how the markets will react to our language along these different dimensions. So I agree that we have a significant communications challenge, but I see no reason to make that challenge more difficult. I think part of the challenge could be met if all of us more explicitly agreed to decision-consistent communications about the conditions that undergird our policy actions. In my view, this would be a statement that policy is being driven primarily by incoming data and not some vague notion of costs and efficacy.

Implicitly, the last two press conferences have, in effect, laid out a three-part test for tapering. First, we need to observe a sustainable improvement in real GDP. Our communication should make clear that to achieve full employment in an appropriate time frame implies growth

well above the 2.2 percent we've been averaging during the recovery. Second, we need continuing gains in labor markets, and speeches or communication could be that, to achieve full employment within an appropriate horizon, we need payroll employment growing closer to 200,000 jobs per month. Third, we need stronger evidence that inflation is trending back to 2 percent. In speeches, we could make clear that inflation well below our target is not acceptable, and that we need to see data consistent with our target, which is tied to the PCE inflation measure and is currently at only 1.2 percent. I would note that explaining why we want inflation to go up presents a communications challenge for many audiences, but it's one we should work on together.

Even if one does not personally agree with this three-part test, if it is agreed to by the Committee, there should be an obligation to clearly communicate the sense of the Committee for the actions it has taken. The first-best solution is that, first, we agree to the action to be taken; then we agree on how best to communicate our action; and, finally, we each consistently communicate that action. Communicating dissent should not lead to the market misinterpreting the communication of the Committee as a whole. A clear communication strategy is far better than introducing another set of complicated actions.

To be fair, it's important to acknowledge that another aspect of our communication challenge is that, even with agreement on how we discuss potential Committee actions, the multiple policy tools with different thresholds for action that we are currently employing are just inherently more complicated to clearly communicate to the public than more traditional monetary policy. Policies based on the federal funds rate were difficult enough to convey, but the nuances of balance sheet tools and the variety of forward-guidance tools are going to be very difficult to convey to a general audience. However, adding a whole new set of tools to reinforce

our current tools is likely to make our communications even more difficult, not easier. If communication is the problem, finding simpler ways to convey our message implies not using instruments and actions that, by their very nature, are likely to only complicate our message. Thus, before introducing more complicated actions, I would prefer to have a more concerted effort at clear and consistent messaging. If clear and consistent messaging does not work, either because of our own governance issues or because the message is just too difficult to convey to the broader public, we should look for simple reinforcing measures as the next most promising area.

My preference would be to use interest on reserves as that signaling device. Given that the current interest rate paid on reserves is much more than the rate on short-term Treasuries, the rate is hard to justify on economic grounds. Moreover, a reduction in the IOER to a more justifiable level may be a useful signaling mechanism to reinforce the distinction between the decision about QE tapering and the federal funds liftoff—that is, policy decisions focused on the long end of the yield curve may not signal a tightly linked policy change at the short end. One way to implement this is a discrete reduction in IOER when tapering is justified. However, my preference would be to move in 5 basis point increments and reduce IOER when we begin to taper or at any time that short rates diverge significantly from what is consistent with our guidance on short-term rates. If this is viewed as primarily a signaling tool, moving at 5 basis point increments would give us five opportunities to publicly reinforce our message before the IOER rate hit zero.

If communications and this signaling are not sufficiently effective, I would not rule out using the other tools described in the memo. However, because these policy interventions are not simple, they will likely be difficult to communicate. Explaining why we are purchasing

fewer longer-term assets by possibly buying substantial amounts of short-term assets in order to achieve our monetary policy goals is fraught with potential problems. While I would not rule out anything at this time, it's imperative that we address our communication problems by more clearly describing the considerations on which our policies are based. Good communication requires not only that one speaks in a way that can clearly be understood, but also that one speaks in a way that will not be misunderstood. This requires speaking in simpler terms and, as much as possible, with one voice. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART. Thank you, Mr. Chairman. And I add my thanks to the staff for an excellent set of memos.

Before addressing the questions, I'd like to summarize how I perceive the policymaking context in the near term. As I noted in my first go-round remarks, I'm increasingly of the mind that our decision tree has to incorporate the possibility that next year will play out much like the past three. The employment situation continues to improve on some dimensions, but with persistent underperformance on others, such as the number of long-term unemployed, elevated levels of part-time employment, and weak hiring rates. Real GDP growth is failing to convincingly accelerate away from the 2 percent track. Inflation remains stuck substantially below our objective. Contrast this picture with the three conditions—the three-part test mentioned by President Rosengren—for tapering that was proposed by the Chairman on behalf of the Committee at his June and September press conferences. They were confidence in the labor market improvement, an acceleration of GDP growth, and inflation moving back toward 2 percent.

Speaking for myself, it's hard to have strong conviction about the acceleration in growth that is written in the Tealbook forecast and was projected in the September SEP. Based on data, economic conditions do not call for a withdrawal of stimulus, and the near-term outlook is clouded by consequences of the fiscal struggle in the Congress. If such a view is widely adopted at the time of the December SEP, the Committee will be presenting a downwardly revised outlook in that communication. I question whether we can, over any relevant horizon, anticipate that tapering or ending our asset purchase program will be justified on the basis of acceptable economic conditions. Given my skepticism about a taper-justifying forecast materializing, I see a policy dilemma shaping up. I think there's a basic question to be grappled with before we address the more tactical questions posed for this go-round. And I'll frame that question this way: Suppose 2014 is a carbon copy of 2013 and consistent with 2012 and 2011. What would be our position on asset purchases?

I see two possible answers. One, we commit to remain all in on the open-ended nature of our asset purchase policy. If that is the direction we're willing to go, we should be clear among ourselves that that is the case and communicate our intention clearly. Two, if we're not completely committed to a truly open-ended asset purchase program, then we need to begin positioning our communications to include as decision criteria a wider set of considerations. I think President Kocherlakota suggested this in the last round. To my mind, these include progress achieved since September 2012 on unemployment, as the Chairman suggested earlier, as well as appreciation of the tradeoff between incremental benefits of prolonged asset purchases and the challenges and risks, however uncertain, associated with the process of normalizing the balance sheet over coming years.

I think there is sentiment around the table that the asset purchases have to come to an end at some point for prudential reasons, and the debate is about: when, how, and based on what explicitly communicated rationale? Realistically, I see the March meeting as the earliest juncture for consideration of a tapering decision, and I doubt that the situation then will bring the clarity desired for a decision purely on the basis of economic conditions. If March is realistic, we have time to reposition somewhat the tapering decision criteria using a variety of communications methods.

So with those comments on context, as I see it, let me respond to some of the questions posed in the memo. On the first question, about clarifying or strengthening rate guidance, I favor strengthening the guidance we now have in place as a way of offsetting the wind-down of asset purchases and preserving at least some of the market-perceived stimulus. As to when we do it, I think language in the statement that strengthens rate guidance is appropriate before the decision to taper—or simultaneously should we decide to begin tapering earlier than I expect. In the next round, I will argue against inserting the qualitative guidance language at this meeting, largely because there's no press conference to explain the obvious question of the meaning of "patient." So I would favor the December meeting, all things being equal.

The qualitative guidance language in paragraph 6 of alternative B addresses the path of the policy rate post-liftoff. I think it's important to do this at least qualitatively. I am not closed to the idea of communicating Committee expectations in quantitative terms—if not in the statement, then in a press conference or speech. One idea mentioned, with different numbers, in a staff memo is to add one or two more unemployment thresholds, saying something like, "The Committee further expects that the federal funds rate target will remain below 1 percent until the unemployment rate approaches or reaches 6 percent and below 2 percent until overall

employment conditions approach full employment." This is a variation of the idea in one of the staff memos. This sort of communication would have to be consistent with the SEP, of course, and would have to be positioned as neither triggers nor firm thresholds. As regards an inflation floor, I am also open, if not overly enthusiastic, to this addition to our forward rate guidance. I prefer the forward-looking forecast of headline inflation because it allows consideration of a wider array of information and seems to be less binding in the event of unexpected circumstances.

Regarding the second question, on market interventions, I support, in principle, the idea of announcing and executing market interventions in support of both the fed funds rate and the overnight repo rate. My thinking is that such action would put an exclamation point behind enhanced rate guidance and say, in effect, "We mean it." Following through on interventions would back up words with action.

The third question, on lowering the fed funds rate target range and IOER, asks if we support further study. I support looking at these options a bit further. We may need a full arsenal to avoid the perception and reality of tightening when we begin to reduce asset purchases. Again, I think this idea says, "We mean it." Earlier consideration of narrowing the fed funds rate range points up risks to key markets and financial industry segments—the money market fund industry, for example. Obviously, we'd have to satisfy ourselves that these actions would not do more harm than good. So if questions 2 and 3 were intended to smoke out any strong objections, I don't have strong objections to doing further work on these possible tools.

On question 4, regarding LSAP guidance, here I expect that my views are different than the views of many on the Committee. Again, I'm thinking we may make a decision to begin tapering in much more ambiguous economic conditions than earlier envisioned, and the rationale

for that decision will, of necessity, include a wider set of decision criteria than we have positioned so far. Under those circumstances, I think it would be best to carry through with a full phaseout of asset purchases without much conditionality. An escape clause might incorporate the condition of the very material reversal of current trends, a strongly negative deviation from the outlook. Otherwise, I would favor winding up the program. So I prefer announcing a road map to zero asset purchases at the time of the decision to begin tapering. Such a move would reduce uncertainty in financial markets, put incremental attention on our rate guidance, and accelerate the necessary transition to an LSAP-free environment. At the same time, I think balance sheet guidance that emphasizes the stock effect as a component of accommodation might help the cause of preserving accommodation. It might help to provide qualitative guidance pointing out the reality that holdings will grow during tapering, flatten out until a decision is made to begin balance sheet normalization, and then decline gradually thereafter.

On the fifth question, regarding the sequencing or mix of reductions, I don't have a strong opinion. I share the ambivalence that I read in the staff memo. I'm guided by the view in the October 17 memo that the estimated financial effects of various options are small. On balance, I would support having MBS reductions lag Treasuries as a way to preserve support for the housing market.

I've taken a lot of time, and I'll skip the last question. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I, too, appreciate the staff memos and all of the work that went into them. I found them very informative.

Let me begin with two preliminary points. The premise of this set of questions is that "asset purchases and forward guidance concerning the policy rate are separate policy tools."

While this is accepted dogma here on the Committee, it is hotly disputed in financial markets. So, following some of the commentary in the memos, let me question for a moment the extent to which these policy tools are truly separate. First, both tools are designed to provide policy accommodation and are therefore directed toward the same end. Markets may perhaps be forgiven if they infer from a policy action concerning one tool that the Committee has decided that the economy requires less accommodation than previously believed, and that the Committee may therefore be similarly inclined to change a stance with regard to the other tool at some point in the future. Second, the Committee has stated that both tools represent state-contingent monetary policy. Altering the setting for one policy instrument relative to previously held expectations must mean that the outlook for the economy has changed in an important way, but this means that the other policy instrument, which is also state contingent, might be altered in a similar way. Again, I think markets might be forgiven for viewing the two policy tools as more closely tied together than they are in the minds of us policymakers.

A second premise of this set of questions is that interest rate policy is the more powerful of the two approaches to providing accommodation and, therefore, that forward guidance is the preferred area of focus for the Committee in the coming quarters. I remind the Committee that the Japanese monetary policy has been to keep the short-term nominal interest rate near zero for more than 15 years. During the period from the mid-1990s up until the recent rise with Shinzo Abe, the zero policy rates seemingly produced neither a consumption boom nor a rise in inflation or inflation expectations. The staff models we use do not have this outcome embedded in them as a possibility and therefore are silent about the probability of the U.S. economy falling into such a state. I think we have to be careful in assuming that even greater commitments to low short-term nominal interest rates, beyond the ones we already have, will produce desired

macroeconomic outcomes. I'm not against trying to improve the forward guidance, but we should be cognizant that zero rates alone, no matter how far in the future they are promised, may not provide the desired level of policy accommodation. Indeed, in contrast, one conclusion from the June and September decisions of this Committee is that changes in the pace of asset purchases have rather large and highly conventional easing and tightening effects in financial markets—that is, the financial market signature of those actions is clear and unmistakable as conventional monetary policy. If we're looking for an effective policy tool, I believe we have, indeed, found it. And on this dimension, I agree with President Rosengren on the efficacy of policy.

I know that a lot of people on the Committee are concerned about the size of the balance sheet, but, as I've reminded people before, the size of the balance sheet relative to GDP is not that large compared with that for other central banks—the ECB, the Bank of England, or the Bank of Japan. I think we still have room to maneuver on that dimension. We're in the low 20s on that. And I'd like to see more emphasis on that question about how far you are willing to go relative to the size of GDP, instead of just citing big round numbers with respect to the size of the balance sheet.

Let me turn briefly to the six questions that were posed. On modifying forward guidance, if we do try to improve our forward guidance, I support including an inflation floor in the statement. In my view, the floor should be 1.5 percent to maintain symmetry with the 2½ percent threshold that we have on the high side. My preference would be to base inflation thresholds on actual year-over-year PCE inflation rates, not on forecasts. No central bank worth its salt would project a substantial miss of an inflation target over the medium term, and so using the forecast of inflation allows, in my view, too much flexibility to explain away low-inflation

outcomes as temporary aberrations. It makes the policy, then, less effective. I also think that the inflation floor is likely to be far more effective than what is suggested in the staff memos. The Committee has inadvertently sent a signal that we will raise policy rates when unemployment or labor market conditions reach certain levels, independently of what's going on with the inflation rate. And we could take that "independently" clause off the table by making it clear that if inflation is very low, then we're not going to be in too much of a mood to raise rates.

On the other aspects of improving forward guidance—the notion of raising the policy rate gradually at some point in the future when we do come off the zero lower bound—as I've argued before, if that's what you want to do, a superior policy is actually to just remain at the zero bound longer instead of coming up off the bound more slowly. So for those who want to go in that direction, I think you should say, "Well, I just want to push out the amount of time that we'll be at the zero lower bound." I also think that this notion of raising the policy rate gradually is not easy to communicate, and the staff memos did a great job of pointing this out. More gradually than what? And what were you expecting before? To get the stimulative effect from that is very difficult to do because it's hard to know what the benchmark really would be and this is something that's occurring many years in the future.

Finally, on forward guidance, I prefer not to change the 6½ percent unemployment threshold and, instead, to stick with the interpretation that this is a threshold and not a trigger. Shifting the threshold would likely badly damage our credibility concerning thresholds generally. Thresholds become, in effect, movable objects based on the convenience of the Committee. Thresholds may then cease to be as useful as they have been for the Committee, and so I'd rather not move that threshold. If there are ways to keep that threshold and provide more guidance, beyond the 6½ percent, I might have an open mind about that.

Let me turn now to targeted market interventions. My overall comment on this class of suggestions is that I see these not so much as balance sheet policies but instead as more elaborate versions of interest rate targeting. I think that the best that can be said for these for now is that they require a lot more study. I have several remarks. First, some approaches seem to represent a return to calendar-based policy. We've spent a lot of time on the Committee trying to eliminate calendar-based approaches to policy in favor of those that are based on macroeconomic fundamentals. In my opinion, we should not return to stating policy in terms of particular dates. Second, and maybe more important, intervention directly in markets where we are trying to read market expectations has an important downside in that it can remove a source of information for the Committee on the state of market expectations. We would be, in effect, masking the information that the market is trying to provide to us, and this might leave us unprepared in situations in which market expectations are particularly valuable signals. Third, to the extent that our commitment via market instruments became untenable, perhaps because of new information that had become available during the intervening time period, markets would come in and test the Fed's commitment, possibly leading to a large expansion of the Fed's balance sheet. This possibility is discussed under the "Credibility" section of the memo. I see this as a very difficult situation for the Committee. Finally, just in general, I thought that some of the effects that were being talked about here on shorter-term rates seem quite small and, in a macro sense, likely to be inconsequential.

On question 3, lowering the interest rate on excess reserves, I'll make a brief comment. I do support, as I have in the past, lowering the interest rate on excess reserves actually all the way to zero and possibly into negative territory. I'm not sure why we are paying banks to hold reserves during a period when we would rather encourage lending and money creation. I do not

think that going to 10 or 15 basis points on the IOER would make any difference, and so I'd recommend not working on this if that's what we're going to do. But if we wanted to push this harder—go to zero or look into negative rates—I think that that might be beneficial for the economy and might be a game-changer, in fact, and I'd support further study of that. So I actually am agreeing with President Rosengren once again, despite the Red Sox. I'm agreeing with him twice in one statement here.

On question 4, more-explicit rules for QE tapering, in my view, this has a lot of merit as a way to pin down expectations about the QE program and how we're going to proceed with the QE program going forward. I think any rule should refer to inflation as well as to unemployment, because you could also state that if inflation starts to move back toward target as we expect, then that would give us more comfort with the tapering decision, and if unemployment continues to come down as we expect, then that would give us more comfort with the tapering decision. It's not that hard to write down a simple equation that would put both in.

I think we know from experience around this table that getting agreement on a numerical rule is unlikely. However, we might be able to make a lot of progress with an informal rule that guides the Committee discussion and the staff analysis in thinking about where we want to be as the economy goes forward. At which combinations of year-over-year PCE inflation and unemployment might we be comfortable saying, "Okay, that's where we'd like the program to be finished"? My example for this is a Taylor rule. The Committee certainly never agreed on a Taylor rule and was opposed, including by the former Chairman, Alan Greenspan. However, I think it did a great service in guiding Committee discussion and in describing actual Committee decisionmaking quite well. So a rule like this can exist somewhat outside of what actually goes into the policy statement and still be valuable in terms of getting everybody into one place about

what we're thinking about and where we think we might be going. I think that something similar could be done with more-explicit rules for QE tapering.

On MBS versus Treasuries, let me say that, on balance, I think equally weighted reductions in MBS and Treasuries are the way to go here. The other options sounded complicated to me. I know that the paper by Krishnamurthy and Vissing-Jørgensen that was presented at Jackson Hole is good and interesting, but I'm not ready to make policy based on that particular paper. So I think that that's probably the best to way to go on this dimension.

And question 6: Are there any others? As you know, I have expressed a preference to have a press conference after every meeting. I appreciate the Chairman's decision to announce a press conference at the January meeting. I think that that will keep more options on the table for the Committee going forward. It keeps more decision points out there, and, I hope we can pick up on one of them and make a key decision there. Thanks very much, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Obstruction or interference? Inside question. [Laughter] President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I do think this is an opportune time to discuss our policy plans, and I appreciate the staff memo. They did an excellent job of summarizing the wide variety of options we have on the table.

We have a lot of irons in the fire, so to speak, and we seem to find ourselves wanting to tweak and adjust policy on lots of different margins. That makes policy very complicated and very hard to explain. So I think it's a good time for us to engage in some planning about how we would want to think about conducting policy going forward, how the different elements that we have specified interact, and how we wish to communicate those elements. As I said, the staff has circulated several memos regarding how we should proceed with reducing the pace of asset

purchases, how we should proceed with forward guidance on the policy rate once our thresholds have been crossed, and how that forward guidance might be strengthened with open market operations. And I appreciate the staff's efforts.

Before I present my views regarding these proposed initiatives, I'd like to take a little different perspective on our policy challenges and strategy. Our communication regarding the stance of policy has been less than perfect, and it's become increasingly complex. Our September decision not to taper our purchases came as quite a surprise to financial markets. Even if it was unintended, the markets clearly thought we were likely to taper, and then we didn't follow through. This contributed to volatility, policy uncertainty, and other things. Now, I'm not sure how much credibility we lost from that episode—I would certainly guess some—but if such surprises continue to happen, we will almost surely lose more of it as time goes on.

I see our difficulties stemming, in part, from two related but different issues. The first has to do with the fact that, as a Committee, we've not come to any agreement regarding our policy reaction function, whether for LSAPs or for the fed funds rate. What actions we will follow after we cross the stated threshold is another case in point. More generally, we've not agreed on whether our attempt to provide more information about future policy actions is an attempt at Woodford-style forward guidance or is simply an attempt to better explain how we will change policy based on the anticipated evolution of economic outcomes—that is, our policy rule. In the former case, we are attempting to commit to a future path that would otherwise be time inconsistent in order to get better economic outcomes today. In the latter case, we are conveying information about our policy rule, coupled with our outlook for the economy. I think that until we resolve internally what we are attempting to do with our forward guidance and our

communications, it's going to be impossible to communicate clearly our stance of monetary policy and the implied conditionality of those policies on the state of the economy.

The second issue has to do with a fundamental tension between having a clearly articulated reaction function and the Committee's desire for discretion—that is, the desire to keep open the possibility of doing whatever seems right at any particular moment in time. This is a fundamental tension because, in a world in which unforeseen events can happen, there's value to commitment and there's value to discretion. There can be a reasonable divergence of views among policymakers as to which of those is a more important guiding principle of policymaking. I personally favor commitment to simple rules, but I don't expect that all members of the Committee will agree with me. I do think, however, that our stated desire for transparency and clarity regarding our future actions is in serious conflict with our desire, often, for discretion. This is one reason that I think we get ourselves tied up in knots with our statements. It's confusing to the public when we claim or express the desire to commit to either a well-articulated reaction function or some other forward-looking action, yet we simultaneously talk and act as if we would want to retain complete discretion. We'll get to the point—in fact, we may already be there—where our statements are more confusing than clarifying. The bottom line is, if we wish to be transparent and accountable, we should agree, then, to articulate a clearly defined reaction function. If we are unable to do so, we should be more tightlipped about our policy intentions in the future because we're acting under discretion. Discretion does not lend itself well to being clear and transparent about a policy framework or about the future path of policy. Needless to say, I do prefer a more clearly articulated reaction function and the transparency that goes with that.

Let me turn now to the policy initiatives—at least some of them—that the staff has put before us. Regarding LSAPs, I found the idea of tying cuts to actual indicators of labor market improvement sensible in concept, but, to my taste, it became overly complicated. Our experience over the last year convinces me that the communication challenges presented by a flow-based LSAP program greatly exceed any benefits of the automatic stabilization features that some found so attractive a year ago. I favor some simplification. We should consider going back to the formulation we used in the first two LSAP programs, whereby we announced a total amount and a path of monthly purchases to get there. After all, we all decided that it was the size of the balance sheet and the size of the program that mattered. I think it is fine for the Committee to use the suggested staff rules to determine maybe the total amount of assets to be purchased and the time to completion. The path could be one of constant equal purchases, or it could be a declining path. I sense from reading the staff memos on the size and composition of the cuts that it doesn't matter that much which path we choose, provided that we tell market participants exactly what we intend to do. This is how we implemented QE2, and I do believe that that implementation created less policy uncertainty and less confusion than the current program has.

Of course, the Committee could retain the option to engage in an additional round of asset purchases later if, after the current round, they thought it was necessary to do more and if they thought it would be helpful. But at least the current program would be brought to an end with some predictability and some determinate size of the balance sheet. I also think such a simplification would help separate the issues of program decisionmaking for LSAPs from our forward guidance on the funds rate, and that might have some benefits.

I'm reminded of the story about Armand Hammer, the industrialist, who was once asked how he lived to be 95. He said, "Well, I smoked five cigars a day and drank three glasses of brandy." And the interviewer responded by saying, "My father did that, but he died at 66." Armand's answer was, "Well, he just didn't do it long enough." [Laughter] Moving right along—it's hard when I try to be funny; I'm really not very good at it.

Regarding forward guidance on thresholds, I'll reiterate what I said earlier. We need to recognize that there are two different sets of rationales for signaling a very gradually rising interest rate path once we reach our thresholds. One reason is that, by promising to keep interest rates exceptionally low in the future, we are encouraging economic activity now. Another reason is that interest rates need to be low in the future because we expect the situation to exist such that the real interest rate is going to be exceptionally low for a long time even though all of our gaps are going to be zero. Ultimately, explaining how that occurs will be important.

Now, these two reasons for keeping rates low have very different implications for the implied degree of commitment by this Committee. Under the first view, we are promising to keep rates low in the future even in the face of rising inflation rates. This is what I take to be the Woodford-style forward guidance. This requires a high degree of commitment. The pressure to raise rates when inflation rates are beginning to rise and reserves are beginning to flow out of the system in copious amounts will be quite intense. Under the second view, there's much less required commitment. We will keep interest rates low because we now project that real rates will be low. I take this to be the key implication of the financial headwinds point of view. In this case, if our projections turn out to be incorrect, then we would raise rates more quickly. Yet this, too, has a challenge associated with it for communications. I think that justifying a zero real

funds rate when the unemployment gap is zero and inflation is close to 2 will require some nimble communications.

The Committee has not agreed on which of these two reasons is the primary motivation for keeping rates low past our thresholds. Unless we have a strong consensus, my preference would be not to change our current thresholds or introduce any more of them. Instead, I would prefer that we convey that, once we are past one of our current thresholds, we will return to a more normal-looking policy-setting framework and let policy be guided by some version of the Taylor rule that we may choose to indicate. The big advantage of doing this, in my mind, is that we will be telling the public how we intend to normalize monetary policy rather than giving them yet another reason to think that we are even further away from normality than we had earlier projected. We have time to work as a Committee on what is the proper way to communicate the return to a normal policymaking framework. In the meantime, I think it is best not to tinker with the thresholds, which would cause more confusion than it would clarity.

Regarding the use of balance sheet actions to strengthen forward guidance, my view is that such a tool is fraught with risks to our credibility and dangers. I believe that if we convey our policy reaction function clearly, market interest rates will reflect our desired policy path. If we fail to clearly convey our forward guidance and our reaction function, our attempts to cap interest rates by shoring up various asset prices and the term structure are liable to invite speculative attacks and create other problems for us, depending on which mechanisms we choose. Open market operations should not be a substitute for clarity regarding our reaction function.

In summary, my preference is to conduct our LSAP program in the way that we conducted our earlier programs: Declare a total amount that we think is consistent with our

outlook and a path for those purchases and then terminate them at some known point in the future. I think this will reduce market uncertainty and will permit an easier separation between our LSAP program and the forward guidance on interest rates, which is an important part of our arsenal. Regarding forward guidance, my preference is to convey that we will return to some version of rule-like behavior once we cross the current thresholds. This will set us on a path toward normalization of policy, reducing uncertainty about future policy, and underscore our positive outlook for the economy. And, finally, regarding open market operations, I believe that if we can clearly convey our reaction function to the public, we will not need to strengthen our forward guidance by directly shoring up the prices of various types of assets. If a mismatch develops between our desired policy path and market expectations, we could work to educate the public about our reaction function. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. You've set an ambitious agenda for today. I'll try to keep up.

First, in an attempt to be as brief as possible, let me give you my executive summary. In order to enhance our unconventional policy tools' effectiveness, I favor simple remedies whenever possible. One of the simplest adjustments is to lower the unemployment threshold to 6 percent or lower. This is a relatively simple adjustment for the public to digest, and it smoothes over several of the rough spots in the public's current assessment of our policy strategy.

So let me get started. We're seriously underrunning our inflation objective at a time when unemployment remains dangerously high. Our biggest credibility risk with the public, to me, is this: They aren't confident that we will stick with our already announced intentions to

provide bountiful policy accommodation in order to achieve our statutory dual mandate goals within a reasonable period of time. I will note at this point that, around this table and in our public commentary, we use the notion of credibility risk in very different ways. That's just the nature of this, but I'm using it in a way that's different than some others already today.

From April until September, long-term Treasury rates increased about 100 basis points. This was not an old-fashioned inflation scare. Inflation remains low. Investors and the public at large were concerned that the Fed would be tightening monetary policy earlier than they had expected, and, at that time, they didn't share the June SEP's optimism for a stronger economic recovery. Investors' tightening concerns even carried over to tighter expectations for funds rate increases in the futures markets prior to our reaching our 6½ percent threshold, I would say. The public acted as if they were revising down their expectations of the Fed's resolve to do whatever it takes to be successful. This is what I would call a Bank of Japan risk—the danger of removing accommodation too quickly. That's our largest credibility risk today. Our decision in September that reinforced the economic conditionality of the LSAP program was a big boost to shoring up our credibility on providing adequate policy accommodation. Mr. Chairman, I agree completely with your assessment on that. That action was important, and so are the actions we begin to consider today.

Now, I personally believe that our open-ended LSAPs and forward guidance have made a substantial positive difference for economic growth and inflation. Our actions to date have modestly offset ferocious headwinds, and you alluded to some of these just a few moments ago, Mr. Chairman. These headwinds come from restrictive, austerity-style government spending cuts and tax increases, as well as severe household deleveraging—deleveraging that continues. Amplifying these influences, the zero-lower-bound constraint has prevented us from more easily

offsetting their negative effects. But I also believe that these tools have not been as effective as they could have been, in part because of our difficult and narrow path to consensus. In order to maximize the effectiveness of our unconventional monetary policy tools amid all of our diverse public commentary, we need to better tune our formal Committee communications on forward guidance. Our challenge is to state our policy actions as a set of consensus views that are often in conflict with individual views expressed in public, while trying to convince the public that we will stick with our policy pronouncements as a Committee. We want to maintain the public's expectation of our resolve to do whatever it takes to be successful. That's my opinion. In this setting, the public and markets are constantly monitoring our statements for signs that we are, in fact, reluctant to maintain this course. They worry that we will instead engineer a Bank of Japan–style policy reversal.

Moving now, more specifically, to our communications challenges, the largest difficulty has been describing what we mean by "threshold" in our forward guidance. I believe we need to do more to enhance and protect the accommodation that it provides. So, what's the simplest thing that we could do? To me, it would be, at the appropriate juncture, adjusting our forward-guidance unemployment threshold down to 6 percent or lower. President Kocherlakota's earlier proposal for 5½ percent would be acceptable to me. Our 2½ percent inflation safeguard ought to be enough to allay any concerns that this enhancement would provide excessive accommodation in terms of inflationary risks. With a 6 percent unemployment threshold, an inflation floor doesn't seem necessary, to me. Although I can't say this with 100 percent certainty, I have every expectation that inflation will be higher along this enhanced forward-guidance path where we maintain the funds rate at zero for longer, at least until unemployment falls to 6 percent. Essentially, the inflation floor suggestion is an elaboration of what we mean by "threshold," as

opposed to "trigger." And the unemployment threshold is simpler and dominates the more complicated inflation floor, in my opinion.

I think the appropriate time for a change in our forward guidance would be when we first reduce the flow purchase rate of assets, but I'm open minded to other people's opinions on that, of course. No matter when it happens, there's a good chance that the reduced purchase flow would be interpreted as a restrictive policy move. I apologize, Mr. Chairman. That's going against your principle 3 that you laid out at the very beginning of this meeting, but I think there is that chance.

CHAIRMAN BERNANKE. My principle is what we should say, not what the market is going to believe.

MR. EVANS. Well, because I think this is likely to be the case, it's more difficult to say that. But okay. Anyway, there's a chance that it'll be interpreted as restrictive, and so enhanced forward guidance should be used to more than offset this interpretation. I would be open to further explicit guidance on LSAP pace reductions at that time.

The final element in my preferred simple set of announced policy enhancements would be to include some language describing a conditionally shallower path of funds rate increases. I favor either the alt-B language or greater explicit reference to the inertial Taylor (1999) type of policy responses, which I doubt the public has fully taken on board but which is embedded in the Tealbook baseline. Overall, I think this package is a simple and direct approach to enhancing our communications' effectiveness.

Okay. I've already covered much of my thinking on these issues, so let me briefly go through the specific questions, if I can. Regarding the first question on the inflation floor, I share President Bullard's objective to get inflation up. I think the question is just how we go about

doing that. Let me express my concern again, and I'm happy for more discussion on that. I don't really prefer the 1½ percent inflation floor. If the public understands what we mean by our threshold, it strikes me that this is redundant information. For example, if unemployment is 6.4 percent and inflation is 1.4 percent, it seems to me that a threshold means we would keep policy on hold at that point. I would hope that the public would already have that expectation. Because this communication seems redundant, the public would question why we've inserted it into the FOMC statement: "Why is this extraneous piece of information being offered up? There must be a reason for it. Let me think this through more carefully. Maybe it means that our threshold doesn't mean what I thought it meant." And I think that would be especially true if we chose an inflation floor of 1½ percent with actual inflation closer to 1.4 percent, which, unhelpfully, the current Tealbook assessment had up a little bit closer relative to their analysis. So I worry about a Bank of Japan risk that people would be concerned that we'd take away the long-promised accommodation too soon.

The alternative post-liftoff policy in the staff memo didn't seem to add much beyond the inertial Taylor (1999). I don't have strong preferences either way on that.

In terms of targeted market interventions, I guess I would say I'm not a big fan of that approach. I wish there had been a little more questioning—I would have asked a question, but it went very quickly. I guess the kind of question that I would have had would be along these lines. We're reluctant to tell the market what we think that their pricing ought to be—rightly so, because we want price discovery and we want that information to come back to us. But if we were going to do interventions, we're pretty close to telling them what we think pricing ought to be. So, what if we just published our assessment of the yield curve and the appropriate pricing based on our understanding of what our policies were supposed to do, and we didn't really stand

behind market interventions of that, but we just continually updated what we thought our policy should be providing? There could be some daylight between that. There could be some daylight between our interventions and whether or not they actually achieve that as well. Is this any worse? How much worse is it? That's the kind of question that I would have. So it just seems more complicated. I prefer things to be simple.

Regarding the third question of the lower range for the funds rate or IOER, I was intrigued by President Rosengren's suggestion of 5 basis point buckets of lowering the IOER. I'm sympathetic to reducing IOER to zero. We've done it in the past. If we were to do it, conditional on things that are happening, maybe that would be useful.

And when it comes to balance sheet adjustments in conjunction with simple and stronger forward guidance, I'm open to this. I tend to think it's still pretty complicated, but the major firepower has to come from our forward guidance. At some point, we do have to bring the asset purchases to a close, and so I'm open minded on that. In terms of composition of the purchases, I'm sympathetic to providing more in terms of MBS and reducing Treasuries, if we ever get to that point.

But at any rate, let me conclude. Simpler is better. I think the lower unemployment threshold of 6 percent or lower, once we begin to taper, would be a good idea. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. I have one question for President Evans, because this idea of tapering but then strengthening forward guidance at the same time has been kicked around the Committee before. Are you worried at all that this would send a conflicting signal? You want to pull back, but you don't want to pull back. Are you worried about that at all, or not really?

MR. EVANS. I've learned to worry about more of this ever since we came to recognize that our communications haven't always had the follow-through that we expected. So, yes, that's true. I've taken on board that there is more of a unidimensional aspect to what we're trying to do than just the plain language of, "We've got two tools. We can use them differently at different times." The markets haven't really been willing to embrace that. I think what they are doing is trying to guess what our true resolve is, which is what I tried to talk about at the beginning. That single principal component in terms of our ultimate resolve to follow through is what's most important. Therefore, if we get to the point where tapering makes sense and we make that adjustment, I fear that the markets will think of that as being on a path to an ultimately more restrictive balance sheet. And if we then offer them this strengthening to say that we intend our forward guidance to indicate that we're going to be in it for longer, that could be helpful. That's how I think about it, and I can't say it would happen.

MR. BULLARD. Okay. I appreciate it.

CHAIRMAN BERNANKE. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. To build on this conversation, which I think is really at the heart of the matter in a lot of ways, President Evans refers to a point in time when it's right to taper but, at the same time, it's also right to strengthen forward guidance. I think that, at such a point in time, it's very hard to explicate that economic conditions can justify both at the same time, unless we follow up on what President Lockhart referred to, explaining why the two tools really are different in terms of some other feature beyond our dual mandate considerations.

CHAIRMAN BERNANKE. That's an important point.

MR. EVANS. I agree with that.

CHAIRMAN BERNANKE. I would just get the Committee's sense. If we went to 6:00 and left whatever remained for tomorrow morning, would that be okay with everybody? So another hour, and let me turn to President Williams.

MR. WILLIAMS. Do I have a whole hour? [Laughter]

CHAIRMAN BERNANKE. Yes, you do.

MR. EVANS. Well, I just want to point out that I'm acting against my own interest in agreeing to that, having just finished my own attempt to be as brief as possible. [Laughter].

CHAIRMAN BERNANKE. Well, thank you, President Evans.

MR. KOCHERLAKOTA. Your selflessness is appreciated.

CHAIRMAN BERNANKE. President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. I, too, appreciate the staff's background memos on this important topic. As others have said, they're very helpful in thinking through both the pros and cons of these various issues.

As I discussed in September, I support strengthening our forward guidance to clarify that future tapering of asset purchases does not imply imminent liftoff of the funds rate. President Kocherlakota made a very good point just a moment ago. I think that if we want easier monetary conditions, or more monetary stimulus, through our forward guidance—I'll talk about IOER in a moment—we should do that now and not necessarily tie it to the tapering decision. However, we also should avoid extending our forward guidance beyond the point where there is strong consensus on the Committee. I'm picking up some themes that have already been touched on.

In thinking about this tradeoff, I find it very helpful to divide forward guidance into two periods—the post-threshold guidance and then the post-liftoff guidance. Post-threshold forward guidance describes what we'll do once the unemployment rate falls below 6½ percent. Post-

liftoff forward guidance describes what we'll do after we raise the funds rate for the first time. I strongly favor strengthening our post-threshold forward guidance, and I would do that at this time. The unemployment rate has fallen substantially, and a 6½ percent unemployment rate, which once seemed so far away, is now looming large. Because that threshold could be upon us relatively soon, it's becoming increasingly important to clarify what we will do when we cross it. In particular, we should make it clear that crossing the threshold does not imply an imminent tightening of the funds rate. Therefore, I favor language along the lines of paragraph 5 in Tealbook alternative A.

Now, I don't have a strong view about including an inflation floor, and I think we've heard the pros and cons on that already. I will just reiterate that the background memos suggest that putting in an inflation floor would have relatively minimal effects. If we were to go to an inflation floor, I would recommend doing the 1½ percent for symmetry. However, even without the inflation floor, I would just mention that the language in alt-A would reinforce the point that the threshold is not a trigger and that inflation, which is explicitly mentioned, will be one of the considerations in the timing of liftoff.

I am much less supportive of post-liftoff forward guidance at this time. In principle, post-liftoff guidance could also give markets and the public a better understanding of the likely path of future policy. However, the date of liftoff is further off, according to the SEP, so the benefits of post-liftoff guidance are not as great as the benefits of post-threshold guidance right now. I also see two major difficulties with post-liftoff guidance. First, when we conducted the consensus forecast experiment last year, we found that reaching a consensus forecast for the next few years was very challenging—that's a good Fed phrase—and this project was shelved for the time being. It's not going to be any easier for us to agree on a consensus forecast for the funds

rate, for the same reasons. And, even though I think I'm only the sixth person, we've already heard the various the different issues—whether it's headwinds or a modified Taylor rule or "lower for longer"—that come up when people think about what the appropriate level of the funds rate is for late 2016. Second, the SEP already provides information about the likely path of the funds rate without conveying a false sense of consensus and, arguably, inappropriate commitment. Even better, the SEP provides information about the uncertainty and diversity of views surrounding the median or central tendency. We don't want to give markets a false sense of certainty by ignoring that disagreement. Thus, while I strongly support the post-threshold forward guidance at the current meeting, I would defer post-liftoff guidance until we are closer to liftoff or until market expectations make that guidance necessary.

Now, turning to the other questions, I do not support the targeted market interventions along the lines outlined in the staff memo at this time, although I do want to emphasize how important it is to do this kind of blue-sky thinking. If we communicate effectively—and perhaps that's like Governor Stein's unicorn; it's a hope—so that market expectations are aligned with our own, I think these interventions would be unnecessary. The memo's proposed policies represent a form of interest rate targeting, which has already been mentioned. That would carry substantial risks and uncertainty, and these should be considered only as a last resort, in my view.

I fully support lowering the interest on excess reserves—and I would say, lower it to 10 basis points—along with lowering the target range for the fed funds rate. In fact, I wish we had done this a long time ago. Lowering the IOER rate not only pushes down market rates, but it also has the added benefit of reinforcing our communication that we want continued low interest rates. If staff members have concerns about money market functioning that could be addressed

by using this reverse repo facility, then I would support using reverse repos to put a floor of, say, 5 basis points.

Like some comments by President Rosengren, I would not change our forward guidance on asset purchases unless we have a strong consensus for doing so. The forward guidance on asset purchases we have given has been confusing at times, in part because there wasn't a sufficiently strong consensus on the Committee regarding the reasons for adjusting the pace of purchases and ending the program. And I think it's exactly the issue a number of people have already brought up—the fact that it's not only the economic benefits, but there is also some notion of costs and efficacy that goes into the reasoning around the asset purchase program. I would recommend caution in introducing new forward guidance around the asset purchases so that we don't make that mistake again. In terms of tapering, I don't have a strong view about the mix. Reducing purchases of Treasuries and MBS in roughly equal proportions is fine and has the added benefit of simplicity.

My final suggestion for the Committee's communications—and although people have already mentioned this, I'll reiterate it—is to pay more attention to the simple maxim that less is more. Several years ago, the San Francisco Fed held a research symposium on behavioral economics. The striking conclusion from that literature is that giving people fewer nuances makes it easier to get the message across. With too many contingencies, people get confused and the message can be muddled. So as much as we can, we should try to keep our message simple and to the point. Thank you.

CHAIRMAN BERNANKE. You have 55 more minutes.

MR. WILLIAMS. I was keeping it simple and to the point. [Laughter]

CHAIRMAN BERNANKE. President George.

MS. GEORGE. Thank you, Mr. Chairman. I would like to also align myself with those who think that simpler is better. I think that should guide us as we look at this.

For me, the communication challenge we face is really less about convincing markets that LSAPs and forward guidance are separate policy tools and more about clarifying the sequencing of our future actions relative to those tools. Because of that, the staff's work, which was very helpful in thinking about this, made me wonder if it would be worthwhile to return to the discussion that we had in June about the path or guidelines for policy normalization? For example, if markets now believe that we might wait until March to start adjusting purchases and then end them late next year, at a time when the unemployment rate could be quite close to 6½ percent, I think having more daylight between the end of purchases and the 6½ percent threshold is important if we want to move deliberately and carefully toward the first rate hike.

We will likely want a period when we hold the balance sheet constant and then cease reinvestments, which are accompanied or shortly followed by temporary reserve-draining operations. These shifts in our balance sheet and operations carry some risk in terms of how markets will respond, and so, for that reason, I have felt that starting to adjust LSAPs sooner would give us more time to properly lay the groundwork before the first rate hike and help mitigate the possibility of a sharp rise in longer-term rates, which could threaten the recovery and financial stability. These considerations and communications suggest to me that it may be worthwhile for the Committee to reconsider the discussion we had earlier and talk about the sequencing of those steps.

Relative to the ideas that the staff raised in their memos, let me start with forward guidance. In terms of our communication strategy and forward guidance, it is tempting, as some have noted, to remodel that guidance as a way to provide more emphasis on its intent. But it

seems to me that guidance works best if it is consistent and often repeated, and so making changes at this point seems counterproductive. Every time we change our guidance, markets must reassess the implications for policy and ask why we changed it, which then increases uncertainty and could raise questions about credibility. This is particularly important because a diverse group of consumers and investors can easily interpret our actions in many different ways, particularly in ways that can be contrary to our intentions.

Given the risk in adjusting forward guidance, I think we should approach the issue of adding an inflation floor cautiously. Under the right circumstances, I could support its intent. At this point, though, I would not want to send a message that our risk assessment that inflation will fall further has increased, especially given that we have seen some modest upward movement in core PCE inflation. Should we see further broad-based slowing in prices, though, adding the inflation floor to signal our commitment to achieving our target may be effective.

I do not favor using targeted market interventions, as such actions move us into further attempts at fine-tuning and are likely to distort the information content and signals from markets regarding expectations for monetary policy. To me, it is unclear how this would improve communication. Right now, markets expect liftoff to occur after the 6½ percent threshold is reached, so they do not question our commitment to follow through with the current threshold-based guidance. In addition, the expected path of the funds rate should move in response to our communications, LSAP expectations, and changes in the outlook. Expecting LSAPs to surgically operate only on the term premium seems unrealistic, and I prefer other strategies to address this.

In terms of cutting IOER, I am open to this, although, as others have noted, we've left that option on the table for several years now, and to raise it at this point by pairing it with more-

aggressive use of the overnight reverse repo facility could send some mixed messages and offer yet another communication challenge.

Regarding LSAP rules, I support rules-based, systematic policy reactions, but I believe that any rule should exploit the connection between the instrument we're adjusting and the target we are trying to hit. The connection between LSAPs and any measure of labor markets, including the unemployment rate or employment growth, especially at such a short horizon, strikes me as rather weak. Instead, I think we should simply try to be clear with the public and markets about when we anticipate the start of tapering, because that is likely to elicit the strongest market reaction. If we try to state a reaction function for asset purchases, which is not fully understood, then we may also be expected to provide a reaction function for the fed funds rate.

In terms of the mix of assets, I am open to any of the options. I could support a decision to adjust the mix based on some research that suggests that the benefits of Treasury purchases are modest. Once tapering begins, reducing Treasury purchases quickly would probably do little to tighten broader financial conditions.

I also like the idea of trying to use the SEP to provide balance sheet guidance. I think there is an opportunity to talk about the appropriate timing for ending asset purchases, similar to how we do appropriate timing of policy firming. And I will stop with that. Thank you.

CHAIRMAN BERNANKE. Thank you very much. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. I, too, want to thank the staff for their good work on the memos that were prepared for this policy planning discussion.

Before I lay out answers to the questions that were posed, let me take a moment to give a general overview of my position. I am supportive of taking actions that will reinforce our

message that policy is and will remain highly accommodative. However, in light of my outlook that the economy will continue to improve, I do not see a need to take actions that would add accommodation. In addition, while our asset purchases do not appear to have had negative effects on market functioning or financial stability thus far, in my mind, the potential longer-run risks continue to grow with the size of the balance sheet. How we reduce our asset purchases, how we communicate our plans, and how we assure the public of our commitment to maintain a highly accommodative monetary policy after we end our asset purchase program do pose immense challenges, and the events of this past summer make those challenges clear. Thus, I believe that our path forward should be governed by a dominant principle, and that is simplicity, as several others have already suggested.

Applying this principle of simplicity, I strongly favor some type of simple rule for asset purchase reductions that can be easily communicated to the public. I know that a simple rule is unlikely to be the first-best option, but a simple rule may still give us the economic results we desire. A simple rule facilitates clarity and enables the public and financial markets to form reasonably accurate expectations. Moreover, with markets already expecting us to proceed in a pretty simple way, ratifying those expectations may be beneficial, especially in light of the communication challenges we had this summer. Along many dimensions, we are at a juncture where a simple, easily explained, second-best policy rule probably dominates a complex first-best solution that would be difficult to implement.

Similarly, I would favor simple and reasonable adjustments to our forward guidance to ease concerns about a premature tightening of policy. However, I do not think it is a good idea to change the thresholds in our forward guidance, because doing so could make markets doubt whether we will actually carry through with what we say, thus reducing the effectiveness of that

guidance. For maximum effect, I believe that any adjustment to our forward guidance should be timed to coincide with the announcement of our first reduction in the pace of asset purchases. For example, the proposed language in alternative B, paragraph 6, would be a good addition to our statement when we announce that the pace of asset purchases will be adjusted. Timed in this way, this adjustment to our forward guidance could help separate asset purchases and short-term interest rates in the eyes of the public by emphasizing that we have not pulled in our expected path of the funds rate.

So with those ideas as a guide, let me briefly answer the questions that were posed. Regarding the first question, imposing a 1½ percent floor on projected inflation seems like a sensible option to enhance and reinforce forward guidance. If we are projecting such low inflation, it is unlikely that we would begin to raise the fed funds rate target anyway. So this floor is intuitive. As I just mentioned, the best time to make any adjustment to the funds rate guidance would be coincident with the first adjustment in asset purchases.

For the second question, I do not see targeted market interventions as being appropriate at this juncture. Many of the options in the memo move away from my desire for simplicity to enhance communications. In addition, some options border less on reinforcing guidance and more on adding a slight amount of accommodation, and I do not think the two concepts are synonymous.

Regarding IOER, in the third question, I have previously been open to a cut in the IOER rate. However, it is not clear whether such a cut would really provide much signal about the Committee's intention to keep rates low well into the future. In fact, adding ever so slightly more accommodation by cutting the IOER could create noise if markets interpret the cut as a signal of pessimism about the outlook on the part of the Committee.

In terms of asset purchase guidance, in question 4, I would strongly favor a simple rule, as I just said, to guide reductions in asset purchases. Linking asset purchase reductions with decreases in the unemployment rate, as Governor Stein has previously suggested, appears to be the best option, but I could also support other mechanical rules, such as a rule linked to payrolls that does not require unrealistic payroll gains. What is most important to me is that we begin the process of adjusting our asset purchases.

For the mix of purchases, in question 5, I would be inclined toward an approach that is simple and aligned with market expectations to avoid possible communication problems. The simplest solution would be to make modest, simultaneous downward reductions in both Treasuries and MBS at each step. That said, I recognize that a case might be made for initially reducing Treasury purchases more than MBS purchases, based on our larger role in the MBS market.

Finally, the sixth question asks about other enhancements to communications. Here I would suggest that we learn from previous experience. In my view, some of our past communication enhancements have solved the problems at hand, but they have not always proven to be robust to future developments. In light of this experience, I suggest that we try to evaluate how proposed communication solutions would hold up under some alternative economic scenarios. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. Like others, I'll make a few remarks before I address the listed questions.

As a general matter, I am sympathetic to clarifying our communications and forward guidance, but I'll echo what people have said about the value of simplicity and just highlight the

incredible complexity of what we are trying to communicate with the statement we have. I think that, going forward, we ought to be setting a pretty high bar for introducing additional elements to forward guidance or additional elements of complexity about how we portray or execute our policy.

The second point I want to make is that, as I said at the last meeting and as President Bullard said, I think it's unreasonable to expect markets not to draw inferences about the funds rate path from what we do with asset purchases. Now, I understand that it's really easy for us. We see all of the information we see. We have this discussion. There's a lot we see in this room that markets don't see, and so it's easy for us to picture: "Yes, I can decide to taper, and it doesn't change at all my view about what funds rate path we're likely to choose in the future." But I think President Bullard has it right. Inevitably, market participants are going to be inferring about some hidden information—not that we're hiding information. But inevitably, they are going to make inferences about our subjective assessments of the incoming data and the economic outlook from one instrument. So, what we do with one instrument is bound to spill over into what they view about the other instrument.

I think it is worth pointing out here that, paradoxically, to the extent that our decision at the last meeting not to taper is perceived as reflecting a desire to push back on the markets' pulling forward of the funds rate path, we ourselves have linked the two policy instruments. So now a decision to taper is going to imply a willingness to tolerate the kind of market move that led us to not taper in September. At this point, for me, this is another reason not to get our hopes up about achieving a clean separation in the public's mind between asset purchases and the funds rate path.

Now, this isn't to say we shouldn't push hard on those expectations at the point when we choose to taper. We should feel as if we are capable of speaking forcefully and ratcheting up the volume on what we expect about the funds rate path. I don't view this as strengthening forward guidance in the sense of introducing some other communication device intended to push down the yield curve, because I think President Bullard is about right. This wouldn't be about adding some little trick to pull the yield curve down. It would be something that would forcefully say, "Yes, we believe this is the likely path of the funds rate"—just to emphasize that we think it ought to stay where it is now.

The third point I want to make is that, personally, I think we should hold off any other forward guidance until we decide to taper. Let's just lie low. We've tried multiple times this past year to communicate. I'm not sure we wouldn't call it a mixed success at best. Anything we're likely to say now about tapering is going to have limited credibility. It's going to raise questions: Is this consistent with June? Is it consistent with September? Is it consistent with the original guidance? So I think that we should just wait until we're ready to taper and do it—and communicate clearly at the time and recognize that long rates could well move a lot.

As the discussion has gone around the table, down the other side, and back again, I've been thinking a lot about what President Rosengren said about clarity and achieving a shared consensus in this room, at least at a workable level, on what we're about. I think it's an important thing, and it's worth reflecting on. I'm not sure I have anything terribly organized to say about it, but I was thinking about it when President Lockhart talked about our being clear on whether we're all in. If we're hitching this to a rise in GDP growth, are we prepared to stick with it, pedal to the metal—the hamster-wheel scenario? And that's a tough question. We haven't addressed that. We didn't really talk about that. At no point did we really talk about it,

and I think we've all assumed that, yes, there'd come a point when we'd want to find a way out of it.

I think what President Plosser said about commitment versus discretion is very germane. Whenever forward guidance comes on the table, we ought to revisit this, because our statement is clearly worded as if it's just a forecast of our future selves and represents no commitment to do anything we would not otherwise want to do at the time. And yet, so much of the language in the minutes and discussion around the table acts as if it is an independent policy tool, which, to some extent, presumes either a discrepancy between our understanding of our future selves and the markets or some willingness to commit.

For me, I take away this broader message in Eric's observation that, looking back, there's an extent to which you could say that we focus a lot on getting an agreement, meeting by meeting, on that meeting's tactical measures, as opposed to the deeper understanding. And when we're talking about how we're going to react in the future, a lot of times we seem to push off things that it would be better to get a consensus about early. Just as an example, look at this discussion. We received a set of questions for discussion. Every one of us has felt it necessary to preface our remarks with a bunch of things that weren't addressed in the questions. The questions are all about these tactical issues about particular instruments, and everyone felt it necessary to address deeper, broader issues before they address the tactical stuff.

So now I'd like to talk about the tactical questions we were to address. Regarding the first question, I think an inflation floor seems like a potentially constructive change, and I'm generally for it. But I'd point out that, to some extent, it's this off-equilibrium communication that we shouldn't often do. It's not clear that there are that many states of the world that it really tells anybody anything about. I generally favor it. It would be nice if it was handled

symmetrically with the 2½ threshold so that it was one clear, simple thing rather than two different contraptions. The "headwinds" language about post-liftoff interest rates is highly problematic. The way it's written, to me, clearly signals greater pessimism on the part of the Committee. So I think it's vulnerable to Woodford's critique, and I don't think it's a good thing to add to the statement. Plus, if our purpose is to compensate for tapering, then it is not clear that we should do it now rather than when we taper.

Regarding the second question on market interventions, I'm generally skeptical that market interventions can strengthen our forward guidance. The staff memo notes that the effectiveness of the interventions "would depend on investors' confidence that the facilities would remain available for the period of time defined by either a date or a threshold." It's not clear to me that starting the interventions would be viewed as any more of a commitment to follow through on them than anything we say. As someone else has said, the standing purchase facility would be date-based as opposed to data-dependent. I'm a little puzzled about why we'd take that step backward. We moved away from date-based forward guidance for good reasons. Plus, just a centennial perspective—I think William McChesney Martin, Thomas McCabe, and Marriner Eccles would be rolling over in their graves. I think Carter Glass would be spinning in his grave if he knew we were contemplating these.

CHAIRMAN BERNANKE. Why those guys in particular?

VICE CHAIRMAN DUDLEY. Why is that a problem? [Laughter]

MR. LACKER. Yet another reason for a deeper discussion.

A third alternative was to commit to overnight RPs at a predetermined rate until the threshold was crossed. But my interpretation of the motivation of this discussion is to help people understand how long we think it will be until the thresholds are crossed, not our degree of

commitment about what we've said we would do until the thresholds are crossed. Committing to doing something different until the thresholds are crossed—it's not clear that that's going to change people's minds about how long it's going to be until the thresholds are crossed. So I'm a little puzzled about that. I think the idea behind forward operations seems to be that we'd take positions that commit us to losing money if short rates go up at some specified time in the future. We haven't actually committed not to let rates go up. Plus, because we're already pretty well positioned to lose a lot of money if rates go up, I'm not sure how much additional credibility this would buy us.

The third question concerns lowering the funds rate when we taper or lower IOER. I'm skeptical about whether it would help for the reasons someone said. We would be using one instrument while we're tapering, which would be perceived as moving another way with another instrument, and that would be confusing. In addition, the current level of the funds rate doesn't really say anything to anybody about how long the rate's going to be low, and I think the disconnect problem is about how long it's going to be until liftoff. That's the major issue of the funds rate curve. And, if we're going to lower IOER now, I think it raises a really awkward question as to why we haven't done this in the last five years. It's just a little bit awkward that we haven't lowered it until now. If there's some reason we can point to, then that might be good, but I think that's awkward.

And, finally, regarding the mix of assets, I favor reducing MBS purchases only.

CHAIRMAN BERNANKE. One rationale is that we have this reverse repo thing now. That's one, if you're looking for a rationale. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. A lot of great things have been said already. President Fisher asked me to speak until 6:00, but, given how many great things have already been said, it's going to be hard for me to meet that challenge.

I do want to associate myself with the remarks that President Evans made about the main risk that we face, which is that the public and the markets don't see us as sufficiently committed to sticking with the long program of accommodation that is going to be required to meet our dual mandate objectives. We continue to be falling short of our dual mandate objectives over the medium term, and I would say that that is one way for us to simplify our communication on an ongoing basis. In January 2012, we set forth a strategic plan of what we are trying to achieve. We came back and reaffirmed that strategic plan. One way to simplify communication is to be making reference to that plan on an ongoing basis as a benchmark for what we're about. For example, why would we think about lowering IOER now? Well, actually, we're falling short on both of our mandated objectives. We're falling short of what we're trying to achieve as an organization in terms of our strategic direction. That provides an explanation for why we would take this step of lowering IOER at this time. I think one way to achieve the simplicity—and I won't be the one holdout, saying, "Yes, we should get more complicated if we can"; I also favor simplicity—is to be speaking more in terms of our goals and less in terms of the tactical moves that we are forced to confront on a meeting-by-meeting basis. Now, with that said—that I think we should be trying to be persuasive that we're in it to win it, and that we're there to try to get the recovery accomplished and get inflation back to 2 percent—I sense that we are going to want to back away from the asset purchase tool before we have accomplished full employment and before we have gotten back to 2 percent inflation.

President Rosengren laid out some arguments for not thinking about costs and efficacy. I'm actually quite sympathetic to the line of reasoning that Eric put forth, but I do not think it's commonly shared. So we have to have a way to talk about this publicly—why is it that we're going to back away from this tool when we're still short of our goals? And this is the problem we faced with our recent communications about near-term tapering. We've been sending the following message: We're willing to curtail or reduce monetary accommodation. Mr. Chairman, despite your third principle, I think reducing the flow of purchases is going to be seen as taking away a tool when the unemployment rate is expected to fall only gradually and the inflation rate is expected to rise only slowly back toward desired levels. That kind of communication is telling the public that we're quite comfortable with relatively long-term deviations from our employment and price goals. It really tells that our strategic plan isn't that relevant for our thinking about monetary policy. With that message, it's not surprising that the markets see it as a very real possibility that we might be willing to raise short-term interest rates relatively soon. We can fix this communication problem—I think President Lockhart hit on this, and I mentioned this in my last go-round—by being more transparent about how we're thinking about purchases. Why are we talking about reducing purchases in the face of a disturbingly weak macroeconomic outlook? It's because many around the table have expressed growing discomfort with this unconventional tool in light of their concerns about its costs, its efficacy, and its just general "unknownness." That's not a word, I don't think.

MR. EVANS. It could become one.

MR. KOCHERLAKOTA. Well, I encourage you to use that at the next press conference.

Yet, when I look at alternative C, I see no mention of efficacy or costs or these general concerns in the proposed justification for tapering. This lack of clarity about the Committee

participants' concerns about asset purchases means that the public does not have a clear understanding of why we see asset purchases as distinct from the fed funds rate as a tool of monetary policy. And President Lacker and President Bullard are right—there's always going to be this inference problem, but we certainly have set ourselves up for magnifying that problem by not saying we see any distinction between these two tools as a way to stimulate aggregate demand.

Mr. Chairman, I encourage the staff to recirculate the one-page handout about the asset purchase program that you distributed at the December 2012 meeting. There were a lot of great things in that handout, but I really like this one terse but, I felt, really apt phrase, which was, "Exiting from the program: Rhetoric should focus on ongoing evaluation of efficacy and costs." I've been considerably more long winded today than you were in that handout, but I arrived at that same conclusion. To make clear that we view asset purchases as a distinct tool from the fed funds rate, our communications about ending the program should emphasize the costs and efficacy considerations associated with this unconventional tool. To be clear, I'm not saying we should mention only those. It's that we're balancing those off against the dual mandate benefits of using the tools and reaching the conclusion that, given that balancing act, it's appropriate at this time to curtail the use of this tool.

So, as many have done, I've had this overall opening statement. Let me turn to the staff's six questions

CHAIRMAN BERNANKE. President Kocherlakota, could I ask for an elaboration? Let me ask the following question. I'm just trying to understand your argument. Part of your argument sounds like, as long as we're not meeting our targets, we should put all instruments to the max. Now, that's not obviously true. In normal circumstances, with a Taylor rule, we'd put

the interest rate below the neutral rate when we're not at our objective, but we wouldn't necessarily go to zero. So, what if I think about our overall policy thrust as being our rate guidance plus the special thing, the asset purchases, which help us drive the effective rate below zero? As we move forward in time and as the economy gets better—and we have seen a lot of improvement—why can't we drop part of the set of tools and still remain highly accommodative? I'm not saying this is where we are. I'm just asking, as a theoretical matter, why we couldn't argue that we have made a lot of progress and the economy has improved enough that we don't need this additional booster rocket to get, ultimately, to our objective. I didn't quite understand that.

MR. KOCHERLAKOTA. I think that's a great question and a very important question, although I do feel as though we might have switched roles on this discussion in the last two years [laughter]—there's nothing wrong with that. But let me try to answer that question. I think that if we were in a position where the outlook was always consistent with our dual mandate objectives, then we would be responding to the changes in economic conditions as you describe. But I guess I look back over the past couple of years, and I see a situation where we've been falling short on both prices and unemployment. That seems to call for more accommodation than we currently have in place. So the reason to say we should be doing the maximum is simply that, given the level of accommodation we have in place—which seems like a lot—we still are falling short of our goals. That means we want to provide more in order to achieve an even faster rate of improvement toward those objectives.

CHAIRMAN BERNANKE. But "falling short" doesn't mean at this moment that we're short, but rather that you're assuming we could get to our objectives more quickly.

MR. KOCHERLAKOTA. Yes.

CHAIRMAN BERNANKE. Our projections do show us reaching our objectives.

MR. KOCHERLAKOTA. But I'll focus on inflation. They show there that we're taking five or six years to reach our objectives. So this would be to facilitate a faster rate of improvement toward those goals. That's a better way to say what I was trying to say, Mr. Chairman.

CHAIRMAN BERNANKE. Okay. Sorry to interrupt you. Go ahead.

MR. KOCHERLAKOTA. No, I appreciate the attempt to make me more clear than I was being.

So I favor simple and transparent approaches, but it's not just simplicity and transparency. I would favor those approaches if they foster faster progress toward our dual mandate objectives. The outlook in the Tealbook, Book A, justifies more stimulus, as others have talked about. On forward guidance, I thought that President Williams's divide between post-liftoff and post-threshold is really nice, but I like the idea of talking about what we would do at the 6½ percent unemployment threshold. And I would favor reducing the unemployment rate threshold. I continue to favor reducing it down to 5½ percent. If we go back to July, the staff prepared a great memo that I thought did an excellent job of rationalizing why it would be beneficial to do so. Our price stability objective is to keep inflation close to 2, so I'm not sure why we would be thinking about raising rates if the medium-term outlook for inflation is as low as 1½ percent. I'm not sure what we'd be adding by adding such a low floor. People have also talked about the last sentence in alternative B(6). That sentence is packed with a lot of economics. It's very rich. I know what it's trying to do, but I think it's better to try to unpack that than to try to have that one sentence carry all of that weight. I think that the SEP, plus the

press conferences, can really do a good job of trying to convey what we're attempting to do there.

Regarding question 2, I see the various alternatives to use market interventions to put caps on medium-term interest rates as potentially valuable. But I think we need to have a lot better understanding of their limitations and challenges before we proceed. The key question for me is one of pass-through. We could do all of these interventions in targeted markets, but we really want to get out there to the rates that households and firms actually pay.

To move on to question 3, I don't think that a change in the IOER or the fed funds target would have large effects necessarily, but, certainly, lowering it is directionally consistent with fostering more-rapid progress to our dual mandate objectives. It's very easy to explain to the public. It's got transparency and simplicity—all of those things—going for it. I actually would go further. I would ask the staff—and this follows from President Bullard's suggestion—to examine whether it's legally possible for the Board of Governors to lower the interest rate on excess reserves below zero. I think it's worth exploring that. It doesn't mean we necessarily have to do it. But is that even legally possible? President Bullard has raised that as an economic possibility, but is it legally possible for us to do that? I think such a move would be a very powerful signal of the strength of our commitment to our dual mandate objectives.

The fourth question asks about mechanistic rules for the reduction of asset purchases. In general, and especially in such unusual times, this Committee is loath to adopt mechanistic, backward-looking rules. Any such rule confronts us with the risk that we will make the mistake of leaving out factors that end up shaping our outlook and our views about appropriate policy. Why, then, are we contemplating a mechanistic approach to this particular part of our policy menu, the reduction of asset purchases? As I understand it, the goal is to reduce the influence of

asset purchase reductions on the public's belief about the future course of the fed funds rate. But I think this is a second-best treatment—and there's a better treatment—for the problem. We should be a lot more transparent about the factors that are influencing our decisionmaking about asset purchases. Why are we contemplating any reduction in asset purchases when the outlook would not lead us to consider an increase in the fed funds rate? That's really the question that we're trying to drive home to markets and the public—that we're willing to reduce asset purchases when we still think of ourselves as not being willing to consider an increase in the fed funds rate. We see the programs as not being substitutable. The reason that that's true is that many around this table see asset purchases as having costs and efficacy considerations that don't apply to the fed funds rate tool. And our external rhetoric needs to be a lot more consistent with this internal reality. If we're clear about those distinctions, then our decisions about reducing the flow of asset purchases would have little informational content about our future decisions concerning the fed funds rate. And I don't see a need to have that special mechanized rule for reducing the flow of asset purchases. For the usual reasons that I'm pretty sure we would regret such a rule very rapidly, I would advise against doing so.

On question 5, I prefer simplicity here—equal-proportion reductions. There might be some small benefits to fine-tuning along those lines, but, boy, those have a lot of possible communication costs, as the memo laid out.

And on question 6, I've already made my main comment along these lines. We should be much more fully transparent about how efficacy and cost considerations are weighing on the Committee in thinking about asset purchases. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher.

MR. FISHER. Thank you, Mr. Chairman. I like the phrase "less is more," but not too long ago, I sent around a memo, if you remember, showing the word count of our statement. Since we started our unconventional monetary policy, we've gone from the mid-250s to 700 or so. It seems to me that there's a conflict between transparency, which we wish to achieve—providing a market signal and allowing people to discount what we're likely to do—and this "less is more" mantra that all of us seem to agree with. I mention that only because I'm now going to speak more, not less, and I will try to keep it within 700 words. I know you want to quit at 6:00.

And, Eric, I just want to tell you that wounds can heal after two years, because it's taken me two years to get over what St. Louis did to the Texas Rangers. I actually agree with President Bullard at this juncture, which I haven't done for about two years. So it may be possible for you, if you lose in the World Series, to find some of his arguments appealing.

MR. BULLARD. Will you just refresh my memory, President Fisher?

MR. FISHER. I don't want to refresh your memory. [Laughter] I think we can have an arbitrage among Shiner Bock, Sam Adams, and Urban Chestnut—or whatever.

Here are some observations, which are somewhat "Bullardian," if I may use that term. The premise of the introduction to the set of questions—that asset purchases and forward guidance are distinct policy tools—is, to me, open to question. We had evidence earlier this year that our asset purchase plans can affect perceptions of future rate policy. Some of us suspected all along that this was the case, and that a significant portion of the benefits claimed for our Treasury purchases actually derive from the inferences people were drawing about future interest rates—the expectations channel—not just term premium effects. There's currently also a very practical linkage between our asset purchase policy and future interest rate policy. As the start of

tapering has been delayed and the unemployment rate consistently edges slightly lower, it becomes increasingly likely that liftoff will be constrained by our need to bring asset purchases to an end rather than by our 6½ percent unemployment threshold.

So we ask, are there better ways of communicating our interest rate intentions? I spoke of forward guidance at the September meeting, I've spoken of it several times, and I'm convinced that the answer to this question is yes. I'm just not satisfied we've found the right approach. Getting forward guidance right from the start is important because people must believe that we'll follow through on whatever it is that we promise to do or that they believe we have promised to do, especially if we want that promise to be effective. We can't just say "never mind" one or two or six months or a year from now. Therefore, it's important that we not commit to a rule that may prove to be dysfunctional, forcing us either to accept a bad outcome or to renege.

By the way, I find the stochastic simulations that the Board has begun reporting very helpful for identifying policy rules that are possibly likely to perform well in a wide range of circumstances. I want to thank the staff, as everybody else has done, for the good work that they're doing. One observation I have is that vague statements of intent allow more flexibility and are easier for us to negotiate at the table, but they are unlikely to be very effective. I find that they are too easily misinterpreted and too easy to reinterpret when they become inconvenient. So, like many others at the table, I would prefer more rule-based decisionmaking, if possible. Among the lessons that I take away from the staff simulations are the following: The optimal funds rate path is highly sensitive to changes in economic assumptions and the economic outlook. An implication is that it will generally not be a good idea to put a time constraint on liftoff, to try to peg a future path to the fed funds rate, or to simply too strongly

signal the intention to target a particular funds rate. Another takeaway for me is that, whatever its intuitive appeal, a promise to deter liftoff until the inflation rate rises at least to X is probably of little value. I actually think it may be harmful. At least, this is the feedback I get from microeconomic operators, Mr. Chairman. It's difficult for me to explain, but I worry about the fact that, if we wait until inflation rises to at least X and then we act, it will be viewed as our tolerating X plus Y. I would underscore that the policy that people expect after liftoff, as I have argued many times at the table and as many other people have argued here, is more important than when liftoff occurs or what liftoff is conditioned on. To me, a half-point cut in the unemployment threshold, by itself, accomplishes very little.

So those are just some observations. What are the practical implications of this slightly discursive set of observations? First, the most straightforward way to prevent tapering from running up against our 6½ percent unemployment liftoff threshold—and so maintain some semblance of separation between our asset purchase policy and our interest rate policy—is to tie reductions in the pace of purchases directly to the unemployment rate. There is a version of that in paragraph 4′ of policy alternative C, and I think it should be considered. Second, MBS purchases are like some of the recently introduced antidepressive medications. I've used this metaphor in my speeches. They are a very powerful tool; they are a drug that has clear, immediate benefits. I believe that our actions on that front did have an important benefit of helping turn that market. But they also have long-term adverse side effects. They are worth using only in the case of a crisis, which we did, and if you're desperate, which we were. We wanted to see a turn in that market. Once you start those medications, it's dangerous to prescribe them forever, but it's also dangerous to stop them too quickly. I'd very much like to phase out the purchase of both MBS and Treasuries. As in September, I'm willing to weight

initial tapering moves toward Treasuries, if that would allay concerns about the housing recovery. That said, my discussions with the homebuilders this last go-round—I did not mention this in my economic intervention—indicate that mortgage rates are just one factor that is interrupting the housing recovery and has led to a pause. They cite the most significant factors as being (a) they priced themselves too aggressively too quickly and (b) there is a shortage of materials and skilled labor such that now, what used to take 7 months takes 14 months. That said, the majority at this table may still consider the backup in rates on mortgage-backed securities to be something that we need to pay special heed to.

With regard to alternatives 1, 2, and 4, potential use of balance sheet actions, like many others, I don't favor them. I do think they possibly inhibit price discovery. At least in the case of 2 and 4, for me, they hint at date-based forward guidance, and I'd like to get away from date-based forward guidance as much as possible. As you were suggesting, President Bullard, you want to drive a stake through the heart of that concept. But those sound, to me, a little bit too much like date-based forward guidance. Alternative 3 in that same memo, which is use options to provide state-contingent forward guidance, may be more appealing because it's state contingent. But I think the implementation problems cited in that memo are quite daunting.

As previously mentioned, making liftoff contingent on an inflation floor doesn't appear to be an especially promising approach to forward guidance, in my view. I'm not excited about complicating our communications, to no real purpose. We need to keep in mind that the public's time and patience are limited—one of the reasons we want to have less rather than more. Along that line, I think the public's patience would not be enhanced by what I consider well-intended but ill-defined, open-ended, amorphous words like "eventually" and "patient," such as in paragraph 6 of policy alternatives A and B. I also have very strong reservations about using

persistent "headwinds" as a justification for additional post-liftoff policy inertia, as is done in paragraph 6 of A and B. First of all, I find it implausible that significant headwinds will extend well into 2016. That's eight years after the peak of the crisis. To me, that strains credulity. And regarding a definition, I think the important thing to realize is, the headwinds that we're facing, as far as I'm concerned now, stem from fiscal policy, not from financial market strains. These fiscal headwinds are only very indirectly caused by the financial crisis. We could argue about that, but I don't find the term useful.

I suspect that, with regard to funds rate inertia, the reason that increased funds rate inertia seems to help economic performance in the staff simulations is because it keeps the funds rate lower for longer in the period after liftoff, partly offsetting a more-restrictive-than-desired policy-setting in earlier years. If people regard the promise of future extra-easy policy as credible, it should promote recovery today. The problem with using inertia in this way is that the amount of future extra stimulus is not linked to the size of the past stimulus shortfall. So if the recovery suddenly picks up steam, inertia locks you into providing more future stimulus than is desirable. You may more than offset past policy errors.

With regard to lowering the IOER rate to offset a probably minor economic impact of the announcement of an unemployment-contingent taper of our asset purchase program, it might have some benefits. The above-market rate that we are paying banks, based on their excess reserves, is awkward. And the joint Board–New York Fed memo makes a good case that a reduction in IOER would not seriously disrupt financial markets. But that said, it seems to be tinkering at the margin. My bottom line, Mr. Chairman, is that I would suggest lying low, as President Lacker said, and pausing here and taking a deep breath, not adding more words. But if

we do anything, it ought to be large. I think tinkering at the margin might just add further confusion in the marketplace.

I have just a couple of last comments. We've talked a lot about LSAPs. We talk about it constantly. The one thing I never hear at this table, other than dealer expectations, is, what are the limits? What are the limits? How long do we go? President Lockhart made a very good point that—I think this is what he said, if I recall that far long ago in the conversation—once we decide to start dialing back, or putting an end to expansion, we ought to make clear what the path is going forward. But I've yet to hear anybody explicate clearly how far we're willing to go, other than getting estimates from the dealers. So I would like, at some point, for someone to articulate what is the total amount of large-scale asset purchases we're willing to contemplate.

And then, finally, with regard to communications, I've argued this from the very beginning—future Chair Yellen has heard me say this from the first time we had a communications meeting—I would strongly advocate that the Chairperson have a press conference after every single meeting that we have. We can't just keep adding words to the statement. There's a great deal of nuance, and I think only the Chairperson, as primus inter pares, can explain those nuances.

I hope that was less than 700 words, Mr. Chairman. Thank you.

CHAIRMAN BERNANKE. I don't think so. [Laughter] But it is now 6:00. I thank everyone for some very thoughtful interventions. We start tomorrow morning at 9:00. A reception and dinner are available.

[Meeting recessed]

October 30 Session

CHAIRMAN BERNANKE. Good morning, everyone. To start, let me call on David Lebow to report on data releases.

MR. LEBOW. Thank you, Mr. Chairman. This morning we received the CPI for September, delayed because of the government shutdown. The CPI was right in line with our expectations. The total index rose 0.2 percent. Ex. food and energy rose 0.1 percent. So this ought to have no effect on our inflation projection, or on our translation of yesterday's retail sales data. This morning we also received the ADP estimate of payrolls in October. You'll remember the employment report was scheduled to be released this coming Friday. It's been delayed by a week. The ADP usually comes out two days in advance; the ADP is on its regular schedule. The ADP showed an increase in private payrolls of 130,000. Our Tealbook estimate was 135,000, held down 25,000 by some effect of the government shutdown. So the ADP has limited reliability, but still it was very close to our estimate. So there were no surprises there.

CHAIRMAN BERNANKE. Thank you. Any questions? [No response.] Okay. Let's begin this morning by completing our go-round on policy planning, and I have the Vice Chairman first up.

VICE CHAIRMAN DUDLEY. I'm glad I'm not going to have to revise my comments in light of the data. Like others, I think it's useful, before answering the six questions, to be clear about the potential problems that we're trying to address, and I'm going to really focus on the decision to taper because I think that's the thing that we're all wrestling with.

I think it really does matter whether the taper is motivated by success—we've achieved our objectives in terms of substantial improvement in the labor market outlook—or failure—we're not tapering because we've achieved our objective, but because the costs associated with

the purchase program are increasing as our balance sheet increases in size. In the former case, we don't need to take actions to offset the impacts of the taper as long as the taper does not lead to a more substantial tightening in financial conditions than we expect. But in the latter case, where we basically failed to achieve our objectives, we will likely need to take offsetting actions because we don't want financial conditions to tighten at all, and the decision to taper is likely to tighten financial conditions through the signaling channel as we've seen earlier in the year. This suggests to me that, compared with the first case, the policy response needs to be much more forceful in the second case to offset the undesired tightening.

If the taper is warranted by the economic outlook, the problem will be mainly just trying to ensure that market participants don't overreact, and I think this can be accomplished in a number of ways. It may just require reminding people that the thresholds are not triggers, and that we're happy where financial conditions are. We might be forced to respond should financial conditions tighten. You can imagine if we did the taper because of success, we could just say, "Look, we are happy with where financial conditions are now. We don't want the financial conditions to back up, and if they were to tighten a lot, especially the forward trajectory of short-term interest rates, we might want to respond to that." We'd have to do some planning about what our escalation options would be if financial conditions subsequently tighten, despite our guidance, but it's not obvious to me that we'd have to implement such measures at that time.

In contrast, if the taper is motivated by, say, balance sheet size, then I think we have to do more immediately. And in that case I think taking away the caps on the reverse RP program, lowering the IOER, strengthening the forward guidance in words, and being prepared to take actions by market interventions that strengthen the forward guidance may all be necessary to offset the undesired tightening of financial conditions that's likely to occur.

There are these two tracks, but regardless, I think in both cases we need to further develop the options that are available, and I think the staff memos were very good work on that. I also think, though, not only should we develop the options, we should also develop escalation protocols. In other words, what we would do in response to different sets of developments as things unfolded because we're not really going to know going in exactly what's actually going to happen. So we need to have a plan in terms of how we would escalate it if financial conditions tighten more than what we think is appropriate.

Turning to the questions, on the first question concerning modifying the forward guidance, I'm very skeptical that adding an inflation floor, especially, and, to a lesser degree, lowering the unemployment rate, is the right approach. It seems to me that a better approach is just to communicate the type of circumstances—such as a low inflation rate or an unemployment rate drop caused by a decline in participation—that would cause us to be more patient. I think we should just keep reiterating that the 6½ percent unemployment rate is a threshold, not a trigger, and communicating those circumstances in which we would wait. I think if we did that, I don't think we get much additional benefit by, say, adding an inflation floor, because the number of instances where the inflation floor would be relevant would be pretty modest in that case. Also, I think adding an inflation floor has two additional problems. On the one hand, it's too simple. An appropriate decisionmaking framework can't be summarized just by one or two parameters. On the other hand, it's too complex. It will be difficult for market participants to assess the joint probability of the unemployment threshold and the inflation floor and how they actually intersect. I think market participants would just be very confused trying to solve that problem.

Turning to question 2, in terms of targeted interventions, I think of this as very much analogous to foreign exchange market intervention, so I want to outline sort of a three-stage approach, and you would go through these stages, escalating as needed. You don't immediately go to a full program of intervention with bright lines drawn in the sand. You only do that as it is necessary. So let me sketch out how this might work.

In stage 1 we make it clear that we do care about the expected path of short-term rates because this is an important component of financial conditions, and financial conditions are important because they govern the impulse of monetary policy to the real economy. Thus, we're going to be monitoring expectations concerning the short-term rate path closely to see if the short-term rate path diverges materially from what we think is likely. And we say if there is a major divergence similar to what we experienced this past summer, we will be prepared to act—but we don't specify precisely the way—to push against it because that would be an inappropriate tightening of financial market conditions and it would conflict with our monetary policy objectives.

In stage 2, if, despite this threat of intervention, market expectations still move to what we view as an inappropriate place, then we intervene in modest size as a signaling device to protest the tightening of financial conditions. I'm open-minded about what the best medium is for this intervention, but one simple approach would be to buy short-dated Treasury securities—say with maturities out to 18 months or less—to signal the fact that we're unhappy with where short-term interest rate expectations go.

In stage 3, if that signaling is also insufficient to push down short-rate expectations, then we could move to a more open-ended program or facility to push against the rise in short-term rates. With respect to how we intervene in that case, I'm open-minded. The staff has put

forward a number of different suggestions. On the one hand, a Treasury purchase program, either spot or forward, I think, has the benefit of acting on the market directly. On the other hand, a term RP program adds, while it's negative in the sense that it adds an additional transmission step—you give the money to the dealers and you're asking the dealers to act on the market—it does have the advantage that the dealers are free to use the funding however they want. You're not just targeting the Treasury market. The money is flowing broadly into the markets more generally. So I'm not really sure which is the better approach, and I think it would be good for the staff to sort of work on this a little bit more to sort of suss out which one would be more effective in generating what we want, which is pushing financial conditions back down to where we think is appropriate.

With respect to question 3, I would favor exploring the use of the reverse RP facility as a means of adding additional monetary policy accommodation, in combination with the IOER rate. So I think removing the caps on the reverse repurchase facility and moving IOER rate down to 10 or 15 basis points when we begin to taper is worth considering. I think this is a case in which you can justify it whether or not we've achieved our objectives with respect to substantial improvement in the labor market outlook because this might not only add a little bit of accommodation, but it would also tighten up the relationship among the different money market rates. So I think it's good to do for its own sake, independent of whether you're trying to rein in financial conditions.

With respect to question 4 regarding the Committee's guidance regarding the balance sheet, I don't favor a mechanical rule at this time. The reason is quite straightforward. I haven't seen a rule that accommodates the necessary tradeoff between simplicity, which we need for communication purposes, versus robustness in terms of changing economic circumstances. So

it's really hard to get the balance right. How do you communicate something that's really simple but actually works in a wide variety of economic circumstances? I'm just skeptical that we can do that.

With respect to question 5 on the mix of asset purchases, I think I'm inclined where most other people are, that maybe I think MBS have a little bit better effect than Treasuries. But I'm not absolutely certain of the reason for the difference, and if someone asked me to explain why I think that, I wouldn't have a very compelling case to make. And the benefit of doing more in MBS versus having MBS stay higher relative to Treasuries is pretty darn modest. So I think at the end of the day it's just not worth the trouble to try to actually do anything that's less than proportionate. What you could do is you could make the first step bigger in Treasuries than in MBS just to equalize the level. Right now we're 45 and 40. You could go to 40 and 40 or 30 and 30 and then do it proportionately after that, but I just don't think it's worth it. The complexity doesn't get you much.

With respect to question 6, other ways to improve communications, I think we've got to revisit the SEP process again. We were trying to de-emphasize it. We were trying to move to a consensus forecast, but we failed. And now the SEP has come back, and it has become very, very important in the communication process, and we do have some issues with the SEP. Do we want to identify who the submissions are? I would favor doing that. At a minimum, at least distinguish between voters and participants. I also think we have the question of the common monetary policy assumption. We have forecasts that are essentially inconsistent with each other because everyone uses his or her own monetary policy assumption. If the SEP is really going to be as important as it seems to be, going forward, I think we need to go back and work on that some more. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I welcome this opportunity to exchange views on how best to communicate our policy intentions. As we've seen since May, this is a challenging undertaking. We unfortunately have to recognize that our statements and actions may induce reactions we didn't anticipate and find difficult to rationalize. As a general rule, I think we stand the best chance of avoiding needless and harmful volatility if we aspire to clearly articulate how our actions and plans serve to achieve the objectives that we've laid out in our consensus statement.

Currently, I think we are not in all that bad a place as far as our communications are concerned. So perhaps the best we can do at this point is to continue to enunciate the key principles of our current policy framework, those you noted in your opening comments yesterday, Mr. Chairman—namely, data dependence, a focus on achieving substantial improvement in the outlook of the labor market retrospectively and prospectively, and the Committee's view that asset purchases are a separate tool from rates policy so that even as we reduce asset purchases, policy is likely to remain highly accommodative for quite some time. I think it's important right now to do no harm by adopting significant changes that might be confusing or disruptive. Still, things can easily change in the coming months, and this discussion is valuable for the purpose of prudent planning. I want to thank the staff for an excellent set of background memos for this discussion.

Turning to the question of how we might render our forward guidance more robust and effective, I think, first and foremost, we can attempt to clarify aspects of our reaction function that are currently left largely unspecified in our statement. Specifically, we could explain how we intend to change the federal funds rate target after a threshold is crossed. In that regard,

enumerating several indicators that we'll be looking at after one of our thresholds has been crossed in deciding when to raise the federal funds rate might be helpful not just in its own right, but also to cement the message that thresholds are not triggers.

Because of the unprecedented nature of current circumstances, addition of language as in paragraph B(6) might provide another useful clarification of our reaction function. It provides a forecast and describes a feature of our reaction function conditional on that forecast. Given the long string of disappointments pertaining to the pace of recovery, it makes sense to convey that headwinds, including fiscal policy, will likely serve as drags on economic growth for several years, even after we've begun to raise the funds rate. If so, satisfactory progress toward our objectives will probably require us to be more patient in removing accommodation than the historical record from previous recoveries would suggest. I, therefore, think that guidance in this regard along the lines the Chairman gave in his September press conference and along the lines of B(6) is helpful.

Equally important, in my view, is the conditionality that's clearly expressed in the draft statement language. If, for once, we're pleasantly surprised and the economy improves more rapidly than we anticipate, the premise of the statement no longer applies. Even if some of these clarifications of the reaction function would be valuable, there's a question as to how they would best be conveyed. Having them be part of the FOMC statement has the advantage of carrying the imprimatur of the Committee, but I also recognize that the statement can carry only so much water.

I agree with the motivation for the inflation floor language. We would be less likely, all else equal, to raise the funds rate after the unemployment rate threshold has been crossed, if inflation is running well below our 2 percent objective. What gives me pause about the

suggested language is that it is missing an "all else equal" qualifier. The inflation floor language that is contemplated is unconditional. This would, in my view, carry a risk of committing us to a course we might come to regret. Moreover, I'm not so clear on the benefits. I think we can quite plausibly assert that if there's slack in the economy and inflation is weak, removing accommodation would be counter to accomplishing our objectives. But I wholeheartedly agree with the view that we must be every bit as vigilant in defending our inflation objective from below as above.

The targeted market interventions discussed in the staff memo might send a powerful signal of our commitment to accommodation and to our forward guidance. But they are also associated with some risks and complications that were well described in the staff memo. I think we should leave such interventions on the table as options to be considered in the future, likely in extraordinary circumstances.

Concerning simple rules for the pace of our asset purchases, I think this is an idea that has its heart in the right place. It would be helpful to be able to communicate a simple rule that reduces purchases smoothly to zero as the labor market improves but, as the staff memo highlights, it is difficult to specify a rule that is simple and yet still reliably promotes our objectives across a broad range of plausible scenarios. I favor using simple rules as guideposts, however, in our internal discussions, and I am also open to exploring whether there are rules that strike a better point on the tradeoff between use of communication and reliability in achieving our economic objectives.

Finally, on MBS and Treasuries, on balance, I think it's best to keep things simple and reduce them in tandem.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. Like many of you, I wanted to make a few overall comments before getting to the specific issues.

I thought, listening to the interventions yesterday, all of them were necessarily a mix of expressions of substantive policy preference or orientation with tactical issues of communication that were raised in the questions for discussion. I'm going to try—maybe not succeed—to make my comments weighted more toward the tactical. That is, I'm going to try to hypothesize substantive positions the Committee might take and then suggest how those decisions can best be executed. A second introductory point is that a number of people yesterday expressed that a sense of simplicity should be a key criterion in deciding on how to communicate Committee intentions. I think it's always difficult to argue against simplicity. The only point I'd make is that simplicity may not exist in a vacuum. That is, adopting a simple rule right now with respect to asset purchases or forward guidance, for example, coming on top of everything we've done and said before, might actually make things more complex, certainly in communication, rather than truly simplify the policy decisions. And, third, a point made by a number of people yesterday with which I strongly associate myself is that we need to be more straightforward in explaining what factors are relevant in our decisions, particularly on LSAPs. And I'll say more about that in a minute.

By and large, I thought the questions that were circulated raised two broad sets of issues on communication. The first is how we might deal with problems associated with market expectations around our forward guidance. What people commented on, in particular, is that recently markets seem to think that we've got a single reaction function, notwithstanding the fact that we think we have two policy instruments and two reaction functions. And, the second, as

many people have already addressed, are the issues generally around communication with our LSAP policy.

It seems to me that the LSAP issues raise more-immediate problems for us than the forward guidance, but let me address the forward guidance issues for a few minutes. For all the bumps that we encountered in getting there, I think we are now at a place where market expectations of when the first increase in the federal funds rate will take place are reasonably close to those of the Committee. It is true, somewhat ironically, that this convergence may be a consequence of the very assumption of a single reaction function that originally led to the divergence between market expectations and the SEP. So markets may have come to the right conclusion for what we might not consider quite the right reason, but, first, as Narayana and Jim noted yesterday, maybe we are a little closer to having a single reaction function than we have been telling ourselves. And, second, even if that's not the case, if markets have reached the right conclusion, the impact on financial conditions shouldn't be too different from what we would want, notwithstanding how they reach that conclusion.

Of course, depending on what we do over the next several meetings, we could face renewed divergence. If so we may need to take some additional steps on communication as suggested in the various memos that have been circulated. But for now I don't think there is actually a need to do very much. Moreover, as several people suggested yesterday, if we are principally worried that a tapering decision may pull forward the assumed date of a first federal funds rate increase, there may be some merit to holding whatever tools we decide we do prefer and deploying them at the time we are communicating the tapering decision, so as hopefully to offset at least some of what might be a strong market reaction. I think Bill already touched on this point, but I was also going to say that because we can't really foresee with precision right

now how significant this potential divergence might be and why exactly it may reoccur, we should probably be somewhat provisional in expressing views on the policy instruments in the staff memos and mentioned in the questions prior to the meeting. So my prior is to keep most things on the table. But, like many of you, I will try to suggest some leanings at least.

I think it does seem like it would be an unqualifiably good idea to offer qualitative guidance as to how we will proceed after the unemployment threshold is passed. My current thought is it would be useful to do this at the time we begin tapering, although that may be subject to more consideration. And I'd do this even if we didn't think there was at that time a particular divergence between market views and our intentions. It just seems like a sensible thing to do. For reasons that Charlie Evans, yesterday, and Bill and Janet both, this morning, have already said, I wouldn't be inclined to use the inflation floor, although, again, I don't think we need to reject it out of hand right now. Principally, without repeating everything they said, I think this idea may be one of those that at best doesn't buy us too much but does carry some nontrivial risk of confusion.

Next, as I've said before, I might well have supported a lower unemployment threshold at the outset for the forward guidance. Since then, I haven't thought it would be a good idea to change it, in large part because of concerns about what this would suggest about the durability of our forward guidance or other statements of intentions the Committee may choose to communicate in the future. So I go in with some presumption against it. But, again, if we face a situation in which there has been a much stronger reaction against the tapering, say, than we had anticipated, it may be that the balance of costs and benefits of the use of the change of an unemployment threshold might be warranted.

The idea of using targeted market interventions to enforce the forward rate guidance has some appeal, but a lot of the reservations expressed yesterday resonated with me. It seems it would have to be a reasonably big problem with market expectations before we would want to undertake something like this. There is clearly a potential for difficult communications challenges; we'd have to describe how this relates to the LSAPs. And as the staff memo itself clearly showed, we need more work before we could feel comfortable embracing one or more of the variants as a tool that was actually ready for use.

Moving now to communication around our tapering intentions, this seems to me both a more immediate and a more difficult problem. It's more immediate not only because it is likely driving, to a significant degree, expectations around the federal funds rate, but also because our decision not to taper in September has dramatically changed market expectations as to when the first taper might occur. I didn't really hear much about this, and I want to be clear that I'm hypothesizing rather than advocating. But if the Committee has any thought that it might want to taper in December or January, we would need to begin publicly laying the groundwork for such a possible move pretty quickly. I think it's a more difficult problem for the reasons I have noted before and that several people have alluded to yesterday. That is, there were different expectations around this LSAP program among Committee members who voted for it right from the outset in September of 2012, whereas our statement was understandably read as reflecting a fairly unified and fairly forward-leaning approach. Since then I think we have collectively struggled to translate these differences, some of which are around efficacy and cost issues that have never been too explicitly discussed publicly, into the terms of our public statement, which is to say "until the outlook for labor market improves substantially." So I think it's almost inevitable that there has been some confusion or uncertainty in the public because the

considerations that members of the Committee have privately are not being discussed explicitly publicly, and, thus, as the public looks just at substantial improvement, I think they're a little confused as to why we at times seem to be leaning taper and at other times leaning against taper.

Our September decision was quite naturally read by markets as signaling that the Committee needed to see a good bit more improvement than it had—in labor market conditions, that is—which is probably interpreted as either a good bit more cumulative improvement, which could take some time, or some pretty noticeable improvement in current performance. So now, in the absence of significantly better current labor market performance over the next several months, market expectations for tapering are going to be low, and I suspect that in the absence of at least moderate improvement in indicators like job creation, even into next year markets will not be able to discern a likely tapering point. This is the dilemma that Jay and others have been highlighting for some time, and that many people have already restated in the go-round today. If we want to preserve the option of tapering at the next two meetings, we will need to begin preparing markets in a way that doesn't get us onto a fixed time track. And, again, I'm not advocating this; I'm just hypothesizing it. And, again, assuming that the center of gravity in the Committee will be for tapering at some point, even in the absence of the significant current labor market performance improvement that we all hope for, we need to begin preparing a plan B, even if we're not inclined to move in December or January.

The staff memo of October 22 presents one plan B option, which is for a more or less mechanical trigger for reducing purchases. And, again, I associate myself with many of you who have said that while the approach has some attraction, in that it would certainly shape market expectations pretty precisely—which would be a particular point in its favor for those who have concluded that cost and efficacy considerations already argue for change—it would basically tie

us to the mast. And it would thereby counteract the possible siren song of bad data that might cause us to change course. But I've thought that much of what we've been trying to communicate about the LSAP program is that we don't have a simplistic reaction function, and we have basically actually succeeded in that. So at the risk of overplaying my Homeric allusion, I fear that tying ourselves to the mast would seem very odd for a Committee that has emphasized how cognizant we are of steering around whatever rocks and crags we see in front of us. It would be a change of course or approach that would, I suspect, leave a lot of people confused as to what our broader policies actually are.

My instinct is that a plan B should instead be centered around a communication strategy that gradually but steadily changes assumptions around our reaction function, and, thus, over a period of somewhere between several weeks and a few months shapes market expectations as to when a decision to taper may be made by reference to the factors that are actually influencing that decision. I'm not going to try, obviously, to lay out a precise strategy for doing so, but it seems pretty clear—and, again, I think this reflects much of what many of you have said—that there would be two elements. One would be the reinforcement of a sense that the Committee has been focusing on cumulative improvement in labor market conditions since September 2012. A second critical element would be reference to the evolving calculus of some Committee members as to costs and benefits as conditions continue their gradual improvement and as the balance sheet grows. This straightforward acknowledgement of what would actually be driving a tapering decision might entail a little short-term credibility loss, because the public would be wondering why we haven't been emphasizing that more all along. But I think it's the best way out of what otherwise will be continued verbal gymnastics that will leave people a bit mystified, and, thus, in the medium term I think we enhance our credibility by taking that approach.

Tapering that is publicly justified as based principally on improvement, even on cumulative improvement, would either confuse people or, as Narayana and Charlie explained yesterday, damage our credibility. So I would say, again, one possibility might be to have the first public comments focused on the substantial improvement idea, which would refer back to the Chairman's June statements, but in the current environment I think even the restatement of that position would be noticed. And then, sometime later there could be public reference to the evolving calculus of costs and benefits point, which would rightly be read as signaling something significant about where the Committee was headed. In some sense, I am agreeing with what I think Jeff said yesterday, which is when we think we are getting close, as a Committee, to deciding to do it, we should probably just do it. And we should probably just lay the foundation for doing it. Just to be straightforward about this, I think to be effective this strategy would have to be executed dominantly by some combination of the Chairman and the Vice Chair of the Board and the Vice Chairman of the Committee. And, ideally, the rest of us would refrain from commenting very much during the period in question other than to echo what they had already said.

In passing, I want to mention that the idea of just trying to get to a point and then doing it was reflected in what Charlie Plosser said yesterday when he suggested the merits of announcing a fixed amount of the remaining LSAP, an idea that seems pretty good in light of our experience over the past year. Others didn't take up this theme, but if there were interest in doing so, one could still follow the gradual communication of a different approach, as I have suggested, hopefully inducing some shifting of market expectations, followed by a meeting at which we announced a fixed remaining amount of purchases instead of a tapering.

My views on IOER and the mix of asset purchase reductions are decidedly secondary to what I think are our key tactical questions, the ones that I have just addressed. So I will say only that I would keep IOER under consideration as a possible additional measure, quite apart from these two sets of communication issues. On the mix and tapering, I think I am very much where Bill is, which is I feel myself leaning weakly toward tapering Treasuries first, but I don't have a strong analytic reason for doing so. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Governor Stein.

MR. STEIN. Thank you, Mr. Chairman. To restate the two premises of the exercise, first, we want to minimize the potential for unintended tightening when we do begin to taper. And, second, it seems to be that the market sees asset purchases as linked with our intended path for the short rate. So any move toward tapering seems to have a powerful signal value above and beyond any direct duration removal effects. That's the concern.

So how to proceed? Basically, I think there are sort of three broad options. Option number 1 would be to continue, as we effectively did in September, to more or less embrace the fact that the two policies are linked in the eyes of the market, which means that if you're willing to continue on buying at $85 billion a month you can maintain the credibility of the program. As a number of people said, that's effectively what we did, and it got us to, in some sense, a good place in effect, even if you don't like the linking. It is kind of weird. It is arbitrary that $85 billion is what you need to do. But it's the signaling technology we've got, so maybe you might just want to use it. In that case, you would basically continue on; you wouldn't taper until you really got to the place you wanted to get to—a run of decisive good news or an upshift in the pace of economic growth. To be clear, I think this option is completely coherent, and it's in some sense the leading option if you think there are not costs of expanding the balance sheet. So

if you want to push back against this option, as at least some of us instinctively want to do, we need to have a theory of the cost side. And I think it's important not to overstate the argument here, because it's pretty slippery.

Part of the problem is not just that we have been unwilling to talk publicly about cost, it's that we don't fully have a shared understanding of the cost, and so that makes it harder to talk about it. So let me just say a few words here. I want to be clear. I wouldn't want to claim that I know with any degree of confidence that there are going to be big costs, especially now. I mean, I felt a little bit differently when we were buying bonds when the 10-year rate was at 1.5, because I thought we were like overpaying pretty blatantly for the bonds. But that's not true anymore. I think we have learned that market function is not a problem, or is not really sort of a first-order problem. I think you can't hang it on that. I don't think you can hang it on financial stability issues in a sort of generic way. A very important point—it's not to say that financial stability is not important, but financial stability does not drive an obvious wedge between asset purchases and lower for longer. To be sure, you can make fancy second-order theories, but to first order both of those have financial stability issues, so you can't say that the one is a motivation for the other.

I think Narayana hit it exactly right, which is if you want to articulate a theory of cost, it is not going to be an easily observable thing. It's going to be some kind of a risk-management case. You have in mind—and I guess those of us who think this way must have in mind—some really unpleasant low probability event. And you can think of various possible events. One would be: You've got a $5 trillion portfolio, and you get a $200 billion spike in the long rate. On a mark-to-market basis, that's a $500 billion or $600 billion swing in your mark to market. It's not in remittances, but who knows what forces get put into play. Somebody starts blogging

about it, Rand Paul gets ahold of it, and all kinds of stuff starts happening. Maybe it's just flack that we can bear, but there is sort of a low probability risk that there is enough flack and the market starts thinking, "Oh my gosh, they're going to have to sell out of this position to reduce the flack." Then it has a real effect, which is that you start having trouble with the long run. I wouldn't want to attach a probability to this scenario, but I think that if you are worrying about this stuff it's this kind of thing. And I'm fully aware that it feels unsatisfying and undisciplined to offer a theory that's empirically irrefutable, which doesn't mean it's wrong, but it's sort of something we can't get access to. I think underlying a lot of this stuff is a discomfort with making a case based on something like this, as opposed to market-function types of costs, which we can see and try to measure. So I think that just goes into the mix.

The second option would be to try to enhance the numerical hard commitment aspects of the forward guidance as a substitute for the signaling effect of the LSAPs—lowering the threshold to 6.0. I'm reluctant to go this route. I think others have expressed the issues well. I want to add one point, which is that if you haven't really been clear on the costs of expanding the balance sheet, doing this doesn't really solve your problem. In other words, if you haven't been clear on the cost premise, as everybody has noted, it really should be the case that when you cut LSAPs, people say, "Gee, I wonder what these guys are thinking about." Therefore it should call into question your forward guidance. Well, if you have called into question your attachment to 6.5, saying, "Well, I'll do a more extreme thing; I'll do 6.0" will not be more credible. That by itself is not a complete argument against the thresholds. It's just saying there is a credibility issue that has to be addressed. And until that is addressed, just doing more of the thresholds is not a solution.

Option 3 is to try to do the delinking explicitly. I think there are three components to trying to do the delinking. First is, just to repeat, we have to be kind of clear on the cost aspect. Second, I do think it will be helpful to have further elaboration of the forward guidance. But, again, as many have suggested, not via numerical commitments but with a fuller explanation of essentially the logic behind the dots being at 2 percent in 2016—a fuller development of the headwinds theory. Here it's important to emphasize the time consistency aspects of the headwinds theory as opposed to the idea of making a promise that you might later regret. In this vein, I am quite sympathetic to the sort of thing that is going on in paragraph 6 of alt-B, although I would prefer to wait and couple this with the taper. And, third, I do think that there is some virtue to some kind of an autopilot aspect to LSAPs, but let me qualify that in two ways. One, I don't think going autopilot spares you the hit the first time. I mean, you are going to have this hit, and you are going to have to deal with it. The only hope is that it spares you a repeated hit. In other words, if you have a discretionary step-down, each time there is potentially some element of signaling. You can't get away from the fact that the first one is news, but you may hope to get away from having to revisit it three or four more times.

Now, what kind of a rule? It's clear from listening to the discussion that I think this idea that I floated of an unemployment-linked rule is not great, and it certainly violates the "simpler is better" dictum. And people analogized it to something like the Taylor rule. Well, you're trying to link to outcomes, and then when you start trying to analogize it to a Taylor rule, you see all of the obvious shortcomings, right? It is linked to outcomes, but it is linked to outcomes in a way that is not really all that good. I think the intent—at least my intent—in this was very, very different than what you would have with a Taylor rule. In other words, the intent was not to calibrate policy to the state of the world on an ongoing basis. It's an exit strategy. It's just one

exit in kind of a clean and orderly way. Of course the right way to do this, the much simpler way, would be, when we finally get there, to do it in a calendar-based way. Here we are, we're making the first taper, and the rest will come $10 billion a month or whatever.

Now, why we have not done that in the first place is just because that would look like a walk-back of the data-dependent principle. So I guess I was trying to finesse it a little bit and say, "Well, we can still have data-dependence with an unemployment rule," in some second-best way of still having predictability. But, listening to the conversation, that doesn't seem to strike the right balance. I would move back to the position that either one does a mechanical, calendar-based step-down, or you abandon it and go with discretion. I think that at least gives you a cleaner choice to make between those two. Again, I would prefer when we finally get there to do it calendar-based, so we don't have to revisit things at every meeting.

On the balance sheet actions, buying Treasury bills and such, a couple of observations: First, I think if what we really are worried about is the detaching of the very short end of the yield curve, the December 2014 forward rate coming up, I think that particular problem is going to solve itself just by the passage of time. That is to say, if realistically we are not going to start thinking about tapering until March, there is a mechanical effect, which is that it's going to take several months to happen, and after that everybody is going to assume it's going to be at least another six months until we lift off. So if we're not tapering until March, I am pretty certain we are not going to have to worry about the December 2014 rate pulling up on us. That's not to say there's not going to be all kinds of other signaling issues about the post-threshold path, but I think that is going to be where the action is. But that we're not going to keep the rate low to 6.5 percent is not going to be a big issue for us going forward. It is going to be what we do afterwards; that is going to be a little harder to solve with these balance sheet measures. And,

second, just echoing what others have said, I think if we are looking to do something that is effectively taking the sting out of tapering LSAPs, and our whole story is we don't like to expand the balance sheet, doing something else which expands the balance sheet in a different way is I think, at a minimum, hard to explain.

Finally, on IOER, I am very open-minded about this. Again, I would just sort of subject it to the "simpler is better" test. I think if we can find a way to use a reduction in IOER as a complement to a package, I would certainly be okay with it. I don't think that there is a big positive kick to be had, but now that we have the RRP facility I also think we really can probably manage it in a reasonable way. Again, I think the test is whether it sort of helps us communicate that. Thank you.

CHAIRMAN BERNANKE. Thank you. Governor Powell.

MR. POWELL. Thank you, Mr. Chairman. These are my general preferences for this meeting. Do nothing to materially modify the forward guidance. Make decisions about strengthening guidance only at the time of the first taper. By the time the Committee does decide to taper, the situation may well have changed since last summer, and it may be that no strengthening of the forward guidance will be required. If the Committee judges that strengthening is required, take a minimalist approach. Adopt only those measures that have combined high expected efficacy and low expected cost. Finally, there are also costs to modifying or adding gadgets to the thresholds, and I think the bar should be set high for doing so. Others have mentioned them under the heading of "Complexity, Confusion, and Credibility." So that's my executive summary, and I will resist the temptation to stop there.

Like others, I also found it impossible to think about the various tactical options without setting them in the context of the current situation or the longer-term strategy question the

Committee may face. So I'm going to give my understanding of the current situation and the practical choices that the Committee faces, and then talk about the tactical options, and I'm going to leave the longer-term strategy question to the next round.

Since the September meeting, market participants have come together around the view that the Committee is very unlikely to taper before the March meeting. The shutdown and the debt ceiling standoff have become particularly important in the market's assessment of the Committee's thinking in September. As a result, in my view, it will be difficult for the Committee to taper in December or January unless three conditions are met. First, the employment and other data are going to have to be very strong. Second, the core members of the FOMC leadership—the Chairman, the Vice Chairman, and Governor/Nominee Yellen—will have to signal credibly, well in advance, that December and January are very much on the table, and the market would have to believe them. Scheduling a January press conference in the immediate aftermath of this meeting would be a start. And, third, the ongoing fiscal negotiations will have to look like they are on track to avoid another disruptive confrontation. Now, it is possible, but not likely, to me that these conditions will be fulfilled at the time of the December or January meetings. In my view, it is equally possible that they will not yet be fulfilled at the time of the March meeting. In any case, if they are not fulfilled at the time of the December or January meetings, the market will not expect a taper and the Committee will not, and probably should not, choose to deliver a major hawkish surprise by tapering, given the risk of an open-ended tightening in financial conditions.

Another consequence of this state of affairs is that market participants now see a period of four or five months, and maybe much longer, in which there is a very low probability of taper. That means another extended period of suppressed volatility during which it is again safe to

reach for yield and use leverage, and we are starting to see that in the fund flows. A lot of it we're not going to see because of the lack of real-time visibility into what various categories of investors are doing. It is likely there will be a significant buildup of risks as investors try to make some money while the coast is clear of tapering threats, after many of them lost money over the summer. So when the Committee does taper, there may, again, be a significant reaction as investors unwind speculative trades.

Turning to forward guidance, market-based estimates of forward rate policy are now well aligned with the September SEP. So I take the point of considering modification to forward guidance to be that when the Committee tapers asset purchases it wants to discourage the market from drawing any hawkish inferences about the Committee's reaction function for the path of the federal funds rate as seems to have happened over the summer. But the passage of time may have alleviated this problem, as Governor Stein was saying. The statement says that a "highly accommodative stance of monetary policy will remain appropriate for a considerable period of time after the asset purchase program ends and the recovery strengthens." Let's say the Committee chooses to taper in March 2014. Purchases would likely end around the end of 2014. Under the staff baseline, the unemployment threshold would be passed at just about exactly the same time, and there would then follow a considerable period of rates continuing at the zero lower bound, with liftoff in late 2015. Now, the Chair and the Committee would no doubt strongly emphasize that language at the time of taper, and as the threshold approaches. The language in alternative A that President Williams referred to in his comments during this round yesterday suggests consideration of a range of factors might be appropriate at that time. But the point is that what was a problem in the summer of 2013 may not be a problem in March or June of 2014, given the passage of time and progress toward the unemployment threshold. The

metaphor that you hear from market participants is that tapering and raising the funds rate are like two different cars in a train. They are separated temporally, but they are connected. So that is a good metaphor, but then at a certain point the train arrives in the station, and that is kind of what is happening at the end of 2014 when we hit the threshold. So there's your metaphor. I just would emphasize that it is very possible that we will get to the point of actually tapering and realize that we don't need to strengthen the guidance, that in fact it is going to hold.

Turning to the questions, the inflation floor makes good policy sense to me, but it seems to fail the efficacy test. I just don't see that it will have much effect today in a world where no one expects higher inflation. As far as stating that we will move very patiently, the language at the end of B(6), I don't see this as a material modification of the guidance. It really amounts to including in the statement what the September SEP, the market, and the Chairman's press conference language from September have already agreed upon for the time being. In that sense I'm not sure that it accomplishes much. I wouldn't do it at this meeting. I don't see a reason particularly not to do it, though, down the road. I wouldn't do it at this meeting because of the lack of a press conference. In addition, once the Committee does taper, the cost-benefit test in the statement regarding asset purchases kind of loses its meaning. And as we move to greater reliance on rate policy, I think we need to have some kind of a test of that nature with respect to rate policy. In particular, I think we need a more robust knockout for financial stability in connection with low rates. We know that long periods of suppressed volatility can lead to the buildup of risks and to a disruptive ending, and the idea that monetary policy can ignore that and leave it to macroprudential tools just is not credible to me. I think we should follow the Bank of England and be more straightforward about this, with some kind of a financial stability knockout,

if we are going to promise to hold rates low for a very long period, and we are. I've got no appetite for lowering the unemployment threshold. Others have covered that very well.

As far as targeted market interventions are concerned, I do see this as worthy of further analysis. And I liked Vice Chairman Dudley's analysis of how to go about that. If the Committee were to taper in March, and the Committee were to announce, say, alternative 3, which is the overnight repo option—the idea would be to cap short-term rates until the unemployment threshold is reached—I doubt that longer-term rates would disconnect in the face of that kind of a strong signal. I guess the idea is that it is such a strong signal it is akin to what the ECB did with OMTs in the summer of 2012. In the face of such a strong signal, it may not be necessary to actually do much. And I pick option 3 because I see the problems with having a calendar-based balance sheet program interact with data-based thresholds as not manageable. So I suggest further work on those.

As far as IOER is concerned, I don't see a big problem with this, but I see it as a small thing. I think we have to get a couple of very big things right and should put aside tinkering with smaller things and do things that really matter.

As far as LSAP rules are concerned, this is something I have struggled with since the beginning of this program, and it would be a great thing to have, without question. On the other hand, we see that it's not difficult to show that any mechanical rule can deliver a false positive or negative, which makes it a very difficult quest. There may be something in returning to a calendar-based rule. Conditional on actually having decided to taper, it may be that calendar-based is the right way to go.

In terms of the sequence, I find myself coming around to the view that we ought to taper Treasury securities right down to the ground and then taper MBS. And the reason is that this

recovery is hugely about housing. We can see that when consumer confidence is high, consumers say it's because of the housing market and increasing housing values. We have seen a significant falloff in that as the housing market has slowed down. Broader financial conditions have not particularly been affected by the events of last summer. I would taper Treasuries all the way to the ground and then do MBS.

In terms of other improvements, I would say, please, no. That's question 6. Let's resist the temptation to tinker. Less is more. Let's get the two or three big things right. And I will discuss the strategic issues in the next round. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you very much. This has been extremely useful. We have some very complicated communications and policy decisions to make, and people have put a lot of effort into thinking about it, and I do appreciate it. Certainly we're going to spend a lot of time looking at it.

I think that I can take a few conclusions from the discussion. Obviously there is the point about keeping it simple. That's not always feasible, but to the extent that it is feasible, there clearly is the sense that we need to focus on the strategy and then support the strategy with communication and whatever other steps are necessary. I sense the general openness to modifying the forward guidance on rates. We will need to review those comments. They were somewhat diverse. One question is whether any modification should take place at the same time or before our first reduction in asset purchases. I think that's a tactical question that needs more thought.

Another thought, which I found interesting, is that rather than trying to provide more numerical guideposts, a fuller, more comprehensive description in qualitative terms of what we'll be looking at and what we'll be considering as we make these decisions going forward—not just

the thresholds, but beyond the thresholds in the longer term—could be useful. There are opportunities to do that, of course. I don't know if Governor Yellen would choose to, but she'll have a number of opportunities to speak in the next month or so. I've got a few speeches. There's a press conference, as I mentioned. It could be that it would pay to go a bit beyond the terse descriptions of the forward guidance in the statement and perhaps, with some consultation, try to provide a little richer description that would capture the flavor of the inflation floor, for example, without necessarily putting a number on it. So that's something that's worth thinking about.

We had a preliminary discussion of market interventions, mechanical rules, et cetera. As I said at the beginning, we really haven't discussed these at length before and I don't think we should rule anything out based on discussions we had. But I did gather that people don't view market interventions, for example, as a first resort. It's something that we should keep on the back burner for a while, but I can imagine circumstances where we might find it worth talking about further. With respect to mechanical rules, a number of people—again, there was not a lot of support at this point—introduced the possibility of alternatives like a fixed amount or a fixed calendar schedule. So on market intervention and mechanical rules, I think it was a useful first discussion and an informative one. These are obviously not first resorts, but I think we should not completely abandon them at this point.

There was a lot of interesting discussion of IOER, and the idea of reducing IOER and perhaps the target range supported by the reverse repo facility got a reasonable amount of support around the table. The Vice Chairman gave one rationale for doing it now. Another rationale is just the fact that we have reverse repo facility now. We haven't had it before, and that would allow us to combine the two to have a tighter range on the funds rate. But I also agree

with Governor Powell, for example, that this is not a first-order measure. We need to think about it in the context of signaling and what would be the appropriate time to take that step.

Just parenthetically, on MBS versus Treasuries, most people were relatively indifferent. I didn't hear too many people with extremely strong views on this. To the extent that there was a bias, there were more people, I think, who favored reducing Treasury securities first in order to signal additional support for the mortgage market.

Now, I think a very important general point that President Kocherlakota, Governor Tarullo, and a number of other people made, was that if we're going to rationalize slowing asset purchases at a point before the substantial improvement criteria are met, we need to begin to talk more about the efficacy and costs, and I would say particularly the costs because efficacy, at least to a signaling channel, was pretty clear. So I think it's the costs that we need to talk about. In fairness, I've talked about the costs in numerous speeches and testimony and press conferences. It's not the case that we haven't talked about them, but it is true that we need to have a clearer sense of how the Committee is thinking about these costs and to what extent they will affect our decisions on the margin.

I have a suggestion here. I think one problem is that we don't really have a clear sense of what people consider to be the most important costs and how much weight they put to them. What I'd like to propose—and let me ask you about survey design in a just a minute—is to circulate a little survey, get your answers back in a week, and based on that—and we'll circulate the results to everybody—just get a sense of where people are in terms of what they think the most important costs are, and that will help us in our communication. No reason for us to emphasize market functioning, for example, if nobody really thinks that market functioning is a determinative factor.

Let me just briefly discuss the survey design here. I've heard five different costs mentioned at various times: market functioning, inflation risk, capital losses to the Fed, financial stability, and a fifth one, which we could call technical difficulties—for example, managing interest rates on exit, that kind of thing. Those are some costs, and we could certainly ask people to rank those, to give an assessment of how important they think they are. In particular, are any of these costs ones that would—either on their own or in conjunction with other factors—be a reason to stop asset purchases before we've achieved the macro objectives? I'd be very interested to hear views on that. So why don't I ask the staff to put together a little survey to do that. Is that okay with everybody? Are there any suggestions? I think it would be very useful to understand what the main concerns are, and then we can talk about them both substantively in the Committee as well as in our communications. There's also the question that Governor Powell raised, by the way, which we should probably add to the survey, which is: To the extent that you see costs of QE, are these costs the result of QE differentially relative to lower interest rates? And to what extent should we make that distinction?

If we're able to do that, I'll go back and, as President Kocherlakota suggested, I'll revise my communication suggestion I made at the beginning of the meeting, and that Governor Yellen repeated a moment ago. First, we should note our data dependence, and I've used the terms "deliberate" and "data-dependent," that we are looking at the data and at the outlook. Second, our macroeconomic criterion relates to gains in the labor market outlook. Here I think it is worth emphasizing that retrospectively there has been meaningful improvement. It really is more than we expected when we began the program, and it has been, I think, significant. And one of the points that came up in our meeting yesterday was that it has happened in the face of fiscal policy, which is not only not helping but is actively working to slow economic growth. This, by the

way, is a point that's not fully appreciated as the distinction between what's happening here and what's happening in Japan. In Japan there is a real collaborative effort going on. Here the Federal Reserve is bearing more than 100 percent of the burden, and that, I think, does affect what we're able to do, and that should be taken into account. I would modify my third point. Remember, my third point was that even if we slow our asset purchases, we intend to maintain highly accommodative policy. I would modify it by saying that we're continuing to review the efficacy and costs of asset purchases and that may lead us, at some point, to change the mix of tools. However, it is our intent to provide as much accommodation as needed to achieve our mandated objectives, and we believe that we can do that.

Thank you for this very useful discussion. It's been a little bit of a bumpy ride for a while, and I bear more than one-nineteenth responsibility for that. I thank you for your tolerance. We're trying to deal with a very complex situation where, on the one hand, we are dealing with unfamiliar tools in an adverse environment in many ways, and nevertheless we're doing the best we can to try to achieve a better economic outcome, which of course is what we all want.

So those are some observations on this go-round. We have another one in a moment, but let me just stop and ask if there are any other comments, questions, or summary points that anyone would like to make at this juncture. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I think it's really beneficial to have so much discussion of what our communications strategy is. I noticed yesterday and today that in your second point you mentioned the labor market outlook, and essentially didn't reference a pickup in GDP growth. Is that deliberate? Are we sort of walking back from a pickup in growth?

CHAIRMAN BERNANKE. The way I think about what was intended by that and what I think is sufficient for our purposes is—remember that our original thing is of course outlook for labor market—what GDP growth does is it provides the reason for thinking that labor market improvement will continue. The way I have phrased it is not that we're looking for increased GDP growth per se, but we're looking for sufficient growth to support continuing gains in the labor market. So it's sort of tautological, and it's not an additional criterion. It's just saying that the economy has to be strong enough. We have seen improvement, but because we're looking at the outlook for labor market, we also have to have some confidence that the economy is strong enough to support ongoing gains, and that's all. It doesn't mean that GDP growth has to go to 3 percent. In particular, in the scenario that you talked about with low productivity gains, 2 percent growth might be quite adequate to continue progress and would meet our criterion, I think.

MR. LACKER. Okay. Well, there have been times in the past year when what came across to the public and what was reported was that a pickup in growth was sort of an additional criterion. So I think we should be dissuading people from interpreting that as a broad concern that we're looking for a big pickup in the economy.

CHAIRMAN BERNANKE. We're looking for growth sufficient to ensure additional gains, ongoing gains in the labor market. In other words, it wouldn't be enough to say we've achieved a lot so far, but suddenly growth has gone off the cliff and there's no prospect of further gains. That wouldn't really be an improvement in the outlook for the labor market.

MR. LACKER. Well, but then the labor market wouldn't be gaining. Is there a timing thing here? Are you thinking of GDP as sort of a leading indicator of the labor market?

CHAIRMAN BERNANKE. This goes back to discussions we've had. What does it mean to say that we're interested in the outlook for the labor market? Clearly, as we've said on numerous occasions, if you're looking at the outlook for the labor market, you really do have to look at the broad economic outlook because it's overall economic conditions that will determine whether or not the labor market will continue to improve. But it is the labor market and, of course, I didn't say inflation going back to 2 percent—that's implicit. But it is the labor market that I think we ought to focus on.

MR. LACKER. All right.

CHAIRMAN BERNANKE. Anybody else? President Fisher.

MR. FISHER. Mr. Chairman, yesterday you gave some interesting data in terms of differentiating the growth of the GDP, excluding government and including government. Could you just repeat those numbers? Because the following statement dealt with the number of jobs lost in G; I think it was 600,000. I am trying to recall what you said because I think that was part of the answer to Jeff's question.

CHAIRMAN BERNANKE. Well, what I said was, in the recovery so far, measuring from the trough quarter—I'm sure somebody will check my arithmetic here—the growth rate of real GDP has averaged about 2.2 percent, which seems about right, while the growth rate of real GDP less government spending has been more than 3 percent.

MR. FISHER. State and local plus federal.

CHAIRMAN BERNANKE. Less all government C&I. So just private C plus I, no G. On the other hand, this is just the spending part, and it doesn't take into account whatever drag is coming from tax and transfer policy. So it's just the G part. Then the other observation is if we just look at nonfarm payrolls since the trough of overall employment, there's been a decline of

600,000 government jobs even as private employment has risen by quite a few million. At the same point in the 2001 recovery, there had been a gain of 400,000. So compared with the previous recession, it was about a net difference of about 1 million at this stage of the recovery, which is obviously a pretty significant effect.

MR. FISHER. Thank you.

CHAIRMAN BERNANKE. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. There are a lot of great ideas that we heard in the past few hours. One in particular that I'd like to associate myself with is the Vice Chairman's idea of thinking about ways to improve the SEP as a communication vehicle. In particular, I think it would be useful to offer—at least in conjunction with, as a supplement to our current SEP—some notion of our forecast under a common policy assumption of some kind. I think that would be valuable communication for the public to hear. As I've indicated in the past, I have often struggled to talk to the public about the thought experiment where I'm in charge of monetary policy. They don't find that a useful thought experiment.

CHAIRMAN BERNANKE. A counterfactual. President Evans.

MR. EVANS. Well, on this point, I just want to remind us all that we did go down that road with a consensus forecast experiment, and a number of participants looking very technically at how you generate a forecast indicated that they would have trouble putting down a forecast that was an equilibrium—sustainable and whatnot. So I certainly share the goal of what President Kocherlakota is advocating and would hope that we could get there, but it will be a challenge.

CHAIRMAN BERNANKE. Yes, you can't just announce a path. In theory, you'd have to announce some kind of reaction function. Anything else? Why don't we take 20 minutes for coffee and then we'll do the monetary policy go-round?

[Coffee break]

CHAIRMAN BERNANKE. Okay. Why don't we reconvene? Our last item is current monetary policy, and let me ask Bill English please introduce it.

MR. ENGLISH.[4] Thank you very much, Mr. Chairman. I will be referring to the handout labeled "Material for FOMC Briefing on Monetary Policy Alternatives."

The top left panel of page 1 shows the median dealer projections for the path of SOMA holdings from the most recent primary dealer survey (the black solid line) as well as the median projection before the September meeting (the orange line). The median dealer now expects holdings to peak slightly later at just under $4.4 trillion, similar to the path that the staff wrote down for alternative A (the red dotted line). Dealers are anticipating total purchases under their current program of about $1.6 trillion—up from about $1.2 trillion prior to the September meeting. The panel directly below shows that a majority of dealers now anticipate that the unemployment rate will be about 6.7 or 6.8 percent when the purchase program is wound down, which is roughly consistent with the simple unemployment-based stopping rule we included in the Tealbook.

Over recent months, the public has had some difficulty understanding the Committee's intentions regarding future asset purchases. As noted in the bottom left panel, the introduction of a simple rule for purchases could help clarify those intentions, albeit at the cost of reduced flexibility. As noted in the Tealbook, and as you also saw in the staff memo, such a rule might be based on the unemployment rate or the level of payroll employment, either of which could help provide greater specificity about what the Committee means in saying that its decisions about asset purchases will be data dependent.

The three panels on the right side of your exhibit focus on federal funds rate expectations and the Committee's forward guidance. The top panel shows that the median expectation for the path of the funds rate from the dealer survey shifted down somewhat since September, roughly consistent with market measures. The middle panel shows that this change has been accompanied by a shift further out into the future of the expected timing of liftoff, with most respondents now seeing the second half of 2015 as the most likely timing. I would note that the dealers' forecasts for

[4] The materials used by Mr. English are appended to this transcript (appendix 5).

when the unemployment rate will drop to the Committee's 6½ percent threshold (not shown) were little changed.

As noted in the bottom panel, the Committee might want to strengthen its funds rate forward guidance, now or in the future, to clarify that it views the forward guidance and the purchase program as distinct tools that need not move together. In the Tealbook we offered four possibilities: a reduction in the unemployment threshold, the introduction of an inflation floor, an explicit statement that the Committee will consider a broad set of indicators when deciding how long to maintain an exceptionally low range for the federal funds rate, and provision of information about the path of the federal funds rate following liftoff.

Turning to the policy decision at this meeting, the statement for alternative B, on page 6, might appeal to policymakers who judge that the available economic data and the possible effects of the fiscal standoff suggest a somewhat weaker near-term path for the economy, and that the recent indicators have not yet provided sufficient evidence that progress toward the Committee's objectives will be sustained.

The first paragraph of alternative B begins by highlighting that the shutdown of much of the federal government—and, perhaps, the delays in some key data releases—have made it more difficult to assess the evolution of economic conditions. It then characterizes economic activity as continuing to expand at a moderate pace and labor market conditions as having improved further, but points to a somewhat slower pace of recovery in the housing market as a consequence of higher mortgage rates. The second paragraph is the same as in the September statement, except that it deletes the reference to the tightening of financial conditions. Alternative B also adds the sentence in paragraph 6 indicating that the Committee anticipates that persistent headwinds will make it appropriate to keep the target for the federal funds rate below its longer-run normal value for a considerable time in order to achieve and maintain maximum employment and price stability.

The Desk survey indicated that dealers expect no change in the pace of asset purchases and few changes to the postmeeting statement. The new language at the end of alternative B would certainly be noticed, but it might not affect investors' expectations all that much, given that they already appear to anticipate a fairly gradual rise in the funds rate after liftoff and that the Chairman included similar language in his September press briefing. Nonetheless, longer-term interest rates would likely decline somewhat.

Alternative C, on page 8, may appeal to policymakers who judge that the substantial progress in labor market conditions since last fall, as well as the underlying momentum in the economy despite the restraint from fiscal policy, warrant starting to wind down the purchase program at this meeting.

The first paragraph of alternative C omits the reference to the shutdown and data releases and is more upbeat about current economic conditions, pointing to the continued decline in the unemployment rate and strengthening of the housing market

despite higher mortgage rates. Relative to alternative B, the second paragraph removes mention of inflation persistently below 2 percent as a risk to the economy and expresses greater confidence that labor market conditions will continue to improve. The third paragraph announces that, in light of the cumulative improvements in the labor market, the Committee has decided to reduce the monthly pace of its asset purchases by $20 billion, split evenly between purchases of MBS and Treasuries.

There are two options for paragraph 4: The first is essentially unchanged from September, and the second introduces two possible versions of a simple state-contingent rule for asset purchases. One is based on the cumulative increase in nonfarm payrolls relative to their level last month. The other is contingent on a ½ percentage point reduction in the unemployment rate, also relative to September. In both cases, future reductions in the pace of purchases would be roughly proportional to the observed progress toward the stated labor market benchmark.

Even if you are not ready to reduce the pace of purchases at this meeting, you might still find the clarity provided by one of the rules in paragraph 4′ is appealing. In that case, you could make no change in purchases at this meeting but announce the rule that will guide the path of purchases going forward.

The adoption of alternative C would surprise market participants; longer-term interest rates would rise, equity prices would decline, and the dollar would likely appreciate. Even if the Committee chose to announce a rule but made no reduction in the pace of purchases at this meeting, there would likely be some backup in rates as investors saw the Committee as moving more quickly than expected to cut purchases.

Finally, turning to alternative A, on page 4, some Committee participants may judge that the medium-term economic outlook is now weaker than foreseen in June. As a result, they may want to avoid signaling a near-term reduction in the pace of purchases and to modify the forward guidance on the federal funds rate to clarify the Committee’s intentions and provide additional monetary accommodation.

The first paragraph of alternative A is similar to that in alternative B except that it characterizes recent economic growth as “modest,” and paragraph 2 retains the reference to the tightening of financial conditions since spring. Paragraph 3 states that the Committee has not yet seen sufficient progress toward its objectives for the labor market and inflation to warrant a reduction in the pace of purchases. And paragraph 4 omits the reference to “coming meetings” in order to suggest that purchases will not be curtailed for a while. Paragraph 5 provides the potential enhancements to the forward guidance I discussed earlier. The sixth paragraph provides an alternative version of the forward guidance regarding the path of the federal funds rate after liftoff.

As Simon mentioned yesterday, expectations about the timing of the first reduction in the pace of purchases were pushed out into 2014 over the intermeeting period, suggesting that the language in paragraph 3 of alternative A might not come

as a great surprise to market participants. However, the changes to the forward guidance in paragraph 5 would be unexpected, and longer-term rates would likely decline somewhat, equity prices rise, and the dollar depreciate.

Draft directives for each of the alternatives are presented on pages 11 through 13 of your handout. Thank you, Mr. Chairman. That completes my prepared remarks.

CHAIRMAN BERNANKE. Thank you, Bill. Are there any questions for Bill? [No response.] Seeing none, let's begin our go-round with President Williams.

MR. WILLIAMS. Thank you, Mr. Chairman. I support alternative B but with two small modifications. I recommend that we delete the first and the last sentences of the statement. I'll start with the first sentence. This sentence puts too much emphasis on the role of the government shutdown, both in terms of the economic outlook and our own decisionmaking. As I discussed yesterday, we are not missing key data, nor is economic performance during the intermeeting period particularly hard to assess. Elsewhere the statement already mentions twice that fiscal policy is restraining economic growth, and that is enough. Indeed, as a factor affecting our outlook, the temporary shutdown is minor compared with the ongoing fiscal austerity. More importantly, highlighting the shutdown in the lead sentence of the statement may give the false impression that monetary policy is paralyzed in the face of short-term fiscal brinkmanship. And it's important to remember this fiscal brinkmanship is not likely to go away anytime soon. I think this is not a message the Committee should be sending.

Turning to the final sentence in paragraph 6, I think it, too, should be removed. Although the Tealbook provides some brief discussion of the effects of headwinds, the Committee needs more-detailed quantitative analysis and discussion about the size, the scope, and source of such headwinds in 2016, before introducing them in the statement. Now, as the Chairman said yesterday, there is analysis around this using the staff forecast, but I think that we should both discuss this further and see alternative models and analysis around that. In any macro model it is

possible to decompose the various factors affecting the equilibrium real interest rate, or the headwinds, if you will, and such an analysis would be especially useful I think in thinking about the role of headwinds in 2016. And, given the importance of our communications, it is essential that clear and well-grounded analysis underlies our statements.

More broadly, I am concerned that this sentence attempts to impart to the public greater agreement on this issue than exists or is in fact necessary. After all, we may agree on an action, even if we don't reach a consensus about why we should take that action. Most of us expect the funds rate to lift off only gradually, but still we may disagree about the reasons for that gradual liftoff. It could be headwinds, it could be part of a lower for longer strategy, or because we think a high-pressure economy will draw people back into the labor force and combat hysteresis, or a combination of all three of these. We don't have to agree on a rationale to find common ground on the policy path. So that brings me to a principle I stated yesterday about the danger of extending our forward guidance beyond the point where there is a strong and clear consensus on the Committee. Putting headwinds in the statement today provides the Committee's endorsement of a particular view on the evolution of the economy three or four years out. Given the inherent uncertainty about the distant future, I doubt such a consensus exists and I think it would be unwise to suggest it does. Moreover, because market expectations are now broadly aligned with the views expressed in the SEP, it's not clear that we need to fix expectations about the path of the funds rate in 2016 and beyond.

Of course, one problem I pointed to yesterday and last month is that we are approaching our 6½ percent unemployment threshold. We need to convey what will drive our policy decisions once we reach that threshold, and I would add the post-threshold language from paragraph 5, alternative A, that begins, "Once the unemployment rate reaches 6½ percent." I

would not include the inflation floor language at this time. Bolstering our forward guidance this way might also help with another problem we discussed yesterday and this morning, and that is that market participants seem to have trouble distinguishing actions regarding asset purchases from our intentions regarding future short rates. Signaling that the Committee is not in fact itching to raise the funds rate target could help market participants make this distinction. Thank you.

CHAIRMAN BERNANKE. Thank you. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. As I think about our policy decisions, I always turn back to our strategic plan, the longer-term goals and strategies statement that we issued in January 2012 and reaffirmed in January 2013. I use that as my lodestar, so to speak, in thinking about our decisions. And as I think about that, I see that the medium-term outlook for prices and employment—really, a five-year outlook for prices—remains weak relative to our longer-run goals. So I am trying to think about what would be a policy choice that would foster a more rapid recovery toward those dual mandate objectives, and I find alternative A attractive along those lines.

In terms of the specifics of alternative A, I sense the consensus for the broad set of indicators approach as opposed to actually the more quantitative approach of lowering the unemployment rate threshold. I think that both have value, and President Williams is right to caution us about trying to structure forward guidance for which there isn't strong Committee support. But that said, I think a lot of the value of our forward guidance in terms of the unemployment rate threshold has come because it has been quantitative. We have the ability to go out and check whether or not it is working. We can assess, and I think market participants can assess, exactly what that means. So I personally would favor a more quantitative approach.

As I have indicated in the past, at the risk of adding a little more complexity to the statement, what we could do is add a separate paragraph about what is going to happen between 6½ and 6 or 6½ and 5½. That paragraph could have a different inflation protection in it. It could be a lower one, 2¼ as opposed to 2½. We could consider the idea of a financial stability knockout. I'm not advocating that by any means, but that's something else you could add to that new paragraph. So this would make it clear that what we are doing is offering clarity about what is going to happen when the unemployment rate falls below 6½ percent. But with that said, the broad set of indicators language is a positive move forward. I don't think it's as positive as trying to be more quantitative, as we have done in the past.

I thought President Williams summarized some of the problems with the last sentence of alternative A and the first sentence of alternative A, and I will associate myself with his remarks on that dimension. So I would drop those sentences at this time in alternative A.

Having said I support alternative A at this time, let me talk a little bit about alternative C. Despite the weak macroeconomic outlook in Tealbook, Book A, and I don't think there's any prospect of that changing in the next six months materially, I do think that there will remain a need to talk about and think about the issue of reducing the flow of asset purchases in the next six months or so. I think the key problem or challenge for us—and I talked about this in the past two go-rounds—is what we think about success for the asset purchase program. How we thought about it going in, in September 2012, is different from what we think about as success for the fed funds rate program. And I think we have to be clear about why we think those definitions of success as being different. I think, Mr. Chairman, your idea of having a survey to gather the reasons among the Committee about why we think about success as being different in terms of the one tool having cost and efficacy considerations that the other tool does not, is going

to be very helpful in sharpening our communication about why we are contemplating reducing the flow of purchases, the use of a form of greater stimulus, when our anticipated rate of progress toward our goals remains so slow.

With that said, I would be willing to contemplate the steps described in alternative C, not at this meeting but at some future date, if they took place after those in A, or simultaneously with those in A, and if they were justified, at least in part, in terms of the cost and efficacy considerations that we are going to be discussing further. And I think we should be explaining clearly in the FOMC statement and other public communications that cost and efficacy considerations are important drivers behind a near-term decision to reduce purchases. That is, I think, the only way to drive home that we remain fully committed to rapid progress toward our dual mandate objectives. I think the survey tool should help us have a much clearer understanding among ourselves of what we mean when we talk about those costs.

To summarize, Mr. Chairman, at this meeting I favor alternative A. I personally would simply lower the unemployment rate threshold to 6 percent or even lower, but I would be willing to support alternative A at this meeting with the broader set of indicators language instead. I would drop the last and first sentence. I could see supporting a version of alternative C in the next few months, but that version of alternative C would have to include clearer language that underscores the role of efficacy and costs as key elements, in the Committee's thinking. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Rosengren.

MR. ROSENGREN. Thank you, Mr. Chairman. I support alternative B as written. Last June I was expecting that by now real GDP growth would be picking up, that payroll employment growth would be rising, and that we would have avoided disruptive fiscal policy

this fall. Had that played out as expected, I would have supported a reduction in purchases at the September meeting. However, that is not the set of facts that we faced at the September meeting, nor is it the set of facts facing us today. Moreover, for the second half of the year, private forecasters, the Tealbook, and the Federal Reserve Bank of Boston forecast all envision GDP growth not much different than the 2.2 percent average growth over the past four years of this very slow recovery, along with continued sluggish expansion in payroll employment. And this outcome is achieved only under the rather optimistic assumption that fiscal policy decisionmaking will not suffer from another self-inflicted wound.

Since the start of this recovery, we have been assuming that monetary policy was sufficiently accommodative to return to full employment and 2 percent inflation within approximately a four-year timeframe. We have now had five years of a very sluggish recovery, and we are still assuming that we are just four years away from reaching full employment and 2 percent inflation. Given the consistent pattern of over-forecasting, we should probably be placing more weight on realized data than on our forecasts. In terms of policy, that means no change in monetary policy until we see economic data consistent with achieving full employment and 2 percent inflation within four years. Actually, my preference would be to do whatever we can to achieve both those goals sooner than the four-year horizon in the Tealbook. However, to have any chance of achieving our goals in four years, we need to see 3 percent real GDP growth in the data, we need to see payroll employment closer to the 200,000 jobs that are forecast next year in the data, and we need to see inflation numbers clearly trending toward 2 percent. The Tealbook forecast expects us to see that in the first quarter. If that forecast becomes a reality, then that is when we should consider reducing our purchases. My expectation is that evaluation is likely to be difficult before March. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Bullard.

MR. BULLARD. Thank you, Mr. Chairman. I have one general comment and two specific comments. In the general comment, I want to again talk about the possibility of ending the asset purchase program by citing efficacy and costs, as has been addressed today by President Kocherlakota, President Lockhart, Governor Tarullo, and others, encouraging us to talk more about the efficacy and cost argument—and I know the Chairman has talked about this in the past—and put this in the context of what Vice Chairman Dudley called ending the program because of failure as opposed to ending the program because of success. I like Vice Chairman Dudley's terms here, despite the fact that he is a Red Sox fan. In fact, I have never met so many Red Sox fans until I came here. [Laughter] Basically I think we should not end the program on the basis of efficacy and costs, unless it is absolutely necessary. And I do not think we are near that point right now, so I'm going to outline that argument.

I liked Governor Stein—another Boston guy here—describing the leading option for the Committee is just to continue the program. I think it has been a successful program, and I think we can continue, and I don't think we're close to a threshold where we have to think about ending it and declaring failure on it. It would be an admission of failure to end the program before achieving our goals, and I think enhanced forward guidance is unlikely to be an effective substitute. And the main reason is the same one we were thinking about last year, which was that forward guidance has to extend farther and farther into the future. And the farther you go into the future the more unknowns there are, and, therefore, any promises you make in the distant future are unlikely to be effective in changing economic behavior today.

Last September, in 2012, we chose to implement an open-ended asset purchase program instead of choosing to strengthen forward guidance. At that point, we could have said that we

don’t want to do the asset purchase program, but that we want to somehow strengthen forward guidance. We didn’t do it. We thought that asset purchase was the more potent tool. And so that kind of tells markets that by closing down the asset purchase program and switching back to forward guidance you are basically saying it didn’t work and we are going to do something that is probably going to be less effective.

Let’s just break down the efficacy and costs argument into two parts. First of all, on efficacy, and I think the efficacy argument, frankly, during the summer has been blown out of the water. So let me just talk about that for a second. The June and September experience surely showed that asset purchases are highly effective in the following sense. The more hawkish June announcement by this Committee led to higher real interest rates, lower inflation expectations, lower equity valuations, and a stronger dollar. That is exactly the financial market signature of a surprise tighter policy announcement. The reverse—exact reverse—occurred in the aftermath of the surprise decision by this Committee at the September meeting in 2013, just this past meeting. Both of these events were clear monetary policy surprises and so provide compelling evidence about the efficacy of the program, at least in terms of having the same financial signature that you would expect from, say, a 50 basis point move in the funds rate in one direction or the other. At a conference, Marvin Goodfriend called this the “black box” argument for the efficacy of this program. And it is indeed a black box argument, but it is a very compelling one. I think we have an effective tool at our disposal, and we would put it away at our peril. On the efficacy side, I think the events of the summer, as unintended as they may have been, did give us two experiments that showed that it is a very efficacious program, and that the flow rate of purchases is very much a key variable that we can turn in one direction or the other in order to get the desired effects that we want.

On the cost side, I do think, of course, we need to keep our eye on costs and on financial stability issues. But I do not think we are close enough to any limits on those dimensions to warrant tapering based on a citation of costs at the current time. The current size of the balance sheet relative to GDP is not particularly large compared with other key central banks. We are in the 20s as a percent of GDP. I think we could go to 30 or 35 percent of GDP without too much difficulty. That's where the other central banks are. If you thought there was some problem with that particular size of the balance sheet relative to GDP, Europe should be in trouble, the U.K. should be in trouble, the Bank of Japan should be in trouble—that doesn't seem to be happening. There is actually one central bank that has a ratio of 90 percent balance sheet to GDP. Who is it? Is it Zimbabwe? It's Switzerland. We should think more in terms of not just round numbers on the size of the balance sheet, but also in terms of the size of the balance sheet relative to GDP, and we should think harder about what we really think that limit might be. I agree, we may get to a point where we don't want to go farther into unknown territory than we have to, but we should have that limit in our head. And if we do get to that juncture, then we would have to swallow hard and make some hard decisions. But I would advise trying gallantly not to do that, and instead I think we should continue with the program until we have better data and a better argument than we already have—we already have a pretty good argument, but a better argument on cumulative progress toward a substantial labor market improvement.

And, as President Kocherlakota just reminded us a moment ago, inflation is running quite low. We have a lot of room to maneuver on that dimension. We do not have a classic monetary policy debate here where inflation is running high but the economy is weak, and you've got each side maneuvering on those two dimensions. We seem to have a lot of room on the inflation side.

The bottom line, I think, is to continue with the successful program until we get better news, and I think we do need to be prepared to move when we have the opportunity. I would not let it go by. We have made considerable progress over the past year among other dimensions. One that has not been mentioned as much at this meeting is much higher equity in home prices than we would have had last year at the time of that decision. That tends to, and does, feed into a lot of our macroeconomic forecasts. So we don't have to be in a hurry.

For today, I do support alternative B, but I agree completely with President Williams and President Kocherlakota that there should be two key changes here. One of the themes of this meeting is that less is more, so let's just take out the two sentences, the very first sentence and the very last sentence. For the first sentence in paragraph 1 of alternative B, which talks about the shutdown of the federal government, my preference, as I was saying yesterday, is not to tie monetary policy too closely to a new variable called "partisan volatility" here in Washington. This volatility is unlikely to go away anytime soon, and so may tie our hands should we wish to make a key decision at a point where partisan volatility is higher than we would prefer. Financial markets are well aware that this is a concern for the Committee. There is no need to enshrine this by putting it into the statement.

And on the last sentence of paragraph 6 of alternative B that talks about headwinds possibly restraining economic recovery far into the future. I would omit this. I think it's more confusing than helpful. But, in particular, I think this sends a very pessimistic signal about the future of the U.S. economy. I have been very concerned about the Committee sending unwarranted pessimistic signals. We don't know any better than anyone else what the economy is going to be like in 2016 or 2017. The combination of us not having any real evidence to

support this statement and the notion that we shouldn't be sending a pessimistic signal, I think, should be a powerful argument for removing the last sentence of alternative B.

By the way, I do think if we want to argue that we are going to hold rates low far into the future, the argument should be the Woodford argument that we are holding them lower to make up for the time when we were constrained by the zero lower bound. That would make the most sense. But I don't think there is complete agreement on the Committee about that, and we should maybe explore that further. But I wouldn't put this in this statement at this time. I don't think it helps us and possibly could be counterproductive by sending this pessimistic signal. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Fisher. Oh, I'm sorry. President Lockhart.

MR. LOCKHART. A question for President Bullard. The ratio of central bank balance sheet to GDP is an interesting ratio, but I don't intuitively get that mechanical connection. If you take national debt to GDP, there's sort of the notion of the economy that services the debt should have some relationship, but explain to me, if you would, the connection between central bank balance sheet and GDP. How does that work?

MR. BULLARD. Well, I don't think we have good theories about it. But what I would encourage is that if we just talk in terms of hundreds of billions of dollars being added to the balance sheet, that's just a number. I think we need to get more to the economics of where that limit is and why we think that limit is there? And I'm giving a very simple argument, which is that other countries have far surpassed us already. They don't seem to have created a lot of financial instability or a lot of inflation, and so I just don't think we have a case—not an empirical case right now—that there's some kind of threshold at 25 percent of GDP or at

28 percent of GDP or something like that. We just don't see that from the available empirical evidence and so, for now, I think it's clear sailing. I'm not saying you want to go on forever, but I think that scaling it is maybe a little bit better way to think about it. Also, in U.S. history, the size of the balance sheet has been bigger than it is today, in the late 1930s, and so it's not unprecedented historically either.

CHAIRMAN BERNANKE. President Fisher.

MR. FISHER. As I think I mentioned at the previous meeting, an efficient Committee starts like the Balkans and ends like Switzerland, which is not quite what I meant for that discussion. [Laughter]

I'm going to just be simple here. I'm going to join the Western–Lutheran Coalition, meaning I agree fully with President Williams, President Kocherlakota, and President Bullard, in terms of getting rid of the first sentence and getting rid of the last sentence of alternative B, given that that seems to be where we're going. Based on the discussion we had, it doesn't sound like we're quite ready for A(5) or for C(4)′. Everybody at this table knows that I don't like the program that we're currently undertaking, but I don't have a vote in this meeting, and I would suggest that President Williams is actually quite wise in his recommendation. In fact, I would remove all of paragraph 6. I think the word "eventually" is just way too indefinite, too open-ended, and it might sort of look like we're just not going to stop this program, but at a minimum, I would get rid of the first and last sentences. He's right. Fiscal policy retrenchment is mentioned two other places in the statement, in the first paragraph and the third paragraph. So I'm in accord with President Williams, President Kocherlakota, and President Bullard on that front.

One small point, which I don't expect you to change, but I just want to note—I mentioned it yesterday. Talking about the housing sector, I think it's incorrect to say that it "slowed somewhat in response to higher mortgage rates," although the word "somewhat" may condition it. Again, talking to the builders, talking to the housing companies, they will point out that is a partial reason and particularly an extreme movement of 100 basis points. The Desk pointed out yesterday that we've actually had a settling down of mortgage rates. The builders will tell you that they priced too aggressively in their eagerness to recoup the past few years. They have a limited amount of property to work with. Due to the labor and resource situation, it has taken them twice as long to build as they normally have in normal cycles. And then, finally, they will mention that mortgage rates have risen, but it's not the principal reason. So I would simply recommend that we insert the word "partially" after "months," "has slowed somewhat in recent months partially in response to higher mortgage rates." I don't think the Committee will accept that, but it would be viewed as more realistic by the people that are in the industry if they were to read this statement. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. I don't know why you're so pessimistic, President Fisher. I'm happy to put that on the table.

MR. FISHER. I would be delighted if you did, and I look forward to it being voted down. [Laughter]

CHAIRMAN BERNANKE. Vice Chairman.

VICE CHAIRMAN DUDLEY. Can I just ask a question of the Western–Lutherans? If you're going to eliminate the last sentence, shouldn't you just revert back to paragraph 5 as of last time?

CHAIRMAN BERNANKE. That's the presumption.

VICE CHAIRMAN DUDLEY. Okay. I just wanted to be clear on that. That's really what you're saying.

CHAIRMAN BERNANKE. President Plosser.

MR. PLOSSER. Thank you, Mr. Chairman. I have believed for some time that the time really has come to end our LSAP program. I do have questions about both its efficacy and its costs, and from a risk management standpoint, the risks of unintended consequences of how we unwind ourselves from this. I don't need to go into all of those at this point. And we are struggling around the table yesterday and today with how do we go about doing that and what the criteria are that we're going to use. That's been a topic of much, I think, fruitful discussion. Given where we are, I did make the suggestion yesterday that one way to get out of this program is to declare, like we did in QE1 and QE2, that there is a size for this program that we're going to target. We believe that's the right amount, and we will do it until we reach that point. And when we reach that point, we will make a decision whether to institute another program or not if it seems to be called for under the circumstances.

I've argued for some time, vociferously, and continue to about the importance of being state contingent; I like state contingency. And I was weakly supportive of the flow-based program, but was troubled by it. The reason is we have neither theory nor evidence from the historical record to go on about how to write a state-contingent rule for our asset purchase program, and I think that's partly what we're struggling with. My suggestion to revert to a balance sheet rule, in terms of how much the purchase program is going to constitute, is clearly a second-best outcome. I'm not arguing that it's the world's first-best way to do this, but it simplifies a number of things. It simplifies in the sense that it easily begins to disentangle this confusion between our interest rate rule and our balance sheet rule. Right now, we've got them

interacting in a way that's very complicated that we haven't entirely sorted out ourselves. It does restore that separation of how the Committee is thinking about balance sheets versus our interest rate rule. So I think there's some simplicity and appeal to that. After all, this Committee has argued for some time that it really is the size or duration of the balance sheet that's providing the accommodation and not the flow. Let's go back to that claim and assert that that's how we're going to decide how we're going to conduct that. I understand that's hard, and Governor Tarullo made some comments earlier this morning about how the communications around that might be a little bit difficult, but I do think it has some appeal to it as a way to unwind ourselves from this.

Now, the other advantage I see to this in getting out of this is that our state-contingent efforts to do this are quite complicated because they have implications, as Governor Yellen was saying, for different outcomes we could experience. For example, if we stick with the unemployment rule and we're in one of those bad nodes where the unemployment rate stays higher than perhaps we otherwise chose, we could be in this program for a very, very long time. Is that really where we want to be and are we prepared to commit to that using one of these other rules? I think that's a risk that we have to understand, and so being able to separate there might have some advantages. If you're in a supply-side damage scenario versus the scenario where fiscal policy goes on in a terrible state for a very long time, I think we pose ourselves some problems. So I'm trying to think of ways to simplify this to extract ourselves from this when we want to, without some of these other complications. Again, it's not first best solution, but it might be one that is desirable. I also worry a lot about our emphasis on fiscal policy and the arguments about that. I do worry that we are perhaps running the risk of placing too much emphasis in our discussions about what's going on with fiscal policy, along the lines of President Bullard's comments. If we can't end this program as long as fiscal policy is in a mess, again, we

may be in this for a very long time. Is that really where we want to be? And it moves us then to a world where I fear, we are, to some degree, accepting a regime of fiscal dominance that may not be in our long-run best interest. For those reasons, I think we need to be a little more creative and open about how we sort of get out of this without boxing ourselves in in a way that perhaps makes us engaged in asset purchases for a very, very long time.

We're obviously not prepared to make any decisions on these difficult questions today. So let me lend my support to alt-B in this context and support three changes, two of which have already—maybe all three of them—been mentioned in some sense. I'll put my hat in the ring with President Williams. I think we need to get rid of the first sentence in that it draws too much attention to fiscal policy, and it ties our descriptions and our actions too much to fiscal policy. So I'd love to get rid of that first sentence. The other thing I'd like to do—and President Fisher made this point—I think we have to be very careful in paragraph 1, when we're describing the economy, not to put too much weight on our interpretations of causality. It's supposed to be descriptive, and I think President Fisher pointed out this sort of reference to the housing market has softened somewhat or weakened in recent months due to an increase in mortgage rates. We don't know that for sure, and we don't know whether it's going to come back or not. In fact, I'd just make the statement "the housing sector has continued to expand, but its pace has slowed," period. That's just a statement of what's happened. We don't need to attribute it to mortgage rates because, in fact, if we sort of begin hanging our hat too much on what's driving the housing sector, we then may find ourselves in an undesirable place later where we have to ask ourselves whether that means that we're going to have to reduce mortgage rates even more than we already have? So I'd prefer to get some of those causal things out of paragraph 1, and I think we would serve ourselves better. I would get rid of the first sentence. I would get rid of the phrase "due to

higher mortgage rates." And the third, I would go along with the sentiment on the last sentence of paragraph 6. President Kocherlakota yesterday made the point very clear. There's a lot of hidden economics in that statement that are actually very complicated and potentially confusing, and where there could be disagreements about how this comes about. I think we have to be very careful about that, and so until we've done a lot more economic analysis and there's more sort of consensus about what this really means and why this is happening, or why this appears the way it does in the SEP, I just think it needs a lot more thought before we go there. I would recommend that we take that sentence out. So eliminate the first sentence, eliminate the reference to higher mortgage rates, and take out the last sentence of paragraph 6. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Evans.

MR. EVANS. Thank you, Mr. Chairman. I agree with a comment that Governor Yellen made during her earlier statement that we appear to be in a pretty good place today. So I prefer no action, and I guess that's alt-B.

At our September meeting, we clearly indicated that we needed more and better confirmation that the SEP outlook was concrete and achievable. Since then, the data flow was interrupted and the fiscal developments in Washington piled greater uncertainty onto our current setting. I don't know, maybe I'm in the minority on that one, according to some of the comments so far. At the margin, the economic setting is most likely worse than we thought in September.

Now, with regard to particular elements in the statement, I don't agree with the suggestions about deleting the first sentence regarding the role of the government shutdown. I think it's a reality check and that most commentators would say that it's more difficult to assess. I probably didn't hear all of the details of President Williams's careful assessment of why things

aren't that much more difficult to assess. I would guess that in Chicago we had computer programs that had missing values and, when we went to run them normally, they just blew up, and so we had to do something in order to correct them. I think it's objectively correct that it's more difficult to assess, and that's all it says, "somewhat more difficult to assess." However, then we say information received seems like things are actually pretty good. I think that if you read the statement from the outset without that, it seems a bit too bright. "Information received since the FOMC…", I can imagine somebody—Jon Stewart—saying, "What information did they receive during that time period?" Anyway, for me, it really adds more questions than answers. Maybe there's a rewording that can make this better, but that bothers me. I think the higher mortgage rates also are a pretty good explanation for at least a partial reason why we've seen housing. The other factors that President Fisher mentioned have been longer lasting, at least in my conversations with people in the housing industry. Some of those effects have been around for a while. It's the increase in mortgage rates that's been more timely and associated with that.

Now, on the alt-A suggestion, I will admit a great deal of sympathy with the alt-A post-threshold guidance in paragraph 5, and President Williams rightly put emphasis on that yesterday. I did not hear enough of a consensus for the 6 percent threshold change in forward guidance, certainly not today, maybe never, and I think that some additional post-threshold guidance helps. I do think that the production function for making it do what we want it to do will involve an awful lot of additional commentary from the center of the Committee—namely, you, Mr. Chairman, or Madam Chair, depending on when we do it. I think it's going to require a couple, three-times-a-month type of commentary on that to drive it home because it's qualitative, and I think people are going to start asking questions about what it really means. The 6 percent

maybe could have been dealt with, pounded in, and then it would be there. But I think that based on the kinds of questions that the rest of us field when we go out and speak and those the wire reporters ask us, they're constantly asking for more information about that. And I think it would be incumbent on us to make that effective, to do it more often; that's a feature of that.

Regarding the last paragraph's forward guidance on the pace of increasing the funds rate, I do favor some type of guidance. I'm probably a little more sympathetic toward it than the commentary so far, but my staff has more concerns about it than I do. I'll simply mention that when my expert staff is bringing up these same objections, it may be an indicator of how the public may struggle with that. I definitely agree that headwinds present an enormous obstacle and are going to continue to be that way for a while, but, to some, it might sound too downbeat for too long regarding our assessment of future growth prospects. So it may lead the public to believe we're more negative about the future than I personally intend by that guidance. Now, to address this, I think it could be helpful to add a bit more specificity if this approach is seriously considered at some point. So I would favor adding something to qualify headwinds, like fiscal and household headwinds that have been restraining the economic recovery, and then the language there. I think you made an excellent observation, Mr. Chairman, about the effect of the fiscal policy to date. It has been really big, and it would justify that type of language. And the household sector is going to continue to assess and work to right-size its debt obligations for a considerably period to come. I expect a long adjustment period like the analysis that we heard yesterday, unless we see much stronger wage and income growth across all industrial and occupational levels. I think that that could work, but I assume that it's probably not live for today. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Lockhart.

MR. LOCKHART: Thank you, Mr. Chairman. I support alternative B. I actually think the first sentence is accurate and appropriate. It addresses a question that is held in the minds of the public. I don't think it overreaches, and I think it sets up the tentativeness of the conclusions on the economy and the reasons that we're staying the course at this meeting. So I don't have an objection to keeping it in. I have some sympathy with President Fisher's "partially." I actually had the same thought, chose not to bring it up, but I do agree that there are other factors at work, and it might be good to qualify that a little bit. I think the bigger question, of course, is the forward guidance "in addition" language in paragraph 6. As I said in an earlier round, I favor enhancing guidance with this measure of strength, if not more, but not at this meeting. I think it's wiser to minimize changes under the circumstances around this meeting. If it were adopted in December as a practical matter, the Chairman would have the SEP in hand and would be able to use a press conference to guide interpretation of that. So I prefer standing pat at this meeting with the September language for the most part, minimizing the changes, and waiting until December to at least consider strengthening rate guidance qualitatively and possibly even quantitatively. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President Pianalto.

MS. PIANALTO. Thank you, Mr. Chairman. Before I comment on my preferred policy option, I wanted to provide some background on my thinking. My estimate for the natural rate of unemployment is 6 percent, and I know that this is on the high end of the range of estimates in the SEP, but I take solace that I'm not the only person with this estimate. So with my natural rate of unemployment at 6 percent, I believe that we are going to need to begin to raise the federal funds rate when unemployment is somewhere in the range of, say, 6¼ to 6½ percent. That is less than 1 percentage point from where the unemployment rate stands today.

Since the asset purchase program began last summer, the unemployment rate has fallen by nearly 1 percentage point, and we have had solid, if not spectacular, growth in payrolls. So if we wait much longer to adjust the pace of asset purchases, we run the risk of making it even more difficult to separate our asset purchase program from our fed funds rate guidance, because when it comes to our hopes for the unemployment rate, their boundaries start to blur together. And separating these tools seemed like it was a key theme from our policy planning discussion go-round. Suppose the unemployment rate continues to decline at its recent pace and the first reduction in the asset purchase program is put off until next March at the earliest, which seems to be what markets are thinking. In that scenario I think separation of the two programs is going to become even more difficult. I favored slowing the pace of asset purchases at our last meeting, and I realize that slowing purchases at this meeting is essentially impossible because it would generate a second surprise in as many meetings.

In light of the current market expectations, I would suggest that the Committee's statement in the form of alternative A is going to be read as indicating that asset purchases are unlikely to slow until some time in 2014. So I would like to see some language inserted into alternative B that would give the Committee greater flexibility to slow asset purchases in December or in January if the incoming data support such an action. And I think this could easily be done by inserting the following sentence after the first sentence of paragraph 3 in alt-B. I would suggest inserting, "In the coming months, if the Committee continues to see further progress toward its objectives for the labor market and inflation, the Committee will likely begin to gradually reduce the pace of asset purchases." Then the paragraph would just continue with, "However, at this meeting the Committee decided to wait for more evidence," et cetera. I think giving us a little more flexibility to move in December and January would be important.

In addition, like many others have already suggested, I would not add the last sentence in alternative B. In my mind, the effectiveness of our communications would be best served by only making further alterations to the forward funds rate guidance when we actually adjust the rate of asset purchases. I think making these changes together would help to decouple our asset purchase program from our fed funds rate guidance. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. President George.

MS. GEORGE. Thank you, Mr. Chairman. Alternative B is certainly consistent with the decision in September to await more evidence that progress will be sustained, and in a world of noisy data and government shutdowns, awaiting more evidence of progress increasingly seems to be a very high bar. That said, I do not support alternative B for several reasons. As I have noted before, it continues aggressive easing despite actual and forecasted improvement in the economy. There has been cumulative and sustained improvement despite fiscal headwinds and slow healing in labor markets. And despite the critique that forecasts have been too optimistic, they have accurately projected forward momentum. The Tealbook, the SEP, as well as private forecasters continue to do so.

I do worry about the cost of this level of accommodation, perhaps because the costs among this Committee have remained ill-defined. Our policy planning go-round highlights the challenges we face in several dimensions, such as how to communicate our goals, how to understand the effects of our tools, and explaining how they will be retired. We should continue to focus on these issues not only for consistent messaging, but, importantly, to affirm our understanding of the efficacy of these tools relative to our goals and the realities of the economy.

The emphasis on data dependence is important, but I've been more focused on cumulative progress rather than the most recent data point. Considering our progress just since

June, the unemployment rate has fallen; employment has increased by 600,000; and the September ISM manufacturing survey had the highest reading in over two years, driven in part by a rise in employment component. The August ISM non-manufacturing index had its highest reading in eight years. With this backdrop, I continue to view taking steps toward slowing the pace of asset purchases as appropriate and reasonable. It is difficult for me to see that adding accommodation at some reduced pace represents any meaningful tightening.

I also am concerned that market expectations of the cumulative size of LSAPs could continue to move higher despite continued job gains and declines in the unemployment rate. Recall that primary dealers expected the unemployment rate at the end of asset purchases to be 7 percent according to the dealer survey prior to the June meeting. This estimate was unchanged in the flash survey after the June press conference. Given the latest survey that now shows expectations for tapering in March, the continued job growth and decline in the unemployment rate make it likely that we will not even start tapering before the unemployment rate reaches 7 percent. Adjustments in these expectations regarding LSAPs might be appropriate if less progress had been made than previously anticipated or the medium-term outlook substantially deteriorated. However, the unemployment rate has fallen more than expected and private-sector expectations for job growth are likely to exceed what had been forecast in September of 2012. That said, it seems increasingly problematic to reinforce a direct connection between LSAPs and labor markets as we have discussed. Moreover, postponing the start of LSAP reductions reinforces a message in my view that we think the outlook is weak when, in fact, the growth trajectory we continue to project shows acceleration.

Finally, I would prefer to omit the proposed new language in paragraph 1 related to the government shutdown for reasons others have raised, as well as in paragraph 6, which I think

does little to clarify our expected policy path and might introduce yet another unobserved variable into the policy-setting landscape. And I would also be supportive of looking at some modification to the mortgage rate increase as the sole reason for the housing slowing. Thank you.

CHAIRMAN BERNANKE. Thank you. President Lacker.

MR. LACKER. Thank you, Mr. Chairman. I was in favor of tapering at our last meeting, and I still believe economic conditions warrant reducing the pace of our asset purchases, given the improvements we have seen in the labor markets and the likelihood that continued economic growth—even at 2 percent—will generate continued labor market improvements. So I find myself in alignment with President George.

But under the assumption we do not begin tapering today, I don't think we should be adding any new elements to our forward guidance at this time. One reason is that the statement is pretty long as it is. And I'll admit I don't have a theory of the optimal statement length, but it has been getting longer over time. And while pondering the growing length of our statements, my research director quipped that he half-expected to open the Tealbook one day soon and see alternative B begin with the words, "Call me Ishmael." [Laughter] Specifically, I find myself in agreement with President Williams about the last sentence in alternative B and that we ought to revert to 5. This constitutes new forward guidance, and it adds a pessimistic characterization of the outlook. I agree with President Bullard that it is likely to be taken as a shift in the Committee's outlook. And for the reasons that Professor Woodford has made really clear, could have a dampening effect on current economic growth by making people feel as if we are more discouraged about future growth.

I also agree with President Williams about dropping the first sentence. It is not that much more difficult to assess economic conditions. Sure, things are murky now, but I don't remember them being a lot less murky than they are right now. The other thing about this is that it places a lot of importance on one month's data, and it is the kind of thing we try and avoid doing. It implies that we do place more attention to one month's data than I think we really do or did today or yesterday. In addition, it implies a connection to fiscal policy as well. The murkiness has to do with the potential economic effects of the shutdown, not just the effects on data collection. And there, I think, we have gotten tripped up in the past by tying monetary policy to fiscal policy, and then having control sort of pass out of our hands and feeling hung up for a period.

I agree with the point President Plosser and President Fisher made about housing. And I liked President Pianalto's suggestion about language, so I pretty much agree with all of the suggestions for changing the statement that were made so far. Thank you very much.

CHAIRMAN BERNANKE. Thank you, President Lacker. Governor Yellen.

MS. YELLEN. Thank you, Mr. Chairman. I support alternative B. I personally considered our September decision a close call, but, in my view, developments have vindicated the wisdom of our choice. We didn't yet have sufficient confirmation that the improvements we had seen in the labor market would be sustained, and our decision was consistent with the basic framework that was laid out in June and got across to markets that our policy is truly data-dependent and we aren't just racing to the exits. Given that incoming data on spending and the labor market have been weak, and what I at least see as the confusing, but hopefully transitory, effects of the government shutdown and debt ceiling debate, it remains hard to assess the

underlying state of the recovery. So I think it is right to wait until December to gain better visibility on the outlook.

As I mentioned yesterday, I think our September communications moved us into a better place, and we certainly haven't foreclosed the option of taking the first step to reduce the pace of purchases in December if the data by that time confirm our expectation of ongoing improvement in the labor market conditions. Whether the first taper comes in December or sometime early next year, I think we stand the best chance of avoiding significant upheaval if we stay the course and continue within the framework we laid out in June. Given that our policy decisions are data-dependent, we should decide when first to taper based on the data regardless of whether markets perfectly anticipate our decision at that time.

I think we are in a decent place with respect to our asset purchase program and our forward guidance if progress toward our goals continues at the pace I view as most likely, or, as I noted in my economic remarks, under several other plausible scenarios. Even though I would prefer to see more rapid improvement in the labor market, it may be prudent under the modal outlook to complete purchases sometime around the middle of next year. We have discussed the uncertain costs and risks associated with a very large balance sheet and stopping around that time may arguably preserve more capacity for us to respond to some future large, negative shock. But the outlook is uncertain, and we need to be mindful that a scenario could unfold along the lines I discussed yesterday: a scenario where economic growth does not pick up, progress in the labor market stalls, and the economy is stuck in the mud. In such a scenario, disinflationary pressures could also mount.

I agree with others who have said we need to have a plan for a case where we eventually wind down our asset purchase program without a declaration of victory. And I think the survey

that you proposed, Mr. Chairman, will be extremely useful in developing that plan. I think we have all indicated discomfort with QE-infinity. It's not that there is some clear absolute limit to the size of our balance sheet, but, rather, that the type of cost-benefit analysis you laid out at our December meeting applies. In particular, we need to ask ourselves how far it would be prudent to go with asset purchases, given our assessment of how pressing the need is for action, how much the purchases are likely to help, the highly uncertain but presumably growing costs and risks, as well as the availability of other tools.

Your framework provides a way to think about some subtle but important issues. For example, do we believe that LSAPs have a larger marginal benefit in a period of real market distress or serious deflationary forces than in the stuck-in-the-mud scenario? If so, might there be an argument for reducing the pace of purchases in the stuck-in-the-mud economy so as to keep some capacity in reserve? And if we were to reduce the pace of asset purchases at a time when the outlook for employment and inflation were unsatisfactory, what other actions could we take to support a stronger recovery and to defend our inflation target?

In summary, at this point, our current framework has provided guidance for what I consider to be my baseline scenario, and I remain hopeful that things will play out in line with the program we have outlined. I do, however, think it would be prudent for us to spend more time developing a plan B for how our asset purchases might evolve under more pessimistic scenarios and to shape our communications in a way that would smooth the transition to such an unhappy state.

CHAIRMAN BERNANKE. Thank you. Governor Tarullo.

MR. TARULLO. Thank you, Mr. Chairman. Just in terms of our medium-term planning, continuing the discussion from the earlier go-round, I will now say somewhat more

affirmatively that I think it would be worth our individually and collectively thinking more about the alternative approach that Charlie Plosser suggested, which is to say instead of a tapering when we are ready to make a change in the LSAP policy, we instead think about announcing a total amount of the LSAP purchase and then just continue however many months it would take to get us to that point.

Turning to today's action, I, like most others, support alternative B. I have more to say about the language than I normally do, but that is prompted in part by the comments that others have made. I am in favor not only of retaining the first sentence of paragraph 1 but of actually strengthening, or at least expanding, it. I mean, it is a positive and not a normative statement. It is supposed to be, as Charlie Plosser did say, describing a situation as opposed to suggesting a particular policy action. First, it doesn't actually suggest that there has been significant fiscal contraction, other than that which is already ongoing. It simply says it has made it harder to assess economic conditions during the intermeeting period, which I find actually quite true. Something that is omitted from that statement, though, is actually the principal reason why I find the conclusion true, and that is the uncertainty around the lifting of the federal debt ceiling. I think the effect of the shutdown itself was probably concentrated in Washington and a few other areas where there were delays in contractor payments being made, and the like, and I think the staff expects that most of that effect will be reversed in the coming weeks and months. But in talking to market actors generally, what I found was that the run-up to the uncertainty and the residue of questions around the federal debt ceiling had more people hitting the pause button on things that they were thinking about doing. And it is that which, I think, makes things a little bit more difficult to assess. Will the pre-talk about shutdown and fiscal cliff trend continue through and be visible by December, or will the effects of the shutdown and the fiscal cliff debate linger

and be another blow to the general certainty about where the economy is headed? So I would actually expand the statement to say that "the effects of recent fiscal developments, including the temporary shutdown of the federal government, uncertainty around the lifting of the federal debt ceiling, and delays in releases of some key data, have made the evolution of economic conditions during the intermeeting period somewhat more difficult to assess."

On the question of the higher mortgage rates, I was under the impression—but this may be wrong—that existing home sales are more sensitive to mortgage rate changes than new construction, for some of the reasons I think Richard explained. The only thing I'd say, though, is if people don't want to leave the sentence as it is, I guess I would prefer to just delete the last phrase "in response to higher mortgage rates" rather than to insert "partially."

I am just going to note in passing, but not suggest a language change, that I am not sure that I, at this point, fully subscribe to the first sentence of paragraph 3, which I see is now "consistent with growing underlying strength in the broader economy." I think that's actually an open question at this point, which kind of gets back to the points I was making about paragraph 1. But I definitely do not suggest a change in the language, certainly not at this time.

And, finally, on paragraph 6, I join with many others in thinking that at least at this time it's probably better not to include it. Hearing some of you, it sounds as though many of you would like to maybe see some massaging of the language itself. But in terms of timing, I agree with what I think Jay said yesterday, and others have echoed, which is that if we are going to do something like this it is probably better to do it at a time when we have a new SEP, which confirms the expectation that is in there, and gives the Chairman an opportunity to explain it. On the downbeat point, I get what people are saying. But if the SEP is downbeat, then it is a little odd to be too worried about being downbeat in the statement. Maybe there is a reason for that,

but, as I understand it, the motivation for this language is the SEP. And we have stated our collective expectations in the SEP, and they are not overly optimistic. Thank you, Mr. Chairman.

MR. FISHER. So it's now the Boston–Western–Lutheran coalition.

MR. TARULLO. No, no. Because they were on the first sentence, I think.

CHAIRMAN BERNANKE. I don't think Governor Tarullo is Lutheran.

MR. TARULLO. That you're right about, Mr. Chairman. [Laughter]

CHAIRMAN BERNANKE. Governor Stein.

MR. STEIN. I support alternative B. I don't mind the first sentence in paragraph 1. I will also join the growing chorus that wants to kill paragraph 6 of alternative B. I think timing is part of the argument. If we're going to do it, we want to do it at a time when we're tapering. Massaging the language is also an issue. But I wanted to underscore some of the points that President Williams made. I think there are some really kind of deeper issues here. One is, if we go in this direction, it is pretty important to be true to the idea that this is not about making another commitment, but it is about explaining what the right time-consistent path is likely be. It's a delicate thing to do because in our communication, of necessity in recent times, we have, in some sense, really blurred together the concepts of commitment and communication. We say things like we are using communication to lower the long-term rate. I mean, communication, on average, should be kind of like a coin toss, right? These concepts have gotten pretty blurred together, and it will take some care to unblur them. Otherwise, I think it would be quite easy, if we are not careful, for the market to basically hear a statement like this as we are promising the funds rate is going to be 2 percent in 2016, which I think we probably don't want to do, or I'll say I'm not sure I would want to do.

And, again, this is something that John mentioned. *r** is a nice and very, very helpful theoretical construct, not easily or simply measured. If we sat down and had a staff seminar on this, I think we would probably be a little hard-pressed to agree on what *r** is today. There is this sort of very model-heavy thing, and there are a lot of measurement issues—the equity premium, all that kind of stuff, which is not easy to measure. To do this guidance, we are sort of talking about what we think *r** will be in 2016, and whatever your standard errors are around its value today, they are going to be bigger for future values. Again, that's not a reason not to do this. I think it's perfectly sensible. At some level you have to have a point estimate, and I think it's perfectly reasonable to explain and defend the point estimate, but it needs to be done in the context of understanding. Again, I think we are going to have to move to a regime ultimately where we are not telling people the funds rate two or three years in advance, and we have to make sure to communicate that carefully. Thank you.

MR. TARULLO. Just to be clear, Governor Stein, I have very strong convictions around *r**.

CHAIRMAN BERNANKE. Governor Powell.

MR. POWELL. Thank you, Mr. Chairman. I see the Committee as still operating under the broad framework for reducing asset purchases that the Chairman articulated after the June and September meetings. And going forward I see two broad cases. In the first case, the data are strong enough to credibly warrant tapering and the fiscal negotiations conclude for now without disruptive consequences. In that case the market will expect taper and the Committee should taper in keeping with existing guidance. But what to do if the economy continues on more or less its current path of 2 percent growth, payroll gains that oscillate between decent and meager, and declining unemployment helped along partly by unwanted declines in the labor force

participation rate, or, alternatively, perhaps the declines in unemployment will slow or stop as labor force participation stabilizes? I think, in that broad case, there is a choice to be made. The Committee can just keep buying $85 billion of securities a month through 2014 and 2015, indefinitely, what President Lacker referred to as the "hamster wheel scenario." If we pass the March meeting with no hint of another potential approach, then I think that is kind of the track that we're on. The alternative is to adopt a shift in the mix of tool strategy: gradually bring asset purchases to a halt by the end of next year, and strengthen forward guidance only if necessary. And I think the time may be coming to make that change. I hope not. And I'm inclined to favor this strategy.

In terms of the timing, I think it's important to look at the calendar, as President Pianalto was suggesting. We're about two years away from, in the base case, hitting the natural rate. The range of natural rate from 6 to, say, low 5s would be hit sometime in 2016—about two years out. If you think about the red zone of tapering as being March and June, as I think of it now today—I would like to be wrong, I would like it to be earlier, but probably March or June are the red zone—we effectively have almost a year of runway for the actual taper, call it nine months. At about that time, at the end of 2014, you are hitting the unemployment threshold. Then, you have promised to wait for a considerable period, so you have used up most of 2015 waiting to think about actually raising rates. At the end of 2015, you are right at the beginning of the zone of the natural rate, and now you haven't raised rates at all, so you've got to get up to at least 2 percent, even in our headwinds scenario. I guess I lay all of that out just to say that I don't see it as in any way premature to be having this conversation. There has been a tremendous amount of progress made, and I think it is time to go ahead. And I think doing this in March or June of next year would in no sense be premature in the base case.

I think there will be major communications challenges in either of these two cases, but in the latter case where we are tapering and it's not a great outcome, I would still emphasize the extent of progress. I would emphasize that the program has broadly achieved the goal that the Committee set forward of substantial improvement in the outlook for the labor market, and I would use the Chairman's three talking points of data-dependence, stock of progress, and independence of tools as well.

It seems to me that it will still never be a great idea to talk about the inefficacy of asset purchases, and I'm with President Bullard on this. I would just point out that, in my opinion, there have been several occasions on which it would have been appropriate to taper, ignoring, for the moment, the question of the market's preparation. For example, June was a time of significant optimism about the economy, with big payroll numbers. Of course, the market was not ready for it. My point is that the Committee doesn't have to choose a time that minimizes its credibility. If it comes to this, it is appropriate to wait and taper at a time when credibility is higher in terms of payroll numbers and the other tests we have laid out for ourselves.

In terms of the statement, I have heard all of the arguments. I guess I would come down: take the first sentence out, take the last sentence out, take out "in response to higher mortgage rates," take it all out. [Laughter] Leave it blank. And I do kind of think we are all over fiscal policy here. We've got two other mentions of it. It starts to sound like a little too much. It is nice to mention fiscal policy, but we are doing it twice already. Those are the things I would do. Thank you, Mr. Chairman.

CHAIRMAN BERNANKE. Thank you. Vice Chairman.

VICE CHAIRMAN DUDLEY. I favor alt-B. In general I think we've managed to get financial conditions back to a good place in which we can expect them to be supportive of the

economy, and if this is sustained that should help generate the pickup in the overall growth rate that we're seeking so that we can actually be confident of seeing substantial improvement in the labor market outlook. I think we don't want to disturb that situation at this meeting. That implies to me a very minimalist approach in terms of the statement.

In terms of the suggested language changes, the only one I feel strongly about is I don't like paragraph 6 because I think the timing is odd in the sense that you're not going to be able to explain it. People are going to wonder, "Why are you doing this now?" We've already gotten the concept out. And, two, I just don't think the language is very good. I mean, I've read the sentence many times, and it's just a really complicated sentence. So both in terms of timing and in terms of sentence structure I don't really like it. I don't disagree with the concept at all. I think the concept is the right one. It helps explain why the median of the SEP projections is at 2 percent in 2016. I think it's important to flesh that out, but I don't think it's good for this statement. In terms of the other suggested changes, I could go either way. The reality is the first sentence, as written, is accurate. It's just a question of is it important enough to include in the statement or not? And in response to higher mortgage rates, I'm happy taking it out. I mean, the reality is that paragraph 1 is really supposed to be more of a statement just about what we're seeing in terms of the data rather than having causal effects in there. So I guess I'm largely in favor taking out "in response to higher mortgage rates."

CHAIRMAN BERNANKE. Okay. Thank you. I guess there have been some pretty clear suggestions as far as language in alt-B. Personally, I don't think the first sentence of B(1) is all that harmful. It does explain why this meeting has been sort of not, in some sense, as active a meeting as it otherwise would be. But given the sense of the Committee, I guess I propose that we cut out all the red in B(1)and start the first sentence of B(1) with "information received."

We'll cut down through "however." I have no objection to eliminating "in response to higher mortgage rates" and just simply saying, "While the recovery in the housing sector slowed somewhat in recent months." Is there any concern about that? [No response.] Seeing none. B(6) was a close call. [Laughter] I'm just joking. B(6) is apparently before its time, like a fine wine, and so I would suggest that what we would do here is simply go back to paragraph B(5) from September, which essentially means taking the first sentence of B(6), putting it back in B(5) without change, and then eliminating the last sentence.

VICE CHAIRMAN DUDLEY. You would not have the word "eventually"?

CHAIRMAN BERNANKE. No. Paragraph B(5) is identical to B(5) in September

MR. EVANS. Mr. Chairman.

CHAIRMAN BERNANKE. Yes.

MR. EVANS. While you're on the last paragraph, could I ask a question, motivated by an observation that Governor Stein made, which I think is perfectly accurate. When we talk about the equilibrium real interest rate and if you put us in a room and we tried to say what the standard errors are around that, I'm pretty confident that it would be measured in percentage points or things like that, right? So to say that it's 2 or whatever it is, we don't have a lot of confidence. However, from the previous discussion, I thought what this paragraph was trying to get at was the fact that the SEP in 2016 was showing a funds rate well below what we've all said is the long-run neutral rate of 4 percent while we had the unemployment rate close to our assessment of the natural rate and inflation close to our inflation objective. If I take it at face value that there's no puzzle about the real interest rate, the implication is that there's no puzzle for the funds rate being 2 percent; the errors around what we say are so large that you shouldn't have to explain that as a puzzle. But I thought this was being offered as—I fully expect to get

questions about this—this is a puzzle. So therefore, there must be more force behind this. There must be something inherent in our outlook that suggests to us that we know more about the real rate than it's just, unconditionally, 1 or 2 percentage points. That's just a question.

CHAIRMAN BERNANKE. So I took the sense of the meeting, and in the interest of time, I just struck it. But I actually think that there's some value to this at some point. The SEP in September showed that a substantial majority of the participants expected the funds rate to be quite below 4 percent at the end of 2016; 2 percent was a median value. I explained it in the September meeting along these lines, and the minutes of the September meeting also said that most people around the table said this headwinds explanation was the right one. And you can certainly tell the story that given the headwinds—including the fiscal, which is pretty measurable—we think we can achieve full employment, but we're going to have to do it at lower interest rates. I mean, obviously that involves Wicksellian concepts and *r** and so on, but you certainly can explain it without any highly complex economic points.

MR. EVANS. That's right, but what I was trying to get at is I think that Governor Stein is exactly correct to say a single statistic doesn't have a lot of power to shed light on whether or not real rates are, in an equilibrium sense, low because of the headwinds that we're facing. But if you get more power from our forecast and everything else that we bring to bear, you're led to make these types of Wicksellian interpretations. Yes, I agree completely with your point myself.

CHAIRMAN BERNANKE. Like I said, we put it in because we thought it would help explain the September SEP and would get the imprimatur of the Committee that the Committee thinks that low interest rate policies are likely to be necessary for some time. That all being said, clearly there are a lot of issues here, and it's something we can continue to discuss as part of our

broader context of guidance and so on, but I did think it was worth discussing anyway. So I'm proposing that we go back to B(5).

MR. EVANS. It strikes me that all of those arguments push back a little bit against the argument that Governor Stein was making, that there's so much uncertainty we can't really have confidence our estimate.

MR. STEIN: No, let me if I may.

MR. EVANS. Absolutely.

MR. STEIN: I think I may have kind of sidetracked us a little bit. Really all I meant to do was to underscore this distinction between it's our best forecast and the headwind story is the leading story versus we're pretty sure that the right funds rate is going to be 2 percent, and that there are standard errors more in the time series than in the cross section.

VICE CHAIRMAN DUDLEY. Market participants have commented: How do they know what the rate is going to be in 2016? So I think your point that there's just a lot of dispersion around that is certainly true.

CHAIRMAN BERNANKE. That is certainly true, but we do have a modal forecast, and it's consequential. People who are buying and selling 30-year bonds have to make some kind of judgment about what r^* is.

MR. EVANS. Right. No, I am in complete agreement with your explanation.

CHAIRMAN BERNANKE. The other two comments that I have here are President Williams on elaborating the forward guidance and President Pianalto on strengthening the statement about asset purchases. I think the thrust of the meeting was to keep things simple today. I would comment, President Pianalto, I see where you're coming from, although there is a sentence very similar to what you suggested in the next paragraph, I think in paragraph 4: "In

judging when to moderate the pace of asset purchases, the Committee will in coming meetings assess whether incoming information," and so on. It's pretty much in the same spirit of the sentence that you suggested.

On President Williams, I found your suggestion about talking about that part of the forward curve being useful, and that's the reason we put this language in alt-A. But, again, I think the thrust of the discussion on strategy was that we should take a holistic approach to the refining of our guidance and be careful not to do it in too much of a piecemeal way. So I would propose that we defer that.

Just to summarize, the suggestions I'm proposing on alt-B are dropping the first sentence, dropping the phrase "in response to higher mortgage rates" in B(1), and going back to the old B(5) from the previous meeting. Are there any questions, comments, reactions? President Evans.

MR. EVANS. I'd just like to restate. I don't prefer the path that you're taking with regard to the first sentence. I think that the first paragraph is going to appear odd because there's nothing in the statement that even acknowledges the events since our September meeting. If you try to make the type of commentary that some have made like, "Oh, don't we feel better about the decision that we took in September because of what happened after September with regard to the government," there's nothing in this statement that gives rise to that justification. It's close to clueless on that score.

CHAIRMAN BERNANKE. Again, I thought this was a reasonable thing to do. The one argument though that I heard that made me stop and think was there's a bit of discussion in markets about how in January and in February and in March there's going to be yet further rounds of debt brinksmanship and shutdowns and so on and so on, and we don't want to give the

impression that we're completely unable to make policy decisions whenever there's any kind of fiscal issue.

MR. EVANS. I would have preferred a lighter touch, which simply made an acknowledgement of delays in data. I did not take that first sentence to really indicate that the actions have been really negative for the economy. But a way to offset that a little bit would be to at least add a few words around "fiscal policy is restraining economic growth a bit more than we anticipated last time" or something that at least is a delta with regard to the government effects.

MR. TARULLO. I agree with President Evans. I think this is going to look odd.

MR. FISHER. May I, Mr. Chairman? I disagree because there are two references about fiscal policy; there's one in that very paragraph.

CHAIRMAN BERNANKE. Yes. We talk about fiscal policy, but not the fiscal debates.

MR. FISHER. You could say "fiscal policy and indecision" if you wanted to.

MR. TARULLO. But just to be clear, there is a difference between, on the one hand, talking about the effect of fiscal policy when we are making a judgment about the effect that contracting fiscal policy has had upon the economy and, on the other hand, saying that it's been more difficult to assess exactly what the effects are. Obviously I'm not going to vote against this just because of it. But I think there's been a lack of precision in people's critiques.

MR. FISHER. If I may just add, Mr. Chairman, I don't disagree with you. What I worry about is the trap it sets for the future. That is, we're going to have these arguments continually. We might have another fight about the debt ceiling. I don't know if Senator Murray and Congressman Ryan are able to resolve this or not. It's our ninth commission in the past three years. I don't want to be trapped by this, as the Chairman just said, into not acting in the future,

and I believe it sets a precedent for doing that. I agree that it has limited the amount of information. I even used that phrase. It doesn't match the instrument panel in the picture I gave, but I think including it here unfortunately has long-term consequences, which I would prefer to avoid. That's my counterargument, Mr. Chairman.

CHAIRMAN BERNANKE. President Kocherlakota.

MR. KOCHERLAKOTA. Thank you, Mr. Chairman. Let me offer a possible suggestion for a lighter touch that I'm sure all sides will—well, we'll see. [Laughter]

MR. EVANS. I stand to get nothing. So anything is better.

MR. KOCHERLAKOTA. So the proposed opening sentence for alternative B begins with the word "information." I would propose adding the three words "the relatively limited" at the beginning of that.

CHAIRMAN BERNANKE. No, I think that's a little too strong. Is there enough support for revisiting this that we should start taking a straw vote or anything like that? Yes?

MR. EVANS. I'd take it to a straw vote.

CHAIRMAN BERNANKE. Is there any interest in Governor Tarullo's suggestion, something like "the effects of the temporary shutdown of the federal government, including delays in release of some data, and uncertainty surrounding the debt ceiling debate have made . . ."? Is there any interest in expanding it that way?

MR. TARULLO. You could also, Mr. Chairman, put it at the end of paragraph 1 rather than at the beginning. I thought at least some of what I heard was some concern that it was the principal thing to which we were addressing ourselves. But, as Charlie says, at this point we're open to taking anything. [Laughter]

MR. EVANS. Even if you change the simple sentence "fiscal policies restraining economic growth," to "fiscal policy continues to restrain economic growth," the way this will be interpreted is they're going to put the two statements side by side and they will notice a delta. At least it will indicate thought. That's all, but at the moment it seems to provide zero thought on that, and that's just a risk that we're talking.

CHAIRMAN BERNANKE. You could say "fiscal policy and fiscal debates are restraining."

VICE CHAIRMAN DUDLEY. You could say "fiscal policy developments." Because that's a little bit broader.

MR. EVANS. I'm not arguing that we need to say the shutdown had a big effect. I'm just saying it has made it somewhat more challenging to assess.

CHAIRMAN BERNANKE. President Bullard.

MR. BULLARD. Mr. Chairman, I'll speak in favor of just doing what you initially proposed, which was to eliminate the first sentence and eliminate the "however." I just think that everyone is well aware that the fiscal policy debate and the fiscal uncertainty are affecting the macroeconomic outlook, and it is certainly affecting the deliberations of this Committee. The effect of this statement will be to say we're standing pat for today and we're not really doing anything today, and we're not trying to send any messages today. And we understand that lots of things are happening in the world, but we're just standing pat for today.

CHAIRMAN BERNANKE. President Lacker.

MR. LACKER. I agree with President Bullard. It's worth pointing out the extent to which the staff's assessment is that the effect of what happened is purely transitory. We may get another one in January, but again, it's going to be a purely transitory thing.

CHAIRMAN BERNANKE. All right. To keep things simple how about I ask for a straw vote just to get a sense of the Committee, and if it's okay, the options are keeping the sentence as written and dropping the sentence? Is that all right? Is that acceptable? Okay. All in favor of keeping the sentence as written please raise your hand. [Show of hands] One, two, three, four, five, six. Okay. All in favor of dropping the sentence. [Show of hands] One, two, three, four, five. Okay. The Lutherans carry [laughter]—

MR. TARULLO: More religious clashing.

CHAIRMAN BERNANKE. Another religious fight. Okay. We're back to where we were. We're going to drop the sentence. We'll drop the phrase "in response to higher mortgage rates," and we'll restore B(5). For the last time, Ms. Danker, would you please call the roll?

MS. DANKER: Yes. This vote is on the alternative B, as the Chairman just described, and the associated directive.

Chairman Bernanke	Yes
Vice Chairman Dudley	Yes
President Bullard	Yes
President Evans	Yes
President George	No
Governor Powell	Yes
President Rosengren	Yes
Governor Stein	Yes
Governor Tarullo	Yes
Governor Yellen	Yes

CHAIRMAN BERNANKE. Okay. Thank you very much. Lunch should be available now. Please get your lunch and bring it back if you would like to hear Linda Robertson give an update on congressional and legislative issues.

The next meeting is Tuesday and Wednesday, December 17 through 18. The meeting is adjourned. Thank you.

END OF MEETING